COLCHESTER ARCHAEOLOGICAL REPORT 6:

Excavations at Culver Street, the Gilberd School, and other sites in Colchester 1971-85



PHILIP CRUMMY

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by
PHILIP CRUMMY

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1: INTRODUCTION

This volume contains reports for various excavations and all the watching briefs and building recording work which took place in Colchester town centre between 1971 and 1985 inclusive (Fig 1.1). The volume is intended to complement *Colchester Archaeological Report* **3** so that together the two monographs cover all the fieldwork in the town centre during this period apart from the excavations of cemeteries, which instead are to be in *CAR* **9**.

Most of the loose finds are being published according to type of find. Thus there are monographs devoted to the following topics: Roman small finds *(CAR* **2**), coins *(CAR* **4**), post-Roman small finds *(CAR* **5**), post-Roman pottery *(CAR* **7**), glass *(CAR* **8**), Roman pottery *(CAR* **10**), and animal bone *(CAR* **12**). Small finds and coins from 1971-9 are published in *CAR* **2** and **4** respectively. Finds not forming part of this scheme, namely coins and small finds found 1979-85, are included in Chapters 5, 6, and 10 below. Plans are yet to be finalised for publication of the post-Roman glass. Finds such as mosaics, wall plaster and votive pots, which are closely linked to excavated structures and features, are also included in the relevant structural report in *CAR* **3** or below.

A series of computerised databases has been compiled in which the following categories of find are classified and quantified: Roman pottery, post-Roman pottery, small finds, Roman glass, animal bone, and coins. Another has been created for the site contexts. These databases are particularly important not just for the data they contain on the finds but because they provide the principal statement of the dating evidence on which all the interpretations in the *CAR* volumes are dependent. Since the amount of information involved makes orthodox publication of this material unrealistic, it is proposed instead to publish a further volume in the *CAR* series which will include a printed index to the databases so that they can be consulted in the Colchester Museums in their computerised forms. In addition, it is hoped to make available substantial extracts of the key dating evidence in this volume.

A more integrated approach to the study, interpretation, and publication of the finds and the structures would have been preferred but the scale of the task has meant that there had to be some sacrifice of objectives so that a publication programme could be devised which was achievable with the resources available.

The major site included in this book is Culver Street where, following the excavation, a £40 million shopping precinct was built. The development covers about four acres and, like Lion Walk *(CAR* **3**), about half the area is taken up by a service basement (Fig 1.2). At least £500,000 would have been needed to excavate the site properly; the sum ultimately available was about a third of this amount spread over four financial years. Thus from the start, hard decisions had to be made about what to excavate. For this reason, work was confined to the basement where, unlike the rest of the site, the destruction was to be total (Fig 1.3). Moreover, within this area, the Boudican and earlier deposits were given priority because of their exceptional importance. In the event, probably about two-thirds of the basement area was archaeologically covered in some way. It would have been valuable to have excavated the Head Street frontage but access here was restricted because of the standing buildings which the developer could only acquire late in the planning stage of the project. And in any case the area in question lay outside the basement and where the new buildings were to be erected on piles.

The Culver Street excavation was in two phases. The first phase started early in 1981 and finished in the spring of the following year (Fig 1.4). The work took place on the sites of the Colchester Borough Council car parks but could not be continued on to fresh areas when it became clear that the start of the development would have to be delayed for reasons unconnected with the archaeology. The second and final stage began late in 1984 and continued until the late summer of the following year.

Between the two phases of the excavation, the developer reduced the size of the planned basement by moving the northern edge southwards and by omitting the area covered by Site E. This meant that some of the areas excavated as part of Phase 1 ended up outside the basement (Fig 1.2).

The excavation programme was complicated and always under revision because of the piecemeal way in which the developers had to acquire the various properties involved. The timetable for excavation had to overlap with the start of the main phase of construction work — and the arrival of various sub-contractors, each with their own work-schedules to maintain, added a new dimension to an already difficult excavation programme. All this meant that towards the end, some key areas were only available for investigation for just a matter of a few days.

The archaeological treatment of each area depended on the time and money available. Three approaches had to be employed. An area could be a) fully excavated top to bottom, b) 'topped and tailed' (ie

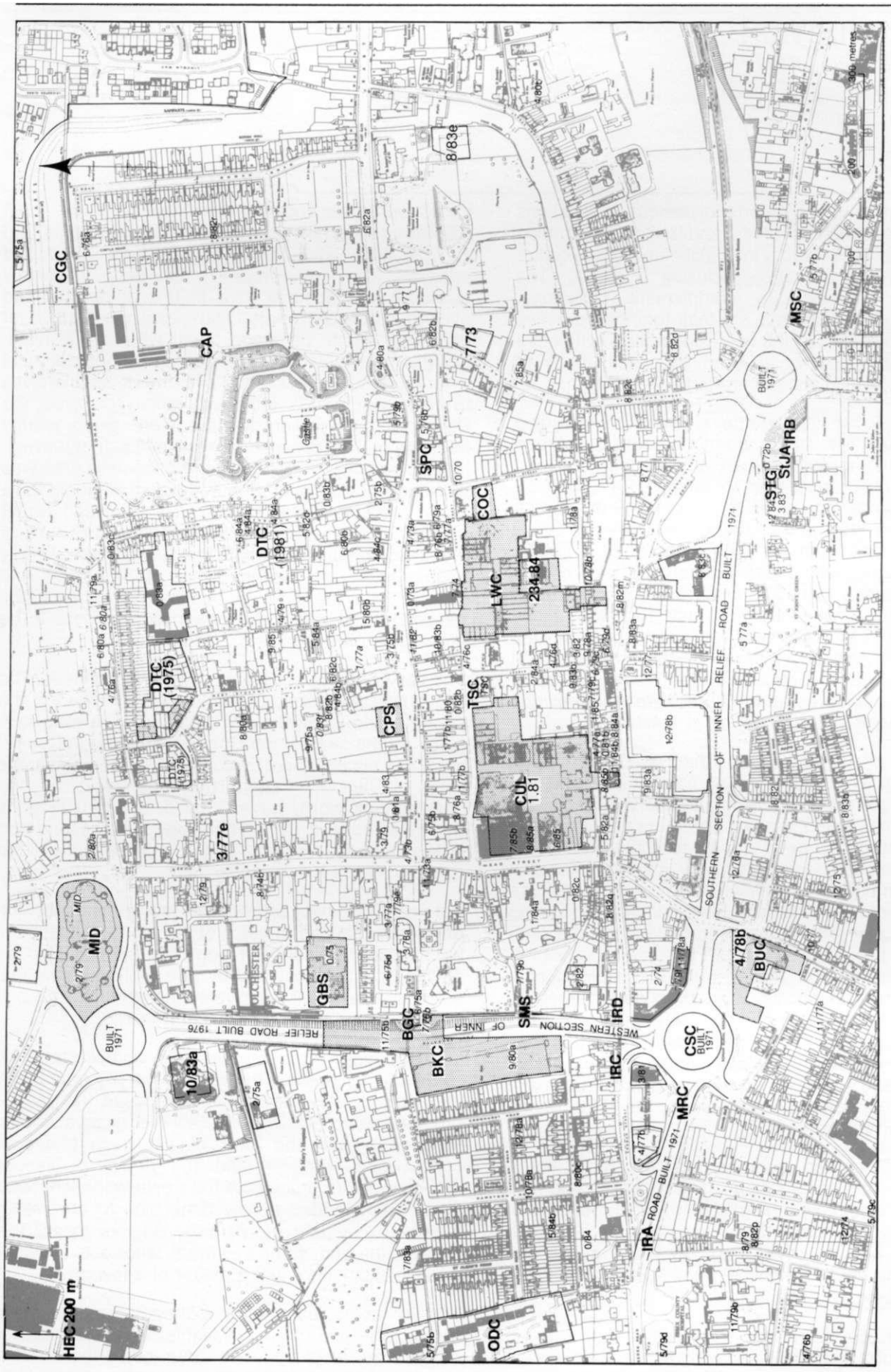


Fig 1.1 Excavations, watching briefs, and building surveys (italics) in Colchester between 1971 and 1985. Largest projects are indicated as shaded areas. See pages 416-419 for a key to the site codes and the locations of the individual site reports.
[Base map reproduced from the 1965 Ordnance Survey 1:1250 map with the permission of the Controller of HMSO. © Crown copyright.]

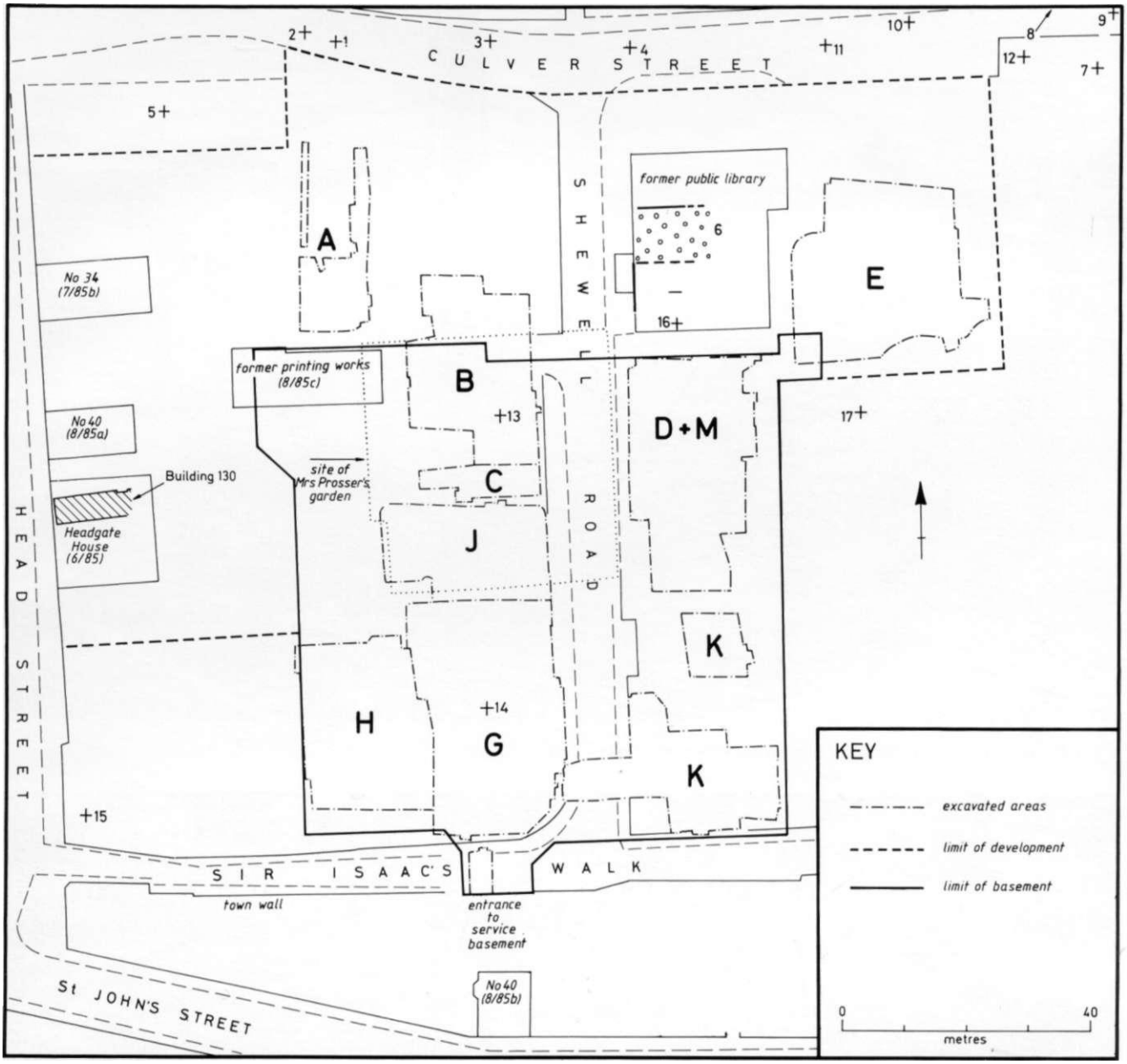


Fig 1.2 Area of excavation at Culver Street showing subsites (lettered) and the limits of the development and the basement. (Also indicated are the locations of earlier discoveries (see pp 35-7) and the standing buildings surveyed during the course of the excavation (see pp 1054-75).)

look at the post-Roman and the latest Roman, machine-strip, and then look at the Boudican and earlier deposits), or c) the Boudican levels could be hurriedly cleaned and planned after mechanically stripping straight down to them without looking at anything else.

The excavation at the Gilberd School took place between 1984-5 on a site which was destroyed during the construction of a terrace for a large extension in the school grounds. The work was approached in a more orthodox way than at Culver Street but even so, a shortage of funds meant that about a third of the site was lost without archaeological recording.

Descriptions of the other sites are given in the form of a catalogue which also includes watching briefs and building surveys. Entries in the catalogue are ordered in terms of the date when the work was started. The most significant projects have been printed in the book; the rest are described on microfiche. Individual site reports can be located by means of the indexes on pages 416-9 and Figure 1.1 opposite.

The recording system for the sites more or less follows that described in *CAR* **3** (pp 3-4). For the second phase of Culver Street, the recording method was changed to a single-context system to help computerisation of the records.

Some of the sites dug after 1981 are referred to by accession numbers given by the Colchester

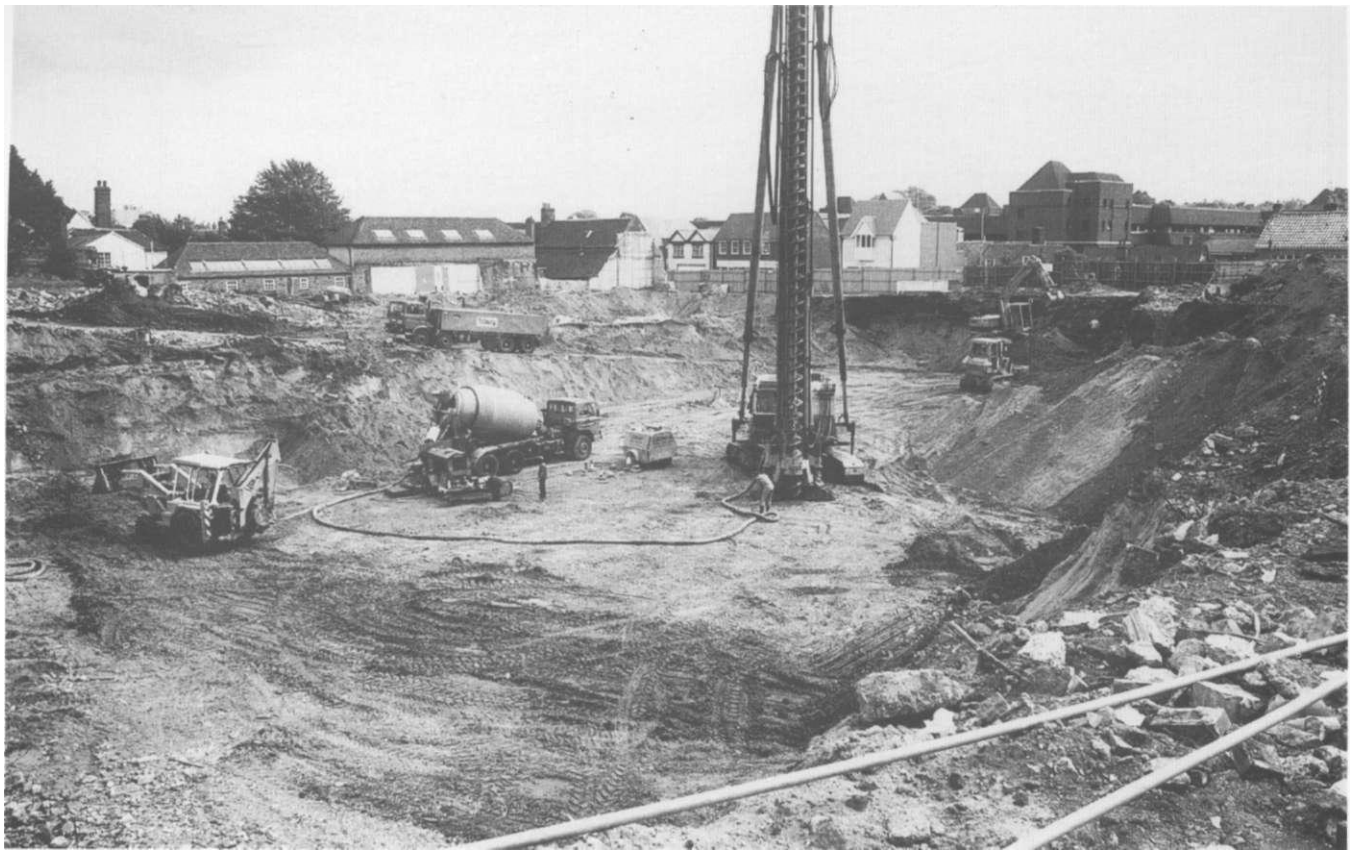


Fig 1.3 The contractors digging the service basement at Culver Street.



Fig 1.4 Phase 1 excavations at Culver Street (ie Sites A, B, C, D, & E) in 1981. Viewed from the south.

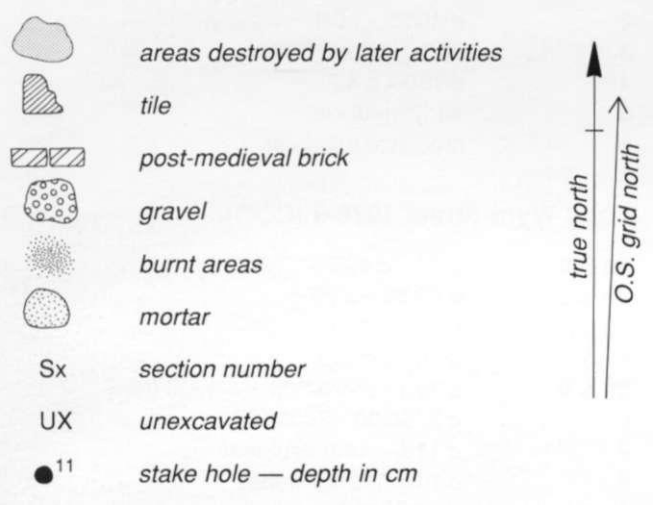


Fig 1.5 Plan conventions

Museums rather than by a three-letter code as in the past. Culver Street and the Gilberd School were dug as a series of sub-sites. Each of these is referred to by a single letter code (eg Culver Street Site A) and recorded as if it were a site in its own right *(see* Fig 1.2 for Culver Street).

The conventions for the plans and sections (Fig 1.5) are the same as those used in *CAR* **3** (p 2). Also, as in that volume, most of the sections have been included on microfiche. The term 'occupation' refers to the fine, dark, sandy, often charcoal-rich deposits which accumulate on floor surfaces that are not kept clean. It is worth repeating here that the sections here (as in *CAR* **3**) are interpretative rather than descriptive. No soil descriptions have been included, nor has any attempt been made to indicate the soil types present in the sections by means of a key. In most cases all that is shown are layers of gravel and occupation and large inclusions of tile, brick, oyster, and fragments of daub. This is because most of the soils are so similar to each other that descriptions are not particularly helpful for interpretation. Sections which are published in the conventional way in which the soil types are purported to be indicated by means of hatching and shading run the danger of being over-simplified to the point of the descriptions being wrong. Descriptions like 'clay', 'loam', 'silt', 'dark soil', and 'light soil' abound in the literature but are often suspect for this reason. If a similar approach had been adopted here, then the key for the sections would be dominated by descriptions such as 'loamy sand', 'sandy loam', and 'sandy clay loam'. If the descriptions had been simplified, then practically all the soils would be described as sand because, despite the names, the predominant component in soils of this kind is sand (Keeley & Macphail 1981, 228-9). The descriptions of the soils in the sections in this report can be found in the original site records in the Colchester Museums or in the microfiche copies at the National Monuments Record at the Royal Commission for Historical Monuments of England.

As a rule, features mentioned in the text appear on at least one of the published plans. This is not usually the case for layers although many will be found in the published sections.

All dates are AD unless stated otherwise.

The period systems for the sites in this report can be summarised as follows.

Culver Street 1981-2 & 1984-5 (CUL or 1.81; Fig 1.2)

Site A

Pre-Period 1	*c*44
1	*c* 44 - c 49
2	*c* 49 - 60/1
3	60/1 - *c* 7100/150
4	*c* 7100/150 - c300
5	*c* 300 - c 350+
early medieval	
medieval and later	

Sites B, C, & J

1	*c* 44 - c 49
2	*c* 49 - 60/1
early 3	60/1 - c 65/75
3	*c* 65/75 - c 100/125
4a	*c* 100/125 - c200
4b	*c* 200 - *c* 250/275
4c	*c* 250/275 - *c* 275/325
4	*c* 100/125 - *c* 275/325
early 4	2nd century
late 4	3rd century
5	*c* 275/325 - 350+
Anglo-Saxon	
PR (or 6)	post-Roman
Med	*c* 1050 - *c* 1500
PM	*c*1500 - *c* 1850
Mod	*c* 1850 -*c* 1985

Sites D & M

1	*c* 44 - *c* 49(/55)
2	*c* 49(/55) - 60/1
3	60/1 - *c* 150/200
4	*c* 150/200 - *c* 275/325
5	*c* 275/325 - *c* 400+
6	early medieval
7	medieval and later

Site E

1	*c* 44 - *c* 49(/55)
2	*c* 49(/55) - 60/1
3a	60/1 - *c* 90/100
3b	*c* 90/100 - *c* 150/200
4	*c* 150/200 - *c* 275/325
5	*c* 275/325 - *c* 400+
6	Anglo-Saxon
7	early medieval
8	medieval and later
9	modern

Sites G & H

1	*c* 44 - *c* 49
2	*c* 49 - 60/1

3a	60/1 - *c* 65/80
3b	*c* 65/80
3c	*c* 65/80
3d	*c* 65/80 - *c* 150
3e	*c* 150
3	60/1 - *c* 225
4	*c* 150 - *c* 225
5	*c* 225 - *c* 275/325
6	post-Roman

Site K

1	*c* 44 - *c* 49
2	*c* 49 - 60/1
3	60/1 - 400+
3a	60/1 - *c* 150
3b	*c* 150
3c	*c* 150 - *c* 400+
4	Anglo-Saxon
5	medieval and later

Site W (watching brief over whole site)

(Roman building and medieval rubble cellar by Head Street)

1	*c* 44 - *c* 49
2	*c* 49 - 60/1
3	60/1 - *c* 150/225
4	*c* 150/225 - *c* 275/325
5	*c* 275/325 - *c* 400+
6	early medieval
7	medieval and later

Gilberd School 1984-5 (GBS)

Sites A & B

Preh	prehistoric
1	*c* 44 - c 49
2	*c* 49 - 60/1
3a	60/1 - *c* 100/125
3b	*c* 100/125 - *c* 250/275
3	60/1 - *c* 250/275
4	*c* 250/275 - *c* 350+
PR	post-Roman
Med	*c* 1050 -*c* 1500
PM	*c* 1500 - *c* 1850
Mod	*c* 1850 - *c* 1985

OTHER SITES

Crouch Street 1971 (CSC)

1	15th/16th centuries
2	16th century and later

Cups Hotel 1973-4 (CPS)

1	*c* 44 - *c* 49
2	*c* 49 - 60/1
3	60/1 - *c* 225
4	*c* 225 - 400+
5	Anglo-Saxon - *c* 13th century
6	*c* 13th - 15th centuries
7	*c* 15th - ?18th centuries

Lion Walk United Reformed Church 1985 (236.84)

1	*c* 44 - *c* 49/55
2	*c* 49/55 - 60/1
3	60/1 - *c* 100/(150)
4	*c* 150 - *c* 400
5	early medieval
6	medieval and later

Long Wyre Street 1978-9 (COC)

1a& b	*c* 44 - *c* 49/55
2a & b	*c* 49/55 - *c* 75
3a, b, c, & d	*c* 75 - *c* 100
4a & b	*c* 100 - *c* 150
5a & b	*c* 150 - *c* 275/300
6	*c* 275/300 - ?400+
7	*c* 11th - 14th centuries
8	*c* 14th/15th centuries
9	*c* 16th centuries
10	*c* 17th/18th centuries
11	*c* 19th/20th centuries

Magdalen Street 1974 (MSC)

1	11th/12th - 14th/15th centuries
2a	14th/15th - 15th/early 16th centuries
2b	15th/early 16th - *c* 1700
2c	*c* 1700 - 19th or 20th centuries
3	19th/20th centuries - 1974

Trinity Street 1977 (TSC)

0	Nos 1 to 3 Trinity Street (still standing)
2	Roman
3	medieval
4	post-medieval
5	18th - early 20th centuries
6	modern

1	Pre-c 150/225
2	*c* 150/225 - ?*c* 4th century
3a & b	Post-Roman

1	mid 1st century - late 1st century
2	late 1st century - 2nd, 3rd, and ?4th century
3	medieval
4	post-medieval and modern

Sites without coded phases

Castle Gardens 1978 (CGC)
St Mary's Steps 1972 (SMS)
Dutch Quarter 1975 (DTC)
Inner Relief Road Site A 1972 (IRA)
Inner Relief Road Site C 1973 (IRC)
Oaks Drive 1973 (ODC)
Balkerne Gate 1973 (BGC)
Maidenburgh Street 1981 & 1984 (DTC)
Castle Park 1984-5 (CAP)
Queen Street 1973 (QSS)

2: THE DEVELOPMENT OF ROMAN COLCHESTER

The fortress and the military buildings

[Figs 2.1-6]

Colchester Archaeological Report **3** contains an account of the fortress and its conversion into the colony (pp 3-9). This can now be revised and refined in the light of the excavations at the Culver Street and the Gilberd School sites which have been completed since its publication. Important developments include the excavation at Culver Street of the centurions' quarters of the first cohort. At the Gilberd School site, equally significant has been the investigation for the first time of *contubernia* and the opportunity to recover details of their plan. The account in *CAR* **3** (pp 5-7) of the planning of the fortress still holds good in broad outline with only slight modifications being necessary. The second phase of the excavations at Culver Street showed that the *via principalis* was 60 pM *(pedes Monetales)* wide as opposed to 50 pM and that the plan of the buildings was not as regular as originally expected. The changes and corrections are incorporated in Figure 2.2.

But the most important advance since publication of *CAR* **3** however is an understanding of how the buildings themselves were planned. Study of the layout of the barracks at the Culver Street, Lion Walk, and Gilberd School sites has shown that these buildings were designed using broadly the same dimensions for each of their various component parts. These can be summarised as follows:

1) the streets between pairs of facing barracks were 15 pM wide
2) the plinths were 2 pM wide
3) the internal walls were 0.5 pM wide
4) the centurions' quarters measured 30 pM across internally (apart from one all but one of the first cohort)
5) internally the *contubernia* were 20 x 12 pM (apparently including those of the first cohort).

Figures 2.3 and 2.4 show plans of the main elements of the remains of the barracks at Lion Walk and Gilberd School superimposed on a best-fit basis on a theoretical plan of the buildings drawn up using only the above five rules. The Lion Walk plan (Fig 2.3) is based solely on an already published plan *(CAR* **3***,* fig 17, Sheet 1b) and thus could be reproduced independently by anyone interested in so doing. In each case, there are deviations between the actual and the superimposed theoretical plans but the differences turn out to be only slight. The buildings were not laid out very accurately (eg Building 131 at the Gilberd School tapers slightly) so the discrepancies can be at least partly accounted for in this way. Being the site of the first cohort, the situation at Culver Street was complicated by variations in the sizes of the centurions' quarters. However, as shown on Figure 2.5, these differences were based on increases in the widths of five of the six centurions' quarters by increments of 7.5 pM to either 37.5 pM or 45 pM. Otherwise the layout conforms to those at the Gilberd School and Lion Walk.

One important area of uncertainty in the planning of the barracks concerns the length of the centurions' quarters. Only at Culver Street has it been possible to measure accurately these parts of the barracks but even here slight variations in the lengths of the few examples which can be measured make it difficult to determine if the variations reflect poor workmanship on the part of the Roman builder or small but intentional differences in the layouts of these buildings. And at Lion Walk this measurement could only be inferred to within about 0.3 m (using *CAR* **3**, fig 15) because the eastern walls of the barracks lay beyond the limit of excavation. However in general, the length of each centurion's quarters seems to have been designed to be twice its width even where they were enlarged as at Culver Street. Unfortunately the variations and uncertainties in the lengths of the blocks make it hard to determine the points from which the measurements were taken but it is clear that the 1:2 ratio did not relate simply to the internal dimensions of the centurions' quarters. In the reconstruction on Figure 2.6, the key 60 pM dimension, which is double the internal width, has been taken to include the widths of both plinths but exclude the width of one roof truss (which presumably equalled the width of the internal walls). If this is correct, then the standard centurion's quarters (ie everywhere except Culver Street) must have been planned to measure internally 30 x 56.5 pM (Fig 2.6).

Another problem relates to the number of *contubernia* and hence the overall length of the barrack blocks. At the Gilberd School site, although there may have always been only 13 *contubernia,* there certainly seems to have been space for 14 of standard size (pp 129-130). If this was the case for all the Colchester barracks apart from those belonging to the first cohort, then each barrack would have been 234 pM (69 m) long (assuming that the centurions' quarters were planned in the way just explained) (Fig 2.6). This would mean that the barracks would have been substantially shorter than the space allocated to them when the fortress was planned. The barracks which were placed east-west down the west side of the fortress were apparently allotted a distance

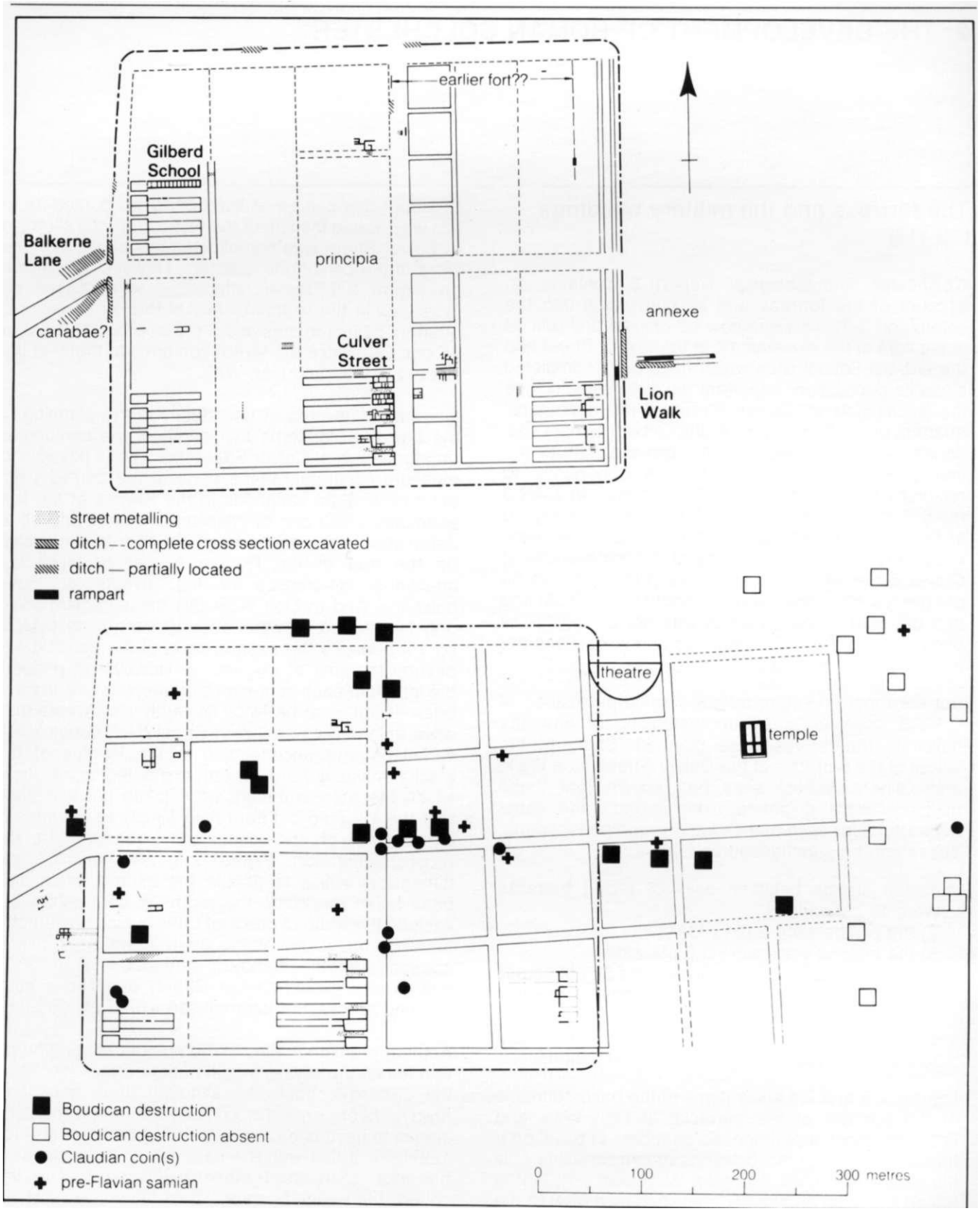


Fig 2.1 The fortress (above) and the pre-Boudican colony (below) at Colchester. [Page 7]

east-to-west of 300 pM less 20 pM for the width of the *via sagularis* (Fig 2.2; *CAR* **3,** 5). This would mean that, according to the Gilberd School barrack blocks, 46 pM (13.8 m) of this allocation would have been unused (300-20-234=46 pM). At the Gilberd School, there was a gap of 24.4 pM (7.2 m) between the east end of the barrack and the west side of the north-south street. This is only about half the theoretical width of the vacant area but the rest can be accounted for by the distortion north of the *porta*

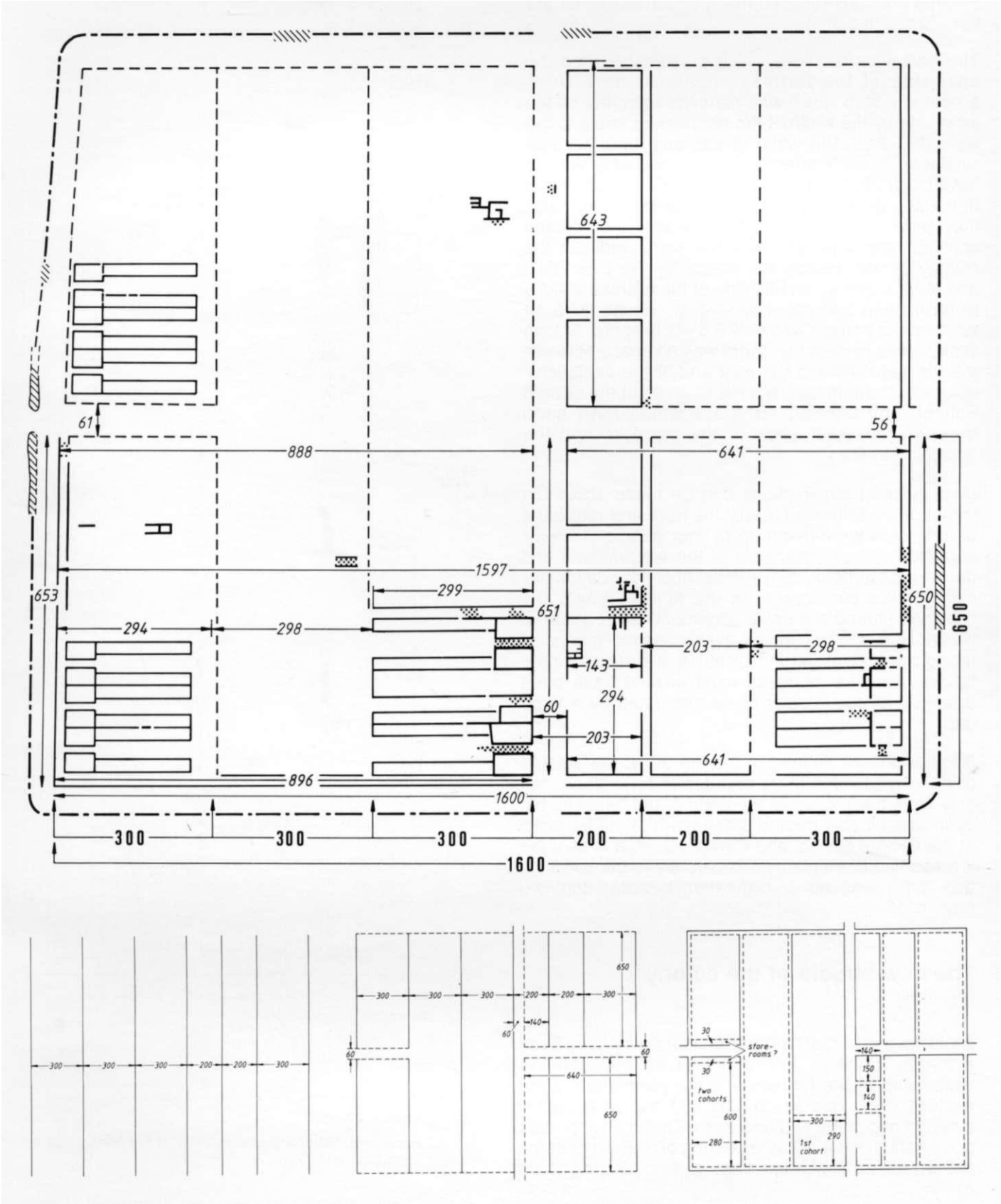


Fig *2.2 Above: the dimensions of the fortress at Colchester in pedes Monetales. (The actual measurements are shown in italics and the theoretical dimensions are shown in bold around the edges of the plan.) Below: three stages in the formulation of the plan of the fortress. [Page 7]*

decumana where the west side of the fortress tapered inwards and thus reduced the space available for the barracks in this area.

The east-west barracks which presumably lined the east side of the fortress appear to have been allocated a strip which was narrower than that on the west side by the width of the north-south street to the west (Fig 2.2). The width of this and the other four similar north-south streets is not known but is likely to have been 20, 25 or 30 pM *(CAR* **3**, 5). All but one of these streets were reused in the colony and, since they seem to have been 30 pM wide in their civilian context, they were probably the same width in the military period. Hence the space for the Lion Walk and other barracks on this side of the fortress is likely to have been 240 pM wide — just enough for a 14 *contubernia* barrack with only 6.5 pM to spare. At Lion Walk, it was evident that there was no space between the *via sagularis* and the east end of the centurions' quarters, showing that, like the situation at the Gilberd School, any unoccupied space would have been between the other ends of the barracks and the adjacent street.

More general observations can be made about the layout of the fortress. Usually the front and rear parts of fortresses were taken up by four groups of twelve barracks, one to either side of the *via praetoria* and the *via decumana,* to provide accommodation for eight of the ten cohorts in the legion. Where the buildings shared the same alignment, each group of twelve was laid out as six evenly-spaced groups of facing pairs. However at Colchester it seems as if the blocks of twelve barracks must instead have been arranged as two groups of six separated by a large gap.

Another unusual feature of the fortress is the amount of open space that there appears to have been. Not only were there gaps at the ends of the barracks but open spaces also existed to the north of the barracks at the Gilberd School and Culver Street. It is as if the fortress had been planned separately to the buildings and there was no co-ordination between the two processes.

The new streets of the colony

[Figs 2.7-8]

As explained in *CAR* ***3*** (pp 8-9), there may have been a hiatus of up to five years or so between the evacuation of the fortress and the completion of the eastern street grid which was laid out on a slightly different alignment to the fortress. This is an important point here since it is has a bearing on the dates of the pre-Boudican buildings east of the *via principalis* (p 27).

The full width of the most southerly of the new east-west streets of the town (excluding the former *via sagularis)* has been excavated in three places (Fig 2.7). It was built as part of the works for the new

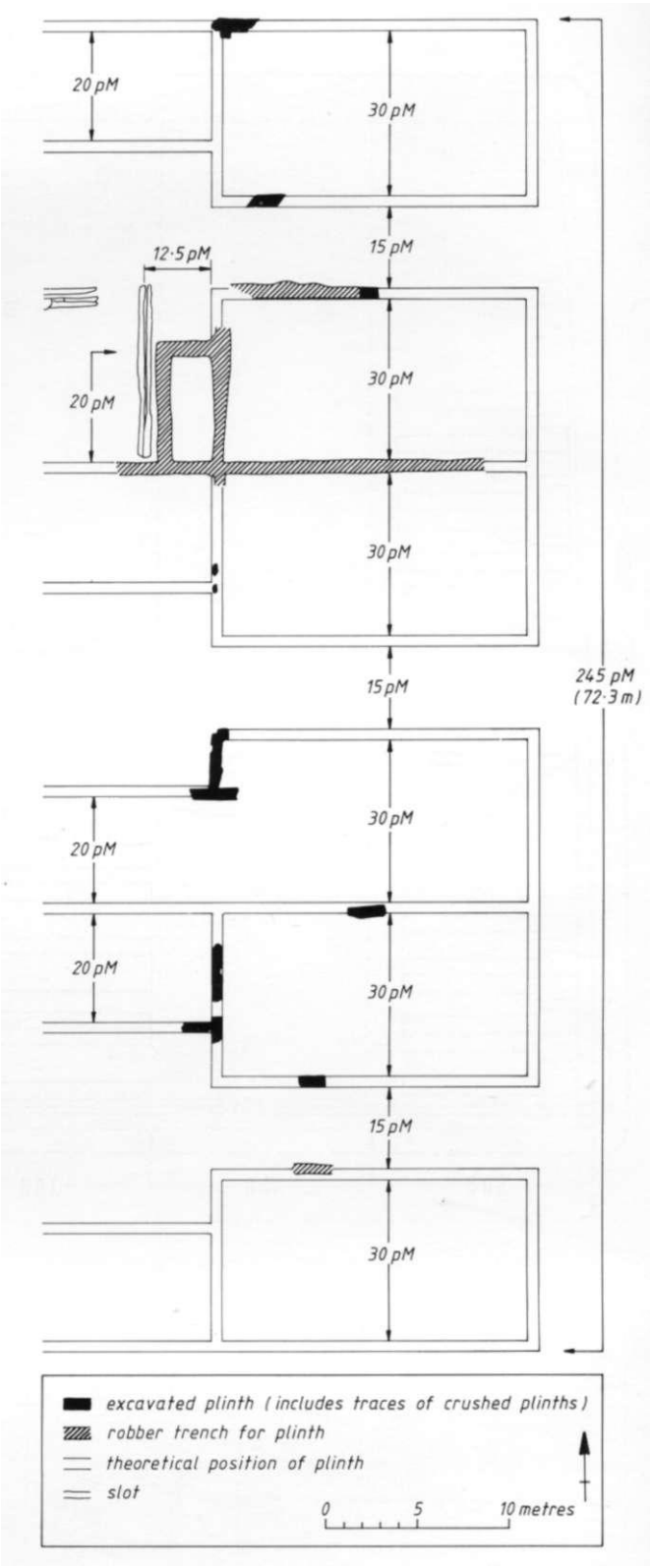


Fig 2.3 Reconstruction of the ground plans of the barracks at the Lion Walk site. [Page 7]

colony since it lay on the 'eastern alignment' shared by the Temple of Claudius and the surrounding part of the town *(CAR* **3**, 8) and because it passed over the sites of military buildings (p 27). It seems to have been laid out so that the main metalled part of the

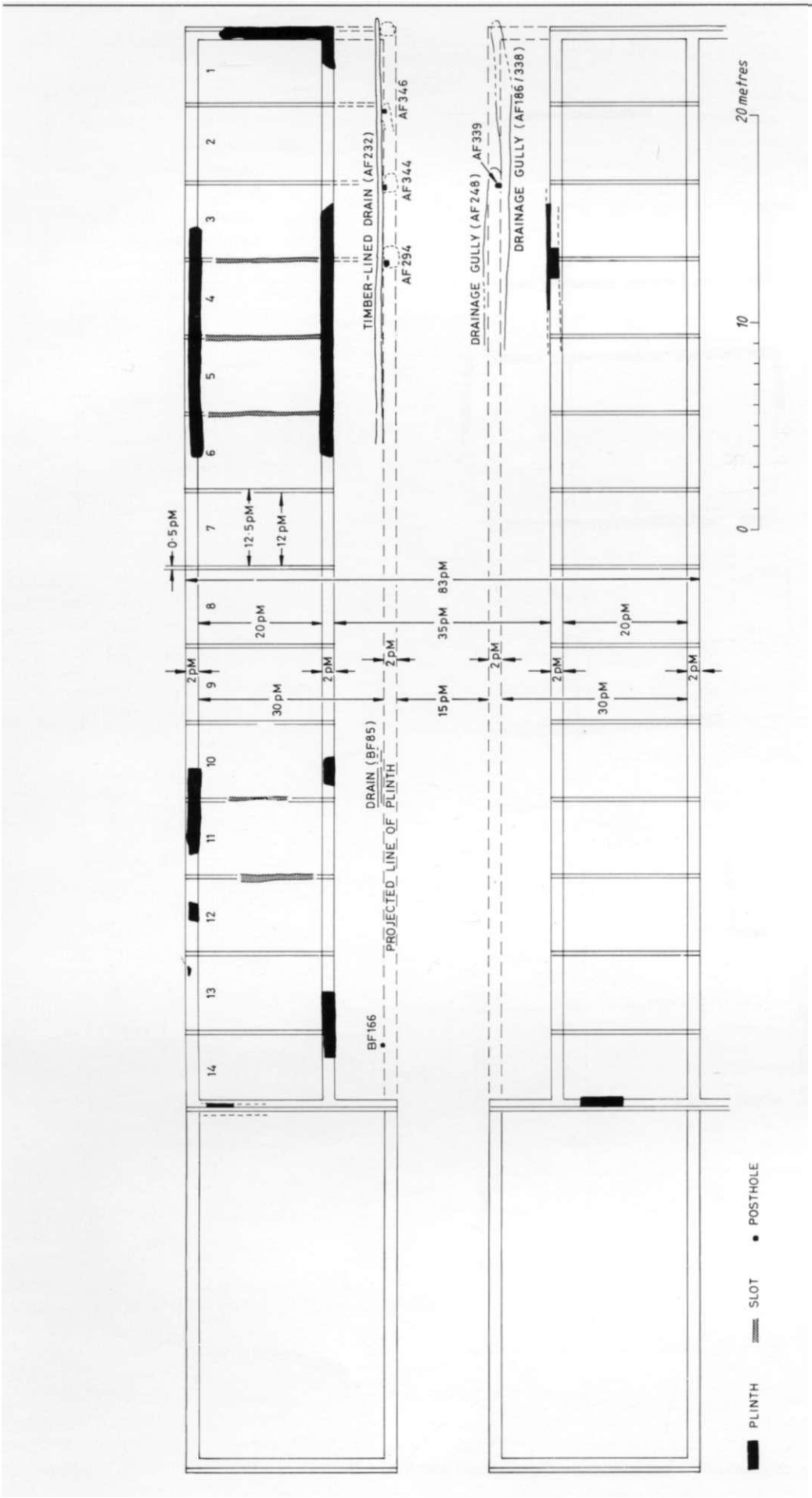


*Fig **2.4** Reconstruction of the ground plans of the two barracks at the Gilberd School site. [Page 7]*

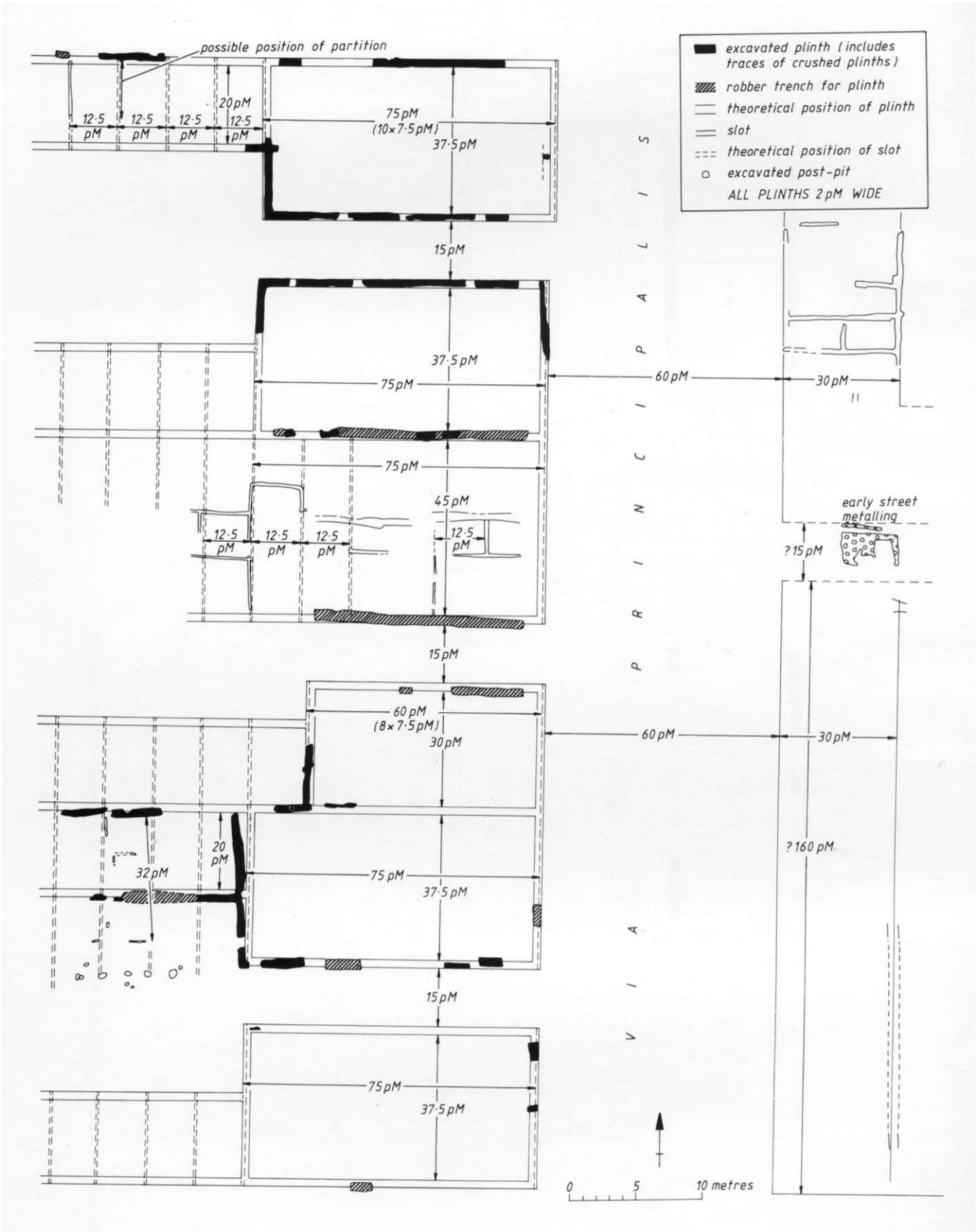


Fig 2.5 Reconstruction of the ground plans of the barracks at the Culver Street site. [Page 7]

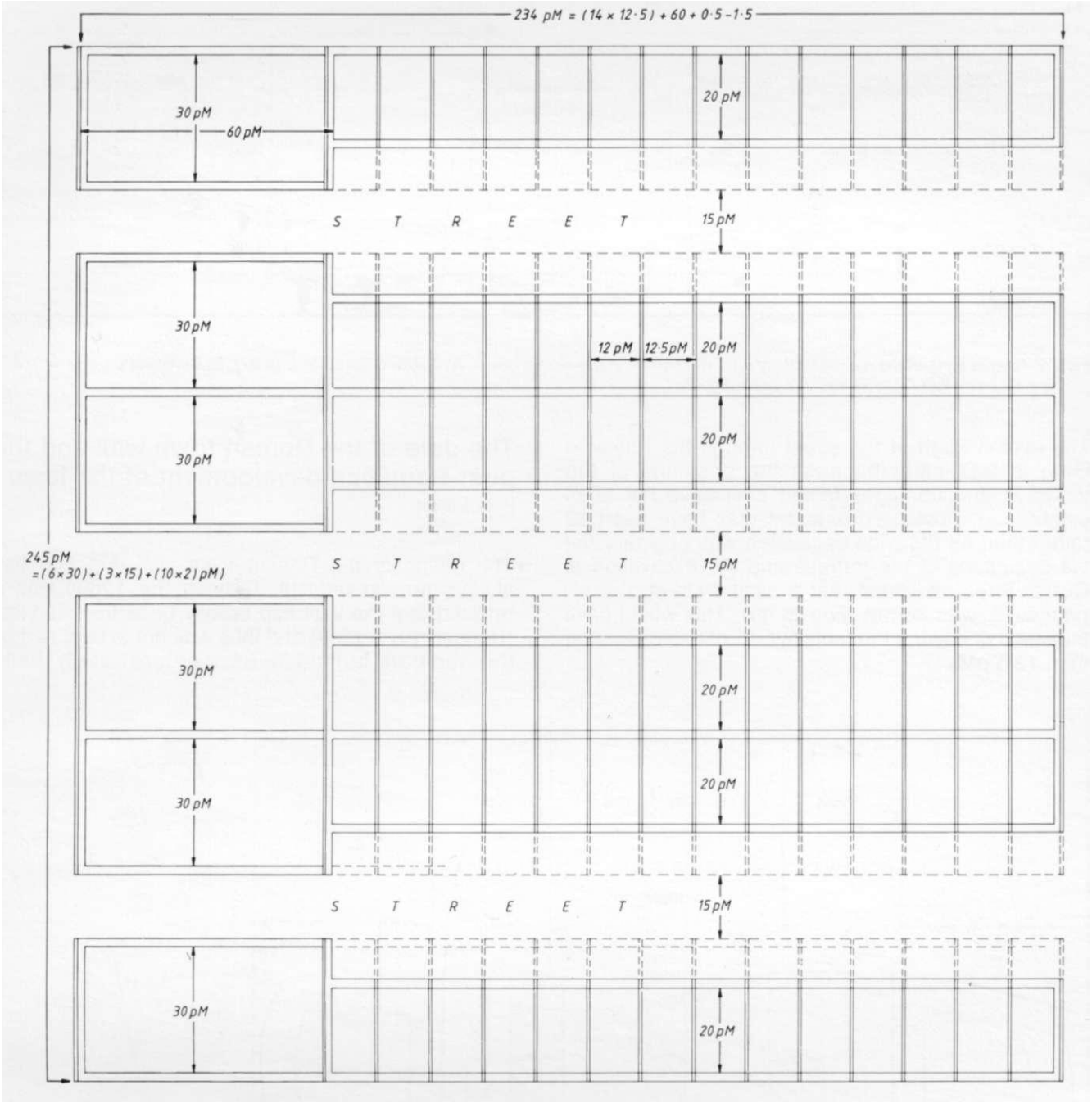


Fig 2.6 Conjectural reconstruction of the ground plans of the barracks for a typical cohort (not the first cohort) at Colchester. Based on the Lion Walk and Gilberd School sites. [Page 7]

street was 30 pM across and the footways were each 12.5 pM across. The 30 pM part included space for drains whilst the 12.5 pM wide areas later included the foundations forming the street-side boundaries of the footways.

Too little is known about the other new colonial streets to indicate if this was a widely-applied formula in the town. However there is some corroborative evidence of the existence of such a strategy from the plan of the Balkerne Gate and to a lesser extent that of Duncan's Gate. The monumental arch predating the Balkerne Gate was designed in plan as a neatly-proportioned rectangle measuring 20 x 40 pM (Fig 2.8). Its three 'piers' were each 5 pM wide so that the street where it passed through the arch was 30 pM wide — just like the colonial street discussed above. However the existence of the central pier had the effect of reducing the street where it passed through the monument to two carriageways, each of which was 12.5 pM wide. The same dimension can be detected at Duncan's Gate which, in the light of this, was clearly designed to accommodate one carriageway (Fig 2.8).

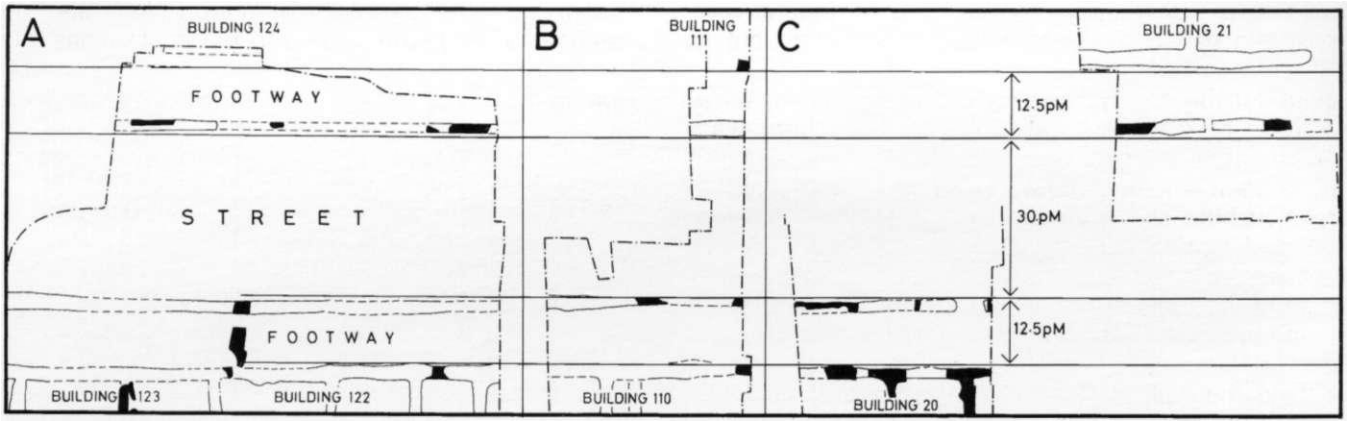


Fig 2.7 *The planning of the most-southerly east-west street in the Roman town. A: Culver Street Site E (p 27); B: Culver Street Site A (p 27); C: Lion Walk Sites G and J (CAR* **3**, *fig 42).*

The overall width of the street through the Balkerne Gate is less clear because the positions of the footways and frontages to the east have not been established. However the street may have been 60 rather than 55 pM wide because it was originally the *via decumana* of the fortress and the excavation at Culver Street indicated that a similar street, the *via principalis,* was 60 pM wide (p 49). This would have the effect of making the footways 15 pM across rather than 12.5 pM.

The date of the Roman town wall and the post-Boudican development of the town

[Figs 2.9-11]

The dating of the Roman town wall (Fig 2.9) has always proved difficult. Only in the 1960s was it realised that the wall had initially been free-standing (Dunnett 1971, 68-9) and thus was not to be dated by the rampart behind it as had previously been

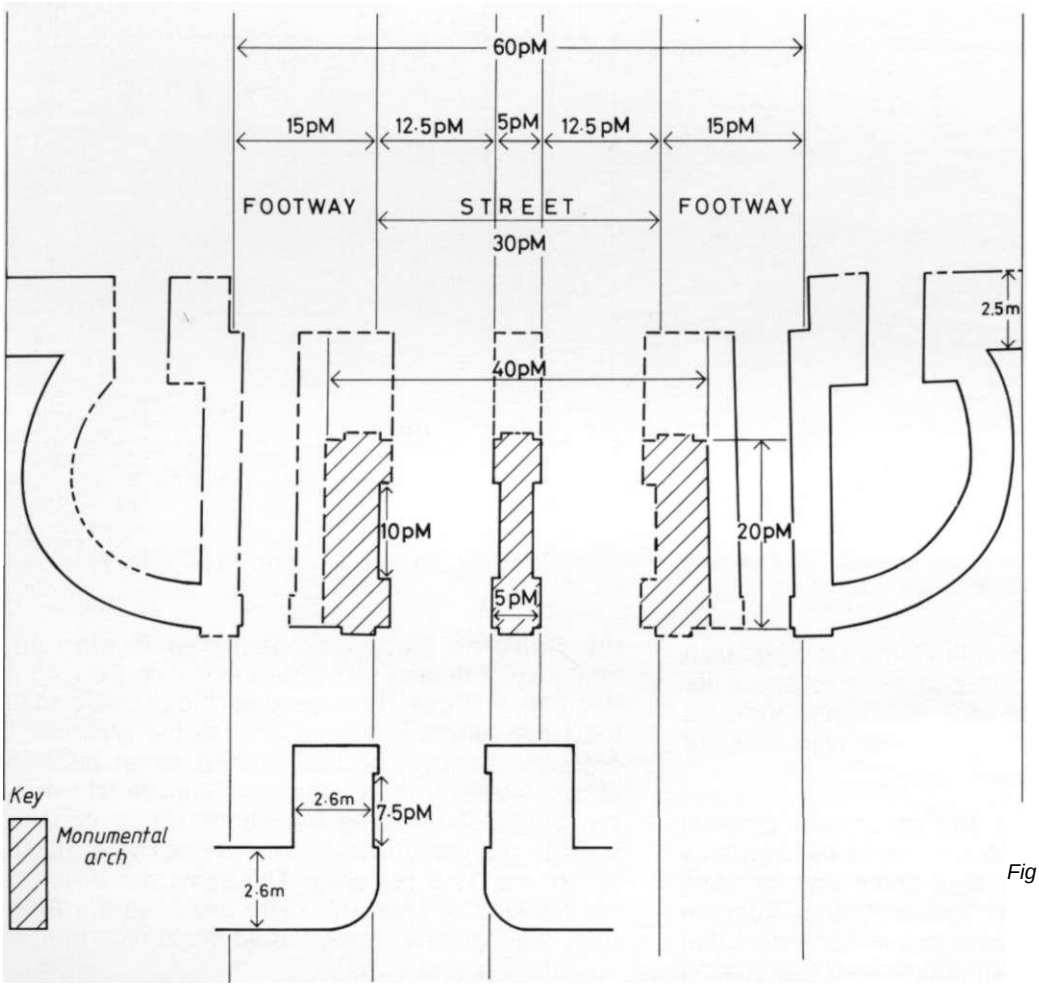


Fig 2.8 The planning of the Balkerne Gate (centre), Duncan's Gate (below), and the streets through both gates. [Pages 13-14]

supposed. The section behind the wall at Lion Walk provided dating evidence for its construction but it was only small in quantity. Here the latest material in or under the construction level was a sherd of *terra sigillata* of *c* 65-80 date *(CAR* **3**, 73). There was nothing from the site which implied that the wall need have been constructed after this time. It was only the relationships of the Romano-Celtic temple (Building 52) and ?shrine (Building 53) at Balkerne Lane to two successive town ditches which suggested that the date of the construction of the wall was to be placed in the first part of the 2nd century rather than the last part of the 1st *(CAR* **3**, 15). However, the section behind the wall at Culver Street (pp 62-3) not only produced dating evidence which reinforced that from Lion Walk but produced it in greater quantity. Moreover, unlike Lion Walk, the construction level for the wall at Culver Street appeared to directly overlie Boudican destruction debris which was *in situ.* (Unfortunately there was no stratigraphic link between the equivalent deposits at Lion Walk.) Thus the weight of evidence for a date of *c* 65-80 for the building of the wall is now very much greater and there is now a need to review the interpretation of the relationships between the relevant buildings and the defences at Balkerne Lane and the implications this has on our understanding of the development of the Roman town as a whole.

Key facts relating to the relationships at Balkerne Lane are as follows. The Romano-Celtic temple and the ?shrine were built on the sites of the butt ends of a large defensive ditch. The latter was dug after the Boudican revolt and backfilled in the Flavian period *(CAR* **3**, 115). The Romano-Celtic temple could not have been built before *c* 100 *(CAR* **3**, 123). Later, the ditch was replaced in such a way that the new butt ends were swung around the two buildings to leave them standing between the ditch and the town wall.

Two interpretations of the sequence of town development (Figs 2.10 & 2.11) are possible on the assumption that the new town wall would have been accompanied with a ditch.

The first interpretation (Fig 2.10) — the one put forward in *CAR* **3** — was based on the assumption that the replacing of the ditch at Balkerne Lane and

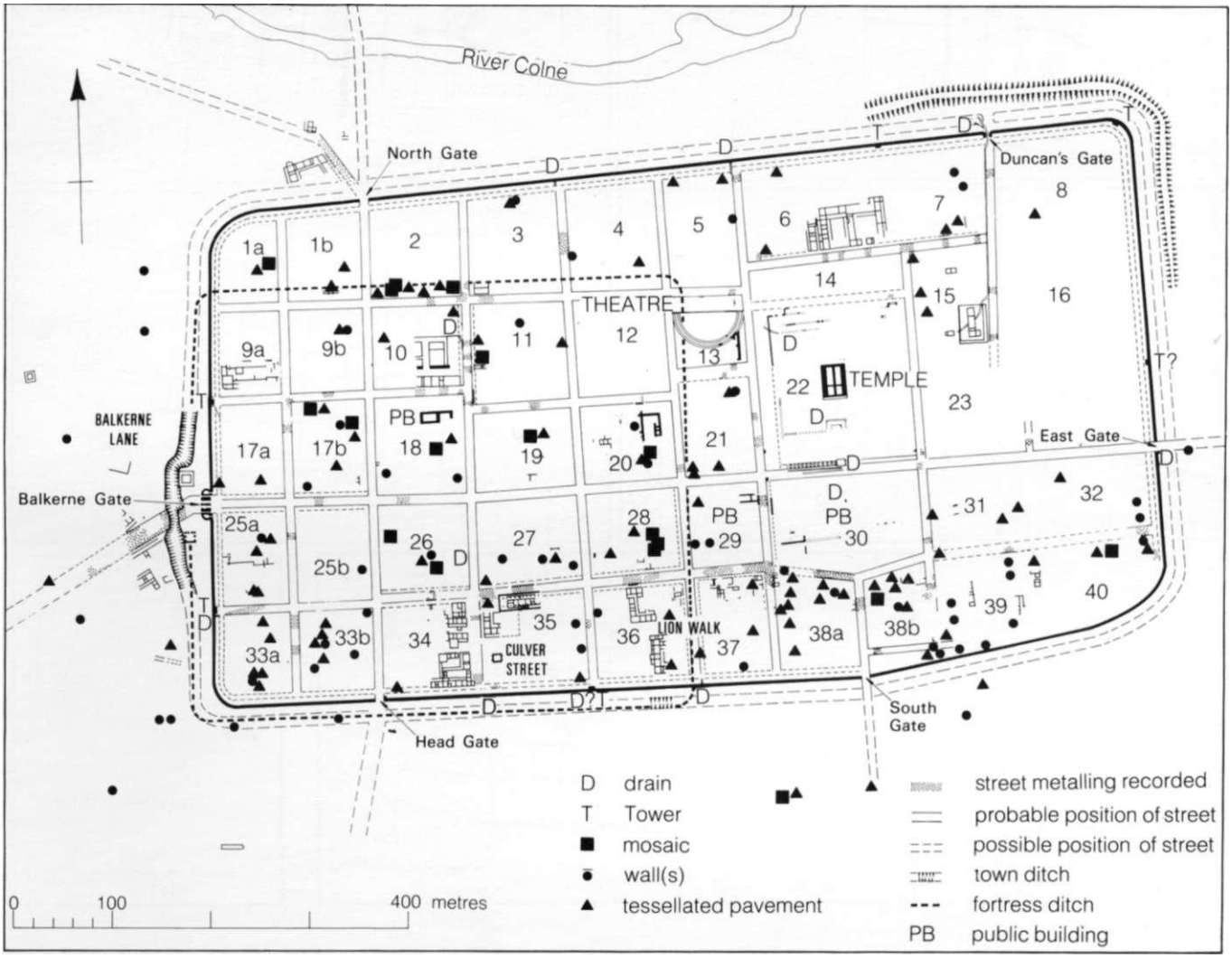


Fig 2.9 Roman Colchester c AD 300 showing the position of the town wall and the filled-in fortress defences.

the building of the wall were contemporary developments. Hence, since the Romano-Celtic temple could not have been erected before *c* 100, then the same *terminus post quern* had to apply to the building of the wall. And from this it would follow that the backfilled ditch must have been part of defences which predated the wall and existed within the period 60/1 to *c* 100. This argument was developed further by taking other factors into account to envisage a defensive circuit of Flavian date which was smaller than that subsequently represented by the town wall. The full case is set out in *CAR* **3**, 11-15 and need not be repeated here.

The second interpretation (Fig 2.11) is based on the assumption that the post-Boudican ditch sealed by the two buildings at Balkerne Lane was dug when the wall was built. This would mean that the wall must have been constructed after 60/1 but before 100. The dates and sequence of the changes to the town's defences otherwise remain as before. The Period 4 enlargement of the defended area of the town can still be accommodated within the alternative scheme but the new area would have been separated from the rest of the town by the wall even although at least parts of the ditch had been backfilled.

In the second scheme the proposition seems odd that, having invested in a wall, apparently the Roman authorities were later content to compromise the quality of their defences with the addition of a secondary bank and ditch. None the less, whatever the explanation for this, the second scheme has many advantages. It simplifies the interpretation by

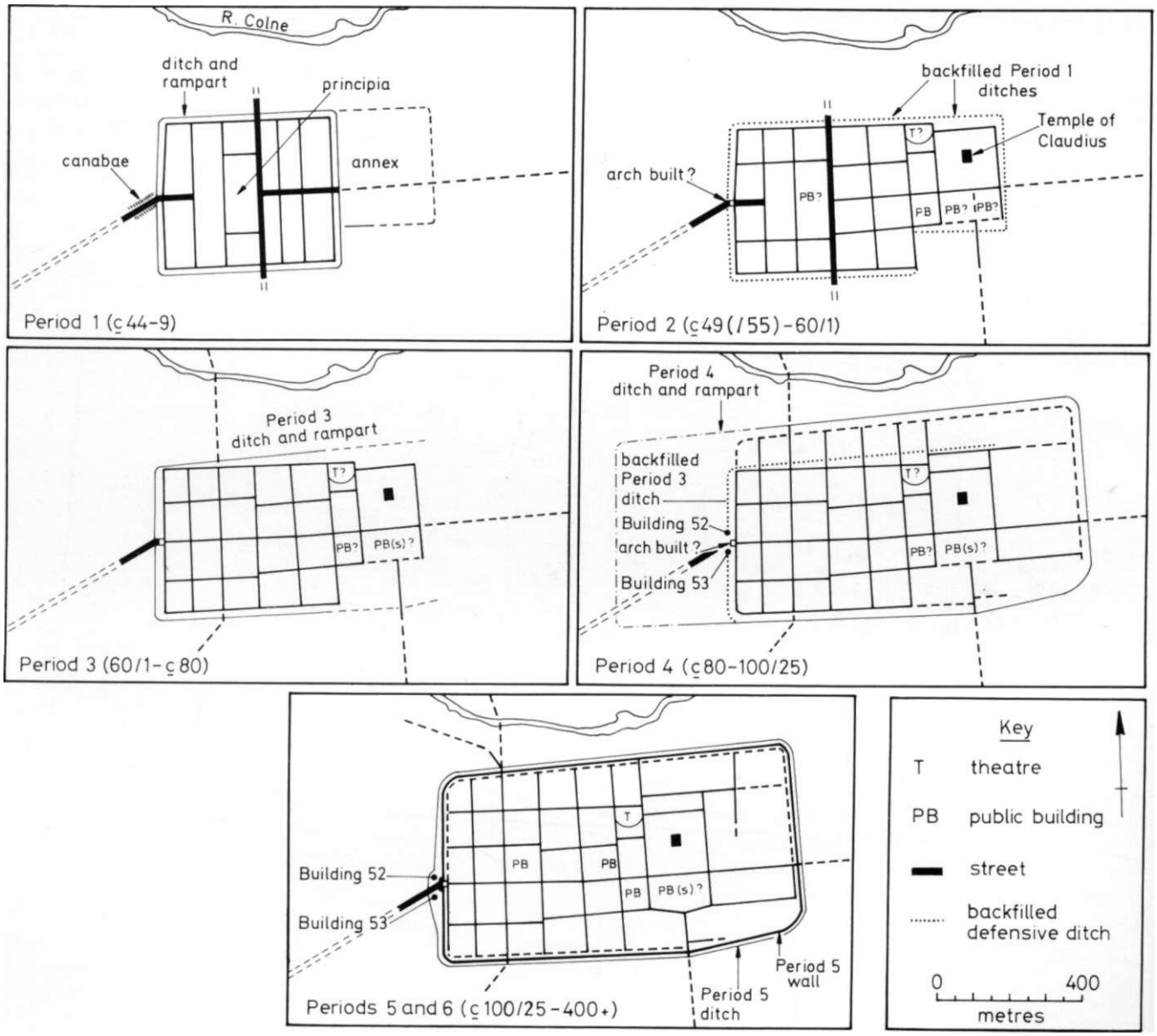


Fig 2.10 A possible sequence of town development based on an early 2nd century date for the construction of the Roman town wall. [Pages 15-18]

removing the need to postulate a separate defensive circuit for the late 1st century (Period 4), the archaeological justification for which is otherwise slender. And it also avoids the problem of having to explain why the Period 4 rampart was removed in those places where it coincided with the site of the later free-standing wall. But primarily, it suits the dating evidence from the Lion Walk and Culver Street sections for the construction of the town wall. And moreover placing the event shortly after the Boudican revolt means that now an historical context can be provided for the construction of the wall. Tacitus wrote that the colony had no fortifications at the time of the Boudican attack *(Annals* xiv.32) — a statement supported by excavation *(CAR* **3**, 8). Out of the inevitable recriminations in the aftermath of the revolt, presumably there came the resolve that a wall had to built around the colony to ensure that it was never to be so vulnerable again.

It is unclear how soon after 60/1 work began on building the wall. The limited dating evidence from the sections behind the wall at Lion Walk and Culver Street indicates that it must have been erected no earlier than *c* 65 and 80 respectively in those two places. Presumably the wall was built in stages and took many years to complete. The scale of the project and the state of the town and its population immediately after the revolt suggest that there may have been a delay of a few years between 60/1 and the start of the building programme.

Pushing back the date of the wall also means that the monumental arch at Balkerne Lane can be dated with

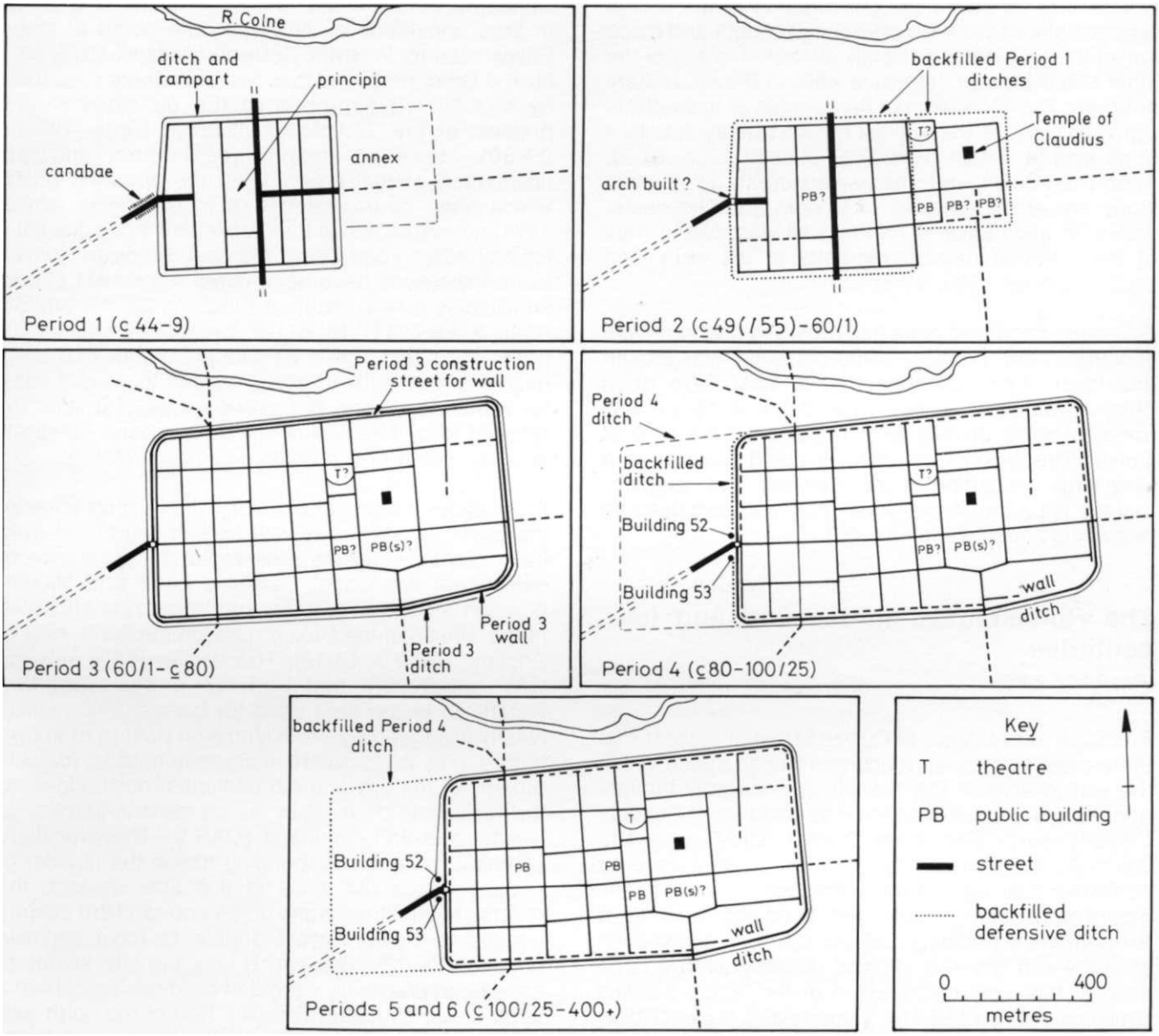


Fig 2.11 A possible sequence of town development based on a date of c 65-80 for the construction of the Roman town wall. [Pages 15-18]

more confidence to *c* 50 than was possible before *(CAR* **3***,* 121-3). The arch could only have been built when there were no defences at Balkerne Lane. This means that, with the scheme of town development as proposed in *CAR* **3***,* there were only two possible periods for its construction, namely 49-60/1 (Period 2) or 80-100/25 (Period 4). If, however, the wall was built *c* 65-80, then the latter choice is removed to leave only 49-60/1. It is just conceivable that the arch was built immediately after the revolt, presumably to record the defeat of Boudica and the recovery of the town. But this would mean tight programmes for the building of the arch and wall and a spectacular level of ineptitude in the planning of both projects since whoever designed the arch would hardly have visualised the monument being encased in the Balkerne Gate especially when the arch was less than a few years old.

A date of *c* 65-80 for the construction of the wall is substantially earlier than previously thought and much earlier than the dates currently attributed to any of the other major Roman defensive walls in Britain, military or urban. The stone wall of the fortress at Inchtuthil is Domitianic and is the earliest known military structure of its kind in Britain (Pitts & St Joseph 1985, 61-2). Apart from Colchester, the earliest urban defences in stone are at the colonies of Lincoln and Gloucester where, in each case, a narrow wall was built in front of the retained military ramparts in the early 2nd century (Jones 1983, 91-3).

One other important point has emerged relating to the construction of the wall. Some of the tile was broken and incomplete indicating that it must have been obtained as scrap (p 64). How much of the tile was fragmentary is unclear but, to judge by the face at Culver Street and elsewhere, it could have been a very large proportion of the material. This suggests that the appearance of the wall may not have been an overriding consideration.

The Roman town in the 2nd and later centuries

[Figs 2.12 & 2.10]

From the excavations at Culver Street, it is clear that there must have been much more open space within the walled area of the town than previously thought and that much of this space was used for cultivation. Equally surprising from Culver Street was the discovery that some of the open areas were used for horticultural or agricultural cultivation — even to the extent of including dedicated buildings such as a tower-granary (Building 125; pp 108-9), a drying oven of some sort (pp 108-12) and possibly even a large barn (if that was the function of the aisled building (Building 127; pp 112-16). There is also the possibility that stock was kept on or at least close to these areas (p 284). Probably most of the open areas in the town were close to the wall. At Culver Street, it was the southern part of the site which was open the longest. At Lion Walk, there was similarly-placed cultivation and at the Gilberd School, soil coupled with the absence of any substantial buildings after 60/1 indicates that, even if not cultivated, the area must have at least been largely open.

The period of 150-250 may have been one of growth in the town because at Culver Street and Lion Walk cultivated areas were built over during this time. At Lion Walk, Building 19 was erected *c* 150 on land which had been vacant probably since the foundation of the colony, and at Culver Street during the first half of the 3rd century, a complex of buildings (Buildings 115, 116, & 120) was placed on a large block of land which had been open since the Boudican revolt.

Mrs Niblett identified two areas within the town walls which she suggested had been affected by post-Boudican fires (Dunnett 1971, 3-4 & 1975, 53) and wondered if these could have been related to a series of fires apparently of Antonine date noted at other Essex sites by Warwick Rodwell (Rodwell 1975, 93). Mr P J Drury proposed that one of the fires described by Mrs Niblett extended to the buildings of the precinct of the Temple of Claudius (Drury 1984b, 29-30). However, despite the number and the distribution of the excavations and watching briefs which have been undertaken in Colchester since 1971, no evidence has been observed since that date for any widespread fire in the post-Boudican Roman town. Indications have been noted since 1971 of odd small-scale fires such as at Buildings 22, 47, and 55 *(CAR* **3***,* 66-7, 117-19, & 128-9 resp) but nothing has been seen that could be interpreted as indicating destruction on a large scale. Indeed there is a case for wondering if one of the two cases of a later fire referred to by Mrs Niblett could have been Boudican after all *(see* 3/77a, p 835).

From about the late 3rd century, the built-up areas of the town, intramural as well as extramural, seem to have started shrinking. The rapid disappearance of extramural houses at Balkerne Lane and Middleborough around 275-300 is probably to be attributed to the effects of the Saxon raids on the south-east of England *(CAR* **3**, 16-19). This decline in the suburbs was apparently matched by a corresponding expansion of the area used for burials. The latter is clearly illustrated by the distribution pattern of known burials (Fig 2.12) where most inhumations (datable broadly to the 3rd and 4th centuries) occur closer to the walls than do most of the cremations (datable to the 1st and 2nd centuries) *(CAR* **9**). However there seems to be no corresponding rise in the number of houses inside the walls at this time; in fact, the reverse seems true. None of the 2nd- and 3rd-century houses at Culver Street appear to have survived beyond 275-325 after which time the site seems to have been practically devoid of buildings apart from a large aisled structure (Building 127) at the north-east corner of the site. Three of the six houses partly excavated at Lion Walk (Buildings 20, 21, & 22) were knocked down and their sites left vacant well before the end of the Roman period. The demolition of two of

these three buildings can be dated, ie Building 20 down *c* 300 and Building 22 down *c* 350 *(CAR* **3***,* 70).

Clearly there must have been radical changes going on not only in the suburbs but also within the walled part of the town in the late 3rd and 4th centuries. It may well be that, as supposed in London for example (Marsden 1980, 167), the population was declining although there must nevertheless have been a substantial population in the 4th century as the large cemetery at Butt Road shows. Here over 650 4th-century burials have been excavated out of a likely total for the cemetery of at least twice that number *(CAR* **9***)*. Other 4th-century burials have been found elsewhere in the town so that the total number must have easily run into many thousands. Where did these people live? It is noticeable that the excavated sites with the highest proportion of late Roman material are the two High Street sites at the Cups Hotel (pp 328-38) and the Angel Yard (Frere 1987, 332) excavated in 1972-4 and 1985-6 respectively. It is possible therefore that the demolition of houses at Culver Street, Lion Walk, and the suburbs was matched by the growth of a medieval-style town where domestic and commercial activities were focused on one street which in this case was the High

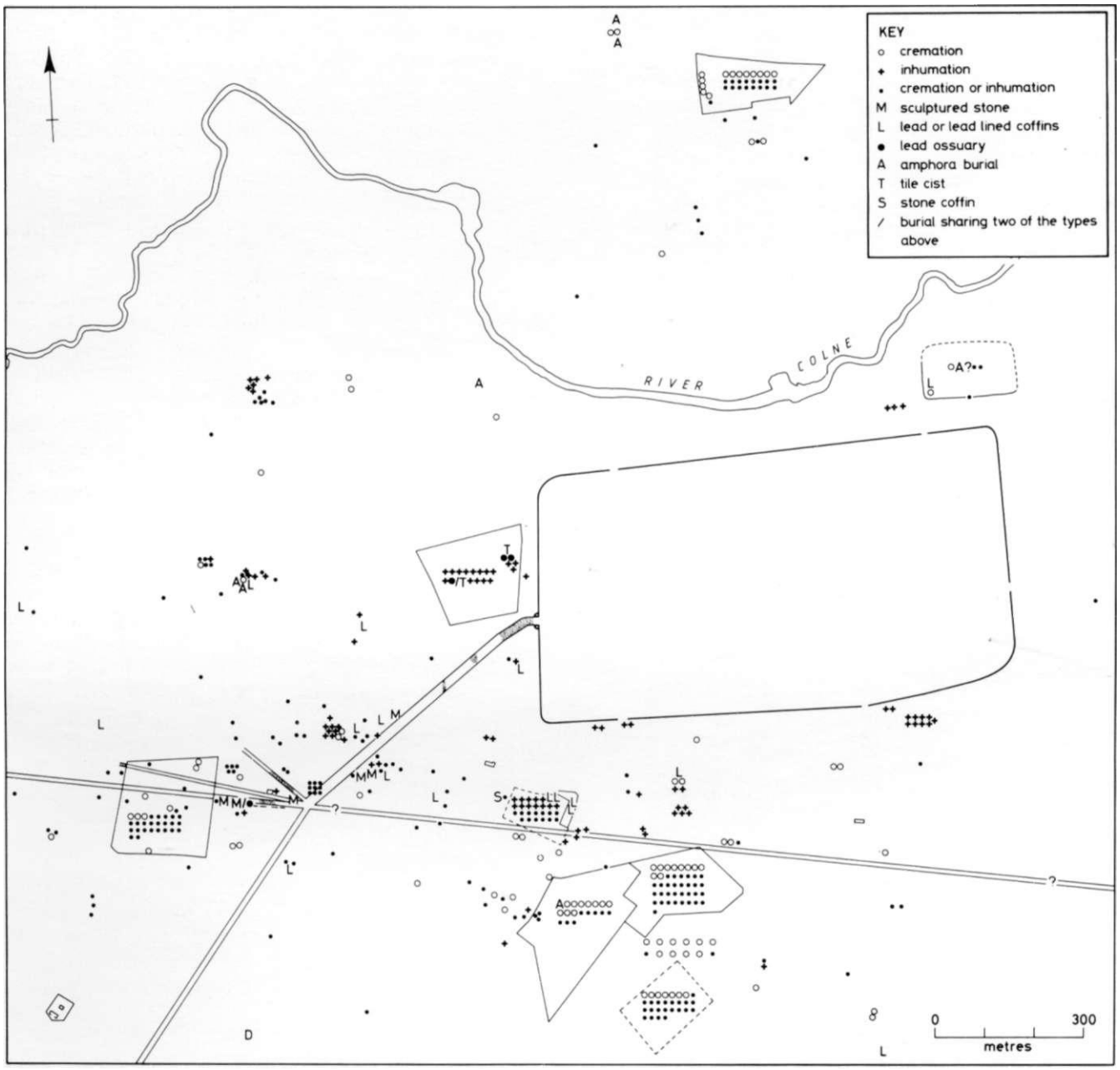


Fig 2.12 The distribution of known burials close to the Roman town wall. Those inside the walled area are omitted. [Page 18]

Street. Despite the excavations at the High Street sites just mentioned, little is known about the late Roman buildings in this area. Conceivably they could have been smaller and more closely packed than the buildings demolished elsewhere in the town so that the demolition of the latter need not necessarily imply a change in the size of the population, more a change in the size and style of types of dwelling.

Evidence for the survival of Roman property boundaries into the post-Roman period has been deduced in the past from a series of foundations uncovered in the High Street which align with modern property boundaries (Hull 1958, 159; *CAR* **1**, 48-9). However excavations at Angel Yard in the mid 1980s indicate that the foundations concerned are of medieval or post-medieval date.

3: EXCAVATIONS AT CULVER STREET 1981-2 AND 1984-5

*by Philip Crummy, Donald Shimmin, Geoffrey Carter, and N A Smith **

Overview

Pre-Roman occupation

[Fig 3.1]

The earliest occupation on the site was represented by a small pit (EF1457) containing large fragments of Neolithic Grooved Ware pots and a large water-worn stone (a ?rubbing stone from a quern), all apparently deposited as part of a ritual (p 317). There was also a scatter of flints and pottery ranging in date from Neolithic to Middle Iron Age with a marked concentration of the Neolithic material on Site E. There was however no indication of occupation immediately predating the Roman invasion.

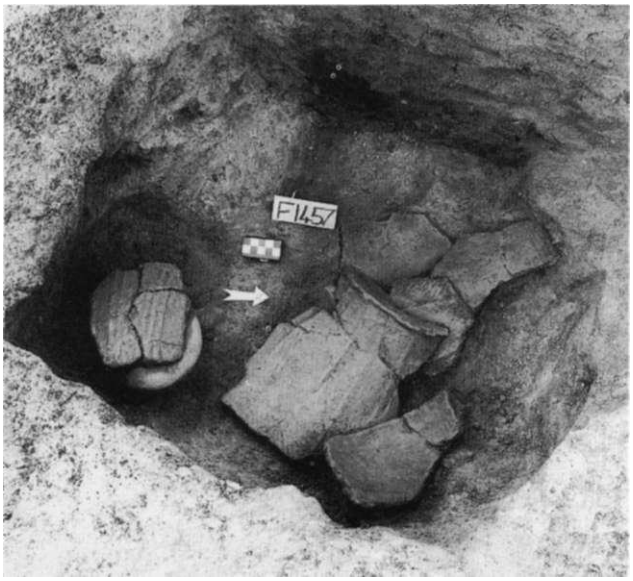


Fig 3.1 Neolithic pottery in pit EF1457. The sherds in the bottom left-hand corner lie on top of a large water-worn stone.

The Roman military period (Period 1: *c* 44-49)

[Fig 3.2]

The topsoil and parts of the underlying subsoil were stripped off over all of the site during the preliminary works associated with the construction of the fortress. The streets were laid out but not initially metalled. Before the barracks were constructed, various pits were dug in the north-west quarter of the site. Of these the most significant were three bowl-shaped ovens or furnaces of uncertain purpose on Site A and an oval pit on Site C reminiscent of the early pits excavated on North Hill (Dunnett 1967, 29).

Extensive use of the streets prior to metalling was indicated in three places at Culver Street. On Sites A and G the first gravelled street surfaces sealed some ruts, those on Site G being accompanied by a bovine hoof print. And on Site E the metalling overlay what appeared to have part of a wattle wall which had been demolished during the course of alterations to the adjacent Building 83. Only part of the street between the two barracks at the Gilberd School site was metalled (p 132) showing that the streets at Culver Street need not have been gravelled over for years.

The military buildings at the Culver Street site lay to either side of the southern end of the *via principalis* and, as noted for the fortress as a whole (*CAR* **3,** 3), were aligned to within half a degree of true north. On the west side of the street were the six barracks of the first cohort whilst on the east side were parts of two, possibly three, large buildings. No doubt the southern end of the *via principalis* would have terminated at the *porta principalis dextra* but this lay just beyond the limits of the Culver Street site.

The excavated parts of the buildings on the west side of the *via principalis* were clearly identifiable as centurions' quarters at the eastern ends of legionary barrack blocks. The buildings must have been intended for the first cohort because they were wider than the barracks excavated elsewhere in the fortress (p 7) and because they stood on the *porta dextra* side of the *principia.* The exceptional size of these barracks must be related to the higher status of their occupants and was presumably linked in some way to the reorganisation of the first cohort which took place in the 1st century (p 24).

The remains of the three northern barracks were very well preserved because of the substantial depth of the Boudican destruction debris and the rarity of the kinds of deep post-Roman pits which usually prove so destructive elsewhere in the town centre. This was in marked contrast to the remains of the other three barracks to the south which had been badly affected in later Roman times by cultivation and partial robbing of many of the plinths.

The principal walls of the barracks were built of sun-dried blocks of sandy clay laid on two parallel timber ground-plates resting on well-constructed mortared plinths of the kind found at Lion Walk and

* This report was compiled and mainly written by Philip Crummy. Sites B and C were phased and written by Donald Shimmin who also supervised the excavation of those sites. Geoff Carter and N A Smith supervised Sites J/G/H and A/E respectively and provided draft phase plans and notes for those areas. Howard Brooks supervised Sites D, K, and M.

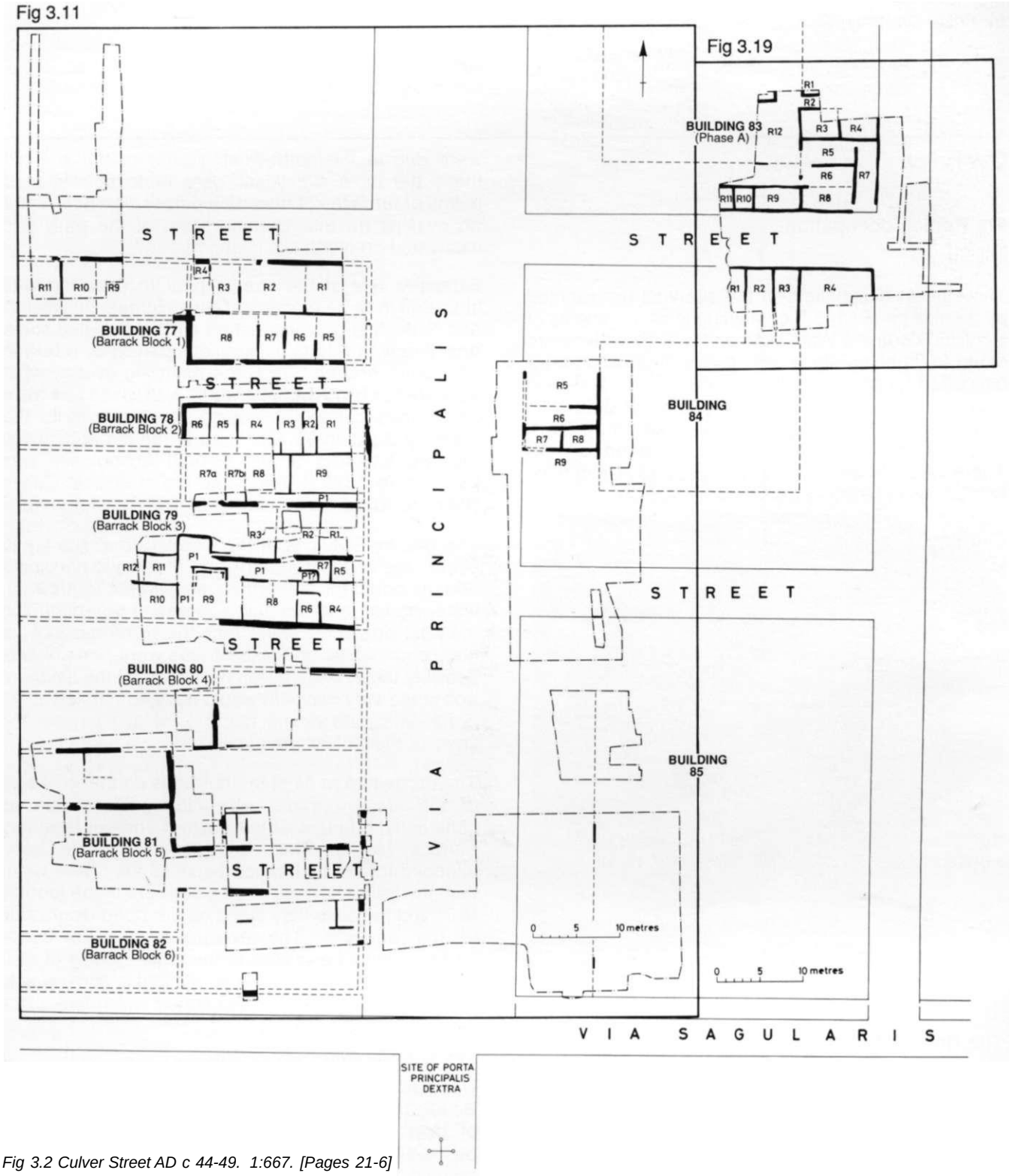


Fig 3.2 Culver Street AD c 44-49. 1:667. [Pages 21-6]

elsewhere in Colchester and discussed in *CAR* **3** (pp 20, 22, & 31). This type of construction was used for load-bearing walls, ie the external walls and the spine walls between two barracks built back-to-back. The cross walls forming the western ends of the centurions' quarters were also of this type although it is not clear if these were load-bearing.

Each plinth was 0.60-0.65 m wide and 0.35-0.40 m high. They were made by pouring a mixture of mortar and stones between two lines of shuttering planks set on edge (*CAR* **3**, 20). In the north-west corner of Barrack Block 2, the planks had not been securely fixed together with the result that the end of one of the boards slid upwards slightly allowing the pebble and

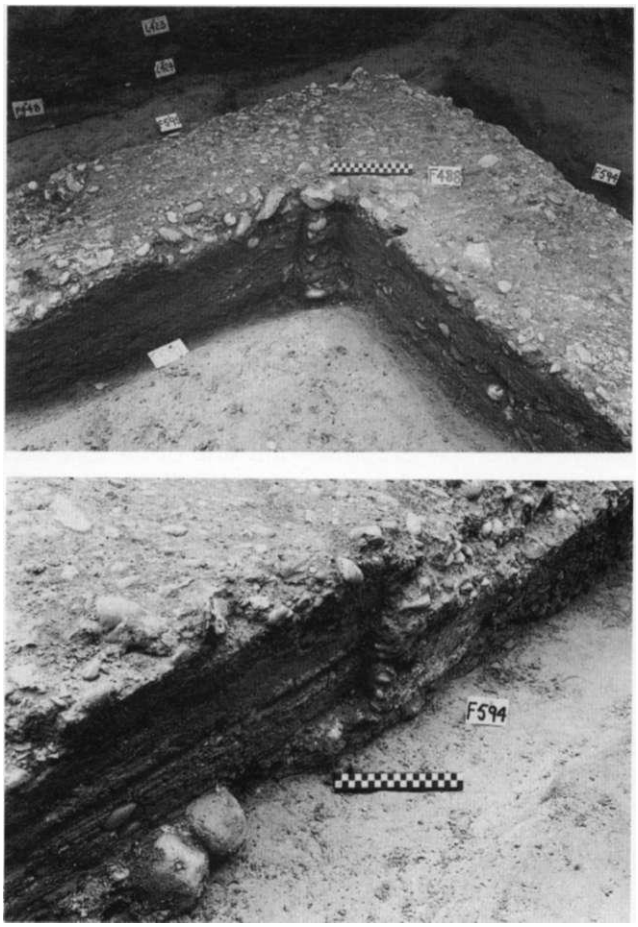


Fig 3.3 Imperfections in the casting of the military plinth BF488 of Building 77. Above: in the angle. Below: in the north face where a board slipped upwards before the mortar had set. [Page 22]

mortar mix to ooze out underneath (Fig 3.3). The same poor workmanship was evident in one of the corners where the shuttering boards had not been properly butted against each other (Fig 3.3).

The plinths of Barrack Block 1 were dismantled and examined. That of the north wall (BF546) consisted of 80 per cent water-worn pebbles and 20 per cent septaria, with some of the latter being roughly faced and used as edging pieces. By contrast, the south wall (BF487) had a high concentration (30 per cent) of gravel/iron-pan concretions, with only 10 per cent septaria, the remainder being pebble. Construction trenches were not normally used in association with plinths *(CAR* **3,** 20) unless, as in the cases of Barracks 1, 2 and 3, the building had to be built on sloping land. The absence of tile or brick (whole or fragmentary) in the plinths must be significant and presumably points to the walls being early in the life of the fortress when, although tiles were available, broken pieces were still comparatively rare.

The timbers along the tops of the plinths were each 100 mm wide. Their existence is in no doubt because in Barrack Blocks 1 and 2 parts survived *in situ* as charred fragments. The purpose of the timbers is not clear. They were not part of a timber-frame because, as was evident from a corner in Barrack Block 1 (pp 39-40, Fig 3.14), the superstructure of the walls consisted only of sun-dried blocks. The most likely explanation is that the timbers were intended to provide the plinths with horizontal rigidity so as to counteract the possibility of localised subsidence into pockets of soft soil under the plinths. The plinths themselves would have had only limited lateral strength because the aggregate, being quite large and rounded, would not have locked together very well. The timbers may also have helped reduce rising damp.

Some of the timber plates were bedded in a thin layer of sandy clay loam applied to the tops of some of the plinths. A thin daub coating was also used to 'render' the inside faces of the block superstructure. Before drying, this was scored or stamped *(CAR* **3,** 23) in readiness for plastering. However, in at least one place where keyed daub survived *in situ,* there was no sign that plaster had ever been applied; either it had fallen off cleanly or the task was never completed.

The non-load-bearing walls of the barracks were much narrower (about 150 mm) than the others. They had single timber ground-plates set in shallow (55 mm deep) slots. Most, if not all, of the internal walls, were of the 'stud-and-wattle' type *(CAR* **3,** 21-2). Following the excavations at Lion Walk, it was not clear if this kind of wall occurred during the military period but it now seems that it did, clear proof being provided by some of the primary walls in Barrack Block 1 (BF515 & BF778).

Sufficient survived of the barrack blocks to show that the internal arrangements of the centurions' quarters were all different. In Barrack Blocks 1 and 2, small rooms of varying sizes were arranged on either side of a single wall which bisected the quarters longitudinally. Unlike some centurial blocks in other fortresses (eg Caerleon), there were no central longitudinal passages although, in Barrack Block 5 the layout of the fragmentary walls could be consistent with an internal passage of this kind and in Barrack Block 3 there appears to have been a central passage of sorts for part of the length of the centurions' quarters.

For any given fortress, generally the *contubernia* were all much the same in size regardless of whether or not they belonged to the first cohort. At Culver Street therefore, it seems likely that, following the evidence from the Gilberd School site, the *contubernia* of the first cohort ought to have been laid out to measure internally 12 x 20 pM (p 129; Fig 2.4, p 11). Unfortunately very little of the men's quarters could be excavated at Culver Street; only in two places were these areas reached (ie in Barrack Blocks 1 and 5) and in both cases details of plan were very limited and problematic. These can be reconstructed on the basis of 12.5 pM (12.0 pM internally) although an equally good case could be made for 15.0 pM (Fig 2.5, p 12).

The excavations at Culver Street throw little useful light on the question of whether the barracks had verandahs. Barrack Block 5 did have a ground-plate in a position which was compatible with a verandah but this could have been the result of a secondary alteration to the building. In any case, to judge by the barracks at the Gilberd School site, had a verandah existed, the posts would have been set in post-pits rather than mortised into a ground-plate.

The centurions' quarters at Culver Street were of three different sizes. All were roughly twice as long as they were wide. Those of Barrack Block 3 were the largest and were 45 pM wide measured internally. Those of Barrack Blocks 1, 2, 5, and 6 were 37.5 pM across internally whilst the width of those of Barrack Block 4 was the same as those at Lion Walk, ie 30 pM. The largest and smallest barracks were placed opposite one another so that the space taken up by each pair of facing barracks was almost exactly the same (ie 94 pM excluding the spine walls) (Fig 2.5, p 12).

Interpretation of Barrack Block 3 has its problems. Not only was it larger than the others, but the layout of its internal walls was different in style to that of the other buildings. It contained one east-west internal wall which, although without a mortared plinth, may have been load-bearing. This is probably to be explained by the exceptional span of the building which may have necessitated some additional support. Even allowing for the effects of this extra wall, the layout was still distinctly different in style to the others. The difference lies in the central and western parts of the area excavated where short stretches of walls or drains, many at right-angles to their neighbours, give the impression of two, possibly three, three-sided cubicles of some sort (Fig 3.11: a, b, & c) irregularly-placed within this part of the block. One explanation for this arrangement is that each of these apparent cubicles represents the remains of a stall for at least two horses. Thus the eastern part of the block, with its small rooms and latrine, could be seen as providing accommodation for a centurion whilst the rest of it was given over to stabling. However, the floors in and around the 'cubicles' were of sandy clay and did not seem to have been churned up in the way that might be expected if they had been inside a stable.

The street along the north side of Barrack Block 1 was narrow and measured at least 6 m across. Little excavation was carried out to the north of the street although, from the small amount which was done, it seemed that no substantial military buildings had existed in this area.

Between Barracks Blocks 1 and 2, there were some indications of a possible water-main. Its presence is not certain otherwise this would have been the first evidence of a system of pressurised water supply in the military period in Colchester. Such a system is known to have existed by at least 60/1 (Dunnett 1967, 31; *CAR* **3**, 26-8).

The first cohort at Colchester appears to have been quingenary rather than milliary. Although this is not surprising since the rather limited evidence from elsewhere had indicated that this was likely to have been the case in pre-Flavian fortresses (Frere 1980; Pitts & St Joseph 1985, 168-9), the discovery of such an arrangement in Colchester helps confirm this conclusion. However there *was* sufficient space for a first cohort of double strength in its expected position. Depending on the size of the *principia,* there should have been space north of Barrrack Block 1 of between about 190 and 230 pM — enough for the 190 pM needed for the four extra barracks. But there was no indication of the existence of any such barracks at Culver Street (although admittedly the excavation at the extreme north end of the site was very restricted) and there was a street on the north side of Barrack Block 1 — it was not back-to-back with another barrack as would be expected had there been more than six barracks in the cohort.

The variations in the sizes of the centurial blocks at Colchester show that the development of the first cohort may prove even more complicated and difficult to understand than hitherto thought. The excavation of the centurial blocks of first-cohort barracks in other pre-Flavian fortresses is needed to see if the variations at Colchester are typical.

It may simply be that the largest block (Barrack Block 3) was that of the *primus pilus* whilst the smallest was for the *pilus posterior.* (Perhaps significant in this respect is the fact that Barrack Block 3 (Building 79) was the only barrack to yield fragments of window glass — *see* pp 117-19.) Another explanation is that, as appears in the 2nd century, the accommodation provided for the first cohort consisted of five centurion-houses and six centurial barracks, the extra century being under the command of the *primus pilus.* In this case the two central centuries at Culver Street could have been assigned to the *primus pilus* whilst the small 'centurial' block (Barrack Block 4) could have provided his unit with extra accommodation of some sort.

Whatever the explanation for the variations in the sizes of the centurions' quarters, it is clear that apart from that of Barrack Block 4, they were larger than the standard centurion's quarters in the fortress. The partly reconstructed plan of the Neronian fortress at Gloucester assumes that the centurial quarters of the first cohort were the same as the others in that base (Hurst 1988, 52, fig 3.4). Clearly this need not have been the case; indeed as has already been suggested elsewhere, larger centurion-houses at Gloucester would have the merit of reducing the assumed number of *contubernia* to a more normal level (Pitts & St Joseph 1985, 165).

Only small parts of the buildings on the east side of the *via principalis* (Buildings 83-5) could be examined. These took the form of large rectangular or square buildings built entirely using the post-in-trench technique. Presumably they represent three of

the eight buildings which normally occupied the *scamnum tribunorum.* Since only six of these buildings would have been intended for the tribunes, there is the likelihood that at least one of the three at Culver Street would have been constructed for some other purpose. Each of the buildings seemed to consist of four ranges of rooms, 30 pM wide, around a central open yard. The absence of plaster in the demolition debris indicated that the buildings had not been decorated internally.

Building 84 contained some hearths and some metal-working debris indicative of brass-working and perhaps small-scale smithing (p 55). It is thus possible that this building was a *fabrica* although no waste materials of this type were found in any significant quantity in the west side of the building (on Site M). Building 83 is more likely to have been a tribune's house because a latrine in the south-east corner of the building contained evidence that the inhabitants enjoyed a wide diet and used expensive table-ware. Excavation of Building 85 was limited to only doing enough to establish its existence. The position of the street between Buildings 84 and 85 is uncertain; if, as seems likely, it was the predecessor of the narrow street on the south side of Building 123 (a later courtyard house, pp 96-106), then it lay further north than is to be expected, hence making Building 85 rather large or else two separate buildings.

There were no indications of *tabernae* lining either side of the *via principalis.* Rooms 5-7 of Building 84 could be interpreted as such rather than having been part a large courtyard house except that they look to have been too narrow and irregular for *tabernae* and there was no evidence for an alternative western range of rooms for Building 84 immediately east of Rooms 5-7.

Roofs seem to have been tiled. The sturdy character of the external walls of the barracks gives the impression that they were designed to support the very considerable weight such as a tile roof would imply. Tile was certainly available when Buildings 83-4 were being built because fragments occurred in their construction trenches (p 251). Tile is surprisingly rare in the Boudican destruction debris of reused military buildings perhaps because the material was salvaged in the aftermath of the revolt, although about a hundred fragments were found in the burnt remains of Building 131 (p 129).

The floors of the military buildings were mainly of sand or sandy clay loam but there were at least two wooden examples in Barrack Block 1 (Rooms 1 and 2) and perhaps another in Building 83 (Room 7). These were not the suspended type used in houses today where a ventilated air gap exists below the floor to prevent the wood decaying because of damp. In contrast, the wooden boards in the military buildings were laid directly on top of the ground which probably explains why one of the floors (in Room 2 of Barrack Block 1) had been replaced despite its relatively short life.

Wooden floors were rare and may have been favoured in places such as wash-rooms or latrines where they could have provided dry standing and more easily cleaned surfaces. Of the two wooden floors in Barrack Block 1, it may thus be significant that the one in Room 1 seemed to have been directly associated with a latrine pit. The arrangement however was not straightforward. There was more than one drain, the latrine pit was in an adjacent room, and the wooden floor could not have been a primary feature because originally the room contained several large pits. The other room with the wooden floor in Barrack Block 1 (Room 2) had no drain or a latrine pit although, being next to Room 1, it still may have been linked with latrines or wash facilities of some sort.

The latrine in Room 7 in Building 83 was of a simpler arrangement. It consisted of a long narrow room with a covered, or at least partly covered, timber drain along the centre leading to a deep timber-lined latrine pit at the south end. As already mentioned, this room may have had a wooden floor. How the latrine worked is not clear. Presumably the pit had seating for two or three people above it as shown for example in the reconstructions of the free-standing latrines in the fortress at Usk (Manning 1981, figs 57-8 & 83-4) and therefore the drain along the centre of the room functioned as a urinal or provided drainage in what was in effect a washing area within the latrine. Alternatively the timber drain might have had seating above it. The drain and floor (if it had been wooden) could have been sluiced out easily and the solid content of the latrine pit would need to have been dug out periodically.

In Barrack Block 2 the presence of a drain in Room 1 suggests that a latrine pit lay in the unexcavated part of the room to the east, and in Barrack Block 3, a large timber-lined latrine pit was situated in Room 2 in the centre of the building, well back from the street frontage. Neither of these latrine pits were associated with wooden floors.

Too little of the other barracks was excavated to establish whether or not these also had latrines. However it seems likely that there was probably a latrine in each of the centurion's quarters, the favoured positions being the angles between the *via principalis* and the streets between the barracks. Presumably these latrines were not for the use of the common soldier since otherwise they would have been on the *contubernia* side of the centurions' quarters.

Samples from some of the military latrines and related features revealed a wide range of eggshell, animal bone, and mineralised plant remains including the seeds of opium poppy, sloe or cherry, grape, and fig (pp 280-1, Fig 8.6). Also noted were mineralised faecal concretions which included bran and the eggs of a parasite found in the human gut (p 275, Fig 8.1).

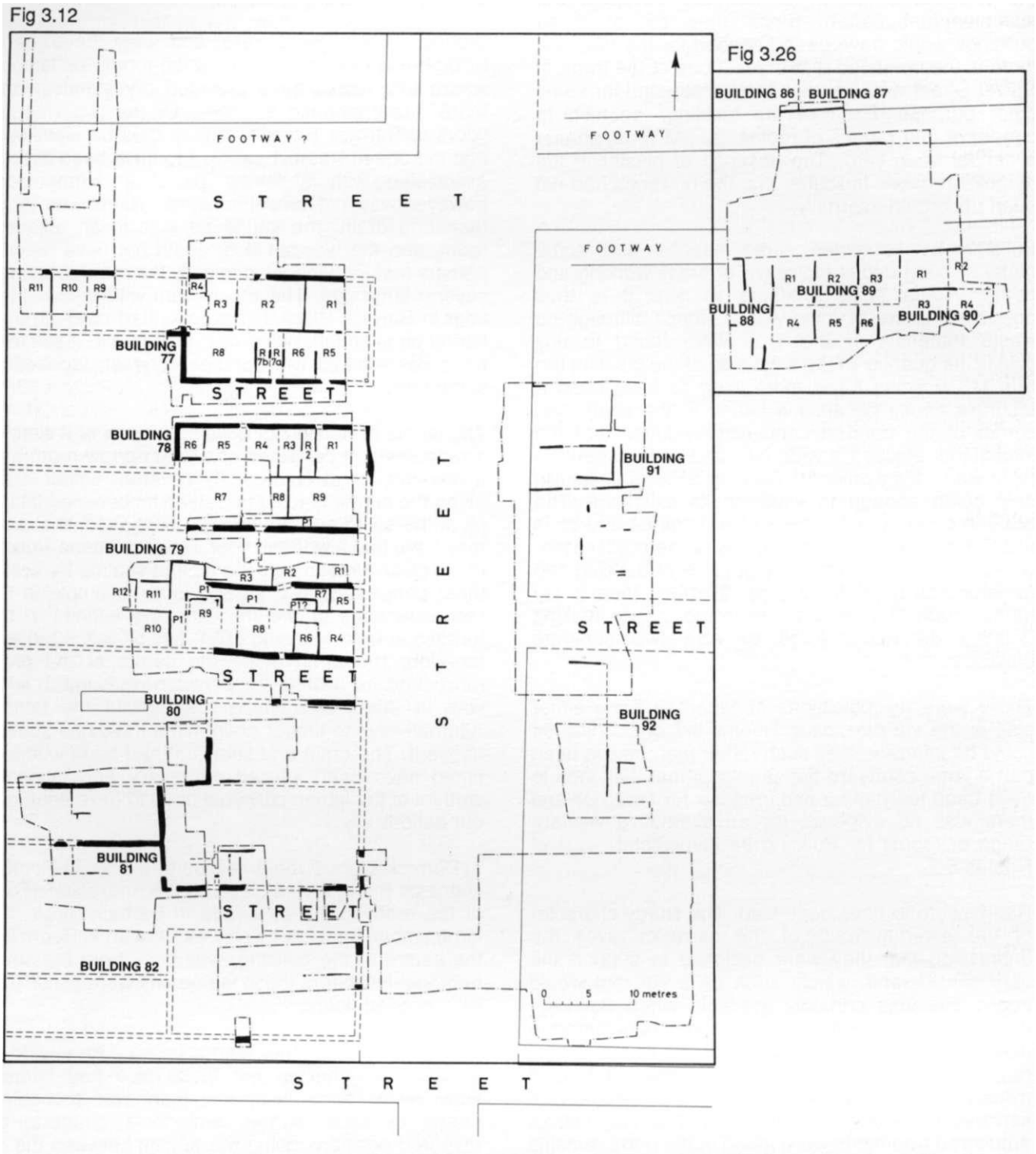


Fig 3.4 Culver Street AD c 49(/55)-60/1. 1:667. [Pages 26-7]

The civilian occupation (Period 2: *c* 49-60/1) [Fig 3.4]

A second phase of occupation was evident in all six barracks, terminating abruptly in the distinctive Boudican destruction horizon. The buildings must, therefore, have been occupied by civilians sometime after the founding of the *colonia* in c 49 *(CAR* **3,** 8). This is in contrast to Buildings 83-5 which were demolished and succeeded by a new street and buildings on a new alignment well before the Boudican revolt.

The *via principalis* and the positions of its two frontages were retained (Fig 3.5, p 28) but, since the defences of the fortress were dismantled with the foundation of the new town (Figs 2.10-11, pp 16-17),

the gate at the south end of the street *(porta dextra)* was presumably demolished.

In effect, the layout west of the *via principalis* at Culver Street was kept as it had been in the military period except that the street on the north side of Barrack Block 1 was widened to be more in keeping with the new streets of the town. There is some doubt about the position of the northern frontage of the street at this stage but certainly by the Flavian period it had been widened so that it measured the full 55 pM across (Fig 2.7, pp 10-14) including the footways.

On the other hand, the area on the east side of the *via principalis* was completely cleared of buildings. A new east-west street was constructed so that its western end passed over the site of Building 83 to terminate at the *via principalis* opposite the widened military street along the north side of Barrack Block 1. Its alignment was about 3 degrees different from that of the military layout. The new east-west street was the same as the Period 2 street excavated at Lion Walk where, as at Culver Street, it was found to have been built on top of the remains of military occupation *(CAR* **3***,* 37).

Small timber-framed houses (Buildings 86-90) were built on both sides of the new street. The remains of these buildings were not well preserved and difficult to interpret. However, it is clear that they had no overall coherence in plan like the well-known contemporary buildings in Insula 14 at Verulamium (Frere 1972, fig 8), although on each side of the street they appeared to share a common frontage wall and perhaps a footway or verandah. All the walls seemed to have been of the 'stud-and-wattle' *(CAR* **3**, 22) or 'stud-and-block' type (the exact method of construction being unclear) and each incorporated a single timber ground-plate. There were no mortared plinths. The stud-and-block type of wall is similar to the stud-and-wattle type except that the gaps between the upright studs were filled with sun-dried blocks of sandy clay. The blocks are discussed in *CAR* **3**, p 22.

Whilst there were some new floors and walls, the internal layouts of the reused barracks seem to have remained largely unchanged. New walls were built in the same manner as before (eg *see* the well-preserved stud-and-wattle wall BF841 in Barrack Block 2). Secondary walls were plastered and painted and there was at least one example of a stud wall which had apparently been infilled with small sandy-clay blocks (ie BF651 in Barrack Block 1).

The modifications and secondary floors cannot be ascribed to a specific period with any certainty. However they are taken to have occurred after the military evacuation of the fortress on the assumption that the civilian occupation of these buildings was a likely context for such changes and because the pre-Boudican civilian period was twice as long as its military predecessor, so that in terms of probability alone, the changes are more likely to have belonged to the AD 50s rather than the 40s.

The situation along the eastern frontage of the *via principia* is obscure since the earliest remains in this part of the site were poorly preserved because of the effects of later Roman cultivation. However, various slots and other features and layers suggest that the eastern frontage of the street was lined with buildings similar to Buildings 86-90. The relevant remains have been given two building numbers (Buildings 91 and 92) according to how they were grouped on the site although it is not clear how many separate structures these very fragmentary remains represent.

The new east-west street described above was part of the colonial grid laid out on the eastern part of the town. Since the new grid of streets may not have been finished until well into the 50s *(CAR* ***3****,* 8-9), it is possible that Buildings 83-5 may have survived the transition of fortress into colony and Buildings 86-92 may not have been built until well after 50. Accordingly the end of Period 1 and the start of Period 2 on the sites east of the *via principalis* is taken in this report to be 49(/55).

No evidence was noted of furniture in the buildings at the time of the Boudican revolt although this may in part be explained by the scope of the subsequent clearance operations. All that survived *in situ* on the floors were two small quantities of grain, one in the middle of Room 1 in Building 78 (the former Barrack Block 2) (p 45) and the other in the corner of Room 8 in Building 79 (the former Barrack Block 3) (pp 48 & 282).

Microscopic investigation of samples from the floor of Room 8 in the reused Barrack Block 1 indicated the sparse presence of a wide range of food remains, eg mussel and oyster shell, carbonised cereal grain, eggshell, and bone fragments of fish (eel and mackerel) and various mammals and birds. The implications of this material in terms of the use of the room are not clear.

The post-Boudican rebuilding and the Flavian period (Period 3: 60/1 - *c* 100)
[Figs 3.5-6]

The reused barracks (Buildings 77-82) were completely burnt in the Boudican uprising of 60/1, and the remains bore witness to the fierce temperatures involved. In places, especially in the middle of Building 77, subsequent clearance led not only to the shovelling-up of all the debris but also to the complete removal of the bases of the internal walls and the surfaces of the floors. This debris was presumably carted away and dumped outside the town leaving very little demolition material *in situ* except in pits which were open at the time of the fire (eg CF138 in Building 79).

All the streets, minor as well as major, were cleared of Boudican debris so that although the buildings were all destroyed, the pre-Boudican layout of streets survived the catastrophe with only minor

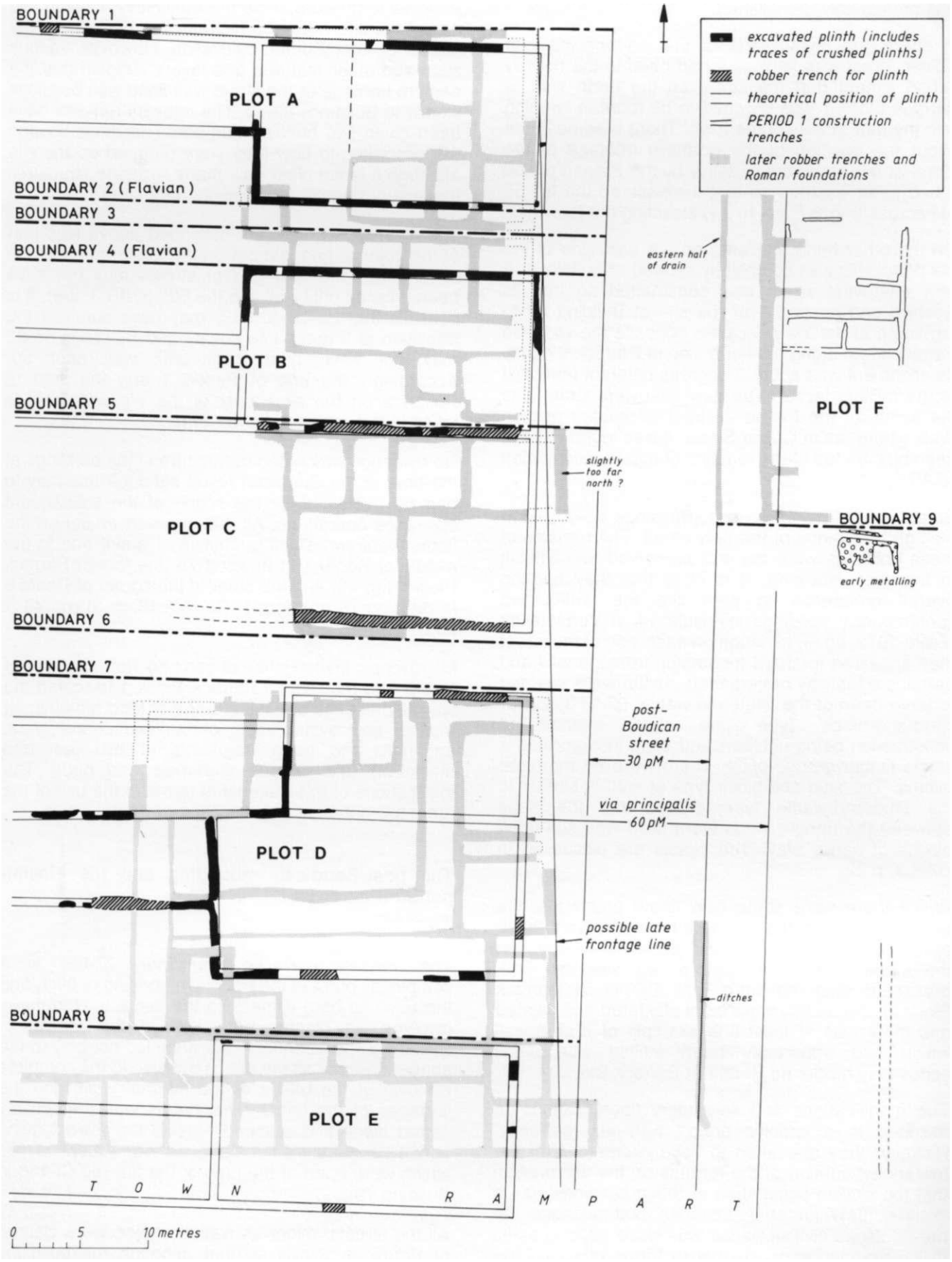


Fig 3.5 The development of properly boundaries on the west side of Culver Street. 1:392. [Pages 29-30]

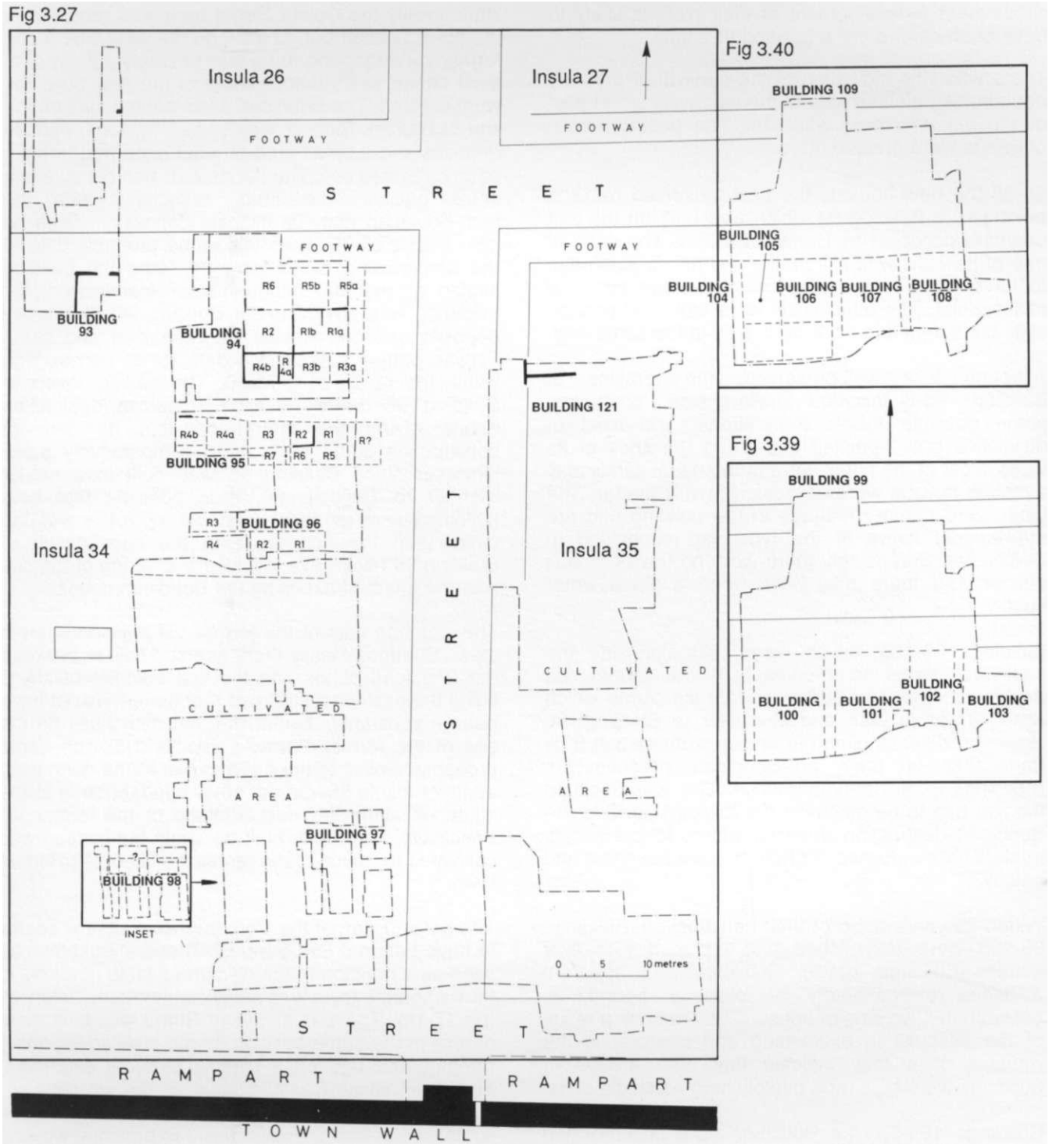


Fig 3.6 Culver Street AD 60/1-c 150/200. 1:667. [Pages 27-33]

modifications. The positions of some of the new building plots strongly echoed those of the pre-Boudican period. The plots of Barracks 1, 2, and 3 (Fig 3.5: Plots A, B, & C respectively) all survived to have buildings erected on them within 15-30 years of the fire. In contrast, the plots of the other barracks were largely vacant for perhaps as much as 150 years. They probably survived as two plots (Fig 3.5: Plots D & E) separated by the narrow street established in the military period between Barrack Blocks 5 and 6.

There may have been no intentional re-establishment of the pre-Boudican plots, the survival of the streets merely making it look as if there had been such an aim. The boundary between Plots B and C was in the same position as the spine wall between Barracks 2 and 3. This may simply be a coincidence. If not, then this shows that the clearance of the remains of the pre-Boudican buildings and the

subsequent redevelopment of their plots is likely to have been carried out a building at a time.

There was little indication of the survival of property boundaries on either side of the east-west street east of the *via principalis* when the first post-Boudican buildings were erected there.

Of all the new houses, the best-preserved remains belonged to Building 94 which was built on the plot originally occupied by Barrack Block **1.** The base of one of its walls was still *in situ* and hence was seen to have been of the stud-and-block type set in a shallow slot. The other walls were indicated only by slots but seemed to have been built in the same way.

Although less well-preserved, the remains of Buildings 95-6 included shallow slots, postholes, some possible rubble foundations, and rows of distinctive gravel-packed pits along the lines of its walls. Most of the floors were of the usual sandy clay although several were of loose, gravelly mortar. The latter were primary features in the building and are the earliest floors of the type yet recognised in Colchester. Surprisingly there were no traces of wall plaster. But there may have been a piped water supply.

Buildings 99-103, which were built alongside the east-west street to the east of the former *via principalis,* appeared to be modest structures which were similar in plan and character to Building 94. However, disentangling the layout of these buildings from that of their pre-Boudican predecessors (Buildings 86-90) proved difficult. This was because the site had to be mechanically stripped down to the Boudican destruction deposits which, to complicate matters further, turned out here to have been thin and patchy.

Within 25 years or so of their construction, Buildings 99-103 were demolished and replaced with new houses (Buildings 104-9). There was little apparent evidence of continuity of property boundaries between the two sets of houses. This may be a result of the difficulty in excavating and interpreting the remains or it may indicate that both groups of buildings were built (and demolished) as single units.

Buildings 104-9, Like Buildings 95-6, incorporated gravel-packed pits which were closely spaced along the lines of the walls. This building technique is one which occurred elsewhere in Colchester (Buildings 17 & 54; *CAR* **3**, 20) and seems to have been peculiar to the latter part of the 1st century. The function of the pits is not clear but presumably the idea was that they were to be used in conjunction with timber ground-plates. The strength of the timber would make it unnecessary for the ground-plates to be supported along their entire lengths by continuous foundations; the gravel-packed pads were presumably judged sufficient for this purpose since the timbers would act like lintels by bridging the gap between each adjacent pair and thus avoid the risk of localised subsidence.

How quickly the Culver Street area was rebuilt after the fire is unclear but, at least on the west side of the former *via principalis,* there was probably a delay of at least fifteen years before some of the new buildings were erected. The Boudican destruction debris on the site of Barrack Block 1 was sealed by some midden deposits and a small area of what appeared to have been cultivated soil. The debris was also cut by some small gullies. The finds associated with the post-Boudican material indicate deposition dates no later than *c* 65-75. Thus this is the probable date of the construction of Building 94 since the building sealed this material. Although such clear stratigraphic evidence was absent under Building 96, its primary deposits included a coin of Vespasian and some Flavian pottery indicating a date for its construction within the range of c 75-90. The earliest levels of Building 95 directly overlay Boudican destruction debris giving the impression that its date of construction could have been comparatively early. However since Building 95 was built in a similar manner to Building 96, it is possible that both buildings were roughly contemporary. If this was the case, then the first stage in the construction of Building 95 must have involved a lowering of the site with the effect of exposing the Boudican debris.

The situation east of the former *via principalis* is not clear. Stratigraphically there seemed little in between the Boudican debris and the first post-fire buildings lining the east-west street so that there may not have been a substantial hiatus like that detectable on the site of the former Barracks Blocks 1-3. The same probably applies to the building plot in the north-west angle of Insula 35. On the other hand the area to the south, ie along the east frontage of the former *via principalis,* was never built on again but instead was cultivated for much of the remaining life of the Roman town.

The construction of the Roman town wall now seems to have begun *c* 65-80 (pp 62-3) and should thus be seen as a reaction to the disastrous state of affairs in 60/1 when the town was caught without any defences (pp 17-18). The wall at Culver Street was built more or less in the same position as the levelled legionary rampart although on a slightly different alignment. The street which had originated as the *via sagularis* together with a strip of land about 4.0 m wide from the south side of Plot E (Figs 3.5 & 3.6) provided working and storage space and enabled equipment and materials to be moved around the new defensive circuit. There was no gate on the site of the military *porta dextra* so that the southern end of the north-south street became a cul-de-sac. Rather than a gate, there may have been an interval tower at the end of the street as happened elsewhere in the town *(see* Fig 2.9, p 15 although *see* also p 61).

Much of the land next to the wall seems to have been left open, presumably mainly because it lay next to the closed end of the north-south street which, despite its origin, was only of minor importance in the town. Probably as part of the post-Boudican

rebuilding operations, the street was reduced **in** width so that its size was more in keeping with the other streets **in** the colony (Fig 3.5). Another indication of the street's low status is the absence of footways down both sides of it — this is in contrast to the east-west street further north.

The later rebuilding (*c* 100 - *c* 300)
[Fig 3.7]

Following the pattern noted elsewhere in the town, the houses built after about 100-125 were more substantial and durable than their predecessors. At this time, on the west side of the north-south street, Buildings 94-6 on Plots A, B, and C were replaced by Buildings 112-4. The plots remained the same except that the site of the minor east-west street which had separated Buildings 94 and 95 was absorbed into the adjacent plots and built over. None of the three new buildings conform to easily identifiable types, particularly Building 112 which developed in a somewhat individualistic fashion from its Period 3 predecessor. Buildings 113 and 114 appeared to have been regular well-planned structures which were possibly of the single corridor type. Building 113 stood out as having been of good quality, with a mosaic and tessellated pavements, and perhaps a hypocaust.

The typical wall of the 2nd and 3rd centuries rested on stone and mortar foundations up to 1.3 m deep, depending on the depth of the underlying deposits *(CAR* ***3****,* 20). The foundations consisted of mortar and fragments of septaria or greensand sometimes in alternating layers. In some instances, the bottom of the foundation trench was filled with a bedding layer of gravel up to 0.6 m deep. This sometimes included stone chippings which was masons' waste left over from dressing septaria or greensand. As is usually the case in Colchester, most of the foundations had been robbed in the medieval period *{see* below), although several stretches of foundation did survive, in some cases to floor level. The tops of the foundations were usually flat and fairly smooth and in places finished off with a course or two of tile. The foundations were on average about 1.0 m deep and 0.7 m wide, there being little difference in size between those of the external and internal walls. The flat upper surfaces of many of the foundations, together with the large quantities of sandy clay forming the demolition debris, reinforce the conclusion made at Lion Walk and elsewhere that the walls were of either sun-dried blocks (with or without a timber-frame) or daub applied to wattles between stud-work panels. Walls could have been of masonry but only rarely so. The north wall of Building 116 was buttressed suggesting that at least a few of the walls of the houses may have been of stone and tile. And certainly cellars could have had masonry walls: there was one in Building 123 at Culver Street and another in Building 22 at Lion Walk (*CAR* **3,** 66-8). (Timber cellars also existed, eg Building 56 at Balkerne Lane, *CAR* **3,** 128-9.) Building 125, the granary, was buttressed and would thus would have had masonry walls.

Most buildings had painted walls (pp 309-15) and many had glass windows (pp 117-19). A wide variety of floors was present, namely mosaics, tessellated pavements, plain mortar floors, gravelled surfaces, and floors of sandy clay loam sealed in many cases by substantial accumulations of dark, finely-trampled soil (so-called 'occupation'). Many of the buildings contained tile hearths. Most would have been used for heating and some for cooking or both. A hearth or furnace at the rear of Building 112 may have been used for copper-alloy working (pp 78-9).

The cultivated area on the west side of the north-south street contained two small buildings which are likely to have been utilitarian rather than domestic in function. Building 98 was a small post-built structure which may have been a barn or shed for storage or animals. Building 97 was a small structure of rather indeterminate plan. **It** was associated with a series of ovens which, again, were presumably linked in some way with the agricultural or horticultural use of the area.

During the early 3rd century these buildings were demolished and three more structures (Buildings 117-19) were erected. Whether or not the surrounding area was still being cultivated up until this time is not clear but the new buildings were still utilitarian in nature. Building 119 was reminiscent of Building 97 in that it contained or was at least associated with some ovens. Building 117 seemed to have consisted of two rooms, one of which contained an oven used for baking or the drying of corn. Building 118 seemed to have been a one-room structure which may have somehow developed from Building 98. It contained an oven and an unusual tank which may have been used for the storage of water. Small quantities of hammer scale from Building 119 and from either Building 118 or the earlier cultivated soil underneath suggests smithing if not in these buildings then somewhere in the vicinity.

The east-west street which originated between Barrack Blocks 5 and 6 survived as a path or track between Buildings 117 and 118. By this time it had become strewn with broken tile and rubble and had a small drain along its northern side.

Later, but still during the early part of the 3rd century, a large house (Building 116) was erected on the northern part of the cultivated area west of the north-south street. Shortly afterwards, perhaps within only a few years, Buildings 117-19 were demolished and replaced by a single large house (Building 120) on the northern side of the rampart. The new building butted on to the east end of another house (Building 115) which was similarly placed in relation to the rampart but which fronted on to the west side of the *insula.* Unfortunately Building 115 was largely unexcavated but sufficient was done to show that it predated Building 120. Its relationship to Building 116 is obscure.

The plan of Building 116 was peculiar since it was dominated by two long corridors lacking the



Fig 3.7 Culver Street AD c 150/200-c 275/325. 1:667. [Pages 31-3]

customary flanking ranges of rooms. The corridors seemed to have functioned more as porticos rather than passages to provide access into adjacent rooms. Another puzzling feature of the plan is that the corridors appear to have led nowhere unless Buildings 116 and 115 were parts of one large building which stretched across the whole width of the *insula.*

Building 120 was a corridor house with two short wings to the north. The western wing overlay the remains of one of the rooms of Building 116 hence indicating that Building 120 was of later date. In addition, parts or all of Buildings 117 and 118 may somehow have been incorporated into the new house. The assimilation of Building 117 into Building

120 presumably accounts for a peculiar kink in the north wall of the corridor of the new house.

The easternmost room of Building 120 overlay the street. Presumably an encroachment such as this was tolerated because it only affected the end of a *cul-de-sac.* This aberration was in addition to an apparently existing deviation affecting the west side of the street where the eastern sides of the houses occupied a more easterly position the further south down the street they occurred (Fig 3.5). Probably this was the cumulative result of a series of encroachments rather than a deliberate re-alignment of the frontage.

Agriculture and the open areas within the walls
[Figs 3.6 & 3.7]

As already explained, the land to either side of the southern end of the north-south street was left open and presumably not used during the years immediately after 60/1 (Fig 3.6). Slowly vegetation would have gained a foothold on the thick mantle of destruction debris which covered both areas and eventually, possibly after a period of many decades, the first attempts to cultivate the land would have been made. The topsoil formed by the first vegetation would no doubt have been very thin and, for a sufficient depth of soil for cultivation, the ground would need to have been turned over many times and have been extensively manured over a long period. Seaweed and burnt stable waste were present in some pits and spreads (ie those of Site G Period 3) associated with the cultivated soil and were presumably introduced to improve its quality (p 283). The ground appears to have been broken up by hand and by plough. In one place, a series of what appeared to be spade marks were detected at the base of the soil (Fig 3.28, p 60) and, on the other side of the street, the soil yielded the town's only known example of a fragment of a ploughshare (Fig 5.50, 186). In some places the repeated turning over and breaking up of the ground led to the loss of practically all of the underlying Roman layers to leave much of the cultivated soil directly overlying the natural.

The land in the south-west part of the site (Sites G & H) was cultivated for 100-150 years at the most (Fig 3.6). By contrast, the area on the opposite side of the street was under cultivation for possibly 350 years or more (Figs 3.6 & 3.7). The difference in the length of time explains why the cultivated soil on the west side of the street was not as well developed as that on the east side. And it may also explain why Dr R Macphail found little evidence of *in situ* horticulture as found in London (pp 274-5).

Unfortunately it was not possible to determine through environmental sampling which crops had been grown in the cultivated areas but various faecal concretions (pp 275-6) and groups of macrofossils were detected instead and point to livestock having been kept on or near these areas (pp 282-3).

This evidence for agricultural activities inside the walls is reinforced by the presence of a tower granary (Building 125) and later a probable corn-drying oven (KF12) within the cultivated area east of the north-south street. These indications are further strengthened by what appears to have been a large barn constructed in the late Roman period (Building 127; *see* below).

The relationship between the granary and the ?corn-drying oven is very clear. The oven occupied the same site as the granary but its base had been built in a rectangular pit cut through cultivated soil sealing the foundations of the granary. The date of the granary is uncertain but it had been demolished long enough for at least 0.5 m of the soil to develop over its unrobbed foundations before the construction of the oven. On balance a period of use within the 2nd century or so seems most likely for the granary. An earlier date is possible since the area was open from 60/1 onwards although the building is more likely to have been constructed when the surrounding land was fit for cultivation.

Although the corn-drying oven shared the same site as the granary, the stratigraphical relationships between the two indicated that there had been a considerable lapse of time between the demolition of one and the construction of the other. Dating evidence for these two events was minimal but the presence of Anglo-Saxon pottery in the base of the backfill of the oven indicated that the structure was abandoned intact at the end of the Roman town and that therefore it had probably been in use until that time.

The later Roman period (c 300-400+)
[Fig 3.8]

Considerable changes took place in the Culver Street area between *c* 275 and 325. All the buildings were demolished, presumably in a piecemeal fashion, none were replaced, and agriculture became the dominant concern throughout this time. The area seems to have been devoid of buildings apart from a large aisled building (Building 127) which was constructed on the site of two or more houses (Buildings 122-3) at the north end of Insula 35. The demolition of the houses was not part of a co-ordinated scheme; it is a phenomenon which has been noted at other sites at this time and may reflect a decline in the size of the population of the town (p 19).

This change in the pattern of occupation is clearly reflected in the pattern of coin loss which shows a lower than expected number of 4th-century coins (pp 290-3). The northern half of the site produced the greatest numbers of these coins (Table 10.2, p 292). Most of these can be accounted for by a small number of gullies, post-pits, and shallow deposits of material which point to activity of an indeterminate nature in this area during the 4th century. Another but less important factor would have been the continued

use of the east-west street as a thoroughfare and the loss of coins that presumably occurred there as a result.

Building 127 was of unusual construction since it incorporated comparatively shallow foundations built on long wooden piles. Although poorly preserved, it seemed to have lacked proper floors or plastered walls and all in all gives the impression of having been a low-grade structure. It could be argued that its plan, alignment, date, and absence of evidence of domestic occupation indicate that the building may have been a church but on balance, the quality of the building and the indications elsewhere on the site of contemporary cultivation suggest that it was more likely to have been an agricultural barn.

The post-Roman period

[Fig 3.9]

A hut with a sunken floor (Colchester Hut 3) was built on the site of Building 113. It was positioned to avoid having to break into the foundations of the Roman house which had been demolished several centuries earlier. The fill of the sunken part of the hut contained **a** large quantity of pottery, a decorated antler comb and a ringed pin, all of which suggest a 7th-century date for the abandonment of the building.

A thin scatter of sherds of early Anglo-Saxon pottery was found over the whole site with a notable concentration in and around the ?corn-drying oven (see above).

A small post-built structure seems to have been the remains of a hut (Colchester Hut 4) with an underfloor space. Dating evidence for the feature is unsatisfactory but points to either the 6th-8th centuries or the 12th century.

Like Lion Walk *(CAR* **1,** 33), Thetford Ware was practically absent at Culver Street, thus indicating the likelihood of little or no 10th-century activity nearby. The earliest subsequent occupation appeared to have been represented by the remains of a building (Building 128) which survived only as a collection of post-pits in the south-west corner of the site. It was probably of 11th- or 12th-century date. Otherwise the earliest certain activity post-dating Anglo-Saxon Hut 3 was indicated by late 11th to 12th century robber trenches. Many of these were presumably dug in response to the great demand which must have existed at this time for building material for Colchester Castle. Occupation on the nearby street frontages was indicated by a large number of pits dug between the 12th and 20th centuries when the area was used mainly for cultivation. Not surprisingly, there seems to be a rough correspondence between the density of pits and their distance from the nearest medieval street frontage. Cultivation of the 'dark earth' early in this period (from the 11th to the 13th century or so) resulted in the loss of the latest Roman levels. At the south end of the site, a complex of small structures (Building 129) may have been the remains of some domestic ?15th-16th century outbuildings which were in a garden belonging to a house on Head Street. Other features included two probable lime kilns on Site B and some ovens on Sites E and J.

Head Street was the principal medieval street nearby, Culver Street and Sir Isaac's Walk being minor streets which only became built-up in recent times.

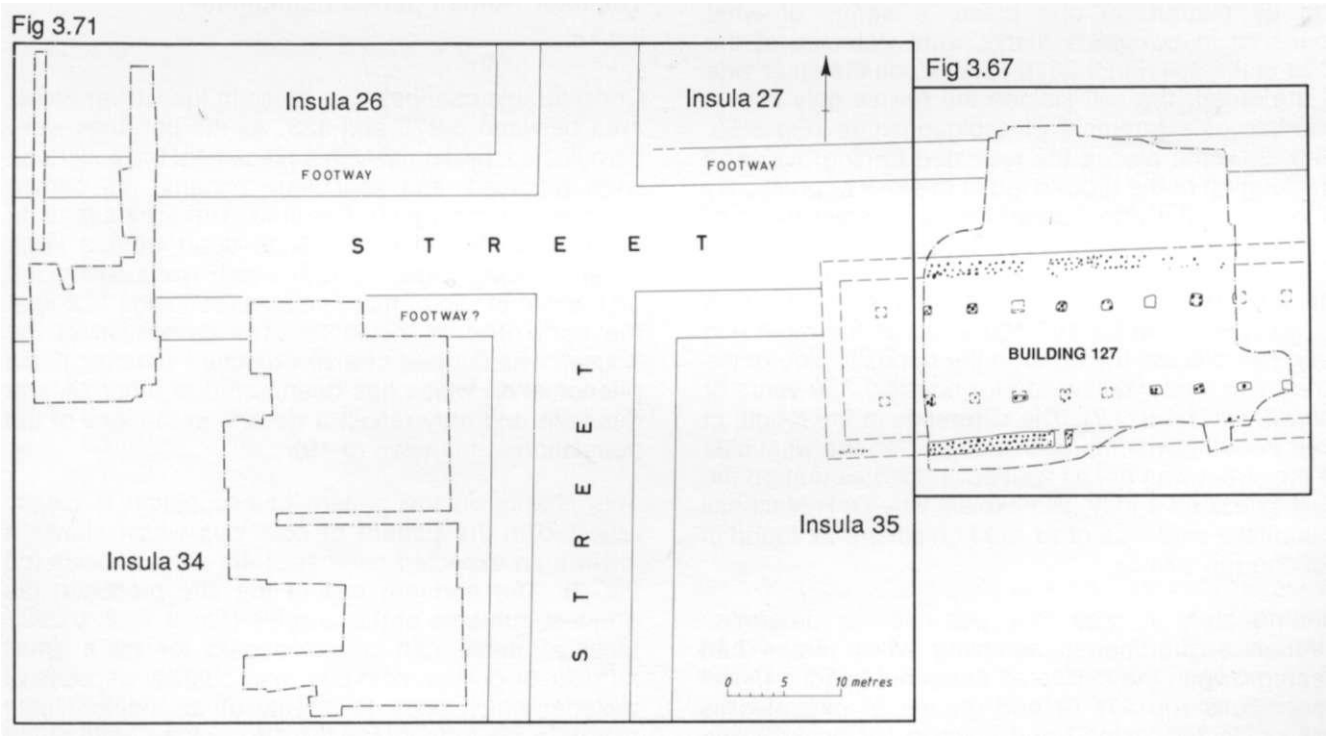


Fig 3.8 Culver Street AD c 275/325-400+. 1:667. [Page 33-4]

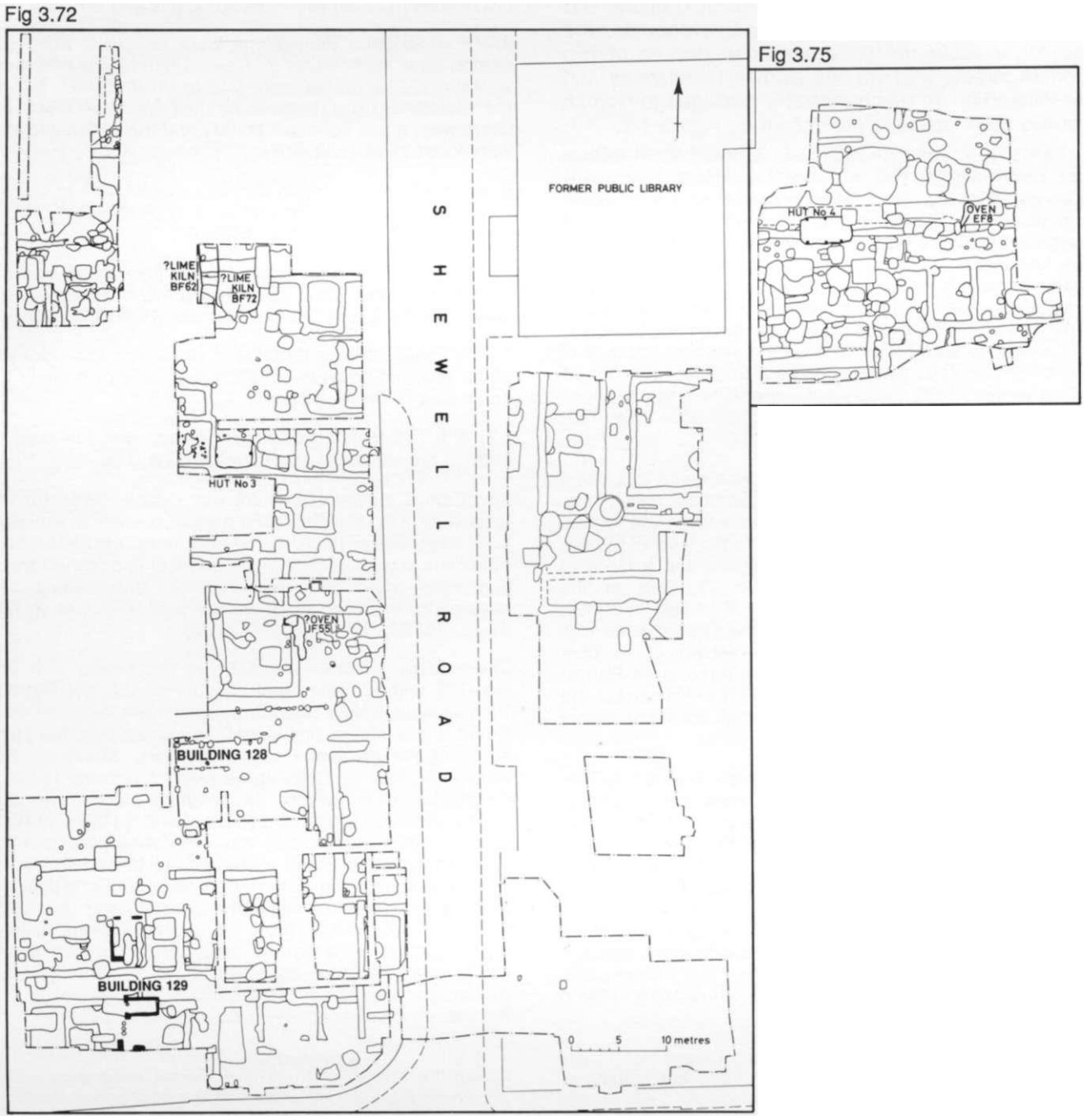


Fig 3.9 Culver Street post-Roman. 1:667. [Pages 34-5]

Shewell Road, which bisects the site in a north-south direction, was of 19th-century origin; it has practically vanished as a result of the modern shopping development.

A medieval cellar (Building 130), built mostly of peg-tile and reused Roman building materials, lay under Headgate House, an 18th-century brick building on Head Street. The cellar was recorded along with five standing buildings (including Headgate House) ranging in date from the 16th to the 19th centuries (Fig 1.2). Most of the cellar survives but the standing buildings were demolished during the course of the redevelopment works.

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Earlier discoveries

[Fig 12]

Records exist of previous discoveries made in the Culver Street area before excavations began. These

derive from chance discoveries, watching briefs, and three archaeological excavations. Together the records indicate the presence of a junction of two Roman streets and various Roman foundations and tessellated floors which probably belonged to Roman houses. The locations are shown on Figure 1.2.

1. Part of a mosaic pavement was exposed when a drain was being laid in 1886 in Culver Street at a spot nearly opposite Bank Passage. The part uncovered was drawn and lifted and is now in the Colchester Museums. The pavement, mainly black and white, is reported to have been five feet below the modern street surface and covered by many fragments of brightly coloured plaster. The latter presumably represents the remains of demolished walls. Only part of the pavement could be exposed since the rest of it extended under a building on the southern frontage of Culver Street. The pavement had a plain tessellated border which was probably the area of tessellation partly exposed in 1856 when another drain was being laid (Hull 1958, 193-4).

2 & 3. In 1936, when a water-main was being laid along Culver Street, a series of Roman foundations, pavements, and other remains was observed to either side of the position of the mosaic found in 1886. To the west of the site of the mosaic, two tessellated pavements and a piece of Roman foundation were noted (No 2). One of the pavements was exposed for a length of 25 feet and must have been part of a corridor. Near the 1886 mosaic was uncovered what was taken to be the west wall of the room containing it. To the east (No 3) were three more Roman foundations, a platform of several courses of Roman tile laid longitudinally, and an extensive layer of brick and rubble (Hull 1958, 194).

4. A Roman drain was observed in the same trench as Nos 3 and 4 above. Only the top of the arch was exposed, but clearly the drain was of the standard type which was built of brick and was large enough for a man to crawl along. Hull reported that the drain was found outside the door of Benham's printing-works and incorrectly concluded that this meant that the drain lay alongside the western side of the north-south Roman street. The position of the printing-works places the drain on the opposite side of the street, a fact confirmed by the discovery of the drain further south during the Culver Street excavations (Hull 1958, 194; p 105).

5. Building operations on the site of the Fleece Hotel were observed by Miss B R K Dunnett in 1970 but nothing of significance was noted.

6. In 1938-9, the digging of the hole for the basements of the new library building was watched by Mr E J Rudsdale who was able to make some simple records. Noted were five areas of tessellation, some robber trenches, and the junction of the north-south and east-west streets *(CMR* 1937-44 17-18, Hull 1958, 209-10, fig 103). (For the plan, *see* below Fig 3.7 & 3.41.)

7. In 1977-8, the vacant plot at No 1 Trinity Street was rebuilt and Nos 2 and 3 Trinity Street extensively refurbished. A small trial excavation was carried out by the Trust prior to the start of the building operations and a close watch was kept on the early stages of the building work while the ground-works were being carried out (pp 828-33, Figs 13.70-3). The Roman remains, observed mainly in the side of the builder's trenches, belonged to one or more Roman houses. Included were tessellated pavements, a cellar, and numerous foundations, the stones of which had been robbed in antiquity for reuse elsewhere. Post-Roman discoveries included two kilns, some pits and a well.

8. Three septaria foundations were observed when the ground-level was being reduced during redevelopment works in 1926-7 on the north side of Culver Street. Two of the foundations lay north-south and one east-west. No floors were noted but much pottery and many Roman coins were found (Hull 1958, 195).

9. A tessellated pavement was found at a depth of six feet when a trench was being dug for a drain sometime before 1909 (Hull 1958, 195; Laver 1909, 88).

10. In 1936, a two-foot-wide Roman foundation was cut through in Culver Street opposite the rear entrance to what were then the Essex Standard Offices (Hull 1958, 195).

11. In about 1972, a tessellated pavement was observed about two feet down in a trench dug for a pipe along the south side of Culver Street.

12. A foundation, supposedly Roman, was observed in 1880 in the garden of No 1 Trinity Street (Hull 1958, 195).

13. A small mosaic pavement was discovered in 1881 in what then was Mrs Prosser's garden but which later was built over when the iron foundry was expanded. The pavement was sealed by the remains of demolished sandy clay walls which had been plastered and painted. The pavement was drawn and then backfilled *(TEAS,* ns, **3,** 140; TEAS, **10,** 88; Hull 1958, 209, pl 33).

The position of the pavement is not known with any certainty and is made more obscure by the fact that Mrs Prosser lived at No 8 Head Street which was *north* of Culver Street. Laver stated simply that the mosaic was 100 yards south of the pavement found in Culver Street in 1886 (Insula 29, No 1). Cutts in his plan of remains found in Colchester (1888, facing p 34) seems to place a symbol in the large garden which, sometime between 1876 and 1909, was acquired by the adjacent iron foundry so that the factory could be enlarged southwards (p 124). Hull took this symbol to refer to the 1886 mosaic although Cutts does not indicate what the character of the discovery was. According to the 1876 OS 1:500 plan, the garden appears to have been reached by a narrow path which led from Culver Street down the west boundary of the foundry. Thus the garden could quite conceivably have been owned by Mrs Prosser despite her not living adjacent to it.

The site of the garden, which was extensively examined during the course of the Culver Street excavation and is shown on Fig 1.2, coincides with the positions of Buildings 113 and 114 at Culver Street. Clear evidence was found in Room 2 of Building 113 of a 19th or early 20th century excavation in which a small mosaic had been removed and part of a nearby military plinth (of Building 78) had been uncovered (p 79; BF2 & BF7, Fig 3.72). Although the drawing of the mosaic has no scale, it very neatly fits the hole left in the surrounding tessellated floor if the dimensions of the mosaic are assumed to have been the same as those of the extraordinarily similar pavement in Room 6 of Building 120 (p 94). If the mosaic in Room 2 of Building 113 was the same as that discovered in 1881 — as it almost certainly must have been — then the pavement must have been re-exposed and removed, possibly when the garden was sold to the foundry.

14. A Roman pavement, coins, and a lamp are recorded on the 1876 Ordnance Survey 1:500 plan as having been found on the site of Rebow Chambers in 1871-2, presumably during the construction of the building (as a Friends meeting house).

15. A tessellated pavement is shown by Cutts (1888, facing p 34) and by the Ordnance Survey (on the 1876 OS 1:500 plan) as being under the house on the corner of Sir Isaac's Walk and Head Street. Hull thought this too close to the wall to be reliable but presumably inadvertently shows the pavement as being even further south than do both of the sources (Hull 1958, 209). In fact the pavement as Cutts and the OS show it is no closer to the wall than the southernmost examples in Buildings 115 and 120.

16. Mr M R Hull dug some trenches on the eastern half of the site of Mumford's Iron Foundry after its demolition in 1934. The highest surviving Roman remains were found to be nine feet deep, the 'only find of interest' being a red tessellated pavement (Hull 1958, 209-10, fig 103) part of which was uncovered during the Culver Street excavations (Building 123, Passage 1; *see* Fig 3.41 for a plan of his trenches).

17. A tessellated pavement was found before 1876. The circumstances of its discovery are unknown (Hull 1958, 209).

Prehistoric occupation

[Fig 3.10]

In places, the natural sand was sealed by a thin layer of cover loam (2.5Y 7/2 light grey loamy sand) containing evidence of prehistoric occupation in the area.

Cover loam occurs over parts of Essex and East Anglia and is believed to have originated principally as a wind-blown deposit at the end of the last ice-age. Originally this would have covered all of the Culver Street site but large areas had been stripped off in the 40s AD during the preparatory works for the construction of the fortress. Hence cover loam only survived in the south-east corner of Site B, the eastern end of Site C, and over all of Sites E and M. It was completely absent from Sites G, H, and K with the effect that the evidence of prehistoric occupation was present almost exclusively over the northern half of the site. The latter took the form of about 690 sherds of pottery, several dozen pieces of flint, and a few features cut into the cover loam. The presence of man-made objects in the cover loam is a result either of prehistoric cultivation or the effect of worm action. Approximately 500 sherds of prehistoric pottery derived from pre-Roman deposits, 97 per cent of these being from the cover loam on Site E. Features associated with the cover loam were rare although there was a small pit on Site E (EF1457; Fig 3.10) containing large parts of two late Neolithic vessels apparently deposited as part of a ritual (Fig 3.1; p 317). One of the sherds had been placed on a large water-worn stone which, although bearing no obvious signs of wear, may have been used as a rubbing stone in a quern. Also from Site E was a fragment of a sandstone (?Sarsen) saddle quern. It was in a small pre-Roman pit (EF1224, not on plan). On the same site were some other pits, the only finds from which were prehistoric pottery and flints, namely EF1256 (?Late Bronze Age or earlier), EF1424 & EF1426 (?Late Bronze Age or earlier) and a large pit (EF1321 (?Middle or Late Bronze Age). Elsewhere features of probable pre-Roman date were limited to a small pit and an irregular slot on Sites B and C (CF196 & BF588; Fig 3.11), each containing one prehistoric sherd.

A report by Nigel Brown on the prehistoric pottery can be found on pages 317-20 and an account of flints by John Wymer and Julie P Gardiner is given on pages 320-1.

Earliest military activity

[Fig 3.11]

The absence of cover loam over the southern part of the site suggests that the topsoil and part of the underlying subsoil were stripped off prior to the construction of the military buildings and streets. Where the cover loam survived, it is uncertain if any preparatory earth-moving had taken place. The survival of the cover loam could simply indicate that it was shallower in these places than elsewhere.

On Site A there were two distinct phases of Roman activity before the construction of the barrack block. There is no evidence to suggest that any of the related features were necessarily pre-Roman but because one of the pits (AF240) was cut by the plinth (AF189) forming the north wall of Barrack 1 (Building 77) these features must belong to the very beginning of the post-conquest period.

The first phase was represented by four slots (AF241, AF242, AF246, & one unnumbered; Fig 3.11, inset). These are almost certainly wheel ruts and indicate the use of the road before it was metalled (like the street between Buildings 81 and 82 and possibly Buildings 83 and 84; *see* below). They were filled with the same layer (AL277) of leached soil that extended over most of this part of the site. Only one slot (AF246) contained any finds — a very small quantity of Roman coarse ware and a few bone fragments. AF241 and AF242 were parallel and 1.4 m apart measured centre to centre. These are strikingly reminiscent of the pairs of slots found during the Balkerne Lane excavation of the mid 1970s, even to the extent of being within 0.1 m of the same distance apart. The Balkerne Lane examples were associated with stake holes and were adjacent to a street rather than directly on it. For these reasons they were thought more likely to have been part of a building rather than wheel ruts *(CAR* **3,** 99). Now this is clearly not so.

To the second phase belonged all the other features shown on the inset on Figure 3.11; these all cut the leached layer AL277 which sealed the wheel ruts. Most notable were three bowl-shaped pits with burnt sides (AF237, AF238, & AF240) forming the bases of ovens or furnaces. All three had a layer of charcoal on the bottom and had been largely backfilled with a clean mixture of sand and loamy sand. The latter contained no metal-working residues or structural fragments which might have provided information



Fig 3.10 Prehistoric and pre-Period 1 Roman remains on Site E at Culver Street. 1:152. [Page 37]

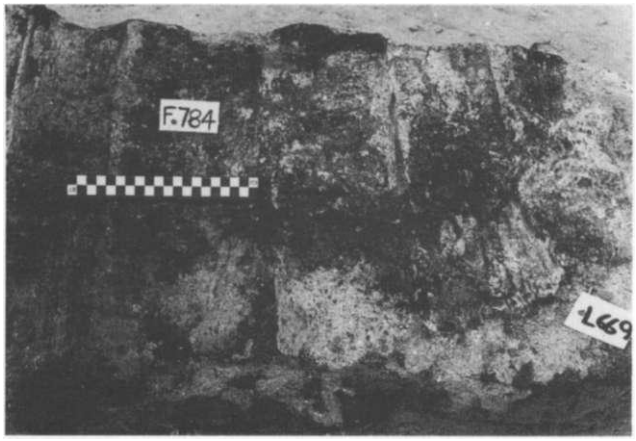


Fig 3.13 Timber floor (BF784) in Barrack Block 1, Room 2.

about function or superstructure. The upper part of the fill of the small pit (AF236) had been badly affected by iron-panning; its lower fill consisted of clean sand with a burnt upper surface. An irregular feature (AF239) with a small burnt patch on one side cut AF238. AF233 was a shallow pit containing a few sherds and oyster shells.

On Site E, there was a pit with burnt sides (EF1362, Fig 3.10) which was very similar to the three on Site A not only in appearance but also in its relationship to the street metalling. The occurrence of all these pits on the sites of streets suggests that the building plots already existed and the fact that the plinth of Barrack 1 cut one of them (AF240) shows that they belonged to the construction phase of the fortress.

Some early features occurred on Site C, including an oval pit (CF151; Fig 3.11), with sides and bottom stained green, reminiscent of the early pits excavated on North Hill (Dunnett 1967, 29).

Barrack Block 1 (Building 77)

[CUL Sites A & B; Figs 3.2 & 3.11-16]

Period 1 (c 44-9)

In Barrack Block 1 (and to a lesser extent in Barrack Block 2), it was clear that the rooms in the centurion's quarters were arranged on either side of a partition placed centrally along the length of the building, in the manner noted previously at Lion Walk *(CAR* **3***,* 31-4). The floors of the rooms, in places levelled and made up with imported dump, were apparently of sand or daub, although in Rooms 1 and 2 there were traces of decayed timber floors (BF583 & BF784; Fig 3.13) which had possibly been in use in Period 1.

The plinth which supported the north wall of Barrack Block 1 (Building 77) consisted largely of pebbles and mortar with lumps of septaria at the face but also contained a quern fragment and a fragment of tile. The plinth was set 50 to 80 mm into the natural sand. No trace of the superstructure existed.

One internal wall forming a partition between two adjacent *contubernia* survived quite clearly as a low stump of sandy clay loam (AF221) between 0.15 and 0.20 m wide. Beneath it the sand was stained as if by a ground-plate, but since there was no sign of any studs or uprights, the wall was presumably of unfired blocks of sandy clay. A second internal wall, east of the first one, was only recognisable as a discontinuity in the layers of occupation. Its exact position could only be accurately identified in the section (Sx 3.3) because of the damage in the area caused by later features. Together the two partitions give the width of one *contubernium* as being almost exactly 4 m.

The earliest floor in each of the *contubernia* was a very thin layer of sandy clay which sealed patches of small chips of septaria and fragments of mortar lying on the natural sand. These patches presumably derived from the construction of the plinth and show that the plinths were original and not replacements for timber-framed walls. To the west of wall AF221 was a shallow slot (AF229), the fill of which was stained as if by decomposed timber. It was not clear if the slot was for the ground-plate of a wall (a predecessor to AF221), a joist for a floor, or some other purpose.

On Site B, long stretches of the mortared plinths of this free-standing centurion's block survived intact (BF546 & BF487) including part of the north-south return plinth (BF781) and a short stretch of the connecting plinth (BF817) to the men's quarters. This had been built separately from, and prior to, the return plinth. A short spur at the east end of BF817 may have been the result of a miscalculation although the existence of a similar arrangement at Lion Walk (Building 3, *CAR 3,* fig 17) suggests that it may have been functional in some way. There was a slight kink in the northern plinth (BF546), coinciding with a slight deviation in the ?drain (BF624). Two short stretches of daub-block superstructure (BF533, Fig 3.12), one course high, survived on the southern plinth (BF487), with a much better preserved section (BF533/862; Fig 3.14) standing three courses high in the south-west corner. The latter, 1.7 m long (equivalent to six daub blocks in length), together with the underlying part of the plinth, was removed intact from the site for future conservation and display in the Colchester Museums. A pair of charred timber-plates rested on the plinths BF781 and BF487. Also, two small, rectangular voids (BF823 & BF824) were apparent in the edge of the plinth BF781 (Fig 3.14). These were left by wooden stakes which had been cast in the plinth. One explanation for these is that they had been used to indicate the level of the upper surface of the plinth, presumably by hammering them into the ground and setting their tops at the intended level.

Eight rooms could be identified in the centurion's quarters. All were arranged on either side of the central partition (BF534). No doubt more had existed but these could not be detected partly because all of the centurions' quarters were not available for excavation and partly because large parts of the internal plan had been obliterated during the

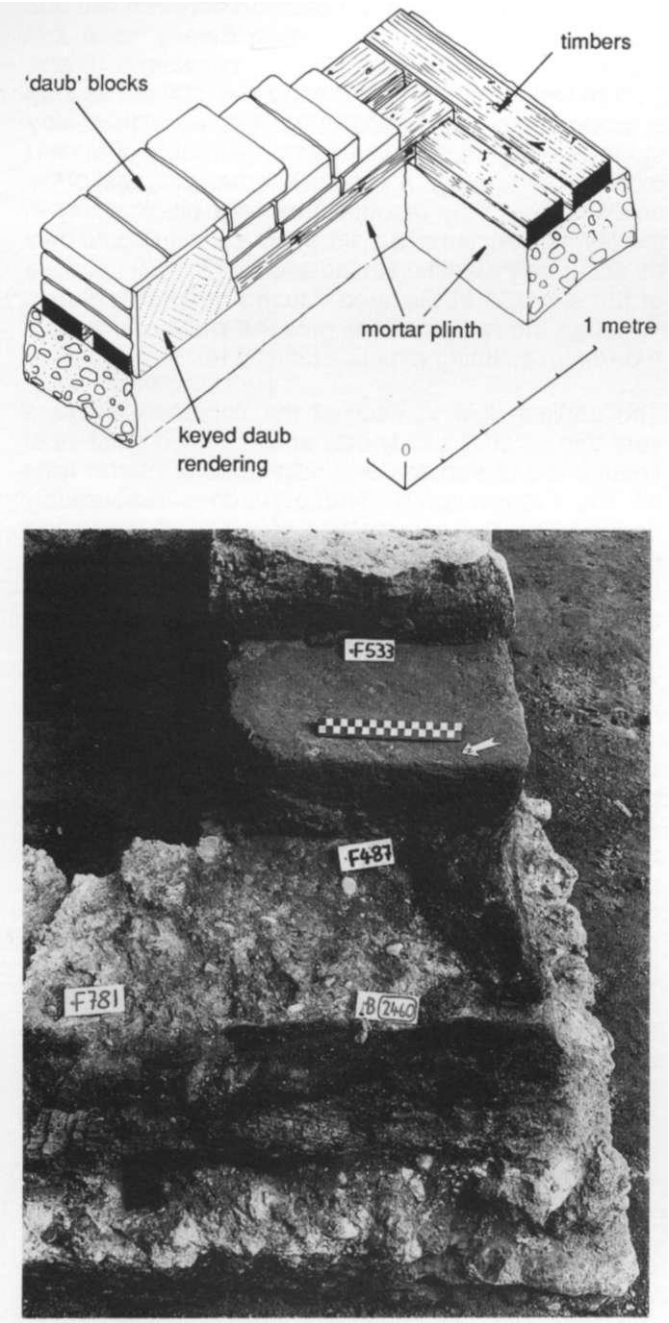


Fig 3.14 The wall (BF533/862) forming the south-west corner of the centurion's quarters of Barrack Block 1. Above: isometric reconstruction. Below: viewed from the west. [Page 39]

cleaning-up operations of the immediate post-Boudican period.

The central partition wall survived as a charred ground-plate and, next to Room 1, a fragment of daub superstructure (BF534). The latter was 0.25 m wide and 0.20 m high and contained cavities left by small wattle-holes and a possible vertical stud.

Room 1 was bisected by a large, shallow, longitudinal pit (BF538) which had a green, silty fill. To the east of the pit were a 1.5 m deep pit (BF532), a ?platform/raised floor constructed of clean, fine, yellow sand (BL576) with a daub revetment and surface, and a series of gullies (BF537, BF539, & BF584). The two main gullies (BF537 & BF539) were neatly constructed; they had straight sides and slightly-curved bottoms in which there were several small depressions. The gullies sloped slightly from north to south and were joined by a narrow, east-west gully (BF584). The two north-south gullies continued beneath the central partition wall and into Room 5, eventually reaching a latrine pit in the middle of the room (BF282, *see* below). The gullies were filled with fragments of charred timber burnt in 60/1; they were provisionally interpreted as a system of timber-lined drains, although it is possible that they were wall-trenches, perhaps similar to those excavated at Lion Walk *(CAR* **3,** 23, 31, & 35). There was an irregular shallow gully (BF607) to the west of BF538. The partition wall between Rooms 1 and 2 was probably on a similar alignment to the replacement wall (BF651) although possibly a small section of the original survived (BF666, *see* Period 2 below).

The number of thin make-up lenses, together with the absence of well-defined occupation layers, in Barrack Block 1, notably in Rooms 1 and 2, made for difficulties in recognising the primary floors. The earliest clearly defined floor in Room 2 was the ?timber floor (BF784, *see* Period 2 below). A short stretch survived of the partition wall (BF515) between Rooms 2 and 3; this included parts of the wattle-and-daub superstructure and a charred ground-plate. The wall between Rooms 3 and 4 (BF864) was less well-preserved but parts survived of its timber ground-plate and daub superstructure. Rooms 3 and 4 were narrow, although both had well-defined floors and occupation (BL572/BL583 & BL505/ BL506). There was a ?latrine pit (BF580) on the west side of Room 3, from which fruit and seed remains were recovered *(see* p 43).

The main feature in Room 5 (at least in the part available for excavation) was a latrine pit (BF282). The pit was more than 2.25 m deep (not bottomed), the upper 1.1 m of which was circular and clay-lined, while the lower part was rectangular and probably timber-lined *(see* Period 2 below). The ?timber-lined drains (BF537 & BF539) from Room 1 passed into BF282, with BF539 having a slight kink, and ending in a well-formed lip. There was a narrow slot (BF571) to the south of BF282, cut into a thick layer of floor make-up (BL535/BL584). The charred remains of the ground-plate of the partition wall (BF548) between Rooms 5 and 6 was set in a shallow slot cut into this layer. Immediately to the west of the wall were the charred remains of a further timber (BF858), probably of Period 1 date, which was perhaps the remains of a floor joist. This rested on ?make-up (BL550/5, BL567, & BL569), 0.3 m thick, which sealed a construction level (BL580) consisting of chips of septaria in a mixture of gravel and sandy loam. At the south end of Room 6, adjacent to the plinth, were the remains of a neatly-constructed gully (BF570), 0.6 m wide x 0.3 m deep. This may have been a setting for a tank associated with the ?water-mains *(see* below). The

remains of the daub walls (BF528 & BF778) bounding Rooms 7 and 8 survived largely as charred timber ground-plates, although holes left by wattles were identified in a fragment of daub superstructure on the latter. Further traces of a construction level (BL595/6; Fig 3.11) containing a coin of Caligula (AD 37-41) and associated with a small pit (BF634) containing a joiner's dog were in Room 8. These were floored over and subsequently cut by a north-south gully or drain (BF574/BF619). A number of stake holes, small pits, and lenses of occupation (BL560) also existed at this level. The keyed daub revealed *in situ* on the internal surface of daub block wall BF862 (Fig 3.14), was almost certainly an original feature of the wall and thus was very likely of Period 1 date.

Three small post-pits (BF582, BF641, & BF808) were dug into the street metalling at the south-west corner of the centurion's quarters. These may have been related to secondary alterations to the barrack. They were neatly spaced at about 7.5 pM (2.2 m) centres and shared exactly the same relationship to Barrack Block 1 as did a group of identically-spaced postholes to Barrack Block 3 *(see* below & Fig 3.12). Presumably the posts were linked in some way to the roof trusses of these buildings (p 48).

Period 2 (c 49-60/1)

The central partition wall (BF534) continued in use, with a possible modification near its eastern end, incorporating small daub-blocks. The pit BF532 and the ?timber-lined drains (BF537, BF539, & BF584) at the eastern end of Room 1 continued in use until 60/1. However, the large, elongated pit BF538 was backfilled and eventually sealed by two phases of pre-Boudican occupation. Initially, possibly still in Period 1, a layer of make-up (BL492) was spread across the room and a wooden floor was laid on top. The presence of the latter was shown by faint, very thin, brown traces of decayed wood (BF583). To this phase belonged a long, narrow 50 mm deep slot (BF558, Fig 3.11) which perhaps was for a joist. These features were subsequently sealed by another floor (BL464). To the third and final phase belonged a long, shallow slot (BF542) containing the remains of a charred timber (along the west side of the room), the remains of an east-west slot (BF556) (in the centre of the room), and a charred timber (BF649) (at the south end of the room). These features appear to have been for floor joists in which case they suggest the existence of a timber floor. One benefit of such a floor would have been that it would have overcome the effects of settlement into the backfilled pit BF538. Analysis of a sample from an occupation deposit (BL440), immediately to the west of BF542 showed the presence of seeds of wild plants and ?crop waste (P 43).

The wall (BF651) was almost certainly a Period 2 replacement, inserted in a trench (BF782). The wall, burnt in 60/1, survived to a height of 0.35 m but was distorted especially on its east side. Eight, possibly ten, voids in the fabric of the wall were left by burnt-out vertical studs but there was no evidence to indicate if or how the studs were fixed to the ground-plate which survived as a fragmented, charred timber. The studs varied in spacing (from 0.2 m to 0.4 m) and in size (from 0.1 m square to 0.2 x 0.18 m). The remainder of the superstructure was infilled with solid 'daub' containing organic tempering. Despite careful excavation, no convincing traces of blocks could be detected although some faint horizontal lines were distinguishable. The west face of the wall had been plastered and painted *(see* p 309). The southern end of BF651 appeared to have been of a different type of construction. Here the super-structure, which was largely unburnt, contained some small ?wattle-holes and overlay a slot, 0.5 x 0.15 m, containing the remains of a charred timber ground-plate. This section of the wall was similar to BF534 nearby and thus was presumably primary.

Room 2 contained two successive floors. The earlier floor (BF784), possibly dating from Period 1, survived as a very thin, delicate layer of decayed wood mixed with a little occupation material (BL669). The floor consisted of planks, about 0.15 m wide, of which eight to ten were uncovered, each with a slightly bowed profile. The floor appeared to have been partially charred. The remains of this floor were cut by two trenches or gullies (BF780 & BF782, Fig 3.11) which may have been associated with the insertion of the wall BF651. Sealing this floor was a dump or demolition layer (BL647) containing fragments of wall plaster. Overlying the latter were the charred remains of a second timber floor (BF721). This was associated with slots (BF665 & BF722) for ?joists on the east side of Room 2. The floor consisted of four charred, wooden planks of varying widths (0.10-0.23 m), lying east-west and surviving for a maximum length of just over 1.0 m. The positions of some planks to the south were indicated by faint dark parallel lines caused by dust and dirt which slipped down the gaps between adjacent boards. Fragments of charred timber also survived in slot BF665, which was the equivalent of BF542 in Room 1. More fragments of charred wood, which were perhaps also for joists, lay to the west (BF722/BF559 & BF560). Stake holes at this level included a group in an east-west line as if for a partition. The inner face of the plinth (BF546) and the central partition (BF534) both contained traces of wall plaster although, being below the latest floor level, the plaster was rather rough and unpainted.

Further west, the walls BF515 and BF864 continued in use throughout Period 2. In Room 3, the pit BF580 was filled in, the backfill including burnt daub which may have derived from a hearth. The pit was sealed by two phases of floor and occupation levels (BL539/BL529 & BL498/BL497). Room 4 was re-floored (BL284).

In Room 5, the large latrine pit (BF282) continued in use throughout Period 2. The room was re-floored (BL477/8). The wall BF548 and the adjacent ?joist BF858 continued in use until 60/1. Traces of occupation in Room 6 were slight but this was

possibly due to there probably having been a wooden floor in the room. The gully BF570 was backfilled. Room 7 was subdivided by a north-south 'stud-and-daub' wall (BF516; Sx 3.7) but the walls BF528 and BF778 were retained. The inserted wall survived to a height of 0.25 m and contained traces of two or possibly three voids for studs resting on a well preserved, charred timber ground-plate. The room was re-floored, the western half on two occasions.

In Room 8, the gully BF574/BF619 was backfilled and the floor replaced twice. The first replacement floor was associated with a ?hearth, a substantial 'ashy' occupation layer (BL510), and a number of small pits and stake holes. The final floor (BL496) was burnt in 60/1 (BL438/BL439). Analysis of the occupation on this floor revealed carbonised cereal seeds, hazel-nut shell fragments, rare weed seeds, fish bone, egg-shell and other remains, consistent with refuse from food preparation (p 43). Fragments of charred planks (BF788) lay in the south-west corner of the room. It was not clear if these had belonged to a timber floor, a collapsed roof, or a piece of furniture. In close proximity to the planks were several perforated fired clay objects which may have been loom- or thatch-weights (pp 203-5, Fig 5.71, 2226-8).

Both internal partitions (AF221 and the partition east of it) may well have survived throughout Period 2. No evidence of replacements was noted but so extensive was the post-Boudican clearance of the site that it is quite possible that all traces of subsequent partitions were destroyed. The differences in the sequences of later pre-Boudican floors and occupation imply that if the partitions of Period 1 did not survive until 60/1, then there must have been replacement partitions close to the positions of the original ones.

Room 10 contained a hearth (AF220), an oven



Fig 3.15 Latrine pit (AF218) in Barrack Block 1, Room 10.

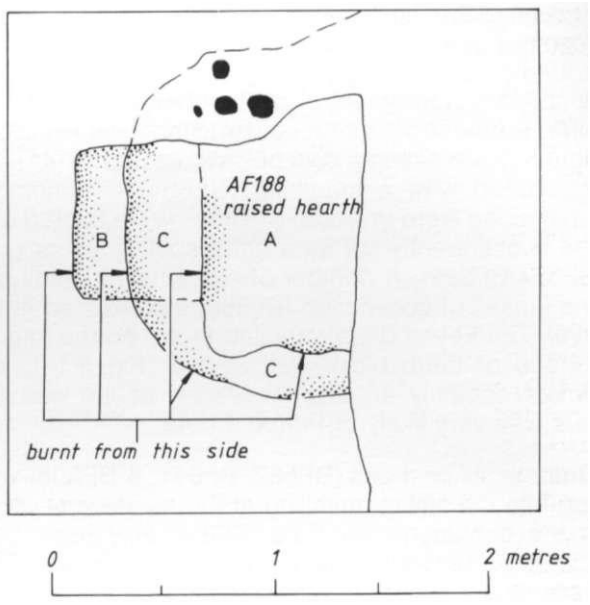


Fig 3.16 Raised hearth (AF188) in Room 11, Barrack Block 1. 1:35. [Pages 42-3]

(AF198) and a series of pits. The oven was oval in shape and was so close to the position of the east wall of the room to suggest that the wall may have been at least partly demolished after all. A curious straight edge of charcoal divided the main body of the oven from its deeper, unburnt, southern end. Of the pits, AF228 was rectangular and filled with clean sand and sandy clay loam apart from the lowest 0.1 m which contained many small fragments of charcoal. This feature was cut by a square latrine pit (AF218; Figs 3.12 & 3.15) lined with timber boards held together at the corners by four large stakes or posts driven into the underlying sand. The latrine pit in its turn was cut by another pit (AF190). The latter was in the shape of a narrow rectangle. It contained three stake holes which may have supported a timber-lining and thus, despite not being square, may also have been a latrine pit. Because the upper sides were burnt in places and the fill contained some burnt sandy clay loam, it is very likely that this feature was open at the time of the Boudican revolt.

Room 11 contained the base made of sandy clay loam for an unusual raised hearth or oven (AF188; Figs 3.12 & 3.16), the upper part of which had been removed during the post-Boudican clearance. The original core (Fig 3.16, 'A') survived to a height of 0.2 m and appeared to have been enlarged on two occasions, firstly with a buttress-like piece on the west side ('B') and later by additions to the south and west ('C'). At each stage its outer face was scorched during use. The surrounding occupation layers contained a high proportion of charcoal. Four stake holes to the immediate north of the feature may have been related to it.

Other Period 2 features within the building include the shallow pit AF219, stake holes (AF223, AF224, & AF230) and post-pits (AF244, AF207, & 7AF212)

apparently in a line east-west, and AF199, AF200, & AF209 in a group to the south-east of AF198).

By the end of Period 2 the floor level within the building had been raised to the height of the plinth AF189, ie about 0.25 m above the original level.

Building 77: plant and animal remains

by Peter Murphy

Small samples were collected from the thin burnt deposits overlying the floors of Rooms 1 (BL440 & BL459) and 8 (BL438 & BL439). All samples consisted mainly of burnt daub and charcoal. The samples from BL440 also contained quite large numbers of carbonised seeds from arable weeds, notably *Spergula arvensis* (corn spurrey), *Chenopodium album* (fat hen) and *Rumex* sp. (dock), and seeds of wetland and grassland plants, including *Ranunculus* sp. (buttercups), *Eleocharis* sp. (spike-rush) and *Carex* sp. (sedges). A single cereal or grass culm node was also recovered. These plant macrofossils seem to represent the remains of hay and straw used as animal fodder or flooring materials. Sample B1806 from this layer contained fragments of cereal grains, and B1808 included scraps of bone and oyster shell, but in general food refuse was rare.

The samples from Room 8 (BL438 & BL439) were different in composition. Fragments of mussel and oyster shell, and bone fragments of fish, small mammals and large mammals occurred fairly consistently. Avian eggshell and bird bones were also present. These deposits also produced a very thin scatter of carbonised cereal grains and hazelnut shell fragments, but few seeds of weeds or wetland plants. Interpretation of this rather sparse material is difficult, but it could represent spilt table waste.

Full lists of identifications are given on microfiche in Tables 8.7 (p 710), 8.12 (p 716), and 8.15 (p 719).

The street north of Barrack Block 1

[CULSite B; Figs 3.2, 3.5, & 3.11-12]

Period 1 (c 44-9)

North of the barrack block was a narrow street (AL274), the metalling of which extended to a maximum of about 6 m wide and 0.15 m thick. Between the street and the barrack block was a drain lying east to west (AF232).

A short stretch of the southern edge of the street was excavated in the north-west corner of Site B (Sx 3.8) and vestiges picked up further east (Sx 3.4). This consisted of a single, flat gravelled surface (BL601/BL682), 0.1 m thick. The make-up (BL612/BL623) for the street sealed a thin ?gravel surface (BL615) which rested on natural sand and may have been an earlier, temporary street. Along the southern edge of the ?later street was a narrow gully (BF624) which sloped gradually from west to east and was probably a drain.

Period 2 (c 49-60/1)

A new east-west street (AL57 & AL118) was laid to the north of the Period 1 street (AL274). The bulk of the new metalling took the form of a strip of gravel between 6 and 7 m wide, leaving a gap of about 4 m (ie the Period 1 road surface) to the south and 3 m to the north presumably for the footways.

Early in Period 2 a narrow drainage slot (AF227) was dug against the outer face of the plinth AF189 in Building 77, presumably as a replacement for AF232. It was later sealed by a layer of metalling AL244, the surface of which was burnt during the Boudican revolt. The slot and metalling seem to indicate that the footway remained uncovered in this period. However, a series of post-pits (AF202, AF215, AF208, AF206, AF203, & AF201) and two shallow slots (AF204 & one unnumbered, adjacent to AF202) could have supported some form of lean-to against the north wall of Building 77. These features could thus indicate either encroachment on to the street or the presence of a rudimentary covered footway late in Period 2. The slots may not have been part of such a building but instead have been wheel ruts.

The northern edge of the street was marked by a narrow slot, AF149. A metre to the north were two wider but shallower slots at right angles to each other (AF146 & AF148). The clean fill of all three slots suggests that they may have been construction trenches like those of Buildings 83-4, but this is not certain.

North of the street

Although only a very small part survived for investigation, the area north of the street appears to have been an open space throughout Periods 1 and 2.

The street between Barrack Blocks 1 and 2

[CULSite B; Figs 3.2, 3.4-5, & 3.11-12]

Of the military streets between the barracks, that between Blocks 1 and 2 was the best preserved. It was 4.6 m wide and consisted of well-packed metalling (BL486/7 & BL411), 0.25/0.3 m thick over make-up of sand (BL436/7, BL629, & BL687). The street had a firm, flat surface which was carefully laid between the daub-block walls of the adjacent barracks in such a way that the gravel overlapped the top edges of both plinths. The make-up levels sealed traces of an earlier, ?temporary gravelled surface. The gravelled street extended northwards around the south-west corner of the centurion's quarters of Barrack Block 1. Here the metalling (BL673) was thinner and of inferior quality and sealed some occupation (BL678) and a ?hearth (BF820, not on

plan) containing a military strap-fitting (Fig 5.53, 1681). The occupation and the ?hearth are likely to belong to the construction phase of the barracks. The street sloped gradually downwards from west to east and north to south. A neatly-constructed ?timber-lined drain (BF413) lay along the south side of the street.

Cutting into the street were the remains of a possible water-main. This was represented by a narrow slot (BF480, Fig 3.11) which was 0.2 m wide, 0.15 m deep, and extended from the west section to half way along the exposed area of the street. A small part of the trench was sealed by the gravelled metalling of the street giving the impression that one section of the water-main had been left in the ground when the pipes were pulled up at the start of Period 3. However, although the trench contained traces of decayed wood, there were no iron collars so that the existence of a water-main is in some doubt. At the east end of the trench was apparently some form of junction where a spur (BF529, Fig 3.11) was taken into Building 77. This was achieved by breaking through the southern plinth to form an untidy gap. Close by the latter and against the inside of the wall was a trench (BF570) which conceivably may have been for a water-tank. The ?water-main continued eastwards from this point but was offset 0.35 m to the south. This part of the ?water-main was set in a trench (BF638, Fig 3.11) which was wider and deeper than the trench containing the western section. In the bottom of the backfill of the trench was a slot (BF43, Fig 3.114) which probably indicated the position of the pipe. Against the east end of the south wall of Building 77 was a neatly-cut trench (BF636, Fig 3.11) with vertical sides. Although there was no trace of decayed wood, this feature was probably the remains of a timber drain. At the western end of the ?drain was a short north-south slot (BF563, Fig 3.11) ending in the ?water-main. Its function is obscure; it resembles the north-south spur (BF529) to the west although the provision of two separate water-supplies into Building 77 seems a rather unlikely occurrence. Alternatively the slot could have contained a drain which conducted surplus water into the end of the east-west drain BF636 although why the north-south slot exists south of the latter is puzzling.

In Period 2, the gravelled street was resurfaced in places, notably at the eastern end of the trench (Sx 3.4). The ?drain BF636 was no longer used and was sealed by the re-metalling but the drain (BF413) and the ?water-main (BF434 & BF480) were retained.

Barrack Block 2 (Building 78)

[CUL Sites B & C; Figs 3.2, 3.4, & 3.11-12]

Period 1 (c 44-9)

The northern and western plinths (BF488) of the centurion's block to the south of the street were well preserved, the north-west corner being 0.6 m further west than its counterpart in Barrack Block 1. The plinth was notable for the shuttering marks and for the construction trenches *(see* pp 22-3). Two short stretches of superstructure survived. In one place (BF435, Fig 3.12), it stood to a height of one course where it consisted of the remains of three burnt daub blocks overlying the charred vestiges of a double timber ground-plate. The other section of superstructure (BF507, Fig 3.12) was adjacent to Room 5. It was 3.0 m long and 0.4 m high and consisted of compacted, largely unburnt daub, resting on the fragmentary remains of a charred timber plate. Two horizontal layers of daub were distinguishable in the wall, but, surprisingly, no individual blocks could be positively identified. Several small ?wattle-holes were near the inner edge of the wall. Thus this stretch of wall could represent a different type of construction possibly associated with a repair or secondary alteration. This view is enhanced by the fact that the adjacent, inner edge of the plinth below BF507 had been cut or chiselled away.

Initially only narrow strips could be excavated along the northern and southern sides of Barrack Block 2, although some excavation of the area in between proved possible during the watching brief. The plan of this part of the barrack block in Period 1 (Rooms 8 and 9 and the south ends of Rooms 1-4) derives from the Period 2 plan since excavation of the Period 1 levels was not possible here.

The central east-west partition wall (BF870) was laid on the original ground surface. Lying on the latter was a thin lens of occupation (BL714) which probably derived from the construction phase. This was sealed by a thick layer of make-up for the earliest floors (Sx 3.14). A short section of daub wall with a timber upright and wattle impressions, survived to floor level at the eastern end of BF870.

Nine rooms and one narrow passage were identified. The main feature in Room 1 was an east-west gully or drain (BF508) with a distinctive greenish fill resulting from organic effluents. A shallow slot (BF564), extending south from BF508, contained a line of stake holes and was presumably the remains of a partition wall. The walls between Rooms 1 and 2 (BF547/BF883) and Rooms 2 and 3 (BF505/BF878) survived only as charred timber ground-plates set in shallow slots. Room 3 was partially subdivided by an east-west slot (BF501) with a posthole at either end (BF502 & BF503) and a possible lining of sandy clay. Traces of a thin construction layer (BL527) consisting of septaria chips, fine gravels and mortar flecks was traced beneath the thin, primary, sand and sandy-clay floors of Rooms 2 and 3. The partitions between Rooms 3 and 4 and Rooms 4 and 5 were probably represented by shallow slots (BF567 & BF614). In Room 4 were the remains of an irregular shallow pit or gully (BF506) associated with two postholes and a V-shaped, irregular gully (BF588) with green-stained edges, of pre- or early Roman date. The main feature in Room 5 was a large sub-rectangular pit (BF460). It was 0.85 m deep and had green-stained sides and some postholes in the bottom. The pit was adjacent to the east-west plinth (BF488), the underside of which had been partially

demolished. Other features in Room 5 were a small pit (BF615) and several stake holes (BF626), including a possible alignment for a partition. A slot (BF598) probably indicated the position of the partition wall between Rooms 5 and 6 although it was rather wide.

There was very little available for excavation of Rooms 7a, 7b, and 8. The positions of the rooms were indicated by narrow slots (CF152-3, CF155, BF871/CF139). A slot (CF132/184), 0.3 m wide and 0.25 m deep, extended eastwards from CF153 for over 9.5 m to form Room 9 to the north and Passage 1 to the south. Passage 1 was modified, or perhaps blocked, by slot CF172 (Fig 3.11, inset). This was about 0.2 m deep and may have been for a partition. The eastern end of the wall over slot CF184 was subsequently demolished but the ground-plate was left to decay *in situ.* Later still a gully (CF192), which was associated with several stake holes, was cut into the backfill of the slot.

Period 2 (*c* 49-60/1)

The gully or drain BF508 in Room 1 was backfilled and the room was subsequently re-floored on three successive occasions (Sx 3.4). The latest of these (BL448) was associated with a hearth (BF544) and some narrow slots (BF884, BF890, & BF891) which were probably for the remains of some light partitions within the room. The floor BL448 was sealed by a burnt occupation deposit (BL435), fragments of charred timber, and a small pile of carbonised grain. The latter was apparently the remains of a small store of fully-processed wheat containing a comparatively low level of contaminants *(see* below). New floors were laid in Rooms 2, 3, and 4; partition walls BF547/ BF883, BF501, and BF505/BF878 were retained. The wall (BF880) between Rooms 3 and 4 was replaced; a short stump of the new wall survived *in situ.* The position of the wall (BF851) between Rooms 4 and 5 was not clear. A pit (BF543), with four regularly-spaced internal postholes perhaps for a lining, was on the east side of Room 5. Although only 0.7 m deep, its shape and the presence of a lining suggests that it was a latrine pit. The pit BF460 was backfilled and Rooms 5 and 6 were re-floored twice. Partition walls BF509 and BF841 were inserted in Period 2, the former being a replacement for BF598. The remains of the wall BF509 consisted of fragments of charred timber ground-plate and daub superstructure. The stud-and-wattle wall BF841 overlay earlier floors (BL428 & BL429) thus clearly indicating that it was a secondary insertion. The wall was relatively well-preserved, standing to a height of nearly 0.5 m. One certain stud hole (BF842) was excavated and possibly another (BF842). The superstructure was of the wattle-and-daub type, with well-preserved impressions of wattles interwoven with horizontal wooden rails. The sides and ends of the daub infill, burnt in 60/1, had a thin coating of daub, keyed with faint, shallow grooves. On the north face of the wall were traces of wall plaster. A pile of wall plaster fragments (BL693) sealed the burnt timber ground-plate in the gap between the superstructure of the wall BF841 and the north-south part of the plinth BF488. This gap may indicate the position of a doorway. The construction of BF841 was probably contemporary with the latest floor (BL427/BL694).

The wall between Rooms 7a and 7b (CF155) was demolished and the room re-floored (CL62/5). In Room 8, which was defined by slots CF152 and CF139/BF871, was a hearth (BF881) and a narrow slot (BF886) apparently for a light subdividing wall. A new floor was laid in Room 9 (CL73/BL711) which was sealed by a thick, occupation layer (BL710/ CL67). The room contained a shallow slot (BF876), a hearth (BF877), and some small pits (BF882, BF885, & BF889). Another stretch of the wall forming the north side of Passage 1 was demolished and the eastern part of the slot (CF132) was sealed by a bowl-shaped raised daub 'platform' over a layer of septaria blocks (CF150). The platform was encircled by many stake holes. The western half of the wall CF132, which now ended in a shallow posthole, was retained.

Building 78: plant remains

by Peter Murphy

Four samples were taken from BL435, the deposit overlying the floor in Room 1 and burnt in AD 60/1. One of these, B1716, produced a large carbonised deposit of prime grain. This consists largely of wheat grains, mainly elongate grains of spelt-type *(Triticum spelta).* Contaminants include rare glume bases, grains of barley and oats and some arable weed seeds, mostly caryopses of *Bromus mollis/secalinus* (brome grass) with seeds of *Agrostemma githago* (corn cockle) and *Rumex* sp. (dock). This very clean grain deposit is closely comparable to the carbonised granary deposits from Balkerne Lane (Murphy 1984), and establishes that, when burnt, the room was in use for storage. The remaining samples from this room contained rare remains of cereals and weed seeds. The only other macrofossils present were occasional scraps of burnt bone. Taxa identified are listed in Table 8.15.

Barrack Block 3 (Building 79)

[CUL Sites C & J; Figs 3.2, 3.4, 3.5, 3.11-12 & 3.17]

Period 1 (*c* 44-9)

Barrack Block 3 (Building 79) was excavated in two stages, the first in 1981-2 as part of Site C and the second in 1985 as Site J. The second phase was carried out under considerable pressure and was restricted to little more than hasty excavation of the Boudican levels. For this reason, the features common to Sites C and J do not tie in with one another as well as might be expected. The interpretation of the plan of Building 79 is discussed above on p 24.

Barrack Block 3 was joined back to back with Barrack

Block 2, the line of the plinth of the shared spine wall being traced for a distance of approximately 19 m. The spine plinth and the one forming the southern side of the barrack had both been robbed early in Period 3; traces of mortar and scatters of stones remained in the bottom of the robber trench (CF131). However, two rather poorly-preserved stretches of plinth (CF119) survived towards the western end and these proved to be of similar type to those found elsewhere. The plinth had been set well into the natural sand (by up to 0.25 m at its western end). There were indications of a construction trench, especially south of the plinth towards its eastern end where the trench (CF144, Fig 3.11) was packed with fine gravel. There was no trace of the wall superstructure *in situ,* although presumably this was, as elsewhere, of block construction since relatively intact fragments of burnt blocks were recovered nearby from the Boudican destruction level.

The centurion's quarters were wider than those of the other barracks (p 24; Fig 2.5, p 12). In normal barracks, it seems likely that the roofs would have been supported by trusses borne on the external walls; the internal walls would not have been load-bearing and thus could have been placed anywhere in the building. However in the case of Barrack Block 3, its exceptional width probably explains the presence of a major internal east-west wall JF248 which, to judge by the substantial way in which it had been built, may have been designed to give the roof trusses some internal support. The eastern part of the wall survived as a stump of daub up to 0.5 m high. Although no individual blocks could be discerned in it, the width of the wall (0.5-0.6 m) and the absence of any evidence of upright timbers indicate that it had been of the same type of construction as the walls on the mortar plinths, ie built of daub blocks. The wall showed no sign of having been plastered although the south face had been rendered with daub like the south wall of Barrack Block 1 (Fig 3.14) and some of the daub in the Boudican destruction debris had been keyed (pp 253-4, Fig 7.2). The wall was built on a foundation, 0.2 m deep and made of unmortared blocks of septaria. The western half of the wall had been demolished, presumably as part of the clearing up operations after the Boudican fire. The absence of lumps of septaria in the foundation trench suggests that the wall was robbed at the same time. There was a misalignment between the robbed and unrobbed parts of the wall. Since the position of the change coincides with the junction between two separate phases of the excavation, it may be that this was not real but was due to a planning error brought about by the speed at which the area had to be dug and recorded. The robber trench for the wall stopped opposite the north-south partition JF364. This presumably reflects the western extent of the wall although, as sometimes is the case with robber trench, it may have slightly overshot the end of the wall. Building 79 was the only barrack to produce fragments of window glass *(see* pp 117-19). Like its exceptional size, this may be indicative of a higher status than the other barracks or it may simply be fortuitous.

Features in Room 1 included a small, circular hearth (CF185) in the north-west corner of the room, a short, 0.15 m deep slot (CF171), two circular ovens (JF313 & JF274), and a number of shallow slots (CF195) with a ?posthole (CF198). The relationships of the ovens to other features in the room hint at a complicated structural sequence. One of the ovens (JF313) was sealed by two slots (CF168/JF312 & JF314) whereas the other oven cut the slot JF277 which was a right-angled continuation of the slot CF168/JF312 sealing the first oven. The slot CF168/JF312 contained traces of decayed timber. This feature and its fellow JF277 thus each resembled the kinds of slots left by ground-plates at the bases of partition walls. If this is indeed what they were, then either the oven JF313 predated the barrack, or the west wall of Room 1 (and hence perhaps Room 1 itself) was a secondary insertion into the building. The close proximity of the east-west slot JF277 to the wall JF248 seems to support the conclusion that JF277 was secondary. However the east-west wall implied by the slot JF277 must have been at least partly demolished before 60/1 because of the relationship of the slot to the oven JF274.

Room 2 was a latrine with a north-south timber drain (CF193) and a rectangular or square latrine pit (CF138). The northern end of the drain, together with much of the surrounding floor (CL83), had been stained the distinctive green colour usually indicative of cess-material. Immediately east of the drain, but still in Room 2, were two east-west slots (CF169 & CF186) of which one (CF169) contained traces of decayed timber. These slots probably contained joists for a wooden plank floor. The latrine pit, which was about 1.6 m deep and extended southwards into the section, had at least five regularly-spaced postholes (Fig 3.11) which presumably supported some kind of superstructure or cover as well as a timber- or wattle-lining for the sides. To the south was a third east-west slot (JF134) which, like the other two, may have been for a floor joist. However its junction with the north-south wall JF312 was such that the slot may have been for a ground-plate in which case it would indicate the position of the south wall of Room 2. Like EF900 (p 50), an interesting range of plant macrofossils in samples from the latrine pit provide some evidence of diet (p 283).

To judge by the extent of the green discolouration, the drain (CF193) appears to have been open next to the latrine pit. From this point southwards the drain was underground and was sealed by all the floors and walls in its path. The drain could not be excavated but it was traced as a strip of subsidence in the Period 2 floors as far south as the southern wall of the barrack (Fig 3.11). The drain presumably continued a metre or so further south to allow the waste to drain away under the street like the drains at Lion Walk in Buildings 8 and 9 *(CAR* **3,** 40-3 & 47).

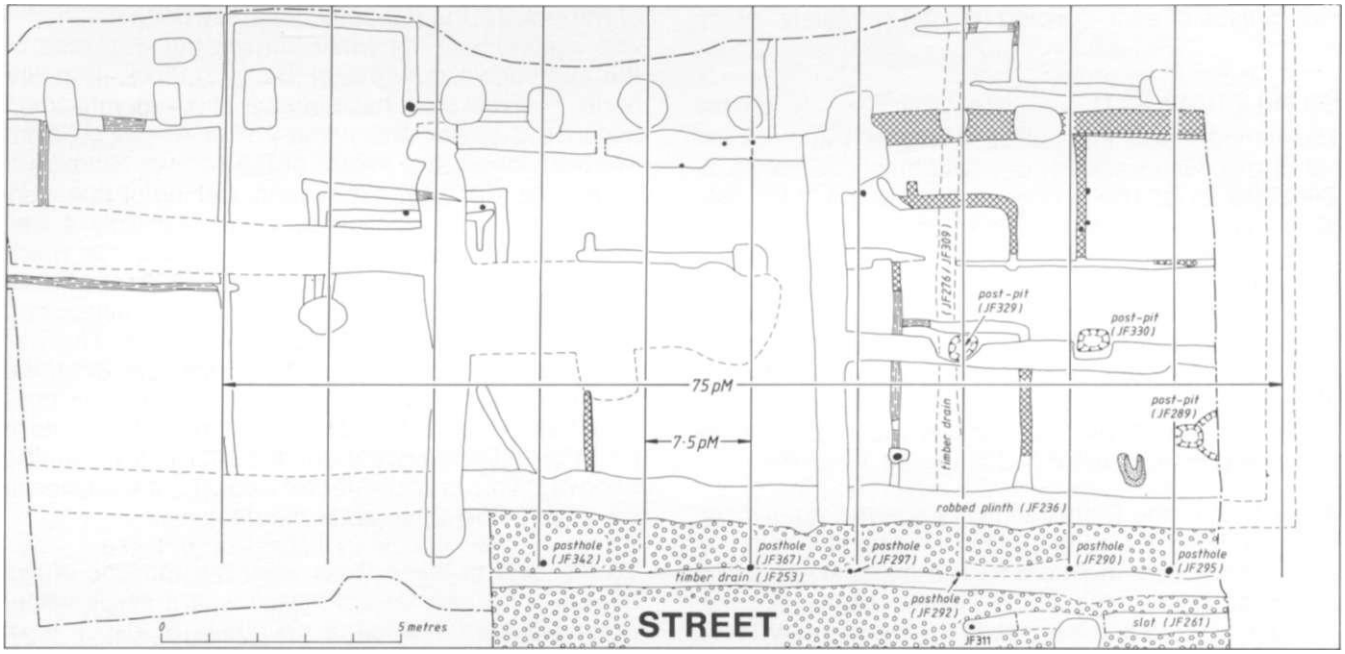


Fig 3.17 ***A*** *series of parallel lines at 7.5 pM intervals superimposed on the plan of the eastern end of Barrack Block 3 (Building 79) to show possible positions of roof trusses. [Pages 47-8]*

None of the other rooms contained any evidence to suggest the presence of wooden floors; all were either of sand or sandy clay loam.

To the west of the latrine pit CF138 were some early military pits (CF151, CF189, & CF190, Fig 3.11) which may have predated the building. Slightly further west was a line of stake holes which was either for a partition wall or a structure which predated the building (Fig 3.11). Traces of a thin daub floor (CL76) and occupation (CL70), albeit much disturbed, existed in Rooms 2 and 3.

Room 4 contained a small sunken baking oven (JF275) against the centre of the south wall.

Recovering the plan of Room 9 was made difficult by the fact that the remains of much of the room had been destroyed during the digging of later pits and other features, and in the south-west its floor was badly distorted by subsidence into at least one earlier pit. Two slots, JF362 and JF363, were straight-sided with flat bases. They are difficult to interpret but are probably best seen as slots for ground-plates, JF362 being a replacement for JF363. JF362 contained traces of a burnt timber *in situ* which presumably had been destroyed in 60/1. An alternative explanation for JF363 is that it was a drain in a horse stall (p 24).

In the street on the south side of the building was an east-west timber drain (JF253, Fig 3.12). Because the feature and the surrounding street gravel could not be excavated, it is not clear if the drain was original or a civilian addition. Fragments of the timber-lining survived as charred wood and inside it was choked with many fragments of burnt daub indicating that the drain had been open in 60/1. The same difficulty applies to the east-west slot JF261 (Fig 3.12). The latter stopped exactly south of the north-south drain JF309 as if it had connected to it. The slot may have contained a drain or a water-main although this is unlikely since it terminated in a small posthole (JF311).

Along the north side of the drain JF253 were six postholes, each in their own post-pit (Fig 3.17). Unfortunately there was not sufficient time to determine the stratigraphic relationships between the street metalling, the drain, and the post-pits. However the three post-pits at the east end (JF293-4 & JF296, Fig 3.12) were sealed by a layer of sand and gravel which in turn was sealed by Boudican destruction debris. The relationships of the next two post-pits (JF298 & JF367) to the drain are problematic; both seem likely to have been to one side of the drain (as opposed to cutting it and its backfill of Boudican destruction debris). The last post-pit was similar to the first three in that it appeared to have been dug down the side of the drain. The post-pipes in each of the post-pits were visible. These seem to have been spaced at regular intervals along the southern wall of the barrack; although a posthole was looked for between JF342 and JF367, there was not enough time to be certain that one never existed. One of the posts (JF292) lay on the line of the north-south drain JF276 suggesting that the posts may not have been an original feature of the building. The pits were laid out at 7.5 pM (2.2 m) centres and shared the same relationship to the barrack block as did three similarly spaced post-pits on the south side of Barrack Block 1 (p 41). Both groups of pits were possibly associated with secondary structures which had been erected on

the south sides of the two barracks and tied to the roof trusses of each building (Fig 3.17).

Period 2 (c 49-60/1)

The Period 1 slots and gullies in Rooms 1 and 2 went out of use, with traces of decayed timber surviving in CF168 and CF169, suggesting that the ?ground-plates had been left to rot *in situ.* Rooms 1 and 2 were subsequently amalgamated and re-floored on at least two occasions, both being associated with a hearth (CF164 (not on plan) & CF136 (Fig 3.12)). The latrine pit CF138 was open until 60/1. The nature of the floor levels to the west of CF138, although somewhat disturbed, suggest that a partition wall, subsequently removed, may have existed on much the same alignment as that postulated in Period 1.

At the time of the Boudican revolt, a small quantity of grain (JF269/JL222, Fig 3.12) was being stored in the north-east corner of Room 8. The material consisted of wheat grains with some barley. Almost all the grains had sprouted so that the intention may have been to use the material for the production of malt for brewing (p 282).

Barrack Block 4 (Building 80)

[CUL Sites G & J; Figs 3.2, 3.4, & 3.11-12]

Periods 1 and 2 (c 44-60/1)

This barrack was anomalous in that it appeared to be of standard size unlike the other barracks of the first cohort, which were all larger (p 24; Fig 2.5, p 12).

Cultivation of the area south of the narrow east-west street to the north led to the destruction of all the internal features of the building. The plinths were robbed in Period 3; the lowest parts of the plinths for the west and south walls survived *in situ* (GF2557 & GF2361).

To the west of the north-south plinth GF2557 was an area of gravel metalling. This was on the site of what presumably ought to have been the easternmost *contubernium* although gravel metalling is not normally used to provide floors in contexts such as these.

Barrack Block 5 (Building 81)

[CUL Sites G & H; Figs 3.2, 3.4, & 3.11-12]

Periods 1 **and 2** (c 44-60/1)

Like Barrack Block 4, most of the internal features of Barrack Block 5 had been destroyed during the cultivation of Period 3. Also the plinths had been robbed out during this time.

The centurion's quarters contained at least two internal block walls made of the same kind of large sun-dried blocks of sandy clay which were found on top of the mortared plinths and in the east-west wall of Barrack 3. One (GF3099/3692) lay north-south and was aligned with the plinth forming the west side of the centurion's quarters of Barrack Block 4 to the north. The wall must have been a secondary insertion because it sealed the primary floor of the building. The wall stood to a height of 0.5 m and, although it could not be fully excavated, did not appear to incorporate a foundation or plinth. Possibly it had been built on a pair of ground-plates like those which formed part of the external walls of the barracks although no traces of timbers such as these were noted despite the wall being burnt in 60/1. The wall contained an opening for a 0.7 m wide doorway, the threshold (GF3689) of which was formed by a brick laid flat (Figs 3.11-12). The wall had a return (GF3091) to the west on the north side of the doorway. Traces of plaster existed on the west side of the wall (GF3692) south of the doorway.

To the east of these walls were the remains of two heavily-burnt internal walls each with a single timber ground-plate (GF2664 & GF2931/2659). Parts of what could have been a third wall lay to the west of GF2931. This took the form of a short length of burnt daub (GF2661) and a shallow slot (GF3101) to the south.

The eastern *contubernia* were available for excavation but the results of this work proved to be insubstantial and inconclusive in most respects.

The central spine wall and the east-west plinths to the south were poorly preserved. West of the centurion's quarters, the distance between the two plinths was 5.9-6.0 m (20 pM), the same as the equivalent dimensions in Barrack Block 1 at Culver Street and barracks at Lion Walk and the Gilberd School (p 7). However, unlike these other barracks, there was a section of burnt ground-plate (HF657), the position of which hinted at the possibility that the Culver Street *contubernia* may have been subdivided into pairs of rooms. To the south of the southern plinth, a few fragments of burnt ground-plate and some possible post-pits point to the building extending beyond the southern plinth. An east-west ground-plate (HF634) marked the division between a burnt sandy clay floor to the north and the gravel metalling of the east-west street to the south. This timber thus was probably the base of a verandah. It contained the stump of an upright post *in situ.* A fragment of burnt ground-plate lying north-south pointed to subdivisions within the ?verandah at least in the immediate pre-Boudican period.

Just south of the ?verandah was a small semicircular patch of burnt sandy clay (Fig 3.12) which may have been the remains of a hearth. Further south still, cutting into the metalling of the street, was a line of small pits (HF639-42 & HF631) aligned on the southern plinth of the centurion's quarters. Although not very evenly spaced, they are sufficiently regular in plan to suggest some structural significance for the features. The pits contained no traces of post-pipes

and thus, if they were structural in some way, they must have been dug for the removal of posts rather than for their insertion into the ground. The most likely explanation for posts in this position is that they were part of a secondary structure (possibly a lean-to) added to the ?verandah to extend the roofed area of the building southwards to make the roof contiguous with that of the centurion's quarters. There were similar but smaller pits (HF632-3 & HF643-4) in this area but their relationships to the barrack were even more obscure.

The street between Barrack Blocks 5 and 6

[CUL Sites G & H; Figs 3.2, 3.4-5, 3.11-12, & 3.18]

The street between Barrack Blocks 5 and 6 had been in use before being metalled. This was made clear by various impressions in the surface of a patch of sandy soil sealed by the earliest metalling of the street. Most of the impressions were in the form of rounded grooves lying roughly parallel with the street. These are best interpreted as wheel ruts formed in a patch of thick mud which was slightly too soft to hold a faithful imprint. The latest impression was left by the hoof of a bovine animal (Fig 3.18).

Cutting into the metalling was an east-west slot (GF1811/4024) about 1.0 m south of Barrack Block 5. Although apparently excessively narrow at the east end (0.15 m across), the feature is best interpreted as a timber drain.

Along the outside of the north wall of Barrack Block 6 was a slot (GF2160/4041/4182) which was presumably for a timber drain. It contained no nails.



Fig 3.18 Hoof print and wheel ruts under the earliest metalling between Barracks 5 and 6.

Barrack Block 6 (Building 82)

[CUL Sites G & H; Figs 3.2, 3.4, & 3.11-12]

Periods 1 and 2 (*c* 44-60/1)

Only the centurion's quarters were excavated. Few internal features survived and the plinths had been robbed in Period 3. Two slots (GF3792-3), 0.35 m deep and 0.30 m wide, originally divided the east end into at least three compartments. These walls were demolished and replaced with a single east-west wall. This was destroyed in 60/1 to leave a slot (GF3791) containing part of a burnt ground-plate. To the west, another wall, possibly primary in origin, was represented by a slot (GF2704) which contained some stake holes suggesting the wall had been of the stake-and-wattle type *(CAR 3,* 23). The slot was filled with burnt Boudican debris and thus must have survived until 60/1. To the south of this slot was a small hearth (GF2771).

The *via principalis* (Periods 1 and 2: c 44-60/1)

[CUL Sites G, K, M, and watching brief; Figs 3.2, 3.4, & 3.11-12; Sxs 3.36-7 & 3.41]

Access to the site of the *via principalis* was limited mainly because it underlay Shewell Road which, being a highway, had to be kept functional until the construction works began. However a brief excavation did prove possible at the south end of the *via principalis* and a useful section across most of it (Sx 3.41) was provided by the contractor's excavations further north.

The *via principalis* was 60 pM wide (p 7; Fig 2.5, p 12). No evidence was found to indicate whether or not, like the minor streets, it was first used without having been metalled. At the south end of the street, on Site K, the pre-Boudican metalling was either thin or in places missing altogether as if it had been worn away in use or removed as part of the post-Boudican rebuilding operations. In Sx 3.41, a thick layer of metalling defined a distinct strip 6.7-7.5 m (23-5 pM) wide along the centre of the street. In contrast, the margins to either side were very thinly metalled.

In Period 2, a wooden drain was built on the west side of the central strip and was possibly matched by another on the other side (Sx 3.41). Contrary to the evidence of Section 3.41, the west drain (or possibly here a ditch) at the south end of the street appeared to have been contemporary with the earliest metalling. However the metalling was so thin here that it may after all have been a secondary feature of the street.

Faint traces were noted in Section 3.41 of a second pair of drains or ditches, this time within the central strip of thick metalling. It is doubtful if they really existed,

Building 83 (Period 1: c44-49(/55))
[CUL Site E; Figs 3.2 & 3.19-22]

Only the south-east corner of this building could be excavated (Figs 3.2 & 3.19). In some respects the plan was complicated and difficult to rationalise satisfactorily in terms of rooms, a process made no easier by the fact that the southern range of rooms was of two structural phases. To interpret the remains, twelve rooms and a central yard are proposed (Fig 3.19). The walls were built using the post-in-trench technique (Fig 3.20). The posts seem to have been square or rectangular in section, up to 0.25 m across, and set in trenches up to 1.1 m deep. Many of the postholes survived as voids (as in Building 84, Fig 3.21). This suggests that the ends of the posts rotted *in situ* and that therefore the posts had probably been sawn off near ground level when the building was demolished.

Only the south-west corner of Room 1 lay within the excavated area. Room 2 was very narrow (1.25 m north to south) and had no posts at the west end apart from in the corners, indicating the possible site of a doorway. Room 2 may thus have been a passage. Room 3 was roughly square and measured 4.5 x 3.3 m. It contained a hearth (EF1060) near the centre. Room 4 was of similar size to Room 3 and contained two successive hearths (EF1058 replaced by EF1057) against the centre of its west wall. At the east end were a gully (EF1235), two small pits of uncertain purpose (EF1140 & EF1236) and, apparently set in the east wall, a third hearth (EF1111). Room 5 measured 6.2 x 2.6 m and contained a T-shaped trench 0.6 m deep (EF1070/ EF1126). The latter may have been a construction trench for an earlier phase but it contained no traces of any posts. Room 6 was similar in size to Room 5, measuring 6.0 x 2.4 m. A gap at the southern end of the construction trench for the west wall (EF1087/EF1122) coincided with the most widely spaced pair of posts forming the room and thus may indicate the position of a doorway 1.1 m wide. This conclusion is strengthened by the fact that the drain EF1021 passes through the line of the wall at this point as if there was a convenient gap.

Room 7 was a latrine in the form of a narrow compartment, 2.5 x 8.7 m in area, occupying the south-east angle of the building. Set down the centre of the floor was a covered or partly covered wooden box drain (EF1100) which terminated in a timber-lined pit (EF900). The drain was 0.2 m deep and about 0.35 m wide. It had been hollow and never backfilled so it must therefore have had a lid. It lined up with the slot or gully EF1235 in Room 4 but probably did not link up with it since the north side of the construction trench EF1192 contained no traces of a slot or drain. The timber-lined pit was positioned so that its south wall was contiguous with the south side of the building in Phase B (*see* below), suggesting that the latrine was a later insertion. The pit was 1.60 x 2.4 m and 2.6 m deep. Its walls were formed of timber planks laid horizontally behind six upright posts. In places the positions of the planks were indicated by thin lines of decayed timber. Subsidence in the soft backfill of the pit caused distortion of the remains of the planks. The construction trench was only minimally larger than the lined part of the pit (Fig 3.22). The posts only extended 0.15 m below the lowest parts of the lowest planks. An irregular hole at the bottom of the pit (Fig 3.22) was probably the result of cleaning out the pit. At the north end of the drain lay what appeared to be the remains of the wooden lid. Near the centre of the drain were two opposing notches (EF1101 & EF1134) and a third one to the south (EF1133). They were similar to the notches along the sides of drain EF1021 under the east-west street which seem to have been dug to take short joists which supported the drain cover *(see* below). Along the base of the north and east walls of the room were the remains of two planks (EF1113 & EF1124), suggesting either that the floor had been of timber or, more likely, that there had been something like a bench against each of these walls. The largest gap between adjacent posts was at the southern end of the south wall. This indicated the possible site of a doorway up to 1.2 m wide.

The latrine pit EF900 contained human coprolites (Fig 8.1, p 275). These incorporated bran and a few eggs of intestinal parasites. Also from the pit were indications of a diverse diet in the military period. The complete list includes the remains of cattle, sheep/goat, pig, fish such as eel, herring, mackerel, and stickleback and figs, raspberries, grapes (Fig 8.6), and elderberry (p 281, & Tables 8.7, 8.12 & 8.15 on microfiche). In addition there was an exceptionally large number of broken vessels of Italian 'egg-shell ware' *(CAR* **10),** a find in keeping with the quality of the diet which the food remains suggest.

As already discussed (p 25), quite how the latrine worked is not entirely clear. The pit can be seen as having had seating above it for two or three people in the manner postulated for the free-standing latrines at Usk (Manning 1981, figs 57-8 & 83-4). In such a form, it may have been possible to enter it from the street rather than via Room 7. However the drain is more difficult to explain. Possibly the most plausible explanation is that it provided drainage in what in effect was a wash-room with a latrine at one end. It could have been used for the cleaning of sponges (although such a facility seems to have been thought unnecessary at Usk). Alternatively the drain had seating above and served as an extension to the main part of the latrine.

Rooms 8-11 were of at least two phases (Phases A & B), the remains being difficult to interpret with any confidence. In Phase A, Room 8 measured 5.9 x 2.5 m. A drain (EF1021) which lay under the west side of the room cut the construction trenches for the north, west, and south walls (EF1202, EF1286, EF1372 respectively) but itself was sealed by the earliest metalled surface of the road to the south. The apparent absence of postholes in trench EF1286

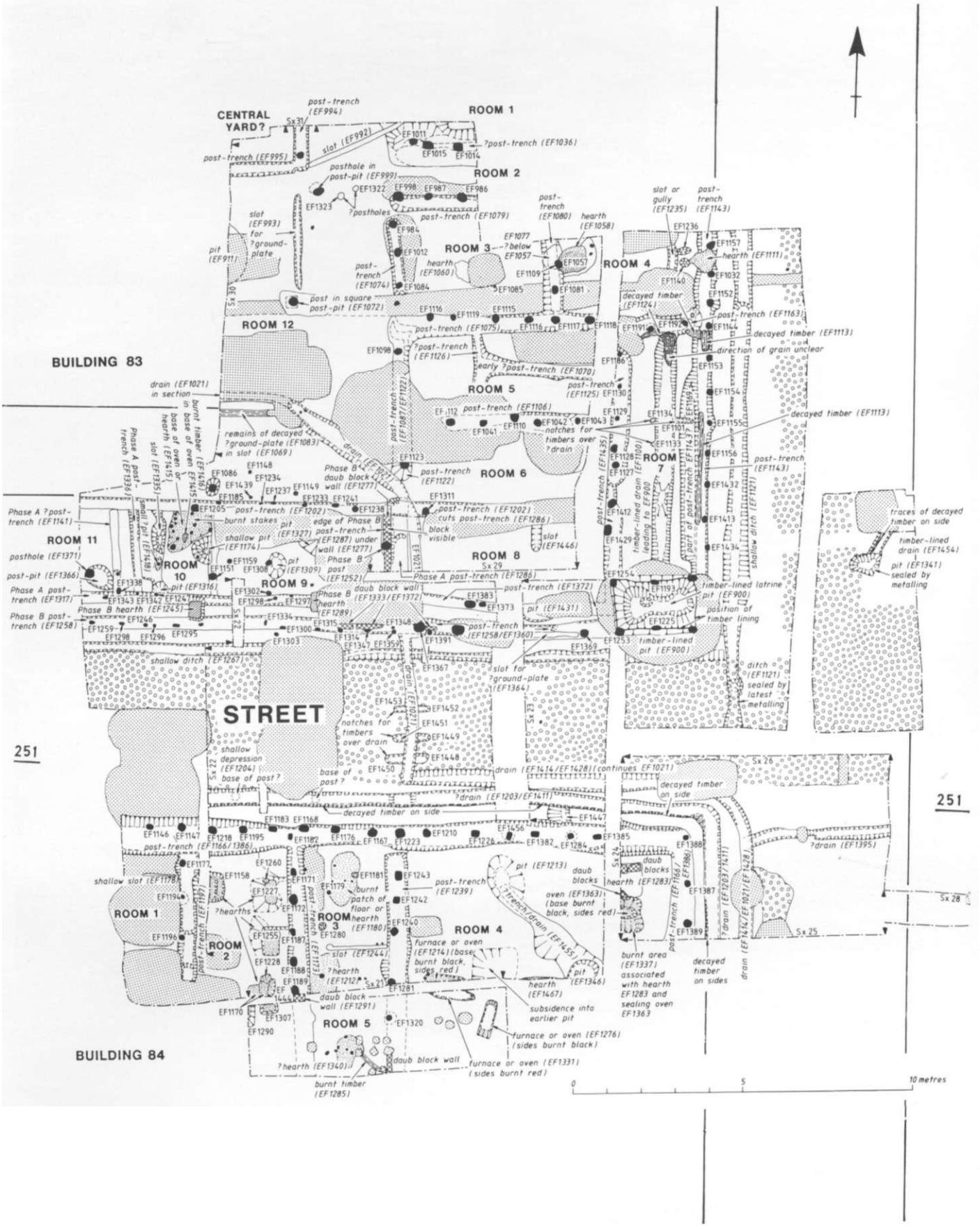


Fig 3.19 Period 1 at Site E (AD c 44-c 49(/55)). 1:157. [Pages 50-6]



Fig 3.20 The south side of the military Building 83 (left), the north side of the military Building 84 (right), and the east-west street in between the two. [Page 50]

does not necessarily mean that the feature could not have been a construction trench but could reflect the difficulty experienced in detecting many of the postholes. Its interpretation as a construction trench is favoured. The relationship between the western and northern construction trenches (EF1286 & EF1202) and the construction trench to the north (EF1087/EF1122) was curious. Despite a common alignment, the trenches (EF1087/EF1122 & EF1252) were not continuous but were separated by a short gap which started 0.15 m north of the trench EF1202. Also the east-west trench (EF1202) cut into the top of backfill of EF1286.

A striking feature of Rooms 8-11 is that the posts forming the walls were in general smaller in diameter than those elsewhere in Buildings 83 and 84 and of a size associated with wattle-and-stake walls such as those at Balkerne Lane *(CAR* 3, 107). Moreover, in one place (on the north side of the north wall of Room 10), there was a line of small holes in the top of the construction trench EF1202, confirming that at least some of the walls incorporated wattles.

Room 8 in Phase A was similar in size to Room 7 (5.5 x 2.5 m). Room 9 on the other hand was almost square being 2.1 x 2.5 m in area. Only part of Room 11 was available for examination. However it contained a feature (EF1141) which appeared to be a



Fig 3.21 Partly-excavated construction trench (EF1166/1386) of Building 84 showing three voids for posts. [Page 50]

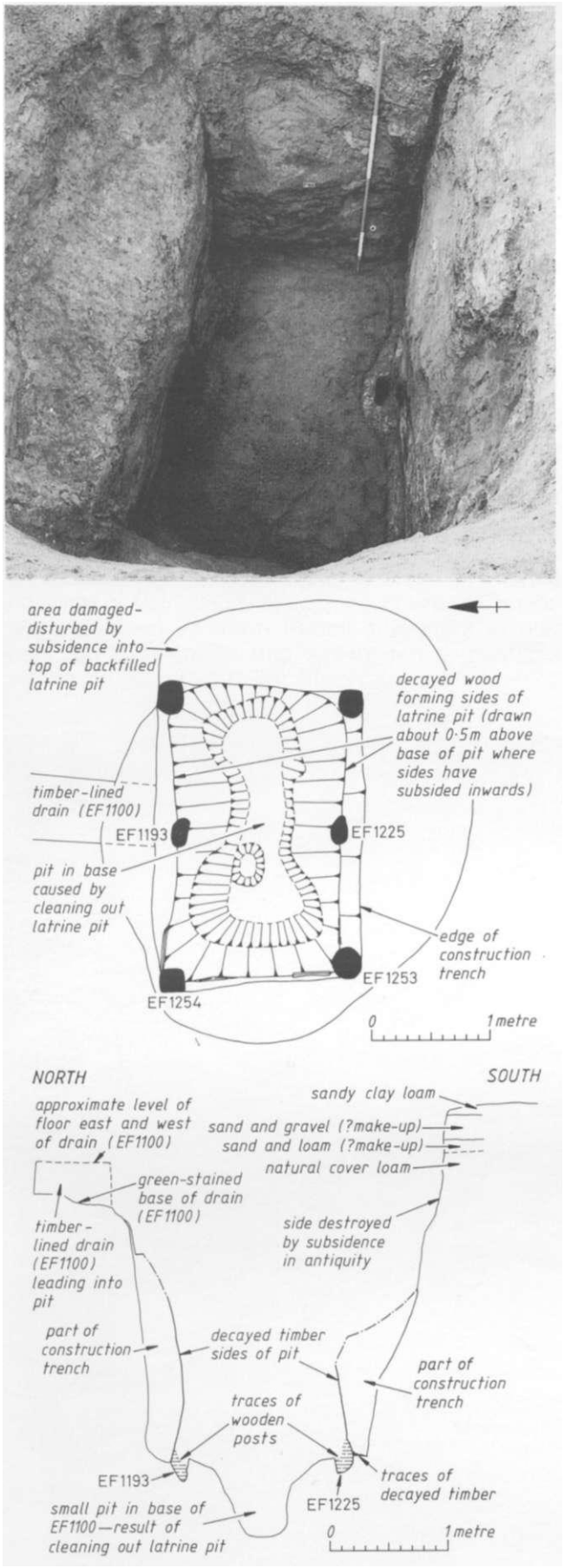


Fig 3.22 Military latrine (EF900) in Room 9, Building 83. Plan at 1:40. Viewed from the east. [Pages 50-2]

construction trench of Phase A despite its proximity to the trench EF1336. The latter, being integral with the east-west construction trenches to the north and south, provides a more convincing candidate for the room's east wall. Trench EF1141 stopped short of the east-west trench EF1202 by only a few centimetres, indicating that it may have been a secondary feature, possibly of Phase B. It could represent a replacement wall for EF1336.

In Phase B, the southern wall of Rooms 8-11 was replaced by a new one 0.7 m to the south (EF1258/1360) and the wall between Rooms 8 and 9 was replaced by wall EF1277. Two hearths (EF1245 (p 253) & EF1289) clearly belonged to this phase since they overlay the Phase A construction trench EF1317. The provision of two hearths rather than one suggests that Rooms 9 and 10 survived the alterations as two distinct compartments despite the lack of evidence showing that the north-south walls were continued southwards to meet the new southern wall of the building.

Most of the other features inside these rooms cannot be attributed to a specific period. In Room 8 was a small slot (EF1446) and in Room 9 there was a small pit (EF1309), and some stake holes. Room 10 had contained an oven (EF1415) apparently of unusual form. The remains consisted of a shallow scoop, burnt and punctured by about ten stakes. In its fill was a large piece of charred wood which, with the stakes, must have been part of the superstructure. Also in the room were a shallow pit (EF1174) and a shallow irregular slot which extended the full width of the room. Room 11 contained a large post-pit (EF1366) and posthole (EF1371).

Fragments of a few of the walls survived (Fig 3.19). They were all of Phase B.

In the extreme north-west angle of the excavated area was an L-shaped construction trench (EF994-5) which, to judge by its position, is likely to represent the south-east corner of a central yard. The layers in the ?yard, being mainly of sand with a little gravel, were not distinctive enough in themselves to indicate whether or not the context had been external. No metalling was observed.

The remaining part of the building is difficult to interpret and for the sake of convenience has been simply called 'Room 12' although the area concerned is very likely to have been more than one room. The remains of an east-west ground-plate (EF1083) in a shallow slot (EF1069) may have made a right-angle with another slot (EF993) to form a passage along the north side of Rooms 9-11 and the west side of Rooms 3, 5, and 6. This is the only clear example of the use of ground-plates in these buildings. A post in a square post-pit (EF1072) stood close to, but not exactly at, the centre of the possible wall suggested by EF993. An alternative interpretation is to see the two ground-plates forming parts of a verandah around a central yard which extended further south than indicated in Fig 3.19. Again the character of the

deposits west of the slot EF993 are of little help with interpretation.

A drain (EF1021) was constructed to conduct waste water away from somewhere near the centre of Building 83 and deposit it in the drain around Building 84. How the water would have been dealt with after this is obscure but, because the land slopes downwards slightly to the south, the waste water would presumably have eventually found its way into soakaways to the south or into the legionary ditch still further south. The drain lay on the north side of the ground-plate (EF1083). It turned sharply at the east end of EF1083 to pass diagonally under the ?doorway in Room 6 where it turned again to pass under first Room 8 and then the street to join the drain around the outside of Building 84. The presence of sharp bends shows that the feature could not have been a water-main because of the way that mains were built *(CAR* **3***,* 26). Pairs of small slots (EF1452 & EF1453; EF1449 & EF1451; EF1448 & EF1450), 50-150 mm deep, lay to either side of the drain where it passed under the street. They presumably contained short timbers to strengthen the lid and enable it to withstand the weight of traffic above. Similar timbers were used in association with a possible drain burnt in 60/1 at the Gilberd School site.

A small slot (EF992) lay diagonally to the west of Room 1. It resembled the slots EF993 and EF1069 but its position makes its interpretation as a slot for a ground-plate unlikely.

Building 84 (Period 1: *c* 44-49/(55))

[CUL Sites E & M; Figs 3.19-20 & 3.23-4]

Like Building 83, only a small part of Building 84 was examined. This was done in two stages. In 1981-2 on Site E, large parts of Rooms 1-4 were excavated in detail and in 1985, on Site M, sufficient was done to obtain an outline plan of Rooms 5-8.

Like Building 83, Building 84 had been constructed using the post-in-trench technique. Many of the postholes survived as voids indicating that, like Building 83, the building had been demolished by sawing the posts off near ground-level (p 50).

Metal working took place in the building. Room 2 seems to have been used for brass making whilst on Site M there was limited evidence for small-scale smithing, if not in this part of the building, then somewhere in the vicinity (pp 194-8).

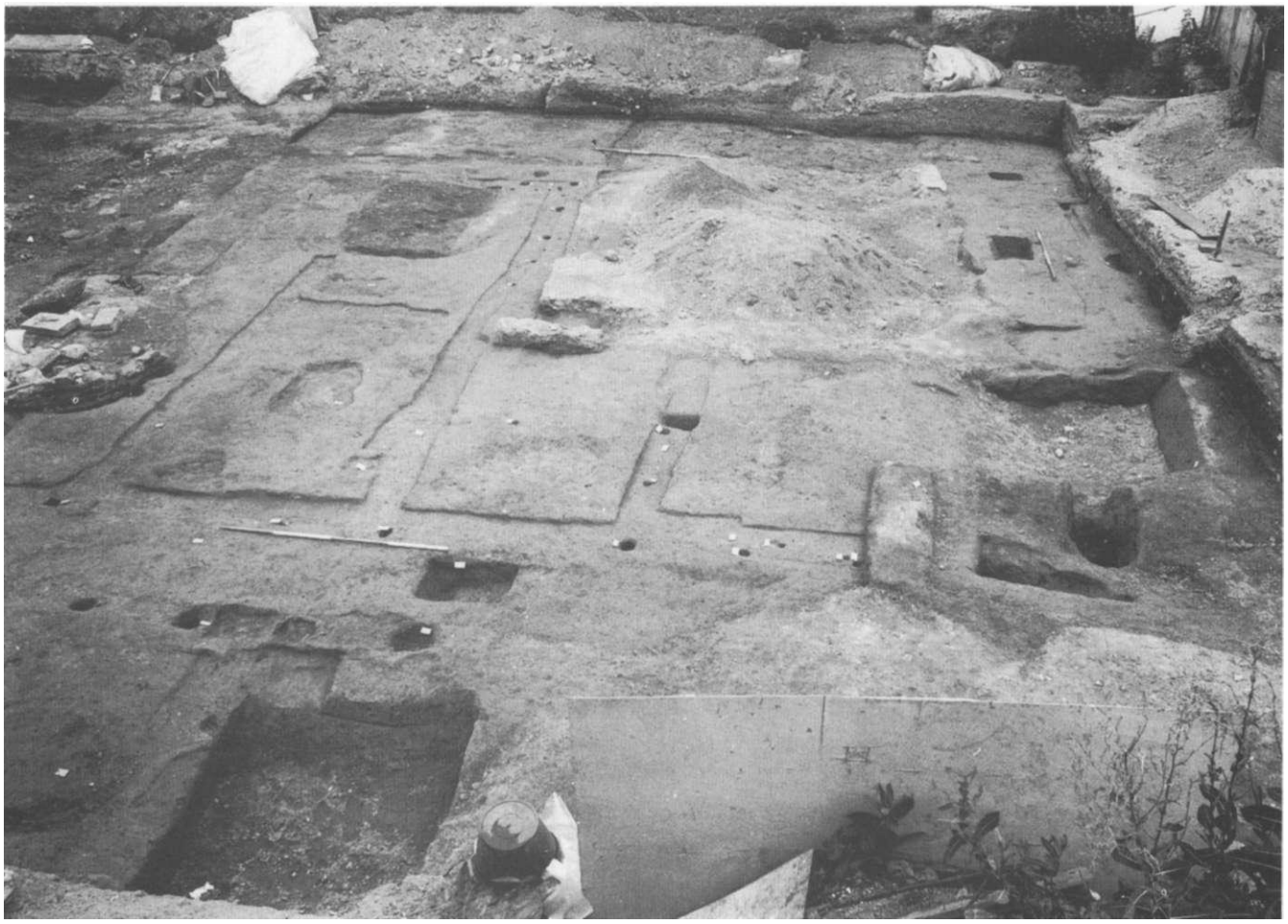


Fig 3.23 Partly-excavated construction trenches of Building 84 (Site M).



Fig 3.24 Section across the ditch on the north side of Building 84. The timber revetment is visible as a dark band on the left-hand side of the section. Viewed from the east. [Pages 55-6]

Only a small part of Room 1 could be examined. Cutting into its floor was a narrow slot (EF1178) which may have been a tree root. Room 2 was 3.1 m across and at least 7.1 m long and contained nine hearths. Three were larger than the others (EF1158, EF1227, & EF1255) and were built against or close to the east or west wall. Two out of the three produced fragments of brass-making crucibles (EF1227 & EF1255). The remaining six hearths formed a close intercutting group (EF1170 (x2), EF1228, EF1290, EF1307, & EF1444). Room 3 was slightly narrower than Room 2 and measured 2.7 m across. It contained three hearths (EF1180, EF1212, & EF1340), all of which were represented by a burnt patch on the floor. A shallow east-west slot (EF1244) indicated that the room may have been divided into two compartments by a light partition. Room 4 was the largest of all the rooms and measured 8.4 by at least 7.0 m. In the north-east corner was a substantial hearth or furnace (EF1283). Its intensely burnt base, 1.0 by at least 0.7 m, survived to a height of 0.17 m and was made exclusively of sun-dried sandy-clay blocks bound together with sandy clay. Some of the blocks were clearly discernible. Against the south side of the hearth or furnace was a shallow burnt depression (EF1337) which was the base of the mouth of the feature. Under EF1337 was a small hearth or oven (EF1363). Small fragments of iron-working debris from in and around the feature and the absence of crucible fragments indicates that EF1283/EF1337 may have been a forging hearth although the quantities concerned were small. Elsewhere in the room were three slots with burnt bases (EF1214, EF1276, & EF1331) and the edge of what appeared to be a hearth of the 'burnt patch' type (EF1467). Presumably these were also used for metal working but none were directly associated with any distinctive metallurgical remains. Diagonally across the centre of the room was an irregular trench (EF1455). This had a shallow pit (EF1213) at one end which could have been a soakaway if the trench were a drain.

In terms of form, the hearths can be divided into four types. The first was simplest and is identifiable usually as only an intensely-burnt irregular patch on the floor usually associated with some stake holes. To this category belonged EF1180, EF1340, and EF1212 in Room 3 and EF1467 in Room 4. A large example found previously is the bronze-working furnace (J1600 + J1601 + J1651) in Building 16 at Lion Walk *(CAR* **3,** 51-2, fig 39). This was also associated with crucible fragments and many stake holes. The second type is recognisably as a shallow pit, 150-300 mm deep and burnt at the base. Eight examples of this kind were noted, namely EF1158, EF1170 (X2), EF1227, EF1228, EF1255, EF1290, and EF1307, all of which were in Room 2. The third type is similar to the last except that the pit is in the shape of a slot. To this group belonged EF1214, EF1276, EF1363, and EF1331 in Room 4. The final type was represented only by a substantial surface-built feature in the east side of Room 4 (EF1283/EF1337) which is described above.

Seven fragments of crucible lay in the backfill of hearths EF1227 and EF1255. High levels of zinc in the fabric of these sherds have led Justine Bayley to suggest that the crucibles were used for the manufacture of brass (pp 194-8). Their association with 'burnt pits' indicates that this kind of feature was probably used for brass making. Moreover the occurrence of this kind of hearth only in Room 2 suggests that the metal working was carried out in a regulated fashion in the building. Thus it could be supposed that Room 4 was used for iron working based around the substantial hearth EF1283/EF1337. However, although iron working was likely somewhere in the building, there is not enough debris to indicate positively that activity of this kind was carried out in Room 4 or any other of the rooms examined.

Along the north side of Building 84 was what appeared to have been a drain (EF1203/1411) set in a roughly square-cut trench (Fig 3.19; Sxs 3.23-4). The latter was about 0.4 m wide at the base and up to about 0.9 m deep. On the south side of the drain was a layer of soft brown-stained sandy loam indicating that this side had been lined with timber (Fig 3.24). It is puzzling that decayed timber could be detected on one side only when the north side would undoubtedly have needed similar support to avoid collapse. One explanation is that the timbers on the north side and presumably the base too were

removed during the demolition of the building.

Part of the drain was set between the north-east corner of Building 84 and the shallower drain (EF1414/EF1428) which led from Building 83 and passed under the street metalling between the two buildings (p 54). Both drains seem to have been in use concurrently.

Rooms 5-9 could only be cursorily examined. The tops of the construction trenches were located by careful surface cleaning after machine-stripping straight down to the appropriate level. The uppermost few centimetres of each construction trench were removed to define them more clearly and to find postholes. Very few of the associated floor layers could be examined.

Despite the superficial nature of the excavation in this area, it was clear that the metal working did not extend this far west. One oven (MF719) was noted in section but this appeared to have been of the sunken oval type which is usually associated with baking *(CAR* **3***,* 25-6).

The streets between and to the east of Buildings 83 and 84

[CUL Site E; Figs 3.2, 3.10, 3.19-20, & 3.25]

The east-west street between the two buildings was well-metalled with layers of packed gravel and sand. The metalling of the north-south street, which it met at the east end, was patchy and existed only north of the junction. The metalling at the junction sealed a group of small indentations (EF1433; Fig 3.10) which possibly resulted from the removal of a small tree or bush when the fortress was being laid out. To the south was a similar group (EF1438; Fig 3.10) with a central depression which presumably corresponded to a taproot.

In one place, the east-west street sealed an area covered with wattles apparently interwoven to form hurdle-work (Figs 3.10 & 3.25). As has been indicated elsewhere (p 21), some of the military streets were in use before being metalled whilst others (at the Gilberd School (p 132) and east of Building 84) were never metalled at all or only partly so. Thus their occurrence here below the earliest metalling need not imply that they predated the street or the buildings to either side of it. Therefore the most obvious explanation for the wattles is that they represent the remains of the original south wall of Rooms 8-11 in Building 83 which was replaced in Phase B (p 52). Wattle-work certainly did exist in this building because traces of it were noted in Rooms 8-11 (pp 82-3). If this was the case, then the street must have been metalled soon after the demolition works because otherwise it would have been blocked by the remains of the wall. Alternatively the wattles might have been part of a bedding put down to support the metalling in an area which was judged to have had poor load-bearing properties. However this is unlikely since



Fig 3.25 Wattles under the street metalling between Buildings 83 and 84.

the area sealed by the wattles was no different to the area not sealed by them further west.

Building 85 (Period 1: *c* 44-49(/55))

[CULSite K; Figs 3.2 & 3.19]

There was little opportunity to examine Building 85 and any remains which did survive had been badly affected by the post-Boudican cultivation of its site (pp 123-4). During the excavation of the Period 3 pits at the south end of Site K, no traces were found of construction trenches like those of Building 84 despite several careful attempts to find them in the sides of later features. As a last resort, the area was machine-trenched and one likely candidate (KF319) was found as a result. The ?construction trench was noted in two places. It was 0.3 m and 0.25 m wide at the north and south ends respectively and the depth was uncertain. The trench was filled with clean sand and there was no hint of any postholes. There appeared to have been no cover loam in this area when the trench was dug (unlike those belonging to Building 84) and consequently it was difficult to distinguish the trench from natural. However, the trench was clearly early and its position neatly corresponded with the east wall of Building 84 which seems to have been set out at 30 pM from the east frontage of the *via principalis* (Fig 2.5, p 12).

On Site M, a similar sand-filled trench (MF560) of apparent early date is likely to have been part of an east-west construction trench for Building 85. South of this trench were some stake holes which may have been contemporary with it.

Buildings 86-90 (Period 2: *c* 49(/55)-60/l)

[CUL Site E; Figs 3.4 & 3.26]

The demolition of Buildings 83 and 84 was followed by the setting out of a new street on a slightly different alignment to the military buildings. This was part of the colonial street grid which may not have been completed until well into the 50s (p 27 & *CAR* **3**, 8-9). The street was about 15.75 m wide including footways. To either side of it were laid out timber-framed buildings (Buildings 86-90). At first the street was not metalled; instead occupation debris and silt accumulated over the area and several pits (EF745, EF1006, EF1019, EF1034-5, EF1164, EF1250, & EF1329) were dug on the site of the street and the adjacent south footway. The street was metalled and later sealed by Boudican destruction debris.

Buildings 86-90 were all built in the same way. The remains are tentatively interpreted as belonging to five different buildings, two on the north side of the street and three on the south, although it was not possible to establish clearly how many buildings had really been involved. On each side of the street, the groups of buildings appear to have shared a common frontage wall and a footway but otherwise there was little to suggest structural unity. The remains of Buildings 88-90 were not well preserved, mainly because they had been badly affected by slots and pits of later periods. Disentangling the remains in terms of convincing plans of separate buildings each with identifiable rooms has not proved possible. The problem was further compounded by the fact that some of the ground-plates had been removed in Period 3 to leave slots that were too difficult to distinguish from the remains of the Period 3 buildings.

The floors of the buildings were of daub and all the walls were on single timber ground-plates with no mortared plinths. Only one fragment of wall survived *in situ;* its type of construction was uncertain.

The buildings had been destroyed during the Boudican revolt but the Boudican destruction debris was very thin and in some places absent.

The footway on the north side of the street was well preserved. It contained lenses of occupation, make-up, and gravel up to a depth of 0.15 m. None of the layers were very extensive. Cutting into the footway were three pits (EF861, EF893, & EF991). The south wall of the footway appeared to have been built at the same time as the rest of the building. The base of its ground-plate was laid in a shallow slot cut into the same make-up level as the plate for the frontage wall. It also sealed an upright pot (EF830) of Colchester Type HZ 3e *(CAR* **10).** Along the outside of the south wall was a timber drain (EF651) which had been destroyed in 60/1. At the east end, it linked up to a north-south drain (EF1027) at the side of which was the remains of a possible hearth in the form of a small burnt patch (EF1089) on the surface of the floor.

The wall between Buildings 86 and 87 (EF870) could not be distinguished from the floor EL105 to the west and was detected only because of the absence of overlying occupation. It seems likely to have been of the 'daub-block type'. Although interpreted as a party wall, it could equally well have been part of an internal partition in the same building.

The position of the southern street frontage could not be detected on the west half of the site but its position was clear from the distribution of the features, particularly the northern ends of some of the slots. There was probably a ground-plate defining a footway like EF690 on the north side of the street but the remains of this and any adjacent timber drain would have been destroyed when the Site E Period 4 foundations were dug. A north-south slot EF950 is tentatively interpreted as a party-wall between Buildings 89 and 90 because the east-west slot EF874/EF956 did not continue west of it. The north-south slot EF412 is seen as representing the equivalent wall between Buildings 88 and 89 mainly because of its apparently similar relationship to the east-west slot EF419.

A small group of burnt tiles (EF435) in Building 88



Fig 3.26 Period 2 at Site E, Culver Street (AD c 49-60/1). 1:184. [Pages 57-9]

was probably the remains of a hearth. A gully (EF593) in Building 88 crossed the footway presumably to conduct waste water into a timber drain along the side of the street. An intensely-burnt patch (EF563) on the floor on the west side of the presumed party wall over the slot EF412 was likely to have been the remains of a hearth.

At least six rooms were detectable in Building 89. The remains of two of the walls appeared to have been removed in Period 3, namely the east wall of Room 2 and the east-west wall between Rooms 1-3 and Rooms 4-6. The building contained many hearths which survived as intensely-burnt patches on the floor. These were presumably the result of industrial activity of some sort. Room 1 contained the remains of five hearths (EF561, EF564-5, & EF576-7) of which at least two (EF576 & EF577) were sequential. The hearth EF561 also incorporated two fragments of thick tile laid flat. Against the east wall of Room 2 was a raised circular oven or hearth (EF693). This survived as a slight burnt depression in the floor surrounded by the stump of a narrow daub wall, the burnt remains of the superstructure. Room 3 contained four hearths (EF649, EF648, EF753, & EF760) of which one (EF649) was unusually large. In

Room 4 were four more hearths (EF579, EF712-3, & EF729) whilst in the centre of Room 5 there was a burnt area which may have been a hearth. Room 6 was comparatively narrow. Rooms 2 to 5 all contained various small pits and stake holes of indeterminate function. If, as seems likely, the building continued south of Rooms 4-6, there must have been at least one large room in this location containing few internal features.

The remains of Building 90 can be viewed as representing at least four different rooms. Their positions were indicated by an east-west slot (EF874) and a closely-set group of north-south slots of Period 3, one of which presumably coincided with the position of a north-south wall of Building 90. Slots EF921 and EF507 indicated the positions of the east walls of Rooms 2 and 4 respectively. In contrast to Building 89, Building 90 contained few small pits and only one good example of a hearth (EF710). The latter lay in the centre of Room 4 and was circular in shape. Room 4 was also the only room to contain many stake holes. They were sealed by the floor (EL98) on which the hearth had been built.

East of Building 90 was a floor (EL127) sealed by occupation (EL116) and a pit (EF903). These may have been part of Building 90 or an adjacent building.

Building 91 (Period 2: c 49(/55)-60/1)
[CUL Site M; Figs 3.4 & 3.26]

Site M was formed by machine stripping Site D down close to the top of the underlying natural. Building 91 was excavated after the stripping and is defined mainly as the collection of early slots, post-pits, postholes, and stake holes which lay north of the ?Period 1 east-west street but post-dated Building 84. These formed no plan which could be rationalised in a meaningful way in terms of one or more buildings. There were no thick deposits of Boudican destruction in this area, which is partly why the phasing of the earliest civilian features here is less certain than in other machine-stripped areas and why there is some doubt whether the earliest civilian buildings were burnt during the fire at all.

The floors of the building were of daub. They seemed to have stopped more or less in the same position as the west side of the earlier military building suggesting that the *via principalis* was unchanged during the changeover from fortress to town. Most of the slots (MF244, MF310-11, MF314, MF347, MF362, MF502, MF565, MF567, MF588, MF671, MF673, & MF690) were likely to have contained ground-plates. The apparent relationships between slots MF347 and MF362 and their adjacent features suggest that they may have been post-Boudican. A north-south strip of daub (MF346) was probably the sole example of part of a wall which survived *in situ;* its east face seemed to have been affected by the slot MF381. On the east side of the wall was a row of neatly-spaced stake holes (MF284 & MF433-6). Close to the line of the wall projected northwards were thin bands of yellow sandy clay (MF323-5) defining a north-south slot with a right-angled return. This is an usual arrangement but seems likely to represent the remains of two walls 'rendered' with a coating of daub which extended over the sides of the ground-plates. Five burnt areas were identified within the building. At least two of these (MF672 & MF689) could have been the remains of hearths although all could have been the result of the Boudican fire. The other most distinctive features consisted of an oven (MF329 (unexcavated)) and the grave of a baby (MF312) apparently buried without an accompanying pot.

To the west were three slots (MF246-7 & MF390) forming an annexe or separate ancillary building on the edge of the street.

Building 92 (Period 2: *c* 49(/55)-60/1)
[CUL Site K; Figs 3.4 & 3.26]

The difficulties which occurred with the dating and interpretation of Building 91 apply equally to Building 92. The latter is defined as the group of early features detected after the machine stripping on the southern end of Site D and the northern end of Site K. The most distinctive features were two construction trenches (KF391/MF181 & KF393) containing postholes (KF394, KF450-4, & MF182-3), some of which survived as voids 0.3 m and more deep. Although of different widths, the two trenches KF391 and MF181 lined up with one another and thus were likely to have been part of the same feature. There is the possibility that these features were really part of Period 1 because, as a building technique, the use of this kind of construction trench is only paralleled in military contexts in Colchester. Moreover the north-south slot is close to the line of the military slot KF319 to the south and MF419/MF423 to the north indicating that it may have been part of Building 85. However the fill of the two trenches (KF391/MF181 & KF393) was not the clean sand associated with military construction elsewhere but sandy silt with oyster shell fragments, flecks of charcoal, small lumps of daub, and small pebbles indicating that they were not primary features. Other features which may have been contemporary include thee more slots (KF396, KF455, & MF315), two possible hearths (KF389 & KF392) and part of a mortar-and-gravel surface.

The cultivated area west of the former *via principalis* (Period 3 of Sites G & H: 60/1- *c* 225)

[CUL Site G; Figs 3.5-6 & 3.27-8]

After AD 60/1, the plots which had been occupied by the southern three barracks were left open. Although there were no standing structures, most of the pre-Boudican boundaries survived the revolt (Fig 3.5, p 28-30) suggesting that demolition took place building by building rather than large areas being levelled at one time. Only the boundary between

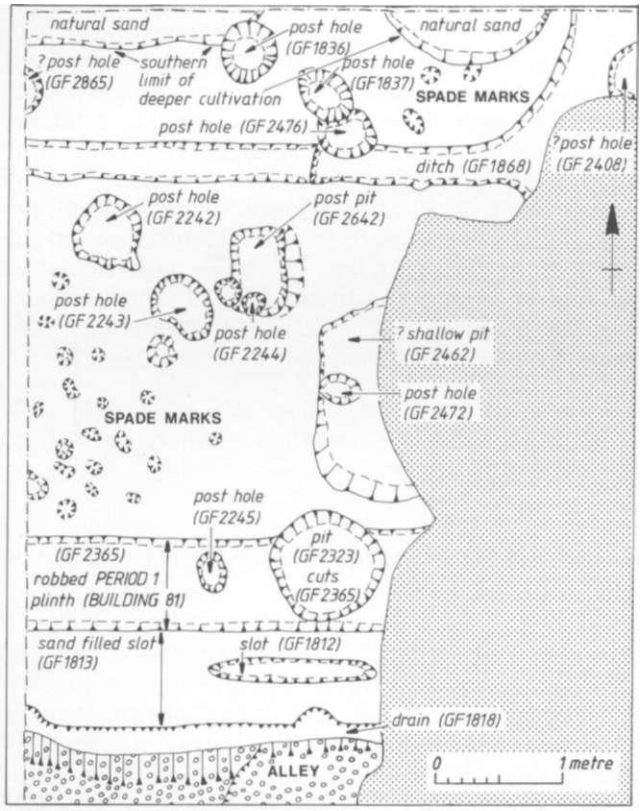




Fig 3.28 ?Spade marks at the base of the cultivated soil (Site G). Plan at 1:60. The ?spade marks are visible in the right half of the photograph (taken from the north-west).

Buildings 80 and 81 (Plot D, Fig 3.5) seems to have vanished. Initially the plots would have been barren areas of land covered with sterile deposits of lumps of burnt daub and charcoal where vegetation would have been slow to establish itself. However, by frequently digging the material over and perhaps with the addition of manure and imported soil, these vacant areas were turned into land which could be successfully cultivated. For perhaps the first five or ten years following the site clearance after the revolt, the plots may have been left as waste land during which time plants would slowly have recolonised the area and hence formed the start of a useful topsoil. However it must have been continuous cultivation with the repeated breaking up of the ground which was eventually to produce soil up to a depth of 0.55 m. The soil was of poor-quality, being produced mainly at the expense of the underlying Boudican destruction debris and the earlier floors and other deposits of Periods 1 and 2. The narrow street which had been between Buildings 81 and 82 was retained so that two allotments or fields were formed, namely a large one on the site of Buildings 80 and 81 (Plot D, Fig 3.5) and another on the site of Building 82 (Plot E, Fig 3.5). Early in Period 3, the street was resurfaced and the old drains were replaced (GF1811/GF4024 & GF2160/GF4013; Fig 3.27).

Plot D seems to have been continuously cultivated whereas to the south, on Plot E, these activities were more intermittent because of the construction of the town wall. Cultivation of Plot D led to the loss of many of the deposits associated with Buildings 80 and 81 and left much of the cultivated soil directly overlying the natural sand. Cultivation of Plot E on the other hand seems to have been less intense so that the erosion did not penetrate the base of the Boudican destruction debris.

At the base of the cultivated soil a few metres north of the street was a distinctive group of irregular depressions (Fig 3.28). They were filled with the soil and cut into the thin layer of Boudican destruction which still survived here directly under the cultivated material. Their shapes, fills, and context indicate that these were the marks of spades used to dig deep into the soil. (Note the spade sheath (Fig 5.50,**1661)** from Building 113 to the north although its context is later than the spade marks.)

On the north side of this group was an east-west ditch (GF1868) which seemed to mark the limit of the deeper cultivation. The ditch turned northwards at its east end into the area destroyed by modern cellars. Close by several postholes (including GF1836-7, GF2242-4, GF2408, GF2476, GF2642, & GF2865) may have been associated with fences.

Various pits were dug in Plot D in which two groups can be distinguished. One consists of small circular pits (GF2362-3, GF2585, GF2594, GF2626, & GF4107) of late 1st to early 2nd century date. These were perhaps dug near the beginning of the cultivation phase (although they contained little Boudican material). The other group is made up of pits (GF79, GF2218, GF2292, & GF2384) most of which were larger than those in the first group. These dated to the mid 2nd to 3rd century and are likely to belong to the end of the cultivation phase.

Samples of burnt material from four Period 3 contexts on Site G (pits GF2594 & GF3064 and layers GL1745 & GL2520) were found to contain fodder and faecal

concretions probably of cattle indicating the presence of animals in the area at this time (p 283).

The cultivated area east of the former *via principalis* (Period 3 of Sites K & M: 60/1- *c* 400+)

[CUL Sites K & M; Figs 3.6-7, 3.27, 3.29, & 3.41]

The area between Building 123 and the south side of Insula 35 (Fig 3.7) appears to have been cultivated for almost all of the Roman period. The eastern extent of the cultivation is obscure but the discovery of Roman building remains in and around Trinity Street (2/84a, pp 284-6) makes it likely that only the south-west quarter of the insula was involved (an area of 0.50-0.75 acres).

The presence of cultivation was indicated primarily by a layer of well-mixed dark yellowish-brown sandy loam. This was up to 0.8 m deep and was similar in appearance to the cultivated soil found at Lion Walk and Balkerne Lane *(CAR* **3,** 56 & 138-41 resp). The soil underlay the 'dark earth' and sealed the truncated remains of Buildings 85 and 92. The latter had been badly damaged by the cultivation and survived mainly as the lower parts of features cutting into the natural. Associated with the soil and supporting its interpretation as cultivated were the granary (Building 125, p 108), the ?corn-drying oven (KF12, pp 108-12), and a ploughshare (Fig 5.50**,1662,** p 186).

There was no footway between the cultivated area and the former *via principalis.* Instead the western limit of the cultivation was indicated by two shallow ditches (KF290-1, Fig 3.41) which lined up with the arched drain (DF112/DF352/MF57) on the west side of Building 123 and thus were presumably part of the same drainage system. They may have been the remains of timber drains except that at the south-west corner of the insula they changed direction by means of a neat curve rather than a right angle which would have been much easier to form with timber planks. The two ditches were presumably not contemporary. However they were parallel, giving the impression that the arched drain may after all have extended south of Building 123 and that the supposed ditches somehow related to the two sides of it. The most obvious explanation for them is that they were robber trenches for the arched drain; however there was no robbing debris in their fills. After turning eastwards, the two ditches appeared to continue as a single, wider ditch (KF120, Fig 3.41). The change of direction indicates that there must have been no drain arch in the Roman town wall at the end of the street and hence possibly no internal tower either (p 31). Presumably the ditch continued along the full width of Insula 35 and linked up with a drain which passed through the wall via an arch close to the present Scheregate Steps (p 328).

Other narrow slots on the south side of the insula showed frequent changes to the drainage system (KF72, KF81, KF120, KF135-6, & KF234). The plan and sequence of these slots are obscure mainly because there was insufficient time for their excavation.

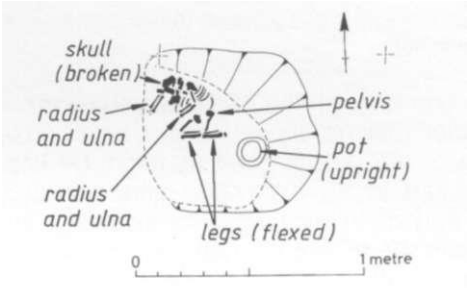


Fig 3.29 Infant burial (Site K Period 3a or 3c) (KF51). 1:33.

In addition to the slots or drains, various pits and other features were dug within the cultivated area. One distinctive group (Fig 3.27) lay in the south-west corner and consisted of two north-south rows of small pits. Some are likely to have been postholes (KF66-8 & KF98-9) whilst the others (KF128 & KF234-42) were possibly post-pits. Although there were no surviving floor levels, the features most likely represented the remains of a small post-built shed in the corner of the field. Alternatively, they may have been the remains of a sequence of fences or gates especially since the pits on the west side were larger than those on the east as if the two groups had been different in function or time.

Another significant group of pits (Fig 3.27) lay close to the southern boundary of the cultivated area. Most of these features contained waste products from bronze working and possibly iron smithing (pp 194-8). The earliest of the pits (KF55, KF132, & a partly-excavated complex KF79/KF154/KL80) contained so much of this material that much of the animal bone in the pits was heavily stained green as a result of having lain in contact with concentrations of the copper-rich debris. The quantity of this material in the earliest pits indicates that practically all the similar debris in the later pits in the area must be residual in context. Although there were no hearths, the density of waste suggests that the metal working either took place close to this area or that debris from that activity was deposited directly into the pits. The earliest of the pits date to 60/1-*c* 150, the others to *c* 150-400+. Unstratified from Site K was the upper part of a pair of large smith's tongs (Fig 5.62,1711, p 193).

Two babies had been buried in this area. One (KF51; Figs 3.29 & 41) had been placed in a pit with a complete upright pot nearby of Colchester Type GX 156 *(CAR* 10, no 546). The body lay on its right side with the legs bent and the right arm under the head. The other baby (KF71, Fig 3.41) had been similarly buried but on its left side, with the knees and arms drawn towards the chest. As usual in burials of this kind, neither were in coffins. Dating evidence for both burials is limited, the latest pottery being Flavian-Trajanic from KF51.

The town defences

[CUL Site G; Figs 3.6-7, 3.27, 3.30 (Sheet 3a), 3.31, & 3.41; Sx 3.35 (Sheet 3a)]

The section through the deposits behind the wall was dug under difficult circumstances and consequently the results are not as good as might be hoped. The section had to be excavated and recorded in two weeks and done by tunnelling sideways in artificial light under the roof of the new tunnel which had to be cast in position before the section could be excavated. The tunnel was dug north to south towards the rear face of the Roman wall. Whilst we can be fairly confident about the following conclusions, there is clearly a need for more sections to be dug under better conditions.

The sequence of construction

The construction of the wall meant the loss of practically all the plot originally occupied by Building 82 (Plot E, Fig 3.5). The Period 3 activity in this part of the site has been subdivided into four phases (Fig 3.30; Sx 3.35, Sheet 3a) as follows. (For a summary of the dating evidence, *see* Appendix 4, pp 399-401.)

Phases 3a-b: from AD 60/1 to the building of a street on the site of Building 82

To this phase belonged the robbing of the southern plinth (GF3617, Fig 3.11) of Building 82 and possibly the start of the cultivation of its plot. A series of long east-west grooves were cut into the Boudican debris (not on plan). These appear to have been wheel ruts related to traffic presumably linked to the construction of the wall.

A street was built directly on top of Boudican debris overlying the remains of Building 82. But the Boudican material was unusually shallow (0.16 m) suggesting that it had been mainly stripped off before the street was laid. The street was constructed of gravel in a sandy matrix and sealed the robber trench for the south plinth (GF3617) of Building 82. It was 200 mm deep at the centre and about 20 mm deep at the edges. It was sealed by up to 200 mm of road silt (Phase 3b). Along the north side of the street was a drain or ditch which marked the southern limit of the cultivation on the site of Building 82. The street lay to the south of the wheel ruts mentioned above and presumably provided better quality access along the route of the intended wall.

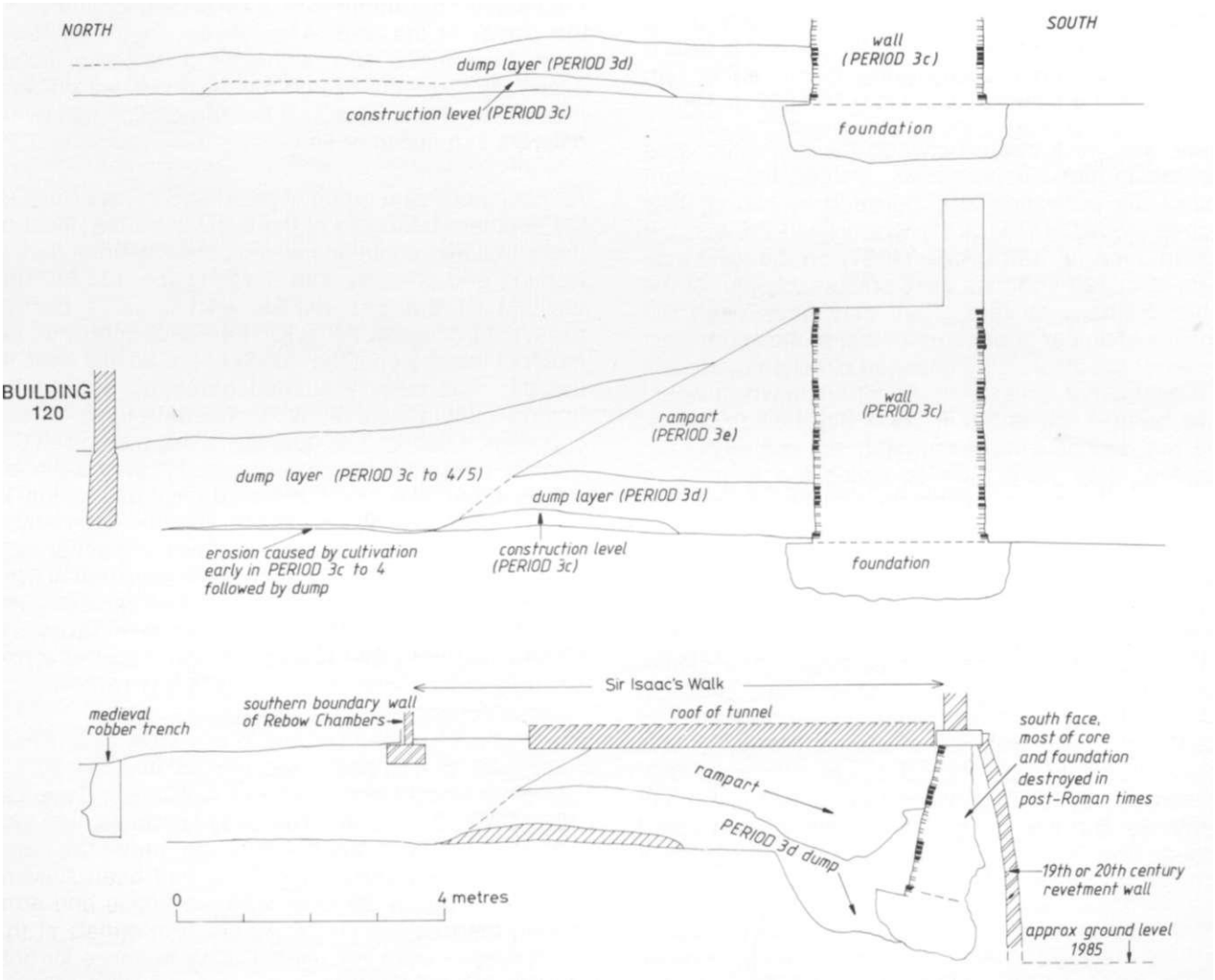


Fig 3.31 The development of the town wall from Phase 3c to the construction of the tunnel in 1985. [Pages 62-3]

Phase 3c (c 65/80): the construction of the wall

Sealing the silt on the Period 3a street was a layer of clean sand which presumably derived from the digging of the construction trench for the wall. Overlying this were piles of septaria chippings left over from dressing the facing blocks. Elsewhere were the remains of wooden mixing boards where the mortar had set before it could be used. The boards were identifiable by thin layers, about 1 mm thick, of brown decayed wood at the base of the layers of mortar. In places, traces of wood grain were visible. These deposits were levelled and sealed by a layer of mortar and septaria to form a street surface.

North of the Phase 3b street, the drain GF3499 was backfilled, the cultivated soil was levelled, and a dump of material (GL3133) was laid down so as to spread on to the north edges of the street. A layer of sand and gravel, which may have derived from the excavation of the construction trench, was spread over the levelled area to form a surface. Part of the surface west of the north-south slot GF2438 was well preserved; elsewhere it was much thinner. From this level were cut various pits (GF2695, GF3064, GF3173, & GF3522/GF3844), the most significant of which was a large square-cut example (GF2875). It was 0.4 m deep and had vertical sides with stake holes around the base indicating that the sides may have been revetted with a stake-and-wattle lining. The pit lay close to the north-south drain alongside the street so that one possible explanation for the feature is that it was a tank to contain the water needed for the building of the town wall. However there was no evidence that the sides of the pit had been lined with an impermeable material such as clay (like the ?water-tanks at Balkerne Lane: *CAR* **3,** 141-2) so that any water stored in the pit is likely to have slowly seeped away.

Phase 3d (c 65/80 - c 150): after the construction of the wall but before the building of the rampart

During Phase 3d, the area between the wall and the north side of the plot originally occupied by Building 82 was covered by a variety of dumps of material. Next to the wall was deposited a sequence of sandy clay layers and occupation debris. The northern part of this material may have been cultivated in places but since the underlying Period 3c deposits seemed to have been undisturbed, any cultivation must have taken place after the deposition of a considerable depth of material. In the south-east corner of Site G, the cultivation was interrupted by the laying of two successive layers of gravel metalling. Contemporary with the layers were a circular sunken oven lined with sandy clay and tile (GF2139) and an open circular hearth (GF2708) (Fig 3.45, inset). There are no other structural remains associated with these features.

Phase 3e (c 150): the construction of the rampart

The rampart was similar in appearance to the part sectioned at Lion Walk *(CAR* **3,** 14-15). It was constructed of dumps of yellowish-brown sandy clay loam which presumably derived from the demolition of daub walls. Only part of the rampart was available for excavation. This was the front (ie southern) part where it had subsided by at least a metre into the space created below by the movement southwards of the robbed town wall.

Phase 36/4 (c 65/80 - *c* 150): dumping behind wall

Dumping on a small scale behind the town wall continued into at least the 3rd century. Secondary activity of this kind is matched at Lion Walk by 'Rampart 2' *(CAR* **3,** 73) which, in the light of the Culver Street section, should be regarded more as the result of casual dumping behind the wall rather than an indicator of a formal remodelling of the defences.

The town ditch

[CUL Site W; Fig 3.30 (Sheet 3a)]

The area south of the town wall was largely unaffected by the modern development works and the only opportunity to examine the ditch beyond the wall was in the section of one of the contractor's service trenches. Observations were limited because of the difficult circumstances but, as far as could be judged, the ditch was about 4.5 m deep, 20 m wide, and filled with dark earth (Fig 3.30, Sheet 3a). There did not seem to have been a berm between the wall and the northern edge of the ditch. On the south side there were some indications in the trench of an earlier ditch of similar depth. The fill of this ?ditch seemed much less sandy than that seen in the legionary ditch at Balkerne Lane and Lion Walk *(CAR* **3,** 93 & 31) and more in keeping with the Flavian ditch sectioned at Balkerne Lane *(CAR* **3,** 115). According to the excavations at Balkerne Lane and Lion Walk *(CAR 3,* 94 & 32), the centre-line of the legionary ditch should have lain within a metre or so of 20 m from the inner edge of the *via sagularis.* This means that the centre-line of the legionary ditch at Culver Street probably corresponded to the centre-line of the wide ditch rather than the ?ditch to the south. This being the case, the legionary ditch would have been completely destroyed when the latest ditch was dug because it would have been much narrower and probably not quite so deep and also the ?ditch to the south must correspond to the Flavian ditch at Balkerne Lane.

The Roman town wall

[CUL Site G; Figs 3.32-3 & Fig 3.34 (35 mm microfiche)]

Little of the wall survived although the inner face turned out to be unrobbed and well-preserved. As at many other in places in the town, the base of the foundation was higher than the existing ground level on the ditch side of the wall. The south side of the wall had been periodically cut back presumably to rob it

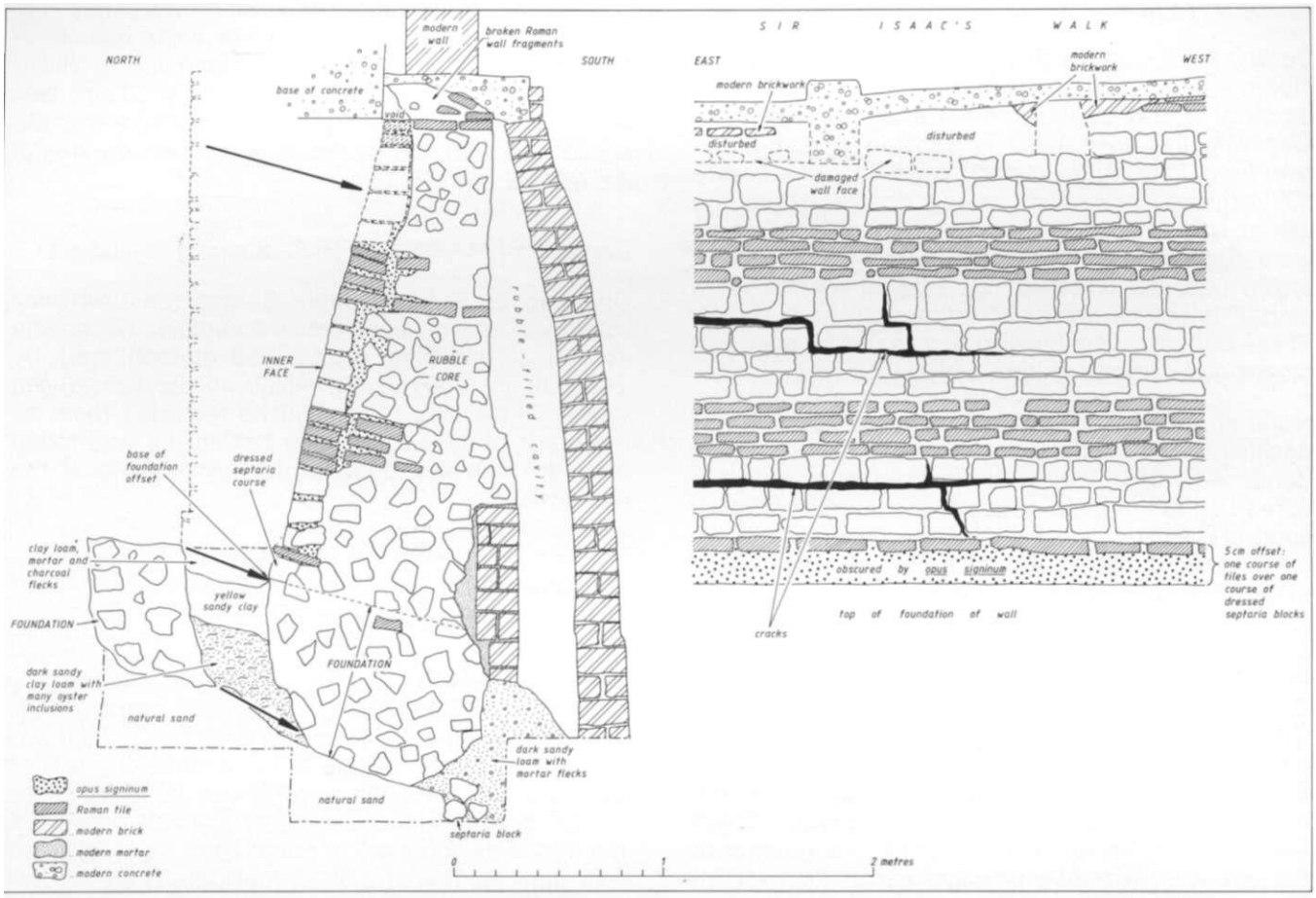


Fig 3.32 Town wall: section and elevation. 1:350.[Pages 63-4]

for building materials. The robbing had been so extensive that well over half the thickness of the wall had been removed in this way. The surviving stump was unstable and had very gradually tipped forward, the south face being nibbled back to leave it vertical. In one place, the stresses were so great that the foundation had broken in two to leave the northern edge *in situ* (Fig 3.32). The forward movement of the stump caused severe subsidence of the layers immediately to the north, especially the rampart (Sx 3.35, Sheet 3a).

The wall was built in the same manner as at Lion Walk and elsewhere *(CAR3,* 14). Additional points of detail can be added. Very little of the brick used in the wall appears to have been complete; clearly much of the material was scrap. The north face (and presumably the south face too) were constructed with *opus signinum* unlike the wall at Lion Walk where the faces and the core seemed to have been set in broadly the same yellowish-white mortar. There was a 40 mm wide offset at the foot of the face. It was made of a course of brick over a course of septaria which had been rendered with *opus signinum.* Of the facing of the wall, the lowest band of septaria consisted of only three courses rather than four.

Parts of the inner wall face were obscured by an off-white substance made up of thin laminations visible to the naked eye. This survived in patches over all of the exposed inner face of the wall where it covered the exterior surfaces of the stones, tiles and mortar joints. Since the face had been protected by the rampart, it seemed possible that the substance was the remains of whitewash which had been applied to the wall between its construction in c 65-80 and the building of the rampart c 150.

Since the discovery of the white substance at Culver Street, similar deposits have been noted at three other places where the rear face of the wall has survived intact and been protected by the rampart: 1) under the north pavement in Northgate Street, next to the site of the former Rennie Roberts Garage in 1987, 2) at No 11 Short Wyre Street in 1988 and 3) in a trench dug just to the south of Balkerne Gate in 1988.

A sample of the coating on the wall at Culver Street was examined by Mr G C Morgan who as a result of his analysis originally considered it to be whitewash *(Britannia,* **19** (1988), 458). However, more detailed analysis and comparison with known whitewash now suggests that the multi-layer deposit is of natural origin.

Analysis of samples

by G C Morgan

[Figs 3.33 & 3.34 (microfiche p 432); Table 3.1]

The pseudo-whitewash deposit appears to have been produced by calcium carbonate being leached by rain water from the lime mortar in the wall and possibly from the septaria nodules of the wall itself. (Analysis of samples of the septaria showed a lime content of about 48 per cent, indicating that this material could have been used as a source for hydraulic lime manufacture.)

High-power electron microscopy showed columnar crystalline structures almost identical with those of recent stalactites (Fig 3.33). True whitewash has a particulate structure, being made from a slaked lime slurry. This suggests that repeated saturation of the wall produced thin calcite films with occasional silica layers. The alkaline nature of fresh slaked lime may have dissolved sufficient silica to produce such films fairly soon after the wall was constructed. The presence of multi-layer calcite films implies periodic saturation (annually?) and that the wall surface was open to the atmosphere to allow evaporation and crystallisation of the dissolved calcite. Apparently similar coatings may be seen on the recently-exposed stretch of Hadrian's Wall east of Sycamore Gap (Fig 3.33).

The pseudo-whitewash consisted of at least 45 layers of varying thickness (0.05-1.5 mm) totalling about 4 mm. It was about 95 per cent acid soluble; the residue, being fragments of tile and sand particles, is probably contamination from the wall mortar. The definite silica films within the calcite layers point to very alkaline conditions, perhaps soon after the original construction of the wall. There were no traces of brush marks on the samples examined, and no sign of particles of lime as found in true slaked lime suspensions used for whitewash.

The addition of hydraulic additives such as crushed brick or tile considerably improves the chemical and physical properties of mortar. The result may be compared with the volcanic pozzolanas of Roman Italy.

Particle size distribution analysis (Fig 3.34, microfiche p 432; Table 3.1, below) shows that the wall core and *opus signinum* mortars have the same size composition, although geologically different. The sand in the mortars is very similar to the sand apparently derived from the crushed brick or tile and may be from a similar source.

	'gravel' >2mm	'sand' 2-0.15	'silt' <0.15	'lime'/ soluble	comments
wall core	61	31	8	21	gravel and sand
wall mortar	44	44	12	31	as above with brick/ tile *opus signinum*
render/ pointing	18	67	15	52	*opus signinum* with sand and gravel

Table 3.1 The particle size distribution in samples of the wall core, the wall mortar and the render/pointing taken from the Roman wall at Culver Street.

Building 93 (Period 3 of Site A: ?65/75-*c* 7100/150)

[CUL Site A; Figs 3.6 & 3.27]

There is no good evidence to indicate how soon Building 93 was built after the Boudican revolt. Following the clearer evidence from Buildings 94-6, we have assumed a date for this event of between c 65 and 75.

The Period 3 house had walls of sandy clay (AF167, AF181, & AF182). The walls appear to have had ground-plates and at least some upright timbers but damage caused by the demolition of the building at the beginning of Period 4 made it difficult to determine the number and spacing. The northern wall (AF167) survived best; there were up to five courses of sandy clay loam each 50 to 70 mm thick and separated by thin bands of darker sandy clay loam. No vertical joints could be made out, indicating that the wall may have been built by ramming down successive courses of sandy clay loam, rather than by laying individual blocks. Dug into the wall were a pit (AF168) (perhaps to remove an upright) and a slot (AF183). The base of the southern wall (AF182) had been almost completely destroyed during demolition and cut by two pits (AF158 & AF166) which, like AF168, may have been dug to remove uprights.

The original floor of the room was the sandy clay loam make-up on which the walls were built. The floor of the room was replaced three times with,similar material and at one stage contained a hearth (or possibly an oven) with a base formed of a tegula set in sandy clay loam (AF191). Stake holes, which cut the various floors, did not form any recognisable pattern.

To the west of the house was an open area or yard, lightly metalled early in Site A Period 3 but later covered with dumps of material and layers of occupation. Adjacent to the house, early in Site A Period 3, was a latrine pit (AF69) with timber sides held in place by stakes or small posts.

North of the street nothing remained of walls of this period. Within the small area excavated in this part of the site was a thick layer of make-up cut by a small oven.

After being completely cleared of debris from the Boudican destruction, the street was remade with a thick layer containing pieces of tile and mortar. This material was presumably acquired from the plinths of the now-destroyed Period 1 buildings. The street was surfaced with gravel and periodically repaired or resurfaced.

The footway on the south side of the street was

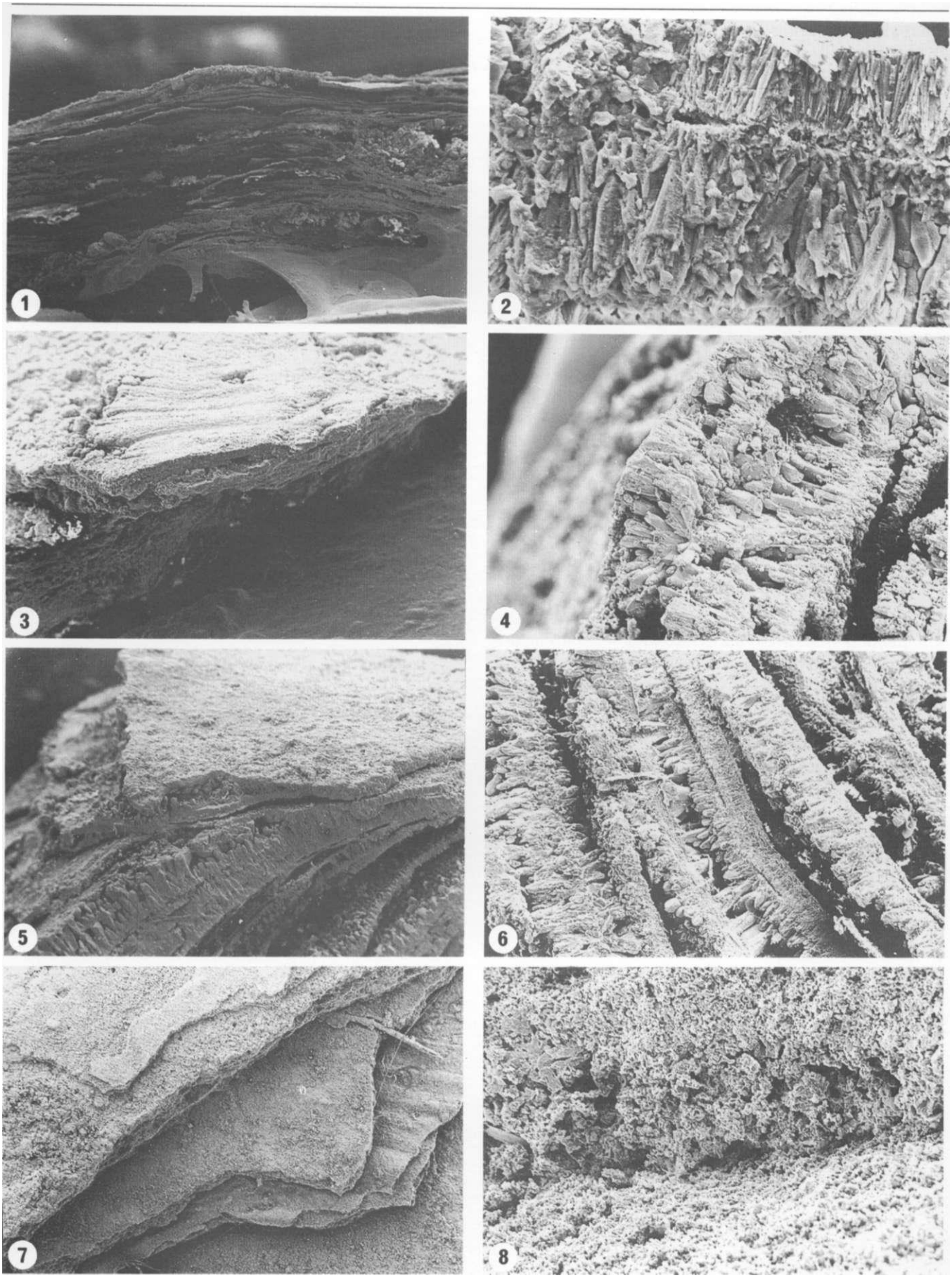


Fig 3.33 ***1*** *and* ***2****....coating on Colchester town wall at 14X and 812X magnification resp;* ***3*** *and 4....coating on Hadrian's Wall at 17X and 44X magnification resp;* ***5*** *and* ***6****....section across a stalactite at 16X and 55X magnification resp;* ***7*** *and* ***8....****whitewash on a bam at 11X and 190X magnification resp. Photographs by Graham Morgan. [Pages 64-5]*

metalled (AL196) at the very beginning of the period but the presence of later floors and layers of occupation showed that it must have been under cover for at least the latter part of this period. The construction of Building 93 sometime after the start of Period 3 may account for this.

Unfortunately, later features destroyed any clear evidence of a wall or plinth between the footway and the street, but an irregular line of postholes and stake holes beneath a later roadside ditch may have supported a fence.

Late in Site A Period 3 the southern footway was cut by several drains, all of which were apparently timber-lined. Drains AF150 and AF142 were successive and drained from roughly the same spot at the north-west corner of the building. A drain or gully (AF155/147) carried water from the open area west of the building to the side of the street. Although ascribed here to Site A Period 3, these drains may belong to the beginning of Site A Period 4 since it was not possible to link stratigraphically the footway layers exactly to the buildings next to them.

Along the northern edge of the street a shallow trench (AF99) contained a wooden water-main. This is very likely the same main as that found on Site E (EF523), 80 m to the east (p 72). Next to the main were two shallow grooves (AF108 & AF114) which may have been the remnants of trenches containing two other water-mains since removed. To the north of the pipes was a shallow trench (AF159) dug as a roadside drain.

Building 94 (Period 3 of Site B: *c* 65/75 - *c* 100)
[CUL Site B; Figs 3.6, 3.27, & 3.35]

The Period 1/2 street to the south of Building 94 was reused in Site B Period 3. A quantity of mixed sandy clay (BL319) was dumped along the southern edge of the street early in Site B Period 3 to facilitate the construction of Building 94, which encroached slightly on to the street. The Period 1/2 ?water-main (BF434 & BF480) was dug up and, along with the drain BF413, the resulting trench was backfilled and consolidated.

Building 94 was square and probably consisted of six rooms of differing sizes in the north-east corner of Insula 34. The building, although clearly a single structure, could represent more than one property. The Site B Period 4 foundation robbed out in the medieval period (BF76) probably led to the removal of the remains of a north-south wall subdividing Rooms 1, 3, and 5. For this reason these rooms have been subdivided accordingly and suffixed 'a' and 'b'.

The slots for the external walls were of similar dimensions to the internal walls; all were 0.25 m wide and 0.2 m deep. The presence of ground-plates in some of them was indicated by decayed wood. The bases of many of the slots were rounded as if the lower faces of the ground-plates were curved rather than flat. The walls had been almost completely dismantled. However, part of a stud-and-daub-block wall (BF417), traced for 5 m, did survive intact to a height of 0.4 m in the north-east corner of the building *(see* Room 1 below & Fig 3.35).

Interpretation of the northern part of Building 94 is difficult. There were internal floors and hearths in this area but few convincing walls. However the construction of the Site B Period 4 foundations (BF76, BF90, & BF111) may well account for this absence.

The lower part of the north wall of Room 1 (BF417) survived almost intact and was important because it represented unique evidence of a stud wall infilled with blocks of sandy clay (Fig 3.35). The positions of the studs were indicated by voids approximately 0.6 m apart. That the base of the wall survived intact suggests that the studs must have been sawn off just above floor level at the beginning of Site B Period 4 (Sx 3.4). Six, possibly seven, voids for studs were identified. The studs appeared to have been rectangular; they measured 0.15 x 0.1 m.

At the base of the wall was a shallow slot, 0.15 m deep, which contained faint traces of decayed wood along its length. The bottom of the slot was curved. The infill between the studs was sandy clay blocks measuring 220 x 150 x 80 mm. The faces of the wall, which had been thinly coated with daub, survived to a maximum height of six courses.

Room 1 was bounded on the west by a slot BF374 and on the south by slot BF403/BF667. Some blocks of septaria (BF378) lay at the north end of the slot BF374. Along the east side of the latter was a linear spread of rubble (BF354). This was probably secondary and perhaps represents a replacement for the slot BF374. At the ends of BF354 were postholes (BF375/BF394 & BF400). Other features included a shallow gully (BF355) with green-stained edges, some pits (BF331 & BF423), and postholes (BF343-4).

Room 2, bounded by slots BF374, BF402, BF410, and BF407, contained a substantial mortar floor (BL324). The floor, set on a layer of make-up 100 mm thick (BL379/80), consisted of crumbly white mortar containing gravel and some tile fragments. A whole pot of Colchester Type HZ 25 (B1576; *CAR* **10**, no 49) had been buried upright in the north-west corner of the room. The pot was sealed by the mortar floor but was set into the underlying layer of make-up. The mortar floor had a flat, well-finished surface which showed little sign of wear. It was sealed by a thin layer of occupation (BL323). The mortar floor did not extend west of the slot BF497 in the south-west corner of the room. To the north-east of the slot was a pit (BF414) with green-stained edges. A small rectangular hearth (BF459) consisting of a sandy clay platform partly edged with fragments of brick, lay against the north wall of the room. The west wall of the room (BF396; Fig 3.27, inset) appeared to have been replaced in the same way as the west wall of

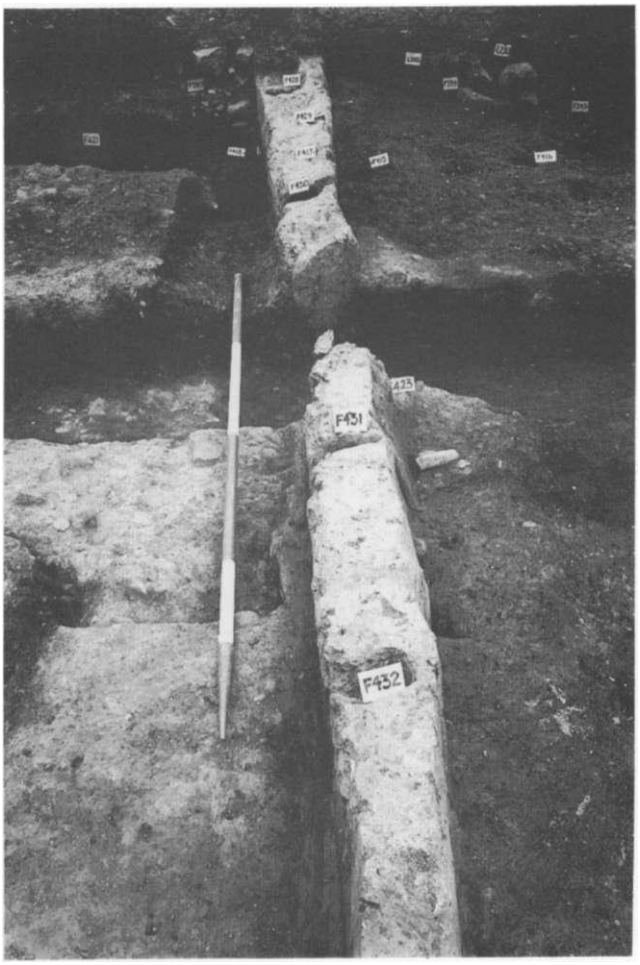
Room 1a.

The southern line of rooms encroached by some 0.6 m on to the narrow street to the south, dumped sandy clay (BL319) having been used to consolidate the south-west corner of the building. The southern slot (BF368/9) had a ?construction trench, 0.25 m wide, along its northern edge. In Room 3 were the remains of a hearth (BF405), a gravel spread (BL306), and some small pits and postholes, including BF338, BF473, BF475, and BF477. The wall between Rooms 3b and 4a was modified during the life of the building. The southern half of the wall was demolished and the underlying slot (BF518) backfilled. A post (BF393) was inserted against the slot BF404. In Room 4 the slot BF468 indicated the position of a partition wall subdividing the room. Later in Period 3 the wall was demolished and the slot backfilled. There was an east-west line of stake holes (BF476) on the north side of Room 4a. In Room 4b were a shallow ?wattle-lined pit (BF474) and a short gully (BF456) with green-stained edges. Rooms 1, 3 and 4 had sandy clay floors, sealed by thin, dark occupation lenses containing ash and charcoal flecks.

The right-angle in the gully (BF500) at the south end of Room 5b perhaps indicates the position of a north-south wall destroyed by the Period 4 foundation and robber trench BF76. The gully and the slot BF418 were possible construction features. Associated with dark lenses of occupation (BL351/2) in Room 5 were a gully (BF421) with green-stained edges, some small pits, postholes, and stake holes.

A short slot (BF373) probably indicated the position of the west wall of Room 6. Features in Room 6 included two hearths (BF401 & BF386) and small pits and postholes associated with a thin sandy clay floor and occupation (BL274/5).

A short east-west slot (BF370) indicated that there may have been at least one structure adjacent to the west side of Room 6. Behind this area and to the west of the main part of Building 94 was a yard containing a sequence of drainage gullies (BF288, BF302/312, & BF397) most of which led to a large soakaway (BF333). A gully (BF302), 0.3 m deep, extended diagonally from the north-west into the soakaway. It apparently was a continuation of an east-west channel (BF312), which showed signs of having been recut. A nearly complete amphora (B1162; London 555/Colchester Type AA 59c; Sealey & Tyers 1989, fig 2, no 3, pi 7c) was found smashed in the southern end of the gully. This gully was backfilled and replaced by a similar but shallower, and more irregular feature (BF288), which cut a large rubbish pit (BF364). The southern end of a gully (BF397) which, unlike the others, sloped from south to north, lay close to the west wall of Building 94. The end of this gully contained a dog skeleton; part of another



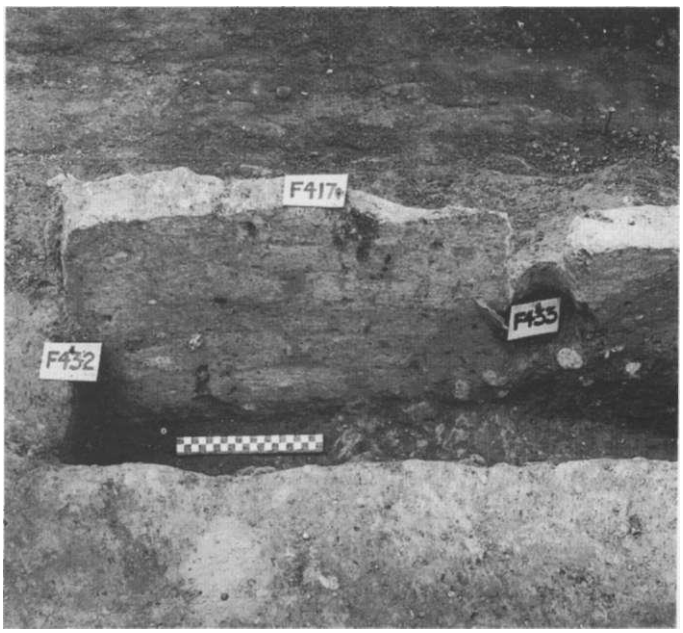


Fig 3.35 Daub-block wall (BF417) between Rooms 1 and 5 in Building 94. Site B Period 3. Left: viewed from the south. Below: an east-west section showing the daub blocks and a void (BF433) for a stud. [Page 67]

was found immediately east of the same gully (BL309; Appendix 5, microfiche p 435). Some midden and dump deposits accumulated in the yard before it was gravelled over late in Site B Period 3 or early in Site B Period 4. A large pit (BF773) and a slot (BF772), extending into the west section of the site, cut the metalling.

Traces of metalling (BL288; Sx 3.8), presumably for the footway associated with the main east-west street to the north, were excavated in the north-west corner of Site B. A well-constructed, ?timber-lined drain (BF192) cut across the footway later in Site B Period 3. The drain, which was 0.35 m deep, sloped slightly from south to north.

The narrow street to the south was re-metalled twice. A narrow slot (BF251), 0.15 m wide and 0.2 m deep, was traced for 6 m along the southern edge of the street. It appeared to have been for a water-main which had been laid sometime after the start of Site B Period 3 and pulled up when Building 95 was demolished. The slot was within the make-up for the second phase of re-metalling. It ended abruptly presumably where it turned a right-angle to rise out of the ground. The southern edge of the street further east was cut by some ?gullies (BF365) which were possibly wheel-ruts or drainage channels.

Building 95 (Period 3 of Site B: c75/90 - c 100/25)
[CUL Site B; Figs 3.6 & 3.27]

Building 95 was poorly preserved. The eastern end of the building (Rooms 1-3 & 5-7) contained small, roughly square rooms, most of which had mortar floors. The western end (Rooms 4 & 8) was less clear but seemed to have been of different construction and perhaps was a secondary development or even a separate property. The building incorporated gravel-filled pits, the function of which is discussed under Building 96 below.

The best preserved part of the building was Room 2. This was 2.5 m square and contained a mortar floor (BL258) flanked by a continuous, shallow trench (BF332/4) indicating the positions of the walls. The slot (BF334) for the internal walls contained some shallow depressions (BF335 & BF346-9), which presumably represent the positions of uprights; some decayed timber was noted in BF347. The bottom of the slot was irregular and there was no indication of a timber ground-plate. The slot BF332 for the external wall sealed a gravel-filled pit (BF359). The mortar floor (BL258) was 100 mm thick and consisted of a crumbly white mortar with gravel and tile fragments. The floor was sealed by a thin occupation layer (BL257).

The external wall BF332 was traced eastwards (as BF314) and westwards (as BF308). Traces of a mortar floor to the east of Room 2 presumably belonged to Room 1, although this was largely destroyed. Two gravel-filled pits (BF426 & BF470) perhaps indicate the position of a north-south wall. A Site B Period 3 occupation deposit (BL373) was observed in the east section of Site B (Sx 3.4). Room 3 was also poorly preserved. Two more gravel-filled pits (BF479 & BF491) probably represented the line of the north-south wall between Rooms 3 and 4a. Traces of a more southerly range of rooms (Rooms 5-7) were observed in Section 3.11. This consisted of three well-preserved mortar floors (BL696-8), similar to BL258, all sealed by lenses of occupation, and associated with slots for walls (BF846-8). To the south, a line of four gravel-filled pits (BF872-5) was observed during the salvage work of the final stage of the excavation. These probably represented the southern limit of Rooms 5-6.

The north wall (BF307/8) of Room 4 was slightly further north than its continuation to the east. This was associated with four evenly-spaced rectangular ?post-pits (BF305 & BF318-20), 0.25 m deep. No post-pipes could be identified in these features to confirm their function although some decayed timber was noted in pit BF305. In the bottom of the pit BF319 was a layer of tile fragments which may have formed a base for a post. The base of the wall between the pits BF305 and BF319 appeared to rest on a linear spread consisting mainly of fragments of mortar and quern stones. Two short slots (BF304 & BF306) of uncertain purpose lay between Room 4 and the street. The remains of Room 4, which may have been two separate Rooms 4a and 4b, were largely destroyed in Period 4. Sinkage (BF427) into the underlying Period 1 pit BF460 did however preserve some floor and occupation deposits (BL327 & BL325). A whole pot (B1505; Colchester Type HZ 3D, *CAR* 10, no 87) had been buried in the floor. At the bottom of a shallow pit (BF379) at the west end of Room 4b was a layer of rubble suggesting that it had contained a post.

Building 96 (Period 3 of Sites C & J: c 75/90 - *c* 100/25)
[CUL Sites C and J; Figs 3.6, 3.27, & 3.36]

The limits of Building 96 were well-defined by lines of rectangular gravel-filled pits (Fig 3.36). Twenty-six of these pits were uncovered (CF97, CF98, CF102, CF104-12, CF121, JF263-6 and nine without numbers on Site J). Each pit was 0.4-0.6 m deep and was packed with large gravel in a matrix of brown sandy loam. The pits cut through the underlying Boudican destruction debris so as to reach the top of the natural sand. The gravel-filled pits presumably underlay the walls of the building, although all traces of these had been obliterated during the construction of the Period 4 foundations which followed a similar plan. The stratification showed that the pits were undoubtedly of Site C Period 3 date because the gravel sometimes spilled over the edges of the pits and was incorporated in the surrounding Site C Period 3 deposits. Pits of this type have been found elsewhere in Culver Street (p 30) and Colchester



Fig 3.36 Row of foundation pits in Building 96. After excavation. Viewed from the west. Site C Period 3. [Pages 69-70]

***(CAR* 3,** 20), although it is still not certain how they functioned. Either they were post-bases or they were pads to support timber ground-plates at various points along their lengths.

There was probably an open area at the eastern end of Building 96. This was suggested by midden-like deposits and the absence of gravel-filled pits. In this area was a bowl-shaped oven (CF90) with a flue filled with crushed charcoal. In Room 1 were four small postholes (CF49, CF50, CF88, & CF89) and a keyhole-shaped oven (CF84) with two stake holes at the mouth. Rooms 1 and 2 had thin sandy clay floors overlain by lenses of occupation (CL30-3).

On the south side of Room 3 was a shallow east-west slot (CF43), with edges of hard packed sandy clay and septaria. The slot contained two rectangular pits (CF51-2) which probably contained posts for the south wall of the room. Beyond the eastern end of the slot were two postholes (CF48 & CF53). To the north of these was a narrow slot (CF46). The eastern end of this slot linked up with a north-south shallow slot (CF99; Fig 3.27, inset) which was replaced by a shallow foundation (CF36) made of septaria chips. On the east side of the foundation was another slot (CF45) which appeared to link up with the slot CF46. Room 3 had a thin, poor-quality mortar floor (CL18) consisting of gravel set in weak mortar. The foundations of Room 3, being of different construction, suggest that the room was a secondary addition. The absence of gravel-packed pits is especially significant in this respect.

The area between Room 3 and the street appeared to have been open throughout Period 3 although a slot (CF39) and some stake holes indicated the existence of minor structures of some kind.

Building 97 (Period 3 of Site G: *c* 150 - early 3rd century)
[CUL Site G; Figs 3.6, 3.27, & 3.37]

Building 97 appears to have been a small structure which fronted on to the west side of the north-south street. The remains of the building were fragmentary. The principal structural feature was a short length of a burnt ground-plate (GF3803) belonging to an internal wall. Along its east side was a narrow strip of daub which appeared to be the remains of some unplastered daub rendering. To the west was part of a north-south slot (GF3828) which may have held the ground-plate for the western wall of the building. To the west of the burnt ground-plate was a sandy clay floor sealed by occupation and patches of gravel. To the east, only a small part of the floor survived. The surface of the floor had been burnt and it was overlain by a layer of charcoal-rich occupation. Whether or not this indicates that the building had been burnt is unclear. The scorching of the floor may only have been localised, and the charring of the ground-plate may have been the result of whatever the activity was which led to the scorching.



Fig 3.37 Ovens (GF3300-1) in Building 97. Viewed from the north-west. Site G Period 3. [Page 71]

Nearby, and presumably linked with the burning, was a hearth and a series of at least four ovens (Fig 3.37). Of the latter, the best preserved was GF3300. This was a circular oven with a flat base which had been cut into the ground and lined with 200 mm of sandy clay. The stoke pit was sub-rectangular in shape. Feature GF3223 was probably the edge of a rectangular stoke pit for another oven. The oven GF3301 was of the more common keyhole shape. The fourth oven (GF3826) had almost completely been destroyed by a Site G Period 4 foundation which had been removed in medieval times.

Building 98 (Period 3 of Site G: *c* 150 - early 3rd century)

[CUL Site G; Figs 3.6 & 3.27]

The remains of Building 98 were represented only by a collection of postholes and post-pits (Fig 3.27, inset). Any floor levels which may have existed appear to have been removed during the construction of the succeeding building (ie Building 118). The plan of Building 98 mirrors that of the later Building 118 and it may therefore be that the two buildings were different phases of the same structure.

The west side of the building is indicated by a line of at least four postholes (GF4012, GF4027, & GF4077-8) of which one (GF4077 or GF4078) represented a replacement. The east side of the building was indicated mainly by two large post-pits (GF4139 & GF4164) both of which had been replaced (GF4132 & GF4116). A central partition was indicated by five postholes (GF4038-9, GF4049, & GF4051-2). Two postholes (GF4034 & GF4101), although rather isolated, may indicate the north-west and north-east corners of the building. The eastern part of Building 98 contained various stake holes and postholes (GF4071, GF4114, & GF4179) whereas the west area incorporated a sub-rectangular oven or hearth (GF4001). The latter was 0.35 m deep and had burnt sides lined with tile. Unfortunately most of the feature lay under a baulk.

Period 3 on Site E (60/1- c 150/200)

[CUL Site E; Figs 3.6 & 3.38-40]

It is unfortunate that the lack of money necessitated the removal of the bulk of the Period 3 and Period 4 deposits on Site E by machine (Fig 3.38). Once the site had been cleared, it was apparent that Period 3 had involved two structural periods. These are referred to as Site E Periods 3a and 3b.

During Site E Period 3a (Fig 3.39), the frontage south of the street was occupied by timber buildings, the ground-plates of which were unsupported like those

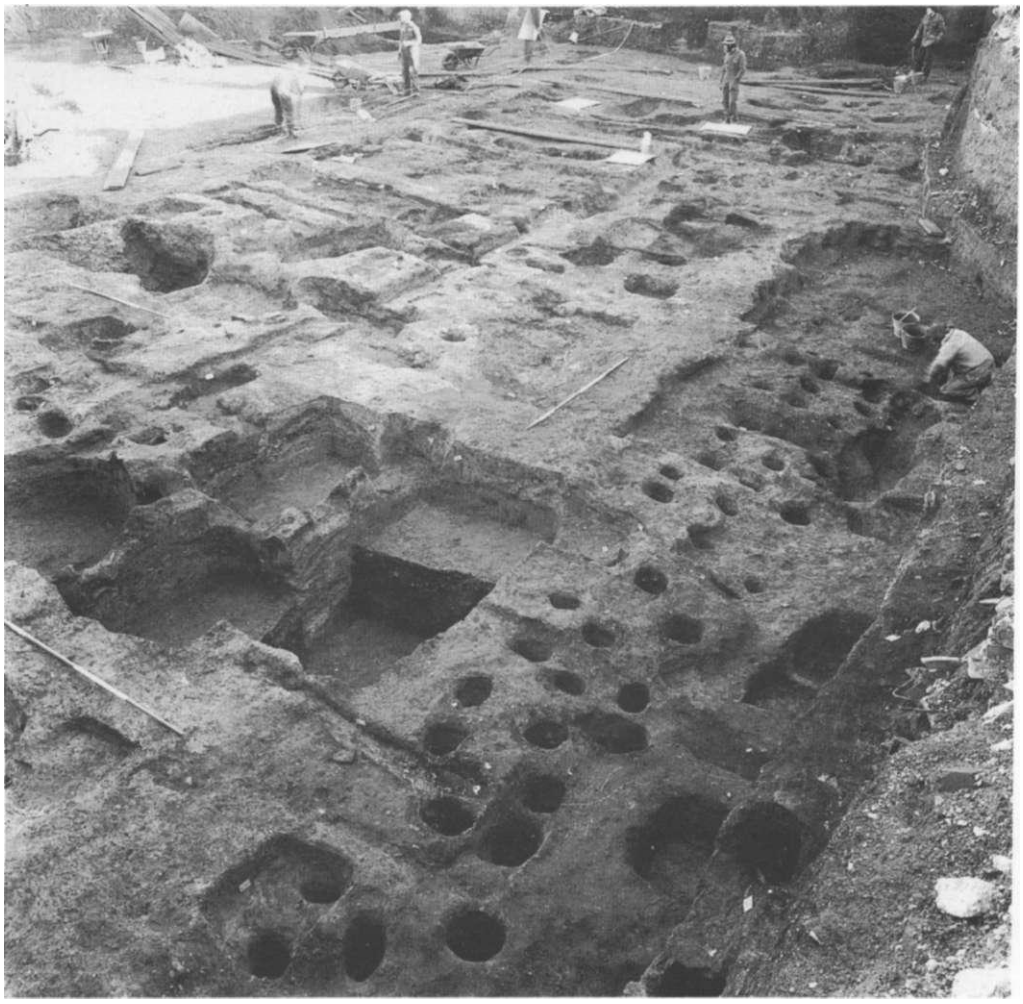


Fig 3.38 Buildings 88-90 and 100-103 during excavation after machine stripping. Viewed from the south-west corner of Site E. Pile holes belonging to Building 127 are visible in the foreground. [Pages 57-73]

of Site E Period 2. In Site E Period 3b however (Fig 3.40), they were replaced by buildings with walls incorporating ground-plates which in places rested on gravel-packed pits.

On the north side of the street was at least one water-main (EF523). It had been laid in a wide trench (EF522) reminiscent of that at Balkerne Lane *(CAR 3,* 115-7) and large enough for several mains. The main survived as faint traces of decayed wood and two iron collars (microfiche p 510, **1314-16)** still *in situ.* The distance between the two collars was 4.75 m which is twice the length of the pipes at Balkerne Lane, ie 2.0-2.5 m *(ibid).* This suggests that there may have been another collar between the two. On the north side of the wide trench were two shallow transverse slots (EF656-7), 2.9 m apart. A third slot (EF1033) lay to the east at a distance of 6.1 m, suggesting the presence of something constructed using a module of 10 pM (2.96 m). Despite being more widely-spaced than might be expected, the most obvious explanation for these features is that they related to the collars of another water-main and that they were dug during either the construction or the removal of such a main. Possibly in Site E Period 3b, a trench (EF558/EF560/EF1037) was dug into the south side of the wide trench EF522. A channel in the base of the new trench suggests that it once contained a main or it was dug to remove one. The new trench contained no decayed wood or iron collars.

On the south side of the street was a substantial trench (EF549), the remains of either a drainage ditch or, more likely, of at least one timber drain. The base of the east end of the trench split into two channels as if the feature was the product of two, presumably successive, timber drains.

Some pits (EF650, EF685, & EF699) had been dug into the metalling of the street.

Building 99 (Period 3a of Site E: *c* 75/80-*c* 790/100)
[CUL Site E; Figs 3.6 & 3.39]

The frontage of Building 99 was represented by a row of post-pits (EF546-8 & EF587-9) and a slot (EF541) all of which were truncated during the machine stripping. Against the outside of the frontage wall was a deep pit (EF516). There was no good evidence for a covered footway or verandah between the street and the frontage as there had been in Site E Periods 2 and 4.

Buildings 100-3 (Period 3a of Site E: c 75/80-*C* ?90/100)
[CUL Site E; Figs 3.6 & 3.39]

Interpreting the remains of the buildings on the south side of the street is difficult because the stratigraphic sequence was complicated and the relevant remains had been largely removed (deliberately) during the machine stripping.

Between 60/1 and the construction of the buildings, some trenches (EF474 & EF493) were dug to remove the remains of walls of Site E Period 2. They presumably were part of post-Boudican clearance works. Some gullies (EF510/EF513, EF512, EF542, EF863, & EF902) and various pits (EF472, EF484-8, EF528, EF704, EF788, EF807, EF890, & EF1266) were dug apparently whilst the area was still open. Because the floors of the Site E Period 3 buildings had been removed during machine stripping, it is not possible to be sure which of these pits predate the Site E Period 3 buildings and which were contemporary with them apart from those which were sealed or cut by features associated with the walls of the buildings.

The position of the frontage wall of Buildings 100-3 was indicated by a series of pits for posts (EF598, EF443, EF473, EF1404-5, EF897, & EF873). This coincided with the position of the frontage in Site E Periods 2 and 4. There was no clear evidence to suggest that the footway between the frontage wall and the street had been an integral part of the buildings.

Unlike Buildings 101-3, the walls of Building 100 seem mainly to been of the type incorporating posts set in pits. The west wall of Building 100 was defined by a line of post-pits (EF403, EF433, & EF390) and large stake holes. A series of small pits (EF402, EF392, EF409, one not numbered, & EF421) and two stake holes may have contained posts for a parallel wall about 3 m to the east. A line of truncated pits (EF595-6 & EF598) may represent another wall almost 2 m further east. The east wall of the building was indicated by a row of post-pits (EF457, EF646, EF645, EF422, & EF423) and then a line of stake holes with stake holes (EF559, EF718-25, & EF715-17) to either side. Several of the post-pits appear to have been dug to provide replacement posts. A shallow east-west slot (EF420) may have represented the back wall of the front rooms, particularly as its alignment marks the change from post-pits to stake holes in the east wall. About 6 m further south, three shallow slots (EF441 & EF508-9) and two pits (EF440 & EF529) probably belonged to this period; their function is obscure because they had been badly affected by the machine stripping and settlement into earlier features.

The west side of Building 101 was indicated by the north-south slots (EF424-5). A slot (EF464) and two posts or stakes (EF475 & one unnumbered) probably represent the remains of the east wall of a passage up the west side of the northern part of the building. On the south side of the building was a shallow rectangular pit with a flat base (EF426). The pit was about 0.25 m deep and seems to have been the remains of a sunken floor. Although the pit was sealed by the north-south slot EF425, the two features were so closely related in plan than it is unlikely that the pit predated the building.

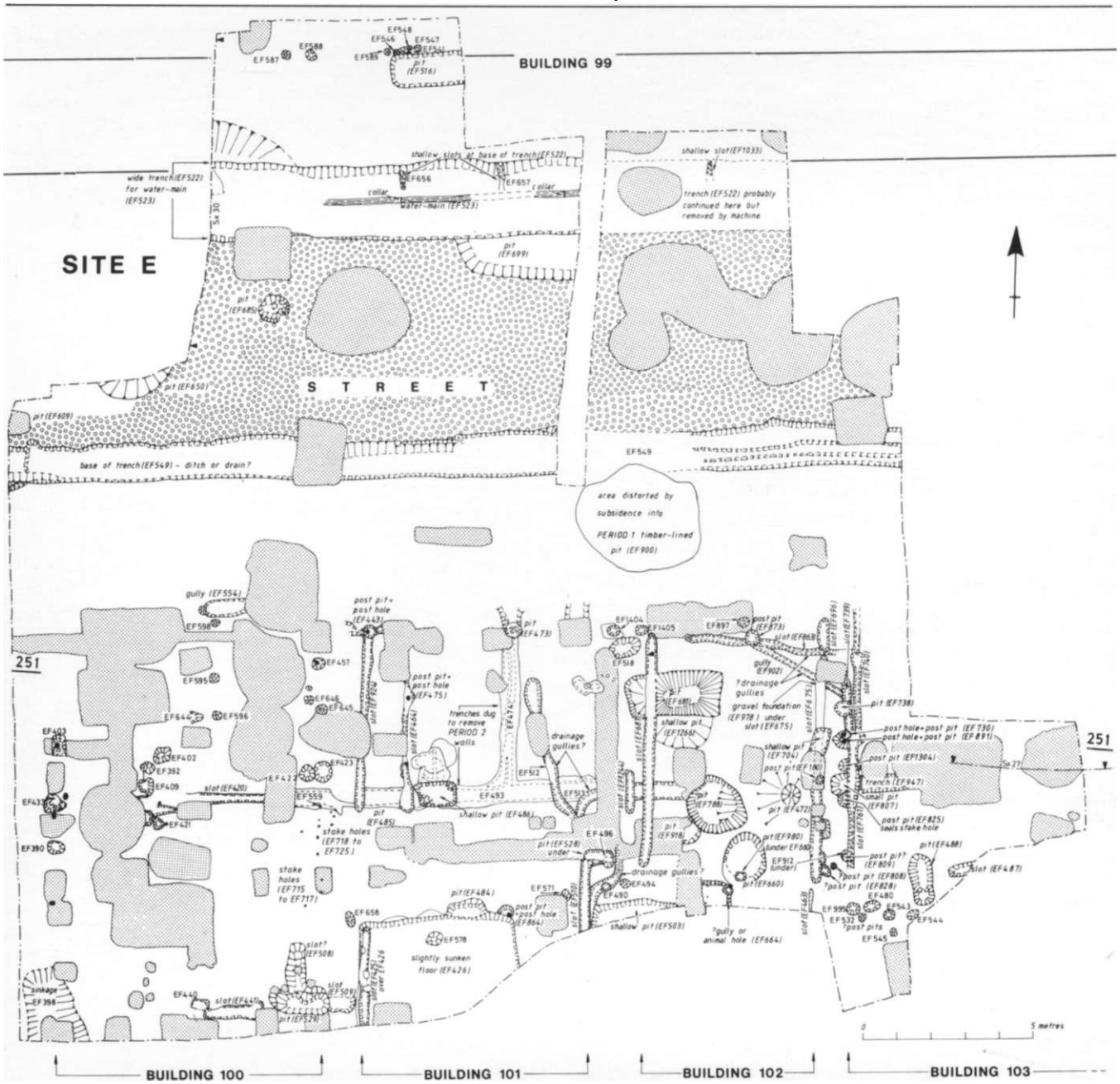


Fig 3.39 Period 3a at Site E, Culver Street (AD 60/1-c 90/100). 1:184 [Pages 71-3]

The rectangular shape of the pit suggests that there may have been walls around each of its sides. A post set in a post-pit (EF864) on the north-east corner of the building supports this view.

Building 101 was separated from Building 102 by a party wall indicated by a north-south slot (EF687) containing at least two stake holes whilst the probable position of the east wall of Building 102 was shown by a line of three slots (EF463, EF675, & EF696) 5.0 m to the east. Of the latter, the largest (EF675) was unusual in that, at the north end, it appeared to have had a gravel-packed foundation (EF978).

A slot (EF740/EF761) indicated either the presence of a north-south passage in the west side of Building 103 or (less likely) that there had been a small gap between Buildings 102 and 103. A slot (EF739) and two posts in pits (EF730 & EF891) showed that the northern end of this wall may have been rebuilt. A group of small pits near the south end of the slot may have held posts associated with an east-west wall in the building.

Buildings 104-9 (Period 3b of Site E: *c* 90/100-*c* 150/200)

[CUL Site E; Fig 3.6 & 3.40]

Buildings 104-109 were identified mainly by means of the distinctive gravel-packed pits which were a constructional feature of many of the buildings erected in Flavian Colchester (p 30; *CAR* **3,** 20). Over fifty such

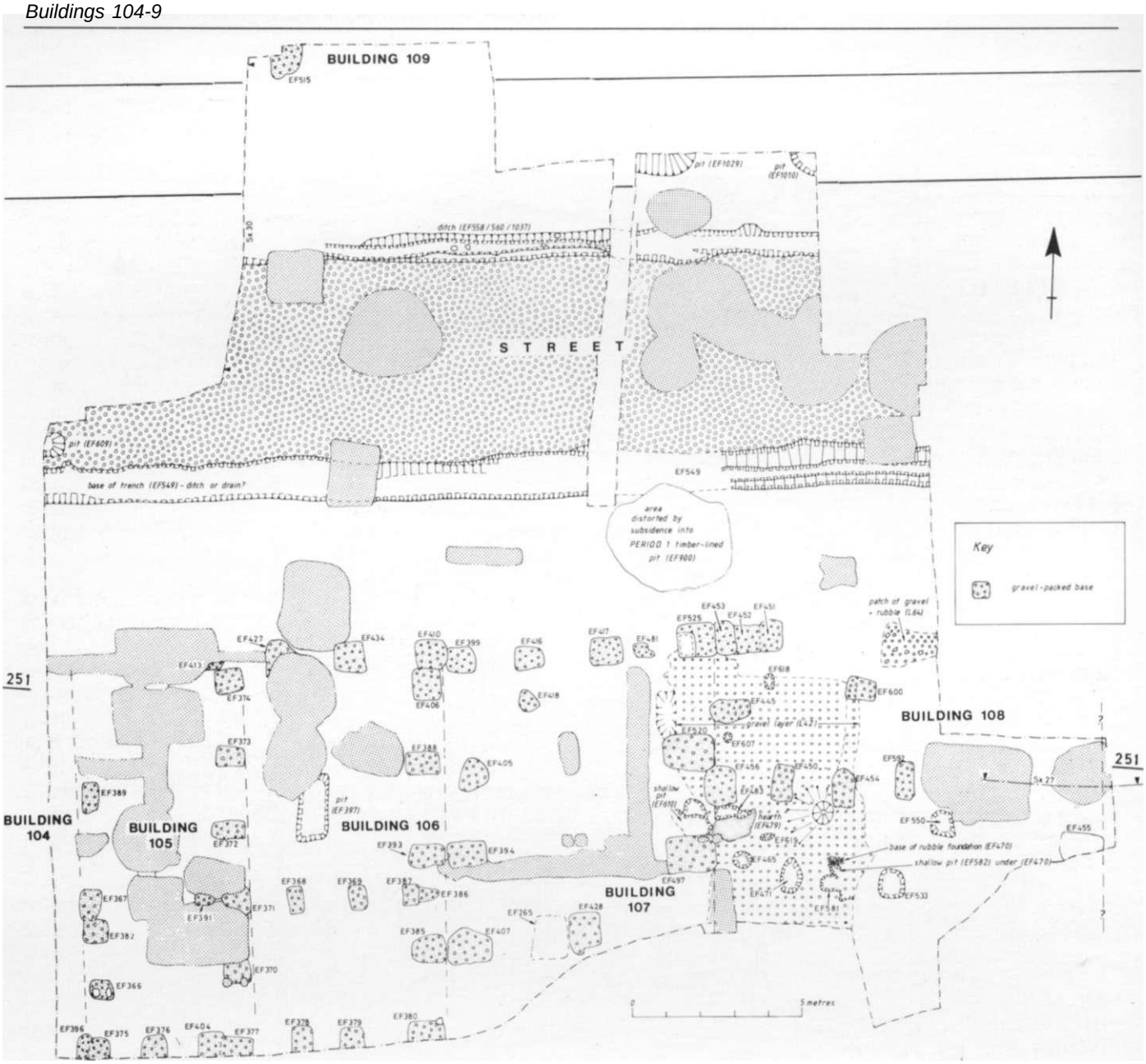


Fig 3.40 Period 3b at Site E, Culver Street (AD c 90/100-c150/200). 1:184. [Pages 72-5]

pits were found on Site E. The pits cut the slots of Site E Period 3a and thus post-dated the buildings of that period. The pits also predated the buildings of Site E Period 4 since there were considerable differences in plan between the positions of the pits and the foundations of Period 4.

On average each pit was 0.6-0.9 m square and up to about 0.9 m deep. Many formed rows where the pits were roughly spaced at intervals of 2.0-2.5 m or more (measured centre to centre). There were instances where two or more pits were adjacent to one another giving the appearance of a structural sequence. However, since in general gravel-packed pits of this type do not seem to have been sited with any great precision or consistency, these relationships may not necessarily be particularly significant — the builders may simply have added extra pits at points were they felt additional support was required.

Building 105 shared its north-south walls with its neighbours, Buildings 104 and 106.

Building 105 was clearly defined by pits EF389, EF367, EF382, EF366, EF396, EF375, EF376, EF404, EF377, EF370, EF371, EF372, EF373, EF374, and EF413. Pits EF371 and EF391 linked by a narrow slot indicated a division of the building into two rooms.

Building 106 was defined by EF378-80, EF385-6, EF393, EF388, EF406, EF410, EF434, and EF427. It was wider than Building 105 but was similarly divided into two rooms (by EF368-9 & EF387). A pit (EF397) had been dug in the centre of the northern room.

The west wall of Building 107 was not shared with

Building 106 but was represented by a separate row of pits (EF399, EF405, EF394, & EF407). The frontage of the building was defined by pits (EF399, EF416-7 & EF481) which were slightly smaller than usual as if of a different period. Two pits (EF497 & EF520) showed the likely position of the east wall and one (EF428) the possible site of the rear wall. A pit (EF265) on the line of the latter may have belonged to Period 4. The absence of a gravel-filled pit in the south-east corner indicates that the building may have continued south of the pit EF428. An isolated pit (EF418) near the frontage is hard to explain.

The position of the frontage wall of Building 108 was shown by a series of adjacent pits (EF451-3 & EF525). There were no pits to the east of these although a patch of rubble and tile (EL64) may have been the remains of a foundation in this position. The west wall was not shared with the building to the west but was represented by three pits (EF453, EF445, & EF456). The building was divided internally by a wall on the line of pits EF456, EF450, EF454, and EF592. A layer of gravel (EL42) was the base of floors in the two rooms of the building. This was cut by many stake holes and sealed by a hearth (EF479) built against the north wall of the south room. Also in the south room were some shallow pits (EF465, EF471, EF483, EF533, EF581-2, EF610, & EF619) and part of a possible rubble-filled foundation (EF470) filled with tile and septaria. The eastern limit of the building is obscure. Close to the eastern limit of the site was a pit (EF455) packed with tile, mortar, and plaster. It may have belonged to a different building because it was isolated and constructed of different materials to the other pits.

Building 109, on the other side of the street, was represented by a single gravel-packed pit (EF515).

There were only two places were there was a clear correspondence between the positions of the gravel-packed pits and the foundations of the buildings of Site E Period 4 (Buildings 122 & 123). One was on the street frontage and the other under the west wall of Building 123 (EF5 & EF406/EF388/ EF393/EF386/EF385/EF380). Both instances reflect continuity of property boundaries rather than provide evidence that the pits were to underpin or support these foundations. The south wall of Passage 1 in Building 123 came close to overlying seven pits but the correspondence in position was only approximate.

Building 110 (Period 4 of Site A: *c* ?100/150-c ?300+)

[CUL Site A; Figs 3.7 & 3.41]

The frontage wall of Building 110 had foundations of roughly-coursed septaria rubble which were set in mortar and overlay a base of gravel and small stones. At about ground level, at the junction of the frontage wall (AF17) and the surviving north-south wall (AF248) were three courses of tile. Insufficient remained to be sure whether these courses continued along both walls or whether they only occurred at the junction. Two other north-south foundations and most of the foundation of the frontage wall had been robbed in the early medieval period (AF33, AF42, & AF54).

Very little of the floors and occupation layers of the building survived the effects of medieval and later pit digging and cultivation. Early in Site A Period 4, all rooms had floors of sandy clay loam. Later the passage was tessellated (AL18) and Room 1 was provided with a solid floor. The character of the latter is obscure since only part of the septaria rubble foundation and small patches of the overlying mortar base survived. It may have been tessellated or of plain mortar. Set neck downwards into the floor of Room 1 was the upper half of a Dressel 20 amphora (AF95; Colchester Type AJ 29C, *CAR* **10**, no 28). The vessel may have been used as a storage container rather than a soakaway or sump, since the material in which it was set had too high a clay content to allow good drainage.

Little of the Site A Period 4 street metalling survived. The street had been drained by two series of ditches (AF74 and AF93 on the north side, and AF104 and AF105 on the south side) and two possible timber drains (AF72 on the north side and AF97 on the south side). All appeared to have silted up with material from the layers of metalling that they were cut into, apart from the ?timber drain AF72 which may have been deliberately backfilled. Later in Period 4 the ditches on the south side of the street were replaced by AF37 which was itself replaced by AF73.

The footway between the street and Building 110 was defined by a narrow foundation of septaria rubble in mortar. Two timber drains, AF100 and AF130 crossed the footway to conduct waste water from the house into the roadside drains. Later in Site A Period 4, a timber drain (AF76) was dug a little to the east.

Building 111 (Period 4 of Site A: *c* ?100/150-*c* 300+)

[CUL Site A; Figs 3.7 & 3.41]

The front wall of Building 111 (AF61) was of septaria and mortar set on a foundation of septaria, tile and fragments of mortar, all presumably deriving from the demolition of an earlier building. Part of only one room was available for excavation. Its floor was tessellated.

It could not be established if Building 111 survived into Period 5.

The footway was defined on the south side by a substantial foundation which had been completely robbed (AF9) in the early medieval period. The footway was 0.5 m narrower than its equivalent on the other side of the street.

A section across the footway to the south of the main east-west street was excavated in the north-west

corner of Site B, immediately to the north of the frontage wall BF77. The level of the footway had been raised 0.6 m, by two thick layers of make-up (BL68 & BL70; Sx 3.8), although it was not clear whether these represented two separate phases or simply different cart loads within the same phase. The footway was provided with a thin gravel surface (BL28). The street was separated from the footway by a wall or colonnade supported on a stone-and-mortar foundation (BF856). The footway was cut by a drain (BF120) which sloped from south to north and then turned eastwards to pass along the rear of the foundation BF856.

Building 112 (Period 4 of Site B: *c* 100-*c* 275/325)
[CUL Site B; Figs 3.7 & 3.41]

Building 112 consisted of a block of six rooms in the north-east corner of Insula 34. Preservation was fairly good, although as elsewhere correlation of the stratigraphy of the rooms was difficult. The wall foundations were of substantial stone-and-mortar construction, usually on a thin base of gravel. The foundations had largely been robbed, although two stretches did survive to ground level. The walls were often on top of or just to one side of the Site B Period 3 slots of Building 94.

An examination of the internal plan (Fig 3.41) makes it clear that Building 112 developed in stages from its Site B Period 3 predecessor. This is perhaps most evident from Room 5, which was similar in plan and build to the earlier structure. The floors and associated occupation within the rooms were apparently continuous from Period 3. The occupation in all the rooms could be divided into two broad phases, ie Period 4a (2nd century) and Period 4b (3rd century). In Rooms 5 and 6, there was a further series of deposits (Period 4c) of mid 3rd to late 3rd/early 4th centuries. Despite being of modest size and construction, Building 112 provided more fragments of window glass than any other building at Culver Street (pp 117-19) and incorporated some unusual decorated wall plaster (pp 310-13).

In Rooms 1 and 2, there was an unusually thick layer of occupation which built up during Site B Period 4. The walls of both rooms had been plastered and elaborately decorated (Fig 11.1, p 311). Some of it lay collapsed face down.

Room 1 was long and rectangular, although it was possibly subdivided (Rooms 1a & 1b). The evidence for this was two gravel-packed post-bases (BF340 & BF341) built early in Site B Period 4. These were adjacent to, and thus possibly a replacement for, the east end of the Period 3 wall (BF417). The post-bases and a hearth (BF239) in Room 1a were short-lived, being sealed by occupation (Sx 3.4). Of longer duration was a north-south slot (BF209) which was probably for a partition wall in Room 1b. Later in Period 4a, the wall appeared to have been replaced by a sandy clay wall (BL193) immediately to the east and the slot was backfilled with gravel. Rooms 1 a and 1b had a thin sandy clay floor (BL217) sealed by occupation (BL147). In Room 1b the occupation was sealed by a thin layer of gravel (BL138) and a pit (BF250) subsequently dug in the south-west corner. In Period 4b, Room 1 was refloored with a thick layer of sandy clay loam (BL129; Sx 3.4). Occupation lenses, with a high component of charcoal and ash, continued to accumulate on the floor reaching a thickness of 0.45 m (BL127/8, BL120, BL104/108; Sx 3.4). The occupation was interspersed with occasional lenses of sandy clay, and also a tile spread (BL121; Fig 3.41) at the south end of Room 1b. These deposits contained two fragments of crucibles used for the melting of copper alloy (pp 194-8). Like most of Building 112, the latest deposits in Room 1 were sealed by a thick layer of demolition debris (BL50).

Room 2 was approximately square and had a floor of sandy clay loam sealed in places by a layer of gravel (BL265-6; Sx 3.4). This was cut by a shallow, north-south gully (BF265) with fragments of tile placed in the bottom and extensive green staining of the sides. Immediately to the east was a north-south line of small pebbles (BF268) which may have been the remains of a rudimentary wall foundation. In Period 4b, the gully BF265 was backfilled and a new floor of sandy clay laid in the room (BL188 & BL165). Thick bands of occupation (BL146 & BL98; Sx 3.4) containing much ash and charcoal (as in Room 1) accumulated on the floor. Included in these deposits were two successive floors of sandy clay loam (BL142 & BL112). A narrow sandy clay ?partition (BF197, Fig 3.41, inset) was inserted early in Period 4b. Although there was no evidence of uprights in the ?wall, whole roof tiles and small pieces of septaria were incorporated into the sandy clay structure presumably as a means of strengthening it. Erosion of the section (after the end of the excavation) revealed floor deposits, including a gravel spread, east of the ?partition BF197 (Sx 3.4). A whole pot of Colchester Type GB 156 (BF643, Fig 3.41, inset; *CAR* 10, no 172), with a fragment of tile for a lid, had been buried at the north end of the room. Another vessel of Colchester Type GX 156 (BF869) was discovered in the section. Collapsed painted plaster lay *in situ* at the base of the demolition material (BL71) sealing the latest floor (pp 310-11, Fig 11.1).

Short stretches of intact foundation survived, in places to floor level, at the T-junction of the south wall of Room 3 with the west wall of Room 1 (BF118-19). This consisted of mortared septaria and greensand on an unmortared layer of gravel and chips of septaria and greensand. The top of the foundation was surface-built and levelled off 200 mm above the finished floor level. The foundation of the west wall of Room 3, although largely robbed, was slightly wider than the rest. It was 0.8 m wide, the bottom being at two different levels. A narrow strip (0.35 m wide) along the western half of the trench, was about 0.1 m deeper than the wider section above and contained

part of a foundation *in situ.* It was not clear whether or not this indicated two phases of foundation.

Room 3 had a sandy clay floor (BL218) on which there was a patchy accumulation of occupation (BL212-4). At the north end of the room were the remains of a north-south longitudinal oven (BF284; not on plan), the bottom and sides of which were partly lined with fragments of tile. Nearby was a hearth (BF283; not on plan), 2.0 x 0.5 m, consisting of large tile fragments. In Site B Period 4b the room contained several pits (BF177, BF178, BF185, BF231, & BF237) of which two (BF185 & BF237) had green-stained sides. A series of shallow, interlocking pits (BF231), with fragments of tile lining some of the edges, were perhaps settings for containers of some kind. A new floor (BL187) was sealed by an accumulation of the distinctive occupation (BL136 & BL59) noted in Rooms 1 and 2. The later deposits of Period 4 contained four fragments of crucibles used for melting copper alloy (pp 194-8). There was no clearly defined layer of demolition debris in Room 3, the latest layer being a gravel spread (BL58) of uncertain date *(see* below).

Much of the western and northern wall foundations (BF113 & BF172) of Room 4 survived the medieval robbing. The foundations differed from those elsewhere, being less substantial and constructed almost entirely of greensand set in white mortar. These factors suggest that the foundations were secondary additions to the main block.

There was a fine sequence of floor and occupation deposits in Room 4 (Sx 3.12). In Period 4a were two sandy clay floors BL159/BL139 and BL132/BL131, the latter consisting of compacted fragments of burnt sandy clay. The last floor was sealed in Period 4b by an irregular gravel spread (BL99), patched with tile fragments (Fig 3.41, inset). The last floor (BL64) was of sandy clay and was sealed by a layer of demolition debris (BL57 & BL65; Sx 3.12) containing fragments of painted wall plaster. Internal features were sparse, but included some small pits and stake holes (BF167, BF190, BF242, BF253, BF254, & BF464; Fig 3.41 & inset). BF167 contained an intact folded beaker of Colchester Type GB 160 (B435; *CAR* **10**, no 175).

The small area, about 3 m square, between Rooms 3 and 4 was either left open or it was occupied by a surviving part of the Period 3 building. In Period 4a a layer of rubble (BL235) was sealed by midden deposits (BL231). A thick layer of sandy clay and demolition debris (BL189) was dumped on the area in Period 4b. In this deposits were three parallel shallow slots (BF179 & BF180) containing traces of decayed timber. They were perhaps the remains of joists of a short-lived wooden floor. An occupation layer (BL95) and a further spread of rubble (BL67) were sealed by debris from the demolition of the sandy clay walls (BL50).

The remains of Room 5, although well-preserved, were slighter than those of Rooms 1-4 and mirrored, to an extent, the plan and quality of construction of its Period 3 predecessor (ie Room 4 in Building 94). The structural evidence for Room 5 consisted of a series of slots and surface-laid footings of rubble. In Site B Period 4a this included slots BF296, BF298 and BF362, and a ?footing BF237. There was also a ?footing for an internal partition (BF316). Slot BF296 also had a ?footing along its inner edge, although this was perhaps secondary. Slight depressions in some of the slots (eg BF298 & BF362) may have indicated the positions of uprights. The ?footings consisted mainly of septaria lumps with some fragments of tile, pottery, and Purbeck marble. There was a tile hearth (BF270) in the north-west corner of the room, and possibly a second one (BF358) against the south wall. The earliest floor (BL285/297) was sealed by a thin layer of occupation (BL228; Sx 3.10) which contained at least 16 fragments of a skull belonging to a baby (Appendix 5, microfiche p 434). The tile hearth BF270 was replaced by a similar hearth (BF263, not on plan) when the sandy clay floor was renewed (BL184/199).

In Period 4b Room 5 was rebuilt on a similar plan as before (BF112, BF116 & BF169; Fig 3.41, inset) but without the internal partition wall (BF316). At the bottom of the slot for the south wall (BF112) was a layer of rubble. A narrow slot (BF214) lay on the west side of the slot BF169, and was perhaps a replacement for it or else a drip trench, although the feature did not link up with the drain to the south (BF108). Since there were no convincing traces of the east wall of the room, this may have been retained from Period 4a although more probably the evidence for the wall had been destroyed during the digging of a Period 5 ditch (BF107). Against the wall was the third in a sequence of tile hearths (BF187; Fig 3.41, inset). The floor for Period 4b was of sandy clay (BL171) and was sealed by a thick accumulation of occupation (BL74/86; Sx 3.10). A whole pot (B704; not planned; Colchester Type GX 33; *CAR* **10**, no 110) was buried immediately west of the hearth. Other features in Room 5 included pits (BF193 & BF206), stake holes, and a slot (BF232), which is unlikely to have been for a wall because it was slightly curved and did not extend across the full width of the room.

Room 6 was neither as well-preserved as Room 5 nor so clearly defined because of the limited evidence for its walls. The room seemed to have been a low-grade structure which was used as a work area. Extending throughout Room 6 (Sxs 3.7 & 3.9) was a thick layer of dark ashy occupation (BL227/271) similar to that in Rooms 1-3. The first in a series of poorly-preserved ovens was built in the south-east part of the room. It was a circular, surface-built structure which was 1.0 m in diameter, with sides and base lined with fragments of tile (BF327, not on plan). This was replaced by a larger rectangular ?oven (BF294, not on plan) of which only the tile base (1.5 x 2.0 m) survived. The occupation lenses continued to accumulate in the room throughout Period 4a (BL224; Sx 3.9).

Probably at the start of Period 4b, the western wall of Room 6 was crudely replaced, as indicated by a short length of foundation (BF248) and other features. The foundation consisted of a trench filled with septaria and sand over which was a course of tile fragments set in mortar. The upper surface was flat and lipped on either side indicating the use of a timber ground-plate. Close to the foundation and on the same alignment were several large blocks of septaria laid flat. These were either post-bases or supports for a ground-plate. The blocks represent either a different phase of the wall or some other kind of structure such as an external support for the eaves.

In Period 4b, the second oven (BF294) was demolished and replaced by a third (BF269, not on plan) which was similar in plan to the first (BF327). The third oven was better preserved than the others and in places survived five tile courses high. Close by and contemporary with this feature were the remains of a surface-built rectangular hearth or oven, 0.75 m square, consisting of a group of tiles laid flat (BF264, not on plan). Also contemporary was a sandy clay floor (BL209/211; Sx 3.9). Subsequently the oven BF264 and the oven/hearth BF269 were replaced by a gully which had been lined at least in part with broken tiles (BF130). Immediately north of the gully was a burnt area which may have been indicative of an oven or hearth associated with it. To the south was a green-stained pit (BF217, Fig 3.41 (microfiche), inset) with a shallow gully leading into it (BF220, Fig 3.41 inset). Round the sides of the pit were some stake holes for a lining of wattles or timber. The pit and the gully may have been the remains of a latrine except that the arrangement was small and the apparent proximity of ovens or hearths suggests a possible industrial use. West of the gully BF130 was a rough floor (BL111; Fig 3.41) consisting of sandy clay and fragments of tile which may have derived from the demolition of one of the ovens. Other features in the southern part of Room 6 included hearths (BL186 & BF287) and pits (BF219, BF278, BF285, & BF301). Two crucible fragments were associated with these deposits although there was no other evidence to indicate metal working in Room 6. At the north end of the room, were a slot (BF273) and several pits (BF244, BF275, & BF678), including a shallow rectangular example (BF274) which, being partly lined with tile and stone, may have been a setting for a tank. A secondary sandy clay floor (BL204/242) was sealed by a gravel spread (BL205) west of BF273, and an occupation layer (BL202). Subsequent alterations included a sandy clay floor (BL156) associated with stake holes and occupation lenses (BL155) and a mortar and gravel spread (BL179/180) containing some wall plaster, some decorated with plant-scrolls and roundels (pp 310 & 312, Fig 11.2). It is uncertain if the plaster derived from the building or if it had been imported from elsewhere.

Late in Site B Period 4 (ie Period 4b/c), the floors of Rooms 5 and 6 were sealed by a thick midden (BL48/63/84/93; Sxs 3.7, 3.9, & 3.10). This implies that at this time the rooms were either derelict or had been demolished.

The nature of the occupation in Period 4c is hard to interpret. There seems to have been a building of some sort on the site of Rooms 5 and 6. This was indicated by floors, occupation, and a tile hearth (BL3, BL36/7, & BL30/1; BF195; Sxs 3.7, 3.9, & 3.10) sealing the midden deposits, although there were no surviving traces of walls. There were two phases of sandy clay floor (BL36/7 & BL30/1), the later of which was associated with a tile hearth (BF195, Fig 3.41, inset) sealed by a thin mortar floor (BL3) set on a thin make-up layer of orange sand. Traces of a similar mortar floor were noted 6 m further north (Sx 3.9).

A pit (BF261) cutting the foundation of the north wall of Room 4 was sealed by the thick layer of demolition debris which overlay the remains of most of the building. Near the base of this deposit was a layer of occupation (BL56) which was tinged green as if it had been weathered. This suggests that the building may have been left derelict for a period before being demolished.

The area to the west of Building 112 probably continued from Site B Period 3 as a yard, being partly re-gravelled (BL210) early in Period 4. Sealing the gravel was a thick accumulation of dump (BL200/ 100/103/42/39/25; Sx 3.7). Features associated with the latter include the remains of an ?oven (BF124), a tile hearth (BF140), a drainage gully (BF170), pits (BF121-2, BF131, BF196, BF198-9, BF228, & BF256) and many stake holes.

In the early part of Period 4, the north-west corner of this area contained the remains of a stoke hole and flue (BF173) for an oven or furnace associated with charcoal-rich occupation (BL96). On the north side of the oven, against the frontage wall, was a patch of charcoal which presumably was the remains of a stock-pile of unused fuel. Nearby, set into the sandy clay floor (BL157) sealed by the occupation was a Dressel 20 amphora (Colchester Type AJ 52D; BF174), only the base of which survived. To the south-east was a tile hearth (BF859). There was no clear evidence to indicate that this area had been roofed over except the existence of the sandy clay floor. Sealing this area was a thick layer of dump or make-up of sandy clay (BL53/60/69; Sx 3.8) which contained waste products from metal working including fragments of brass-making and metal-melting crucibles (pp 194-7 & microfiche pp 542-3). It is unclear if these related to the underlying oven/furnace or if the sandy clay and the metal-working debris derived from the demolition of a structure elsewhere. The absence of any metal-working debris in and around the oven/furnace suggests that the latter explanation is true. In view of their rarity, the occurrence here of yet more brass-making crucibles suggests that they might be residual and derive from brass making in Building 84. Certainly their context seems later than the floruit of brass making (p 197). Later in Period 4 the area was

gravelled over twice (BL33 & BL27; Sx 3.8).

In Period 4c, an oven (BF33, not on plan) was built in the western part of the yard. It was rectangular in plan and measured 1.1 x 2.0 m. It was surface-built and constructed of sandy clay and tile fragments. The remains of the oven were thoroughly burnt and very incomplete, the maximum height being 0.3 m. The eastern half appeared to preserve the shape of a semicircular chamber, thus possibly implying a double-chambered structure like the one at Balkerne Lane (JF52, *CAR* **3,** 132-4). Immediately north of the oven was an unburnt, bowl-shaped depression cut by several stake holes (BF48). To the north-west was a layer of crushed mortar and tile (BL14) which either was laid down to form a working surface for the oven or else was the debris from the demolition of an earlier unrelated structure. To the west and north of the oven were two pits (BF44 & BF45/9, not on plan). In each case, an irregularly-shaped tunnel had been excavated by leaving part of the ground intact as if to form a narrow bridge or arch across the top. The tunnels showed no signs of having been burnt *in situ.* They are unlikely to have been animal burrows partly since their relationships to the oven suggest that they were associated with it in some way. Equally, they cannot easily be seen as vents or flues because of the absence of burnt sides and the insubstantial nature of the tops of the tunnels. The superstructure could have extended as far as the tops of the tunnels in which case its shape could have been like a square with the north-east and north-west corners cut off and the stakes in the centre would have supported some form of roof. The function of the oven is unclear.

The probable west boundary of Building 112 was formed by the wall foundation (BF596). This was set in a slightly wider construction trench (BF740). The foundation was unusual in that it was narrow and shallow, constructed predominantly of greensand with only a little septaria, and had an upper course of tile. There were no traces of floors to the west of the foundation and thus it may have had open areas to either side.

To the south of the yard, the east-west alley was completely built over in Period 4, its site being shared more or less equally between Buildings 112 and 113. A narrow gap was left between the two buildings for an east-west drain or ditch (BF108). There was no evidence for a timber-lining. After the drain was no longer in use, a baby was buried in it (BF386, Appendix 5, p 433).

Building 113 (Period 4 of Site B: *c* 100/125-*c* 275/325)

[CUL Site B; Figs 3.7 & 3.41]

Building 113 was a substantial, well-built house probably of single corridor-type, although it is possible that Buildings 113 and 114 were separate wings of the same courtyard-type house. The wall foundations were mainly of substantial stone-and-mortar construction over a layer of gravel. The stone in most had been robbed, although some stretches did survive to floor-level north-west of Room 4 (BF82 & BF233) and in Room 8 (BF245 & BF596). The main range of rooms (Rooms 1-5) shared a regularity of plan and a consistency in the quality of construction which suggest that it was planned and built as in a single unit, as opposed to the rooms to the north-west (Rooms 6-7) which appear to have been later additions.

Room 1, nearest the street frontage, was probably a workroom. Three phases of use were identified. The first phase was represented by a gully (BF271; Fig 3.41, inset) and layer of make-up (BL197), both of which were heavily stained green. The gully was backfilled and the room refloored in Phase 2 with sandy clay (BL196/172). A crumbly mortar floor (BL152) was laid in the northern part of the room. The southern edge of the floor was defined by a slot (BF229) which presumably was for a ground-plate of a partition wall. At least ten iron nails lay in the bottom of this slot. A series of thin, ashy, charcoal-rich occupation layers (BL79/123/133) accumulated over the floor throughout Phases 2 and 3, the slot BF229 being backfilled and sealed early on in the sequence. In the Phase 3 part of this series of deposits were a gravel spread (BL113) and a tile hearth (BF216). One of the occupation layers (BL123) contained a spade sheath (p 186, Fig 5.50,1661) which is of special interest in view of the evidence for cultivation elsewhere on the Culver Street site. A north-south gully (BF183; Fig 3.41, inset) belonging to Phase 3 contained at least two depressions or shallow postholes (BF227 & BF234). The gully had a soft, green-stained fill suggesting that it was unlikely to have contained the base of a partition wall.

Room 2 was altogether more substantial and of better quality. Initially the room had a thick mortar floor (BL154) with a neat, flat surface sealed by a thin lens of occupation (BL153). The floor was replaced by a mosaic pavement with a tessellated border. The pavement was set in hard white mortar on a layer of clean sand 100 mm thick (BL11). The mosaic had been robbed out in the late 19th century to leave only a small part of the western edge and practically all of the border. This must have been the same mosaic which was discovered and recorded in 1881 although Hull stated that the pavement had not been destroyed (Hull 1958, 209).

Little of Room 3 survived. A layer of gravel and mortar (BL78; Fig 3.41) was sealed by a layer of sandy clay (BL77/L114). The mortar layer had no good surface and thus, rather than being the remains of a mortar floor, may have been make-up for a more substantial floor which has been destroyed.

Along the top of the surviving wall foundation (BF233) on the west side of Room 4 were the remains of a thin yellowish mortar layer containing the impressions of a tile course which would have provided a level surface for the daub-block superstructure. Room 4 had a tessellated pavement (BL151) most of which had

been destroyed during the construction of an Anglo-Saxon hut (pp 119-21). Quarter-round moulding forming a neat, protective skirting survived in places along the western side of the room. The pavement was free of occupation material, being sealed by a thick layer of demolished sandy clay wall (BL134).

The wall foundation (BF12) on the south side of Room 5 was narrower than, and slightly offset to, the main east-west foundation (BF3) to the east, although the two were probably contemporary. Two phases were distinguished in Room 5. The room had a sandy clay floor (BL150) in Phase 1 which was replaced in Phase 2 with an *opus signinum* floor (BL5) on a rubble base (BL126).

Room 6 contained a substantial *opus signinum* floor (BL524) with a rubble-and-mortar base. In the south-west corner of the room, two impressions in the floor indicated the positions of robbed *pilae* stacks for a hypocaust. The western wall foundation (BF779) only extended two-thirds of the way across Room 6 and thus perhaps indicated the position of a doorway.

To the west of the robbed foundation BF597 were traces of another mortar floor in section. This was approximately at the same level as the sub-floor of the hypocaust (BL524) indicating that Room 7 was probably similar to Room 6.

It did not prove possible to excavate fully the rooms to the south of the robber trenches BF3/12. Room 8 had a sandy clay floor and was subdivided by a shallow, north-south wall foundation (BF245). This was sealed by a thick layer of sandy clay (BL149) which was either demolition debris or a late secondary sandy clay floor overlain by the remains of a mortar floor (BL117). Room 9, observed only in section (Sx 3.11), had a substantial *opus signinum* floor (BL119) with a quarter-round moulding which only survived at the western edge of the room. The floor was sealed, like the latest floors elsewhere in the building, by a thick deposit consisting of the remains of demolished sandy clay walls (BL705/6; Sx 3.11).

To the east of Room 9 was Passage 1. This contained a tessellated pavement (BL708) which had been extensively and crudely repaired using mixtures of gravel, tesserae, and fragments of tile. The southern wall foundation was narrow and rather insubstantial. A narrow north-south slot in the floor indicated that the passage may have been subdivided.

Room 10, which lay to the south of Passage 1, may have been a secondary addition to Building 113. It contained a tessellated pavement on a base of crumbly *opus signinum.* The floor was sealed by a demolished sandy clay wall which, as elsewhere in the building, was subdivided (BL705 & BL706; Sxs 3.4 & 3.11) by a thin lens of occupation.

A small open area lay between Buildings 113 and 114. Early in Period 4 there was a narrow drainage gully (CF42) immediately north of the east end of Building 114. The gully was sealed by a thick accumulation of dump material (CL14) and ultimately was replaced by a more substantial drain (CF12). The latter sloped from west to east and was fed by two subsidiary channels (CF33 & CF40). Cutting into the accumulation of dump material CL14 was a small pit for a whole pot (C192; Colchester Type GX 156). At the western end of the open area, traces of occupation (CL15) and patches of mortar were cut by a large circular pit (CF27; Sx 3.17), the edges of which were much distorted as a result of sinkage and slump. The pit (of ?early 3rd-century date) cut a shallower pit (CF133) to the south. Other features included two small pits (CF29 & CF35), of which one (CF35) contained the remains of a young infant (Appendix 5, microfiche p 433). A complete pot (C492; Colchester Type GX 156), which had been set into demolition debris (CL8), was found in Sx 3.17.

The mosaic in Building 113, Room 2

[Site B; Figs 3.41-2]

by DJ Smith

Only a small part of the border of this mosaic survived, mostly on one side (Fig 3.41). It took the form of three bands, the innermost of three rows of greyish brown tesserae (septaria), then one of three rows of white (chalk), and one of seven rows of greyish brown. The tesserae were cubes of 10-13 mm. There remained most of an extensive surround of red tesserae (tile) of approximately twice that size.

The rest had been removed in the 19th century (pp 36 & 79) but the mosaic can be identified as that found at a depth of 5 ft (1.5 m) in May 1881 'in Mrs Prosser's garden', subsequently the site of Mumford's Iron Foundry. This was drawn and published as a coloured engraving (Fig 3.42; *Trans Essex Archaeol Socy,* ns, **3** (1889), 140, pl 7; hence Hull 1958, 209 (no 80), pi 33). The fate of the original drawing appears to be unknown. Including the fragments found *in situ,* the mosaic (ie the decorative panel) was apparently 8 ft (2.4 m) square.

The centrepiece was a cantharus, depicted in yellow to suggest gilding, if not gold, in an elongated octagon of polychrome simple guilloche (the diagonal sides the shorter). The octagon was 'superimposed' on a linear pattern of four tangent stars, each formed of eight contiguous lozenges in pairs. The four stars would have formed a central square but for the octagon, the diagonally opposite sides of which diagonally halved each star. With one apparent exception, the surviving lozenges each contained a freestanding solid lozenge in dark greyish brown. Between and contiguous with each longer side of the octagon and the linear square containing this pattern was a linear oblong containing two quasi-tangent ovals each framing a freestanding heart-shaped leaf with a short stem and linked by short diagonal lines to the angles and mid-point of the sides of the oblong. A

small square in each angle of the pattern contained a simple knot and four of the eight surviving lateral triangles formed by the paired lozenges of the stars preserved an inscribed inverted solid triangle. The containing linear square was surrounded by a tightly-braided straight-tongued double guilloche between and tangent to two lines. This was executed in red, yellow, and white, with a dark greyish brown outline, while the knots were of red, pale yellow, and white (apparently without a dark outline), and the rest was executed in dark greyish brown. The ground throughout was white.

The original drawing or engraving also showed a surrounding narrow and contiguous band of tesserae of the same size as in the design and surrounding and contiguous with this band a broader band of medium-sized tesserae, as well as part of the plain surround of large irregular red cubes of 25-40 mm; but these bands must be regarded as only a summary representation of those of which the fragmentary remains still survived in 1981 (cf Fig 3.41). There is, however, no need to doubt the reliability of the rest of the original record, the features of which can all be paralleled in other mosaics of Colchester (*see* below).

The cantharus was a substantial vessel with a large foot contracting into a knop below a short and heavily gadrooned body from which two elegantly curved, knopped handles curled outwards and up to join a thick rim on a flared neck. The rim was depicted from a higher viewpoint so that part of the interior of the vessel was seen.

The materials of the colours employed in the mosaic were primarily tile for the red, tile or pottery for the yellow, septaria for the dark greyish brown, and chalk for the white. These were the colours and materials employed in the fragmentary but obviously similar mosaic in Building 120 (p 94). The tesserae are described as being of 'very small dimensions, some of those forming the vase being about one eighth of an inch square' *(Trans Essex Archaeol Socy,* ns, **3** (1889), 140; hence Hull 1958, 209). If similar in size to those of the mosaic of Building 120, they will have been, except in the cantharus, cubes of 10-15 mm (though in the engraving those in the cantharus are not shown as smaller).

The form of the cantharus and the bird's-eye view of its rim are paralleled in two other mosaics of

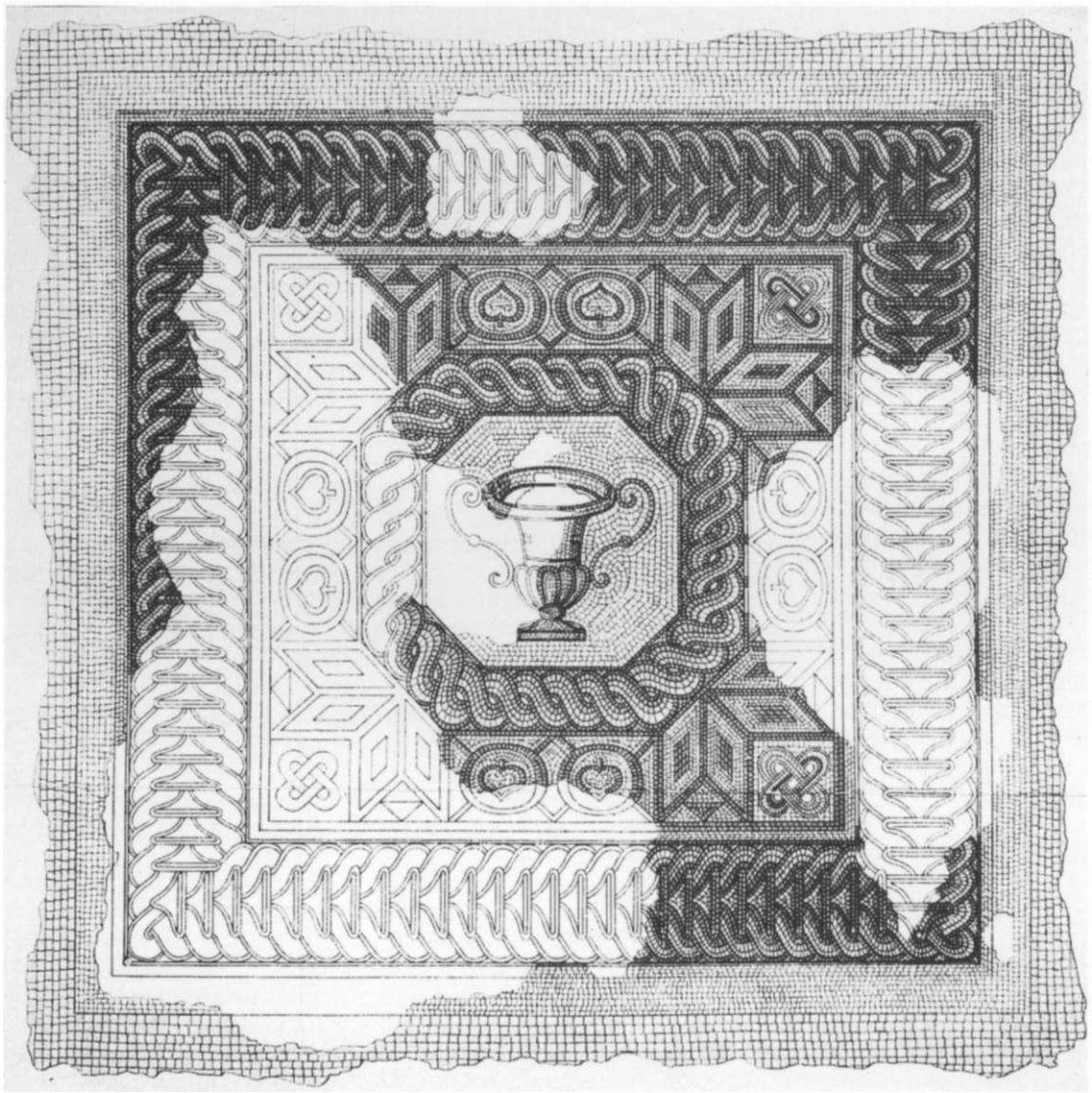


Fig 3.42 Mosaic found in Mrs Prosser's garden in 1881. Almost certainly from Room 2 of Building 113.

Colchester. One of these was that discovered in 1793 on the property of a Mr John Hinsum in East Stockwell Street, formerly Bear Lane, 'in the Yard of Bragg the baker' *(Gent Mag,* 1794, pt 2, 801; hence *Lib Rom Brit Rems,* 1 (1887), 72; *Vet Mon,* **3** (1796), pl 39; Hull 1958, 104, Insula 12 (no 25)). The other was Mosaic B discovered in 1965 on North Hill for which a date *c* 150 or at least in the second half of the 2nd century has been proposed (Dunnett 1967, 38, pi 7; Smith 1967, 41, 42; cf Neal 1981, no 39). In this mosaic also the vessel is rendered in yellow.

The lozenge-pattern can be paralleled in a similar mosaic from Silchester, undated *(Archaeologia,* **46** (1881), pl 13). It is noteworthy that in this mosaic four of the eight lateral triangles contain an inscribed inverted solid triangle but two others diametrically opposite contain a freestanding solid triangle while the other two contain a quasi-inscribed solid pelta and these are diametrically opposite two of the triangles containing an inscribed inverted solid lozenge. Since, however, the two triangles surviving on one side of the pattern from Culver Street and the triangle surviving on two other sides all contain an inscribed inverted solid triangle, it seems most probable that this motif was repeated in the diametrically opposite triangles.

The straight-tongued double guilloche surrounding the lozenge-pattern is paralleled elsewhere in Romano-British mosaics, including two from Colchester. There it is recorded in the pavement discovered in 1793, already cited for canthari closely comparable with that of the mosaic under discussion, and in a fragmentary mosaic found in 1865 on North Hill of which the double guilloche is described as 'a very beautiful bordering of very fine tessellae' *(Trans Essex Archaeol Soc, os,* **4** (1869), 55, pl 3). It is also a notable feature of the Verulamium mosaic depicting a lion with a stag's head in its jaws which is dated not earlier than *c* 180 (Frere 1983, 161, 163, 167, pi 18; Smith 1975, 281, pi 121 (no 2); Neal 1981, no 75); and it bordered an otherwise unrecorded panel associated with a mosaic from Silchester which there are stylistic grounds for assigning to perhaps *c* 140-60 *(Archaeologia,* **55** (1896), 227, pi 14; Smith 1975, 275, pl 113 (no 1)).

Finally, dark bands of differing width on a white ground were employed to set off numerous Romano-British black-and-white and polychrome mosaics in the later 1st century and the 2nd (Smith 1975, *passim)* and were a feature of the mosaic found in Building 120 (p 94).

Building 113 appears to have been constructed in the early 2nd century and the mosaic was a secondary feature; the house was demolished *c* 275/325. The few datable stylistic parallels cited above tend to suggest for the mosaic a date between *c* 150 and the later 2nd century; but the stratified evidence indicates a later period for the fragmentary but almost certainly very similar mosaic in Building 120, only about 60 m distant (p 94), and it may be noteworthy that the mosaic of 1793 cited above for its comparable canthari included an oblong panel of six-strand guilloche for which at present it is difficult to envisage a date before *c* 200. It seems, therefore, that despite its earlier appearance the mosaic of Building 113 must be assigned to the first half of the 3rd century.

Building 114 (Period 4 of Sites C & J: *c* 100/125-*c* 275/325)

[CUL Sites C & J; Figs 3.7, 3.41, & 3.43]

Building 114 was a substantial town house which was very similar in plan to the main range of rooms of Building 113 but was lacking the high quality of its floors. The wall foundations, although largely robbed, were also of similar type with three stretches surviving intact (CF8, CF25, & between Rooms 3 & 7). There was a close correspondence with the Period 3 plan, in this case represented by gravel-filled pits of Building 96. A notable feature of Building 114 was a large hypocaust in a room on the south side.

The northern wall foundation of Room 1 (CF8) survived intact to floor level. Early Period 4 features in Room 1 included a pit (CF92) with the remains of a neo-natal child (Appendix 5, microfiche p 433), two other small pits (CF91 & CF93), and an irregular gully (CF75). Later were some more small pits (CF62, CF64, CF65, CF66, & CF69) and some stake holes. All the features in Room 1 were associated with various weathered and green-stained dump and occupation deposits (CL21 & CL29). There was no clearly defined floor in this material which suggests that the room may have been open to the street.

Room 2 had a series of four successive sandy clay floors. The first (CL28) directly overlay the Period 3 floors and, in common with the second floor (CL19b), was associated with a hearth indicated by a heavily burnt area (CL27 & CL26 resp; Sx 3.16). On top of occupation on the third floor (CL19a) was some collapsed wall plaster (CL11; Sx 3.16). The plaster was directly sealed by a thick layer of occupation (CL12) showing that the room continued to be used despite being in a bad state of repair with debris lying on the floor. Associated with the third floor was a small pit (CF32) and a whole pot of Colchester Type GX 156 (C152). The last floor was cut by a posthole (CF30) and sealed by a layer of occupation. The upper surface of the latter was partially burnt, like the equivalent deposit in Room 3, suggesting that there had been a minor fire in the building. This surface was sealed by a thick layer of sandy clay with wall plaster (CL9; Sx 3.16) left after the demolition of the building.

The sequence in Room 3 was similar to that in Room 2 except that there were only three sandy clay floors (CL24, CL19, & CL10; Sx 3.16). Associated with the second of these (CL19) were two small pits (CF70 & CF73) one of which (CF70) contained a complete pot (C61; Colchester Type GX 156) and the remains of a neonatal infant. Also on this floor were pieces of

turquoise wall plaster lying face down. Cutting the third floor was an east-west slot (CF31). Rooms 4 and 5 were observed largely in section. They had sandy clay floors, with two probable phases of occupation in each.

Part of a small room (Room 6) was excavated to the north-west of the main range of rooms. The eastern wall foundation (CF25) survived to ground level. The base of the northern foundation (CF9) consisted of an exceptionally thick layer of septaria fragments which presumably had been used to counteract sinkage into an earlier pit. The room had a sandy clay floor.

Room 7 (Fig 3.43) contained two mortared pads and the lower parts of four, possibly five, channels which presumably had formed the base of a composite hypocaust. This is a type generally datable to later than the 2nd century (p 272; Black 1985a, 86-7) in which case it was probably a later addition to the building. No other parts of the system survived, presumably having been destroyed by a combination of medieval robbing and cultivation. The robber trenches for the north, south, and east foundations of the room (JF14, JF124, & JF104) contained fragments of combed box tile. The sides of the channels were of mortared rubble which had been extensively robbed. Four channels converged on the centre of the room where there had been substantial subsidence into the backfill of a Site J Period 3 pit. Despite the distortion caused by the settlement, it was clear that three of the channels (JF181 & JF185-6) had been built so as to slope down towards the centre of the room whereas the southern one (JF125) was made level. Evidence of heat was slight and restricted to the southern end of the floor of the southern channel (JF125) which was scorched and the fill of channel JF185 which contained fragments of burnt mortar and sandy clay. A fifth channel (JF179) led from the southern end of the channel JF185 to the south-east corner of the room and may well have originally extended along the full length of the inside of the south wall. Two small pads of mortared rubble lay between the angles formed by the three northernmost channels. These survived because of the subsidence in the centre of the room. Probably there would have been two more pads in the other two angles to form a matching set of four. The channels are likely to have been drains rather than flues (Rook 1975) and the pads were presumably some kind of floor support. The burnt area at the south end of channel J125 suggests that the stoke hole was against the centre of the south wall.

Thick layers of demolished sandy clay walling sealing the Site J Period 4 buildings were the latest Roman deposits over much of the site. This was no doubt partly due to the disturbance of later deposits during the formation of the post-Roman topsoil or 'dark earth' *(CAR* **3**, 92). As noted above, there were traces of occupation within and contemporary with the demolition levels although the exact nature of this remains unclear.

Building 115 (Sites G & H Period 5; *c* 225-*c* 7350/400+)

[CUL Site H; Figs 3.7, 3.41, & 3.44]

Building 115 was probably a large house (Fig 3.44). It was situated at the rear of the town rampart and fronted on to the west side of Insula 34. All that was available for examination was part of an east-west wing and the excavation of this was limited to exposing the latest floors, emptying the robber trenches, and digging two box sections through the upper parts of the underlying stratigraphy. In all, four rooms and part of a passage were uncovered.

The building butted on to Buildings 116 and 120 and, to judge by the relevant relationships, was earlier than Building 120 *(see* pp 92-3).

The building seems to have been of two phases. The first is represented in one of the box sections by a stump of sandy clay wall, plastered on the west side, and part of a sandy clay floor sealed by a thin layer of occupation (Sx 3.34, microfiche). The start of the second phase was marked by the deposition of a thick layer of make-up, 0.45 m deep. Into this was dug a trench for the foundation HF478. The latter was formed by filling the trench with mortar and septaria and building a free-standing top, two courses high. The rooms were then provided with tessellated floors.

The floors were all similar and unusual in that the tesserae ranged widely in colour from pale yellow to deep brownish red. These seem to have been deliberately mixed at random to achieve a mottled effect.

Of the unrobbed sections of foundation, HF390 was similar in construction to HF478 (Sx 3.34). However the lowest part of the east-west foundation between Room 4 and Passage 1 (HF480) consisted of gravel and chips of septaria set in mortar. The upper part was made of septaria and pinkish mortar capped by a layer of brownish yellow mortar.

To the north of the building was a lightly gravelled open area on the west side of which, mostly under the west baulk, was a section of foundation (Fig 3.41). This must have been the rear part of a room to the west which either belonged to Building 115 or was the rear part of another building fronting on to the west side of Insula 34.

Building 116 (Period 5 of Sites J, G, & H: *c* 225 - c 275/325)

[CUL Sites J, G, & H; Figs 3.7, 3.41, & 3.44-5]

Building 116 in its final form (Fig 3.41) was a substantial house with eight rooms and three passages built around a yard. Its plan was unusual and seems to have been the product of three phases of development. Initially the building consisted of two rooms (Rooms 1 & 2) on the street frontage with a large yard behind. A cross passage (Passage 1)

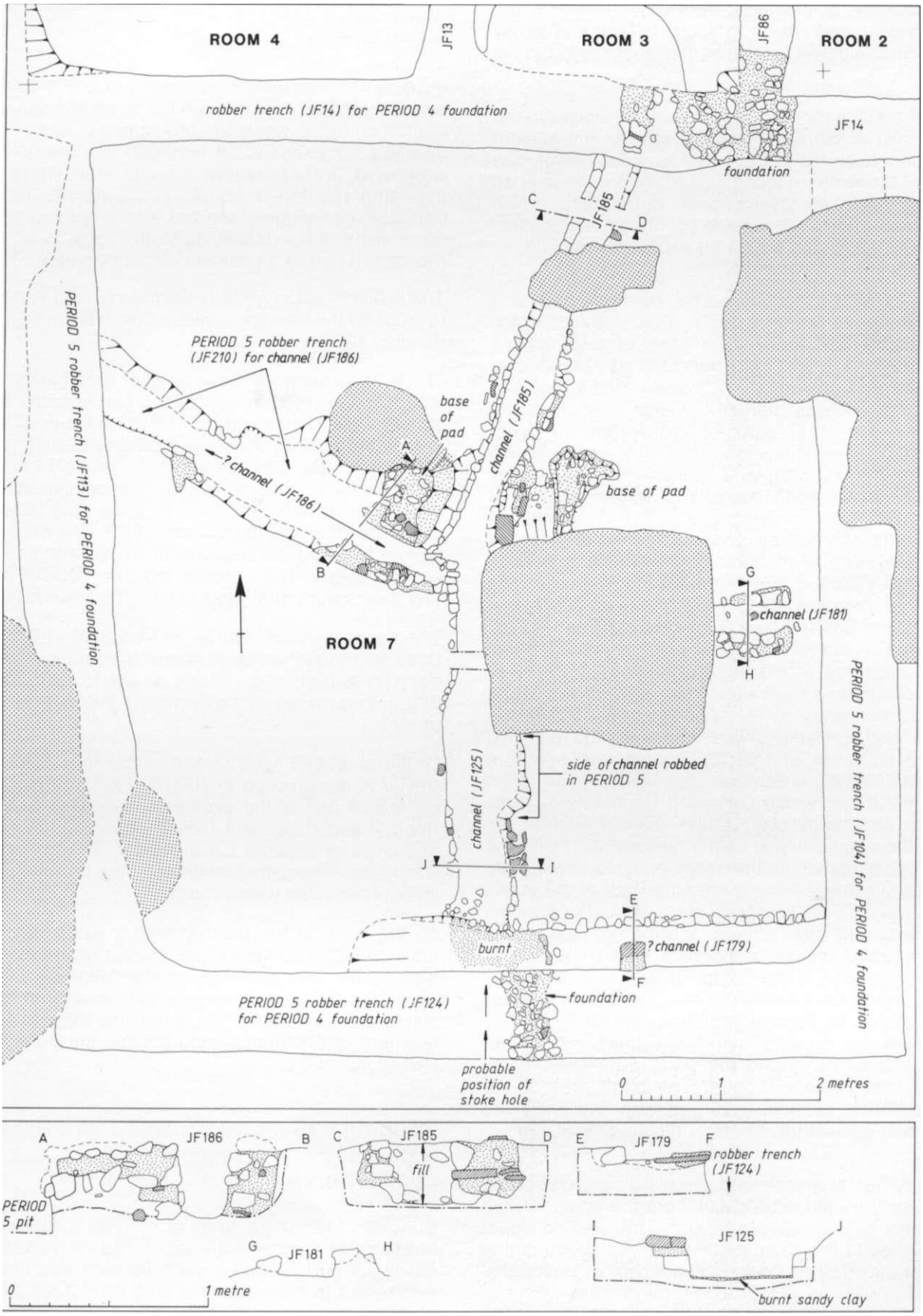


Fig 3.43 Room 7 (hypocaust), Building 114. 1:57. [Pages 82-3]



Fig 3.44 Building 115 and the western parts of Buildings 116 and 120 viewed from the north end of Site H. [Pages 83-94]

separated these two rooms whilst another (Passage 2) linked all three compartments at the rear. A range of rooms (Rooms 4-7) was later added on the north side of the yard and finally the construction of two more passages (Passages 3 & 4) and two additional rooms (Rooms 3 & 8) on the south side left the yard as two small areas to the north and south of Passage 3 (Fig 3.45).

The building was built on the cultivated land of Site G Period 3 except in the south-east corner where it directly overlay the remains of Building 97.

Phase 1

The lower parts of the foundations of the first phase of the building had survived the medieval robbing. These consisted of mortared septaria over a layer, 0.2-0.4 m deep, of gravel and tile fragments set in mortar.

The floor of Room 1 appeared to have been of gravel, at least 90 mm thick. On the surface was a burnt circular patch, 0.6 m across, which was presumably the remains of a hearth (GF1513). Under the gravel was a layer of loamy sand (GL1974) with no associated layers of occupation. Cutting this layer was a small sub-rectangular pit (GF1983), 80 mm deep, with burnt sides and base. This had been part of a hearth or oven. Close by was small posthole (GF2066) which may have been linked with this feature. An oval oven (GF3756) in the centre of the room may have post-dated Building 116 because it had been cut into a layer of what appeared to be destruction debris sealing the gravel floor.

At first Room 2 seems to have contained a mortar floor which became rather thin and worn with use. This was replaced by a tessellated floor on a mortar base.

The floor of Passage 1 was only seen in section. It was made of sandy clay. There was no foundation across the north end of Passage 2 suggesting that

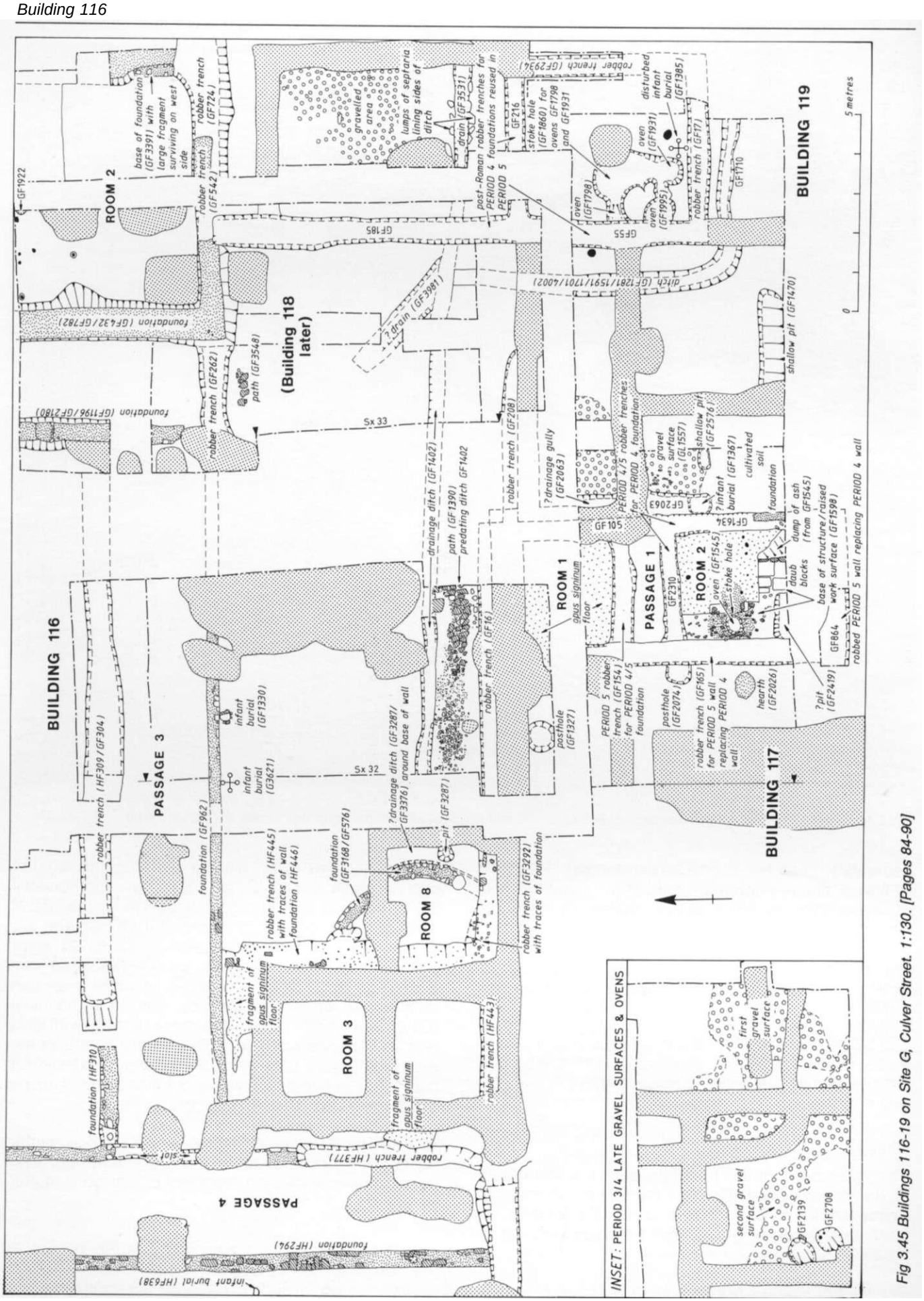


Fig 3.45 Buildings 116-19 on Site G, Culver Street. 1:130. [Pages 84-90]

this may have been the position of a doorway. The passage seems to have turned a right angle at the north end to link up with a narrow passage leading to the street frontage. The robber trench (JF5) on the north side of the narrow passage contained the remains of a small foundation made of mortared septaria. The main east section of the site provided evidence of a drain on the south side of JF5. The insubstantial nature of the foundation and the indications of a drain suggest the existence of a free-standing wall for an external open passage to provide access to Passage 2 from the street.

The west foundation of Passage 2 (GF1196) was narrower and shallower than the other foundations of the Phase 1 building. It consisted of a layer of mortar overlain by a layer of mortared septaria.

The primary floor in Passage 2 took the form of a layer of sandy clay with patches of mortar on the surface which may have represented the remains of a heavily-worn mortar floor. This was sealed by a tessellated floor with cubes aligned north-south except at the south end where the rows turned east-west to continue into Passage 3. The pavement had been repaired with a large patch of gravel 100-50 mm thick. The pavement only survived at the southern end of the passage but, at the north end of the passage (where it had severely subsided into the backfill of an earlier feature), there was a layer of gravel sealed by a thin layer of mortar which was probably the remains of the pavement.

Phase 2

The foundations of the north-west quarter of the house (which roughly corresponded to the new work of Phase 2) were of coursed septaria and poured mortar. They had not been robbed out, presumably because they lay under or close by Building 128 *(see* p 122). Evenly spaced along the north side of the north wall of this phase (ie Rooms 4-7) were at least four buttresses. The buttresses were a primary feature of Phase 2 because they were included in the initial foundation design. Why they were considered necessary is obscure.

Room 4 had been the largest and most important room in the house. Despite being markedly out of square, the room had contained a mosaic. The floor was of *opus signinum,* 0.4 m thick. On its surface was a thin white layer of mortar with faint impressions of rows of small tesserae which had been removed presumably for reuse elsewhere when the building was demolished.

Room 6 contained a thin spread of mortar, gravel, and fragments of wall plaster which may have been the remains of a layer of make-up for a solid floor of some kind. Underneath was a layer of sandy clay loam with two scorched patches (GF99). These may have been the remains of hearths although there was no accompanying occupation.

Rooms 5 and 7 were small, Room 5 being markedly out of square. No floor levels survived.

Phase 3

Room 3 lay in the angle between Passages 3 and 4 (Fig 3.45). The room measured 4.50 x 6.55 m internally. Its floor had been of *opus signinum* but all that survived were two patches, one on the north side and the other on the west. The wall foundations had been robbed out in the early medieval period (HF377, HF443, & HF446). Room 8 was formed by the addition of a curved wall to the east side of Room 3. No floors survived but large quantities of broken *opus signinum* in the area may have been the remains of a floor in Rooms 3 or 8. Rooms 3 and 8 had shallow foundations similar to those of Passages 3 and 4.

The foundations of Passage 3 consisted of a shallow trench filled with mortar and chips of septaria on which were at least three courses of tile and dressed septaria. The south foundation of Passage 3 would have linked up with the foundation on the west side of Passage 2 but was constructed differently to it. The first floor of Passage 3 was indicated by lenses of occupation on sandy clay loam. This was renewed with a similar floor which subsequently was patchily resurfaced. Finally a tessellated floor was laid throughout the passage. Layers of make-up were used so as to leave the finished floor 0.25-0.30 m higher. A small fragment of quarter-round moulding (GF1559) survived against the centre of the south wall foundation (GF962).

Passage 4 provided a link between Rooms 3 and 4 and Passage 3. Its foundations were similar to those of Passage 3. Along part of the top of the west foundation was the impression of a timber ground-plate which must have been put in place when the mortar was still wet. The south end of the passage stopped against the north wall of Passage 1 of Building 115, a relationship which implies that Buildings 115 and 116 may have been part of the same building. The floor of the passage was tessellated. It was separated from Passage 3 by a slot for a timber ground-plate indicating the presence of a doorway between the two. A similar slot (HF530) across the width of Passage 4 indicated that the northern end had been partitioned off from the rest of the passage.

The northern yard had been gravelled. A timber drain (GF652/GF3892) lay along the east side, next to Passage 2. At the north end, it may have connected with the street via the possible east-west drain on the south side of JF5.

No substantial surfaces seemed to have survived in the southern yard, apparently because much of it was lowered to make the ground-level roughly the same as that of the later Building 120 to the south. (This may have been done to solve drainage and dampness problems.) The main deposit (GL1050) associated with the Site G Period 4 yard does seem to have been removed on the south side of a line

1.0-2.0 m south of Passage 3 so as to leave the area about 0.35 m lower (Sx 3.32). Just south of the end of Passage 2 was a small patch of tile (GF3548) which was the remains of a path or a threshold into Building 116. Against the southern boundary of the yard area was a path (GF1390) of gravel and tile fragments with a drainage gully (GF1402/3531) leading to the street. Both may have predated Building 116.

Two baby burials lay in the south yard, under the eaves of Passage 3 (GF1330 & G3621, Appendix 5, microfiche p 433). One of these (GF1330) included a pot of Colchester Type GB 112 *(CAR* 10, no 144). A third baby burial (HF368) was found after Site H was machined down to the Boudican destruction layers. It lay just west of the foundation HF294 suggesting that it too had been buried under the eaves of Building 116.

The southern boundary of this yard was indicated by the eastward continuation of the robbed south wall foundation (GF3292) of Rooms 3 and 8 which took the form of a narrow shelf along the north side of the robber trenches GF16 and GF208. This probably represented the robbed foundation of a free-standing boundary wall enclosing the yard. This lay 0.5 m north of the robbed plinth of Building 82. The line of the wall must have kinked southwards twice, the first being somewhere within the part of the site destroyed during the construction of the southern cellar of Rebow Chambers. The wall appears to have been part of Building 117 and thus the first kink presumably occurred at its junction with the east wall of Building 117 (indicated by robber GF1634, Fig 3.45).

Building 117 (Period 4 of Site G: c 200 - *c* 225)
[CUL Site G; Figs 3.7, 3.41, & 3.45-6]

Building 117 (Fig 3.45) consisted of two rooms separated by an east-west passage. Outside the building, at the foot of the east wall, was a drainage gully (GF2063) and beyond was a gravelled yard (GL1557).

The west foundation (GF165), the north foundation (GF16), the northern end of the east foundation (GF105), and the south foundation of Room 1 (GF154) were reused or replaced by foundations of Room 6 and Passage 1c of Building 120 (Site G Period 5). They were subsequently robbed in post-Roman times along with the rest of Building 120. The other foundations of Building 117 (ie the north and east foundations of Room 2 (GF231 & GF1634)) were robbed prior to the construction of Building 120. The robbing of the north foundation was done at the same time as the removal of the adjacent larger foundation for Building 120 and, as a result, left a narrow shelf (GF16) along the north side of the robber trench.

The floor of Room 1 was of mortar made with chips of septaria. It was heavily worn.

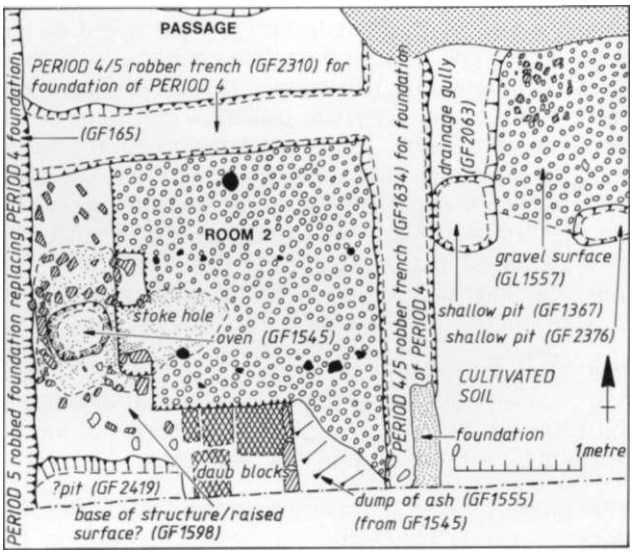


Fig 3.46 Part of Building 117 (Period 4). 1:60.

Room 2 had a sandy clay floor with a raised surface or 'platform' (GF1595) along the west and part of the south sides of the room. The easternmost part of the platform partly sealed occupation on the floor thus indicating that it was a secondary insertion. The platform was made of blocks of sandy clay, some of which were clearly visible (Fig 3.46). Partly sunk into the middle of the west side of the platform were the remains of an oven (GF1545). It was circular in shape, 0.18 m deep, and had burnt, slightly-vitrified sides. The base was a rectangle of tile and amphora sherds laid in two courses (p 253). The superstructure seems to have been of broken tile set in sandy clay. The stoke hole, which had been cut through the face of the platform, lay to the east. The base of the stoke hole was part of the floor of the room. It had been heavily burnt. Over the floor there was an extensive accumulation of ash and burnt sandy clay, particularly in the south-east corner where the deposits were especially deep. This material, which must have derived from the oven, contained much wheat suggesting that the oven had either been used for baking or drying grain *(see* below).

Cutting into the platform was a rectangular ?pit (GF2419). Its fill contained much burnt sandy clay and charcoal and its east side was lined with a vertical tile. As the ?pit was on the edge of the site, interpretation was difficult. Since the bottom of the feature did not penetrate the floor of the room, one possibility is that it was simply a part of the platform which gave the appearance of being a feature.

The passage had a floor of sandy clay similar to that in Room 2.

Building 117: sample from the floor of Room 2
by Peter Murphy

Samples from contexts GL1507 and GF1545

contained quantities of food refuse (carbonised cereals and hazelnut shells, marine molluscs, avian eggshell, bones of fish and mammals) and charcoal. GL1507 produced shells of the marsh or 'freshwater slum' snail *Lymnaea truncatula,* possibly indicating locally damp conditions. GF1555, an accumulation of ash and charred material thought to have come from the oven GF1545, contained a similar range of miscellaneous food refuse, but in addition a large assemblage of carbonised cereals. The assemblage consists almost entirely of elongate wheat grains *(Triticumci. spelta)* with very rare, poorly preserved, wheat spikelet fragments, grains of barley, oats and rye, rare hazelnut shell fragments and a few seeds of common arable weeds and wetland plants. It would appear that this oven was perhaps used for grain drying (Table 8.17).

Building 118 (Period 4 of Site G: *c* 200 - c 225)
[CUL Site G; Figs 3.7, 3.45, & 3.47-8]

Building 118 was constructed at the east end of the southern yard of Building 116 where it sealed the drain GF3981/GF1402. The construction work seems to have involved the lowering of the ground level by removing much of the underlying Period 3 cultivation soil and the remains of Building 98. Building 98 may have been the primary phase of Building 118 because the positions of the north and west walls of both buildings were more or less the same (although Building 98 seemed to have extended further eastward).

The west wall is represented by a line of three large rectangular postholes (GF1037, GF1654, & GF1663; Fig 3.47). Two of them (GF1663 & GF1037) were joined by a shallow slot (GF2979) which may possibly have been for a ground-plate. The north wall (GF3389) had a foundation of septaria and tile fragments set in yellow mortar. The east wall probably corresponded to the line of the Period 5 building (Building 120), the position of which was indicated by a robber trench GF158 (Fig 3.41). The foundation of the south wall (GF3408/3424) was of septaria and tiles bonded with yellow brown mortar. This foundation was wider at its east end where it was 0.8 m across. It stopped short of the east wall indicating the probable site of a doorway.

The first floor of the building was of sandy clay. After some occupation had accumulated on it, the floor was replaced by a sequence of four mortar floors, each separated by layers of occupation.

The main internal feature in the building was an oven (GF3235) built into the north wall. Only its base survived and this was partly cut away by two later pits (GF185 (Fig 3.72) & GF1227 (Fig 3.41)). The base was constructed of tile fragments set in sandy clay, those on the east side being larger than elsewhere. The oven incorporated a sandy clay wall (GF3236) along its south face and overlay the foundation of the north wall (GF3389). The base was burnt, apart from

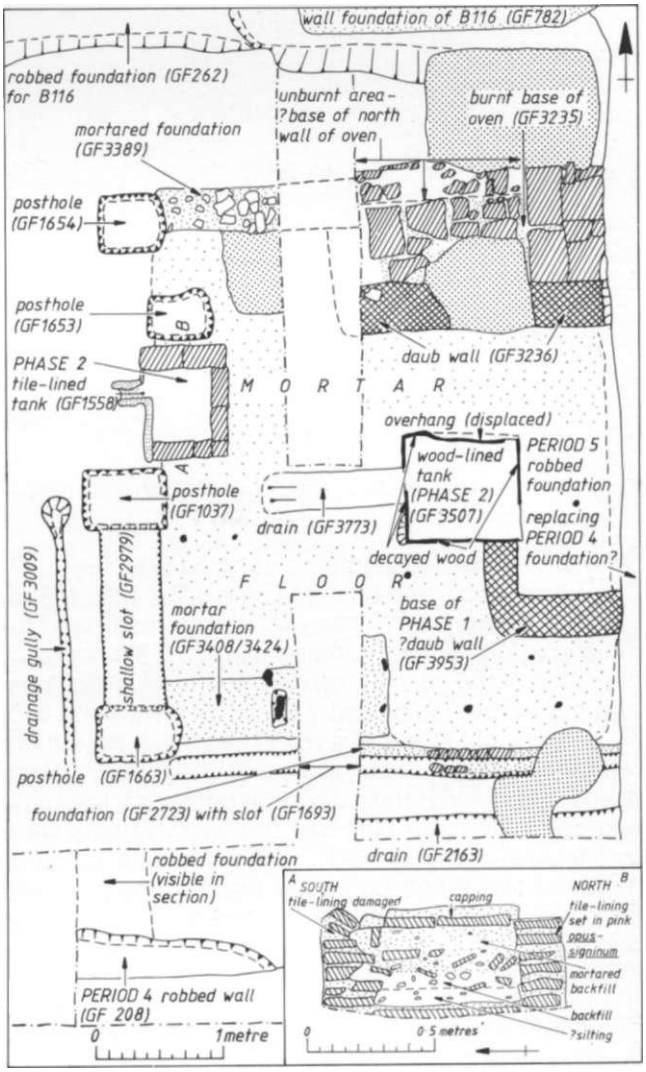


Fig 3.47 Plan of Building 118 and Section AB through the tank GF1558. 1:60. [Pages 89-90]

the north-west corner (Fig 3.47). Interpretation is difficult because of the poor level of survival and the odd pattern of the burning. The unburnt tiles along the north edge may have been part of the back wall of the structure whereas the larger tiles in the north-east corner may have belonged to a flue through the north wall of the building.

In the first phase of Building 118, there appears to have been a right-angled length of sandy clay wall (GF3953) against the east wall of the room (Fig 3.47). Associated with the second mortar floor was a wooden tank (GF3507) set in a pit 0.9 m square and 0.3 m deep. Delicate traces of decayed timber survived from the lowest section of the tank. This was made of four planks with half the width of each end cut away so that they could neatly interlock (Fig 3.48) and then be nailed. A short square-cut drain (GF3773) led into the west side of the tank.

Associated with the latest floors of the building was a

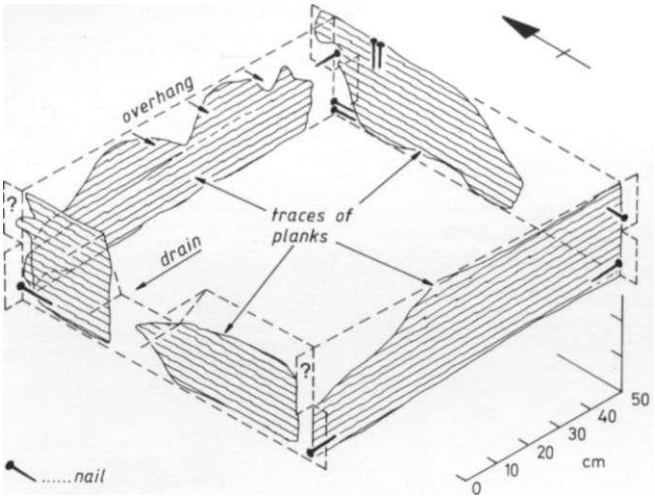


Fig 3.48 ?Water-tank (GF3507) in Building 118. 1:21. [Page 89]

tank of mortared tile fragments (GF1558; Fig 3.47, Section AB) built in a pit measuring 0.7 x 1.0 x 0.5 m. Like the wooden tank, this presumably had been for the storage of water or other liquid. To build the tank, the sides of the pit were rendered with *opus signinum* and the north, south, and east sides were lined with six courses of tile laid in a similar material. Part of the rendering on the west side (Fig 3.47) was in the shape of a cylinder indicating that perhaps a lead pipe had originally been built into the wall. No tiles were laid against the west side. The floor was made of mortared tile. When no longer needed, the tank was filled with a mixture of mortar and fragments of tile and the top was capped over with a single layer of mortared tile *(see* below).

The south wall was replaced in the final phase of the building. The position of the new wall was indicated by a slot (GF1693) for a ground-plate of a wall. The north side of the slot had been lined with a row of tile fragments. To the south, along the outside of the building, was a drain (GF2163). A narrow gully (GF3009), presumably for drainage, similarly lay along the west side of the building. The latest mortar floor was replaced by a floor of sandy clay, the occupation on which sealed the earlier wall foundation GF3408/GF3424 on the south side of the room.

Sealing the occupation on the sandy clay floor was a layer of destruction material. This included much tile which presumably derived from the roof. This deposit was sealed by the first gravel surface of the yard of Building 120.

Building 119 (Period 4 of Site G: *c* 200 - *c* 225)
[CUL Site G; Figs 3.7 & 3.45]

Building 119 consisted of only one room measuring 4.2 x 3.6 m internally. Its foundations were robbed in post-Roman times. All but the south wall coincided with walls of the succeeding Period 5 building (Building 120) indicating that Building 119 may have been an early phase of that building.

The primary floor consisted of a dump of sandy clay material sunk into which were three ovens (GF1798, GF1931, & GF1995). Two (GF1798 & GF1931) shared a common stoke pit (GF1860). Oven GF1931 was the only complete example. Its stoke pit had parallel sides and a rounded base and led into the main part of the oven which was a straight-sided pit, 0.15-0.20 m deep, with a flat base. When the oven was no longer needed, it was cut through for the stoke pit of the oven GF1995. The fuel used in the ovens was mainly oak with a small amount of birch and hazel or alder (Table 8.23, microfiche p 727). Samples of debris taken during the excavation from in and around the ovens produced too few macrofossils for interpretation (p 283).

The demolition of the last of the ovens left a layer of burnt and crushed sandy clay deriving from the superstructure. This layer was sealed by a floor of sandy clay associated with a layer of occupation but no features. There is the possibility that the roof of the building was made solely of *imbrices* (p 255).

Building 120 (Period 5 of Site G: *c* 225 - *c* ?300)
[CUL Site G; Figs 3.7, 3.41, 3.44, & 3.49-52]

Building 120 was the latest Roman house on Sites G and H (Figs 3.7, 3.41, & 3.44). It post-dated Buildings 115-9 and was of the winged corridor-type. The main part of the building was confined to the plot which had been laid out for Barrack Block 6 in Period 1 (Plot E, Fig 3.5). The two wings represented an encroachment on to the adjacent property to the north.

Almost all the house was available for excavation. The wall foundations had been robbed out in the early medieval period except parts around Rooms 7 and 8. The shape of the house had been influenced by its Period 3 predecessor: the north wall of the passage retained the kink noted in the southern boundary wall of Building 116 (p 85) and the frontage of the building had been offset to follow the frontage of the earlier Building 119. (For evidence of glass windows, *see* pp 117-19.)

Room 1 was separated from Room 2 by a partition, the existence of which was indicated by two square-cut slots (GF3344, Fig 3.41, inset) and its replacement GF3050 (Fig 3.41). The room contained a hearth (GF3141) and an oven (GF3290) (Fig 3.41 inset). The hearth was replaced by another in the same place (GF1334, Fig 3.41). The floor, which consisted of a layer of gravel overlain with patches of mortar, seemed patchy and worn. Being next to the street frontage, the room may have seen heavy use as the main entrance into the house. Oddly enough, there were no clearly defined layers of occupation. The floor was sealed by a thin patchy layer of mortar which may have been the remains of a second floor.

This in turn was sealed by several layers of sandy clay loam, the explanation for which is obscure.

Room 2 was not excavated in detail. Its floors were of sandy clay loam. Part of the latest floor was scorched in one area indicating the presence of a hearth (GF1300).

Room 3 was small and separated from Passage 1 by a narrow north-south passage (Passage 2). Between Rooms 3 and 4 was a daub block wall (GF701) built on a foundation of unmortared blocks of septaria. Traces of plaster with slight hints of white paint survived on the north face of the wall. A slot (GF543) of square profile for a ground-plate separated Room 3 from Passage 2 to the west. The floor of the room was tessellated, the base being of 100 mm thick *opus signinum.* Near the south end of the slot for the west wall, a square slab of Purbeck marble (GF778) had been set in the tessellated pavement to provide a threshold. The pavement was directly overlain by debris left after the demolition of the wall GF701.

Room 4 contained a series of four successive sandy clay floors. The latest of these had two hearths, one (GF236) represented by a group of tiles laid flat and the other (GF452) by a scorched patch on the floor.

Room 5 originally contained a wooden floor which may have been built to counteract excessive sub-sidence into the backfill of the Period 3 pit GF3064. The wooden floor was covered by a layer of sandy clay on which was placed a large hearth (GF485). The wooden floor incorporated at least four joists (GF398, GF537, GF565, & GF678) set in shallow slots so that there could have been little or no air gap between the floor boards and the ground underneath. Two of the joists (GF398 & GF565) had been charred by the heat of the later hearth (GF485) indicating that they must have been left *in situ* when the wooden floor was covered over. However, as there were no traces of any burnt floor-boards, they appear to have been removed before the joists were buried. Associated with the remains of the hearth were two pieces of tile. The floor in the centre of the room was patched several times, no doubt in response to the severe subsidence. Dug into this floor was a small subrectangular pit (GF626). It cut the slot GF537 indicating that either this joist had been removed with the floor boards or else the timber had decayed by the time the pit was dug. The pit is of particular interest for the burnt fodder which it contained (pp 94-5). The floor and the backfilled pit were sealed by a deposit of make-up, 0.2 m thick. This may represent demolition of part of the building or the laying of a substantial new floor. Sealing this deposit were layers of occupation up to 0.25 m deep which, because of the large elements of charcoal, oyster, bone, and antler, had the appearance of midden deposits rather than finely trampled occupation which had accumulated on a floor surface.

Room 6 originally contained a mosaic pavement (Figs 3.49-50; p 94), asymmetrically placed within a wide border of plain red tessellation. The pavement was laid on a 150 mm thick bed of *opus signinum.* The use and status of Room 6 later changed. Layers of occupation and sandy clay loam accumulated on the floor covering the pavement completely. These layers were similar to the latest material in Room 5 but also contained much shell, bone, and charcoal. To judge by the distribution of the layers, some of them may have derived from an oven or hearth in the unexcavated strip against the south wall of the room. On at least one occasion, the room seems to have been partly cleaned out by shovel. This resulted in most of the cubes of the mosaic being scraped off and various shallow pits or scoops (particularly GF104, GF360, & GF369) being dug into its base.

The north and west walls of Room 7 had not been robbed. They may have been entirely of masonry. The upper part of the north wall consisted of four courses of dressed septaria, the upper three being surface-built. At first the room had a plain *opus signinum* mortar floor (GL1113, Fig 3.41, inset) with a quarter-round moulding around the edge. This was replaced by a plain red tessellated pavement of exceptionally good quality. The tesserae were small and neatly made and were laid in north-south rows at a density of about 48 rows per metre. On the inner face of the north wall were traces of plain white plaster applied when the tessellated floor was being constructed. The room could have been entered from Passage 1 or Room 13 via doorways at the west end of the north wall and the north end of the west wall (Fig 3.51). Both were 1.4 m wide. The threshold of the north doorway (GF889, Fig 3.51) may have contained the remains of a timber ground-plate. The foundation of the north wall passed under the doorway, unlike that of the west wall.

Room 8 was a heated room with a mosaic pavement and painted walls. The room contained a hypocaust which had been extensively damaged in the post-Roman period by robbing and the digging of a large pit (HF438, Fig 3.72) in the vicinity of the stoke hole (Fig 3.51). Like Room 7, the surviving walls of Room 8 were of masonry, although it is not clear if they had been for their full height. Substantial parts of the north and east walls survived to a height of up to 0.6 m above the hypocaust sub-floor. The foundations of the walls were made of small fragments of septaria set in mortar. Above this, the sequence was as follows: three courses of septaria, two of tile, one of septaria, and one of tile. The inside of the wall had been rendered with *opus signinum.* The only floor to survive intact was the sub-floor of the hypocaust. This was 200 mm thick and made of *opus signinum.* The bases of nine pilae stacks made of the usual square bricks were still *in situ.* The positions of four more were shown by pads of *opus signinum.* The highest contained two bricks and stood to a height of 0.12 m. The stacks were regularly spaced at 0.6 m intervals (centre to centre) apart from two in the north-east corner which were double. The stoke hole lay to the north of the room. This took the form of a pair of short mortared walls extending northwards from either side of a tile-turned arch

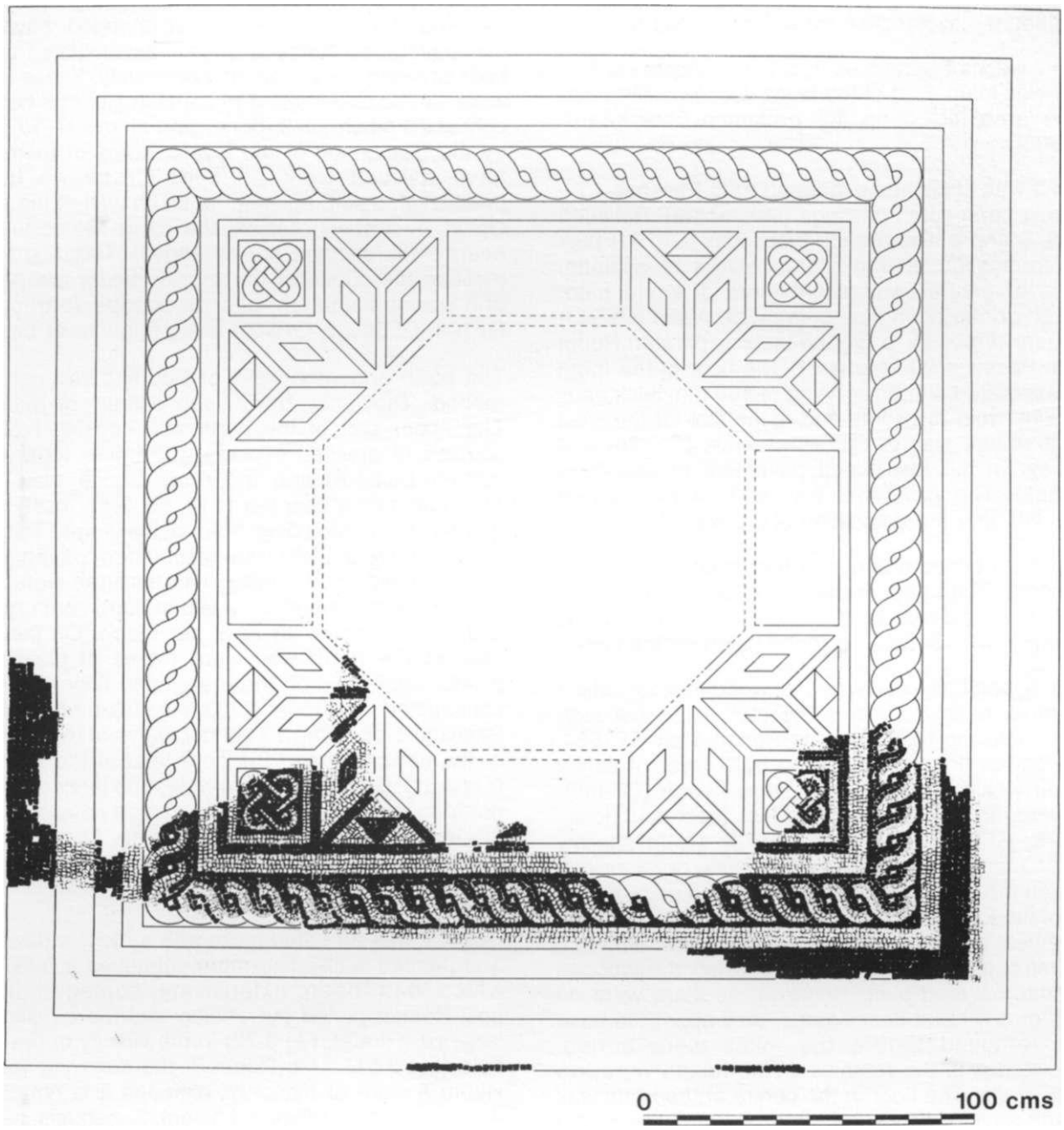


Fig 3.49 Painting (by D Baldwin) of the mosaic in Building 120, Room 6. 1:20. [Pages 91-4]

through the centre of the north wall of the room. All that survived of the stoke hole was part of the east side of the arch and the base of the east wall (GF3487); its floor had been completely destroyed when the pit HF438 had been dug. In the debris left after the post-Roman robbing were some mosaic tesserae and large quantities of painted wall plaster including pieces which seem to have derived from the start of the spring of a vault (pp 313-14, Fig 11.3). Mortar-and-stone walls would have reduced the risk of fire. However the highest part of the surviving walls need not necessarily have been higher than the floor above the hypocaust so that the walls could have been of stone, tile, and mortar only up to floor level.

Room 9 contained a red tessellated pavement laid on a 200 mm thick base of yellowish-brown mortar. The sequence of later deposits is similar to those in Rooms 6 and 7. The floor was sealed by a 0.3 m thick layer of destruction debris left after the demolition of sandy clay walls. This in turn was sealed by some occupation layers and a small hearth (GF486, not on plan).

The ground level rose gently upwards from the east, so that, to keep the floor levels fairly uniform throughout the building, it was necessary to terrace the western end. This presented a problem in Room 9 because, when this was built, Building 115 was

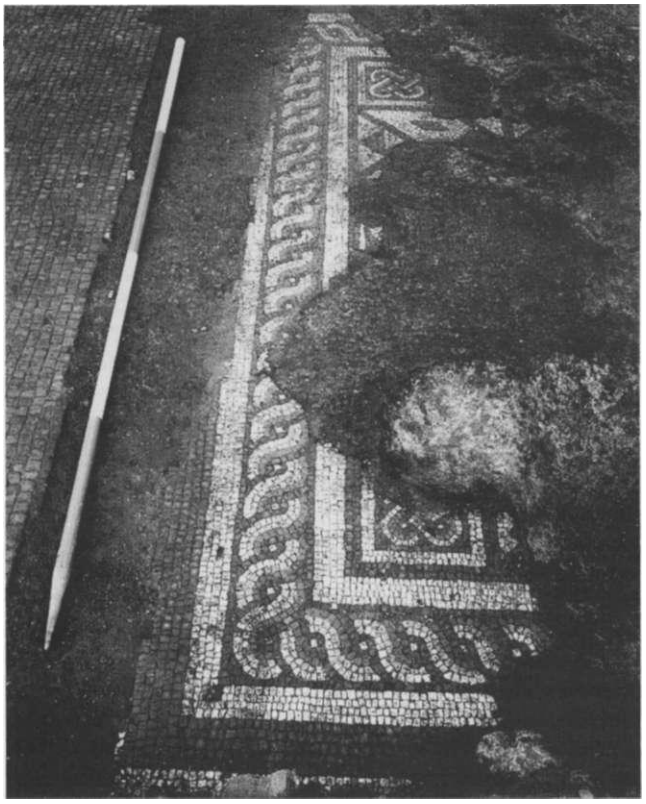


Fig 3.50 The mosaic in Room 6 in Building 120. Viewed from the south. [Pages 91-4]

already in existence and its floors were about 0.5 m above the intended levels of the adjacent floors of the new building. As a result, the foundation (HF478) forming the eastern wall of Room 1 in Building 115 was undermined and a sandy clay wall (HF477) built against its east face. The east side of the sandy clay wall had been rendered with two coats of mortar, the second being *opus signinum,* before the floor was laid (Sx 3.34).

Room 10 was a small room in the west wing of the house. It contained a small mosaic panel, set asymmetrically within a red tessellated border. The tesserae of the mosaic had been removed in the late Roman period presumably for reuse in a mosaic elsewhere. All that survived were a few white cubes on the east edge. The pavement was sealed by dark earth, any demolition material presumably having been destroyed in the early medieval period.

Room 11 was similar to Room 7 in that it contained a plain *opus signinum* floor which was replaced with a tessellated pavement. Also, like Room 7, the mortar floor had a quarter-round moulding around the edge.

Room 12 seems to have been an addition to the east side of Room 10. It was square in plan. The foundations, of which one (GF575) escaped later robbing, were about 0.7 m shallower than those elsewhere in the building. No floors or internal features survived.

Room 13 contained the stoke hole for the hypocaust in Room 8. Access from Room 7 was via a doorway between the north wall and a short spur of wall 0.6 m long projecting northwards from the south wall (Fig 3.51). The fuel seems to have been mainly oak with some hazel or alder (Table 8.23, microfiche p 727). The room originally had a gravel floor, but this was replaced with one of white mortar possibly when the first floor in Room 7 was replaced. Much charcoal and ash lay on the floor of the room.

A tessellated floor occupied the entire length of Passage 1. The rows lay east-west, apart from at the west end where they turned north-south. The west end of the passage was partitioned to form Passage 1A. The wall incorporated a timber ground-plate in a square-cut slot (HF417). The position of a doorway was indicated by two slabs of Purbeck marble set in the tessellated floor, one to either side of the slot to make a durable threshold (Figs 3.52 & 5.34). Under the middle of Passage 1a was an unrobbed foundation HF470. This appeared to have belonged to the building but there were no floor levels under the tessellated floor which could be associated with it. The passage was cut by two north-south post-Roman robber trenches (GF105 & GF183) but it is not clear if these reflect genuine partitions (ie Passages 1B, 1C, & 1D). Both robber trenches coincided with the positions of walls of Building 117 and it may therefore be that, like the foundation HF470, the foundations

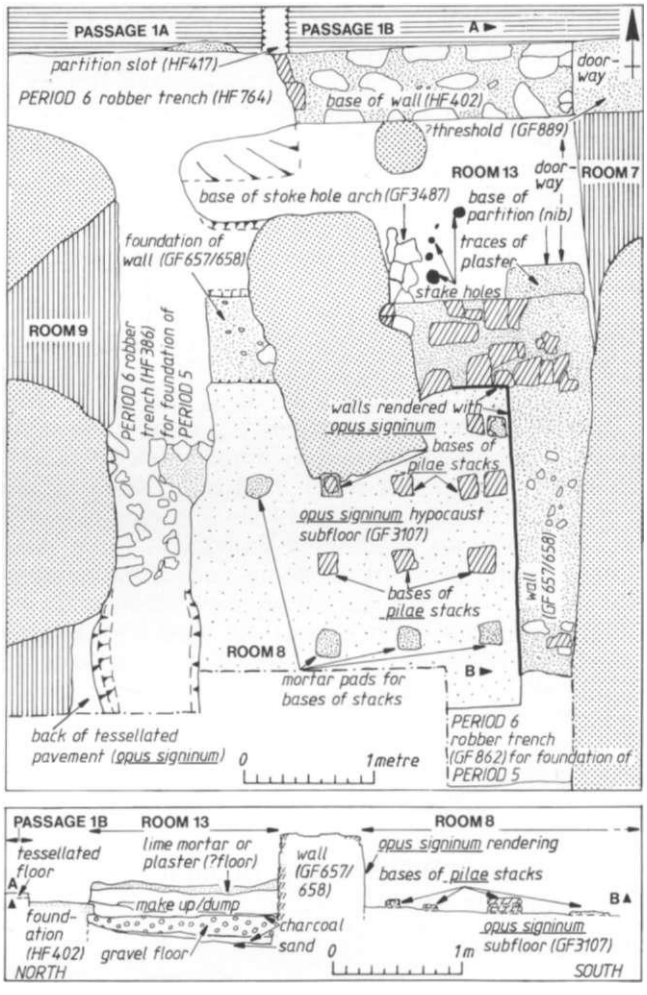


Fig 3.51 Rooms 8 and 13, Building 120. 1:60. [Pages 91-3]



Fig 3.52 *Threshold of reused slabs of Purbeck marble on either side of a doorway between Passage 1A and 1B in Building 120. Viewed from the south-west. [Page 93]*

which these trenches were dug to remove belonged to Building 117 and hence must have been sealed by the tessellated floor in Passage 1. Support for this conclusion comes from the depth of the robber trench GF105. This was shallower than most of the robber trenches for Building 120 but similar in depth to GF1634 which belonged to Building 117. Passage 2 was very narrow and provided access into Rooms 2, 3, and 4 from Passage 1D. The relationship of Passage 1D to Room 3 was similar in many respects to that of Passage 1A and the rest of Passage 1. Passage 3 was separated from Room 3 by a ground-plate and the threshold of the doorway between the two incorporated a reused slab of Purbeck marble.

Between the two wings of the building was a gravelled yard (GL936 & GL781). On the east side was a series of burnt patches (GF914, GF1159, GF1160, & GF1161) which were probably the result of open bonfires. Nearby was the tile tank GF1558 of Building 118 (p 90) which had been filled in and covered over with a course of tile and mortar. It may then have been used as a foundation for a small free-standing structure of some sort; a replacement for the tank is the most obvious explanation. At the east end of the north side of the yard was a sandy clay wall (GF2360). This aligned roughly with the north wall of Building 120 (Room 1) and thus was possibly a boundary wall separating the yard from Building 116, which may still have been in existence during the first part of the life of Building 120.

The mosaic in Building 120, Room 6

[Site G; Figs 3.49-50]

byDJ Smith

Very little survived of this mosaic but sufficient to permit a probable reconstruction of the design, with the exception of the central panel (Fig 3.49), and so to establish its approximate dimensions. There remained part of one side of a linear square containing a linear lozenge-pattern in dark greyish brown on a white ground with most of two small square corner panels, one of the small lateral triangles, and part of one of the lateral oblongs. This was surrounded first by a band of white four tesserae wide, then a dark greyish brown band eleven tesserae wide bearing an inscribed polychrome simple guilloche, then another white band four tesserae wide, a dark greyish brown band five tesserae wide, a white band eight tesserae wide, and a dark greyish brown band eight tesserae wide. The only complete lozenge contained a freestanding solid greyish brown lozenge, the corner squares a freestanding dark greyish brown solid square bearing an inscribed polychrome knot, the triangle an inscribed inverted triangle of dark greyish brown, and the oblong a hint of an unidentifiable motif. The knots and the guilloche were executed in red (tile), yellow (tile?), and white (chalk), and outlined in dark greyish brown (septaria). The tesserae were cubes of about 10 mm except in the outermost dark band where they were slightly larger. Presumably there was the usual plain surround of still larger red tesserae.

The lozenge-pattern was 1.80 m square. Including the guilloche the design measured 2.2 **m** square and, including the surrounding white and dark greyish brown bands, the overall dimensions were 3.0 m square. Although it is possible that the lozenge-pattern comprised four complete stars of eight paired and contiguous lozenges, so forming a small central square panel, it is much more probable that there was a 'superimposed' large octagonal panel of which each diagonal side bisected a star diagonally as in the mosaic of the nearby Building 113 (Fig 3.42, p 81): hence the tentative reconstruction. If so, the description and discussion of that mosaic will serve for this and both mosaics can be regarded as contemporary and attributable to the same designer. Associated external evidence suggests for it a date in the early 3rd century.

Probable byre or stable sweepings from Building 120

by Peter Murphy

The sample from pit GF626 in Room 5 produced macrofossil assemblages which are interpreted as burnt stable or byre sweepings containing dung and waste fodder. It produced abundant carbonised grains of barley *(Hordeum vulgare),* traces of other cereals, and many seeds of arable weeds and grassland plants (Table 8.18, microfiche p 722). Associated with these were burnt shells of land, marsh and freshwater molluscs typical of river flood-plain grasslands (Table 8.6, microfiche p 709), which presumably were accidentally collected with hay. Faecal concretions, representing animal dung,

were also present. The sample also contained marine mollusc shells, avian eggshell, and bones of fish, birds and mammals. The pit fill is thus composed partly of human food waste, but also of partly burnt refuse from byres or stables. This implies that livestock were kept at, or near, the site.

Other late deposits associated with this building (GL235 & GL894 (Room 5), GF360 (Room 6), & GL783 (Passage 1F3)) contained assemblages of carbonised plant remains, shell and bone, largely composed of food waste. These were mixtures of destruction debris and post-demolition ?occupation deposits.

Building 121 (Period 3 of Sites D & M: *c* ?65/75 - *c* 150/200)

[CUL Sites D & M; Figs 3.6, 3.27 & 3.57]

The remains of Building 121 were nearly all removed by machine towards the end of the excavation. Only during the excavation of Room 8 was any substantial part of the building observed and even then the remains were left unexcavated. Parts of two foundations indicated two rooms. The earliest foundation (DF1779a) was of gravel and lay along the probable frontage of the building. The foundation was cut by an east-west foundation (DF1779b) of mortar containing a small amount of gravel. The floor on the south side of the foundation (DF871) was of *opus signinum* whilst that on the north was of sandy clay. The north-south foundation had been cut along its length by the later foundation for the frontage wall of Building 123 (Fig 3.57). This relationship indicates that there is unlikely to have been continuity between the two buildings represented by the two foundations. To the south were two slots (DF1924 & DF1982) which may have been parts of contemporary drains.

Building 122 (Period 4 of Site E: *c* 150/200-*c* 275/325)

[CUL Site E; Figs 3.7 & 3.53]

All the foundations of Building 122 had been robbed in the early medieval period apart from two lengths (EF268 & EF135; Fig 3.53). Both consisted of mortar and rubble poured into a trench. The stone used was septaria with a little flint and the top of the foundation was left smooth. All bases of the robber trenches were formed by the underlying Roman deposits showing that the lower parts of the foundations had not been formed of packed gravel.

In plan the building consisted of a range of rooms (Rooms 1-5) with a corridor to the south (Passage 2) and a corridor or verandah to the north (Passage 1). The latest levels associated with the building had been destroyed during early medieval cultivation, including practically all of the destruction deposits sealing the latest floors.

The floors of Rooms 1-4 were of sandy clay with no surviving layers of occupation. Room 1 contained an east-west foundation indicating that it probably started off as two separate rooms. The latest floor in Room 5 was a mosaic pavement with a plain red tessellated border. The pavement had almost been completely destroyed but sufficient survived to indicate that the mosaic had stopped short of the west and south walls by 0.5 and 0.3 m respectively. Rooms 6 and 7 were very small (each about 1.8 m square) and were separated by a very substantial structure on a U-shaped foundation (EF266) measuring about 1.7 x 1.6 m. The highest surviving Roman material in Rooms 6, 7, and 8 immediately to the south was 0.3-0.4 m lower than elsewhere in the building suggesting that all three rooms plus the large foundation had been structurally linked in some way. Although difficult to interpret in plan, one possible explanation of the complex is that it represented part of a hypocaust robbed in early medieval times. Some support for this view came from the foundations for the later building (Building 127); these contained much broken flue tile and *opus signinum* and thus hint at the existence of an earlier hypocaust. There were no burnt areas which might have pointed to the position of a stoke hole.

A gap of about 1.0 m existed between the west walls of Rooms 7 and 8 and the east wall of Building 123. This may have been to accommodate eaves in which case there would have been a north-south roof over Rooms 6-8. A short trench (EF262) at the west end of robber trench EF101 and a similar one at the west end of EF113 are either the result of overshooting by the robbers or, less likely, they indicate the positions of external buttresses.

Passage 2 had a tessellated floor which appeared to have been crudely repaired with a layer of well-packed small stones and fragments of tile as if at some point the passage had been demolished and the area had been part of a yard. Passage 1 seems to have originally been continuous with Passage 2 in Building 123 to form a covered public footway or verandah along the side of the street. Later the passage was blocked by a north-south wall of which EF271 was part of the foundation. The wall lay slightly to the east of the line of the robber trench EF5 suggesting that the west wall of Room 1 had been a party wall which belonged to the adjacent properly, Building 123. The character and function of the blocking wall at the west end of Passage 1 is obscure. It need not necessarily mean the passage ceased to be a thoroughfare since the wall could have contained a doorway. However two slightly different mortar floors (EL11 & EL12; Fig 3.53) inside Passage 1 suggest that, with the insertion of the wall, the passage may have been converted into two separate rooms. However no traces were noted of an appropriate partition although there was insufficient excavation to clarify this point with any certainty.

At the west end of Passage 2 were two robber trenches (EF181 & EF267). Their proximity suggests

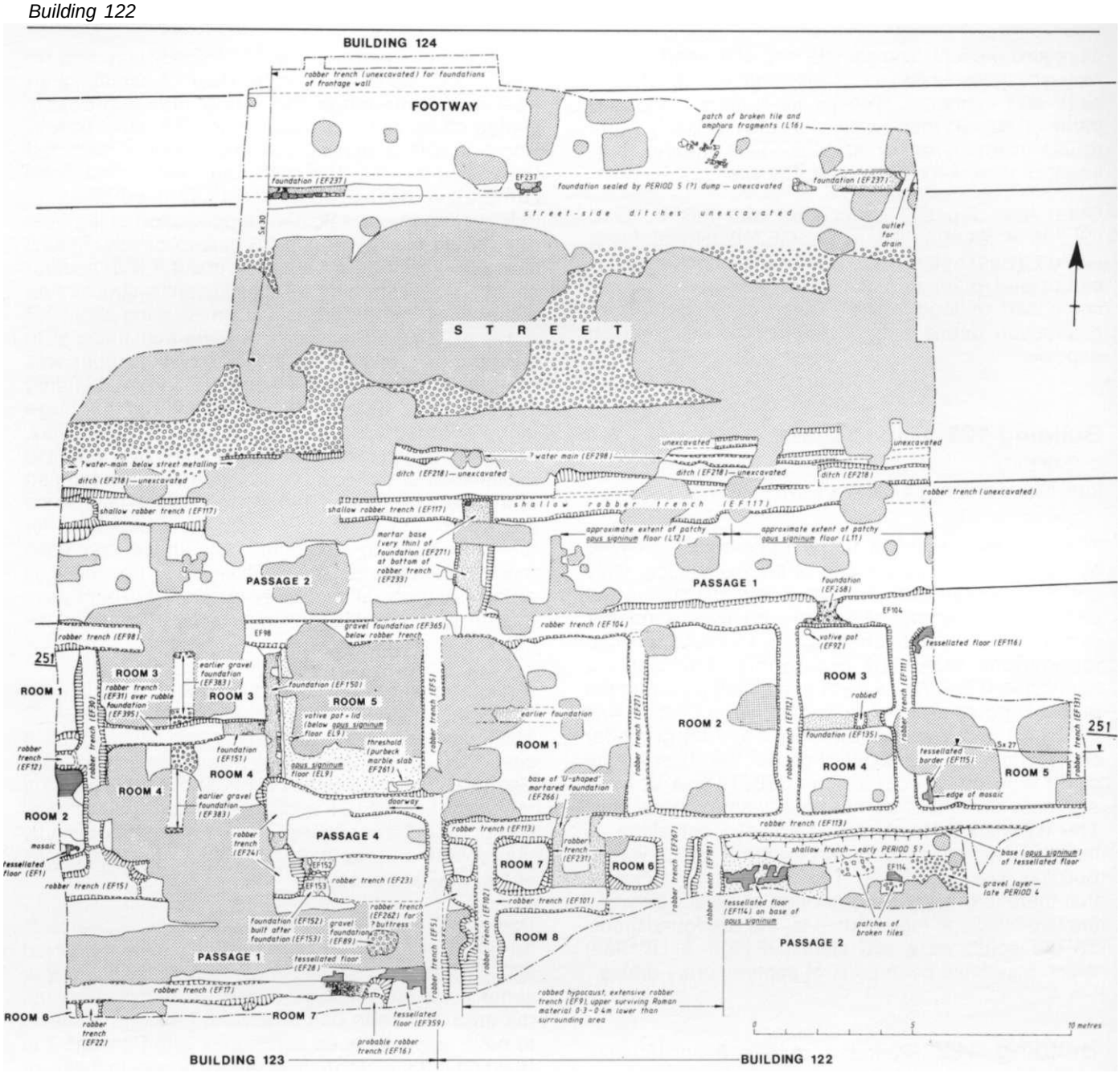


Fig 3.53 Period 4 at Site E, Culver Street (c 150/200-c 275/325). 1:184. [Pages 95-108]

that the layout of this part of the building had been modified at sometime during the life of the building. One possibility is that there had originally been a narrow room with walls indicated by the positions of robber trenches EF101, EF102, EF113, and EF181. Out of this was later formed Rooms 6 and 7, the east wall of the former being replaced by a wall indicated by robber trench EF267.

Building 123 (Period 4 of Sites D, E, & M: *c* 150/200 - *c* 275/325)

[CUL Sites D, E, & M; Figs 3.7, 3.41, & 3.53-62]

Building 123 was a large house of high quality. It appears to have been roughly square and measured about 36 x 40 m (Figs 3.7, 3.41, & 3.53-4). The house consisted of four ranges of large rooms around a central yard approximately square in shape. The building contained at least four mosaic pavements, one hypocaust, glass windows *(see* pp 117-19), a kitchen and two cellars. It incorporated much carved stone, some imported, including dados, wall veneers, cornices and a marble table.

The north-east corner of the building was examined on Site E in 1981-2 and the south-west corner on Sites D and M in 1984-5 (Fig 3.55). In both places the work was limited to removing the surviving demolition deposits and examining the latest floors before stripping by machine (pp 1-3). Before excavations began, some information was already available about the north-west corner of the building because of a

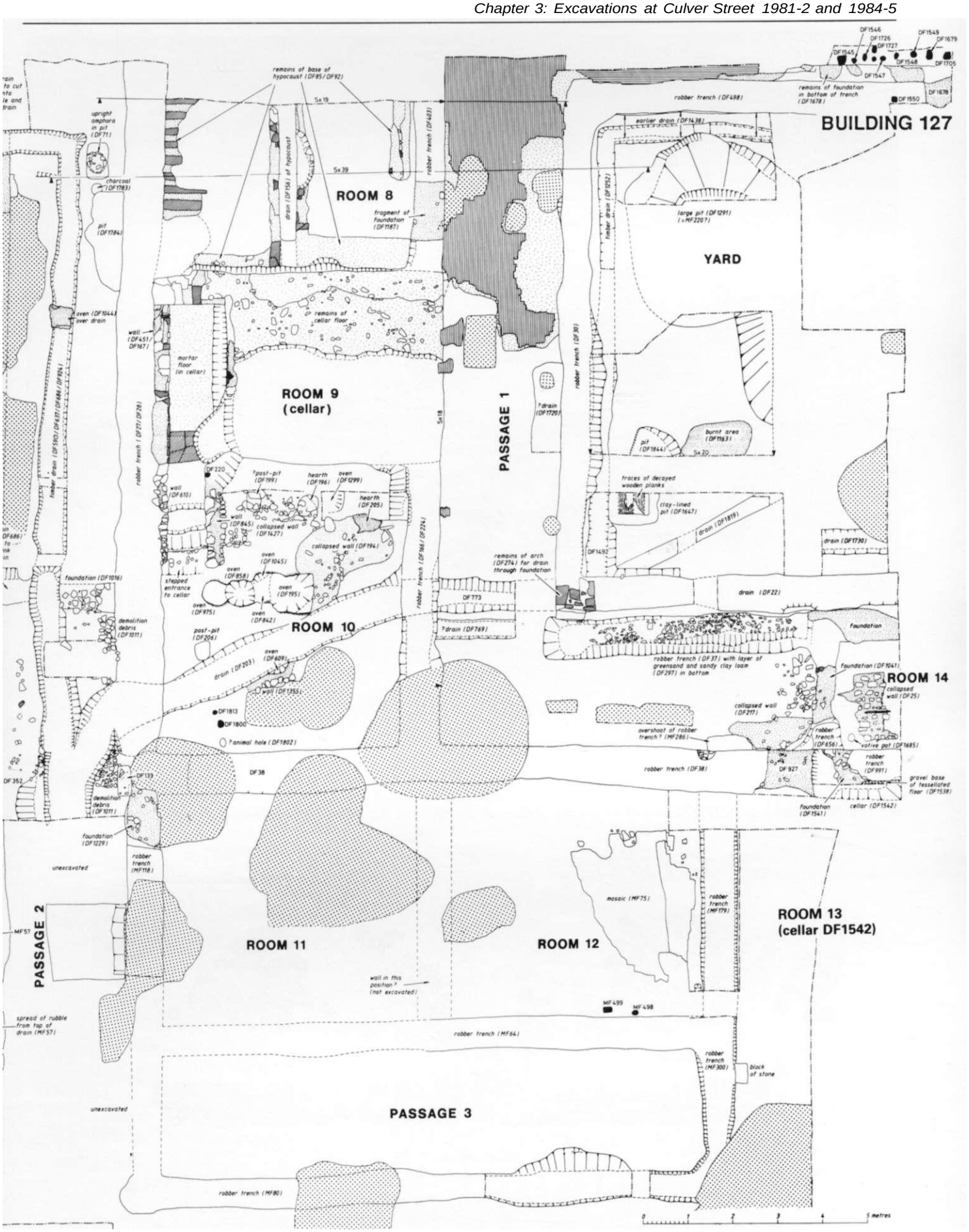
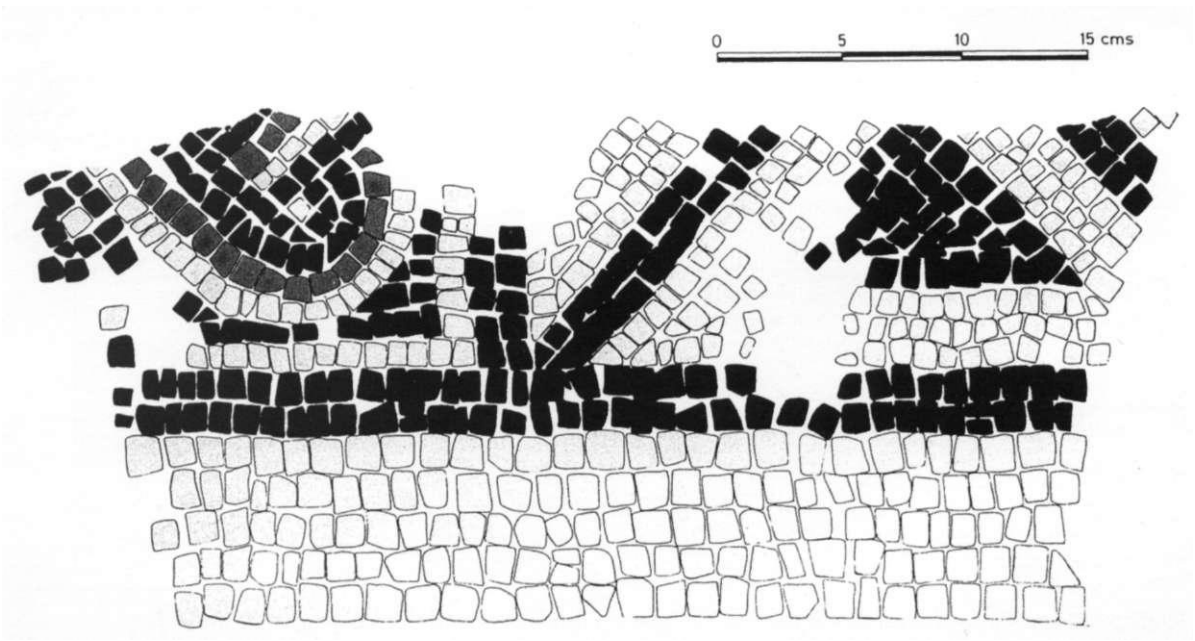


Fig 3.54 Building 123 and the south-west part of Building 127 (see top right-hand corner). 1:109. [Pages 96-108 & 112]



Fig 3.55 Above: the western part of Building 123 viewed from the north of Site D. [Pages 96-108]

Fig 3.56 Below: painting (by Ft H Moyes) of the mosaic in Room 2, Building 123. 1:3. [Pages 96-106, especially 106]



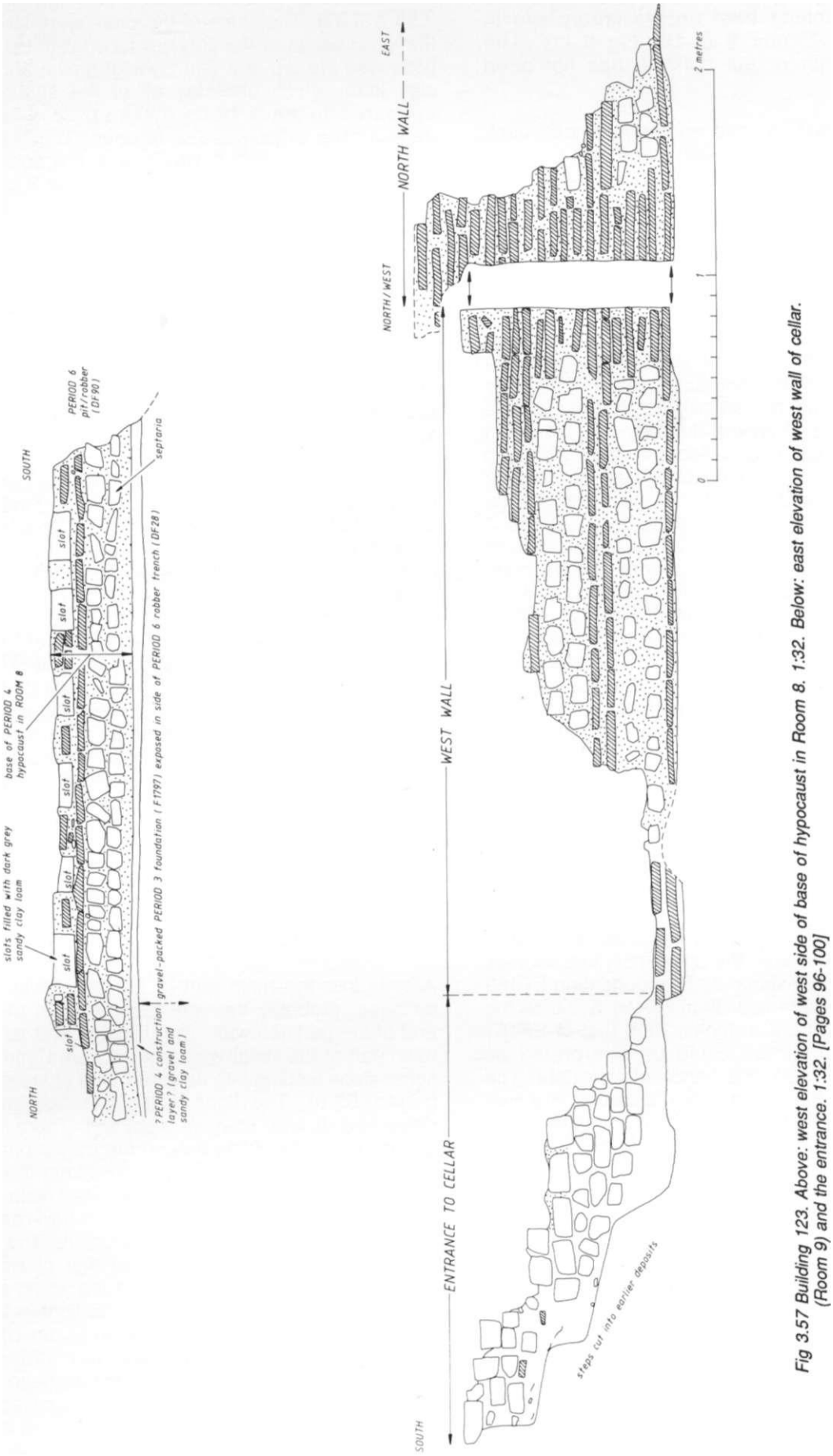


Fig 3.57 Building 123. Above: west elevation of west side of base of hypocaust in Room 8. 1:32. Below: east elevation of west wall of cellar. (Room 9) and the entrance. 1:32. [Pages 96-100]

small archaeological excavation in 1934 and the subsequent watching brief on the library site in 1938-9 (pp 36-7, nos 6 & 16; Fig 3.41). The south-east quarter of the building has not been examined.

The northern, western, and southern ranges each consisted of a row of rooms with a common passage on either side, the layout of the eastern side being unknown. At the north-east corner (Site E), post-Roman cultivation led to the loss of practically all the demolition layers and any late floors which existed there. The south-west part of the building, where the destruction debris was more extensive, had been less badly affected.

Rooms 1, 2, 3, 4, 6, and 7 on Site E had sandy clay floors but no surviving occupation layers. Possibly more substantial floors had existed in these rooms but they had been destroyed during the post-Roman cultivation. Room 5 had a floor of *opus signinum* (EL9) with a threshold made of a slab of Purbeck marble (EF261) bedded in the mortar. The marble had become very battered and decayed. Room 2 contained a mosaic set off-centre in a border of plain red tessellation (Fig 3.56; p 106). Only one fragment survived but to judge by the pattern and its relationship to the tessellated pavement it is unlikely to have been much wider than 2.0 m measured north to south. Very little of Room 7 was available for excavation but the robber trench for the foundation of the north wall (EF17) seemed to have been 8.0 m long suggesting that it was an exceptionally large room.

Part of the foundation on the north side of Room 4 (EF151) was unrobbed. It was built mostly of septaria rubble in mortar. The foundation had been trench-built to within 0.1 m of the top which was smooth and had a slight lip. It seemed to have been earlier than the adjacent north-south foundation (EF150). This was built mostly of rubble and mortar poured into a trench with the uppermost two courses being of roughly-laid septaria. The foundation EF150 seemed to have been later than EF151 because the top of it was about 0.2 m higher than that of EF151 although in plan EF151 could be interpreted as butting against EF150 and hence of late date. The implications of the relationship between the two foundations, whatever this was, are not clear in terms of the development of the plan of the building. The simplest explanation is that the wall on foundation EF150 was rebuilt at some stage in the life of the building when the top of the existing foundation was raised to take into account changed floor levels.

Room 8 contained very fragmentary remains of a hypocaust which had been extensively robbed in the early medieval period. The subfloor was in two halves, each neatly made of septaria, mortar and tile in a narrow wedge-shape so as to slope inwards towards a neat north-south drain (DF156) along the centre of the room. The thickest part of the subfloor was on the west and east sides which were built of two courses of septaria under a course of tile (Figs 3.55 & 3.57). The sides of the drain were formed by the inner edges of the subfloor faced with tile and its base was the top of a thin layer of gravel and sandy clay loam which underlay all of the subfloor and appeared to have been make-up or a levelling deposit. The drain was 0.2 m deep. The hypocaust had been of a design which was not common in Colchester. The floor was supported on a series of long closely-set piers rather than the customary square *pilae* stacks. The piers were made of tile and mortar. The piers and the gaps between them varied in width between 0.14-0.24 m and 0.17-0.24 m respectively. The medieval robbing led to the destruction of all the piers apart from those on the west side of the hypocaust. The subfloor suffered almost as badly and survived in patches around the edges. Three small fragments of mosaic from the robbing were probably all that remained of the floor (p 106).

Room 9 was a cellar with 0.65 m thick masonry walls made of neatly-coursed septaria and tile (Figs 3.55 & 3.57). The west end of the cellar had been partitioned off with a masonry wall to form a small passage or room similar in plan to the cellar in Building 22 at Lion Walk *(CAR* **3**, 66-8). All the walls of the cellar had been robbed out in medieval times apart from the west wall of the passage, the west end of the north wall and a small stump of the partition wall. The west wall of the passage was had been made by building a wall (DF167/DF451), only 0.35 m thick, across the face of the adjacent north-south foundation and extending it downwards. This relationship indicates that the cellar is likely to have been an insertion into the building. The original north-south foundation was subsequently robbed out in the early medieval period (DF27/DF28) but the thin addition was left intact. Although almost entirely robbed out, the wall between the passage and the main part of the cellar seems to have been the same in width as the other walls of the cellar (ie 0.7 m).

Access into the main part of the cellar was via the passage, probably through a doorway in the south end of the partition wall. The passage and hence the main part of the cellar was entered from Room 10 via some steps leading into the south end of the passage (Figs 3.57-8). The floor in the passage was well preserved. It was of *opus signinum.* There was no quarter-round moulding around the edges but on the east side there was a shallow slot along the foot of the partition wall. The slot was filled with robber trench backfill indicating that it had probably contained a mortar or mortared structure. The floor of the cellar was only 1.1 m below that of Room 10 which seems to imply headroom too small to have been of practical value. However the floor in Room 8 would have been higher than that in Room 10 by the height of the hypocaust (which could not be ascertained). The floor in the cellar had been heavily robbed so that no part of its surface survived in the main part of the cellar. The floor had been at least 0.2 m thick and was made of septaria rubble in mortar.



Fig 3.58 The remains of the steps leading down to the cellar (Room 9) in Building 123. Viewed from the east. [Pages 100-1]

The latter covered all of the base of the pit dug for the cellar so that it served as the foundations for the walls as well as the base for the floor in the passage and the main part of the cellar.

Compared to the cellar, the entrance leading down into the passage was poorly made and of sufficiently different character to suggest a different period of construction (Figs 3.57-8). Three steps were cut into the ground in Room 10, each providing a drop of about 0.35 m. The face of each step was strengthened with a revetment of small blocks of septaria. The base of one of the septaria faces was still *in situ.* The walls of the entrance were made of roughly-coursed septaria bonded with mortar. The east wall (DF845) was 0.4 m thick — the west wall (DF610) is likely to have been the same except that the west side had been partly removed during the robbing of the adjacent north-south foundation.

The cellar ceased to be used during the life of the building. Debris from ovens in Room 10 was dumped into the entrance passage and into the passage in the cellar so that eventually access was no longer possible. The dumped material consisted of an accumulation of lenses of burnt sandy clay, charcoal, and ash. Within these deposits were at least five areas (DF452-3, DF582, DF735, & DF746, not shown on plan) which appeared to be the remains of hearths *in situ* rather than redeposited burnt material. Each of these took the form of a small intensely burnt area about 100 mm across which in some cases incorporated fragments of tile.

The cellar was backfilled with the mixture of dark earth and rubble which is typical of robber trenches. A notable find was part of a table leg carved in the shape of a panther head (pp 173-6, Fig 5.33,1020).

Room 10 is likely to have been a kitchen. The floor of the room was sandy clay. The room contained at least eleven ovens and two hearths (Figs 3.54 & 3.59). Pieces of a junction collar of an oak water-main **(1318,** microfiche p 510) on the floor suggest that running water may have been available in the room, drainage being provided by the drain DF203 which passed across the room at an angle. The remains of the ovens consisted of small circular or sub-rectangular pits sunk into the floor. They were about 0.15 to 0.20 m deep and had burnt sides. There was no sign of vitrified material so the working temperature is likely to have low. The ovens had not all been in use at the same time. The elements of the sequences which could be disentangled are as follows (Fig 3.59). The latest features were: ovens DF195, DF609, DF858, DF975, DF1043 (the last not on plan), and hearth DF205. These sealed or cut part of a collapsed wall (DF194). The oven DF842 was later than the oven DF1045 of which only a small fragment survived. The whole group was later than the oven DF854 which in its turn was later than the oven DF844. DF195 was later than DF923. Most significant is that the earliest of the ovens (DF844) had been cut into the east wall (DF845) of the entrance passage down into the cellar thus implying the dereliction of the cellar either before or at an early stage in the sequence of ovens. Additionally an oven (DF1299) and a possible hearth (DF196) in the northern part of the room sealed an area of collapsed rubble wall which very likely came from the east wall of the entrance passage into the cellar. The collapsed wall DF194 sealed by the latest ovens was of mortared septaria and may have been part of a section of similar wall which seemed to be an integral part of the oven DF609 to the south. The drain DF203 seemed to be the latest feature of all but it may be that the trench DF203 was the result of removing the drain either late in the life of the building or at the time of its demolition. The ovens were presumably for

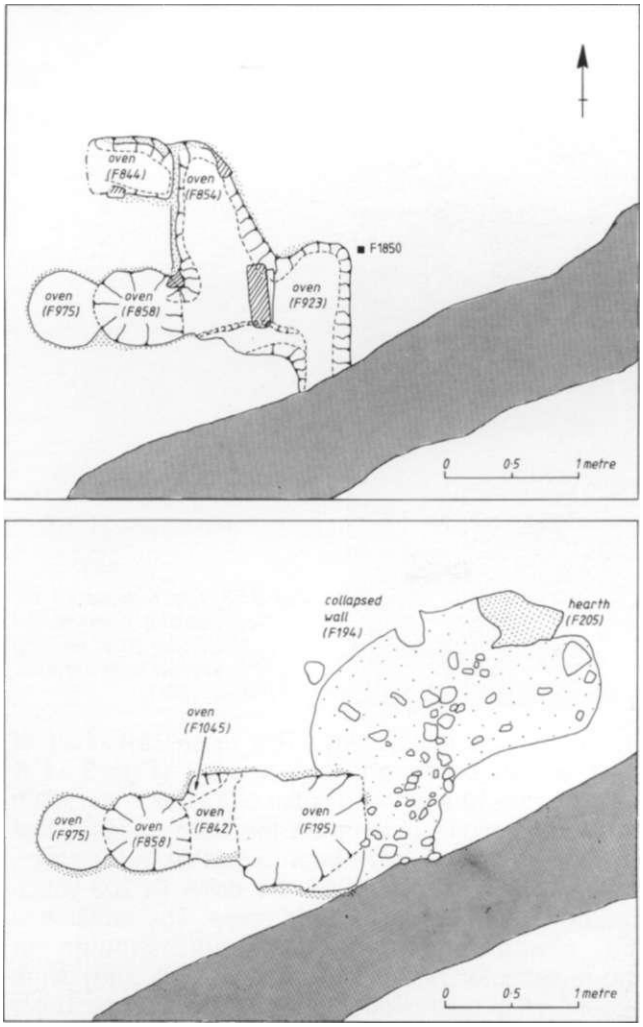


Fig 3.59 ***A*** *group of ovens in Room 10, Building 123. The early part of the sequence is shown above, the late below. 1:56. [Pages 101-2]*

baking but samples taken from the deposits of burnt sandy clay and ash in DF854 and DF858 contained too few carbonised cereals and weed seeds (Table 8.16, microfiche p 720) to be of value in this respect. The charcoal was mainly oak with some birch, hazel/alder, and willow/poplar (Table 8.23, microfiche p 727). Other features in the room include two possible post-pits (DF206 & DF199) and some stake holes.

Rooms 11 and 12 and Passage 3 had suffered badly from the effects of post-Roman cultivation and, being part of Site M, could only be given the briefest of examinations. The main robber trenches were traced, apart from the one separating Rooms 11 and 12 which proved difficult to locate in the time available. Room 12 contained a mosaic pavement which had been largely destroyed in the medieval period (Figs 3.60-1; pp 106-8). The only part to survive was an area which had subsided into the backfill of an earlier Roman pit. The highest surviving layers in Room 11 and Passage 3 were of sandy loam. It was not possible to tell if these were parts of sandy clay floors for the rooms or if the floors had been completely destroyed in the medieval period as had happened in the western half of Room 12.

Excavation on the site of Room 13 was not permitted because of danger to an adjacent existing building. Access was only possible on a watching brief basis after the piles had been inserted for the perimeter wall of the service basement (Sx 3.40). Very limited salvage work enabled the recovery of most of the fragments of a smashed mosaic which lay within the boundary of the basement area.

The room was sunken so that the primary floor was 2.0 m lower than the floors to the north and west (Sx 3.40). Its dimensions are obscure except that the room is likely to have been 8.5 m wide, measured north to south (Fig 3.54). Although the southern side of the room was not visible in section, the absence in plan of an east-west return from the robber trench MF179/MF300 indicates that the south side of the room was a continuation of the south side of Passage 3.

The room at first had a plain *opus signinum* floor on a substantial mortar and septaria base which was 0.2 m thick. The floor was sealed by a thin deposit of dark silty loam which in its turn was overlaid by another base of mortared septaria, this time for a mosaic pavement (Fig 3.62; pp 107-8). The second base was 0.15 m thick. The mosaic cubes were set on a substantial bed of *opus signinum* (0.2 m thick) directly overlying the second mortar base. The *opus signinum* was in two distinct layers. The lower one showed signs of wear, suggesting that it had been a plain mortar floor which had been replaced by the mosaic. The sequence of floors is illustrated in Sx 3.40 (microfiche). The robber trench for the foundation on the north side of the room (DF991) contained a few glass tesserae. None were noted in any of the fragments of mosaic or in the surrounding debris. The pavement was sealed by a thick layer of sandy clay and wall plaster which derived from the demolition of the walls. Practically all the mosaic had been broken up in antiquity. Why this should have been is obscure. There was no evidence that the cubes were stripped off and salvaged as often occurred elsewhere (eg Building 70, Room 6, *CAR* **3**, 168). But the event almost certainly happened in Roman times and is to be linked with the destruction of the building. Alternatively, if the room had contained a hypocaust, then the destruction could have been a result of *pilae* stacks being robbed in the early medieval period. However the demolition debris contained no visible traces of stacks either loose or *in situ* and it lacked the dark earth which would normally be associated with such activity at this time.

Room 13 is intriguing. It was unusually large for a normal domestic room and was provided with a mosaic floor despite being sunken and thus presumably cut off from natural light. Perhaps the room fulfilled some religious role in the way suggested for the underground chamber in Building XXVIII.1 at Verulamium (Frere 1983, 248-50).

Passage 1 was a wide corridor which ran around at

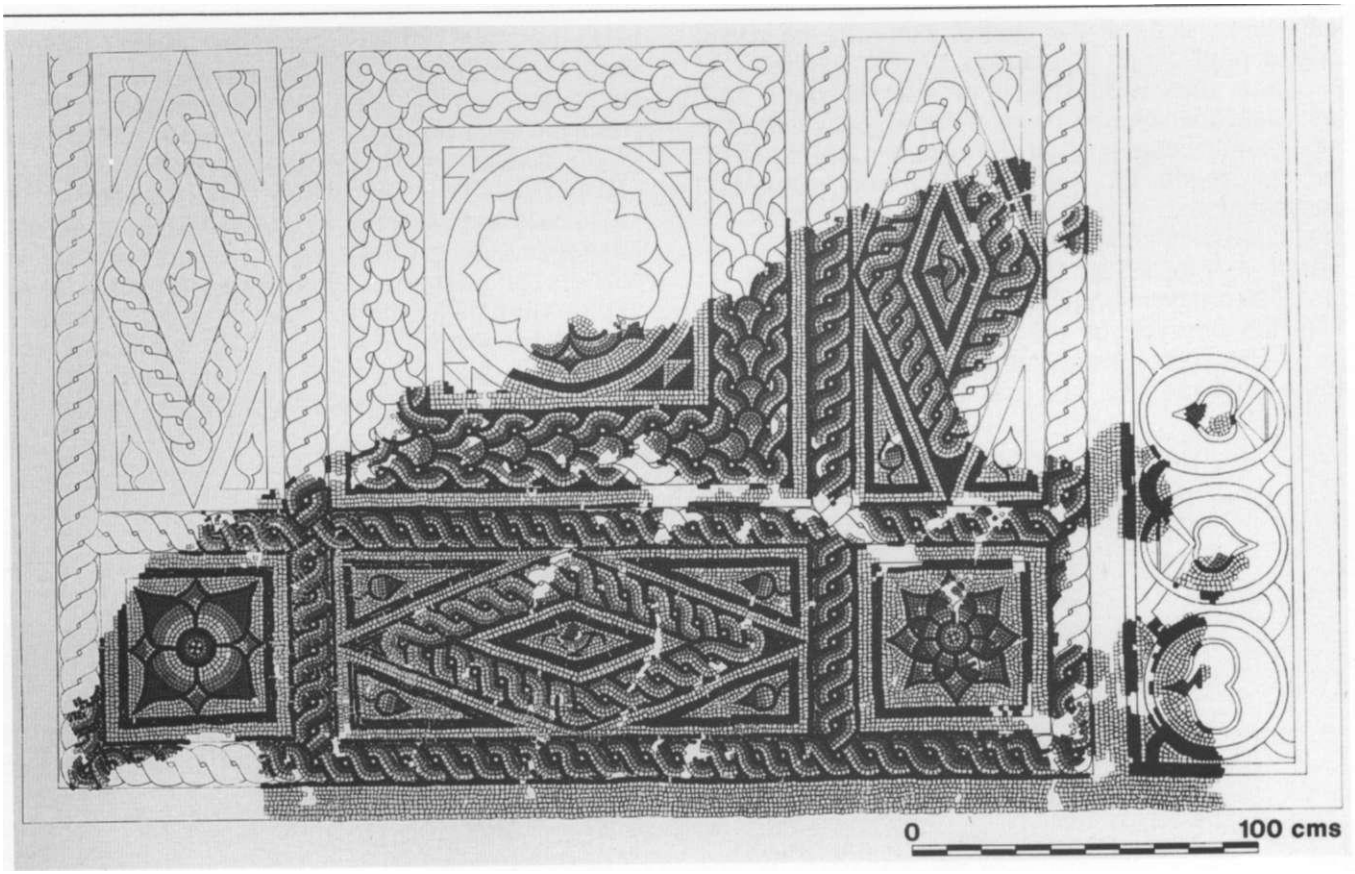


Fig 3.60 Painting (by R H Moyes) of the mosaic in Room 12, Building 123. 1:22. [Pages 96-107, especially 106-7]

Fig 3.61 The mosaic in Room 12, in Building 123. Viewed from the north-west. [Pages 96-107, especially 106-7]



least three sides of the central yard. On the south side a partition on foundation DF1041 divided the passage into two. The floor was of plain red tessellation which had been replaced, complete with new mortar base, west of the central yard, if not all the way round. On the north and west sides, the passage was 2.7 m wide whereas on the south side it measured only about 2.3-2.4 m. On the east side of Room 7 (Fig 3.53), there was a small area of tessellated pavement (EF359) continuing southwards from the passage on the north side of the central yard. This piece of pavement continued far enough south between the east end of the robber trench EF17 and the north-south robber trench EF5 to suggest that the passage may have turned south to continue along the east side of the central yard. However there are two difficulties which run counter to this conclusion. Firstly, this part of the passage, had it existed, would apparently have only been about 1.2 m wide and secondly, the rows of tesserae did not change direction in the way they normally do in corners of passages elsewhere. An alternative explanation is that the pavement represents a threshold leading into a short narrow passage like Passage 4. A complete pot (DF1685) of Colchester Type GX 168C had been set upright into the floor of

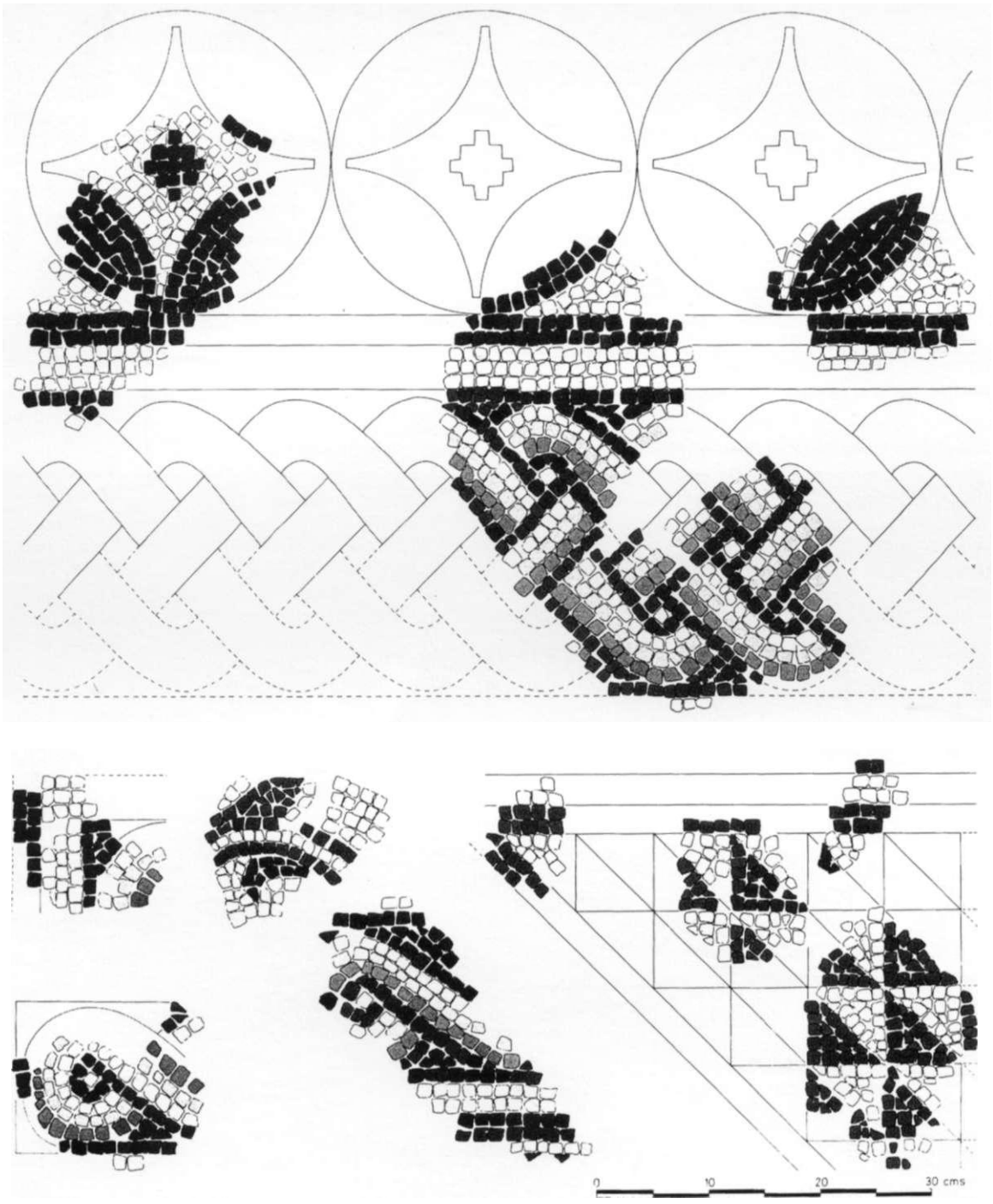


Fig 3.62 Painting (by R H Moyes) of the mosaic in Room 13, Building 123. 1:6. [Pages 102 & 107-8]

the passage on the south side of the yard.

Passage 2 was on the north and west sides of the house and was likely to have been a covered public footway. The east end of the passage on the north side of the house was formed by a cross wall on a mortared foundation (EF271). The south end of the passage on the west side was open, although it had been subdivided by a cross wall on foundation DF1016. The floor surfaces in the passage were typical of footways elsewhere in the town and consisted of thin gravel surfaces and layers of sandy loam. The foundation supporting the north side of the passage on the north side of the house was shallow and had been completely robbed out (EF117, Fig 3.53). On its north side lay a ditch or a drain (EF218) and a possible water-main (EF298). The latter was a narrow trench which was sealed by metalling at the west end of Site E as if a part of a water-main had been left *in situ.* However there were no remains of collars. The foundation of the west wall of the passage on the west side incorporated an arched drain (DF112/352/MF57) in much the same manner as the east wall of Building 19 (Fig 13.258, p 379). Internally the arch must have been about 0.9 m high and 0.6 m wide (Sx 3.42, Fig 3.41). The wall itself appeared to have been built on the eastern half of the drain which is why that part of the structure was more substantial. In at least two places, the eastern side of the drain was constructed of tile rather than septaria as if it had been of more than one period. The most marked change occurred on the line of the robber trench DF38, indicating that the latter may have been on a boundary between two properties which had been amalgamated for the construction of Building 123. Down the middle of Passage 2 on the west side of the building was a timber drain (DF590/DF637/DF686/DF924, Fig 3.54), the purpose of which was to conduct waste water southwards. There was not enough time to trace its course on Site M. At the north end of Site D the drain turned a right-angle and appeared to link into the arched drain to the west as if replacing its adjacent section. Near the right-angled bend a Dressel 20 amphora (Colchester Type AJ 53E) had been set upright in a pit (DF71) probably without its mouth and neck. Further south the timber drain was joined by a similar drain (DF203/DF773) which passed through Passage 1 and Room 10 to carry waste water away from the drain (DF22/DF1252/DF1492) around the internal yard.

Passage 3 gave access into Rooms 4 and 5 from the end of Passage 1. The south wall seems to have been replaced with the effect of making the passage narrower. Two unrobbed sections of east-west foundations (EF152 & EF153) lay side by side on the south side of Passage 3. Both were made of mortared septaria rubble. The top of EF153 consisted of a course of septaria capped with a layer of mortar to form a smooth surface. The upper part of EF152 took the form of two courses of mortared septaria. In section, it was clear that the northern foundation (EF152) was the later of the two.

A timber drain (DF22/DF1252/DF1492) lay around at least three sides of the central yard. No nails were found in the drain but in places there were clear stains of decayed timber boards. On the west and north sides, the drain was 0.35-0.40 m wide and 0.22 m deep. It was more substantial on the south, being 0.8 m wide and 0.35 m deep. This may have been because here the drain had been made of tile. An opening of tile had been formed through the foundation on the east side of Passage 1 so that the drain could pass through. The lowest course of the opening was still intact, having survived the post-Roman robbing. The drain appeared to have replaced an earlier, wider one (DF1438) on the north side of the yard. Another (DF1819) lay diagonally across the yard and linked up with the drain DF22/DF1252/DF1492 in the south-west corner next to the tile opening. Part of a fourth drain (DF1730) lay 0.5 m north of drain DF22 but may have of been of earlier date. There was not enough time to tell how far west it extended. Under Passage 1 was an east-west trench (DF769) which may have been either part of the drainage system (although it was in a peculiar position in relation to the yard and the other drains) or a slot for a partition wall in the passage. The yard had been lightly gravelled. In the late 3rd or early 4th century, the northern half of the yard was destroyed when a large pit (DF1291) was dug, probably for sand and gravel. The drain (DF1252) around the yard must have existed at the time because the north side of the pit clearly respected it. Being about 2.0 m deep, there was considerable subsidence into the backfill and thus late material accumulated over the top. Part of the southern half of the yard had been burnt (DF1163), probably as a result of an open bonfire. Nearby was a small wooden box or tank set in a clay-lined pit (DF1647). Traces of decayed planks were clearly visible in the bottom of the pit. The use of clay suggests that the structure had been a water-tank linked to the adjacent system of drains.

Various factors indicate that Building 123 was likely to have been one of high status. It is the largest known Roman house within the walls of Colchester; its rooms and passages were of generous proportions; at least three of its rooms contained mosaic floors; the marble table leg points to expensive furniture within; and there is the possibility that the enigmatic Room 13 may have had a religious function. The number and quality of the fragments of carved stone from the building underline this point: of the pieces chosen for illustration from the Culver Street site as a whole (Figs 5.30-3), almost half turn out to have come from Building 123.

When the remains of Building 123 on Site D were first exposed, it was striking how most of the site was covered with dark earth mixed with rubble and fragments of mortar. The impression given was that many of the walls may have been of rubble rather than of sandy clay although the effect was no doubt heightened by the robbing of Rooms 8 and 9 where areas (ie the hypocaust and the cellar floor) were affected rather than single foundations. A large

section of collapsed wall of septaria and tile lay in the south part of Passage 1 and more rubble from a demolished wall lay in the south end of Passage 2 (Fig 3.54). However, most of the walls in the building are likely to have been of sandy clay, since the material overlying the surviving part of the mosaic in Room 12 was predominantly of sandy clay as was the demolition material noted in section in Room 13.

The collapsed wall in Passage 1 and the lumps of sandy clay on the floors in Rooms 12 and 13 indicate that the building was almost certainly deliberately demolished. Dating evidence for this event is thin but points to sometime between *c* 275 and 325.

The mosaics in Building 123

by D J Smith

The mosaic in Room 2

[Site E; Fig 3.56]

This room yielded a small fragment of mosaic measuring 0.47 x 0.21 m. It preserved part of a small hollow square and a tangent hollow triangle, together forming a length of a side of a pattern in dark greyish brown lines two tesserae wide on a white ground. The square contained a freestanding solid dark greyish brown square bearing an inscribed knot executed in red (tile), yellow (sandstone or tile?), and white (chalk), and outlined in dark greyish brown (septaria), and the triangle contained a freestanding solid dark greyish brown triangle. This fragment could be and quite probably is from a corner of a pattern of four eight-lozenge stars with a central panel such as those from Buildings 113 and 120 (Fig 3.42, p 81 & Fig 3.49, p 92). The length of the base of the hollow triangle is one-sixth of that of the side of such a pattern and, since it measures 0.27 m, the fragment indicates a pattern approximately 1.80 m square. This is the same size as the square of lozenge-pattern in the mosaic of Building 120 (p 92). Limited external evidence suggests a date in the period from the mid 2nd to the 3rd century.

The mosaic in Room 8

Only three small fragments of the pavement were recovered, the largest being about 100 x 100 mm in area. The latter shows most of a semicircle formed by a double row of grey tesserae centred on a similar single one. The background is white.

The mosaic in Room 12

[Site D; Figs 3.60-1]

Less than half of this mosaic survived but, except for a very fragmentary and subsidiary panel on the north side, the remains suffice for it to be described as though intact. The main design was a grid of dark greyish brown bands bearing an inscribed polychrome simple guilloche, forming nine rectangular panels of which that in the centre was twice the width of each lateral panel and four times the size of each corner panel. The central panel contained a polychrome floral motif in a dark greyish brown circle on a square white ground with, in each corner, a freestanding solid dark greyish brown right-angled triangle with a concave base (concentric with the circle) and an inverted white triangle inscribed in it. The square was framed by a broad dark greyish brown band bearing an inscribed polychrome round-tongued double guilloche and surrounding this was a white band three tesserae wide. The lateral oblong panels were identical with one another. Inscribed in each was a hollow lozenge formed of a dark greyish brown band bearing an inscribed simple guilloche in grey (greensand), white, and dark greyish brown. Within this was a linear lozenge in dark greyish brown containing a motif like a small opening bud in profile in white, yellow, and red. In each of the triangular spaces formed by inscribing the larger lozenge in an oblong was a freestanding dark greyish brown linear right-angled triangle with a small pointed leaf, transversely banded in white and yellow and tipped with red, springing into it from the shortest side. In each of the small square corner panels was a freestanding square in dark greyish brown containing a polychrome floral motif, the tips of its axial petals tangent to the sides of the square. The two surviving flowers were of different types and each will have been paired diagonally. The design measured 3.23 m square (excluding the white border).

The freestanding panel on the north side of this design was separated from it by a band of white tesserae, seven rows wide. There remained only fragments of the dark greyish brown linear frame three tesserae wide and of what appears to have been, within it, a row of quasi-tangent linear circles of vertical ovals in dark greyish brown containing a bichrome heart-shaped leaf of white with a red tip and outlined in dark greyish brown. These were alternately inverted. From the frame midway between each circle or oval two short lines ran at an angle to join them. The length of this panel was presumably equal to that of the adjacent side of the grid-design but its width is uncertain.

Both panels were executed on a white ground which was extended beyond them by seven rows of tesserae on the east side and probably also on the other sides. The tesserae throughout were cubes of about 10 mm.

Grid-designs forming nine rectangular panels such as that from Building 123 are known from Verulamium, Cirencester, and other sites in Britain, but no fewer than four have already been discovered in Colchester and one of the other sites is that of West Mersea *(see below)* only about eight miles to the south (Smith 1975, 276-9). Two of those from Colchester,

discovered on North Hill in 1965, are exceptionally decorative and may date from as early as *c* 150 (Dunnett 1967, 29-38, pls 7-8) or at least from *c* 150-200 (Smith 1967, 40-42; Smith 1975, 277, pis 116-7; Neal 1981, nos 39-40). But, as will be seen, the other two afford closer parallels.

The central flower of the mosaic under discussion was evidently a conventionalised type which is widely found and apparently of no significance for dating or attribution, but the round-tongued double guilloche which frames it invites comparison with that of the Mosaic of the Wrestling Cupids from Middleborough, Colchester, datable probably to *c* 150-75 (Smith 1984, 168-72, fig 158). In both these mosaics the pattern is better executed than in Mosaic C of North Hill (Dunnett 1967, pl 8; Smith 1975, pl 117, mis-captioned as Mosaic B; Neal 1981, no 40).

The type of flower in the north-east corner is common in Romano-British mosaics of *c* 150-200 (Smith 1975, plates), including Mosaic B of North Hill (in the panel of lozenge-pattern: Dunnett 1967, pl 7; Smith 1975, pl 116, mis-captioned as Mosaic C; Neal 1981, no 39). The flower in the south-east corner, though not strictly the Romano-British 'squared rosette' (Smith 1975, 274-5, plates), is nevertheless similar in the suitability of its shape for filling a square.

It is, however, the lateral panels which are the most instructive feature of this mosaic. Such panels, comprising a 'guilloche lozenge' inscribed in an oblong, are known from two other rectangular nine-panel grid-designs discovered in Colchester. One of these is represented by the fragment found in 1763 in the garden of Mr John Bernard (Hull 1958, 150-1, Insula 19 (no 18), pl 23A; Smith 1975, 277, pl 118 (no 1)), now the site of Greytown House in the High Street. Here the lozenge(s) bore an inscribed simple guilloche and contained a small freestanding solid lozenge and each angle of the oblong was occupied by a freestanding hollow right-angled triangle; but there were no vegetal motifs. The other mosaic is represented by a substantial fragment found in 1922 on North Hill and now in Colchester Museums *(Trans Essex Arch Socy,* ns, 16 (1923), 294-5, colour pl opp p 251; Hull 1958, 97, Insula 10 (no 14); Smith 1975, 277). Here the 'guilloche lozenge' inscribed in one of the two surviving oblong panels contains a small solid white lozenge on a red ground and the freestanding right-angled triangle in each angle of the oblong is of red outlined in dark greyish brown; again there are no vegetal motifs.

Elsewhere, a design of this type at Verulamium, dated to *c* 150-155/60, has two opposite oblong panels with an inscribed 'guilloche lozenge' containing a very small solid red lozenge on a white ground while each angle of the oblong is occupied by a freestanding solid red right-angled triangle (Frere 1983, 237-8, 241, pl 36; Neal 1981, no 73). At least two of the oblong panels in the mosaic found in 1862 at High Wycombe (Bucks), dated to not earlier than *c* 180 if not later, had an inscribed 'guilloche lozenge', with a heart-shaped leaf with two stems instead of a right-angled triangle, in each angle of the oblong (Hartley 1959, pl 9; Smith 1959, 251-4; Smith 1975, 278, pl 118 (no 2)). At Cirencester a design discovered in 1950 in Ashcroft Road had two oblong panels with an inscribed 'guilloche lozenge' which contained a very small solid lozenge in a freestanding hollow lozenge while the angles of the oblong were occupied simply by a freestanding hollow right-angled triangle; the other two lateral oblongs contained a freestanding length of six-strand guilloche and the corner squares a flower virtually identical with that in the south-east corner of the mosaic under discussion *(Ill Lon News,* 2nd Dec 1950, illust; Smith 1975, 278). The six-strand guilloche recalls the length of four-strand guilloche contained in the design of the same type discovered in 1767 at West Mersea (Essex) *(VCH Essex,* 3 (1963), 158, pl 23 (upper)). Finally, the lithograph depicting half of such a design in a mosaic discovered in 1863 on Wadfield Farm near Winchcombe (Glos) shows a linear lozenge inscribed in the lateral oblong panels with stylised vegetal motifs within it and a freestanding hollow right-angled triangle containing a heart-shaped leaf with two stems in each angle of the oblongs (Dent 1877, 13-14, pl opp p 13; Smith 1975, 278-9, pl 119 (no 1)).

It remains to comment on the fragmentary panel on the north side of the grid-design. This undoubtedly contained a 'cornice pattern' such as is found in a number of Romano-British mosaics of c 150-200, of which it is a distinctly insular feature, either as a border or as a filling-pattern (Smith 1975, plates, *passim).* There is considerable variety in this type of pattern, ranging from the fine example bordering the mosaic from Jewry Wall Street in Leicester, datable to c 150 (Smith 1975, 282-3, pl 124; report by Leicester Archaeological Unit forthcoming), to the simplified form found in Mosaic B from North Hill in Colchester which may be as early, and in that at High Wycombe *(see above).* Colchester has yielded a good example of intermediate standard (Hull 1958, 77-8, pl 15) which on stylistic grounds has been assigned to *c* 150 (Smith 1975, 285-6, pl 127 (no 1)), though this now seems perhaps too early. The history of this pattern must have been one of rapid stylisation and the apparently stylised form of the pattern in the mosaic under discussion is therefore of no chronological significance.

The excavation established the period of this mosaic as ranging from *c* 150 to the 3rd century, and comparison of its features with other dated mosaics suggests only that it may date from later rather than earlier in this period.

The mosaic in Room 13

[Site D; Fig 3.62]

This mosaic appeared to have been destroyed in Roman times (p 102). Few of the fragments recovered measure more than 0.15 m across and it is

estimated that they amount to perhaps less than a tenth of the mosaic. They included fragments of guilloche in red, yellow, white, and dark greyish brown, and of a pattern of contiguous right-angled triangles alternately white and dark greyish brown (the colours counter-changed) with a dark greyish brown frame two tesserae wide (cf for example the corner of the other fragmentary mosaic found in 1865 on North Hill: *Trans Essex Archaeol Socy,* os, 4 (1869), 55, pl 2). One of the fragments of guilloche, of four strands and 0.26 m wide, was contiguous with a white band three tesserae wide of which the other side was contiguous with a dark greyish brown band two tesserae wide, and tangent to this on a white ground had been a row of tangent solid circles of dark greyish brown 0.27 m in diameter bearing an inscribed poised concave-sided white square with a central poised serrated solid square of thirteen dark greyish brown tesserae. Presumably the circles had formed part of an all-over pattern, of a long-lived and widespread type, the colouring of which produced the effect of an all-over pattern of intersecting as well as tangent circles (cf Balmelle *et al*, pls 237-9). The type is well represented in Britain but generally with a central poised concave-sided square or simply a single poised tessera: the central poised serrated square in the present instance is exceptional in Britain. The fragments may have come from a pavement of the same period as that in Room 12 but could be from a later floor. The tesserae are cubes of 10-15 mm.

Building 124 (Period 4 of Site E: *c* 150/200-*c* 275/325)

[CUL Site E; Figs 3.7 & 3.53]

Building 124 lay on the north side of the east-west Roman street on Site E. Very little of it was uncovered. Part of the robber trench for the foundation of the frontage wall was exposed but not excavated. The west end of the trench seemed to branch northwards as part of a return. An unrobbed mortared foundation (EF237) formed the south side of a footway flanking the south side of the building. The upper part of the foundation was made of neatly-coursed stone capped by a single course of brick. It was sealed by dump deposits probably of Site E Period 5. The east end of the foundation incorporated a 0.3 m wide channel which was probably an outlet for a timber drain. Along the south side of the foundation was at least one ditch or timber drain. These remains were unexcavated. It could not be determined if the building survived into Period 5.

Building 125 (Period 3 of Site K: 2nd century)

[CUL Site K; Figs 3.7, 3.41, & 3.63-4]

Excavation of the east part of Building 125 was not permitted; this area could only be examined during the watching brief when the basement excavation was in progress. However the building was small because it did not reach the east side of the contractor's excavation for the service basement which was 3.5 m to the east of the excavated part of the building. Although the east side of the building was never seen in plan, a section through part of it was visible in the side of one of the contractor's trenches. This enabled the complete ground plan of the building to be restored.

Building 125 was a small buttressed stone structure which had stood in the middle of the cultivated area on the east side of the street. Its plan and context indicate that it was almost certainly a tower-granary (Figs 3.63-4). Internally the building measured approximately 5.5 x 7.0 m. All that survived were the foundations (KF330). These were about 1.0 m deep and were unrobbed. They were of stone and mortar laid in a trench in alternating layers. The stone was greensand mixed with a little septaria (five per cent). The north and south walls each contained three external buttresses whilst the west and presumably the east walls each incorporated two. The foundations of the buttresses were of the same build and depth as the foundations of the walls.

The foundations were sealed by cultivated soil to a depth of at least 0.5 m indicating that the site of the building had been cultivated after its demolition. The overlying soil was uniformly well mixed. It was similar to and contiguous with the soil elsewhere in the area which had apparently been cultivated continuously throughout the life of the building and for some time after its demolition. The floors and related deposits had been destroyed by the Roman cultivation.

The ?corn-drying oven (KF12) (*c* 300-400+)

[CUL Site K; Figs 3.7, 3.41, & 3.63-6]

Cut into the cultivated soil over the foundations of the granary (Building 125) was an oven for drying corn or some other material (KF12; Figs 3.63-6). The position of the oven in relation to the granary suggests continuity of some sort but this relationship seems to be accidental since the granary would not have been visible when the oven was built, its foundations being sealed by cultivated soil at that time.

The oven (Figs 3.63-6) was made by first digging a rectangular pit 4.5 x 2.3 m in area and at least 0.5 m deep. The oven was a free-standing structure which, unlike many other corn-drying ovens, had not been inserted into an existing building. It was built of broken tile bonded with sandy clay. The material included fragments of box tiles, column bricks, and hypocaust tiles but no *tegula.* Many fragments had *opus signinum* still adhering to them. The main chamber of the oven was made by lining the sides of the pit with tile. This created a lining which was neatly faced on the inside but rough behind. The structure seemed to have been designed in a more complicated way than the typical T-shaped and other types of corn-drying ovens *(see* Morris 1979, 5-22 for descriptions and discussion). The front consisted of a

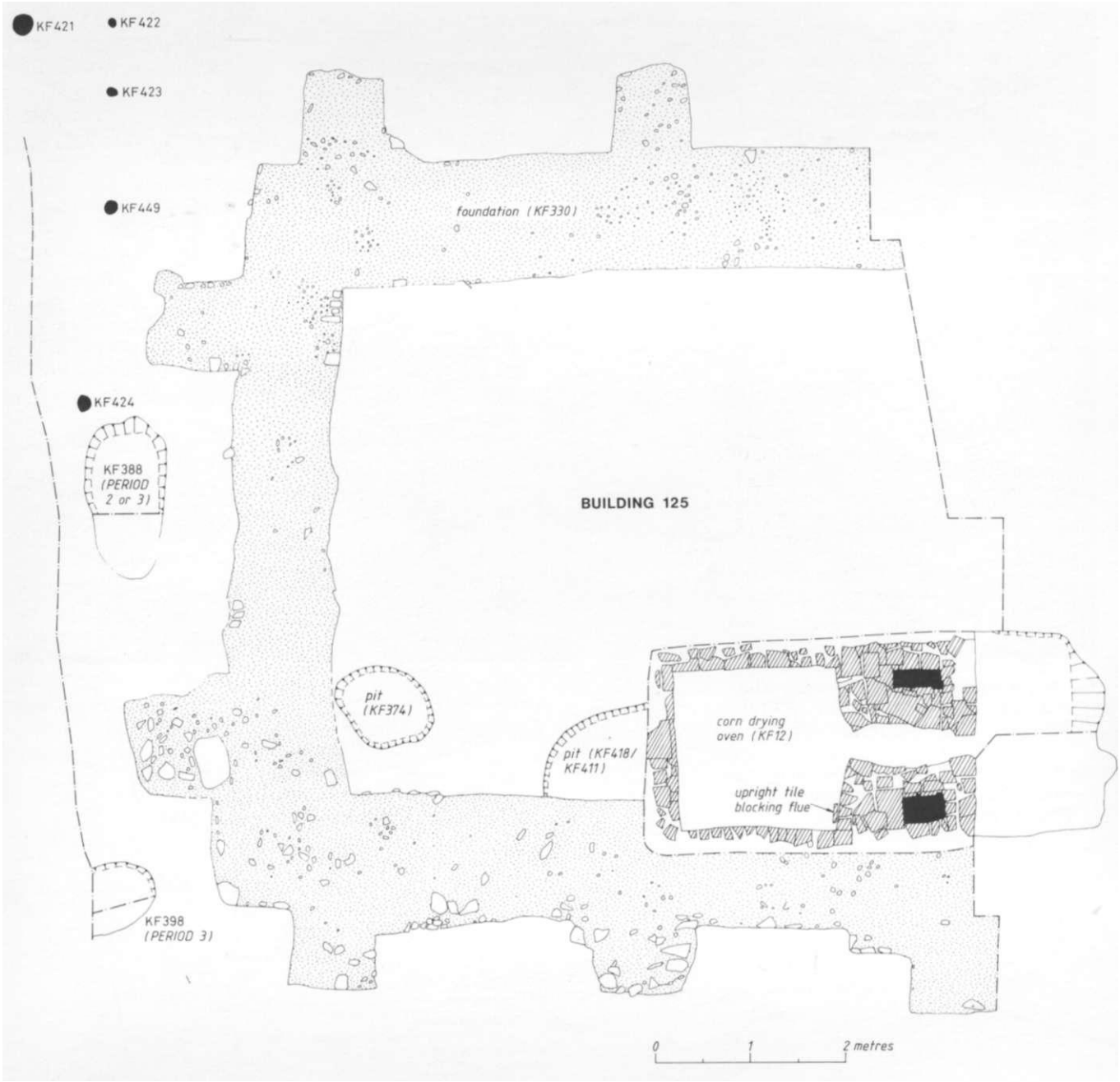


Fig 3.63 Building 125 (granary) and ?corn-drying oven (KF12). 1:67. [Pages 108-112]

short horizontal flue leading from the stoke pit to the large square central chamber into which it apparently directly opened. The flue was flanked by two tile-made blocks each measuring 1.5 x 1.0 m. The centre of each of these blocks was taken up by a vertical flue linking horizontal smaller flues on a level with the base of the central flue and main chamber. Each block contained four of the smaller flues: three leading from the central flue and another (slightly larger) leading into the main chamber. All the flues, both vertical and horizontal, were rectangular or square in section. The mouth of one of the flues had apparently been blocked, or at least partly so, by a piece of tile placed upright against it presumably to act as a damper (Figs 3.65-6).

The stoke pit was filled with soil containing much ash and charcoal. The latter consisted mainly of oak with some hazel or alder and willow or poplar (Table 8.23, microfiche p 727). Little could be discovered about the superstructure of the oven except that, like the sunken part of the oven, it had been made of reused brick set in sandy clay. The main chamber and the stoke pit were filled with the remains of the superstructure mixed with soil. The absence of mortar in the oven and in its destruction debris and the absence of any traces of supports in the main chamber hint that the floor (or floors) may have been



Fig 3.64 Above: the granary (Building 125) and the ?corn-drying oven (KF12). Viewed from the north. [Pages 108-112]

Fig 3.65 Right: Site K Period 3c ?corn-drying oven (KF12): plan and elevations. 1:47. [Pages 108-112]

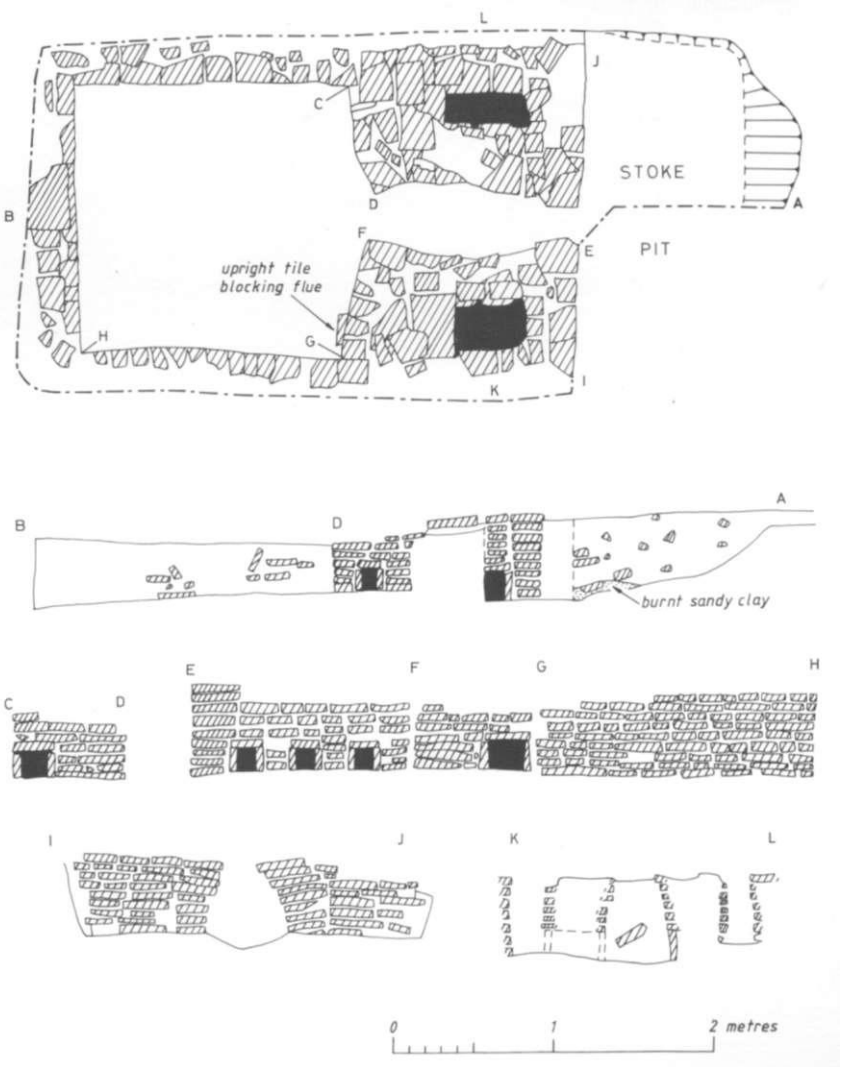




Fig 3.66 Site K Period 3c ?corn-drying oven (KF12): viewed from the north before the removal of the cultivated soil into which it was cut. [Pages 108-12]

supported on iron bars or, less likely, wooden joists. Soil samples from the main chamber, the stoke pit, and the north vertical flue contained bread/club wheat, barley, rye, and oats but no spelt (pp 281-2). However, the quantities of cereal were not great and it is therefore possible that the oven was used to dry material other than grain.

The presence and complexity of the flues suggest that good temperature control was an important consideration in the design of the oven and that the structure was indeed intended as a dryer rather than a kiln. This conclusion is supported by the absence of vitrification which indicates that the heat in the oven must have been comparatively low. In corn-drying ovens, temperature control was achieved by damping flues and by keeping the drying floor away from the direct heat of the fire. Quite how the flues in KF12 would have functioned is obscure since the heat could apparently have passed straight into the main chamber in an comparatively uncontrolled manner. One possible explanation is that the far end of the central flue (where it narrowed) was blocked in some way thus forcing the hot air and smoke into the subsidiary flues. From here the hot gases could have passed into channels or voids under or around a drying floor in the main part of the oven. The temperature control could have been achieved mainly by altering the apertures of the large vertical flues if, as seems probable, these were vented through the top or sides of the oven. Alternatively, rather than blocking the end of the central flue, it may have been possible to draw enough of the hot gases into the flues by creating a strong updraught through the large vertical flues to either side of the central flue.

Corn-drying ovens are common on Roman sites especially those of late Roman date but, surprisingly, at least eight sherds of vegetable-tempered Anglo-Saxon pottery dating to the 6th or 7th centuries *{CAR* **7,** Fabric 1) were scattered throughout the backfill of the stoke pit and the main chamber. Some of these sherds were securely stratified near the bottom of the backfill in both these areas so that there is no doubt about their context. In addition the environmental analysis of cereals from the oven suggests that, because of an absence of spelt, the material is more typical of the post-Roman period than the Roman (pp 281-2). Despite these facts and despite the unusual construction of the oven, it is hard to imagine that the oven was post-Roman so that the most likely explanation for the above is as follows. The oven was built in the latter part of the Roman period (between *c* 300 and 450). It was abandoned at the end of the Roman period and survived as a ruin until the 6th or 7th century when finally the remains were demolished or they collapsed. The soil backfilling the ruined oven contained the cereals which either derived from

The ?com-drying oven (KF12)

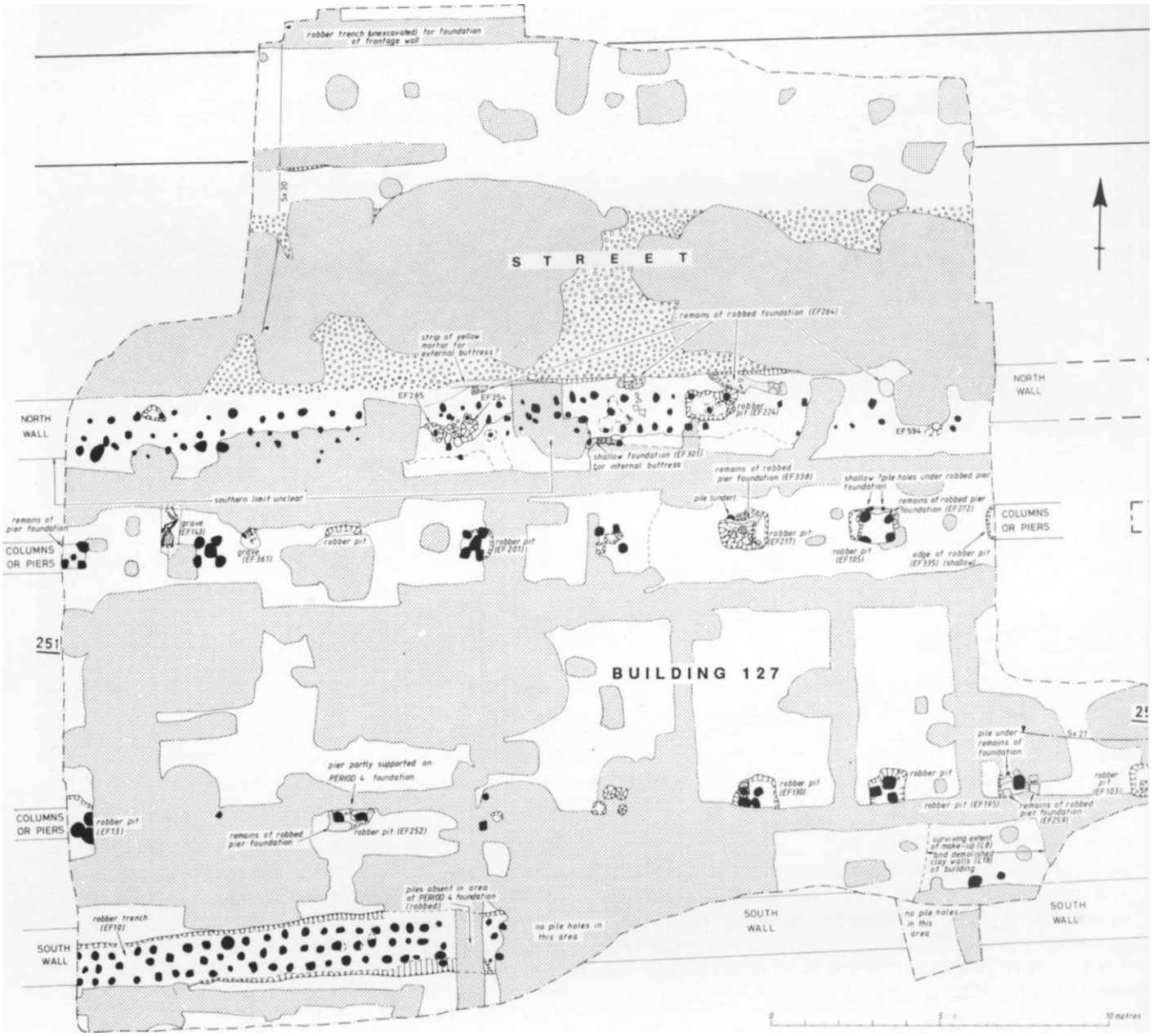


Fig 3.67 Period 5 at Site E, Culver Street (c 275/325-c 400+). 1:184. [Pages 112-17]

Anglo-Saxon cultivation of the land in the immediate vicinity or indicate an unusual Late Roman cereal assemblage. Alternatively the cereals could be irrelevant because the oven was used to dry something else.

Building 127 (Period 5 of Site E: *c* 275/325-*c*400+)

[CUL Site E; Figs 3.8, 3.54, 3.67-8, & 3.70-1]

Building 127 was a large aisled building of unusual construction. Most of the building lay within Site E (Figs 3.67-8) although part of the south-west corner was on Site D (Figs 3.54 & 3.71). The building had two wide external walls built on foundations about 1.5 m across. The aisles were formed by two rows of columns or piers supported on foundations about 0.8 m square. The north wall and the aisles were parallel to each other but the south wall varied in width and was slightly out of alignment. The foundations for the aisles were equally-spaced so that the north and south rows were identical. The positions of eight foundations were identified in the north row; one more was noted in the south one. The position of the south-west corner of the building (as identified on Site D) in relation to these foundations showed that there was exactly enough room for one more foundation between each of the rows found on Site E and the probable position of the west wall of the building (Fig 3.8). The building must have been at least 45 m long and about 17 m wide, measured externally. The

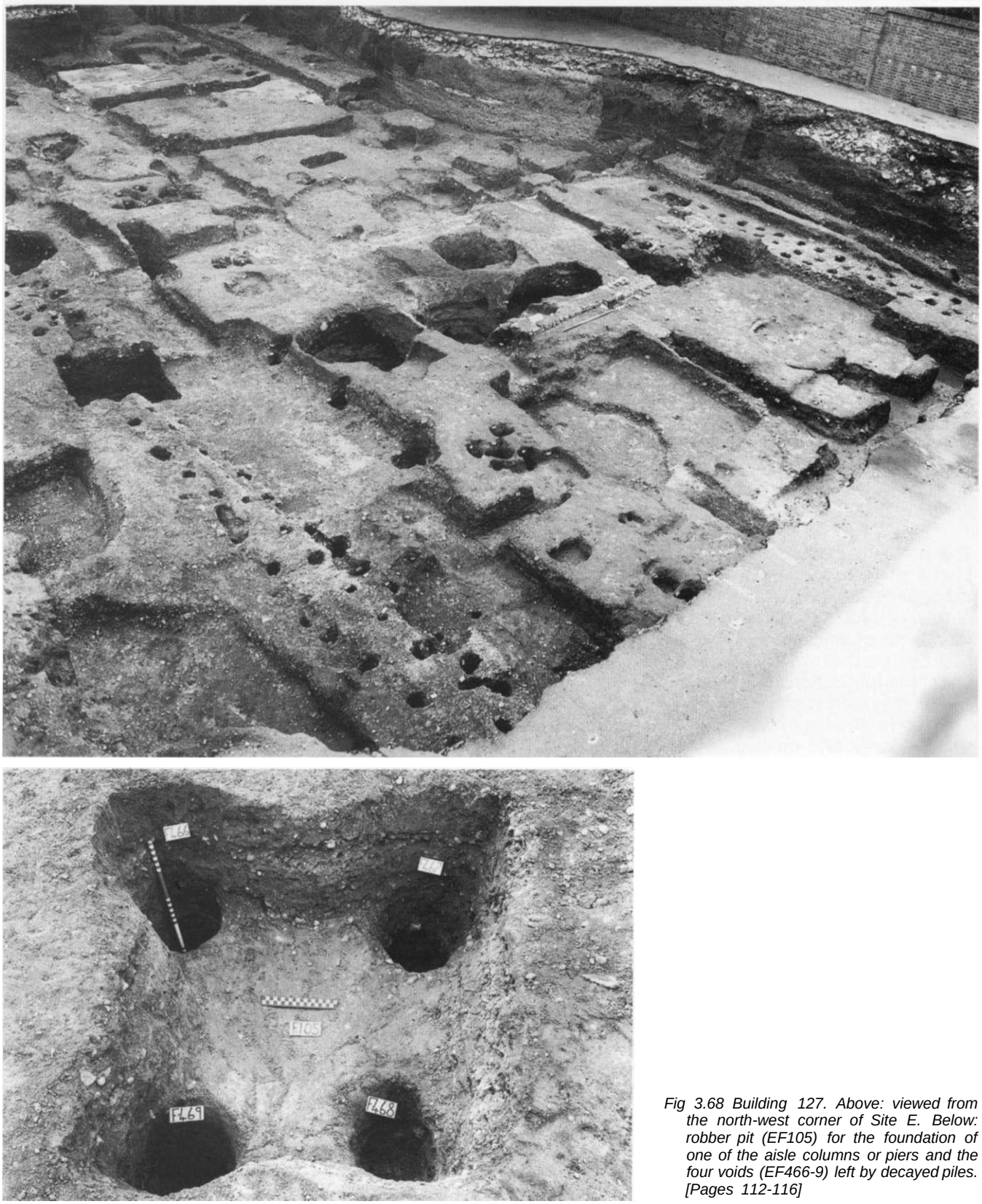


Fig 3.68 Building 127. Above: viewed from the north-west corner of Site E. Below: robber pit (EF105) for the foundation of one of the aisle columns or piers and the four voids (EF466-9) left by decayed piles. [Pages 112-116]

building was aligned on the frontage although its north wall was built on the south side of the street with the effect that the width of the street was reduced from about 9.0 m to about 6.5 m.

The foundations had been robbed out apart from fragments belonging to the north wall and some of the pier or column bases. The material used to construct the foundations was very mixed and much the same in all the surviving fragments. The lowest course of the foundation of the north wall was of packed rubble consisting of septaria, large fragments of *opus signinum,* and many fragments of tile (including box tile). This was overlain by a layer of rubble (septaria,

greensand, and tile) set in a yellow-brown mortar. The foundation survived to a maximum depth of 0.35 m and seemed to have been made using demolition materials from a building which included a hypocaust system. The obvious source for this material was Buildings 122 and 123.

The principle that foundations should be bedded on the natural to avoid the risk of subsidence *(CAR* **3,** 20) was not followed. Instead, the foundation trenches were comparatively shallow and, rather than cut through all the underlying stratigraphy to reach the natural, wooden piles were driven into the bottoms of the trenches. The piles were pointed and varied in length between 0.5 and 1.2 m. They were hammered into the ground until the tops of the piles were level with the bottoms of the foundation trenches. Presumably the idea was that the piles should reach the natural and hence provide the required sound base in a more economical way than could orthodox foundations. Had the foundations reached the natural, they would need to have been deep and expensive, especially in view of the width of the outer walls.

The positions of the piles were shown by voids; no traces of decayed wood were observed in these although it was clear from the relationships between a few of the voids and some of the surviving fragments of undisturbed foundation that the piles had been left to rot *in situ.* The largest piles were under the foundations of the north and south arcades where they occurred in groups of four or five. The piles under the south wall had been roughly laid out in three rows and on average were slightly smaller than those under the aisles. The piles under the north wall were the smallest of all. They too seemed to have been laid out as three rows although these were not so clearly defined as the rows under the south wall. The reduced size of these piles must have been related to the presence of the underlying street metalling. Smaller piles were used here either because it was harder to hammer piles into the ground or less substantial piles were judged to be adequate because the metalling provided a more sound base for the foundation.

No floor levels or other related layers belonging to the building survived. The latest Roman layers (as opposed to features) were shallow pockets of destruction debris belonging to Buildings 122 and 123: everything higher had been destroyed during early medieval cultivation of the area. It is possible that the building was never provided with a proper floor and that the existing ground surface was used instead. The building could have had a sandy clay floor since such a floor is likely to have been destroyed during the later cultivation. However, had there been a mortar floor, then at least part would probably have survived.

Against the south side of the north wall was part of a shallow foundation of tile (EF301). Being opposite one of the bases, this seems likely to have been the remains of an internal buttress or pilaster. Opposite another base in the same row was a strip of yellow mortar lying against the north side of the foundation. Although rather narrow, this may have been part of an external buttress.

The dating evidence for Building 127 is very limited and points to its construction sometime after c 275. The presence of reused building materials in its foundations suggests that the construction of the building may have immediately followed the demolition of Buildings 122 and 123. The latest material in Passage 2 of Building 123 (EL19) contained a coin of 270-84. This was sealed by demolition debris of Building 123 (EL18). Some of the latter produced a small quantity of 2nd- to 3rd-century pottery. A Roman date for Building 127 seems very likely because of its alignment and relationship to the Roman street and because of the technique used in its construction. The use of wooden piles seems to have been an exclusively Roman rather than post-Roman technique which has been noted in Colchester in Buildings 25, 53, 66, and 135 (pp 133-4 *& CAR 3,* 20-2).

Two inhumations (EF143 & EF361; Fig 3.69) lay under the north aisle. Both had been partly destroyed during the medieval cultivation of the site. Grave EF143 was 0.45 m deep whereas only the lowest few centimetres of grave EF361 survived. (The near-complete destruction of the latter is the clearest proof of the loss of the latest Roman layers on the site.) The bodies had been buried without coffins and placed with their heads to the south. The graves lay neatly between the foundation on the north side of the footway in Site E Period 4 and the centre-line of the north aisle. This relationship suggests that the graves predated the robbing of the foundation and that, rather than cut through the foundation, the north ends of the graves butted against the southern side of it. Grave EF143 was almost complete apart from the skull and some bones of the feet. The latter had been removed during the digging of the robber trench EF117 for the north foundation of the Period 4 footway. The south-east corner of the grave was cut by a pit EF142. Because of the unrobbed foundation, the grave was too small for the body to be fully extended. The body had been placed on its back with the legs flexed and the feet resting against the foundation. The absence of the skull gives the impression that the body may have been decapitated (like those in the grounds of East Hill House (p 378). However, the skull must have been removed when the adjacent pit (EF142) was dug since there was enough room for the head between the neck vertebrae and the end of the grave. Most of the other skeleton (EF361) had been destroyed during the digging of the EF166. However the upper part of it still survived including the crushed remains of the skull which clearly had not been removed from the body. Both skeletons were radiocarbon-dated. Bones from EF143 (HAR-5984) and EF361 (HAR-5985) gave results of BP 1860 ± 80 and BP 1630 ± 80 respectively. Recalibrated according to Stuiver &

Becker 1986, these produce dates of AD 33-235 and AD 262-535 for one standard deviation and BC 89 - AD 377 and AD 230-600 for two. Assuming both graves to have been broadly contemporary, the overlap between the two sets of results suggests that the skeletons probably belong somewhere within the range AD 225-375. This is compatible with the probable life of Building 127.

On the south side of the remains of Building 127 was a small rectangular pit (EF3) with four postholes along each of its long sides. The northern edge of the pit coincided with the southern edge of the foundation trench of Building 127. Despite the close alignment, the pit seems to have been unconnected with Building 127. Wood still survived in the postholes indicating that they must have been of recent date and in the fill of the pit was some 19th- or 20th-century pottery.

Measuring from the centre points of the columns, the width of the nave was twice the spacing of the columns. This relationship is so simple and fundamental to the building that it has proved possible to reconstruct the likely ground plan devised by the architect (Fig 3.70). As a result it becomes apparent that the two dimensions involved (ie 26 and 13 pM) were not his starting point but instead he began by making the width of the nave measured from the inside of the aisle supports (ie 24 pM) exactly double the width of the aisles plus the width of the supports (ie 12 pM). This accords with other aisled buildings where the dominant dimension is the width of the nave taken from the inner edge of the aisle supports (eg the Butt Road Roman church, the Silchester church & the London mithraeum: *see CAR* **9).**

Roman buildings of this type could have been used for forum basilicas, bath-house exercise halls, houses, barns and later for churches (Morris 1979, 55-65; Smith 1964) but the absence in Building 127 of any floors, hypocausts or structures such as hearths, ovens, metal-working areas or internal subdivisions means that the function of the building remains uncertain. It may have had some kind of public status since it was built over the southern part of the east-west street. Although apparently only of modest quality, it was certainly large for its type, being comparable with the largest of the aisled buildings in Pat Morris's survey *(ibid).*

Two possibilities for its function are favoured. The plan of the building, its orientation, its date of construction and the fact that its construction involved a change of use of the site suggest that it may have been a Roman church. The change of use is possibly the most significant of these features since had the building been used for any other purpose, then its site may well have been so used since the foundation of the town even although the building may have been replaced more than once. The absence of a substantial floor does not rule out the possibility that the building had been a church since the cemetery church at Butt Road only had a sand floor. The association of the building with two graves is also

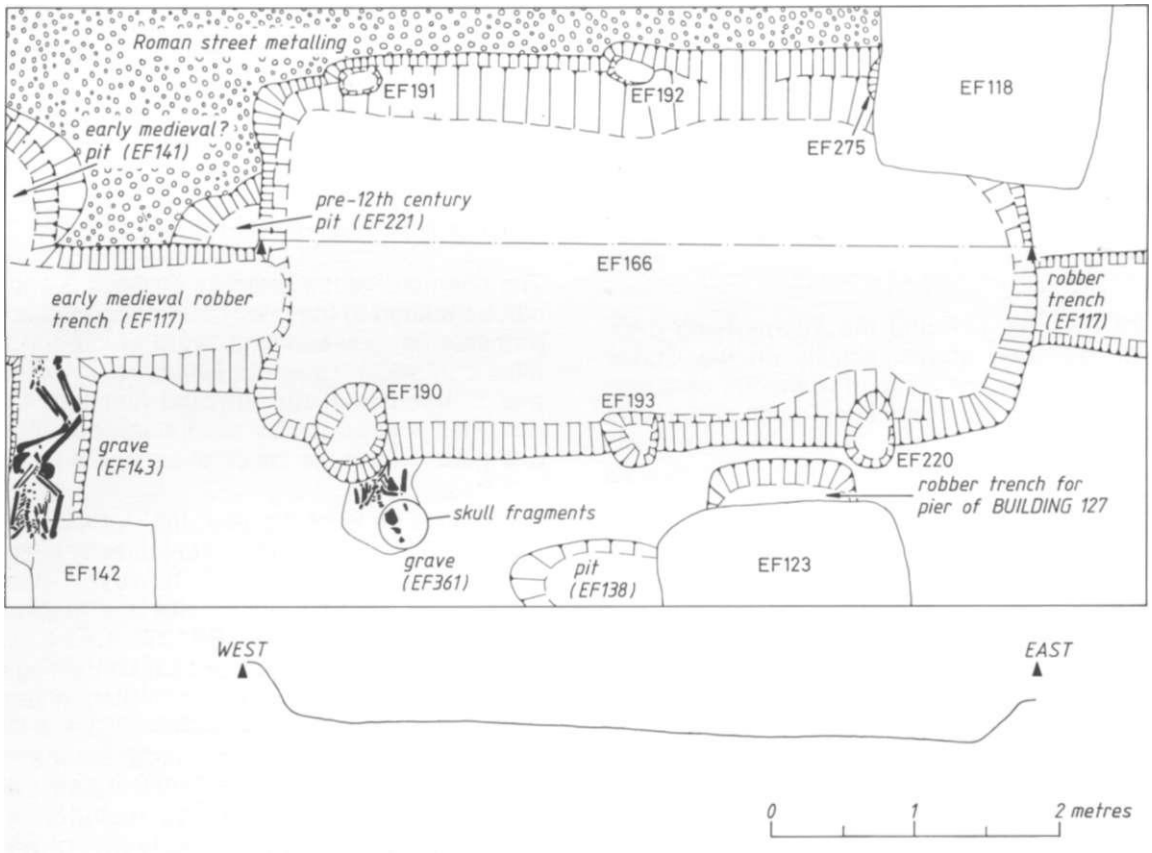
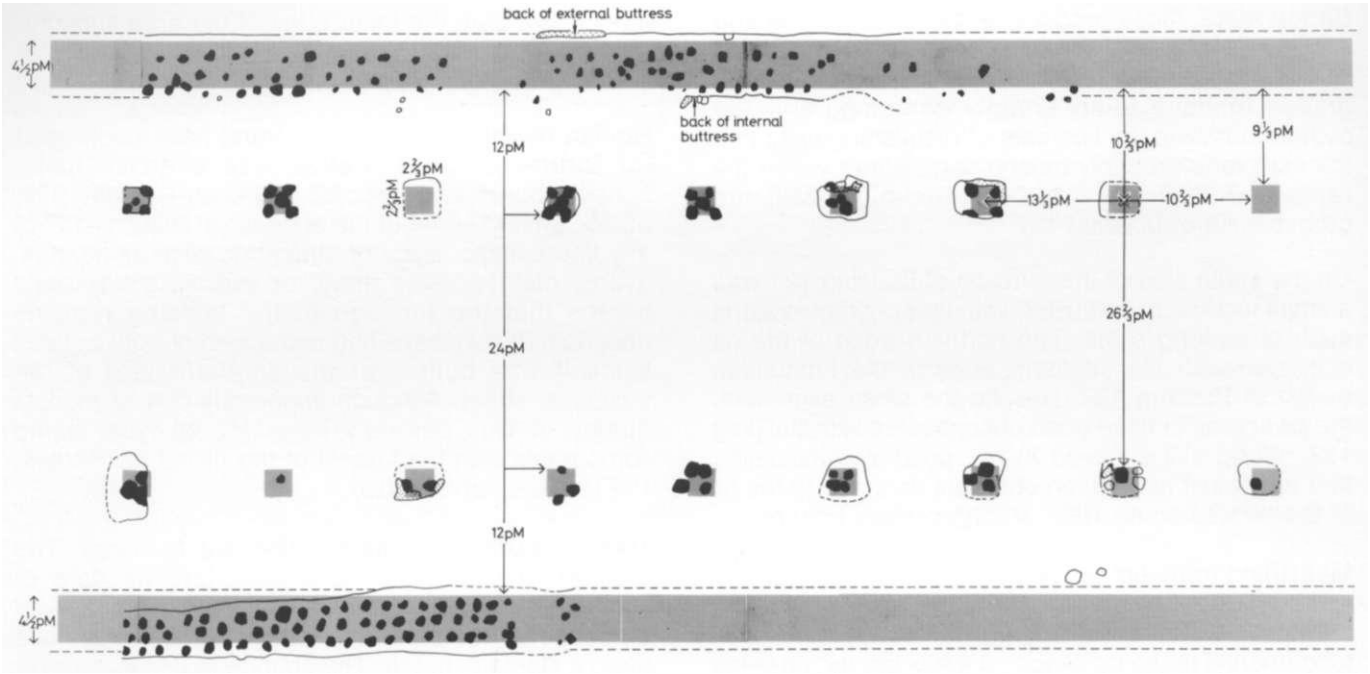


Fig 3.69 Hut 4 (EF166) and late Roman graves (EF143 & EF361). 1:40. [Pages 115 & 121-2]



F/g 3.70 P/an *analysis of Building 127. The probable intended plan (shown grey) is superimposed on the actual plan. 1:212. [Page 115]*

possibly significant in this respect although the mode of burial (ie north-south and not in coffins) contrasts with the graves at Butt Road *(CAR* **9;** Crummy 1980, 264-7) and hence suggests a pagan rather a Christian context.

An alternative and much more likely explanation for the building is that it was an agricultural barn. The evidence for cultivation on a modest scale elsewhere (eg the open cultivated areas, the granary, and presumably the ?corn-drying oven) all provide powerful circumstantial evidence to this effect although they do not help explain the graves.

Later Roman occupation (c 275/325-400+)

[Figs 3.8 & 3.71]

Apart from Building 127 and the ?corn-drying oven which are described above, activity on the Culver Street site in the 4th and first part of the 5th centuries was very limited, no doubt because much of the area at this time was open. There were however some late, rather insubstantial deposits in the north-west part of the site. The relevant features and layers are easiest summarised according to the subsites on which they occurred, namely Sites A, B, and C.

Medieval activity on Site A had destroyed almost all the layers belonging to the second half of the Roman period. A patch of demolished sandy-clay wall, 0.3 m thick (AL6) sealed the tessellated pavement AL18 in the passage of Building 110 where the floor survived as a result of settlement into an earlier pit (AF69). This showed that at least 0.3 m of late Roman material was destroyed during the medieval period.

The dating evidence for the demolition of Building 110 is very slender but points to a date of around *c* 300. Not enough is known about Building 111 to determine if it survived beyond this time. There were various features which probably post-dated Buildings 110 and 111 but contained only 4th-century or earlier pottery. South of the street these features consisted of several post-pits (AF90, AF89, one unnumbered, AF132, AF84, & AF85), shallow pits (AF63, AF137, AF80, AF81, AF47, & AF140) and two shallow trenches (AF36 & AF65). In the footway was a shallow trench (AF75) cutting a pit (AF92). The purpose of these features is not clear. Presumably shallower features were lost when the latest Roman material was truncated in the medieval period. The only contemporary features noted north of the street were a timber-lined drain (AF15) and a ditch (AF35).

The character of the deposits on Sites B and C which can be related to the late Roman period indicates that probably no new buildings were erected in this area after *c* 275/325. However Roman activity on Sites B and C throughout the 4th and first part of the 5th centuries is indicated by small quantities of late coins and pottery from the lower levels of the dark earth.

Over large parts of the site, the demolition levels of the latest Roman buildings were directly sealed by the dark earth. There were however pockets of 4th-century deposits which survived in places. This included pits (BF134, BF137, CF14, CF15, & CF18-CF22), a posthole (BF133) containing a coin of 270-90, and rubble spreads consisting of septaria, tile and mortar fragments (BL17, BL46, CL4, & CL6). Two north-south, irregular drainage gullies (BF39 & BF107) led into a less clearly defined east-west gully (BF34). Finds in the gullies included nine late 3rd-century coins, a white marble disc of wail veneer (B277), a blue glass intaglio, and many iron nails. The

coins indicate backfilling of the gullies by *c* 300. The dates of these coins are 259-68, 260-8x2, 268-70, 270-3, and 270-90x4. The western edge of the gully BF107 was cut by a small pit (BF99) which contained a group of five coins, dated 260-8 and 270-90x3. (One is an illegible 3rd- to 4th-century coin.) On the west side of gully BF39 there was a line of three large post-pits (BF88, BF89, & BF92). All three had post-pipes, 0.75 m deep and 0.25 m wide, in substantial post-pits packed with stone and tile. The postholes were associated with a rubble spread (BL4) and perhaps were either part of a small insubstantial building or a boundary fence like those on Site K at Culver Street (p 61) or those at Balkerne Lane *(CAR* **3**, 138). The post-pipe of post-pit BF89 contained a coin dating to 270-90.

A sequence of occupation and floor levels (CL95; Sx 3.17) was preserved as sinkage in a large pit (CF27) dug on Site C possibly in the early 3rd century. The deposits consisted of lenses of dark brown occupation interspersed with a few lenses of sandy clay and two possible floors each consisting of a thin layer of pinkish mortar. The sequence sealed demolition debris of Building 114 and contained seven coins of the 3rd and 4th centuries (namely 222-35, 268-70, 270-3, 270-90, 330-45x2, & 353-4). It is not clear whether the occupation and mortar ?floors imply the existence of a building; no structural remains were associated with the deposits and the occupation layers were browner than normal as if they might have been external.

The footway at the northern end of Site B was cut by a large pit of late 3rd or early 4th century date (BF243, Fig 3.41). The backfill of the pit was sealed by a gravel spread (BL55) which was cut by a large posthole (BF105) and some small pits (BF135, BF136, & BF139, Fig 3.71).

In some places, especially on Site C, the latest Roman layers were sealed by a layer of brown topsoil 0.15 m deep which may have been cultivated in the late Roman period. This was distinctly more brown than typical dark earth and of a different texture.

It is possible that the gullies, post-pits, and spreads of rubble and gravel on Sites B and C relate to buildings. However, if this were the case, they must have been very insubstantial and short-lived.

Roman window glass

Finds of Roman window glass were limited (229 fragments) and must represent a very small fraction of the window glass which existed on the site since together they are equivalent in area to one small window about 350 mm square (Baxter & Cool 1991, 129-30; *CAR* **8**). Nevertheless their stratification and distribution show clear associations with certain buildings and thus point to the presence of window glass in those structures. All but seven pieces were cast and thus datable broadly from the 1st to the 3rd centuries. The others were blown and thus are assignable generally to the 4th century. The numbers of fragments of cast window glass associated with the various buildings can be summarised as follows:

Building 79 (Site C Periods 1 and 2: c 44-60/1)

Room 2	4
general	3
total	**7**

Building 91 **2** (Sites D & **M** Period 2: *c* 44-60/1)

Building 108 **1** (Site E Period 3b: *c* ?90/100-*c* 150/200)

Building 112 (Site B Period 4; *c* 100-c 275/325)

Room 1	3
Room 4	7
Room 5	20
Room 6a	12
general	1
total	**43**

Building 116 **7** (Sites G & **H** Period 5: c 225-c 275/325)

Building 120 **21** (Site G Period 5: c 225-c ?300)

Building 120 (or **118)** **1**

Building 123 (Site D Period 4: c 150/200-c 275/325)

Room 8	5
Room 9	1
Passage 1	1
Passage 4	3
yard	5
general	1
total	**16**

Building 127 **1** (Site E Period 5: *c* 275/325-*c* 400+)

Others

Site A	2
Site B	19 (Site B Period 4 or later and thus probably mostly from Building 112)
Site C	4 (Site C Period 3 or later)
Site D	12 (2 of Site D Period 4 and the rest post-Roman and thus probably all from Building 123)
Site E	19 (all Site E Period 7 or later)
Site G	41 (Site G Period 3a or later and thus presumably mostly from Building 120)
Site **H**	14 (Site **H** Period 6 or later and thus presumably mostly from Building 116)
Site J	5 (Site J Period 6 or later)
Site K	2 (Site K Period 3)
Site M	7 (at least one possibly from Building 91)

The list points to window glass in Buildings 79, 112, 116, 120 and 123 but not necessarily Buildings 91, 108, 118, or 127 since there were very few pieces associated with these buildings. Window glass from Buildings 116, 120, and 123 is no surprise in view of the quality of the buildings concerned but the presence of glass in the comparatively modest Building 112 suggests that some ought to have been present in Buildings 113, 114 and 122 even although none was associated clearly with them. In general only about five per cent of the glass was in demolition

layers suggesting that practically all of the material derives from breakages during the lives of the buildings concerned and that panes were kept for reuse elsewhere when the buildings were demolished. Pre-Boudican window glass is rare but this may simply be a product of the short time-scale involved and the low numbers of finds. However the absence of window glass in the Boudican destruction debris is striking and suggests that either window glass was indeed uncommon at this period or that the colonists had the time and forethought to remove the glass before the attack. The glass from Building 79 does not necessarily indicate the use of glass panes in the military period since these could have been inserted when the building was reused in the colony. (Information about the glass was provided by Hilary Cool and Jenny Price who describe and discuss the material further in *CAR* ***8***.)

Roman glass working

by Hilary Cool

The site produced a few fragments of waste associated with glass working. One of these (2265, GL2874, Site G Period 3d) is evidence for the blowing of glass vessels as it is part of a lid-like moile. This is the waste glass detached from an open vessel when the rim is cracked off. Three other fragments, all from Site H (2271-3, one from Site H Period 5 trench HF59 & two unstratified), are from a form of twisted waste that has been found associated with glass blowing assemblages though the process that produced it has not been identified. A triangular block of glass (2269, DL247, Site D Period 4 demolition debris of Building 123) may have been an 'ingot' ready for melting. The fragments were scattered across the site and there is no evidence that they were all connected with the same glass-working event. Nor, because there are so few of them, do they provide evidence that glass blowing was undertaken at Culver Street. They do suggest, however, that the blowing of glass vessels may have been taking place in the vicinity, and the context of 2265 is very strong evidence for the blowing of glass vessels in Colchester by the mid 2nd century.

The numbers above in bold are catalogue entries in *CAR* **8** where the subject is covered more fully.

Anglo-Saxon hut (Colchester Hut 3; *c* 7th century)

[CUL Site B; Figs 3.9 & 3.72-4]

An Anglo-Saxon hut (BF4; Figs 3.72-4), the third discovered in Colchester *(CAR* **1**, 1-6), was uncovered in the south-west corner of Site B following machine stripping of the topsoil. It was excavated as quadrants.

The base of the hut had been dug through the tessellated pavement of Room 4 in Building 113 and the overlying Roman demolition layers. It cut into a layer of sandy clay loam and Boudican destruction debris underlying the tessellated pavement.

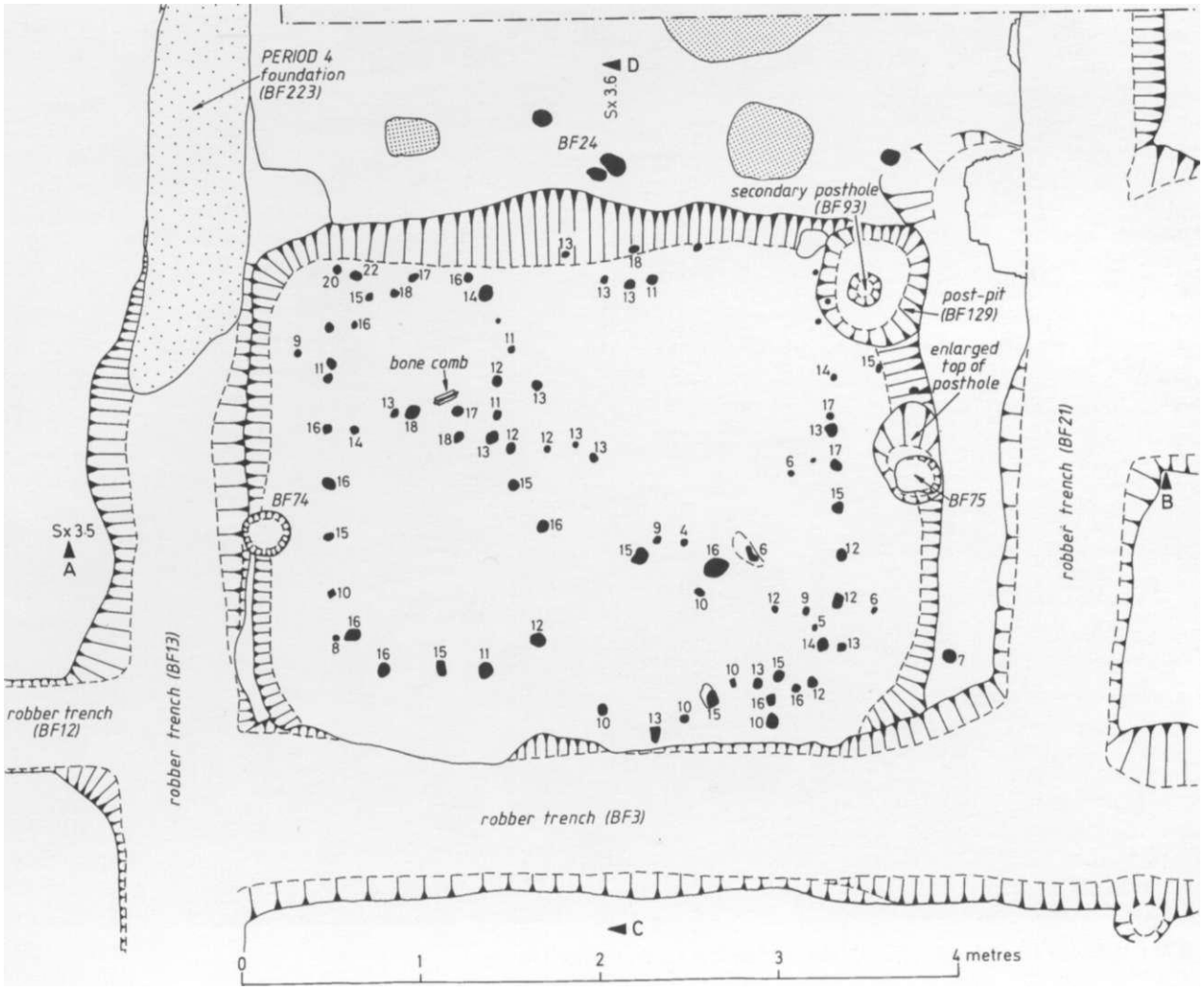
The sunken part of Hut 3 measured 3.9 m x 3.1 m and served as the floor of the building. The hut, like Hut 2 at Lion Walk, was of the two-post type, the sunken area being 0.6 m deep. The two main postholes (BF74 & BF75) were 0.9 m deep and were set in the mid-points of the short ends. They were circular, apparently flat-bottomed and without post-pits.

The sides of the hut were steep. As if walked on, the base of the sunken area was flat, slightly hardened, and sealed by patches of trample. The sunken area was peppered with about 80 stake holes. A line of stake holes spaced fairly evenly at 0.2 m intervals lay at about 0.5 m out from the south-west corner of the pit. Another less clearly defined line lay at a similar distance out from the east side. Both lines indicate wattle structures of some sort. The other stake holes formed irregular clusters reminiscent of the arrangement in Hut 1 at Lion Walk and may thus have been associated with looms.

A small group of stake holes (BF24) beyond the northern edge of the hut may be contemporary with it.

The fill of the sunken area was made up of two distinct layers (Sx 3.5 in Fig 3.73). The upper layer (BL6/12) post-dated the demolition of the hut. It consisted of a mixture of dark earth and rubble (ie a dark greyish-brown sandy loam with many fragments of septaria, greensand, tile, and mortar). The lower layer (BL13), being a fine, mixed sandy clay loam, contained much less rubble and was not so humic in character. This did not appear to be an occupation layer because it was very mixed, it dipped in the middle, and was not horizontally layered. During the excavation of the lower layer, many of the stake holes were detected as loosely-filled narrow pipes, showing that the hut and the internal structures had probably been standing when this layer was formed or deposited. The postholes at either end of the hut were similarly visible which, together with the absence of traces of decayed timber, suggests that they were extracted after the formation of the lower layer. This conclusion is reinforced by the shape of the upper part of the eastern posthole. This was widened presumably during the removal of the post. The origin of the lower layer is obscure. One possibility is that the material accumulated at the foot of the walls of the building during a lengthy period when it stood derelict and unused. However, a shallow posthole (BF93) and post-pit (BF129) containing rubble packing cut the lower layer but did not penetrate the underlying floor. This suggests that there had been at least one secondary structural alteration to the building after the deposition of the lower layer and hence that it was still in use at this stage.

Apart from the postholes and stake holes, there was no positive evidence for the superstructure of the hut,



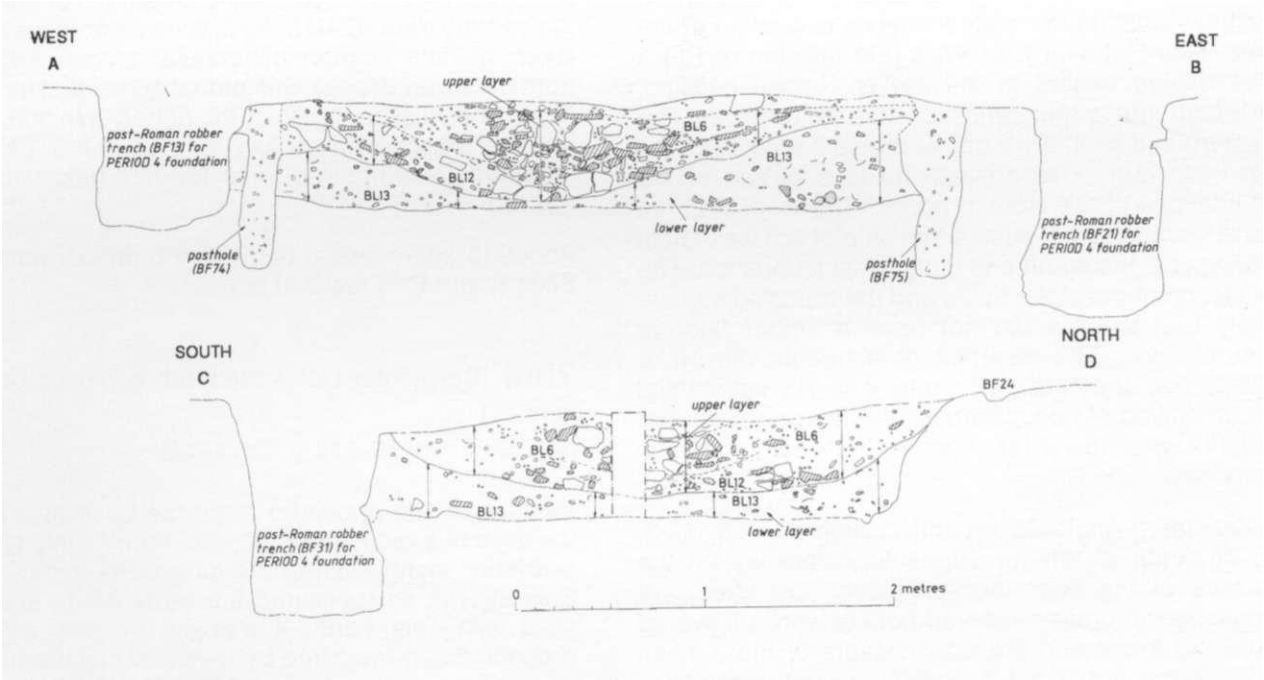


Fig 3.73 Colchester Hut 3 (Anglo-Saxon): plan and Sections 3.5-6. 1:40. [Pages 118-20]



Fig 3.74 Colchester Hut 3 (Anglo-Saxon). Viewed from the south. [Pages 118-20]

as the Anglo-Saxon ground surface had been destroyed during the early medieval cultivation of the area. Like Hut **1** at Lion Walk, the position of Hut 3 was related to that of the earlier Roman building, although the significance of this is unclear. The western and southern sides of the sunken area of the hut were dug close against the tops of two of the foundations of the Roman house. The work was not done thoroughly because a thin strip of soil was left *in situ* against the south end of the west foundation. The existence of the stake holes and the trampled surface imply that the hut did not have a timber floor at ground level. The absence of a hearth, the stake holes, and the fact that there was no substantial accumulation of occupation on the floor suggest that the hut was used for work rather than domestic purposes.

A decorated Anglo-Saxon antler comb *(CAR* 5, 22-3, fig 25,1850) of 6th- or 7th-century date lay on the surface of the floor. Approximately 150 sherds of Anglo-Saxon grass-tempered pottery were recovered from the lower and the upper layers of the sunken area of the hut *(CAR* 7, Fabric 1). This included a complete pot (B369) reassembled from sherds from the lower layer, and parts of at least four others from the upper layer. A copper-alloy ringed pin of probable 7th-century date *(CAR* **5***,* fig 2,3) came from the upper layer; a ?late Roman penannular brooch fragment from the lower deposit was probably residual (pp 140; Fig 5.1,34). Taken together, the pottery, pin and comb indicate a broad 7th-century date for Hut 3. (We are indebted to Catherine Hills for her help with the above.)

About 15 sherds were recovered from elsewhere on Sites B and C in residual contexts.

?Hut (Colchester Hut 4; ?6th-8th centuries or 12th century)

[CUL Site E; Figs 3.9, 3.69, 3.72, & 3.75-6]

Feature EF166 appeared to be the base of a hut in the form of a rectangular pit with three evenly-spaced postholes along each of the long sides (Figs 3.69 & 3.75-6). The pit measured 5.5 m by 2.8 m and was filled with dark earth. It was 0.4 m deep but had probably been truncated by medieval cultivation. The postholes were between 0.20 and 0.55 m deep measured from the base of the pit. They are unlikely to have supported a timber-lining around the sides of

the pit because the postholes at the east and west ends were set well back from the corners. The building was cut by a late 12th- to early 13th-century pit (EF118) and itself appeared to cut an east-west robber trench (EF117) of late 11th- to early 12th-century date. These relationships and the latest finds in the feature indicate that the building probably belonged to the 12th century.

The fills of the pit EF166 and the robber trench were very similar so that it was difficult to distinguish between the two and there is therefore the chance that the robber trench cut the fill of the hut and that this relationship was missed during the excavation. Hence the hut could have been Anglo-Saxon, especially since the hut and the robber trench each contained a sherd of vegetable-tempered pottery. However, had the hut really predated the robber trench, then the hut would probably have been set to one side of the Roman foundation to avoid having to cut through the top of it.

A late Saxon/early medieval parallel in Colchester to EF166 is a pit (GF234) which lay in the yard of Building 28 at Lion Walk (*CAR* **3,** 77-8). This was smaller in size and over twice the depth (1.05 m) but it had at least six small posts around the sides and was of 12th-century date. The posts were seen as

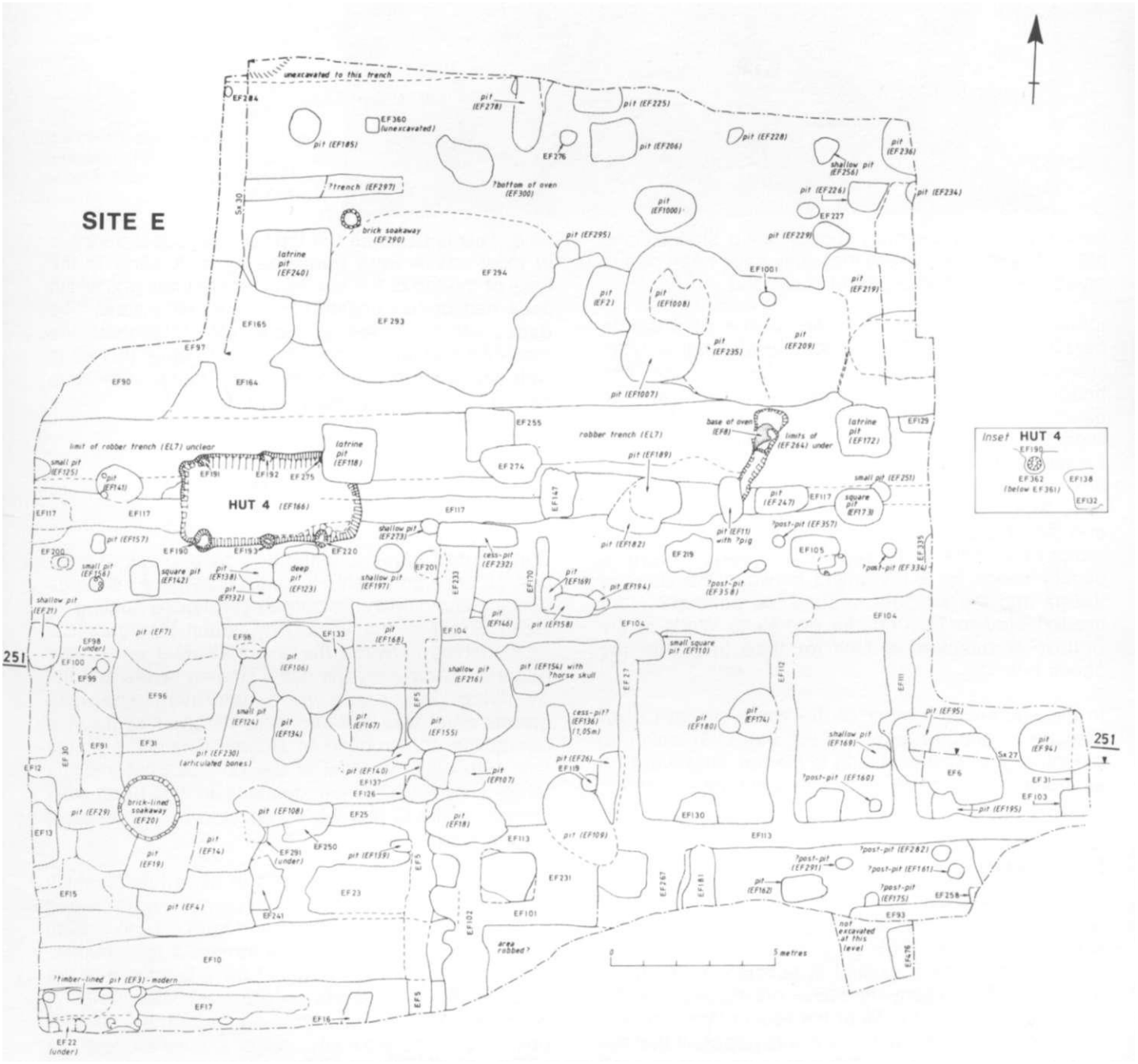


Fig 3.75 Post-Roman features at Site E, Culver Street. 1:184. [Pages 120-4]

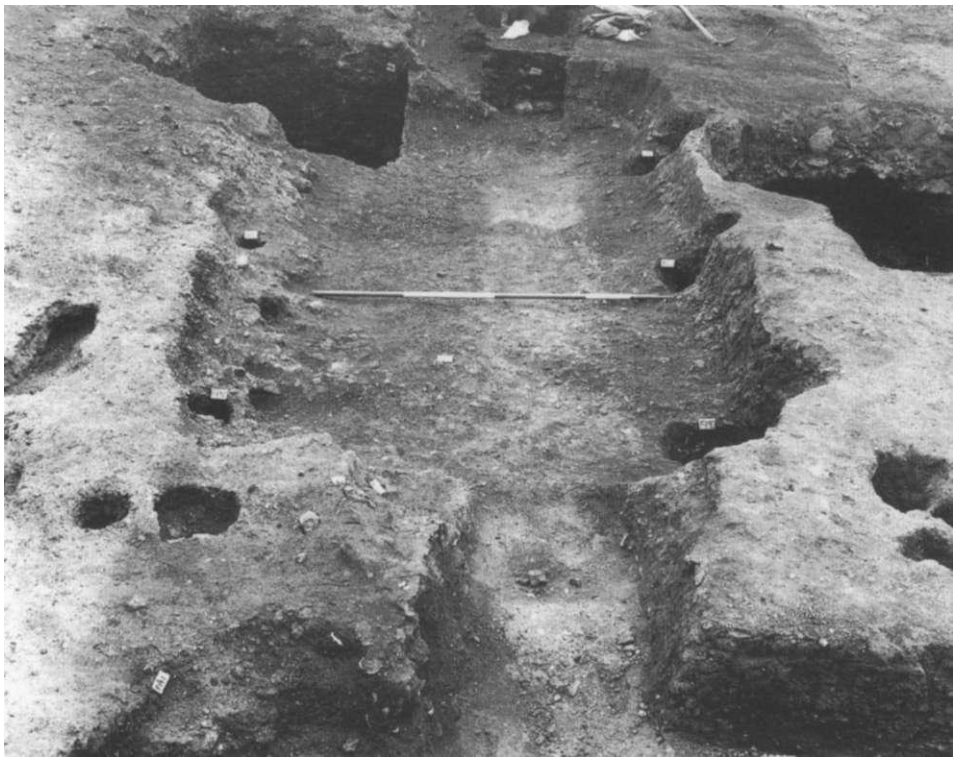


Fig 3.76 Colchester Hut 4 (?6th-8th centuries or 12th century). Viewed from the west. [Pages 120-2]

providing little more than support for a timber lining but, in the light of EF166, they may have been part of an above-ground structure of some sort.

Ipswich is the nearest major source of possible parallels for Saxo-Norman structures of this type. However, nothing closely resembling EF166 has been found in that town and it would seem that on balance the feature should be seen as being more likely the remains of an underfloor space for a hut of earlier Anglo-Saxon date. By contrast, the bases of the nearest comparable structures in Ipswich were used as floors and the buildings are usually deeper and associated with substantial quantities of contemporary pottery. Moreover at Ipswich there is usually space for a revetment between the sides of the pit and the supports around the perimeter. (We are indebted to Tom Loader and Keith Wade of the Suffolk Archaeological Unit for their help with the above.)

In the south-west corner of the same site at Culver Street was another feature (EF3, Fig 3.75) which, to a degree, was similar in plan to the hut. However EF3 seems almost certainly to be of recent date (p 115).

Dark earth

The uppermost Roman layers were overlain by an accumulation of topsoil, the so-called 'dark earth', which was a very dark greyish-brown sandy loam. This material clearly existed in substantial quantities by the time of the early medieval robbing because the main constituent in the fill of the robber trenches was the dark earth itself. However it was apparent that the dark earth was unlikely to have been much more than a spade's or a furrow's depth in most places at this time. This is because the tops of the robber trenches in most cases were truncated by dark earth at the level of the top of the surviving Roman material which itself had been truncated by the same means. The dark earth continued to accumulate throughout the medieval and later periods to a depth of up to 1.50 m with the uppermost 0.3 m or so being subject to periodic cultivation throughout this time.

Building 128 (early medieval?)

[CUL Sites G & J; Figs 3.9 & 3.72]

Building 128 is represented only by a series of post-pits of uncertain date. It was probably a utilitarian building standing in the garden of a house fronting on Head Street to the west. Any useful stratigraphical relationships between the pits and other layers and features (particularly the latest Roman layers and the overlying dark earth) were destroyed when the ground level was lowered over this part of the site during the construction of Rebow Chambers in the late 19th century. Most of the post-pits cut into the latest surviving Roman deposits in the north-west corner of Site G and were truncated by the floors of Rebow Chambers.

There were about 30 post-pits in all, a few of which contained clearly visible post-pipes. They ranged from 0.20 to 0.35 m in depth and from 0.10 to 0.15 m in diameter. Some of the pits formed a recognisable rectilinear plan; some may not have belonged to the building. Three post-pits on the west side (GF25-7) were rectangular in plan and contained circular post-pipes. One east-west row of at least six post-pits (GF27-9, GF35-6, & GF101) cut into the wall foundation of Building 119 (GF96).

Very few of the pits contained post-Roman finds and what there was dated to the post-medieval or modern periods apart from one sherd of early medieval pottery from JF71. However, because of the shallow nature of many of the pits, these finds may all be spurious and hence not true indicators of the date of the building. The pits GF26 and GF228 produced two joining sherds of c 19th-century date bearing the legend 'Friends of Colchester'. These are presumably associated with the construction of Rebow Chambers which originally was a Friends' Meeting House. Other sherds of this date were found in GF3. Pit GF25 contained slate.

Despite dating evidence to the contrary, the building could have belonged to the 11th or 12th centuries. A significant pointer in this respect is the fact that the building stood on the only substantial part of the Culver Street excavation site where the underlying Roman foundations were completely unrobbed. This suggests that the building existed during the time when the robbing of Roman foundations was prevalent, ie the late 11th and 12th centuries. Possibly almost as significant is the absence of early medieval pits, particularly in view of how common they were in the surrounding area (see below).

Robber trenches and other post-Roman features

[Figs 3.9, 3.72, 3.75, & 3.77]

Like Lion Walk, the earliest post-Roman activity (apart from that represented by the early Anglo-Saxon material) was the robbing of the Roman foundations which belonged to the late 11th and the 12th centuries although limited robbing activity seems to have continued into the 13th and possibly even the 14th centuries (eg BF3, BF86, & CF6).

Site A was extensively affected by pits dug during the medieval period. Most of the northern part of the site consisted of medium to large pits filled mainly with topsoil. Although these pits were largely left unexcavated, they seem to have extended well down into the natural sand. The southern half of the site was not so intensively pitted. The latest pottery in most of these pits, like those in the northern half of Site A, belonged to the late 15th or early 16th centuries. Three small pits contained pottery no later than the 13th or 14th centuries (AF13, AF14, & AF36). Several contained 17th-century pottery and clay pipes. Pit AF40 was of the late 17th or early 18th centuries. Presumably the southern pits are the result of piecemeal pit-digging in back gardens but, considering their size, the northern pits may have been dug to extract gravel from the Roman street or to quarry into the underlying natural sand.

With the exception of the north-west corner of Site B, medieval and later pitting on Sites B and C was not extensive. In the north-west corner of Site B were two large 13th- or 14th-century pits (BF62 & BF72; Fig 3.72) with burnt sides. These were probably the remains of lime kilns like those found at Lion Walk and elsewhere *(CAR* **3,** 30 & 87). The pits could not be fully excavated. Both cut robber trenches. Pit BF72 was at least 3m deep; its sides were only partly burnt, for reasons which are not clear. Other possible medieval features included BF26 and BF550. In the south-west corner of Site B, the Roman mortar floor (Building 113, Room 5) was cut by pits BF1/BF103 and many small pits backfilled with dark earth (BF10, BF104, BF147-165, & BF208). These were probably of 16th- or 17th-century date and perhaps were of horticultural origin. Other post-medieval features included BF61, BF66-7, BF96, & CF11).

Site E was the area at Culver Street which had been affected most by the digging of pits and other features. These ranged in date from the 11th or early 12th to the 18th or 19th centuries. The earliest post-Roman features seem to have been 11th- or 12th-century robber trenches. Although the southern frontage of Culver Street was not extensively built on until the 19th century, many of the other post-Roman features imply nearby occupation on the south side of the street dating from the about the 12th century. Distinctive features in this respect include the ?hut (Hut 4, EF166) which was apparently 12th century (pp 121-2) and two poorly-preserved ovens (EF8 & EF300; Figs 3.75 & 3.77) which were probably 13th century. The remains of oven EF8 took the form of a long pit less than 0.2 m deep. The sides and base were lined with clay which had been extensively burnt during its use. All that survived of oven EF300 was a shallow pit with burnt sides and base. Some of the smaller pits were deep (over 1.4 m) and square or rectangular in plan (EF118, EF172, EF232, & EF240). These were therefore probably latrine pits which, like those on Site G, were associated with buildings on the nearby street frontage. The largest pits (EF7, EF90, EF96, EF100, EF164-5, EF209, EF219, EF235, & EF293-4) occurred mostly on the site of the Periods 2-5 Roman street and formed a distinctive group partly because they fell within the same date range, namely the 15th to 17th centuries:

Of the post-Roman pits on Sites G and H, a substantial proportion turned out to be early medieval. Many of these were deep, steep-sided features which were likely to have been cess pits (eg GF60, GF185, GF260, GF284, GF352, GF557, HF67, HF208, HF332, HF372, & HF438). Supporting evidence to this effect comes from discovery of faecal concretions from two of the pits (GF185 & GF557; *see* below). Two others (GF163 & GF478) yielded similar evidence but these may have been dug primarily as sand pits and were used as cess pits when they became redundant. The cess pits were scattered over a wide area suggesting that it was not essential for these features to be close to the place of occupation and that hence they could have belonged to the occupants of the house or houses on the Head Street frontage. In the centre of Site G were at least three deep pits (GF163, GF376, & GF719) which were probably dug for sand. These contained exceptionally large quantities of 12th-century pottery and a penny

of Edward the Confessor dated 1062-5 (North 830). There were a few pits which had sides which coincided with the edge of a robber trench (ie GF174, GF185, GF3458, & HF365). These give the impression that they may have been dug when the foundations still existed — in other words that they predated the robber trenches. It is hard to establish by excavation the relationship between adjacent features in contexts like these, particularly when the pit concerned is deep and the subsidence caused by it is severe. However, all these pits contain pottery which places them later than the robber trenches. One of them (HF365) has been dated to the first half of the 12th century and is one of the earliest of the post-Roman pits on the entire Culver Street site.

On Site J, there was a large scatter of small shallow pits most of which were probably 12th or 13th century in date. Apparently contemporary was a large pit with slightly scorched sides (JF55, Fig 3.77). This was probably an oven which was similar to EF300.

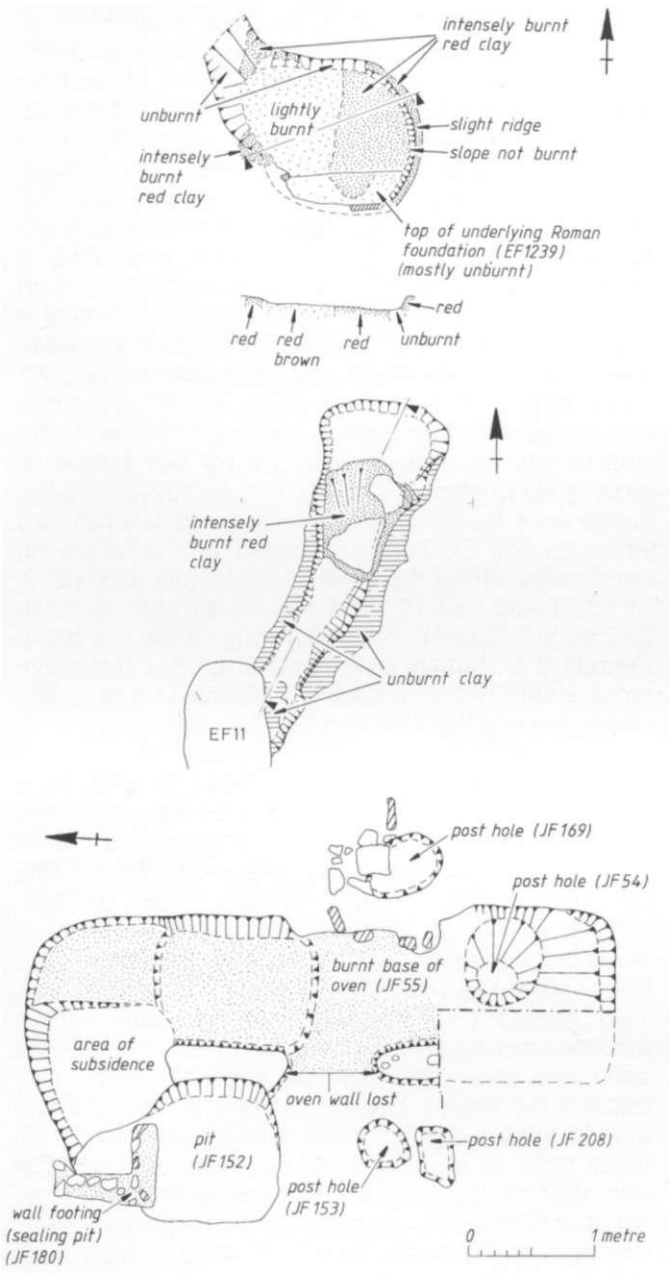


Fig 3.77 Post-Roman ovens. Above: EF300; centre: EF8; below: JF55. 1:60. [Pages 123-4]

In general, most of the area covered by the Culver Street excavation appears to have been open until the 19th century. It is shown as mostly being laid to gardens on Speed's map of 1610 and Morant's of 1748. The southern frontage of Culver Street was built over in the 19th century for a distillery and for outbuildings for the White Hart Inn.

In 1865 an iron foundry (Davey, Paxman, and Davey) was established in the former White Hart buildings. Contemporary or subsequent alterations seem to have involved the construction of cellars which in places had been dug into natural sand (BF17). In the late 19th century, the foundry (by this stage Mumford's) was extended eastwards to incorporate the former distillery buildings and southwards with the construction of a set of 'fitting shops' on what had been Mrs Prosser's garden (p 36, no 13, Fig 1.2). (For a plan of the foundry in 1909, *see* the *Insurance Plan of Colchester.)* A line of concrete bases on Sites B and C (BF6, BF30, BF100, BF138, & CF1) was a result of this southwards expansion. By the time of its demolition in 1933-4, the foundry occupied the full length of the Culver Street frontage north of Sites A, B, and E and extended southwards to reach the south side of Sites J, D and M. The former public library was built on part of its site, the rest being taken up by car parks and Shewell Road which, having originated as a 19th-century cul-de-sac, was extended northwards to join Culver Street. Despite the scale and extent of the iron works, it is surprising how little impact it had on the archaeological deposits below. The best preserved remains of the foundry were noted on Site E (Sx 3.30, Sheet 3a).

Samples from medieval pits

by Peter Murphy

Bulk samples were collected from pits GF163, GF185, GF293, GF376, GF478, GF557 and GF661, all of 12th to 13th century date. Four of these contexts were presumably cess pits (GF163, GF185, GF478, & GF557) as they contained mineralised faecal concretions usually with mineralised fly puparia and other arthropods and mineralised plant macrofossils. These include fruitstones and seeds of blackberry *(Rubus fruticosus),* sloe and/or cherry *[Prunus* sp.) and apple *(Malus sylvestris/domestica),* fragments of bean testa *(Vicia faba)* and testa fragments of the weed *Agrostemma githago,* formerly a common contaminant of whole grain foods. Residues of this type, preserved by phosphatic mineralisation, commonly occur in archaeological deposits partly composed of human faeces. In addition, pits GF163 and GF557 contained small ficiform coprolites, thought to be goat droppings, and GF557 produced a possible canine coprolite including many chips of bone. Other macrofossils from these features include

carbonised cereals (bread/club wheat, rye, barley, oats), charcoal, mineralised wood and stem fragments, marine mollusc shell, avian eggshell and bone. In GF185, small fish bones were notably common. In the remaining pits mineralised macrofossils are either absent or much less abundant and these features are therefore thought to have been used mainly for disposal of domestic refuse, rather than being cess pits. Full lists of macrofossils identified are given in Tables 8.10, 8.14, 8.21.

Building 129 (715th to 16th centuries)

[CUL Site H; Figs 3.9 & 3.72]

Building 129 refers to a group of probably three separate outbuildings of likely 15th- to 16th-century date. Morant's map of Colchester in 1748 shows this area to have been part of a large planned garden stretching from the rear of Head Street to two-thirds of the way to Trinity Street. Although substantially later in date, the map does indicate that these buildings are likely to have been ancillary structures in the garden of one of the houses fronting on to Head Street to the west.

The best preserved of these structures was a small cellar (HF39). It walls were constructed entirely of random-coursed septaria apart from the west end where the entrance was formed by two neatly-made jambs of narrow brick. The cellar floor was made of trampled earth and was about 1.0 m lower than the ground surface outside. Access into the cellar was via a rectangular pit (HF158). Stairs or steps presumably were used but no clear evidence of these survived. The latest material in the backfill of the cellar and the pit was of early 16th-century date.

North of the cellar were the fragmentary foundations (HF75, HF89, & HF483) of a small rectangular building measuring 4.7 m by at least 3.4 m. The foundations, which were shallow and made of coursed septaria and peg-tile, were narrow and presumably supported a timber-frame. One part (HF89) rested directly on top of the tessellated pavement in Passage 4 of Building 116 whilst the long north-south section (HF75) had been built partly on top of the western foundation of the same passage.

Some considerable time before the excavation began, the area south of the cellar had been lowered to leave exposed the base of a wide foundation (HF94) and part of a probable drain (HF93). The latter was made of septaria and mortar with a central channel formed of peg-tile. A similar more complete example occurred on Site C at Lion Walk (LWC CF95 on fig 61 in *CAR* **3).**

Between the ?drain and the cellar to the north were three, perfectly circular, shallow depressions (Fig 3.72). These may have been the bases of settings for small wooden barrels like the larger examples found at Middleborough *(CAR* **3,** 203). Whatever the true purpose of the depressions, their presence underlines the probable utilitarian nature of this group of buildings.

Building 130 (medieval)

[CUL Site W; Figs 1.2 & 3.78]

A cellar (WF50; Fig 3.78) fronted on to Head Street and lay under Headgate House (Nos 44-8 Head Street; Fig 1.2). It had been backfilled, possibly during

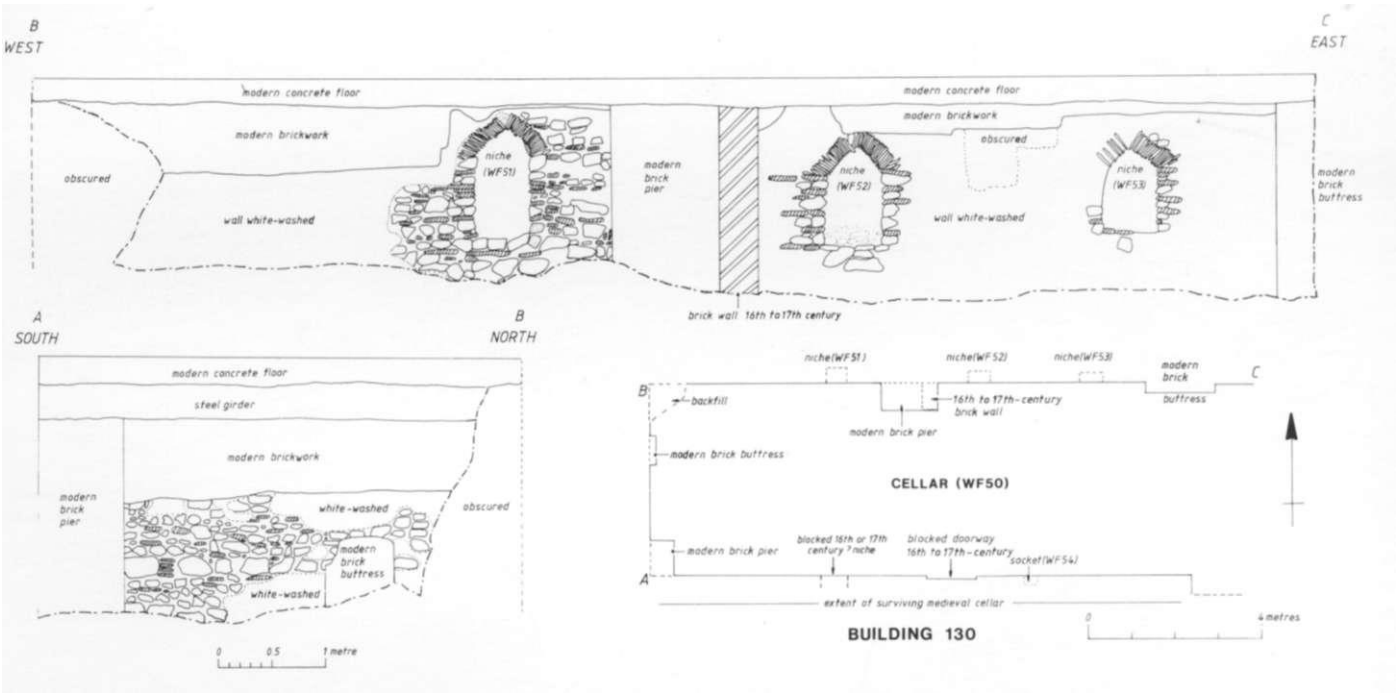


Fig 3.78 Site WBuilding 130 (medieval cellar): plan (1:175) & elevations (1:71). [Pages 125-6]

alterations to Headgate House in the 1960s, and had to be temporarily emptied out during the ground-works for the new precinct. Most of the backfill was removed and some records made. The cellar was then backfilled again and, apart from the upper 0.3 m or so, it should still survive more or less intact.

Measured internally, the cellar is 4.5 m wide and at least 11.55 m long. The east wall is missing. The internal height, which was at least 2.0 m, could not be measured because the floor was never uncovered and its ceiling had been destroyed. The walls are largely obscured by thick layers of whitewash, but where exposed, they proved to be constructed of roughly-coursed ragstone and tile, the latter being a mixture of peg-tile and reused Roman material.

The north wall contains three niches (WF51-3) with pointed heads formed of peg-tile. In the south wall is a small socket (WF54) which may be a mortice for some form of timber-work. The back of the socket slopes inwards as it rises, being at its deepest at the bottom (0.25 m). There is little to permit close dating of the cellar. The absence of brick, the presence of peg-tile, and the shape of the recesses indicate a probable date within the 13th to 15th centuries for its construction.

Probably in the 16th or 17th century, a doorway and a niche or small window were inserted into the south wall presumably to link the cellar with another one to the south. The jambs of these openings were made of soft red hand-made bricks. The head of the doorway was cut off by the modern concrete floor above. A north-south wall was built against the north side of the cellar in the same material. Only about 0.5 m of the wall survived. The wall probably did not divide the cellar into two compartments because it is aligned on the west half of the inserted door.

In the 19th or 20th century, the doorway and the contemporary ?niche were bricked up. The east wall was demolished, brick buttresses were built against the west and north walls, and the upper parts of the rubble walls were rebuilt in brick.

Building surveys

[CUL W; Figs 1.2, 3.79, 13.281, & 13.283-301]

During the course of the excavations, five standing buildings were surveyed; all of these have since been demolished (Fig 1.2). They ranged in date from No 40 Head Street, which incorporated the remains of a 16th century house, to a printing works of 19th or early 20th century origin. Details are given on microfiche (6/85, 7/85b, 8/85a, 8/85b, & 8/85c).

4: EXCAVATIONS AT THE GILBERD SCHOOL, NORTH HILL 1984-5

by D Shimmin

Introduction

A rescue excavation took place in the grounds of the former Gilberd School, North Hill (TL99282528) in advance of conversion of the school into a sixth form college (Fig 4.1). This involved the construction of a large annexe terraced into the hillside to the south of the main school building.

The site lies immediately inside the Roman town wall, near the junction of known east-west and north-south streets which formed the north-east corner of Insula 17a *(see* Fig 2.9). The extent of previous archaeological work in the immediate area had been limited. Remains of a Roman house in Insula 9 were uncovered beneath the main school building in 1865 and 1910 (Hull 1958, 93-7). A section was dug behind the town wall in 1938, revealing an internal tower (Fig 4.1; Hull 1958, 22-4). The stretch of town wall to the south of the tower had collapsed and been removed at the end of the 18th century. On the site itself previous work had been limited to unpublished trial trenches along the periphery. All had been dug by masters and boys from the school: some in 1938 (soon afterwards apparently used for air-raid shelters), and some in the early 1970s. The latter revealed street metalling along the eastern edge of the site, and a short length of Roman stone-and-mortar plinth of military date in the south-west corner (Fig 4.2, Sheet 4a).

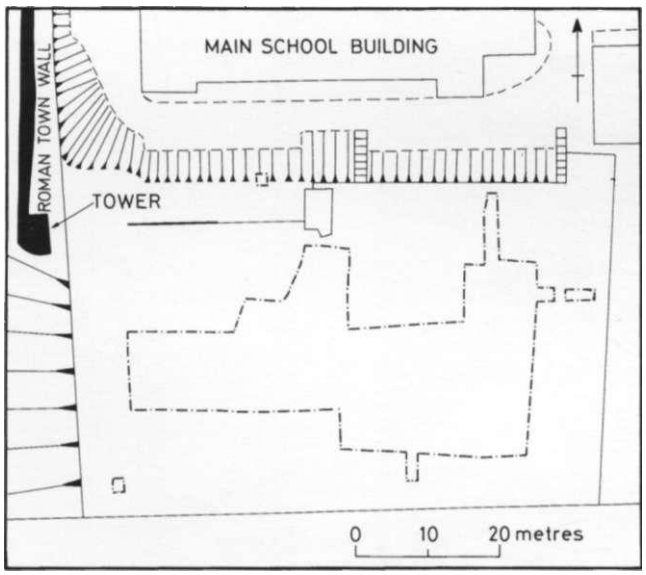


Fig 4.1 The Gilberd School site in relation to the town wall and the main school building.

The site lies on a north-facing slope with the modern ground level dropping from approximately 29.3 m to 27 m OD. There was a more marked drop in slope immediately north of the site down to the level of the main school block at approximately 24.4 m OD (Fig 4.1).

Excavation began in July 1984 on the eastern half of the site (Site A), and was subsequently extended westwards (Site B) in January 1985. The excavation drew to a close in April 1985, by which time 1,040 square metres had been investigated. The post-Roman topsoil on the site was stripped by machine. It also proved necessary to remove some Roman levels by machine on Site B in order to reach the pre-Boudican levels. Open-area excavation revealed a well-preserved but comparatively shallow (usually under 1 m thick) series of archaeological deposits. Some trenching was carried out at the edges of the site, notably to section the Roman streets. A limited programme of environmental sampling was undertaken from Boudican deposits and some pits *(see* p 288).

Summary

Rescue excavation of a town centre site with minimal post-Roman disturbance revealed the men's quarters *(contubernia)* of a legionary barrack block, which was aligned east-west and was situated towards the rear of the fortress. The *contubernia,* which were excavated in Colchester for the first time, were defined by regularly spaced slots and measured internally 5.75 m (20 pM) by 3.5 m (12 pM). There were probably thirteen *contubernia,* which included two larger rooms at the western end, adjacent to the centurion's quarters.

There was some evidence from the barrack block for secondary occupation, which perhaps dated to the early years of the *colonia,* although the structure had largely been demolished and built over before the Boudican revolt. The early colonial remains consisted of a large building with pile foundations and several smaller structures, all of which were destroyed in AD 60/1. The evidence for post-Boudican occupation, which was surprisingly sparse, included the edge of one building and a small structure of probable 3rd- or 4th-century date. Much of the site remained an open area throughout the Roman period, with sporadic pit digging and possibly cultivation taking place.

The site was probably used primarily for cultivation in the medieval and post-medieval periods, although in the south-east corner of the site there were two

medieval industrial features, namely a casting pit and a lime kiln.

Pre-Roman occupation

[Fig 4.2]

Evidence for prehistoric occupation was limited to a scatter of pottery sherds and flint flakes in the north-east corner of the site, and possibly two small pits in the north-west corner. The slight scatter of material, which included a rim fragment of an Neolithic plain bowl (Fig 12.1,5), a body sherd of a Deverel-Rimbury biconical vessel (Fig 12.2,29), and two plano-convex flint knives of Late Neolithic/Early Bronze Age date (Appendix 16, p 783), was recovered from the surface of the natural sand in the north-east corner of the site, which had not been extensively cleared in the early Roman period. The two small pits (BF132 & BF133; Fig 4.2), one of which (BF133) contained a Late Bronze Age body sherd, cut a thick deposit of cover loam (AL214/218 & BL70). This layer, which is of periglacial origin, extended over much of the western two thirds of the site (Sxs 4.2 & 4.6), overlay natural sand, and in places reached a thickness of nearly a metre. A few largely undiagnostic prehistoric sherds and flint flakes were residual in contexts which were mostly of early Roman date.

Barrack Block 1 (Building 131: Period 1; c 44-49)

[Figs 4.2-4.4]

The men's quarters *(contubernia)* of this freestanding barrack block measured 52 m by 7 m externally. Barrack Block 1 faced southwards across a narrow street and was probably the most northerly of a group of six barracks, which extended northwards from the western gate of the fortress. These were aligned east-west with the centurions' quarters situated end on to the *via sagularis* to the west. The external walls rested on well-preserved mortared plinths, similar to those excavated at Lion Walk, Culver Street, and elsewhere (pp 22-3; *CAR* **3,** 20-1). Apart from clearance of the pre-Roman vegetation and topsoil, there was no definite evidence for military activity on the site predating the construction of Barrack Block 1. Following the initial clearance, the site of the barrack block was terraced, especially at the eastern end, in order to lessen the effects of the natural slope from south-east to north-west. In addition the plinths were set in construction trenches (AF275; Fig 4.2; Sx 4.3) which were up to 0.4 m deep at the eastern end. A stretch of the northern plinth (BF6) at the western end was also higher by 0.25 m to help counteract the slope. Nevertheless, a slight incline remained with the level of the southern plinth falling from approximately 27.2 m to 26.25 m OD over a distance of 50 m. There was also a drop of approximately 0.2 m between the



Fig 4.3 Barrack Block 1. Viewed from the east. [Pages 128-131]



Fig 4.4 Barrack Block 1. Viewed from the west, showing parts of the contubernia (Rooms 3-6) to the left and the drain (AF232) to the right. [Pages 128-131]

tops of the northern and southern plinths.

The plinths typically measured about 0.60 m x 0.35 m and were constructed of water-worn pebbles with some septaria blocks set in a hard yellowish mortar. Plinth BF6 was unusual in that it contained several fragments of tile. '

The superstructure of the external walls was probably of 'daub'-block construction *(CAR* 3, 22). No trace of this however survived *in situ* although several blocks (measuring approximately 430 x 300 x 90 mm) were recovered from associated contexts nearby, including the upper backfill of a pit (AF213) and a demolition level (AL181) overlying the south-east corner of Barrack Block 1. Traces of decayed timber, probably from a double ground-plate, sealed the southern plinth (AF214). A trench (AF207/210, Fig 4.5), associated with the demolition of the daub-block wall superstructure, perhaps indicated the approximate width of the wall. Over a hundred fragments of tile were recovered from the barrack block, in particular from demolition debris at the east end, indicating that the daub-block walls probably supported a tiled roof (P 252).

The *contubernia* were divided by internal partition walls, which were set in narrow slots 0.14-0.20 m wide, 0.20-0.25 m deep and 5.7-5.8 m long. The internal walls were probably of timber-framed construction, infilled with small daub-blocks, several possible fragments of which were recovered from the latest levels in Room 3. Traces of decayed timber from the ground-plates were found in the slots.

The evidence from the intact *contubernia* (Rooms 4 & 5) indicated that the slots were regularly spaced at intervals of 3.62-3.73 m. This perhaps reflects the planning of the *contubernia* in terms of widths of 12.5 pM (3.69 m). The slots themselves were perhaps 0.5 pM wide giving an internal room width of 12 pM. The distance between the inner edges of the plinths was 5.72-5.78 m. The intended length of the *contubernia* was perhaps 20 pM (5.9 m) (pp 7-10, Fig 2.4). The discrepancy between the actual and intended measurements is presumably to be explained by inaccuracies created during its construction.

The projected total length of 14 *contubernia* (175 pM, 51.6 m) accords well with the actual length of the men's quarters of Barrack Block 1, which including the external plinths was 52 m. The difference between these two figures depends on the relationship between the west wall of the western *contubernium* and the plinth which formed part of it. If, as seems likely, the wall was placed centrally on the plinth, then the difference becomes minimal.

Although there was space for fourteen *contubernia,* only thirteen were apparently built, two (Rooms 12 and 13) occupying the space intended for three (Fig 2.4, p 11). These larger rooms were used perhaps for storage, latrines or for accommodating junior officers (Pitts & St Joseph 1985, 164 & 171-3).

There was no convincing evidence that the *contubernia* had been subdivided into separate rooms for sleeping and storage. Similarly there were no unequivocal indications that the two barracks had verandahs. There was certainly a clearly defined space for a verandah between the *contubernia* and the street which they faced but whether this was covered is not clear. There were some postholes at the east end but these might have been for a structure erected over the street rather than a verandah.

It was not possible to clarify the arrangement between the men's quarters and the centurion's block to the west. The latter, which lay beyond the limits of the excavation, had probably been at least partially destroyed by terracing into Balkerne Hill and by the construction of a large World War II air-raid shelter.

The remains of Rooms 1 and 2, and much of Room 3 had been destroyed during the digging of a post-medieval pit (AF42). Rooms 3-6 were separated by narrow slots (AF225, AF208, & AF224; Fig 4.2; Sx 4.2). The floors were raised by a layer of make-up (AL174/AL213/ AL276) 0.15-0.3 m above the tops of the plinths (AF214 & AF309), with the floor level having a slight incline from south to north (Sxs 4.1 & 4.2). A hearth (AF324) was associated with a thin sand reflooring (AL191) in Room 3. A neonatal human burial lay in a shallow pit (AF270) cutting the earliest floor in the south-east corner of Room 4. There were two small hearths (AF246 & AF328) with isolated patches of burning and a small pit (AF329) in this room, again associated with a reflooring (AL169/274).

Rooms 5 and 6 were subdivided by shallow east-west slots (AF334 & AF336). The slots probably housed partition walls, which divided off space at the back of the room from an area just under 3.5 m (?12 pM) square at the front, although neither feature extended across the full width of the rooms. The backfill of the slots was sealed by the occupation (AL209/272 & AL201/278) lying on the earliest floors. The slots are unlikely to have been an integral part of the original *contubernia* and instead probably resulted from short-lived ad-hoc arrangements in the rooms. Immediately north of the partition (AF336) in Room 5 and probably associated with it were the remains of a hearth (AF330). This had a base of tile fragments and vitrified sandy clay sides. The earliest floor in Room 6 was associated with two small pits (AF262 & AF331), some stake holes, a possible hearth and the slot AF334. These were subsequently sealed by a layer of floor make-up (AL190/200/277; Sx 4.2) containing a coin of Agrippa (AD 40-50). Rooms 3-6 were characterised by thin dark occupation lenses (Sxs 4.1 & 4.2) sealing the floors.

Parts of Rooms 6 and 10 and all of Rooms 7-9 were destroyed in Period 2 during the construction of Building 133. A number of features and layers predated the earliest probable floor make-up for Rooms 10-13. There were two shallow parallel slots (BF152 & BF153) approximately 1.0 m apart on either side of the southern plinth (BF5). Both slots contained traces of decayed timber and were perhaps constructional features. The southern slot (BF153) was cut by or possibly associated with a small pit or posthole (BF154). The clearance horizon and the other slot (BF152) were sealed by a thin occupation lens (BL82; Sx 4.4) associated with patches of burning and charcoal spreads. These included three probable hearths (BF150, BF155, & BF163) and one partially-charred timber fragment (BF147; Fig 4.2 (inset)). Fragments of iron nails were recovered from BF155, BF163 and BF147. The deposits probably resulted from an initial construction phase. The position of BF147 immediately below the later slot (BF44) between Rooms 10 and 11, although probably fortuitous, suggests that it may perhaps be the remains of a ground-plate for a partition wall.

A thick layer of make-up consisting largely of clean sand (BL64; Sx 4.4) was used to raise the floor level in Rooms 10-13 approximately to the level of the top of the plinths. This layer contained the remains of an inlaid iron dagger scabbard (Fig 6.37,375) and an iron shield boss (Fig 6.35,372).

The floor make-up was cut by several north-south shallow slots (BF44, BF64, BF58, & BF59), which would have housed ground-plates for the partition walls between Rooms 10-13. The primary division between Rooms 10 and 11 was probably represented by a narrow slot (BF44), which was similar to the slots between Rooms 3-6. A wider slot (BF64) immediately to the west is likely to have been secondary. Both slots contained traces of decayed timber partially charred in AD 60/1. The distance between BF44 and a narrow slot (BF58) further west indicated that in its primary phase Room 11 had been about 100 mm wider than the other excavated *contubernia.*

Rooms 12 and 13 were of appreciably larger size than the other excavated examples. Room 12 was approximately 5 m wide and contained two shallow pits (BF63 & BF70). The evidence for the division between Rooms 12 and 13 consisted of a wide slot (BF59), a group of pile holes (BF48, Fig 4.5), and a charred beam (BF45, Fig 4.5); none of these were unequivocally primary features. Even if, as seems likely, BF45 and BF59 were secondary, then they presumably replaced a primary partition wall on a similar alignment. This is suggested by the straighter eastern edge of the pit (BF67) in the south-east corner of Room 13. This room was probably 4.5 m wide, just over half being available for excavation. The plinth forming the west wall of Room 13 was observed in a contractor's trench and hurriedly plotted. A north-south timber drain (BF38; Figs 4.2 &

4.5), perhaps for a latrine, extended southwards through a breach in the plinth BF5. The drain was 0.15 m deep with two slight depressions (BF76 & BF77) and had been built of nailed oak planks which were subsequently charred in 60/1. The floors of Rooms 10-13 were largely destroyed by later activities, although in places traces of thin sandy clay floors and associated occupation lenses survived.

The area between the *contubernia* and the street was approximately 2 m (7 pM) wide, and was bounded on the south side by an east-west drain (AF232/BF85). The surface of this area had been raised to and levelled off at approximately the same level as the *contubernia* floors, using make-up of sandy clay at the eastern end (Sx 4.1) and sand at the western end. Patches of gravelled surfaces were excavated at the eastern end (AL210) and outside Room 5 (AL177). The latter was associated with a short slot (AF277) of uncertain use. Outside Room 6 was a group of three small pits (AF254), approximately 0.25 m deep with intensely burned sides. These had probably been baking ovens. Immediately to the west was a large pit (AF252) approximately 1.75 m deep. Rubbish pits have been noted in similar positions elsewhere, for example at Inchtuthil (Pitts & St Joseph 1985, 151), although they do not appear to have been a regular feature of Building 131. The timber drain (BF38) continued across the area from Room 13, ending in a shallow depression (BF78) which may have been the beginning of an east-west gully.

The neatly-constructed timber drain (AF232/BF85) 0.25-0.3 m (1 pM) wide and 0.15-0.20 m deep (Sxs 4.1 & 4.3) extended along the north side of the street. There were extensive traces in AF232 of decayed timber, indicating that the lining had been left to rot *in situ.* Only a short stretch of the remains of the drain survived on Site B (BF85). Two short north-south slots (BF86 & BF87) below BF85 perhaps housed blocks of wood to help level up the drain.

Along the southern edge of the drain at the eastern end, there was a line of four evenly-spaced postholes (AF294, AF340/344, AF346, & AF351). Three (AF294, AF340/344, & AF346) had well-defined post-pipes approximately 0.2-0.25 m square and 0.4 m deep. The most easterly posthole consisted of a circular depression at the north end of a slot (AF351). The postholes were approximately 2.35 m (8 pM) from the plinth (AF214). The post-pipes were all offset to the west of the alignment of the internal walls forming the *contubernia.* This suggests that the east faces of the tops of the posts which had stood in the postholes butted against the west faces of timbers which extended from the internal walls of the *contubernia.* There was limited evidence of a corresponding arrangement on the south side of the street in the form of a posthole with a well-defined post-pipe (AF339) and a second posthole (AF342) in which one could not be found. Despite a careful search, no traces of equivalent postholes were detected further west on either side of the street apart from one unconvincing shallow ?posthole (BF166) near the west end of the site and a group of shallow ?postholes (AF285), on average 0.25 m deep in the south-west corner of Site A.

The most obvious explanation for the postholes is that they were parts of verandahs belonging to Barrack Blocks 1 and 2. However this does not explain why the postholes seemed to occur only at the east ends of the barracks unless the verandahs did not extend the full length of the *contubernia.* However, the drain AF232 and the gully AF338 would have been *inside* such a verandah, not outside as would be expected.

An alternative interpretation is that the postholes were part of a structure which had been built across the street and tied in to the roof trusses which presumably were integral with the walls forming the *contubernia.* A north-south slot (AF351) approximately 0.6 m deep extended across the eastern end of the street from the eastern end of the drain AF232. Slight depressions in the bottom of the slot seem to indicate the position of timber uprights, perhaps forming a revetment wall or small structure. A series of occupation layers (AL298/302/306) approximately 0.3 m thick, with a high concentration of charcoal flecks and ash, extended over the area between the eastern two *contubernia* of Barrack Blocks 1 and 2. Three small pits (AF347-9) were associated with the earliest of these layers. These deposits seem likely to have been derived from industrial activity, although with the possible exception of a group of hearths (AF83, AF94 & AF106; Fig 4.6) of uncertain date, no definite traces of ovens or furnaces were recovered and the layers were largely sterile.

Finds from inside Barrack Block 1 hint that the repair and finishing of military equipment were taking place on a small scale in the building or the immediate area: a probable blank for a cavalry harness pendant derived from occupation AL267 in Room 4 (Fig 6.42, **386);** a piece of sheet brass with secondary cutting from sandy clay floor AL263 in Room 5 (Fig 6.42, **387);** and an offcut from a repousse-decorated strip which may have been used in the repair of Pompeian-type sword scabbards from pit BF67 in Room 13 (Fig 6.43**,388).** From outside the barrack, in the area of the east-west street or possible structure across the line of the street, a small quantity of iron-rich fuel ash slag came from a drainage gully (AF338), and two pits (AF213 & AF250) produced a number of fragments of sheet metal, both copper-alloy and iron **(424-430 & 477-8,** microfiche) six from AF213 and three from AF250, which may represent further indications of the repair or manufacture of military equipment. The evidence for such activities must be regarded as tenuous because the quantity of finds concerned is small.

The east-west street (Period 1: *c* 44-49)

[Figs 4.2 & 4.4]

Only the eastern end of the street between Barrack Blocks 1 and 2 could be examined in any detail and

here it was found to have been approximately 5 m (15 pM) wide. In addition to an east-west incline, this section of the street sloped downwards slightly from south to north with a more pronounced gradient close to the north edge, presumably to improve the run-off of surplus water into the drain AF232 (Sxs 4.1 & 4.3). The extreme eastern end of the street, beyond the end of the barrack blocks to where it met the north-south street, had not been properly levelled or consolidated. Moreover the street had not been metalled over its whole length. A substantial layer of street metalling, which was approximately 0.25 m thick and of probable Period 1 date, was observed in a contractor's trench at the western end of the military street opposite Rooms 12 and 13, but this does not seem to have extended as far as Rooms 1-6. Thus the street is unlikely to have seen much use and may have been treated as if it were a *cul-de-sac* off the *via sagularis* to the west. The apparent erection of some kind of structure over the east end reinforces this conclusion.

Further west, the street area was cut by four large pits (AF211, AF213, AF250, & AF268) 1.25-1.50 m deep. They were probably rubbish pits similar to AF252. Finds included some items of military equipment (Fig 6.32, 363 (AF213) & Fig 6.32, 356 (AF268)) and copper alloy and iron sheet fragments mentioned above from the pits AF213 and AF250. Other features in the area included an oven (AF253) and some pits (AF259-61, AF263, AF266, AF271, & AF279). On Site B, part of a large pit (BF24) had been dug on the northern side of the street.

The east-west drain between the street and Barrack Block 2 was less regular than AF232. The eastern end consisted of a narrow gully (AF186/338) approximately 0.45 m deep. Like AF232 on the opposite side of the street, this was located along the inner edges of some postholes (AF339 & AF342; *see* above). The thick occupation deposits in the street area were cut by the drain (AF338) suggesting that the latter had either been re-cut or that it was a secondary feature. This part of the drain conducted waste water westwards into a wider shallow gully (AF248; Sxs 4.1 & 4.3). The latter would have lain to the north of the postholes if they continued westwards.

Barrack Block 2 (Building 132; Period 1: *c* 44-49)

[Fig 4.2]

The north wall of Barrack Block 2 on the south side of the street was located by trenching. It was apparently of similar type and construction to Barrack Block 1. The plan of the former was probably a mirror image of the layout of the latter, and Barrack Block 2 is likely to have been built back-to-back with a barrack block to the south (Fig 2.1).

The short length of plinth (AF291; Sx 4.3) which was uncovered on Site A, had been set in a shallow construction trench (AF312). A small area of floor, excavated immediately to the south of the plinth, was associated with a ?hearth (AF308) and a ?slot (AF307), which presumably represented a partition wall between *contubernia* (Rooms 3 & 4).

A north-south plinth, first uncovered during the unpublished excavations carried out by the school in the early 1970s, was relocated in a trench beyond the south-west corner of the site. It probably formed part of the dividing wall between the centurion's quarters and the men's quarters of Barrack Block 2.

The area between the *contubernia* and the street was sealed by occupation layers and a gravel spread (AL237) associated with a group of amphora sherds (Colchester Type AA 17, 17D *(CAR* **10**)). A coin of Agrippa (AD 40-50) was recovered from an occupation layer (AL156).

The north-south street was excavated at the eastern margin of the site. The earliest layer of metalling (AL76/161) was approximately 0.1 m thick and of probable Period 1 origin. The most westerly patch of gravel (AL76) was loose and possibly not the real edge of the street.

There were no definite traces of military occupation for at least 20 metres to the north of Barrack Block 1, leaving an unusually large vacant area inside the fortress.

Secondary use of Barrack Block 1 (Building 131; Period 1 or 2: *c* 44-60/1)

[Figs 4.2 & 4.5]

The evidence for secondary occupation within Building 131 included postholes, pits and floors, with some modifications to the internal layout. This evidence, together with the fact that Rooms 10-13 were burnt in 60/1, suggests that at least part of Barrack Block 1 continued in use in Period 2.

Rooms 3-6 were refloored with sandy clay and sealed by fairly thick occupation layers (Sxs 4.1 & 4.2). Room 4 contained some pits (AF209 & AF327), gullies (AF323 & AF337), hearths (AF212 & AF233) and a posthole (AF238). The pits and gullies had green-stained edges and were cut into natural sand. They were probably used as soakaways or drains and suggest that the room no longer functioned as a *contubernium.* A line of postholes (AF319, AF304, AF320, AF303, AF325, AF302, AF314-15, AF321, AF316, & AF322) lay along the inner edge of the plinth AF309 at the north end of Rooms 3 and 4. They ranged in depth from 0.30 to 0.65 m. These postholes belonged to a late phase of Building 131 and were probably associated with a repair of the wall and roof. There were some pits (AF217, AF240, & AF241) and a posthole (AF239) in Room 5, and a tile spread (AF313) in Room 6.

In a final phase of use the *contubernia* divisions (AF208, AF224, & possibly AF225) were demolished and the slots backfilled. They were sealed by a floor

deposit of mixed sandy clay (AL121, AL251, & AL255) upon which a thick occupation layer (AL96, AL120, & AL250) accumulated, especially over Rooms 5 and 6 (Sx 4.2). This again suggests secondary military or more likely early colonial reuse of Barrack Block 1 prior to its demolition.

In Room 10 there were two pits (BF12 & BF54), the largest of which (BF12) was 1.3 m deep. The remains of a ground-plate, charred in 60/1, survived in a slot (BF64), which perhaps housed the base of a replacement wall for BF44.

The primary slot (BF58) between Rooms 11 and 12 was backfilled and the enlarged room was refloored. Two stakes (BF55 & BF56), charred in 60/1, survived to floor level. The evidence for a partition between Rooms 11/12 and 13 included a slot (BF59), a charred ground-plate (BF45) and a group of pile holes (BF48), 0.30-0.45 m deep. The piles were similar to examples excavated in Building 133 and were thus most likely of Period 2 date. The timber drain (BF38) continued in use and was charred in 60/1. An occupation layer (BL35, BL46 & BL63; Sx 4.4), heavily scorched in 60/1, sealed the secondary floors in Rooms 11/12 and 13. This further indicates that the western end of Building 131 was standing and probably in use at the time of the Boudican revolt.

Occupation deposits (AL112, AL142, AL157, AL228, & AL230; Sxs 4.1 & 4.3) accumulated between Building 131 and the street to the south, notably on Site A. They were associated with make-up layers (AL125, AL229, & AL294) and a gravel spread (AL119).

A series of secondary postholes was excavated next to the eastern end of the drain AF232 near the end of Building 131. This consisted of five groups of paired postholes (AF98, AF125, AF196, AF265/267 & AF345) 0.5-1.0 m deep and 0.15-0.20 m wide, most of which contained traces of decayed timber. The groups included circular and squared posts. These postholes were situated immediately north of the drain (AF232), unlike the Period 1 postholes (AF294, AF344, AF346 & AF351; Fig 4.2), which they presumably either replaced or reinforced. The similarity of these paired postholes to examples excavated in Building 134 (namely AF227/288 & AF288/293; *see* Fig 4.5 & pp 134-5) suggests that they belonged to Period 2. The extension of the line of postholes eastwards (AF265/267), together with the evidence of posthole groups further south (AF157-9 & AF173) reinforces the suggestion that a structure spanned the east-west unmetalled street. This ?building may have fronted on to the north-south street during Period 2, although there were no definite remains of floors or Boudican destruction in this area. Some large pits (AF129, AF143, & AF202) were associated with the postholes and were possibly post-pits.

The drain (AF232) initially continued in use and the western end (BF52) was re-cut. However it had been largely backfilled prior to the demolition of Building 131 and the timber left to rot *in situ.*

The Period 1 ?industrial occupation deposits at the eastern end of the street were sealed by a sandy clay make-up layer (AL85 & AL300/301) associated with a thin occupation lens (AL83 & AL289). Further west the street area was sealed by an occupation layer (AL114, AL136, & AL146; Sxs 4.1 & 4.3) and a substantial gravel spread (AL119). The occupation layer contained traces of pigment (mainly blue with some red and other colours) suggesting that paint for decorating wall plaster was being prepared on the site. The drainage gullies to the south of the street went out of use and the backfill of AF248 included further traces of pigment. There was no definite evidence for the secondary use of Building 132.

Building 133 (Period 2: *c* 49-60/1)

[Fig 4.5]

A substantial timber-framed structure (Building 133) was constructed on a terrace dug through the central part of Barrack Block 1 during the early years of the colony. Building 133, which was subsequently destroyed in 60/1, was 12.5 m wide and at least 18.75 m long. It extended beyond the south section probably for at least a further 5.5 m. The terracing, which involved the removal of 0.5-1.0 m of deposits (Sx 4.6), provided a flat site for construction work approximately level with the newly laid-out street to the north.

Most of the timber-framed walls were supported by piles, usually in fairly regularly-spaced groups of two, four or sometimes more, which were driven into the cover loam to reach the underlying natural sand *(CAR* **3,** 20). The holes for the piles varied in depth from 0.4 m to over 1.0 m and housed both square and round posts, with traces of decayed timber surviving *in situ.* Many of the groups of piles were set in shallow, rectangular pits (eg BF94-6). It is unlikely that the groups of piles necessarily corresponded to the positions of the uprights in the timber-frame which they supported.

Piles were not used along the eastern side of Building 133, where natural sand was near or at the surface. Here the wall was set in a shallow slot (BF84 & BF93; Sx 4.6). The internal walls in the southern part of the building also rested in slots. There were traces of charred timber ground-plates in some of the slots; the wider examples probably contained double ground-plates (eg BF62 & BF65).

Little survived of the superstructure of the walls which were probably of daub-block construction. Fragments of several small blocks were found in and near the slot BF60, and the destruction debris backfilling the terrace contained large quantities of burnt 'daub'. The large number of tile fragments recovered suggests that Building 133 had a tiled roof.

The long, rectangular plan of Building 133 was

divided into two parallel rows of rooms of different widths to either side of a load-bearing wall. Rooms 1, 3 and 5/6 were 7.5 m wide and Rooms 2, 4 and 7 were approximately 3 m wide. The absence of piles at the extreme north end of the line of the wall between Rooms 1 and 2 might possibly be explained if the pile groups BF138, BF141 and BF142 supported a verandah or colonnade along the front of Building 133. The eastern, external wall of Room 2 was of two different types of construction. The northern part included two pile groups (BF151 & BF162) and a short slot (BF115). The remains of the southern end, where natural sand was near the surface, consisted of a slot (BF84), 0.3 m deep, containing traces of a decayed timber ground-plate and at least six uprights (BF19-21 & BF159-61). In addition to the roof, these posts also supported a north-south vertical timber revetment along the edge of the terrace, the charred remains of which survived up to 0.7 m high. In Room 2 there was a large north-south gully (BF73) 0.6 m deep, which cut into natural sand and was perhaps a soakaway. The gully had a timber cover supported by joists set in short, shallow slots (BF90/91, BF81/82, BF80/89, BF79/88, & BF74/27). A parallel for this method of supporting the cover is provided by the military drain EF1021 where it passed under the street between Buildings 83 and 84 (p 54). Fragments of charred timber survived *in situ* in some of the slots, and the remains of two collapsed, charred timber planks (BF83), presumably part of the cover, were found in the bottom of BF73. A D-shaped gridiron (Fig 6.13,135; BF68), resting on tile fragments, was recovered from the side of BF73 into which it had apparently slipped.

The groups of piles (BF102, BF111, BF108, BF149, BF148, & BF143) on the line of the wall between Rooms 1 and 3 were associated with a shallow slot (BF75) at the eastern end and a line of stake holes (BF114), presumably for a stake-and-wattle wall *(CAR* 3, 23) over the western half, with perhaps a doorway in the middle. The Room 3/4 wall was also set in a shallow slot (BF65). The eastern wall of Rooms 4 and 7 was housed in a narrow slot (BF93) which was 0.4 m deep and similar to BF84. There were traces of the decayed timber ground-plate and the vertical revetment, and the positions of four probable studs (BF104, BF105, BF98, & BF99) were established. The infill survived to floor level and consisted of layers of sandy clay and sand sealed by two courses of mortared fragments of tile.

The position of the western external wall of Room 3 was indicated by a line of pile-holes (BF127-130) aligned diagonally along the edge of a drainage gully (BF72). There was no evidence for piles further south, and the narrow slot (BF60) dividing Rooms 3 and 5/6 ended abruptly at the edge of BF72. There was space for a doorway at the east end of BF60.

Rooms 1-7 had sandy clay floors (BL71, BL90, BL96, BL97, & BL99) sealed by thin occupation layers (BL33, BL80, BL81, BL87, BL89, & BL95; Sx 4.6) scorched in 60/1. There were traces of a very thin occupation spread (BL72/91) underneath the sandy clay floors, and a probable hearth (BF164), with other burnt patches nearby below the floor of Room 4. These perhaps derived from a construction phase.

The large drainage gully (BF72), 0.75 m deep, which apparently extended out from Room 5 on the west side of Building 133, probably housed a timber drain. Two shallow parallel groves in the bottom of the gully perhaps indicated the position of the sides of the drain.The western side of the gully, which formed the edge of the building terrace, had been backfilled up to the edge of the drain, with Period 1 plinth fragments being incorporated in the dump material. Remains of the timber drain seem to have been removed in the post-Boudican clearance, prior to the gully being backfilled with destruction debris.

A short length of a probable timber drain (AF205) on the eastern side of Building 133 was excavated in the south-west corner of Site A. Charred oak fragments formed the bottom, sides and possibly the lid of the drain. However there were no traces of the drain further north and it is possible that AF205 turned westwards through Building 133, perhaps to conduct waste into BF72. Two voids (AF218 & AF219) were observed in section immediately west of AF205; they were probably postholes for the east wall of Building 133.

Building 134 (Period 2: *c* 49-60/1)
[Fig 4.5]

A small rectangular structure (Building 134) was built during Period 2 in the north-east corner of the site, in part overlying the demolished Barrack Block 1. Building 134 was constructed on a fairly flat area of natural sand in the north-east corner of Insula 17a, and was probably a rather insubstantial timber-framed structure fronting on to the north-south street. It was subsequently burnt down during the Boudican revolt. The surviving remains included ground-plates, a well-defined burnt floor, and charred stumps of posts, which in three or perhaps four cases were in pairs (AF227/228, AF272/273, AF288/293, & 7AF287/231). The external walls were probably of the stud-and-wattle type *(CAR* 3, 22) since some of the burnt sandy clay from the associated Boudican destruction debris contained wattle impressions. There was no definite evidence for internal divisions into separate rooms. The quantity of tile fragments from the destruction debris suggests that the roof was tiled.

Prior to the construction of Building 134, the east end of the redundant barrack block (Building 131) was demolished and the plinth in the north-east corner was robbed out (AF280) with the surviving length of plinth (AF251) and the area immediately to the east being sealed by dump (AL181, AL231, & AL236), probably from the demolished daub-block walls.

The probable position of the north wall of Building 134

was indicated by the edge of the burnt floor. A longitudinal east-west feature (AF119), 0.4 m deep, in the northern part of the building, was probably not structural, and perhaps functioned as a drain or soakaway. The charred post stumps AF255 and AF227/228, which were approximately 0.5 m deep, divided the central part of the building into three bays and perhaps supported a central ridge. Traces of a charred ground-plate lay on the eastern edge (AF226). There was a pair of charred post stumps (AF272/273), possibly traces of a charred ground-plate, and a posthole (AF317) containing decayed timber on the western side. Along the southern edge of the building were a charred timber stump (AF231), a posthole (AF287), and a pair of postholes (AF288/293), which contained decayed timber and possibly indicated a doorway.

The floor of the building consisted of disturbed natural sand (AL158) sealed by a thin occupation layer (AL47) scorched in 60/1. The floor was sealed by a thin layer of Boudican destruction debris (AL45/6). Finds on the floor included a copper-alloy ?bowl (Fig 6.12,133, p 217) and a patera handle (Fig 6.11,131, pp 216-17) from AL47 whilst from redeposited Boudican destruction debris AL46 was a copper-alloy dish or scale pan (Fig 6.18,195, p 221).

The plan and size of the building and the quality of the associated finds suggest that it did not have a straightforward domestic function.

Building 135 (Period 2: *c* 49-60/1)
[Fig 4.5]

The southern edge of a structure (Building 135) lay immediately north of the reused western end of Building 131. Only a narrow strip of one room, burnt in 60/1, was available for excavation. This was probably the rear of a building which fronted on to the east-west street and occupied the plot immediately west of Building 133.

The walls, which were probably of stud-and-wattle type, were set in shallow slots (BF46 & BF139). A charred timber ground-plate survived in BF46, and there were traces of decayed timber in BF139. The Period 1 plinth (BF6) was apparently reused to form the south wall of Building 135. The north face of the plinth was heavily burnt and cracked.

The floor was of sandy clay (BL84) and was sealed by a scorched occupation layer (BL39). A thin scatter of fruits and seeds of grassland plants including bramble fruit stones and hazelnut shell fragments were recovered by flotation from BL39. This material suggests that either animals were housed in Building 134 or that hay was spread on the floor (p 288, Table 10.1, microfiche). (Although from a later context and from elsewhere on the site, it is of interest to note the prong of a hay-rake (Fig 6.30,244) from a Period 3 pit (AF121).)

Building 136 (Period 2: *c* 49-60/1)
[Fig 4.5]

Following the demolition of the eastern end of Building 131, much of the surrounding area, including the trenches (AF207, AF210, & AF310; Sx 4.1) dug to remove the external walls, was sealed by a thick layer of dump (AL101/110/249) which probably largely derived from the demolished daub-block walls. The area to the south of Building 131 was subsequently sealed by a thick layer of make-up to provide a new building platform. This was approximately 0.45 m thick and consisted mainly of clean sand (AL88/100; Sx 4.3).

The evidence for structural remains (Building 136) in this part of the site was slight, with no clearly defined external walls. Four shallow north-south slots (AF144, AF145, AF180, & AF183) were excavated, together with the end of an east-west slot (AF203). Charred timber fragments in AF144 and AF145 were presumably from ground-plates, although the slots were unusually closely spaced and thus may have been floor joists. A sandy clay floor (AL50/70) was associated with the slots. This was sealed by a patchy occupation layer (AL61).

Two groups of pile-holes (AF157-9 & AF171) up to 0.85 m deep were located further east, and perhaps indicated that Building 136 extended towards the north-south street frontage, although no associated floor levels or Boudican destruction debris survived at this level.

The streets in Period 2 (*c* 49-60/1)
[Fig 4.5]

The Period 1 north-south street at the eastern edge of the site continued in use in Period 2, with a strip 4 m wide between the street and the frontage of Building 134 perhaps forming a footway.

An east-west street was laid out probably on the early colonial alignment *(CAR* 3, 8) along the northern margin of the site. A layer of street metalling (AL287; Sx 4.5) 0.15 m thick forming the southern edge of the street, was excavated on Site A. Further traces of metalling were observed in a contractor's trench approximately 3 m to the west. A possible drainage gully alongside the street was noted in section (Sx 4.5), and a slot (AF244) further south perhaps housed a timber revetment. The existence of a footway between these two features was suggested by patches of gravel (AL183; Sx 4.5), the upper surfaces of which were burnt, probably in 60/1.

Some street metalling (BL111/BL113/BL115) of probable Period 2 date was excavated in a small trench north of Site B, and a more substantial layer of Period 2 or 3 metalling 0.25 m thick was observed in a contractor's trench nearby.

Period 3 (60/1 -*c* 250/275)

[Fig 4.6]

Following the post-Boudican clearance, there was little evidence for rebuilding on the site, much of which remained an open area throughout the remainder of the Roman period. There was a narrow gully (AF110) of early Period 3 date which led into a shallow pit (AF111) in the southern part of Site A. These were associated with a thin midden layer (AL32/206) which perhaps derived from a building further south. Subsequently this was sealed by a layer of dump (AL48, AL77, & AL81; Sx 4.3) from which a coin of Nero (AD 64-7) was recovered. The dump was probably make-up for a partly gravelled yard surface. Features associated with the latter included a neonatal baby burial (AF139), a gully (AF135), and some small pits. A midden deposit up to 0.5 m thick (AL7-9; Sx 4.3) containing two coins of Vespasian (AD 71) accumulated on the surface in the late 1st century.

Building 137 (Period 3: 60/1-c 250/275)

[Fig 4.6]

A midden layer (BL21; Sx 4.6) and a large pit (BF40), both of late 1st-century date, lay at the western end of Site B. They were cut by robber trenches (BF2, BF8, BF10, BF11, & BF29; Sx 4.4) for the stone-and-mortar foundations of one or more buildings (Building 137).

Only Room 1 was available for excavation and, although much disturbed, probably contained an *opus signinum* floor resting on a make-up layer of rubble (BL19). A layer of septaria fragments (BL17; Sx 4.4) to the north of Room 1 perhaps formed a yard surface.

Further structural remains were observed in a contractor's trench to the north of Site B. This was close to the east-west street frontage and included robber trenches, an oven 0.4 m deep, and a possible mortar floor.

The streets and other remains of Period 3

(60/1-c 250/275)

[Fig 4.6]

The nortn-south street was remetalled in Period 3 (AL134) although the resurfacing could not have occurred until well after 60/1 since a coin of Nero (AD 64-8) lay on the Period 1/2 gravel surface. A dump layer (AL69) which contained a coin of Vespasian (AD 71) immediately to the west of the street was sealed by a stone-and-mortar foundation (AF35) reinforced with piles (Fig 4.6, inset) 0.50-0.65 m deep. The foundation was perhaps intended to separate the street from a footway on its western side.

The east-west street at the northern edge of the site also continued in use. A substantial layer of metalling (AL243; Sx 4.5) was excavated on Site A. The metalling and a possible earlier surface (AL284) sealed thick layers of make-up (AL281/282 & AL285/286). Several layers of metalling (BL101, BL104, & BL106) were also excavated in the trench north of Site B.

A large east-west foundation (AF34; Sx 4.5) cut a number of dump layers of late 1st century date in the area to the south of the street on Site A. The foundation, which was approximately 1.0 m wide and 1.3 m deep, was constructed of compacted gravel sealed by a layer of septaria fragments. The northern edge was faced with large dressed septaria blocks. A possible buttress (AF108), 0.4 m deep and built largely of septaria fragments, had been added on the northern side. These features probably formed a revetment wall and were intended to counteract the effects of the slope.

The remains of a shallow ?foundation (AF124; Sx 4.5) lay further south. This was 0.4 m deep and consisted mainly of gravel, with some septaria, tile and mortar rubble. It is possible that this feature together with AF34 formed the foundations for a small single-celled building in the corner of Insula 17a, although the surrounding levels had been much eroded and no trace of an internal surface survived. Tile fragments from this area included an antefix and a part of an opening for a smoke hole or chimney (Fig 7.1,1 & 2, pp 252 & 256).

Dump layers (AL14/52, AL66, & AL49/82) of probable early 2nd century date, which were excavated in the western part of Site A, included a mass of painted wall plaster (pp 315-16; Sx 4.2, AL73). Associated features included a gully (AF197) and some small pits. Of broadly similar date was a group of pits (including AF134, AF141, AF153, AF163, AF171, AF175, AF176, & AF237) in the south-east corner of the site, which were associated with, and in some cases filled with, a dark occupation deposit (AL55).

Several large hearths (AF83, AF94, & AF106), probably of Period 3 date, lay nearby. The earliest of these (AF106) had a base of cobbles and tile fragments set in a shallow pit, and was sealed by a layer of burnt sandy clay. This was replaced by a further layer of sandy clay (AF94) immediately above AF106 and subsequently by a smaller sandy clay hearth (AF83) slightly further north. An archaeomagnetic date of 80 cal BC - 1 cal BC at the 68 per cent confidence level was obtained for AF106. This is rather earlier than expected and may be accounted for by slight ground movements caused by subsidence (Appendix 6).

There were some large pits of mid 2nd- to 3rd-century date in the central part of Site A (AF27, AF79, AF90, AF107, AF121, AF128 & gully AF66) and the western half of Site B (BF23, BF25, BF28 & gully BF32). Part of the Period 1 plinth (BF5) was robbed (BF26) during Period 3, and there was a midden layer (BL12/56) north of BF23. An amphora base (BF57) set in sandy

clay and a large north-south gully (Sx 4.6) were noted in the eastern half of Site B during machining.

Building 138 (Period 4: *c* 250/275-c 350+)
[Fig 4.6]

There was evidence for continued activity on the site in the later Roman period when a small building (Building 138), which probably fronted on to the north-south street, was constructed near the north-east corner of Insula 17a. Although there were no definite remains of external walls along the south or west sides, Building 138 probably consisted of two rooms with the presumed timber-framed superstructure resting on shallow, largely robbed, stone-and-mortar foundations.

The shallow east-west robber trench (AF28) for the northern foundation adjacent to the Period 3 ?foundation (AF124) continued across the presumed Period 3 footway area, perhaps linking up with the foundation (AF35) at the edge of the street. Three post-pads (AF76-8), approximately 0.25 m deep and packed with septaria fragments and gravel, were in Room 1 where they presumably supported timber uprights. There was a north-south robber trench (AF33) between Rooms 1 and 2. Remains of the eastern foundation (AF41) of Room 2 survived *in situ* and consisted of septaria fragments set in a thin layer of whitish mortar. This sealed two unusual narrow pits (AF93 & AF97; Fig 4.6, inset) which were 0.5 m deep and were filled with compacted sandy clay. They were presumably intended as additional supports for the foundation. A timber drain (AF73) extended from Room 2 into the probable open area east of Building 138. The sides of the drain were visible as slight traces of decayed timber. Rooms 1 and 2 had sandy clay floors (AL13), with a surface of laid tile fragments (AL6) surviving in the western part of Room 2.

Evidence for the date of Building 138 was sparse, although a sherd of Romano-Saxon pottery from AL13 indicated use into the later 4th century. A late Roman date may also be suggested by the presence of a thin deposit of dark topsoil below BF41 and in the fills of AF76-8 which was unlikely to be due to worm action. There was a patch of gravel (AL12) to the west of Building 138 which perhaps formed a yard surface. This sealed a dump layer (AL20) containing a coin of Carausius (AD 286-293).

A coin of Constantius II (AD 330-1) was recovered from the metalled surface (AL134) of the north-south street, indicating use of the streets into Period 4. Other probable Period 4 features included some pits: AF292 (which cut the southern edge of the east-west street), BF15 (which contained a coin of Maximian, AD 287-93), BF17, and BF31.

A layer of brown topsoil (AL2/BL3; 10YR4/3 sandy loam; 0.25 m thick; Sx 4.6) overlay the southern part of the site and perhaps resulted from late Roman cultivation. This topsoil differed from the post-Roman dark earth (10YR 4/1 sandy loam) but was similar to deposits of probable late Roman date noted on Site C and elsewhere at Culver Street (p 117).

The medieval casting pit (*c* 11th or 12th centuries)
[Figs 4.7-4.8]

There was a large pit (AF80; Figs 4.7-8), approximately 0.8 m deep, in the south-east corner of the site. Towards the eastern side of the pit, a substantial structure (AF85) had been built, consisting of two parallel north-south sides surviving to a height of approximately 0.6 m. They were constructed of mixed sandy clay containing stone and Roman tile fragments and formed a central firing area open at both ends.

The structure was of two main phases and was initially only 0.4 m high. The inner faces had been

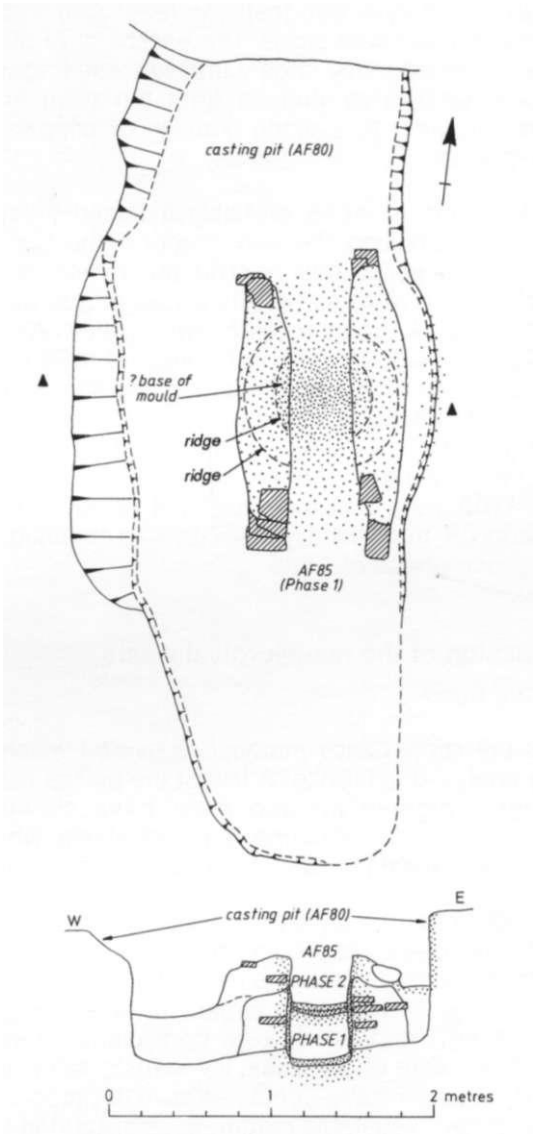


Fig 4.8 The medieval casting pit (AF80). The plan is of Phase 1. [Pages 137-8]

coated with a thin layer of sandy clay with well-preserved finger or tool marks surviving on the burnt surface. This surface and the slightly sunken floor had been replaced during the first phase of use. On the upper surface of AF85 there were two slight concentric ridges which were probably the remains of the base of a large mould or a platform on which a mould would have been bedded. Subsequently AF85 was rebuilt, with the sides being heightened by approximately 0.2 m and the floor level being raised by about the same amount. The inner surfaces were again coated with a thin layer of sandy clay. Two more concentric ridges were noted on the upper surface of the rebuilt oven but they were less pronounced than before. In one place a narrow tongue of burnt sandy clay bridged the sides at a point corresponding to the outer circular ridge. In this phase the floor was replaced twice.

The concentric ridges were probably the remains of the base of moulds used in the casting of large metal objects. It is likely that the molten metal was run directly into the mould from a furnace at floor level, and the evidence suggests at least five casting operations had taken place. The backfill of AF80 and AF85 contained many largely undiagnostic fragments of burnt sandy clay derived from the oven and/or moulds as well as a small quantity of copper-alloy casting waste.

The functions of AF85 probably included firing the clay mould, melting the wax model if the lost wax method was used, and heating the mould prior to casting. There were no definite traces of a furnace at ground level. A group of flat hearths (AF83, AF94, & AF106; Fig 4.6) immediately west of AF80 were probably of Roman date. Finds from AF80 and AF85 included a quantity of sherds of early medieval sandy ware (Fabric 13, *CAR* **7)** of probable 11th- or 12th-century date. An archaeomagnetic date of 1050-1100 with a confidence limit of 68 per cent (Appendix 6, microfiche, pp 437-8) was obtained from the second phase of AF85.

Discussion of the metallurgical waste

by Paul Budd

All of the copper-alloy material recovered which has been analysed is bronze. A few of the pieces may be relatively high in tin and most have significant amounts of lead, although it is debatable whether they could be said to have been deliberately leaded.

A number of fired clay pieces recovered from feature AF85 have been interpreted on the basis of their form and fabric as fragments of a mould for a large casting. Three large pieces (the largest of which weighed about 1 kg) from A471 were particularly characteristic. They were of a porous, low-density fabric which would originally have contained a high proportion of finely-divided vegetable matter, possibly added to the clay in the form of animal dung. Several roughly-shaped, hand-made surfaces survived and at least one of the pieces displayed a precisely-shaped surface to which corroded copper alloy (probably bronze) was attached. Material of a very similar nature has come from a number of medieval sites, most recently from St Georges Street, Canterbury, where it has been interpreted as the remains of a medieval bell mould (Budd 1987). A small mould fragment from A675 is a reduced fired fragment of a similar fabric to the above but probably from a much smaller mould. Traces of copper and lead were detected on its inner surface. A soil sample (A385) from the pit AF80 which surrounded AF85 contained a number of fired clay fragments of a porous sandy fabric, which were oxidised fired to a light orange, but which featured a black reduced fired band. These may also have been mould fragments, though if so no original surfaces survived.

The concentration of the metal-working debris in AF85 and AF80, and the evidence of burning noted on excavation suggest that AF80 was a casting pit. It was the normal medieval practice when casting a large object by the *cire perdue* (lost wax) method to dig a pit in which to place the mould so that the metal-melting furnace could be constructed at ground level and the molten metal run directly into the mould. If a mould of the size requiring a casting pit was constructed here only a very small proportion of it has been recovered. Moreover, as a metal-melting furnace is unlikely to have been located at any great distance from the casting pit, it is surprising that no fragments of furnace lining have been recovered. The absence of this debris may be due to the location of the feature(s) on the southernmost (highest) edge of the excavated area. Any furnace would have been uphill from the pit and thus unexcavated. Other possible reasons include later disturbance, or deliberate demolition and removal of the furnace soon after it was used.

The dimensions of some of the mould fragments recovered and the diameter of the mould rim surviving on AF85 suggest that large objects were being cast. XRF analyses of a selection of the casting waste suggested that all of the material was bronze and at least some of it was high in tin. This suggests that the activity involved was bell-founding. However, many of the pieces of casting waste contained some lead, the presence of which would have a detrimental effect on the tone of a finished bell. Other possibilities are cauldrons and skillets or even monumental castings but the alloys used for them normally had quite different compositions (Brownsword 1991). Unfortunately the few mould fragments which have been recovered are non-diagnostic.

The medieval lime kiln (*c* 12th or 13th centuries)

[Figs 4.7 & 4.9]

A lime kiln consisting of a large circular pit (AF11) 3.4 m in diameter and 1.0 m deep was excavated



Fig 4.9 The medieval lime kiln (AF11) with the raking out pit (AF36), viewed from the east.

immediately east of the casting pit. The kiln had intensely-burnt sides and base and to the west there was a small raking-out pit (AF36) connected to AF11 by a short tunnel (AF37). At the base of AF11, especially near the sides, lay a deposit of partly crushed and burnt sea-shells, a sample of which was examined (pp 288-9). The shells, which included cockle and some mussel and oyster, formed the raw material used in the roasting process *(CAR* 3, 30). Traces of quick-lime and charcoal fragments were also found.

Unlike the large example excavated at Lion Walk (*CAR* **3**, 86-7), there was evidence for only one phase of use of AF11, although it was unclear how many individual firings took place. Finds were sparse, although sherds from the backfill reinforced the evidence from Lion Walk and elsewhere for a 12th- to 13th-century date.

Robber trenches and other post-Roman features

[Fig 4.7]

Most of the post-Boudican Roman foundations on the site (AF28, AF33, BF2, BF8, BF10, BF11, BF29, & BF30) were robbed, probably in the 12th or 13th centuries.

The site was largely unoccupied throughout the medieval and post-medieval periods and during this time it was used primarily for cultivation, with a thick layer of topsoil or 'dark earth' *(CAR* **3,** 92) accumulating up to a depth of 1.5 m. A series of small rubble-filled pits (AF7, AF10, AF12, AF30, AF31, AF46, & AF65) of probable 15th- or 16th-century date was excavated on Site A. Their function is unclear although a horticultural use is probable. A similar origin is likely for a large number of small scoops (AF13-19 & AF20-4), mostly in parallel rows, excavated in the south-east corner of the site and probably dating to the 16th or 17th century. These ?cultivation marks lay on an east-west terrace, which sloped away immediately to the north. Modern features included a large sand extraction pit (AF42) and a series of rubbish pits (AF1, AF2, AF3, AF4, AF5; AF44, AF58, & AF59) of late 19th or 20th century date.

Acknowledgements

Thanks are due to a loyal and hard-working digging team, especially to Frank Lockwood as planner, and also to the Architect's Department of Essex County Council, and the headmaster and staff at the Gilberd School.

5: THE ROMAN SMALL FINDS FROM THE CULVER STREET SITE

by Nina Crummy

This chapter is ordered in the same way as *CAR* **2,** that is, the primary groupings are by function rather than material. Subdivisions and types are also those used in *CAR* ***2,*** hence there may be numerical gaps if types are not represented in this assemblage.

Where corrosion has been cleaned from an iron object, or where little corrosion was present to begin with, the existing exposed surface has been accurately drawn. Where an object was drawn from an X-radiograph, a surface has been stylistically indicated.

The post-Roman finds were included in *CAR* **5.**

CATEGORY 1:
Objects of personal adornment or dress

BROOCHES

The thirty-six brooches (or brooch fragments) recovered range in date from the earliest days of the Roman occupation of the site through to the late 3rd and 4th century. Twenty-eight belong to the period AD 43-70. Though pre-Roman cover loam was found and excavated at Culver Street, and though some of the brooches here belong to types found in Britain before the conquest (for example the Nauheim derivatives), because none was found in pre-Roman levels it seems likely that, as with the brooches published in *CAR* **2,** all are post-conquest in origin. Not one brooch from Culver Street derives from a Period 1 level, a situation reflecting the disturbed nature of the military deposits.

The T-shaped Lamberton Moor brooch has a date range of pre-70 into the 2nd century. The knee brooch and Type 182 brooch, with zoomorphic foot, belong to the 2nd century. Three penannular brooches belong to the late Roman period.

The brooches are identified and arranged according to the types outlined in the late M R Hull's corpus of pre-Roman and Roman brooches (typescript in the CM). This is referred to here as Hull forthcoming, with its catalogue numbers prefixed by *Corp.* The first part of the corpus has been published as *Pre-Roman bow brooches* (Hull & Hawkes 1987). The section on Roman brooches, edited by Dr G Simpson, is forthcoming.

The copper alloys used in the manufacture of the brooches have been identified by Justine Bayley, Paul Wilthew, and Paul Budd of the AM Lab using X-ray fluorescence. Where more than one alloy name is given it suggests an intermediate composition, though if a single descriptor is required the first alloy name is the most likely to be correct. A general discussion of the analytical results for the Culver Street and the Gilberd School brooches can be found on page 144.

BOW BROOCHES

Group 1: La Tene III and Roman brooches with no hook and no arms

Type *11. Nauheim derivatives with a single-curve bow* (1-7). Date range: pre-Roman, dying out in the pre-Flavian period. This type is well represented by seven brooches, of which two are from contexts within the date range for the type: one (3) from Period 2 road metalling, and one (2) from a Period 3 pit. Catalogued on microfiche.

Group 2: brooches with cylindrical spring-cover

Type 27. Simple rosette brooches with applied moulded plate (Fig 5.1; **8**). This type is found mainly in the *oppida* and is probably a pre-conquest import which only continued in use to *c* 50.

8 Fig 5.1 SF 1.81 4971, J250. Unstratified. Periods 1 to 5. The foot and part of the spring with the pin are missing from this large brass brooch. If there ever was an applied plate on this brooch it is now missing. The rosette has a simple border of moulded 'rays' defined by concentric grooves. A rivet with a cupped head is set in the centre. Surviving length 36 mm.

Group 4a: eye-brooches

Type 42? Eye-brooches with a strongly-angled bow and long loot, separated by a button (Fig 5.1; **9).** Date range: Claudian/Neronian. This example may more correctly belong with Type 43, debased eye-brooches, but the pronounced kink of the bow suggests Type 42. The button is here a transverse moulding, a feature of Type 43, but Hull does include some 'slightly debased' brooches without a full button

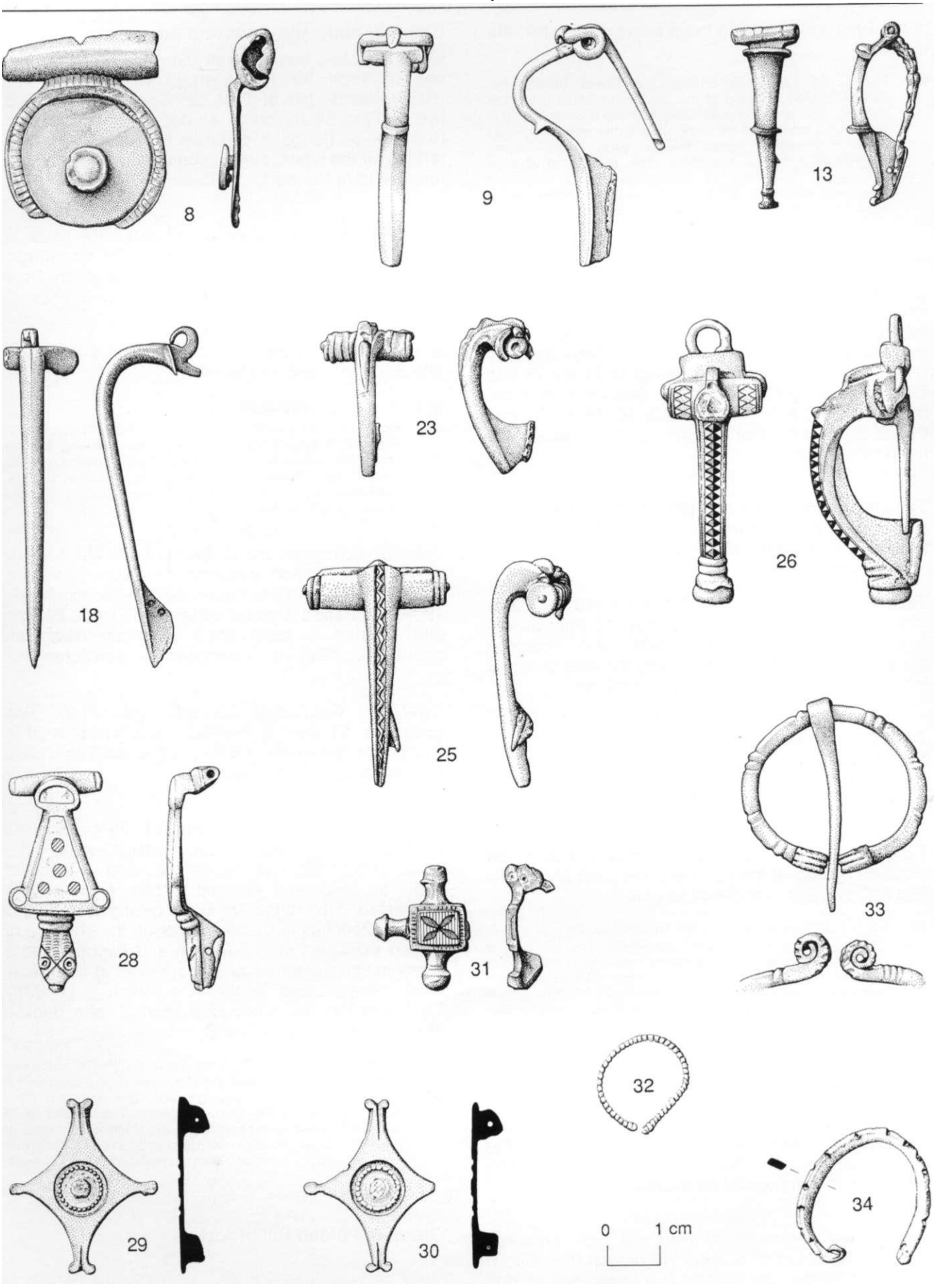


Fig 5.1 Brooches. 1:1.

in his Type 42, allocating them a late date within the range.

9 Fig 5.1 SF 1.81 2493, E1255 L108. Dump: Building 89. Period 2. Only the end of the pin of this brass brooch is missing. The spring has six turns, and the external chord is fixed by a small forward hook. The small side-wings may have rudimentary eyes, though even under strong magnification this is not clear. The bow is of shallow D-section. The button is represented by a prominent transverse moulding. The foot is triangular in section, with a blunt end. The catchplate is solid. Length 47 mm.

Group 4b: early hinged brooches

One Aucissa and seven Hod Hill brooches were found. These brooches were first imported into Britain by the army of conquest, and were abandoned as standard wear c 60/5. Of these eight brooches one **(10)** derives from the destruction of Buildings 78 and 79, dated to early Period 3 (immediately post-Boudican), and four others **(9, 12, 14, 16)** from other Period 3 contexts. None comes from a Period **1** or Period 2 context.

Type 51. Aucissa brooch **(9a).** Date range: 43 to *c* 60/5. One example from Period 3d dump beneath Building 120. Catalogued on microfiche.

Type 60. Simple Hod Hill brooches **(10-11).** Date range: 43 to c 60/5. Two examples, **11** from an un-stratified context, and **10** from redeposited Boudican dump (early Period 3) representing the destruction of Buildings 78/79. Catalogued on microfiche.

Type 63. Hod Hill brooch with lateral lugs at the top of the bow **(12).** Date range: 43 to *c* 60/5. One example from Period 3 dump in Building 97. Catalogued on microfiche.

Type 71. Hod Hill brooch with narrow bow and bold cross-mouldings at the head and the base of the bow (Fig 5**.1; 13).** Date range: 43 to *c* 60/5.

13 Fig 5.1 SF 1.81 4814(C), H626. Unstratified. Periods 1 to 6. A complete brooch of tinned ?gunmetal. The pin is very corroded. There is a bold transverse moulding at the junction of head and bow, another at the junction of bow and foot, and a third above the foot-knob. The catchplate has a small circular perforation. Length 34 mm. A close parallel to this brooch is in the collection of the Colchester Museums (CM 82.1897; *Corp* 0502).

Type 79+. Miscellaneous brooch of Hod Hill type **(14).** Date range: 43 to *c* 60/5. One tinned gunmetal brooch, exactly similar to *CAR* **2,** fig 5,35, with four crescents of niello on each side of the bow. The brooch derives from Period 3 make-up for Building 94, Room 2. Catalogued on microfiche.

Unidentified fragments of Hod Hill type brooches **(15-16).** The head of a ?Hod Hill brooch from Site B clearance levels, and the foot of a tinned bronze Hod Hill brooch from a Period 3a linear feature on Site K.

Group 5: early sprung brooches

Eight brooches belonging to this group were found, two of Type 90 (Colchester), two of Type 92 (Colchester B), two of Type 93 (Colchester BB), and two of Type 94 (dolphin). All but one **(18)** are from Period 2 or Period 3 contexts which suit the date ranges for the types, though some may, of course, be residual from Period 1.

Type 90. Colchester brooch (Fig 5**.1; 17-18).** Made in one piece, with a simple curved bow, flat side-wings, and forward hook to secure the external chord. Date range: Tiberius-Nero.

a) with decorated bow
A large brass brooch **(17)** from Period 2 dump on Site E. Catalogued on microfiche.

b) with undecorated bow

18. Fig 5.1 SF 1.81 4048(C), D1946 F1945. Part of drain F1819. Period 4. A large brass brooch with one side-wing and the catchplate damaged, the spring with the pin missing, and the forward hook damaged. The remaining side-wing is plain. The upper edge of the catchplate is decorated by punched circles. Length 66 mm.

Type 92. Colchester B brooches **(19-20).** Made in two pieces, with distinctive cavetto mouldings flanking a ridge on the bow. Date range: 50-70. Two examples, **19** from a Period 3 gravel surface on Site B, **20** from early Period 3 redeposited Boudican demolition debris of Building 78. Catalogued on microfiche.

Type 93. Colchester BB brooches **(21-2).** Two examples, **21** from a ?Period 3 posthole/post-pit in Room **1** of Building 96, **22** from a ?Period 3 pit on Site M. Catalogued on microfiche.

Type 94. Dolphin brooches (Fig 5.1; **23-4).** Dolphins have a comma-shaped bow, semicylindrical side-wings (either plain or decorated), and a rearward hook to hold the external spring chord. Hull's suggested date range for both sprung and hinged dolphin brooches is Claudian, though the absence of hinged examples from Sheepen and Period 1 and 2 levels in Colchester suggest that these, at least, may have been current in the late Neronian or early Flavian period. **24,** catalogued on microfiche, derives from a Period 2 pit on Site E.

23 Fig 5.1 SF 1.81 5195(C), K441 F390. Pit. Period 3. A small tinned brooch of bronze or gunmetal, complete except for the pin. The side-wings are grooved and moulded. The mouldings flanking the head are knurled. The head carries a prominent crest and short ridge indicative of the forward hook of the parent Type 90 Colchester brooch. The plain bow is oval in section. The catchplate is solid. Length 30 mm.

Group 6: Polden Hill brooches

Type 95. Brooches with the comma-shaped profile of Type 94 (dolphin) but with the spring attached by

means of an axial bar fixed in the returned ends of the semicylindrical cross-bar (Polden Hill arrangement) (Fig 5.1**; 25).** The date for the type is pre-Flavian.

25 Fig 5.1 SF 1.81 2197(C), E669 F462. Dump and occupation. Period 3. The pin, the catchplate and the external chord of this brooch are missing. The alloy is leaded bronze. Part of the rearward-facing hook which held the chord remains. There are two grooves at each end of the cross-bar. The centre of the bow is decorated with a wavy line set in a shallow groove. Length 43 mm.

Group 7: T-shaped brooches

Type 148. Lamberton Moor brooch (Fig 5.1; **26).** This type is British in origin with a mainly southerly distribution. It was in production by the 70s or earlier, and continued well into the 2nd century.

26 Fig 5.1 SF 1.81 893(C), B327 L27. Gravel spread. Period 4. A well-preserved brass brooch. One link from the chain which would have been attached to the loose wire head-loop survives. The terminal knob holds an opaque red glass bead. The deep cup of the head-stud, now empty and showing a rivet hole in the bottom, would have held a similar bead. The bow is decorated with lozenges of blue enamel flanked by triangles of red enamel. The solid shackle is decorated with triangles of red enamel (not shown in the illustration), as is the cross-bar. The brooch is hinged and belongs therefore to subtype c. The hinge and head-stud cast in one with the bow suggest a 2nd-century date for this brooch. Length 54 mm.

Group 9: knee brooches

Type 176. Knee brooch with a bow of rectangular section, rounded in profile and expanding to a square foot with a transverse catch **(27).** Date range: probably 2nd century. The bow and foot only of a leaded gunmetal brooch similar to *CAR 2,* fig 11,70. Found in a medieval or later (Period 7) pit on Site M. Catalogued on microfiche.

Group 10: various enamelled bow brooches

Type 182. Brooches with a triangular bow, the foot zoomorphic or astragaloid (Fig 5.1; **28).** The type dates to the 2nd century.

28 Fig 5.1 SF 1.81 991(C), B469 L60. Dump levels. Period 4. Only the hinged pin of this brooch is missing. The alloy is a leaded gunmetal. The triangular bow is filled with what was a translucent turquoise enamel (now yellow) and holds four translucent green glass dots made from sections cut from a glass rod. The semicircular head and the two flanking roundels at the base of the bow held ?red enamel. The foot is zoomorphic, and represents a snake's head with conventional curved incised lines for the skin (as on examples from Colchester, *Corp* 798; Wall, Staffordshire, *Corp* 6027; and *Corp* 1604 in the BM). The type is not common in Britain, but is well represented on the continent in the area around Siscia, which may be the centre of its manufacture.

PLATE BROOCHES

Type 225. Flat cruciform brooches with incurving sides (Fig 5.1; **29-30).** A brooch of the same type was found at Sheepen for which parallels from the Rhineland are cited (Hawkes & Hull 1947, 325, pl 98,165). This type was introduced into Britain by the invading Roman army, and belongs to the Claudian period, possibly surviving into the reign of Nero.

29 Fig 5.1 SF 1.81 5045(C), J333. Unstratified. Periods 1 to 5. This tinned brass or gunmetal brooch is complete except for the end of the pin and part of the catchplate. The upper and lower angles bear a double lug split by a groove, the side angles a single lug. The slightly recessed central circular element has a moulded and knurled ring around an 'eye' of enamel (probably red originally). The pin is hinged. Length 34 mm. This brooch forms a pair with **30** below. The two are well worn, but seem to be from the same mould. The grooves splitting the double lugs are all of different lengths and set at different angles. They were cut after the brooches were removed from the mould.

30 Fig 5.1 SF 1.81 5046(C), J333. Unstratified. Periods 1 to 5. The pin and the right-hand lug of this tinned brass or gunmetal brooch are missing. *See* **29** above. Length 34 mm.

Unclassified (Fig 5.1; **31).**

31 Fig 5.1 SF 1.81 616(C), B100 L6. Backfill of Hut 3. Anglo-Saxon. This brooch, of leaded bronze, has affinities with Types 230-33 and Type 227. It has perhaps most in common with Type 233, brooches with a rectangular enamelled central plate with extended narrow matching ends. Here the rectangular enamelled central plate has a knobbed projection rising from the centre of each side (one is missing). All the projections are of similar length, though two are slightly thicker. One of these covers the hinge for the brooch pin, the other covers the catchplate. The central plate, with beaded edge, holds a raised field of red enamel with a diagonally-set simple four-petalled floret of ?niello. Length 23 mm.

PENANNULAR BROOCHES

Fowler Type A (1960, 150-2). Penannular brooches with bulbous terminals (Fig 5.1; **32).**

32 Fig 5.1 SF 1.81 3509(C), G1023 L865. Dump. Period 3d/4. A small ?copper penannular loop of thin ribbed wire with very slightly thickened terminals. Possibly a brooch. Internal diameter 15 mm.

Fowler Type C (1960, 152). Penannular brooches with the terminals coiled and twisted so that the coil is at right angles to the plane of the ring (Fig 5.1; **33-5). 34** from Hut 3 may perhaps more properly belong in an Anglo-Saxon horizon, rather than be a residual late Roman piece, but on balance, given the number of residual Roman finds present in BL13 and the brooch's affinities with previously published examples from Colchester *(CAR* **2,** 18-19), a Roman date seems more appropriate.

33 Fig 5.1 SF 1.81 459(C), B23 F2. Trench. Modern. A large complete brass brooch. The hoop has groups of two or three grooves set at intervals around the outer face of the circumference. The coils have been grooved twice along their length and their sides notched before being rolled up. The pin has a slight hump, probably the result of use. Internal diameter 29 mm.

34 Fig 5.1 SF 1.81 790, B222 L13. Occupation in Colchester Hut 3. Anglo-Saxon. The pin and one terminal of this brass

brooch are missing. The distorted hoop is of thin rectangular section at the side lacking the terminal, and has V-shaped notches on the outer edge. Towards the centre of the hoop the section thickens to almost lozenge-shape and has V-shaped notches on two adjacent edges (alternately). The surviving terminal is formed by simply folding the end of the hoop back. Internal diameter approximately 21 mm.

Discussion of the results of the alloy analyses of Roman brooches from Culver Street and the Gilberd School

by Justine Bayley

The analytical results for most of the Culver Street and Gilberd School brooches are not unexpected as they conform to the patterns of alloy usage that have been previously identified in a sample of over 2,000 brooches analysed at the Ancient Monuments Laboratory (Bayley *et al* 1980; Bayley & Butcher 1981; Bayley 1985; Bayley & Butcher 1991; Bayley 1990).

Aucissa brooches are virtually always brass. Ninety per cent of one-piece Colchester and rosette brooches are brass, as are about 70 per cent of Hod Hill brooches. Here all three Aucissa brooches are brass, the two rosettes are brass, and four of the five one-piece Colchester brooches are brass. The thirteen Hod Hill brooches are made up of seven brasses, two brasses or gunmetals, two gunmetals, and two bronzes. Although the sample is small, the numbers of each alloy are very much as expected.

Other early brooches include the Gilberd School's 'strongly-profiled' brooch which is brass (as are four examples from Richborough), and the Culver Street pair of plate brooches which are brass with minor amounts of tin like a number from other sites (Bayley & Butcher 1991). These two brooches, like most of the Hod Hills, are tinned.

Nauheim derivative brooches are found in a range of lead-free or low-lead alloys of which bronze is the most common (60 per cent). The compositions of the seven examples here are not unexpected. Penannular brooches are also found in a whole range of low-lead copper alloys and are occasionally made of virtually unalloyed copper, the only brooch type that ever is. The presence of two ?copper penannulars is unusual but not completely unexpected. (N Crummy adds: both the ?copper penannulars are not positively brooches.)

Most two-piece Colchester brooches are leaded bronzes (Bayley 1985), though a few are either leaded gunmetal or unleaded bronze. The two bronzes here are therefore of unusual though not unique compositions. Colchester derivatives (and knee brooches) are made of a range of alloys, though leaded bronze predominates (over 60 per cent) with unleaded bronzes and gunmetals comprising some 20 per cent. The comparative data for these last two groups of brooches is a far smaller sample (about 50 of each) than for the other types discussed. It may be that variations in composition correlate with typological variations, but this has yet to be conclusively demonstrated.

The comu-shaped brooch from the Gilberd School is tinned bronze. This composition supports the dating of the brooch as later than the 1st century AD, during which period the common alloy used for brooches that were to be tinned was brass (as the Hod Hills and plate brooches above, though see the tinned bronze Hod Hill and tinned leaded bronze dolphin from Culver Street). Tinning is found again on some knee brooches, to which the cornu-shaped brooch seems to be related by virtue of its extended catchplate, so that on balance a date similar to that of knee brooches would be acceptable.

HAIRPINS

Bone pins

Type 1. Pins with a plain conical head **(36-56).** Date range: *c* 50-c 200. Most of these pins derive from mid Roman or later contexts and thus are either just within their horizon or residual, though one **(48)** comes from Period 1/2 fill of a cess-pit in Room 5 of Building **77.** Catalogued on microfiche.

Type 2. Pins with 1-4 grooves beneath a conical head **(57-87).** Date range: *c* 50 - *c* 200. Four of these pins **(80, 81, 85, 87)** derive from Period 3 contexts, and two **(77, 83)** from Period 3 or **4,** with most of the remainder coming from mid Roman or later contexts. Catalogued on microfiche.

Type 3. Pins with a more or less spherical head (Fig 5.2; **88-219).** Date range: c 150/200-4th century +. The heads of these pins can be subdivided into four shapes: A, globular or elliptical, sometimes with a small flat area on the very top; B, a semicircular or elliptical lower half with a slightly conical or low convex upper half; C, lenticular; and D, hemispherical. Most of these pins derive from post-Roman or unstratified levels, with the remainder being split between late 2nd- to 3rd-century and 3rd- to 4th- or 4th-century contexts.

88 Fig 5.2 SF 1.81 5019, J333. Unstratified. Periods 1 to 5. Length 64 mm. Head B. An extremely light fine pin.

Type 4. Pins with a faceted cuboid head (Fig 5.2; **220-34).** Date range: *c* 250-4th century +. Two of these pins are associated with the late Roman destruction of buildings: **223** from demolition debris in the yard of Building 123, and **230** from the destruction debris of Building 116. Also worth noting is **225** from Site G F14, a pit containing several mid 3rd century coins which provide the *terminus ante quern tor* the

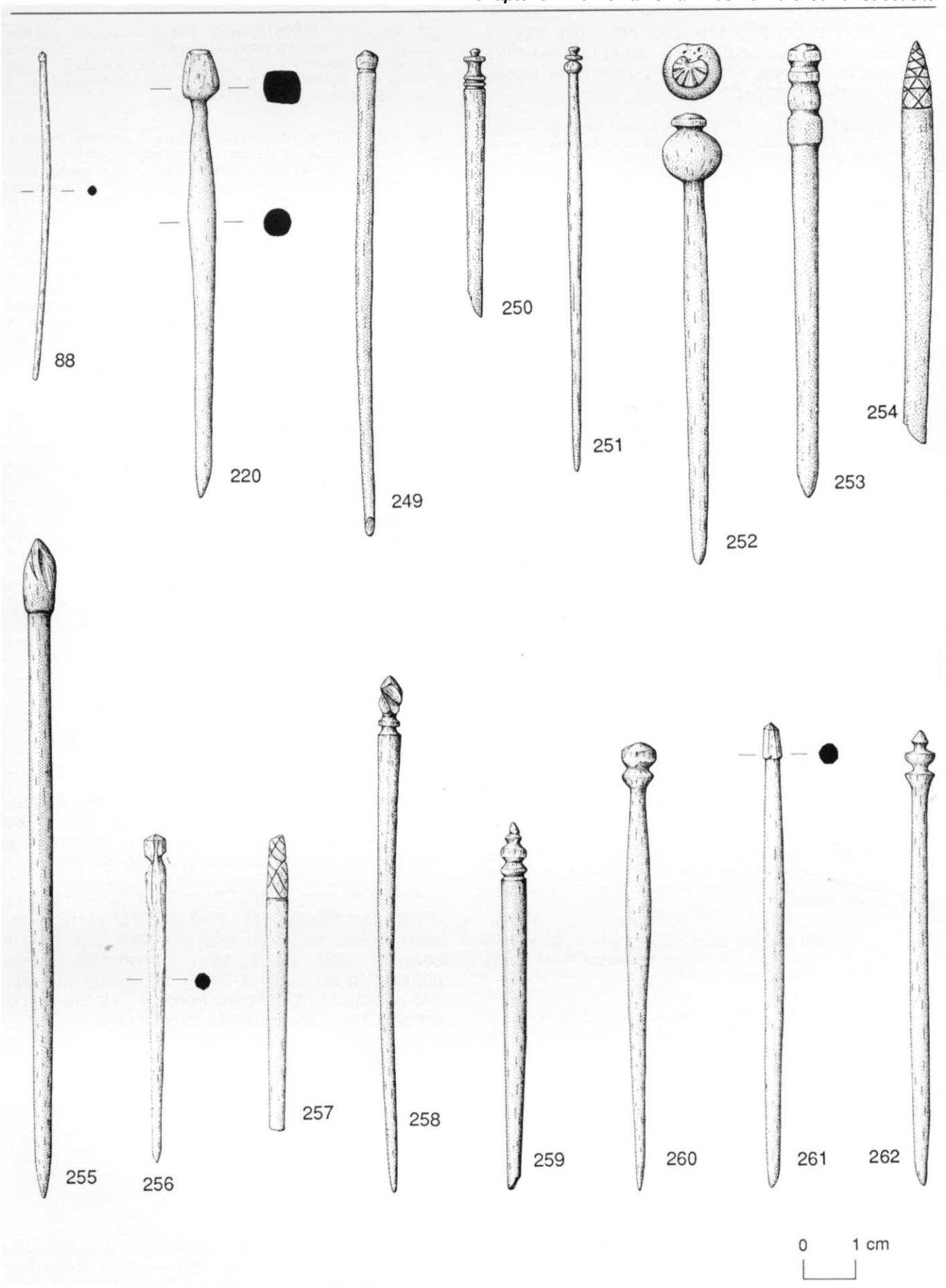


Fig 5.2 Bone hairpins. 1:1.

destruction of Building 116. One other pin **(224)** is from late Roman occupation of Building 120, while the rest derive from late Roman or post-Roman topsoil and site clearance levels.

220 Fig 5.2 SF 1.81 3370, D592 F684. Robber trench for Building 123. Period 6? Complete. Length 86 mm. A crudely-shaped head, perhaps intended to be a Type 4.

Type 5. Pins with 1-5 reels beneath a conical or ovoid head **(235-7).** Date range: 4th century +. Two of these pins are from post-Roman contexts. The third comes from Period 4 ?dump in Passage 2 of Building 123. Catalogued on microfiche.

Type 6. Pins with a reel- or bead-and-reel-shaped head **(238-48).** Date range: c 200-4th century +. The earliest contexts in which pins of this type were found are Period 4 occupation lenses in Room 1 of Building 113 **(239),** and Period 4 dump/floor on Site C **(241).** Catalogued on microfiche.

Miscellaneous (Fig 5.2; **249-64)**

249 Fig 5.2 SF 1.81 767, B215 F98. Small pit. ?Post-Roman. This pin falls between Types 2 and 3. The head is a little thicker than the shaft and slightly bulbous. Similar pins are found at Winchester in early Roman levels (N Crummy forthcoming). Tip missing. Length 94 mm.

250 Fig 5.2 SF 1.81 775, B222 L13. Occupation in Colchester Hut 3. Anglo-Saxon. A pin related to Type 6 (bead-and-reel), with a head combining the motifs of reel, spool, and small bead. The tip is missing but the pin may possibly have been reused at the broken length. Length 52 mm.

251 Fig 5.2 SF 1.81 911, B349 L37. Occupation: Building 112, Room 6a. Period 4c. A complete pin similar to **250,** with bead, reel, and small bead/inverted cone motifs. Length 81 mm.

252 Fig 5.2 SF 1,81 1033, B490 L59. Occupation/dump: Building 112, Room 3. Period 4 (or 5). A complete pin related to Type 3, with a large globular head surmounted by a cap-like feature, the upper surface of which has radial grooves. Length 86 mm.

253 Fig 5.2 SF 1.81 1237, B803 F243. Large cess-pit. Periods 4/5. A complete pin with coarse mouldings, most closely related to Type 6. Length 86 mm.

254 Fig 5.2 SF 1.81 1810, E1. Site clearance. A pin related to Type 2, with a pointed head decorated with a rough trellis design. Tip missing. Length 77 mm.

255 Fig 5.2 SF 1.81 3772, D1686 L1143. Demolition debris: Building 123, Passage 4. Period 4. A complete pin with a straight shaft and coarse flame-shaped head. Diagonal grooves of varying length and irregular spacing on the head are probably an attempt at decoration. Length 126 mm. The flammiform head relates this pin to the 4th-century Type 5. The straight shaft almost certainly reflects not an early date, but the inability of the carver to achieve an even swelling.

256 Fig 5.2 SF 1.81 3123, G368 L302. Occupation? Period 5b? A straight-shafted pin with two V-shaped notches below the plain head. Complete. Length 62 mm. This pin may be related to Types 1 and 2, in which case it should date to before c 200, or it may be unfinished, perhaps a Type 3.

257 Fig 5.2 SF 1.81 2915, G150. Unstratified. Periods 4 to 6. A straight-shafted pin with lattice work and transverse grooves on the head. The very top of the head is missing. Length 57 mm. Related to pins of Type 2, and therefore probably of mid to late 1st- or 2nd-century date.

258 Fig 5.2 SF 1.81 4284, H133 L3. Topsoil/clearance. Period 6. A variant of a Type 2 pin, with a straight shaft and pointed head, which has been notched to give a twisted appearance, above a groove. Complete. Length 100 mm. This pin may date to before c 200.

259 Fig 5.2 SF 1.81 3412, G856 L784. Destruction debris/occupation: Building 120. Period 5b. A pin with a straight shaft and a head which is an elaboration of Type 2. Similar pins were found at Balkerne Lane *(CAR* **2,** fig 23,441-2). The head has a small reel and cone set above a bead beneath which are two wide grooves (ie a reel). Length 70 mm. This pin and the Balkerne examples link Type 2 and Type 6, and are probably of 2nd-century, or early 3rd-century, date.

260 Fig 5.2 SF 1.81 4724, M49 F31. Large pit. Period 7. A variant of a Type 3 pin with a thick collar beneath a head of B form. Complete. Length 86 mm. A date later than c 150 would be appropriate for this pin.

261 Fig 5.2 SF 1.81 3063, G310 F14. Sand pit. Period 5. A pin with a swollen shaft and a narrow pointed head of polygonal section, set proud of the shaft. Probably related to Type 3, and possibly even an unfinished pin of that type. Complete. Length 90 mm.

262 Fig 5.2 SF 1.81 3969, D1763 L1372. Dump: Building 123, Room 8. Period 4. A pin with two reels set below a tiny conical head, related to either Type 5 or Type 6 pins. Complete. Length 88 mm. If Type 5, rather than 6, was the inspiration for this head, as seems most likely, then the pin should date to the 4th century.

Jet pins

Type 2. Pins with a faceted cuboid head **(265-6).** Date range: c 250-4th century +. **265** comes from Period 4/5 demolished clay walls of Room 2, Building 112, and **266** is unstratified. Catalogued on microfiche.

Shaft fragments **(267-71).** Five jet pin shaft fragments were found, of which two are from post-Roman contexts. **267** came from Period 4/5 dump/ demolished clay wall of Room 1, Building 112 *(see* **265** above), and **269** from a Period 4 pit in the yard of Building 123. Catalogued on microfiche.

Glass pin (272)

A fragment of a possible pin shaft was found in Period 3 cultivation soil on Site G. Catalogued on microfiche.

Metal pins

Type 1. Pin with a plain conical head **(273).** Date range: ?c 50-2nd century. The example catalogued on microfiche may not be a hairpin. It derives from early Period 3 occupation/midden on Site C.

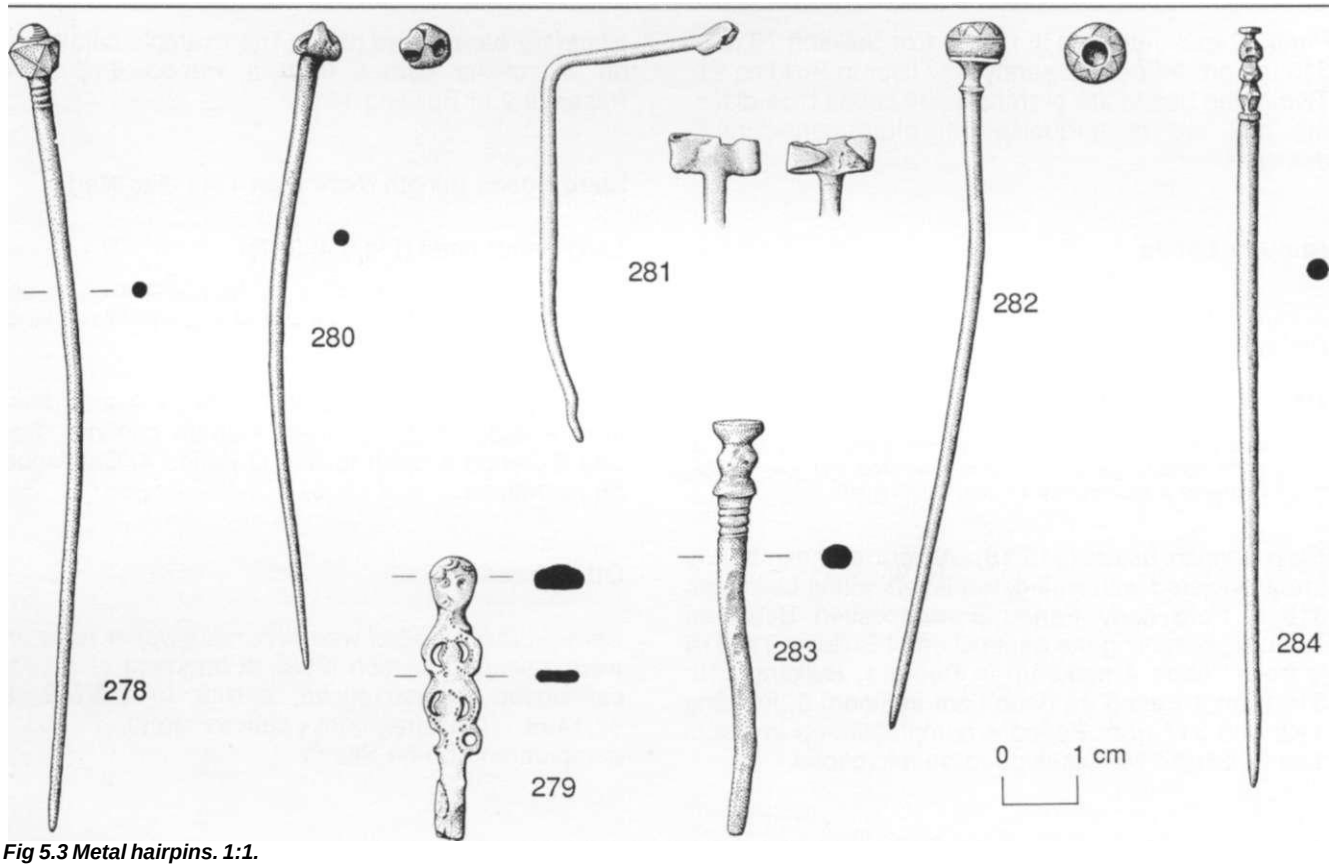


Fig 5.3 Metal hairpins. 1:1.

Type 2. Pins with a head of bead, reel and spool motifs surmounted by a flattened sphere **(274).** Date range: 2nd to 3rd century. One example, catalogued on microfiche, is from Period 4 dump/floor on Site C.

Type 3. Pins with a more or less spherical head **(275-7).** Date range: throughout the Roman period. **275** is from Period 2 destruction debris of Buildings 86/87, which supports the pre-Boudican evidence for the type in *CAR* **2,** 29. The other two pins are from post-Roman contexts. Catalogued on microfiche.

Miscellaneous **(Fig** 5.3; **278-91).**

278 Fig 5.3 SF 1.81 2063(C), B2161 L35. Demolition: Building 112, Room 4. Periods 4/5. Pin with a rectangular-section head which tapers towards the shaft. Each side of the head is decorated with an incised cross, the upper two arms of which are much longer than the lower. Set into the head is a round piece of dark blue ?translucent glass. The top of the shaft carries three grooves. Length 107 mm.

279 Fig 5.3 SF 1.81 2336(C), E876 L57. Unburnt colonial occupation: Buildings 86/87. Period 2. A pin head similar to the example from the Gilberd School, Fig 6.3,55. The type, pre-Flavian in date, is discussed on p 210.

280 Fig 5.3 SF 1.81 4019(C), D1883 L1745. Dump or make-up? Yard of Building 123. Period 4. A complete pin with an unusual hollow head formed by turning up and over each corner of a triangle of sheet metal. Length (slightly bent) 86 mm. *See* **281** below.

281 Fig 5.3 SF 1.81 4818(C), H626. Unstratified. Periods 1 to 6. A ?pin related to **280** above, with a head of sheet metal, roughly rectangular but with pointed short sides which have been folded over. Unlike 280 where the shaft joined the head at the centre of the underside of the triangle of sheet metal, the shaft of this ?pin joins the head at the middle of one long edge. The lower part of the shaft has been bent almost at a right angle to the upper part, and the tip is missing. Length 75 mm.

282 Fig 5.3 SF 1.81 4821(C), H630. Unstratified. Periods 1 to 6. A complete pin related to Type 2, with a head consisting of a spool motif surmounted by a flattened sphere. The sphere has a mid-line groove above which is incised a zig-zag pattern. The head has a deep hollow in the top, probably to take a bead of coloured glass. Length 96 mm.

283 Fig 5.3 SF 1.81 2833, D72 F43. Large pit. Period 7. A pin with a head of two reel motifs flanking a bead. Four grooves have been cut into the shaft immediately below the head. The shaft is of flattened ovoid section. The tip is missing. Length 55 mm.

284 Fig 5.3 SF 1.81 2866(C), D114 F88. Settlement in drain. Period 5 or 6. A complete pin with a head consisting of rectangular section bead and reel motifs. Length 100 mm.

BEADS

Gadrooned beads

Melon beads (Fig 5.51; **292-313).** Date-range: 1st to 2nd century. Most of these beads derive from contexts which support the early Roman date range for the type. Most notably, **299** comes from a Period 1 ?drain/cess-pit in Room 1, Building 78; **297** is from

Period 2 make-up also in Room 1 of Building 78; and 313 is from a Period 2 sandy clay floor in Building 91. Two of the beads are of translucent cobalt blue glass, the rest are of turquoise frit, often considerably decayed.

Annular beads

Annular bead with marvered trail (Fig 5.4; **314).** Probably of early or mid Roman date.

314 Fig 5.4 SF 1.81 4732, J147 L1. Site clearance. Period 6. A fragment of an annular bead originally of translucent cobalt blue glass, now decaying to opaque green. Many swirls of white opaque glass have been marvered into the surface. Diameter approximately 15 mm, length 6 mm.

Plain annular beads **(315-18).** All four of these beads are associated with well-dated levels within buildings. **318** is from early Period **3** redeposited Boudican dump representing the destruction of Building 79; **315** is from Period 4 make-up in Room 1, Building 110; **316** from a Period 4a daub floor in Room 5, Building 112; and **317** from Period 4 dump/make-up in Room 1 of Building 114. Catalogued on microfiche.

Short beads (length more than 1/8 but less than 9/10 diameter)

Short oblate beads (Fig 5.4; **319-22).** These beads date in general to the 3rd and 4th centuries. Two of the beads catalogued on microfiche **(320-1)** derive from Period 5b occupation in Building 120.

319 Fig 5.4 SF 1.81 5083, D1697 F352. Drain: Building 123, Passage 2. Period 4. A short oblate (almost spherical) bead of colourless glass now decayed to opaque white, chipped in one place to expose gold foil. Beads of this type belong to the late 3rd and 4th centuries (Boon 1977, 193-207). Length 3 mm, diameter 4 mm.

Short biconical bead **(323).** The example catalogued on microfiche is from unstratified site clearance. The form is current throughout the Roman period (Guido 1978, 97).

Standard beads (length more 9/10 than but less than 1 1/10 diameter)

Standard spherical beads **(324-5).** Both beads derive from post-Roman contexts. Catalogued on microfiche.

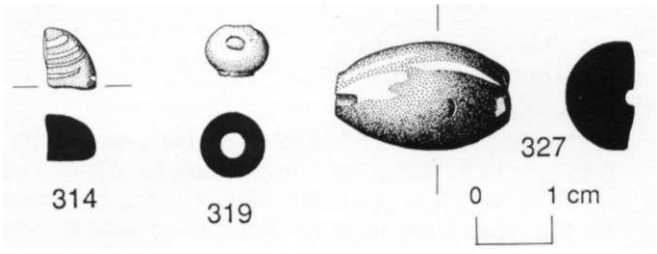


Fig 5.4 Beads. 1:1.

Standard barrel bead **(326).** The example catalogued on microfiche comes from a Period 4 drain in Passage 2 of Building 123.

Long beads (length more than 1 1/10 diameter)

Long barrel bead (Fig 5.4; **327)**

327 Fig 5.4 SF 1.81 4351, H273 L78. Destruction debris: Building 116. Period 5. A fragment of a jet long barrel bead. Length 23 mm, diameter 14 mm.

Long cylinder beads **(328-37).** These beads derive from a wide range of dated Roman contexts, from Site B Period 3 **(329)** to Site D Period 4. Catalogued on microfiche.

Other beads

Semicircular jet bead with decorated upper edge and wedge-shaped section **(338).** A fragment of a bead, catalogued on microfiche, similar to *CAR* **2,** fig 37,1496. The fragment derives from Period 4 dump/demolition on Site C.

ARMLETS

Shale and jet armlets

Plain **(339-51).** Most of these armlet fragments are residual in post-Roman contexts, with some in late Roman contexts, and one **(346)** from a ?late Period **3** ?foundation for Room 9 of Building 95. Catalogued on microfiche.

Cable decoration (Fig **5.5; 352)**

352 Fig 5.5 SF 1.81 4804, M9 L1. Surface cleaning. Unstratified. Shale. Fragment. Internal diameter approximately 58 mm. Circular section, thickness 8 mm, height 7 mm. The grooves form a continuous spiral, as *CAR* **2**, fig 38,1556.

Latitudinal grooves and ridges (Fig **5.5; 353-5).** The two illustrated fragments are from post-Roman contexts, but the ?armlet fragments catalogued on microfiche **(355)** are from a Period **5** context on Site B.

353 Fig 5.5 SF 1.81 4699, M96 F27. Robber trench. Period 6. Shale. Fragment. Internal diameter approximately 62 mm. D-shaped section with internal ridge, thickness 7 mm, height 8 mm. A convex central ridge is flanked by an upper and lower marginal step.

354 Fig 5.5 SF 1.81 4701, J162 L1. Site clearance. Period 6. Shale. Fragment. Internal diameter approximately 98 mm. More or less D-shaped in section, the outer face being the upright of the D. There is a step about half-way down the inner face, and below this the inner face is rough with ridges left by the cutting away of the inner core. Thickness 6 mm, height 12 mm. There are four latitudinal grooves on the outer face.

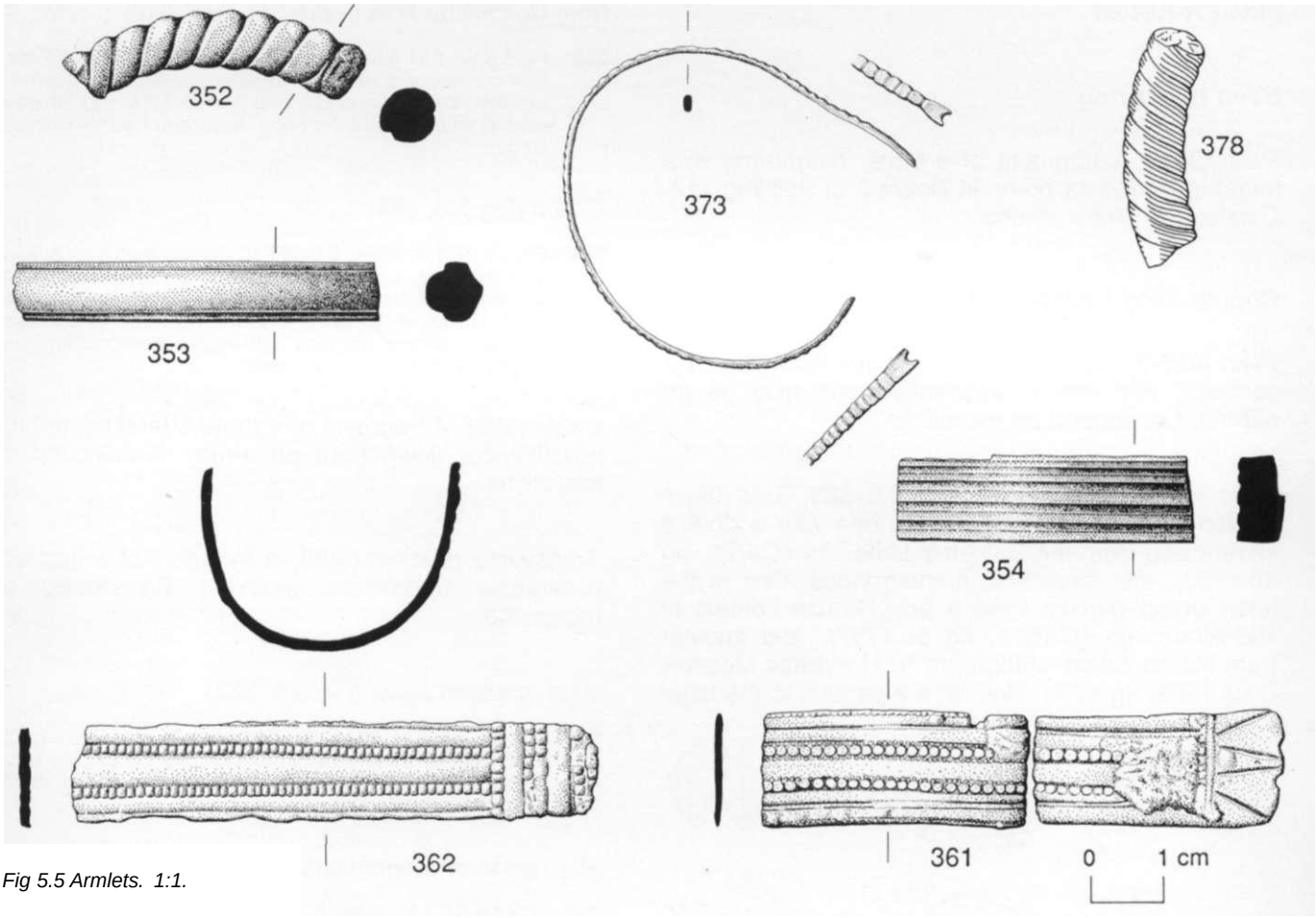


Fig 5.5 Armlets. 1:1.

Notched **(356-60).** All are from unstratified or post-Roman levels. Catalogued on microfiche.

Copper-alloy armlets

Early (Fig 5.5; **361-2).** Early metal armlets are much broader than the bangles common in the 3rd and 4th centuries.

361 Fig 5.5 SF 1.81 749(C), A342 L79. Destruction debris (redeposited). Period 3. Two fragments of a penannular armlet similar to *CAR* **2**, fig 40,1586, but with two panels of wreath design separated by a single central moulding and flanked by grooves and mouldings. One end survives. It is marked by two transverse lines of knurled decoration and two incised Vs. Surviving length 72 mm.

362 Fig 5.5 SF 1.81 2372(C), E1026 L89. Make-up: Building 89. Period 2. A fragment of an armlet with decoration of mouldings and beading, both along and across the outer face. Width 14 mm, internal diameter approximately 32 mm, probably distorted.

Wire **(363-4).** Two examples from Period 5 contexts on Site G are catalogued on microfiche.

Cable **(365-9).** Four examples were found in post-Roman contexts and one is unstratified. Catalogued on microfiche.

Plain **(370).** One example from a post-Roman pit is catalogued on microfiche.

Notched, crenellated **(371-2). A** fragment with alternate notches was found in a post-Roman pit, and a crenellated fragment is unstratified. Catalogued on microfiche.

Transverse grooves (Fig 5.5; **373)**

373 Fig 5.5 SF 1.81 3140(C), G364 F14. Sand pit. Period 5. An almost complete but distorted armlet, decorated with continuous transverse grooves. Each terminal is damaged, but both seem to have been flattened and pierced, suggesting that they were riveted together. Maximum internal diameter 44 mm; rectangular section, thickness 1 mm, height 2 mm.

Multiple motifs **(374-7).** Four fragments of these distinctive armlets were found, one **(376)** from a Period 4 drain in Passage 2, Building 123, two **(374, 377)** from other late Roman contexts, and one from an unstratified context. Catalogued on microfiche.

Glass armlet (Fig 5.5; **378)**

378 Fig 5.5 SF 1.81 4295, H131 L3. Topsoil/clearance. Period 6. A fragment of a glass armlet. The original colour was probably translucent cobalt blue, the surface is now corroded. Thickness 9 mm, internal diameter approximately 60 mm.

FINGER-RINGS

Bone finger-ring

Plain **(379).** A fragment of a bone ?finger-ring was found in Period 4a dump in Room 2 of Building 112. Catalogued on microfiche.

Copper-alloy finger-rings

Plain **(380-2).** Two of these rings are from Period **3** contexts, and one is unstratified and may be an earring. Catalogued on microfiche.

Plaint with decorative clasp (Fig 5.6; **383).** This ring is related to others from the town, one with a double spiral clasp from the Balkerne Lane site *(CAR* **2,** fig 50,1756), and three with running loops. One of the latter group derives from a post-Roman context at Middleborough *(CAR* **2,** fig 50,1757), and another from the so-called 'Mithraeum' in Hollytrees Meadow (Hull 1958, fig 47,4). Hull cites a parallel to the latter from Colchester now in the BM *(ibid,* 118).

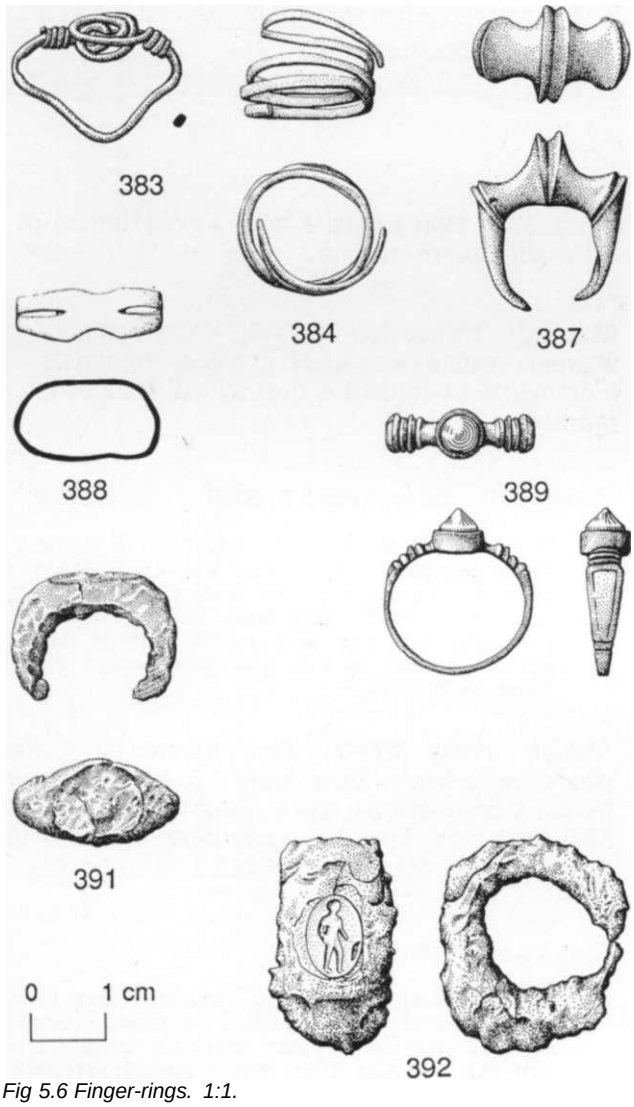


Fig 5.6 Finger-rings. 1:1.

383 Fig 5.6 SF 1.81 4392(C), H304 F146. Robber trench? Period 6. A crushed and distorted finger-ring with the ends twisted together to form a spiral then turned back and wrapped several times around the hoop. Maximum internal diameter 20 mm.

Coiled (Fig 5.6; **384)**

384 Fig5.6SF1.81 3591, D1140F30. Robber trench for Building 123. Period 6. A ring of four coils. One terminal appears to be broken. At the other end the coil has been bent back on itself for some distance before the terminal. Maximum internal diameter 15 mm; rectangular section, maximum height 2 mm, thickness 1.5 mm.

Cable **(385).** A fragment of a three-strand finger-ring, possibly cut down from an armlet. Catalogued on microfiche.

Transverse grooves **(386).** A fragment of a ring with continuous transverse grooves. Catalogued on microfiche.

With moulded bezel (Fig 5.6; **387)**

387 Fig 5.6 SF 1.81 3841, D1645 L1372. Dump: Building 123, Room 8. Period 4. A ?finger-ring with strong split mouldings at the centre and to either side of the bezel. The internal diameter is small, 13 mm.

With glass or enamel setting (Fig 5.6; **388-90)**

388 Fig 5.6 SF 1.81 1195, B736 L144. Dump/clay floor: Building 113, Room 1. Period 4. A crushed finger-ring, with waisted bezel. The hoop has been split for a short distance to either side of the bezel's centre, which is plain. Though there is no sign that a setting was fixed to the bezel, the fact that the incisions into the hoop avoid this area suggests that it may have held some ornament. Internal diameter approximately 15 mm, maximum height 7 mm.

389 Fig 5.6 SF 1.81 4084(C), G2657 F2370. Drain? Period 4 or 5. A well-preserved finger-ring, with a circular bezel in which is set a conical piece of translucent dark blue (?black) glass. The bezel is flanked by sharply-defined mouldings. Maximum internal diameter 18 mm.

Iron finger-rings

With glass setting (Fig 5.6; **391-2)**

391 Fig 5.6 SF 1.81 3844, D1632 F1492. Drain: yard of Building 123. Period 4. A ring with a thin-walled oval bezel which probably originally held a piece of glass. Part of the D-shaped hoop is missing. Maximum internal diameter 14 mm.

392 Fig 5.6 SF 1.81 3919, G2173 L1974. Destruction debris: Building 116. Period 5. A ring with a flattened hoop broadening out towards the bezel, in which is set a nicolo glass intaglio (see report by Martin Henig below). Internal diameter 21 mm.

?Plain **(393).** A ?finger-ring with the bezel possibly slightly wider than the hoop was found in topsoil/clearance on Site H. Catalogued on microfiche.

INTAGLIOS (Figs 5.6-7; 392, 394-8)

by Martin Henig

394 Fig 5.7 SF 1.81 241, A149. Unstratified. Post-Roman. A corroded nicolo glass intaglio with flat upper face and bevelled sides. Dimensions 12 by 10 by 2.5 mm. The impression yielded by the intaglio is not very good but the figure may be identified as Dea Roma seated on a cuirass in profile to the left. She holds a Victory on her outstretched hand and behind her is a shield. For the type (goddess with short tunic) *see* Henig 1978, no 249, App 85, App 130; Zwierlein-Diehl 1979, nos 1437-40. Roma is also represented at Colchester by two gems set in gold rings. One is a nicolo of Severan date (Henig 1978, no 250) showing the goddess seated and holding a sceptre. The other is a head of Roma on an amethyst, probably of 1st-century date (information from D T-D Clarke of the CM who kindly allowed me to examine a photograph sent by the owner). These two intaglios may well have belonged to wealthy colonists or to provincials serving at the altar of the Imperial cult which was probably set up in Claudius's lifetime (Fishwick 1972, 164-81). Our intaglio belonged to a much more modest member of society who nevertheless wished to honour the Ruling Power in his daily life. According to Cornelius Vermeule the image shown is pre-Hadrianic, but the intaglio itself probably dates from later in the 2nd century (Vermeule 1959, 68 ff).

395 Fig 5.7 SF 1.81 430, B27 L2. Dump/midden build-up. Period 5. A corroded intaglio of nicolo glass with flat upper face. Form F2 (Henig 1978, fig 1). Dimensions 8 by 5.5 by 2 mm. The impression shows a smith seated on a low pedestal and working on an object placed on a stand. The type is a common one, perhaps because of the ubiquity of smiths in Roman Britain. Iconographically it may be derived from representations of Daedalus working on wings for himself and Icarus. Examples from Britain include specimens from Harlow (Essex), Whiton (Suffolk), and Alchester (Oxfordshire) *(ibid,* nos 528-31 and Appendix 88; *id* 1975, 325-6, pl 12B). The intaglio dates to no earlier than the end of the 2nd century and is probably 3rd century.

396 Fig 5.7 SF 1.81 1180, B688 L133. Occupation lenses: Building 113, Room 1. Period 4. A nicolo intaglio in good condition apart from slight surface wear. Form F4 (Henig 1978, fig 1) with flat upper face and bevelled sides. Dimensions 8.5 by 6.5 by 2 mm. The impression shows a satyr prancing towards the right, right arm raised, left arm lowered with hand holding curved staff *(pedum* or *lagobolon).* Compare *ibid,* nos 172, 176, 177; Maaskant-Kleibrink 1978, no 940; Zwierlein-Diehl 1979, no 1386. The device is diminutive, but the cutting is nevertheless both neat and accurate. In style it belongs to the classicising group dated by Dr Maaskant to the 1st century AD and the first decades of the 2nd century (Maaskant-Kleibrink 1978, 197).

397 Fig 5.7 SF 1.81 4709, J34 L1. Site clearance, Period 6. Nicolo glass intaglio of Form F2, ovoid with bevelled edge (Henig 1978, fig 1). Maximum dimensions 12 by 9 by 1.5 mm, upper surface 9 by 6 mm. The device (described in impression) is a young satyr seated upon a rock with his body in profile to the left. In his right hand he holds a cup and in his left what is probably to be interpreted as a bunch of grapes. A tree is shown behind the satyr and in front of him is his *pedum.* There is a short ground line. The cutting of the gem is bold and precise in the classicising tradition of the 1st century AD (Maaskant-Kleibrink 1978, 197). Comparison may be made in general terms with the satyrs on intaglios from Charterhouse-on-Mendip, Somerset (Henig 1978, no 157) and Silchester, Hampshire (discovered in field-walking; Fulford *et al* 1987, 279-81), but these are satyr-musicians, with double-flutes, not revellers. Scenes of drinking or perhaps libation, in front of images of Priapus are, however, reasonably common upon gems, mainly datable to the Augustan age (Henig forthcoming, no 188).

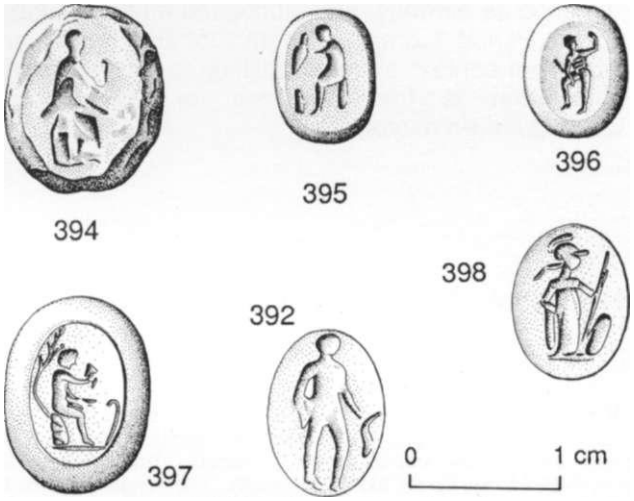


Fig 5.7 Intaglios. 2:1.

On the reverse of the gem a graffito has been scratched in Greek letters reading EYCE/BI, abbreviated from the personal name Eusebios, in the nominative, or perhaps the genitive Eusebiou. The exact significance of the graffito must remain uncertain. If it is the signature of the artist, it is surprising that it was not given greater prominence (ie upon the obverse as Richter 1971, 129-53) — or was this the work of a slave within the *officinal* It is much more likely that it was the name of the original owner, intended to support his claim to his signet and prevent confusion in a workshop while it was being set or reset by an *annularius,* an explanation I have maintained previously in the case of an enigmatic 'P' on the reverse of a nicolo from Oxfordshire (Henig & Wilkins 1982, 381, pl 56, c).

392 Figs 5.6 & 5.7 SF 1.81 3919, G2173 L1974. Destruction debris: Building 116. Period 5. An ovoid nicolo glass intaglio set in an iron ring *(see* above). Internal diameter of ring 21 mm, external diameter 26 mm. Intaglio 12 by 10 mm. The form of the ring (Type V, Henig 1978, fig 1) is characteristic of the middle and late 2nd century. The device (described in impression) is a satyr standing with his body towards the left. He holds a *pedum* in his left hand, the crook of which can be seen above his shoulder. With his right hand he holds a goat by its forelegs. There is a short ground line. The intaglio is now much decayed. The design is matched by nicolos from Unterstall in Bavaria (Schmidt 1971, 232-3, no 28, pl 23) and Berlin (Furtwangler 1896, no 8215). A version of the type in glass in Hanover includes an image of Bacchus upon a pedestal, emphasising that the subject is indeed a satyr (Zazoff 1975, no 867).

398 Fig 5.7SF 1.81 3767, G1728 F1722. Posthole: Building 117. Period 4. A jasper intaglio, very dark green in colour, and ovoid (Form F1; Henig 1978, fig 1). Maximum dimensions 10 by 7.5 by 1.5 mm. The device (described in impression) is of Minerva standing with her body to the front, facing left. She holds her spear before her in her right hand. At her feet is her shield. There is a short ground line. The cutting is coarse, with no attempt at detailing, analogous to Dr Maaskant-Kleibrink's Incoherent Grooves Style (1978, 326). The gem is not closely datable, but is probably later 2nd or 3rd century rather than earlier. For the type *see* Sena Chiesa 1966, no 130, and Henig 1978, no 233, from Richborough, Kent.

EARRINGS (399-400)

Two copper-alloy penannular rings, possibly to be

identified as earrings, are catalogued on fiche. One is from a Period 1 drain in Room 7 of Building 83 and thus from context alone is unlikely to be an earring. The other is from medieval or later topsoil. Catalogued on microfiche.

MISCELLANEOUS JEWELLERY (Fig 5.8; **401-5)**

401 Fig 5.8 SF 1.81 174, A98 F28. Robber trench. Early medieval. A ?pin, or fastener for clothing. The object is a copper-alloy rod of tapering section, (?)deliberately bent about two-thirds along its length. The longer arm is the thicker, and terminates in a point. The shorter arm tapers to a thin point which has been bent round upon itself to form a hook. Threaded on to this shorter arm, and prevented from falling off by the hook, is a translucent dark blue glass faceted-cuboid bead, of a type belonging to the late 3rd or 4th century *(CAR* **2***,* 33).

402 Fig 5.8 SF 1.81 3747, D1368 L1143. Demolition debris: Building 123, Passage 4. Period 4. A piece of gold wire twisted to form the 'eye' part of a necklace clasp, with a loop at either end. *(See* **403** for the hook.) One loop terminal is of greater diameter than the other, and has been beaten to a flat section. The other retains the original circular section and has a short length of gold wire with a flattened loop terminal suspended from it. Total length 21 mm. Length of eye clasp 17 mm.

403 Fig 5.8 SF 1.81 3748, D1379 L1143. Demolition debris: Building 123, Passage 4. Period 4. A gold wire 'hook' from a necklace clasp. *(See* **402** for the eye). At the end opposite the hook the wire has been twisted around itself to form a loop, from which is suspended a short length of gold wire with a flattened loop terminal (now distorted), similar to that on **402.** Total length 27 mm. Length of hook 23 mm.

404 Fig 5.8 SF 1.81 3428, G913 F914. Hearth/burning: Building 120. Period 5b. A short length of twisted gold wire, probably from a damaged clasp fitting similar to **402** and **403.** Length 20 mm.

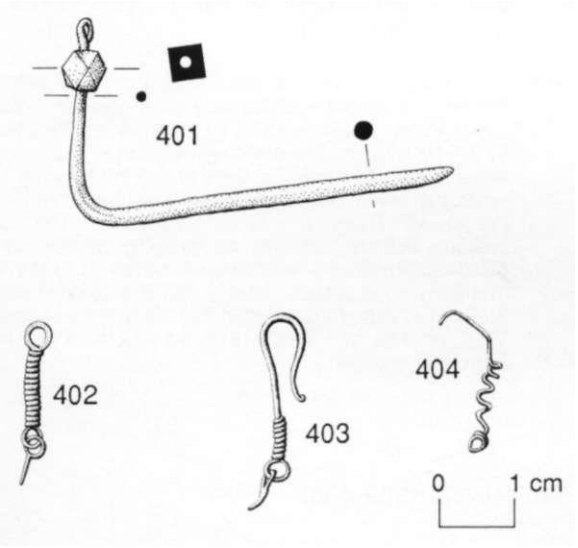


Fig 5.8 Miscellaneous jewellery. 1:1.

BUCKLES (406-9)

Four copper-alloy buckle loops are catalogued on microfiche.

FOOTWEAR (410-13)

Catalogued on microfiche. *See* also the ?hobnails associated with the iron fitting SF 1.81 5363 (Category 11).

CATEGORY 2:
Toilet, surgical or pharmaceutical instruments

STIRRING RODS (Fig 5.9; **414-21)**

The possible manufacture of these objects on the Culver Street site is discussed in *CAR* **8.**

414 Fig 5.9 SF 1.81 2545, B2406 L22. Dump level. Period 4 (or 5). A fragment of a translucent green glass stirring-rod with one end surviving. Length 73 mm, diameter 10 mm.

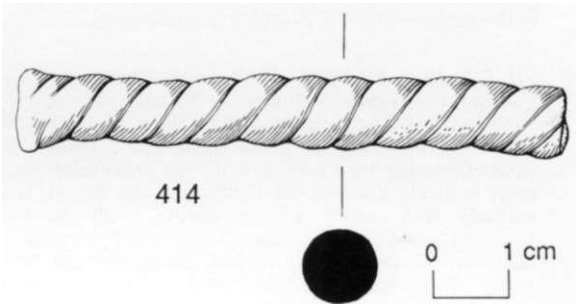


Fig 5.9 Stirring rod fragment. 1:1.

MIXING PALETTES (422-6)

Five fragments of stone palettes were recovered. **425** derives from Period **2** destruction debris of Building 79, **424** from Period 4 dump in Room 8 of Building 123, and **426** from Period 5 dump in Building 116. Catalogued on microfiche.

MIRRORS (Fig 5.10; **427-32)**

Round and rectangular mirrors are early Roman in

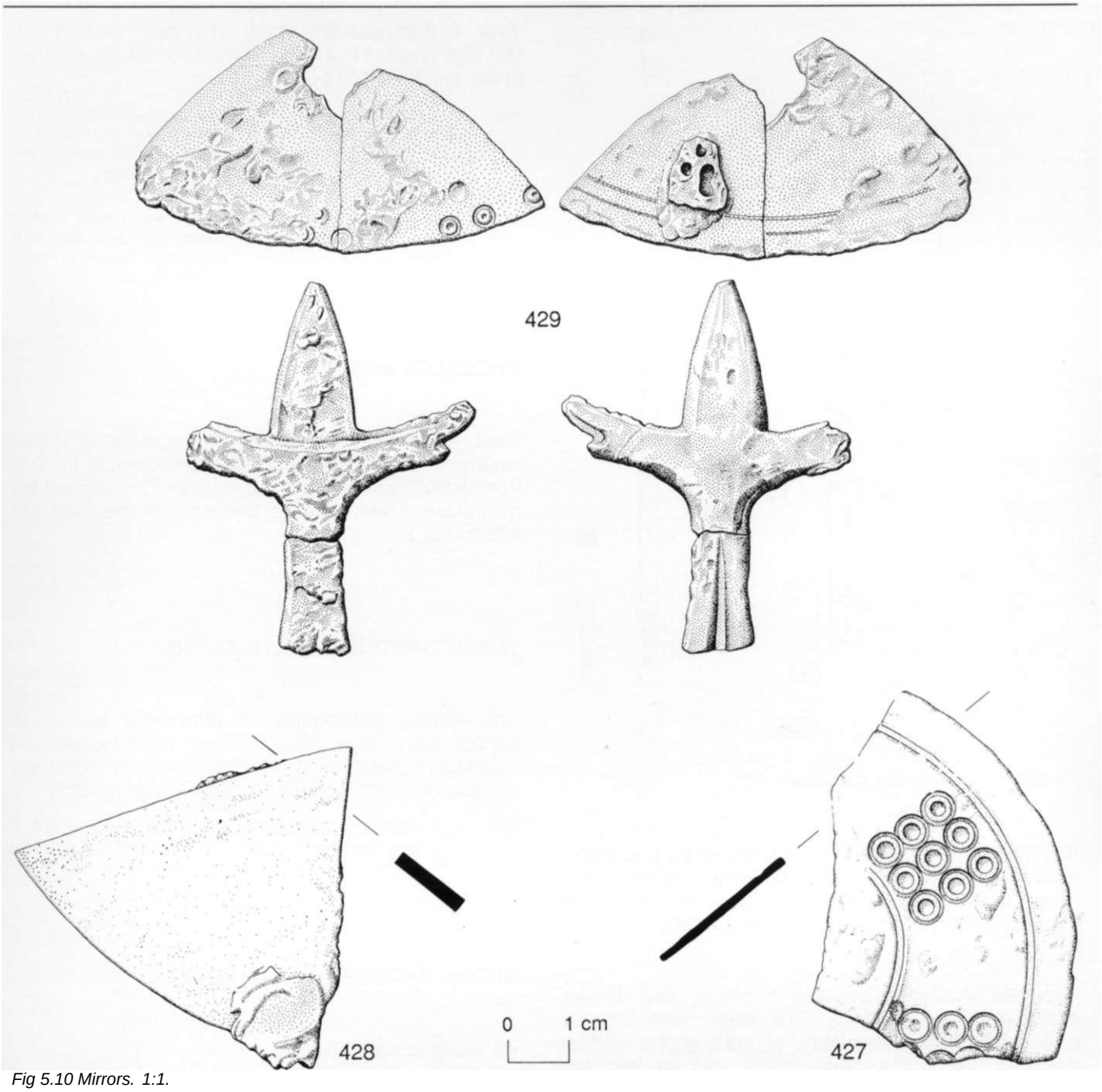


Fig 5.10 Mirrors. 1:1.

date. They are made of speculum, a high tin bronze.

427 Fig 5.10 SF 1.81 2479(C), B2304 L22. Dump level. Period 4 (or 5). A fragment from a circular speculum mirror, diameter approximately 100 mm. The piece is decorated on one face with two groups of concentric grooves set 19 mm apart. The area within the band so defined bears a group of nine incised ring-and-dot motifs, set squarely three by three, and part of a similar group. Surviving length 65 mm.

428 Fig 5.10 SF 1.81 783(C), C206. Unstratified. A triangular fragment from a circular speculum mirror, diameter approximately 160 mm. Part of the solder for attaching a handle to the mirror plate remains at one corner. Surviving length 60 mm.

429 Fig 5.10 SF 1.81 901(C), A439 L93: Building 110. Trench fill. Period 3. Two joining fragments of a circular speculum mirror, diameter approximately 160 mm, with part of a handle. The outer edge of the mirror is very slightly notched and marked on one face by ring-and-dot motifs and there are other ring-and-dot motifs set in from the edge. The small area surviving and the corroded surface make a pattern hard to define, but those on the edge seem to be in groups of three. The other face bears a pair of marginal grooves. Only one side of the handle survives, and its lower end is missing. Surviving length of the handle 62 mm.

NAIL-CLEANERS

All are of copper-alloy. The types and their date ranges are more fully discussed in *CAR* **2,** 57-8.

Type 1a. Nail-cleaners with a more or less straight,

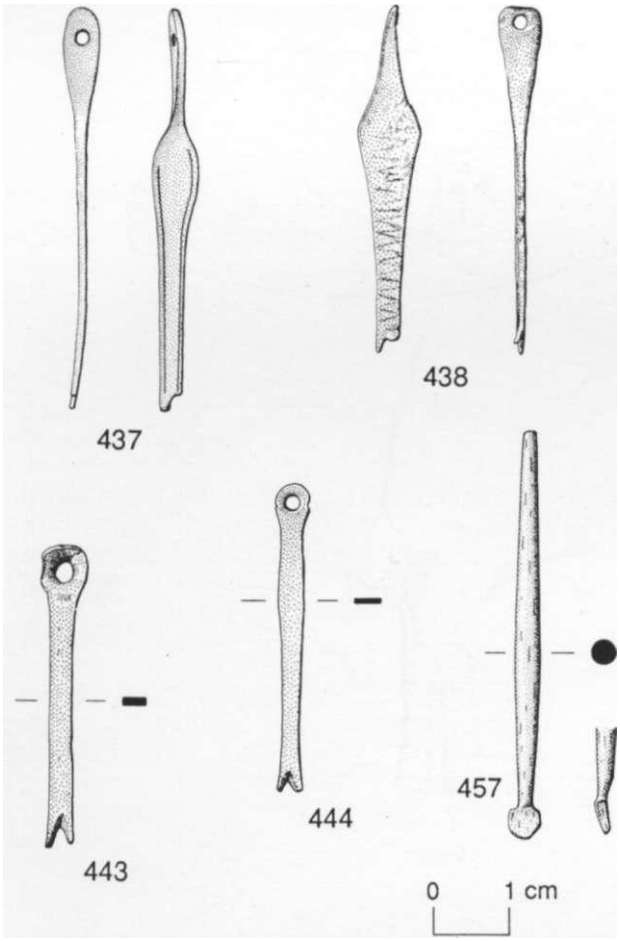


Fig 5.11 Nail-cleaners and toilet spoon. 1:1.

flat, thickish shaft **(433-6).** The suspension loop rises directly from the shaft and is on the same plane. Date range: mid to late 1st century, possibly continuing into the 2nd century. Catalogued on microfiche.

Type 2a. Nail-cleaners with a simple leaf-shaped blade (Fig 5.11; **437-41).** The suspension loop is often, though not invariably, at right angles to the plane of the blade. Date range: mid to late 1st century, probably continuing into the 2nd century.

437 Fig 5.11 SF 1.81 4026(C), D1857 F845. Wall (random rubble): entrance to cellar of Building 123. Period 4. The suspension loop of this nail-cleaner is at right angles to the plane of the blade. The narrow-shouldered long blade is defined by a marginal groove. At one point the tool used to cut this has slipped and cut a line running too close to the edge of the blade. The points are damaged. Length 54 mm.

438 Fig 5.11 SF 1.81 4427(C), H370 L283. Dump. Period 5. The surface of this cleaner is scarred by corrosion. The suspension loop is at right angles to the plane of the blade. One point is missing. Both sides of the blade are decorated with a freely-applied incised zig-zag. Length 46 mm.

Type 2b. Nail-cleaners with a stylised leaf-shaped blade **(442).** Date range: 2nd century, possibly continuing into the 3rd century. Catalogued on microfiche.

Type 4. Nail-cleaners which have been beaten out, not cast (Fig 5.11, **443-4).** *(See* also the nail-cleaner in the toilet set **479** below.)

443 Fig 5.11 SF 1.81 3627, G1359 L1050. Dump: Building 116. Period 4. A nail-cleaner with a suspension loop formed by punching a hole into the flattened terminal. The edges of the hole on the underside are burred. Length 39 mm.

444 Fig 5.11 SF 1.81 3560, D1059 F22. Robbed drain: yard of Building 123. Period 4. A nail-cleaner similar to **443**, also with the edges of the punched hole burred. Length 42 mm.

TWEEZERS (445-56)

Most are blade fragments, or fragmentary whole tweezers. They derive from contexts varying in date from early Period 3 to post-Roman. Catalogued on microfiche. *(See* also the tweezers in the toilet set **479** below.)

TOILET SPOONS (Fig 5.11; **457-68)**

The spoons catalogued on microfiche are all of copper alloy. One **(465)** derives from redeposited Boudican destruction debris, the others from contexts ranging from 2nd century to post-Roman in date.

457 Fig 5.11 SF 1.81 2933, G159. Unstratified. Periods 4 to 6. A bone toilet spoon with small round flat scoop. The tip of the shaft is missing. Length 55 mm.

SPOON-PROBES (Fig 5.12; **469-72)**

All are of copper alloy.

469 Fig 5.12 SF 1.81 1338, B905 L196. Dump: Building 112, Room 2. Period 4. In two pieces. The central part of the circular-section shaft is covered with close-set punched dots which give the impression of herringbone decoration. A single reel moulding separates this part of the shaft from a short undecorated length just above the probe. Above the spoon is a series of baluster, bead, and reel mouldings. Length 115 mm.

470 Fig 5.12 SF 1.81 5140(C), K64 F55. Pit. Period 3a. Above the small round flat spoon is a reel moulding, beyond which the shaft is polygonal, tapering to circular before the probe. The shaft between the moulding and the spoon is subrectangular and marked by a series of transverse nicks on all four faces. The distance between the nicks varies from face to face. They may be a crude attempt at incised cable or spiral decoration, or may possibly indicate a system of measurement, the most likely being as an indicator of remaining quantity. This would be an efficient method to use if cosmetics, perfumes, or unguents were stored in opaque narrow-necked vessels. The same would also be true if this spoon-probe were to be associated with pharmaceutical preparations. Length (slightly bent) 104 mm.

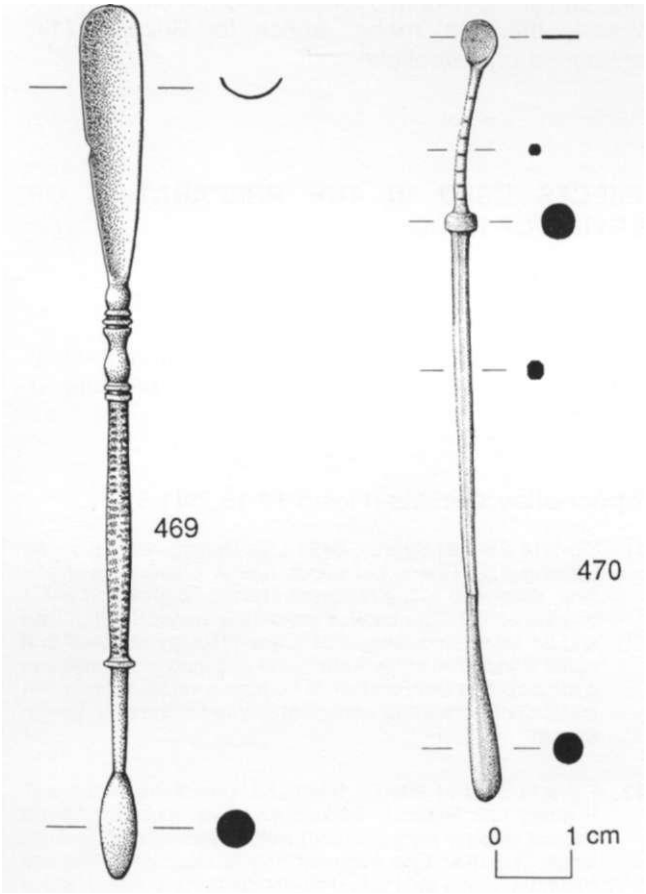


Fig 5.12 Spoon-probes. 1:1.

PROBES (473-8)

Six probes with short broken shafts were recovered. Most, if not all, probably formed part of a double-ended instrument. Catalogued on microfiche.

TOILET SET (479)

A set composed of a nail-cleaner of Type 4, a pair of tweezers, and a wire shaft possibly from a toilet spoon was found in Period 4a dump in Room 2 of Building 112. The method of forming the suspension loop on the nail-cleaner and the broken shaft is similar to that used for *CAR* **2,** fig 67,1943. Catalogued on microfiche.

MISCELLANEOUS INSTRUMENT (480)

A moulded and notched shaft, possibly from a toilet instrument, was found in Period 3d dump on Site G. Catalogued on microfiche.

CATEGORY 3:

Objects used in the manufacture or working of textiles

NEEDLES

Sewing needles

Type 1. Needles with a pointed head **(481-96).** This type, made in both bone and copper alloy, is found at Culver Street in 1st- to 4th-century contexts. It may be current throughout the Roman period, or it may have a terminal date of *c* 200 along with its bone hairpin counterparts, Types 1 and 2. The eye can be rectangular, round, figure-of-eight-shaped, or triangular. Catalogued on microfiche.

Type 2. Needles with a spatulate head (Fig 5.13; **497-517).** The type is found in both bone and copper alloy. As with Type 1, it is probably current throughout the Roman period. **497-515** have a rectangular, and **516-17** a figure-of-eight-shaped eye.

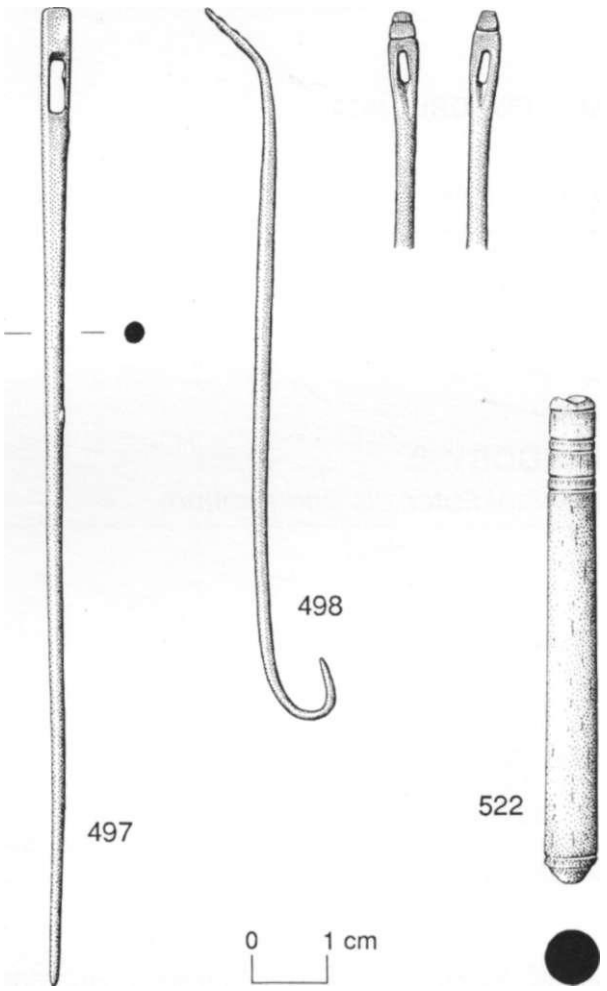


Fig 5.13 Needles and ?spindle fragment. 1:1.

497 Fig 5.13 SF 1.81 4979, M692 F313. Large pit: Building 121. Period 3. A well-preserved copper-alloy needle. Complete. Length 130 mm.

498 Fig 5.13 SF 1.81 4147(C), G2879 L2874. Pit. ?Period 3. A needle with the head bent at an angle to the shaft, and the tip turned up to form a hook. Reuse as a fish-hook is the most obvious explanation for this, but not necessarily the correct one. Length (bent) 94 mm. There are transverse grooves above the eye, and a short slight lengthwise groove below the eye on each side but not above it. This needle has therefore been classified as Type 2, not 3.

Type 3. Copper-alloy needles with a groove above and below the eye **(518-21).** These needles are late Roman in date. **518** derives from Period 4 dump in Room 6a of Building 112, **520** was found in Period 4 occupation/trample of Building 117, and **519** in a Period 4 drain in the yard of Building 123. Catalogued on microfiche.

SPINDLE (Fig 5.13; **522)**

522 Fig 5.13 SF 1.81 4443, G3160 F2695. Pit. ?Period 3. A slightly tapering bone shaft, broken at each end, and decorated at each end with pairs of grooves which form false cordons. Probably a fragment of a spindle. Length 64 mm, maximum diameter 7 mm.

SPINDLEWHORLS (523-5)

Three possible spindlewhorls made from pottery sherds were recovered. One is from site clearance, one from a medieval robber trench, and the third from an unstratified late or post-Roman context. Catalogued on microfiche.

CATEGORY 4:
Household utensils and furniture

SPOONS

Type 1. Spoons with a round bowl **(526-38).** Both copper-alloy and bone spoons of this type were found. One copper-alloy example, **527,** is plated with tin. **535** derives from Period 1/2 occupation (?industrial) in Room **9** of Building **78,** and **526, 529,** and **537** from Period **3** contexts. Catalogued on microfiche.

Type 3. Spoon with a mandolin-shaped bowl **(539).** This spoon fragment has enamelled geometric motifs at the junction between shaft and bowl. It derives from an early medieval robber trench for Building 114. Catalogued on microfiche.

OBJECTS USED IN THE PREPARATION OR SERVING OF FOOD

Shale vessel (540).

A sherd from a large dish or platter with a small footring was found in site clearance on Site J. Catalogued on microfiche.

Copper-alloy vessels (Figs 5.14-15; **541-9)**

541 Fig 5.14 SF 1.81 989(C), B431 L50. Demolished daub wall: Building 112, Room 1. Periods 4/5. A brass or gunmetal strip, decorated with a repousse stylised floral design with a beaded border. The back of the strip is covered with a lead and tin solder, indicating that it was probably attached to a metal object. The strips were found adhering to the inside of a *terra sigillata* dish, and could be from a vessel (of very thin metal since completely corroded) stacked in the dish. Length 82 mm.

542 Fig 5.14 SF 1.81 990(C), B468 L50. Demolished daub wall: Building 112, Room 1. Periods 4/5. Five fragments from a second strip (or the same one) with similar decoration. Total length 308 mm. One fragment only is illustrated. Also one fragment from a strip with different decoration, though still of a stylised floral theme, with a border of dots. Length 33 mm. These pieces were found adhering to a pie dish of black burnished ware.

543 Fig 5.14 SF 1.81 1418, C403 L63. Occupation lenses: Building 79, Rooms 2/3. Periods 1/2. The end of a skillet handle, surviving length 58 mm, diameter of the circular element 37 mm. The handle has a marginal moulding, and the pierced circular end is also decorated with concentric grooves and mouldings.

544 Fig 5.15 SF 1.81 4856(C), B2568. Unstratified. Handed in by a construction worker, almost certainly from Boudican destruction debris. A jug-handle and lid of leaded bronze (alloy identification by Justine Bayley of the AM Lab). The workmanship of the piece is undistinguished. The lunular lower end of the handle seems to have been soldered to the vessel. It is likely that the handle originally completely encircled the jug's rim as each 'arm' at the upper end has the remains of a curved strip of copper-alloy ?riveted to it. The handle and lid are held together by a simple hinge, one lug on the lid held between two on the handle and held by a riveted bar, apparently of iron. The leaf-shaped lid would have been raised by means of a knobbed fitting on its forward half. This fitting would have rested against the tongue-shaped thumb rest on the handle when the lid was open. The rear part of the lid is more or less flat, but forward of a slight step across the widest part it develops shallow sloping walls, and terminates in a blunt end of flat-bottomed inverted shallow U-section, which would clearly provide the means of pouring from the jug even with the lid down. Maximum height of handle 127 mm, length of lid including hinge fitting 59 mm. A similar lid was found in the 1930s on the Sheepen site (Hawkes & Hull 1947, pl 99, 13) and this parallel, together with the likely provenance of this piece, indicates a Claudian-Neronian date for the type.

545 Fig 5.14 SF 1.81 4755, M24 L1. Surface cleaning. Unstratified. A jug lid of leaf-shaped form, broken at the tip and across the perforated lug by which the lid was hinged to

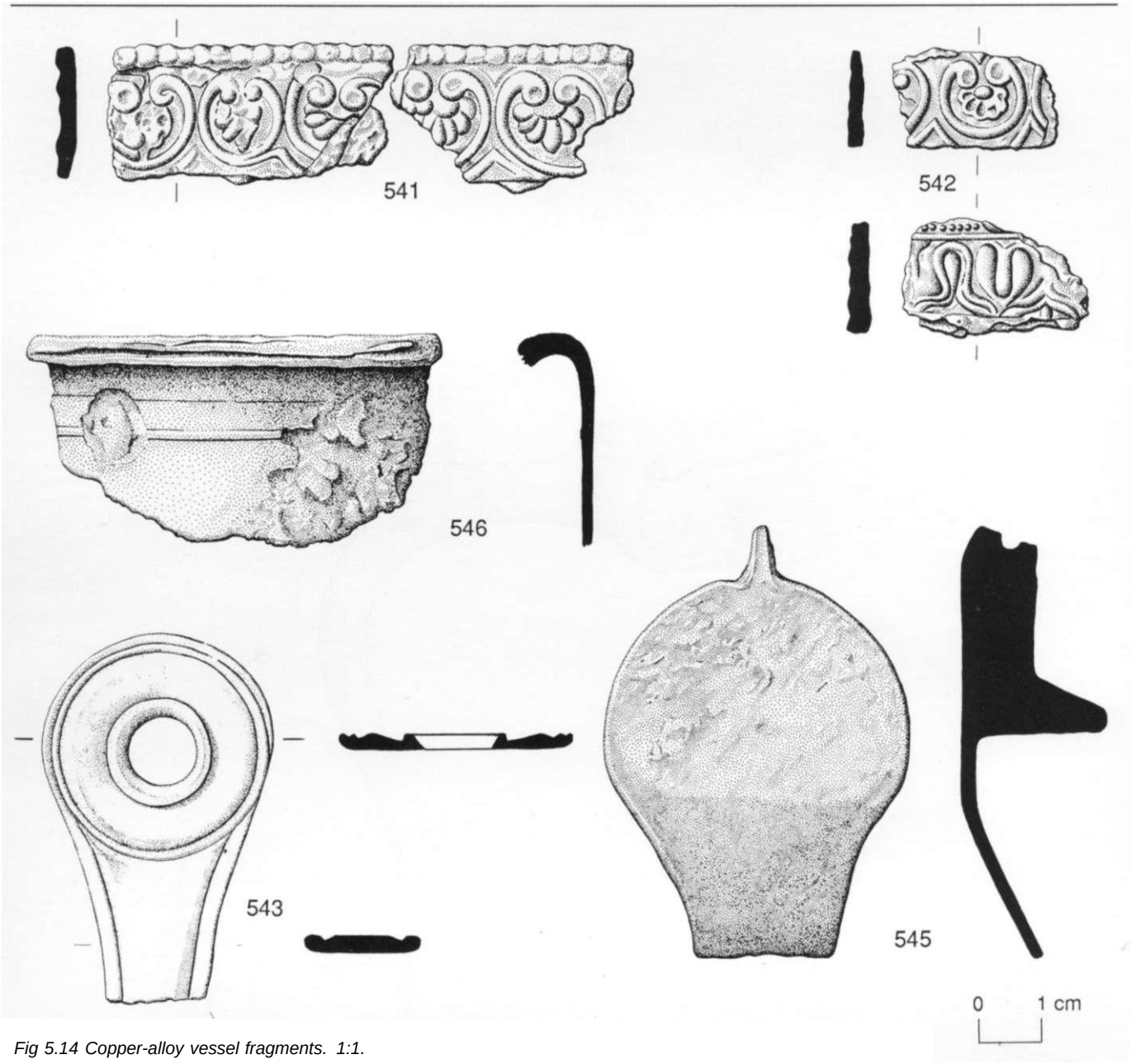


Fig 5.14 Copper-alloy vessel fragments. 1:1.

the jug handle. Running from the lug to the centre of the rounded element of the lid is a simple strip moulding, from the end of which rises a conical projection. This projection, as with the knobbed fitting of the lid above, provided a means of lifting the lid. Surviving length 69 mm, maximum width 49 mm.

546 Fig 5.14 SF 1.81 3584(C), B2549. Unstratified. A rim sherd from a wide-mouthed bowl or large jar. The edge of the rim is corroded, but seems to have been grooved, and the neck of the vessel is decorated with a pair of slight grooves above a cordon. Internal diameter 160 mm, surviving height 34 mm.

Quernstones (Figs 5.16-18; 550-91)

by D G Buckley and H Major

The details of the quernstones presented below follow the format used for querns from other Colchester sites *(CAR* **2,** 73-6). The original dimensions, where ascertainable, given for each rotary quern are as follows: upper-stones, diameter/ maximum thickness at rim; lower-stones, diameter/ thickness at rim/thickness at centre. These measurements are given on the basis that the proportion of thickness to diameter may have a certain chronological significance. This may become more useful as our knowledge of querns increases. The maximum thickness at the rim is given, for this must be closest to the original thickness before wear took place. Often only the maximum thickness of a fragment can be given. The pieces not illustrated here are described on microfiche.

550 Fig 5.16 SF 1.81 168, A70 F31. Pit. Medieval or post-medieval. Lava, upper-stone fragment, 380/80 mm. Roman, as Röder Type 4 (Crawford & Röder 1955, fig 1), the stone tapering towards the middle, with raised kerb around the edge of the upper surface, and handle hole through the side. Vertical tooling on the side, harp dressed on the top, and radial grooving on the grinding surface. Part of the keying present at the centre.

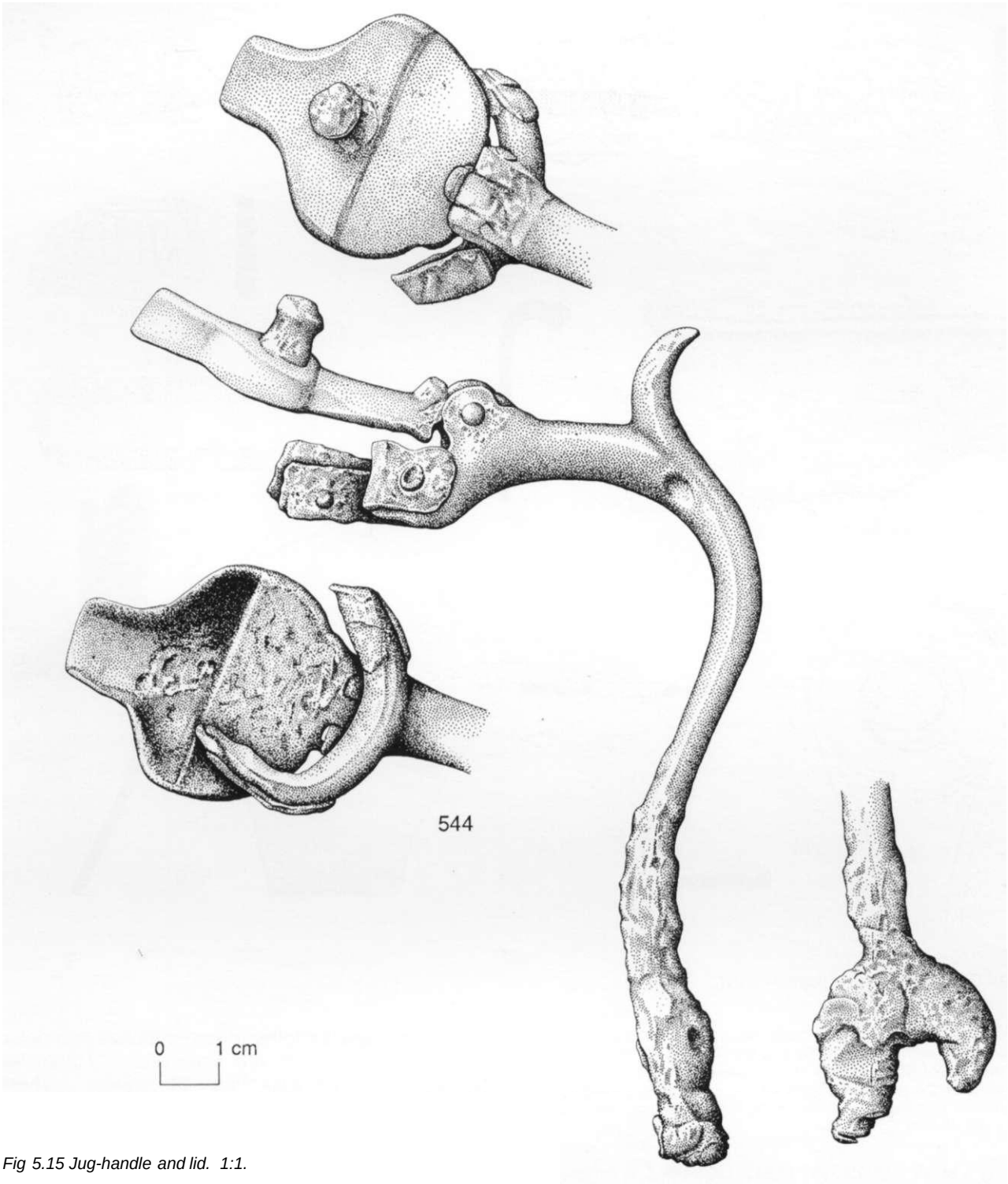


Fig 5.15 Jug-handle and lid. 1:1.

551 Fig 5.16 SF 1.81 1389, B1014 L231. Midden/dump: Building 112. Period 4a. Lava, lower-stone fragment, 520/47/20 mm. Vertical tooling on the edge, undersurface fairly rough, grinding surface harp dressed.

552 Fig 5.16 SF 1.81 1667, B1709 L389. General Boudican demolition layer: destruction of Building 77. Early Period 3. a) Two joining fragments of lava lower-stone with eroded surface 360/40/- mm. b) Not illustrated. Two joining fragments, as (a) and probably from the same stone. Thickness at edge 50 mm. c) Lava, upper-stone fragment, 420/80 mm. Vertical tooling on the edge, upper surface was probably dressed, grinding surface pitted. Kerb on upper edge 40 mm wide. Handle hole through the side. This was possibly a pair with (a) and (b), although less eroded.

553 Fig 5.17 SF 1.81 2080, E494. Unstratified. Lava, upper-stone fragment, 470/100 mm. Vertical grooving on the edge, upper surface and grinding surface harp dressed. Grinding surface worn. Kerb on upper edge 40 mm wide and 10 mm deep. Central hole present, 50 mm diameter.

554 Fig 5.16 SF 1.81 2084, E494. Unstratified. Lava, upper-stone fragment, 420/100 mm. This stone is very similar to 553 and may well be part of the same stone. It has the same dressing, although the kerb is slightly wider at 45 mm and

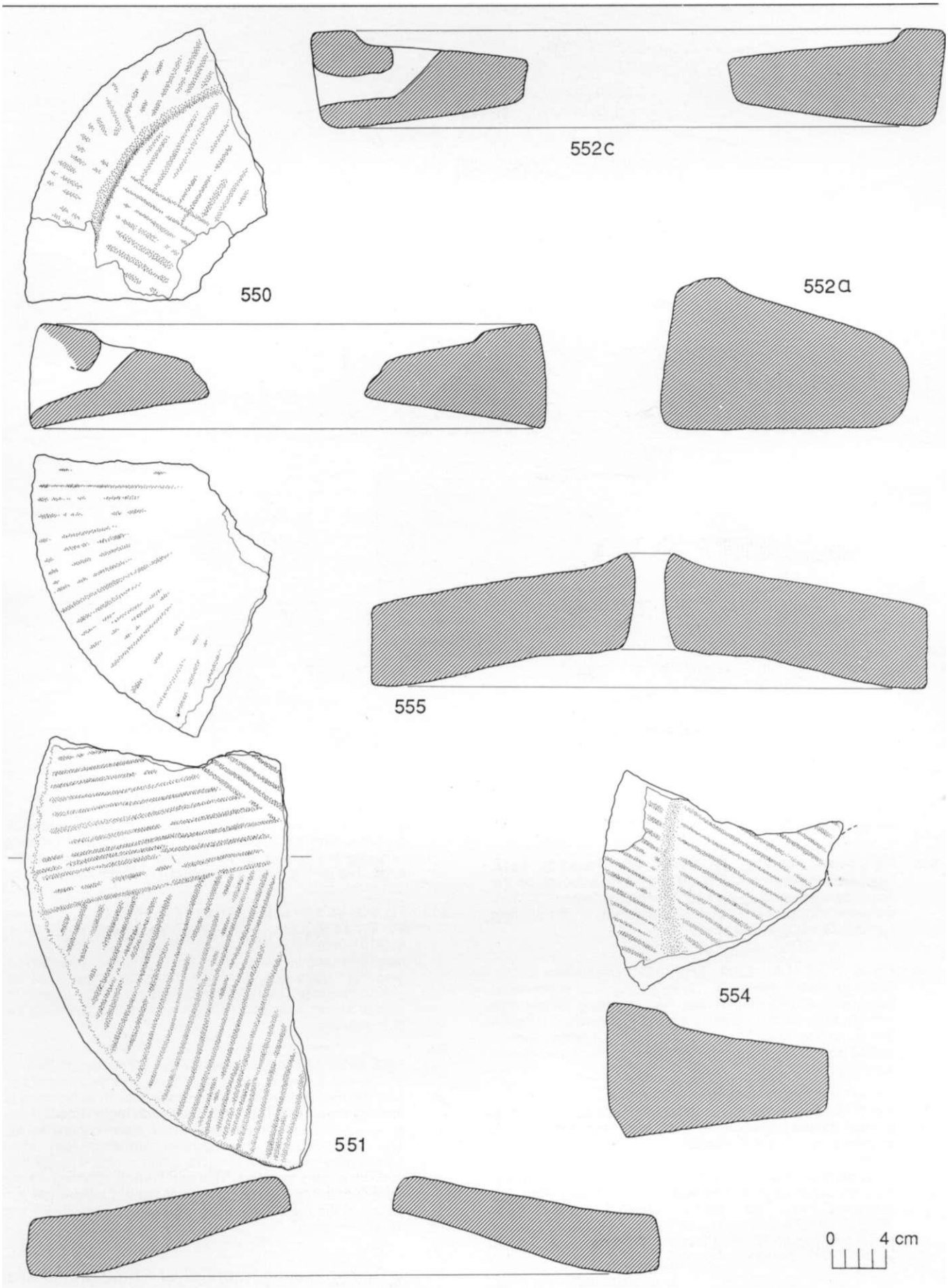


Fig 5.16 Quernstones. 1:4.

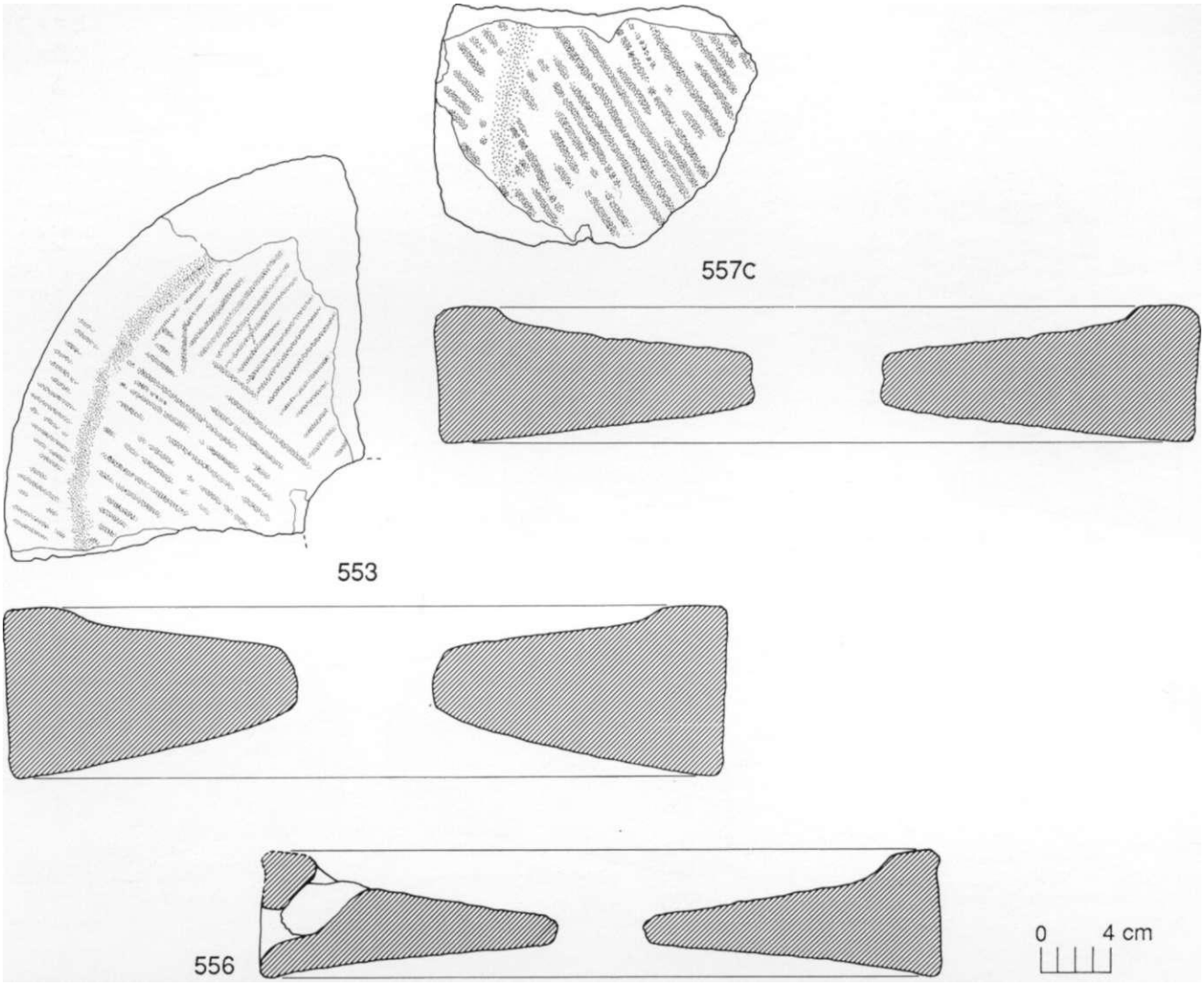


Fig 5.17 Querns tones. 1:4.

the grinding surface has a slightly different profile.

555 Fig 5.16 SF 1.81 2191, E673 F474. Slot. Period 3a. Lava, lower-stone fragment, 390/60/70 mm. Vertical tooling on the edge, pecked grinding surface. Central perforation 30 mm diameter, slight collar around the perforation on the grinding surface. Gentle grinding angle.

556 Fig 5.17 SF 1.81 2200, E682 L22. Destruction debris: Buildings 86/87. Period 2. Three joining lava upper-stone fragments, 360/73 mm. Röder Type 4 with a handle hole through the side, this contains a metallic concretion although this is not necessarily part of the original handle. Vertical tooling on the edge, upper surface harp dressed, and slightly curved over the width.

557 Fig 5.17 SF 1.81 2436, E1197 F1037. Ditch. Period 2. A number of lava fragments, a) Three fragments with grooving on one surface. Not illustrated, b) Two joining upper-stone fragments, -/75 mm. Vertical tooling on edge, upper surface harp dressed, traces of grooves on the grinding surface. Kerb on upper edge 40 mm wide and 10-15 mm deep. Not illustrated, c) Two joining upper-stone fragments, 360/120 mm. Vertical tooling on the edge, top surface worn, radial grooves on grinding surface. Kerb damaged. Part of central hole survives.

558 Fig 5.18 SF 1.81 5274, M336 F335. Pit. Period 2. Lava, upper-stone fragment, 440/87 mm. The fragment has broken across a handle hole. The upper surface has parallel grooving, and the grinding surface has traces of grooving surviving at the outer edge. There is vertical tooling on the edge. The kerb is 37 mm wide and 11-17 mm deep.

559 Fig 5.18 SF 1.81 5365(i), M462 F454. Pit or trench? Building 91. Period 2. Lava, a fragment from a large upper-stone, 465/101 mm. Possibly the same stone as 560. Broken across a handle hole. The upper surface has parallel grooving. There are very faint traces of grooving on the grinding surface. There is vertical tooling on the edge. The kerb is 37 mm wide and 15-19 mm deep. Part of the central hole survives.

560 Fig 5.18 SF 1.81 5365(H), M462 F454. Pit or trench? Building 91. Period 2. Lava, a fragment from a large upper-stone, 440/106 mm. Broken across a handle hole. The thickness at the rim drops to 91 mm by the handle hole. Possibly the same stone as the fragment from the same context above. The upper surface has parallel grooving. Part of a right-angled depression survives at the centre. The grinding surface is harp dressed. There is vertical grooving on the edge, which also carries a large V-shaped groove (99 mm across at the top, 70 mm high). The kerb is 37 mm wide and 15-17 mm deep.

All the Roman querns from Culver Street are of lava, with the exception of a Millstone Grit rotary quern fragment from an early medieval robber trench **(569).**

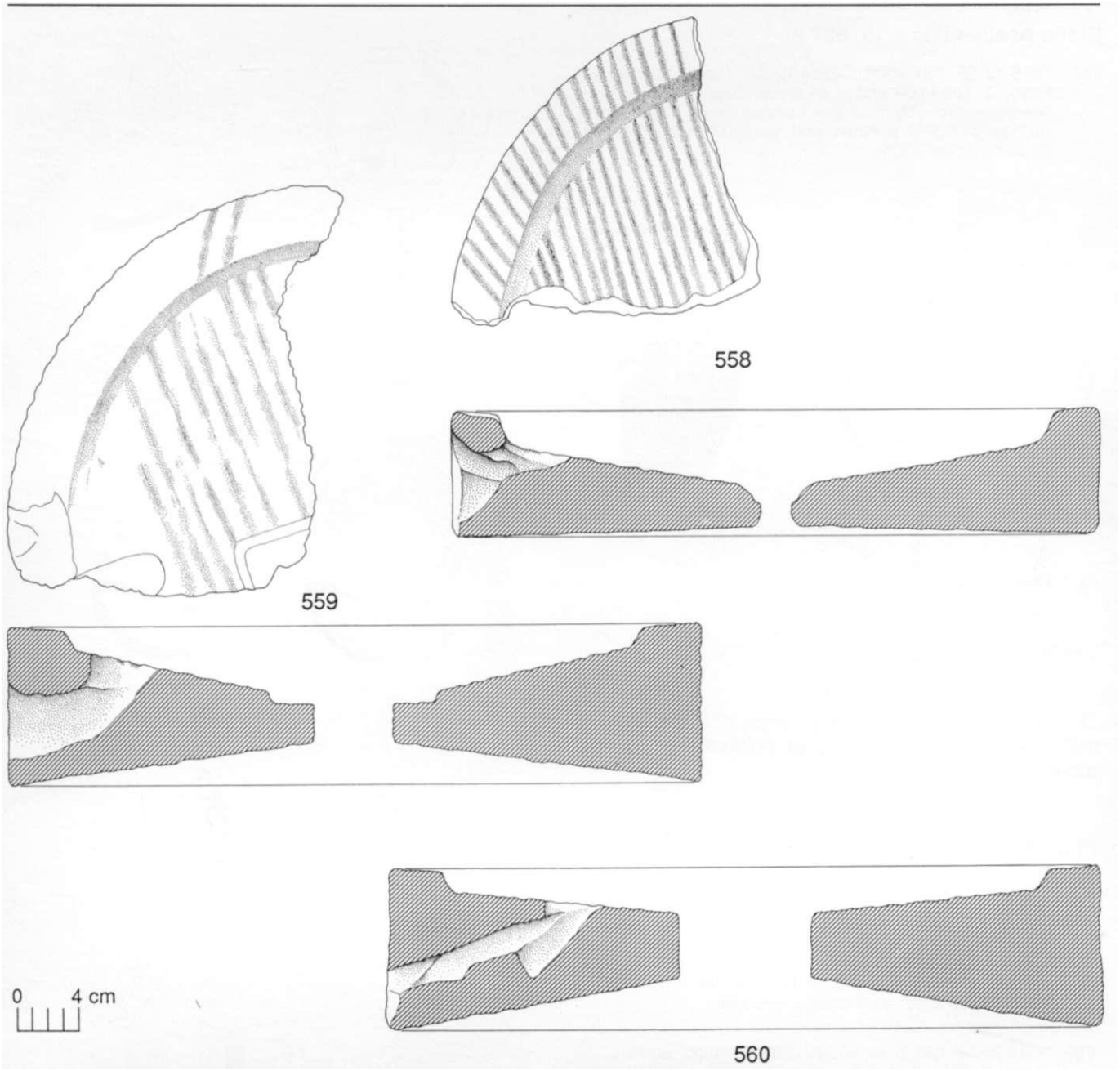


Fig 5.18 Quernstones. 1:4.

The majority of contexts are early Roman, although most, if not all, the quern fragments from post-Roman contexts are also Roman.

The background to the trade in lava mills into Britain has been given in *CAR* **2**, pp 75-6 (with references) and need not be repeated. Collectively the querns conform to the Roman forms previously reported, as illustrated by Röder (Crawford & Röder 1955, fig 1, Types 4, 5, 6). A number with handle holes cut through the side of the stone are clearly of Röder's Type 4, which he considered a feature of an oscillating rather than totally rotating form. On a number of fragments one variation not previously noted on Colchester lava querns is a pitted rather than grooved grinding surface. This was a regular form of dressing on late Iron Age rotary querns of other stone types, and may reflect the re-dressing of worn stones since the characteristic decorative grooving is present on the tops and sides of the same stones.

The large number of lava querns from early Roman contexts at Culver Street including a number from Boudican destruction levels, is further testimony to large-scale early development of the millstone trade between the continent and Colchester.

Stone mortars (592-6)

Four fragments of mortars were found, all probably of various forms of limestone. A fifth fragment, of white marble, may be from a bowl or mortar, or may be an architectural fragment. Catalogued on microfiche.

Stone pestles (Fig 5.19; **597-8)**

597 Fig 5.19 SF 1.81 4003, G2224 L2185. Dump: Building 97. Period 3. The lower end of an elbow-shaped pestle of dark limestone, probably from the Purbeck beds. The grinding surface is highly polished and worn. Diameter 82 mm, surviving length 55 mm.

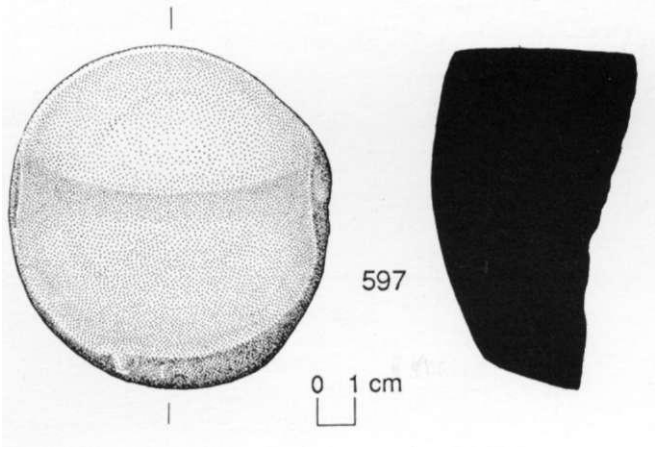


Fig 5.19 Pestle fragment. 1:2.

LAMPS

Only a sample of the ceramic lamps from the site are published here. It is hoped to publish the material more fully elsewhere.

Picture lamps (Fig 5.20; **599-604).**

599 Fig 5.20 SF 1.81 2603, E1587 F1329. Pit. Period 2. A complete lamp of Central Gaulish manufacture, Loeschcke (1919) Type 4 with rounded nozzle. The design shows an eagle, the bird of Jupiter, perched at rest on a branch (the talons are hooked so this cannot be a ground line) carrying an annulet or small wreath in its beak. The lamp is evenly covered with a dull dark orange-brown slip.

600 Fig 5.20 SF 1.81 1749, B1280 L285. Make-up: Building 112, Room 6. ?Period 4a. A fragment from a discus of Lyon ware bearing a design of a crab *(ibid,* Taf 14,539). The fabric is yellow-buff, with a even coating of slip fired dark brown, except over some of the prominent features of the design and the inner shoulder ridge where it is a yellow-brown.

601 Fig 5.20 SF 1.81 1714, B1658 L407. Boudican destruction debris: destruction of Building 78? Early Period 3. A lamp of Loeschcke Type 4 of Central Gaulish manufacture in a hard buff fabric with dull red-brown slip. Only part of the rounded nozzle and the lower part of the discus remain. The design shows Luna *(ibid,* Taf 6,370).

602 Fig 5.20 SF 1.81 2494, E1262. Unstratified. A fragment of a Central Gaulish lamp with only a small part of the base, the wall and the upper part of the discus surviving. The design is of two vine branches rising from a vase (missing), as *ibid,* Taf 11,463. The fabric of the lamp is a fine pinky-buff, with an orange slip.

603 Fig 5.20 SF 1.81 1712, B1718 L415. Boudican destruction debris: destruction of Building 77. Early Period 3. Fragments of a lamp of local manufacture showing the radiate head of Sol. The fabric is buff-coloured and unslipped.

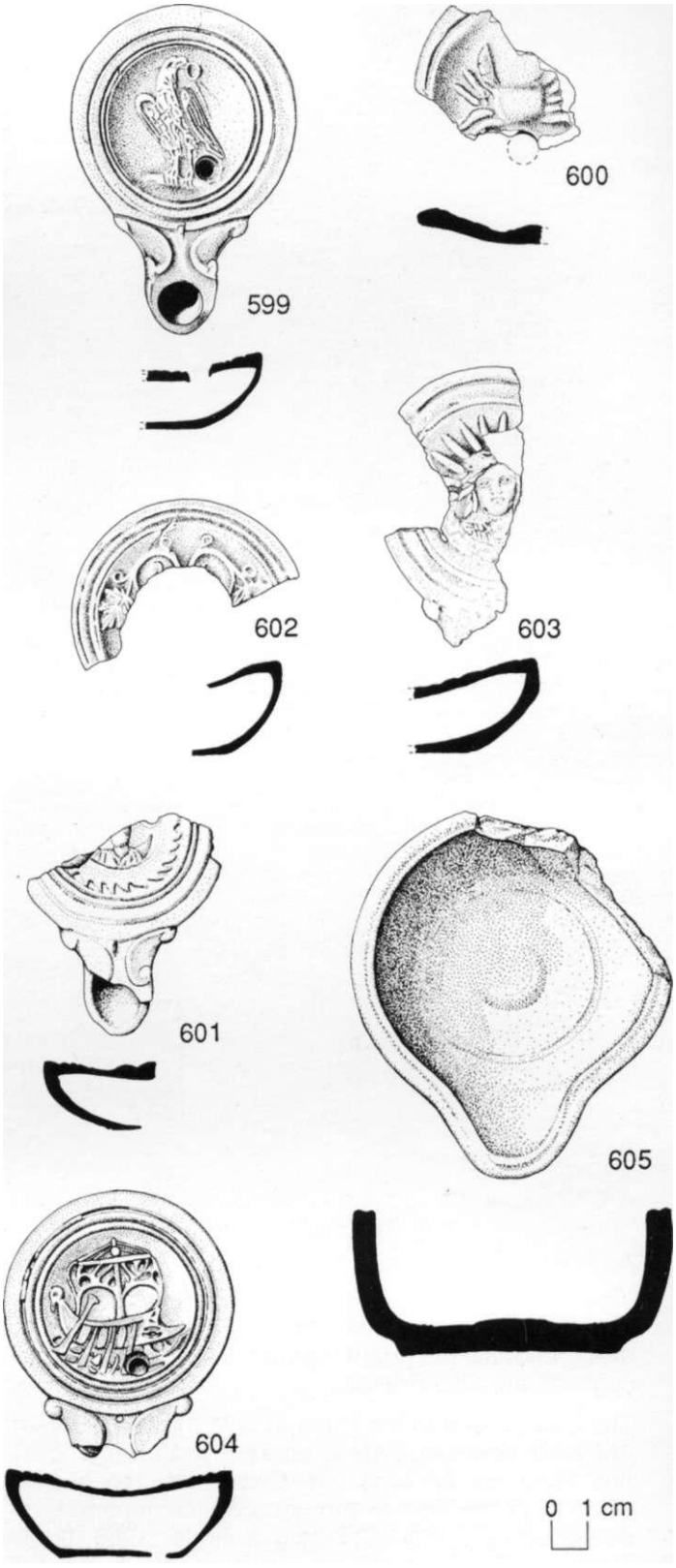


Fig 5.20 Ceramic lamps. 1:2.

604 Fig 5.20 SF 1.81 5379, W81 F80. Pit. Period (1 or) 2. Most of a Lyon ware lamp, only part of the base and the end of the nozzle are missing. The fabric is a fine yellowy-buff colour, evenly covered with a yellowish-brown slip fired in places to dark brown with a slightly green tinge. The design shows a galley, as *ibid* Tat 11,187.

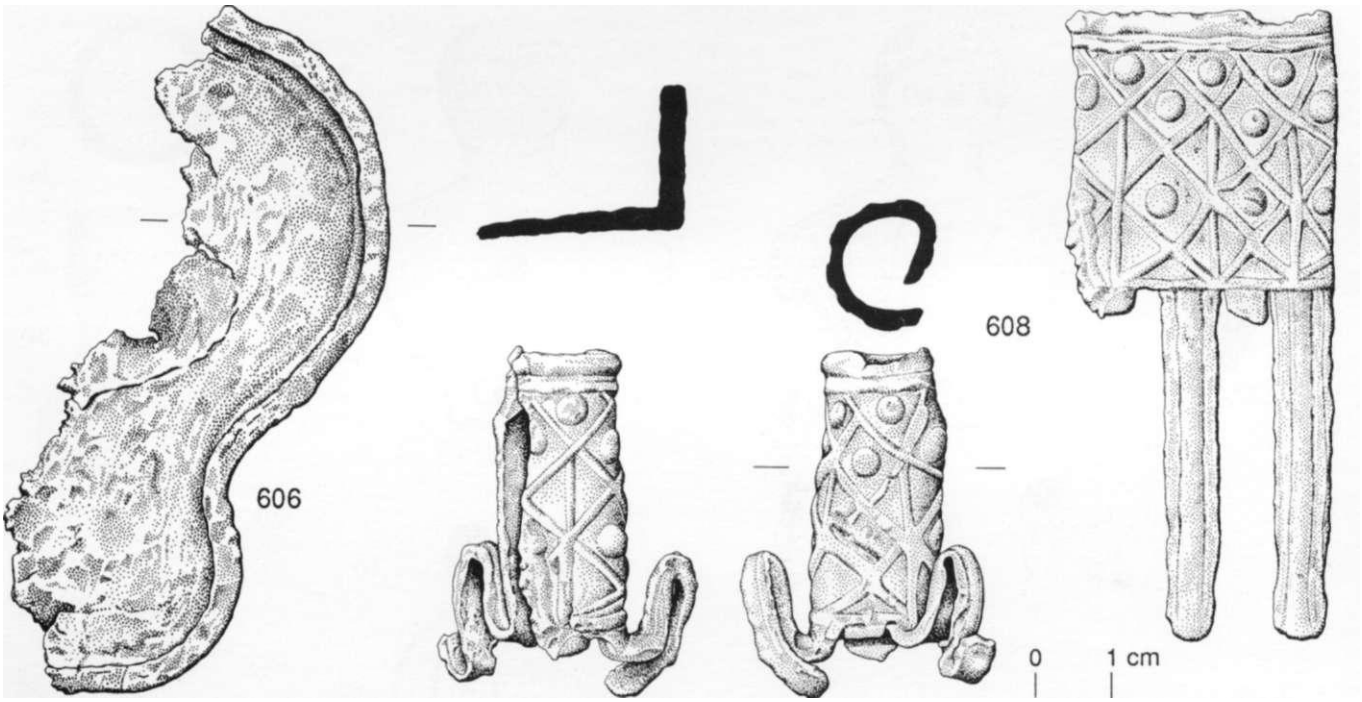


Fig 5.21 Lead lamp and candlestick. 1:1.

Open lamp (Fig 5.20; **605)**

605 Fig 5.20 SF 1.81 2417, B2259 L136. Occupation: Building 112, Room 3. Period 4b. Most of an open lamp in a hard grey fabric. The vessel is wheel-thrown, and the nozzle pinched out after removal from the wheel.

Lead-alloy open lamp (Fig 5.21; **606)**

606 Fig 5.21 SF 1.81 1892(C), E61 F56. Pile hole: Building 127. Period 5. Approximately half of a figure-of-eight-shaped lead-alloy open lamp. The base is very distorted. The lamp wall is at right angles to the base. Length 90 mm. The height of the wall varies from 15 to 20 mm.

Lamp-hook (607)

A single lamp-hook, from Period 2 dump on Site E, was recovered. It is catalogued on microfiche.

CANDLESTICK (Fig 5.21; **608)**

608 Fig 5.21 SF 4248, H28 L3. Topsoil/clearance. Period 6. A lead candlestick with two of originally three feet surviving. The raised design on the main body of the object is of a trellis the lozenges of which are set with either bosses or vertical lines. The vertical lines together form three upright elements extending only two-thirds of the height of the body. The surviving folded feet indicate how a stable base was formed to support the candlestick when in use. Height 46 mm, maximum diameter 17 mm.

A similar object from Balkerne Lane, with its feet unbent, was published as being of unknown function in *CAR* **2,** fig 207,4709, and a further fragment from that site has also been recovered (unpublished). Similar pieces from the eastern counties were published by Major and Eddy (1986) but their function was not identified. A further piece, from the site of the Royal Grammar School, Colchester, identified (probably by M R Hull) as a candlestick, is in the CM. The design on the Culver Street candlestick is not matched by any of the previously known examples.

FURNITURE FRAGMENTS AND FITTINGS

Handles (Fig 5.22; **609-28).**

See also the ring-handles Fig 5.23**,640-2.**

609 Fig 5.22 SF 1.81 3872, G1557 L1373. Floor make-up/dump. Period 3 or 4. A copper-alloy ?drop-handle, crudely made and possibly unfinished. The central-section is straight, more or less flat on one face and with rough marginal mouldings on the other face. Part of one loop is missing. Both terminals are crude knobs. Surviving length 107 mm.

Copper-alloy furniture fragments (Fig 5.22; **629-31)**

629 Fig 5.22 SF 1.81 1181(C), C305 F105. Gravel foundation pit: Building 96, Room 1. Period 3. A male bust with a rectangular loop at the base through which is fitted a link from a chain. Other links were found with the object. Height 54 mm. The head is that of a young man with short neatly-arranged hair. The style has been identified by Dr Martin Henig as Julio-Claudian in date, slightly earlier than the date of its context. For the calyx of stylised acanthus from which the shoulders rise, Dr Henig suggests as a parallel the Mercury from Waddon Hill, Dorset *(Dorset N H Soc,* **101** (1979), fig 27). The back of the figure is flat, indicating that it was fitted to a flat surface, and, piercing the chest at the centre, is a circular rivet of a different copper-alloy. It probably derives from a wooden chest, or possibly from a rather more unusual item of furniture. Roger Goodburn has suggested that the horizontal line indicated by

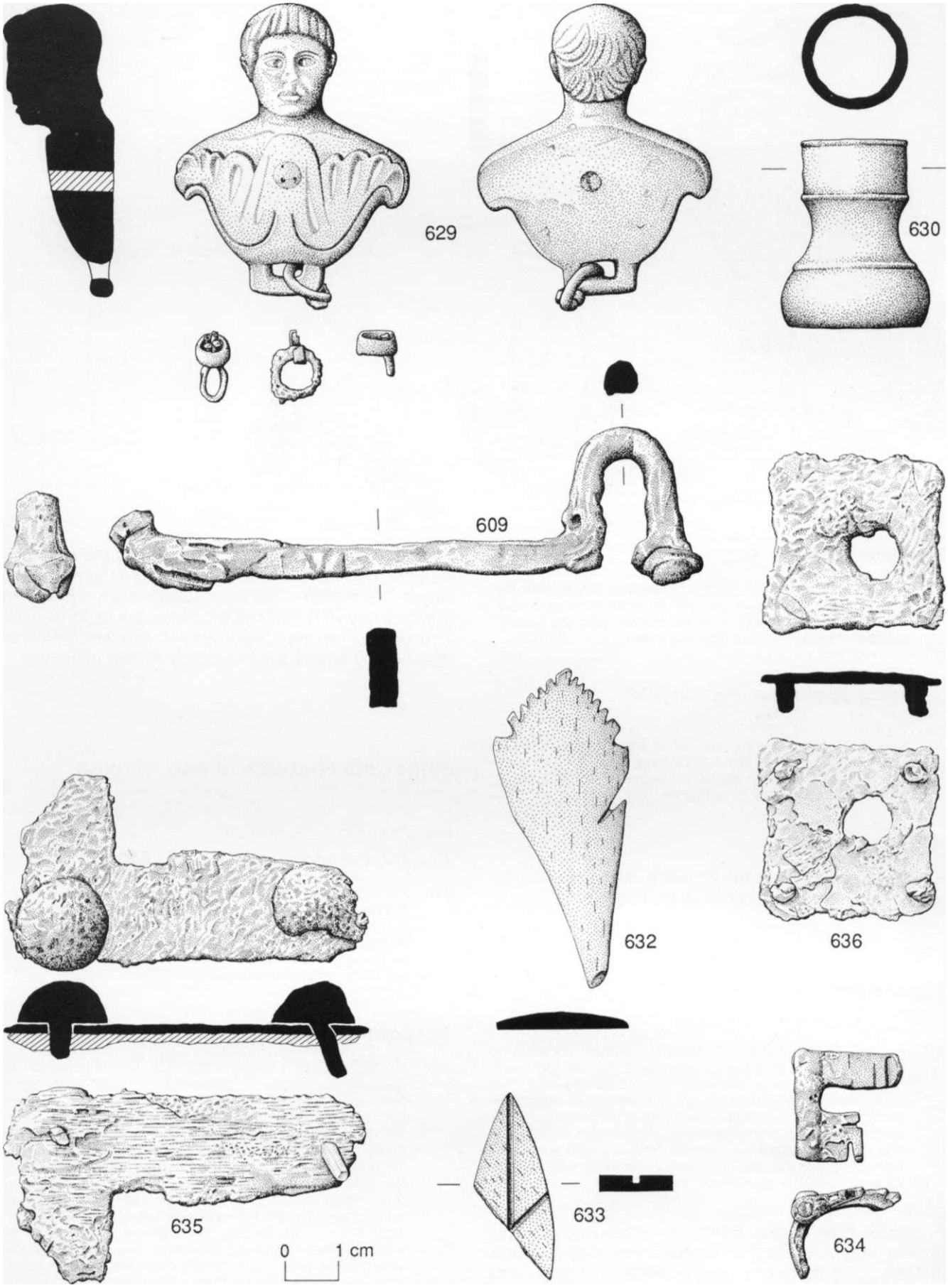


Fig 5.22 Furniture fragments and fittings. 1:1.

the top of the calyx was continued by the object to which the bust was attached, and the shoulders and head therefore stood proud of the top of the piece, projecting outwards very slightly.

630 Fig 5.22 SF 2722(C), B2527 F866. Pit: Building 77, Room 3. Period 2 A foot terminal from a folding stool or tripod, as Liversidge 1969, fig 4,13. Height 33 mm, diameter 28 mm.

Bone inlay (Fig 5.22; **632-3)**

632 Fig 5.22 SF 1.81 2990, G177 L177. Occupation debris/midden: Building 120. Period 5b. A fragment of a plaque with one surviving pointed and notched ('feathered') end, and a straight side into which a deep slantwise notch has been cut to give an almost ansate form. The plaque is of slight convex section with a flat underside. Surviving length 59 mm, width 26 mm. Feathering is a feature of the copper-alloy fittings on a 4th-century box from the Butt Road site, Colchester *(CAR* **2,** figs 90-1), and a late Roman date for the Culver Street piece seems most likely.

633 Fig 5.22 SF 1.81 3519, G971 Pit. Period 6. A leaf-shaped fragment of probable inlay of rectangular section. Two deep grooves have been cut into the surface, and the piece may have fractured along a third. Maximum dimensions 36 by 14 mm, 3 mm thick.

Ring-key (Fig 5.22; **634)**

634 Fig 5.22 SF 1.81 2934(C), G177 L177. Occupation debris/midden: Building 120. Period 5b. A fragment of a copper-alloy rotary key on a ring with a D-shaped hoop, part of which is missing. The front panel has notched and faceted decoration (as *CAR* **2**, fig 89,2164, 2169). Internal diameter of ring approximately 15 mm.

Box fittings (Fig 5.22; **635-9)**

See also in Category 11 the lock-plates Fig 5.46, **1640-2,** and the small lion-headed stud Fig 5.40, **1543.**

The preserved organic remains on these objects have been identified by Jacqui Watson of the AM Lab.

635 Fig 5.22 SF 1.81 4041, G2509 F2462. ?Pit. ?Period 6. An iron L-shaped fitting, probably from the edge of a box. There is a convex-headed nail at the end of one side, and another in the corner. Both ends are broken. The original length of the longer side, with the nail, was probably not much greater than what now remains, though that of the other is uncertain. Length of longer side 63 mm. width 18 mm, length of shorter side 36 mm, width 18 mm. Jacqui Watson reports: The underside of the fitting is covered with mineralised wood, *Fagus* sp (beech), tangential surface.

636 Fig 5.22 SF 1.81 4903, J225 L222. Destruction debris: Building 79. Period 2. An iron plate possibly from the lock mechanism of a box. The plate is more or less square, with slightly incurving sides, a circular perforation placed off-centre, and a small nail or rivet in each corner. The plate is similar in size to the guide plate from the Butt Road box *(CAR* **2**, fig 90,2204), suggesting that an inserted key would have been of lever-lock type, with a shaft projecting some distance beyond the bit. There are traces of mineralised wood, *Quercus* sp (oak) on the inner face of the plate. This identification indicates that the plate is most unlikely to belong to the box from the same layer (SF 5303 below), as the woods differ.

Site J box (Fig 5.23; **640-4)**

Found lying together in Boudican destruction debris were five copper-alloy coins of Claudius 1 and one of Agrippa. Also from the same layer came several fittings which almost certainly derive from a box which may be associated with the group of coins. The fittings are of a type often associated with casket burials of the 1st century (Borill 1981, fig 120; Niblett 1985, figs 19-20; N Crummy forthcoming).

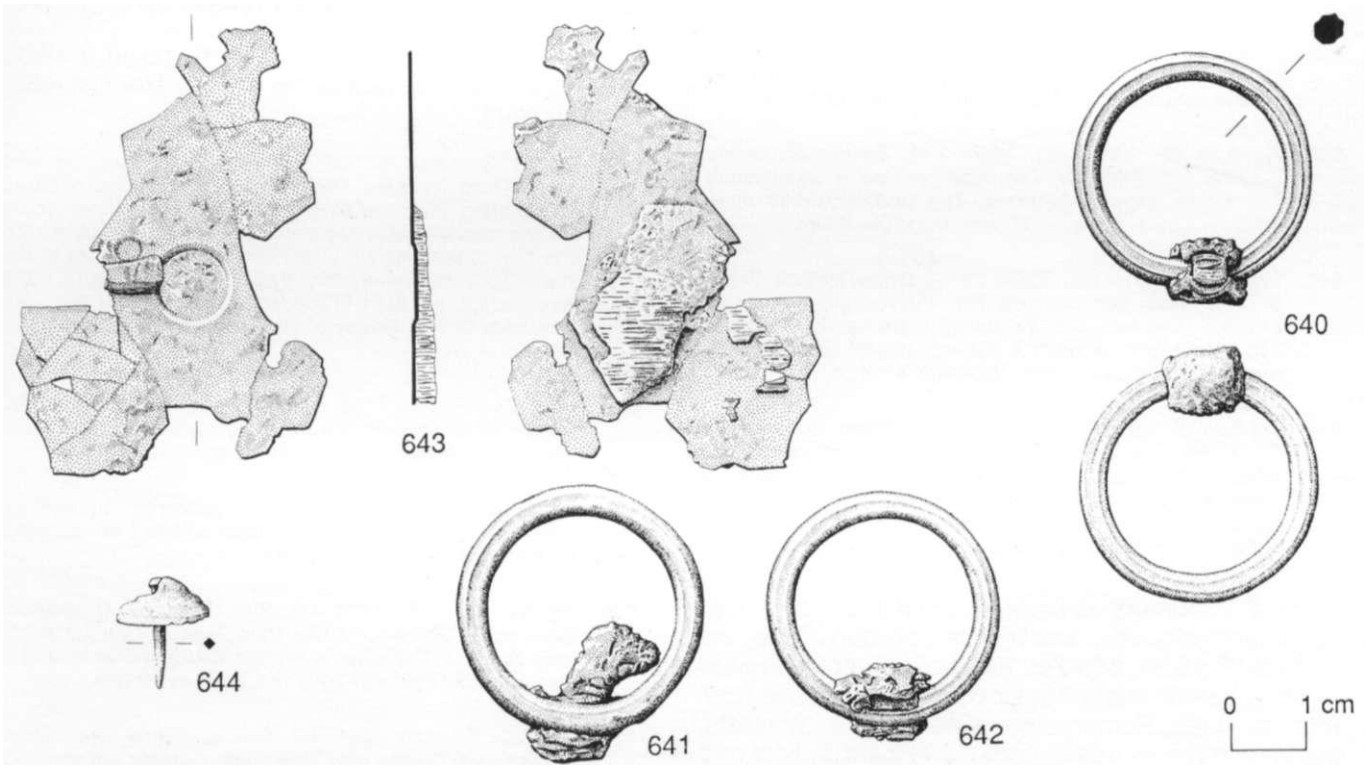


Fig 5.23 Fittings from the Site J box. 1:1.

640-4 Fig 5.23 SF 1.81 5303(C), J279 L222. Destruction debris: Building 79. Period 2. Three copper-alloy ring-handles, each with the remains of an iron split-spike loop attached, one large fragment of copper-alloy sheet with the mineralised remains of wood on the reverse and two small fragments with no organic remains, and a copper-alloy stud in four fragments. The ring-handles have the usual complex moulded section of their type, and are all about 24 mm in diameter. The convex stud appears to be plain (ie not lion-headed as might have been expected on an early Roman box), about 14 mm in diameter, with a square-section shaft 15 mm long. The large piece of copper-alloy sheet, almost certainly all that remains of the lock-plate, has a circular depression 9 mm in diameter more or less in the centre, and a small fragment of a rectangular-section rod adhering to the surface. The maximum dimensions of the sheet are 60 by 41 mm. The iron-preserved remains on the reverse have been identified by Jacqui Watson as probably *Fagus* sp (beech).

CATEGORY 5:
Objects used for recreational purposes

COUNTERS FOR BOARD GAMES

Bone counters

Type 1. Plain counters (Fig 5.24; **645-64). 645** derives from a military context, indicating the arrival of this type of counter with the army of conquest. The type seems to persist throughout the Roman period. All have a central depression from a lathe centre or compass unless otherwise stated.

645 Fig 5.24 SF 1.81 2412, E1160 L146. Occupation: Building 83. Period 1. Both surfaces are flat and neither has a central mark. Each face bears a crude incised star of six points. The edge is bevelled. Diameter 18 mm, thickness 2 mm.

646 Fig 5.24 SF 1.81 4391, H323 L78. Destruction debris: Building 116. Period 5. The upper surface is countersunk. The upper edge is bevelled. The underside has many scratched lines. Diameter 20 mm, thickness 3 mm.

647 Fig 5.24 SF 1.81 4160, G2897 L2785. Gravel surface. Period 3 or 4. Both surfaces are flat. Both edges are neatly bevelled. The face with the centre mark has been divided into quadrants by a rough X, cut with at least two strokes for each line. Diameter 18 mm, thickness 4 mm.

648 Fig 5.24 SF 1.81 4355, G3062 F3051. Scoop: Building 120. Period 5b. The upper surface is deeply countersunk. The edge is very slightly rounded. Into the flat underside three small depressions have been drilled and the position for a fourth has been roughly scratched into the surface (not shown on the illustration). Diameter 19 mm, thickness 7 mm.

Type 2. Counters decorated on the obverse with concentric grooves, usually set obliquely into the surface (Fig 5.24; **665-74).** All bear a central compass or lathe centre mark. These counters all derive from mid to late Roman (or post-Roman) contexts, supporting the evidence from the Gilberd School of a later date for the type (p 220).

665 Fig 5.24 SF 1.81 4848, M207 L1. Surface cleaning. Unstratified. A very poorly-made counter. The disc has been cut from the bone so that a foramen lies across part of the underside, passes through the counter just off-centre, and continues across part of the upper face. This presumably made it difficult to fix the counter on to a lathe centre. Consequently the grooves are irregular in both width and position on the upper face. The upper edge is bevelled. Diameter 19 mm, thickness 4 mm.

Type 3. Convex counter **(675).** A single convex counter from an unstratified context is catalogued on microfiche. The form is late Roman in date (MacGregor 1978, **33).**

Glass counters (676-82)

Seven glass counters were recovered, five opaque white, one opaque mid blue, and one of translucent green. Three, all white, are from early contexts, namely **679** from a Period 1 hearth in Room 4 of Building 83; **680** from a Period 1 road foundation on Site G, and **682** from a Period 2 floor in Building 91.

Pottery counters

The fabric identifications are by Drs P Kendrick and R P Symonds.

Counters with a ground edge and at least one abraded surface (Fig 5.24; **683-843).** Few of these counters derived from early contexts. **709,** in fine/decorated grey ware, comes from Period 1/2 occupation and make-up in Room 4 of Building 78**. 747** is from Period 2 dump on Site E, and **746** is from Period 3 make-up on the same site. **781** (black-burnished ware Type 1) and **795** *(terra sigillata)* are from Period 3 pits on Site G.

The five illustrated counters were found in a stack with the largest, **683,** at the top and the smallest, **687,** at the bottom.

683 Fig 5.24 SF 1.81 1797, D2. Site clearance. Unstratified. Wall sherd. Tempered ware. The edge is damaged. Both surfaces are abraded. Diameter 61.5 mm, thickness 16.5 mm. There are two lines of graffiti, separated by a deeply-cut groove, on one face of the counter. Line 1 may read SHAV. Not all the marks illustrated are necessarily part of the graffito. Line 2 is very unclear, but the first two letters are probably AV. I am grateful to Dr P R Sealey of the CM for all his help with this reading.

684 Fig 5.24 SF 1.81 1798, D2. Site clearance. Unstratified. ?Wall sherd. Tempered ware. Both surfaces are abraded. Diameter 37.5 mm, thickness 14.5 mm.

685 Fig 5.24 SF 1.81 1799, D2. Site clearance. Unstratified. Base sherd. Coarse grey ware. Both surfaces are abraded. Diameter 38.5 mm, thickness 8.5 mm.

686 Fig 5.24 SF 1.81 1800, D2. Site clearance. Unstratified. Base sherd. Black-burnished ware Type 1. One surface is very abraded. The other is marked with a graffito X, and is also abraded. Diameter 36.5 mm, thickness 9 mm.

687 Fig 5.24 SF 1.81 1801, D2. Site clearance. Unstratified. ?Wall sherd. Coarse grey ware. Both surfaces are abraded. Diameter 28 mm, thickness 10 mm. There is a possible

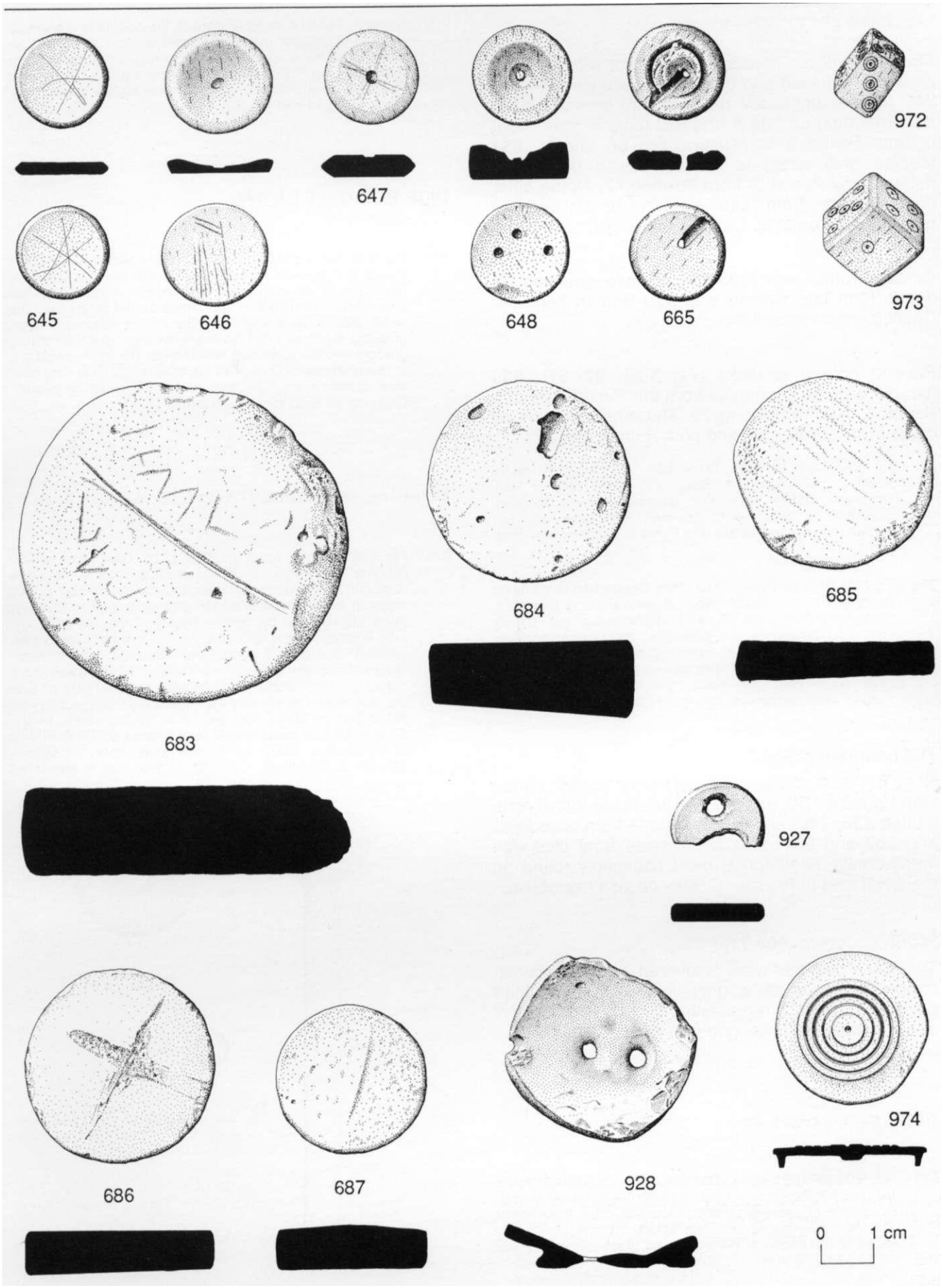


Fig 5.24 Counters, dice and ?dice box lid. 1:1.

graffito 'I' on one face.

Counters with no abraded surface but with an edge ground for at least part of its circumference **(844-97). 846** (coarse unslipped red ware) is from Period 3 road metalling on Site A and **892** (coarse grey ware) is from Period 3 horticultural soil on Site H. **851** (coarse grey ware) is from Boudican destruction debris (early Period 3) from Building 77**.** All the other counters are from late Roman, unstratified, or post-Roman contexts. Catalogued on microfiche.

Counter rough-outs (**898-926**). These counters all derive from late Roman and post-Roman contexts. Catalogued on microfiche.

Pierced pottery counters (Fig 5.24; **927-37**). **935** (coarse grey ware) derives from the Period 2 fill of a Period 1 drain in Building 79. The other counters all come from late Roman and post-Roman contexts.

927 Fig 5.24 SF 1.81 2991, D184 L60. Destruction debris of Building 123. Period 4. Base and lower part of wall. Damaged. Oxford ware. The underside is very abraded. Diameter 74 mm, height 16 mm. The base has two perforations set well apart, one 5 mm in diameter, the other 6 mm.

928 Fig 5.24 SF 1.81 3006, G212 L206. Destruction debris/floor: Building 120. Period 5b. Base sherd. Fragment. Black-burnished ware Type 1. Both faces are slightly abraded. Diameter 36 mm, thickness 7 mm. The counter has two perforations. One is round, 6 mm in diameter, with hour-glass-shaped sides. The counter has broken across the other which seems to have been oval with hour-glass-shaped sides, maximum diameter 17 mm.

Tile counters (938-67)

None of these counters derives from a context earlier than Period 4. The original tiles are rarely identifiable, though **938, 946,** and **963** are made from keyed tile, and **962** and **964** have been made from tiles with finger-drawn ?signatures, most commonly found on the lower end of tegulae. Catalogued on microfiche.

Stone counters (968-71)

Two stone counters were recovered, one of Cippolino marble and one of a grey-white marble. A third possible counter is represented by two fragments of off-white marble. Catalogued on microfiche.

DICE (Fig 5.24; 972-3)

972 Fig 5.24 SF 1.81 4396, G3116 L2327. Occupation/dump: Building 97. Period 3. A bone die with the numerals marked by double ring-and-dot motifs. Opposite sides total seven. The die is thin on one axis. The '1' side is damaged, and the motifs at one corner of the '6' side are practically worn away. 12 by 12 by 10 mm.

973 Fig 5.24 SF 1.81 3823, D1568 L1372. Dump: Building 123, Room 8. Period 4. A bone die with the numerals marked by single ring-and-dot motifs. Opposite sides total seven. An attempt has been made to bevel the edges of this die. Most have been done, except for the junctions of the '3' face with the '1', '5', and '6' faces. The die tapers slightly on one axis. 16 by 15 by 14 mm.

DICE BOX (Fig 5.24; 974)

974 Fig 5.24 SF 1.81 1527, B1243 L281. Midden/occupation. Period 3. A bone lid probably from a dice box. On the upper face there is an indentation and on the underside a small projection, indicating that the lid was turned on a lathe. The upper side is decorated with five raised concentric rings, probably made by trimming the outer edge and then cutting grooves into the remaining raised area. The thick inmost ring is raised above the height of the other rings. This decorated area is off-centre. The wall of the lid is set in slightly. Diameter 29 mm, thickness 5 mm.

MUSICAL INSTRUMENT (Fig 5.25; 975)

975 Fig 5.25 SF 1.81 4950(C), J242 L222. Destruction debris: Building 79. Period 2. A mouthpiece from a horn-type instrument. The piece appears to have been cast in one piece in leaded bronze which also contained a little zinc (alloy identification by Justine Bayley of the AM Lab). The tube is undecorated and straight (internal diameter 5 mm, external diameter 7 mm), and develops into a hemi-spherical cup with a thick turned-down rim. The other end is cut off at a slight angle. Slight differences in the patination on the tube may indicate that this mouthpiece was slotted into, rather than on to, the next section of the instrument. Length 87 mm. Of four mouthpieces from Roman Britain illustrated in Wickenden 1987, fig 9, only one, from Verulamium (Waugh & Goodburn 1972, fig 40,129) has a non-flaring tube.

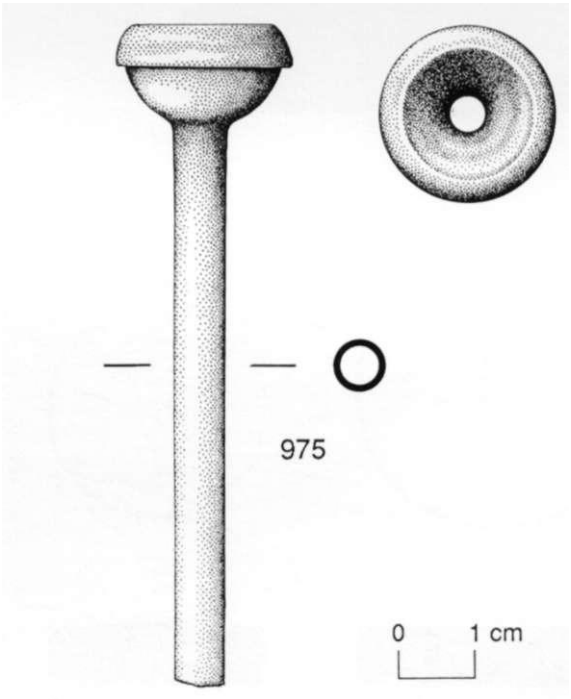


Fig 5.25 Mouthpiece from a horn-type instrument. 1:1.

CATEGORY 6:
Objects employed in weighing and measuring

SCALES

Balance (scale with beam arms of equal length) **(976).**

A possible fragment of an iron balance with a central triangular lug was found in late Period 4 dump in Room 1 of Building 113. A small copper-alloy balance derived from an unstratified context on Site J. It may be post-Roman. Catalogued on microfiche.

Scale pan (Fig 5.26; **977)**

977 Fig 5.26 SF 1.81 2228, E741 L55. Clay wall (demolished: demolition of Building 84. Early Period 2. Several fragments from a copper-alloy ?scale pan with everted rim. Part of a split-spike loop survives passed through a hole in the rim. The loop projects above the rim and, with two or three other such loops set at equal intervals around the circumference, would have been used to attach a chain or thread to the pan so that it could be hung from a scale. Approximate diameter 65 mm.

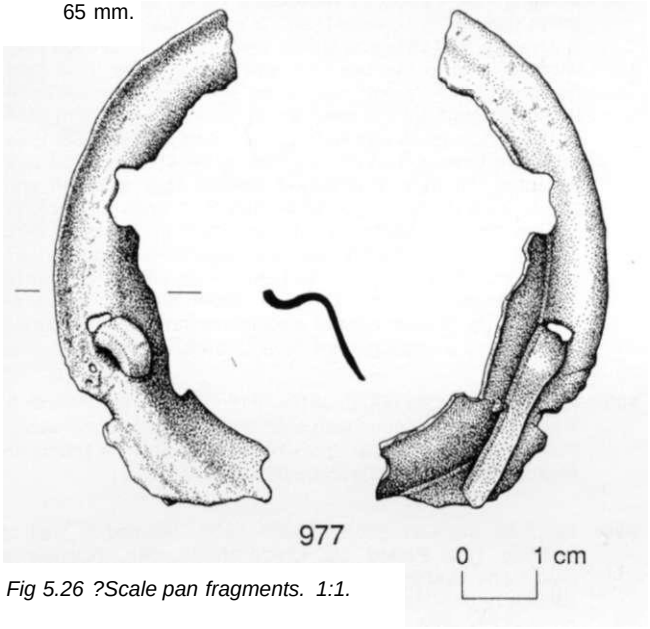


Fig 5.26 ?Scale pan fragments. 1:1.

CATEGORY 7:
Objects used for or associated with written communication

SEAL-BOX (978)

The base of a lozenge-shaped copper-alloy seal-box was found in a large cess-pit in Room 5 of Building 77 dated to Periods 1/2. Catalogued on microfiche.

STYLI (Fig 5.27; **979-980**)

979 Fig 5.27 SF 1.81 3935(C), G1993 L1769. Dump/construction debris. Period 3 or 4. Most of a stylus with a shouldered straight-sided eraser. The other end is damaged, but may have broken at a moulding, in which case this stylus could belong to Manning's Type 4 (1985, 85). Surviving length 120 mm.

980 Fig 5.27 SF 1.81 5361, G3485 L1476. Occupation: Building 120. Period 5a. A complete stylus of Manning's Type 1 *(ibid).* The shoulders of the eraser are less marked than in the preceding example, and the shaft tapers to a simple point. Length 157 mm.

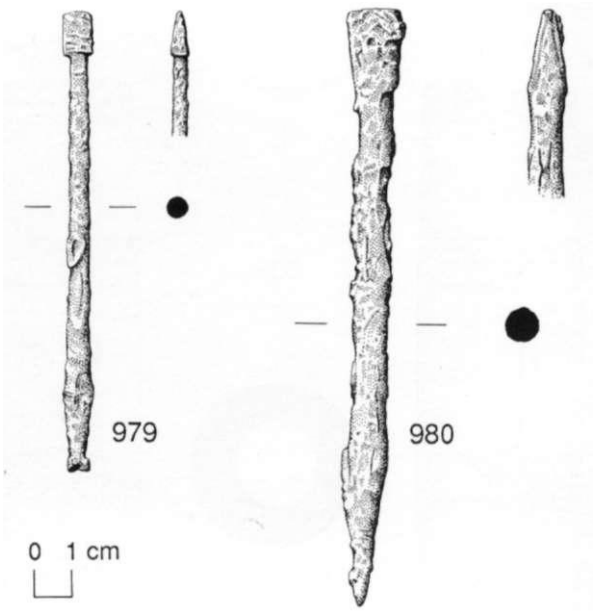


Fig 5.27 Styli. 1:2.

CATEGORY 8:
Objects associated with transport

HARNESS

Hipposandal (Fig 5.28; **981)**

981 Fig 5.28 SF 1.81 5286(X), H502 L488. Floor: Building 120. Period 5b. A fragment of an iron hipposandal of Manning's Type 3 or 4 *(ibid,* fig 16). The front of the sandal is missing, and the rear hook has been pushed downwards and to one side. Width 89 mm. The hipposandal fragment from the Gilberd School site (Fig 6.21**,200)** is similarly distorted.

Bridle (Fig 5.29; **982)**

982 Fig 5.29 SF 1.81 4470, G3174 F3173. Pit. Period 3a or 3b. A bone cheekpiece, as MacGregor 1976, 38 (and *see* Fig 6.22,202), circumscribed with bands of herringbone decoration at each end and to either side of the rectangular cut-out. Three ring-and-dot motifs ornament the central panel on the outer side of the cheekpiece. The panel on the inner

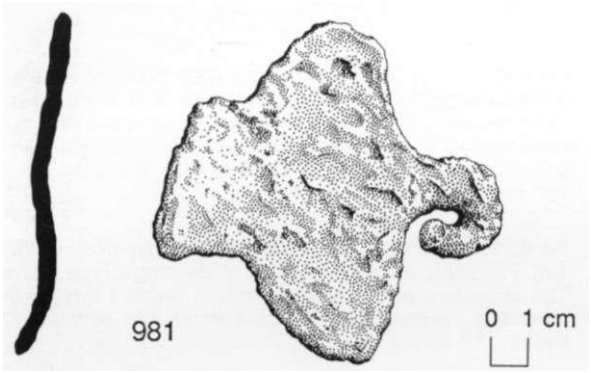


Fig 5.28 Hipposandal. 1:2.

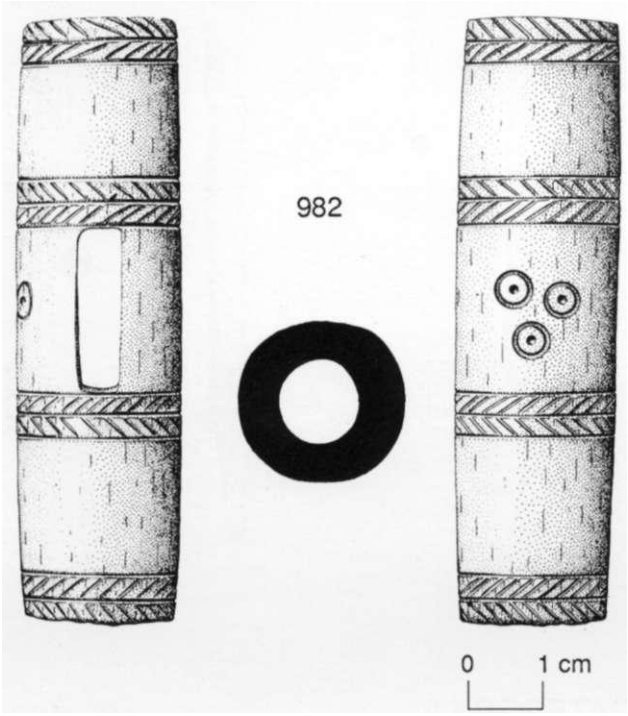


Fig 5.29 ?Cheekpiece. 1:1.

side (thus obscured in use) is plain. Length 80 mm, maximum diameter 22 mm.

Harness fitting (983).

An iron object, tentatively identified as a harness fitting, is catalogued on microfiche. It was found in the backfill of gully F39, dated to Period 5.

CART FITTING (984)

A fragment possibly from a linch-pin was found in Period 4b make-up for Room 5 of Building 112. Catalogued on microfiche.

CATEGORY 9:
Buildings and services

WALL VENEER AND OTHER ARCHITECTURAL STONE FRAGMENTS (Figs 5.30-4; **985-1178)**

985 Fig 5.30 SF 1.81 3311, D454 F259. Robbing pit. Period 6. Purbeck marble. A moulded veneer slab (in two pieces). Probably part of a dado. The underside is very rough. Length 600 mm, width 185 mm, thickness 39 mm.

986 Fig 5.30 SF 1.81 3312, D395 L389. Demolition debris or topsoil? Building 123, Room 9. Period 4. Purbeck marble. A fragment of a moulded veneer slab. Probably part of a dado. Two contiguous edges survive, at right angles to each other. The underside is very rough. Maximum dimensions 188 by 181 mm, thickness 46 mm.

987 Fig 5.30 SF 1.81 1838, E1. Site clearance. Unstratified. Purbeck marble. Veneer, moulded and with a dowel hole on the one surviving edge. Possibly part of a dado, as 985 and 986. Maximum dimensions 171 by 119 mm, thickness 27 mm.

988-92 Fig 5.30 SF 1.81 3376, D679 F684. Robber trench for Building 123. Period 6? Micaceous purple sandstone. Four strips (one in two pieces), and a small fragment (992, not illustrated). 988 One end shows saw marks. Length 268 mm, width 40 mm, maximum thickness 21 mm. The inner face has been cut from both long sides and then broken, leaving a central rough thicker area which tapers from 17 mm wide at the middle to 11 mm wide at each end. 989 As 988. Both ends are broken. Length 129 mm, width 40 mm, maximum thickness 19 mm. The thicker central area is rough and tapers from 22 to 15 mm wide. 990 Both ends are broken. Length 209 mm, width 40 mm, maximum thickness 21 mm. The central thicker area has been smoothed. It tapers from approximately 17 to 7 mm. 991 Both ends are broken, but at similar angles. Length 131 mm, width 40 mm, thickness 16 mm. The thicker central area has been smoothed away, leaving only a slight groove. *See* also 997-9 and 1006.

993 Fig 5.30 SF 1.81 5276, M165 F15. Robber pit. Period 6. Sandstone. A fragment with both broken and moulded faces. Possibly from a pilaster, possibly from a piece of sculpture. Maximum dimensions 175 by 83 by 78 mm.

994 Fig 5.30 SF 1.81 5362, G3654 F658. Reused in wall of Building 120. Period 5b. Unidentified stone, possibly a mud-stone, and possibly burnt. A fragment of a thick, roughly circular or oval piece of stone with a sunken centre. Possibly originally a post base reused as walling stone. There are traces of mortar on the underside, sides, raised rim, and one broken edge of the fragment. The latter indicates reuse. Maximum dimensions 192 by 155 mm, height 85 mm.

995 Fig 5.31 SF 1.81 4009, D1792 F1790. Large pit. Period 7. Light grey marble with dark grey veins. Rectangular veneer slab. Three edges survive, the fourth may also have been worked, but not polished. The upper surface is highly polished and plain. The lower surface has been partly pecked away along one edge, and a thin groove has been roughly chiselled into the surface at right angles to this edge. Dimensions 193 by 99 mm, thickness 36 mm.

996 Fig 5.31 SF 1.81 1839, E1. Site clearance. Unstratified. Pavonazetto marble. A fragment of veneer with a raised roundel on the upper face. No edges survive. Maximum dimensions 110 by 76 mm, thickness 35 mm.

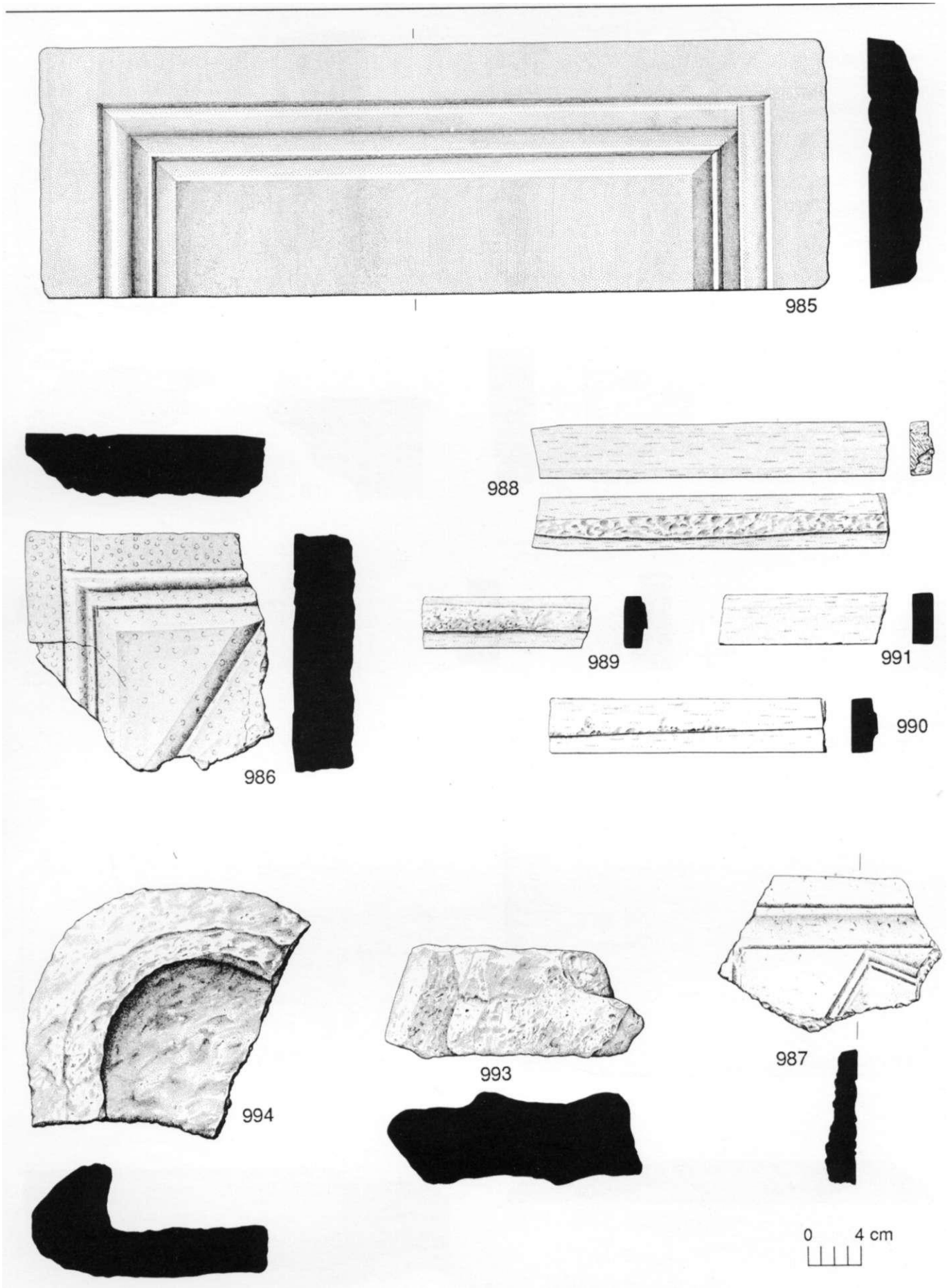


*Fig **5.30** Wall veneer and other architectural stone fragments. **985-93** are from Building **123. 1:4.***

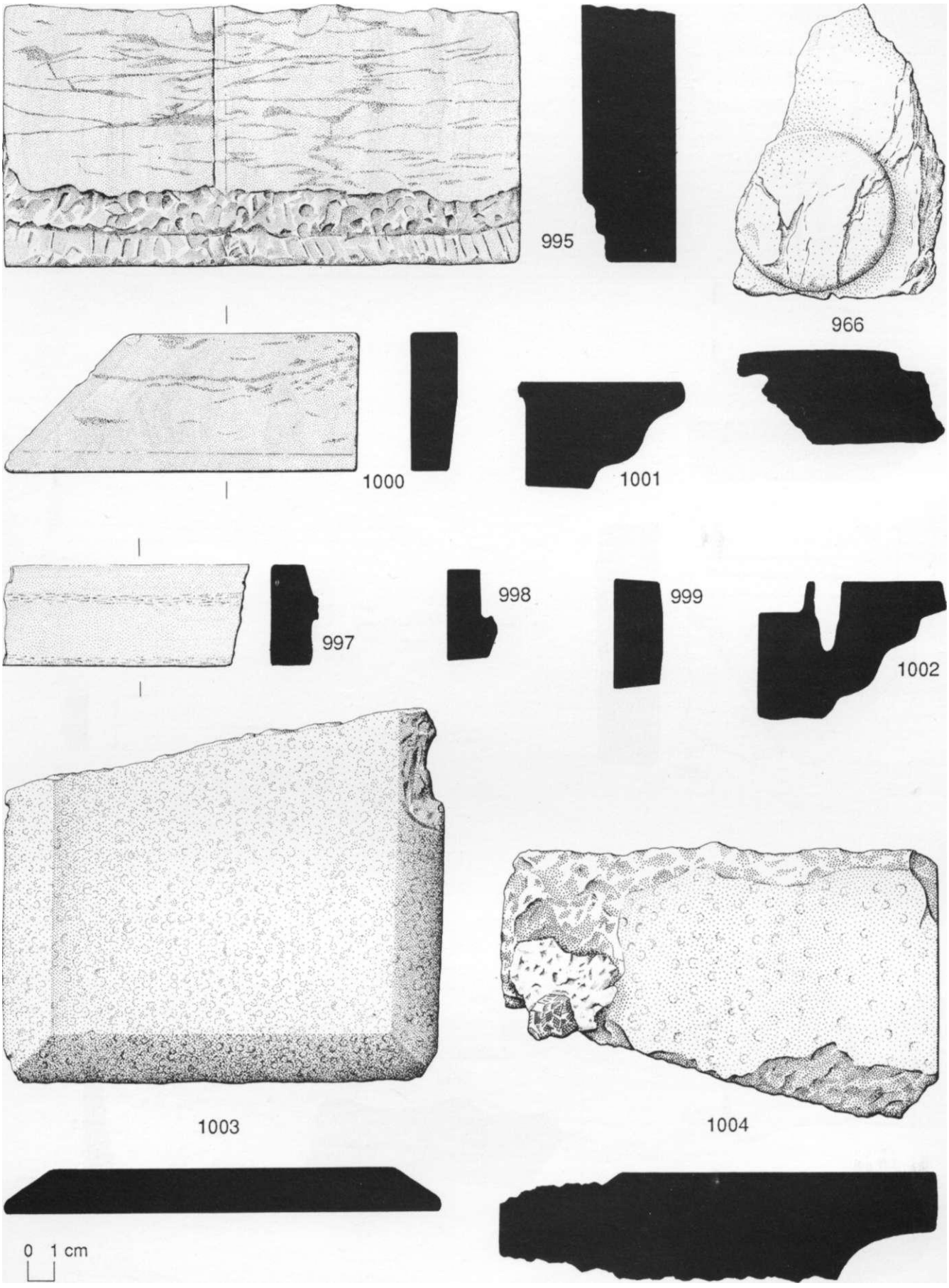


Fig 5.31 Wall veneer and other architectural stone fragments. 995-7 and 1001-3 are from Building 123. 1:2.

997 Fig 5.31 SF 1.81 3973, D1760 L1372. Dump: Building 123, Room 8. Period 4. Purple sandstone. A strip similar to **988-92**, **998-9,** and **1006.** Both ends are broken. Length 90 mm, width 38 mm, maximum thickness 18 mm.

998 Fig 5.31 SF 1.81 3288, G437 F352. Pit. Period 5. Purple sandstone. Section only illustrated. A strip similar to **988-92, 997, 999,** and **1006**. One end survives. The inner face has been cut at two markedly different thicknesses, giving an L-shaped section. The lower part of the thicker area, which tapers slightly from one end to the other, has been broken, not cut. Length 76 mm, width 34 mm, maximum thickness 19 mm.

999 Fig 5.31 SF 1.81 3465, G784 L784. Destruction debris/occupation: Building 120. Period 5b. Micaceous purple sandstone. Section only illustrated. Roughly rectangular fragment as **988-92, 997-8** and **1006**. Both ends sawn. Length 36 mm, width 41 mm, thickness 18 mm. The thicker central area on the inner face has been almost smoothed away.

1000 Fig 5.31 SF 1.81 3521, G869 L605. Dump. Period 5. Cippolino marble. Mitred veneer strip (in two pieces). Length 131 mm, width 51 mm, thickness 18 mm. The shape of the section suggests that this strip was formed by the same method as that used on the sandstone strips **988-92** and 997-9 above.

1001 Fig 5.31 SF 1.81 3549, D1092 F22. Robbed drain: yard of Building 123. Period 4. Weathered Purbeck marble. Section only illustrated. A fragment of a cornice moulding. Both ends are broken. Length 192 mm, width 59 mm, height 39 mm.

1002 Fig 5.31 SF 1.81 3242, G496 F293. Pit. Period 6. Purbeck marble. Section only illustrated. A cornice moulding with a dowel hole. Length 107 mm, width 72 mm, height 50 mm. The internal corner is stepped.

1003 Fig 5.31 SF 1.81 3290, D399 F259. Robbing pit. Period 6. Purbeck marble. A fragment of a rectangular or square piece of veneer with bevelled edges, 8 mm thick. Three contiguous edges survive. Complete dimension 82 mm, incomplete dimension 70 mm. The larger (unbevelled) face is polished.

1004 Fig 5.31 SF 1.81 1.81 3574, G1101 F46. Robber trench. ?Period 6. Purbeck marble. Veneer rectangle, 42 mm thick. Three contiguous edges. Complete dimension 160 mm. Maximum surviving length of incomplete dimension 99 mm. ?Underside rough, but with a well formed moulding along one edge. There is a roughly gouged hollow on the ?upper side around a hole which passes at an angle through the slab. An iron nail is *in situ* in this hole, and the hollow around the nail's head is filled with opus *signinum.*

1005 Fig 5.32 SF 1.81 3590, G1240 L769. Floor foundation: Building 120. Period 5a. Purbeck marble. A fragment of veneer with a single V-shaped groove. Broken into two pieces at the groove. Maximum surviving dimensions 182 by 117 mm, 40 mm thick.

1006 Fig 5.32 SF 1.81 4527, H203 F183. Robber trench. Period 6. Micaceous purple sandstone. Section only illustrated. One end of a strip broken at a point where either the section was thicker, or made a right-angled turn. Length 45 mm, surviving width 31 mm, thickness 11 mm. *See* 988-92 and 997-9.

1007 Fig 5.32 SF 1.81 4463, H131 L3. Topsoil/clearance. Period 6. Imperial porphyry. A moulded curved veneer strip, both inner and outer edges and one end survive. Maximum dimensions 54 by 24 mm, 8 mm thick.

1008 Fig 5.32 SF 1.81 4456, G3000. Unstratified. Periods 1 to 6. A gastropodic limestone from the Purbeck beds, possibly Purbeck burr. A small moulded fragment, possibly the corner of a triangular piece. Dimensions 64 by 69 by 71 mm, thickness 38 mm.

1009 Fig 5.32 SF 1.81 4441, H367 F335. Wall foundations: Building 116. Period 5. Possibly Africano marble. A small complete right-angled triangle of veneer, 8 mm thick. Dimensions 47 by 51 by 22 mm.

1010 Fig 5.32 SF 1.81 4593, H403 F402. Robber trench. Period 6. Weathered Purbeck marble. A fragment of a triangular piece of veneer, 9 mm thick. Two contiguous edges survive, one of which is complete (length 80 mm). The complete shape was probably an equilateral triangle. Both faces are equally weathered and polishing is undetectable.

1011 Fig 5.32 SF 1.81 4916, J103 F18. Pit. Period 6. Weathered Purbeck marble. Section only illustrated. A fragment of a cornice moulding. One end survives. Length 102 mm, width approximately 107 mm, height 61 mm.

1012 Fig 5.32 SF 1.81 4281, H183 L3. Topsoil/clearance. Period 6. White marble. A veneer hexagon, 29 by 25 mm, 5 mm thick. This piece is scarcely discoloured, and may be post-Roman.

1013 Fig 5.32 SF 1.81 4993, J250. Unstratified. Periods 1 to 5. Purbeck marble. Section only illustrated. Veneer strip, with one long edge bevelled and broken at the bottom. Length 101 mm, maximum width 84 mm, thickness 26 mm.

1014 Fig 5.32 SF 1.81 4010, G2442 F46. Robber trench. ?Period 6. Weathered Purbeck marble. Section only illustrated. ?Veneer slab, with part of the upper surface roughly cut away. Maximum dimensions 220 by 160 mm, thickness 47 cut down to 31 mm.

1015 Fig 5.32 SF 1.81 4996, J223 L222. Destruction debris: Building 79. Period 2. Weathered Purbeck marble. A fragment of a rectangular piece of veneer with bevelled edges, 8 mm thick. Three contiguous edges survive. Width 61 mm, maximum surviving length 70 mm. Both faces are equally weathered and polishing is undetectable.

1016 Fig 5.32 SF 1.81 5241, K200. Unstratified. Sandstone. Section only illustrated. A moulded fragment, possibly from the base of a wall, or an upright frame. Length 306 mm, width 98 mm, height 91 mm.

1017 Fig 5.32 SF 1.81 5407, W63 F56. Purbeck marble. Section only illustrated. ?Flange fragment. Length 89 mm, width 28 mm, height 45 mm.

1018 Fig 5.32 SF 1.81 5406, W63 F56. Purbeck marble. Section only illustrated. A fragment of a cornice moulding. Length 133 mm, width 59 mm, height 35 mm.

1019 Fig 5.32 SF 1.81 5403, W67. Purbeck marble. Section only illustrated. Moulded veneer slab with two contiguous surviving edges at an acute angle. Edges measure 179 by 165 mm, thickness 26 mm.

1020 Fig 5.33 SF 1.81 3310, D433 F259. Robbing pit. Period 6. Parian marble. A table leg in the form of a carved panther head.

Dr Susan Walker writes: The fragment of leg, 170 mm long, is decorated with the head of a panther surmounted by a moulded crown. The smoothly finished back is inclined at an angle of 96 degrees. A rectangular dowel-hole is cut in the upper surface; a round hole is cut in the back of the leg some 40 mm below the top, and a similar round hole is cut in the broken lower surface. Its form suggests that the leg

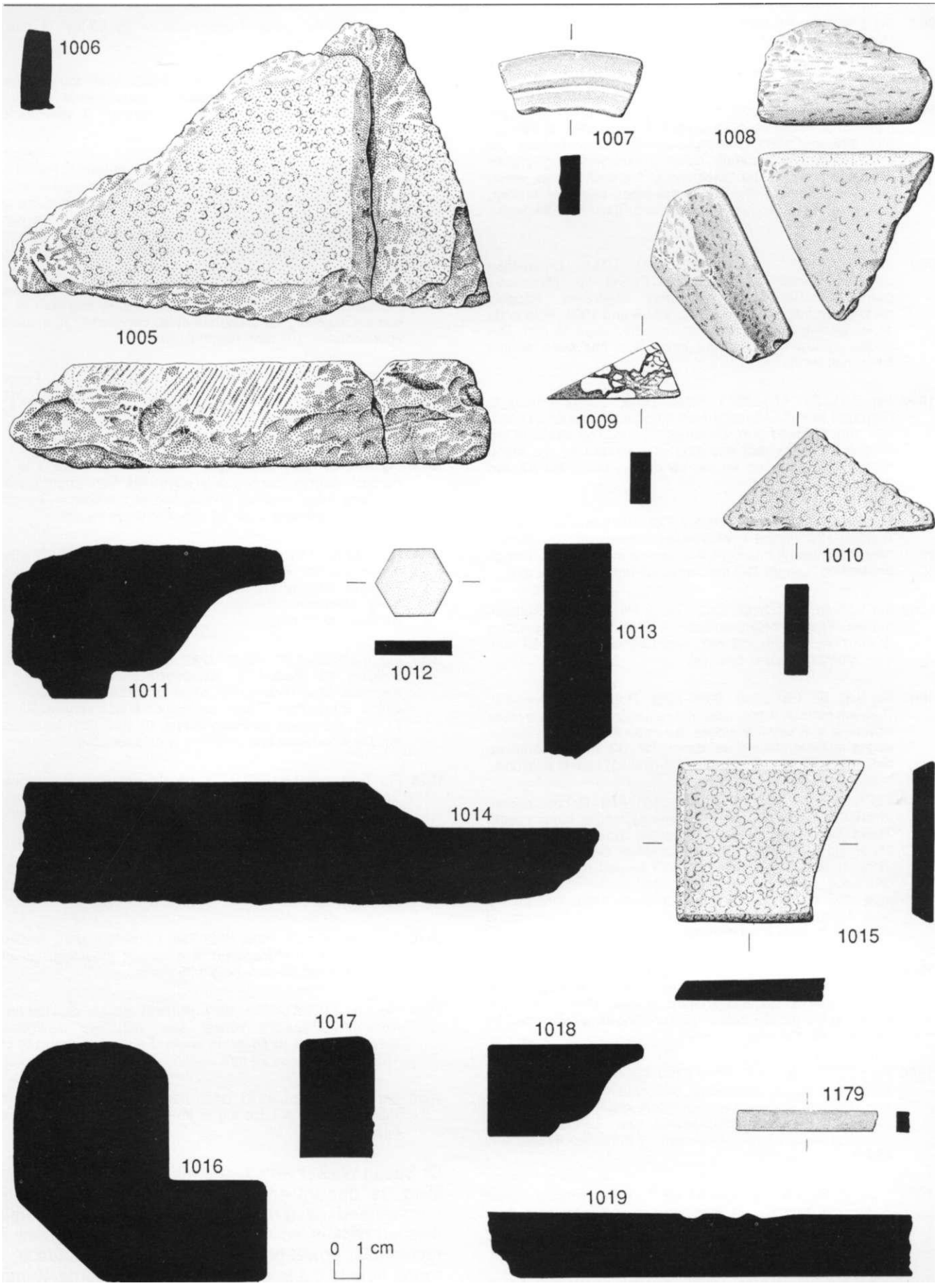


Fig 5.32 Wall veneer and other architectural stone fragments. 1:2.

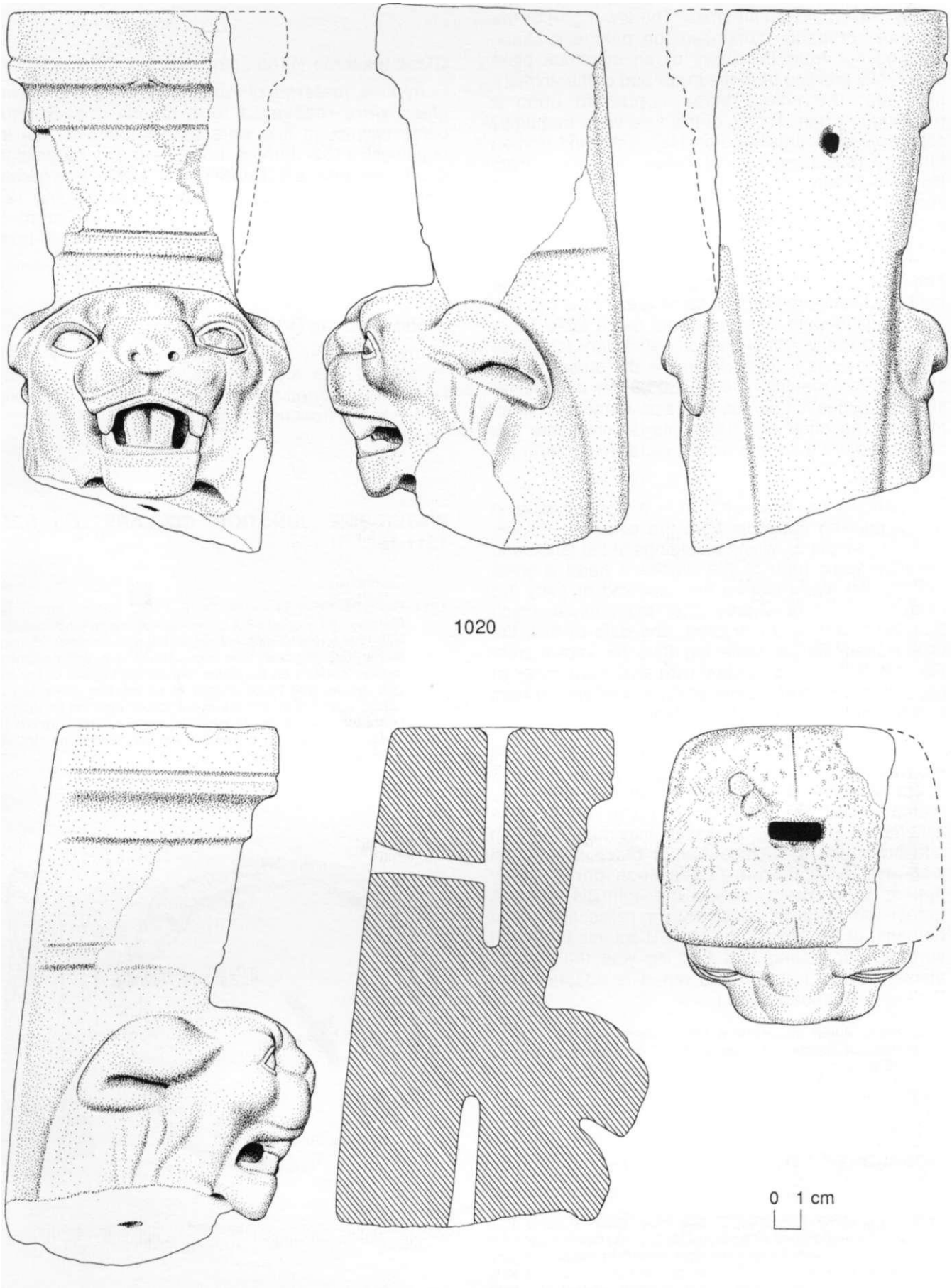


Fig 5.33 Parian marble table leg from Building 123, Room 9. 1:2.

belonged to a three-legged round table, a Greek type widely copied in Roman times. The lower part of the leg most probably comprised the panther's chest, swelling out from the calyx of an acanthus plant apparently growing from the lower part of the animal's hind leg, the whole being supported upon a rectangular plinth. Tables of this type were frequently schematically represented on Hellenistic and Roman funerary reliefs; several of these are known from Romano-British sites (eg York). Similar tables are known from Roman Britain, but these are almost exclusively made from Kimmeridge shale, and most are decorated with griffins.

The head, together with two other fragments of white marble which were from the same area of the site and thus were thought to be from the same table, were submitted to the BM Research Laboratory for stable isotope analysis to help determine the origins of the stones. The results *(see* pp 506-8 on microfiche) strongly suggest that the leg was made of Parian marble. The other two fragments do not share this origin, and are therefore almost certainly not from the same table.

The panther was recovered from a Norman robbing pit for building materials from the cellar of Building 123. The simple crowning mouldings of the tenon and the naturalistic form of the panther's head suggest that the leg was made in the later 2nd or early 3rd century, about or shortly after the time at which Building 123 was constructed. The date of this, the only Parian marble table leg thus far known from Roman Britain, coincides with the beginning of imports to Britain of marble artefacts and veneer from quarries in the eastern Mediterranean.

The hole in the broken lower surface shows that the leg was repaired in antiquity. Possibly it was broken in transit. The similar hole cut in the back may indicate that the elements of the table were assembled in Britain. This hole may have held an attachment for a stretcher-bar or brace, though on well-preserved marble tables such bars usually appear lower down, behind the animal's head. A further indication of assembly (or reassembly after damage) of the table is the letter B cut into the upper surface, suggesting that this leg was the second element to be joined. (This report is adapted from Walker & Matthews 1986.)

1140 Fig 5.34 (on microfiche p 508). Two fragmented slabs of Purbeck marble, set in tessellated floor of Passage 1A and 1B to form threshold. Catalogued on microfiche.

MOSAICIST'S STRIP? (Fig 5.32; **1179)**

1179 Fig 5.32 SF 1.81 3571, D1084 F352. Drain: Building 123, Passage 2. Period 4. A strip of dark ?limestone, rectangular in section, with three sawn and smoothed edges and one rough broken one. Both ends are broken. Possibly a strip used in the manufacture 'on site' of mosaic tesserae. Length 53 mm, width 8 mm, maximum thickness 6 mm.

TESSERAE

Glass tesserae (1180-228)

Forty-nine tesserae of turquoise, blue, and green glass were recovered from mostly post-Roman contexts, though five were associated with Roman buildings. **1182** derived from Period 4 demolition debris of Passage 4, Building 123.**1205** came from a Period 5 pile hole (for a foundation) of Building 127 and **1186** and **1187** came from the Period 5 demolition of the same building. **1228** came from ?Period 5b destruction debris of ?Building 120.

Stone tesserae (1229-310)

Many tesserae came from robber trenches associated with rooms containing mosaics, notably BF7, which robbed the mosaic in Room 2 of Building 113, and the trenches robbing Building 123.

WATER-PIPE JUNCTION COLLARS (Fig 5.35; **1311-18)**

1311 Fig 5.35 SF 1.81 3408, D678 F684. Robber trench for Building 123. Period 6? A complete water-pipe junction collar with characteristic external ridge. Internal diameter 95 mm, height approximately 29 mm. There are well-preserved organic remains on the collar, but Jacqui Watson of the AM Lab reports that these appear to be random, the result of casual association with the metal, rather than the remains of a wooden water-pipe. Attached to another collar from site D, **1318,** catalogued on microfiche, are the mineralised remains of an oak water-pipe.

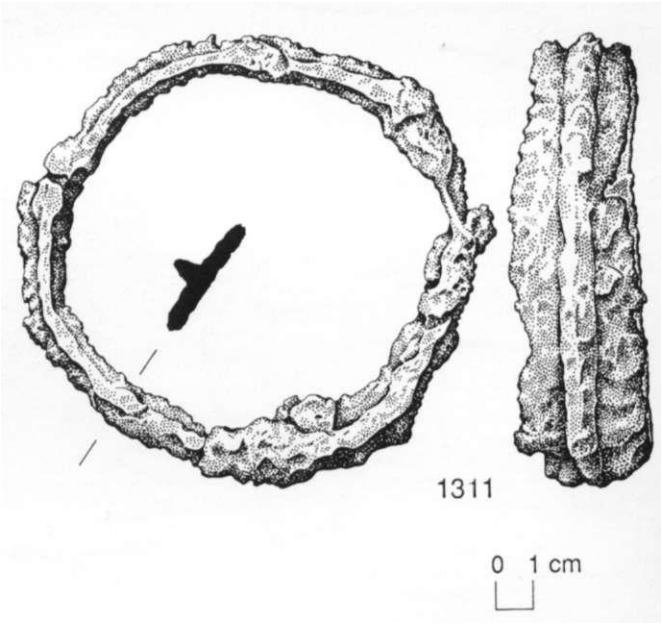


Fig 5.35 Water-pipe junction collar. 1:2.

CATEGORY 10:
Tools

TOOL HANDLES

BONE AND ANTLER HANDLES

One-piece handles

Plain (Fig 5.36; **1319-22)**

1319 Fig 5.36 SF 1.81 570, C42 L1. Topsoil (Roman?). ?Period 5. **A** polished and inscribed bone handle which has been only partially hollowed out for a tang (now missing). There are traces of iron corrosion products left by the tang. Part of the blade end of the tapering oval-section handle is missing. Length 83 mm, maximum diameter 21 mm.

Mark Hassall writes: The handle is inscribed in neat capitals FLAMMA SENOVARI, the flame of Senovarus', with flamma referring to the knife itself almost, perhaps, as a nickname. The text originally read FLAMMA SENOVARVS, but the last two letters of the name were erased and the letter 'I' substituted to give a genitive. The Celtic name Senovarus/a is attested twice from Britain, from Bath, Avon *(Britannia* **13,** 1982, 398, note 4 (& 401, note 8), and from Caves Inn, Warwickshire *(Britannia* **14,** 1983, 350, Addenda c, 3).

Comparable inscriptions include the bone scraper or palette from London inscribed CERES EQ(V)ITIS, 'the "Ceres" of Eques' *(Britannia* **9,** 1978, 479, note 49) (where Ceres is not explained, but might conceivably be a proper noun, rather than a garbled Latin substantive), and the parallel there cited from Trier, a thin bone implement inscribed RESTITVTI SPAT(H)A, 'the sword of Restitutus'. For Flamma as a nickname for the knife itself, compare the names of horses attested on North African curse tablets, Igneus (Fiery), Fulgidus (Lightning), Nitidus (Flashing), Scintilla (Spark), Sidereus (Steel), or Pugio (Dagger) (A Audollent, *Defixionum Tabellae,* 4556-60, Index III 2). Flamma does not appear from the *Thesaurus Linguae Latinae* to have been used as the equivalent of dagger, but it does occur as a personal name (I Kajanto, *The Latin Cognomina,* 341).

1320 Fig 5.36 SF 1.81 3069(X), G305 F266. Linear feature/drain? ?Period 5. **A** complete knife with a plain handle. The blade has a straight edge and an arched back. The tang continues the curve of the back, and is fixed in an antler handle. The handle is perforated transversely 15 mm from the end, presumably not to secure the tang with a rivet (the tang does not continue that far up the handle), but to provide a means of suspension. Total length 180 mm, length of handle 84 mm. This knife illustrates the suitability of antler, naturally curved, as a medium for handles on knives where the tang continues the curve of an arched back.

With a waisted end; dated to the Claudian-Neronian period *(see CAR 2,* 107)

i) plain (Fig 5.36; **1323-6)**

1323 Fig 5.36 SF 1.81 2588, E1490 F1279. Stake hole. Period 1. **A** very small example of the type. The blade end is not pinched. There are slight traces of iron from the tang. Length 52 mm, maximum diameter 9 mm.

ii) decorated **(1327-8)**

Catalogued on microfiche.

With incised decoration **(1329)**

A fragment of a circular section handle with a single groove close to one end came from an unstratified context on Site H.

Two-piece handle (1330)

A fragment of a bone two-piece handle, pierced for suspension, came from Period 4c occupation in Room 6a of Building 112.

Clasp-knife handle (Fig 5.36; **1331)**

1331 Fig 5.36 SF 1.81 2409, B2206 L632. Occupation: Building 112. Late Period 4. **A** handle for a clasp-knife carved into a representation of Venus, naked except for some ?drapery around her thighs. Her right arm and part of her right side are missing. She has a high-piled coiffure and a tress of hair trails over her left shoulder. The figure ends at about knee level and rests on a short plain pedestal which was bound by a copper-alloy collar. **A** small fragment of the iron blade remains in a half-open position. Length 72 mm.

COPPER-ALLOY HANDLE (Fig 5.36; **1332)**

1332 Fig 5.36 SF 1.81 2448(C), B2266 F282. Large cess-pit: Building 77, Room 5. Periods 1/2. **A** copper-alloy handle with a thick shaft grooved on the sides just below the curved pierced top. Traces of iron and iron-replaced wood adhere to the broken base. Probably for a knife or razor, though there is a possibility that this may be a key handle (compare *CAR* **2,** fig 142,4161). Length 54 mm.

IRON KNIVES AND CLEAVERS (Figs 5.36-7; **1320, 1333-59)**

See the complete blade with handle Fig 5.36,1320.

1333 Fig 5.37 SF 1.81 2655(C), B1714 F505. Slot for partition wall: Building 78, Rooms 2/3. Periods 1 & 2. A small knife blade with central tang, almost certainly originally fitted with a handle as Fig 5.36**,1323.** The blade has a curved back with a straight edge. Length 85 mm.

1334 Fig 5.37 SF 1.81 3505(C), G806 L605. Dump. Period 5. A knife with a handle which terminates in a penannular suspension loop. The handle is rectangular in section at both ends (the middle is damaged), but close to the blade the long axis of the rectangular section is parallel to the blade,

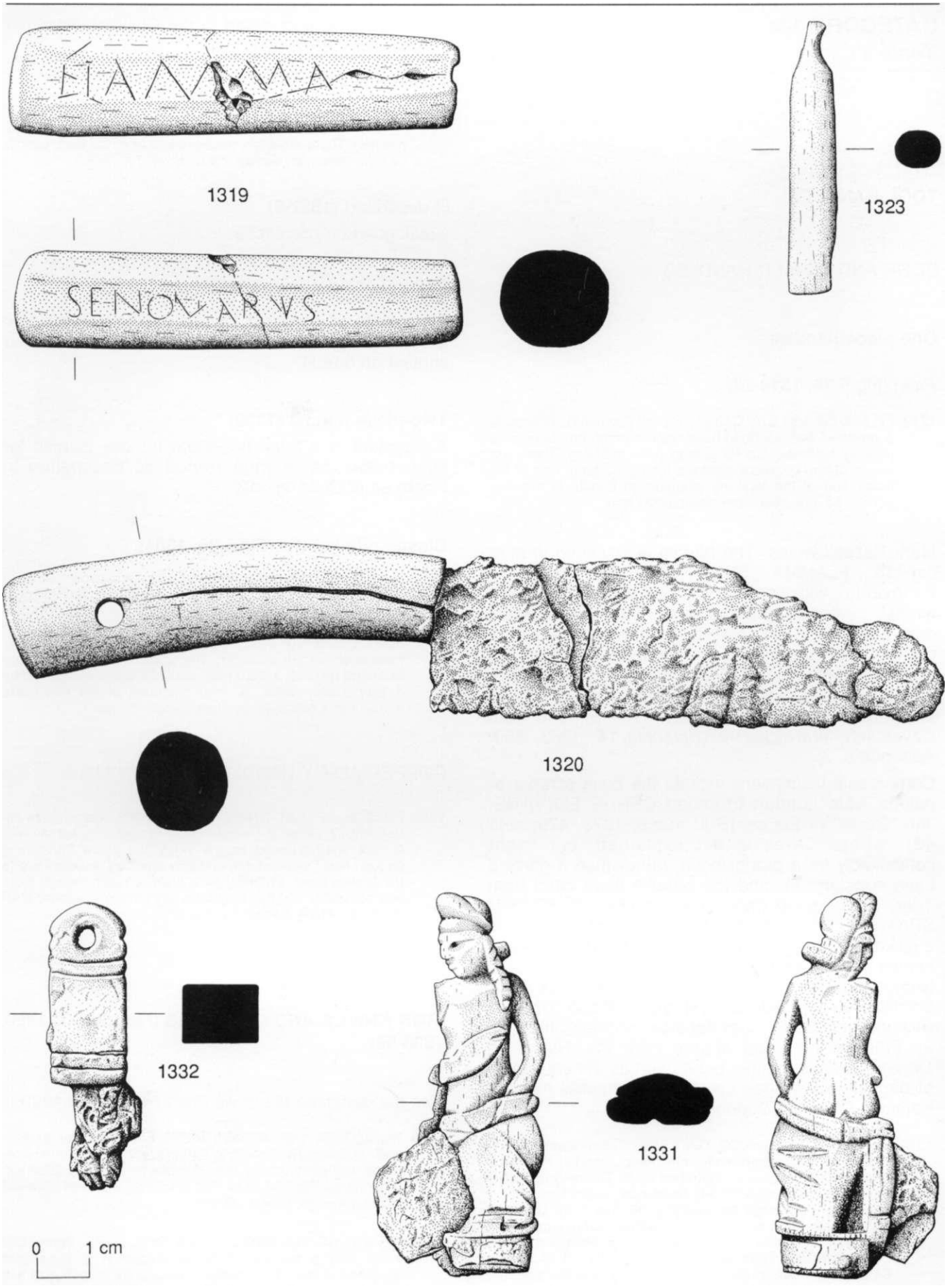


Fig 5.36 Tool handles and knife. 1:1.

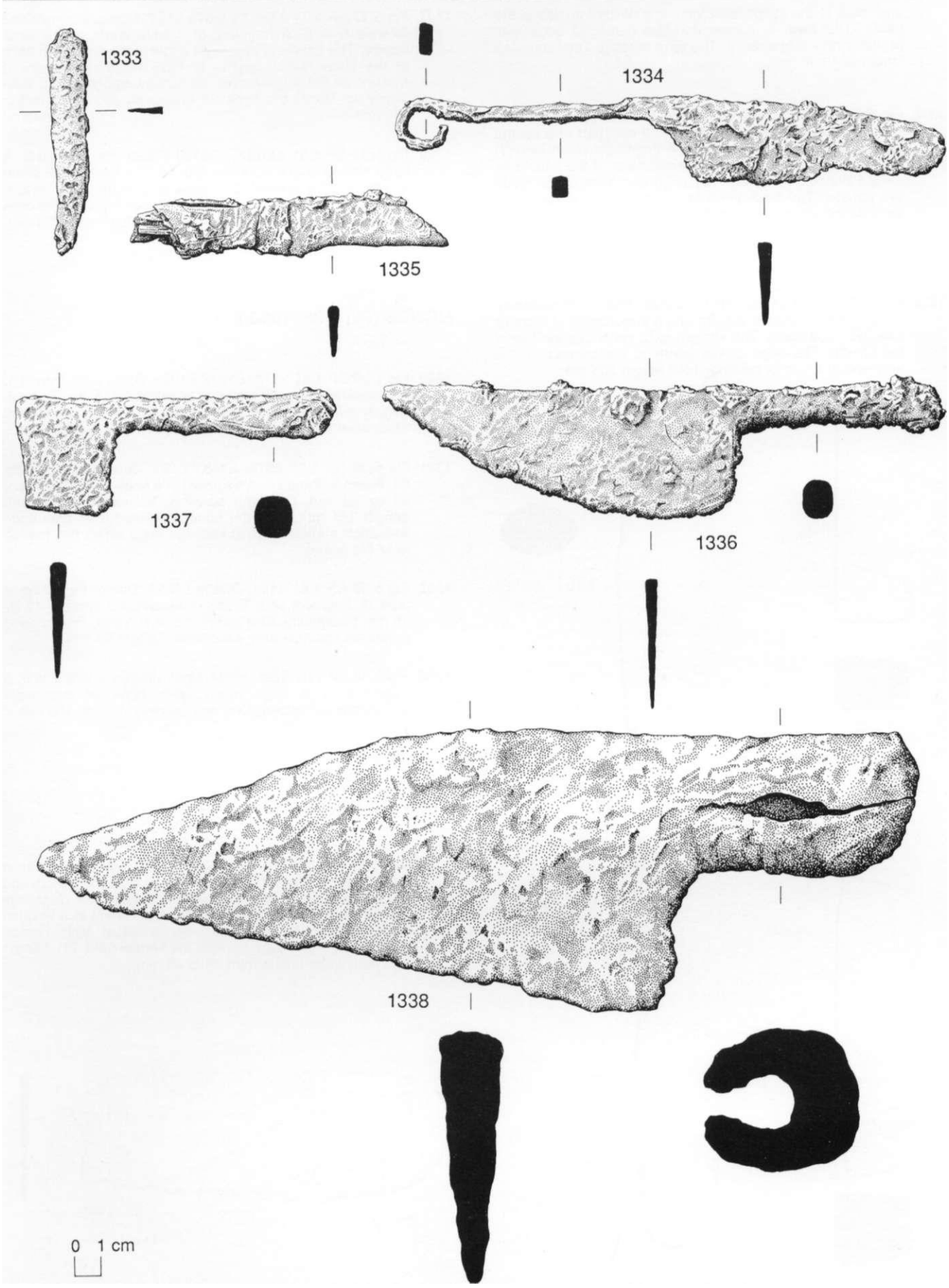


*Fig **5.37** Knife and cleaver blades. **1:2.***

and close to the suspension loop, it is at right angles to the blade. The back is curved and the damaged edge was probably originally straight. The tip is missing. Total surviving length 204 mm.

1335 Fig 5.37 SF 1.81 3589(C), G1240 L769. Floor foundation: Building 120. Period 5a. A small knife with part of a central square-section tang around which fragments of an ivory(?) handle have been preserved (identification of the handle by Jacqui Watson, AM Lab). The edge and back of the blade are parallel. The back turns at a sharp angle to run down towards the edge and form the tip. There are also traces of mineralised organic remains on the blade. Surviving length 118 mm.

1336 Fig 5.37 SF 1.81 5352(C), G3420 F3408. Foundation: Building 118. Period 4. A knife with a thick handle of more or less circular section. The straight back continues the line of the handle. The edge curves gently to the pointed tip, the very end of which is missing. Total length 205 mm.

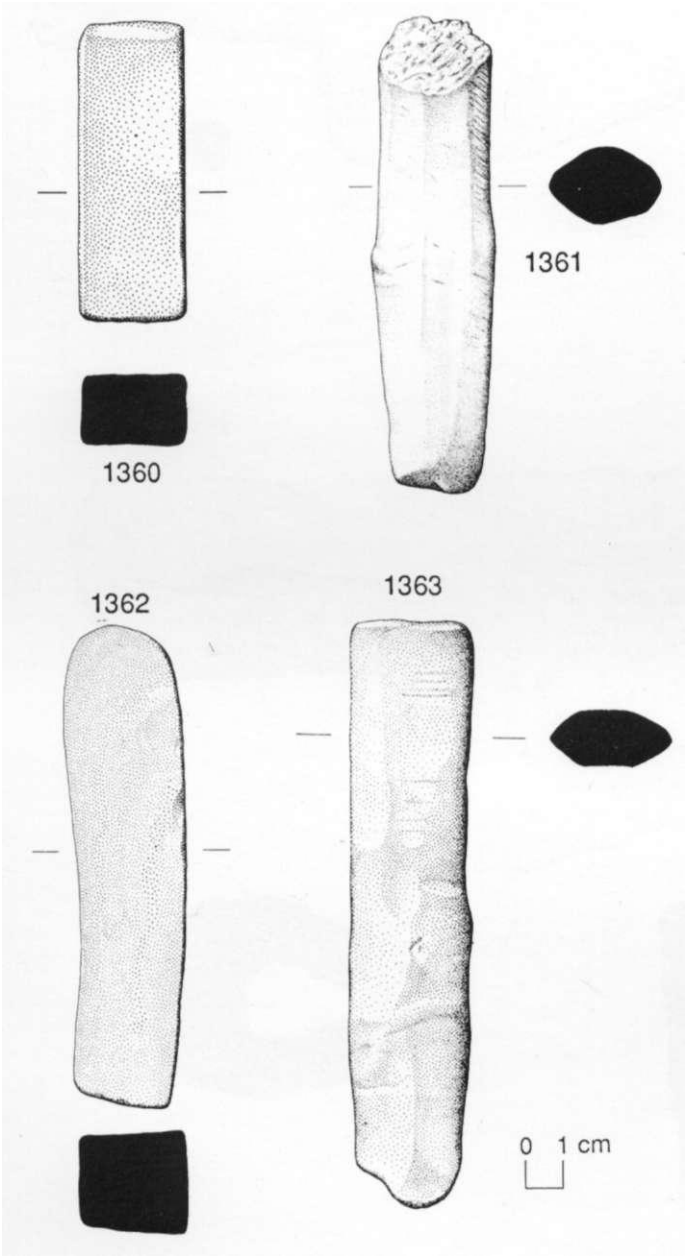


Fig 5.38 Hones. 1:2.

1337 Fig 5.37 SF 1.81 3334(X), G579 L164. Occupation/midden? ?Period 5 or 6. A fragment of a knife blade with a stout handle. The handle is at a slight angle to the line of the back of the blade, which seems to have been straight. What remains of the edge curves up slightly, suggesting a form similar to Manning's Type 11 (1985, fig 28). Total length 116 mm.

1338 Fig 5.37 SF 1.81 4479(X), G3138 F2695. Pit. ?Period 3. A large cleaver with a socketed handle. The back of the blade is very slightly curved, the edge is straight. This cleaver belongs to Manning's Type 4 *(ibid,* fig 30), for which he cites examples from Silchester and London. Total length 328 mm.

HONES (Fig 5.38; 1360-81)

1360 Fig 5.38 SF 1.81 2470, E1213 F1059. Stake hole. Period 1. A complete hone of rectangular section (18 by 29 mm). Slightly waisted. The ends may not be original. Weathered calcareous sandstone. Length 78 mm.

1361 Fig 5.38 SF 1.81 2572, E1431 L193. Occupation: Building 84, Room 3. Period 1. A fragment of a hone of ovoid section, 32 by 22 mm. One end survives. Micaceous sandstone. Length 121 mm. That the hone was used from both ends with short strokes is clear from the ridge which has formed near the centre.

1362 Fig 5.38 SF 1.81 4151, G2854 L2852. Dump. Period 3d or 3d/4. A fragment of a ?hone of rectangular section, 15 by 16 mm (maximum). One rounded end survives. Fine-grained purple and creamy-grey sandstone. Length 63 mm.

1363 Fig 5.38 SF 1.81 5283, H624. Unstratified. Periods 1 to 6. A fragment of a large much worn hone of micaceous calcareous sandstone. One end survives. Length 153 mm.

IRON TOOLS (Fig 5.39; 1382-3)

1382 Fig 5.39 SF 1.81 1279(C), B323 L35. Demolition: Building 112, Room 4. Periods 4/5. A fragment from the handle end of a hand-saw. There are two rivet holes, set diagonally across the tongue-shaped end, for attachment to a wooden handle. Most of the teeth, as is usual with Roman hand-saws, slope back towards the handle *(ibid,* 21). Length 141 mm, width tapers from 48 to 43 mm.

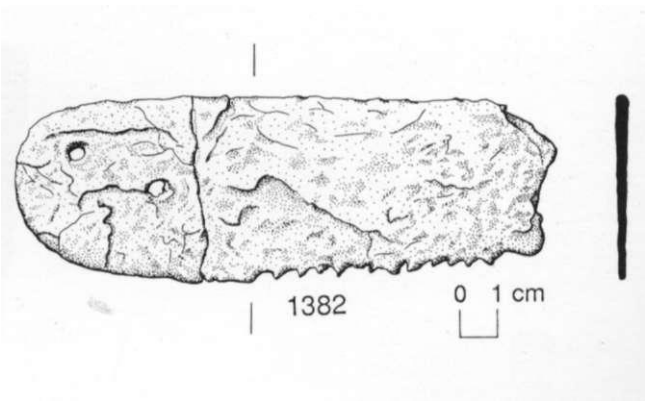


Fig 5.39 Saw fragment. 1:2.

CATEGORY 11:
Fasteners and fittings

NAILS AND STUDS

COPPER-ALLOY NAILS

Nails from Period 1 contexts are noted in the summaries below as they may perhaps be associated with military equipment, and thus more correctly belong in Category 13. Also, the possibility of other nails being residual from Period 1 should also be borne in mind, particularly those from Period 2 and early Period 3 contexts.

Nails with a globular, bun-shaped or biconical head (1384-424)

Nails of this form have been recovered from contexts associated with Buildings 77, 81, 84, 89, 93, 95, 99/100, 112, 113, 116, 120, 122, and 123. **1419** derives from a Period 1 floor surface in Building 81. The remainder came from contexts ranging in date from Period 2 through to post-Roman. Catalogued on microfiche.

Nails with a flat head (1425-49)

Flat-headed nails were found associated with Buildings 78,89, 94, 99/100, 100, 101, 112, 113, 117, and 123. From make-up below the Period 1 road on site E came **1441,** with the others coming from contexts ranging in date from Period 2 to post-Roman. Most come from early or mid Roman contexts. Catalogued on microfiche.

Nails with a convex head (1450-9)

Though comparatively few of these nails were found, the majority (seven) derive from early Roman contexts, notably **1451** from a Period 1 floor in Room **9** of Building 77, and **1459** from Period 1 or 2 occupation/trample in Building 81. Catalogued on microfiche.

COPPER-ALLOY STUDS

As with the copper-alloy nails, studs from Period 1 contexts are noted in the summaries below as they may perhaps be associated with military equipment, and thus more correctly belong in Category 13.

Studs with a flat head (1460-95)

Flat-headed studs were found in contexts associated with Buildings 77, 78, 95, 108, 112, 114, 116, 117, 120, and 123. **1462** came from Period 1 occupation in Room 10 of Building 77; **1472** came from a Period 1 cess-pit/?drain in Room 1 of Building 78; and **1481** was found in a Period 1 ditch on Site E. The remaining studs of this form were found in contexts ranging in date throughout the Roman period, and in unstratified and post-Roman contexts. Catalogued on microfiche.

Studs with a convex head (1496-542)

Studs with convex heads were found associated with Buildings 77, 79, 84, 90,93, 94, 95,99/100, 112, 113, 114, 117, 120, and 123. **1497** derived from a Period 1 floor in Room 10 of Building 77; **1509** from Period 1/2 make-up in Building 77; and **1517** from Period 1/2 occupation lenses in Rooms 2/3 of Building 79. Catalogued on microfiche.

Decorated studs (Fig 5.40**; 1543-6)**

1543 Fig 5.40 SF 1.81 1757, B1921 L457. Floor/make-up & occupation: Building 78, Room 1. Period 2. A stud made in two pieces with a moulded copper-alloy base into the rim of which is fitted a white-metal repousse disc with a lion's head. Possibly a box fitting? Diameter 12 mm.

1544 Fig 5.40 SF 1.81 2421, E1165 F1019. Pit. Period 1-2. A very corroded stud in the form of a male bust. Similar to a head of Silenus from Verulamium, St Albans, Hertfordshire (Waugh & Goodburn 1972, pl 38,e). Compared to the Verulamium stud and to that with the head of Jupiter Ammon from Colchester (*CAR **2,*** fig 122,3222; M Henig pers comm) this object is poorly executed. The beard is indicated by straight grooves. Height of head 17 mm. Length 13 mm.

IRON NAILS AND STUDS

The iron nails and large studs from Culver Street Phase 1 have not been catalogued. Contexts containg nails and from Roman buildings are listed on microfiche in building number order, and within each building by period. All but a few of the iron nails from Phase 2 of the excavation are missing.

LEAD NAILS AND STUDS (Fig **5.40; 1547-50)**

1547 Fig 5.40; SF 1.81 3013, G212 L206. Destruction debris/floor: Building 120. Period 5b. A distorted stud or nail with a lozenge-shaped head. Length approximately 48 mm. Maximum length of head 28 mm. A similar stud comes from Period 4 dump/demolition on Site C Studs and nails of lead would have to be inserted into previously-formed holes, such as those in tiles.

RIVETS (1551-3)

Catalogued on microfiche.

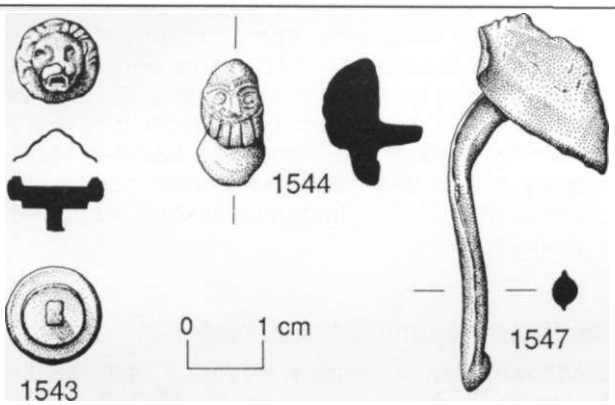


Fig 5.40 Studs. 1:1.

BOSSES (1554-66)

Most of the bosses derive from late Roman contexts apart from a ?solder-filled example, **1566,** from Period 2 destruction debris of Building 79.

HINGE FITTINGS (Figs 5.41-2; **1567-84)**

1567 Fig 5.41 SF 1.81 2721, B2527 F866. Pit: Building 77, Room 3. Period 2. A bone hinge unit from a composite wood and bone hinge (Fremersdorf 1940). The unit has one peg hole, with an accompanying internal indentation *(CAR* **2**, 121). Length 26 mm, diameter 28 mm.

1568 Fig 5.41 SF 1.81 4001, G2357 F2310. Robber trench. Period 4 or 5. Probably a bone terminal spacer from a hinge, similar, though not exactly so, to Hull 1963, fig 81,6a-c. The section is almost plano-convex, though the flatter of the two sides is very slightly, and irregularly, convex. Diameter 22 mm, height 5 mm.

1579 Fig 5.42 SF 1.81 3580(C), G979. Unstratified. Periods 4 to 6. A fragment of an iron strap from a loop-hinge, with a pierced rounded terminal and perforated by a nail shaft remaining *in situ.* Surviving length 97 mm, width 28 mm. Jacqui Watson (AM Lab) reports: there are fragments of mineralised wood on the underside, one of which is *Quercus* sp (oak), though its random orientation suggests that this is probably not part of the board to which the strap was fitted.

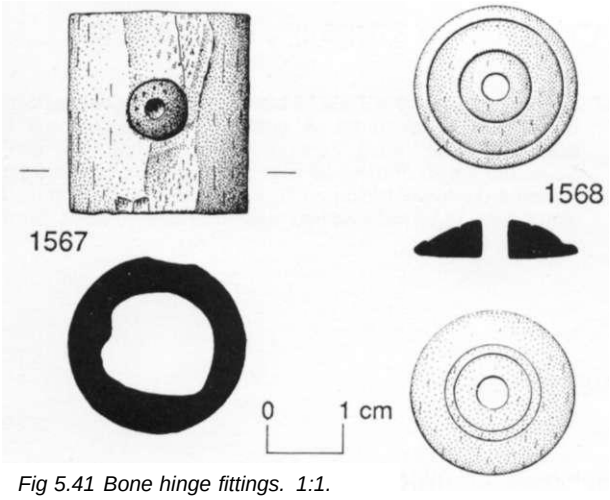


Fig 5.41 Bone hinge fittings. 1:1.

1580 Fig 5.42 SF 1.81 5331(X), G3176 F2695. Pit. ?Period 3. An iron strap from a loop-hinge, with a pierced rounded terminal, and two perforations for nails. Length 113 mm, maximum width 20 mm. Jacqui Watson (AM Lab) reports: there are fragments of mineralised wood, *Quercus* sp (oak), on one side, with a tangential surface, and therefore probably associated with the strap through deposition.

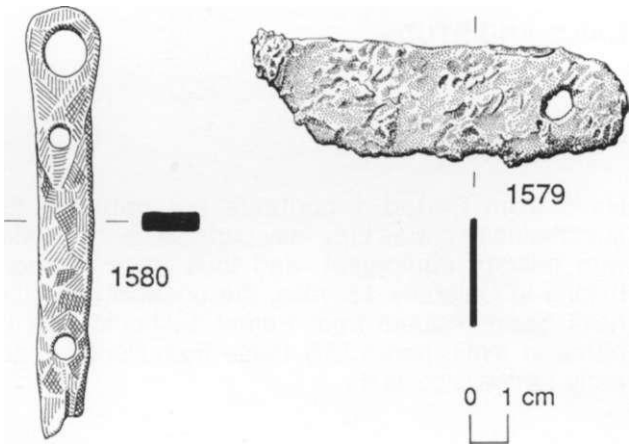
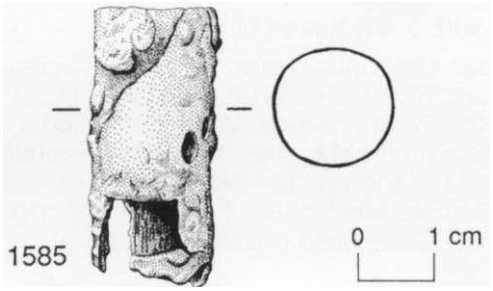


Fig 5.42 Iron hinge fittings. 1:2.

BINDING (Fig 5.43; **1585-99)**

1585 Fig 5.43 SF 1.81 3272(C), D412 L411. Dump or make-up? Building 123, Room 9. Period 4. A copper-alloy tube (in three fragments) with mineral-preserved wood lining the inner face. Internal diameter 14 mm, length 35 mm. Jacqui Watson reports: the wood is either *Salix* sp (willow) or *Populus* sp (poplar), probably from a coppiced pole.



1585

Fig 5.43 Binding. 1:1.

MISCELLANEOUS FITTINGS (Fig 5.44; **1600-1)**

1600 Fig 5.44 SF 1.81 5363, G3484 L3466. Occupation: Building 120. Period 5a. An iron strip of U-shaped section, with mineralised wood covering the curved part of the outer face. Jacqui Watson reports: the sample was in poor condition, but enough features were present to suggest that it was a non-indigenous conifer, possibly *Abies* sp (silver fir) or *Cedrus* sp (cedar). Three rivets/nails placed at 42 mm intervals along the centre (bottom) of the section served to attach the wood to the iron strip. Length of strip 122 mm. The precise function of this object is uncertain. However, the U-shaped section suggests that something could be slid or slotted into the strip. This separate piece may have been organic and decayed completely, or may have been of a more durable material, such as metal, but was removed before the strip was deposited. The use of a non-native wood indicates that the complete object was imported, and thus was possibly quite unusual. At one end of one outer side of the strip is a cluster of small iron ?hobnails, held on by corrosion products. The hobnails are almost certainly only associated with the object by an accident of deposition. A

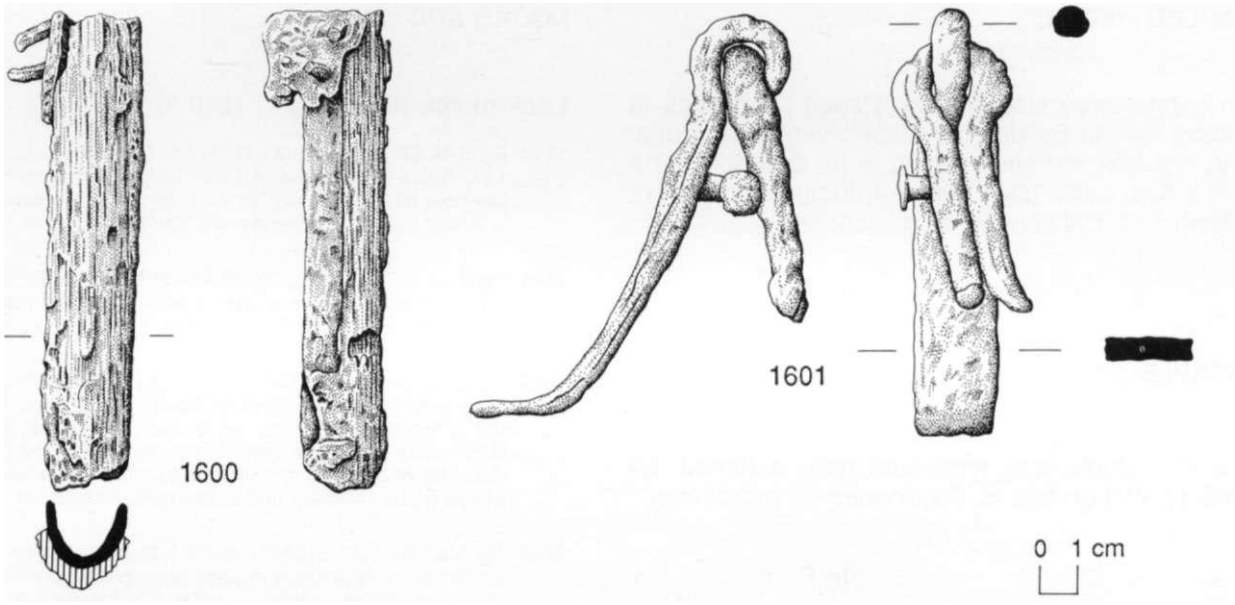


Fig 5.44 Miscellaneous fittings. 1:2.

separate cluster of five ?hobnails is also part of this small find number.

1601 Fig 5.44 SF 1.81 1430(X), B493 L71. Demolished clay walls: Building 112, Room 2. Periods 4/5. A bent iron strip with a loop at one end through which passes a split-spike loop, similar to Manning 1972, fig 72,155. A bent nail is fitted into the strip close to the loop. Length of strip 136 mm.

RING-HEADED PIN (Fig 5.45; **1602)**

1602 Fig 5.45 SF 3871(X), D1303 F203. Gully: yard of Building 123. Period 5. An iron ring-headed pin, as *CAR* **2,** fig 128,4075. Length 182 mm.

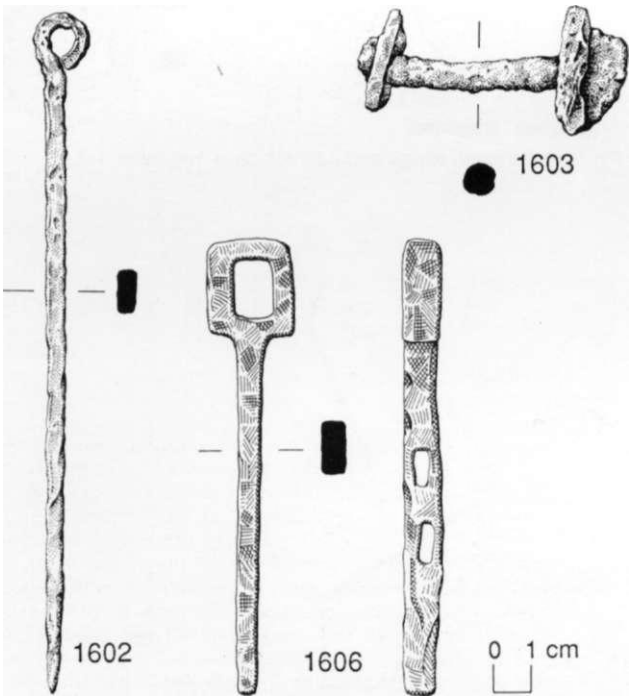


Fig 5.45 Ring-headed pin, holdfast, and loop-headed strap. 1:2.

HOLDFASTS (Fig 5.45; **1603-5)**

1603 Fig 5.45 SF 3455(X), D606 F582. Hearth? Building 123, Room 9. Period 4. An iron holdfast with a circular head (partly bent upwards), and a rectangular rove. Diameter of head 30 mm, rove 24 by 21 mm (maximum), length 51 mm.

LOOP-HEADED STRAP (Fig 5.45; **1606)**

1606 Fig 5.45 SF 1.81 3790(X), G1542 L1391. Dump/construction debris: Building 116. Period 5. An iron loop-headed strap, with a pierced rectangular terminal and a shaft pierced by two rectangular holes. As Fig 6.29**,331** and Manning 1985, pl 70.S140-1. Length 122 mm. The precise function of this object is unknown.

DOUBLE-SPIKED LOOPS (1607-22)

Split-spiked loops of both copper-alloy and iron were recovered from contexts varying in date from Period 2 to late Roman and unstratified. Loops were found in contexts associated with Buildings 86/87, 112, 116, 119, 120, and 123. The example dated to Period 2 came from unburnt colonial occupation in Building 86/87. Catalogued on microfiche.

JOINER'S DOG (1623)

Two fragments possibly from a joiner's dog came from a small Period 1 pit in Room 8 of Building 77. Catalogued on microfiche.

STAPLES (1624-6)

Two copper-alloy staples from Period 2 contexts in Building 89 and Building 90 respectively were found. An iron staple, too short-armed to be described as a joiner's dog, came from Period 4 dump in Room 8 of Building 123. Catalogued on microfiche.

T-STAPLE (1627)

An iron T-staple was recovered from a Period 3/4 gravel spread on Site B. Catalogued on microfiche.

TIE-STRIPS (1628-32)

Of these five fragments of iron tie-strips, some may originally have been part of loop-hinges. Two, **1630** and **1631,** came from early Period **3** contexts on Site C. The others derive from mid to late Roman contexts associated with Buildings 112, 114, and 120. Catalogued on microfiche.

COLLARS AND FERRULES (1633-39)

Two copper-alloy and two iron collars were recovered from pre-Flavian contexts and a copper-alloy ferrule derived from Period 1 occupation in Building 79. A second copper-alloy ferrule came from a Period 3 pit in Building 94, and an iron disc, possibly from a ferrule, came from the only late context represented by this group of finds, a Period 5 gully in Building 126.

LOCKS AND KEYS

Lock-plates (Figs 5.46-7; **1640-3)**

1640 Fig 5.46 SF 1.81 3419(X), D731 L641. Oven debris: Building 123, Room 9. Period 4. An iron lock-plate fragment with a key-hole for a rotary key. At each corner of the broader end is a rivet hole. Maximum dimensions 55 by 37 mm.

1641 Fig 5.46 SF 1.81 3350(X), G640 L605. Dump. Period 5. An iron lock-plate fragment with a key-hole for a rotary key. Maximum dimensions 52 by 50 mm.

1642 Fig 5.46 SF 1.81 4597(C), H225 F59. Trench. Period 5. A fragment of sheet iron with an iron band attached. Possibly the internal guide plate of a lock. Maximum surviving dimensions 69 by 59 mm, 3 mm thick. Maximum internal diameter of band 40 mm, height 13 mm. Also a folded strip of iron (in two pieces), and a fragment of sheet iron.

1643 Fig 5.47 SF 1.81 5161(C), K223 F92. Trench. Period 3b or 3c. A fragment of sheet copper alloy, probably a lock-plate. Only part of two original contiguous sides survive. Each is marked by a marginal groove. Some of the other edges have been broken, others cut. Of the cut edges, some represent functional holes in the ?lock-plate. An internal iron L-shaped

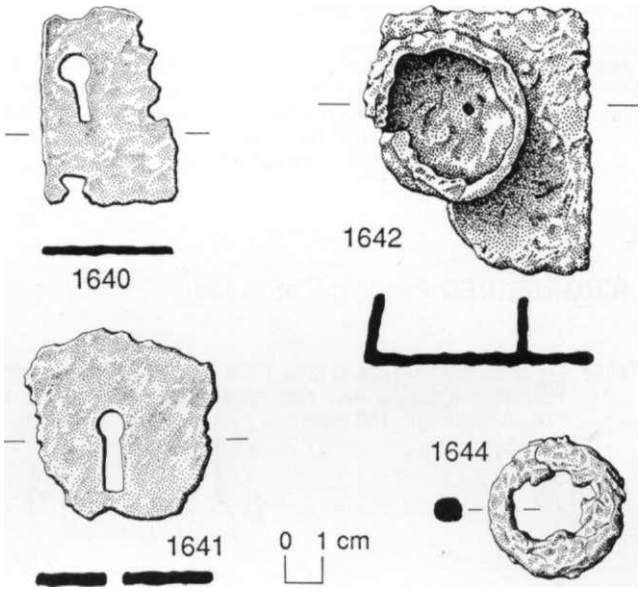


Fig 5.46 Iron lock-plates and padlock case fragment. 1:2.

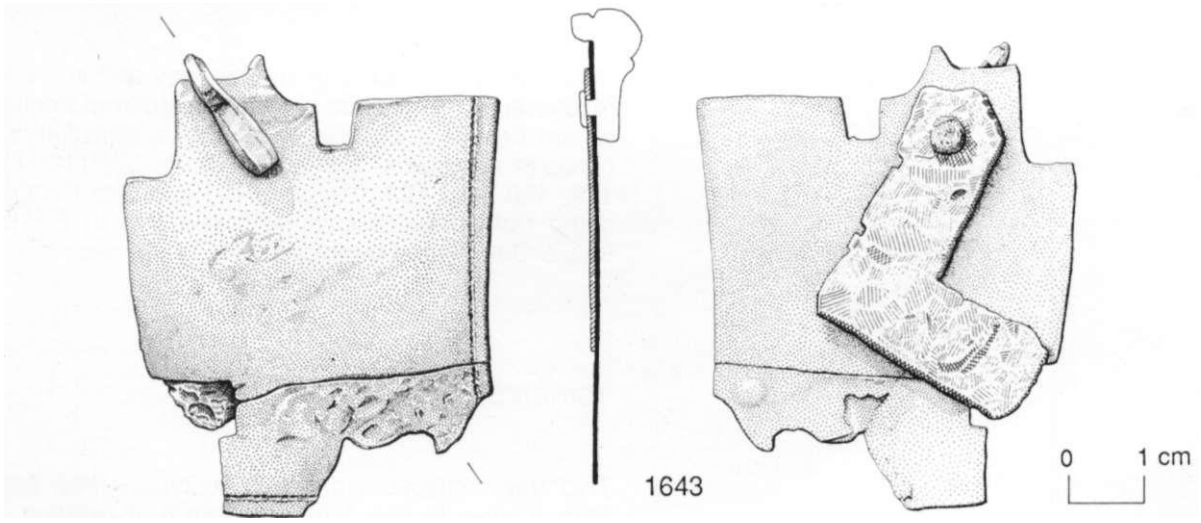


Fig 5.47 Copper-alloy ?lock-plate. 1:1.

fitting, probably a catch, was moved by means of an external copper-alloy fitting. The two were held together by a riveted projection from the underside of one end of the copper-alloy fitting which passes through the plate and one terminal of the iron catch. Movement of the catch was defined by a cut-out in the plate into which is slotted a small projection from the other end of the copper-alloy fitting. Maximum dimensions of the plate 62 by 50 mm.

Padlock case (Fig 5.46; **1644)**

1644 Fig 5.46 SF 1.81 3031(C), D211 F91. Pit. Period 6. The keyhole plate from a circular iron padlock case. Diameter 36 mm.

Lock-bolts (Fig 5.48; **1645-50)**

All are of copper alloy. Of the five catalogued on microfiche, four are unstratified fragments, the other, **1646,** derives from a Period 3 posthole in Room 2 of Building 95.

1645 Fig 5.48 SF 1.81 4874(C), M270 L89. Make-up/dump? Period 3. A complete large lock-bolt with triangular, ovoid and lozenge-shaped cut-outs. Length 86 mm.

Lift keys (Fig 5.49; **1651-2)**

1652, catalogued on microfiche, was found in Period 4a occupation in Room 3 of Building 112.

1651 Fig 5.49 SF 5129(X), G4200. Unstratified. Periods 1 to 6. An iron L-shaped lift key with a large suspension loop. The bit has three teeth. Length 99 mm.

Slide keys (Fig 5.48; **1653-60)**

Slide keys of both iron and copper alloy were found. Catalogued on microfiche are iron keys or key fragments from Periods 1 and 2 road make-up on Site G, a Period 4 floor in Room 10 of Building 123, Period 5 floor make-up/dump from Building 116, and Period 5b destruction debris from Building 120, and a fragment of a copper-alloy key from a post-Roman robber trench on Site G.

1653 Fig 5.48 SF 1.81 1680, B1718 L415. Boudican destruction debris: destruction of Building 77. Early Period 3. A copper-alloy slide key with moulded handle similar to *CAR* 2, fig 140, 4154. Length 64 mm.

1654 Fig 5.48 SF 1.81 5117(C), K119 L117. Base of rampart? Period 3b. A copper-alloy slide-key with four teeth of equal length set on an L-shaped bit. The handle, which rises from the base of the teeth, has a moulded handle and suspension loop. On all four faces the upper and lower edges of the moulded part are defined by a pair of grooves, and the panel between marked by a slight incised cross. Length 68 mm, width of bit 18 mm.

1655 Fig 5.48 SF 1.81 4857(C), B2568. Unstratified. Handed in by site workman, almost certainly from Boudican destruction debris. A large brass slide-key with five teeth set three by two (alloy identified by Justine Bayley of the AM Lab). The handle rises from the base of the teeth and is of almost

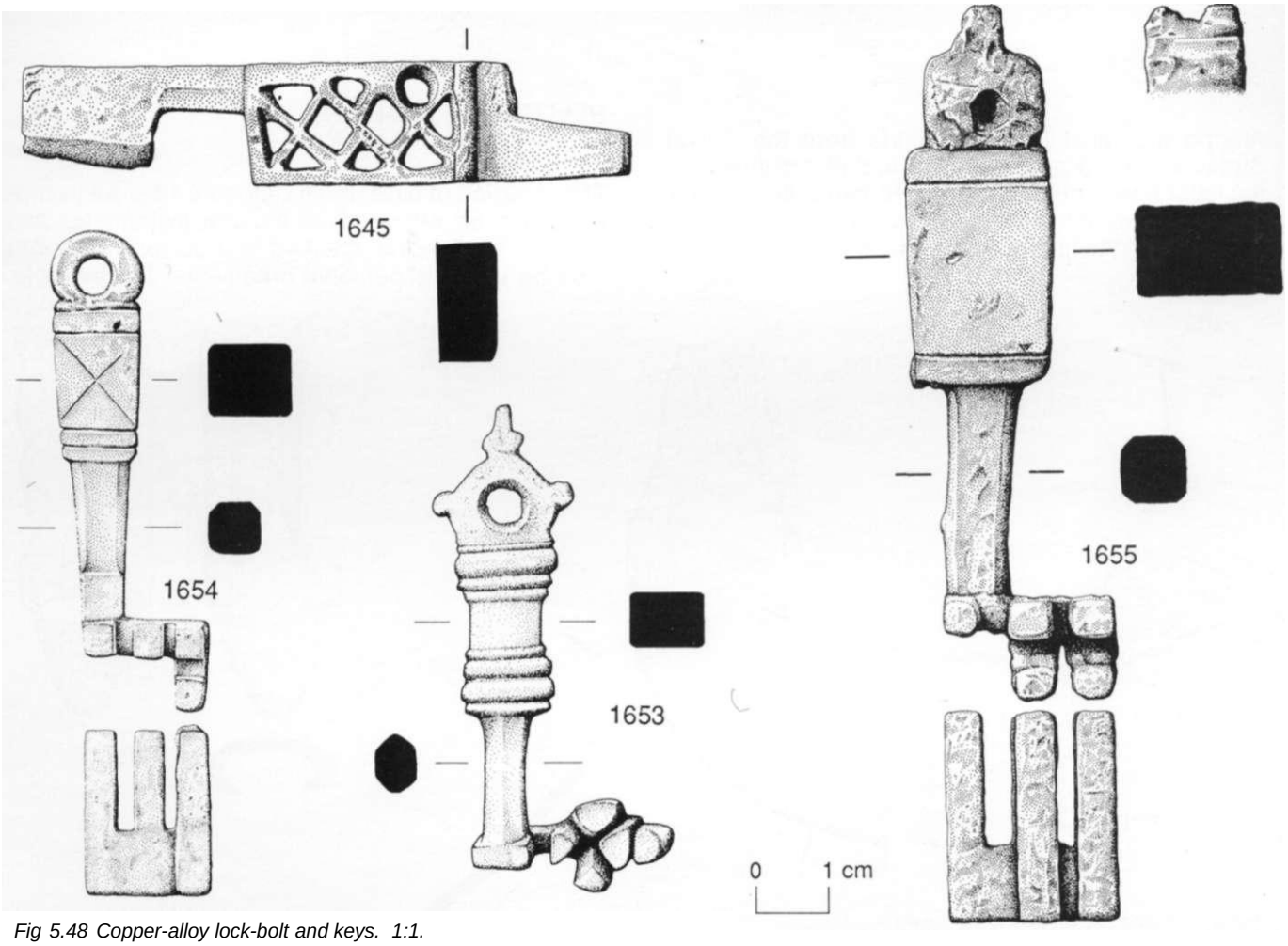


Fig 5.48 Copper-alloy lock-bolt and keys. 1:1.

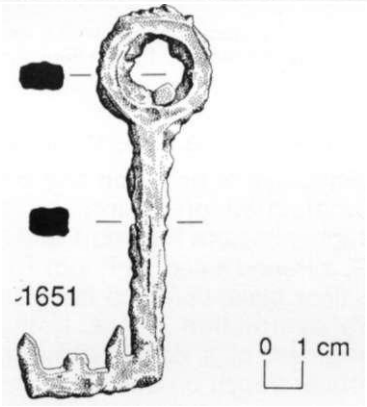


Fig 5.49 Iron lift key. 1:2.

identical form to *CAR* 2, fig 140,4153, but with the double-headed moulding above the suspension loop set from front to back, not sideways. Length 96 mm, width of bit 24 mm.

CATEGORY 12:
Objects associated with agriculture, horticulture and animal husbandry

Among the most important finds from the Culver Street site are a spade sheath and ploughshare tip, the latter recovered from within Roman cultivated soil. Together they substantiate the evidence for Roman horticulture (or agriculture) within the town walls (pp 59-61).

SPADE SHEATH (Fig 5.50; **1661**)

1661 Fig 5.50 SF 1.81 1426(C), B639 L123. Occupation: Building 113, Room 1. Late Period 4. Two fragments from an iron spade sheath with a round mouth, almost certainly of Manning's Type 1a (1985, fig 10), on which the division between the arms and the edge of the sheath is not distinct. The inner edge is grooved to hold a wooden blade. The end of one arm survives. It has a pair of slight lugs, one of which is markedly rounded in profile while the other is almost right-angled. The latter is illustrated. Probable maximum width 202 mm. Charcoal fragments from the sheath have been identified by Jacqui Watson (AM Lab) as *Fraxinus* sp (ash).

PLOUGHSHARE TIP (Fig 5.50; **1662**)

1662 Fig 5.50 SF 1.81 5257, M559 L171. Agricultural soil. Periods 3 and 4. A damaged iron ploughshare tip *(ibid,* 43-4, pl 17.F1-F2). A more or less rectangular section of the main body of the object has broken away (left-hand view in the illustration). The socket to hold the wooden share was simply formed by folding over the sides to form curved flanges (right-hand view). The pointed terminal is thick and slightly convex in section. Length 112 mm, width 36 mm. No wood remains in the socket, though there are small fragments of mineralised organic material adhering to the inner surface. The share is short, but an Iron Age example only 70 mm long came from Gussage All Saints, Dorset (Rees 1981, 12), and a small share tip was found at Hunsbury, Northants (Manning 1964a, fig 5G).

BELLS (Fig 5.51; **1663-7**)

The inclusion of bells within Category 12 is subjective. Bells can be regarded as musical instruments and correctly so if found attached to a *sistrum.* They can also be used as personal ornaments. For example,

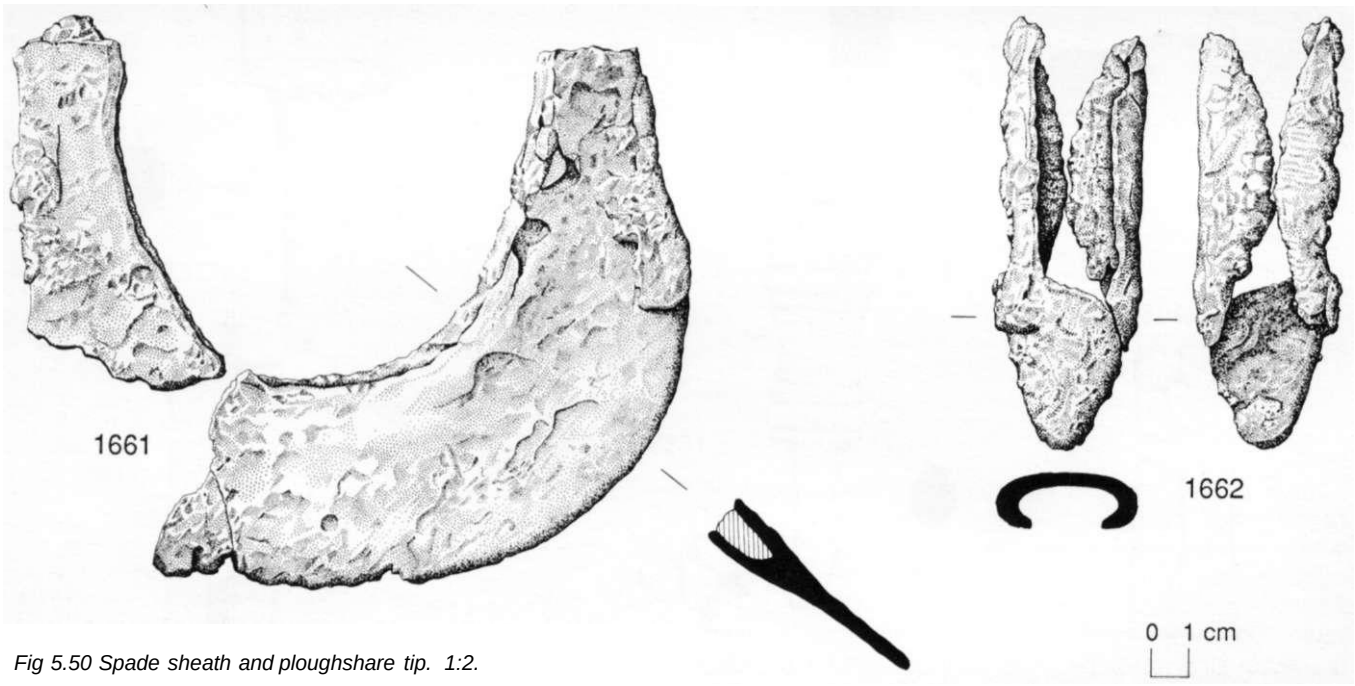


Fig 5.50 Spade sheath and ploughshare tip. 1:2.

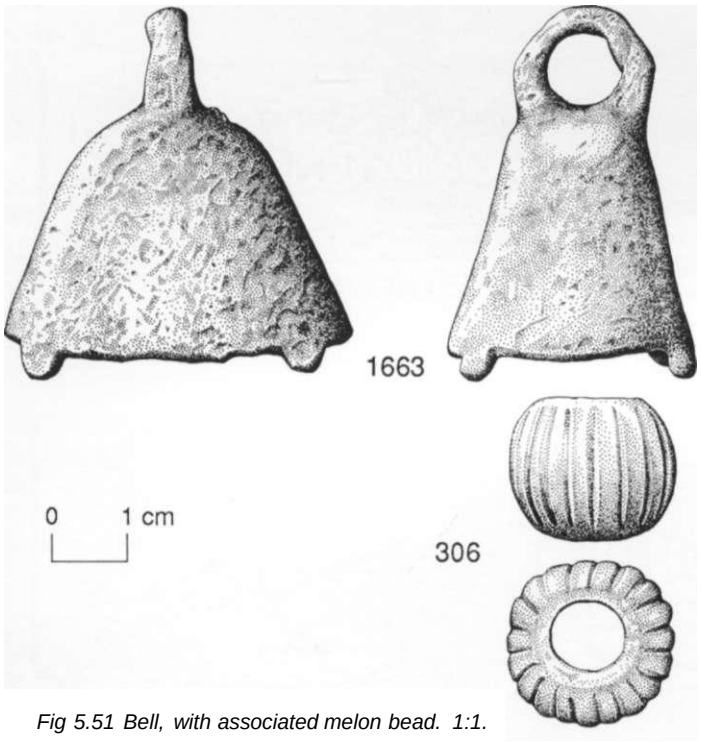


Fig 5.51 Bell, with associated melon bead. 1:1.

bells have been found threaded on to armlets *(CAR* 2, fig 41,1808 on armlet 1610), and used as pendants *(CAR* **2**, fig 54,1811). However, unless they were found associated with other objects which indicated that they belonged within a different category, solitary bells have been interpreted as being from the collars of animals, particularly cows, sheep and goats *(CAR* **2**, 127). The illustrated bell catalogued here, though found associated with a melon bead, is from a context within which the bead is almost certainly residual, and is moreover of a size more compatible with use as an animal bell than as personal ornament.

1663 Fig 5.51 SF 1.81 3537(C), G1176 L1137. Floor make-up/dump: Building 120. Period 5a. A copper-alloy bell with an iron clapper (in two pieces). The bell is subrectangular in section, with a knobbed lug at each rounded corner. The large suspension loop is set across the narrower dimension. Maximum dimensions 45 by 30 mm, height (including lugs) 51 mm. A large decayed turquoise frit melon bead (306) was found in the soil filling the body of the bell. This association is almost certainly fortuitous.

CATEGORY 13:
Military equipment

Almost all the military equipment is illustrated and catalogued in the printed text. The contexts from which the pieces derive mainly date to the 1st century, though are by no means all Period 1, illustrating the high level of residual finds within the town. One of the girdle-plate tie hooks, **1684**, is from a medieval or later pit. The two spear heads, **1688** and **1689**, are both from Period 4 contexts. This may indicate that they should be considered as mid or late Roman military equipment. Three pieces (**1695-7**) which can more certainly be identified as from later Roman equipment all derive from site clearance levels. Alloy identifications are by Justine Bayley of the AM Lab.

ARMOUR

Copper-alloy belt and apron fittings (Fig 5.52; **1668-80**)

1668 Fig 5.52 SF 1.81 1732(C), B1888 L463. Make-up: Building 78, Room 1. Period 2. A small rectangular mount. One corner is broken off. The mount is decorated with an inlaid design of very thin wavy lines and indented (?holly) leaves in niello. Length 28 mm, width 12 mm.

1669 Fig 5.52 SF 1.81 2615/2616(C), E1634 L267. Make-up. Period 1. A belt-plate and buckle. A corner of the plate is missing, as is the buckle tongue. The iron hinge pin which held the plate and buckle together is broken. Both plate and buckle are decorated with inlaid niello (copper sulphide). The buckle has the standard pelta-shaped cut-out, marked along the edge by a row of triangles with incurving sides; a dot of niello is set in each semicircle formed by the triangles. The plate has a central scroll design, with groups of three (in one case four) dots inside the roundels formed by the scroll, and dots along the sides marking its individual elements. The central area of the plate is defined by two straight lines. Rows of linked lozenges are set either side of these lines to run at divergent angles towards the edge of the plate and towards the scroll. Total length 102 mm, width of plate 27 mm, maximum width of buckle 34 mm.

1670 Fig 5.52 SF 1.81 2502(C), E1261 L184. Dump/demolition of clay walls: demolition of Building 84. Early Period 2. A rectangular belt-plate similar to *CAR* ***2,*** fig 151,4210-11. The plate is decorated with incised concentric circles set around a central iron rivet. There were four iron rivets set in each corner, three of which remain. The side hinges of the plate have been made by folding the edges upwards, not downwards as is more usual, and these folds have then been clinched along their length. One of the iron hinge pins remains. Length 49 mm, width 36 mm.

1671 Fig 5.52 SF 1.81 2376(C), E1030 L103. Dump/make-up. Periods 1/2. A rosette stud with indented edge. No decoration can be distinguished on the face. Diameter 21 mm. The shaft is bent, length 18 mm.

1674 Fig 5.52 SF 1.81 2521(C), B2382 L682. Street metalling. Period 1. A corroded acorn-shaped mount, similar in size and shape to Waugh & Goodburn 1972, fig 32, 37. Length 33 mm.

1675 Fig 5.52 SF 1.81 2599(C), E1573 L256. Dump on military road: demolition of Building 83. Early Period 2. A baldric toggle with palmette decoration and mouldings near the barred end. Length 55 mm, maximum width 12 mm.

1676 Fig 5.52 SF 1.81 5114(C), W1. Unstratified. A well-preserved rectangular tinned brass belt-plate inlaid with niello in a pattern of two panels of wavy lines. The pattern is shakily executed, particularly when compared to the buckle and belt-plate 1669. Four flat-headed rivets, two on each short side, provided the method of attaching the plate to a leather belt. Dimensions 42 by 28 mm.

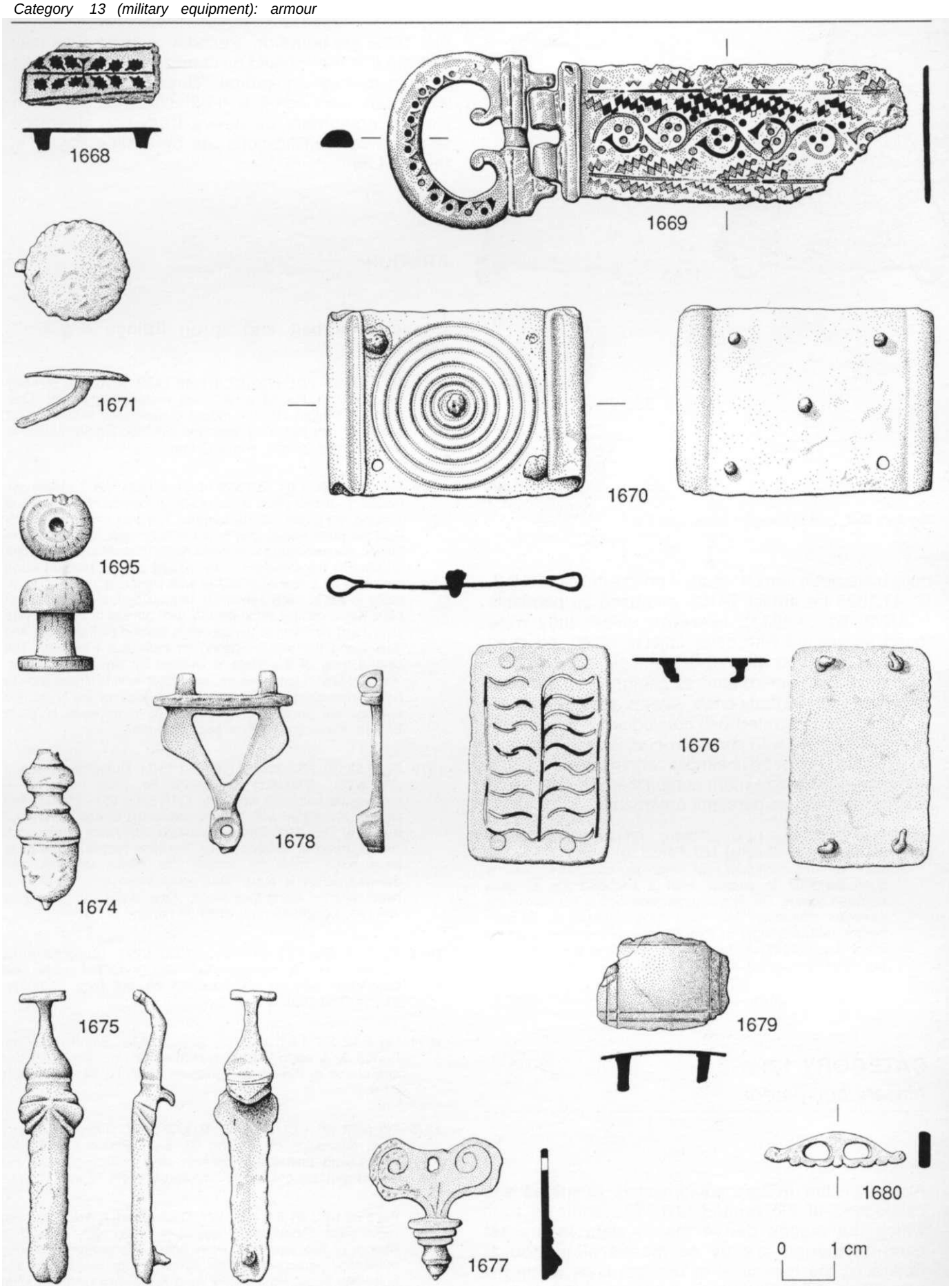


Fig 5.52 Military belt and apron fittings. 1:1.

1677 Fig 5.52 SF 1.81 4949(C), M384 L243. Clay floor: Building 91? Period (1 or) 2. A tinned brass pendant of greatly exaggerated heart shape, with knobbed and moulded terminal. An incised scroll embellishes each side of the 'heart'. Length 28 mm, width 26 mm.

1678 Fig 5.52 SF 1.81 5152(C), K200. Unstratified. A hinged baldric frog of tinned leaded bronze (see Fig 6.32,357, which is made from the same alloy). A disc would have been riveted to the pierced point of the terminal. The object is plated with white metal. Length 35 mm, width 27 mm.

1679 Fig 5.52 SF 1.81 5132(C), K200. Unstratified. A worn brass belt-plate with two projections on the underside for attachment. The upper face has a pair of marginal grooves on each side. Length 25 mm, width 19 mm.

1680 Fig 5.52 SF 1.81 4109(C), G2741 L2710. Dump. Period 2 or 3. A leaded bronze mount of exaggerated pelta form with palmate terminals which all link together. The mount is now bent, but was probably originally flat. Length 7 mm, width 27 mm. The absence of rivets suggests that it was sewn on to a leather belt. A similar though larger mount was found at Sheepen, and published as an ornament for a scabbard-fitting (Hawkes & Hull 1947, pl 103,32).

Copper-alloy fittings from laminated body armour (Fig 5.53; **1681-4)**

1681 Fig 5.53 SF 1.81 2542(C), B2405 F820. Temporary hearth? Period 1? A hinged cuirass or baldric strap fitting as *CAR 2,* fig 145,4186, with all four dome-headed rivets surviving. Length 41 mm, width 14 mm.

1683 Fig 5.53 SF 1.81 2377(C), E1066 L106(?). Dump. Early Period 3. A girdle-plate tie-hook with both dome-headed rivets surviving. Length 45 mm.

1684 Fig 5.53 SF 1.81. 281(C), A141 F58. Pit. Medieval or post-medieval. A girdle-plate tie-hook with holes for two rivets marked by incised concentric circles. Length 40 mm.

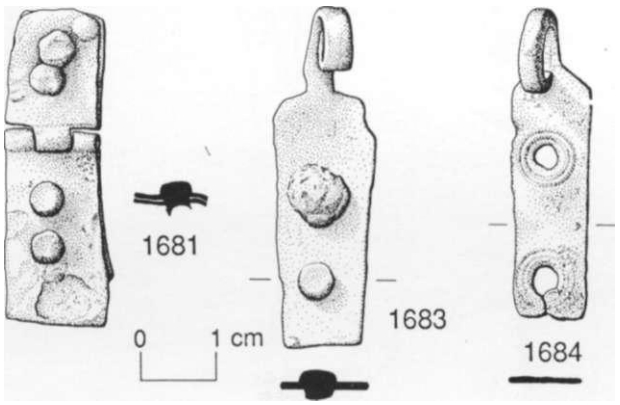


Fig 5.53 Laminated armour fittings. 1:1.

Copper-alloy fitting from mail armour (Fig 5.54; **1687)**

1687 Fig 5.54 SF 1.81 2533(C), E1336 L196. Dump/make-up: Building 84, Room 2. Period 1. A double-hook fastener for *lorica hamata,* made of a low tin bronze alloy. In some areas the surface is coated with white metal, probably tin. Each hooked plate has a serpentine terminal. The two plates are held together by, and pivoted on, a rivet at the top of the upper sections. Also held by the rivet is a fragment of sheet copper alloy, possibly a washer, and the distance by which the rivet projects beyond the bottom plate indicates the thickness of the mail. Both plates have a line of inlaid decoration marking the end of the thicker section, and another across the wide section before the rivet. The inlay is only patchy and has not been identified (but it is not niello). In the centre of the wide section of each plate, and completely piercing the metal, are two circular ?rivets of a different copper-alloy, now completely corroded. There are slight concentric circular grooves around each ?rivet. Length 65 mm.

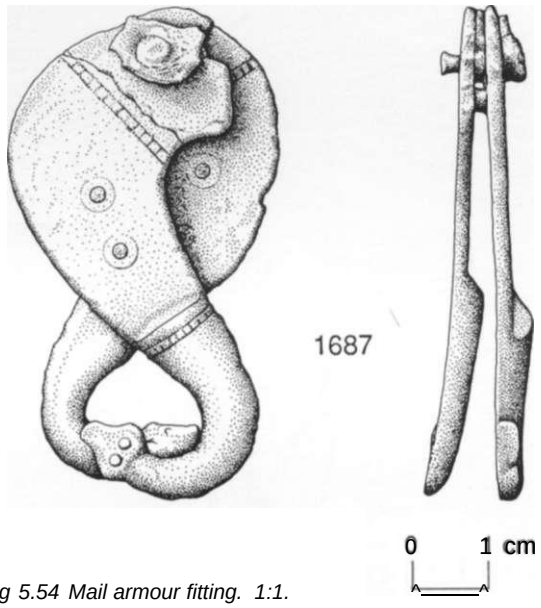


Fig 5.54 Mail armour fitting. 1:1.

ARMS

Spear heads (Fig 5.55; **1688-9)**

1688 Fig 5.55 SF 1.81 1132(C), B668 L133. Occupation lenses: Building 113, Room 1. Period 4. An iron spear or lance head, with a flanged socket made by turning over the edges of the lower part of the head. Length 176 mm, maximum width 43 mm.

1689 Fig 5.55 SF 1.81 625(C), C151 L13. Demolition: destruction of Building 114, Room 1. Period 4. An iron leaf-shaped spear head, the tip is missing as is most of the shaft. Length 114 mm, maximum width 39 mm.

Javelin (1690)

Four fragments of an iron shaft, possibly from a javelin, were found in a ?Period 3 pit on Site M. Catalogued on microfiche.

TOOLS

Pickaxe (Fig 5.56; **1691)**

1691 Fig 5.56 SF 1.81 1291(C), C323 L39 + L43. Dump levels. Early Period 3. A copper-alloy sheath fitting from a legionary pickaxe. A riveted bar remains across the width of the sheath, possibly a repair, as there is an empty rivet hole on each side close to the ends of the bar. Length 64 mm.

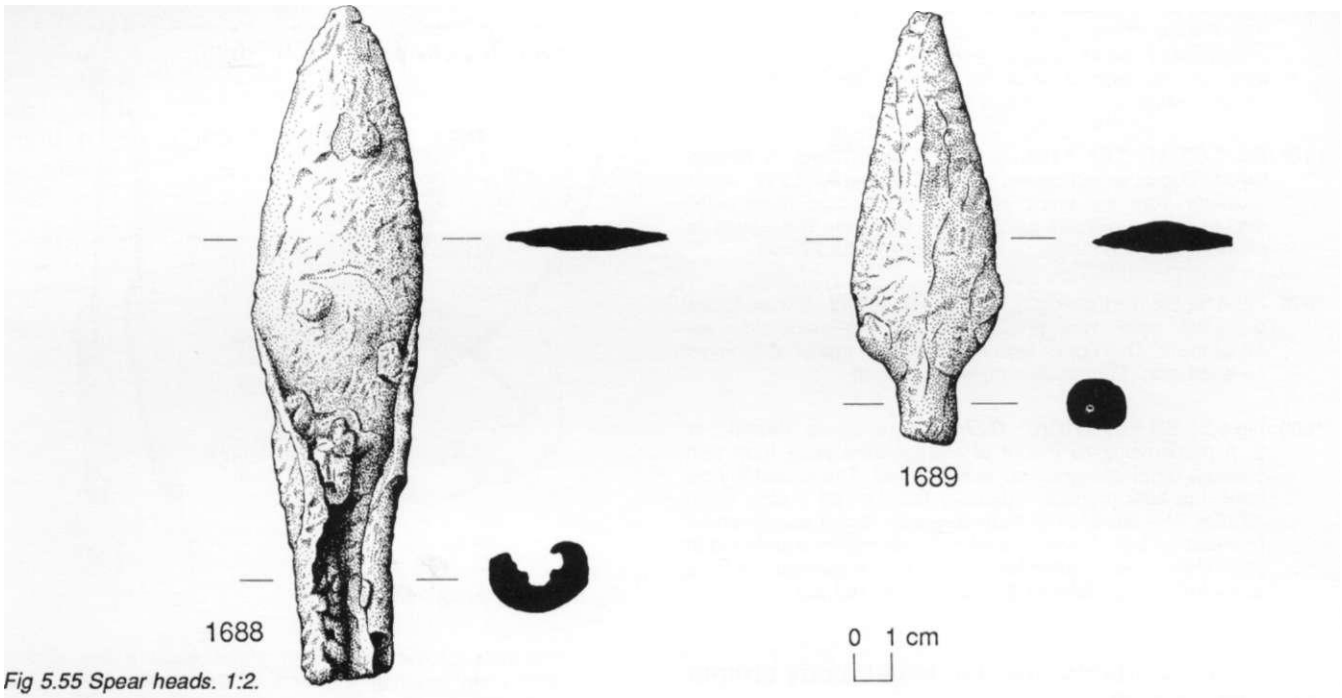


Fig 5.55 Spear heads. 1:2.

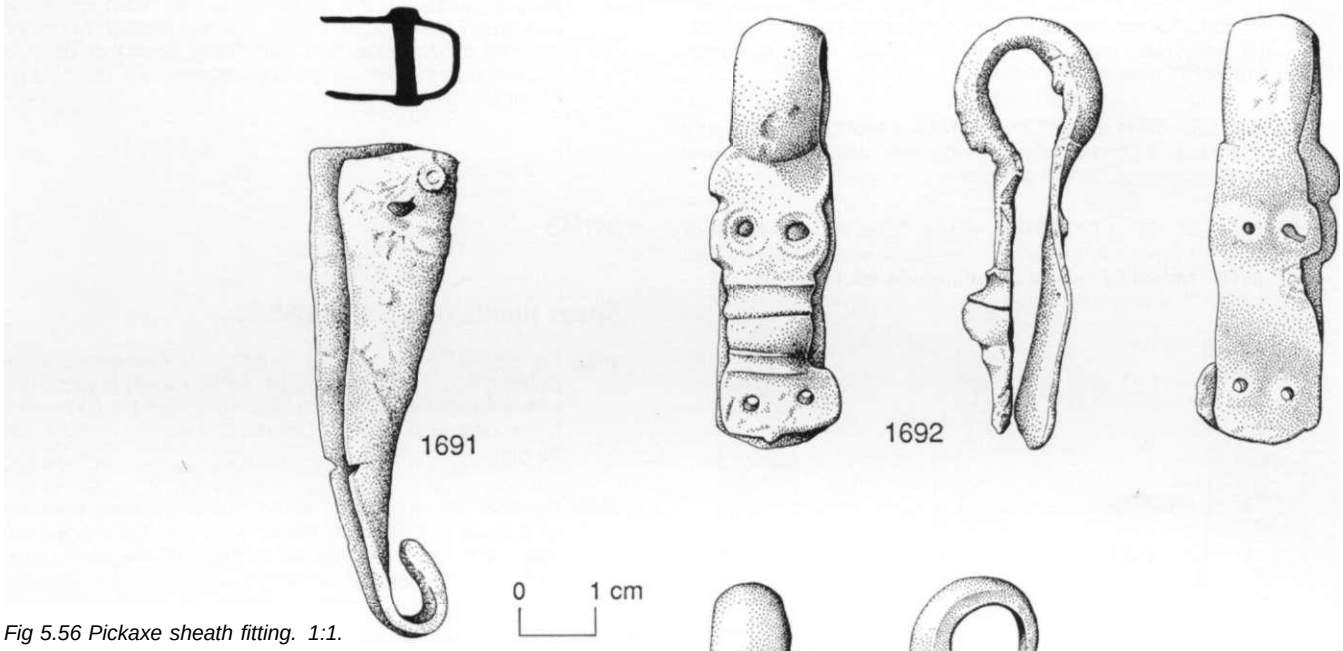


Fig 5.56 Pickaxe sheath fitting. 1:1.

CAVALRY HARNESS FITTINGS

Strap-loops (Fig 5.57; 1692-4)

1692 Fig 5.57 SF 1.81 1568(C), B1442. Unstratified. ?Period 3. A large copper-alloy strap-loop with holes for four rivets (two pairs), all now missing. Similar to one from Gloucester (Webster 1960, fig 5,101). Length 57 mm.

1693 Fig 5.57 SF 1.81 4924(C), B2570 F882. Posthole? Periods 2/3. A copper-alloy strap-loop with many convex mouldings at the junction of the upper plate and the loop. The lower plate is missing. A single projection from the underside of the tip of the upper plate was the only means of fixing a strap between the two plates. Length 65 mm.

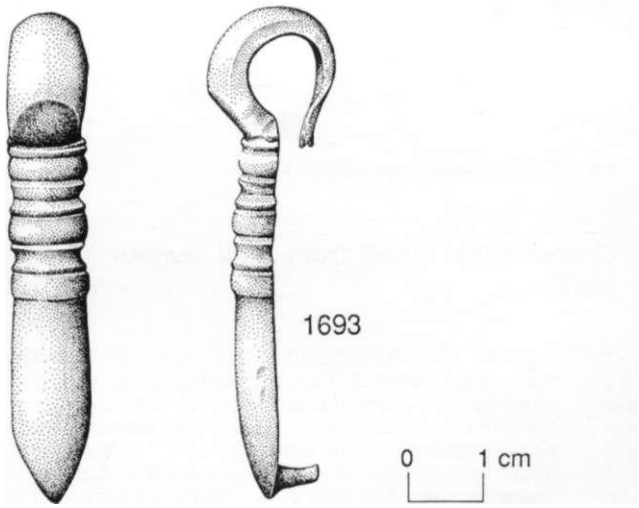


Fig 5.57 Strap-loops. 1:1.

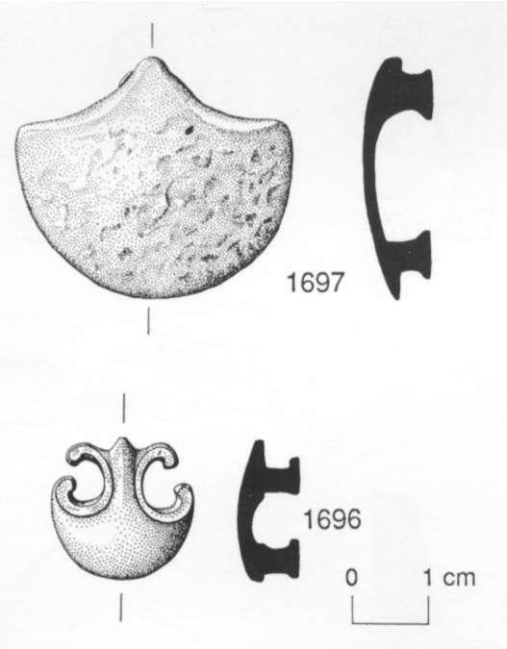


Fig 5.58 Peltate fittings. 1:1.

EQUIPMENT PROBABLY BELONGING TO THE 2ND OR 3RD CENTURIES (Figs 5.52 & 5.58; **1695-7)**

1695 Fig 5.52 SF 1.81 2799, G1 I1. Topsoil/clearance. Period 6. A bone stud with large discoid foot, as Oldenstein 1976, Taf 46,480. Length 18 mm.

1696 Fig 5.58 SF 1.81 4255(C), H16 L3. Topsoil/clearance. Period 6. A copper-alloy peltate fitting with two stout projections with riveted ends on the underside, as *ibid,* Taf 53. Length 19 mm.

1697 Fig 5.58 SF 1.81 4558, K2 L1. Clearance. Period 5. A copper-alloy fitting of greatly debased peltate form with two stout riveted projections on the underside as those on 1696. Length 32 mm, width 37 mm.

PHALLIC AMULET USUALLY ASSOCIATED WITH THE ROMAN ARMY (Fig 5.59; **1698)**

This object may be civilian in origin rather than military, but such objects are often counted among military finds *(CAR* **2,** 139).

1698 Fig 5.59 SF 1.81 5009(C), G4091 F3987. Road surface. Period 3. A copper-alloy phallus with a much-worn suspension loop. Length 30 mm, height 16 mm.

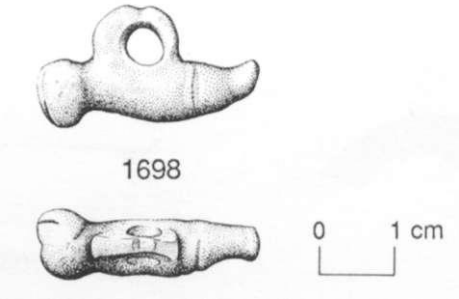


Fig 5.59 Phallic amulet. 1:1.

CATEGORY 14:

Objects associated with religious beliefs and practices

FIGURINES

Human figurines (Figs 5.60**-1; 1699-1701)**

1699 Fig 5.60 SF 1.81 1438, B756/L146 and B815/L165. L146 = occupation lenses: Building 112, Room 2. Period 4b. L165 = dump: Building 112, Room 2. Period 4a. Fragments from a pipeclay figurine of Minerva. The head, base, and most of the lower part except for one side and part of the back are missing. The goddess seems to be seated in a high-backed basket-work chair with curving arms, her left hand supporting her shield which rests on the floor by the side of the chair. It is the shield and the *aegis* on her breast which identify her as Minerva. The folds of her belted tunic are clearly moulded

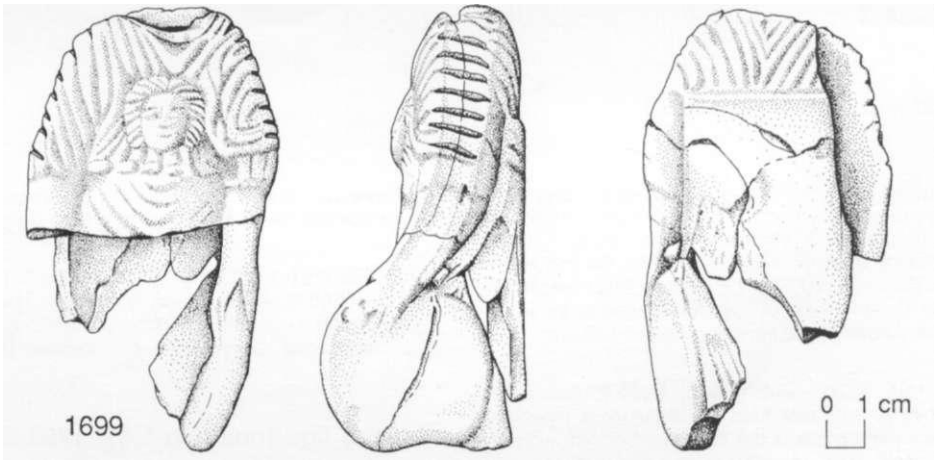


Fig 5.60 Minerva figurine. 1:2.

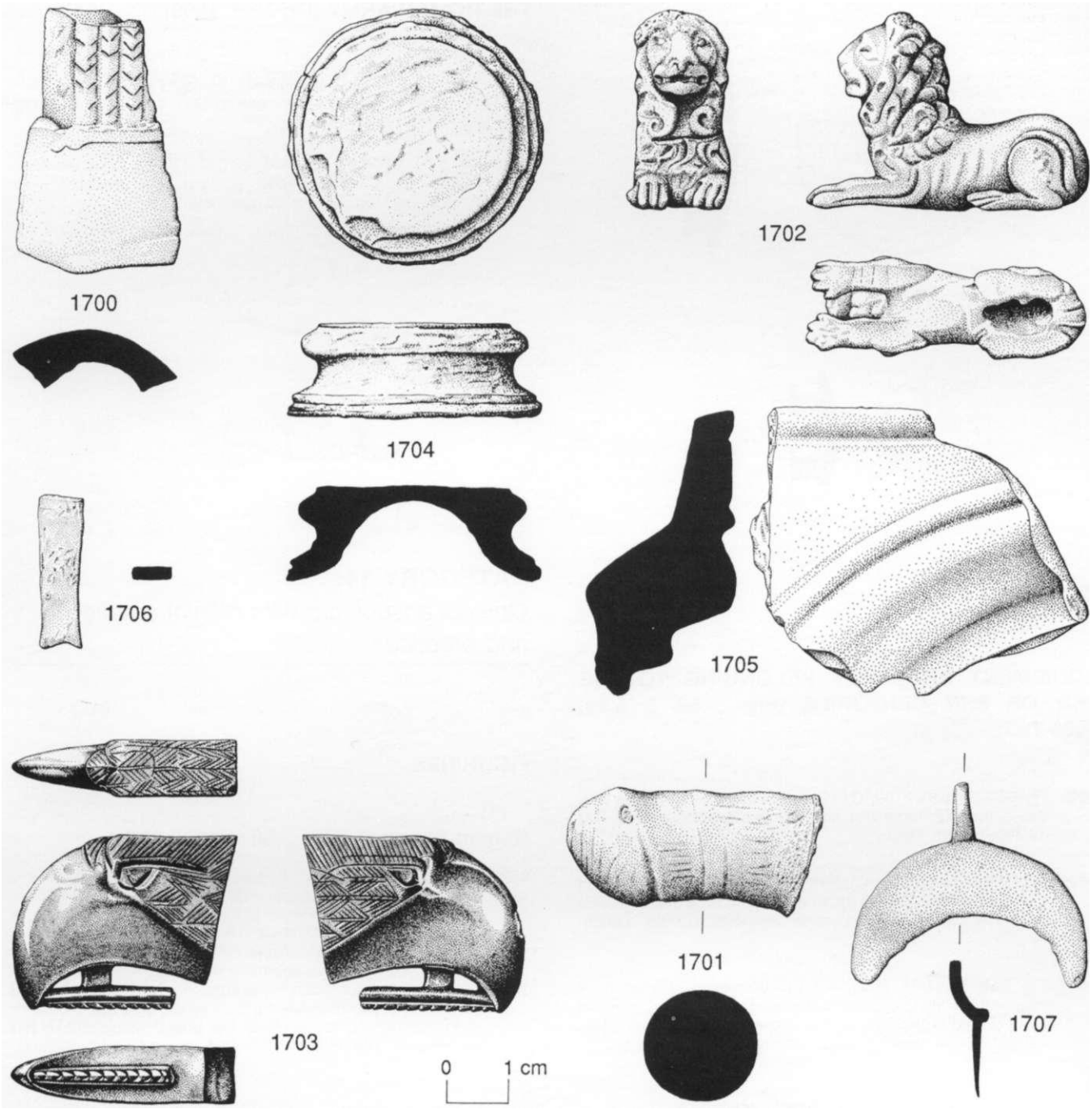


Fig 5.61 Figurines and model (?votive) objects. 1:1.

except on the sides (the joins of the mould) where they are continued as deep slashes into the clay. A seated Minerva with *aegis* is illustrated in Rouvier-Jeanlin 1972, 471, a fragment of another from Cologne, signed by the modeller Lucius, in van Boekel 1987, fig 72, and another fragment from London in Green 1976, pl 7,g. All appear to be from different moulds. Approximate surviving height 110 mm.

1700 Fig 5.61 SF 1.81 3320, G649 F648. Robber trench/pit (F661). Period 6. A fragment from the base of a pipeclay figurine. Above a plain plinth is the lower part of one side of a basket-work chair. Many goddesses (eg Minerva and the Mother Goddess) were depicted sitting in basket-work chairs, and it is impossible to attribute this fragment to a specific deity. Maximum surviving height 42 mm.

1701 Fig 5.61 SF 1.81 4040, G2513 L2511. Occupation/topsoil. Period 3. A lead(-alloy?) phallus. The end of the object is rough, suggesting that the phallus may have been fixed on to a figurine. Length 40 mm, maximum diameter 19 mm.

Animal figurines (Fig 5.61; **1702-3**)

1702 Fig 5.61 SF 1.81 992(C), B469 L60. Dump levels. Period 4.

A copper-alloy figurine of a lion. The animal is lying in a formal pose with head raised and tail curled over the left rear quarter. The mane is corroded but was obviously luxuriant. Length 45 mm, height 31 mm. The underside is hollow and possibly provided a means of attachment (eg soldering), perhaps to a piece of furniture or a large metal vessel. This lion is remarkably similar in size and pose to that from Hanbury, Worcestershire (Symons 1985) and the two almost certainly share a common function, possibly even deriving from the same workshop, though they are not from the same mould. To give but two examples of differences, the ribs on the Hanbury lion *curve* in the opposite direction to those on the Colchester animal, and the top of each of its forelegs is delineated by a fringe of short incised grooves.

1703 Fig 5.61 SF 1.81 3750, D1380 L328. Make-up: Building 123, Passage 4. Period 4. A jet eagle head, broken from a figurine or some other object. In section the fragment is more or less rectangular, slightly thicker at the top of the head than the bottom. Surviving length of the head 36 mm, height 30 mm. The plumage is indicated by fine scratched lines, while the eyes have been carved out and well finished. The beak is large and tapers to a fine hook. From the hook a moulded and incised bar runs back towards the body, attached to, and supported by a small thick projection. This projection is quite poorly finished, which adds credence to its identification as a support for the bar rather than an integral part of the design. The exact identification of the bar is uncertain. The eagle is the bird of Jupiter, and as such is frequently depicted holding the palm branch of victory in its beak (eg Loeschcke 1919, Taf 4,330), or clutching crossed thunder-bolts in its talons (eg Toynbee 1973, 241). A copper-alloy eagle's head from Leicester shows the bird holding what has been interpreted as a 'food pellet' in its beak (Green 1976, 166, pl 8,e). In none of these representations of the bird can a clear parallel for the Culver Street eagle's bar be seen.

The thin rectangular form of the head at first seems to suggest that it does not derive from a free-standing figurine but formed a projecting part of some other object, intended to be viewed from either side but not from the front. However, it is too large to be a pin head, and its form makes it too thin and delicate to suggest identification as part of a knife handle (the jet knife handles from Germany are much more rounded, solid and capable of sustaining the pressure of use (Hagen 1937, Taf 37)).

Many jet animals are fully three-dimensional and naturalistic, for example the small bears from Colchester (May 1930, 277), York (RCHM York, pl 70), Malton and Bootham, Yorkshire (Corder 1948, 173-5), the jet hare from Colchester *(CAR2,* fig 175), and a tiger or lioness from Chew Park villa, Somerset (Toynbee 1964, 365). Stylised animals in jet and shale are also known, such as the shale fox's head from the Roman fort at South Shields (Allason-Jones & Miket, 1984, 7.170) and stylised lions of thin rectangular form from Silchester (Lawson 1976, fig 14,104), and Cologne (Hagen 1937, Taf 40), while from Chelmsford a lion clasping a human head in its jaws is of semi-naturalistic form (Drury 1973, pl 54,b-c). A jet bird from a brooch or pendant has been recorded from York (*Journ Brit Archaeol Assoc,* 1851, 156). The species of bird is difficult to identify from the published illustration. It has a hooked beak, and the plumage seems to be represented in a similar way to that of the Culver Street eagle, but its stance and the pellet or apple held in the beak are more indicative of a parrot or finch than an eagle. The object is unfortunately now lost (RCHM York, 142).

MODEL (?VOTIVE) OBJECTS (Fig 5.61; **1704-10)**

1704 Fig 5.61 SF 1.81 1709, B1843 L419. Boudican destruction debris: destruction of Building 77. Early Period 3. A copper-alloy round moulded pedestal base from a figurine. The base is hollow on the underside. Diameter 42 mm, height 15 mm.

1705 Fig 5.61 SF 1.81 1746, B1308 L310. Clay dump: Building 95, Room 4. Period 3. A fragment from a pipeclay *aedicula* with part of the curve of the niche. Surviving height 48 mm.

1706 Fig 5.61 SF 1.81 3447, D729 L89. Dump (clay): Building 123, Passage 2. Period 4. A rectangular strip of lead(-alloy?), possibly an offcut, though an inscribed piece of similar size was found on the Victoria Road site, Winchester (N Crummy forthcoming), where it was considered to be associated with this category. Length 26 mm, width 8 mm.

1707 Fig 5.61 SF 1.81 5385(C), W72 F66. Pit. Period 4. A copper-alloy lunula pendant with the remains of a suspension loop. Length 38 mm, width 40 mm. A terracotta bust of a girl wearing a similar pendant is illustrated by van Boekel (1987, fig 9). The bust is from Bonn, West Germany.

CATEGORY 15:

Objects and waste material associated with metal working

TONGS (Fig 5.62; **1711)**

1711 Fig 5.62 SF 5233(X), K200. Unstratified. The upper part of a pair of large smith's tongs. The jaws are of bowed form with extended gripping faces, a common type suitable for a range of tasks (Manning 1985, **7).** Only short lengths of the handles survive, though there may be two handle fragments among the other pieces that make up this small find. Surviving length 130 mm, maximum width at the jaws 49 mm. Other finds from this context include pieces of 1st-century military equipment, so that an early date for these tongs should be considered.

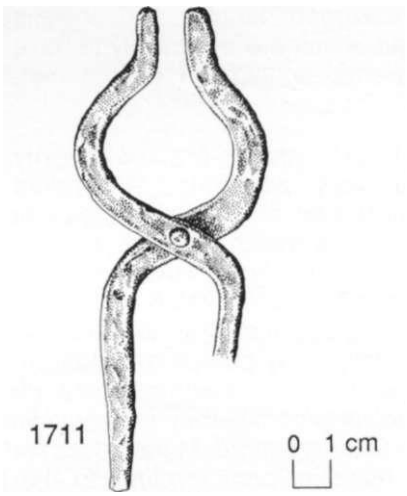


Fig 5.62 Tongs. 1:2.

CRUCIBLES AND OTHER METALLURGICAL DEBRIS

Pieces of metallurgical debris were recovered from Phases 1 and 2 of the Culver Street excavation. Those clearly related to structural evidence for metal working, or concentrated in a context or group of contexts, together with any unidentified fragments, several soil samples, and all the crucible sherds, were referred to the Ancient Monuments Laboratory for analysis. A report on these pieces by Justine Bayley (Phase 1) and Paul Budd (Phase 2) follows here. The material which proved of low significance will be found listed on microfiche (pp 542-6). The material not referred for specialist analysis was identified by Nina Crummy, and the records kept in the site archive.

Metal-working evidence from Culver Street

by Justine Bayley and Paul Budd

A quantity of fired clay and metallurgical waste, as well as a number of metal melting crucible fragments, recovered during Phases 1 and 2 of the Culver Street excavation, was examined and a selection of the material was analysed qualitatively by energy dispersive X-ray fluorescence (XRF) in order to determine, where possible, what metals or alloys were being worked. The majority of the evidence was for non-ferrous metal working with crucibles, metal-rich fuel ash slags and spillages of metal all present in some quantity. There were only small numbers of finds indicative of iron working, the usual background level common on all occupation sites of this period.

Explanation of terms

Crucibles are ceramic vessels in which metals are melted. Here the term is used a little more widely to include all vessels in which metallurgical processes were carried out. Casting waste is used to describe the corroded dribbles and splashes of non-ferrous metals which are most likely to have derived from the accidental spillage of molten metal during casting operations.

Fuel ash slags are commonly, although not necessarily, associated with metal working. These alkali-fluxed silicate slags can be formed where silicate-rich materials, such as clay, have come into contact with alkalis (most commonly from the ash within a fire) at elevated temperatures. The silicates are fluxed by the alkali to form a vitreous slag which is usually fairly porous and light in weight. Fuel ash slags are not in themselves diagnostic of any particular process, they merely indicate a fire burning at high temperature. Metal traces within fuel ash slags can however provide clues to the processes being carried out where they were formed, for instance those described as 'iron-rich' probably formed in a blacksmith's hearth. Similarly those with high levels of copper normally indicate the working of copper alloys.

Hearth lining and furnace lining are typologically indistinguishable from one another and are really specific forms of fuel ash slag where the silicate being fluxed is the clay lining of a hearth or furnace. The difference between the two forms is merely one of scale, with the higher and more sustained temperatures within a furnace producing deeper vitrification.

Smithing slag is an iron silicate (fayalitic) slag which is diagnostic of the working of iron in the forge or smithy. It contains a much higher proportion of iron than fuel ash slag and is therefore far denser. A further form of iron-rich waste associated with smithing is hammerscale which derives from the magnetic oxide film which forms on the surface of iron when it is heated in the forge or smithy. It can take the form of small droplets of roughly spheroidal form ('spatter') or tiny flakes ('scale').

Crucible fragments (Tables 5.1-3)

The crucible sherds can be divided into four groups. The first consist of crucibles which were used to melt copper alloys and are similar to those described from Lion Walk, Colchester *(CAR* **3,** 214-5). The remains here are fragmentary but can be seen to be of the same general form. Sizes are also similar; the diameters given in Table 5.1 are internal ones for rims, but maximum external diameters for body sherds. The fabric, as in the examples from Lion Walk, is pale grey in colour and quartz tempered. An extra outer layer of less refractory clay appears to be the norm. Most of the sherds bear visible signs of the metals they once contained, either red (copper coloured) patches in their vitreous layers, or trapped droplets of metal, now corroded. The XRF analyses of the crucible surfaces detected combinations of copper, tin, zinc and lead, showing a variety of alloys were being melted, though the majority seem to be bronzes (copper and tin). The majority of these crucibles came from Period 4 contexts in Building 112 though a few are from other areas of the site. Of the eight sherds which were from medieval contexts or were unstratified, most are very similar to the rest of the material and are most probably residual Roman. One contained a few droplets of gold trapped in the vitreous layer on the inside of the crucible, showing it had been used to melt gold; it could be residual Roman but the sherd is not large enough to be diagnostic. A later Roman sherd from Site D also contained traces of gold.

The second group (Table 5.2) of sherds is quite different in both form and fabric. They seem to come mainly from a different area of the site and from earlier contexts than the majority of the crucibles described above. The elements detected by XRF were the same but the proportions and relative frequencies were different. The fabric is somewhat variable but generally contains only a small amount of mineral temper together with considerable amounts of

Context no, description and date	Vessel description	Metal traces (visible)	(XRF)
SITE B PERIOD 4 (*c* 100/125 - *c* 275/325)			
Building 112			
B405 BL104. Room 1. Occupation			(Cu)
"	Ba +	R M	(Cu)
B448 BL62. Room 5. Occupation	B +	R M	Cu Sn
"	R + 0=50	R M	Cu (Sn Zn)
B701 BL135. Room 6. Dump	B +	R	Cu Pb Zn
B724 BL136. Room 3. Occupation	R +		(Cu Pb)
B2255 BF178. Room 3. Gully	B + 0=100	R M	
Dump			
B428 BL42	B +	M	Cu Zn Pb (Zn)
B455 BL39	B + 0=60	M	Cu Sn Pb (Zn)
B548 BL94	B	R	
B565 "	B +	R	Cu
"	Ba	M	Cu Zn Sn Pb
B744 BL60	B +	R	Cu Sn Pb (Zn)
"	B +	R	Cu Sn Pb (Zn)
"	B +	R	Cu Sn Pb (Zn)
B2502 BL53	B ++	R M	Cu Zn Sn Pb
"	B	R M	Cu Zn Pb Sn
B2504 BL60	B	R	(Cu)
Other			
B331 BF126/108. Ditch	B +	R M	Cu Zn Pb Sn
"	B +	M	Cu Zn Pb Sn
"	R		(Cu Pb Zn)
B752 BF108. Gully	B	R	Zn Cu Pb
B2501 BL44. Occupation	B	R	Cu Zn Pb
SITE B PERIOD 4b (*c* 200 - *c* 275/325)			
Building 112			
B451 BL48. Room 5. Dump	R + 0=40	R	(Cu)
B748 BF237. Room 3. Pit	B +	M	Cu Sn Pb (Zn)
SITE B 7PERIOD 4 (?*c* 100/125 - *c* 275/325)			
B293 BF122. Pit	B +	R	(Cu Pb)
"	+		(Cu Pb)
SITE B PERIOD 4/5 (*c* 100/125 - *c* 350+)			
?Building 112			
B439 BL58. Room 3. Gravel surface	B		
SITES D & E PERIOD ?4 (?*c* 150/200 - *c* 275/325)			
Building 123			
D981 DF686. Drain	B		Au (Cu)
MEDIEVAL OR LATER			
B200 BF72. Pit	R + 0=50		(Cu)
"	B + 0=80		
G1024 GF862. Robber trench	Ba		Cu Zn Sn (Pb)
G2967 GL1. Site cleaning	B		Zn (Cu Pb)
H306 HF146. ?Robber trench	Ba		Cu Zn Sn (Pb)
J2 L1. Site cleaning	B		(Cu Zn)
UNSTRATIFIED			
B362	R + 0=60	R	(Cu Zn Pb)
C27	B		Au (Cu Zn Pb)

Table 5.1 Crucible sherds. Metal melting.

Key. **Vessel descriptions:** *B=body sherd, Ba=base; R=Rim; +=extra outer layer, 0=diameter (in mm).* **Metal traces:** *R=red colour in vitreous layer; M=traces of corroded copper alloy; Ag=silver; Au=gold; Cu=copper; Pb=lead; Sn=tin; Zn=zinc. Elements within brackets gave only weak signals.*

Context no, description and period	Metal traces (XRF)
SITE E PERIOD 1(*c* 44 - *c* 49(/55))	
Building 84	
E1423 EF1227. Room 2. Hearth	(Zn)
"	Zn Cu Pb
"	(Cu Pb Zn)
E1436 EF1255. Room 2. Hearth	Zn Cu
"	Zn Cu
"	Zn Cu
"	Zn
Other	
A402 AL121. Occupation/natural	Zn
SITE E PERIOD 2 (*c* 49(/55)-60/1)	
Building 89	
E784 EF579. Room 4. Hearth	-
SITE E PERIOD 3 (60/1 - *c* 150/200)	
Ditch EF549	
E750	Zn Cu
E786	Zn Cu Pb
"	-
"	(Zn)
"	(Zn)
E791	Zn
"	Zn
"	Zn
SITE B PERIOD 4 (*c* 100/125 - *c* 275/325)	
Dump BL60	
B744	Zn Pb Cu
"	(Zn)
"	Zn Cu
"	Zn Cu
"	(Zn)
SITE B PERIOD 4b (*c* 200 - *c* 275/325)	
Building 112	
B448 BL62. Room 5. Occupation	Zn Pb Cu Sn
B647 BF217. Room 6. Pit	-
SITE G PERIOD 4(*c* 150 - *c* 200)	
Cultivated soil	
G2801 GL1822.	(Cu Zn) (Form Ba)
ROMAN	
E494. Unstratified (Roman)	Zn Cu
"	Zn Cu

Table 5.2. Sherds from ?brass-making crucibles. For key, see Table 5.1.

Context no, description and period	Vessel description	Metal traces (XRF)
C100 CL8. Dump. Site C Period 4 (c 100/125 - 275/325)	B	Zn Cu Ag
K50. Unstratified	R	Ag Cu Pb
K164 KF135. Site K Period 3b or 3c (c 150 - 400+). Linear feature	B	Cu Ag (Pb Zn)

Table 5.3. Crucibles with traces of silver. For key, see Table 5.1.

vegetable matter and is dark grey except near the outer surface where it is vitrified, vesicular and paler in colour. The outer, vitrified surface is never coloured red and droplets of metal are not visible. These crucibles appear to be handmade of a single layer of clay except near the rim where a sort of two layer structure is visible (Bayley 1984a, fig 1), but the additions are in the same fabric as the main body and may be the remains of lids added to seal the crucibles. The fabric is very porous and friable and many of the sherds show fresh breaks. Most of the pieces are small but the few larger fragments suggest a pear-shaped body with a maximum internal diameter of about 40 mm and a narrow mouth at the top which was sealed before the crucible was used. The largest sherd had a projecting knob on the side of the body which could have functioned as a handle.

These vessels are quite unlike ordinary Roman crucibles. Indeed their fabric does not appear to be very refractory and the deep vitrification noted suggests they may not have been strong enough to support the weight of molten metal they would have contained if they were to be lifted from the fire. The strongest evidence for their use however comes from the XRF data.

The outer surfaces contained almost no detectable metals while the inner surfaces gave very high readings for zinc together with traces of copper and occasionally lead. Zinc has a high vapour pressure (ie when a zinc-containing alloy is melted a lot of zinc vapour is given off) so all refractories used to melt brass (copper and zinc) tend to contain considerable amounts of zinc as it diffuses into the fabric and may even get trapped in a vitreous slag phase. The levels of zinc detected here however are far higher than is found even in crucibles used to melt brass. The most likely explanation for these high zinc levels is that the crucibles were used to make brass by the cementation process. Tylecote (1962, 53) describes the process as follows:brass was made by mixing the ore calamine (ZnC03) with copper under reducing conditions (ie charcoal). The calamine was ground, and mixed with charcoal and granulated copper. This was heated in a crucible at about 950-1000°C to reduce the zinc in the calamine to zinc vapour which was absorbed by the solid copper granules. The temperature was then raised and the copper-zinc alloy melted.' This process would be most effective if carried out in a sealed crucible as the zinc vapour would then be unable to escape into the atmosphere.

No other ancient brass-making crucibles are known in this country or even in Europe (Craddock 1978, 9) although a group of sherds of similar form and fabric to those described here has recently been found in Belgic contexts in Canterbury (Bayley 1983). However, only a few of them have the diagnostic high zinc levels.

The third group of crucibles (Table 5.3) comprises two sherds where a number of factors suggests they are from vessels of Iron Age form. The sherd from K50 is

from a hand-made vessel and is made from a rather poorly made refractory fabric, reduced fired to a dark grey over most of the sherd. The straight-edged rim suggests a triangular form and the sherd curves to a probable round bottom. The bottom part of the outside of the sherd is oxidised fired which, together with the degree of vitrification around the rim, indicates that the crucible was probably heated from the top. This corresponds to the common Iron Age practice of building the fire up around the crucible. The identification of the other sherd (KF135 K164) as being of possible Iron Age form is less certain, but it is of a similar fabric and is also handmade. Both sherds have attached corroded silver globules suggesting that both were used for silver melting.

If the identification of form is correct, these crucibles are unlikely to have been made or used much after the mid 1st century AD and so may be residual in the contexts in which they were found.

A final sherd (also in Table 5.3) was of an oxidised fired, sandy fabric with a 3 mm thick vitreous deposit on the inside which contained corroded metal droplets. Visual examination suggested these metal droplets were silver or a silver-rich alloy which was confirmed by XRF analysis which detected copper, zinc and silver. The thickness of the vitreous layer and the oxidising conditions under which the vessel had been heated indicated that it was not used for metal melting though the presence of significant amounts of metals does indicate some metallurgical use.

Discussion

The distribution of the crucibles and other metallurgical waste from Culver Street in time and space enables more to be said about the industries that produced them.

The major group of brass-making crucibles came from Building 84, Rooms 2 and 4 (on Site E) where they were associated with hearths *(see* p 55). The brass making is almost certainly military, dating to the period *c* 44-49, though it could possibly be civilian because there are reasons to suppose this building might have survived in use for a few years after the foundation of the colony. As brass was used mainly for coinage, military fittings, and brooches at this period (Bayley 1990), a military involvement with its production is not unexpected; unofficial civilian brass making would raise far more questions about the control and use of the alloy. Some further brass-making crucibles were redeposited in a Period 3 ditch on Site E.

Building 112 on Site B produced the bulk of the metal-melting crucibles, most of which had been used for bronze. These beaker crucibles are common in the later 1st and 2nd centuries. Some came from occupation layers but the majority were in a Period 4 dump together with a further group of brass-making crucibles. No structures that might relate to metal-working activity were noted here. The dump was mainly daub and may represent demolition of a structure from elsewhere, perhaps Site E as it is unlikely that a second brass-making area was present near Culver Street.

Many pits and other features on Site K contained considerable quantities of iron working slags which were identified as tap slag by Nina Crummy. The slag was not weighed or recorded in any detail but the relatively large amounts of material suggest smelting was carried out near here though no features that could be identified as furnaces were noted. The iron-working seems Flavian in origin but might continue beyond this time.

Further evidence for iron working was found on Site G where hammer scale, a by-product of iron-smithing, was identified in soil samples from Building 119 and Building 118 or the Period 3 cultivated soil underlying it. Hammer scale does not normally travel far so iron smithing must have been carried out in the area of these buildings.

The rest of the metal-working debris forms no particular concentrations but is scattered across the excavated areas. The finds include both ferrous and non-ferrous material of all the types listed above under 'Explanation of terms'. Most of the material is probably just further evidence for the processes already identified, the manufacture of brass, the melting and casting of copper alloys (mainly bronze), and the smelting and smithing of iron. In addition there is a little evidence for the working of precious metals. Crucibles containing both gold and silver have been noted above and to these can be added a lump of debased silver from the post-Roman topsoil (H153).

The quantity of metal-working debris suggests considerable craft or industrial activity. Except in the few cases noted it has not been possible to associate individual processes with particular buildings but this area of Colchester must have provided working space for a number of different craftsmen during the Roman period.

CATEGORY 16:

Objects and waste material associated with antler, horn, bone, and tooth working

ANTLER OFFCUTS OR UNFINISHED OBJECTS (1712-20)

1713, a sawn tine fragment drilled through the centre, derives from Period 1 make-up for Building 77. 1714 is a ring cut from an antler beam, and was found in a

Period 3 drain/slot on Site B, and **1715** comes from Early Period 3 occupation on Site C. This latter piece is a notched and drilled tine fragment reminiscent of antler cheekpieces (*CAR* **2,** fig 109,2538). The remaining pieces derive from late Roman levels, which are generally more productive of worked antler fragments. Three pieces come from Period 5b occupation debris/midden layers (GL167 & GL177) in Building 120. Catalogued on microfiche. All are of red deer antler.

HORN-WORKING WASTE (1721)

A fragment of a cut horn core (species uncertain) came from Period 5b destruction debris/floor in Building 120. Catalogued on microfiche.

BONE OFFCUTS OR UNFINISHED OBJECTS (Fig 5.63; **1722-31)**

1722 Fig 5.63 SF 1.81 680, C113 L14. Clay dump. Period 4. An unfinished spindlewhorl made from a *bos* femur head. A hole has been drilled through the centre. The bottom has been cut across and the lower sides roughly trimmed, exposing much cancellous tissue, suggesting that this piece was almost certainly rejected as unsuitable for completion.

1723 Fig 5.63 SF 1.81 3248, G567. Unstratified. Periods 4 to 6. A short length sawn from a long-bone. There is an abandoned saw-cut 4 mm in from one end. Maximum length 28 mm, maximum diameter 38 mm.

1724 Fig 5.63 SF 1.81 4174, G2917 F160. Robber trench. ?Period 6. A roughly-cut tapering length of bone encircled by a deep groove towards one end. Both inner and outer bone surfaces and roughly trimmed surfaces are represented. Length 75 mm, maximum width 13 mm.

1725 Fig 5.63 SF 1.81 4462, H400 F183. Robber trench. Period 6. A roughly worked length of bone, with both inner and outer natural surfaces, and split and trimmed sides. The fragment has laminated on one side. Length 67 mm.

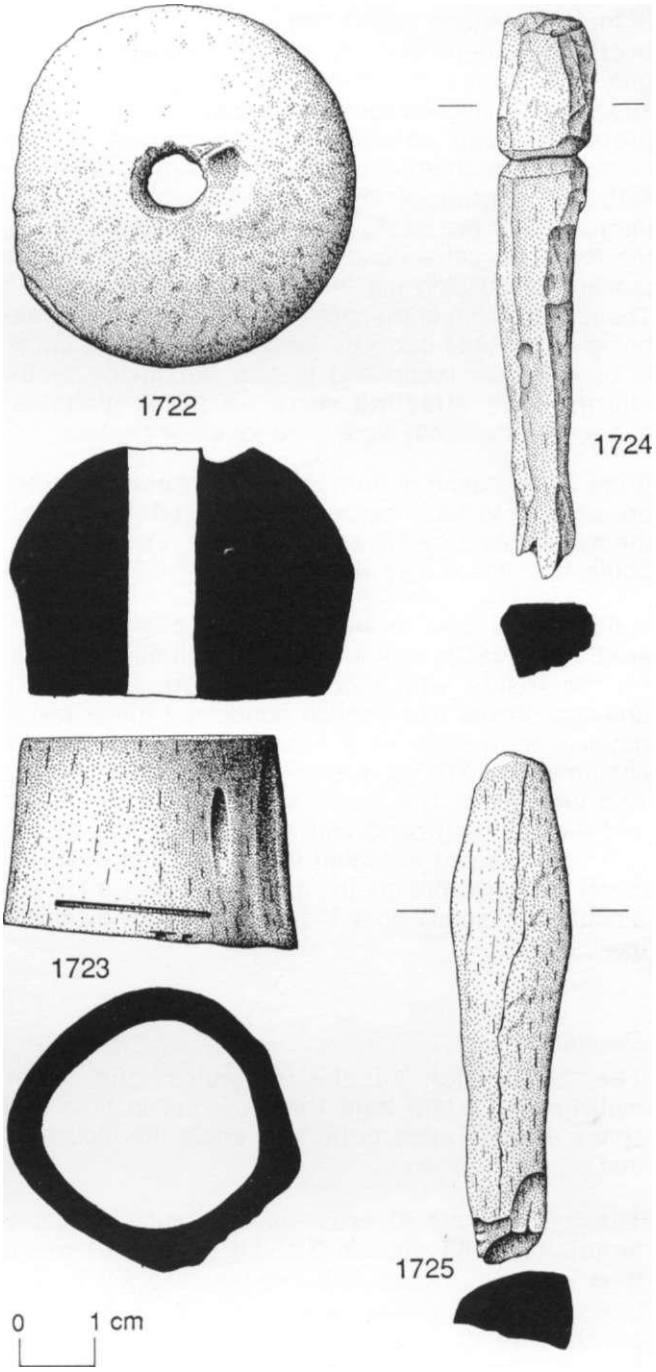


Fig 5.63 Bone offcuts or unfinished objects. 1:1.

CATEGORY 17:
Objects and waste material associated with the manufacture of pottery vessels or pipeclay objects

No objects associated with the manufacture of pipeclay vessels have been recovered. Any objects relating to pottery manufacture will be dealt with in the pottery report.

CATEGORY 18:
Objects the function or identification of which is unknown or uncertain

RINGS (1732-58)

Catalogued on microfiche.

CHAINS (1759-69)

Catalogued on microfiche.

WIRE (1770-90)

Catalogued on microfiche.

BONE ?PEGS (1791-1801)

Short ?pegs of simple tapering form usually derive from late or post-Roman levels *(CAR* **2,** 162-3), which is the case for all but one of these objects. From GL4310 (Period 3d dump) came the top of such a ?peg, but in view of the early date of the context, this may perhaps be more correctly interpreted as the head of a very thick Type 1 hairpin.

SHEET COPPER-ALLOY (1802-1976)

Only the small find number and context details are given for these pieces. They are listed by site, and within site by period.

MISCELLANEOUS UNIDENTIFIED COPPER-ALLOY OBJECTS (Figs 5.64-6; **1977-2030)**

1977 Fig 5.64 SF 1.81 2460, B2266 F282. Large cess-pit: Building 77, Room 5. Periods 1/2. A copper-alloy fitting, possibly part

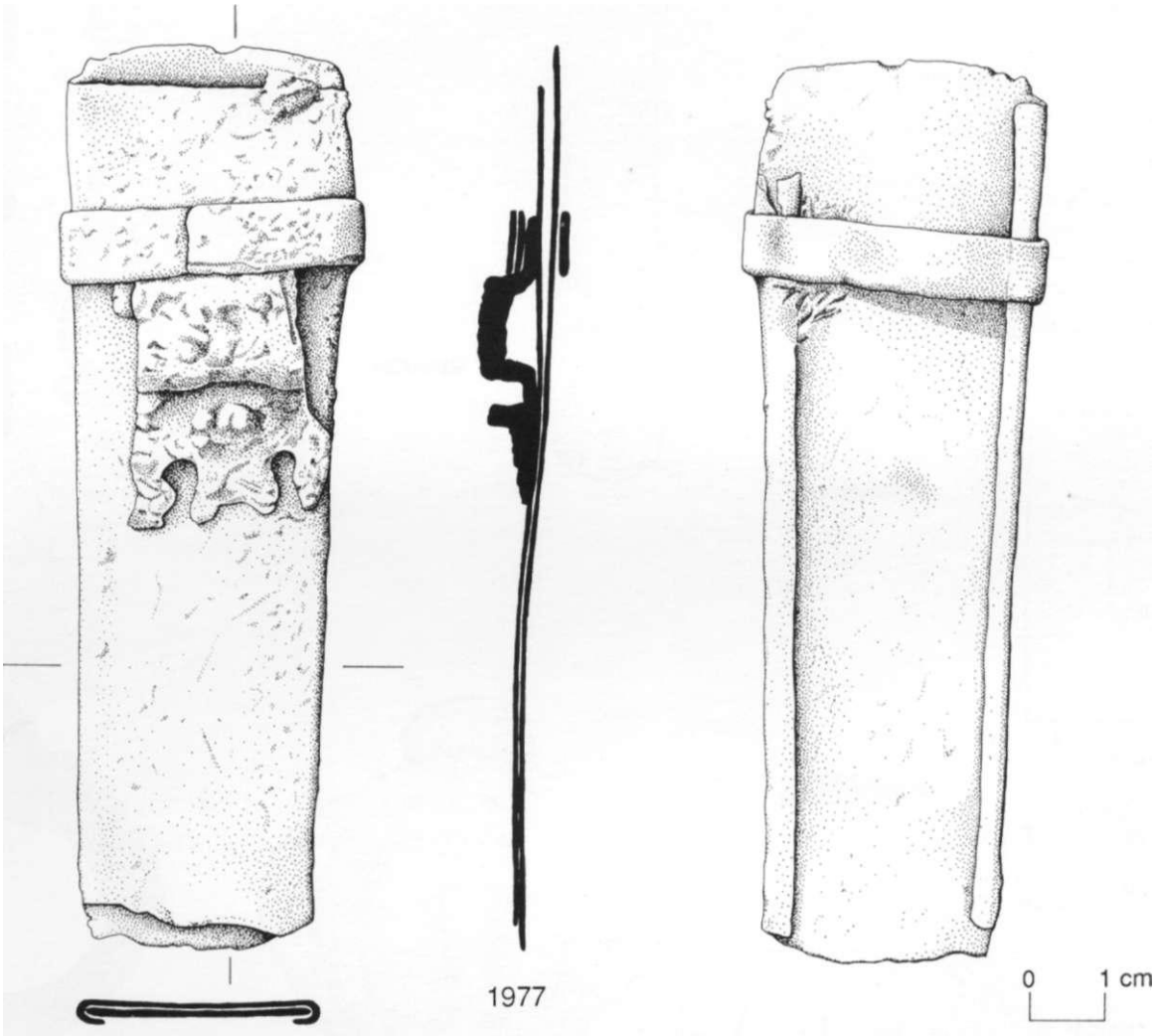


Fig 5.64 Unidentified copper-alloy object. 1:1.

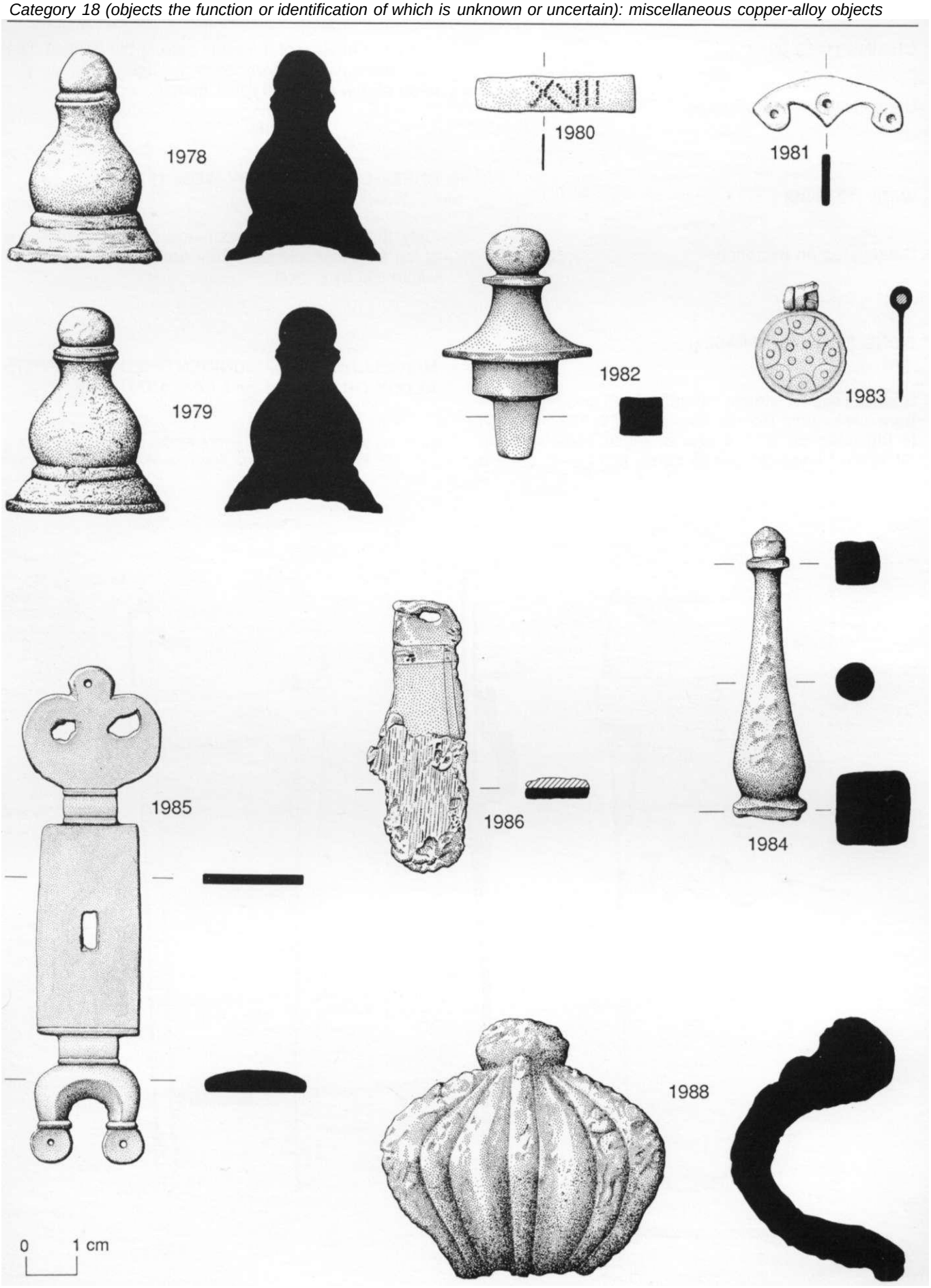


Fig 5.65 Miscellaneous copper-alloy objects. 1:1.

of a door mechanism from a piece of furniture. Soldered to the main part is a catch, perhaps for a bolt. One decorative end survives. The other appears to have been broken and mended by folding a thin copper-alloy strip right round the object to hold it in place. Length 118 mm. Tapering slightly, maximum width 38 mm.

1978 Fig 5.65 SF 1.81 1670, B1741 L389. General Boudican demolition layer: destruction of Building 77. Early Period 3. A campanulate terminal. Height 39 mm, diameter 29 mm.

1979 Fig 5.65 SF 1.81 1682, B1766 L418. Boudican destruction debris: destruction of Building 77. Early Period 3. A second campanulate terminal. Height 42 mm, diameter 31 mm.

1980 Fig 5.65 SF 1.81 185, C36 L1 ? Topsoil (Roman?). ?Period 5. A rectangular strip with the inscription XVII formed by punched dots on one face. One end may have been broken off. Length 31 mm, width 7 mm.

1981 Fig 5.65 SF 1.81 2627, E1656 L149. Dump. Period 2. An elongated pelta decorated with ring-and-dot motifs. Length 29 mm. Possibly military.

1982 Fig 5.65 SF 1.81 3366(C), G736 F174. Pit. Period 6. A campanulate terminal with markedly flaring sides. Beneath the flared section a short square-section shaft projects from a circular element. Height 44 mm, diameter 28 mm. Somewhat similar to **1978** and **1979** above.

1983 Fig 5.65 SF 1.81 5167(C), K432 F416. Robber trench. Period 3b or 3c. A hinged roundel with a grooved design of crescents and rings on the upper face. Diameter 18 mm, thickness less than 1 mm, length 23 mm. Possibly the lid of a seal-box, but very thin. A similar roundel derived from a disturbed Claudio-Neronian assemblage at Longthorpe, where it was identified as a late medieval tag (Webster 1987, fig 24,51).

1984 Fig 5.65 SF 1.81 -3644(C), G1447 L1423. Cultivated soil? Period 3 or 4. A ?terminal, with a long baluster-shaped body separated from a knobbed head by a square moulding and resting on another square moulding. The underside of this lower square is very rough but does not appear to have broken. It seems likely that this object was part of something larger, fixed by partially embedding and/or soldering on the lower square element. Height 57 mm, maximum width 15 mm.

1985 Fig 5.65 SF 1.81 4925, B2570 F882. Posthole? Periods 2/3. A fitting with a rectangular central panel, with a central rectangular perforation, separated by short rectangular 'necks', defined by mouldings, from two terminals. One terminal is lunulate, with each arm ending in a pierced disc, probably for rivets. The other is roughly heart-shaped, with two large perforations, and a small disc set between the incurving upper elements of the heart. This disc is pierced by a small ?rivet hole. The central panel and the heart-shaped terminal are flat, but the lunulate terminal is strongly moulded and each arm is separated by a transverse moulding from its pierced disc. Probably a belt-fitting, and possibly military, though no parallel has been found. Length 95 mm, maximum width 28 mm.

1986 Fig 5.65 SF 1.81 5097(C), K123 F120. Linear feature. Period 3b or 3c. A possible strap-fitting, either rectangular or tapering slightly. Both ends are rounded. One end is pierced, and bears traces of grooved decoration. The other is covered on both sides with traces of mineralised wood, identified by Jacqui Watson (AM Lab) as *Quercus* sp (oak). Length 52 mm, maximum width approximately 14 mm.

1987 Fig 5.66 SF 1.81 3990(C), G2368 F2342. Road surface. Period 1 or 2. A circular cast object with a flat, slightly countersunk and rough under surface, and concentric mouldings on the upper surface. The central countersunk

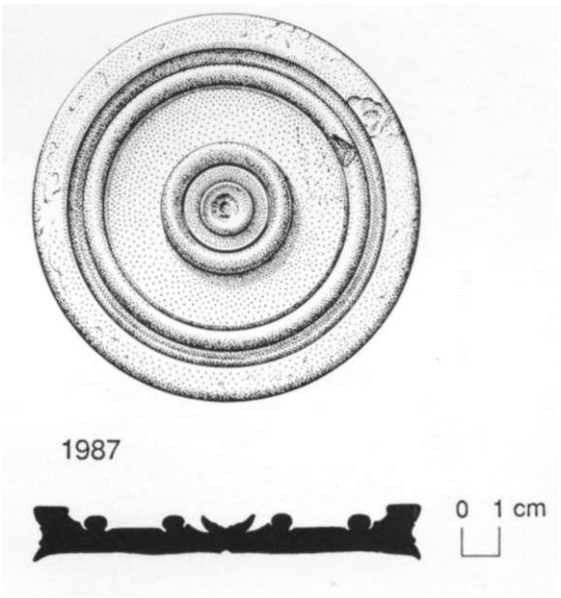


Fig 5.66 Unidentified copper-alloy object. 1:2.

and indented moulding on the top face and the simple indentation on the bottom face indicate that the object was finished on a lathe. The edge is grooved and moulded. The rough finish of the underside suggests that the disc was set into or on to a larger object. Diameter 103 mm, thickness 13 mm. Associated with the copper-alloy object **1988** and the two iron objects **2035** and **2036** below. All four objects were found close together embedded in a pre-Boudican road surface and may thus be vehicle fittings.

1988 Fig 5.65 SF 1.81 3991(C), G2369 F2342. Road surface. Period 1 or 2. A curved ovate cast object, with thick ribs and a knobbed terminal. Illustrated with the terminal uppermost. The other end is broken. Maximum width 55 mm, length 50 mm. Associated with the copper-alloy object **1987**, and the two iron objects **2035** and **2036** below.

MISCELLANEOUS UNIDENTIFIED IRON OBJECTS (Fig 5.67; 2031-2190)

2031 Fig 5.67 SF 1.81 3581 (X), G1087 L1050. Dump: Building 116. Period 4. A flat more or less circular object, with a large perforation placed close to one edge which gives the piece a lunulate appearance, and with an asymmetrically-positioned rivet for attachment (for clarity the rivet hole, rather than the rivet, is shown on the illustration). Diameter 60 mm, thickness 4 mm.

2032 Fig 5.67 SF 1.81 3860(C), G1830 L1767. Horticultural topsoil. Period 3. A crescent-shaped object with a nail placed slightly off-centre on the outer edge. The ends of the crescent are broken, and the object may originally have been circular and therefore similar to **2031**.

2033 Fig 5.67 SF 1.81 3897(C), G2046 F1545. Oven: Building 117. Period 4. An iron bar of circular section with a roughly flattened terminal at one end. The other end is broken. Length 218 mm.

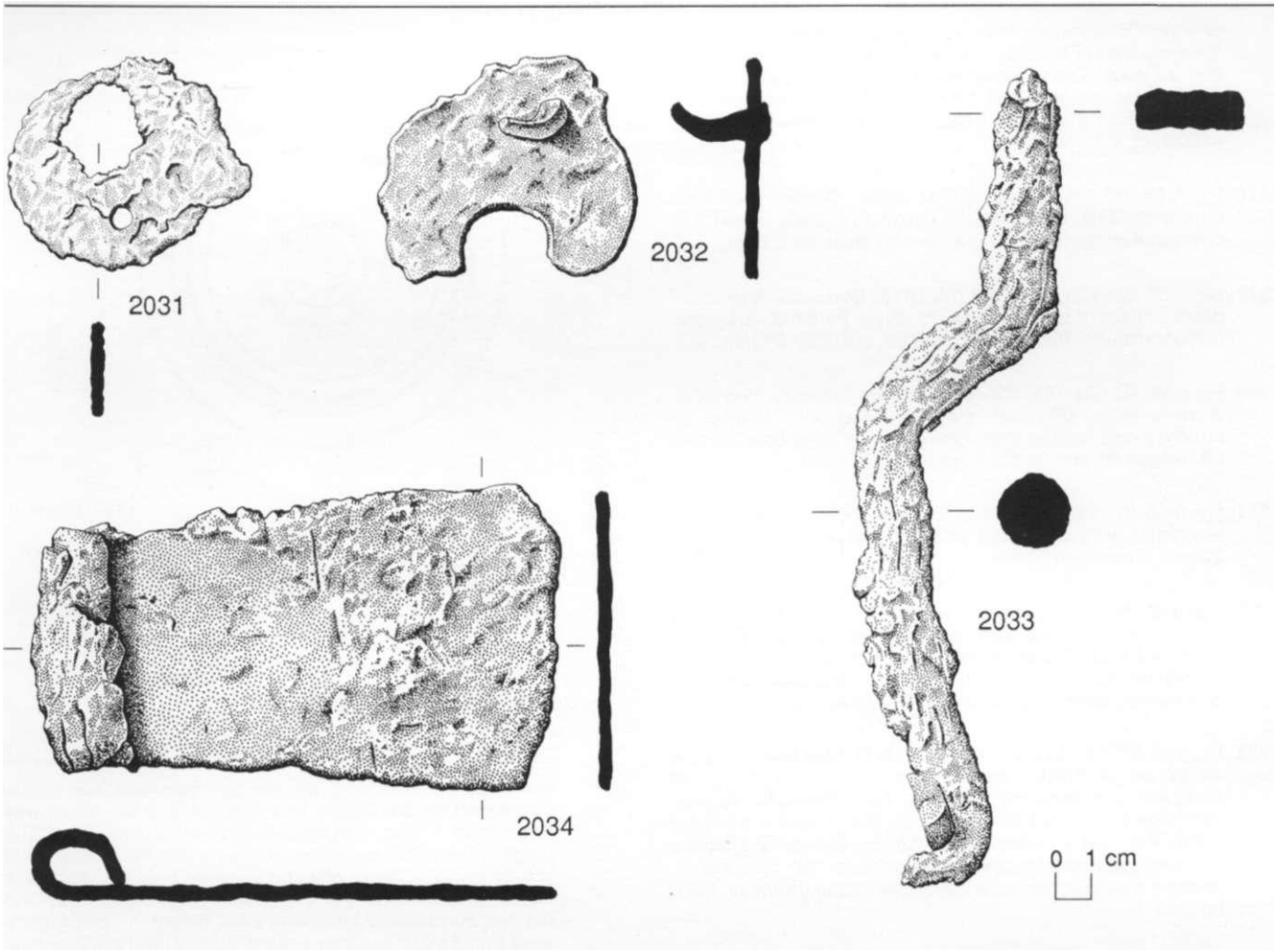


Fig 5.67 Miscellaneous iron objects. 1:2.

2034 Fig 5.67 SF 1.81 5350(C), G3889 L3125. Cultivation soil. Period 3. A flat slightly tapering plate, with the narrower end roughly rolled over. This rolled-over end is not large enough to accommodate a handle, though it may serve as a rudimentary hinge. Length 145 mm, maximum width 83 mm, maximum thickness approximately 6 mm. A parallel for this object has not been found, though an agricultural use may be suggested by the context. If, however, the object is residual in that context the possibility arises of its having a pre-Boudican, possibly military, origin.

2035 Not illustrated. SF 1.81 3992(X), G2371 F2342. Road surface. Period 1 or 2. (Though not illustrated this object and 2036 below are catalogued in the printed text because of their association in a pre-Boudican road surface with Fig 5.66,1987 and Fig 5.65,1988.) Two fragments of an iron object. One fragment seems to be a bar or strip, possibly pierced by a large hole. The other appears to be a strip with thick rounded edges, length 73 mm.

2036 Not illustrated. SF 1.81 3993(X), G2372 F2342. Road surface. Period 1 or 2. *(See* 2035.) An iron strip 102 mm long.

MISCELLANEOUS UNIDENTIFIED LEAD OBJECT (Fig 5.68; **2191-211)**

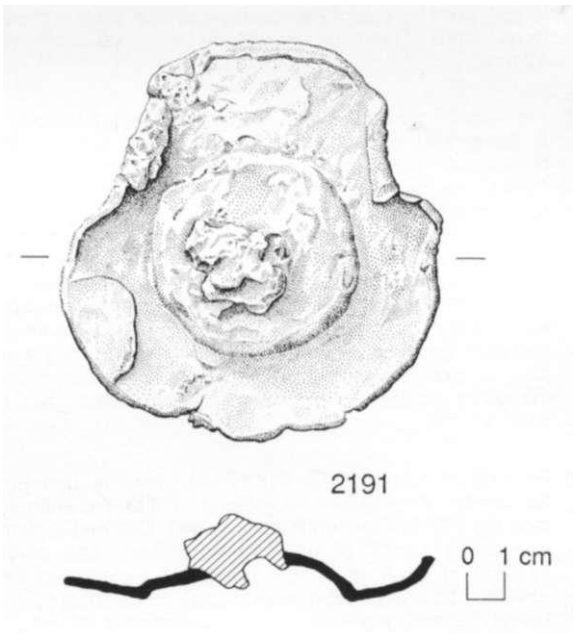


Fig 5.68 Unidentified lead object. 1:2.

2191 Fig 5.68 SF 1.81 3107, G266 F266. Linear feature/drain?

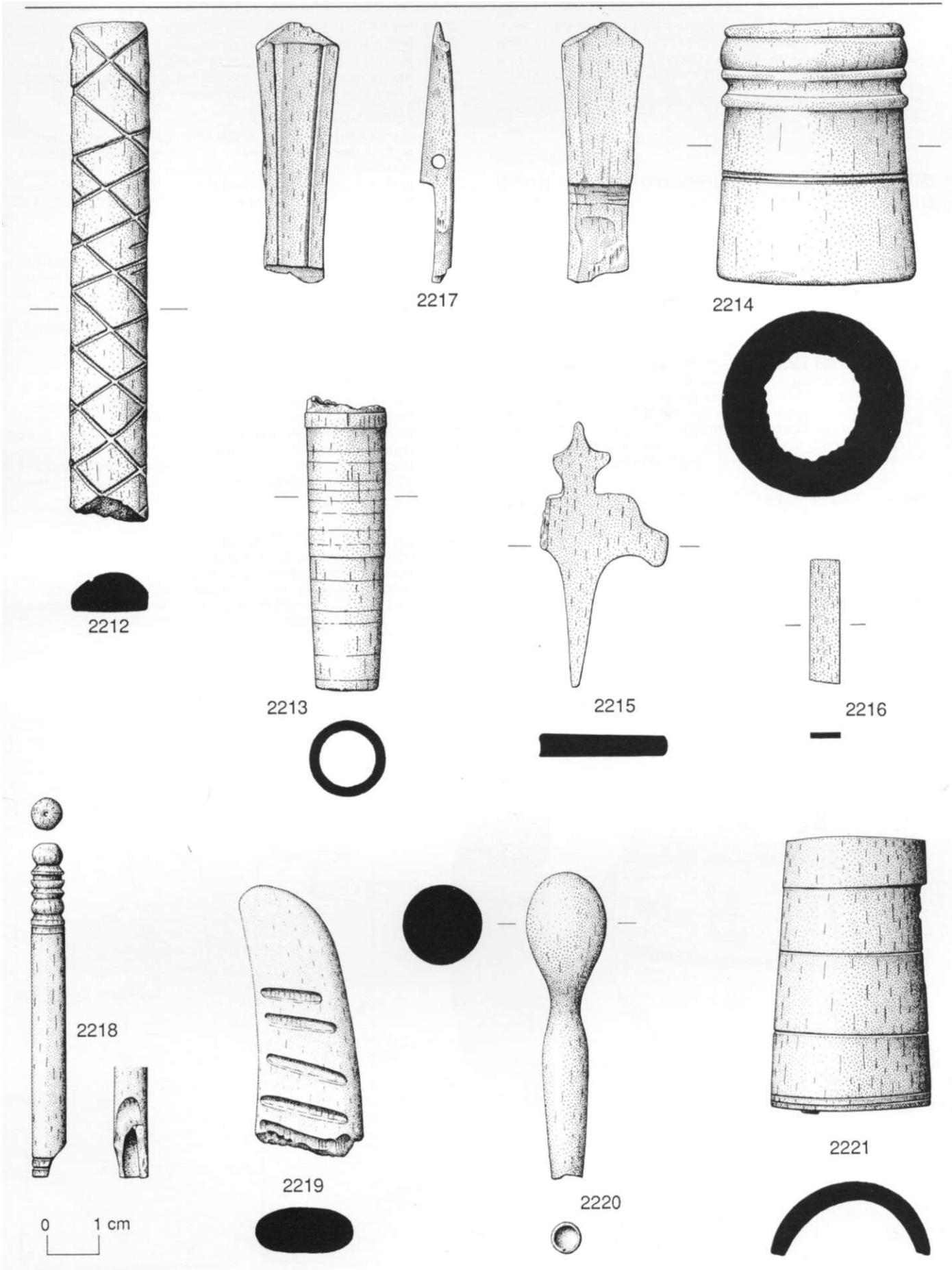


Fig 5.69 Miscellaneous bone objects. 1:1.

?Period 5. A bent and damaged lead disc of sheet lead, 3 mm thick, with a low convex centre and wide rim. The remains of an iron nail which served to attach the disc to a larger object survive in a central perforation. Diameter 104 mm.

MISCELLANEOUS UNIDENTIFIED BONE OBJECTS (Fig 5.69; **2212-24)**

2212 Fig 5.69 SF 1.81 675, B167 L7. Fill of gully F39. Period 5. A length of bone of D-shaped section, one end broken, the other sawn and polished. The upper, convex face of the strip is decorated with an incised lattice. There are no rivets, or rivet holes, in the strip. Length 96 mm.

2213 Fig 5.69 SF 1.81 2528, B2372 L487. Metalling in alleyway. Period 1. A length of bone ?tubing, possibly a handle. The tube tapers from 16 mm to 13 mm in diameter, and was probably lathe-turned. The surface is slightly irregular and covered by a series of extremely fine grooves. There is a ridge close to the broader end. The narrower end is polished, the broader end broken off. Length 56 mm.

2214 Fig 5.69 SF 1.81 751, C203. Unstratified. A large lathe-turned bone ?terminal with grooves and mouldings. Most but not all of the internal cancellous tissue has been removed. Length 51 mm, maximum diameter 38 mm.

2215 Fig 5.69 SF 1.81 3703, D1218 L1214. Demolition debris: Building 123, Room 8. Period 4. A decorative bone plaque, with most of one side missing. The underside partly consists of cancellous tissue. Length 51 mm.

2216 Fig 5.69 SF 1.81 3867, D1570 L1372. Dump: Building 123, Room 8. Period 4. A thin rectangular strip of bone. Length 24 mm, width 6 mm, thickness 1 mm. The smoother of the two surfaces bears a scratched line crossed by two others. These may not be deliberate.

2217 Fig 5.69 SF 1.81 3443, G858 L857. Occupation? ?Period 5 or 6. A bone object similar in plan to the back-plates of scabbard chapes, but much narrower, with a distinct waist, thinner in section at one end than the other, and perforated transversely near this change in thickness. Both ends are broken. Length 51 mm, maximum width 16 mm.

2218 Fig 5.69 SF 1.81 3945, G2217 L1702. Dump/cultivation: Building 116? Period 3 or 4. A bone object with a terminal decorated with bead-and-reel motifs. The other end is perforated and part has split off level with the top of the perforation. That end is marked by two grooves. Length 65 mm.

2219 Fig 5.69 SF 1.81 4803, G3433 F3418. Pit. Period 6. A fragment of ?antler tine, cut down to an elliptical section. Four wide grooves have been cut into the surface, two of them so deep that the inner cancellous tissue has been slightly exposed. The piece has broken across another deep groove. On the other side there is a slight incised groove and faint traces of several others. Length 55 mm, width 21 mm. Possibly post-Roman.

2220 Fig 5.69 SF 1.81 5007, G4109 F4107. Pit. ?Period 3. A complete bone object consisting of a large oval head separated from a short tapering shaft by a narrow neck. The shaft terminates in a cupped hollow. The deliberate hollowing of this terminal must be related to the function of the object. Length 58 mm, maximum diameter of head 16 mm.

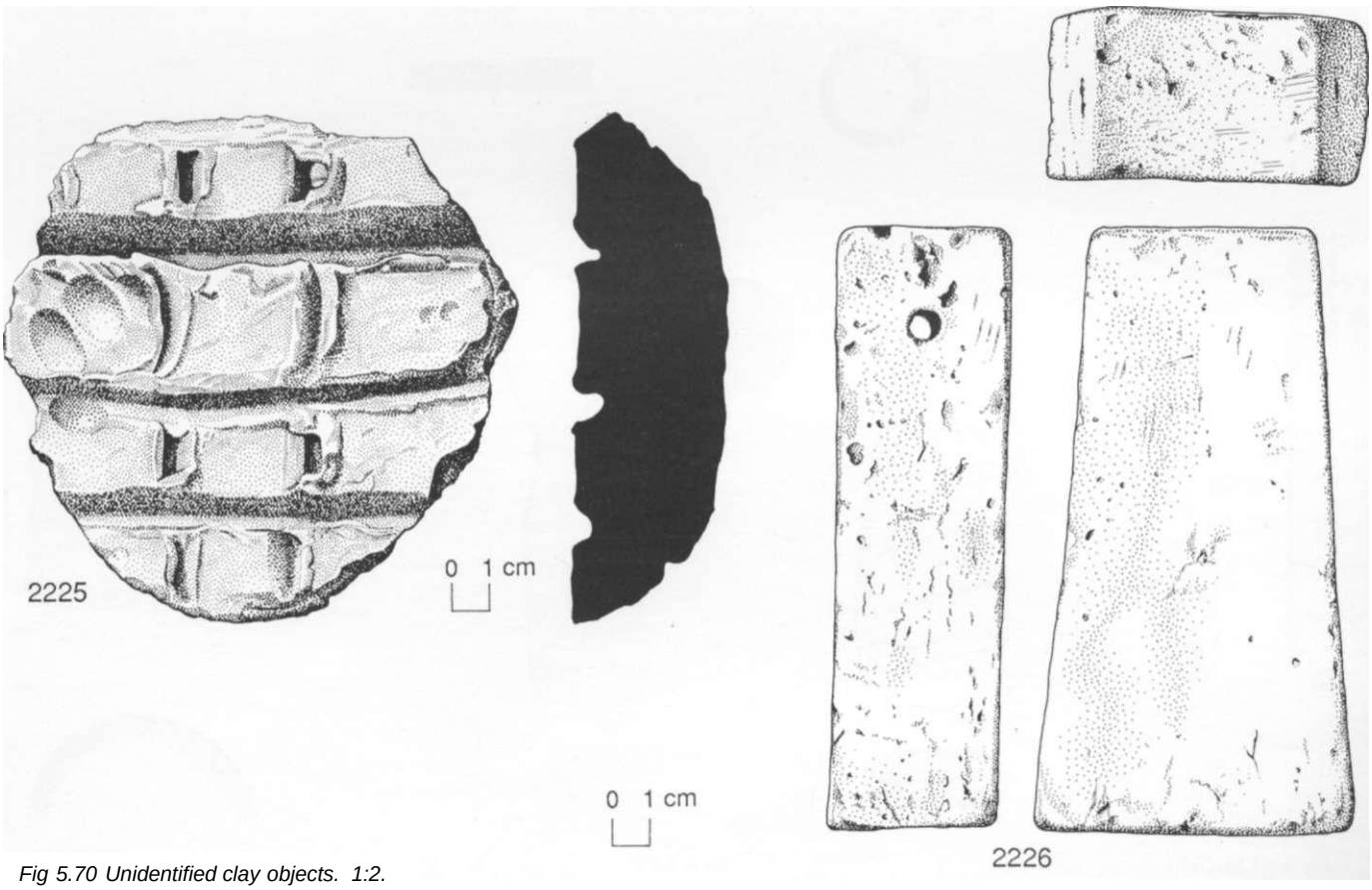


Fig 5.70 Unidentified clay objects. 1:2.

2221 Fig 5.69 SF 1.81 4698, J177 F55. Oven/kiln. Period 6. A fragment from a tapering bone tube. The wider end is marked by a pair of fine grooves. Three single grooves are placed at regular intervals on the body of the tube. At the narrower end, immediately adjacent to the last groove and close to the line of fracture, the bone is much thicker and stands out proud of the adjacent section. Length 52 mm, maximum diameter 31 mm.

UNIDENTIFIED CLAY OBJECTS (Fig 5.70; **2225-8**)

2225 Fig 5.70 SF 1.81 3222, G332 L205. Destruction debris A: Building 116. Period 4. A roughly circular piece cut from a flat keyed tile or brick. The underside is convex and does not extend to the original lower surface of the tile. The upper tile surface is scored with a rough chequer-board pattern and also bears two depressions probably made by fingers. Maximum diameter 133 mm, thickness 38 mm. The size and the convex underside of this object distinguish it from the tile counters of Category 5, and it has therefore not been included with that group.

2226-8 Fig 5.70 SF 1.81 2555-7, B2363 L395. Demolition debris. Early Period 3. Two complete objects, with a fragment of a third, in a hard tile-like fabric. Only one complete example is illustrated. The two complete ones vary externally in colour from dark red to black, the result of secondary burning (probably Boudican). The fragment shows no secondary burning, but has been fired to a typical tile red. The objects are trapezoidal in plan (ie have two sides parallel), with a rectangular section. They are all pierced transversely close to the narrower end. The holes show no signs of wear, except possibly one side of the fragment, which would suggest that it was suspended with the hole to the bottom (surely unlikely). Length of each complete object 166 mm, average thickness 43 mm, width tapers from 83 to 62 mm.

No parallel for these objects has been found, despite the help of Dr John Peter Wild, Alan McWhirr, and Dr Gerald Brodribb, to whom I am grateful for their time and trouble. Superficially the pieces resemble loomweights, but their transverse section is rectangular not square, and their fabric and firing are different. It seems most likely that they are tiles intended for a specific purpose, such as in an arch, and should perhaps therefore more appropriately be placed with the tile report in this volume. Other suggestions have been that they are thatch weights, or weights for fishing nets.

UNIDENTIFIED STONE OBJECT (Fig 5.71; 2229)

2229 Fig 5.71 SF 1.81 5026, H531 L3. Topsoil/clearance. Period 6. A ?mudstone object, more or less oval in section, with a moulded base. Height 32 mm.

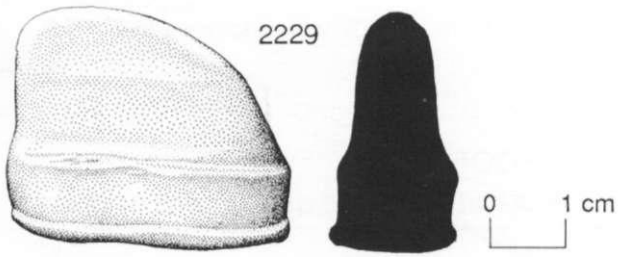


Fig 5.71 Unidentified stone object. 1:1.

6: THE ROMAN SMALL FINDS FROM THE GILBERD SCHOOL SITE

by Nina Crummy

This chapter is ordered in the same way as *CAR* **2,** that is, the primary groupings are by function rather than material. Subdivisions and types are also those used in *CAR* **2,** hence there may be numerical gaps if types are not represented in this assemblage.

Where corrosion has been cleaned from an iron object, or where little corrosion was present to begin with, the existing exposed surface has been accurately drawn. Where an object was drawn from an X-radiograph, a surface has been stylistically indicated.

The post-Roman finds were included in *CAR* **5.**

CATEGORY 1:
Objects of personal adornment or dress

BROOCHES

The copper-alloys used for the brooches below have been analysed and identified by Justine Bayley of the AML using X-ray fluorescence. A discussion of the results can be found in the report on the Culver Street brooches, p 144. The brooches are identified and arranged according to the types outlined in the late M R Hull's corpus of pre-Roman and Roman brooches *(see* p 140). This is referred to here as Hull forthcoming, with catalogue numbers from the corpus prefixed by *Corp.*

Twenty-two brooches were recovered from the site, two of iron, the rest copper-alloy. They demonstrate clearly the high proportion of pre-Flavian small finds from the site, many specifically military. Nine of the brooches belong to Hull's Group 4b, early hinged brooches, two of which are Aucissas and seven Hod Hills. Group 5, early sprung brooches, are also well represented, with one Type 84 (Almgren's strongly-profiled brooch), one Type 89 (continental Colchester), three Colchesters, and two Colchester Bs. There are three penannular brooches, all of which are early, with one (an iron example) deriving from a Period 1 context within Building 131. Two of the remaining three brooches are also early: an iron strip bow brooch of Type 14 and a Type 27 rosette brooch, both of which are pre-conquest in origin and cease to be used during the pre-Flavian period. The last brooch is the only late piece from the site, a corny-shaped plate brooch, dated on the form of its catchplate from the mid 2nd to mid 3rd century.

BOW BROOCHES

Group 1: La Tene III and Roman brooches with no hook and no arms

Type 14. Copper-alloy and iron brooches with a hinged pin and single curve to the bow (1). Iron examples of this type are pre-conquest in origin, and die out in the pre-Flavian period. One iron example; catalogued on microfiche.

Group 2: Brooches with cylindrical spring-cover

Type 27. Simple rosette brooch with applied moulded plate (Fig 6.1; **2).** This type is found mainly in the *oppida* and is probably a pre-conquest import which only continued in use to *c* 50.

2 Fig 6.1 SF GBS 965(C), A2280 L109. Occupation (?weathered). Period (1 or) 2. This brass brooch is complete, except for the pin and part of the catchplate, though it is damaged and badly corroded in places. Length 44 mm. The brooch appears to be sprung not hinged, though this is not certain. Brooches of this type are more usually sprung. The applied repousse-decorated plate covers both the circular element of the rosette and the foot. The plate is corroded and damaged, but very similar examples are illustrated and described by Hull (forthcoming) and allow the design to be reconstructed. The rosette is decorated with an outer ring of beading, and an inner band whose motifs are described by Hull as acorns and palmate leaves. On this example the design of the central area is completely obscure, but on others was an inverted human face, which would have been upright if the brooch were worn with the foot pointing upwards. The decoration on the foot is here better preserved. As with the rosette the margin is beaded, and the field contains a male figure in an aggressive posture facing left, confronting what is here an unidentifiable form. On a well-preserved example from Vindonissa, signed ANGVIL, the scene can clearly be identified as a gladiator confronting the fore-part of a griffin (Hull forthcoming).

Brooches from Britain depicting this scene come from Dragonby *(Corp* 9186) and Sleaford *(Corp* 5240, 5241) in Lincolnshire, Fingringhoe, near Colchester, Essex *(Corp* 5026), with the best-preserved example coming from Lakenheath, Suffolk *(Corp* 2419). A brooch with only a griffin on the foot comes from Silchester, Hampshire *(Corp* 4797).

Group 4b: Early hinged brooches

Type 51. Aucissa brooch (Fig 6.1; **3-4**). Brooches with

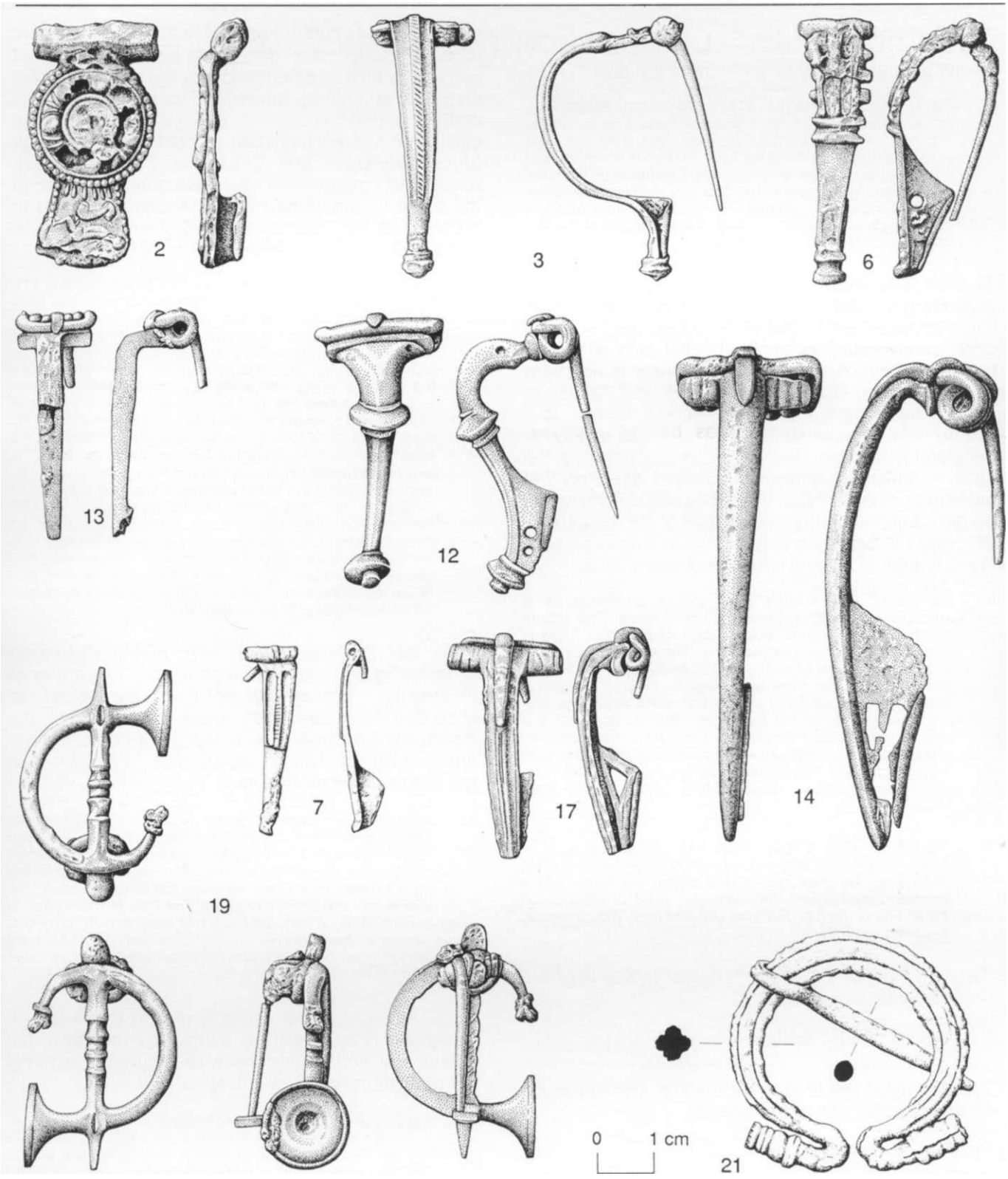


Fig 6.1 Brooches. 1:1.

a broad flat bow arched to a semicircle and decorated with longitudinal mouldings. The flat head is broader than the bow and carries transverse mouldings and a pair of lateral notches; sometimes also a pair of stamped eyes. The head is rolled over upwards to hold an axial bar, often of iron with copper-alloy terminal knobs, on which the pin is hinged. The knobbed foot is short and returned sharply from the bow. The junction of bow and foot can be marked by transverse mouldings. Aucissa brooches are so called because of the maker's name sometimes found inscribed across the head. A positive centre of origin for this series of brooches, found throughout the Roman world during their life, is not proven. Generally dated Augustus-Nero, they were probably introduced into Britain at the conquest. The army seems to have

ceased using them *c* 60/5.

b) with a stout rib down the centre of the bow

3 Fig 6. 1 SF GBS 696(C), A1421 L93. Dump. Period 2. A well-preserved brass brooch, complete except for one of the copper-alloy terminal knobs from the iron axial bar. The catchplate forms a tube at the lower end on to which the foot knob, cast separately, is slotted. Any decoration on the head is obscured by corrosion. The bow has marginal mouldings and its central rib is knurled. The junction of bow and foot has a single transverse moulding. The upper part of the foot is of angular D-section. Length 45 mm.

Type 60. The simplest and commonest of the Hod Hill series (Fig 6.1; 5-7). Hod Hill brooches have a similar hinge arrangement to that of Aucissae, but the head, often undecorated, is short and flat with a narrow neck. The bow curve is gentle and there is no sharp angle between head and foot. The foot takes up approximately half the length of the brooch and usually has a terminal knob. The great variety of decoration used on Hod Hill brooches provides the basis on which the series is subdivided. It is likely that all were originally coated with white metal. Originating on the Continent in the second half of the 1st century BC, Hod Hill brooches only arrived in Britain with the Roman army in 43 and went out of use *c* 60/5.

6 Fig 6.1 SF GBS 414(C), A667 L9. Dump. Period 3a. A corroded but complete brooch of tinned brass. One side of the head is damaged. The junction of bow and head is marked by a transverse moulding. The bow has a central ridge and marginal mouldings, all probably knurled. On each side of the bow are three small semicircular lugs. The foot is separated from the head by two transverse mouldings and there is one above the foot knob. The catchplate has a circular perforation. Length 48 mm. A similar complete brooch comes from Broxtowe, Nottinghamshire, a fragment from Silchester, Hampshire, and another fragment from Richborough, Kent (*Corp* 4483, 4772, and 1868 respectively).

7 Fig 6.1 SF GBS 534(C), A939 L44. Dump. Period 3. A flattened brooch of tinned gunmetal, most of the hinged pin is missing. The bow has plain marginal mouldings and a knurled central ridge. The damaged head is grooved on either side of the pin. The axial bar is of iron. The catchplate is solid. Length 34 mm.

Type 61. Hod Hill brooch with lateral lugs at the base of the bow (**8**).

Catalogued on microfiche.

Type 62. Hod Hill brooch with lateral lugs set in the middle of each side of the bow (**9**).

Catalogued on microfiche.

Type 63. Hod Hill brooches with lateral lugs at the top of the **tow (10-11).**

Catalogued on microfiche.

Group 5: Early sprung brooches

Type 84. Almgren's 'strongly-profiled' brooch (Fig 6.1; 12). A type noted by Hull as rarely found in Britain except in areas centred on Richborough and London, to which Colchester may now be added. Almost certainly a brooch introduced into the province in AD 43 by the army of conquest. The terminal date is less certain, but the sub-group with round holes in the catchplate has a distribution centred on Richborough (three examples) and Colchester (two examples), possibly indicating that it may have gone out of use at the same time as Hod Hill and Aucissa brooches in *c* 60/5. The two examples from Colchester are *CAR* **2,** fig 6,37, and the following:

12 Fig 6.1 SF GBS 1026(C), A2402 L260. Dump: Building 131, Room 3. Period 1 or 2. A well-preserved complete one-piece brass brooch. The bow, with its narrow neck and broad head, has the distinctive arched profile which gives the type its name. The neck widens into side-wings which hide the eight-turn spring. The external chord is firmly held against the top edge of the side-wings by a forward hook. The bow is separated from the foot by a button flanked by narrow mouldings. The upper moulding does not continue round the back of the head, and the button is slightly flattened at the back. The lower moulding passes right round the foot. The foot has a strong reverse curve and a large terminal button and knob. Above this lower button is a narrow moulding. The catchplate has two small circular perforations. Length 50 mm. The whole brooch leans markedly to the left, as does the similar, but not identical, example of the type from the Balkerne Lane site *(CAR 2,* fig 6,37). This distortion may be the result of holding thick folds of material. On each side of the top of the bow there is a spot of corrosion which may be all that remains of an enamel 'eye'.

Type 89. The Continental form of the Colchester brooch (Fig 6.1; **13**). This type usually has a bow of rectangular section, rather than the round or D-section bow commonly used for Type 90, the Colchester brooch proper. Few Type 89 brooches are found in Britain. Those that are date to no later than the Claudio-Neronian period.

13 Fig 6.1 SF GBS 676(C), A1354 L89. Occupation (?weathered). Period (1 or) 2. The tip of the foot, the lower half of the pin, and the catchplate are missing from this brass brooch. The spring has six turns. The external chord is held by a forward hook which does not run on to the head. The side-wings are short and plain. The bow is rectangular in section (4 by 3 mm) and is badly corroded at the centre. Length 41 mm. The brooch is a small example of the type, though one of comparable size comes from Silchester, Hampshire *(Corp* 3768).

Type 90. Colchester brooch (Fig 6.1; **14-16**). A one-piece brooch with a simple curved bow, flat side-wings, and forward hook to secure the external chord. Date-range: Tiberius-Nero.

14 Fig 6.1 SF GBS 713(C), A1464 F200. Small pit: Period 2 or 3. A large brass brooch, complete except for the lower half of the pin. The catchplate is slightly damaged. The bow is lenticular in section. The side-wings are grooved. The spring has eight turns and the external chord is held by a forward hook which continues, closely fitted, down the head. The catchplate has three triangular perforations, now damaged. Length 86 mm.

Type 92. Colchester B brooch (Fig 6.1; **17-18**). A two-piece brooch, with the spring secured by passing the external chord and axial bar through a perforated lug behind the head. The side-wings are semicylindrical. The forward hook which held the external spring chord of Type 90 can still be seen in

the upper part of the perforated lug and the crest which passes over the head on to the bow. The crest lies on a ridge which continues down the bow flanked by cavetto mouldings. Date-range: *c* 50-70.

17 Fig 6.1 SF GBS 714(C), A1474 F202. Pit: Building 131. Period 2. A small bronze brooch, complete except for the lower half of the pin. Each side-wing has a terminal groove and moulding, and a groove close to the side of the head. The spring has eight turns. The bow ridge below the crest is grooved, and the bow has marginal grooves. The catchplate has a triangular perforation. Length 40 mm.

PLATE BROOCH

Unclassified (Fig 6.1; **19**).

19 Fig 6.1 SF GBS 254(C), A323 F71. Pit. Post-Roman. A tinned bronze sprung brooch, complete except for the tip of the pin, in the form of a Roman trumpet, or *cornu.* This identification is clearer when the brooch is inverted into the spring down/catchplate up position in which at least some brooches were worn (Hull forthcoming; see also the rosette brooch Fig 6.1,2). The curved element is more or less G-shaped, with slight mouldings at one terminal to indicate the instrument's mouthpiece, and flared at the other. A cross-bar passes through the curve, moulded in the centre to provide a secure handhold as the cross-bar (wooden) of the instrument would have been (Liversidge 1968, 359-61). One end of the bar is knobbed, the other pointed. The spring fitting lies behind one point where the cross-bar joins the curve (here shown at the top), and the catchplate behind the other. The spring fitting used is one common on plate brooches, being a bilateral spring of four turns held by a short axial bar on to a single pierced lug at the back of the brooch, the chord lying underneath the spring (Hattatt 1982, fig 10). The long transverse catchplate has a simple cut-out to hold the pin. Length (along the cross-bar) 42 mm.

The date of this brooch is uncertain, as it derives from a post-Roman context. Liversidge *(ibid)* mentions a brooch in the form of a *comu* from Mainz, but offers no date. The transverse catchplate on the Gilberd School brooch is reminiscent of those found on knee brooches of the mid 2nd to mid 3rd centuries, while the method of fixing the spring is used on both plate and bow brooches, including knee brooches, dated from the Claudian period through to the 3rd century. The *cornu* was used both by the Roman army and in civilian entertainments *(ibid),* so it is not possible to suggest that this brooch forms part of the military assemblage from the site, and if any date more specific than 1st to 3rd century were to be suggested it must that of the knee brooch series, from the mid 2nd to the mid 3rd century.

PENANNULAR BROOCHES

Fowler Type A (1960, 150-2). Penannular brooches with rounded bulbous terminals (20).

Catalogued on microfiche.

Fowler Type B (1960, 152). Penannular brooches with the terminals coiled and folded back on the same plane as the ring (Fig 6.1; 21-22).

21 Fig 6.1 SF GBS 736(C), A1615 L100. Make-up. Period 2. A very corroded large penannular bronze brooch. The ring is of complex section. The terminals are circular in section and have bead-and-reel mouldings. The lower side of the two outermost elements of one terminal are better preserved than the rest of the brooch and show that the reels were grooved and the outer edge of the end beads were marked with notches. The spring is straight. Maximum diameter 43 mm.

HAIRPINS

Bone pins

Nearly all the hairpins are of the early Types 1 and 2. None derives from a context earlier than Period 3. Pins are incomplete unless otherwise stated.

Type 1. Pins with a plain conical head (Fig 6.2; 23-27). *See CAR* **2***,* 20-1. Date range *c* 50-200.

23 Fig 6.2 SF GBS 464, A717 F113. Pit. Period 3. Complete. Length 93 mm.

Type 2. Pins with 1-4 transverse grooves beneath a conical head (Fig 6.2; **28-47**). *See CAR* **2***,* 21. Date range c 50-200.

28 Fig 6.2 SF GBS 302, A382 F79. Shallow pit. Period 3b. Two grooves. Complete. Length 103 mm.

29 Fig 6. 2 SF GBS 316, A456 F79. Shallow pit. Period 3b. Two grooves. Complete. Length 104 mm.

30 Fig 6.2 SF GBS 327, A480 F79. Shallow pit. Period 3b. Two grooves. Complete. Length 99 mm.

31 Fig 6.2 SF GBS 698, A1446 F121. Pit. Period 3. Repointed. Two grooves. Length 63 mm.

32 Fig 6.2 SF GBS 536, A968 F128. Pit. Period 3. Two grooves. In two pieces. Length 89 mm (very tip only missing).

Type 6. Pin with a reel- or bead-and-reel-shaped head (Fig 6.2; **48**). *See CAR* **2***,* 24-5. Date range *c* 200-4th century.

48 Fig 6.2 SF GBS 145, A85 L1. Topsoil. Post-Roman. Reel-shaped head. Length 41 mm.

Miscellaneous (Fig 6.2; **49-52**)

49 Fig SF GBS 526, A933 F102. Pit. Period 3. Length 67 mm. A pin with a stilted conical head of slightly greater diameter than the shaft. Pins with heads standing proud of the shaft are usually to be dated later than c 200 *(CAR* **2**, 20), though this straight-sided example could be accommodated as a variant of Type 2, rather than of Type 3 or Type 6, and thus could be dated earlier than *c* 200.

50 Fig 6.2 SF GBS 1081, B203 L8. Midden. Period 3. A pin head in the form of a female bust. The hairstyle is that of the Hadrianic period, which accords well with the date of the context. Length 85 mm.

51 Fig SF GBS 1062, B156 F15. Large pit. Period 3b or 4. A complete pin with a large bun-shaped head into which are cut spiralling grooves. The swollen shaft is very exaggerated. A variant of Colchester's Type 3 *(see CAR* ***2****,* 21-2), probably 3rd century in date. Length 110 mm.

Jet pin (53)

One fragment of a jet pin shaft was found in a Period

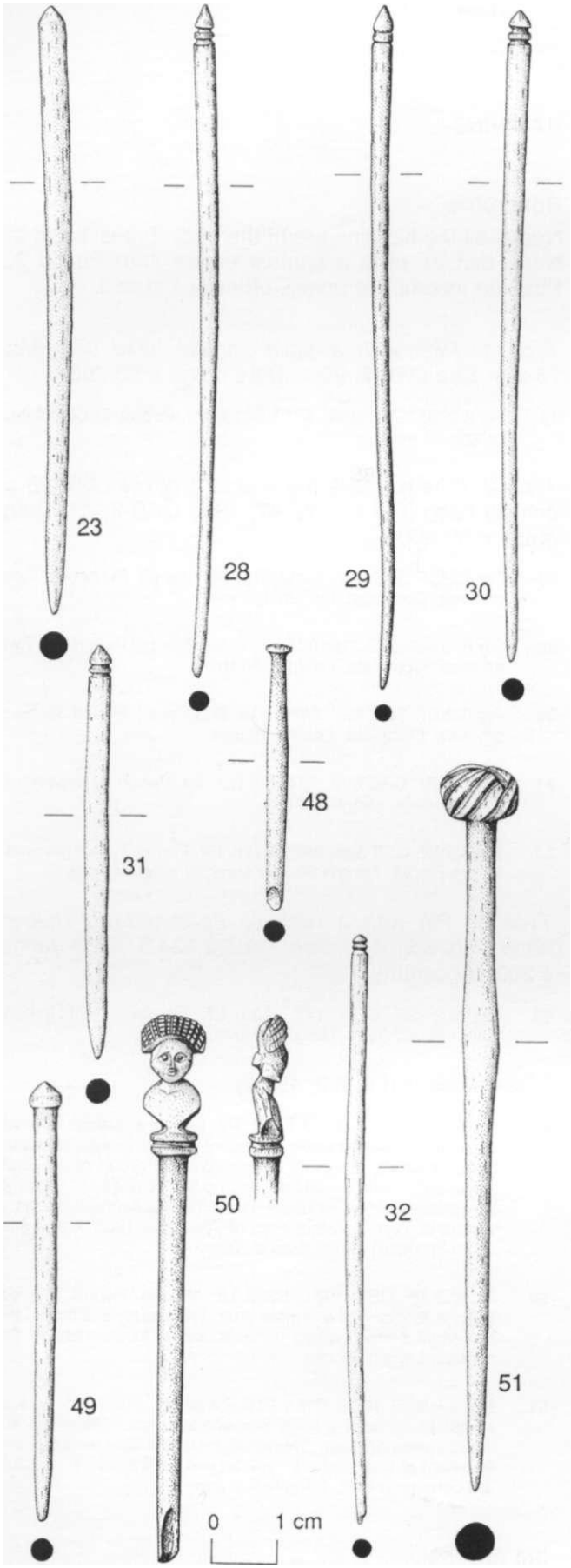


Fig 6.2 Bone hairpins. 1:1.

3 context. This early context indicates that this pin was probably of a form comparable to that from the First Pottery Shop, Colchester (Hull 1958, fig 77,6). Catalogued on microfiche.

Metal pins

Type 5. Pins with a groove or grooves below a flattened spherical head (Fig 6.3; **54**). Date range 2nd century. The example catalogued here was found with several Type 2 bone pins, thus giving support to the comparison between the two forms drawn in *CAR* **2**, 30.

54 Fig 6.3 SF GBS 321/324(C), A438/A456 F79. Shallow pit. Period 3b. A copper-alloy pin in two pieces, the tip is missing. Length 77 mm. Two grooves beneath the flattened spherical head form a false cordon.

Miscellaneous (Fig 6.3; **55-56**)

55 Fig 6.3 SF GBS 167(C), A141 L1. Topsoil. Post-Roman. Copper-alloy with white-metal coating. A pin head in the form of a flat-backed human head set above two flat circular elements, each with confronting lunular cut-outs. Both sides are decorated with tiny punched dots set around the outer margin and the cut-outs, with a line up the centre of the back of the head. Length 23 mm.

This pin belongs to a group with a southerly distribution, indicating a date-range within the 1st century, possibly even pre-Flavian. The elements of the head are variable. One example from London (Wheeler 1930, fig 32,3) has a lunula resting on its back, and another from London has a simple knob (Liversidge 1968, fig 61,d). This latter also has two spherical pendants, or jangles, hanging from the lowest cut-outs. An example from Cirencester (Viner 1982, fig 28,39) is similar to the knobbed London pin, and may also have had pendants. A complete example with a human head above a more complex flat element than that of the Gilberd School pin was found at Dorchester, Dorset (Davies *et al* 1983, fig 3,1). As well as the human head in common with the Gilberd School example this latter pin (identified by the excavators as a dress pin) also has on the flat element lunular cut-outs and tiny punched dots. Another pin fragment

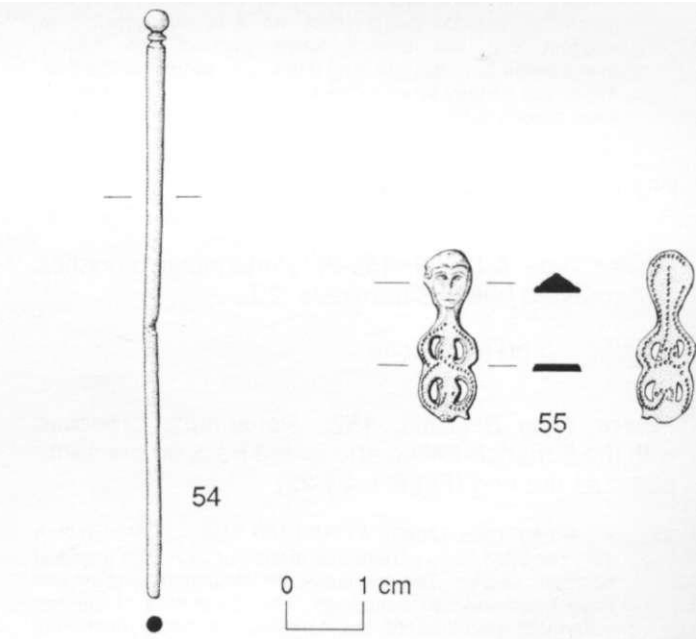


Fig 6.3 Metal hairpins. 1:1.

with a human head similar to the Gilberd School piece derived from a Period 2 level on the Culver Street site (Fig 6.3,279).

BEADS

Gadrooned beads

Melon beads (Fig 6.4; **57-65**). These beads are by far the most numerous on the site, appearing first in Period 2. Date range 1st-2nd century.

57 Fig 6.4 SF GBS 1066, B133 F23. Pit. Period 3. Length 15 mm, diameter 22 mm. Turquoise frit.

Annular bead

Plain annular bead (Fig 6.4; **66**)

66 Fig 6.4 SF GBS 1086, B205 L8. Midden. Period 3. Diameter 17 mm. Translucent sky blue glass.

Short beads (length more than but less than 9/10 diameter)

Short biconical beads (Fig 6.4; **67-68**)

67 Fig 6.4 SF GBS 1141, B301 L20. Dump/redeposited destruction debris: destruction of Building 135. Period 2 or 3a. A short biconical bead of opaque green glass. Length 3 mm, diameter 5 mm.

Long bead (length more than 1 1/10 diameter)

Long cylinder bead (Fig 6.4; **69**)

69 Fig 6.4 SF GBS 827(C), A1938 F250. Pit. Period 1. A copper-alloy cylinder with transverse mouldings. Similar objects from a cremation at Winchester have been interpreted as beads (N Crummy forthcoming), though the Period 1 context of this object suggests that it is a fragment of military equipment rather than a bead. Length 17 mm, diameter 12 mm.

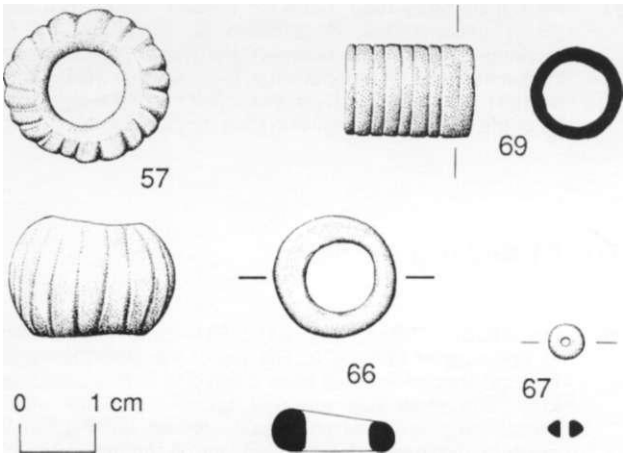


Fig 6.4 Beads. 1:1.

ARMLETS

Shale armlets

Plain (**70-71**)

Catalogued on microfiche.

FINGER-RINGS (Fig 6.5; **72**)

72 Fig 6.5 SF GBS 746, A1540 L101. Dump: demolition of Building 131. Period 2. Fragment (in two pieces) of a plain copper-alloy finger-ring. Internal diameter 14 mm; rectangular section, height 4 mm, thickness 1 mm.

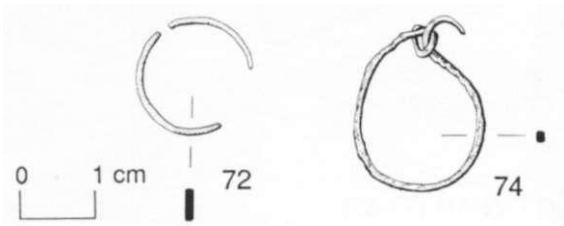


Fig 6.5 Finger-ring and ?earring. 1:1.

INTAGLIO (Fig 6.6; **73**)

73 Fig 6.6 SF GBS 960, B13. Clearance. Unstratified. Martin Henig writes: A cornelian intaglio, ovoid with a convex upper face (Form B4/5), and with a small chip missing on the right side. Maximum dimensions 12 by 10 by 4 mm. The device represents Pan standing to the front and facing left (impression). He holds a staff with a curved end *(pedum* or *lagobolon)* in his left hand, and in his right an object which looks like a small cornucopia but which is probably a syrinx. There is a ground line.

The intaglio is well cut and the figure fills the field of the gem well. It may be assigned to the Small Grooves Style (Maaskant-Kleibrink 1978, 251) and dated to the 2nd century AD. There is a close parallel upon a cornelian in Hanover (Zazoff 1975, no 1485), and note also red jaspers from Vindolanda (Henig 1978, App 40) and from near Cleves (Maaskant-Kleibrink 1978, no 745).

It is, of course, very possible that the figure was interpreted as the Latian deity, Faunus, whose worship in East Anglia at Thetford is attested in the late 4th century (Hutchinson 1986, 136-7).

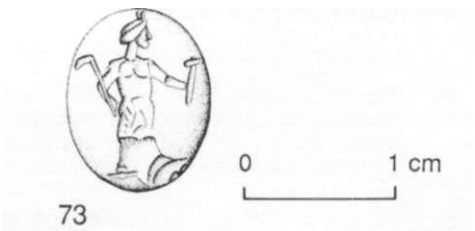


Fig 6.6 Intaglio. 2:1.

EARRING (Fig 6.5; **74)**

74 Fig 6. 5 SF GBS 994(C), A2372 F310. Trench: Building 131. Period 2. A loop of thin wire with one end damaged, it seems to have formed a hook. Possibly an earring. As Allason-Jones 1984, Type 3. Diameter 18 mm.

BUCKLES AND BELT-FITTINGS (Fig 6. **7; 75-76)**

75 Fig 6.7 SF GBS 1276, A245. Cleaning. Roman. An iron D-shaped buckle loop. The bar of the D has been broken and the buckle forced open. Length 44 mm, maximum width (distorted) 58 mm. Possibly from harness rather than a belt.

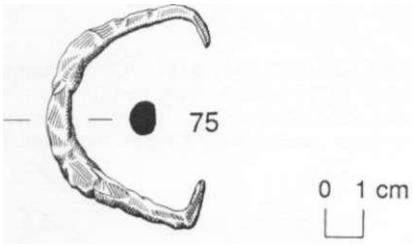


Fig 6.7 Buckle. 1:2.

FOOTWEAR (77-87)

Several groups of hobnails were found in pits dating from Period 1 or 2 to Period 3b. Though many were corroded together in strips, no complete sole pattern could be established. Catalogued on microfiche.

CATEGORY 2:
Toilet, surgical or pharmaceutical instruments

All objects are of copper-alloy unless otherwise stated.

MIRRORS (Fig 6**.8; 88-89)**

88 Fig 6.8 SF GBS 592(C), A1111. Unstratified. Period 3. A fragment of sheet speculum probably from a rectangular mirror, though the surviving original side is not perfectly straight. Maximum length 36 mm, maximum width 30 mm.

89 Fig 6.8 SF GBS 733(C), A1592 L100. Make-up. Period 2. A fragment from a small round mirror of speculum. Diameter 78 mm. The rim is quite rough. Two concentric incised grooves are set about 4 mm in from the rim, with a further pair 19 mm in, and there is an incised circle at the centre. Mirrors of this size were usually fitted into a wooden frame which completely covered one face (N Crummy forthcoming). No traces of organic material survived in this case to indicate which face was covered, so the problem arises as to whether the incised grooves and circle are decoration on a reflective face or served as 'keying' on a covered face, or whether the mirror was set in a frame which left both faces exposed. The rough rim certainly indicates the presence of some sort of frame originally.

NAIL-CLEANER (Fig 6.8; **90)**

90 Fig 6.8 SF GBS 531, A971 L2. Topsoil. Period (3 +) 4. A nail-cleaner of Type 1a, with a simple flat shaft, which tapers only slightly from the suspension loop to the points. The upper part of the loop is missing, as is most of each point. Similar to *CAR* **2,** fig 62**,1869.** Length 39 mm. Type 1a is dated to the second half of the 1st century, possibly surviving into the 2nd century.

TWEEZERS (91)

Catalogued on microfiche.

TOILET SPOONS (Fig 6.8; **92-95)**

with small round flat or cupped scoop

92 Fig 6.8 SF GBS 546(C), A907 L42. Dump. Period 3a. A small spoon from a set with the flattened upper end of the shaft pierced for suspension. Length 46 mm. Cupped scoop, diameter 5 mm. Similar to *CAR **2**,* fig 64,1900.

93 Fig 6.8 SF GBS 381(C), A610 F103. Terrace. Post-Roman. A small spoon from a set with a shaft curled at the top to form a suspension loop. The loop is at an angle to the plane of the scoop. Length 46 mm. Cupped scoop, diameter 5 mm.

94 Fig 6.8 SF GBS 1088, B205 L8. Midden. Period 3. A bone ?toilet spoon. This identification is suggested by the similarity of the angle between shaft and ?scoop on this implement and on copper-alloy toilet spoons *(CAR* **2**, fig 64,1901,1907). Alternatively, the object may be a stylus. The tip of the shaft is missing. Surviving length 81 mm.

TOILET SET (Fig 6.8; **96)**

96 Fig 6.8 SF GBS 155(C), A162 F11. Lime pit. Medieval. 1) Nail-cleaner of Type 2. The top of the object is roughly lozenge-shaped and has been pierced to form a suspension loop. The shaft has marginal grooves and six parallel transverse grooves, which cross the former, running from the neck to the base of the shoulders. A groove runs from between the splayed points (one is missing) up towards the shoulders, but peters out before meeting the lowest transverse groove. The cleaner has been cut from sheet metal and the decoration cut cold. Length 38 mm.

2) Tweezers. The blades are parallel-sided for most of their length but flare outwards at the curved tips. They have marginal grooves. As with the nail-cleaner these tweezers have been cut from sheet metal and the grooves cut cold. Length 35 mm. 3) The suspension loop of a third instrument with a narrow circular-section shaft, probably a spoon. All three pieces are held on a fragment of a wire ring.

SPATULA-PROBE (Fig 6.8; 97)

97 Fig 6.8 SF GBS 1098, B208 F25. Pit. Period 3 or 4. A complete spatula-probe with a stylised angular leaf-shaped spatula blade that has been blunted at the tip. Length (bent) 99 mm.

SPATULA (Fig 6.8; 98)

98 Fig 6.8 SF GBS 266(C), A279 L9. Dump. Period 3a. A small leaf-shaped spatula blade cut from a piece of sheet metal. The surviving short fragment of a shaft was formed by curling up the sides of a sheet metal strip. Length 31 mm.

PROBES (99-**101)**

Two of the three probes catalogued on microfiche were probably originally from a double-ended instrument such as a spatula-probe. The third has no shaft remaining.

MISCELLANEOUS INSTRUMENTS (Fig 6.8; **102-103)**

102 Fig 6.8 SF GBS 653(C), A1301 L66. Dump. Period 3. A shaft of flattened circular section surmounted by a flattened notched head above which is a suspension loop. Length 40 mm. Possibly from a nail-cleaner or a pick.

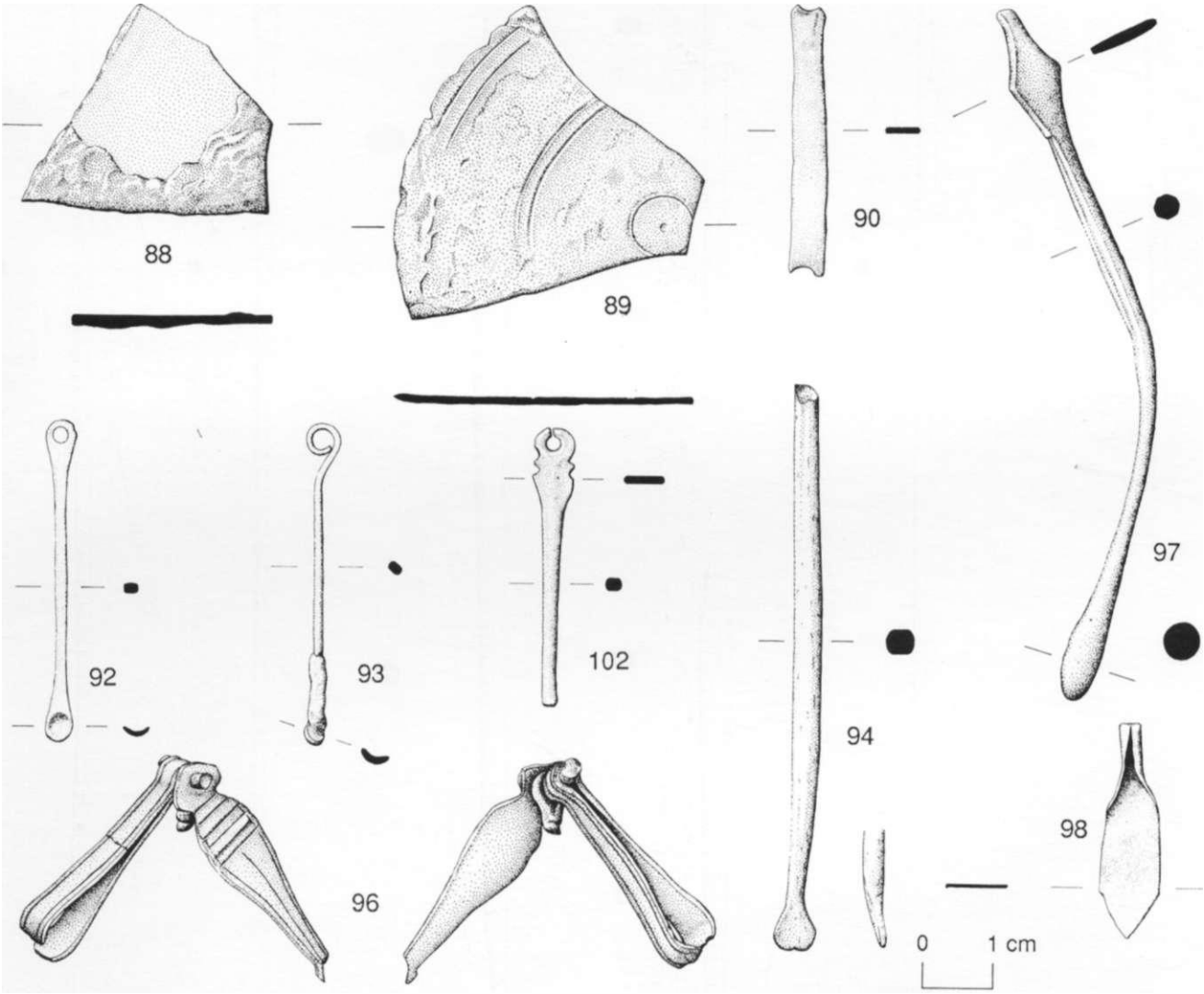


Fig 6.8 Toilet, surgical or pharmaceutical instruments. 1:1.

CATEGORY 3:
Objects used in the manufacture or working of textiles

NEEDLES

SEWING NEEDLES

Type 1. Needles with a pointed head (Fig 6.9; **104-111).** *See CAR 2,* 65.

a) rectangular eye

104 Fig 6.9 SF GBS 1064(C), B159 F11. Robber trench for Building 137. Medieval. Copper-alloy. Complete. Length 82 mm. There is an incised line above and below the eye.

105 Fig 6.9 SF GBS 445(C), A757 L28. Dump. Post-Roman. Copper-alloy. Complete. Length 129 mm.

b) round eye

106 Fig 6.9 SF GBS 185, A200 L1. Topsoil. Post-Roman. Bone. Very tip missing. Length 68 mm.

c) figure-of-eight eye

108 Fig 6.9 SF GBS 83, A78 F3. Large rubbish pit. Modern. Bone. Tip missing. Length 65 mm.

d) many-eyed

111 Fig 6.9 SF GBS 644, A1233 F172. Pit. Period 3. Bone. Complete. Length 157 mm. A more or less rectangular eye between two round eyes.

Type 2. Needles with a flat spatulate head (Fig 6.9; **112-118).** *See CAR 2,* 65-7.

a) rectangular eye

112 Fig 6.9 SF GBS 385(C), A648 L9. Dump. Period 3a. Copper-alloy. Complete. Length 139 mm.

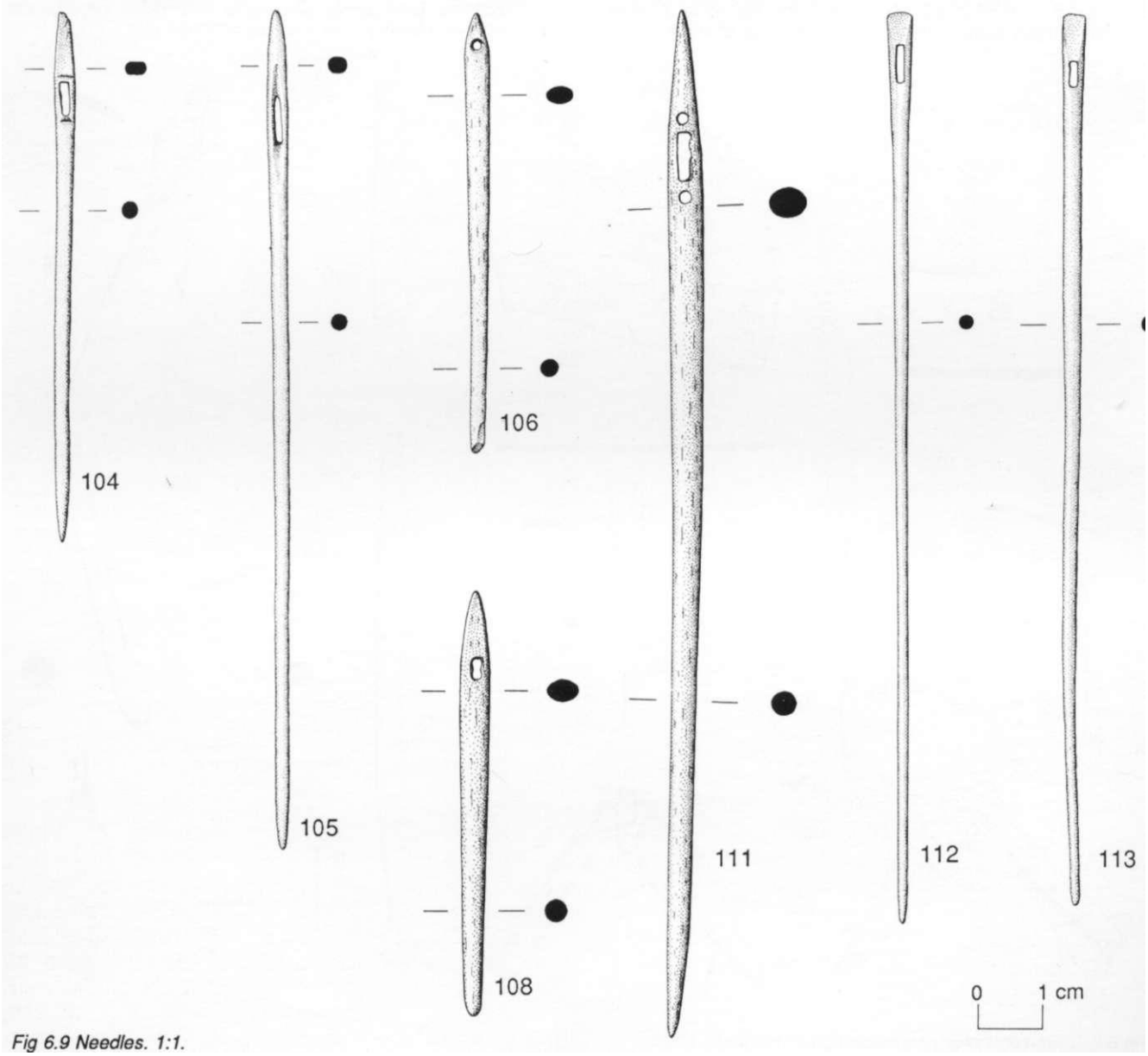


Fig 6.9 Needles. 1:1.

113 Fig 6.9 SF GBS 1037(C), B118 F28. Pit. Period 3. Copper-alloy. Complete. Length 136 mm.

Needle fragments (119)

A fragment of a bone needle which has been stained green is catalogued on microfiche. The staining indicates a date for the fragment in the 1st or 2nd century *(CAR* 2, 20).

WEAVING COMB (Fig 6.10; 120)

120 Fig 6.10 SF GBS 1074, B143 F28. Pit. Period 3. A bone weaving comb, complete except for one missing and one broken tooth, and for one corner of the upper end which has fractured across a suspension hole. Maximum length 142 mm, maximum width 44 mm. On the reverse of the comb the rough inner tissue of the bone has not been removed except for a triangular patch at the top on the side of the suspension hole. At least two reasons for leaving the cancellous tissue are possible. First, had it been removed the comb would have been much thinner and therefore weaker. Second, the rough surface allows a much firmer grip to be taken on the comb. It seems likely that the smooth face lay next to the palm, with the thumb resting against a pad of cancellous tissue at the centre/right. Maximum downward pressure would thus be applied (left on the illustration) at the base of the teeth, on the very two teeth that have broken. The cancellous tissue has been worn in that area, in such a way that indicates pressure down towards the base of the teeth. Moreover, the surviving teeth on that side are also all shorter than those on the opposite side, suggesting that they have been worn down by use.

Such implements are most commonly found in Iron Age contexts, though earlier examples are known (Cunliffe 1978, 287; Hodder & Hedges 1977, 17) and the form survives into the early Roman period, during which time they seem to be most common on northern military sites. They are almost exclusively British, apart from one example from a Middle and Later Bronze Age context at Birka, Sweden *(ibid).* Doubt has been cast on the identification of these objects as weaving combs by Hodder and Hedges *(ibid),* who offer and discuss alternative functions. A full detailed discussion of the large group of combs from Danebury can be found in Sellwood 1984, 371-8.

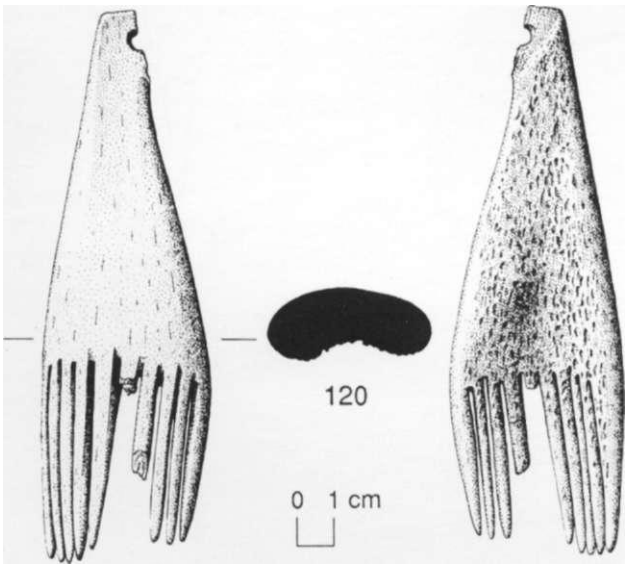


Fig 6.10 Weaving comb. 1:2.

CATEGORY 4:
Household utensils and furniture

SPOONS

Type 1. Spoons with a round bowl (Fig 6.11; 121-124). This form is early, dating from the mid 1st century probably to the end of the 2nd century. The earliest example recorded here is 124, which derives from a Period 1 or 2 daub floor in Room 5 of Building 131.

121 Fig 6.11 SF GBS 570(C), A991 L48. Dump (demolition?). Period 3. The handle and part of the bowl of a copper-alloy spoon. Length of handle (bent) 99 mm. Diameter of bowl 22 mm.

122 Fig 6.11 SF GBS 625, A1220 L55. Dump. Period 3. A fragment of a round-bowled bone spoon with part of the handle. Length 54 mm, diameter of bowl 20 mm.

Type 3. Spoons with a mandolin-shaped bowl (125)

Only a fragment of this spoon, from an unstratified Roman context, survives and the identification of the bowl form is only tentative. Catalogued on microfiche.

OBJECTS USED IN THE PREPARATION OR SERVING OF FOOD

Shale trays (Fig 6.11; 126-128).

Date-range: 1st to early 2nd century. The two pieces catalogued on microfiche are only tentative identifications. One is from post-Roman topsoil, and the other from an unstratified Roman context.

126 Fig 6.11 SF GBS 391(C), A648 L9. Dump. Period 3a. A fragment possibly from a rectangular tray with a moulded edge. The upper surface of the piece has split off in two places along what may be lines of a design. Maximum dimensions 78 by 61 by 13 mm thick.

Shale vessel (Fig 6.11; 129)

129 Fig 6.11 SF GBS 1286, A85 L1. Topsoil. Post-Roman. A sherd of a shale vessel. The fragment has laminated badly and its location relative to the base and wall of the vessel is uncertain. Maximum dimensions 49 by 41 mm, approximately 6 mm thick.

Copper-alloy **vessels** (Fig 6.11-12; 130-134)

Complete, or even nearly complete, copper-alloy vessels are not common as site finds at Colchester, with the more robust elements such as handles being all that usually survives. The recovery from the Gilberd School of 130, 132, and 133 is probably due to the comparatively undisturbed nature of the early Roman deposits. Two of the pieces are of pre-Flavian

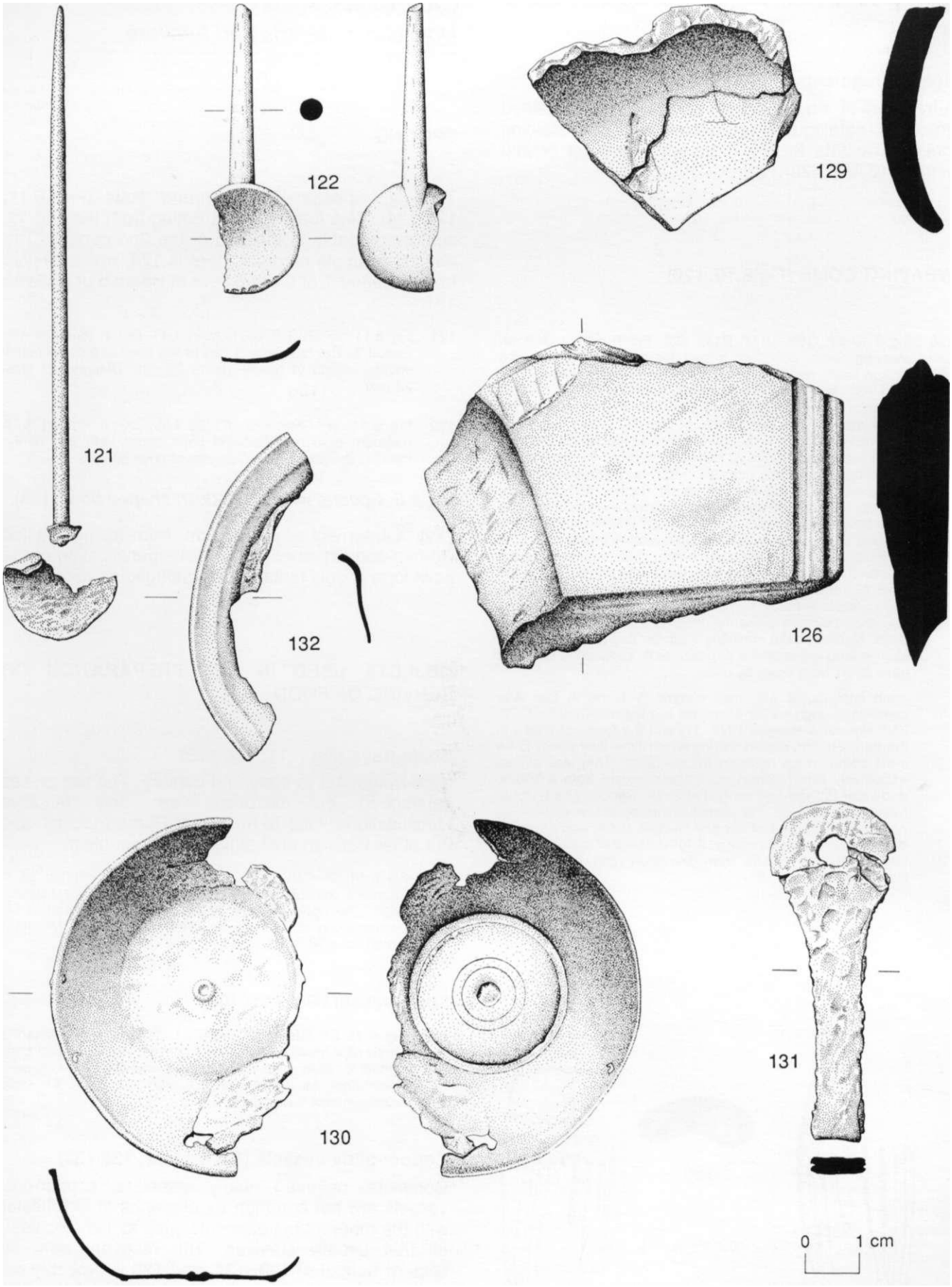


Fig 6.11 Spoons, shale tray fragment, shale vessel fragment, copper-alloy vessel fragments. 1:1.

date, the dish **133** and the skillet handle **131,** both from AL47, a Period 2 scorched floor in Building **134.** Two other pieces also show signs of burning, the ?cup **130** and the rim or footring **134.** These may also therefore be pre-Boudican in origin, as may **132,** which derives from Period **3** dump.

130 Fig 6.11 SF GBS 753(C), A1636 F95. Pit/scoop for midden. Period 3. Part of a small distorted and ?burnt cup, bowl, or small skillet with a very slight rolled-over rim. The underside rests on a footring. The object was shaped by spinning on a lathe. The positions of the lathe centres (both apparently single-projection cup centres) on both the inside and underside of the base are marked by flattened projections with central hollows. Two concentric grooved circles have been cut into the metal around the projection on the underside. Internal diameter approximately 57 mm, height 21 mm. Compare with the skillet of unknown provenance in Tassinari 1975, pl 2,8, which is equally small (diameter 57 mm) but has a distinct rim.

131 Fig 6.11 SF GBS 774(C), A1643 L47. Scorched floor: Building 134. Period 2. The corroded handle of a small skillet with a rounded and pierced terminal. There are traces of repousse mouldings at the terminal. Length 63 mm.

132 Fig 6.11 SF GBS 641(C), A1250 L66. Dump. Period 3. Part of a small bowl or skillet with a flared rim. Diameter (distorted) between 55 and 70 mm.

133 Fig 6.12 SF GBS 524(C), A1026 L47. Scorched floor: Building 134. Period 2. A badly burnt and corroded shallow dish with a broad flat rim and simple base. A pair of grooves close to the outer edge of the rim form a decorative moulding. There is a single groove at the inner edge. Around the rim are set twelve knobs (one is missing). The top of each knob rises well above the level of the rim, though the underside is level with the underside of the rim. This indicates that the dish was cast. The cast vessel was then finished (turned) on a lathe, for a clear indented cup centre mark can be seen on the inside of the dish and the large circular hollow on the underside shows the position of a wider spur centre, which had two or more projections. Diameter (excluding knobs) 110 mm, height 14 mm.

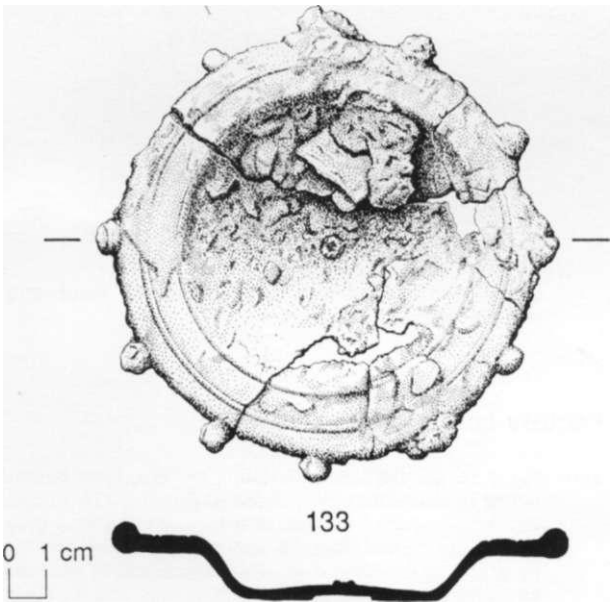


Fig 6.12 Copper-alloy dish. 1:2.

Gridiron (Fig 6.13; **135)**

135 Fig 6.13 SF GBS 1181(C), B400 F68. Gridiron resting on tile fragments: Building 133, Room 2. Period 2. A large three-legged semicircular gridiron. A bar with a flammiform terminal projects inwards from the leg set in the centre of the curved side, and parallel to the straight side of the semicircle is an internal bar. Four inner curved rungs on each side are welded to both these features in such a way that the internal pattern resembles a many-branched candelabrum. The leg on the curved side is strengthened by two D-shaped loops. Maximum length along the straight side 503 mm, maximum width 298 mm.

No close parallel has been found for this gridiron, which is clearly unrelated to the small portable rectangular gridirons favoured by the Roman army. However, Halbout *et al* (1986, 84) list a D-shaped gridiron (*en forme d'arche)* from Rouen. This piece, unfortunately not illustrated, is somewhat smaller and less elaborately-constructed than 135, and is dated to the late 2nd to early 3rd century.

Quernstones (136-43)

Only small fragments from quernstones were recovered, all are of lava, probably from the German Mayen quarries (Buckley & Major 1983, 75), and most are very weathered. They are catalogued on microfiche. In only a few cases can a guess be hazarded as to whether the fragment(s) derive from an upper- or a lower-stone. When the numbers of quernstones from the military and early colonial levels of Culver Street (pp 158-61), Lion Walk and Balkerne Lane *(ibid,* 73-5) are considered, this collection from the Gilberd School, with its well-preserved pre-Flavian stratigraphy, is disappointing.

Stone mortars (Fig 6.13; **144-145)**

145, catalogued on microfiche, is a ?dished mortar of very weathered ?gastropodic limestone found in redeposited Boudican destruction debris from Building 134. One large and over forty small fragments of the vessel were recovered.

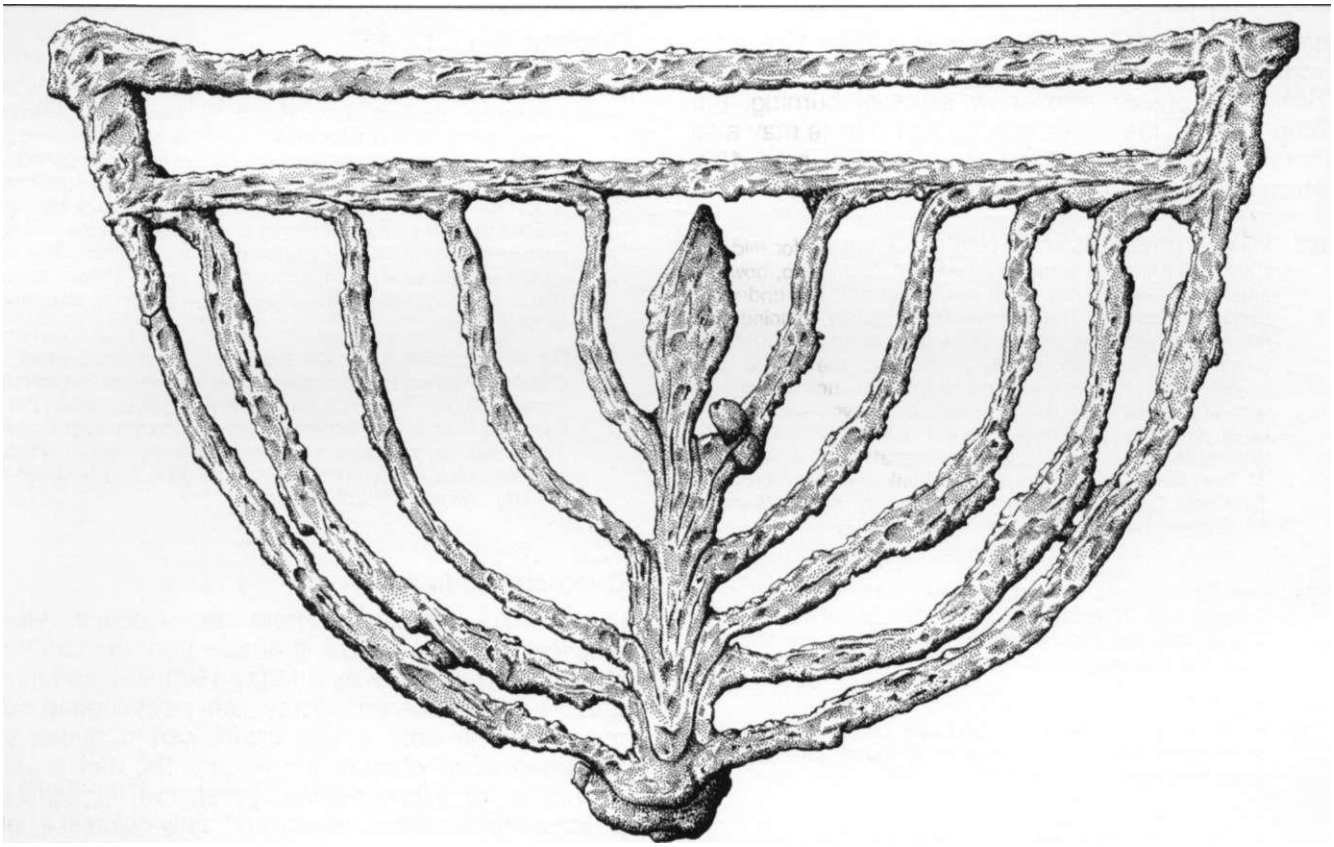
144 Fig 6.13 SF GBS 712, A1405 L66. Dump. Period 3. A fragment of a large mortar made from a pink-orange and grey granite. The wall slopes inwards slightly. Surviving height 144 mm, external diameter approximately 510 mm, internal diameter 460 mm.

LAMPS

Only some of the lamps have been published here. These extend the range of designs in *CAR 2.* It is hoped to publish the material more fully elsewhere.

Picture lamps (Fig 6.14; **146-149)**

146 Fig 6.14 SF GBS 865, A2051 F211. Pit. Period 1. A fragment of a lamp of buff fabric with a reddish-brown slip, unevenly applied. Probably Central Gaulish. Only part of the discus survives, showing a design of a winged figure with right arm stretched outwards and downwards, holding an object close to the chest in the left hand. Possibly Cupid, as Loeschcke 1919, Taf 5,22.



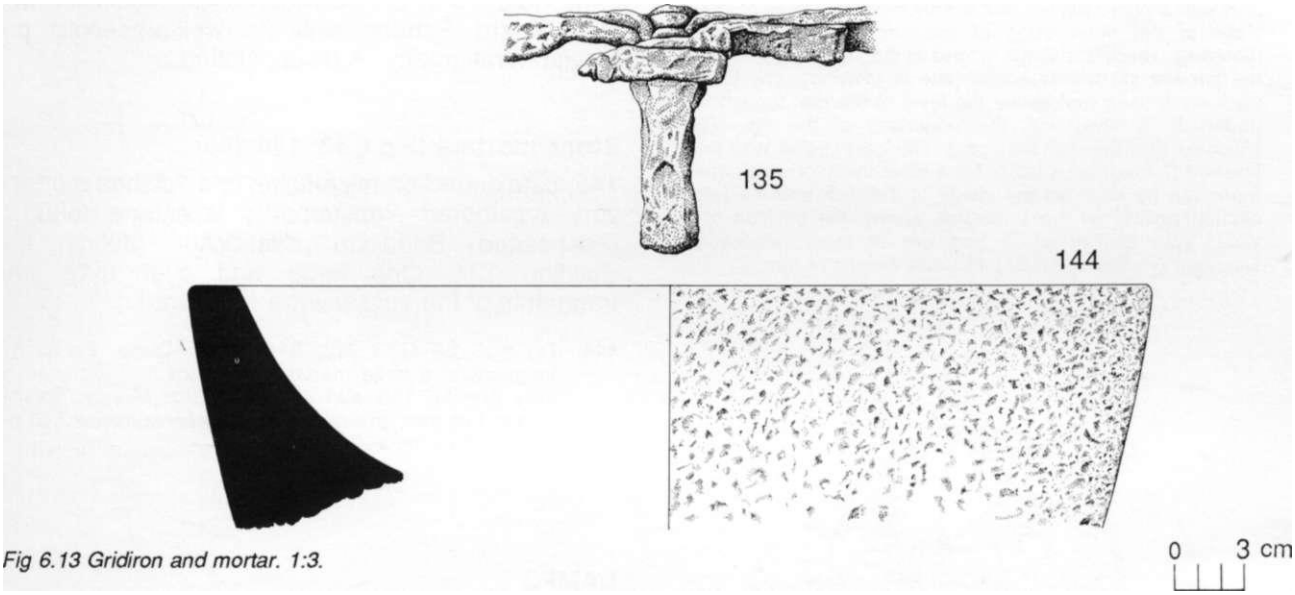


Fig 6.13 Gridiron and mortar. 1:3.

147 Fig 6.14 SF GBS 63, A35 F2. Pit. Modern. A discus and shoulder fragment from a lamp of probable Italian manufacture. The fabric is hard and creamy-white, with an evenly-applied orange-brown slip. The fragment is decorated with a well-moulded figure of Diana.

148 Fig 6.14 SF GBS 1028, A2405 L265. Make-up: Building 131, Room 4. Period 1 or 2. A small fragment from the centre of a discus showing the head of Hercules wearing a lion's skin *(ibid,* Taf 7,395). Probably Central Gaulish. The fabric is buff coloured, with a yellowy-brown slip.

149 Fig 6.14 SF GBS 851, A1878 F237. Pit(s). Period 3. A small locally-made lamp, complete except for the end of the nozzle, which was probably rounded as Loeschcke's Type 4. The fabric is buff coloured and apparently unslipped. The discus is decorated with an eight-petalled floret, and the shoulder is coarsely rouletted.

Factory lamp (Fig 6.14; 150)

150 Fig 6.14 SF GBS 583, A1044 L45. Boudican destruction debris (redeposited): destruction of Building 134. Period 2 or 3a. A fragment of the top of a factory lamp in a grey-buff fabric. The central discus is very slightly dished and defined by a ring of punched dots. The comparatively wide sloping shoulder bears three further rings of dots and an outer ring of short slanting grooves, 'feathering'. This lamp is unlikely to be of local manufacture, and resembles Mediterranean examples.

Open lamps (Fig **6**.14; **151-152)**

151 Fig 6.14 SF GBS 903/941, A2160/L93 (Period 2 dump) and A2131/L228 (Period 1 or 2 occupation). Building 131. Period 1 or 2. Most of an open lamp probably of Loeschcke's Type 11, figure-of-eight-shaped. Most of the nozzle is missing. At each side there are traces of burning on the wall at the junction with the nozzle. The fabric is hard and pinky-beige.

152 Fig 6.14 SF GBS 779(C), A1623 L112. ?Occupation. Period 1 or 2. A severely corroded iron lamp which could only be partially cleaned to aid illustration. The body of the lamp has a flat base with straight walls, similar in form to ceramic lamps of Loeschcke's Type 11. The wall slopes backwards at the rear end, and its upper edge rises. The edge is surmounted by two loops, one of which projects over the inside of the lamp, the other over the outside. The function of these rings is obscure. They may have provided some means of suspending or carrying the lamp. A fragment of a rectangular-section bar projects backwards from below the outermost ring. This may be all that remains of a handle. Total length 140 mm.

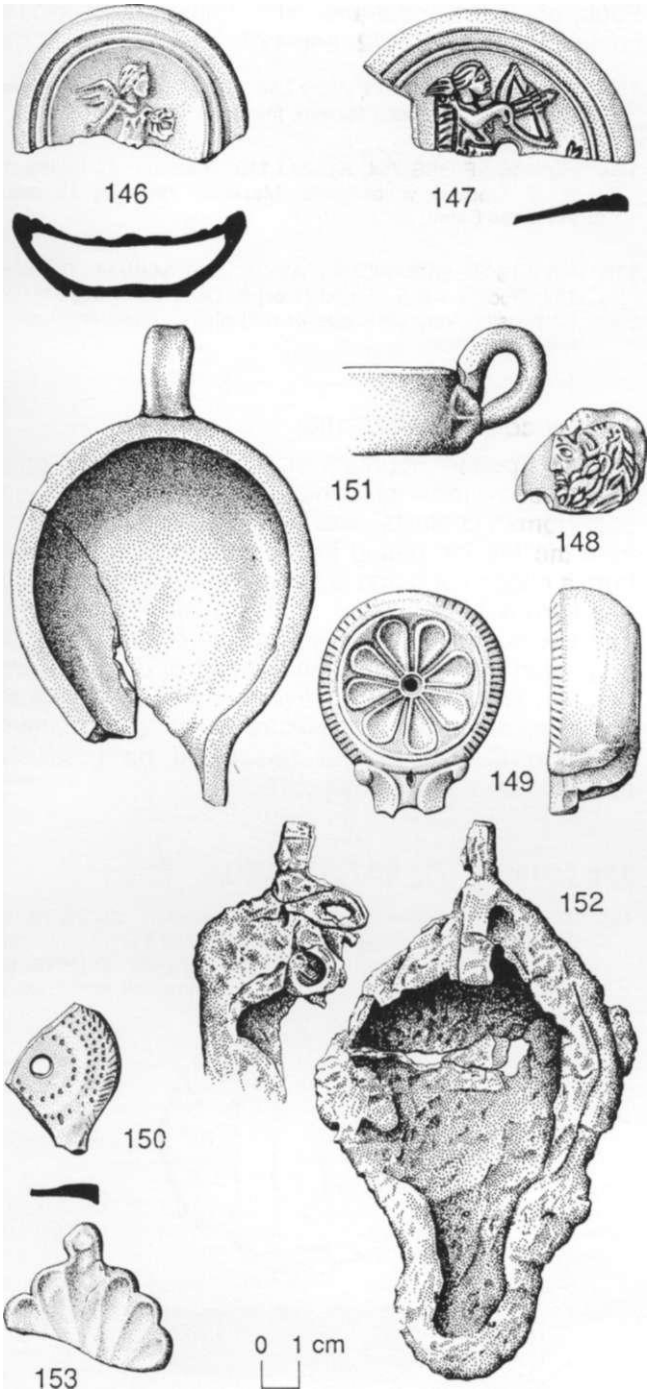


Fig 6.14 Lamps. 1:2.

Ceramic lamp imitating a metal form (Fig **6**.14; **153)**

153 Fig 6.14 SF GBS 988, A2348 L250. Occupation: Building 131. Period 1 or 2. A leaf-shaped sherd of Central Gaulish green-glazed ware possibly from a lamp. Some lamps made of copper alloy have a leaf-shaped reflector attached to the vessel opposite the nozzle. This sherd is markedly dished on one face, probably that facing the nozzle, and slightly dished on the other, which has the remains of a slight ?boss, now mostly missing, in the centre.

FURNITURE FRAGMENTS AND FITTINGS

Handles (Fig **6.15; 154-156).**

Two iron ?handle fragments, both from Period 1/2 contexts, are catalogued on microfiche.

154 Fig 6.15 SF GBS 737(C), A1604 L47. Scorched floor: Building 134. Period 2. A fragment of a copper-alloy ring-handle, probably from a box, with distinctive moulded section (almost identical to *CAR* **2**, fig 85,2116). External diameter (distorted) 41 mm.

BOX FITTINGS (Fig **6.15; 157-158)**

158, catalogued on microfiche, is a composite stud of a type usually associated with wooden boxes.

157 Fig 6.15 SF GBS 56(C), A37 L1. Topsoil. Post-Roman. A (leaded) gunmetal spindle-shaped stud with an iron shaft of which only a short length survives (alloy analysis by Justine Bayley of the AML). This stud is similar to the 'bell-shaped' studs which may be interpreted variously as box fittings associated with the Roman military, or as short sword or dagger pommels (Allason-Jones 1985). Diameter 18 mm, surviving length 28 mm. *(See* also the miscellaneous fitting Fig 6.47,573.)

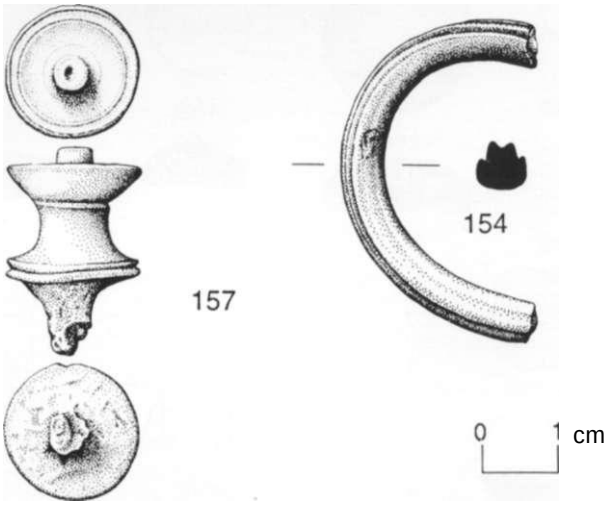


Fig 6.15 Ring-handle fragment and ?box stud. 1:1.

CATEGORY 5:
Objects used for recreational purposes

COUNTERS FOR BOARD GAMES

Bone counters

Type 1. Plain counters (Fig 6.16; **159-167).** The absence from the Gilberd School site of Type 2 counters, which are decorated on the obverse with concentric grooves (eg *CAR* **2,** fig 94**,2268),** implies that they are of later date than plain Type 1 counters, which appear as early as Period 1 in Colchester (eg Fig **5**.24**,645).** A difference in date between the two types was not apparent from the counters listed in *CAR* **2** (91), though it was suspected by Stephen Greep *(ibid,* 97, note 1).

159 Fig 6.16 SF GBS 109, A121 F5. Rubbish pit. Modern. The obverse is countersunk and bears an indentation from a lathe centre. The reverse has a rough central groove, the result of using a long bone for the manufacture of the counter (A MacGregor 1976, 4). Diameter 23 mm, thickness 4 mm.

160 Fig 6.16 SF GBS 206, A212 F42. Pit(s). Post-medieval. Both surfaces are flat. The edges are bevelled. Four parallel marks on one face *may* be graffiti, but oblique marks of similar appearance on the other face are tool marks made during shaping of the flat panel from which the counter was cut. Diameter 13 mm, thickness 2 mm.

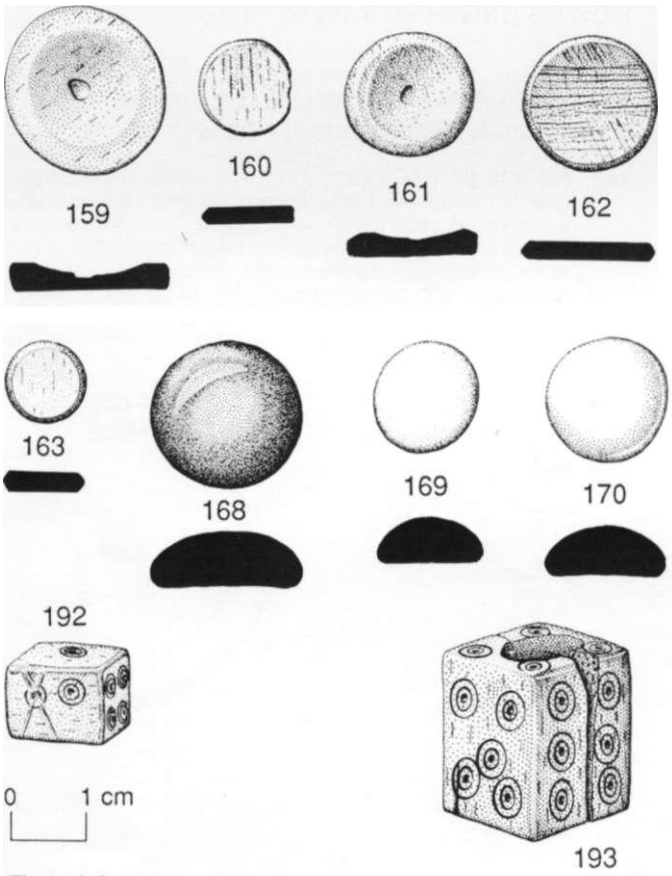


Fig 6.16 Counters and dice. 1:1.

161 Fig 6.16 SF GBS 315, A377 F27. Pit. Period 3b. The obverse is countersunk and has an indentation from a lathe centre. The reverse is flat. Diameter 18 mm, thickness 3 mm.

162 Fig 6.16 SF GBS 749, A1284 F144. Slot; for partition wall? Building 136. Period 2. Both surfaces are flat. The edges are bevelled. Diameter 18 mm, thickness 3 mm.

163 Fig 6.16 SF GBS 983, A2338 L101. Dump: demolition of Building 131. Period 2. Both surfaces are flat. The edges are bevelled. As with **160** there are marks on both faces which are interpreted as tool marks from manufacture. Diameter 11 mm, thickness 3 mm.

Glass counters (Fig 6.16; 168-174)

Four of these counters are from pre-Boudican contexts, **169, 170, 172,** and **173.**

168 Fig 6.16 SF GBS 553, A939 L44. Dump. Period 3. Opaque black glass. Diameter 20 mm, thickness 7 mm.

169 Fig 6.16 SF GBS 754, A1623 L112. ?Occupation. Period (1 or) 2. Opaque white glass. Maximum diameter 15 mm, thickness 6 mm.

170 Fig 6.16 SF GBS 1001(C), A2376 L255. Make-up: Building 131, Rooms 4 & 5. Period (1 or) 2. Corroded opaque black (or possibly very dark blue or red) glass. Diameter 17 mm, thickness 7 mm.

Pottery counters (175-188)

Fourteen pottery counters or counter fragments only were recovered, of which six were found in post-Roman contexts, and five derive from pits dated from the Flavian period to the 2nd century. Two are from a midden or dump layer of 2nd century date, and one from a 'topsoil' layer of mid to late Roman date. The low number of counters recovered, with its high proportion (compared to the number of other Gilberd School small finds) deriving from post-Roman contexts, enhances the picture of pottery counters given in *CAR* ***2,*** where few could be positively assigned an early Roman date.

Tile counters (Fig 6.17; 189-191)

189 Fig 6.17 SF GBS 1288, B11. Unstratified. Clearance. A counter rough-out made from a fragment of a relief-patterned flue-tile with a chevron design, Lowther's die 29 (1948, fig 12). Maximum diameter 72 mm, thickness 18 mm. (*See* p 265, Type B4.)

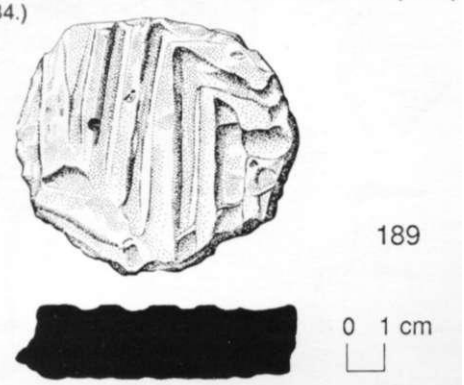


Fig 6.17 Tile counter, made from relief-patterned flue tile. 1:2.

BONE DICE (Fig 6.16; 192-194)

192 Fig 6.16 SF GBS 1224, B576 L81. Occupation (burnt): Building 133, Room 7. Period 2. An irregularly-shaped die, rectangular in section and tapering from the side marked four downwards. Maximum dimensions 14 by 11 by 13 mm. Opposite sides equal seven. The numerals are marked by double ring-and-dot motifs, well executed though somewhat irregularly laid out. On the side for five, two motifs only have been cut. One of these motifs has then been partly obliterated by an X which crosses the whole face and of which each bar has been cut several times. This is possibly a home-made die, or an apprentice-piece, abandoned because it was clear once the two existing ring-and-dot motifs on the five side had been cut that there would not have been room for a further three laid out in the correct pattern. It may imply bone working on or near the site.

193 Fig 6.16 SF GBS 743/1220, A1599/1604 L47. Scorched floor: Building 134. Period 2. A burnt bone die in three fragments (a small chip is still missing). Dimensions 21 by 18 by 21 mm. The die has been made from a long bone, with the marrow cavity passing from the four side to the three side. The numerals are marked by double ring-and-dot motifs. Only two have been cut on the three side. The marrow cavity fills the space between these two and does not allow room for the third to be cut. Rather than place the third at a corner, and thus provide potential confusion with four, the cavity itself seems to represent the third motif. A fragment of a similar die comes from the Lion Walk site *(CAR2,* fig 102,2501), but two of the four corners of its three side were missing, and the problem of the position of the third motif could not be resolved.

This burnt example from the Gilberd School may have formed a pair with **194** (catalogued on microfiche), a burnt die fragment found in a medieval pit, of similar dimensions to **193** and also made from a long-bone with the marrow cavity running from the four side to the three side.

CATEGORY 6:

Objects employed in weighing and measuring

SCALES (Fig 6.18; 195)

195 Fig 6.18 SF GBS 571(C), A1052 L46. Boudican destruction debris (redeposited): destruction of Building 134. Period (2 or) 3a. A fragment of a dish, possibly a scale pan. Diameter 56 mm. On the outer face there are pairs of slight grooves at the rim and the centre, and about midway between rim and centre. A ribbed fitting (like a bird's foot) is soldered on to the outside of the ?pan, and there is a trace of a second similar fitting at the broken edge.

FOLDING FOOT RULE (Fig 6.18; 195a & 195b)

195a-b Fig 6.18 SF GBS 821, A1890 & SF GBS 823, A1910 resp. Two fragments from a bone folding rule with copper-alloy terminals and central mechanism were recovered from a Period 3 pit (or pits), AF237. The larger fragment **(195a)** is marked on one face by three iron pins. From the surviving end of the piece to the centre of the central pin is 73.9 mm = 4 *digiti* = 1 *palma,* ie one quarter of the full length of the open rule. From the central pin to the centre of each flanking pin is 18**.5** mm = 1 *digitus,* ie one sixteenth of the full length of the rule. Only the central pin pierces the bone to show on the opposite face, where it marks the division of this half of the rule into two *palmi.* The smaller fragment **(195b)** almost certainly comes from the centre of the rule, with the misplaced piece of copper-alloy sheet all that remains of a pivoting latch mechanism (cf Wheeler 1946, fig 21,1). The two fragments do not, however, fit together, and it seems likely that **195b** may be the inner terminal of the second half of the rule, rather than the missing part of **195a.**

It is unusual for *unciae* (one *uncia* = one twelfth of a foot) not to be represented on a foot rule, as it is equally unusual for the full length of a rule not to be marked out into individual units, whether *unciae, digiti,* or *palmi.* For example, the copper-alloy rule from Princes Street, London *(ibid,* 83) is marked on one face into *digiti,* on another into *palmi,* and on one side into *unciae,* and the bone rule from Silchester is marked into *digiti, unciae, semis,* and *palmi* (Boon 1974, fig 41,19). However, though the Gilberd School rule fragment is not marked out along its full length, units of 1, 2, 3, 4, and 5 digits can be measured off using the points represented by the end of the rule and the three pins, and the centre point of the rule would provide a measurement of eight digits. The missing half of the rule may have been marked with *unciae,* though a maximum of six *unciae* may have been all that was marked.

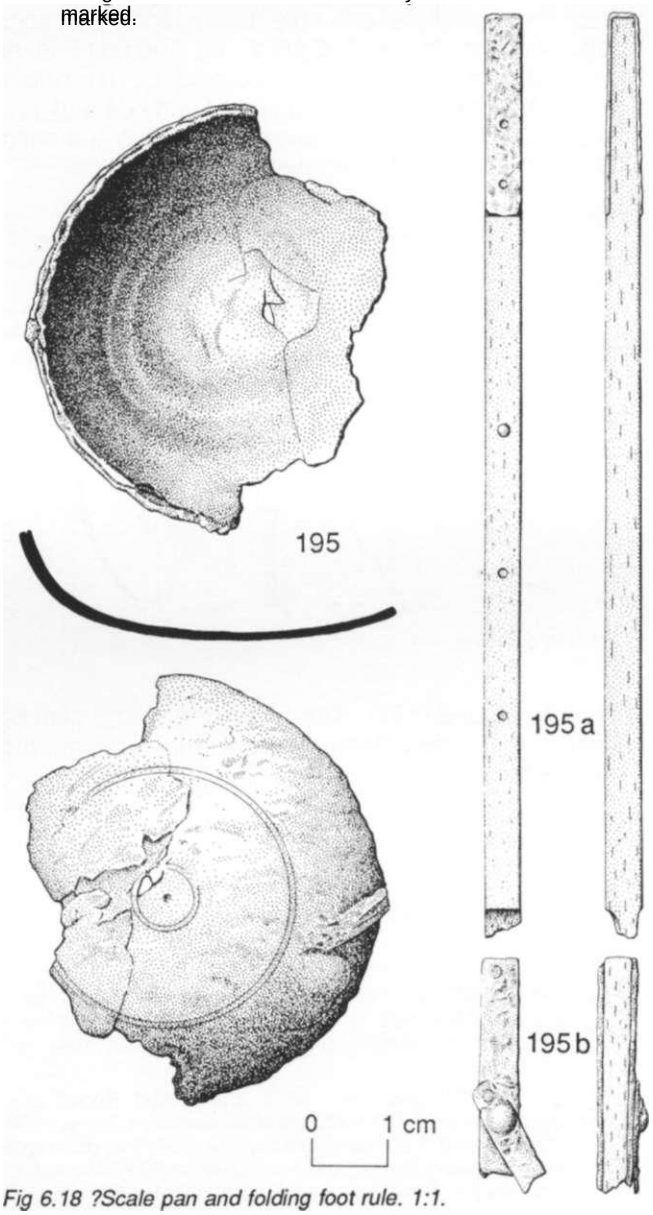


Fig 6.18 ?Scale pan and folding foot rule. 1:1.

The question must remain, however, as to whether the rule is a finished object or not. It may have broken during manufacture, for example, when a hole was drilled to take one of the main pins, or it may have been broken from wear received during its use. There is no firm evidence for bone-working on the Gilberd School site, though it may be inferred from the blundered die, Fig 6.16, 192.

CATEGORY 7:
Objects used for or associated with written communication

SEAL-BOXES

Type 1. Ovate (Fig 6.19; **196).** The description of Type 1 seal-boxes as set out in *CAR* **2** has been revised from acorn-shaped to ovate, as it is apparent from the complete example below that the acorn decoration on the box *CAR* **2,** fig 106,2517 is not diagnostic of the type. The context of the Gilberd School box confirms the suggested early date of Type 1, and it is now clear that this simple ovate leaf shape develops into the stylised leaf of Type **4** boxes.

196 Fig 6.19 SF GBS 665(C), A1337 L84. Occupation. Period 1 or 2. A complete hinged seal-box of ovate shape. The lid is plain, but coated with white metal. The base has three round perforations through which fibrous material, probably string preserved by wax, may be seen. There are two U-shaped notches, almost directly opposite each other, in the sides. More fibrous material is visible in the right-hand hole. Length 29 mm.

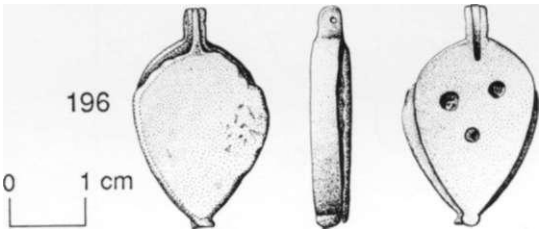


Fig 6.19 Seal-box. 1:1.

Type 2. Round **(197).** The base of a round seal-box was found in post-Roman dump. It is catalogued on microfiche.

STYLI (Fig 6.20; **198-199)**

198 Fig 6.20 SF GBS 710, A1391 F190. Scoop. Period 3. An iron stylus of Manning's Type 1 (1985, fig 24), with a point at one end and a shouldered small eraser. Length 138 mm.

199 Fig 6.20 SF GBS 1149, B362. Unstratified. Period 3b. An iron stylus with a shouldered small eraser as found on both Types 1 and 2 of Manning's classification. The other (point) end is broken. It seems to have been slightly flattened, bent and twisted. Surviving length 111 mm.

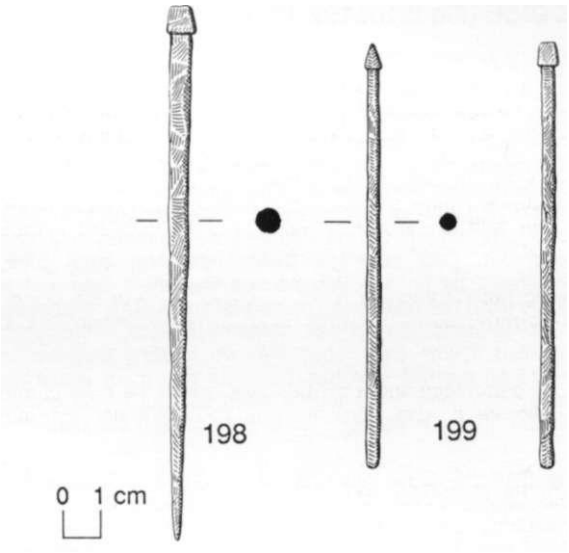


Fig 6.20 Styli. 1:2.

CATEGORY 8:
Objects associated with transport

HARNESS

Hipposandal (Fig 6.21; **200)**

200 Fig 6.21 SF GBS 738, A1545 L101. Dump: demolition of Building 131. Period 2. A fragment possibly from the heel of an iron hipposandal of Manning's Type 1 or 2 (1985, fig 16), the rear hook of which has been bent sharply downwards. Damage to the surface of the metal on the upper side close to the hook supports this identification. Maximum width 70 mm, surviving length 74 mm.

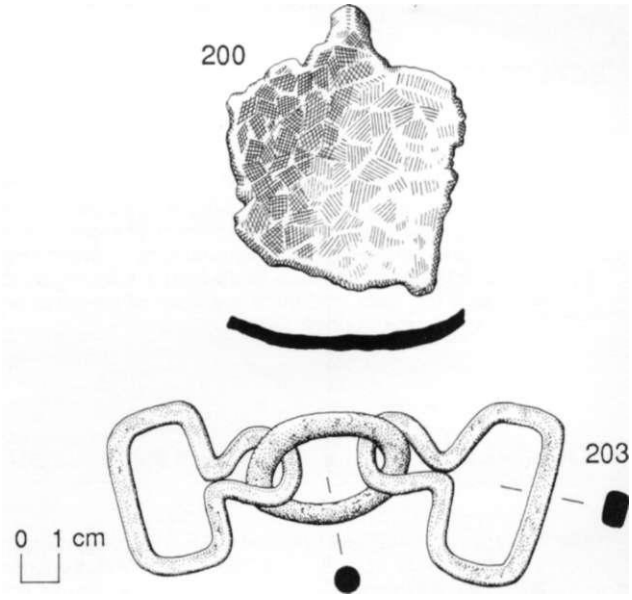


Fig 6.21 Hipposandal and ?horse furniture fitting. 1:2.

Bridles (Fig 6.22; 201-202)

201 Fig 6.22 SF GBS 1241, A2597 L302. Occupation; Period 1. An antler cheekpiece for use with a leather bit. At the lower end a band of diagonal grooves is set between two pairs of grooves, and at the upper end a similar band (now mostly worn away) lies between a single groove and a pair. The single groove is markedly less well formed than any other and cuts across one of the diagonal grooves. It seems to be a later addition to the scheme of decoration cut by an unpractised hand. The single perforation is roughly figure-of-eight shaped, indicating that it was formed by drilling two overlapping holes. The upper end of the object has clearly been very worn, though the decoration is still clear immediately below the point of seeming maximum wear, and almost worn away on the opposite side. One side of the perforation and a considerable part of the body of the cheekpiece is also worn away at the lower end. Length 104 mm, maximum diameter 22 mm.

Such cheekpieces are found from the prehistoric period onwards in Europe and Asia (Roes 1960, 68-72; Britnell 1976; Foltiny 1967). Roes suggests an alternative use as needles used in thatching or in the manufacture of coarse mats of twigs or rush.

202 Fig 6.22 SF GBS 633, A1278 L69/A1311 L68. Dump levels of Period 2 or 3. A bone cheekpiece, toggle, or slider, so described in M MacGregor 1976, 38, where three similar objects of cast bronze and one of bone are catalogued as horse trappings. The piece was made from a long-bone and has a rectangular cut-out. A bar of cancellous tissue divides the marrow cavity in two at one end. There is a band of diagonal slashes between grooves around each end. Length 96 mm, maximum diameter 24 mm. The bands of decoration are most worn at one end on the same faces as the cut-out, but on only one face at the other end, the cut-out itself is smooth but not markedly worn. This pattern of wear would seem to indicate use as a toggle. Length 96 mm, maximum diameter 25 mm.

Three similar pieces, two of bone and one of cast bronze, are among the early Roman finds from Cirencester (Viner 1982, fig 30,70; Webster 1982, fig 35,95-6), and M MacGregor (1976, 38) suggests that these objects belong to the immediately post-Conquest period, with a possible terminal date in the very early 2nd century. The Gilberd School example supports such a date-range.

?Horse furniture (Fig 6.21; 203)

203 Fig 6.21 SF GBS 1258, A2540 L289. Occupation (weathered). Period (1 or) 2. An iron ring with two trefoil-shaped fittings similar to the cheekpieces found on Roman curb-bits (Manning 1985, pl 29,H18). Length approximately 115 mm. This may be a junction ring with two fittings for divergent leather straps (as cavalry harness strap-loops).

CATEGORY 9:
Buildings and services

WALL VENEER AND OTHER ARCHITECTURAL STONE FRAGMENTS (Figs 6.23-4; 204-234)

Several of these pieces derive from pre-Boudican contexts, eg the fragment of marble veneer 211 comes from a Period 1 pit, 207, 219, and 220 derive from Period 1/2 contexts, and 206 and 218 come from Boudican destruction debris.

204 Fig 6.23 SF GBS 555, A913 L12. Gravel spread. Period 4. Discoloured white marble. A simple moulding from a cornice or skirting. Maximum length 72 mm, width 56 mm, thickness 29 mm.

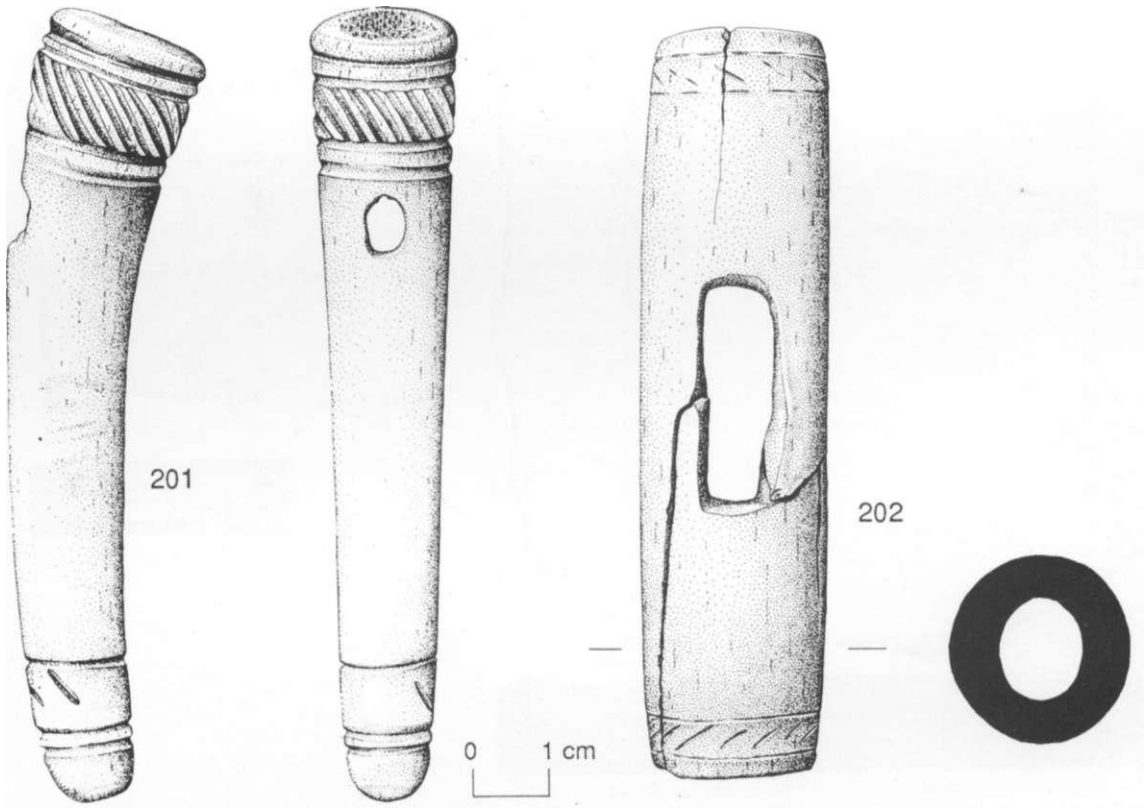


Fig 6.22 Cheekpiece, and ?cheekpiece. ***1:1.***

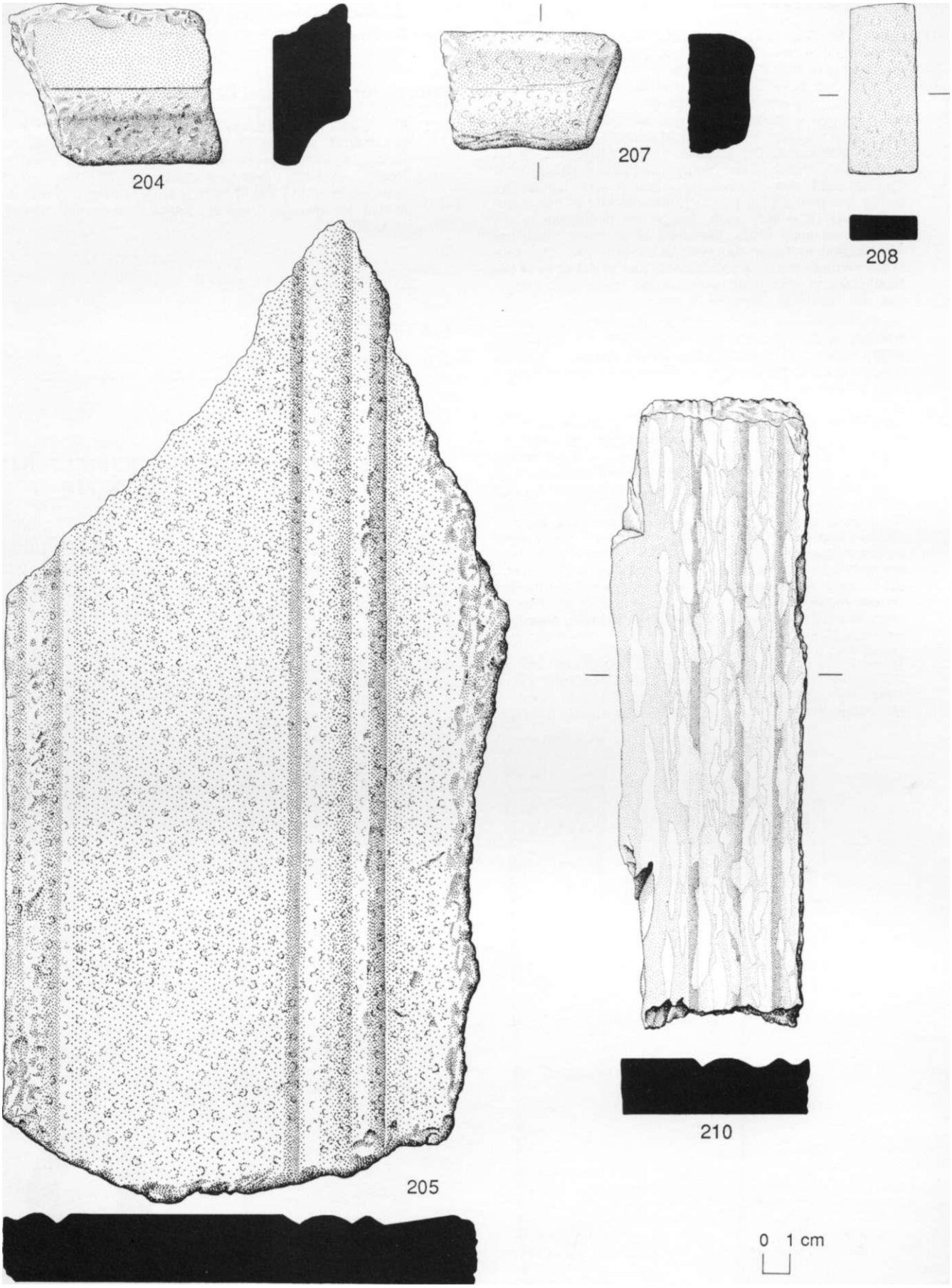


Fig 6.23 Wall veneer and other architectural stone fragments. 1:2.

205 Fig 6.23 SF GBS 959, A2268 L35. Dump (weathered). Period 3b. Purbeck marble. A large moulded fragment of veneer. Saw marks are clearly visible on the underside. One edge, 186 mm long. Maximum dimensions 364 by 187 mm, thickness 23 mm.

206 Fig 6.24 SF GBS 606, A1112 L46. Destruction of Building 134. Boudican destruction debris (redeposited). Period (2 or) 3a. Purbeck marble. In two fragments. One edge, 170 mm long. The rough underside of this piece is coarsely bevelled towards the surviving edge. Maximum dimensions 170 by 116 mm, maximum thickness 64 mm.

207 Fig 6.23 SF GBS 759, A1623 L112. ?Occupation: Building 131. Period 1 or 2. Purbeck marble, weathered. A mitred moulded strip, with rounded outer edge. Maximum surviving length 66 mm, width 42 mm, maximum thickness 25 mm.

208 Fig 6.23 SF GBS 471, A261 F55. Pit. Roman. Micaceous sandstone. A slightly tapering complete strip, one end is slightly rounded. Length 63 mm, width varies from 26 to 25 mm, thickness 10 mm.

209 Fig 6.24 SF GBS 370, A490 F80. Large pit. Medieval. Purbeck marble. This piece is roughly triangular in transverse section, with two finished faces. The smoother of the two has traces of mortar, while the other, with the rippled sawn surface usually found on the underside of pieces of veneer, has none. The mortar also extends over one of the broken faces of the piece, indicating reuse. Maximum dimensions 160 by 134 mm, maximum thickness 90 mm.

210 Fig 6.23 SF GBS 503, A821 F123. Pit. Period 3. Marble with a mid to dark green groundmass and long narrow breccia of creamy-white. A large moulded fragment of veneer. No edges survive, though one broken edge coincides with a line of the moulding. Maximum dimensions 227 by 72 mm, thickness 20 mm.

211 Fig 6.24 SF GBS 883, A2102 F252. Pit. Period 1. Africano marble. The right-angled corner fragment of a piece of veneer with a groove running from the longer surviving edge. The groove is deeper at the inner broken edge than at the outer finished edge. Slight irregular scratches run from the groove at right angles towards the edge. Maximum dimensions 141 by 79 mm, thickness 25 mm.

212 Fig 6.24 SF GBS 1068, B143 F28. Pit. Period 3. Orangey-pink niarble with slight purple veining. An oddly-shaped piece of veneer, more or less triangular. Two definite edges survive, but are not contiguous. From one a curved edge runs across towards a ?broken edge. The stone is very weathered, making positive identification of edges difficult. Dimensions 53 by 60 by 60 mm, thickness 15 mm.

TESSERAE (235-244)

Five tesserae are chalk and one is of an unidentified grey stone. Three of the five derive from Period 3a contexts, one from Period 3b, and one from post-Roman topsoil. The unidentified stone tessera is from an unstratified post-Roman context. The other pieces all appear to be of unfired clay, ie daub. Several show signs of having been sawn from a larger block. Two are from AF119, a Period 2 (or 3a) gully, and twenty-eight from Period 3b or 4 dump AL13, which may represent make-up for Building 138. The others are from post-Roman contexts. Catalogued on microfiche.

CATEGORY 10:
Tools

TOOL HANDLES

BONE AND ANTLER HANDLES

One-piece handles (Fig 6.25; **245-248)**

Plain

245 Fig 6.25 SF GBS 538, A955 F102. Pit. Period 3. A bone handle of circular section with three flutings. The surviving end shows diagonal (anti-clockwise) stress marks where the handle has been 'screwed' into some other fitting, possibly a pommel. The broken end tapers markedly, indicating that this is not a fourth fluting but that the handle was not much longer than its surviving length of 57 mm. Maximum diameter 28 mm. The flutings are not as marked as on military sword handles, providing practically no extra grip in consequence. Though a military origin for this handle has been discounted for this reason, it is still a possibility in view of the comparatively high proportion of specifically military objects from the Gilberd School site.

With a waisted end

These two illustrated handles, the plain fragment **248** catalogued on microfiche, and the two-piece handle with blade **249** belong to a series dated to the Claudio-Neronian period and described in *CAR* **2** and Greep 1983. The distinctive waisted end was necessary to provide a surface against which a tension clip holding the knife tang in place could rest.

246 Fig 6.25 SF GBS 624, A1256. Unstratified. Period 3. A handle with a waisted end, of oval section and with grooved decoration as *CAR* 2, fig 110,2925. There are four grooves on one side, five on the other. The blade end has broken off and the tang is missing. Surviving length 60 mm, maximum width 13 mm.

247 Fig 6.25 SF GBS 660(C), A1345 L66. Dump. Period 3. A handle with a waisted end, of rectangular section with a central rib, as *CAR* 2, fig 110,2926, but with no iron pins along the centre line. The blade end is damaged. There is no trace of the iron tang. Surviving length 79 mm, section 8 by 14 mm.

Two-piece handles (Fig 6.25; **249-250)**

249 Fig 6.25 SF GBS 854(C), A2064 F252. Pit. Period 1. A knife with most of the blade surviving, fitted with a two-piece bone handle with a waisted end, similar to *CAR* 2, fig 111,2934. The handle is of oval section and is decorated with a pattern of grooves. The tang is the same width as the blade at the blade end and has been cut to match the shape of the handle throughout its length. Three iron pins, originally with copper-alloy heads of which only staining on the bone now survives (not shown on illustration), fixed the two plates and the tang together. The upper and lower pins also each held two thin bands of iron set in transverse grooves in each plate. These bands did not encircle the handle, but butted up against the tang, and would therefore seem to be decorative rather than necessary fittings. On one side the two decorative longitudinal grooves pass to either side of the

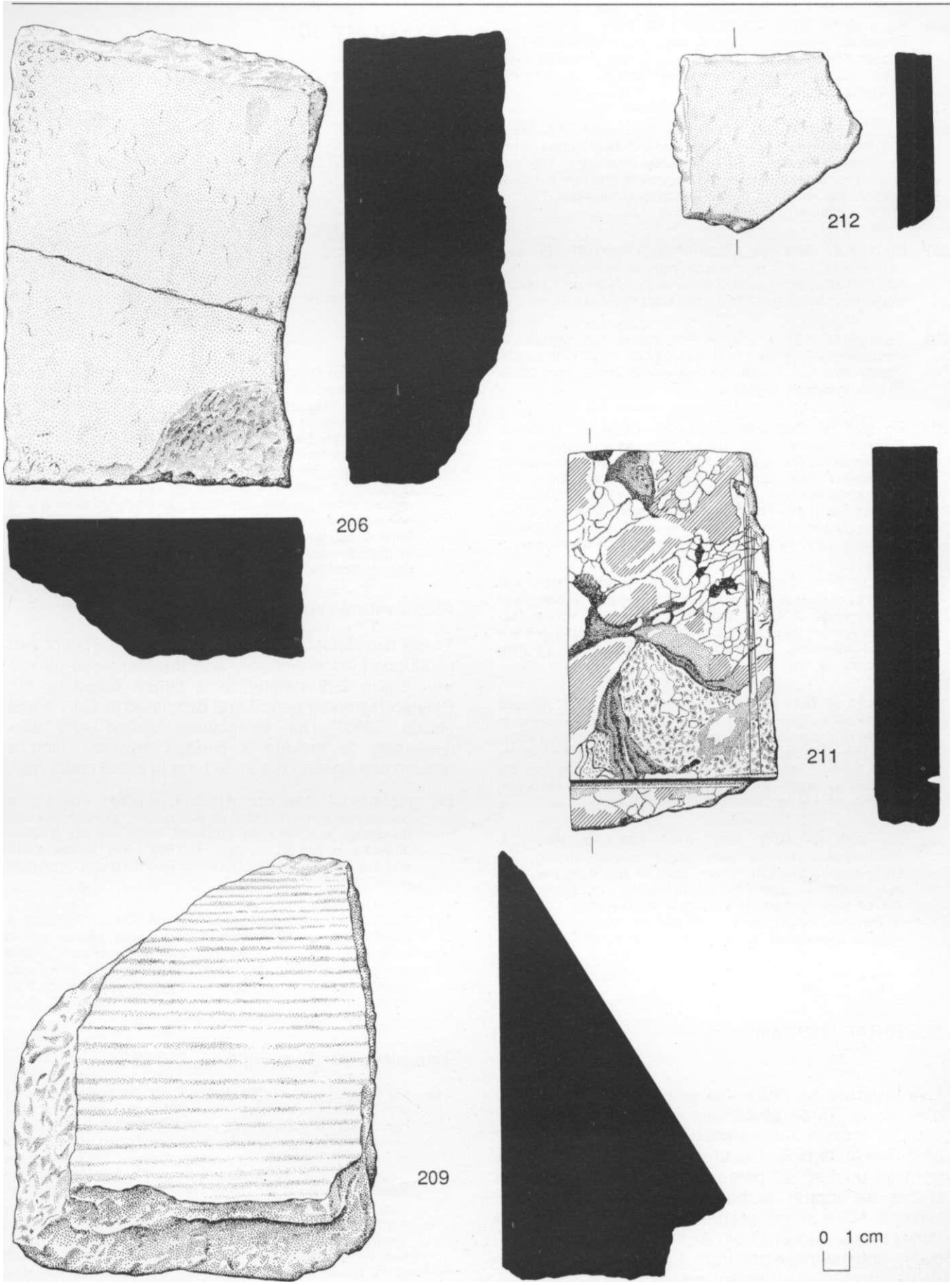


Fig 6.24 Wall veneer and other architectural stone fragments. 1:2.

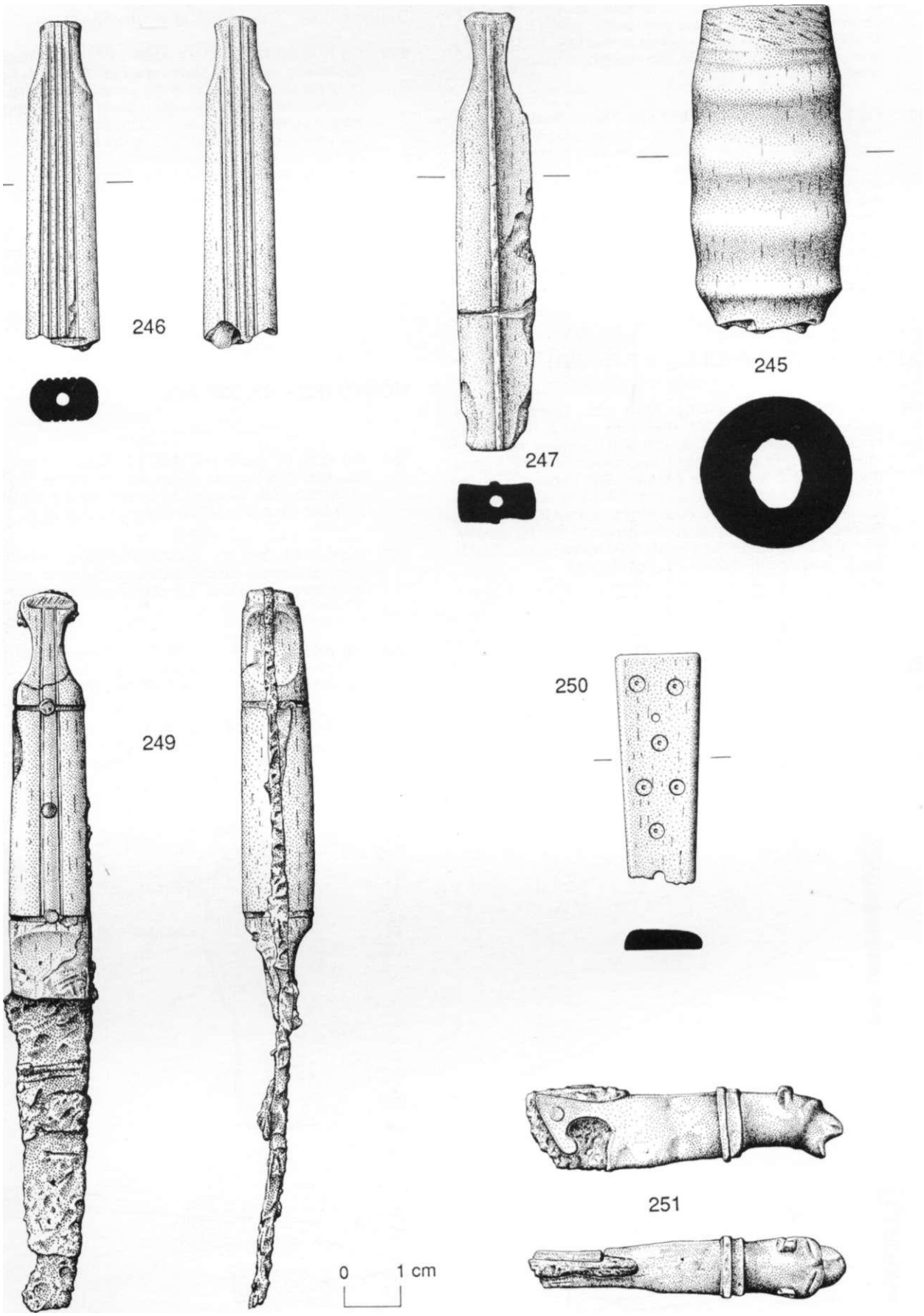


Fig 6.25 Tool handles and knife. 1:1.

three pins, but on the other side the uppermost pin is slightly off-centre. Part of the curved tension clip survives at the upper end. The blade has a very gently curved back and a straight edge which runs upwards to meet the back. The tip is missing. Total length 130 mm. Length of handle 72 mm, width 13 mm.

250 Fig 6.25 SF GBS 811, A1847 L28. Dump. Post-Roman. A fragment of one tapering plate from a two-piece handle, maximum width 15 mm. There is a centrally-placed rivet hole 11 mm up from the surviving end, and the plate has broken across a second hole 28 mm from the first. The plate is decorated with incised ring-and-dot motifs: a pair at the surviving end, and four set in a cross. Assuming that the decoration and rivet holes were originally arranged symmetrically, it is possible to postulate a second terminal pair of ring-and-dot motifs and an original length for the handle of approximately 47 mm.

COPPER-ALLOY HANDLE (Fig 6.25; **251)**

251 Fig 6.25 SF GBS 454(C), A618 L13. Dump (possibly make-up for Building 138). Period 3b or 4. A rectangular-section handle for a knife or razor with a terminal, separated from the body of the handle by two mouldings, in the form of the head of a leopard or panther. The blade end of the handle has a distinctive curved cut-out which links this handle to others in both copper-alloy and ivory *(CAR* **2***,* 110). Stephen Greep (1983) dates the series to the 1st century. Part of the iron blade remains attached to the handle, held in place by a copper-alloy rivet. Length 57 mm.

BLADES (Fig 6.26; **252-257)**

See also the blade with handle **249** above. Two of the pieces catalogued on microfiche derive from AL136, Period 1 or 2 occupation, and one from AF144, a Period 2 slot possibly for a partition wall in Building 136. The fourth is unstratified.

252 Fig 6.26 SF GBS 508(C), A866 L10. Midden/dump. Period 3b. An iron cleaver of Manning's Type 2A (1985, fig 30). The tip of the blade and most of the socket are missing. The type is distinguished by a wide short blade and a strongly convex edge. In subtype A the back is straight, continuing the line of the socket or tang. The type is the most common form of cleaver, depicted on altars as the sacrificial blade, and was probably used throughout the Roman period *(ibid,* 122). Surviving length 128 mm.

253 Fig 6.26 SF GBS 924, A2152 L230. Occupation. Period 1 (or 2). An iron blade with a straight back, curved edge, and a tang tapering from square to rectangular in section. Length 135 mm.

HONES (Fig 6.27; **258-263)**

258 Fig 6.27 SF GBS 114, A86 L1. Topsoil. Post-Roman. A fragment of a hone of calcareous sandstone. The section is subrectangular: opposing faces are flat, but the comers are rounded. Maximum length 50 mm, section 24 by 30 mm.

259 Fig 6.27 SF GBS 204, A83 F4. Rubbish pit. Modern. A worn hone of tapering circular section (a truncated cone). Coarse micaceous sandstone. Length 91 mm, maximum diameter 37 mm.

260 Fig 6.27 SF GBS 400, A420 L1. Topsoil. Post-Roman. A fragment of a rectangular-section hone of calcareous sandstone. Maximum length 64 mm, section 24 by 28 mm.

261 Fig 6.27 SF GBS 542, A900 F66. Gully. Period 3b. A fragment of a rectangular-section hone of a dense calcareous sandstone. Maximum length 62 mm, section 15 by 25 mm.

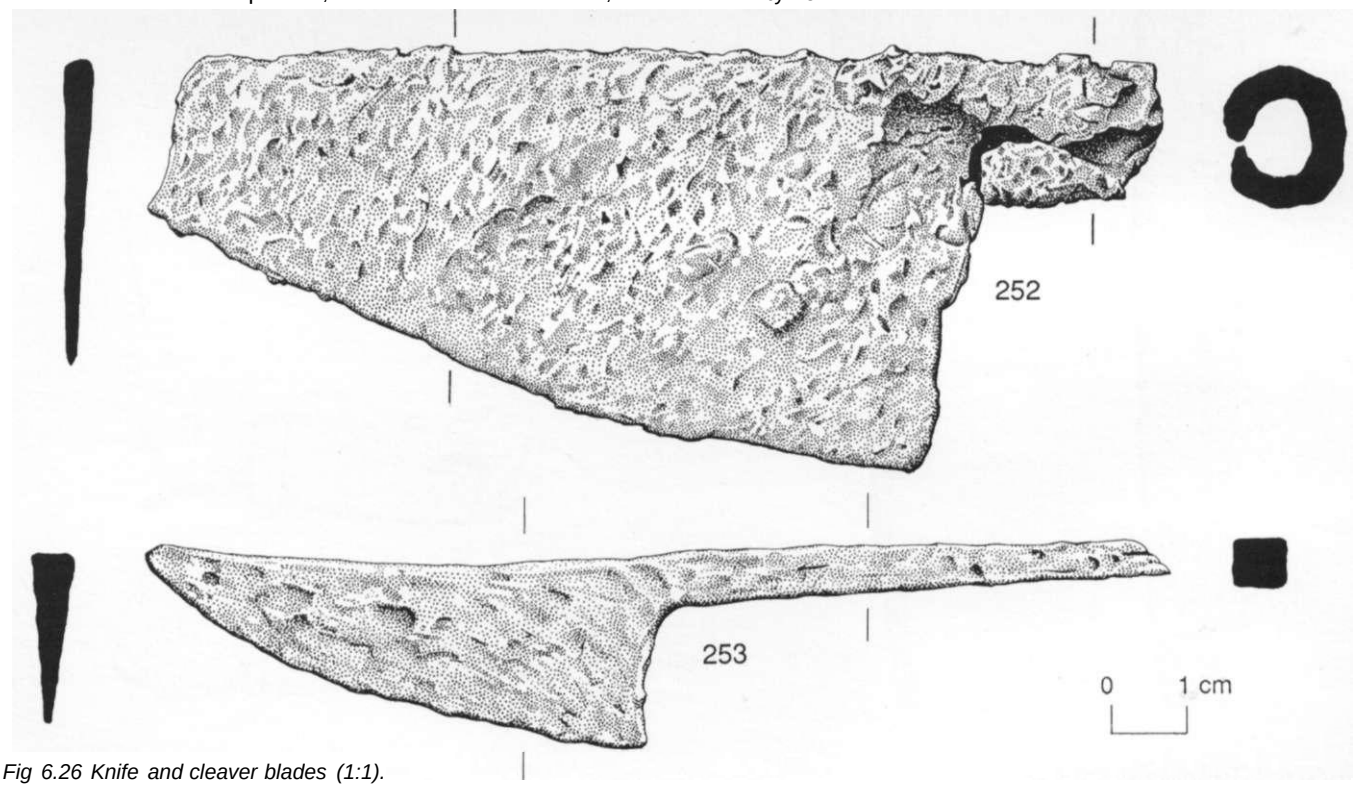


Fig 6.26 Knife and cleaver blades (1:1).

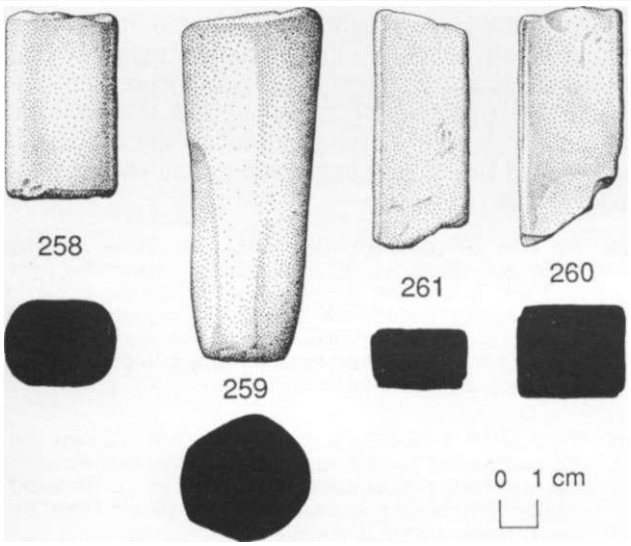


Fig 6.27 Hones. 1:2.

CATEGORY 11:
Fastenings and fittings

NAILS AND STUDS

COPPER-ALLOY NAILS

Nails with a globular, bun-shaped or biconical head (264-270)

269 derives from Period 1 or 2 occupation in Building 131. Five of the other nails are from Period 3, 3a or 3b contexts, and **270** is from a medieval robber trench for Building 137. Catalogued on microfiche.

Nails with a flat head (Fig 6.28; **271-273)**

Of the two nails catalogued on microfiche one, **273,** derives from a Period 1 or 2 stake hole, BF42, and the other from AL13, Period 3b or 4 dump.

271 Fig 6.28 SF GBS 1154(C), B332 F54. Small pit: ?Building 131. Period 2. A ?nail with a thick square shaft, only part of which survives. The head of the object was probably intended to be flat, but the outer edge is now distorted and lower than the centre which is supported by the shaft. Maximum diameter of head 21 mm. Shaft 9 mm square, surviving length 20 mm.

Nails with a convex head (Fig 6.28; **274-278)**

Three of the four nails catalogued on microfiche derive from pre-Boudican levels. **276** and **277** come from daub floors in Building 131, the former from AL262 in Room 6, the latter from AL268 in Room 4. **275** comes from AL61, Period 2 occupation in Building 136. The fourth nail, **278,** derives from Period 3 pit AF117.

274 Fig 6.28 SF GBS 635(C), A1220 L55. Dump. Period 3. A well-preserved large nail. Maximum diameter of head 23 mm. Square section shaft. Length 111 mm.

COPPER-ALLOY STUDS

Studs with a flat head (Fig 6.28; **279-289)**

Three of the six flat-headed studs catalogued on microfiche come from post-Roman levels, one is from a Period 3b pit, one from a Period 2 trench, AF310, in Building 131, and one from Period (1 or) 2 occupation, AL109.

279 Fig 6.28 SF GBS 1030(C), A2405 L265. Make-up: Building 131, Room 4. Period 1 or 2. A copper-alloy stud head with traces of a rectangular-section iron shaft on the underside. Diameter 29 mm. This stud may more correctly belong in Category 4 with the box fittings.

280 Fig 6.28 SF GBS 269(C), A267 F27. Pit. Period 3b. A flat-headed stud with a turned-down rim and short riveted shaft. Diameter 16 mm. ?Circular section shaft. Length 4 mm.

281 Fig 6.28 SF GBS 383(C), A591 F95. Pit or scoop for a midden. Period 3. A stud with a flat head, and riveted shaft. Only a small fragment of the riveted end survives, but it is possible that originally it was as large as the head (cf *CAR* **2,** fig 123,4031). There are slight concentric mouldings on the underside. Diameter 13 mm. Square section shaft. Length 5 mm.

282 Fig 6.28 SF GBS 398(C), A646 F107. Pit. Period 3b. A large stud head with concentric convex mouldings and a turned-down rim. Only a very short part of the shaft survives. Diameter 45 mm.

283 Fig 6.28 SF GBS 1055(C), B141 F15. Large pit. Period 3b or 4. The head of a ?stud. The underside is burred where a shaft/rivet for attachment has been pushed through. A pair of narrow grooves form a decorative concentric circular moulding around the edge of the disc, with another pair at a point midway between the edge and the centre. Diameter 23 mm.

Studs with a convex head (Fig 6.28; **290-300)**

Nine convex-headed studs are catalogued on microfiche. One is from an unstratified Roman context and five from Period 3 levels. **293** is from redeposited Boudican destruction debris from Building 134, **294** from Period 1 or **2** occupation (AL157) in Building 131, and **298** from Period 1 (or 2) make-up, BL34.

290 Fig 6.28 SF GBS 395(C), A646 F107. Pit. Period 3b. A damaged stud with a convex moulding at the rim and a raised convex central area depressed around the hole for the missing shaft. Diameter 23 mm.

291 Fig SF GBS 1165(C), B385 L56. Midden/dump. Period 3. A stud with a high central dome and convex moulding at the rim. Diameter 19 mm. Square section shaft. Length (clenched) 6 mm.

Other studs (Fig 6.28; **301-302)**

301 Fig 6.28 SF GBS 771(C), A1645 L47. Scorched floor: Building 134. Period 2. A large stud with a deep concave head which may originally have held a boss of glass, though

no trace of any other substance now remains. Diameter of head 17 mm. Square section shaft, clenched. Length approximately 34 mm.

302 Fig 6.28 SF GBS 863(C), A2048. Unstratified. Period 1. A pin or stud with recessed head perhaps for a decorative boss. Diameter of head 13 mm. Polygonal section shaft. Length 41 mm.

IRON NAILS

The iron nails have not been catalogued in this report. The contexts directly associated with Period 1 and 2 buildings which produced iron nails are listed on microfiche, and the nails from those contexts are now in the CM.

RIVETS (Fig **6**.28; **303-306)**

Though rivets, or riveted studs, were often used to attach copper-alloy fittings to leather or iron military equipment, the examples catalogued here do not derive from military or pre-Boudican colonial contexts, and have therefore been kept apart from the main body of military equipment (Category 13) as they are equally likely to derive from civilian objects. Two riveted studs are catalogued on microfiche. Both are similar to the group **304,** and one, **306,** derives from the same context. The second comes from redeposited Boudican destruction debris (AL45) from Building 134.

303 Fig 6.28 SF GBS 387(C), A585 L13. Dump (possibly make-up for Building 138). Period 3b/4. A copper-alloy small stud with a flat head and riveted shaft. The rim is turned down, and the underside is marked into quadrants by slight mouldings. Diameter of head 8 mm. Circular section shaft. Length 3 mm. The turned-down rim and mouldings indicate that this piece was used on leather, not metal.

304 Fig 6.28 SF GBS 438(C), A802 F119. Gully: Building 134. Period 2 (or 3a). Twelve riveted copper-alloy studs with a flat top, and fragments of three others. One only is illustrated. The diameter of the heads ranges between 8 and 9 mm. The length ranges from 3 to 4 mm.

BOSS (307)

One boss with traces of lead-based solder on the underside was found in a Period 1 context, gully AF186. It is catalogued on microfiche.

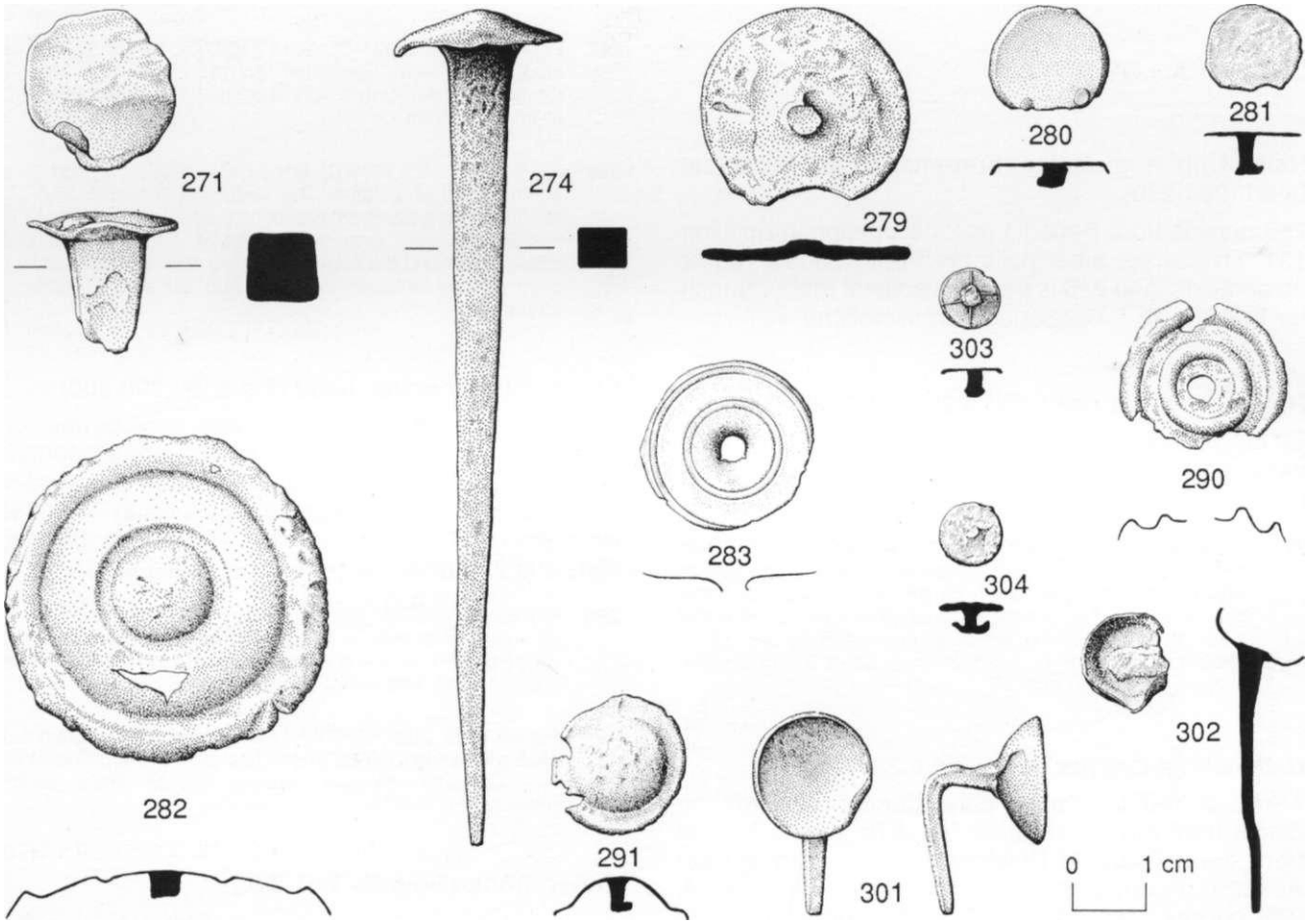


Fig 6.28 Studs, rivets, and nails. 1:1.

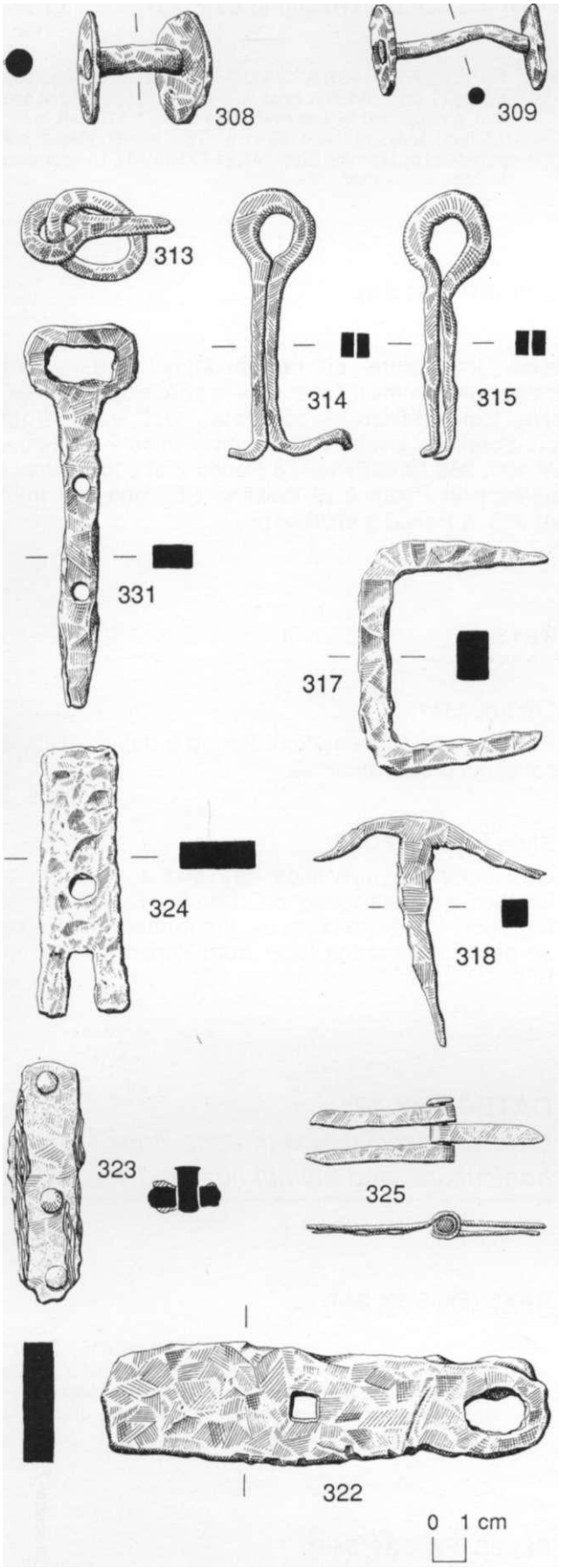


Fig 6.29 Holdfasts, double-spiked loops, joiner's dog, T-staple, hinge fittings, loop-headed strap. 1:2.

HOLDFASTS (Fig 6.29; **308-312)**

See Manning 1985, 132-4 for a description of the use of holdfasts. Of the five found on this site, four derive from the Period 3b or 4 large pit (BF15) and therefore presumably derive from the same structure/object.

308 Fig 6.29 SF GBS 500, A653 F27. Pit. Period 3b. An iron holdfast with a large flat circular head and a circular rove (tail-plate) which has slipped down the shaft a little. Length 42 mm, maximum diameter of head 35 mm, maximum diameter of rove 35 mm.

309 Fig 6.29 SF GBS 1033, B99 F15. Large pit. Period 3b or 4. An iron holdfast with a large flat circular head and a rectangular rove. Length 46 mm (the shaft is very slightly bent), maximum diameter of head 28 mm, rove 27 by 24 mm.

DOUBLE-SPIKED LOOPS (Fig 6.29; **313-316)**

A distorted copper-alloy double-spiked loop is catalogued on microfiche. It derives from Period 3 ?weathered occupation/topsoil AL62.

313 Fig 6.29 SF GBS 600, A1091 L46. Boudican destruction debris (redeposited): destruction of Building 134. Period (2 or) 3a. An iron ring fitted with an iron double-spiked loop, as *ibid,* pl 59.R27. The ring may, by analogy with copper-alloy examples fitted with double-spiked loops, be a ring-handle from a piece of furniture (see Fig 5.23,640-2). Maximum internal diameter of ring 21 mm. Length of spiked loop 45 mm (both points are broken off).

314 Fig 6.29 SF GBS 1190, B491 F83. Charred timber plank floor: Building 133, Room 2. Period 2. An iron double-spiked loop, both ends are turned outwards (the tip of one is missing). Length 81 mm.

315 Fig 6.29 SF GBS 1189, B501 F73. Gully: Building 133, Room 2. Period 2. An iron double-spiked loop with both ends turned to one side. Length 82 mm.

JOINER'S DOG (Fig 6.29; **317)**

317 Fig 6.29 SF GBS 1071, A2435 F178. Backfilled 'terrace'. Period 2 or 3a. An iron joiner's dog, length of cross-piece 67 mm, maximum surviving length of arms 52 mm.

T-STAPLES (Fig 6.29; **318-319)**

One ?T-staple is catalogued on microfiche. It comes from Period 3 pit AF121.

318 Fig 6.29 SF GBS 498, A553 F96. Pit? Period 3b. An iron T-staple with an anchor-shaped head (as *ibid,* pl 62.R70-2). Surviving length 69 mm. Width of head 89 mm.

RING-HEADED PINS (320-321)

Two ring-headed pins are catalogued on microfiche. **321** comes from redeposited Boudican destruction debris (AL45) from Building 134, and **320** from AF133, a ?pit of Period 3b.

HINGE FITTINGS (Fig 6.29; **322-328)**

Catalogued on microfiche are **326,** a fragment of a bone hinge unit from AF66, a Period 3b gully, and two fragments from loop-hinges, **327** from Period 1 or **2** occupation (AL228) in Building 131, and **328** from AF232, a timber-lined drain of Period 1 (and ?2).

322 Fig 6.29 SF GBS 489, A507 L17. Dump. Period 4. A broad iron tongue-ended strap from a loop-hinge. There is a large perforation at the rounded end and a rectangular nail or rivet hole 75 mm in from that end. The other end is broken, possibly across another rivet hole. Length 137 mm, maximum width approximately 33 mm.

323 Fig 6.29 SF GBS 547, A858 L39. Dump. Period 3. Part of an iron tongue-ended strap pierced by three rivets, and with fragments of mineral-preserved wood on both surfaces. A large fragment of mineral-preserved organic material is attached to one side, partly overlying both the preserved wood and the upper surface. It is probably not associated directly with the fitting, but has become fixed on after the object's deposition. This object is almost certainly a hinge fitting, but in the absence of the other end of the strap, it is uncertain from which type of hinge. Length 79 mm, width 20 mm.

324 Fig 6.29 SF GBS 1070, B153 F31. Pit. Period 3. One strap from a strap-hinge, with two pierced lugs at the complete (inner) end. The other end has broken off. A large rivet hole 7 mm in diameter is centred 36 mm from the inner end. Surviving length 82 mm, maximum width 31 mm.

325 Fig 6.29 SF GBS 610, A1142 L37. Dump. Period 3. A strap-hinge with three long narrow plates as *ibid,* fig 31,4. The central spiked plate points in the opposite direction to the two outer ones and has been folded in half around a circular-section pin. The two outer spikes were probably folded over in the same way, or they may be single plates hooked over the pin as shown in the illustration. The ends of these two plates may be broken off. The pin has a flat-headed terminal (?cap) at one end, and may have a similar terminal at the other end. Length 73 mm, width 20 mm. Manning describes this type of hinge as rare in Britain, but cites numerous examples from the Rhineland *{ibid,* 127).

COLLAR AND FERRULE (329-330)

329 is a fragment of a copper-alloy collar from Period **3** midden BL8, and **330** is an iron fragment from either a ?ferrule or a weapon with a split socket. Catalogued on microfiche.

LOOP-HEADED STRAP (Fig 6.29; **331)**

331 Fig 6.29 SF GBS 937, A2239 L89. Occupation (Tweathered). Period (1 or) 2. An iron strap with a rectangular loop at one end, and pierced by two rivet holes. Length 115 mm, width 10 mm, width of head 32 mm. Two similar pieces are published by Manning *{ibid,* 144, pl 70.S140-1). Their precise function is unknown.

BINDING (332-340)

Nine fragments of copper-alloy binding are catalogued on microfiche. One is from site clearance, five from Period 3 contexts, and three from pre-Boudican levels. **336** is from Period 2 make-up, AL100, **339** from BF115, a Period 2 slot for a timber partition in Room 2 of Building 133, and **338** from AF263, a Period 1 shallow pit.

KEYS

Lift key (341)

Part of an iron lift key from Period 3 dump, AL23, is catalogued on microfiche.

Slide keys (342-343)

One complete iron slide key and a fragment of another are catalogued on microfiche. Both derive from post-Boudican contexts, the former from Period 3b pit AF66, and the latter from Period 3 make-up, BL9.

CATEGORY 12:
Objects associated with agriculture, horticulture, and animal husbandry

RAKE (Fig 6.30; **344)**

344 Fig 6.30 SF GBS 484(X), A813 F121. Pit. Period 3. An iron hay-rake prong, with a slightly curved tapering stem with a characteristic step at its junction with the tang *(ibid,* 59, pl 25.F63-6, and pl VI). Length 130 mm.

BELLS (Fig 6.31; **345)**

345 Fig 6.31 SF GBS 1180(C), A2501 L218. Make-up: Building

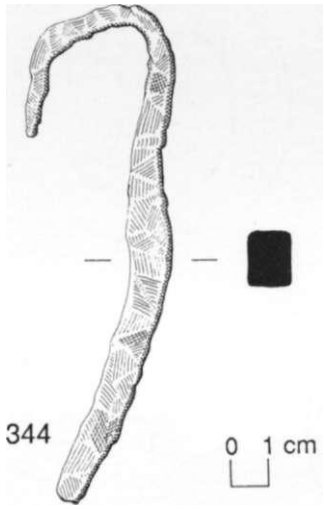


Fig 6.30 Rake prong. 1:2.

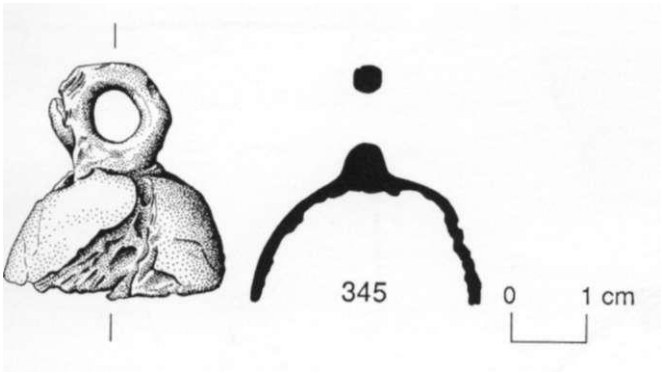


Fig 6.31 Bell. 1:1.

131. Period 1. A copper-alloy corroded and damaged bell with circular suspension loop. The clapper is missing. Height 31 mm, diameter 31 mm.

CATEGORY 13:
Military equipment

Justine Bayley of the AM Lab writes: Many of the copper-alloy pieces of military equipment have been analysed qualitatively by energy-dispersive X-ray fluorescence to identify the nature of the alloy used to make them.

Analyses of the copper-alloy finds from the Sheepen site, Colchester, indicated that many of them were made of brass rather than bronze. Many were military fittings, so this group of similar objects from the Gilberd School was analysed to see if the correlation of brass with military metalwork was site-specific or more widespread. These pieces too were on the whole also of brass. As both sites are 1st century in date, this may also be a factor affecting the alloys used, though purely domestic sites with occupation from the 1 st century onwards only seem to have a low percentage of brasses, even in the earliest levels.

ARMOUR

Belt and apron fittings of copper alloy and bone (Fig 6.32; 346-360)

346 Fig 6.32 SF GBS 195(C), A187 LI. Topsoil. Post-Roman. A well-preserved brass rosette stud with inlaid niello decoration. Diameter 15 mm.

347 Fig 6.32 SF GBS 963(C), A2276 L246. Dump. Period 2. A brass rosette stud with inlaid niello decoration. Diameter 18 mm. The circumference, though damaged, seems to have been indented.

348 Fig 6.32 SF GBS 1155(C), B371 F1. Terraced area: destruction of Building 133. Period 2 & 3. A brass rosette stud with inlaid niello decoration. Diameter 15 mm. The circumference may have been indented.

349 Fig 6.32 SF GBS 1018(C), B69 F12. Pit: Building 131, Room 10. Period 1 or 2. The head of a brass stud with two deep concentric mouldings. The shaft is missing. Probably a belt-mount (Ulbert 1969, Taf 29,9). Diameter 18 mm.

350 Fig 6.32 SF GBS 632, A1267 L49. Dump. Period 3. A fragment of a bone buckle loop. The upper face has been polished smooth, but the underside shows saw or file marks. Maximum width 44 mm.

351 Fig 6.32 SF GBS 686(C), A1384 L66. Dump. Period 3. A corroded bronze buckle loop of characteristic 1st-century form. Length 28 mm, maximum width 32 mm.

352 Fig 6.32 SF GBS 245(C), A233 F32. Shallow pit/scoop. Post-Roman. A brass buckle loop as *CAR 2,* fig 144,4173. Length 30 mm, maximum width 34 mm.

353 Fig 6.32 SF GBS 421(C), A697 L28. Dump. Post-Roman. A plain brass belt-plate with a dome-headed riveted stud in each corner and one in the centre. Length 54 mm, width 20 mm. This plate and 354 below from the same context almost certainly came from the same belt.

354 Fig 6.32 SF GBS 451(C), A724 L28. Dump. Post-Roman. A plain brass belt-plate as 353 but with one end broken off. Maximum surviving length 43 mm, width 20 mm.

355 Fig 6.32 SF GBS 849(C), A1718 L132. Make-up: demolition of Building 131. Period (1 or) 2. A brass belt-plate. One corner is missing. The surface appears to be plain. Length 29 mm, width 17 mm.

356 Fig 6.32 SF GBS 873(C), A2121 F268. Pit. Period 1. A fragment of a brass hinged belt-plate with traces of white-metal coating. As *CAR 2,* fig 151,4210-11. Width 40 mm.

357 Fig 6.32 SF GBS 842(C), A1961 L194. Dump. Period 1 or 2. The triangular loop of a tinned leaded bronze/gunmetal baldric frog, similar to examples from Culver Street, Colchester (Fig 5.52,1678), Hod Hill (Brailsford 1962, fig 4,98,100), Camulodunum (Hawkes & Hull 1947, pl 103,3),

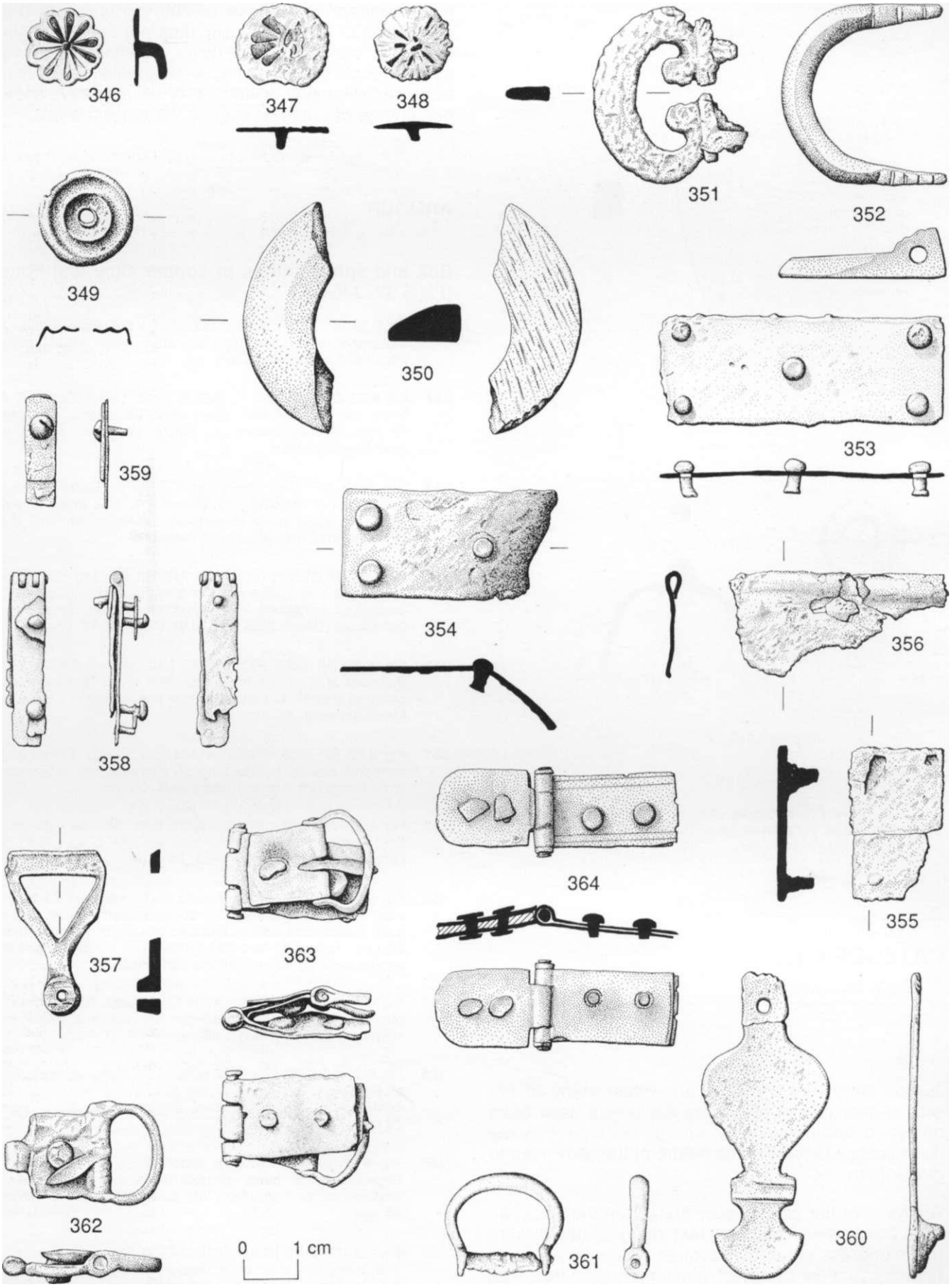


Fig 6.32 Military belt, apron, and laminated armour fittings. 1:1.

and Hofheim (Ritterling 1913, Taf 12,39, Taf 15,13). A button would have been fixed to the roundel at the base of the loop by a riveted projection. Length 31 mm. The top corners and the upper part of the sides have been crudely trimmed off. The similar pieces from Hod Hill have two lugs to take a hinge pin, as has Fig 5.52,1678 from Culver Street, but on the examples from Hofheim the upper bar seems to be either solid, or may possibly be rolled over to provide a method of fixing a hinge pin.

358 Fig 6.32 SF GBS 812(C), A1801 L157. Occupation: Building 131. Period 1 or 2. A narrow brass hinged mount, folded over at the hinge. Along the length of the more complete half of the object a dome-headed ?rivet and a headless ?rivet stand out from the surface and pierce a fragment of sheet copper-alloy (possibly used as a washer). Neither ?rivet seems to pierce the hinged plate. A riveted projection protrudes from the surface of the incomplete hinged plate. Length of the complete plate 32 mm, maximum width 7 mm.

359 Fig 6.32 SF GBS 813(C), A1801 L157. Occupation: Building 131. Period 1 or 2. A fragment from a brass mount similar to 358, or possibly part of it. A dome-headed rivet passes through two strips of sheet metal.

360 Fig 6.32 SF GBS 389(C), A579 F90. Pit. Period 3b. A brass fitting with a semicircular terminal at the back of which is a projection for attachment to a strap. The terminal is separated from a leaf-shaped element by a rectangle decorated with transverse grooves. The narrow upper end is pierced by a ?rivet hole and is broken, possibly across another hole. Length 56 mm. Possibly similar to a fitting from Hofheim *(ibid,* Taf XI.47).

Copper-alloy and Iron fittings from laminated body armour (Fig 6.32; **361-367)**

Three corroded pieces are catalogued on microfiche. **365,** deriving from Period 3 dump AL24, is a brass fitting which may belong in this group. **366** is a (leaded) gunmetal buckle and strap-plate from Period 2 make-up AL231 from Building 134, and **367** is an iron buckle and ?strap-plate from AL288, Period (1 or) 2 ?dump.

361 Fig 6.32 SF GBS 981(C), A2338 L101. Dump: demolition of Building 131. Period 2. A brass buckle loop with an iron bar. Width at the bar 18 mm.

362 Fig 6.32 SF GBS 293(C), A354 F42. Pit(s). Post-medieval. A brass buckle and one section of a hinged plate from a cuirass (or baldric) strap. Maximum length 30 mm. Width at the bar of the buckle 18 mm.

363 Fig 6.32 SF GBS 859(C), A2033 F213. Pit. Period 1. A brass buckle and hinged plate from a strap. Complete, but folded over at the hinge. Maximum length (straight) 53 mm. Width at the bar of the buckle 16 mm. Also two fragments of sheet copper alloy, not illustrated.

364 Fig 6.32 SF GBS 1008(C), B60. Unstratified. Period 3a. A brass hinged fitting from a cuirass or baldric strap. One half is rectangular, the upper and lower plates held closely together by dome-headed rivets. The other half is an elongated D shape. Its upper and lower plates lie further apart and still hold a fragment of the leather strap preserved by contact with the metal. The two rivets holding this section together have crude irregularly-shaped heads. On the rectangular plate a pair of thin grooves marks each long edge, matched by a pair of grooves running round the D-shaped plate. A circular washer lies between each riveted end of the hinge pin and the folded-over plates of the fitting. Length 45 mm, maximum width at the hinge 17 mm.

Laminated armour (Fig **6.33; 368)**

368 Fig 6.33 SF GBS 1013(X), B57 F1. Terraced area: destruction of Building 133. Period 2 & 3. Four rectangular iron plates, only one of which is complete, held together by iron rivets with flat copper-alloy heads. The rivet in the top right-hand corner of the top plate lies over the centre of the second plate down, and well in from its upper edge. The complete plate (second from the top) has a rivet in the top right-hand corner and the bottom right-hand corner. They are slightly curved both longitudinally and transversely. Length of the complete example 59 mm, width 23 mm.

These plates cannot be accommodated as scale armour, the plates of which usually have a rounded or pointed lower end and many more rivets, but are tentatively identified as laminated armour for a limb, as in width they are comparable to the bronze thigh armour from Newstead (Robinson 1975, pl 502-4), though are much shorter. The lower plates of the Newstead thigh armour had a width of 27 mm, and the shortest was 120 mm long. The difference in length between the Newstead and Gilberd School plates suggests that the latter are perhaps best seen as coming from towards the bottom of the calf.

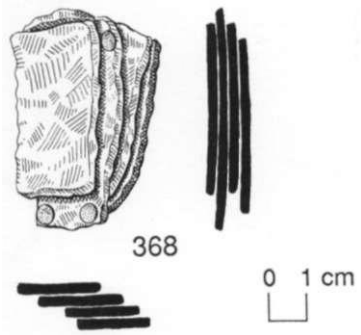


Fig 6.33 Laminated armour. 1:2.

Scale armour (Fig **6.34; 369-370)**

369 Fig 6.34 SF GBS 892(C), A2146 L231. Dump: Building 134. Period 2. Three very corroded copper-alloy ?rectangular overlapping plates from a shirt of scale armour. By comparison with 370 below, almost certainly part of the same shirt, the plates would have been tinned. Each plate is slightly convex in both sections and has two perforations set side by side on the upper edge, and two perforations along each long side. A similar perforation arrangement occurs on copper-alloy plates from Carnuntum *(ibid,* fig 159,20-1) and convex copper-alloy plates are known from Straubing *(ibid,* fig 441). The copper-alloy wire loops joining the plates survive at both side joins of the middle plate, ie right side middle plate to left side right plate, and left-side middle plate to right side left plate, and a fragment of wire remains in the top hole of the right side of the right plate. The lower hole of the right side of the right plate is now missing where the plate has been damaged and what appears to be a rectangular cut-out at that point is not deliberate. The upper left part of the left plate has broken off and the plate has shifted position in consequence. Dimensions of the middle plate: 16 by 25 mm. Also found with this armour was a ?buckle tongue, and from the same layer come the two scales 370 below, and a hinged strap-fitting from laminated armour (366, catalogued on microfiche).

370 Fig 6.34 SF GBS 889(C), A2163 L231. Dump: Building 134. Period 2. Two tinned copper-alloy plates from scale armour as 369 above, almost certainly from the same shirt.

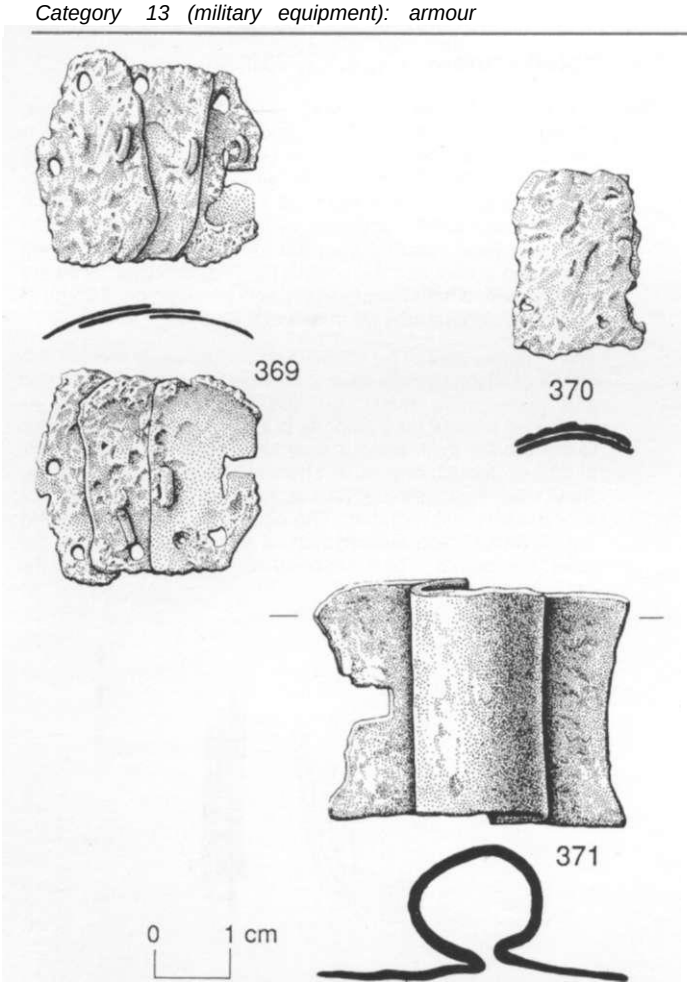


Fig 6.34 Scale armour and helmet plume tube. 1:1.

Helmet (Fig 6.34; 371)

371 Fig 6.34 SF GBS 796(C), A1695 L100. Make-up. Period 2. A brass plume tube from a helmet. The tube has been formed from a piece of thick sheet brass. The flat side elements of the piece have incurving upright edges. One side, which would have faced towards the front of the helmet, is damaged and has broken across the rectangular perforation for the rivet by which the helmet's peak was attached. A similar tube is soldered to the right-hand side of a Coolus Type E helmet found in the Walbrook, London (Paddock 1985, fig 6b; Robinson 1975, pl 54, fig 42). Robinson dates Coolus Type E helmets to the first half of the 1st century AD, a date which fits well with the context of this tube. Height 31 mm, maximum length 42 mm.

ARMS

Shield (Fig 6.35; 372)

372 Fig 6.35 SF GBS 1262(C), B611 L64. Make-up: Building 131, Rooms 10-13. Period 1. An iron shield boss with a circular central dome and a flange probably of oval or sub-circular shape, a large part of which is missing. The flange does not lie flat, but neither does it have a regular curvature to indicate whether it derives from the fully semicircular legionary shield in use by the mid 1 st century or from a more gently curved auxiliary shield. Four rivet holes survive, there may be a fifth. Maximum diameter 216 mm, height approximately 35 mm. Jacqui Watson of the AM Lab reports: the shield boss has mineral-preserved straw on the upper side, and *Quercus* sp. (oak) on the underside. The oak appears to have been part of a board with a tangential surface, which would have been quite unsuitable for a shield, being too heavy and with a tendency to split under impact. Possibly the boss was in contact with a piece of oak on deposition, rather than attached to an oak shield board.

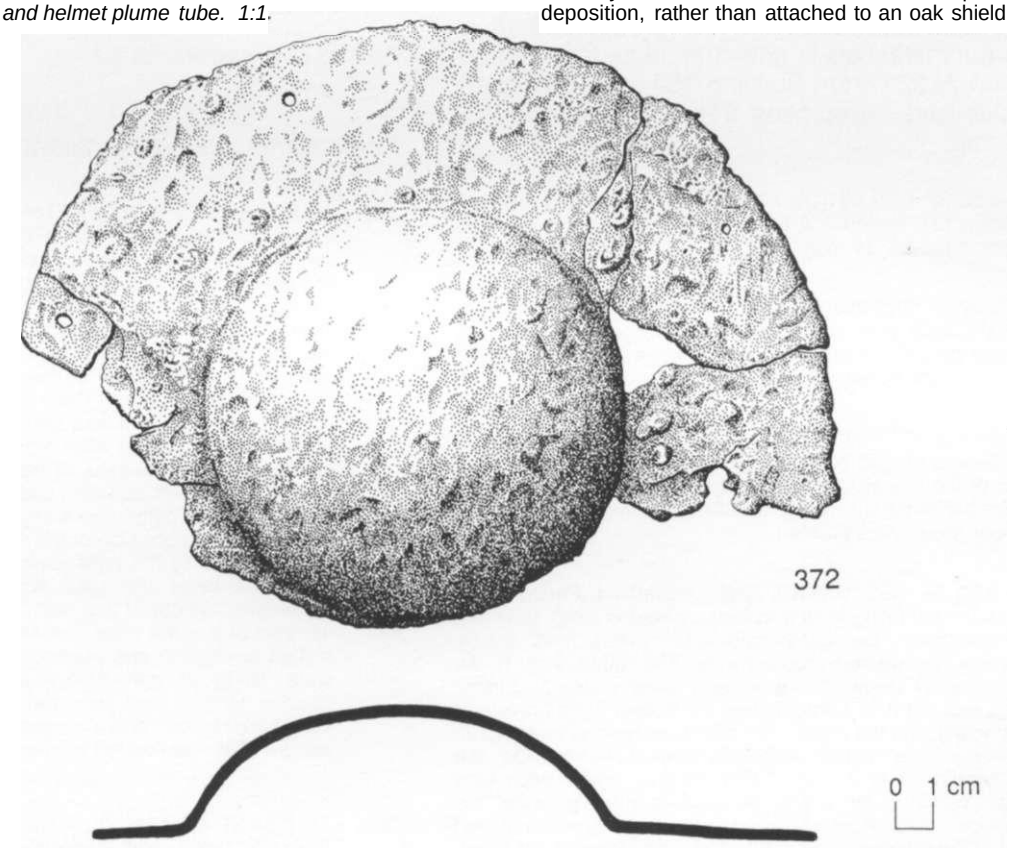


Fig 6.35 Shield boss. 1:2.

Sword (Fig 6.36; 373-374)

See also Category 15, Fig 6.43,388.

373 Fig 6.36 SF GBS 1035, B86. Unstratified. Site clearance. A fragment of a bone sword grip, oval in section and with four flutings. Length 87 mm, surviving diameter (not the maximum) 24 mm.

374 Fig 6.36 SF GBS 1009(C), B57 F1. Terraced area: destruction of Building 133. Period 2 or 3. A fragment of a tinned brass mount from a sword scabbard, broken in almost exactly the same places as an example from the Lion Walk site (*CAR 2,* fig 148,4194). This piece is finely moulded, and has a row of small punched dots on each side of the strong central moulding. The mount would be fitted across the width of the scabbard by two rivets, the holes for which survive. One is placed centrally on the width of the mount, the other lies towards one edge. Length (distorted) 75 mm, width 11 mm. The internal measurement of the central section between the two rivet holes is 54 mm.

Dagger (Fig 6.37; 375)

375 Fig 6.37 SF GBS 1259(C), B611 L64. Make-up: Building 131, Rooms 10-13. Period 1. The front-plate of an iron waisted dagger scabbard, with brass and enamel inlay. The scheme of decoration is outlined by a broad band of brass inlay and divided into four zones by three pairs of broad brass lines.

The first and third zones of decoration are alike, being a segmented rosette with alternate brass and red enamel triangular petals encircled by a laurel wreath of enamel. Both rosette and wreath are set within fine concentric circles of brass. This composition is framed by L-shaped motifs of red enamel and an upper and lower line of brass. The second zone is divided by narrow brass lines into a central square flanked by upright rectangular panels. The side panels almost certainly contained a line of enamel laurel wreath, now entirely missing, but hinted at by faint depressions in the iron. The central square contains a rosette with curved petals filled alternately with brass and red enamel and has three dots in each spandrel, the inlay for which is uncertain. The triangular fourth zone of decoration contains a chevron of alternate brass and red enamel petals. A band of laurel wreath runs around this zone, separated from the chevron by two fine lines of brass. The outer frame of the roundel at the tip of the plate seems to have been plain, though the missing central rivet was probably decorated, or decorative, in some way.

Two groups of three rivet holes at the top and centre of the scabbard indicate both how the front and back plates were held together and the positions of the fittings for attaching the scabbard to the belt. Length 255 mm, maximum width 65 mm.

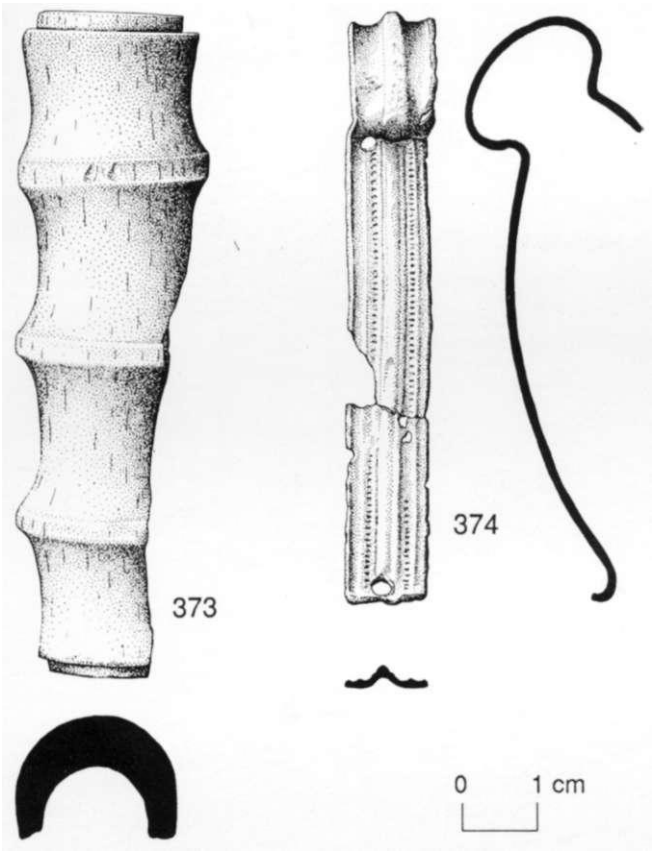


Fig 6.36 Sword and scabbard fittings. 1:1.

First-century military daggers and their scabbards from Britain and the continent have been catalogued and fully discussed by I R Scott (1985a & b). His research and the recovery of this example from the Gilberd School has provided an opportunity to re-examine the two previously-published scabbards from Colchester and military daggers from the town.

The Gilberd School scabbard, deposited in make-up for the barrack-block constructed *c* AD 44, belongs to Scott's Type A, Section A, and employs five out of six principal motifs. Section A is dated at the earliest to c AD 6/9, with a terminal date set sometime pre-AD 54. In view of their elaborate decoration, these scabbards are unlikely to be short-lived objects, allowing a conjectured date of manufacture for this example sometime prior to the invasion of Britain, possibly even within the reign of Tiberius.

In 1966 an iron dagger in a bronze-bound iron scabbard was recovered by B R K Dunnett from a pre-colonial level on Insula 11 on the Telephone Exchange site (Dunnett 1971, 11, and 28-30). This context is now recognised as being associated with the legionary fortress. The dagger is obscured by the scabbard, but has a flat tang pierced to take a rivet (or rivets) that fixed on the wooden (or bone) handle. The flat tang, and the context, allows the dagger to be dated as pre-Neronian (Scott 1985a, 162-3). The scabbard, decorated with silver and enamel inlay, belongs to Scott's Type A, Section C. The motifs employed include two specific to this section, hatched fields and, in the triangular zone, 'a shape like hanging drapery' *(ibid* 199). Scott dates Section C to the Claudian period, thus allowing this scabbard a date-range of 41 to 49 AD.

In 1974 on the Balkerne Lane site a Type B scabbard was found which belongs to Scott's Section G, dated from the Neronian period to the end of the 1st century. Inlaid with silver (no enamel or niello has been identified in conservation work subsequent to the publication of this piece in *CAR* **2,** 134-5), this scabbard employs the two principal motifs of the section, large-leaved 'palmettes' and a 'temple'. It would seem to be residual in its context, dated c150-c 250, and even were it to be Neronian in origin, it post-dates Colchester's legionary fortress.

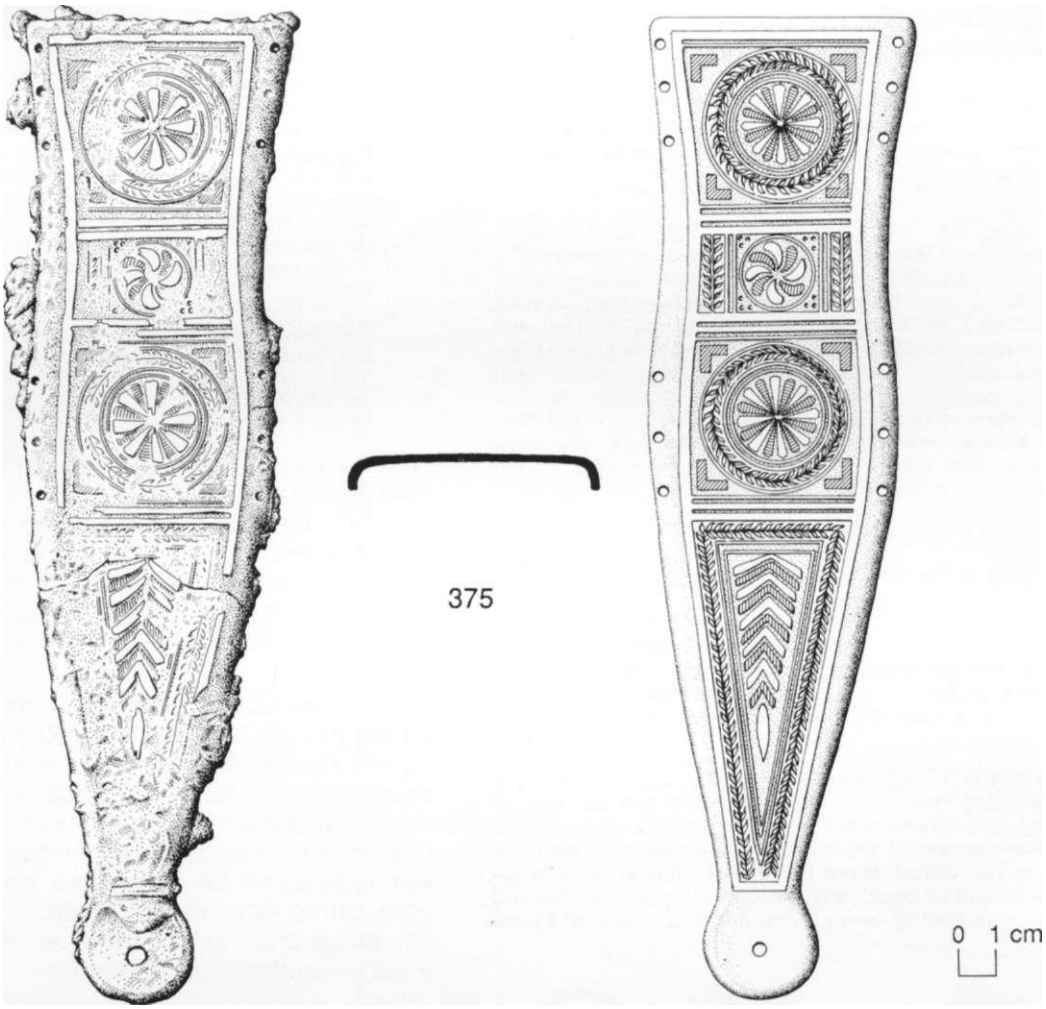


Fig 6.37 Dagger scabbard front-plate. 1:2.

Scott *(ibid,* 175-6) considers that Type A and early Type B scabbards were made in civilian workshops by skilled craftsmen with contracts to supply the army with weapons, while the majority of Type B, poorer in both design and execution, were made in the army's own workshop. He describes *(ibid,* 165) Type A scabbards as being of iron, with a wood or leather liner, and Type B scabbards as being of wood and leather, with iron plates fixed at the front.

Regarding the construction of dagger scabbards Jacqui Watson of the AM Lab writes:

The Gilberd School scabbard plate is decorated with brass inlay and enamel (Type A). It appears to have been riveted on to the extended sides of an iron back plate, of which very little remains. The scabbard plate from Balkerne Lane (Type B), which is inlaid with silver, has traces of mineral-preserved horn on the front and back as shown in Fig 6.38. The depth and shape of the horn suggests that the decorated plate was inserted into a horn scabbard and held in place by the riveted side loops. A similar scabbard plate has been recovered from the excavations at Deanery Field, Chester, Cheshire, and is illustrated in *Liverpool Annals of Archaeology and Anthropology* 15, pts 1-2 (1928), pl 12. From both examples it is difficult to suggest whether the horn scabbard was recessed to take just the one decorated plate, or if a plain iron plate was inserted into the back. In

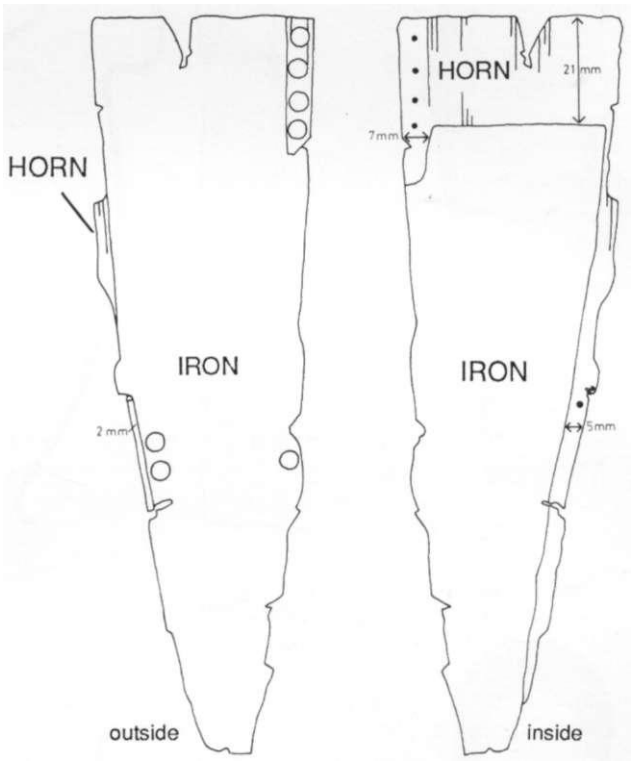


Fig 6.38 The construction of the Balkerne Lane site, Colchester, dagger scabbard front-plate. Just over half-size.

either case the horn must have been carefully carved to provide a suitable void to take the dagger and support the iron plates.

The scabbard could have been fashioned from one piece of horn or several pieces fused together by steaming and compressing. It is difficult to know how robust the fused horn would be for this function, and so one is inclined to suggest that it would have been made from a single piece. If these scabbards are made from single pieces of horn, suitable raw material would have had to come from long-horned cattle or even aurochs rather than the indigenous Celtic short-horns, sheep, or goats. This could suggest that they were imported from the continent rather than made in Britain at this period.

Horn is ideal for supporting these iron plates as it is a natural laminate combining flexibility with strength, and less likely to break in thin areas than other materials such as bone, ivory, or wood. Freshly polished horn varies in appearance from a pale version of tortoiseshell to a translucent blond colour, and would have complemented the inlaid iron plates especially if they had been darkened by some surface treatment.

Gerry McDonnell of the AM Lab has contributed the following note on the decoration of the Balkerne Lane scabbard plate:

The inlay technique of this scabbard is not uncommon in the Roman period, and also occurs in other periods. Its purpose was purely decorative, but it is of interest to note that the smith was inlaying white metal (silver) into white metal (iron). Although some effect can be seen, it is not as effective as inlaying with copper alloy (as the brass used on the Gilberd School scabbard), since there is not a great deal of colour contrast or differences in reflectivity. The contrast would increase as the iron tarnished, a process which could have been artificially induced by ('blueing') the iron, ie forming a thin oxide layer on the surface of the iron. Because of the corroded state of iron objects, it would be difficult to detect such a layer, although it is likely to be stable, and may form a continuous layer within the corrosion products. Further technical study of this type of inlay will be undertaken.

Two daggers other than that from the Telephone Exchange site discussed above are known from Colchester. Four iron blades were published as daggers from the Sheepen (Camulodunum) excavations of the 1930s in advance of the construction of the Colchester bypass (Hawkes & Hull 1947, 340, and pl 104,1-2,6-7). Only one can be described as military *(ibid,* pl 104,1). It has a handle with flat tang of Scott's Type 1 (1985b, 153), a broad blade with a simple midrib, and rivets through the shoulders, all features considered by Scott (1985a, 162-5) to be pre-Neronian. Such a date is consistent with the provenance of the dagger where the finds from the site as a whole are overwhelmingly pre-Boudican.

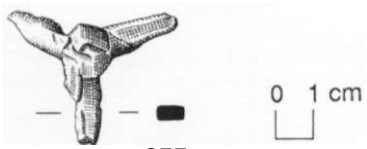
The other Colchester dagger is in the British Museum and has been fully described by R P J Jackson and discussed by Scott in Manning 1985 (153-4, 156-7, pl 73,V9). Its provenance is given as 'Colchester 1938', and this date may indicate that it too derives from the extensive excavations of the Sheepen site of the 1930s. The handle is of Scott's Type 1, and the blade of Type B, with grooves defining the midrib. These features allow a Claudian-Neronian date to be assigned to the piece, and, if the dagger did indeed come from the Sheepen area, then this date can be refined to probably AD 43-60/1.

Javelin (376)

A possible fragment of a javelin *(pilum)* is catalogued on microfiche. It derives from AF248, a shallow gully of Period 1.

Caltrop (Fig 6.39; 377)

377 Fig 6.39 SF GBS 799(X), A1770 L136. Occupation (weathered?). Building 136? Period 2. An iron caltrop with one of the four spikes missing and the others almost certainly damaged. Caltrops, used to disable enemy cavalry, are designed always to fall with one spike pointing upwards, and can thus be swiftly scattered. A caltrop is recorded from Silchester (Webster 1960, catalogue number 193). Maximum dimension 49 mm.



377

Fig 6.39 Caltrop. 1:2.

CAVALRY HARNESS FITTINGS

Strap-loops (Fig 6.40; 378-380)

These loops, or harness-clips, were used in conjunction with a central ring to join together three or four divergent leather straps.

378 Fig 6.40 SF GBS 634(C), A1253 L49. Dump. Period 3. The ?front-plate of a brass strap-loop. There are two projections for attachment at the back of the plain tapering mount, which is of shallow U-shaped section. Length 61 mm, maximum width 11 mm.

379 Fig 6.40 SF GBS 700(C), A1432 L66. Dump. Period 3. A fragment of a large brass strap-loop with a long acorn-shaped terminal. Most of the loop and the back-plate are missing. The underside is hollow. There is a flat-headed rivet at the very end of the terminal for fitting the strap and back-plate. Length 57 mm. A similar loop from Hod Hill (Brailsford 1962, fig 2.A32) has two rear projections for attachment, one behind the tip of the terminal and one behind the upper mouldings.

380 Fig 6.40 SF GBS 1211(C), B486 F61. Slot: Building 133, Rooms 6/7. Period 2. An almost complete, though distorted, brass strap-loop with a stylised acorn terminal. Only the very end of the back-plate and the tip of the rivet are missing. Length 34 mm.

Button-and-loop fastener (Fig 6.40; 381)

381 Fig 6.40 SF GBS 431(C), A681 L31. Dump. Period 3a. A copper button-and-loop fastener of Wild's Class 4 (1970, fig 1), with a round convex head. The loop has been pushed inwards and downwards. Diameter of head 17 mm, length 23 mm.

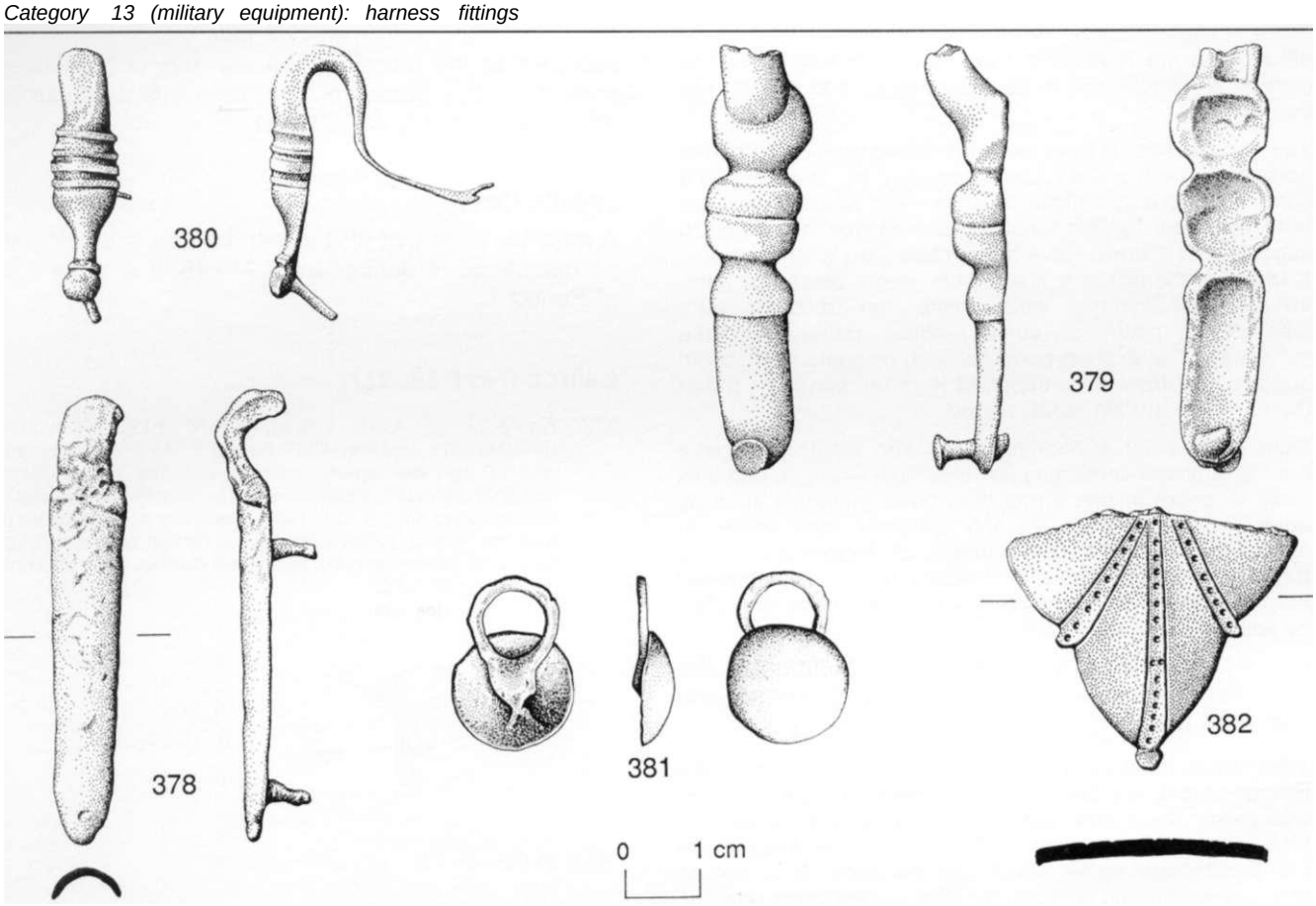


Fig 6.40 Strap-loops, button-and-loop fastener and harness pendant. 1:1.

Pendant (Fig 6.40; 382)

See also Category 15, Fig 6.42,386.

382 Fig 6.40 SF GBS 275(C), A297 L9. Dump. Period 3a. The tip of a leaded bronze leaf-shaped pendant (cf Webster 1982, fig 38,114, from Cirencester). The ribs of the leaf are marked with a single line of punched dots. The central rib terminates in a small knob. The two side ribs project slightly beyond the lines of the leaf segments. Surviving length 35 mm.

CATEGORY 14:
Objects associated with religious beliefs and practices

FIGURINES (Fig 6.41; 383-385)

383 Fig 6.41 SF GBS 157(C), A168 L1. Topsoil. Post-Roman. A copper-alloy cockerel of crude workmanship, the features having been cut into cold metal. The two sides of the bird's head and comb differ markedly in design. The eyes are simple punched holes. The cuts on the short wings to indicate feathers are also different on each side. The bird is standing with head and tail raised well above the body and the end of each wing stands clear of the body as if the bird were crowing. The legs of the figurine, with the toes crudely suggested, stand on a rectangular base, the underside of which is not flat. Even were it so, the bird would be unable to stand as its weight is unevenly distributed, with the centre of gravity forward of the legs. The base was probably therefore fixed to a plinth. Height 33 mm.

The bird is clearly related to two other cockerels from Essex: one from Chelmsford and one from Great Canfield (Drury & Wickenden 1982, 239-40, pl 18,1-2). The well-modelled Great Canfield bird is the larger and finer of these two, with head flung back in the act of crowing. The Chelmsford cockerel shows signs of becoming stylised, with its thinner tail and exaggerated beak. The Colchester cockerel, not much smaller than the Chelmsford bird, with its tail represented by one long and two short side feathers, is the least naturalistic of the three.

All three were intended to be fixed to a plinth of some kind. The Chelmsford bird has a dome-shaped base with a lower projection, and the Colchester and Great Canfield birds have flat bases but cannot stand on them. As the cockerel is one of the attributes of Mercury, together with a goat and a tortoise, Drury and Wickenden suggested that the other two Essex cockerels derived from Mercury groups, as exemplified by that from Verulamium (Wilson 1972, 329-30, pl 25b,c). Assuming their supposition to be correct, a similar origin may be postulated for the Gilberd School bird.

384 Fig 6.41 SF GBS 1214, B185 F28. Pit. Period 3. A fragment of a pipeclay figurine. Height 50 mm. Most of the surface is missing, though the fragment obviously represents part of a plain base surmounted by drapery. One possible source for such a fragment is a Dea Nutrix figurine, as that from Old Welwyn, Hertfordshire (Green 1976, pl 15,a).

385 Fig 6.41 SF GBS 819, A1622 L112. ?Occupation: Building 131. Period 1 or 2. A fragment from the base of a terracotta figurine or *aedicula.* Maximum length of sides 26 and 21 mm, maximum height 16 mm.

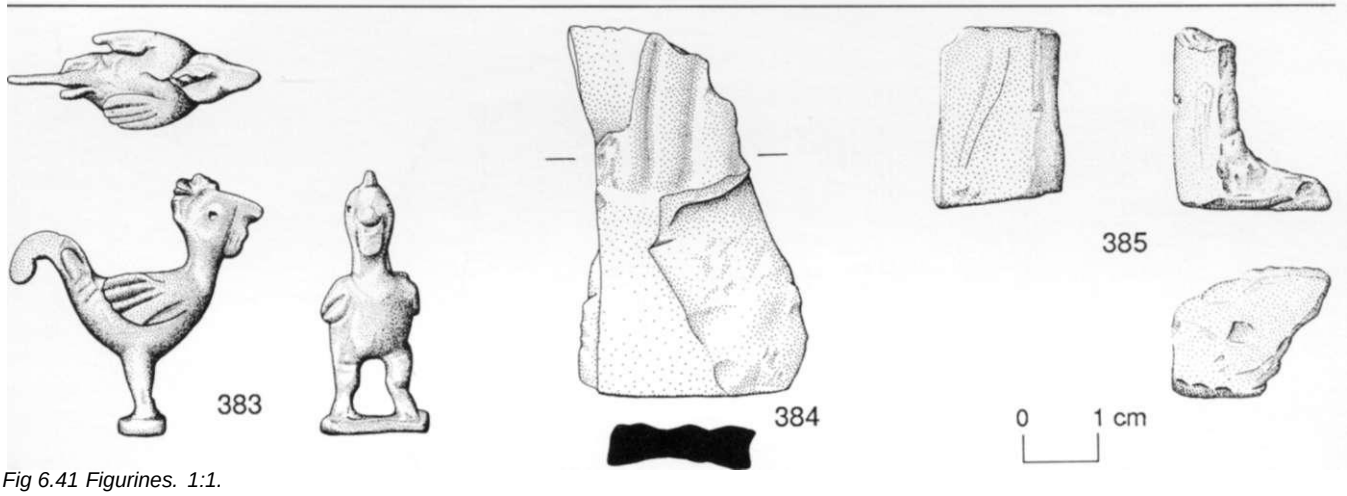


Fig 6.41 Figurines. 1:1.

CATEGORY 15:

Objects and waste material associated with metal working

EVIDENCE FOR THE MANUFACTURE/REPAIR OF MILITARY EQUIPMENT (Figs 6.42-43; **386-388)**

I am indebted to Christopher Dobson, a professional armourer, for his identification of **386** and **388** as specifically military objects. The alloys have been identified by Justine Bayley of the AM Lab.

386 Fig 6.42 SF GBS 1038(C), A2424 L267. Occupation: Building 131, Room 4. Period 1 or 2. A leaded bronze roughly heart-shaped object with a flat projection. A second projection has been broken off opposite the first. This piece has been interpreted as a blank for a cavalry harness pendant. The missing projection would have been the terminal, often bud-shaped, and the surviving projection would have been folded over to form a suspension loop (as *CAR* 2, fig 156,4233). Surviving maximum length 52 mm, maximum width 52 mm. In support of the interpretation of this object as a harness pendant blank, it should be noted that the same alloy, leaded bronze, was used in the manufacture of this piece and the pendant fragment Fig 6.40,382.

387 Fig 6.42 SF GBS 1065(C), A2441 L263. Daub floor: Building 131, Room 5. Period 1 or 2. A piece of sheet brass with three incurving sides and a fourth side which shows signs of secondary cutting. The piece is convex both transversely and longitudinally, though the curvature varies. Contiguous incurving sides meet at pierced oval terminals, one of which has been broken across the perforation. The fourth side can be divided into three sections, the central one of which has a cut edge defined on the right by a slight nick into the metal. The right-hand part is slightly longer than the centre and has been cut except at the point immediately adjacent to the nick where the edge is twisted and broken, ie the metal below this part has been deliberately removed by being cut and then ripped away when the point of attachment was sufficiently short and weak. The left-hand part projects well below the other two and on its lower edge has also been partly cut and partly broken. Its inner (cut) edge has been pushed inwards, stressing the right-angled junction with the central section and splitting it. Maximum surviving dimensions 84 by 59 mm.

388 Fig 6.43 SF GBS 1160(C), B390 F67. Pit: Building 131, ?Room 13. Period 1. A large folded piece of white-metal-coated copper-alloy sheet with stamped repousse decoration. The sheet tapers very slightly, and has broad plain borders with a central panel of decoration defined by lines of dots into three zones. The upper and lower zones are alike and depict a mussel shell flanked by crested dolphins. In the centre of the middle zone is a two-handled wine jar, or *cantharus.* Both the upper and lower edges have been cut in places, and either broken or crudely cut in others. Maximum width approximately 105 mm, maximum length approximately 76 mm.

Tinned or silvered copper-alloy sheet with repousse decoration is found on many pieces of military equipment,

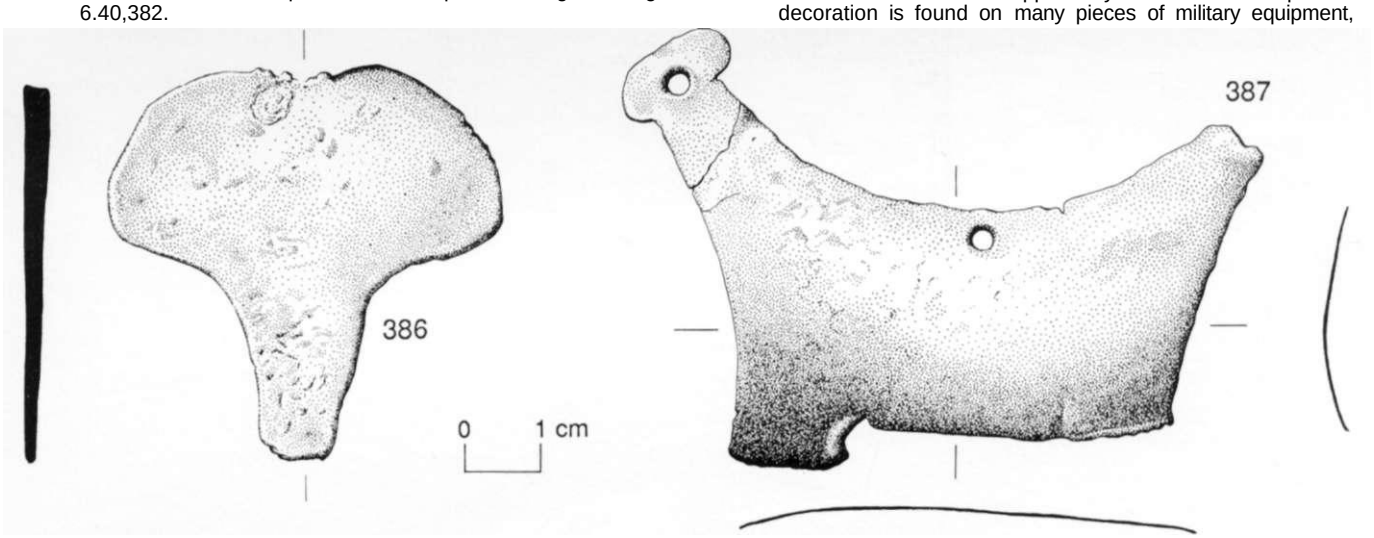


Fig 6.42 Objects associated with the manufacture/repair of military equipment. 1:1.

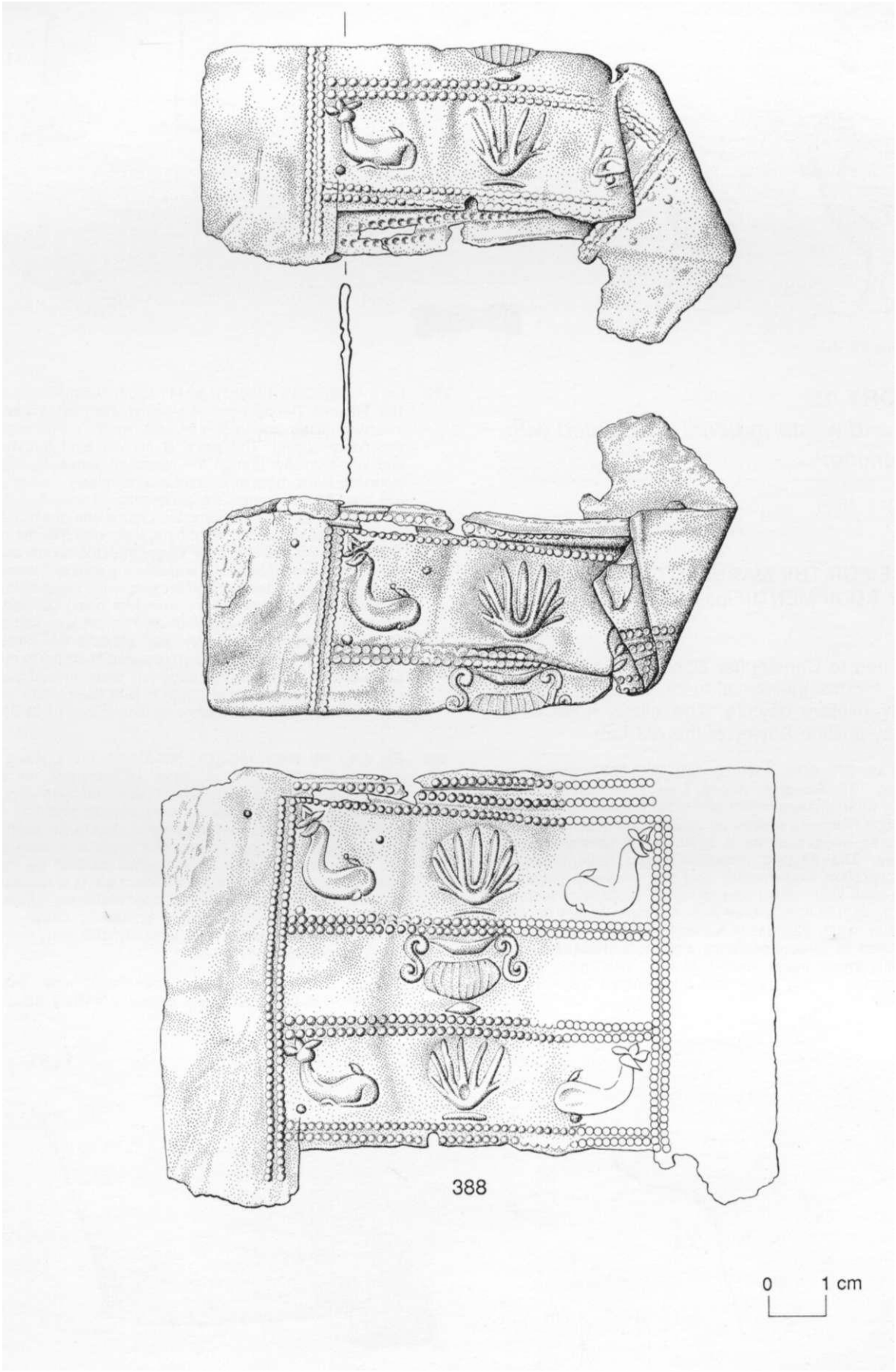


Fig 6.43 Object associated with the manufacture/repair of military equipment. 1:1.

such as helmet brow-bands and cheekpieces, scale armour breastplates, greaves, and sword scabbards. The size and shape of this fragment, together with its cut and broken upper and lower edges, suggest that it may be from a strip of sheet metal covered from end to end by stamped decoration and used in the manufacture or repair of sword scabbards of Pompeian type (Connolly 1975, 51). The length required would have been cut from the strip (very possibly the strip provided more than one such length), and any excess discarded. The presence of such an offcut on the Gilberd School site suggests that scabbards were at the least being repaired in the immediate vicinity.

METALLURGICAL WASTE OF THE ROMAN PERIOD

By Paul Budd

The Roman material comes from contexts dated between the 1st and 3rd centuries (microfiche pp 608-9), although much of the later material may be residual. The only Roman metal working for which there is evidence on the Gilberd School site is small-scale iron working. The evidence consists mostly of iron-rich fuel-ash slags, although there is one piece of smithing slag (from BF159, a posthole in Building 133), and one large piece of reduced fired clay with a thick vitrified outer clay layer (from AF323, Building 131) which may be a piece of hearth lining as well as tap slag (identified by Nina Crummy) from a number of contexts.

One probable crucible fragment (SF GBS 344) was recovered from a post-Roman context, A223, though it may be residual Roman. It is a small rim sherd from a fairly thin-walled vessel (up to about 6 mm thick) with an internal rim diameter of approximately 20 mm. The fabric is reduced and is probably quartz-tempered, although it is not particularly refractory and modification of the fabric by high temperatures (creating a vesicular structure throughout) has disguised the original appearance. The sherd displays some internal vitrification. XRF analysis detected traces of copper and lead.

CATEGORY 16:
Objects and waste material associated with antler, horn, bone, and tooth working

ANTLER OFFCUTS OR UNFINISHED OBJECTS (Fig 6.44; **389-393)**

The Period 3b pit AF27 produced three fragments of worked antler; one is catalogued under **391** and two under **392.** Also listed under **392** is a unworked fragment split from an antler tine, included here by

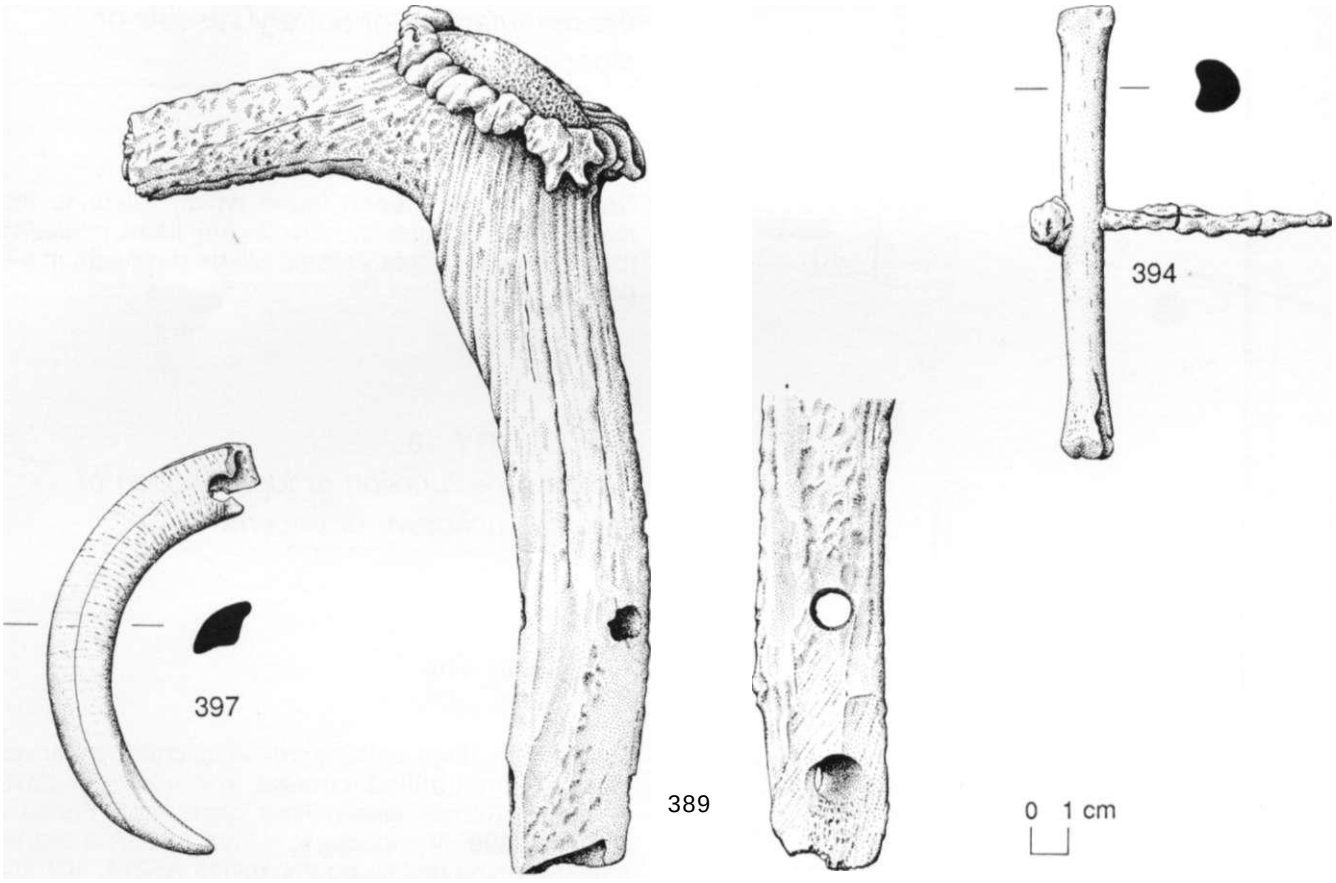


Fig 6.44 Antler, bone, and tooth ?unfinished fragments. 1:2.

association with the other two pieces. 393, a section sawn from a tine, derives from an unstratified context, while 390, a partly sawn, partly broken, tine tip comes from AL117, Period (1 or) 2 make-up.

389 Fig 6.44 SF GBS 336, A477 F27. Pit. Period 3b. A fragment of shed antler, with a complete coronet and burr, part of the brow tine, and part of the beam. The surface of the beam has been roughly cut away in places, and is pierced by two holes drilled at different angles. The beam has broken across a third hole. Probably intended for use as a pick handle. Maximum length 210 mm.

BONE OFFCUTS OR UNFINISHED OBJECTS (Figs 6.44-45; 394-396)

394 Fig 6.44 SF GBS 1256. B597 F117. Pit/gully: Building 133. Period 2. A sheep metacarpal, worn and broken at the distal end and pierced midway along its length by an iron nail with a square head. Length of bone 117 mm. Length of nail 74 mm. Centrally-pierced sheep metacarpals are often found on Iron Age sites (eg Glastonbury, Somerset (Bulleid & Gray 1917, 421-4) and Danebury, Hampshire (Sellwood 1984, 389). Their function is uncertain (Wild 1970, 34).

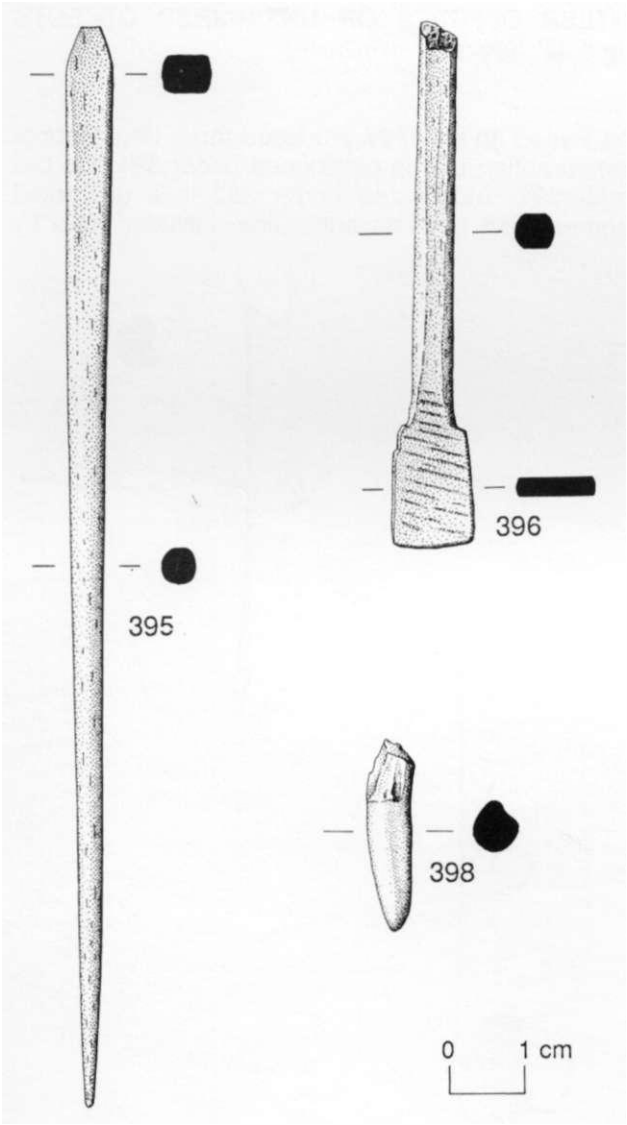


Fig 6.45 Bone unfinished objects and ?worked tooth. 1:1.

395 Fig 6.45 SF GBS 618, A1169 F153. Scoop. Period 3a. A long point with a roughly-shaped head of rectangular section. Probably an unfinished needle. Length 142 mm.

396 Fig 6.45 SF GBS 1228, A2546 F338. Gully. Period 1. A roughly-made spatulate-shaped object, with a broken shaft. The spatulate end has been made by cutting into the bone at an angle from the shaft with a knife or small saw. The tool marks are still clear and rough, suggesting that the object is unfinished. Length 69 mm.

WORKED TOOTH FRAGMENTS (Figs 6.44-5; 397-398)

397 Fig 6.44 SF GBS 525, A908 L10. Midden/dump. Period 3b. A pig's canine pierced at the upper end and broken across the perforation. Length 107 mm.

398 Fig 6.45 SF GBS 1146, B345 L35. Burnt floor: Building 131, Rooms 12-13. Period 2. A burnt tooth fragment, possibly an incisor, perhaps of *cervus.* It may be cut at the upper end. Length 25 mm.

CATEGORY 17:
Objects and waste material associated with the manufacture of pottery vessels or pipeclay objects

No objects have been found which relate to the manufacture of pipeclay objects. Any items related to the making of pottery vessels will be dealt with in the pottery report.

CATEGORY 18:
Objects the function or identification of which is unknown or uncertain

RINGS (399-410)

One of the rings catalogued on microfiche derives from an unstratified context and six from post-Boudican Roman levels. Four come from Period 2 contexts. 399, of copper-alloy, from AF207, a slot for timber-framing resting on the ?plinth AF214. 402 and 409 are iron and derive from make-up, AL116 and

AL100 respectively. 407, also of iron, comes from dump/make-up AL88. From a Period 1 or 2 daub floor, AL268, in Room 4 of Building 131, comes another iron ring, 405.

CHAINS (Fig 6.46; 411-417)

Of the five pieces catalogued on microfiche, three are only tentatively identified as chain links. The other two are 415, two short lengths of copper-alloy loop-in-loop chain with a ring terminal, deriving from Period (1 or) 2 occupation, AL250, in Rooms 3, 4 and 5 of Building 131, and 416, four copper-alloy chain links with a fragment of an iron loop-headed pin, from BF15, a Period 3b or 4 large pit.

411 Fig 6.46 SF GBS 986(C), A2332 L96. Occupation? Building 131 (?demolition). Period (1 or) 2. A fragment of a copper-alloy loop-in-loop chain with part of a thick ring threaded through one end. A further segment of the ring survives in the suspension loop of a stout hook found with the chain. The hook has a thick shaft of rectangular section near to the suspension loop, and terminates in a knob. Length of chain 39 mm. Length of hook 50 mm.

412 Fig 6.46 SF GBS 242(C), A233 F32. Small pit/scoop. Post-Roman. Many interlinked small copper-alloy rings embedded in iron corrosion products. The rings are penannular, which, together with the post-Roman context makes identification of this object as Roman mail *(lorica hamata)* unlikely. The mail links described in Robinson 1975 (171-3) are either punched *(ie* annular) or have their ends riveted together. Average diameter 7 mm. Possibly post-Roman.

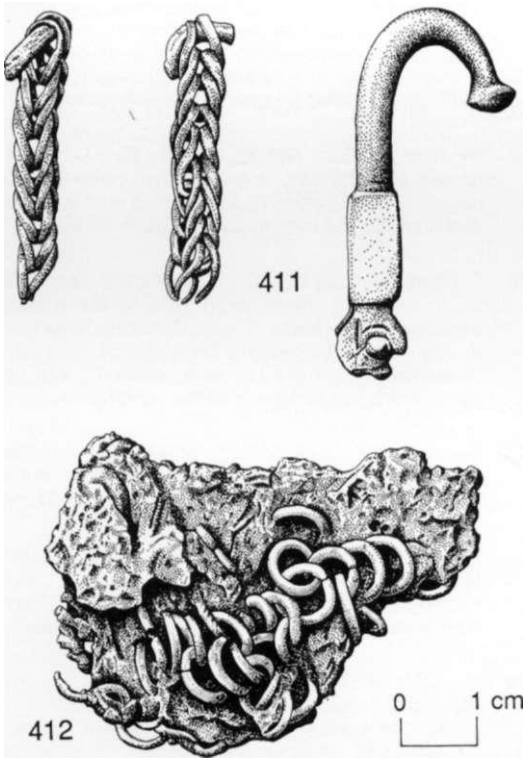


Fig 6.46 Chains. 1:1.

WIRE (418-421)

Four fragments of wire are catalogued on microfiche. Three of copper-alloy, one of iron. The only piece of note is the latter, which is twisted and appears to pass through an associated fragment of sheet iron. It comes from AL46, redeposited Boudican destruction debris from Building 134.

BONE ?PEG (422)

One bone ?peg from AL10, Period 3b midden/dump, is catalogued on microfiche.

SHEET COPPER ALLOY (423-476)

Many fragments and strips of sheet copper alloy were found on the site. They are catalogued on microfiche, arranged by period. Nine derive from contexts of Period 1, nine from Period 1 or 2, and six from Period 2.

SHEET IRON (477-504)

The fragments of sheet iron are also catalogued on microfiche and arranged by period. Four come from Period 1 contexts, one from Period 1 or 2, and three from Period 2.

MISCELLANEOUS UNIDENTIFIED COPPER-ALLOY OBJECTS (Fig 6.47; 505-531)

Of the pieces catalogued on microfiche, one (518) may be a military belt-fitting. It derives from AF144, a Period 2 slot, possibly for a partition wall, in Building 136.

505 Fig 6.47 SF GBS 306(C), A418 L11. Dump. Period 3. A worn brass cast fitting with the head looped over to form a tongue-shaped back plate, from the very tip of which a narrower projection has been broken/cut off. The front of the fitting, with two crosswings and a terminal, may be intended to form a tripartite debased acanthus motif. It may, alternatively, be zoomorphic. The worn looped head is almost certainly zoomorphic, with two ears separated from a rounded muzzled head by a moulding. Length 35 mm, maximum width 38 mm.

506 Fig 6.47 SF GBS 409(C), A630 L13. Dump (possibly make-up for Building 138). Period 3b or 4. A fragment of a longitudinally-concave brass mount with transverse mouldings and two slightly curved projections on the

underside. These may be all that remains of a loop. The broader end of the mount is broken. Length 40 mm, maximum width 19 mm.

507 Fig 6.47 SF GBS 413(C), A697 L28. Dump. Post-Roman. A sheath-like fitting consisting of two pieces of U-section binding which hold a solid plate and a decorative openwork plate. There may have been a third plate, indicated by traces of sheet metal within the binding on what seems to be the underside. There are no rivets along either length of binding. The binding and plates are fixed together at the upper end by a grooved strip. The method of fixing the strip at the back is obscured by corrosion, but at least one end finished in a rounded terminal which is pierced by an iron rivet. The rivet also passes through a second rounded terminal which does not seem to be the other end of the strip. The lower end of the object is broken and partly bent over. Length 50 mm, maximum width 21 mm.

508 Fig 6.47 SF GBS 629, A1255 L71. Dump: Building 136. Period 2. A double-ended shafted instrument. One end is broken across what appears to be an eye, the other, not on the same plane, is flat and spatulate, but narrow. Possibly a form of weaving needle. Length 84 mm.

509 Fig 6.47 SF GBS 982(C), A2338 L101. Dump: demolition of Building 131. Period 2. A damaged leaded bronze circular perforated mount with a stout lower projection. Diameter 21 mm, height 10 mm.

510 Fig 6.47 SF GBS 840(C), A1969 L194. Dump. Period 1 or 2. A bronze object, convex in section, of exaggerated palmate form. No method by which this object could be attached to another is evident. Length 34 mm, maximum width 24 mm. Compare with the leaf-shaped sherd from a ceramic lamp, Fig 6.14,153.

511 Fig 6.47 SF GBS 844(C), A2023 L201. Occupation: Building 131, Room 6. Period 1. A very corroded brass bar of rectangular section with a hooked acorn terminal. The upper end of the bar is broken, but appears to be somewhat thicker than the rest. No visible means of attachment to another object are present on the surviving fragment. Length 49 mm. Possibly a hook similar to Fig 6.46,411 which was associated with a chain.

512 Fig 6.47 SF GBS 472(C), A759 F117. Pit. Period 3. A corroded circular stud-like fitting with a recessed head in which traces of ?enamel remain. There is a small copper-alloy boss/rivet head in the centre of the head. On the underside the shaft appears to pierce a triangular ?washer. Diameter 21 mm.

513 Fig 6.47 SF GBS 559(C), A1018 F129. Pit. Period 2 or 3a. A (leaded) gunmetal spindle-shaped fitting with a deeply-cupped upper section. The lower section is both shorter and of smaller diameter than the upper, and has a flat base with a central indentation, probably to allow the object to be fitted on to a projection on another item. Height 16 mm, maximum diameter 20 mm. Probably allied to 'bell-shaped studs' as Fig 6.15,157, a link supported by the use of the same alloy in the manufacture of both objects and of other similar pieces (Allason-Jones 1985, 102).

514 Fig 6.47 SF GBS 164(C), A170. Unstratified. Roman. A circular ?pendant consisting of two plates, the upper of which has a high domed centre through which is passed a dome-headed rivet which holds it to the slightly convex lower plate. The two plates were originally in one piece, as the narrow rolled-over projection from the upper plate should clearly fit on to the rim of the lower plate. The fracture seems to have been caused by the corrosion/expansion of a fragment of an iron ?suspension ring which remains in the rolled-over projection. Maximum diameter 19 mm, length 22 mm.

515 Fig 6.47 SF GBS 978, B26 L4. Dump. Period (2 or) 3a. A short point, with a shaft grooved to resemble a twisted cable. The upper end is pinched, as if the object has been cut by ?shears. Length 70 mm.

516 Fig 6.47 SF GBS 1091(C), B205 L8. Midden. Period 3. A short tube with a grooved narrow central section and moulded terminals, one of which is crushed and the other fragmentary. Possibly a bead? Length 26 mm, maximum diameter 11 mm.

MISCELLANEOUS UNIDENTIFIED IRON OBJECTS (Fig 6.48; 532-569)

Some of the pieces catalogued on microfiche may be fragments of structural fittings. For example, 548 from the demolition of Building 131 is a strip with a small right-angled return at one end, and 549 is a disc with mineral-preserved wood on both faces, deriving from AL169, Period 1 make-up in Room 4 of Building 131.

532 Fig 6.48 SF GBS 369(C), A534 L8. Midden. Period 3a. An object with a short broad ?tang, the end of which is broken, a straight edge with a small projection close to the ?tang, and a curved edge. This piece is superficially like a cleaver blade, but the transverse section does not support this, the curved edge being the same thickness as the straight edge. Length 90 mm, maximum width 66 mm.

533 Fig 6.48 SF GBS 540(X), A866 L10. Midden/dump. Period 3b. A strip with one end tapering before widening out into a large circular terminal with a central perforation. That end has broken across the perforation and the other end is also broken. Possibly a part of a handle. Surviving length 113 mm, maximum width 11 mm, diameter of terminal approximately 26 mm.

534 Fig 6.48 SF GBS 568(C), A989 L13. Dump (possibly make-up for Building 138). Period 3b or 4. A fitting consisting of a plate, pierced by two ?rivet holes, which narrows and extends into a ring-ended terminal in which are the remains of either a hook or a distorted ring. Length 72 mm, maximum width (incomplete) 61 mm. Possibly from harness.

535 Fig 6.48 SF GBS 587(X), A1060 L52. Dump. Period 3a. A narrow tapering strip with four rivet holes and one rivet at regular intervals along its length. The rivet is at the narrowest end. Length 159 mm, maximum width 20 mm.

536 Fig 6.48 SF GBS 1254(X), A2607 L302. Occupation. Period 1. A strip with three large rectangular perforations and broken across a fourth. The perforations have been punched through the metal causing the edges of the strip to bulge at those points. Length 158 mm, width 12 mm between the perforations, up to 15 mm at the perforations.

537 Fig 6.48 SF GBS 346(X), A267 F27. Pit. Period 3b. A tapering strip with a rectangular rivet hole at the surviving broad end. Length 98 mm, maximum width 21 mm.

538 Fig 6.48 SF GBS 735(X), A1579 F209. Pit: Building 131, Room 4. Period (1 or) 2. A length of well-preserved rectangular-section bent tube, in two pieces, encasing iron wire of rectangular section. Total length 30 mm.

539 Fig 6.48 SF GBS 907(X), A2112 F213. Large pit. Period 1. Most of a rectangular plate with a copper-alloy rivet on one edge, and another fragment, also with a copper-alloy rivet, which may fit the larger piece, though this is not certain. Only the larger fragment is illustrated. Length (incomplete)

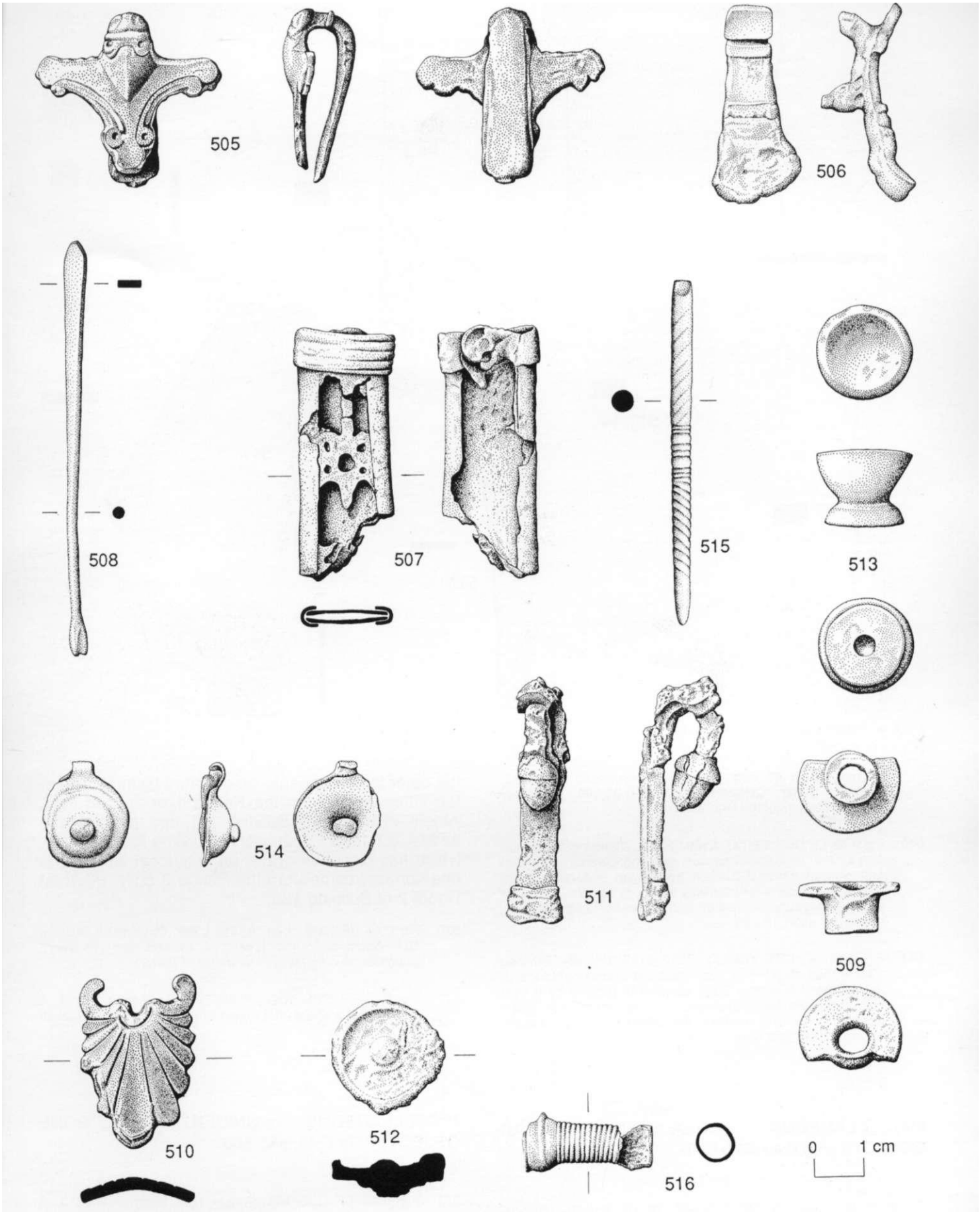


Fig 6.47 Miscellaneous copper-alloy objects. 1:1.

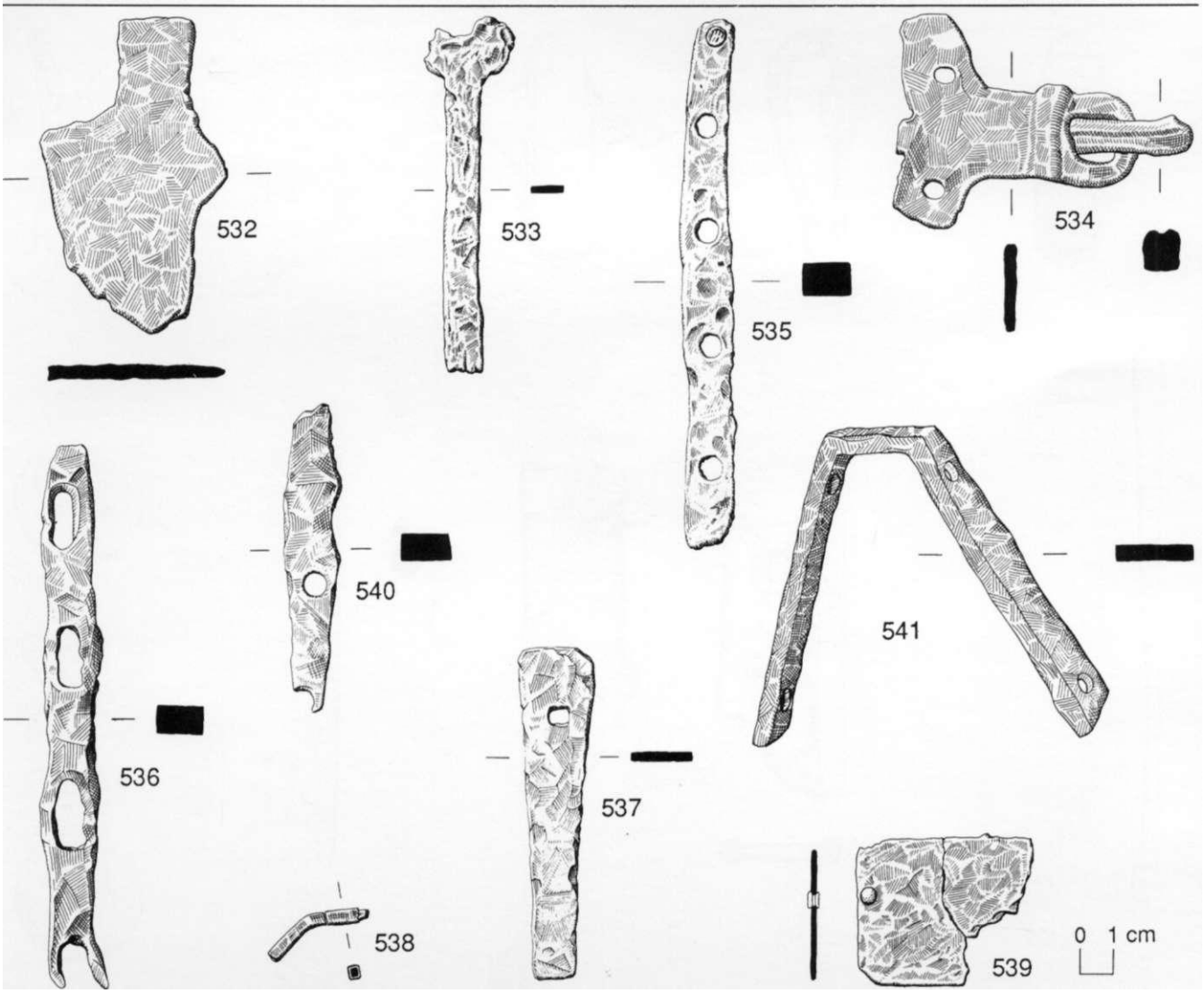


Fig 6.48 Miscellaneous iron objects. 1:2.

52 mm, width 43 mm. Also other associated fragments, including a nail. Compare with Fig 6.33,368, tentatively identified as laminated limb armour.

540 Fig 6.48 SF GBS 931 (X), A1891 F248. Shallow gully. Period 1. A strip of rectangular section, tapering towards a rounded and pierced terminal (broken across the perforation), and with a rivet hole about halfway along its length. The other end is bent round upon itself and is broken. Length 93 mm, maximum width 13 mm.

541 Fig 6.48 SF GBS 1257(X), B597 F117. Pit/gully: Building 133. Period 2. A strap bent (perhaps intentionally) into a flat-bottomed V-shape. Each terminal is pierced by a rivet hole, a rectangular-headed rivet survives on one side, and a fragment of a rivet shaft on the other. Length (if straight) approximately 220 mm.

MISCELLANEOUS UNIDENTIFIED LEAD OBJECTS (Fig 6.49; 570-580)

Four of the pieces catalogued on microfiche derive from pre-Boudican contexts, one is a drip of lead and the other three appear to be distorted by heat. Two of the latter derive from the Period 1 or 2 daub floor, AL268, in Room 4 of Building 131, and the third from AF219, a Period 2 post-hole in Building 133. The drip, which has pieces of gravel and charcoal adhering to one surface, came from the Period 2 gully, BF73, in Room 2 of Building 133.

570 Fig 6.49 SF GBS 1049, A2416 L262. Daub floor: Building 131, Room 6. Period 1 or 2. A pierced disc (?washer). Diameter 56 mm. Internal diameter of perforation 12 mm.

571 Fig 6.49 SF GBS 1097, B208 F25. Pit. Period 3 or 4. A fragment of a sheet lead object with bevelled edges. Length 89 mm.

MISCELLANEOUS UNIDENTIFIED BONE OBJECTS (Fig 6.49; 581-588)

581 Fig 6.49 SF GBS 671, A1223 L66. Dump. Period 3. A fragment of a shaft which tapers upwards towards a terminal decorated with bead, reel and baluster mouldings above two

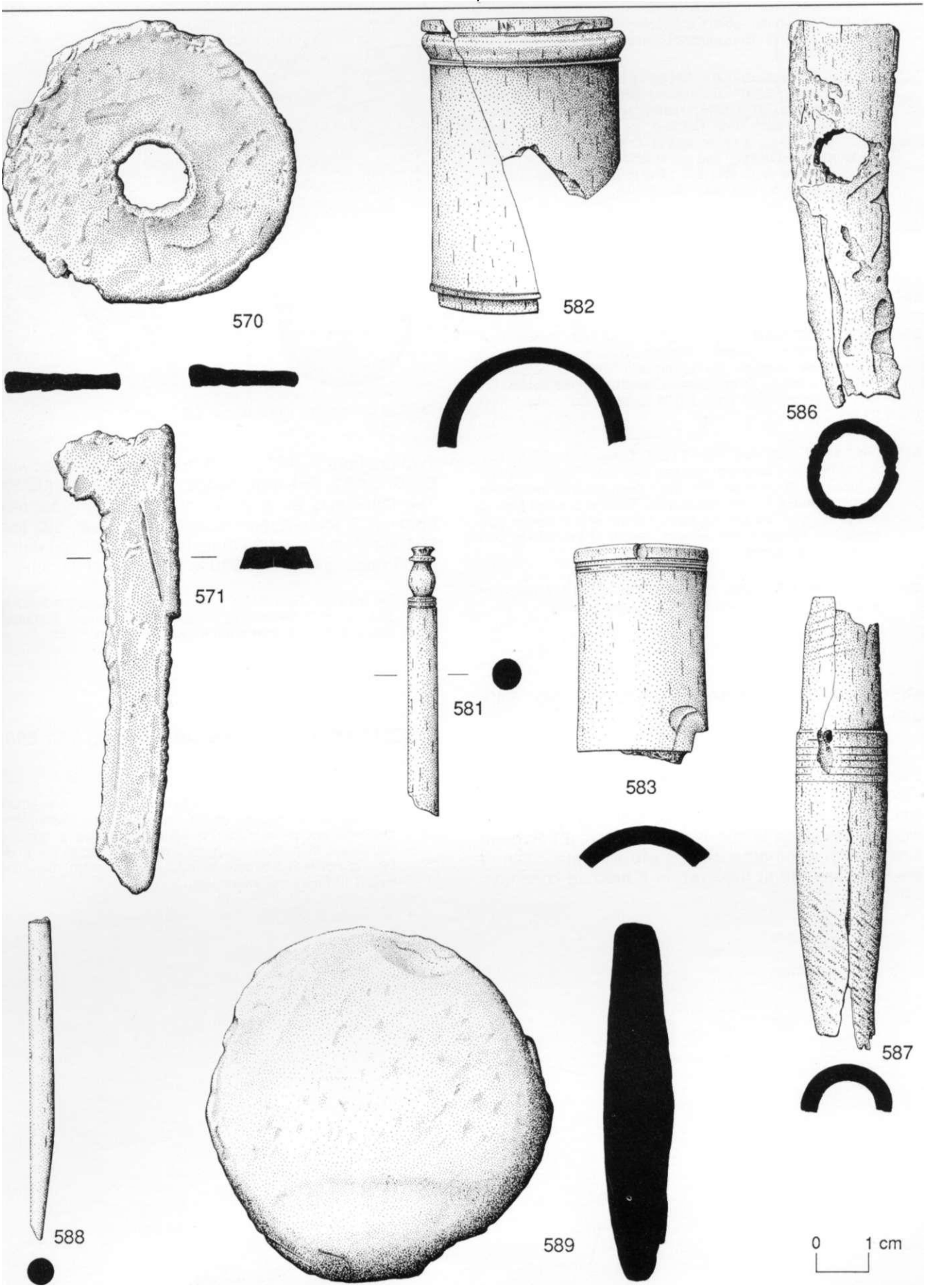


Fig 6.49 Miscellaneous lead, bone, and shale objects. 1:1.

grooves. Were this object a hairpin, the shaft would taper from the terminal downwards. Surviving length 51 mm.

582 Fig 6.49 SF GBS 492/961, A812/F121 & A2293. F121 = pit, Period 3, and A2293 = unstratified, post-Roman. A fragment (in two pieces) of a tube (?collar) with turned decorative mouldings at each end. There is an inner lip at one end, possibly to allow another object to be slotted in without penetrating too deeply, and at the other end the outer face is cut away as if to enable this tube to be fitted into another object. Length 55 mm, diameter 36 mm.

583 Fig 6.49 SF GBS 628, A1213 F163. Pit. Period 3. A burnt fragment of a tube (?collar) as 582, but with different turned mouldings at the surviving end. Length 41 mm.

584-5 Not used.

586 Fig 6.49 SF GBS 917(C), A2070 F252. Pit. Period 1. A decayed antler object, slightly curved and pierced transversely towards the lower end. The tip is broken. Possibly a toggle or cheekpiece, allied to those associated with horse harness (see Fig 6.22,201). Surviving length 73 mm.

587 Fig 6.49 SF GBS 869, A2115 L221. Dump. Period 2 (or 3a). A fragment of a tube with one end recessed. The thicker end is tapering. Several grooves have been cut into the thicker part just above the recessed area. There is a small hole at the junction of the two sections. Length of the thinner part (complete at one point) 27 mm, length of the thicker part (incomplete) 59 mm.

588 Fig 6.49 SF GBS 1056, B144 F28. Pit. Period 3. A fragment of a shaft, with one end cut down. Length 62 mm.

MISCELLANEOUS SHALE OBJECTS (Fig 6.49; **589-594)**

Catalogued on microfiche are nine fragments of shale (one entry comprises four pieces, another two), of which only one retains positive signs of its original working. As shale is not a local material, it has been assumed that the other pieces are all that remain of artefacts brought to the town in a finished condition.

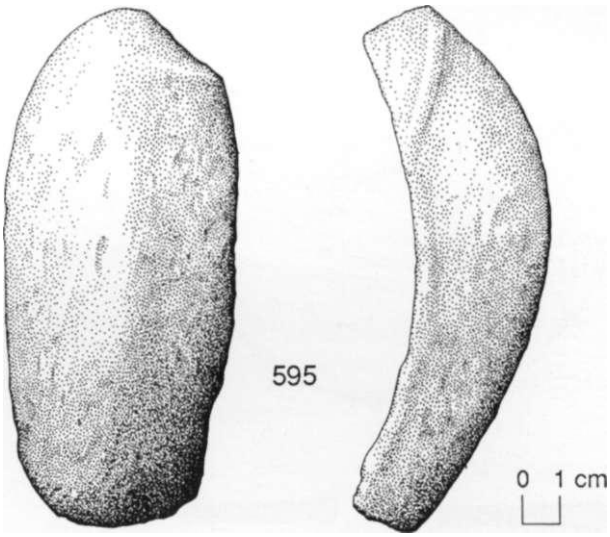


Fig 6.50 Unidentified stone object. 1:2.

Two are from Period (1 or) 2 make-up associated with Building 131, **591** from AL132, and **592** from AL229. The latter may be a fragment of a rectangular tray from which the polished faces have split off. **593** and **594** are from Period 3 contexts, pit AF102 and dump AL66 respectively, and **590** is from Period 3a dump.

589 Fig 6.49 SF GBS 913(C), A2145 L231. Make-up: Building 134. Period 2. An irregular laminated disc of shale. Maximum diameter 67 mm, maximum thickness 13 mm.

MISCELLANEOUS STONE OBJECT (Fig 6.50; **595)**

595 Fig 6.50 SF GBS 791, A1447 F121. Pit. Period 3. A fragment of a curved sandstone object, roughly ovoid in plan and plano-convex in section. Possibly for use as a grinding implement in a stone or pottery mortar. Though the inner face is not well finished, its edges are smooth. Surviving length 134 mm, maximum width 60 mm.

7. ROMAN AND POST-ROMAN TILE AND DAUB

by Nina Crummy

Introduction

Some 1,280 kg of Roman and post-Roman tiles and bricks were recovered from the Culver Street excavation, and an estimated 600 kg from the Gilberd School site. The latter assemblage consisted in the main of large fragments of roof tiles, with *tegulae* predominating, deriving from contexts associated with the Boudican destruction of Period 1/2 buildings, while that from Culver Street was composed of small fragments of tile, often no more than one or two to a context, and often too small for the original tile form to be identifiable. This difference between the tile from the two sites is undoubtedly a reflection of the comparatively undisturbed nature of the early deposits on the Gilberd School site, which saw little Roman or post-Roman disturbance of the Period 1 and 2 levels. Culver Street, on the other hand, saw continuous occupation throughout the Roman period, some Anglo-Saxon activity as evidenced by Hut 3 on Site B, early medieval robbing of the Roman foundations, and the digging of rubbish pits from the Norman period onwards, all of which, especially the robbing activities, served to break up and disperse the tile assemblage.

Little daub was retrieved from the excavations, and only the decorated fragments from Building 79 have been discussed here. Post-Roman tile forms only a very small part of the total assemblage; nevertheless the Culver Street site produced some of note: glazed floor tiles, crested ridge tiles, and an unusual decorated double-sided tile of probable 14th-century date.

At Colchester, the tiles sent in from the site for identification are usually a representative sample of the larger pieces, those with distinctive features, and those from noteworthy contexts. This selection is the responsibility of the site director or supervisor. The majority of pieces are discarded after identification, especially if they are from a small site, though remarkable items are kept. For tiles from the excavations of 1981-5, an archive form based on that used by the Department of Urban Archaeology of the Museum of London was used for their identification. The noticeable difference between the DUA approach and that used here is in the treatment of tile fabric. No attempt has been made here to establish a fabric series, though, recognising that this is a potential area for research into Colchester's tiles, all the material from Culver Street, and that from Period 1 and Period 2 contexts from the Gilberd School, has been kept to provide a basis for future research. A note on buff tiles which form a distinctive fabric within the Colchester early tile assemblage and which were made in the area of the Eccles villa, Kent, has been provided by Dr Ian Betts of the DUA.

The tile material from the Culver Street and Gilberd School sites which derives from contexts directly associated with structures is detailed on microfiche in building number order, while any other pieces which are intrinsically important or which derive from noteworthy contexts (especially early ones) are detailed by site/area. Also on microfiche are brief overviews of the tile from the Cups Hotel and Spendrite sites.

Acknowledgements

The tiles from the Cups Hotel site were identified and listed by a group of volunteers to whom the Colchester Archaeological Trust extends its thanks: Gabrielle Chadwick, Brenda May, and Joy Hind. Thanks must be extended to Ernest Black, who not only drew my attention to the possibility of Colchester's buff tiles being Kentish imports, but also provided a valuable detailed report (pp 261-72) on the keyed tile fragments from recent excavations. Without his work this chapter would be much the poorer. I am also grateful to Ian Betts and John Cotter for their contributions. Researchers interested in medieval building materials are referred to the latter's forthcoming work on louvres from Colchester (in *CAR* 7, the report on the medieval and post-medieval pottery). Finally, and especially, I am grateful to Joy Hind, who has helped with the enormous task of listing the tiles, and who has drawn many of the tile signatures and prepared the signature archive.

Roman tile and daub: discussion

As many of the military buildings of the Period 1 fortress at Colchester were adapted for reuse in the veterans' *colonia* founded in *c* 49, it is often not possible to be certain that tiles, particularly roof tiles, associated with these buildings had their origin in Period 1. However, the tile assemblages from Buildings 83 and 84 on Culver Street Site E and Building 131 on the Gilberd School site, show that in Period 1 these structures were probably fitted with tiled roofs. The construction trenches of the two Culver Street buildings both contained fragments of *tegulae,* and those of Building 83 also held fragments of *imbrices.* This implies that roof tiles had been brought to the site for use on the buildings, broken in transit or on arrival and thus made available for

inclusion in the construction trenches.

That these two buildings were fitted with tiled roofs as part of their original design seems clear. The information from Building 131 on the Gilberd School site is more ambiguous, as none of the Period 1 tile associated with the barrack was in construction levels. However, the contexts producing tile do seem to indicate that during Period 1 broken roof tiles were lying around in the vicinity of Building 131, and thus were available for inclusion in building work. These fragments probably represent tiles brought to the site early in Period 1 for use on the roof of the barrack, *or* tiles brought to the site during Period 1 to replace an earlier roof made of some other material such as thatch, *or* roof tiles which broke, were removed from the roof and reused during Period 1. The last possibility could also indicate a tiled roof being part of the original construction of the barrack.

Tegulae and *imbrices* were not the only types of tile available within the fortress. Fragments of column and other bricks were found in Period 1 levels on Culver Street Site B, as was a piece of tile of uncertain form with very shallow grooving. The Period 1b hearth EF1245 in Room 10 of Building 83 contained a signed brick. Twenty-nine other tile fragments, including roof tiles and brick, were also found on Culver Street Site E. On the Gilberd School site a fragment of an antefix with a foliate design (Fig 7.1,4) was found in either Period 3a dump or in Period 2 destruction debris of Building 131. This barrack block is dated to Period 1, and therefore the antefix fragment may be of military origin.

The design on this antefix is similar to that on another

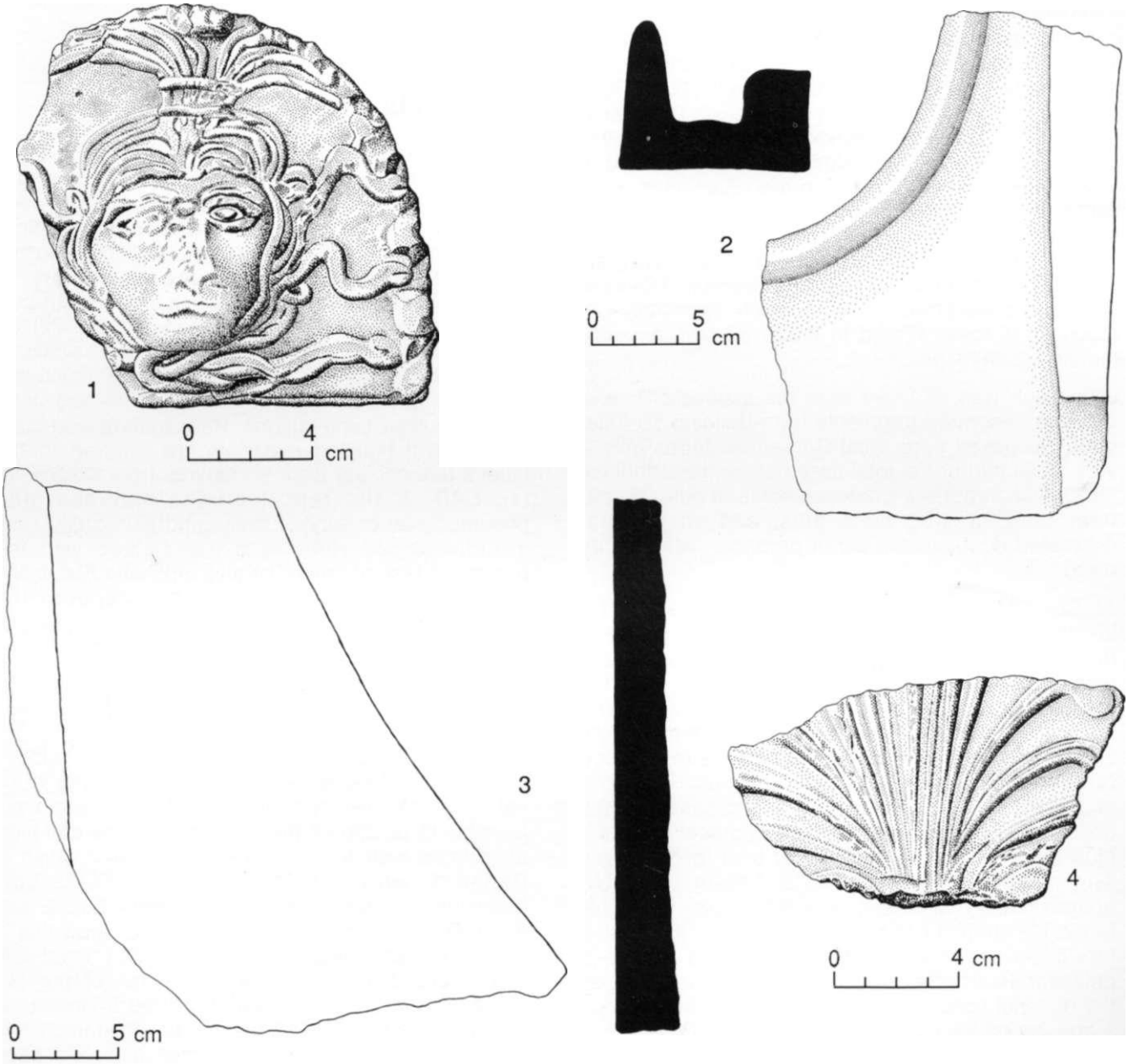


Fig 7.1 Unusual tegulae (1:3) and antefixes (1:2) from the Gilberd School. [Pages 252-3]

antefix from the town (Hull 1958, pl 30b, top left). On the same plate are two antefixes decorated with a Medusa head, one of which comes from Insula 33, from the old GPO site in Head Street (Hull 1958, 209; Pollexfen Collection 1468), the other is unprovenanced. The Gilberd School site has produced a third antefix with a Medusa head (Fig 7.1,1), which was found in AF53, a large pit/terrace of Roman date (no closer date can be assigned to this feature). The Gilberd School site is in Insula 17a, two *insulae* north of Insula 33. Too few of these Medusa-head antefixes have been found to give weight to any pattern of distribution, and none may be closely dated stratigraphically, but it may be worth noting that of the three published from Colchester two come from *insulae* in the extreme west of the walled area of the town, within the area of the military fortress and early colony.

Almost certainly originally from the military period are the column bricks reused in Building 152 on the Cups Hotel site. Thirty-five column brick fragments were found on the site, all but one deriving from Building 152. They were used, set in mortar, as infill in between stud-work (pp 330-2, Fig 13.11). Another example was found in Building 154, in Period 4 make-up, which was composed of recycled destruction debris of Period 3. Thus this piece too may have originally derived from Building 152. The date of the reuse of these column bricks is particularly informative, as it yields more information about the bricks used in the military fortress. Building 152 is dated to Period 2, the veterans' *colonia* of *c* 49-60/1. The reuse of these bricks implies that they were originally almost certainly in use in Period 1. A fragment of a column brick was found in Period 1 silt BL610 on Culver Street Site B, confirming the use of these bricks in the military period.

Several blocks of sandy clay (daub) were recovered from the Culver Street site, and all but one derive, or probably derive, from military contexts. One, measuring approximately 290 (1 pM) x 230 (incomplete) x 90 mm came from the barrack block wall BF533 in Building 77, reused in the colonial period. Several other intact blocks formed part of the barrack block wall BF862 in Building 77 (pp 39-40, Fig 3.14; *CAR* **3**, fig 11,2). They measured 430 x 290 (1 *pM)* x 90 mm. The wall was lifted in one piece for future display in the CM. Another block may also be of military origin as it too comes from a Period 1 building reused in Period 2. Measuring 150 x 135 (incomplete) x 90 mm, it was found in Boudican dump *tin situ* (CL52) in Building 79. The block not associated with a military building was found in the Period 4 foundation BF205 for Building 113. Its surface was slightly scored. It is possible that this block was military in origin and reused in Period 4.

Several fragments of decorated keyed daub also derived from Boudican destruction debris in Building 79, including some from the same context as the sandy clay block. The keyed daub is probably a primary feature of the building and hence is likely to be military. One piece (Fig 7.2,1: C370 L52) represents the corner of a plain square or rectangular panel defined by at least two mouldings. Two others (Fig 7.2,2-3: C370 L52 & J366 L222) show right-angled corners filled with narrow radiating mouldings. Some of the smaller fragments from CL52 may show the lozenge pattern most frequently found on daub in Colchester, and there is a least one piece with scored hatching (Fig 7.2,4, cf *CAR* **3**, fig 13). Another fragment from CL52 bears mouldings which meet irregularly at an angle below 90° but do not form a lozenge. Three very unusual patterns are also represented. The first (Fig 7.2,5) seems to show large and small mouldings radiating outwards from either a plain circular centre or a plain circle set in a right-angled corner. The second (Fig 7.2,6) shows four radiating mouldings which terminate at a finger-made curve. Running close to this curve is a straight line made by pressing a length of string into the damp daub. These two designs are from CL52. The third pattern (Fig 7.2,7) shows an imbricated design, as of overlapping lozenge-shaped or hexagonal tiles. Two fragments survive, both from C362 L47.

Hearths and ovens form an important group of both pre- and post-Boudican contexts producing tile. Tiles, especially *tegulae,* and bricks were eminently suitable for use in the construction of a hard, fire-resistant, reasonably flat base. On the Culver Street site, the Period 1b hearth EF1245 in Room 10 of Building 83 demonstrates the range of tiles favoured for use in hearths. It was made up of two *tegula* fragments, a fragment of a signed brick 73 mm thick, part of a *lydion* (in four fragments) 251 mm long (incomplete), 272 mm wide, and 67 mm thick, and four unidentified fragments.

The flanges of *tegulae* used in hearths were usually left on, but occasionally are found to have been deliberately removed. One example of this practice also comes from late Period 1 in Building 83, where the hearth EF1111 in Room 4 (p 50) produced a bottom left corner of a *tegula* with the flange broken or chipped off. A second example is a *tegula* lacking its flanges which formed part of the Period 4b oven BF269 in Room 6a of Building 112 (p 78). This *tegula* bears an exuberant S-shaped signature on the surface.

An oven (GF1545) from the Period 4 Building 117 on Culver Street was of tile and daub construction and had a floor composed of two layers of *tegulae* and amphora sherds. In all the oven produced 32.5 kg of tile, composed of 59 fragments (corners and sides) of *tegulae,* 51 unidentified fragments, of which many were probably from *tegulae,* and one signed brick fragment, measuring 192 (incomplete) x 177 (incomplete) x 34 mm.

Also on Culver Street, the Period 4 Building 123 contained hearths and ovens which utilised keyed tiles as a construction material. DF582 (Room 9), only tentatively identified as a hearth, contained fragments of *tegulae,* a piece of voussoir of Type V6, and a fragment of box tile of Type B10. (For descriptions and dates of the types of box and

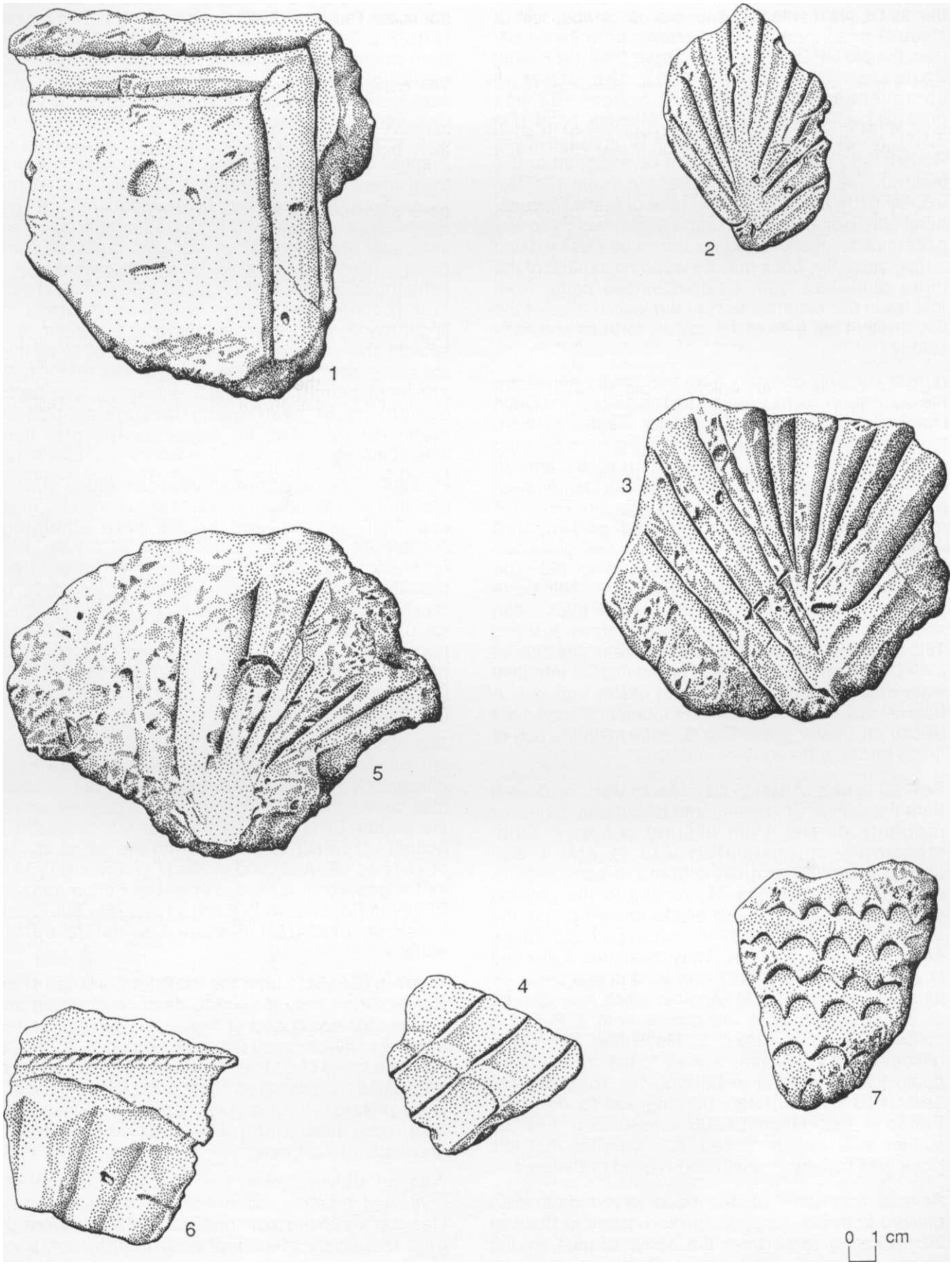


Fig 7.2 Fragments of keyed daub from Building 79 at Culver Street. 1:2. [Page 253]

voussoir tiles, *see* pp 261-70). Also in Room 9, oven debris DL641 contained two pieces of voussoir of Type V6, and the oven DF1044 in Passage 2 contained a piece of box tile of Type B10.

The sides of an acutely arched *imbrex* can be practically flat, which probably accounts for the low number of *imbrices,* four only, identified from hearths or ovens. All were on the Culver Street site. In the Period 3 Building 94 a hearth BF459 contained three side fragments of *tegulae* and a piece of *imbrex.* In Period 4 the ?hearth DF582 in Building 123 which contained keyed tile also held a fragment of an *imbrex,* as did the oven debris DL475 in Room 9. The fourth piece came from the oven GF1798 in the Period 4 Building 119.

An unusual characteristic of the assemblage of Building 119 is that most of the identifiable tile fragments are of *imbrices.* The construction debris GL1592 produced an unidentifiable fragment, but GL1647, floor make-up/dump, contained two *imbrex* fragments, floor make-up GL1645 one, burning GL1959 one, and oven GF1798 one. GL1716, described as destruction debris/occupation, produced one *imbrex* fragment and a piece of a semicircular column brick. Thus, of eight tile fragments directly associated with the building, six are of *imbrices.*

This suggests that an element of 'sorting' appears to be present. The tile fragments themselves are unlikely to be of manufacture contemporary with Building 119, but residual, or deliberately reused. If deliberately reused, then the use of *imbrices* implies that either these were the preferred material, or, more likely, the only material available. Deliberate reuse is unlikely in view of the very low number of pieces as a whole from the building, therefore the fragments must be residual, but again with the implication that the bulk of the material available to be redeposited was composed of fragments of *imbrices.* The *tegulae* from the same pile of roof debris must have been deliberately removed for reuse elsewhere. One feature which was of similar date to Building 119 and composed largely of *tegulae* is the oven GF1545 in Building 117 described above. There is no means of proving beyond any doubt that the *tegulae* used in the oven are from roof debris which also produced the *imbrices* in Building 119, but the example serves to illustrate that *tegulae* could be selected from an original assemblage leaving only *imbrices.*

However, it should here be noted that apparently roofs may be made solely of *imbrices* (Brodribb 1987, 22-4), though there seems to be no archaeological evidence for this in Britain, and for literary evidence Brodribb quotes Virgil, who *(Georgics* 4, 296) describes a hut as covered *'imbrice'* (with an *imbrex).* It is probable that the demands of the metre have here dictated that only one type of tile be described, as they have surely limited the number of tiles used on the hut roof to the singular. However, Building 119 did consist of a single room, which could justify it being called a 'hut'. The *imbrex* fragments came not from construction levels but occupation and destruction, and so may represent breakages during the life of the building from a roof composed only of *imbrices.* Perhaps then Building 119 may provide archaeological proof of architectural truth in Virgil's use of *'imbrice'?*

Tile played an important role in providing a stable material for use in foundations. The tank GF1558, constructed originally in the Period 4 Building 118, then backfilled and capped for use possibly as a foundation for a similar structure in the Period 5 Building 120, was built of fragments of flat tiles set in *opus signinum* (pp 89-90, Fig 3.47), and included a complete *lydion* (Table 7.1). Tile was also, of course, an essential ingredient of *opus signinum.*

A foundation provides a *terminus ante quern* for the tiles used within it. Most forms are long lived, but occasionally dated types can be proposed, and thus the source of the tile contained within some foundations can be important. Of particular interest in this respect is the source of the tile used in the pile holes and foundations of the aisled Period 5 Building 127 on Culver Street Site E.

The demolition layer (EL10) of the Period 4 buildings which preceded Building 127 on the site contained fragments of voussoir tiles of Type V1, and box tiles of Types B5, B9, and B10. From the pile holes for the building came four fragments of unidentified keyed tile, and box tile of Type B10. Possibly the feature producing the most tile from the whole of Site E is the Building 127 foundation EF264, which contained many pieces of keyed tiles as well as bricks and roof tiles. Almost 90 kg of tile set in thick mortar came from the feature, the mortar being mainly *opus signinum,* though some *lydion/pedalis* fragments had buff mortar as well as *opus signinum* adhering to them. Keyed tile types present in the foundation were box tiles of Type B6, B6/B11, B9, and B10, and a voussoir of Type V2. Five keyed tile fragments of uncertain form were also found.

The structure in which these keyed tiles were originally used is uncertain. On Site E, Building 127 was preceded in Period 4 by Building 122 and part of its south-west corner, which lay on Site D, by the courtyard house, Building 123. Unfortunately, lack of money for the excavation necessitated the stripping on Site E of the Period 4 and Period 3 levels beneath Building 127, so that the precise nature of the buildings of these periods, and thus the tile used within them, was lost. Ernest Black has argued (p 269) that the keyed tile fragments from Building 127 originally derived from hypocaust jacketing in Building 123.

Such an argument cannot be accepted unequivocally as correct. It presupposes no hiatus between the destruction of Building 123 and the construction of Building 127. Moreover Building 122 could have been the source of the material — as indeed could a building elsewhere.

Many forms of Roman tiles have been identified on both the Culver Street and Gilberd School sites, some of which have already been mentioned. Only two antefixes have been found, both at the Gilberd School, and these are discussed above (pp 252-3).

Both *tegulae* and *imbrices* are common on both sites, but the Gilberd School has also produced three fragments of *tegulae* of unusual form. Two are cut slantwise from top to bottom to form a shape suitable for use at a junction of two roofs. The larger fragment (Fig 7.1,3) is from the middle of a *tegula,* and clearly shows that the tile was trimmed by eye. It was found in AL1, post-Roman topsoil. The smaller tile, which is unstratified but may derive from a Period 3b or 4 pit, is a top right corner of a *tegula,* with the very corner missing, but showing that the line of the cut began on the top edge, running from within a few millimetres of the right hand edge at the corner down across the tile at an angle of approximately 45°.

The third unusual *tegula* fragment (Fig 7.1,2) represents about one quarter of a tile with a central hole. It was found in AF123, a Period 3 pit. Around the hole, which is approximately 220 mm in diameter, is a tall flange projecting about 40 mm above the upper surface of the tile. The junction of this flange with the upper surface is defined on the upper surface by a finger-made groove for at least the part of its circumference closest to the side flange, which is also defined by a finger-made groove. Tiles of this type are discussed by Brodribb (1987, 19-20). The function of the hole seems to have been as a vent which could be closed by a flat circular tile or piece of wood or alternatively it may have been covered by a louvre *(ibid,* fig 15). (I am grateful to Dr E M Evans of the Glamorgan-Gwent Archaeological Trust Ltd for information on this tile and its use.)

Small flooring bricks as used in herringbone floors *(opus spicatum)* were absent from the Gilberd School, but fourteen were found at Culver Street (Table 7.1), four of which are of very similar dimensions. All four come from Site G, two from Period 3 contexts (dump in Building 97 and cultivated soil), one from Period 5 dump in Building 116, and one from Period 5a dump/cultivation in Building 120. These four very possibly all derived from the same original floor, which has not been located. Also from Site G is a small flooring brick of slightly different form, greater in length (which is unfortunately incomplete) but lesser in width than the other four. Other small flooring bricks from Culver Street exhibit a wide range of possible dimensions while still remaining within the extremes given by Brodribb (I987, 52). The contexts from which some of these other bricks derive suggest a date within the last quarter of the 1st century for their earliest popularity in the colony (eg Buildings 101/102, Period 3a, rubbish layer EL61), but a pre-Boudican date may be suggested by the presence of one in the fill of Period 2 pit EF1329. However, they are perhaps more likely to have been in demand in the 2nd century or later when substantial (eg tessellated or mortar) floors were more common.

Tegulae mammatae, unlike small flooring bricks, are more common on the Gilberd School site than at Culver Street, only one piece having been identified from the latter site. Nine fragments came from the Gilberd School, five in pre-Boudican levels associated with the barrack block Building 131 and the colonial Building 133 which replaced it (Table 7.2). One fragment, found mortared in a slot in Building 133 (BF93), was clearly reused. All the *mammae* from both the Gilberd School and Culver Street are of Brodribb's Type A, round and shallow, which he suggests implies use of the tile in courses or for flooring, where the *mammae* helped to bond the tile into mortar. He sees tiles with his Type B *mammae,* high and conical, as used for cavity walling (1987, 62).

Neither small flooring bricks nor *tegulae mammatae* occur in large numbers and thus little emphasis should be placed on any interpretation of their distribution. It should be noted, however, that the latter were certainly, and the former possibly, in use in the pre-Boudican period. Small flooring bricks are not generally common at Colchester, and, while no *opus spicatum* floor has been located, the comparatively high number from the Culver Street site suggests that there may have been at least one in that area of the town.

The single piece of *tegula mammata* from Culver Street is only 34 mm thick and came from the dump/demolished clay wall L16 in Room 1 of Building 112, dated to Period 4/5. The Gilberd School tiles ranged in thickness from 53 to 69 mm, up to twice as thick. Though the Culver Street piece was almost certainly residual in its context, it may be post-Boudican in origin, with its thinner section indicating a different manufacturer, a later date, a different use, or any possible combination of the three.

Column bricks are another notable group of tiles, occurring on both the Culver Street and Cups Hotel sites. The context and military date of the Cups Hotel bricks has been discussed above (p 253), and an equally early example cited from Culver Street Site B. A second example from Site B was found in Period 3 make-up (BL239), and this, too, may be of military origin.

Column bricks are usually either semicircular or quadrantal (Brodribb 1987, 55). Some of the Cups Hotel bricks are quadrantal, while others are of unusual form, representing approximately one sixth of a circle. Identification of the precise form of most of the Culver Street bricks proved impossible because in the main the tiles were too fragmentary. However, four semicircular bricks have been identified compared to only two quadrantal. Two of the former were reused in a Period 3b foundation, EF367, in Buildings 104/105, and were probably originally used in a Period 1 or 2, or possibly 3a, building. They thus parallel the early date exhibited by the Cups Hotel quadrantal bricks. However, the long life of this type of brick may be attested by two complete or almost complete pieces, one quadrantal, one semicircular, recorded from Site K. They derive from the backfill of the ?corn-drying oven KF12 which was built of fragments of reused tile sometime between *c* 300 and 450 (pp 108-112). The bricks from the structure itself were not preserved.

Context and period	Length	Width	Thickness	
Bessalis				
D48 F27 Robber trench for Building 123. Period 6	180	189	38	
Lydion				
G3823 F1558 Tank/foundation: Buildings 118 & 120. Periods 4 & 5	415	297	35	
Oblong				
D1610 L1588 Dump: Building 123, Passage 2. Period 4	403	148	46	
E480 F264 Foundation: Building 127. Period 5	197 *	149	40	
D48 F27 Robber trench for Building 123. Period 6	263 *	157	47	
?Oblong				
B1655 F477 Posthole/pit: Building 94, Room 3b. Period 3	140 *	142	65	
D1587 F1432 Wall collapse. ?Period 5	303 *	153	33	
Non-standard				
G2349 F2160 Drain. Periods 1, 2, & 3	234 *	320	40	
G2297 F2295 Post-pit with pipe. Period 4 or 5	73 *	105	30	?tapering
G336 F264 Pit. Period 6	232	217	35	
Opus spicatum				
E964 L61 Rubbish layer: Buildings 101/102. Period 3a	125	72	32	
G1418 L1332 Dump/cultivation: Building 120. Period 5a	104	77	25	
G3925 L3624 Cultivated soil. Period 3	104	76	27	
B1199 L266 Dump. Period 3/4	102	70	17	
G2224 L2185 Dump: Building 97. Period 3	100	72	30	
G1613 L989 Dump: Building 116. Period 5	100	70	27	
D571 L569 ?Robber fill. ?Period 6	115 *	60	40	
G1541 L1373 Floor make-up/dump. Period 3/4	105 *	60	26	
G1830 L1767 Horticultural topsoil. Period 3	94 *	58	28	
C349 F116 Shallow pit/scoop. Early Period 3	77 *	57	38	
D1520 F22 Robbed drain: yard of Building 123. Period 4	75 *	58	28	
C274 F95 Shallow pit. ?Period 3	40 *	65	21	
E1619 F1329 Pit. Period 2	-	55	40	
E703 L34. Dump. Early Period 3	-	64	33	

*Table 7.1 Dimensions (mm) of Roman bricks from Culver Street. Incomplete dimensions are marked *.*

Context and Period	Length	Width	Thickness	Boss position
Building 131				
A2375 L255 Make-up: Building 131, Rooms 4 & 5. Period (1 or) 2	-	-	-	central
Building 133				
B558 F93 Slot: Building 133, Room 4. Period 2	275	210	69	central
A1687 L131 Dump: destruction of Building 133. Period 2 or 3a	143	121	63	corner
B428 L26 Dump (redeposited Boudican destruction debris): destruction of Building 133. Period 2 or 3a	218	180	65	corner
B20 F1 Terraced area: destruction of Building 133. Period 2 & 3a	-	-	-	on edge
Other contexts				
A55 F4 Pit. Modern	128	110	58	corner
B11 L1 Topsoil. Post-Roman	217	177	65	corner
B11 L1 Topsoil. Post-Roman	152	135	65	on edge
B11 L1 Topsoil. Post-Roman	232	142	53	in from comer

Table 7.2 Tegulae mammatae from the Gilberd School. The lengths are all incomplete, the maximum surviving being given.

Context and Period	Semicircular	Semicircular/ quadrantal	Quadrantal
B2188 L610 Silt. Period 1	-	1	-
B1215 L239 Make-up. Period 3	-	1	-
E515 F367 Foundation: Buildings 104/105. Period 3b	2	5	-
G1934 L1716 Destruction debris/occupation: Building 119. Period 4	1	-	-
G3185 L946 Floor surface: ?Building 120. ?Period 5b	-	1	-
G1273 F1212 Pit. Period 6	-	1	-
G313 F284 Pit. Period 6	-	1	-
H519 L3 Topsoil/clearance. Period 6	-	1	-
K464 F12 ?Corn-drying oven backfill. Period 4	1	-	-
K30 F12 ?Corn-drying oven backfill. Period 4	-	-	1
K100 Unstratified	-	-	1

Table 7.3 Column brick fragments from Culver Street.

Brodribb (1987, 55) cites only 28 examples of semicircular bricks from fifteen sites in Britain. They occur at Fishbourne in both Period 1 and Period 3 levels, being used in Period 3 to make seats rather than columns. Quadrantal bricks are only slightly less scarce in Britain than semicircular, with 30 examples from 19 sites (*ibid,* 142). They too could be used other than for columns: at Stebbing, Essex, they were used to make *pila* stacks *(ibid,* 55).

Only a few complete bricks of the other standard forms have been found (Table 7.1). Mention has already been made of the one complete *lydion* (p 255). Two complete *bessales* were recovered, one from an unstratified context on the Gilberd School site, the other, a signed example, was found in a robber trench for a foundation of the Period 4 Building 123 on Culver Street.

A small group of three (possibly five) oblong bricks from Culver Street is of interest (Table 7.1). Brodribb (1987, 142) cites 27 examples of oblong bricks from thirteen sites, with an average length of 381 mm, width of 140 mm and thickness of 47 mm. He found that the length of these bricks clustered around two measurements, 240 mm and 440 mm, with one example of the larger size coming from Colchester *(ibid,* 57). The one example from Culver Street with its length complete falls into neither group, being about the length of a *lydion* and half the width.

Two non-standard bricks have been recovered from Culver Street. One, from a post-Roman pit on Site E, is of unusual dimensions, 232 x 217 x 35 mm. These measurements have no similarity to those of any of the non-standard bricks listed by Brodribb (1987, 57). Tile found in the ?drain GF2160 (p 49), dated to Periods 1, 2 and 3, included a brick 234 (incomplete) x 320 x 40 mm. This may be part of either an excessively wide *lydion* or a non-standard brick.

The finger-made marks found on the lower ends of some *tegulae* and occasionally on bricks are usually referred to as signatures. The reason for the application of such marks is not clearly understood, but a discussion of the possibilities can be found in Brodribb 1987 (pp 99-105). Signatures on tiles from Culver Street and the Gilberd School are not illustrated here, but have been drawn to form the beginnings of an archive collection. Most of those recorded are of the common semicircular form, executed by one finger or more, and set at the lower end of a *tegula.* One notable exception is an exuberant S-shape which ranges over most of the surface of a *tegula* from which the flanges are missing (possibly deliberately removed) and which formed part of an oven (BF269) of Period 4b in Room 6a of Building 112 (p 78).

Sixty-one signatures were recorded from the Gilberd School site, 23 from pre-Boudican levels or Boudican destruction. Two, on fragments possibly from *tegulae,* come from Period 1 contexts pit AF250 and gully AF186. The latter also bears an impression from a piece of string similar to those found on daub (Fig 7.2,6; *CAR* **3,** fig 13). One is on a brick from hearth waste AL122 in Building 131, ascribed to Period (1 or) 2. Nine signatures come from Period 2 levels, four from Building 131 (three in destruction debris), and four from Building 133. One of the Period 2 signatures is on a *tegula,* the others are on fragments of tile which may be from either *tegulae* or bricks. From the Period 2 and/or 3a destruction debris of Building 133 come eleven signatures, ten on *tegulae.* Twenty-two signatures derive from levels attributed to either Period 3, Period 3a, or Period 3b, and one comes from Period 3b or 4 dump AL13, which is possibly associated with the Period 4 building B138. Nine of the nineteen are on *tegulae,* one on a fragment of brick 34 mm thick, and the remainder on unidentified fragments. Post-Roman and unstratified contexts have produced fifteen signatures, one on a brick 55 mm thick, four on *tegulae,* and ten on unidentified fragments.

Culver Street produced 93 signatures, only two (perhaps four) of which come from military contexts. One of these is on a brick, 73 mm thick, from the Period 1b hearth EF1245 in Room 10 of Building 83, and the other may not be a true signature. Five come from Period 2 contexts, with a further one from Boudican destruction of Period 2/3a. Thirteen were found in Period 3 levels, six from Period 3/4, twenty-seven from Period 4, one from Period 4/5,

thirteen from Period 5, three from Period 5/6, and twenty from post-Roman levels. Where a tile bearing a signature can be identified it is usually a *tegula,* though bricks are also represented.

Marks other than signatures have been recorded on the tile archive listing but most have not been pursued further, for example paw prints are noted but the species has not been identified.

Only two tally marks were noted on Roman tile; they have been drawn for archive. Both came from Culver Street Site E. One is on a small fragment of a column brick, approximately 47 mm thick around the edge, from a Period 3b foundation, EF367, associated with Buildings 104/105. The mark is two parallel scored lines on the edge, set 40 mm apart. The second is on a fragment of a rectangular brick, 37 mm thick, also from a Period 3b foundation, EF394, for Building 107. It also consists of two parallel scored lines on one edge, set 20 mm apart and within 40 mm of a corner. On the upper surface of the brick is a curved scored line, similar to a finger-made signature, but of varying curvature and apparently made with a flat-tipped implement.

A tile from Period 3 or 4, in GL1975, occupation/ destruction debris, carries part of a semicircular signature made by single finger-mark and is also marked by a number of fine incised lines, cut into the tile before firing but after the signature was applied. These lines occur in pairs about 10 mm apart. Two pairs are straight, one parallel to the edge of the tile, the other rising from one end of the first group at about 45°. Two pairs are curved, one set just above the end of the latter straight pair, the other at the same height but some 30 mm to one side.

Almost all tiles in pre-Boudican Colchester are fired to an orangey-red colour, and on the whole idiosyncratic fabrics do not stand out. Exceptions to this rule are buff-coloured tiles which occur in small numbers in contexts throughout the Roman period. Many are undoubtedly residual, and it is those from 1st-century contexts which are therefore of particular importance. They are more common in pre-Boudican levels on the Gilberd School site than elsewhere.

Roman tile from Eccles, Kent, found at Colchester

by Dr IM Betts

A number of tiles from Colchester occur in a distinctive white or yellow fabric type, quite unlike the red colouration of the majority of Roman tiles. Tiles of similar colour are known from a number of sites in south-east England, for example Chelmsford, Essex, London, Verulamium (St Albans), Hertfordshire, and Beddington, Surrey, as well as numerous sites in Kent.

The fabric is fired to either white, yellow, or occasionally pink or light grey. It is usually hard and well-fired, with varying amounts of clear, white, or reddish ('rose-coloured') quartz (mostly up to 0.5 mm). Certain tiles have a scatter of iron oxide (up to 1 mm) and calcium carbonate (up to 2 mm). In addition, a number of tiles occasionally have lenses of red clay up to a few millimetres across.

Two types of white and yellow fabric tiles are currently known from Colchester: roofing tile, comprising *tegulae* and *imbrices,* and brick.

A kiln producing tiles of the same distinctive colour is known from Eccles in Kent, the tiles being manufactured from the local gault clay. The kiln is associated with a villa complex situated 450 m to the north-east. Examination of the fabric of a number of tiles from Eccles shows them to have a very similar fabric to the white and yellow tiles found at Colchester. This suggests that the Colchester tiles were either produced at Eccles, or at another unknown tile kiln in Kent exploiting the same clay source.

The earliest fragment of tile in a Kent fabric at Colchester occurs in a pre-Boudican context, and thus dates to the period AD 43-60/1. This agrees well with the dating evidence from London, where Eccles area tiles, identical in fabric to those found at Colchester, first appear in the period c 50-60/1.

The tile kiln excavated at Eccles dates to the late 2nd century. However, as McWhirr (1979, 158) has pointed out, other kilns must have existed in the area to provide tiles for the earlier phases of the villa at Eccles, dated c 55 and *c* 65, and for the construction of the kiln itself.

Pottery from Eccles also came into London during the 1st century, primarily in the Neronian period. Detsicas (1977, 29) suggests that production of pottery ceased by AD 65. However, pottery of Eccles type is still found in London in small quantities in the early Flavian period, although this could be residual (B Davies pers comm). What is not certain is whether tile production ceased at the same time as the production of pottery. There is some evidence from London that it did. Recent excavations at Huggin Hill baths, believed to have been constructed in the Flavian period (Betts 1987), revealed no imported Eccles area tiles incorporated within the baths. This is despite the fact that tiles were an important structural element of the bath-house.

Tile production must have resumed in the 2nd century as there are box flue tiles with roller-stamp keying from the Eccles villa itself (Betts *et al* forthcoming). The tiles are of Eccles fabric and date to the first half of the 2nd century. If tiles were still being exported from Kent in the 2nd century, it would be expected that box flues in the Eccles area fabric would be present at Colchester, but they are not. Nor are they present in London. The implication is that at some date in the first half of the 2nd century they were no longer supplying more distant markets such as Colchester and London. The expense involved in moving tiles over such large distances (85 km in the case of Eccles-Colchester) may have increased to such a point that it was no longer economic. By the 2nd century the level of production from kilns in the Colchester area was presumably sufficient to satisfy

local demand.

Eccles fabric tiles are found in 2nd century and later contexts at Colchester but seem almost certain to be residual (though no intensive study by fabric has been undertaken). The Eccles tiles are of good quality, being hard and well-fired, and would undoubtedly have been highly desirable if needed for reuse in later structures or as hardcore.

There is little doubt that transportation by water was a critical factor in the success of the Eccles area tile industry in the 1st century. The kiln lies close to the old channel of the river Medway, which would have allowed easy transport access to the Kent coast. From there the tiles could have been shipped to supply the major markets of London, and both Colchester and Chelmsford in Essex. It is not certain whether the river Colne was navigable in the Roman period as far as Colchester itself. The tiles may have been shipped to a possible landing-place at Fingringhoe Wick on the Colne estuary some 7.5 km to the south-east.

Post-Roman tile: discussion

Post-Roman tiles were not found in large numbers at either the Gilberd School site or Culver Street, and none from the Gilberd School need be commented on further.

Site E on Culver Street produced several post-Roman tiles, most coming from pits of Period 8. Peg tiles were most prolific, and four Period 8 pits (EF7, EF106, EF209, EF240) produced peg-tiles with two immediately adjacent nail holes in the surviving corners. A fragment of a glazed crested ridge tile came from Period 8 pit EF14. It is in a hard sandy fabric, fired orange with a grey core. The glaze is dark brown. The crest is knife-cut and rather irregular. A similar tile was found associated with Building 28 on the Lion Walk site, Colchester, and is discussed by Paul Dairy in *CAR* 3, 81-2. He dates tiles of this type in Essex to sometime between the mid to late 13th and the end of the 14th century. Small fragments possibly from ridge tiles also came from a Period 8 pit EF29 and a Period 7 robber pit EF13. The latter piece is glazed. A fragment of an unglazed ridge tile was found in a pit MF121 which contained pottery dating to the late 15th and early 16th century.

Floor tiles made up a considerable proportion of the total number of post-Roman tiles. A small fragment from a floor tile about 40 mm thick, with a yellow glaze streaked with brown, came from pit EF155, and pit EF133 contained a green glazed floor tile 125 mm by 125 mm by 24 mm thick. Two glazed floor tile fragments were found on Site J, one in a Period 6 pit, one unstratified. Both have a greenish-brown glaze. One is 25 mm thick, the other 30 mm.

The 15th-/16th-century pit MF121 which produced a fragment of ridge tile also produced a piece of a floor tile, 30 mm thick, with a dark greenish-brown glaze.

On Site H lay Building 129, a group of three ?outbuildings dated to the ?15th/16th centuries. Seven glazed floor tiles and fragments of four others may originally have derived from Building 129, though all but two were found in Period 6 pits and site clearance. From pit HF176 came two fragments, both with the surface very worn, but what remains suggests a glaze applied over a white slip, similar to the Flemish tiles from Building 28 on the Lion Walk site, Colchester *(CAR* **3**, 81). One piece is 30 mm thick and has only one surviving edge, the other is 125 mm square and is 28 mm thick. Two tiles were also found in pit HF158. Both show little wear. One is a square green glazed tile with one complete dimension of 120 mm, 30 mm thick, and the other a triangular yellow-glazed tile from the edge of a floor using tiles of a similar size to the latter. The one complete surviving edge (not the diagonal) measures 123 mm, and the tile is 29 mm thick. From site clearance HL3 come three glazed tiles: two are triangular with a dark green glaze, 30 mm thick, each representing half a 125 x 125 mm square; the third is a fragment of a square tile with a glaze of yellow streaked with brown, again 125 mm across and 30 mm thick. From pit HF157 comes a small right-angled corner fragment of a green-glazed tile, 30 mm thick. This could be from either a square or a triangular tile. Pit HF374 also produced a right-angled corner fragment, again 30 mm thick, and again from either a square or triangular tile. All these tiles presumably derive from the same original floor.

Only one of the two tiles from the cellar HF39 associated with Building 129 may belong to the above group. It is a small fragment, glazed yellow over a white slip, 30 mm thick, and very worn. Only a small part of one edge survives, 70 mm long. The original size of this piece cannot be ascertained. It may be from a tile about 120-5 mm square, or-it may belong to a much larger tile as does the second fragment from the cellar. This is a fragment from a large ?square tile with a maximum surviving dimension of 155 mm. It has a dark brown glaze, and is 30 mm thick. From Building 28 on Lion Walk came tiles 235-40 mm square, and this piece may derive from one of that size. The backfill of the cellar HF39 contained no pottery later than the early 16th century in date. Drury dated the large Lion Walk tiles to the 15th or early 16th century, and the smaller ones to the late 14th to mid 15th century *(CAR* **3***,* 81).

A medieval decorated double-sided tile

by John Cotter

Two joining pieces of tile (Fig 7.3) were found during general site clearance on Site W (W3 unstratified). They are reported as having been found a short distance east of the medieval vaulted cellar of Building 130, from which they might have derived. The tile has a very coarse sandy pale grey fabric with dull oxidised surfaces where unslipped. On both sides there is an incised design of a human figure.

On the least well-preserved side is a 'sitting' figure,

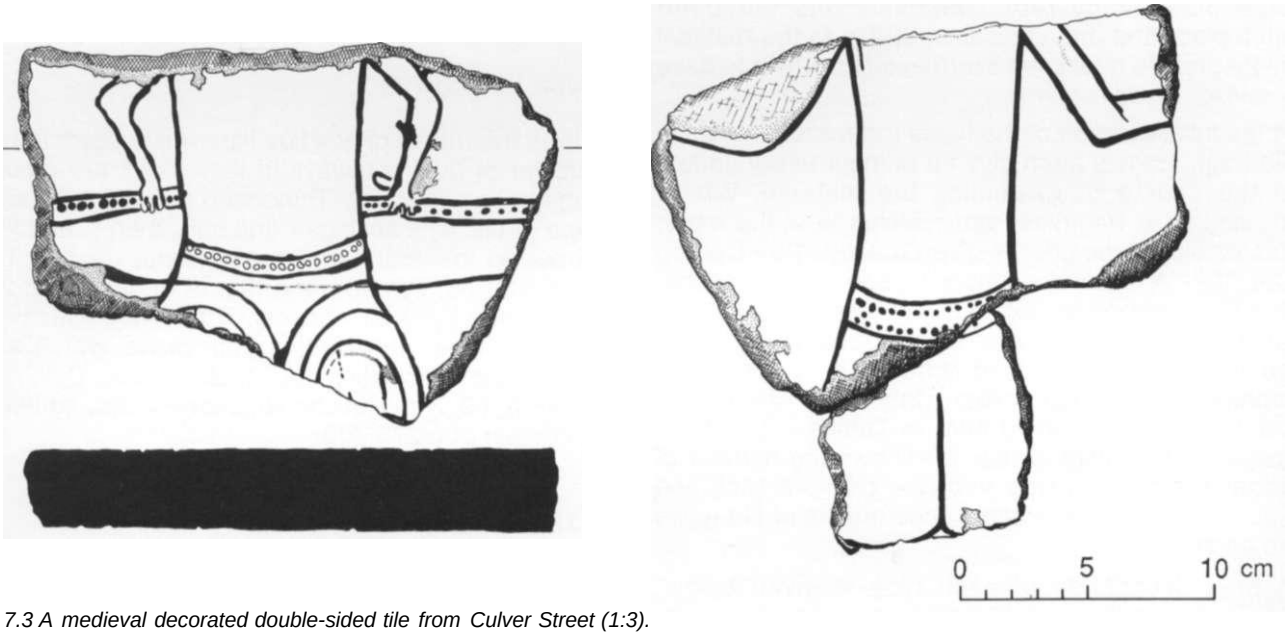


Fig 7.3 A medieval decorated double-sided tile from Culver Street (1:3).

with the design incised in sgraffito fashion through a thick covering of cream slip, revealing the underlying reddish surface fabric. This side was then covered with a pale green copper-flecked lead glaze. The other side bears a 'standing' figure and, in contrast, has not been slipped and has only a thin patchy clear glaze whose greenish-brown colour derives from the fabric rather than added colourants.

No great skill is shown in the execution of the designs, and their fragmentary condition leaves their significance open to speculation. The 'sitting' figure wears a tunic and a belt with a single row of studs. From the creases on the tunic, he (or less likely she) appears to be sitting down on a ?bench defined by a horizontal line passing behind him. The figure looks to be in the act of tying on a second studded belt by wrapping it around his waist but if so, why are the ends apparently nearly horizontal instead of hanging down? The 'standing' figure also wears a tunic, which may be split at the front, and a belt with two rows of studs.

In many respects this tile is very different to other medieval and post-medieval tiles from the town. It is much larger than any tile of these periods excavated so far. If the 'standing' figure is reconstructed to its full height then it must have been around 370 mm high by 270 mm wide even before reaching the edges of the tile.

If the tile was intended to be viewed from both sides, then it cannot be a floor tile or a plaque made to be set into or on to a wall. Any number of possible interpretations of the object can be proposed. For example, it might have been a screen of some sort, or perhaps a portable object (such as an altar), or a slab reserved for the preparation of certain foodstuffs.

Ceramically, the fabric of the tile is similar to medieval Colchester ware (Fabric 21 A), especially the coarser fabric used for roof furniture such as louvres and ridge tiles. In particular, the sgraffito decoration and green glaze link it closely with Colchester ware sgraffito decorated vessels. The same circular stabbed pits used for the studs of the belt are found on a Colchester sgraffito sherd from Long Wyre Street, though here the pits are on a plant stem (CM 1929:25; *CAR* ***7*** forthcoming). The earliest stratified sherd of Colchester sgraffito ware comes from a context probably of the early 14th century, although this type of decoration continued in use well into the 15th century. On balance a 14th-century date for the tile seems quite probable. There is one other example of a Colchester-ware tile in the CM (CM 1954.33). This is clear glazed with a crudely painted dragon or gryphon in thick cream slip with a circular eye stamped through the slip and some sgraffito details on the mane. Colchester's medieval Court Rolls (unpublished) contain numerous late 14th- and early 15th-century references to tilers and tile kilns located near the east end of the present High Street and the top of East Hill.

Keyed tile fragments

by E W Black

About 500 fragments of keyed tile were examined from sites excavated in Colchester since 1981, mainly from Culver Street, the Gilberd School and Spendrite. Some 341 fragments have been assigned to thirteen types of box flue tile (prefixed by B), eleven types of voussoir tile (prefixed by V), and three other types of keyed tile. The remaining fragments could not be assigned to any of these types and are classified as uncertain.

The biggest difficulty in classification is presented by the box flue tile fragments, and many of the types are distinguished only by their style of keying. Where this is so, and where no other criteria are employed, the classifications must be regarded as very tentative.

Classification by fabric analysis has not been attempted, and the application of this to the material might provide additional information on which to base a revised classification.

In the full catalogue of the types (on microfiche) each tile fragment has been given a number assigned to it in the course of examining the material. Where individual tile fragments are referred to in the report this catalogue number is given preceded by Cat, eg Cat 152. A second catalogue (also on microfiche) lists the contexts producing keyed tiles on each of the sites, area by area where appropriate, and then period by period, and what tile types were represented in each context. Information from both catalogues is presented here in Tables 7.4 and 7.5 (pages 270-1 resp). Table 7.4 shows the number of fragments of each type from the different sites and Table 7.5 gives the earliest occurrences of tile types on each site.

A brief description of each type is given below, followed by a discussion of the assemblages.

Type B1 (Fig 7.4)

Six fragments were recovered, three each from Culver Street and the Gilberd School. The distinctive features of this type from Colchester and elsewhere are the comparatively thin walls of the tiles (often less than 10 mm), and their depth, which is less than that of box tiles of 2nd-century type and which corresponds to the height of flanges on half-box tiles or to the length of ceramic spacers used with *parietalis* tiles. (For the method of use of these tiles *see* Black 1987, 196, figs 2A & B.) The faces have scored lattice keying. Of the Colchester specimens one (Cat 227) is thicker than usual (14-15 mm), but is assignable to Type B1 because of its keying and the position of the cutaway edge, only about 25 mm from the face of the tile thus indicating a shallow depth.

Two specimens from the Gilberd School (Cat 322 and Cat 323) have shallow horizontal grooves or 'ribbing' on their interior surfaces, a feature also present on tiles of this type from Fingringhoe Wick, near Colchester, and from Lewis's Gardens, Colchester (Richardson 1961, 12: 'flue tiles ... noticeably thin and well made'), and from 14 Lexden Road, Colchester. (Tiles from these sites are in the CM.) The same feature is present on a small number of the fragments of the same type of tile that can be associated with the baths of the 'proto-palace' at Fishbourne, West Sussex (Black forthcoming).

A nearly complete tile of Type B1 was found in 1848 along with two half-box tiles on the east side of Long Wyre Street, Colchester (Hull 1958, 204; tiles in the CM). Its dimensions (measured externally) are height 342-3 mm, width 138-140 mm, and depth 81-5 mm. Both faces have scored lattice keying and there is a rectangular cutaway 31 x 50 mm in each side. The thickness of the walls is 8-13 mm, and in this case there is no internal ribbing.

The type is dated to the 1st century AD (Black 1985b, 372).

Type B2 (Fig 7.4)

Three fragments of box flue tiles which seem to have circular or oval cutaways in their sides are grouped together as Type B2. They need not all be the same type of tile. The keying of one specimen (Cat 338) is similar to that found on fragments classified as Type B13 (Cat 68, Cat 98), and that of another (Cat 231) resembles Type B10 keying. The keying differs from that on tiles with circular cutaways which were excavated in Building 24 at Lion Walk, Colchester *(CAR* 3, 69, & microfiche supplement 296, fig 202) in a context of *c* 275-400+.

Type B3 (Fig 7.4)

One specimen from Culver Street Site D (Cat 311b) has the edge of a cutaway surviving for 167 mm to within about 127 mm of one end of the tile. If the cutaway were actually no longer, and if it were centrally placed, this would indicate a height of about 420 mm. However, in this specimen the edge of the cutaway lies 36-7 mm from the junction with the face of the tile, and in the six other examples where the cutaway edge survives the distance varies from 24-5 mm to 44-6 mm. Since the cutaway was large there would usually be sufficient overlap in adjacent tiles in a wall jacketing so that precise central positioning of the cutaway may not have been considered necessary. However, the unusual length of the cutaway might have been intended to enable tiles of Type B3 to be placed horizontally above two adjacent vertical stacks of tiles in a jacketing. They would have formed a horizontal channel which led the heated air to the chimneys in a hypocaust where no hollow vault lined with voussoirs was provided. Such tiles usually had two standard cutaways in each side, but none of these has been recognised in this Colchester tile assemblage.

The keying comprises three parallel bands of combing linking the ends of the faces, usually a mixture of straight and wavy bands. In at least three specimens a band of straight combing crosses these at one end of the tile (Cat 147, Cat 311b, Cat 312a).

For this type Cat 154c gives the external width as 181-2 mm, and Cat 154c and Cat 318b both have an internal width of about 150 mm.

Type B4

This type comprises four fragments of relief-patterned tile. Two, Cat 33 and Cat 179a (from Culver Street Sites B and D respectively), are stamped with die 14; one, Cat 344b (from the Gilberd School Site A), is stamped with die 27; and the fourth, Cat 208 (from the Gilberd School Site B), is stamped with die 29 (Lowther 1948, figs 12, 16, & 18).

Cat 208 has been trimmed to a roughly circular shape to serve as a counter (Fig 6.17,189). Die 29 is

known from the villa at Alresford, Essex, with dies 8 and 26 *(ibid,* 17), and die 8 is dated to the Hadrianic period of the *mansio* baths at Chelmsford (Dairy 1988, 80-4). Die 29 is therefore likely to be Hadrianic in date.

Die 14 is associated with dies 4 and 6 at Ashtead Common, Surrey (Lowther 1948, 17), and these are also dies represented at Chelmsford, so that die 14 can also be assigned a Hadrianic date, though how long it may have remained in use is uncertain. Die 27 is not as yet reliably dated.

Type B5 (Fig 7.4)

The type is characterised by unkeyed spaces left between three vertical bands of combing, and usually by a gap left between each side of the face and the adjacent band of combing. Often a band of wavy rather than a band of straight combing is adjacent to the side. Sometimes, while a considerable gap is left towards the side of the tile, combing impressions intersect (Fig 7.4, Cat 26). It is possible, however, that this keying could represent a distinct type of tile.

The cutaway in Cat 308 measures 42 mm across and was at least 104 mm long. Its sides were 21 mm and about 55 mm from the junctions with the faces of the tile. On Cat 316d the single surviving side of a cutaway was 37 mm from the junction. The internal widths are about 110-11 and at least 122 mm on two fragments that were keyed by the same comb (Cat 278c and Cat 278d). On another it is 112-15 mm. The internal depth on two specimens (Cat 308 and Cat 315) is 87-8 and 82 mm.

On one specimen the end of the tile is folded over, creating a flange towards the interior (Cat 61g). A second example has the same feature in a less pronounced form (Cat 262a). This is matched in tiles of Types B6 and B8, and is discussed under Type B6.

Type B6 (Fig 7.4)

The keying of this type is similar to that of Type B5, except that the vertical bands of straight and wavy combing intersect and do not leave continuous gaps between them. Five of the specimens from Culver Street Site B (Cat 101, Cat 176a, Cat 176d, Cat 203, & Cat 204) were keyed with the same comb, and this, with one additional tooth, seems to have been used to key a tile from Site E (Cat 149). If it was the same comb, Cat 149 must have been keyed first and the others after the loss of a tooth from the comb. (It is suggested under Type B8, which is characterised by scored lattice keying, that some specimens may have come from one face of tiles keyed on their other face with the comb used on five of the six Type B6 fragments from Culver Street Site B. If this proposal could be proved, this would necessitate the creation of a new type number for these tiles.)

The internal width of four specimens (Cat 22, Cat 61k, Cat 246c, & Cat 307a) varies between 116 and 120 mm. The edges of cutaways are set 32-4 and 40 mm from the junctions with the surviving faces (Cat 217 & Cat 61k).

One example (Cat 153) from Culver Street Site E has a projection or 'hood' recessed 6-8 mm from the interior surface of the face of the tile and extending about 28 mm beyond its end. This projection was apparently produced on the same former as Cat 113 and Cat 218a, both of which are folded over at the end, forming a flange towards the interior of the tile. This was evidently created by the clay being pressed up against the bottom of the extension on the former, but not extending along its full length to form the 'hood' present in Cat 153. The same type of flange is present in two specimens of Type B5 (Cat 61g & Cat 262a) and in one of Type B8 (Cat 184). Brodribb (1987, 77) notes the occurrence of tiles with a 'hood' at only eight sites. This apparent rarity suggests that such tiles had a restricted chronology, and that Types B5, B6 and at least some B8 tiles are likely to have been made on the same former. A hood is found on tiles stamped with die 16 at Canterbury, Kent, and with a 'billet' die at Verulamium (St Albans), Hertfordshire (die 25: Wilson 1984, 112-13, fig 50.18). At Chelmsford die 16 has a Hadrianic date (Drury 1988, 83), and a similar date, or not much later, can therefore be proposed for Types B5, B6 and some specimens of B8.

Type B7 (Fig 7.5)

Type B7 is characterised by its style of keying. The faces of the tiles generally have a band of combing adjacent to each side. Usually these bands are straight, but they can occasionally be wavy. The space between bands is filled by short strokes of combing meeting the longer bands at an angle. In at least one instance (Cat 319) where a narrow comb has been used, the scheme seems to have been a band of wavy combing between two of straight combing, with the same short strokes of combing at an angle between them.

The cutaway edges on nine specimens lie between 31-2 and 62 mm from the junctions with surviving edges. The base of the cutaway on two specimens (Cat 132a & Cat 248) was about 43 and about 41 mm across. On Cat 79 the surviving length of the cutaway is 188 mm and it extends to within at least 70 mm from one end of the tile. On four other specimens (Cat 132a, Cat 193, Cat 220, & Cat 248) the cutaway is 96-7, about 72, about 71, and about 59 mm respectively from one end of the tile. It can be suggested that, like Type B3 tiles, Type B7 tiles were designed to form a horizontal channel above the vertical stacks of tiles in a wall-jacketing.

Type B8 (Fig 7.5)

All fragments of box flue tile with scored lattice keying, except for those assigned to Type B1, are grouped together as Type B8. One specimen, Cat 184, has a flange projecting towards the interior at

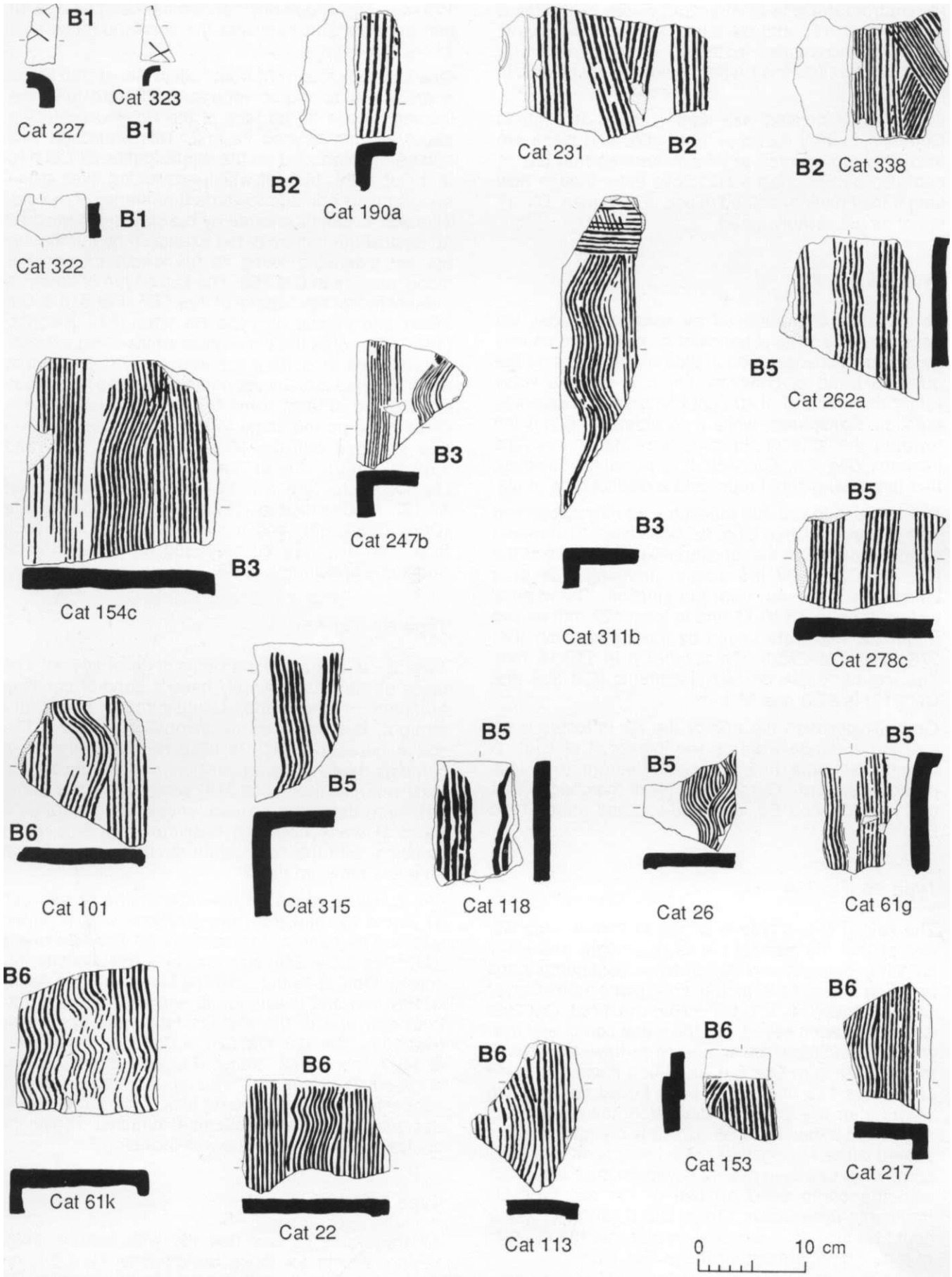


Fig 7.4 Box-flue-tile Types B1-B3, B5-B6(1:5). Type B1....Cat 227, 322, 323; Type B2....Cat 190a, 231, 338; Type B3....Cat 154c, 247b, 311b; Type B5....Cat 26, 61g, 118, 262a, 278c, 315; Type B6....Cat 22, 61k, 101, 113, 153, 217.

one end of the tile. Type B5 and B6 tiles also have this feature. An unmarked tile in the CM (half complete) has scored lattice keying on one face and two vertical bands of wavy combing flanking a band of straight combing on the other. The surviving cutaway in the side measures 33 by at least 95 mm, and is set 39-40 mm from the junctions with the faces and 156 mm from the surviving end of the tile. The number of Type B8 fragments is fewer than those of Types B5 or B6, and the distribution of the types only coincides significantly on Culver Street Site B. It is possible that the fragments from this site should be classified separately from the other specimens of Type B6, and that they and many of the Type B8 fragments actually both came from tiles similar to the unprovenanced tile with combing and scoring in the CM.

The edges of cutaways survive on four specimens. On three of these, from Culver Street, the distance from the junction with the face is between 34 and 44 mm. On the fourth, from the Spendrite site (Cat 256a), the distance is 47 mm, and the rounded corner of the cutaway survives set only 50 mm from the end of the tile. It is very probable that Cat 256a represents a different type from the others, but it seems premature to classify it separately until larger fragments are found.

Type B9 (Fig 7.5)

This type is similar to Type B6. It is distinguished by the use of small combs with very narrow gaps between the teeth, and by a tendency for the tile wall to be relatively thin. Nine out of nineteen fragments have a thickness between 11 and 13 mm, and only three exceed 15-16 mm. In general the keying seems to cover the whole face, though a narrower unkeyed band is left adjacent to the junction with the side. However, the fragments are small, and these statements must be regarded as tentative. A band of wavy combing is often adjacent to the side. The cutaways on three tiles (Cat 64, Cat 111a, & Cat 347c) are between 29 and 31 mm from the junction with a surviving face. On Cat 111a the base of the cutaway was at least 37 mm across with a clear knife mark on the surviving edge. The surviving length of the cutaway on Cat 347c is 100 mm. On Cat 344a the external depth of the tile is about 117-18 mm.

Type B10 (Fig 7.5)

Type B10 is characterised by its style of keying. Either a series of impressions cross the face of a tile at an angle and intersect to form a number of St Andrew's crosses, or the same device is set within a frame formed by a band of combing along the longer edges of each face. Sometimes these vertical bands of combing are set in from the edges. The hall-mark of the type is the intersection of bands of (usually straight) combing, in contrast to the 'overlapping' of bands in Type B7. Rarely intersecting curved bands of combing are found, and very occasionally there seems to have been an attempt to achieve an overall keying of the surface.

Of the 102 specimens assigned to Type B10 the thickness of all but one falls within the range 14-21 mm; the exception (Cat 106) is 21-25 mm thick. The dimensions of the type are given by two joining fragments, Cat 303, from a watching brief on the Post Office site, Head Street (X295): height 398-402 mm, internal width 129 mm. The cutaways on this piece are 44 and 49 mm from the surviving face, and the lower edge of the cutaway is about 29 mm across, suggesting an external depth of about 120 mm for the tile. The height of the cutaway is about 100 mm. On four other specimens (Cat 51, Cat 61h, Cat 157a, & Cat 264) the edge of the cutaway lies between 42 and 45-47 mm from the junction with the surviving face. (The size of the cutaway of Type B10 is very similar to that of Type B11.) The internal width of Cat 175 was at least 142 mm, indicating that it was made on a different former from Cat 303.

Type B11 (Fig 7.5)

The Keying of Type B11 is the same as for Type B6. B11 is distinguished as a separate type on the basis of a) its internal width, which lies in the range 124/125-130 mm on five examples (Cat 9a, Cat 9b, Cat 310, Cat 321e, & Cat 321 h), and b) the use of the same comb (Cat 9a, Cat 65?, Cat 66, & Cat 205). The dimensions of the type are given by Cat 9b: internal width 130 mm, internal depth 88 mm. There is a cutaway, measuring about 34 by 100 mm, set 38-9 and 41-2 mm from the junctions with the face and about 150 mm from one end of the tile. The height may be estimated at about 400 mm.

Type B6/B11 (not illustrated)

Fragments with keying as in Type B6 and Type B11, but without other features which would enable them to be assigned to one of the types, are classified together as Type B6/B11.

Type B12 (not illustrated)

This type comprises three fragments from box tiles with keying as Type B6 or Type B11, but of abnormal thickness (between 20-3 and 24-5 mm).

Type B13 (Fig 7.5)

Type B13 comprises seven fragments of tile, six of which have a thickness between 9-10 and 10-12 mm. The seventh is 6-8 mm thick. They have combed keying, but are generally too small to show what sort of pattern was employed. Both straight and wavy bands of combing are represented. Cat 68 shows three, possibly four, intersecting bands of straight combing reminiscent of Cat 338 in Type B2. Cat 181 and Cat 189, come from Period 3 contexts on Culver Street Site B. Cat 181 derives from F334, a gully (wall trench) in Building 95, Room 2, dated *c* 75/90-

100/125, and Cat 189 comes from L389, Boudican demolition representing the clearance of the remains of Building 77, dated to 60/1-75. A date of no later than the early Flavian period is therefore indicated for this type.

Type V1 (Fig 7.6)

For this type Cat 99 gives a greater width (ie the width of the face at the junction with the top of the tile) of 191 mm, and a lesser width (ie the width of the face at the junction with the base) of 162 mm. The height is 170 mm externally and 135-8 mm internally. The face is unkeyed with an oval cutaway (59 by about 48 mm along its axes) in an approximately central position. The top of the tile has scored lattice keying, and the base has three bands of straight combing in a Z pattern. The internal depth is 155-6 mm and the estimated external depth 185-86 mm.

Type V2 (Fig 7.6)

The greater width of Cat 18 in this type is estimated at 176 mm, and the lesser width at 160 mm. The estimated external height is 162-3 mm, and the internal height is about 122 mm. The face is unkeyed with a circular cutaway about 48-9 mm in diameter. The top was evidently combed, but very little of the keying survives on any of the fragments.

Type V3 (Fig 7.6)

No complete dimensions for Type V3 can be given. The maximum surviving height and width on Cat 242 are 153 and 173 mm respectively. The face is unkeyed with an oval cutaway measuring about 62 by 50 mm along its axes. A distinctive feature is a raised rim around the cutaway on the internal surface of the face. The top of Type V3 was combed, but very little of the keying survives on any of the pieces.

Type V4 (Fig 7.6)

Most of one face and the top of an unprovenanced tile of Type V4 is in the CM, and the dimensions for the type are taken from this tile since the specimens from Culver Street Sites B and E are too small to supply this information. The face is unkeyed and has a roughly oval cutaway measuring 53 by 49 mm along its axes. The greater width is 186 mm and the lesser width about 165 mm. The height is 157 mm. The top is combed with a St Andrew's cross framed by bands of straight combing at the junctions with the faces. The depth is 255 mm. (All measurements are external.)

Type V5 (Fig 7.6)

For Type V5 Cat 321a gives a greater width of 160 mm and a lesser width of 145 mm. The height internally is 130 mm. The face has an overall keying with at least three horizontal bands of straight combing and two more forming a St Andrew's cross. There is no cutaway. The top and base seem to have been unkeyed.

Type V6 (Fig 7.6)

It is not possible to give complete dimensions for this type. Three joining fragments (Cat 23, Cat 30, and Cat 35a) give a maximum surviving height of 225 mm and a width of 140 mm. The face is keyed with a St Andrew's cross bisected by a horizontal band of combing. There is no cutaway.

Type V7 (Fig 7.6)

The top or base of Cat 78 is 190 mm wide and has an internal depth of 160 mm. There is a band of straight combing parallel and adjacent to the junction with each face, and a central band of wavy combing. A small portion of a face surviving on Cat 70 has no trace of keying.

Type V8 (Fig 7.6)

For Type V8 Cat 320a gives a greater width of 168-75 mm and an estimated lesser width of about 144 mm. The face is unkeyed and has a roughly circular cutaway about 52-4 mm in diameter. The top has overall keying with bands of combing set at 45° to the corners and horizontal bands crossing them.

Type V9 (Fig 7.6)

Only one specimen (Cat 321g) of this type is catalogued. The face is unkeyed. The width where the tile is broken at the junction with the base is 162 mm. There is a circular cutaway about 40 mm in diameter.

Type V10 (Fig 7.6)

The maximum surviving height and width of Type V10 are about 165 and 160 mm. The face of Cat 199a has a circular cutaway with a raised rim around it on the external surface. There are at least two bands of combing, of which one terminates at the cutaway and the other passes it at an angle. A surviving small portion of top/base has part of a band of combing at right angles to the junction with the face. Cat 199b, which is also probably Type V10, shows two parallel bands of combing connected by two scored lines.

Type V11 (Fig 7.6)

For this type Cat 209 gives a greater width of 179 mm and a lesser width of about 163 mm. The external height is 240-4 mm and the internal about 205 mm. There is no cutaway. Both the face and top/base are keyed with various combinations of straight and

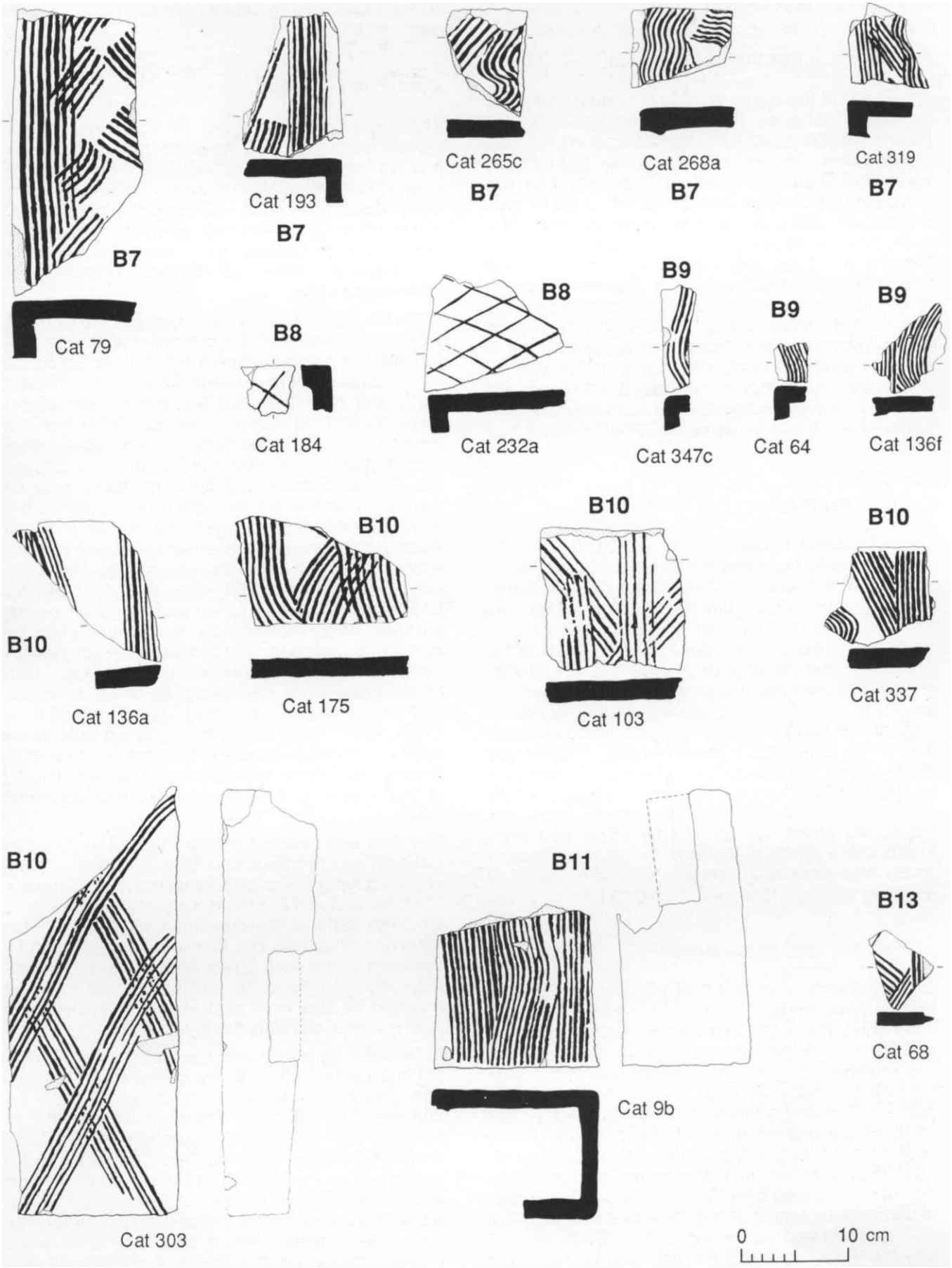


Fig 7.5 Box-flue-tile Types B7-B11, B13 (1:5). Type B7....Cat 79, 193, 265c, 268a, 319; Type B8....Cat 184, 232a; Type B9....Cat 64, 136f, 347c; Type B10....Cat 103, 136a, 175, 303, 337; Type B11....Cat 9b; Type B13....Cat 68.

curved bands of combing.

***Parietalis*/half box** tile (not illustrated)

Insufficient of the edges of these tiles survives for it to be certain whether they are from *parietalis* tiles (keyed flat tiles used with ceramic spacers) or from half-box tiles. However, both *parietalis* and half box tiles were used with tiles of Type B1, and two complete half box tiles were found with a tile of Type B1 in Long Wyre Street, Colchester, in 1848 (Hull 1958, 204). All three catalogued specimens (Cat 237, Cat 270, & Cat 267) are from the Gilberd School, and one (Cat 237) comes from a Period 1 context *(c* 44-49). The thickness is 26 to 30 mm and one face has scored lattice keying. On Cat 267 the lattice pattern is not cut into the surface but stands out in relief, evidently the result of placing a tile that was not dry on top of one that has already been keyed, and then applying some pressure to it. Presumably this form of keying was achieved by accident rather than design.

Combed flat tiles (Fig 7.6)

Three specimens (Cat 177c, Cat 219a, & Cat 229) are keyed with the same comb with alternate bands of straight and wavy combing. Cat 177c is a corner fragment which shows that these pieces came from flat tiles. The thickness of all three specimens is 28-30 mm. Two other pieces (Cat 233, & Cat 261a) are 24-5 and 26 mm thick and are tentatively assigned to this type. It is possible that the fragments are from *parietalis* tiles, but alternating bands of straight and wavy combing are not a feature of such tiles which usually have scored keying. Another type of tile seems more likely, and a very close parallel is available in tiles from the Flavian bath-house at Red House near Corbridge, Northumberland. There tiles measuring about 178 by 165 by 25-38 mm were keyed with a variety of patterns, the most common of which was alternating straight and wavy bands of combing (Daniels 1959, 169-71, fig 23.I.A).

Scored *pila* **tiles** (not illustrated)

Six specimens were found of *pila* tiles with scored lattice keying on one surface. Four had a thickness within the range 32-36 mm. Cat 197 is 28-9 mm thick, and there is a possibility that it is a fragment of *parietalis/*half box tile. The full thickness of the sixth specimen is not preserved. Similar tiles have been published from Hartlip and Chalk in Kent (Smith 1852, pl 8,6; Johnston 1972, 119, pl 9b) and from Gadebridge Park, Hertfordshire (Neal 1974, 198, 200, fig 87,725), and at all these sites relief-patterned flue tiles have also been present. In Colchester also a fragment of scored *pila* brick was found with flue tiles stamped with dies 5 and 13 in excavations at 12 Lexden Road in 1953 (in the CM). While their contemporaneity is not proven, the occurrence of both types of tile in small quantities at the Culver Street site seems to provide another instance of the same sort.

Discussion (Tables 7.4-5)

The earliest stratified keyed tile fragments are from the Gilberd School site. An unmortared *parietalis/*half box tile fragment (Cat 237) derives from a Period 1 context dated *c* 44-49. This indicates the existence of a hypocaust associated with the legionary fortress. It is difficult to see any other context for this than a legionary bath-building, as in the later 1st-century fortresses at Exeter and Caerleon (Bidwell 1979; Zienkiewicz 1986).

Type B1 box tiles (Cat 302, Cat 322, & Cat 323), which were designed for use with *parietalis* or half box tiles, are represented at the Gilberd School site in contexts of Period 2 and Period 1/2, predating 60/1, and from a Period 3a context, immediately following 60/1. At Culver Street Site B another Type B1 fragment (Cat 185) came from a context within Period 3 dated *c* 75-100. Cat 302 and Cat 323 from the Gilberd School had been mortared over the interior surface and over broken edges before they were deposited in make-up layers, ie they had already been reused before their deposition in Period 2 and Period 1/2 contexts respectively. This raises the possibility that the proposed Period 1 baths had been subject to alteration before 60/1, or had perhaps been replaced by new baths when the *colonia* was founded. The complete half box tiles and Type B1 flue tile found on the east side of Long Wyre Street came from the vicinity of 'three hypocaust arched fire-places' (Wire's Journal, 23.8.1848, in ERO), which were possibly connecting flues in the subfloor division between two rooms heated by hypocausts. This is one clue to the possible location of one or other of the early bath-buildings postulated here.

Box tiles with combed keying (Type B13 (Cat 181, Cat 189) and two fragments (Cat 174a, Cat 174b) of uncertain type) make their appearance in contexts of 60/1-75 and *c* 75-100 at Culver Street Site B. Evidently baths in the refounded colony were being fitted or refitted with box tiles in this period, and the combed flat tiles from Culver Street Sites B, C, and D may belong to the same construction since they are matched by tiles used in a Flavian bath-building at Red House, Corbridge, Northumberland.

In the later Culver Street assemblage Site E yields the most information. Many of the tiles recovered from Site E were reused in Building 127, the aisled building constructed at the beginning of the 4th century when the earlier domestic buildings in the excavated area were demolished. The tiles from Site E contexts of Period 5 and later should reflect what was available to the builders of Building 127. As can be seen from Table 7.4 the assemblage of box tiles from Site E matches that from Site D very well indeed. There is no indication that box tiles reused in Building 127 were taken from anywhere else than Building 123 on Site D, and there is no support from

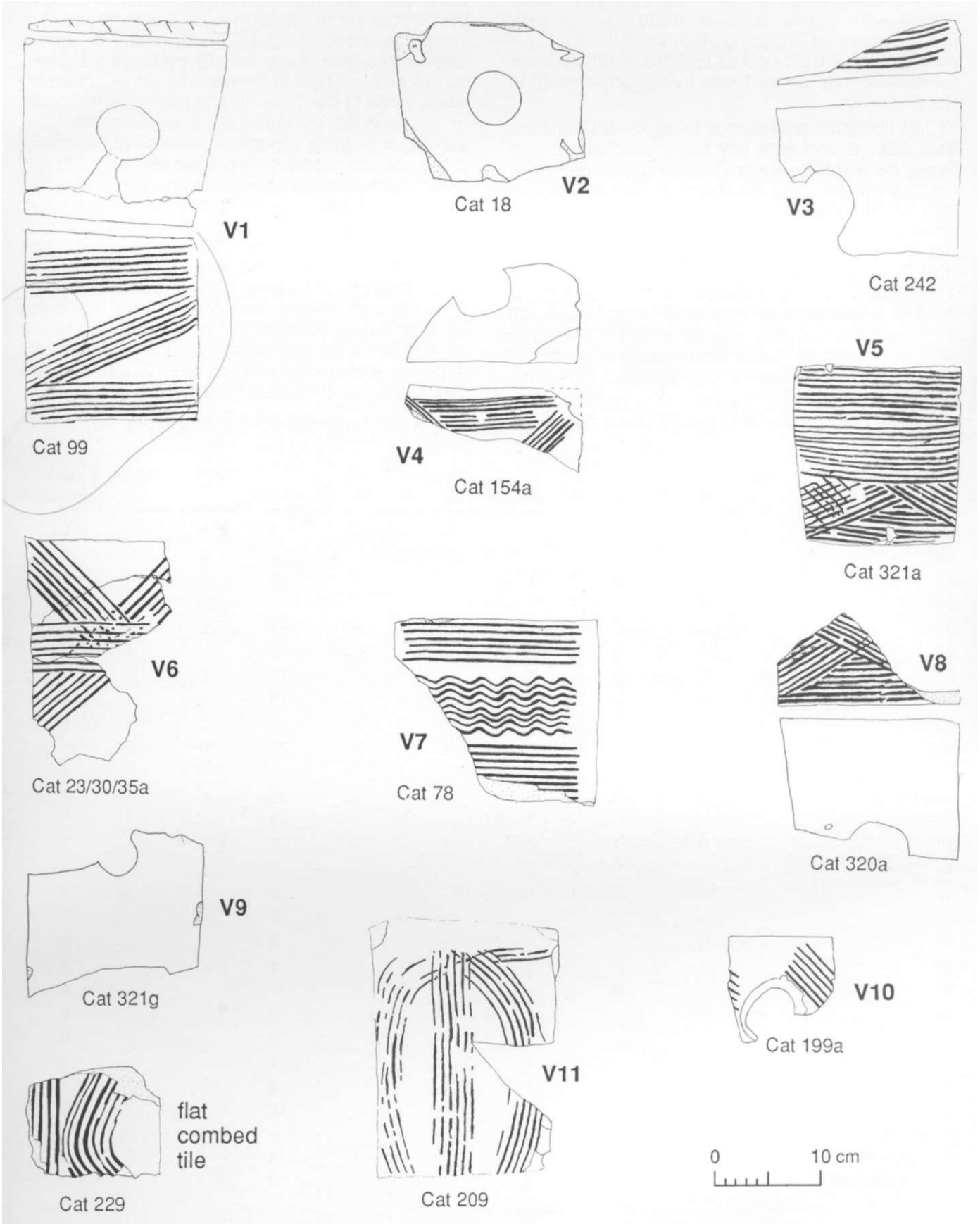


Fig 7.6 ***Voussoir tiles and a combed flat tile*** *(1:5). Type V1....Cat 99; Type V2....Cat 18; Type V3....Cat 242; Type V4....Cat 154a; Type V5....Cat 321a; Type V6....Cat 23/30/35a; Type V7....Cat 78; Type V8....Cat 320a; Type V9....Cat 321g; Type V10....Cat 199a; Type V11....Cat 209; combed flat tile....Cat 229.*

the tile assemblage for the idea that there were rooms with hypocausts in Building 122 (the predecessor of Building 127 on Site E). The construction of Building 123 is dated *c* 150/200 and the building had at least one hypocaust, namely in Room 8.

Of the tile types represented in significant numbers from Sites D and E, it has been noted above that Types B5 and B6 were probably of similar date, and that this was probably the Hadrianic period or slightly later. A mortared fragment of Type B6 (Cat 143) came from a context of Period 3 (60/1- *c* 150/200) on Site E, and two unmortared fragments of Type B5 (Cat 278c, Cat 278d) came from a floor in Building 118 (GL3238) dated to Period 4 *c* 200-225. One of the two relief-patterned fragments stamped with die 14 (Type B4, Cat 33), also of probable Hadrianic date, was found on Culver Street Site D in the robber trench DF86 for the base of the hypocaust in Room 8 of Building 123.

There seem to be two possibilities: either Types B4, B5, and B6 tiles were fitted in the original jacketing of the hypocaust in Building 123 Room 8 and this should be dated to the Hadrianic period or slightly later on the (admittedly limited) evidence for dating die 14 and the type of former with an extension on which some of the Type B5 and B6 tiles were made, or, still accepting the dating evidence for the tile types as valid, if Building 123 dates considerably later than *c* 150, the specimens of Types B4, B5, and B6 must derive from an earlier, unexcavated hypocaust within the area of the Culver Street sites. The latter hypothesis fails adequately to explain how fragments of B5, B6, and B6/B11 tiles as well as B3, B7, and B10 tiles were found in the Period 6 robber trenches and robber pits of Building 123 and how fragments of Type B5 and B6 tiles were available for use in the construction of Building 127 at the start of the 4th century when, as Cat 143 shows, a used fragment of Type B6 was deposited in EF549 (Site E Period 3 ?trench) before the end of the 2nd century.

The writer favours the view that Types B4, B5, B6

Type	1.81 A	B	C	D	E	G	H	J	K	M	W	Totals	GBS	SPT	Grand totals
B1	1	1	-	-	-	-	-	-	1	-	-	**3**	3	-	**6**
B2	-	1	-	-	-	-	-	-	1	-	-	**2**	1	-	**3**
B3	-	-	-	4	3	1	-	-	-	-	-	**8**	-	3	**11** (13)
B4	-	1	-	1	-	-	-	-	-	-	-	**2**	2	-	**4**
B5	-	-	-	6	6	2	2	1	-	-	-	**17**	6	3	**26**
B6	-	6	5	4	1	-	-	-	-	-	-	**16**	-	1	**17** (18)
B7	-	3	-	3	5	9	1	1	-	-	-	**22**	2	3	**27** (28)
B8	1	4	-	-	-	4	3	1	-	-	-	**13**	-	1	**14**
B9	-	3	-	2	7	2	2	-	-	-	-	**16**	2	1	**19**
B10	1	15	1	12	24	5	7	2	1	2	-	**70**	9	16	**95** (101)
B11	1	-	-	1	-	4	2	-	-	-	-	**8**	-	-	**8**
B6/11	-	2	-	7	6	7	2	1	1	-	-	**26**	4	-	**30** (33)
B12	-	1	-	-	-	1	1	-	-	-	-	**3**	-	-	**3**
B13	-	2	-	1	1	2	-	1	-	-	-	**7**	-	-	**7**
V1	-	1	-	-	2	2	-	-	-	-	-	**5**	1	-	**6**
V2	-	-	-	-	1	1	-	-	-	-	-	**2**	1	-	**3**
V3	-	-	-	2	-	-	-	-	-	-	1	**3**	-	4	**7**
V4	-	1	-	-	1	-	-	-	-	-	-	**2**	-	-	**2**
V5	-	-	-	2	-	2	-	-	-	-	-	**4**	-	-	**4**
V6	-	1	-	3	-	-	-	-	-	-	-	**4**	-	-	**4**
V7	-	-	-	-	-	3	1	-	-	-	-	**4**	-	-	**4**
V8	-	-	-	-	-	7	1	-	-	-	-	**8**	-	-	**8**
V9	-	-	-	-	-	1	-	-	-	-	-	**1**	-	-	**1**
V10	-	1	-	-	-	1	-	-	-	-	-	**2**	2	-	**4**
V11	-	-	-	10	-	-	-	-	-	-	-	**10**	-	-	**10**
parietalis/half box tile	-	-	-	-	-	-	-	-	-	-	-	-	3	-	**3**
combed flat tile	-	1	1	1	-	1	-	-	-	-	-	**4**	-	1	**5**
scored *pila* brick	-	1	-	-	-	3	1	-	-	-	-	**5**	-	1	**6**

Figures given in brackets in the grand totals column include tile fragments from watching briefs, small sites, and the unprovenanced pieces.

Table 7.4 Numbers of keyed tile types per site.

(and possibly B9, the keying of which is similar to that of Types of B5 and B6) were the tiles originally fitted in Room 8 of Building 123, and that alterations to the box tile jacketing were carried out some time in the second half of the 2nd century with the removal of some tiles (resulting in the deposit of fragments such as Cat 143, Cat 278c, and Cat 278d). Type B10 tiles could have been used in the original jacketing, but it is proposed here that it was they that replaced some Type B5 and B6 tiles in the postulated alterations to the hypocaust. If some of the original jacketing remained in place at this time, the availability of Type B5 and B6 tiles for reuse in Building 127 along with Type B10 is explained.

The Period 4 floor (GL3238) in Building 118 (c 150-225) on Culver Street Site G produced two reused fragments of scored *pila* tile (Cat 278a & Cat 278b) as well as two fragments of Type B5. It was noted above that relief-patterned flue tiles and scored *pila* bricks often seem to be associated, and this strengthens the argument for the contemporaneity of Type B4 (die 14) with Types B5 and B6.

On the Culver Street site the distribution of Type B7 matches that of Type B10, and the smaller number of Type B3 could be interpreted in the same way. Both types of tiles were provided with unusually long cutaways. It was suggested above that Type B7 tiles may have been designed for use in horizontal channels at the top of wall jacketing, and perhaps they were used along with Type B10 tiles in the hypocaust in Room 8 of Building 123. One fragment of Type B7 (Cat 193) came from a Period 4a context (*c* 100/125-200) in Building 112 on Site B.

The small number of voussoir fragments from types with cutaways (such as would be used in a vault above a room with a hypocaust) from Culver Street Sites D and E supports the idea that Room 8 in Building 123 was not vaulted. Type V11 occurs in sufficient quantity to suggest that it was used in Building 123, but its use is likely to have been in an

Type	1.81 A	B	C	D	E	G	H	J	K	M	W	GBS	SPT	Earliest date
B1	3r	3	-	-	-	-	-	-	u/s	-	-	1/2r	-	*c* 44-60/1
B2	-	?4	-	-	-	-	-	-	3m	-	-	P-M?r	-	?*c* 100/25-275/325
B3	-	-	-	4/6r	7	u/sr	-	-	-	-	-	-	3	*c* 150/200-275/325 (or early medieval)
B4	-	u/sm	-	6	-	-	-	-	-	-	-	P-Mm	-	early medieval
B5	-	-	-	6?r	5r	4	5m	6	-	-	-	(3b)4	4	*c* 150-225
B6	-	?4am	-	4m	3r	6	-	-	-	-	-	-	3	60/1-*c* 150/200
B7	-	4a	-	6m	7r	5m	5	6	-	-	-	3b	3	*c* 100/125-250/275
B8	5	4?r	-	-	-	5m	5	6	-	-	-	-	4	*c* 100/125-275/325
B9	-	P-R	-	4	5r	6	6	-	-	-	-	P-Mm	3	*c* 150/200-275/325
B10	4r	4m	u/s?r	4r	4?r	6	5m	6	3m	u/sm	-	3r	3	60/1-*c* 250/275
B11	4r	-	-	6r	-	5r	5/6m	-	-	-	-	-	-	*c* ?100/150-300
B6/11	-	?3?r	-	4r	7r	3r	5m	6m	4r	-	-	2/3m	-	*c* 49-250/275
B12	-	u/s	-	-	-	5r	u/sm	-	-	-	-	-	-	*c* 225-275/325
B13	-	3r	-	4r	7r	5	-	6	-	-	-	-	-	*c* 65/75-100/125
V1	-	4b/c?r	-	-	5r	4m	-	-	-	-	-	(3b)4m	-	*c* 150-225
V2	-	-	-	-	5m	5m	-	-	-	-	-	u/sr	-	*c* 225-275/325
V3	-	-	-	4	-	-	-	-	-	-	4m	-	3	*c* 150/200-275/325
V4	-	4	-	-	u/sr	-	-	-	-	-	-	-	-	*c* 100/125-275/325
V5	-	-	-	6	-	5m	-	-	-	-	-	-	-	*c* 225-275/325
V6	-	5r	-	4	-	-	-	-	-	-	-	-	-	*c* 150/200-275/325
V7	-	-	-	-	-	1/2/3r	u/s	-	-	-	-	-	-	*c* 44-225
V8	-	-	-	-	-	6r	u/s	-	-	-	-	-	-	post-Roman
V9	-	-	-	-	-	6r	-	-	-	-	-	-	-	post-Roman
V10	-	5r	-	-	-	5r	-	-	-	-	-	medm	-	*c* 225-275/325
V11	-	-	-	4r	-	-	-	-	-	-	-	-	-	*c* 150/200-275/325
parietalis/half box tile	-	-	-	-	-	-	-	-	-	-	-	1	-	*c* 44-49
combed flat tile	-	medr	u/sr	6	-	3/4	-	-	-	-	-	-	3	60/1-*c* 225
scored *pila* brick	-	4a	-	-	-	4r	u/sm	-	-	-	-	-	4	*c* 100/125-200

The number given in each column is the site period number; P-R = post-Roman; u/s = unstratified; P-M = post-medieval; med = medieval; r = reused; m = mortared; ? here always immediately precedes the queried entry. The periods which are the earliest for all sites in which a tile type occurs are underlined.

Table 7.5 The earliest occurrences of keyed tile types.

arched opening since no cutaways are present in the faces of these voussoirs.

On Culver Street Site B, Building 113 had a hypocaust in Room 6 and possibly another in Room 7. With one exception, the specimens listed under Type B6 from Site B were combed with the same comb as Cat 149 from Site E, but at some time in between the comb lost one of its teeth (p 265). If this observation is accurate, the implication is that the tiles from Site B were made later, and, if Cat 149 derived from the hypocaust in Room 8 of Building 123, it follows that hypocausts in Rooms 6 and 7 (if one existed there) in Building 113 were slightly later in date. It has been noted (p 266) that the specimens of Type B8 from Site B may have formed part of the same tiles as Type B6, on the basis of an unprovenanced tile with this combination of keying in the CM.

The Type B7 and B10 tiles from Site B may reflect a refitting of the jacketing in Building 113, or may even be redeposited from Site D. There are almost as many specimens from the Gilberd School site where no hypocausts have been recorded.

On Culver Street Site G, Room 8 in Building 120 had a hypocaust in Period 5 (c 225-?300). The tile assemblage from Sites G and H indicate that Type B11 tiles were used in this, and possibly also Types B7 and B10 tiles. Types V7 and V8 are also concentrated in this part of the Culver Street excavation.

On Culver Street Site J, Room 7 in Building 114 had a composite hypocaust (p 81, Fig 6.43). There is only one identifiable fragment out of five (Cat 291a) from the robber trenches of Room 7, and it is Type B6/B11. The composite form of hypocaust is generally later than 2nd century (Black 1985a, 86-7) and a date within the 3rd century rather than earlier may be required for the hypocaust in Room 7. If this is correct Cat 291a is more likely to be Type B11 than B6.

No detailed comment can be made about the tiles from the Spendrite site, except that Types B3, B7, and B10 probably indicate that a hypocaust was fitted with a jacketing in the later 2nd century.

8. ENVIRONMENTAL STUDIES: CULVER STREET

by Peter Murphy

Introduction

Before 1982 soil sampling for the retrieval of economic and environmental data at Colchester was on a comparatively small scale, with an emphasis on the examination of the Boudican destruction levels (Murphy 1984). The excavations at Culver Street provided an opportunity to examine deposits from a much wider range of contexts, relating to several periods of the town's development. Although the archaeological deposits were quite well-drained, and there was no permanent waterlogging, a surprisingly wide range of macro- and micro-fossils survived: foraminiferans, land and marine mollusc shells, barnacles, crabs, mineralised arthropods (mainly fly puparia and woodlice), bones of fish, amphibians, birds and mammals, avian eggshell, faecal concretions and coprolites containing parasite eggs and phytoliths, and carbonised and mineralised plant macrofossils comprising cereals, fruitstones, nutshells, seeds, wood and charcoal. All these categories of material have yielded information on the environment and economy of the site. The structure, chemistry and micromorphology of certain deposits were also studied.

The results of this work are presented and discussed below. The report is divided into three main sections. A short synthesis and summary of the main results, intended for the non-specialist reader, is given on pp 284-7. Further detail is given in reports dealing with each separate category of material. Full lists of identifications and detailed analytical data are presented on microfiche (pp 700-727).

Sampling and recovery methods

During the 1981 season, sampling at Sites B, C and E was on a limited scale, and was confined largely to the Boudican destruction levels and to a small number of other contexts, mainly Roman cess pits and rubbish pits. The samples, up to 20 kg in weight, were processed in the laboratory. Carbonised plant remains were extracted by manual water flotation, collecting the flot in a 0.5 mm mesh. The non-floating residues, containing bone, shell, mineralised seeds and arthropods, were wet-sieved in a 0.5 mm mesh. The dried flots and residues were sorted under a binocular microscope at low power.

The results obtained indicated that more extensive sampling, and the collection of larger samples, would be profitable. In the 1985 season, therefore, bulk samples were collected from Roman and medieval contexts. Sample size was recorded in terms of numbers of buckets of approximately 12 litre capacity: usually one to four buckets per context were collected, though smaller samples were taken from deposits of limited depth or extent. The stratigraphic complexity of the sites made probabilistic sampling impractical, but an attempt was made to obtain samples from as wide a range of contexts and site periods as possible. These samples were processed on site using a bulk sieving/flotation tank (Kenward *et al* 1980) with 0.5 mm meshes to collect the flot and 1 mm meshes to retain the residue. To complete the extraction of carbonised plant remains, it proved necessary to re-float the residues in the laboratory.

The dried flots were sorted under a binocular microscope, extracting carbonised plant remains and any other macrofossils which had floated off (mainly mollusca and small bones with some mineralised seeds and arthropods). The residues from bulk-sieving were usually sorted without magnification, separating artefacts, concretions, bone, shell and other macrofossils. Residues from several deposits, however, proved to contain concentrations of mineralised seeds and small fish bones, and these were sorted under the microscope. Methods used for examining soils and concretions are outlined below.

All categories of plant and animal remains recovered, with the exception of mammal bone fragments and bones of amphibians, reptiles, birds and small mammals, are listed and discussed in this report. The remains of terrestrial vertebrates are more appropriately considered with the hand-collected bone and will form part of the forthcoming monograph by Dr R M Luff on the bone from sites in Colchester *(CAR* **12).**

Soil studies

[Tables 8.1-8.5]

Buried soils

by Dr R I Macphail

In this report, results of soil studies at Sites E and G are summarised and discussed. Full analytical data, profile descriptions and micromorphological descriptions are given on microfiche (Tables 8.1-8.5, pp 703-8).

i) Cover loam (Site E, samples from EL300 and EL350)

During the autumn 1982 excavation at Culver Street, possible cover loam material was found overlying the local, sandy parent material, probably composed of outwash sands. Roman levels (EL157) overlay this cover loam material, which had at least one prehistoric feature cut into it, and had prehistoric pottery in its upper levels (EL300). Various questions were posed by the archaeologists concerning a) the nature of the cover loam, b) its pedogenic character, c) evidence for on-site agriculture, and d) evidence for possible prehistoric erosion.

Methods

The soil profile was described and sampled for bulk and micropedological analyses. In the latter case undisturbed samples were removed from layers EL300 and EL350 in monolith tins. Large (50 x 50 mm) thin sections were made, and grain size, pH, loss on ignition and organic carbon analyses using standard methods (Avery & Bascomb 1974) were carried out *(see* acknowledgements). Thin sections were described according to Bullock *et al* forthcoming.

Results

The analytical data show that levels EL300 and EL350 have an alkaline pH — presumably gained from calcareous materials (probably chiefly mortar), present in the overlying Roman layers. Grain size analysis suggests that large increments of silt and small increments of clay, to the medium sandy 'outwash' sands substrate, have produced the 'cover loam' levels. Cover loam *sensu stricto* has been mapped in the immediate vicinity of Colchester (Catt 1977, 1978), where it actually occurs in an area of gleyic argillic brown earths (Wix Association) developed on glacio-fluvial drift (ie the AC horizon material) over Eocene clay (Hodge *et al* 1983). To the north and east of the town stagno-gleyic paleo-argillic brown earths (Tendring Association) occur on drift material containing an aeolian component (Hodge *et al* 1983). At Culver Street, it appears that cover loam has been mixed with the underlying sandy drift, probably during the late Devensian (Catt 1979).

The organic matter analysis (Table 8.1) and the thin section studies (micromorphological descriptions on Table 8.2 on microfiche, p 704) suggest that levels EL300 and EL350 are lower subsoil horizons. They relate to soils which have tended to move downslope: disrupted coatings in EL350 indicate minor soil transport. A pedogenic history of probable argillic brown earth development in an upper (now eroded off) soil may be envisaged, as parent material laminae have concentrated clay deposition (illuviation) in the C2 horizon. The occurrence of limpid coatings succeeded by mainly dusty coatings suggest a woodland cover was followed by clearance and soil disturbance (Slager & van der Wetering 1977; Courty & Federoff 1982). Such disturbance could relate to the prehistoric truncation of the soil.

Mottles within the upper level (EL300) relate to ferro-manganiferous nodular formation around organic rich 'old root channels'. The fabric of the two horizons (C and C2 horizons) has a thin content of organic matter which may be associated with organic matter washed in from the Roman levels above. However, the 'old root channels' are possibly earlier, correlating with the argillic brown soil formation.

Evidence for on-site agriculture is only circumstantial. No 'plough pan' type fabric was present. However, the evident truncation of the profile and the indications of soil disturbance (ie dusty clay coatings) indicate that a history of cultivation is a distinct possibility.

The presence of Iron Age artefacts and coarse charcoal in layer EL300 suggests possible pre-Iron Age soil erosion and probable minor soil loss prior to the Roman accumulations.

ii) ?Cultivated soil (Site G Period 3, samples from GL1814)

Of particular interest at this site was the origin of about 0.45 m of dark reddish-brown (5YR 3/3) deposit (GL1814) which occurred immediately over the burned brickearth clay wall foundations of Roman barracks destroyed in the Boudican fire. The deposit itself was capped by a sandy foundation for a number of Roman floors, eventually topped by a tessellated floor level. As the deposit was ubiquitous in the area, it was necessary to interpret it properly as it represented a major land-use phase after Colchester had been destroyed. The deposit, which strongly contrasts with the much darker 'dark earth' on the site (and on other Roman urban sites), was thought by the archaeologists to have been a cultivated soil.

Methods

A large undisturbed monolith sample was taken for thin section manufacture, in addition to a bulk sample. Samples were analysed (Avery & Bascomb 1974) for grain size, organic carbon, loss on ignition (400°C and 800°C) and calcium carbonate, whereas the thin section was described according to Bullock *et al* 1985 with minor amendments (Courty *et al* forthcoming) because of the anthropogenic nature of the deposit.

Results

The results are presented in Tables 8.3-5 (microfiche, pp 705-8). They show that the deposit is very poorly sorted, but contains much silt and fine sand derived from the brickearth clay wall and daub material. It is also very low in organic matter and fine (<2 mm) charcoal, as indicated by organic carbon and loss on ignition. It is also low in fine calcium carbonate,

although large fragments of mortar are present (Table 8.4).

Micromorphological examination of the deposit showed it to be completely dominated by fragments of burned and unburned building materials. Close examination of the fabrics showed, in contrast to studies of dark earth (Macphail & Courty 1985; Macphail 1983) that the deposit appeared to be a spread of little weathered destruction material (Courty, pers comm). Recent comparison, however, with a similarly dated horticultural soil (spade marks and clear evidence of composting) in destruction debris at Whittington Avenue, London (Brown & Macphail in prep) indicates that the deposit at Culver Street was cultivated. Debris was broken up, but only a little organic matter was incorporated.

In summary, the deposit seems to have been physically broken up, probably by cultivation, but as organic matter levels are low and burrowing by soil fauna was not pronounced, *in situ* horticulture cannot be proven here.

Acknowledgements

The author wishes to acknowledge the thin section manufacturing facilities of the INA P-G (Grignon, France), and Anne Gebhardt and Stephen Carter for analytical data. He thanks Mike Allen for carrying out the grain size analysis on samples from Site E.

Concretions and coprolites

[Figs 8.1-3]

The non-floating residues from several contexts included concretions: BL519 (cess or silt deposit) in Building 77 (Period 1), BF508 (drain or latrine pit) in Building 78 (Period 1), CF138 (latrine pit) in Building 79 (Period 1/2), EF900 (latrine pit) in Building 83 (Period 1), GF163 (Site G Period 6 pit), GF185 (Site G Period 6 pit), GF478 (Site G Period 6 pit), GF557 (Site G Period 6 pit), GF626 (Site G Period 5b pit), GL783 (Site G Period 5b occupation or destruction debris), GL1745 (Site G Period 3 burnt deposit), GL2520 (Site G Period 3 dump or burnt deposit) and GF3064 (Site G Period 3d pit). These are very variable in form and colour. Those from EF900, pale buff in colour with an open porous structure including fragments of plant material, seem mostly to have formed as flat irregular sheets within the pit fill. Concretions from GL2520 are greenish-grey and slag-like, fairly flat with holes and irregular ramifying projections, again with an open porous structure including plant tissue (Fig 8.1). Other features produced brown to pale buff concretions, porous and usually including some plant tissue. Concretions of this type are quite common in urban deposits, and seem generally to have formed by mineralisation of faeces. Occasionally concreted stools or coprolites are encountered (Jones 1984, 225). A few mineralised droppings or stools retaining their original form were recovered at Culver Street, including small flattened ovoid coprolites from the military latrine pit EF900 at Site E and some striated ficiform coprolites, possibly goat droppings*, from the medieval pits GF163 and GF557 at Site G (Fig 8.1). GF557 also included an ovoid coprolite 40 x 18 mm including many chips of bone — possibly a canine coprolite.

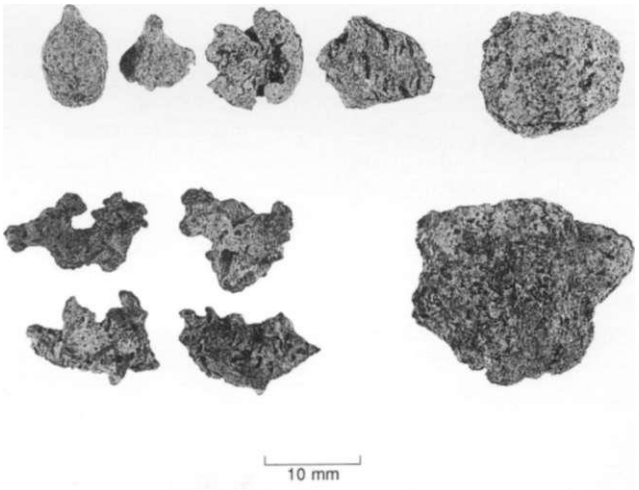


Fig 8.1 Coprolites and faecal concretions. Above left: *ficiform coprolites, probably goat droppings (GF163: Site G Period 6 pit).* Below left: *faecal concretions (herbivore) (GL2520: Site G Period 3 burnt deposit).* Right: *human coprolite and faecal concretion (from the Period 1 latrine EF900).*

The concretions from GF626, GL1745, GL2520 and GF3064 at Site G were associated with carbonised plant material interpreted as burnt animal fodder *(see* below) and it seemed possible that these concretions represented animal dung cleaned out from byres or stables and burnt together with spilt fodder and litter. To investigate this possibility concretions from these contexts were examined in more detail, by comparison with concretions from the latrine pit EF900, which were probably derived from human faeces. The concretions were disaggregated by treatment with dilute HCl, which produced brown solutions with dark sediments and some suspended material. After agitation aliquots of these suspensions were mounted on microscope slides and examined by transmitted light at high power.

The acid-insoluble fraction from EF900 consisted mainly of scraps of unidentified tissue, with some fragments of cereal periderm (bran), occasional phytoliths, angular sand grains and a few ova of a parasitic nematode *Trichuris* sp. (Fig 8.2). Bran and trichurid ova are common and characteristic components of human faecal material from archaeological deposits (Jones 1984), whilst the freshly-fractured sand grains might have been produced when foodstuffs were ground in mortaria.

* Kindly identified by Marijke van der Veen.

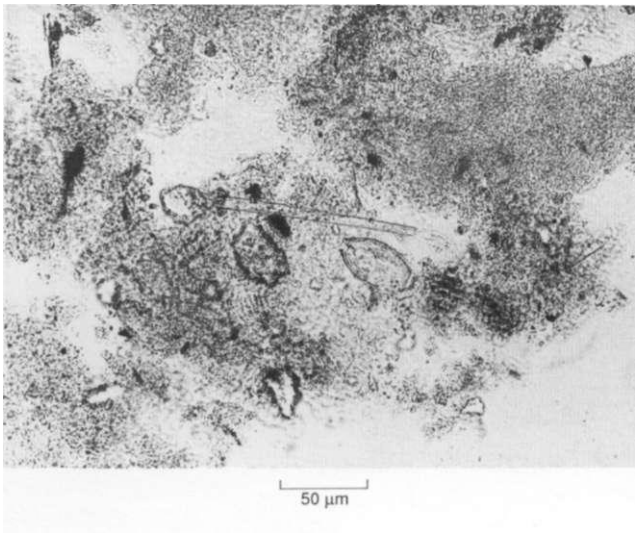


Fig 8.2 Acid-insoluble fraction of human coprolite (from the Period 1 latrine pit EF900).

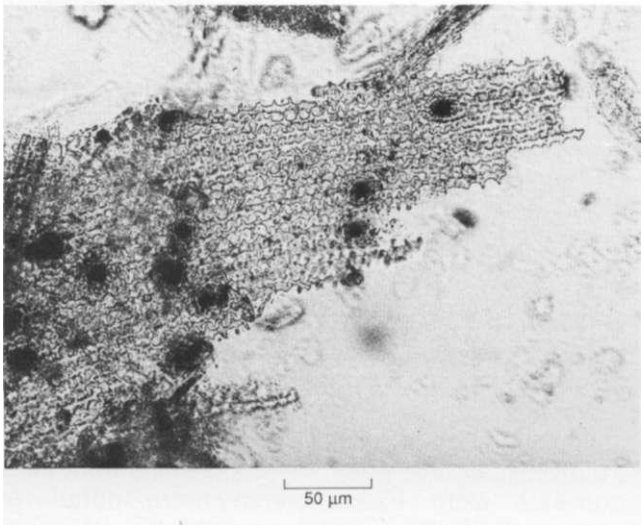


Fig 8.3 Acid-insoluble fraction of herbivore faecal concretion (GL2520: Site G Period 3 dump or burnt deposit).

The samples from the remaining contexts were quite different. They included abundant grass and/or cereal phytoliths, some of which remained aggregated as 'silica skeletons' of tissue from grass leaves or stems (Fig 8.3), with angular and rounded sand grains, some small charcoal fragments and a few diatom frustules. The phytoliths are mostly elongate forms from long cells, comparable to cereal-type phytoliths, but there are also a few 'dumb-bell' phytoliths characteristic of the panicoid grasses *Molinia caerulea* and *Sieglingia decumbens* (Macphail 1981, 324). Charred caryopses of S. *decumbens* were associated with concretions in several deposits. The siliceous microfossils, derived presumably from grass or hay and drinking water, establish that some type of animal dung is represented, and the absence of large tissue fragments suggests that this dung was from ruminants, possibly cattle, rather than horses.

Faunal remains

Land and freshwater molluscs

[Table 8.6]

Shells of land and freshwater molluscs were not common in the deposits at Culver Street, but some small assemblages were recovered from Sites B, D, and G. Retrieval at Sites D and G was by bulk sieving, and hence a proportion of the smallest shells was not recovered from deposits at these sites. However, the concentration of shells in the deposits was too low for the recovery of useful assemblages by the conventional extraction methods. Shells identified are listed in Table 8.6 (microfiche, p 709). Tentative or incomplete identifications refer in general to shells with abraded surfaces, or to shells obscured by encrustations.

Interpretation of urban snail assemblages presents some difficulties, for they commonly include both shells from the local molluscan fauna as well as shells imported to the site with various raw materials. Two of the assemblages from Site G (Period 5b pit GF626 & Period 3d pit GF3064) include a high proportion of shells in this latter category. Both samples were from Roman pits, and the shells, which are mostly greyish or black in colour dutj to the effects of heat, were associated with carbonised grass culm fragments, seeds of grassland plants and grains of barley, thought to represent burnt waste animal fodder, including hay *(see* below). Most of the molluscs identified in these two samples, including *Lymnaea truncatula, Anisus leucostoma, Carychium minimum, Vertigo antivertigo, V. pygmaea* and *V. angustior* occur in grassland, marsh and 'freshwater slum' habitats. It seems that most of these' shells arrived at the site with hay cut in wet meadows. The shells of the aquatic snail *Valvata cristata* from GF626 are probably related to river flooding of this wet grassland.

It is possible that specimens of *Lymnaea truncatula* from other contexts also reached the site with hay, but there may also have been a resident population of this species. Shells of this snail, which can tolerate poorly-oxygenated wet habitats subject to drying-out (Evans 1972, 199-200) came from a drain (BF421, Site B Period 3) of Building 94 and from Roman 'occupation layers' at Site G (GL235, GL894 & GL1507, Periods 4-5b). The presence of *L. truncatula* in these layers and the occurrence of thin layers and lenses of greyish gleyed fine-textured deposits in some parts of Site G point to locally impeded drainage.

The remaining sparse assemblages consist of a mixture of ecotypes and are not readily interpretable.

Marine invertebrates

[Fig 8.4 & Tables 8.7-8.11]

Counts of marine mollusc shells and remains of other invertebrates are given in Tables 8.7-10 (microfiche,

	ROMAN (SITES D, G, H)		MEDIEVAL (SITE G)	
	MN	No of samples in which present	MN	No of samples in which present
Littorina littorea (L) (winkle)	1	1	-	-
Littorina sp. (winkle)	3	3	1	1
Hydrobia ulvae (Pennant)	3	3	-	-
Buccinum undatum L. (whelk)	33	24	4	3
Indeterminate gastropod	2	2	-	-
Nucula sp.	1	1	-	-
Mytilus edulis L. (mussel)	272	29	13	8
Ostrea edulis L. (oyster)	90	36	27	8
cf *Pecten maximus* (L) (scallop)	1	1	-	-
Cerastoderma edule (L) (cockle)	7	4	-	-
Cerastoderma cf *lamarcki* (Reeve) (cockle)	1	1	-	-
Cerastoderma sp. (cockle)	20	17	1	1
Venerupis rhomboides (Pennant) (carpet shell)	2	2	-	-
Venerupis decussata (L) (carpet shell)	24	19	-	-
Macoma balthica (L)	2	2	-	-
Tellinacea indet.	1	1	-	-
Indeterminate bivalve	6	6	-	-
Foraminifera	-	1	-	-
Barnacles	-	25	-	4
Carcinus maenas L. (shore crab)	1	1	-	-

Table 8.11 Summary of marine invertebrates from Culver Street Sites D, G, and H. This table lists minimum numbers of individuals (MN) and the number of samples in which each taxon is present.

pp 710-15) and the results are summarised in Table 8.11 (above). The specimens counted were retrieved from bulk soil samples by wet-sieving over a 1 mm mesh in the flotation/bulk sieving tank.

Bulk sieving at urban sites commonly produces assemblages of shell representing human food waste (cf Ayers & Murphy 1983, 34), but the assemblages from Roman deposits at the Culver Street sites seem to include material from more than one source. In addition to mature shells of edible shellfish species some remains of other marine invertebrates which would not have been consumed are present. These are as follows:

i) Shells of molluscs which are too small to form a component of the human diet *(Hydrobia ulvae, Nucula* sp, *Macoma balthica* and immature specimens of *Cerastoderma* spp, *Mytilus edulis* and *Ostrea edulis).*

ii) Mature shells of *Ostrea, Cerastoderma* and indeterminate fragments of bivalve shells which have an encrustation of bryozoans on their interior surfaces. These shells were empty, and had been so for some time, when originally collected.

iii) A cheliped fragment most closely matching the shore crab, *Carcinus maenas.* The edible crab, *Cancer pagurus,* is not represented in these samples.

iv) Numerous shell plates of barnacle species. Barnacles frequently attach to mollusc shells, but shells from these sites do not in general show scars where barnacles had been cemented to them. The cockle valves from GF2218 (Site G Period 3 ?pit) are a rare exception to this generalisation. The barnacles from most samples seem to have reached the site on some other substrate.

Had this been a waterfront site these remains of inedible invertebrates could have been interpreted as rubbish discarded when catches were sorted before sale, but Culver Street is on the highest part of Colchester, well away from the river. Some other explanation must be sought. The simplest possibility is that these specimens were brought to the site with seaweed or strand-line detritus for use as organic manure and lime. Many of the species here present are found attached to, or associated with, seaweeds or are commonly seen strewn along strand-lines (Bell 1981, 120). At several archaeological sites the presence of such species has been interpreted as indicating seaweed collection *(ibid,* 121). Seaweed was known to the Roman agricultural writers as a soil improver, and indeed Pliny mentions it as a root-feed for cabbages (White 1970, 144). Bell (1981, 117-9) cites ethnographic and historical evidence for the use of seaweed as a horticultural manure. On these grounds the remains of foraminifera, crustaceans and small, abraded and bryozoan-encrusted mollusc shells can plausibly be interpreted as surviving residues from a manure of this type.

The abundant valves and fragments of *Venerupis* spp, some of which are completely unabraded and occur as paired articulating valves, are thought to represent human food waste (Fig 8.4). Shellfish of this genus are still eaten in parts of France today (T P O'Connor, pers comm). Their frequent occurrence in Roman deposits at Culver Street indicates that *Venerupis* spp were shellfish species of some economic importance: they occur at

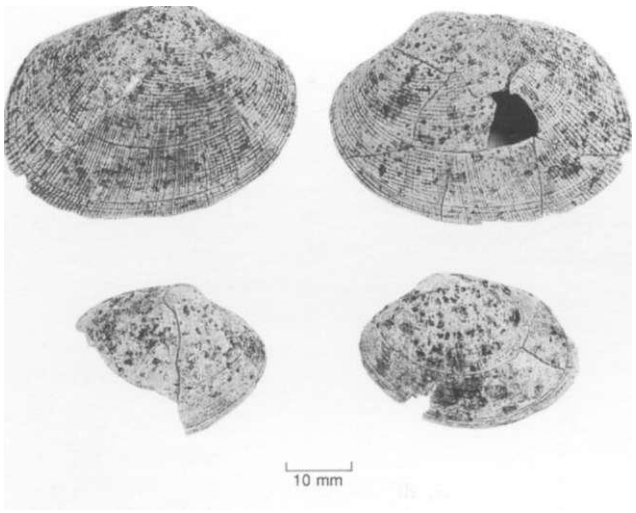


Fig 8.4. Valves of Venerupis decussata and V. rhomboides (carpet shells) from Roman contexts at Site G.

comparable frequencies to shells of *Buccinum undatum* (whelk) and *Cerastoderma* spp. (cockle). The two most abundant shellfish, however, are *Ostrea edulis* (oyster) and *Mytilus edulis* (mussel). Winkles *(Littorina littorea)* and possibly scallop (cf *Pecten maximus:* a very small shell fragment) are present but very rare. Medieval pits at Site G produced mainly shells of mussel and oyster, with some whelk and winkle.

Mineralised arthropods

Mineralised arthropods, notably fly puparia and woodlice, occurred sporadically, particularly in the Roman and medieval cess pits. These have been retained but not studied in any detail.

The fish bones

[Tables 8.12-8.13]

by Alison Locker

Introduction

A total of 4,531 fish bones were examined from excavations in Culver Street. Each of the areas excavated individually within the site are denoted by a letter (Tables 8.12-8.13, microfiche, pp 716-17), but in this report they are discussed as a single group since the subdivisions relate more to the topography of the area in the early 1980s than to any archaeological considerations.

The fish are largely Roman, medieval and post-medieval in date. Many of the deposits were sieved, which accounts for most of the fish bones recovered. The fish recovered by hand-picking on site (denoted by an asterisk in the tables) are notable both for their low numbers and relatively large size. This suggests that if no sieving had been carried out the range of species recovered would have been greatly depleted.

The following species were identified: Elasmobranch indet., rays indet. (Rajidae), eel *(Anguilla anguilla),* herring *(Clupea harengus),* cf sprat *(Sprattus sprattus),* Salmonidae, smelt *(Osmerus eperlanus),* cod *(Gadus morhua),* haddock *(Melanogrammus aeglefinus),* whiting *(Merlangius merlangus),* stickleback *(Gasterosteus aculeatus),* cf gurnard (Triglidae), thin-lipped grey mullet *(Liza ramada),* thick-lipped grey mullet *(Chelon labrosus),* cf wrasse (Labridae), cf dragonet (Callionymiidae), mackerel *(Scomber scombrus),* plaice *(Pleuronectes platessa),* flounder *(Platichthys flesus),* halibut/ turbot *(Hippoglossus hippoglossus/ Scophthalmus maximus),* cf dab *(Limanda limanda),* cf lemon sole *(Microstomus kitf).* The term 'large gadoid' has been used when a bone is indeterminate to species, but is likely to belong to the cod family. Similarly 'flatfish indet.' has been used when the species of flatfish cannot be more precisely determined.

The Roman deposits

The quantity of fish bones identified to species was too low to demonstrate any spatial or temporal changes within the Roman period. Table 8.12 (microfiche, p 716) indicates the number of bones for each species by context. Considering the large quantities of soil that were sieved, eg 31 kg from Site B and 25 kg from Site C, the density of fish compared with the volume of soil sieved is low. At Site G the samples were taken in litres. Here the density of fish bones per litre is approximately half that from the medieval deposits. A total of 1,269 bones were recovered from 696 litres of soil in Roman samples, whereas in the medieval deposits 2,113 bones were recovered from 384 litres of soil.

The hand-picked fish bones totalled 45 (2 per cent of all Roman fish bones). The only cod bones identified from this period are from the hand-picked deposits; none were found among the sieved samples. The most commonly occurring species were eel, herring, plaice and flounder. The frequency of stickleback is exaggerated by 15 skull fragments in DL535 (Site D Period 5 gully DF203), which together with a small crustacean claw from the same feature may represent the stomach contents of another fish.

Other species are represented by very few bones. A cod dentary from C97 (CL8, Site C Period 4 dump or demolition debris) was estimated to be from a fish of approximately 0.95 m (Wheeler & Jones 1976), which would be of less than average size today when 1.2 m is regarded as common (Wheeler 1978, 150). Most of the species recorded are inshore or shallow water species, that could have been caught locally in the Colne, its estuary and environs.

High proportions of unidentifiable bones were noted in some contexts, in particular at Site D, where a

large number of fin ray fragments were present; these are unidentifiable to species. Other features containing a high proportion of unidentifiable material include the Roman military latrine pits EF900 and CF138.

The post-Roman deposits

As previously discussed, the density of fish is greater in the sieved samples from the medieval deposits than in those of Roman date. The difference between the two periods appears to be that in the medieval deposits eel, herring, and to a lesser extent cod are the most common species; the flatfishes are of less importance. Some species that were present in the Roman deposits, such as mackerel, still occur but in very low quantities. Others, such as the mullets, are not found in the medieval deposits.

The increased importance of some species may reflect a more specialised medieval fishing industry, in particular the development of the herring fleets in the 13th and 14th centuries, and offshore line fisheries for cod.

The most common species amongst the hand-picked groups was cod. It was not possible to suggest the size of these fish, but one precaudal vertebral centrum from G825 (GF376, Site G Period 6 pit) showed evidence of two knife-cuts, possibly evidence of filleting.

A single vertebral centrum from H178 (HF176, Site H Period 6 pit) was identified as halibut or turbot. This was broken and had been chopped. Given the distribution of these two species, it is more likely that turbot is represented since halibut is not found in the southern North Sea nowadays.

Biology and fishing methods

The biology of the species identified is important in reconstructing the type of fisheries likely to have been prosecuted along the local shoreline. Colchester is approximately ten miles from the open coastline and the Colne estuary is close to the town centre. Therefore freshwater, brackish and marine resources are within a short distance of the town.

Exploitation of freshwater fish appears limited to two species both in Roman and medieval times. Eels may have been trapped in the river as they migrated seawards, in eel-bucks (Wheeler 1979, 60), or alternatively could have been caught in the estuary. Salmonids (either salmon or trout) may have been caught on lines or possibly in traps as the fish ascended the river. The bones of stickleback may be an incidental catch, or as previously suggested the contents of the stomach of another larger fish.

The greatest catches of smelt are made in the winter and early spring. They enter the river mouth in winter and move upstream to spawn in March to May (Wheeler 1979, 48). Fine nets would have been used to catch these small fish (up to 250 mm in length) in the Colne estuary.

Flatfishes such as plaice and flounder may have been caught in the estuary as well as along the shoreline on lines and in traps. Other flatfish such as dab and lemon sole were probably caught on lines along the Goastline, either from the shore or from small boats. The turbot, a valuable food fish, is also found in shallow inshore waters from below the shoreline to about 80 m (Wheeler 1978, 344) and would have been caught on lines. Shallow water inshore species such as whiting would have been caught in nets, as would herring.

The seasonal migration of the herring southwards from the Shetland Islands led to the development of a very important medieval fishery. Smoked and pickled herring became a cheap staple food that was available all year, and would have been a particularly important source of protein during the winter months. Other seasonal shoaling fish include mackerel, identified in small numbers from both Roman and medieval deposits. These form huge schools and are found inshore seasonally. Nets or lines could have been used for their capture. An oily fish, prior to the development of smoking this species would probably have been consumed fresh.

Both thin-lipped and thick-lipped grey mullet were identified from Roman deposits. They could both have been caught locally in coastal waters. Thin-lipped grey mullet has also been identified from Roman and medieval deposits at Canterbury (Locker, in prep). Both species also enter estuaries, and would have been caught on lines.

The remaining two important food species are cod and haddock, both of which would have been caught on lines. Cod was identified from both Roman and medieval deposits but haddock was only identified from Roman levels in sieved deposits.

The remaining species occur in low numbers. The elasmobranchs such as rays and dogfishes have cartilaginous skeletons which do not usually survive, and if they do are often not diagnostic. Dermal denticles (spines embedded in the skin) and teeth are all that usually remains of these fish, so their importance may well be under-represented. In the medieval deposits, only two teeth were recovered, the rest being dermal denticles. Other species such as dragonets, gurnards, and wrasses may all have been eaten, especially the first of these, but they are not present in sufficient quantities to suggest they were anything other than an incidental catch.

Since the sites are within easy reach of the coast and estuary, it is likely that during much of the year fish was eaten fresh. Out of season salted and dried fish may have been consumed during the Roman period, as well as pickled and smoked fish during the medieval period. A few cut marks on cod vertebral centra and cleithra are evidence of fish processing, such as heading and filleting.

Acknowledgements

I would like to thank Mr A Wheeler (British Museum, Natural History) for the use of reference material, and to Peter Murphy for extracting the fish remains.

Avian eggshell

[Fig 8.5]

Fragments of avian eggshell were present in a high proportion of contexts at the Culver Street sites, though never in large quantities. At Site G, eggshell fragments were recovered by bulk sieving from twenty samples from Roman contexts, and two from medieval pits. Specific identification of such fragmentary archaeological material is not at present possible, though measurements of shell thickness can be used to distinguish the main size categories of birds (Keepax 1981, 323). Thicknesses of shell fragments from four contexts at Site G have been determined: three Roman pits (GF79, GF2218, & GF2594, Site G Period 3) and one Roman hearth (GF360, Site G Period 5b). Measurements on 30 fragments from each context were taken using a screw-gauge micrometer. The results are summarised in Figure 8.5. In all four samples, a unimodal distribution of measurements was obtained, most fragments being between 0.25-0.35 mm thick. These dimensions are comparable to those obtained from modern domestic fowl (Keepax 1981, 323). In these particular samples from Culver Street there are no thicker-shelled fragments comparable to larger birds — goose, swan or guinea-fowl — though thick shell fragments of this type are reported by Keepax from a Roman context at Little Chester, Derby (Keepax 1981).

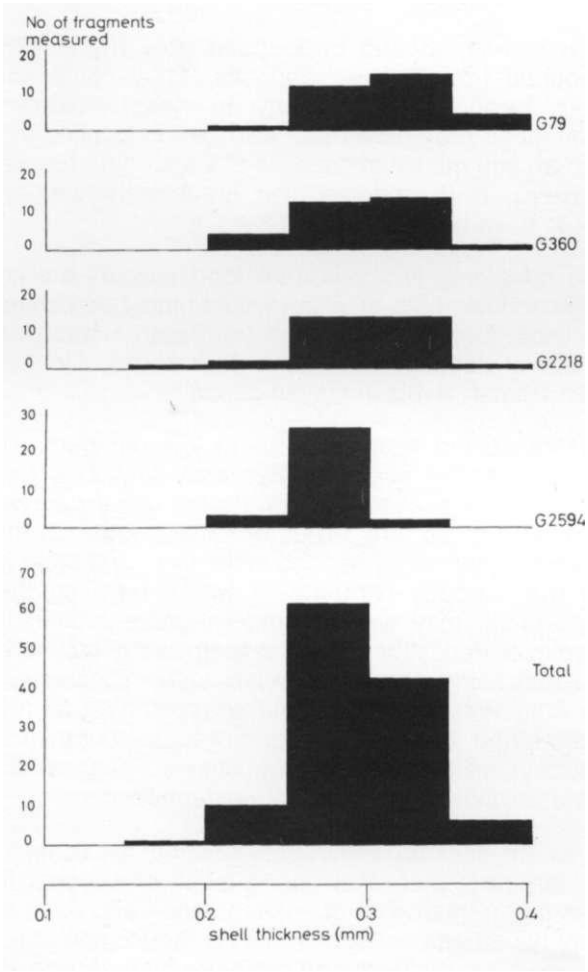


Fig 8.5 Eggshell thicknesses from four Roman contexts at Site G.

Plant macrofossils

[Figs 8.6-8.7 & Tables 8.14-8.21]

Plant remains preserved by carbonisation and phosphatic mineralisation (Green 1979) were recovered from Roman contexts at Sites B, C, D, E, G, J, and K and from a group of medieval pits at Site G. Full lists of identifications are given in Tables 8.14-20 (microfiche, pp 719-25).

Food plants

The range of food plants identified in samples from Roman and medieval contexts at Culver Street is summarised in Table 8.21 (p 285). Detailed descriptions will not be given here, though some remains of exotic food plants are illustrated in Fig 8.6 and some other macrofossils are shown in Fig 8.7.

In the Roman samples the main cereals are wheats, represented by predominantly elongate grains with occasional glume bases and rachis internodes of spelt, *Triticum spelta* and a few possible emmer glume bases (*Triticum dicoccum),* and six-row hulled barley *(Hordeum vulgare).* There are some grains of oats (*Avena* sp) and rye *(Secale cereale)* and one floret base of *Avena sativa.* In a sample from a post-Roman robbing pit at Site D (DL349/DF249) rye *(Secale cereale),* represented by grains and rachis nodes, and possible two-row barley *(Hordeum* cf *distichon),* tentatively identified from the predominance of symmetrical grains, were common.

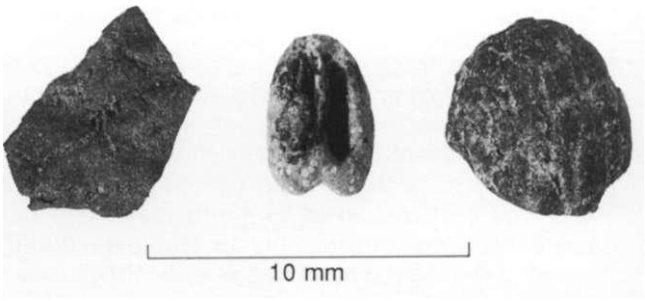


Fig 8.6 Macrofossils of some exotic food plants. Left to right: Juglans regia (carbonised walnut shell) (GF914, Site G Period 5b hearth or burnt deposit), Vitis vinifera (mineralised grape pip) (EF900, Period 1 latrine pit), Olea europaea (fragment of carbonised olive stone) (GL1745, Site G Period 3 burnt deposit).

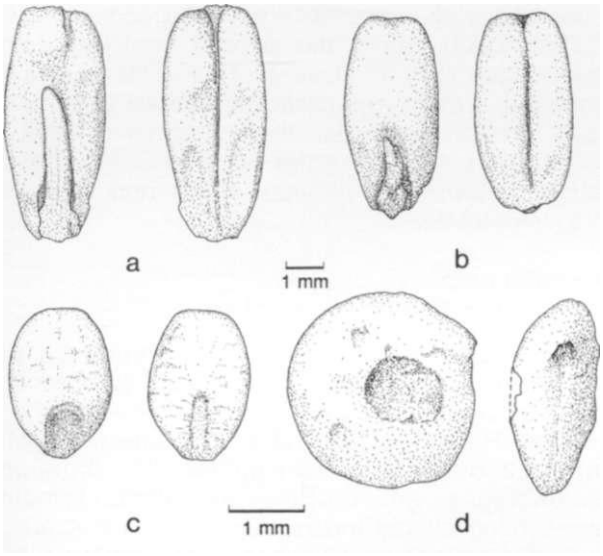


Fig 8.7 Carbonised plant remains: a & b. . . . . Triticum sp. (germinated wheat grains) (JL222/JF269, Building 79 Site J Period 2 destuction debris); c. . . . . Sieglingia decumbens (heath grass caryopsis) (GF626, Site G Period 5b pit); d. . . . . Lens esculenta (lentil seed) (GF14, Site G Period 5 pit).

Medieval pits at Site G produced small assemblages of cereals including short grains of free-threshing wheats *(Triticum* sp), grains and rachis nodes of rye *(Secale cereale)* and grains of *Hordeum vulgare* and *Avena* sp.

Remains of pulses are not common. Both Roman and medieval contexts contained a few carbonised and mineralised pea-sized seeds and cotyledons but none of these retains its hilum. The ?corn-dryer KF12 (pp 108-112) included a single seed of horse-bean *(Vicia faba* var. *minor),* and from a medieval pit (GF557) came a mineralised hilum of this species. A Roman pit at this site (GF14, Site G Period 5) produced a single carbonised seed of lentil *(Lens esculenta).*

Carbonised fragments of hazelnut shells *(Corylus avellana)* occurred sporadically in Roman contexts and a carbonised fragment of walnut endocarp *(Juglans regia)* came from GF914 (Site G Period 5b hearth or burnt deposit). Roman latrine pits EF900 and CF138 contained mineralised remains of opium poppy *(Papaver somniferum),* elderberry *(Sambucus nigra),* raspberry *(Rubus* cf *idaeus),* grape *(Vitis vinifera)* and fig *(Ficus carica)* with mineralised internal casts of *Prunus* sp, possibly P. *avium.* Further mineralised remains of *Vitis vinifera* and *Morus nigra* (mulberry) came from DL349 (medieval robber pit DF249) and D535 (Site D Period 5 gully DF203). Carbonised endocarp fragments of sloe *(Prunus spinosa)* and olive *(Olea europaea)* were present in samples from Site B (BF265, Site B Period 4 gully) and Site G (GL1745, Site G Period 3 burnt deposit). Olive, mulberry and walnut have not hitherto been identified from Roman contexts at Colchester, and there are few records of these crops from other Roman sites in this country (Willcox 1977, 278-9). The remains of olive, dated to the 2nd-3rd centuries, represent an imported commodity, whilst mulberry and walnut could have been cultivated locally. At Site G a restricted range of mineralised fruitstones and seeds *(Malus sylvestris/domestica, Prunus* sp, *Rubus fruticosus, Sambucus nigra)* was recovered from medieval pits.

Sample composition and taphonomy

The assemblages of carbonised and mineralised plant macrofossils from Roman contexts fall into five groups.

1) Prime grain
[Tables 8.14-8.16, microfiche pp 719-21]

These assemblages consist mainly of cereal grains with small numbers of cereal rachis and spikelet fragments and weed seeds. The sample from BL435, part of the Boudican destruction layer at Site B, is closely comparable in composition to the cereal assemblages from Balkerne Lane, which were interpreted as burnt granary deposits (Murphy 1984). This sample from Culver Street consists almost entirely of wheat grains (93 per cent of the total 'seed' count), predominantly elongate forms of spelt-type *(Triticum spelta),* with two glume bases, rare grains of barley *(Hordeum* sp) and oats *(Avena* sp) and some arable weed seeds *(Agrostemma githago, Rumex* sp. and *Bromus mollis/secalinus).* It represents a fully-processed batch of wheat, carbonised whilst in store during the Boudican fire.

At Site G similar assemblages were recovered from two Roman hearths (GF1555 & GF2326, Site G Periods 4 and 1/2 resp). Again these consist of fully-processed batches of prime wheat grains with a few spelt spikelet fragments, occasional grains of barley, oats and rye *(Secale cereale),* some hazel nutshell fragments *(Corylus avellana)* and rare seeds of grassland plants and arable weeds *(Ranunculus* sp, *Agrostemma githago,* Chenopodiaceae, *Vicia/ Lathyrus* sp, *Eleocharis* sp, *Carex* sp, *Bromus mollis/secalinus* and *Sieglingia decumbens-lype).* Carbonisation was perhaps a consequence of poor temperature control whilst wheat was being dried for storage.

Small soil samples were collected from the stokepit, northern flue and the interior of a well-constructed ?corn dryer (KF12) on Site K (pp 108-112). The samples produced small assemblages of carbonised plant remains, consisting mainly of grains of free-threshing wheat *(Triticum aestivum/compactum),* barley (including *Hordeum vulgare),* rye *(Secale cereale)* and oats *(Avena* sp) with a seed of horse-bean (*Vicia faba* var. *minor)* and a few weed seeds. The feature was evidently used, at least in its final phase, for drying cleaned batches of free-threshing cereals. This is unusual: late Roman corn-dryers appear, in general, to have been used either to dry spelt grain or to parch malted spelt, using spelt chaff as part of the fuel (Hillman 1982;

Jones 1979; Murphy 1982). The absence of spelt in KF12 and the presence of free-threshing cereals could well be a consequence of the very late date of the fill of this feature, which contained some Anglo-Saxon pottery.

At Site D the soil (DL349/DF249) filling the hollow left by the early medieval robbing of the Roman cellar (Room 9) of Roman Building 123 produced another assemblage of prime grain. The cereals present are barley *(Hordeum* sp), rye *(Secale cereale)* and oats *(Avena* sp). Most of the barley grains are symmetrical and it seems probable that a two-row form *(H. distichon)* is represented. The only rachis fragments are two rye nodes. Weed seeds include *Agrostemma githago, Spergula arvensis, Chenopodium album, Vicia/Lathyrus* sp, *Rumex acetosella, Centaurea* sp, *Anthemis cotula, Eleocharis* sp. and *Bromus mollis/secalinus.* The association in this deposit of cereals which are unlikely to have been grown as a mixed crop, and the mixture of weed ecotypes, suggest that cereals from more than one source became incorporated in this deposit.

2) Malt
[Table 8.19, microfiche p 724]

A small pile of carbonised cereals lay in a corner of Room 8 of Building 79, up against two burnt wall stubs in the burnt debris from the Boudican fire (p 48, JL222/JF269). The sample from this deposit consisted mainly of carbonised wheat grains with some barley *(Hordeum vulgare),* a few badly preserved wheat glume bases *(Triticum spelta* and *Triticum* cf *dicoccum)* and a single seed of *Agrostemma githago.* Almost all the cereal grains had germinated before being carbonised, with 'sprouts' extending for about a half to two-thirds of the grain length. Most grains in this sample are badly deformed as a result of sprouting and cannot be specifically identified, though elongate grains of spelt or emmer predominate.

Sprouting can occur either accidentally, due to damp storage conditions or intentionally during the production of malt for brewing. There are several reasons for thinking that this deposit was malt, stored ready for brewing, which was carbonised during the sack of the town. Firstly, sprout-length is reasonably uniform: in the case of accidental sprouting one might expect to observe much more variation in sprout lengths, depending upon the length of time for which different parts of the grain deposit were exposed to damp conditions, whereas malting involves carefully controlled germination. Secondly, grain storage conditions in the early Roman town seem to have been generally good: stored batches of wheat from Site B at Culver Street, from the Cups Hotel and from Balkerne Lane (Murphy 1984) included very few sprouted grains. Thirdly, this sample from Site J differs from other samples of stored grain from Boudican deposits at Colchester in that it includes a relatively high proportion of barley. Other Boudican-period cereal samples so far examined consist almost entirely of wheat, usually with a few grains of barley, representing chance contamination (Murphy 1984), but in this deposit from Site J the wheat:barley ratio is close to 10:1. This seems to suggest that grain was mixed to produce a favoured blend for malting. Evidence for the use of spelt in malting has come from other Romano-British sites at Catsgore, Somerset (Hillman 1982) and Caerleon (Helbaek 1964).

3) Fodder crops
[Tables 8.14 & 8.17, microfiche pp 719 & 722]

Five contexts at Site G (GF626, Period 5b pit; GL1745, Period 3 burnt deposit; GL2520, Period 3 dump or burnt deposit; GF2594, Period 3 pit; & GF3064, Period 3d pit) and one at Site B (BL440, Period 2 occupation in Building 77) produced assemblages of carbonised plant remains representing animal fodder. They are characterised by high frequencies of seeds from grassland and wetland plants, usually with abundant small grass caryopses, and, in some deposits, grains of six-row hulled barley *(Hordeum vulgare),* associated with carbonised grass culm fragments. The plant remains can be divided into several categories:

a) Cereal remains. Grains of six-row hulled barley are present in most of these assemblages, and in GF626 and GL2520 comprise up to almost 15 per cent of the total 'seed count'. A few grains, spikelet forks and floret bases of spelt *(Triticum spelta),* oats *(Avena sativa)* and rye *(Secale cereale)* also occur. In most samples there is a proportion of poorly-preserved indeterminate cereal grains.

b) Arable weeds. Fruits and seeds of *Raphanus raphanistrum, Agrostemma githago, Stellaria media, Spergula arvensis,* Chenopodiaceae, *Malva* sp, *Polygonum aviculare, P. convolvulus, Galium aparine, Anthemis cotula* and *Cirsium* sp. are present but in most samples these make up no more than 2 per cent of total seeds. The sample from Site B (BL440) is the exception to this, with 14 per cent arable weed seeds.

c) Rumex spp. Nutlets of *Rumex acetosella* and larger but indeterminate *Rumex* nutlets occur consistently, and in GL1745 account for 58 per cent of total seeds. Species in this genus occur in grassland, but *Rumex* spp. are also common weeds.

d) Grassland and wetland herbs. These include *Caltha palustris, Ranunculus acris/repens/bulbosus, R.* cf *parviflorus, Dianthus* sp, *Stellaria palustris/ graminea, Montia fontana, Medicago/Lotus/Trifolium* spp, *Vicia* and *Lathyrus* spp, including *L. nissolia, Potentilla* sp, *Polygonum persicaria, P. lapathifolium, Rhinanthus minor, Euphrasia/Odontites* sp, *Prunella vulgaris, Plantago lanceolata, Chrysanthemum leucanthemum, Juncus* spp, *Eleocharis* sp. and *Carex* spp. Together these taxa make up 10-29 per cent of total seed counts from these assemblages.

e) Grasses. Besides grass culm fragments, caryopses of various Gramineae are common,

particularly in GL2520 and GF2594. There is a very wide range of forms but only the more conspicuous taxa *(Bromus* and *Sieglingia decumbens)* have been identified.

In several of these deposits from Site G the carbonised plant remains were associated with burnt shells of wet grassland and marsh snails *(see* above) and with faecal concretions including many grass and cereal phytoliths which have been interpreted as burnt dung, probably from ruminants, most likely cattle *(see* above). The deposits producing these assemblages are interpreted as sweepings from byres, including dung and spilt fodder (hay and barley), which had been burnt. The carbonised residues from these fires were in some cases placed in pits (GF626, GF2594, & GF3064), but in others left as 'spreads' (GL1745 & GL2520). Since such deposits occurred in contexts dating from the 1st to the 4th centuries, it appears that animals, most likely cattle, were kept on or very close to the site throughout the Roman period, though most of the evidence comes from Site G Period 3 (60/1 - *c* 225) (pp 60 & 94-5).

Besides indicating the presence of animals on site, these assemblages provide some useful information on sources of animal fodder in Roman Essex. The evidence for the use of barley as fodder is consistent with known Roman practice: Roman agricultural writers record that six-row hulled barley in particular was grown mainly for stock and was rarely used as a human foodstuff (White 1970, 214-5). The range of grassland and wetland ecotypes represented shows that hay cut in more than one type of grassland was brought to the site. Seeds of several grassland plants which would not have grown in the same habitat are associated in these deposits, for example species characteristic of valley-floor wet meadows such as *Caltha palustris* and *Rhinanthus minor,* and dry grassland plants such as *Dianthus* sp. and *Rumex acetosella.* However most of the grassland herbs here identified can occur in valley hay meadows managed by traditional techniques (Greig 1984). The abundance of *Sieglingia decumbens* amongst the grasses (9.6 per cent of total grass caryopses in GF626) is of interest, for this species, the Heath Grass, is not common in Essex today. Jermyn (1974, 206) gives a scatter of records from 'dry heathy and sandy places', with only three localities in the Colchester area. Clapham, Tutin and Warburg (1968, 523) note that the plant occurs 'locally on damp base-rich substrata', and, given the associated herb flora in these samples, this type of habitat seems the most likely source for the remains of *Sieglingia.* Its apparent absence from such habitats in Essex today may be due to changes in grassland management.

Relatively pure animal fodder deposits of this type are not common, the closest parallel with the Colchester material being the deposits of charred hay from a Roman site at Dormagen, West Germany (Knörzer 1979). Though differing in detailed species composition, the Dormagen samples resemble those from Colchester in containing barley grains, with other cereals, including oats, rare arable weed seeds and abundant seeds of grassland plants.

Finally, it is worth considering whether the Colchester deposits represent waste material burnt as refuse or manure. Pliny records that in Northern Italy ash was preferred to dung as a manure, and that stable waste was therefore burnt before spreading on the land (White 1970, 141-2). At an urban site such as Colchester burning dung, litter and waste fodder before application on cultivated plots could well have been more convenient since the ash produced would have been less noisome and more easily stored in pits such as GF626, GF2594 and GF3064.

4) Latrine pit assemblages
[Table 8.14, microfiche p 719]

Samples from the military latrine pits CF138 (p 47) and EF900 (p 50) produced mixed assemblages of fruits, seeds and wood fragments preserved by phosphatic mineralisation with carbonised cereal remains. The mineralised material includes fruits and seeds of *Papaver somniferum* (opium poppy), *Prunus* sp. (?cherry), *Rubus* cf *idaeus* (raspberry), *Vitis vinifera* (grape) and *Ficus carica* (fig). Faecal concretions from EF900, disaggregated with dilute acid, produced fragments of cereal periderm (bran), indeterminate plant tissue and ova of the parasitic intestinal nematode *Trichuris* sp. *(see* above). Contexts of this type, which include both table refuse and plant residues which have passed through the human gut, are common on urban sites.

5) Background scatter
[Table 8.18, microfiche p 723]

As at most sites the majority of samples contained only very low concentrations of plant remains, including a haphazard mixture of material probably derived from a variety of sources. Carbonised grains, rachis and spikelet fragments of cereals, seeds of grassland plants and weeds, nutshells and fruitstones are present. In a few samples (eg from GL235 (Site G Period 5b occupation), GL1932 & GF1995 (oven and associated deposits in Building 119)), remains of grassland plants are fairly common, and it is possible that these contexts may have included some material dispersed from deposits of burnt animal fodder, but in general this thin 'background scatter' of plant remains is not interpretable.

The assemblages from the medieval pits at Site G are less varied in composition (Table 8.20, microfiche, p 725). Several included only small quantities of carbonised cereal remains and weed seeds, of unknown origin, but in GF163, GF185, GF478 and GF557 mineralised plant remains, fly puparia and other arthropod remains occurred. Mineralised testa fragments of *Agrostemma githago* from GF185 and GF557 and a mineralised hilum of *Vicia faba* from GF557 suggest that these features were cess pits: these macrofossils are characteristic residues from a diet including weed-contaminated

whole-meal flour and beans. Mineralised remains of edible fruits from these pits include *Rubus fruticosus* (bramble) fruitstones, internal casts of fruitstones of *Prunus avium* or *P. spinosa,* seeds of apple *(Malus sylvestris/domestica)* and fragmentary seeds of elder *(Sambucus nigra).* These probably represent a mixture of table waste and faecal residues.

Charcoals

[Table 8.22]

by Maisie Taylor

The charcoal identifications are listed in Table 8.22 (microfiche, p 726). Almost all the charcoal from building components is oak. The fuel from the hearth (Building 117, Room 2, GF1545/G2048) is entirely composed of oak, which is a superior fuel wood. From Building 118 (GF3384/G3413) came a birch bark roll. Rolls of this kind were used as a source of light. To judge by the wavy edge at one end, the taper had been burnt before the firing that led to its complete carbonisation.

Charcoals from ovens, hypocausts and the ?corn-dryer KF12 are of oak, birch, hazel or alder, willow, and willow or poplar. Obviously oak is an excellent fuel. The wood burns well, both as wood and as charcoal. Birch is also a good fuel wood, burning well as wood or charcoal. The natural tars in the wood means that it burns with a good hot flame. The big disadvantage with birch that has stopped it becoming such an important fuel as oak, is the fact that it cannot be coppiced. With a tree such as oak, regular cutting of coppices could guarantee a steady source of fuel. Cutting of birch trees, however, does not lead to regeneration. Presumably this means that birch may be used when available but is much harder to find as a regular fuel. Alder is not a very good fuel wood. It will burn when well seasoned. The charcoal is very fine and burns steadily. (Alder charcoal used to be the preferred species for the production of gunpowder.) Hazel, on the other hand is an excellent fuel and was traditionally thought to be good for firing ovens. The presence of nut casings amongst the charcoal would tend to suggest that the wood here is more likely to be hazel than alder.

There is a similar problem with willow and poplar. Poplar is not really a very good fuel. It can be made to burn but only when very dry and broken down into small pieces. Willow, on the other hand, will burn quite well as long as it is not too fresh. It gives off quite a lot of heat but virtually no smoke.

Summary and discussion

In this section a short summary and synthesis of the main results from studies of biological remains and soils will be presented for the non-specialist reader. The results obtained so far relate to three main aspects of the site's economy: evidence for local agriculture mainly during the Roman period; supplies of plant foodstuffs to the Roman and medieval towns; and the exploitation of marine resources. The mammal bones from the site have not yet been studied, but will be included in *CAR* **12.**

Local agriculture

At Site E a sandy silt cover loam deposit (EL300 & EL350) was observed overlying sandy drift and sealed by Roman levels. Several prehistoric features were cut into this deposit. Studies by Dr Richard Macphail suggest that these layers represented the lower subsoil horizons of a truncated soil, and micromorphological analysis indicates a history of woodland cover followed by clearance and disturbance. This disturbance may have been related to cultivation. The artefacts and charcoal in EL300 (p 37) suggest erosion of the earlier loamy soil cover in prehistory.

Samples from several Roman contexts at Site G provide evidence for local agricultural activities during Site G Period 3 (60/1-*c* 225; pp 59-60). Spreads of burnt material (GL1745 & GL2520) and pit fills (GF2594 & GF3064) produced assemblages of macrofossils interpreted as partly burnt waste from byres or stables. These include abundant carbonised fruits and seeds of grassland and wetland plants, grass culm fragments and arable weed seeds, mixed, in some samples, with carbonised cereals, mainly barley *(Hordeum vulgare).* In GF3064 these carbonised plant remains were associated with shells of marsh and meadow snails, discoloured by burning, which are likely to have reached the site with hay. Three of these contexts also produced partly burnt concretions containing abundant grass phytoliths, which represent herbivore dung. A further very similar deposit came from pit GF626, dating to Site G Period 5b *(c* 250-c 300), which is thought to be contemporary with Building 120. However, residuality cannot be excluded. These results indicate that livestock were kept at, or near, the site during both periods. It is unclear, however, whether these deposits simply represent stable or byre waste burnt as refuse, or a form of manure. As noted above, Pliny records the use of burnt stable waste as manure (White 1970, 141), and clearly at an urban site conversion of fresh manure to ash could have been one solution to problems of storage.

Remains of various marine invertebrates from the site might be related to the use of another type of manure: seaweed. Shells of mollusca too small to have been collected for food and mollusc shells which were 'dead' when originally collected were found in samples from several contexts. Other non-edible marine invertebrates include foraminiferans and crustaceans. These could perhaps have reached the site as contaminants of shellfish catches, but, as is argued above, there are grounds for suspecting that they might have been collected with seaweed or strand-line litter. Seaweed is known to have been used as a horticultural manure

by the Romans, and this practice continued until the 19th century in Essex, the weed being known by the dialect term 'dacson' or 'ducksun' (Benham 1955, 148).

These lines of evidence for possible manures and, by inference, for cultivation at the site are based on tentative interpretations of macrofossil assemblages. However there is also some archaeological evidence suggesting that at least two parts of the site may have been under cultivation from the late 1st or 2nd century. Overlying the Boudican fire debris was an extensive dark reddish brown layer (GL1814 and its lateral equivalents) composed largely of material derived from the clay and daub walls of buildings destroyed in 60/1. A similar but more widespread layer lay on Site K, on the opposite side of the north-south Roman street. Both are interpreted by the excavators as dug soils, that on Site K being considerably more homogeneous in composition than the shorter-lived equivalent on Site G. Micromorphological and chemical analyses of a sample from Site G were undertaken by Dr Richard Macphail. The deposit had a very low organic content (0.4 per cent organic carbon) and there was very little sign of biological activity. It seemed to consist of a spread of destruction debris, only slightly weathered. However, the deposit did seem to have been broken up, presumably by cultivation. Archaeological evidence suggested that the deposit had, in fact, been dug over: it differed markedly from undisturbed areas of the fire debris, which contained very large pieces of daub and charcoal, and the extent and intensity of disturbance seemed to be much greater than would have been required merely to level the fire debris. Furthermore features interpreted as spade marks were noted at the base of the deposit. It should also be noted that the two spreads of burnt stable or byre waste (GL1745 & GL2520) noted above were directly on the upper surface of this layer.

The ?corn-drying oven at Site K (KF12) was clearly related to agricultural activities in a broad sense. However the fill of this feature contained Anglo-Saxon pottery and the carbonised cereals from samples of the fill (bread/club wheat, barley, rye, oats) are more characteristic of Saxon contexts than Roman. This seems to imply some form of cleaning-out and reuse in Saxon times, an interesting event, but one which unfortunately removed all evidence for the oven's original function in the Roman period. Whether it was in fact used for drying harvested cereals before storage or perhaps for parching malt cannot therefore be determined. Other archaeological evidence for local agriculture is provided by the ploughshare from Site K, as well as the granary and building interpreted as a possible barn (pp 33-4).

In summary, then, soil studies indicate woodland clearance and possible cultivation at Culver Street during prehistory; there is clear evidence for livestock in the vicinity of Site G Period 3 at least; and some macrofossil assemblages from Roman contexts can be interpreted as indicating the presence of manures — ashed stable waste and seaweed. There are several lines of evidence indicating that the reworked layers overlying the Boudican fire debris had been cultivated. Although the better-developed cultivated layer at Site K was not sampled, archaeological evidence and micromorphological studies at Site G are consistent with this interpretation, particularly when considered in the light of the results from a horticultural soil of similar date in destruction debris at Whittington Avenue, London. Nevertheless the Culver Street layers clearly were not heavily manured: they had a low organic carbon content and showed little burrowing by soil fauna.

Plant foodstuffs

[Table 8.21]

The two main cereals identified in samples from Roman contexts were spelt wheat *(Triticum spelta)* and six-row hulled barley *(Hordeum vulgare).* Occasional grains and spikelet fragments of emmer *(Triticum* cf *dicoccum),* possibly free-threshing wheat, oats (including *Avena sativa)* and rye *(Secale cereale)* were also present. The fill of the cellar (DF259) robbed in medieval times included abundant remains of rye and probable two-row barley *(Hordeum* cf *distichon).* Many samples included only a thin scatter of carbonised cereals, which are not readily interpretable in terms of activities at the site, but some larger assemblages were recovered. Charred remains of stored cereals came from

		Roman	Medieval
Triticum spelta	(spelt)	+	-
Triticum cf. *dicoccum*	(emmer)	+	-
Triticum sp. (free-threshing)	(?bread wheat)	+	+
Hordeum vulgare	(6-row barley)	+	+
Hordeum cf. *distichon*	(2-row barley)?	-(a)	?
Avena sativa	(cultivated oats)	+	-
Avena sp.	(wild/cultivated oats)	+	+
Secale cereale	(rye)	+	+
Vicia faba var. *minor*	(horse-bean)	+	+(b)
cf. *Pisum sativum*	(pea)?	?(c)	?
Lens esculenta	(lentil)	+	-
Corylus avellana	(hazelnut)	+	+
Juglans regie	(walnut)	+	-
Malus sylvestris/domestica	(apple)	-	+
Prunus spinosa	(sloe)	+	-
Prunus sp.	(?cherry)	+(d)	+
Rubus fruticosus	(bramble)	+	+
Rubus idaeus	(raspberry)	+	-
Sambucus nigra	(elderberry)	+	+
Olea europaea	(olive)	+	-
Ficus carica	(fig)	+	-
Morus nigra	(mulberry)	+	-
Vitis vinifera	(grape)	+	-
Papaver somniferum	(opium poppy)	+	-

Table 8.21 Food plants from the Culver Street site (summary). Notes: (a) The Hordeum cf. distichon from DL349 is of late or post-Roman date, (b) Mineralised hilum. (c) Carbonised seeds and cotyledons lacking hilums, or mineralised seeds, (d) Mineralised internal casts of endocarps, P. avium-size.

Boudican destruction levels at Sites B and J. At Site B (Period 2, Building 78) there was a cleaned prime grain deposit consisting mainly of spelt (BL435) and at Site J (Period 2, Building 79) a mixed deposit of sprouted wheat and barley grains is interpreted as malt stored ready for brewing (JL222/JF269). In several contexts dated to Periods 3 and 5 at Site G barley grains were associated with charred remains of hay, indicating the use of this cereal as animal fodder. Roman hearths at Site G (GF1555 & GF2326, Site G Periods 4 & 1/2 resp) produced large prime grain assemblages, again mainly of spelt, probably produced due to poor temperature control during grain drying. No deposits of crop-cleaning waste were recovered and cereal chaff was rare. This implies that cereals reached the site in a fully processed form.

The ?corn dryer (KF12), though apparently of Roman date, had Saxon pottery in its fills and, as noted above, contained remains of free-threshing wheat, barley, rye and oats. The cereals are more characteristic of Saxon than Roman contexts. An identical range of cereals came from medieval pits at Site G.

Besides cereals, some remains of pulses were recovered, including horse-bean *(Vicia faba)* in KF12 and a medieval pit (GF557), pea-sized cotyledons from both Roman and medieval contexts, and a seed of lentil *(Lens esculenta)* from the Roman pit GF14 (Site G Period 5). Roman features also produced a range of fruits, nuts and flavourings, comprising hazelnut *(Corylus avellana),* walnut *(Juglans regia),* sloe *(Prunus spinosa), Prunus* sp (possibly cherry or sloe), bramble *(Rubus fruticosus),* raspberry *(Rubus idaeus),* elderberry *(Sambucus nigra),* olive *(Olea europaea),* fig *(Ficus carica),* mulberry *(Morus nigra),* grape *(Vitis vinifera)* and opium poppy *(Papaver somniferum).* The olive must, of course, have been imported, but the remaining crops of Mediterranean origin could have been grown locally. Medieval pits at Site G contained a more restricted range of fruits and nuts, including apple *(Malus sylvestris/domestica), Prunus* sp, bramble, elderberry, and hazelnut.

Marine foodstuffs

Shells from edible marine molluscs and fish bones in the samples from the site demonstrate the importance of coastal fisheries. In Roman deposits the main species of shellfish represented are mussels *(Mytilus edulis)* and oysters *(Ostrea edulis),* though other species consumed included whelks *(Buccinum undatum),* cockles *(Cerastoderma* spp), carpet shells *(Venerupis decussata,* and *V. rhomboides),* winkles *(Littorina littorea),* and possibly scallop (cf *Pecten maximus). Venerupis* spp. have previously been recorded from a Roman site at Waddon Hill, Dorset (Davies 1971), but at Culver Street they are one of the main types of shellfish represented. They are eaten today in parts of France, where they are known as 'palourdes' (Davies 1971). At Site G samples from medieval pits included a slightly more restricted range of shellfish: oysters, mussels, whelks, cockles, and winkles.

Fish bones were recovered by wet-sieving and hand collection from Roman and medieval contexts. The density of fish bones in the Roman deposits was markedly lower than in the medieval features. This might indicate an increasing reliance on fish as a protein source, but taphonomic factors must also be considered: most of the medieval fish bones came from refuse and cess pits whereas the Roman fish bones were collected from a wider range of types of context.

The Roman deposits produced bones of a range of exclusively marine and estuarine fish. Of these herring *(Clupea harengus),* plaice *(Pleuronectes platessa),* and flounder *(Platichthys flesus)* were most abundant, together with remains of eel *(Anguilla anguilla),* which could have been caught either in the Colne estuary or further upstream in freshwater. Bones of smelt *(Osmerus eperlanus),* cod *(Gadus morhua),* haddock *(Melanogrammus aeglefinus),* whiting *(Merlangius merlangus),* possibly gurnard (Triglidae), thin-lipped grey mullet *(Liza ramada),* thickrlipped grey mullet *(Chelon labrosus),* possibly dragonet *(Callionymiidae),* and mackerel *(Scomber scombrus)* were also identified. Some of the indeterminate flatfish bones are tentatively identified as dab *(Limanda limanda)* and sole *(Microstomus kitf).*

Assemblages of bones from estuarine and marine fish in the medieval features were predominantly of herring and cod. Bones of eels were again frequent. Flatfish were less well represented than in the Roman contexts, and bones of mullets were absent. Alison Locker 'suggests that this indicates a more specialised and intensive medieval fishing industry exploiting mainly herring and cod (p 279).

Taxa in these features which were not recorded from Roman contexts comprise unidentified cartila-genous fish (Elasmobranchs), rays (Rajidae) and possibly wrasse (Labridae).

Other foodstuffs

Freshwater fishing seems to have been less important than marine fisheries. As noted above, most of the fish bones from the site were of exclusively marine and estuarine species. Bones of eel, however, were common and these may indicate trapping in freshwater, though they could also have been caught in the estuary. The few bones of salmonids (salmon or trout) from Roman contexts may have come from fish caught on lines in the river, but the stickleback bones may merely be an incidental catch or could have come from the guts of large fish.

Fragments of avian eggshell occurred in samples from both Roman and medieval features, though only

in small quantities. Identification of such fragmentary eggshell to species is not, at present, possible, but shell thickness gives an approximate indication of the size of bird represented. Thicknesses of fragments from four contexts of Period 3 and 5 at Site G are comparable to those of modern domestic fowl. Thick-shelled fragments from larger birds (eg goose, swan, guinea fowl) were not present in these samples.

Acknowledgements

The flotation and bulk sieving on site was undertaken by Max Fox. Val Williams sorted the residues. I am grateful to them both for their careful and systematic work. Dr Terry O'Connor kindly checked some identifications of marine invertebrates and commented on their interpretation.

9. ENVIRONMENTAL STUDIES: GILBERD SCHOOL

by Peter Murphy

Carbonised plant remains

Methods

Samples were collected from the Boudican destruction layers (AL47, BL35, BL39, BL69, BL89), from some "Ist-century contexts related to military activity at the site (AF232, AF254, AL123) and from 2nd-3rd century rubbish pits (AF27, BF25). The samples were processed in a bulk sieving/flotation tank (Kenward *et al* 1980) with 0.5 mm meshes to collect the flot and 1 mm meshes to retain the residue. To complete recovery of carbonised plant remains it proved necessary to re-float the residues in the laboratory. The dried flots were sorted under a binocular microscope at low power. Plant remains identified are listed in Table 9.1 (microfiche, p 728).

Food plants

The samples included small numbers of cereal grains and spikelet fragments of spelt *(Triticum spelta),* six-row hulled barley *(Hordeum vulgare)* and wild or cultivated oats *(Avena* sp). The rubbish pit BF25 produced a single abraded seed of horse-bean *(Vicia faba* var. *minor).* Carbonised fruitstones of bramble *(Rubus fruticosus)* and sloe *(Prunus spinosa),* and fragments of hazelnut shells *(Corylus avellana)* came from the Boudican layers BL35 (Building 131) and BL39 (Building 135).

Sample composition and taphonomy

The samples from the Boudican destruction layers contained large quantities of charcoal, mostly of oak *(Quercus* sp), with burnt daub from the superstructure of buildings destroyed in AD 60/1. At other sites in Colchester, including Balkerne Lane and Culver Street, the Boudican layers have also produced large quantities of carbonised cereals and other crops, indicating storage of foodstuffs within buildings (pp 45 & 282; Murphy 1984), but at the Gilberd School only thin scatters of cereal remains were present. Interpretation of such sparse assemblages is difficult, but presumably they represent small-scale accidental spillages of cereals, strewn on floors, which became carbonised when buried by burning debris. There is certainly no evidence for the use of any of these buildings as granaries.

Several of the samples from Site B, notably Sample 49 from BL39 (Building 135) produced fruits and seeds of grassland plants, including *Ranunculus acris/repens/bulbosus, Ranunculus flammula, Stellaria palustris/graminea, Montia fontana, Medicago/Trifolium-\ype, Vicia/Lathyrus* sp, *Potentilla* sp, *Prunella vulgaris, Plantago lanceolata, Eleocharis* sp, *Carex* spp. and Gramineae, and these were associated in some samples with carbonised culm fragments of grasses. Nutlets of *Rumex* spp. were also fairly common. Similar, but much larger, assemblages from Culver Street, associated with concretions derived from animal dung, are interpreted as sweepings from byres burnt as refuse (pp 282-3). The Gilberd School samples did not contain faecal concretions, but the carbonised assemblages are nevertheless thought to represent charred residues from burnt hay. This could perhaps indicate that animals were housed in some of these buildings, though the use of hay for domestic flooring is perfectly possible.

The samples of carbonised plant remains from the 1st-century military features and 2nd/3rd-century refuse pits are very sparse and are not interpretable. The military features AF232 and AL123 contained no identifiable seeds. AF27 contained a few macrofossils preserved by phosphatic mineralisation, a form of preservation commonly occurring in cess pits.

Sample from the medieval lime kiln (AF11)

A sample from the medieval lime kiln (AF11, p 139) was received for examination. It consisted of whole and fragmentary marine mollusc shells in a red sand matrix. A 1 kg sample was wet-sieved in a 0.5 mm mesh. The predominant species was *Cerastoderma edule* (L) (cockle), but a few shells of *Ostrea edulis* L. (oyster) and *Mytilus edulis* L. (mussel) were also present, together with some non-hinge fragments of indeterminate bivalves. The shells were mainly fragmentary and some were fused together in a ground-mass of amorphous calcite as a result of burning. Sixteen intact cockle shells were fairly small (18-30 mm; mean 23 mm) and some were abraded and perforated by boring organisms.

Clearly shell was being used as the raw material for lime burning. These shells may represent food waste or alternatively could have been collected from estuarine shell banks as 'dead', disarticulated valves specifically for lime production. The relatively small shell size and rather abraded state of some of the valves tend to support the latter alternative, though

shells from both sources may have been used.

Charcoals

by Maisie Taylor

Seven samples from timber features burnt in 60/1 were identified. These belonged to Buildings 131, 133 and 134. Six are oak and one is ash. Details are given in Table 9.2 on microfiche p 729.

10. THE COINS FROM THE CULVER STREET AND GILBERD SCHOOL SITES

by John A Davies, Robert Kenyon, and R Goodburn

OVERVIEW

[Fig 10.1]

by John A Davies

The Culver Street coins

The combined assemblage from the Culver Street Phase 1 and Phase 2 excavations totals 750 coins, of which 4 are Celtic, 720 Roman, and 24 post-Roman (Coin Catalogues 1 & 2, pp 402-7 & Coin Catalogue 3, microfiche pp 730-68). This very substantial excavated collection represents the coin used and lost in the oldest part of the *colonia,* and in the south of the Roman fortress. The Culver Street coins have already received some consideration, together with other coins excavated in the town between 1971 and 1983, in *CAR* **4.** That complete publication and analysis of over 3,000 site finds and the listing of over 8,000 coins from the Colchester Museums provides a background against which subsequent finds from the town can be compared. In this report the Culver Street coins will initially be considered collectively, on a quantitative basis, in order to establish the overall pattern of coin loss for the site.

Since the preliminary publication of the Culver Street coins, full identifications of the Phase 2 coins now enable a complete consideration of the combined assemblage from this excavation. The two Phases comprised eleven sub-sites, or areas, which were subjected to differing intensities of excavation. There is a strong pattern in the coin loss on Romano-British sites which remains marked despite the individual history of particular sites (Casey 1980, 28). However, this pattern will be affected by differing intensities of coin recovery, and the method of excavation employed must be considered before the coins from Culver Street can be analysed. The coin numbers from each sub-site are shown in Table 10.1, broken down into the issue periods employed by Reece (1972).

Culver Street Phase 1 comprises the four areas: Sites

Coin period & date (AD)	u/s	A	B	C	D	E	G	H	J	K	M	W	Totals
1 (to 41)	-	1	7	1	-	8	-			-	.		17
2 (41-69)	-	6	13	15	1	29	4	-	8	2	3	-	81
3 (69-96)	-	2	9	3	1	8	4	-	-	2	1	-	30
4 (96-117)	-	2	4	-	1	2	2	1	1	-	-	-	13
5 (117-38)	-	1	-	1	-	-	6	-	-	-	1	-	9
6 (138-61)	-	2	7	1	3	-	4	3	-	-	-	-	20
7a (161-80)	-	-	4	2	-	-	6	-	-	-	-	-	12
7b (180-92)	-	-	-	1	1	1	2	1	-	-	-	-	6
8 (193-222)	-	-	7	4	1	-	6	3	-	-	-	-	21
9a (222-38)	-	1	4	2	1	-	4	2	-	-	-	-	14
9b (238-59)	-	2	3	1	1	-	7	4	-	-	-	-	18
10 (259-75)	-	12	23	5	16	3	12	10	1	2	4	-	88
11 (275-94)	2	19	53	4	25	3	46	22	-	2	5	1	182
12 (294-317)	-	1	-	-	2	-	1	-	-	-	-	-	4
13a (317-30)	-	2	-	-	-	-	-	-	-	-	1	-	3
13b (330-48)	1	9	23	7	2	3	8	1	2	-	-	-	56
14 (348-64)	-	2	6	2	-	2	5	1	1	-	2	-	21
15a (364-78)	-	2	13	-	-	2	-	3	-	-	-	-	20
15b (378-88)	-	-	-	-	-	-	-	-	-	-	-	-	-
16 (388-402)	-	2	5	2	-	-	3	-	-	-	-	-	12
TOTALS	3	66	181	51	55	61	120	51	13	8	17	1	627

Table 10.1 Roman coin numbers from Culver Street sub-sites by coin periods.

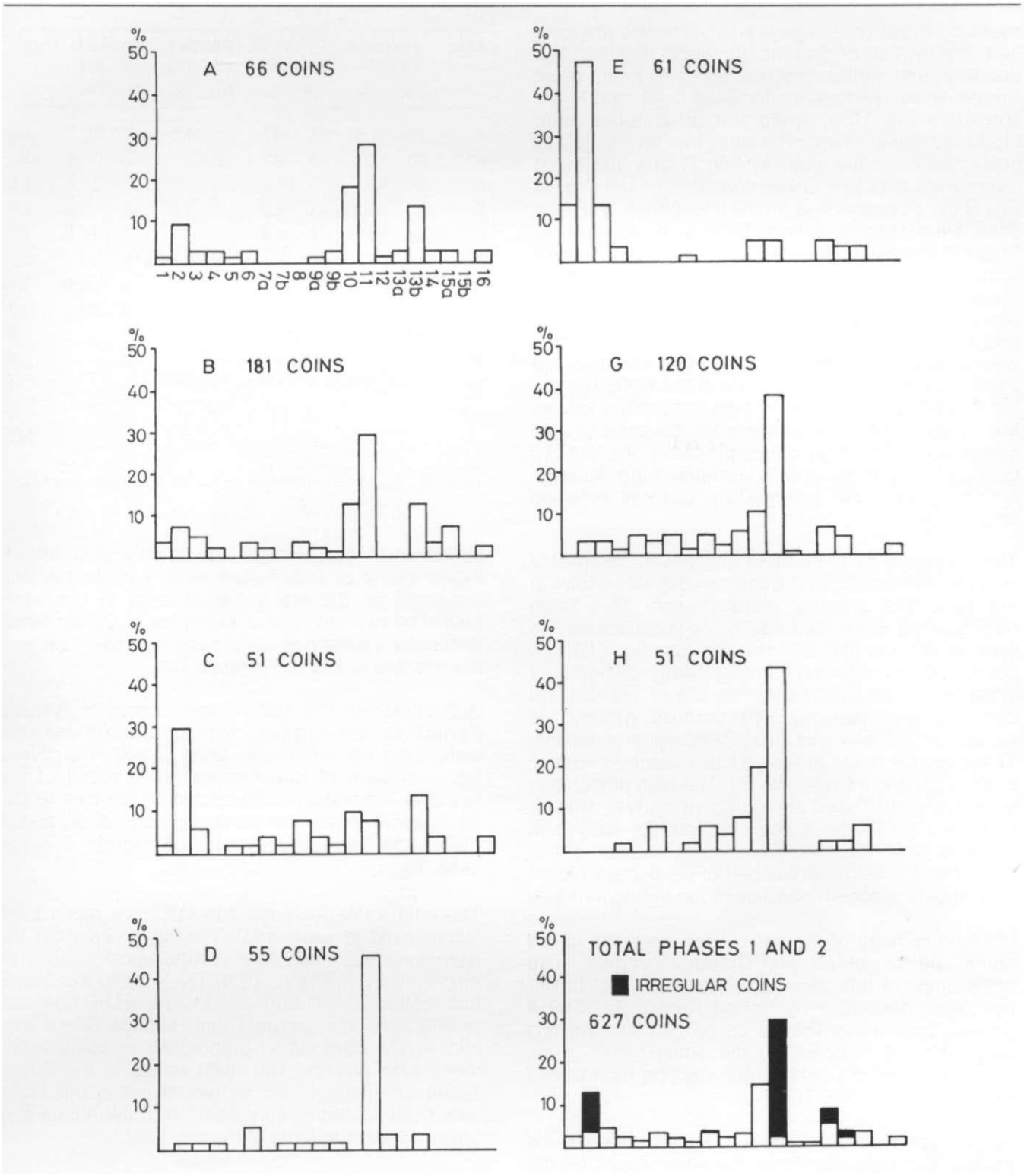


Fig 10.1 The pattern of coin loss on the main Culver Street sites. (The dates of the issue periods are given in Table 10.1.)

A, B, C, and E. The first three were completely excavated by hand, while Site E was hand-dug in the latest and earliest layers, but machine-stripped in between. The histograms expressing the pattern of coin loss are shown in Fig 10.1. The overall Phase 1 picture shows a complete range of coinage from early to late Roman, with pre-Boudican numbers particularly high. This can be partly explained at Site E by the method of excavation used, but it is also high at Site C, confirming strong early activity here. The histograms all show a low proportion of 4th-century coinage. The latest layers were closely examined in all cases and the area appears to have seen less activity during that period.

The seven Phase 2 sub-sites lie adjacent to, and

south of, those of Phase 1. Here selective stripping had the effect of balancing work towards the Boudican and earliest deposits and also to the latest Roman levels. Histograms for Sites D, G, and H are shown in Fig 10.1, while the other sites each produced fewer than 50 coins, too few to justify presentation in this way. At Site D only the latest layers were dug. Site G was completely hand-dug. At Site H the emphasis was on the later period. Very few coins were recovered from Sites J, K, M, and W. Phase 2 combined lacks the earliest coin of Reece's coin Period 1 (to AD 43). Subsequently, numbers remain high right through to the mid 3rd century (Period 9b; 238-59). The late 3rd century (Periods 10 and 11; 259-75 and 275-94) shows remarkably high values, but from Period 13a (317-30) onwards the values are all low. The emphasis of excavation on the latest levels accounts for the high 3rd-century values, but again makes the absence of 4th-century coin conspicuous. The high values preceding the late 3rd century appear to reflect genuine high activity, especially as those intermediate deposits received less investigation.

Area	**Phase A to 259**		**Phase B 259-94**		**Phase C 294-330**		**Phase D 330-402**		**Totals**
	No	%	No	%	No	%	No	%	
A	17	25.8	31	47	3	4.5	15	22.7	66
B	58	32	76	42	-		47	26	181
C	31	60.8	9	17.6	-		11	21.6	51
D	10	18.2	41	74.5	2	3.6	2	3.6	55
E	48	78.7	6	9.8	-		7	11.5	61
G	45	37.5	58	48.3	1	0.8	16	13.3	120
H	14	27.5	32	62.7	-		5	9.8	51
J	9	69.2	1	7.7	-		3	23.1	13
K	4		4		-		-		8
M	5		9		1		2		17
W	-		1		-		-		1
u/s	-		2		-		1		3
									627

Table 10.2 Roman coin numbers for Culver Street sub-sites by coin phases.

The histogram for the total of 627 closely identifiable coins from Phases 1 and 2 combined is also shown in Fig 10.1. The irregular coins present have been distinguished within the bars. These imitations can be seen to fall into five chronological groups: Claudian copies of the mid 1st century, early 3rd-century imitation *denarii,* barbarous radiates of the late 3rd century, and two mid 4th-century groups, ie Constantinian and *Fel Temp Reparatio* imitations. These groups relate to Reece's coin issue Periods 2, 8, 11, 13b, and 14 respectively. The high percentage of early, pre-Boudican, coins at Culver Street, especially on Phase 1 sites, reflects the early high status of Colchester and the specific situation of this site within the town: across part of the barrack blocks and ?tribunes' accommodation of the military fortress.

Imitative coinage of the 1st century accounts for 66 coins, 60 of which are Claudian copies. The significance of this coinage in relation to Colchester has been discussed by Robert Kenyon in *CAR* **4** (24-41), and in this volume on pp 295-307. He has also reported in detail orr the small hoard of six irregular *asses* of Claudius and Agrippa from Culver Street Site J (pp 306-7).

Apart from Reece's Period 2, which contains the profuse Claudian imitations, the early values for the two combined phases of Culver Street are not high for a Romano-British urban site. It is the values for Periods 6 to 9b which are particularly high and suggest strong activity from the mid 2nd to the late 3rd century. A number of the large heavily worn *aes* of Antoninus Pius, Marcus Aurelius, and Commodus may relate to later 3rd-century circulation and deposition. Such *aes* did enjoy prolonged use and were employed to supplement the coinage pool right through the 3rd century. The high proportion of *denarii* of Severus, Caracalla and Severus Alexander, many of which are in very fine condition, relate to a period when the coinage was largely silver-based. Fewer coins of this period were lost (to become site-finds) as the unit value of coins in circulation rose. The high number of examples at Culver Street reinforces a pattern of abnormally high coin loss from the mid 2nd to late 3rd century.

Just eleven of the 182 coins recorded in Reece's Period 11 are regular, with barbarous radiates comprising the remainder. Sites D and H produced high numbers of these coins, as a result of the selective excavation concentrated on the later levels. To a lesser extent the hand-dug Sites A, B, and G also show high proportions of radiate coinage generally.

The coin totals for each sub-site have again been summarised in Table 10.2. This table separates the Roman coinage into four chronological phases as employed by Reece *(CAR* **4,** 17): A up to AD 259, B from 259 to 294, C from 294 to 330, and D from 330 to 402. It is now apparent that Romano-British sites can exhibit contrasting proportions of coins within these long phases. The main trends in the Culver Street assemblage can be picked out in this table, with the late 3rd-century peak and low 4th-century values present at most of the sub-sites.

A number of coins require separate consideration, in addition to Robert Kenyon's study of the Claudian imitations. An unusual individual find is an eastern issue of Caracalla (198-217). Such Greek Imperial issues are rare finds on British sites. Occasional examples did reach Britain, as evidenced elsewhere in the votive context of Coventina's Well (Allason-Jones & McKay 1985). It can be noted that a didrachm of Domitian (81-96) was recovered from the Balkerne Lane excavations *(CAR* **4,** 86). This particular example from Culver Street dates from the early 3rd century, when the number of Greek mints

was at its highest, with over 200 known.

The very high proportion of barbarous radiates present warrant some discussion *(see* below p 308). Despite their number they do not include a hoard.

In the case of the official Gallic Empire coinage present there is a remarkable predominance, among legible examples, of coin from the mint of Cologne over that of Trier. Among coins from Phase 1 of the excavation the ratio is 19:6, and among those from Phase 2 it is 22:4. This was consistently the case from Postumus to the Tetrici.

The small number of Carausian and Allectan coins from Culver Street is also noteworthy. None of the eleven examples recovered can be allocated to the 'C' mint. If Colchester were indeed the 'C' mint, it would be expected that a reasonable proportion of any excavated assemblage from the town would relate to that mint.

The Culver Street Roman coins exhibit a pattern of coin loss in keeping with other Romano-British urban sites, despite the differing intensities of excavation employed on the eleven sub-sites. Phase 1 of the excavation, to the north of the site, has a higher proportion of pre-Flavian and Flavian coinage and has a less pronounced late 3rd-century peak than that seen on Phase 2 to the south. The early post-conquest period at Colchester saw greater activity than at most other British sites, with the early military presence and the foundation of the *colonia* explaining the pronounced early coin loss. High coin loss continued through the mid 2nd century to the end of the 3rd century. The unusually high number of late 3rd-century coins recovered can be explained by the concentrated excavation of late levels on all of the sub-sites. Thereafter, in contrast to other Colchester sites at Lion Walk, Balkerne Lane, the Cups Hotel, and Butt Road, Culver Street shows unusually light 4th-century coin loss, although loss does continue right through the century in common with the other Colchester sites. Romano-British urban sites do generally possess a lower proportion of coins of that date than rural sites, but the Culver Street values are particularly light. It is possible that this unusual situation resulted from cultivation of the 'dark earth' from the late Roman period right through to the later post-medieval period. If this is the case, as on some sub-sites it appears to be (pp 33-4), the pattern of Roman coin loss can be regarded as comparable to that recorded from other large urban sites.

Twenty-four post-Roman coins were recovered during the Culver Street excavations. There is a complete absence of early Anglo-Saxon coinage, which is the picture seen at Colchester generally *(CAR* ***4,*** 68). The earliest of the post-Roman coins is an 11th-century issue of Edward the Confessor, after which all centuries are represented.

The Gilberd School coins

The coin assemblage from the Gilberd School excavation comprises 72 items, of which 68 are Roman, three post-Roman and one completely illegible. The total of identifiable Roman coins is not large and the overall pattern of coin loss, which shows a strong bias towards the early years, must be interpreted cautiously.

Over half the identifiable Roman coins belong to the years before AD 160. In particular, this early coinage is dominated by 1st-century Claudian imitations, which are the subject of a separate report below by Robert Kenyon. Although these coins were found in high numbers at other Colchester sites, the proportion within this assemblage is particularly high, resembling some Culver Street sub-sites in this respect. At Culver Street many of these bronzes were related to the barracks and tribunes' accommodation within the early Roman fortress.

From the mid 2nd century coin recovery is much lighter. The span of a century is represented by a single coin: a *denarius* of Caracalla. The overall supply of bronze coin to Britain did drop sharply from the end of the 2nd century, which accounts for the absence of *aes* throughout the province at this time. It is clear from hoard evidence that bronze coin of the earlier 2nd century continued in use in place of new coin and was certainly still in circulation in Britain during the reign of Postumus (Reece 1974, 87-8). It is likely that there was also a corresponding decline in the use of coin for minor transactions, resulting in much less casual coin loss during these years (Kent 1985, v). However, the comparatively very steep drop in coin loss after the mid 2nd century at the Gilberd School site does reflect less use of the site during these years. Even the normally profuse Gallic Empire issues of the period 260-74 are absent.

Coin loss increases at the end of the 3rd century and continues steadily through to the mid 4th century, with a more predictable pattern for an urban site. It then tails off after 350. The latest coin is a single irregular example of the often profuse *Fel Temp Reparatio,* falling horseman, series.

The Gilberd School Roman coins are almost entirely low denomination *aes.* Within the coinage of the 1st and 2nd centuries there are just two *denarii* and a single *sestertius,* the remainder being *dupondii* and *asses.* In addition to the predominance of low denomination issues, this assemblage contains nearly 60 per cent irregular coins (Table 10.3). Although irregular coinage is found in appreciable numbers on all British sites, the proportion within this predominantly *aes* assemblage is particularly marked. They are not restricted to a single period but outnumber regular issues both in the years up to AD 69 and after 275. Most notable at Colchester are the 1st-century Claudian imitations, which were struck and used in response to the lack of official *aes* in the immediate post-conquest period (p 295; *CAR* **4,** 24-41). The general acceptance of irregular types in later years and their use in place of, and alongside, everyday low-value official coinage is evidenced from

Coin period & date (AD)	Regular	Irregular	Totals
1 (to 43)	1	1	2
2 (43-69)	3	17	20
3 (69-96)	6	-	6
4 (96-117)	2	-	2
5 (117-38)	1	-	1
6 (138-61)	1	-	1
7 (161-92)	-	-	-
8 (193-222)	1	-	1
9 (222-59)	-	-	-
10 (259-75)	1	-	1
11 (275-94)	3	5	8
12 (294-317)	1	-	1
13a (317-30)	2	1	3
13b (330-48)	3	10	13
14 (348-64)	1	1	2
15 (364-88)	-	-	-
16 (388-402)	-	-	-
	26	**35**	**61**
Illegible 1st century			2
Illegible 3rd-4th century			5
Post-Roman			3
Undated illegible			1
TOTAL			**72**

Table 10.3 Summary of the coins from the Gilberd School site.

the comparative numbers from this site.

The overall pattern of coin loss from the Gilberd School excavation reflects the main use of this site during the 1st century and, in particular, its function as the men's quarters within the legionary barrack and the conversion of the military buildings to civilian use on the establishment of the veteran *colonia.* Subsequently, from the mid 2nd century, the coin loss drops markedly, reflecting less activity on the site. The Roman coin list terminates after the mid 4th century.

The site, which lies well back from the frontage of the nearest post-Roman street, was little used over the following centuries as is clearly evidenced by the recovery of only three English coins: a farthing of William IV, and two pennies of George V.

THE CELTIC COINS

by Roger Goodburn

All are from Culver Street.

SF 1.81 2382, E1105 F977. ?Stake.hole. Period **2.** Iceni, uncertain type. Silver, quite worn and corroded. Weight 0.58 gm. Obverse: opposed crescents with peltae, two pellets between. Horizontal bar above and below, with traces of corded and plain vertical lines of 'wreath' at right angles. Reverse: horse prancing to right with transverse row of three pellets beneath. Other detail obscure.

This is of Allen's 'Pattern-horse' type (1970, 31, nos 146-59), with an open-headed horse. Beneath the horse may have been either a symbol or letters ED; the state of the coin makes certainty impossible. It is similar to Mack 423, 425b, 429, 430. The type is fairly common and one of the latest Icenian issues, in use to the Boudican uprising. It is noteworthy that the Period 2 context (49-60/1) fits with the suggested period of use.

SF 1.81 1781, B2054 F602. Stake hole. Building 77, Room 8. Period 1/2. Cunobelin, Mack 253. Copper-alloy. Unworn, slightly corroded. Weight 1.93 gm. Obverse: CVNOB, bearded head of Jupiter Ammon to right. Reverse: CAM on trapezoidal tablet beneath crouching lion under tree. Pelleted border.

Around 50 similar specimens are known, eighteen from Colchester, fifteen from Harlow, and five from elsewhere in Essex. Only eight come from the western area (Hertfordshire). There are three or four outliers. This is of Allen's 'developed type with a Camulodunum legend', issued at Camulodunum itself, perhaps later in Cunobelin's reign.

SF 1.81 1690, B1778 L428. Building 77, Room 6. Floor/make-up. Periods 1/2. Copper-alloy, very corroded. Weight 2.85 gm. Obverse: uncertain. Reverse: horse galloping left.

This copper-alloy coin, or core of a coin, is of uncertain identity, but the horse leaves no doubt that it is British and the style indicates probably Tasciovanus or Cunobelin, eg Mack 175, 188, 214, 255.

SF 1.81 2718, B2528 F867. Building 77, Room 3. Pit. Period 2. Impression of a Coritanian stater. This object seems to be a disc of calcined clay, 18-20 mm in diameter, 1-2 mm thick, weighing 1.22 gm.

In the disc the reverse of a Coritanian (Corieltavian) stater has been impressed. It is of a coin inscribed DVMNOCOVEROS around a disjointed horse prancing to left, with three pellets beneath the head (Mack 463). The unimpressed face is concave, with sandy accretions and a red-brown surface colouration. The body of the disc is grey, with a perhaps slightly fritted texture. The impressed face is convex and bears a bluish-green cupric deposit up to within 2 mm of the edge. X-ray fluorescence examination confirmed high levels of copper on both faces; a little antimony was present on the impressed face. Iron was detected (highest on the plain face), doubtless derived from the clay.

The copper incrustation suggests that the impression was left by the core of a forgery, apparently without gold plating. The XRF examination apparently revealed neither gold, nor silver, nor tin. If this is so, it not only implies that the forgery was devoid of all plating, but that the core was of copper, not bronze.

How the impression came about is obscure. It could have been made casually but deliberately, or perhaps the coin was thrown away or lost or trodden into a clay floor or patch of clay which then suffered burning; or it could have been incorporated unwittingly into a clay structure which was destroyed by fire. Deliberate forgery here of such a coin (properly of gold, and

issued far away and somewhat earlier on) seems very unlikely.

There are about 32 forgeries of gold coins of the Coritani/Corieltavi, some 25 provenanced. Seven are from South Ferriby, Lincolnshire, and five others from the Coritanian homeland. Of the remaining thirteen outliers, five are from Colchester indicating its importance as a traffic centre.

The Colchester coins are forgeries of Type M, Type Q, and three examples inscribed VEP. The Type Q was stratified (Hawkes & Hull 1947, 135, no 1) in a level corresponding roughly with the reign of Cunobelin (Allen 1963, 33). The inscribed types post-date the uninscribed, but the earlier coins continued in circulation. The coin of DVMNOCOVEROS which made this impression could have been discarded at any time up to the Conquest.

THE CLAUDIAN COINS FROM CULVER STREET PHASE 2 AND THE GILBERD SCHOOL

[Figs 10.2-5]

by Robert Kenyon

Colchester has proved to be the most prolific site for Claudian coins in Britain *(CAR* **4,** 24), having produced more than 530 coins, including hoards. This is almost two-thirds as many again as Richborough, its nearest rival, where total clearance of the site uncovered 345 Claudian coins (Reece 1981, 57). Though development, and in consequence archaeological excavation, has been intense in Colchester since 1971 it does not even remotely approach 'total clearance' of the Roman town. The prominent military significance of the legionary fortress and the importance within the new province of the veterans' *colonia* during the early decades of the Roman occupation must account for the large number of Claudian coin-finds.

The majority of the Claudian coins are what have been described as 'contemporary Claudian copies' (Sutherland 1935). That is, they were produced in imitation of *aes* from the mint of Rome, and issued by unidentified mints in the north-western provinces of the Empire. Inspection of even a small sample of Claudian 'copies' (eg Fig 10.5) illustrates the wide ranges of die-cutting and coining skills to be found in these provincial mints. The best of the provincial coins have round flans, accurate legends, and well-centred die-impressions. They are of a size and weight commensurate with those from the mint of Rome and the die-engraving skills displayed in the coins approach those of the engravers of Rome. The worst are of irregular shape, often with legends that consist merely of lines and curves purporting to be letters. The dies used to strike these crudest coins are the products of illiterates, who seem to have been unfamiliar with even basic die-engraving techniques: the dies were often engraved (to use the word loosely) with a 'positive image', which when struck on a blank created a retrograde impression, ie the coin's designs, and any accurately copied letters, would be reversed. The dies were often struck with the blank poorly centred between them and with little concern for correspondence between the sizes of die and blank. The resulting coins were lower in weight and smaller than those from the mint of Rome. The bulk of Claudian coins found at Colchester, and in Britain generally, fall between these extremes.

Examination of Colchester's Claudian *aes* from the Archaeological Trust's pre-1984 excavations and inspection of those in the Colchester Museums produced die-grouping and stratigraphic evidence for the siting of a mint at Colchester during the early period of the Roman occupation *(CAR* **4,** 24-41). Re-examination of the very worn Claudian *aes* in the collection of the Colchester Museums identified further links to Colchester's largest die-group, Group A *(ibid,* 33-4). In addition, one of the coins from the 1984-5 excavations discussed below (SF 1.81 4631; p 304) belongs to that same die-group.

The coins

The coins from the excavations of 1984-5 on the Gilberd School and Culver Street Phase 2 sites are dealt with here in a similar way to that in my previous report on Claudian *aes* from Colchester *(ibid,* 24-41) to facilitate comparison of methods of analysis and results. The Claudian coins from the Culver Street Phase 1 excavation, fully dealt with in *CAR* **4,** are re-listed here in Table 10.4 to make available a complete list for the site, but are not further discussed.

The coins in Tables 10.4-5 are arranged in groups to which they can be assigned by the date of their context *(ibid,* 27-32). Where a context cannot be allocated with certainty to one period, the latest suggested date is used. The dating used in *CAR* **4** for Culver Street Phase 1 coins was provisional, and in the light of further work some of these coins are now in a different dated group *(see* note to Table 10.4). Any re-allocation has not altered the conclusions drawn in *CAR* **4.**

The contents of Tables 10.4-6 should be explained. In the first column are three clusters of letters and numbers. These are best explained by the following examples: SF 1.81 5004, J318 F309, or SF GBS 658, A1325 L61. First comes the small find number (SF) of the coin. This follows a museum accession number in the case of Culver Street (1.81) or a three-letter site code in the case of the Gilberd School (GBS). This is followed by a site find (context) number, prefixed by a single letter area (or sub-site) code (J318, A1325) and followed by a feature (prefixed 'F' as in F309) or layer number (prefixed 'L' as in L61). If the context does not form part of a feature or layer this last cluster is absent.

The second column gives the reference number for each coin (all Claudian) from the revised edition (1984) of *RIC* 1. As this volume has only recently superseded the 1923 edition a concordance between the two for the coin-types discussed below may be useful:

1923	1984	Description
66	100	as, Minerva advancing right, holding shield and raising spear, S.C.
69	97	*as,* Liberty standing, holding *pileus* in right hand, left hand extended, S.C.
68	95	as, Constantia, helmeted, standing holding spear in left hand, right hand raised, S.C.
82	92	*dupondius,* Antonia profiled on obverse
67	94	*dupondius,* Ceres seated, holding two corn-ears in right hand, left hand holds a long torch, S.C.
60	96	*sestertius,* EX S C/ OB/ CIVES/ SERVATOS in oak-wreath

In the third column the grades A, B and C are used to describe the skill and style of imitation. 'A' is an excellently-styled copy, with accurate and well-shaped legends, which might easily be mistaken for an orthodox issue. 'B' is a competently styled, though non-Roman-looking, copy; the legends are not well proportioned and are occasionally incomplete or inaccurate. 'C is a very crudely styled copy, which often has a retrograde legend and is the product of an illiterate die-engraver. 'O' is used to describe an orthodox coin from the mint of Rome.

The diameter given in the fourth column is that of the maximum dimension.

In the fifth column the axis numbers 1-12 refer to the relative position of the hours of the clock, 0 describes an indeterminate axis.

The weight of the coin in grammes is given in the sixth column.

In the seventh column the condition of the coin is given on a nine point scale. 1 is excellent, 2 very good, 3 good, 4 worn, 5 very worn, 6 poor, 7 very poor, 8 illegible, and 9 very corroded.

The eighth and ninth columns describe some features of the workmanship of the die-cutting, and notes about the formation of the legend: 'all' is used to indicate that the portrait/reverse-type and the legend are very crudely depicted; unbarred letters are noted, eg 'A'; retrograde letters are noted, eg 'S', 'C'; if the legend is unclear, obscured or missing then '?' is used; the absence of any note indicates that the legend is accurately formed and legible; 'o/s' indicates that the die was struck on an existing coin, the design of which can still be partly seen; 'XX' is used to signify that the legend reads anti-clockwise. '<' indicates where the portrait or reverse type is facing in the wrong direction.

The tenth column gives the plate reference(s) of illustrated coins.

Operational techniques, stylistic analyses, and metrology

Method of production of *aes* coins and flans

The hand-engraving of dies, the manufacture of moulds for casting blanks, the skill of the bronze-caster, and the techniques employed in striking coins all ensure that each struck coin is unique in some way. The large number of coins that could be struck from one pair of dies would be identical in many ways, yet differences will occur even in these die-linked coins. The shape and size of flan and the impressed position of the dies on the coin's flan are the two most likely variables. Others, such as the degree of wear of the dies and the evenness, or otherwise, of the striking, may also enable the student to identify 'individuality' in these mass-produced items.

Evidence for the method of production of blanks for Claudian *aes* can occasionally be recognised by traces of casting seams on the edges of coins. The raised seam around the edge of a coin is the result of molten metal, having filled a two-part mould, attempting to flow between the two halves of the mould. This 'tell-tale' feature of the casting process is indicative of the artisan's skilful technique, for it is proof that the mould has filled, and occurs only on the more truly-round coins. The absence of a casting seam on a coin in good condition may be primarily for one of two reasons. Either the seam was trimmed off the blank prior to striking, or the casting was poorly done and the molten metal had failed to fill the mould properly. An explanation for the latter case would be the inadequate venting of a mould. Impenetrable pockets of trapped air would be produced when molten metal was poured into the mould and the resulting casting would be irregular in shape. The variety of shapes of many of the Claudian *aes* found in Britain illustrates the range of abilities of the flan-casters who supplied the provincial mint workshops with blanks. The Claudian coins from the Gilberd School and Culver Street sites are generally well-shaped, although not always entirely circular (Fig 10.5,14), but none exhibits a clear casting seam.

The absence of a casting seam on little-worn coins may also be explained by the mint operators' practice of striking earlier worn *aes* in place of newly-cast blanks. The additional wear and a repeated process of annealing and restriking would probably account for its absence in the case of overstrikes. When a coin was overstruck the undertype was not always completely obscured by the new designs *(see* below), though it is possible that many overstrikes were successfully undetectable, especially if the surface of the coin were filed flat prior to restriking.

However, I would not attempt to explain the absence of a casting seam on all well-preserved round

SF no & context nos	*RIC*	Grade	Diam (mm)	Axis	Weight (gm)	Condition	Obv	Rev	Plate
Group 1 (C 44-c 49)									
SF 1.81 1758, B1922 F564	100	A	29	6	9.52	3			*CAR* **4,** pl 1.4
SF 1.81 2636, E1721 L298	100	B	28	6	10.68	3			*CAR* **4**, pl 3.5
SF 1.81 2534, B2391 L687	100	B	26	6	9.59	3			
SF 1.81 2561, E1413 L185	95	B	26	5	6.24	9	?	?	
SF 1.81 2630, E1677 L263	94	B	27.5	6	11.32	3	A	A	*CAR* **4**, pls 1.5 & 5.5
SF 1.81 2468, E1219 L166*	92	A	30	6	9.86	3			
SF 1.81 1465, C431 L76*	100	B	28.5	6	8.18	2			*CAR* **4,** pl 1.6
Group 2 (*c* 44-60/1)									
SF 1.81 1534, C452 L87	100	B	26	5	5.6	8	?	?	
SF 1.81 1498, C442b L82	100	B	27	6	7.65	4			
SF 1.81 1497, C442a L82	100	B	24.5	4	5.67	4	?		
SF 1.81 754, A351 L95	92	B	26	12	8.5	2	A		*CAR* **4,** pls 1.9 & 5.14
SF 1.81 1422, C403 L63*	100	B	28	3	8.8	4			*CAR* **4,** fig 1.12
Group 3 (*c* 49(55)-60/1)									
SF 1.81 1424, C405b L60	100	B	27	1	9.16	4			
SF 1.81 1423, C405a L60	100	C	27	3	7.23	3	AR		*CAR* **4,** fig 1.13
SF 1.81 2413, E1154 F1006	100	B	25	10	4.9	2	A		*CAR* **4**, figs 1.14 & 4.13
SF 1.81 1409, C390 L60	100	B	24	6	5.91	4			
SF 1.81 2318, E871 F745	100	B	25	4	9	4	**?**		
SF 1.81 2332, E893 L67	100	B	28.5	9	7.5	4	**?**		
SF 1.81 2383, E1100 L119	100	B	28.5	6	8.59	4			
SF 1.81 2458, E1197 F1037	100	B	27	7	7.15	9	?		
SF 1.81 2337, E896 L56	100	B	23.5	6	4.9	9	?		
SF 1.81 2420, E1192 F1037	94	A	28	7	11.09	4			
SF 1.81 2474, E1224a L138	94	B	27	6	8.35	4		?	
SF 1.81 2481, E1224b L138	94	B	28	6	9.46	3	A	**9**	
Group 4 (60/1 -*c* 75/80)									
SF 1.81 1325, C336 L51	100	B	25.5	6	6.5	4	A		*CAR* **4**, fig 2.1
SF 1.81 1367, C363 L47	100	B	24	7	4.91	3	**?**		*CAR* **4,** figs 2.2 & 4.10
SF 1.81 1299, C318 L39	100	C	23	12	5.19	2	all	SC	
SF 1.81 2442, E1205 L106	100	B	26	6	7.08	5	?		
SF 1.81 1217, C317 F100*	100	B	28.5	6	9.8	4			*CAR* **4**, fig 3.2
Group5 ((44)60/1-c 150)									
SF 1.81 1492, B1150 L255	100	B	30.5	6	7.3	5	A		
SF 1.81 1567, B1366 L309	100	C	29.5	6	7.65	4	A		
SF 1.81 1562, B1425 F397	100	B	28.5	6	6.76	4			
SF 1.81 1671, B1740 F51	100	B	27	6	8.55	3	A		
SF 1.81 902, A439 L93	100	B	25	0	4.4	9	?	?	
SF 1.81 1002, A500 L194	100	B	29	6	8.59	5	?		
SF 1.81 1142, A535 L209	100	B	27	6	6.53	7	?	?	
SF 1.81 2322, E895 F557	100	C	25	6	7.33	7	?		
SF 1.81 2223, E737 F462	94	C	25	6	8.02	3	A	?	
SF 1.81 2203, E699 (L33)*	100	B	26.5	5	8.48	9	?		
SF 1.81 2164, E568*	100	B	27	8	6	4	A		
SF 1.81 1372, B952 L210	100	B	24	6	5.53	5	?		
Group 7 (post-Roman and unstratified)									
SF 1.81 2210, E718	100	B	25	11	5.77	5	?		
SF 1.81 2443, E1206	100	B	25.5	0	4.48	9	?		
SF 1.81 2179, E625	100	B	26	7	5	5	?		
SF 1.81 2416, E1187	100	B	26	4	4.69	4			
SF 1.81 2411, E1155	92	B	27	0	6.32	9	?	?	
SF 1.81 907, B367	96	A	36	7	25.12	2			*CAR* **4**, fig 2.15

[* The phasing of the starred contexts above has been refined since the publication of Tables 10, 11, 13 and 15 (pp 28-32) in *CAR A]*

Table 10.4 The Claudian coins from the Culver Street Phase 1 excavation.

SF no & context nos	RIC	Grade	Diam (mm)	Axis	Weight (gm)	Condition	Obv	Rev	Plate
Group 1 (*c* 44 -*c* 49)									
SF 1.81 5004, J318 F309	96	A	34.8	6	27.02	2			Fig 10.5,1
Group 3 (*c* 49-60/1)									
SF 1.81 4822, M217 L216	100	B	29	12	9.13	3	A	o/s	Fig 10.5,8
SF 1.81 4906, M409 L403	100	C	27.4	4	7.23	3	A		Fig 10.5,3
Hoard									
SF 1.81 4972, J252 L222	100	B	29	7	9.3	4	A		Fig 10.4,6
SF 1.81 4973, J252 L222	100	B	26.3	7	6.98	4	A		Fig 10.4,7
SF 1.81 4974, J252 L222	100	B	28	6	8.02	4			Fig 10.4,8
SF 1.81 4975, J252 L222	100	B	26.7	6	5.41	5			Fig 10.4,9
SF 1.81 4976, J252 L222	100	B	27	6	8.34	4	?		Fig 10.4,10
SF 1.81 4977, J252 L222 (Agrippa)	56	B	29	6	8.8	4			Fig 10.4,11
Group 5 (60/1-*c* 150)									
SF 1.81 4631, G3545 L3284	100	A	28	6	9.46	4			Figs 10.3,13 & 5,7
SF 1.81 5035, J245 F236	100	B	28.9	0	7.54	9			
Group 6 (other Roman)									
SF 1.81 3693, G1396 L1373	100	B	25.8	12	5.2	6			Fig 10.5,13
SF 1.81 5149, K404 L358	94	A	28	6	13.78	1			Figs 10.4,13 & 5,16
SF 1.81 5105, K176 F92	92	O	30	6	13.28	4			
Group 7 (unstratified)									
SF 1.81 3295, D447 L448	100	B	26.5	6	6.71	7			

Table 10.5 The Claudian coins from the Culver Street Phase 2 excavation.

SF no & context nos	RIC	Grade	Diam (mm)	Axis	Weight (gm)	Condition	Obv	Rev	Plate
Group 2 (*c* 44-60/1)									
SF GBS 996, A2358 L252	95	B	27.5	6	7.34	4			Fig 10.5,6
SF GBS 824, A1961 L194	94	B	27	6	10.97	4	A	A	
Group 3 (*c* 49-60/1)									
SF GBS 658, A1325 L61	100	A	28	7	8.48	4	XX<		Figs 10.4,12 & 5,2
SF GBS 888, A2163 L231	100	B	29.8	6	9.35	2	A		Fig 10.5,5
SF GBS 723, A1505 L110	100	B	28	7	7.5	5	?		
SF GBS 719, A1497 L111	100	B	25.4	5	7.12	4	A	o/s	Fig 10.5,9
SF GBS 808, A1799 L151	100	B	25.4	6	6.25	4			Fig 10.5,4
Group 5 (60/1-*c* 150)									
SF GBS 682, A1384 L66	100	B	26.5	7	6.38	9	?		
Group 6 (other Roman)									
SF GBS 522, A891 L10	92	B	28	6	10.19	3	A		Fig 10.5,12
SF GBS 1067, B133 F23	100	B	26.5	12	8.76	2			Fig 10.5,11
SF GBS 948, A2265 u/s	100	B	23.4	6	6.98	3			Fig 10.5,10
Group 7 (post-Roman and unstratified)									
SF GBS 211, A225 u/s	100	A	28	6	8.76	3			Fig 10.5,15
SF GBS 810, A1845 u/s	100	B	29.7	8	8.84	5	o/s		
SF GBS 404, A610 F103	94	A	28.5	7	11.92	4			Fig 10.5,14

Table 10.6 The Claudian coins from the Gilberd School excavation.

Claudian *aes* as the result of overstriking. Clearly the casting seam would not feature on those blanks that did not attempt to flow between the two halves of the mould. Personal experiment has demonstrated that successful casting is not simply a case of pouring molten copper into a mould then breaking it open to find fully-rounded blanks. Inspection of a number of Claudian coin-shapes will quickly show that not all those who produced the blanks were skilled artisans.

Occasionally the edges of a coin will exhibit other signs of casting or of being finished with a file, but

wear, corrosion and patination often removes even these traces. The most noticeable feature to be observed on the edges of many Claudian *aes* is an indication of the position of the sprue (the passage through which molten metal enters the mould). This usually takes the form of a flattened area, or a flat slight projection, at a point on a coin's circumference, as Fig 10.5,11 (SF GBS 1067) where the blank was broken off the sprue. The indented V-shape on the circumference of Fig 10.5,3 (SF 1.81 4906) is indicative of a casting where the sprue was stronger than the cast blank at the molten metal's point of entry into the hollow of the mould.

The presence of only one detectable sprue on this group of coins suggests that although the blanks were cast in multiples, they were not generally cast in a strip of interconnecting depressions (which would give each blank two sprues). The mould design is open to speculation. At its most simple it may have been wheel-shaped, a ring of circular depressions hollowed out around a central pouring reservoir with a sprue feeding each depression, or a tree-like arrangement with branches channelling the molten metal to hollow roundels. Whatever form the mould took, incorporated into it would have been vents, sometimes called risers, to release the trapped gases which can spoil a cast shape *(see* p 296).

Rarely does the surface of a coin betray its origin or manufacture. The heat and pressure of being struck gives the new coin a smooth texture in the field (the flat areas around the design), thereby (possibly) changing the nature of the blank's surface. What was once rough may become smooth, and what was uneven in profile may, after striking, become flat. It follows that this may even be the case with some overstruck coins. Some overstrikes are easily detected by a clear impression of an undertype in the field, as Figure 10.5,8 (SF 1.81 4822). Others may be less obvious, but they nevertheless exhibit indications of an undertype in the field, as Figure 10.5,9 (SF GBS 719). It must surely be probable then that some overstruck coins are not readily detectable because they display no trace of an undertype in the flat areas of the coin.

The almost unworn Ceres *dupondius* from Culver Street, SF 1.81 5149, has a very uncharacteristic obverse surface. On the lower part of the bust are concentric striations, indications of what look like ?lathe marks. This coin was not struck squarely, resulting in a good impression from the upper parts of the dies but none at all from the lower parts (Fig 10.4,13 & Fig 10.5,16). The rings left clearly visible by this careless striking could be the result of an impression taken from the mould during casting or of attention to the blank before it was struck. (The marks have not been transmitted from the die.) If these concentric rings were received from the mould during casting, then they could be the impression of the marks of a tool used by the pattern-maker to make the depressions in the mould. After-treatment of a cast blank is unlikely to have involved the machining of its surface. If the blank's surface were so irregular as to warrant this extreme treatment, it is surely unlikely that it would have reached this late stage of the coining process without being put back into the melting-pot. Although the use of a lathe for machining metals was known in antiquity, the lack of clear advantage mitigates against its use in this case. Cast blanks would already be flat. If the design of an earlier struck coin needed to be removed, experience would have shown that annealing and overstriking could obscure the undertype *(see* above). The absence of any other marks indicating the use of a lathe on the coin (eg a central depression or other holding marks on the coin's circumference) provides more negative evidence against its use. It would seem therefore that the striations on the coin's surface were received from the mould. Future thought perhaps should be given to the problem of what could have made these marks, as it may throw some light on the question of which material was used to make the mould.

Personal experiment has shown that when copper blanks are being struck the hot, heavy, and routine work dictates that the team producing them works quickly. The fast, regular pace of work can produce consistent results such as a constant die-axis alignment (against the use of 'boxed' dies suggested previously in *CAR* **4,** 24), as well as errors such as a brockage, ie a coin with one face correctly struck and the other being an incuse impression of it, the result of a coin jamming in the die and it striking the next blank. The obverse of the *sestertius* SF 1.81 5004 (Fig 10.5,1) with its incomplete letter-forms in the legend illustrates another feature indicative of fast work. The missing parts of the legend are the result of the obverse die becoming blocked with traces of metal, thereby preventing a clear, full impression being transmitted to the blank. (When this happened during my experiments I found it necessary to use small files or a wire brush to clean the die. If this failed, striking a soft lead blank usually removed the troublesome deposits.) Clearly, in the workshop producing this *sestertius,* speed was paramount and quality-control limited.

So often it is the similarities in a coin series (eg die-links) that enable numismatists to extract the most information about production and circulation from a group of coins. However, individual aspects of coins and differences in appearance can also provide good opportunities for maximising knowledge of a particular coin series and its production.

The most individual coin in this group is the Minerva *as* SF GBS 658 (Figs 10.4,12 & 10.5,2), with its ?unique obverse (Kenyon 1987). Its individual characteristics are a unique legend, reading anti-clockwise, around a proficiently executed, right-facing, bust of Claudius. Many Claudian *aes* have anomalous features, often due to lack of engraving skill or an inability to copy accurately, and occasionally engraving errors occur. This coin is, however, the result of none of those inconsistencies. It is competently engraved and the legend is literate,



Fig 10.2 Claudian coins. ***Group A die-/style-links, dupondii:*** *1-3...Ham Hill (Taunton Museum), 4...South Cadbury (Taunton Museum), 5...Waddon Hill (Bridport Museum), 6...Gloucester (Gloucester Museum), 7...Cirencester (cast in Ashmolean Museum), 8...Lincoln (Usher Art Gallery), 9-12...Colchester (CM).*

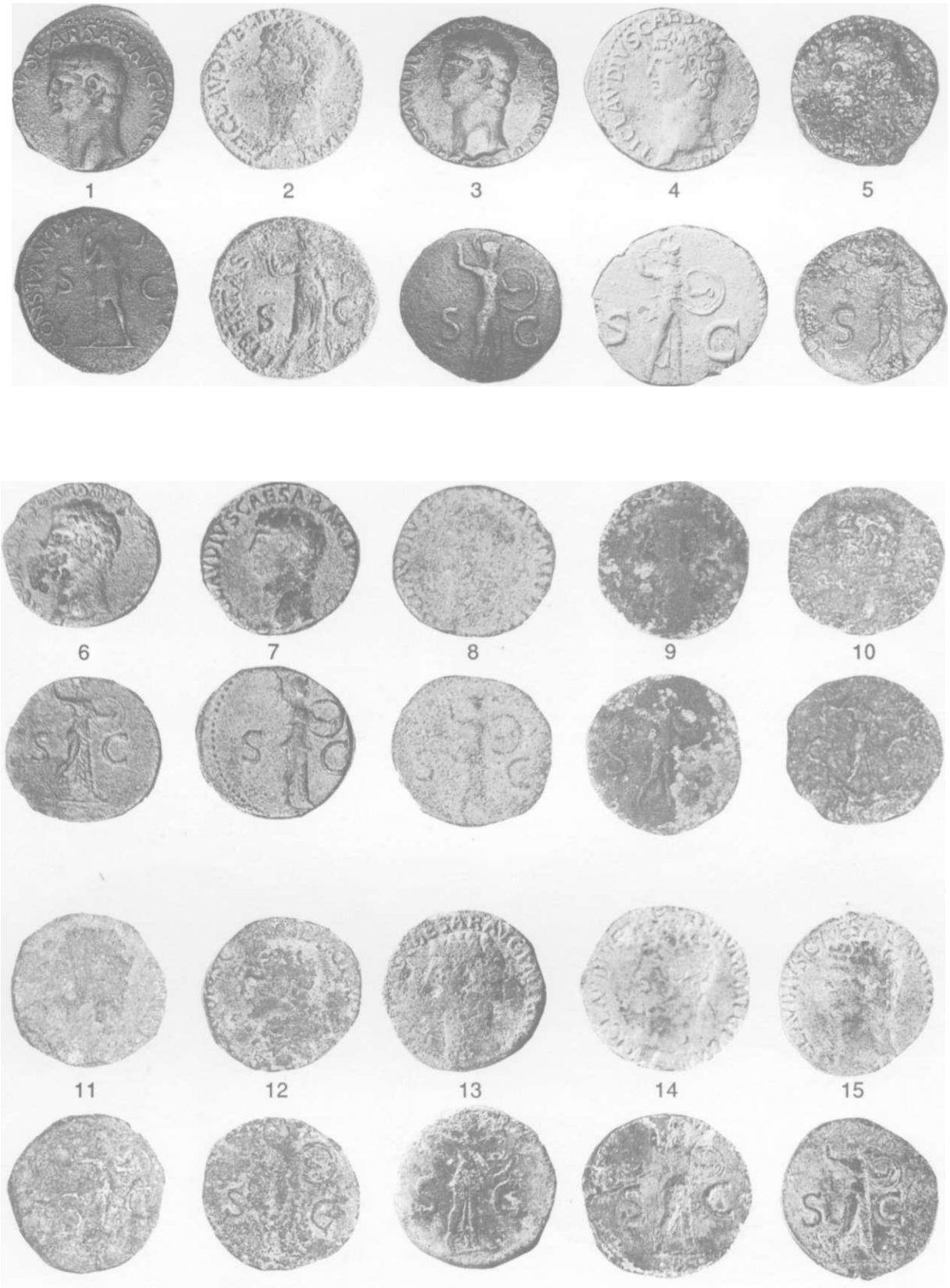


Fig 10.3 Claudian coins. ***Group A die-/style-links, asses:*** *1...Billingsgate (reputedly), London (private collection), 2...Colchester (CM), 3...unprovenanced, photograph courtesy of Spinks & Son, London (sale stock), 4...Walbrook, London (BM, ex-Roach Smith), 5...Wanborough (Swindon Museum), 6-8...Lincoln (Usher Art Gallery), 9...St Albans (Verulamium Museum), 10...?Harlow (CM), 11-12...Colchester (CM), 13...SF 1.81 4631, 14-15...Colchester (CM).*

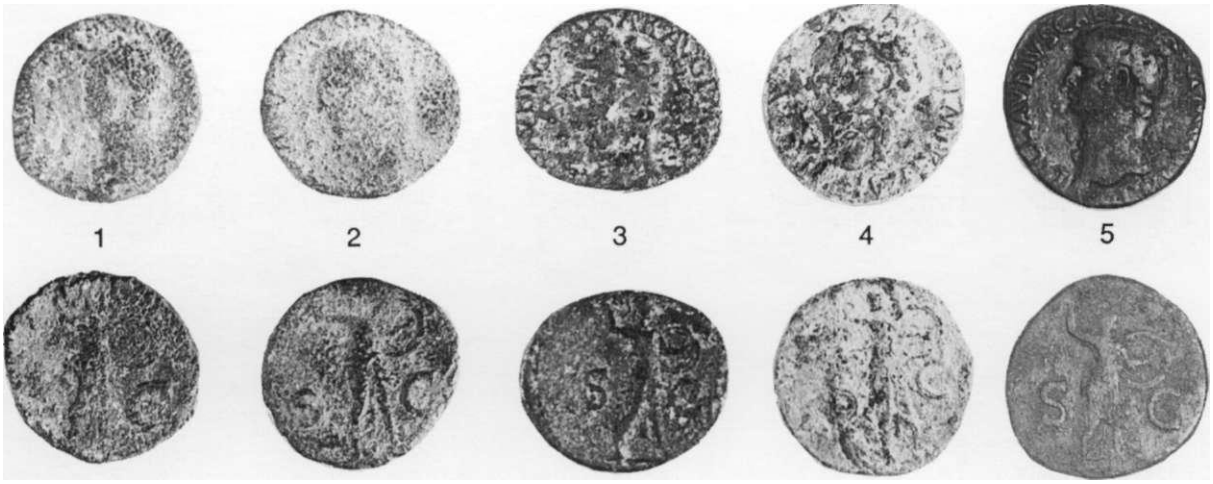




Fig 10.4 Claudian coins. ***Group A die-/style-links, asses:*** *1-5...Colchester (CM).* ***Culver Street Site J Group:*** *6...SF 1.81 4972, 7...SF 1.81 4973, 8...SF 1.81 4974, 9...SF 1.81 4975, 10...SF 1.81 4976, 11...SF 1.81 4977.* ***Enlargements:*** *12...SF GBS 658, 13...SF 1.81 5149.*

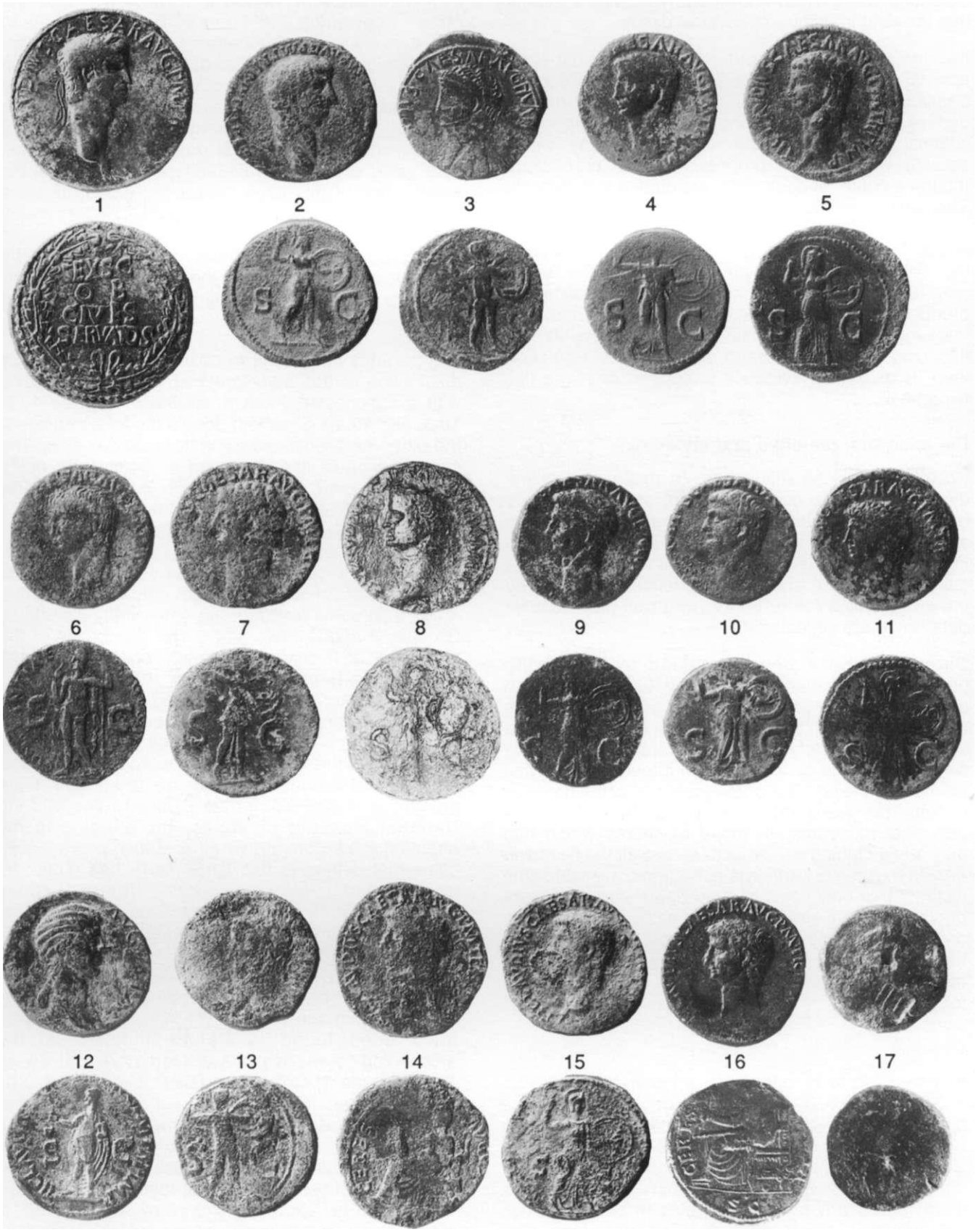


Fig 10.5 Claudian coins. 1...SF 1.81 5004, 2...SF GBS 658, 3...SF 1.81 4906, 4...SF GBS 808, 5...SF GBS 888, 6...SF GBS 996, 7...SF 1.81 4631, 8...SF 1.81 4822, 9...SF GBS 719, 10...SF GBS 948, 11...SFGBS 1067, 12...SF GBS 522, 13...SF 1.81 3693, 14...SF GBS 404, 15..SF GBS 211, 16...SF 1.81 5149; Augustan countermarked as: 17..SF GBS 831.

indicating a (?limited) knowledge of Latin. It seems that the coin is unique in obverse design.

Its weight, 8.49 gm, and (conjectured) die-size, approximately 27 mm, put it in Colchester's second phase of production, tentatively dated to *c* 47-c 52. It derives from a layer belonging to the pre-Boudican colonial occupation of the town (c 49-60/1), which accords well with the proposed date of production, though it could, of course, be residual in that deposit. There is no evidence to suggest that this coin was struck at Colchester, but other coin-evidence suggests that a (?military) mint was operating during the earliest years of Roman occupation at Colchester *(see* below). If, as would seem probable, Colchester produced Claudian coins in the years immediately following the Roman invasion, it is not impossible that this coin could have been struck there. However, there is as yet no evidence to support or refute this hypothesis.

Die analyses: die-links and style-links

No attempt will be made here to make a complete die-study of these coins. However, some coins have been grouped because of their similarity in appearance and they are presented together in Figures 10.2-4. It is anticipated that a more complete die-study of these and other die-related coins will be the subject of a future paper, when all the available data has been collected.

Die-groups have been identified by comparing photographs of coins from these excavations with others from Colchester and further afield. The groups may take the form of 'die-links', ie coins struck by the same die(s), or 'style-links', ie coins that display a similarity of style or technique in die-cutting, but that are not die-linked. The photographs of coins not from Colchester were taken in a number of mostly provincial museums. **In** those museums which had only a few coins, I was able to record all the Claudian *aes.* In museums with large collections, available time dictated that only coins in a 'readable' condition were photographed. Coins worn flat or badly corroded were omitted. Inevitably some potential die-linked coins will have been missed, but should any be noticed in a museum's or individual's collection I would be grateful for notification.

Group A

It is pleasing to recognise yet another coin (SF 1.81 4631; Figs 10.3,13 & 10.5,7) belonging to this large die-/style-linked series already noted at Colchester *(CAR* **4,** 33-4). Re-examination of the coins in the Colchester Museums has also revealed further die-/style-links to this group. The newly identified links were mostly amongst those coins in poor condition not previously photographed. In addition, inspection of two important groups, the 'Child's Grave' hoard *(GM* 1866(H), 336; *CAR* **4,** 74), and a package of coins marked 'Harlow', which may be from the Romano-Celtic temple there, produced yet more links. Links have also been provided by other coins examined since my report in *CAR* **4.** Perhaps the most interesting of these newly-recognised die-/style-links are the Libertas and Constantia *asses* from Colchester and London respectively. The long-legged elegant figures of these reverses and the broad-necked busts of Claudius fit easily into the die-group. Thus we have here not only a large die-related group containing *dupondii* and *asses,* but also *asses* of different reverse types. Because of the significance of this large die-related group, all coins so far identified have been illustrated. This has meant that even coins in poor condition and of 'unphotogenic' quality have been included. The diverse sources of some of the other illustrated coins accounts for the unavoidably wide range of contrast evident in the plates.

It is perhaps interesting to observe the geographical distribution of this early group: the number of coins with a Colchester origin illustrated in Figures 10.2, 10.3, and 10.4,1-5, almost equals the total number of the other die-associated coins from various sites. The centralisation of this die-group at Colchester, noted previously *(CAR* **4,** 34), is further confirmed by this evidence. The numismatic links between the military-occupied hill-forts of the south-west, Ham Hill and South Cadbury, Somerset, and Waddon Hill, Dorset, and Colchester, the fortress/*colonia* in the south-east of Britain, feature not only coins of Group A, but also some related to the other early die-related Groups, C and D *(ibid,* 34-5). The distribution of the remainder of the large well-made coins of Group A includes, perhaps as expected, the major military establishments of Cirencester and Gloucester (both Gloucestershire), and Lincoln (Lincolnshire). The lesser military establishments of Verulamium (St Albans, Hertfordshire), and Wanborough (Wiltshire), are also represented and so too is London. I am grateful to G C Boon, formerly Senior Keeper of the National Museum of Wales, for bringing to my attention (pers comm) two other British provenanced coins that belong to this large die-related group: an unpublished Minerva *as* from Lydney (Gloucesershire) and a Ceres *dupondius* from the important military site of Usk (Gwent) (Boon 1982,16, Hoard B/l).

It is clear that die-group A was produced at an early date following the invasion of AD 43 as examples have been found in Period 1 levels of the archaeological excavations at Lion Walk and Culver Street Phase 1, Colchester *(CAR* **4,** pls 3.1 & 3.5). Also, it is generally considered that the function of early imperial *aes* was to act as pay and small-change for the military and government officials. The distribution of these coins across the country would seem to illustrate that the four invading legions were supplied with new *aes* minted at Colchester before they set out to travel the length and breadth of the new province.

The paucity of Group A die-linked coins found outside Britain overrides the suggestion that Colchester was purely a supply-base for coins minted elsewhere in

the Empire. Comparison with coins from continental sites illustrated in foreign-language publications has provided only two die-/style-linked coin to Group A, a Ceres *dupondius* from a Spanish collection (Campo *et al* 1981, pl D,8) and a Minerva *as* from the large group of coins found at St Leonard (Mayenne), France (Giard 1970, pl 1, no 4), the latter again brought to my attention by G C Boon.

Other links

Three other Colchester coins from Culver Street Phase 2 and four from the Gilberd School are internally and/or externally die-/style-linked.

The first, a Minerva *as* (SF 1.81 4906; Fig 10.5,3), is apparently from the same hand as a coin illustrated by the late C H V Sutherland in his foremost study of the Claudian *aes* from Sheepen, Colchester (1947, pl 11,11). It is also related to the reverse die of an *as* from the Lion Walk excavation, Colchester *(CAR* **4,** pl 1.11). The general posture and shape of the figures, together with the distinctive letter-shapes S and C alert attention. Closer inspection identifies other features which are very similar, notably the shortened arm holding the shield and the shape of the face.

The second is an Antonia *dupondius* (SF GBS 522; Fig 10.5,12) with very distinctive nose and hair. It is die-linked by both obverse and reverse dies to another Sheepen coin illustrated by Sutherland (1947, pl 19,2).

The third (SF GBS 1067; Fig 10.5,11) is a Minerva *as* die-linked to a coin from a pre-Flavian grave in the Victoria Road cemetery at Winchester (Kenyon forthcoming). The two are of similar weight, 8.76 gm and 9.1 gm respectively, and share both obverse and reverse dies. (Another Claudian *as* from the Victoria Road site is also die-linked to a coin from Colchester *(ibid).)*

The familiar style of the Minerva *as* (SF 1.81 3693; Fig 10.5,13) is easily recognisable as belonging to the series identified in *CAR* ***4*** (Group C; pl 5.1-4) linking Colchester and Richborough. An unusual feature of that particular group of coins was the inclusion of, for want of a better description, a 'plated' *as.* The solidity of the Culver Street coin cannot be disputed.

The fifth coin, a Minerva *as* (SF GBS 211; Fig 10.5,15) provides yet more internal, as well as external, die-/style-links. The internal links are to a *dupondius* from the same site (SF GBS 404; Fig 10.5,14), and to an excellently preserved *dupondius* from Culver Street Phase 2 (SF 1.81 5149; Fig 10.5,16). The external style-link is found in a *dupondius* from Fingringhoe Wick, Essex, some five miles south-east of Colchester. The damaged condition of two of the three Colchester coins prevents absolute identification of die-links, but comparison of the positions and shapes of the legends and busts confirms their similarity of treatment. This is Colchester's second example of co-production of *asses* and *dupondii* from one mint workshop *(CAR* **4,** 34). Coins were struck on blanks of two metals (copper and orichalcum) with dies that were probably manufactured in the same engraving workshop. Therefore one can perhaps recognise a much more considered and controlled approach to the production of some of these provincial coins than is usually noted.

Die measurement and sizes

A guide to the measurements of dies was obtained by placing those coins that had a clear dotted border visible (because they were struck off-centre) on a chart of circles of gradually increasing size until a suitable fit was found. If a coin had a full flan and the complete die was visible then the diameter of the die (ie the diameter of the dotted border) was measured. This method provides a rough, but workable, guide to the sizes of dies used.

The measurable die sizes of the coins from both the Culver Street Phase 2 and Gilberd School sites are shown in Table 10.7. The absence here of Claudian *asses* and *dupondii from* what is certainly the earliest phase of Roman occupation, and the small number of coins with measurable dies, limit the potential value of this data. In an attempt to enhance these results, die sizes of some coins are conjectured from assumptions about the nearness of their flan size to their die size. These conjectured measurements are shown by a '?' before the number of coins, eg ?1. Where measurable dies and conjectured die sizes fall in the same group, measurable dies are given first, followed by conjectured dies, eg 2?1.

The correlation between die size and proposed date *(ibid,* 36-9) cannot be tested by these results. However, it may be observed that the measurable dies were of the same sizes as those already noted for *asses,* ie 30-31 mm, 27-28 mm, and 25 mm *(ibid,*

	Group							
Diam (mm)	1	2	3	4	5	6	7	**Total**
asses								
30	-		-	-	?1	-	-	?1
29								
28	-		1	-		-	1?1	2?1
27	-		3?3	-		1	-	4?3
26	-		1	-		1?1	-	2?1
total	-		5?3	-	?1	2?1	1?1	8?6
dupondii								
30	-		-	-		-	1	1
29								
28	-		-	-		?1	1	1?1
27		1	-	-		-	-	1
total		1	-	-		?1	2	3?1
sestertius								

1 in Group 2, obverse 34 mm, reverse 32 mm

Table 10.7 Measured and estimated die-sizes of Claudian coins from the Culver Street Phase 2 and the Gilberd School sites.

36-7). In addition, 26 mm dies may be seen in use. These are undersized dies for the second issue. Coins of this die size occur in contexts dated to the pre-Boudican period (AD 43-60/1) and the later Roman period.

The die sizes of *dupondii* are also found to correspond to one already noted, ie 27-28 mm *(ibid,* 39). There is also a *dupondius* struck from 30 mm dies. This die size was not recorded among the die sizes of *dupondii* noted in my earlier report *(CAR* **4,** 35-6) although it was proposed that *dupondii* were struck with 30-31 mm dies *(ibid,* 39).

'Agrippa' *aes,* present from Colchester's Period 1 onwards, have not been counted here as Claudian coins, although they undoubtedly served as models for imitation in the Claudian era.

Analysis of the weights and sizes of *aes*

Three main standards of size and weight, operating at different times in the Claudian period, were proposed in *CAR* **4** (36-9). They were as follows.

First issue: *as,* weight 10.0-11.5 gm, dies of 30-1 mm, *dupondius,* weight 13.0-15.0 gm, dies of 30-1 mm.

Second issue: *as,* weight 8.0-9.5 gm, dies of 27-8 mm, *dupondius,* weight 10.0-11.0 gm, dies 27-8 mm.

Third issue: *as,* weight 4.5-6.0 gm, dies of 25 mm *dupondius,* weight 8.0-9.0 gm, dies of 25 mm.

Comparison of these standards with the more recently-excavated coins (only those in condition 4 and better were considered) produced generally confirmatory results.

The as

The first issue standard is represented here by only one coin, SF 1.81 4631 (Figs 10.3,13 & 10.5,7). Its worn condition accounts for its slightly low weight of 9.46 gm.

The remainder of the *asses* belong to the second issue, with weights ranging from 7.12-9.35 gm and almost encompassing the proposed range given above. The lowest weight is for a coin, SF GBS 719, in a distressed condition which probably accounts for its lack of mass. Three other coins also belong to this issue, SF 1.81 4906, SF GBS 808, and SF GBS 948, but all were produced on underweight blanks, 6.25-7.23 gm, using undersized dies, of approximately 26 mm. It is possible that they were intended to deceive. One is very crude and clearly of inferior manufacture (SF 1.81 4906), but the other two are reasonably well produced coins of small module.

The third standard of the *as* is not represented here.

The dupondius

Of the four *dupondii,* two may be attributed to the first issue: SF 1.81 5149, with a weight of 13.78 gm, and SF GBS 404, at 11.92 gm. The latter's worn and friable condition accounts for its low weight. The similarity of the dies suggests that not only were they struck at the same centre *(see* above, p 305), but also that they were probably struck to roughly the same weight. The second issue is represented by SF GBS 824 and SF GBS 522. Their die sizes, 27 mm and 28 mm, and weights, 10.97 gm and 10.19 gm, respectively, are within the range given.

The sestertius

The *sestertius* SF 1.81 5004 is, at 27.02 gm, of almost orthodox weight and would belong to the first issue if the proposed phases of minting were to be extended to include the *sestertius.* (The second issue would then be 20-24 gm *(see CAR* **4,** 40) and the third issue 16-18 gm. Although the evidence is scanty, due to the comparative rarity of finds of Claudian *sestertii,* it does suggest that *sestertii* were struck to these three standards.)

The Culver Street Site J group

Six Imperial *aes* (SF 1.81 4972-4977; Fig 10.4,6-11) were found together in Boudican destruction debris *(CAR* **4,** p 75, Hoard 24). Also found in the same layer were scattered casket fittings of a type often associated with casket burials (Fig 5.23, **640-4,** pp 165-6). The coins represent the contents of what may have been a lost purse, a small hoard, or a grave offering in a casket. Certainly the six provide us with another small Claudian group, or hoard, from Colchester *(ibid,* 70, 74-5, Hoards 8, 18, 19, and 26).

In common with the majority of Claudian hoards, this is wholly of *aes.* The inclusion of an Agrippa *as* with five Claudian *asses* in what may be considered a group of coins taken from circulation, rather than specially selected pieces, indicates the important, but secondary, role played by this coin-type in Claudio-Neronian Britain. Colchester's two larger Claudian *aes* hoards (Hoards 8 & 18; *see* below) also include Agrippa *asses* in their composition. The pre-Boudican context explains the absence of Neronian *aes* from this group. (Nero's first copper-alloy currency was not struck at Lugdunum (Lyon, France) until *c* 64 and is unlikely to have reached Britain before the mid 60s at the earliest.)

Expectation of finding related die-groupings of coins in a hoard may be higher, at first thought, than in scattered finds. The reasoning being perhaps thus: if they were found together perhaps they were issued together, particularly if, in the case of provincially-struck coins such as these, the point of issue may not be too distant from where they were struck. However, after a moment's reflection it becomes clear that a number of important factors have been ignored, the most obvious being time and quantity. The enormous number of coins that were struck and the possibly lengthy period of circulation would ensure that even coins struck together at the same centre quickly dispersed.

Inspection of these six coins reveals a seemingly

homogeneous group, but without recognisable internal or external die-/style-links. Similarities in the sizes and shapes of the obverse busts, with accurate, evenly-sized and evenly-spaced legends, convey uniformity. In addition, it is possible to recognise in the general treatment of the reverse designs a degree of conformity.

It is generally accepted that there was a progressive reduction in the sizes and weights of so-called 'Claudian copies' produced during the Claudio-Neronian period. The weight-range of the Claudian coins in this group, with four between 8.0-9.5 gm and two between 5.0-7.0 gm, would therefore suggest that they would not have been in circulation together during the earliest period of Roman occupation, when coins of a more orthodox weight were circulating. Judging by weight, the degree of wear, and the archaeological context, it is unlikely that the coins came together before the mid 50s. They may have been lost between then and the Boudican revolt, or, far more likely, were hidden or simply abandoned during the revolt itself, either as the contents of a purse or a casket, or as offerings in a casket awaiting burial.

Claudian coin hoards of metals other than copper-alloy are rare. *Aes* hoards can vary from small accumulations like this one (and *ibid,* 74, Hoard 19), equivalent to about half-a-day's pay for a legionary soldier, to bigger savings of about 30 coins *(ibid,* 70, 74, Hoards 8, 18), amounting to roughly three day's wages. But it is well known that troops did not receive all of their pay in coin: deductions were made for equipment, food, savings, etc. The amount left would be paid to the soldier as 'pocket money'. Calculations made from the accounts of two soldiers described in a Domitianic papyrus of AD 81 indicate that of the 75 *denarii* paid three times a year, each soldier received only 13 *denarii for* personal use (Watson 1969, 105-7, 220-1). So, in terms of a soldier's available spending money (less than one and three-quarter *asses* a day), a hoard of even only six *asses* would represent a reasonable sum. The value of a small Claudian hoard such as this one from Culver Street Site J would therefore seem to be greater than may at first be evident. Claudian hoards of a small size and of low denominations are not unusual, and indeed some may have passed unrecognised as hoards in the past.

Conclusion

The paucity of Rome-minted Claudian *aes* among the excavated coins from Colchester's extensive archaeological excavations reflects the picture of Claudian coin-finds throughout England and Wales. It is clear that Britain was not supplied with *aes* from Rome during the period of Claudian rule. The production and supply of copper-alloy coins to meet the need for paying the army may have rested with the military authority itself, or it may have been the responsibility of the procurator or governor. It is difficult to know whether the allocation of this task was originally to one ?permanent mint or more. Clearly more than one mint produced Claudian *aes, but* all were not necessarily officially commissioned coins.

If a permanent mint (or mints) was responsible for supplying the army in the field, then delays in delivery of fresh coins may have occasioned the manufacture of coins by those same troops. One could expect then to see a pattern of an increasing proportion of poorly-made coins the further one travels from a minting-centre. Other interpretations could be advanced to explain distribution patterns (eg native production of the crudest coins) and therefore one should proceed cautiously. This aspect needs further close study, but for the moment a general observation is that there seems to be a greater percentage of crudely-struck Claudian coins from sites in the West Country than in the south-east.

A COUNTERMARKED AUGUSTAN *AS* FROM THE GILBERD SCHOOL SITE

[Fig 10.5]

by Robert Kenyon

The occurrence of a countermarked coin at a British site is always noteworthy and important to record. There are two main reasons for this: first, to add to the records of the geographical distribution of a counterstamp, and second, to identify the particular coin that has been countermarked. This information enables a more complete picture of the purpose, behaviour and use of counterstamps to be formed.

This very worn Augustan altar *as* of Lugdunum (SF GBS 831; *RIC* 230?, 23.5 mm, die-axis 2, 9.58 gm) is counterstamped TIB across the neck of the obverse bust (Fig 10.5,17). Buttrey (1970) dates the Tiberian countermarks to the AD 30s, so this coin had already seen some circulation before it was counterstamped. It is undoubtedly residual in its context (A1882, L176, Period 3 midden), which is dated 60/1-*c* 250/75, and reflects the high proportion of early *aes* from the Gilberd School site as a whole. The scarcity of Claudian and pre-Claudian *aes* in post-Flavian centres also suggests that the coin was lost in the Claudio-Neronian period and redeposited during subsequent activity on the site.

It is certain that the coin travelled a long way from the site of its counterstamping. C M Kraay, in his paper on the behaviour of early Imperial countermarks (1956, 124), points out that the two main versions of TIB countermarks, TIB and TIBC, are not always identified in reports as separate types. Consequently, it is difficult to ascribe a particular origin to this variety, except to say that it was a Rhineland camp. Kraay identified Strasbourg as the source of TIBC *(ibid,* 120). TIB may be a variant used in another Rhenish post. H Chantraine's work in publishing the coins from

Neuss (1982) details 98 coins with variants of the Tiberian countermarks: 23 of the (TIB) variety, and 75 [TIB]. This recent information suggests that one, or more, of the frontier camps in the vicinity of the bordering region between Upper and Lower Germany may have been applying the [TIB] variant. To find a coin from this region at Colchester is not perhaps surprising, as three of Britain's occupying legions were stationed in that area prior to the start of the invasion: II Augusta at Argentoratum (Strasbourg), XIV Gemina at Moguntiacum (Mainz), and XX at Novaesium (Neuss).

THE BARBAROUS RADIATES FROM THE CULVER STREET SITE

by John A Davies

The 171 barbarous radiates, or irregular *antoniniani* of the 270s and 280s, account for 27 per cent of the identifiable Roman coins from Culver Street. The range of types and sizes present is consistent with that of other excavated assemblages. The variety of style and degree of wear exhibited makes the presence of a dispersed hoard unlikely. The types reflect the regular coins in circulation.

The small number of central Empire types comprise imitations of Gallienus, Claudius II, and the *Divo Claudio, Consecratio,* issues. They also include a single copy of Probus, showing Jupiter, with thunder bolt and sceptre, on the reverse (SF 1.81 3014). Copies of the emperor Probus are not common and his coinage is the latest to be represented within this imitative coin series.

The bulk of these coins are copies of the Gallic Empire coinage. Most imitations of Victorinus carry the *Invictus* reverse type. However, the majority are copies of issues of Tetricus I and Tetricus II. There is a complete range of coins present, including many minims, although a number of those have been rendered completely illegible by much wear.

There are other noteworthy types present. Hybrids combine an obverse of Victorinus with a *Pax Aug* (vertical sceptre) reverse of Tetricus I (SF 1.81 3605), and an obverse of Tetricus I with a *Princ Iuvent* reverse of Tetricus II (SF 1.81 2968). Of particular interest is a coin of Tetricus I carrying the reverse type *Laetitia Augg* (SF 1.81 3075). It is a member of a die-group first identified in the hoards of Saint-Mard I and II from Luxembourg (Lallemand and Thirion 1970, pl B, 15/3901). The obverse portrait of either Tetricus I or II is combined with the figure of Laetitia on the reverse, but employing the legend *Salus Augg.* In this example the flan is of reduced size and the legend has been lost. Further examples of this group have since been identified in the Paternoster Row hoard from London and from the site of Neatham in Hampshire (Davies 1988). This example is an important contribution to the identification and study of die-groups and their distributions.

11. PAINTED WALL-PLASTER FROM THE CULVER STREET AND THE GILBERD SCHOOL SITES

by Roger Ling

Most of the plaster from the Culver Street and Gilberd School sites has been quantified in terms of area and surface decoration according to building and (where possible) room. Seventy-six tables have been compiled on this basis covering a total area of 18.5 m^2 (listed in Table 11.1, Appendix 14, microfiche pp 769-70). The tables relating to the building which produced the most material (ie Building 123) are reproduced on microfiche (pp 770-8); the rest are in the site archives in the Colchester Museums.

The following notes concern the groups of plaster which are worthy of special comment or contain pieces which merit illustration.

CULVER STREET

Building 77; Barrack Block 1 (Site B Period 2)

F651 (internal wall)

A few scraps of plaster, colours much eroded. Remains of plaster *in situ* revealed a simple panel-decoration on a.white ground, the frames of the panels painted respectively green, red and green.

Building 78; Barrack Block 2 (Site B Period 2)

Plaster of similar quality to that from Barrack Block 1, including pieces with finely smoothed red and black surfaces. There are signs of discolouration probably due to burning.

Building 79 (Sites B & C Period 2)

Very small quantity of plaster, mainly dark red background with black band (20 mm wide) edged on one side with a 3 mm wide white band and apparently on the other by a green band 6 mm wide. The quality of the red plaster is reminiscent of Building 8 at Lion Walk *(CAR* **3***,* 42).

Buildings 77-9 (Sites B & C, Period 2 general destruction debris)

The material is very similar to the three previous Period 2 groups above, as would be expected in Boudican destruction deposits. One or two fragments show splashes of pink on a white ground (eg B1526, Building 78) or in black and red on a pink ground (eg C319, Building 79), producing the familiar effect of imitation veneer favoured for the base zone in Romano-British wall-decorations. A couple of fragments (B1769) have traces of floral or other ornamental motifs, too incomplete to identify. Several pieces carry imprints of keying patterns on the reverse (B1719/1692, Building 77). A few pieces (B2285, Building 77) have finely smoothed red surfaces.

Building 81 (Sites G & H Period 2)

Very small quantity of plaster, practically all white but with a very small amount of red and black, including one black band. All the plaster has very poor quality paint (thin).

Buildings 86-90 (Site E Period 2)

Fragments of various panelled and striped decorations in white, green, red and black. One group of joining fragments (E876) shows a red surface overpainted in green. The pieces are mostly of very good quality, finely burnished (especially those with a red ground) and with the stripes carefully and evenly painted (E830 & E1197). One piece (E1189) has a bevelled surface, presumably from the angle of a door- or window-reveal or of a niche.

Buildings 94-5 (Site B Period 3)

A slightly different range of colours is represented, including pink and grey. The grey and pink material (Building 95, B1641) is coarsely finished. One fragment (B2284) shows a white ?rosette. Three joining pieces are so roughly surfaced along one edge as to suggest that they may have come from the angle of the wall in which the plasterer had difficulty using his float or trowel.

Buildings 100-109 (Site E Period 3)

Another heterogeneous assemblage of fragments from striped and panelled schemes, including both the finely smoothed type and some slightly coarser material. A couple of pieces (E813 & E825) show remains of white curving forms (leaves?) on a red ground; one fragment (E703 EL34) shows a red line on a white ground with a row of three red spots such

as frequently run diagonally from the corners of panel frames in Romano-British wall-painting; one largish fragment (E813: 10 x 115 mm) is painted green all over; and others (E825) have white lines and stripes on a green ground, at least once painted in turn over a red ground. One white fragment (E617) seems to present a convex surface, so perhaps comes from a column or semi-column. Finally a number of fragments (E525 EF397; E703 EL34; E825 EL52) derives from a distinctive decoration with a black fascia edged by a white stripe (9 mm wide), on a red ground. The colour-scheme is that of the gladiator wall from Building 51 in Balkerne Lane (Davey & Ling 1982, 99-101, no 10, fig 15; *CAR***3**, 1984, figs 138-9).

Building 112 (Site B Period 4)

Room 1

Heterogeneous fragments, but the B366 material looks very similar to that from Room 2 and could well be contemporary, even identical. Incised guide-lines are, as there, visible on red and green surfaces.

Collapsed plaster in Room 2

A small sheet of wall-plaster was found lying face down and was lifted after consolidation of the backing with scrim and plaster of Paris. Unfortunately, while small areas were found to be complete, most of the plaster had fragmented, and it proved impossible to reconstruct any meaningful relationships. A small sample of pattern-elements is illustrated (Fig 11.1). The orientation of none of the pieces is certain but guide-lines scored in the plaster to assist the painter are assumed to be vertical or horizontal. Fragment 584 shows fasciae of red and green meeting at an obtuse angle, and may possibly represent an architectural element in perspective, a common element in Roman wall-decoration (cf Davey & Ling 1982, 194, pl 96). Fragment no 589 shows stripes meeting at an angle of about 110° and, if this too does not belong to a perspectival scheme, it may form part of some kind of polygonal pattern. Beyond this, all speculation is unprofitable.

Room 6: mortar and gravel spread (not necessarily from Building 112)

One important fragment in this group of material shows a pair of purple stripes on a white ground joining at an acute angle (angle of a triangle?); red and yellow bands follow at one side. B882 includes several interesting elements, eg imitation marbling (pink blotches on a purple ground; dark veins on pale green). Some of the fragments clearly derive from a single decoration with yellow tendrils and volutes, green roundels, and small white elements on a red ground (Fig 11.2). The presence of ruled and compass-drawn guide-lines suggests a carefully measured repeating pattern, and the surviving motifs are consonant with the type known by German writers as *Tapetenmuster* ('wallpaper pattern'), used both on walls and on ceilings *(see* especially Ling 1985). There is insufficient material to carry out a confident reconstruction of the pattern, but, working from the evidence of the largest fragments (A, B and C; *see* Fig 11.2) and referring to the traces of guide-lines and the 'grain' of the plaster (the fine surface striations created by a roller or other compacting implement) as well as to the painted elements, we can postulate two principal motifs. The first one, based on a green roundel (Fig 11.2 (centre left)), is safe enough, though the emblem within the roundel, evidently painted in white on the red ground, cannot be re-composed. The second, as can be judged from Fig 11.2 (centre right), is little more than educated guesswork: for instance, there is too little of the circular guide-lines in fragments B and C to provide more than a rough indication of their radii, which could be some centimetres larger or smaller. How the two motifs fitted together is still more problematical: if the circles of Fig 11.2 (centre right) were enlarged, the green roundel of Fig 11.2 (centre left) could be fitted in the centre; alternatively, they could have been arranged in an alternating pattern rather like those of the decoration from the supposed market-hall at Leicester (Davey & Ling 1982, 131-3, no 23, figs 4, 28, pl 52) and of a number of examples from sites in the Alps and Gaul (Allaz, Martigny, Avenches, Amiens: references in Ling 1985, note 26; cf Allag 1983, 197, figs 9-11). Usually such schemes produce a fairly strongly compartmentalised structure, with emphasis upon the diagonals and the crossing-points, but here the broad volutes would have left less of the background visible, thus creating a more even spread of decorative elements. Something of the original effect can be gauged from a wall-decoration in the so-called Baths at Virunum, near Klagenfurt in Austria, where arabesques and floral motifs, executed mainly in green and dark red, cover a black field (Praschniker & Kenner 1947,175f, 221f, 232f, pl 1, figs 154-6: almost certainly dated too late). For the use of similar volutes in a different medium and in a different pattern one can compare the stucco vault-decoration of the 'tomb of the Valerii' on the Via Latina outside Rome (Wadsworth 1924, 69-72, pls 20-4; Mielsch 1975, 95-7, 177-9, K124, pl 85).

What surface the plaster decorated is uncertain, but the thickness and weight of the fragments seem to preclude a flat ceiling. The largest piece (A) gives a very faint hint of curvature, suggesting derivation from a vault; but the hint could be illusory and is in any case insufficient to settle the matter. The decoration could equally have come from a wall.

Certainly from a wall is a much thicker fragment in the same deposit. Though the motif, a curving yellow tendril on a red ground, is ostensibly similar to that of the plaster already discussed, the surface is less carefully smoothed and burnished; perhaps as a result of this, the red colour is lighter. The guide-lines, moreover, are of a different kind from those on

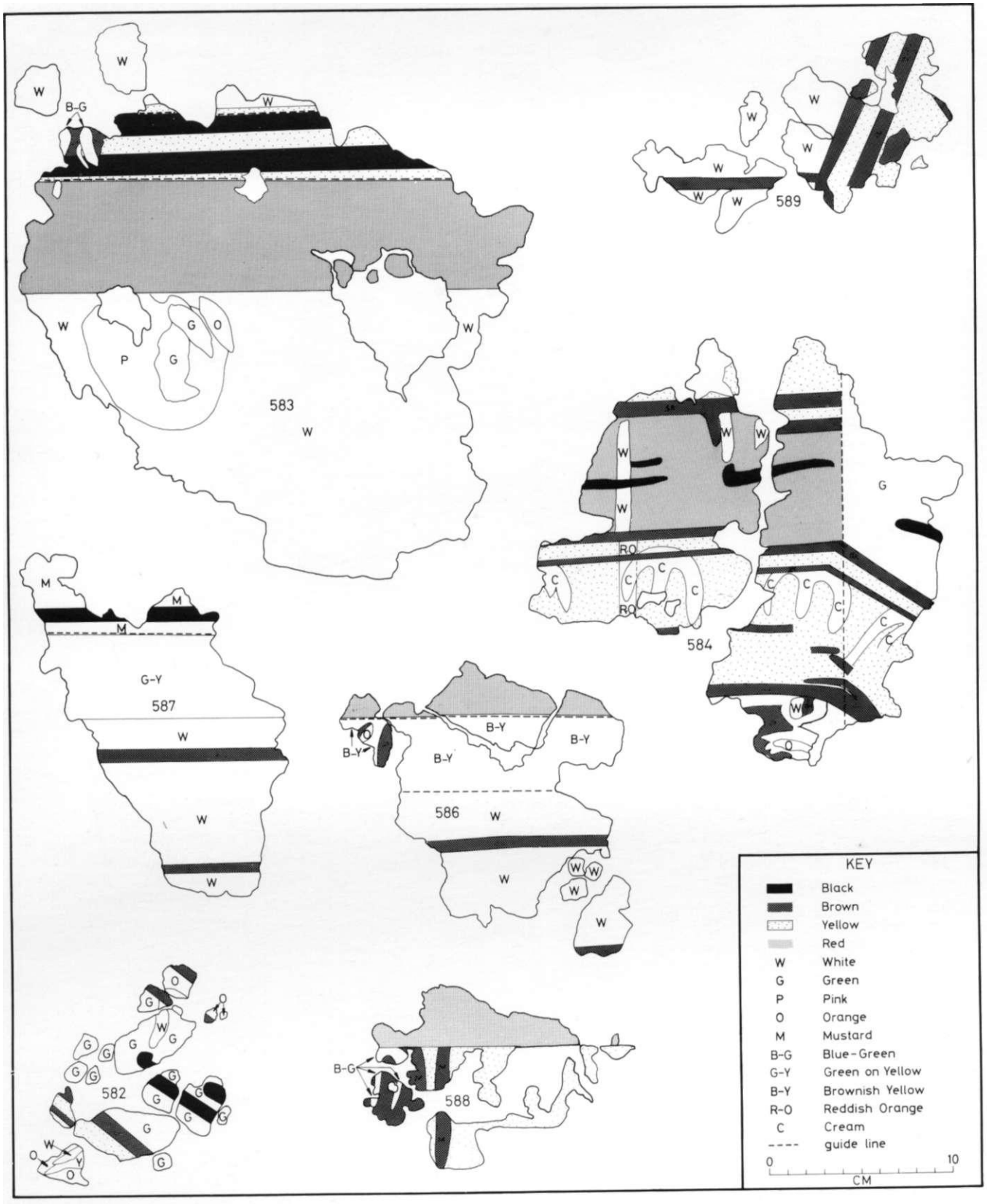


Fig 11.1 Wall-plaster from Building 112, Room 2. 1:3.

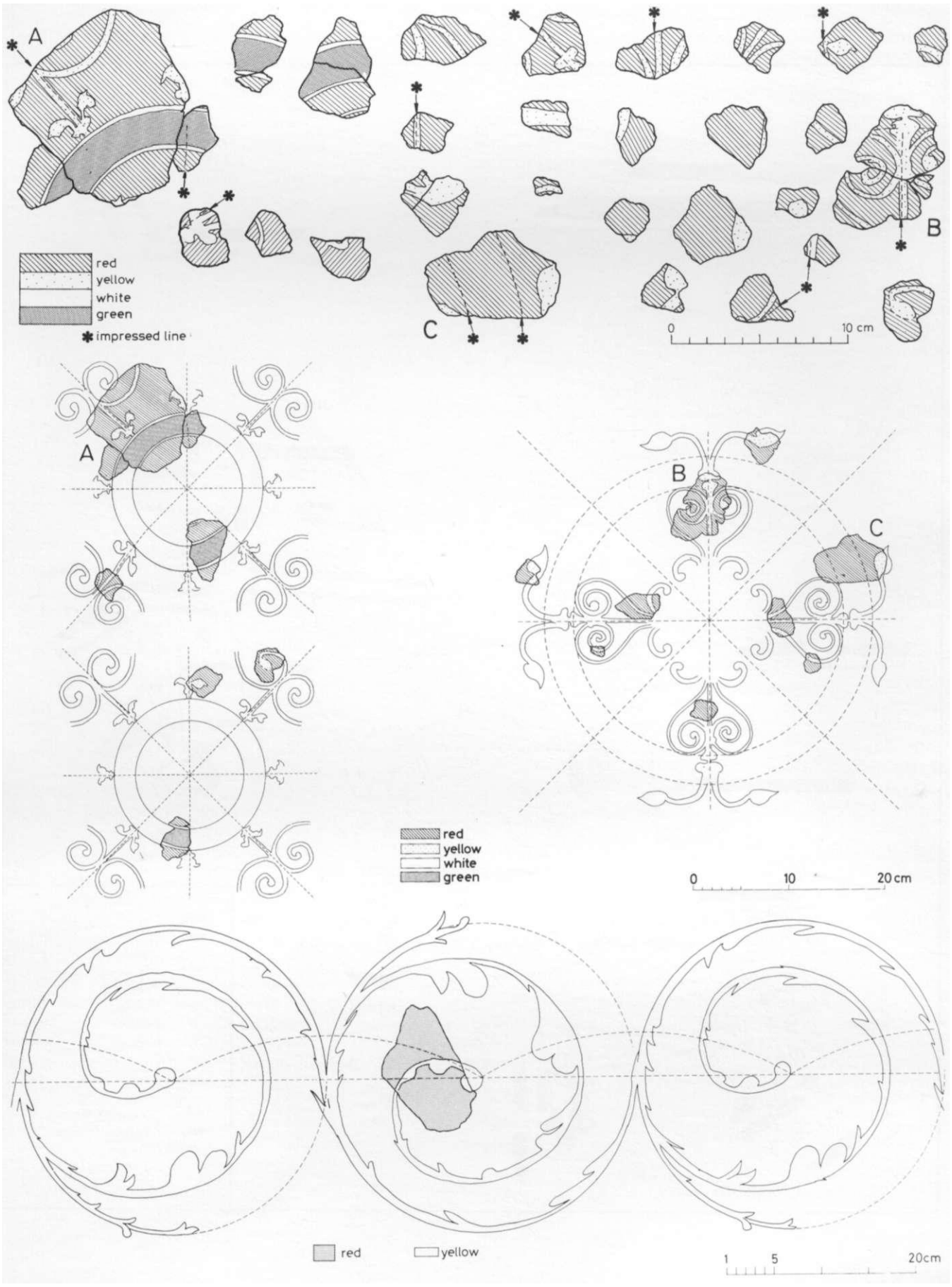


Fig 11.2 Wall-plaster possibly from Building 112, Room 6. Above: *fragments.* Centre: *reconstruction of pattern elements based on some of the fragments illustrated above.* Below: *conjectural reconstruction of a continuous plant-scroll.*

the other fragments: one is a string imprint, achieved by 'line-slapping' (for this technique, *see* eg Davey & Ling 1982, 59), and the other is a compass-drawn arc with a radius much greater than any considered so far. By assuming that the string point is horizontal, and by projecting the arc to intersect with it, we can reconstruct the basis of a continuous plant-scroll of a familiar Roman type (Fig 11.2). The horizontal line would mark the centre of the scroll, along which the mid-points of each spiral were measured with the aid of the arcs; these mid-points would then be used to describe the circles upon which the spirals were painted. A very good parallel for a scroll painted in this way is provided by a frieze reconstructed from fragments of wall-plaster found at Alesia in Gaul (Barbet *et al,* 1977, 175-84, 191-6, figs 2-10); it consists of a series of tangent spirals growing alternately clockwise and anti-clockwise and linked by a continuous stem which passes alternately above and below. This is the basis for the conjectural reconstruction in Fig 11.2. Fragments of similar scrolls have been found in two houses at Verulamium, where, as on the Continent, they decorated friezes in the upper part of the wall-decoration (Davey & Ling 1982, 32, 171-3 (no 41 A, B), 186 (no 44 A ii), figs 41, 48, pls 82-4, 93).

Building 113 (Site B Period 4)

A hotch-potch of mainly small pieces from panelled and striped decorations in a variety of colours, including both fine- and coarse-quality work. Some pieces from B1110 look burnt and are possibly residual. One or two pieces (B791 & B1110) show traces of hanging fillets or leaves. Three joining pieces (B738) have a red band 20 mm wide between white lines on a green ground, a scheme paralleled in the room of the Lion Mosaic in House XXI.2 at Verulamium, dated *c* AD 180 (Davey & Ling 1982, 180 f, no 41F, fig 44).

Building 115 (Site H Period 5)

Very small quantity of plaster, mainly red but probably including yellow panels outlined by black bands edged on at least one side by a white band 5 mm wide. Also a fragment of ?dado in dappled pink.

Building 116 (Sites G & H Period 5)

Mixed collection from various rooms, some of high quality, particularly the white finishes. Plaster from H262 has chunks of daub wall adhering to the back. The quality varies from group to group.

Building 118 (Site G Period 4)

Small quantity of plaster different to the rest on Site G, therefore possibly from Building 118, rather than imported from a dump elsewhere. Much of it is decorated with stripes or bands. It contains at least one unusual panel or dado of grey dappled dark red and pink with a slightly roughened textured surface.

Building 120 (Site G Period 5)

Room 8 (hypocaust room)

The first decoration, which shows abundant traces of 'pecking' for the later coat of plaster, was a simple panel-scheme on a white ground with black or purple-red inner border-lines and vertical divisions effected by yellow or green bands 15 to 20 mm wide edged by black lines. That the scheme was more than a simple arrangement of rectangular panels, however, is indicated by two fragments which show purple lines converging at an acute angle (cf the material below described as 'probably from Building 120'). A sequence of horizontal bands (Fig 11.3) can be assembled from a series of large fragments which are especially thick (up to 85 mm) and curve over at the top, so may represent the start of the spring of a vault; they indicate that the upper border of the scheme was formed by a purple red band 50 mm wide with a black line along the upper edge, and a yellow line 7 mm further above, with the start of a yellow band 20 mm higher. The composition of the plaster shows a high mixture of terracotta particles and several of the thicker fragments carry imprints of box-tiles on the reverse.

The fragments of the second decoration are much finer, in a brown sandy plaster 10 mm thick. White, pale blue (blue frit) and red are the main colours present, and there are several pieces with scored guide-lines, either on blue, or on red, or separating blue from red. The fragments are too small to show whether any of the lines were curved.

From the general area of Building 120

This assemblage contains remains of more than one decoration. Some of the pieces are finely finished with white or red surfacing, but none presents any special interest. All derive, so far as can be judged, from simple panel or linear schemes. Some show identical frames, with yellow or green bands edged by black lines, and inner border-lines of black or purple, to the panels from Room 8, and they may therefore derive from the same or a comparable scheme.

Probably from Building 120

There are pieces here analogous to the primary and secondary decorations from Room 8, so they may well derive from this same room, or another which went through a similar sequence. Two or three 'first-phase' fragments are particularly interesting, because they show a pair of purple 'border-lines' meeting at an acute angle with a blob attached (as

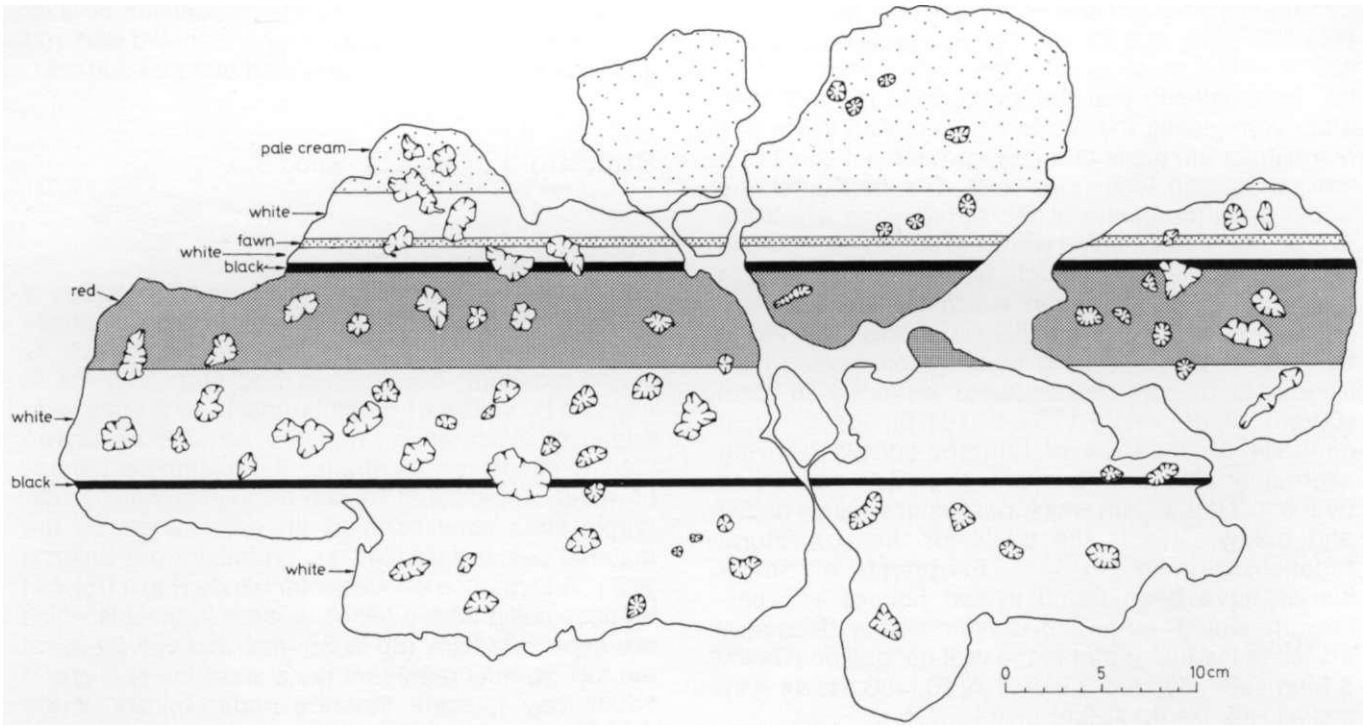


Fig 11.3 Wall-plaster from Building 120, Room 8. 1:4.

frequently at panel-corners), cf two fragments ascribed to Room 8 and a purple band converging on a black line a short distance above a yellow band edged with purple lines. The top edge of the purple band is angled, implying that it comes from the junction of wall and ceiling, therefore (given the angle of convergence of the borders below) from the top of a segmental lunette.

Building 123 (Sites D & G Period 4)

[Appendix 14, Tables 11.2-11.12, microfiche pp 770-8]

Room 8

Small quantity of plaster of various scraps of different types probably from rooms or buildings elsewhere.

Most of the fragments derive from a panel scheme or schemes in which the dominant background colour appears to have been white. The white panels have black inner border-lines and are contiguous to green or red areas. A few fragments show backgrounds of yellow (with purple stripes) or red. One interesting piece (Fig 11.4, right) has remains of what may be part of an architectural detail in perspective. Another (Fig 11.4, left) has stripes in a sequence of purple-red, white bisected by a black line, green (painted over yellow ochre), and purple-red. Its orientation is uncertain. Several of the fragments are of considerable thickness (50 or 60 mm); the thickest (the piece with the perspectival element) attains 90 mm, but this may have been against a box-tile or similar, since there is a vertical rebate in the backing plaster. One or two pieces show traces of possible 'pecking' of the surface for a re-decoration.

Post-Roman robber trenches

This material is basically homogeneous, with fragments roughly 15 mm thick carrying a polychrome decoration appropriate to a room of some size and functional importance. The scheme appears to have been one of panels, with red, pink and green predominant among the surviving fragments. Some of the red may be cinnabar, a pigment of special value confirmed to date on only a dozen or so sites in Britain. No traces of figures or vegetal ornaments are visible.

Buildings 122-4 (Site E Period 4)

Some finely smoothed pieces with red and black grounds (E474 L17) have yellow stripes and in one case green over the red ground. The work is of good quality, probably not later than the 2nd century. Other pieces are less fine, with pink, purple and grey ornament. Two large joining pieces with horizontal banding in purple and white evidently formed the projecting end of a cornice or pilaster-capital.

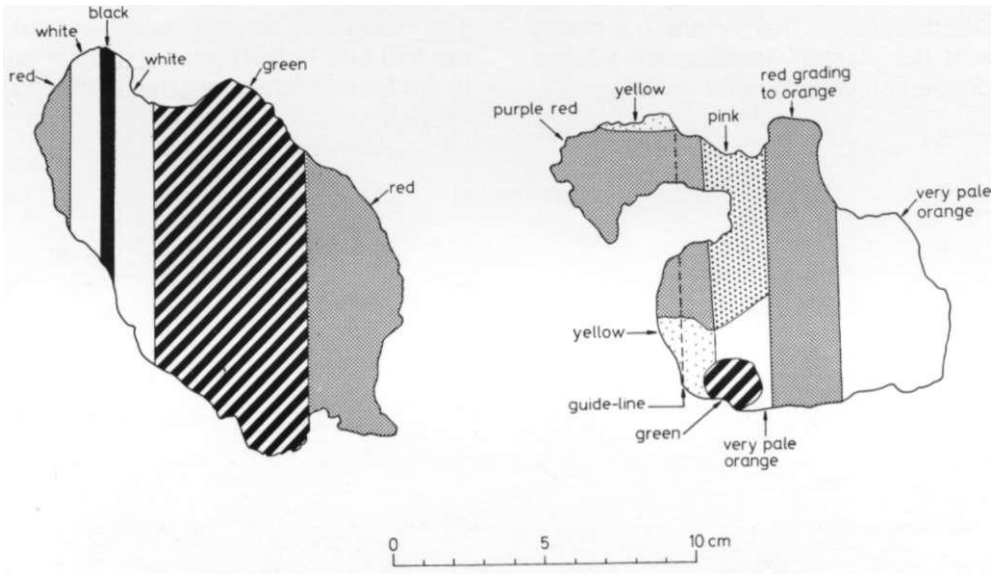


Fig 11.4 Wall-plaster from Building 123, Room 8. 2:5.

Building 124

Passage 4

Very small quantities of plaster from about fifty contexts. Some indications of the decoration in the passage included areas of dappled red and areas of pink with random red spots to give the effect of marble. The predominant colours are red with some pink and a little white.

GILBERD SCHOOL

Dump of over 3 sq m (AL73, p 136), probably not associated with any of the excavated buildings

Most of the fragments appear to derive from a single polychrome panel-decoration in which the preponderant colours were red, light blue, and black, with yellow playing a lesser role. The arrangement of colours is uncertain, but one or two crucial pieces show corners or conjunctions of borders which are informative.

1. Two joining pieces. The corner of a blue panel enclosed by a red border 75 mm wide, which is enclosed in turn by a black border or surround. The red border is edged by white or yellow stripes 5 mm wide. Another fragment shows simply the corner of a blue field and the red border round it.
2. The corner of a red area, with a yellow(?) border round it, possibly turning to blue or black on one side.
3. The corner of a red panel with a blue border.
4. A yellow band 60 mm wide, edged by white stripes, between red and black areas.
5. Various pieces. A yellow band adjacent to blue or black, from which it is always separated by a white stripe. One fragment from against a door-frame has a yellow band 40 mm wide, then black.
6. A blue band between yellow and black.
7. A blue band between yellow and red.

One large fragment with a bevelled surface (from a door- or window-reveal) has blue on one (the broader) face of the bevel, red on the other. Another bevelled piece has yellow on both faces.

Among the red fragments some carry yellow lines, of the type which normally form inner borders in panel-schemes. That the red fields may also have contained more varied ornamentation is indicated by one piece with a yellow waving ribbon and another with a green 'fern'.

It is difficult to make complete sense of the data, given the limited number and size of the fragments, but one is bound to postulate some form of scheme with panels in alternating colours, probably blue and red, with borders of (for blue) red and black, or yellow and black, and (for red) blue and yellow, or yellow and black. Whether there were also black and yellow panels, or whether these colours appeared only in borders, cannot now be determined.

An unusual feature is the major part played by blue. Blue frit was an expensive imported pigment (the good-quality brands cost from 4 to 5.5 times as much as the best red ochre), and is not widely attested in British wall-paintings, save in subsidiary roles. Even in the much more numerous and better preserved decorations of Roman Italy it is rarely used as a ground-colour for panels; the few surviving examples belong mainly to the late-Third and Fourth Pompeian Styles (middle and third quarter of the 1st century AD) and are found in specially selected important rooms of a house: for example, in the atrium of the House of the Theatrical Panels, or of Casca Longus, at Pompeii *(c* 40-60), in the central exedra opening on to the garden of the House of the Mosaic Atrium at Herculaneum (between 62 and 79), and in the tablinum of the House of the Hunt at Pompeii (between 71 and 79). This, combined with the fact that the Gilberd School material seems to have

coloured surfaces throughout (hardly any fragments show the white of the plaster), implies that we are dealing with a decoration of some pretension.

The decoration seems, however, not to have been the first one in the room; an earlier surface is visible in the broken edges of several fragments.

12. PREHISTORIC POTTERY AND FLINT

by Nigel Brown, John Wymer, and Julie Gardiner

The prehistoric pottery

[Figs 12.1-2]

by Nigel Brown

Introduction

A total of 806 sherds (weighing 8.491 kg) of prehistoric pottery has been recovered from excavations of a number of Roman sites, the majority (731 sherds weighing 7.911 kg) from Culver Street (full details in archive).* Much of the material was recovered from the cover loam (pp 37-8, Fig 3.10). It is unclear what this layer represents so the pottery contained within it is best regarded as unstratified. The pottery ranges in date from the earlier Neolithic to Middle Iron Age. However, an occupation site was indicated on Site E at Culver Street by some large fragments of Grooved Ware in a small pit (EF1457) and a scatter of similar material (and flints) in the surrounding cover loam.

Diagnostic sherds in the collection as a whole are illustrated in Figures 12.1-2 and described in Appendix 15 (microfiche pp 779-80). In the latter, the letter R preceding the context indicates a residual sherd from Roman or later context; the rest of the material is from the pre-Roman cover loam. The letter following the context number indicates the sherd's fabric. The fabrics are those used to categorise a number of prehistoric assemblages from central Essex (full details in the archive in the CM). The catalogue is arranged by ceramic style in rough chronological order. The Late Bronze Age (LBA) pottery has been attributed to the five vessel classes used by Barrett (1980) to categorise LBA pottery. This is indicated by a Roman numeral after the appropriate catalogue entry.

Discussion

The Neolithic plain bowls may be attributed to the Grimston style and can be paralleled in assemblages from Broome Heath, Norfolk (Wainwright 1972) and North Shoebury, Essex (Brown forthcoming). Similar pottery has been recovered locally from submerged sites at Dovercourt, Walton and Clacton (Hedges 1980). The Grooved Ware clearly belongs to the Durrington Walls style. The Colchester Grooved Ware displays four of the eight major traits which Wainwright and Longworth (1971, 242) have used to define the Durrington Walls style; rims of Form 13, internal incised decoration, vertical cordons to divide the surface into panels and filled triangles. Minor traits can also be matched in the Durrington Walls assemblage, eg the presence of a rounded-finger impression at the join of vertical and horizontal cordons, and triple vertical cordons (Longworth 1971, 63). The Colchester group therefore clearly contrasts with the large assemblage from the type site of the Clacton style to the south east (Longworth *et al* 1971) and has similarities with material from Lawford (Shennan *et al* 1986).

The presence of such large sherds in a pit indicates an occupation site. However whether this was an enclosed one like Lawford or an apparently open site like Clacton is unknown.

The sherds had been placed in the pit so that one large sherd rested on a stone (a ?rubbing stone for a quern) which was separated from the main group of pottery (Fig 3.1, p 21); this appears to indicate a deliberate deposit. Structured deposits of pottery and other artefacts are a recurrent feature of the Neolithic. Parts of Grooved Ware vessels were deliberately included in 'midden' deposits at Durrington Walls (Wainwright & Longworth 1971) and Lawford (Shennan *et al* 1986). However, the Colchester pit group has striking parallels with the manner in which Deverel-Rimbury pottery, together with loomweights and other domestic debris, was placed within settlements of the later 2nd millennium BC at North Shoebury (Wymer & Brown forthcoming) and Mucking.

The finger tip rustication and paired finger-tip impressions on nos 18 and 19 (Fig 12.1) occurs as a minor element in Grooved Ware contexts. However the shouldered form 18 is unlikely to be Grooved Ware, these sherds are perhaps best regarded as Beaker coarse ware.

The sherds of bucket urns are typical of the Deverel-Rimbury tradition. The apparently profuse use of finger tip decoration represented by the rusticated body sherds nos 26 and 31 (Fig 12.2) and the frequent use of finger impressions below as well as on top of the rim is appropriate to the local Ardleigh Group.

The Late Bronze Age pottery can be widely paralleled in Essex from sites such as Mucking (Bond 1988), Springfield Lyons and Lofts Farm (Brown 1988) and occurs locally at Sheepen and Frog Hall Farm.

The Middle Iron Age sherds resemble pottery from

* The archive catalogue includes all the prehistoric pottery from the other town centre sites excavated between 1971 and 1985. The quantities concerned are very small.

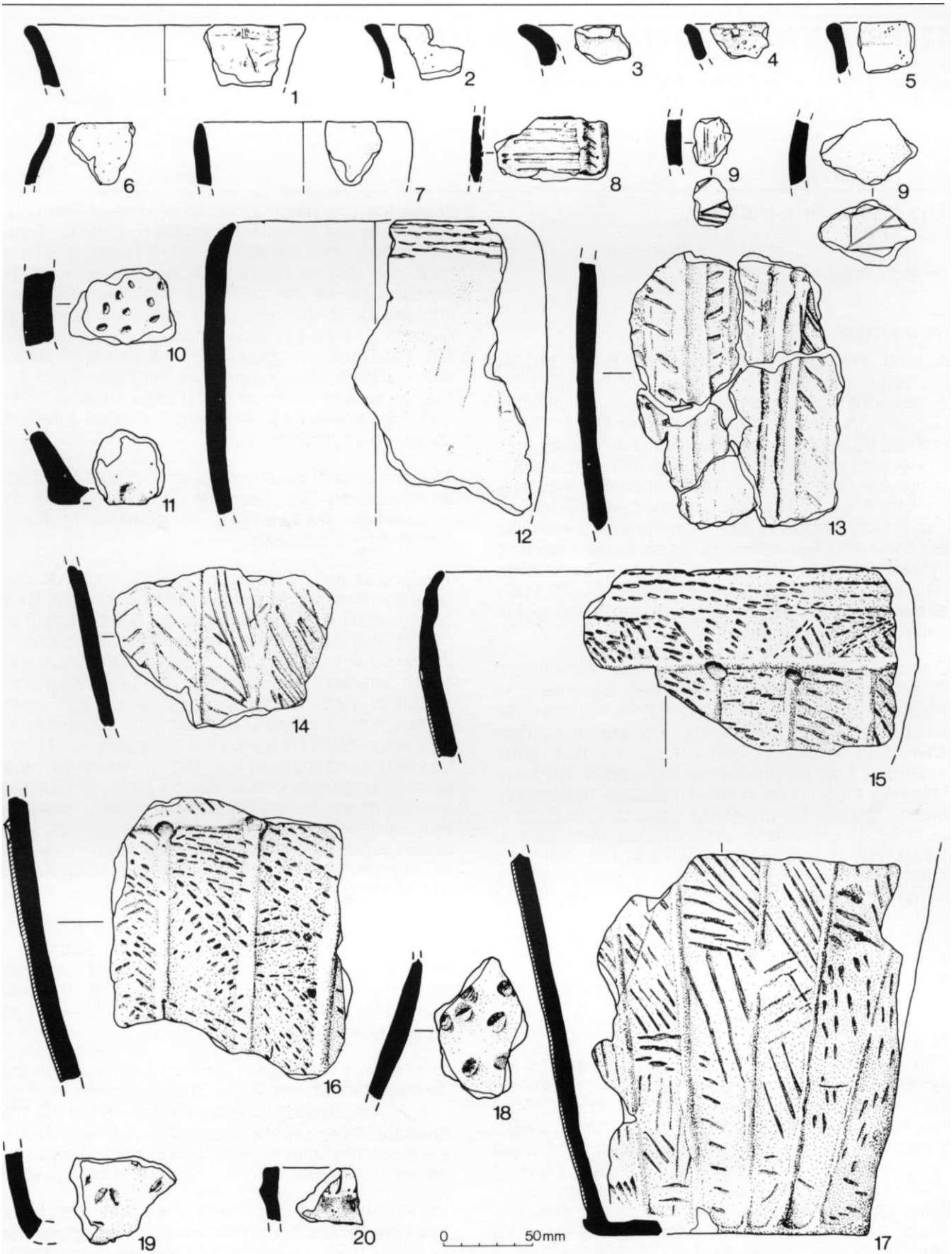


Fig 12.1 Earlier Neolithic plain bowls: 1-6; Grooved Ware: 7-17 (nos 14-17 are possibly parts of the same vessel); Beaker coarse ware: 18-20 [No 3 is from Culver Street pit EF1321, nos 9 and 12-17 are from Culver Street pit EF1457, nos 1, 2, 4 and 10 are from the cover loam at Culver Street Site E, and the rest are residual. All are from Culver Street except nos 5 (GBS), 6 (BKC Site E), 7 (HEC), and 19 (LWC Site A). See Appendix 15 (microfiche pp 779-80) for fuller details and fabric descriptions.)

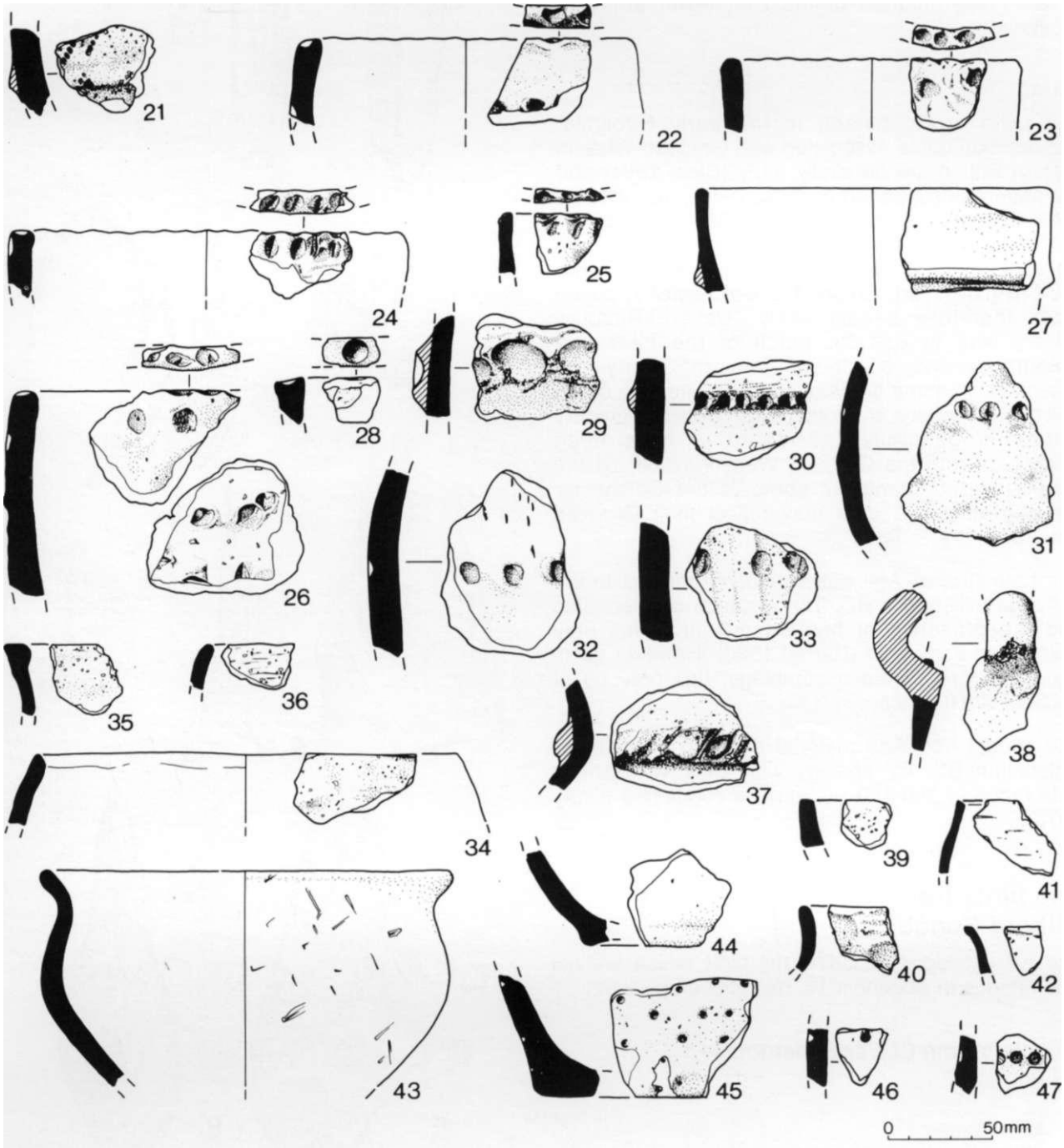


Fig 12.2 Collared Urn: 21; Deverel-Rimbury: 22-33; Late Bronze Age: 34-42; Middle Iron Age: 43-4; miscellaneous: 45-7
[Nos 26-7 are from Culver Street pit EF1224, nos 23, 31 and 41 are from Culver Street pit EF1321, nos 22, 28, 32-5, 38, 40 and 42-5 are from the cover loam at Culver Street Site E, no 29 is from the top of the natural sand at Culver Street Site G, and the rest are residual. All are from Culver Street apart from nos 29, 37 and 47 (GBS), and 36 (IRB). (See Appendix 15 (microfiche p 780) for fuller details and fabric descriptions.]

Little Waltham in both form and fabrics.

The stabbed impression of nos 45 and 46 (Fig 12.2) are superficially reminiscent of Grooved Ware decoration. However the impressions are more cylindrical and the flint-tempered fabrics are inappropriate for Grooved Ware. Similar stabbed impressions occur on some sherds amongst an Early Iron Age Darmsden-Linton style assemblage from Lofts Farm (Brown 1988) and also occur in Middle Iron Age contexts (Drury 1978, 131).

Stamped circlet decoration as on no 46 occurs in Middle Bronze Age (Priddy 1986), Early Iron Age

(ibid) and later Iron Age contexts (Drury & Rodwell 1973); the attribution of the Colchester sherd is uncertain.

Dating

The plain bowls belong to the early Neolithic. Radiocarbon dates associated with Grooved Ware in eastern Britain are generally early (Cleal 1984) and this pattern is supported by three dates, 2010±80 bc (HAR 6208), 2040±80 bc (HAR 6266) and 2170±80 bc (HAR 6271), associated with Grooved Ware from the upper fill of the Springfield Cursus. A date in the late 3rd millennium BC for the Colchester Grooved Ware therefore seems likely. Deverel-Rimbury pottery was in use for much of the later 2nd millennium and continued into the early 1st millennium in some areas, so that close dating of the Colchester pottery is problematic. Deverel-Rimbury pottery is generally considered to have been developed from the Grooved Ware tradition, so the grog-tempered fabrics of some of the Colchester Deverel-Rimbury sherds may reflect their Grooved Ware ancestry.

The Late Bronze Age pottery clearly belongs to the early 1st millennium BC. The absence of decoration and the presence of hooked rim jar forms may indicate an early date (Barrett 1980). However given the small size of the assemblage, this may be of doubtful significance.

The Middle Iron Age material dates to the late 1st millennium BC. By analogy with Little Waltham, a date range of 300-100 BC may be suggested (Drury 1978).

The flints from Culver Street and the Gilberd School

The full catalogue including the flints which are not illustrated is in Appendix 16, microfiche pp 781-2.

The flints from Culver Street Phase 1

[Fig 12.3]

by John Wymer

Whatever their contexts, these flints testify to prehistoric activity on or near the site where they were found. For the most part, spalls and rough pieces excluded, they are typical products of systematic flintwork as practised up to Late Neolithic or Early Bronze Age times. A few pieces are sufficiently diagnostic to be dated (with varying degrees of certainty). The small rolled flake (Site E, SF 1.81 2522) must be Palaeolithic on the grounds of its condition. The gravel beneath the town of Colchester is part of a spread of Middle Pleistocene age, and a few flakes and hand-axes have previously been found within it, so SF 1.81 2522 is not unusual. The two blades (Fig 12.3.1 and Fig 12.3.2 — the former being made into an end scraper) and a broken

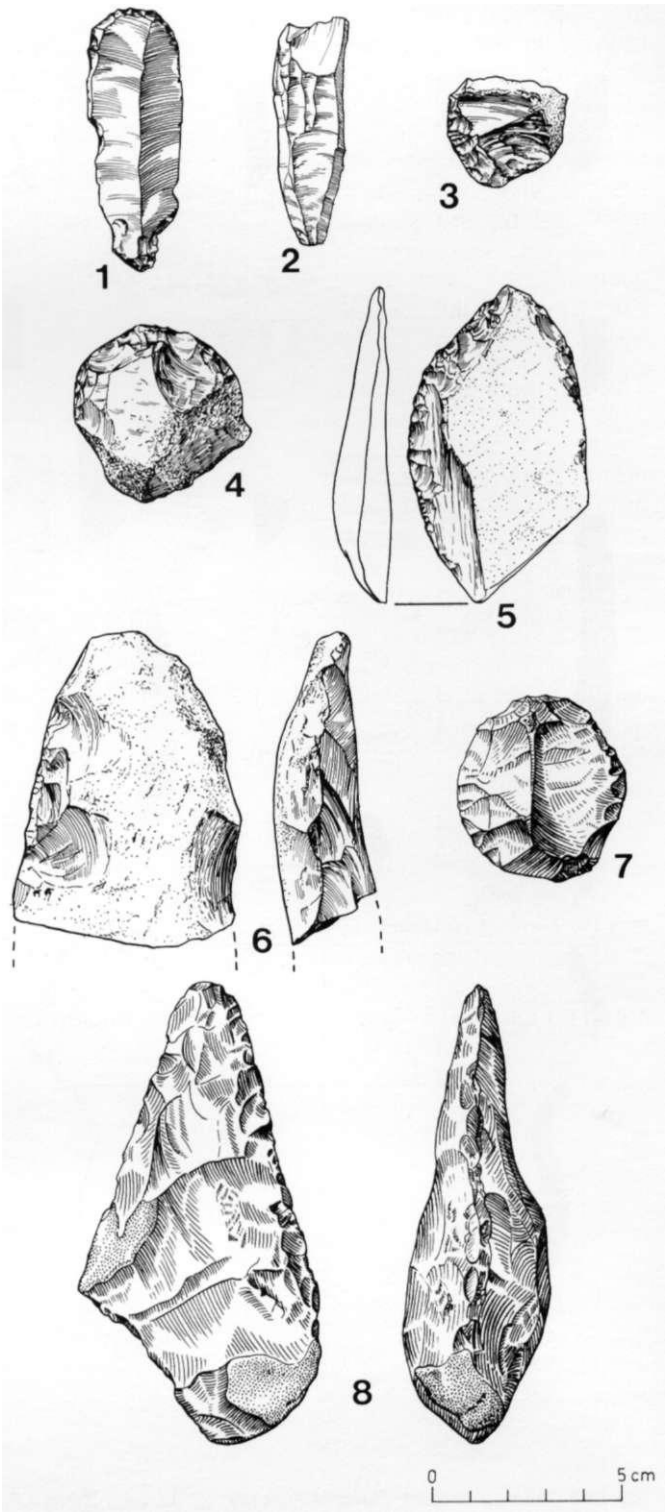


Fig 12.3 Flints from Culver Street (1:2): 1....end scraper (Mesolithic; Site A, SF 1.81 1666): 2...blade (Mesolithic; Site E, SF 1.81 2598): 3....flake with shallow secondary working (Neolithic or early Bronze Age; Site B, SF 1.81 1728; 4....round scraper made on thick, cortical flake (Neolithic, Site E, SF 1.81 2535); 5....knife made with shallow secondary working on cortical flake (Neolithic, Site E, SF 1.81 2530); 6.... butt end of flaked axe, possibly broken in manufacture (?Mesolithic, Site E, SF 1.81 2677); 7....scraper (Neolithic, Site E, SF 1.81 2712); 8....hand-axe (Palaeolithic, Site G, SF 1.81 4941).
[Nos 2 and 4 are from the prehistoric pit EF1321 on Site E, nos 5, 6 and probably 7 are from the cover loam on Site E, and nos 1, 3 and 8 are residual]

one (SF 1.81 2648) are of Mesolithic type and most unlikely to belong to any other later industry. They make an interesting addition to the few Mesolithic artifacts found within the Borough of Colchester (Wymer 1977). A tranchet axe from Middlewick is from a typical Mesolithic lowland valley context, but another axe comes from St Mary's Hospital, not far from and on the same high gravel terrace as the excavation site, and could be part of the same occupation. This supports the likely date of the butt end of the flake axe (Fig 12.3.6) as also being Mesolithic.

The scrapers (Fig 12.3.3, Fig 12.3.4, & Fig 12.3.7) are of Neolithic form, as is the large knife (Fig 12.3.5) made on a cortical flake. The shallow flaking on the first of these scrapers (Fig 12.3.3) is more typical of Late Neolithic to Early Bronze Age industries but is not diagnostic of them.

The flints from Culver Street Phase 2 and the Gilberd School

The Palaeolithic hand-axe
[Fig 12.3.8]

by John Wymer

A symmetrical, competently-made hand-axe (Fig 12.3.8, SF 1.81 4941) of pointed type, found in Period 3 dump on Site G. Cortex remains on part of the butt, most of which is missing because of a large thermal fracture. This thermal fracture is post-fabrication but it would appear that the butt had been trimmed bifacially. The condition of the implement can be described as rolled, on the criterion that the flake ridges are reduced in places to facets more than 1 mm but no more than 2 mm wide. It is stained on top of a faint, patchy blue-white patina.

This is a typical pointed hand-axe of an Acheulian Lower Palaeolithic industry, and its rolled condition indicates it is most likely derived from a coarse gravel deposit. Such a deposit underlies most of the area of the Roman town, being a terrace gravel of some precursor of the modern river Colne at about 30 m OD. A few rolled flakes have previously been found during the current excavations and considered to be of Palaeolithic age. The hand-axe is to be added to the six other hand-axes known from Colchester (Wymer 1985, 255-6), all apparently from the same gravel. The gravels of this area have never been studied in detail and all that can be said concerning the age of it is that terrace gravels at about this height OD are later than the major Anglian glaciation and earlier than the Last (Ipswichian) Interglacial.

The remaining flints from Phase 2 and from the Gilberd School

by Julie Gardiner

In addition to the hand-axe, the Culver Street Phase 2 excavations produced eight flints most of which are of dubious identification. The flints are described in Appendix 16 on microfiche, pp 782-3. Also described and discussed in the appendix are the flints from the Gilberd School site. These number twenty-three, are of poor quality, and include two plano-convex knives.

13. SMALL SITES, WATCHING BRIEFS, AND BUILDING SURVEYS 1971 TO MID 1985

Summary of small excavations and watching briefs

Between 1971 and mid 1985, the Colchester Archaeological Trust (formerly the Colchester Excavation Committee) undertook about 50 excavations mainly in and around Colchester town centre. These ranged from the substantial projects at Lion Walk, Balkerne Lane, Butt Road, Middleborough and Culver Street to small exploratory trenches on 15 sites. In addition, about 200 watching briefs were carried out on sites where excavation was not possible or thought to be either unnecessary or not worthwhile. There was also some recording work on buildings. Six standing structures were recorded in considerable detail but in most cases (27) the work was restricted to partial survey or the making of a photographic record for archive purposes.

All the excavations and surveys undertaken between 1971 and mid 1985 are listed in Appendix 1 where a broad indication of the types of structures and finds is given for each of the projects. The individual reports which follow on pages 324-87 and pages 784-1075 (microfiche) cover all the fieldwork carried out by the Trust during this period apart from:

i) the major sites described separately in *Colchester Archaeological Reports* 3 and 6,

ii) the sites relating to the Iron Age dyke system *(CAR* **11)**

iii) the sites relating to Roman and later cemeteries, ie Butt Road, Maldon Road, St John's Abbey Grounds, and St Giles's Church *(CAR* **9**).

In addition to Culver Street (pp 62-5) and Lion Walk *(CAR* **3**, 70-3), parts of the town wall were investigated on ten occasions. At St Mary's Steps (pp 324-8), the presumed Roman postern gate was found to have been a drain arch which had been widened in post-Roman times to provide limited access through the wall. Another drain arch was discovered in St Peter's Street (4/76a) which, with two subsequently found in 1988 at 11 Short Wyre Street and 42 St John's Street (not yet published), brings the total known in the town to six plus two possible examples and one under Duncan's Gate (Fig 2.9). The rampart behind the wall was observed several times (CAP 83-4, 7/79c, & 0/83c). No street metalling was noted in the body of the presumed rampart in the two places where it was seen in the north-east corner of the town (CAP 83-4 & 6/76) although remains of what may have been an *intervallum* road were observed at the edge of the rampart during CAP 83-4. A possible street was noted in the body of the rampart in Sir Isaac's Walk (7/79c). As at Lion Walk *(CAR* **3**, 70-3), this was presumably the remains of a temporary surface which was in use during the construction of the rampart. Little useful dating evidence was obtained on any of these occasions although at CAP 83-4 the relationship between the rampart and the base of the wall clearly indicated that the rampart was later.

Streets were exposed during the excavations at Long Wyre Street (COC 79), Queen Street (7/73), and Lion Walk United Reformed Church (234.84) whilst a military street was seen in section at the Cups Hotel site (CPS 73-4).

Watching briefs are an effective aid in the plotting of the street plan of the Roman town *(see* Fig 2.9). Even small exposures of metalling can be of great help in this respect. The streets forming the east and west edges of Insula 22 were noted during watching briefs at Cowdray Crescent (4/80a) and Maidenburgh Street (0/83b) respectively. Less conclusive evidence was seen for the street between Insulae 13 and 21 further north at Maidenburgh Street (5/82d). The north-south street between Insulae 17a and 17b was recorded at Balkerne Gardens (3/77a & 3/78), the street between Insulae 25a and 33a was observed in a service trench in Church Street (7/79b), and a service trench in the Castle Park (CAP 83-4) cut across the street between Insulae 7 and 15.

The street between Insulae 32 and 40 was observed in the grounds of East Hill House (8/83e). It lies on the same alignment as the street separating Insulae 27-9 and 35-7 despite the irregularity of the streets between the intervening Insulae 30 and 38a/b.

There does not seem to have been a properly-formed *intervallum* road around the entire circuit of the wall. A north-south street lay along the inner edge of the rampart in the grounds of East Hill House (8/83e) and was matched by a similar arrangement on the opposite side of the town, ie on the west side of Insulae 25a and 33a. Although not conclusive, indications from CAP 83-4 are that there had probably been a street between the rampart and the north edge of Insulae 6 and 7 and that this had been rather thin. The excavation at Lion Walk showed that in at least one place on the south side of town there had been a street along the inner edge of the rampart. But this street was absent further west at Culver Street.

The street leading to the Balkerne Gate from the junction of streets near Lexden Road west of the town has been well fixed in several places (ie 10/78a, 0/84, & 5/84b). This is in addition to the part uncovered during the excavations at Balkerne Lane *(CAR* **3,** 93-114). More of the extramural street found during the excavation at the Middleborough site was

uncovered during the subsequent watching brief (2/79; *CAR* **3,** 183). Although no metalling was seen, the alignment of the Roman house recorded at North Station Road (11/76) indicates where the street leading northwards from North Gate may have met the River Colne.

As would be expected, remains of Roman buildings were observed on numerous sites. The distinctive plinths associated with barracks were recorded in two places (2/82 & 1/84a) and provided fresh information on the layout of the fortress. In general, most of the remains of Roman buildings probably belonged to houses, the only definite Roman public building being the theatre (DTC 82 & 84, 4/84a, 6/84a). In a few cases, sufficient was found to provide useful information about the plans of the buildings concerned (especially St Helena's School (HEC 76), and Lion Walk United Reformed Church (234.84)). Part of one of the mosaic pavements at the rear of 17 and 18 North Hill was uncovered and recorded, and long sections of the trenches dug for a sewer through the Castle Park (CAP 83-4) and Trinity Street (8/84a) indicated the presence of large areas of well-preserved remains of Roman houses.

A shallow ditch observed in the Castle Park (CAP 83-4) may be part of the defences of the annexe of the fortress and thus represent the first indication of the likely position of its northern limit. Part of the military defences of the main part of the fortress were sectioned at the Lion Walk United Reformed Church (234.84), a short distance south of where they had been examined during the Lion Walk excavations in the 1970s.

Three Roman pottery kilns were excavated at Oaks Drive (ODC 73) and dump material was examined from a kiln which had stood on or close to the south bank of the River Colne (6/79b). (For the well-preserved Roman kiln discovered during the watching brief at Middleborough, *see CAR* **3***,* 182-4.) Medieval or later kilns of unknown function were noted at Nos 2 and 3 Trinity Street (TSC 77).

Human remains occurred on over 20 sites; those in cemeteries are to be described in *CAR* **9.** Of the others, the most interesting are those which make up what appears to be a scatter of late Roman burials of low status inside the walled area of the town. A characteristic of the group is that the remains rest on or slightly cut into the latest Roman levels and thus give the impression of being post-Roman in date. As far as can be judged, none of the bodies were in coffins or were accompanied by grave goods and there does not seem to have been any consistency of orientation. There were two at 65 High Street (5/76b), two in the grounds of East Hill House (8/83e), and one at William's Walk (5/82d). To these can be added the two in Building 127 at Culver Street (pp 114-15) and the remains of a skeleton found in 1923 on a mosaic pavement in a field known (perhaps significantly) as the 'Bury' or 'Berry Field'. The skeleton, described as 'lying obliquely across the pavement at one corner' (Hull 1958, 218) is generally taken to be the remains of a corpse in a demolished or abandoned building. A more likely explanation, particularly in the light of the East Hill House graves about 100 m away, is that the bones lay in a shallow grave which stopped at the pavement. The three burials uncovered during the Middleborough excavation *(CAR* **3,** 183 & 186) share all the characteristics of this group and thus may well be closely related to it despite being just outside the walled part of the town. (They were described as being post-Roman in the excavation report.)

The two bodies at the East Hill House site (8/83e) had been decapitated apparently after death (p 378). The reason for the rite of post-mortem decapitation is not clear (Clarke 1979, 372-6, Merrifield 1987, 72) but the fact that one of the bodies was that of an eighteen-month old child is important in this respect.

Samples of bone from six of the skeletons have been radiocarbon dated and produced results which suggest Roman dates for all of them. The results, corrected according to Stuiver and Becker 1986, are as follows:

Context	Date bp	Error	Corrected date	Harwell Ref
East Hill House				
X244/247	bp-1700	70	AD 242-415 (1a) AD 132-533 (2a)	HAR-5986
Culver Street				
EF143	bp-1860	80	AD 33-235 (1a) 89 BC-AD 377 (2a)	HAR-5984
EF361	bp-1630	80	AD 262-535 (1a) AD 230-600) (2a)	HAR-5985
Middleborough				
F308	bp-1820	80	AD 75-322 (1a) AD 3-410 (2a)	HAR-5982
F214	bp-1520	70	AD 429-637 (1a) AD 390-650 (2a)	HAR-5981
F770	bp-1800	90	AD 79-340 (1a) AD 3-430 (2a)	HAR-5983

On the basis of a two sigma error, the Culver Street results overlap AD 230-377 which, when combined with the dating evidence for Building 127 (pp 112-16), point to a probable late 3rd- to 4th-century date for the graves. The radiocarbon date for the bones from East Hill House is supported by the occurrence of decapitation (8/83e) which is a practice found in late Roman contexts elsewhere. Similarly the three results from the radiocarbon dating of the Middleborough bones overlap AD 390-410, indicating a probable late Roman origin for the remains.

The undated burials making up the rest of the group are presumably Roman although those from William's Walk (5/82d) and 65 High Street might be related to the nearby inhumations around Colchester Castle. Paul Drury (1982, 385-7) argued that the latter are Middle Saxon but the rarity of finds of this period from the town generally must make this conclusion questionable.

Important finds made between 1971 and 1985 include a 4th-century coin hoard from Balkerne Gardens (3/77a; *CAR* 4, 71) and some carved Early English capitals from Stanwell Street (8/83a) which

may have originally come from St John's Abbey. Anglo-Saxon finds are rare from the town generally. The Cups Hotel site (CPS 73-4) produced some pottery of this period as did the watching brief at the site of St Mary's Cottage (2/82). In both cases the finds were associated with deep deposits of topsoil which may have been filling unrecognised sunken floors of huts like Hut 3 at Culver Street (pp 119-21).

A limited number of watching briefs was undertaken outside Colchester. The most rewarding of these was at the Mersea Strood which, because of the discovery of large wooden piles under the earliest metalling, can now be dated to around AD 700 (Crummy, Crossan, & Hillam 1982).

The reports

Most, of the watching briefs which produced no new substantial archaeological information are omitted from the reports which follow either in printed form or on microfiche. The larger excavations are referred to by means of a three-letter code followed by the year or years in which the excavation took place. Codes for the smaller projects take the form of the month/year in which the work started. A zero is used when the month is uncertain. The reports are arranged as far as possible in chronological order according to starting date. The reports for most of the sites with three-letter codes have been placed at the beginning of the year in which they started.

'Record/report' at the start of each section refers to the person or persons responsible for the site recording followed after an oblique stroke by the author or authors of the account which follows. No stroke is used where the authorship is the same.

'Photographs', where this occurs at the head of a report, refers to the photographic archive in the Colchester Museums. 'Finds' usually refers to the so-called 'X series' which is a single run of finds numbers used for the small watching briefs.

Abbreviations

HB	Howard Brooks
GC	G Carter
AC	Alison Colchester
CC	Carl Crossan
PC	Philip Crummy
SG	Simon Garrod
AG	A J Gouldwell
JH	Jim Heathcote
JS	Jan Sewter
DS	Donald Shimmin
NS	Nicholas A Smith
BW	Barbara Whitehouse
PR	post-Roman

St Mary's Steps (SMS 1972)

Balkerne Lane
Figs 13.3-7
Reason: construction of new sewer
Record/report: PC

The archaeological investigation at St Mary's Steps in 1972

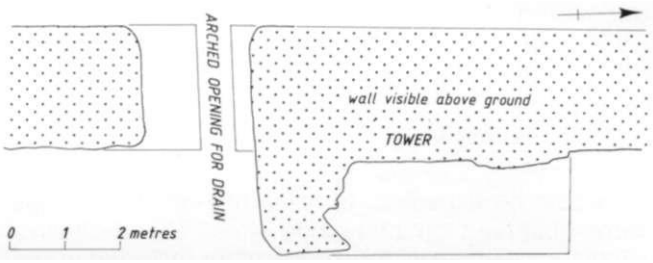


Fig 13.3 St Mary's Steps (SMS 72): small-scale plan showing drain, tower, and wall.

showed how an arch for a Roman drain in the town wall was used as a postern gate from at least the 15th until the early 18th centuries. It consequently raises the question, 'Could the town's other two postern gates have originated in a similar way?' The work also makes clear that the so-called 'drains' apparently ending at the town wall (Hull 1958, 60; *CAR* **3,** 15) were in fact merely arches to allow wooden drains to pass though the wall and into the ditch.

St Mary's Steps is the site of a postern gate which has existed since at least the 15th century and was known as 'the West Postern' or 'the postern near Colkyngs castell' (ie the Balkerne Gate) (Morant 1748, Bk 1, 7). All that can be seen of it today are the remnants of some sloping tiles along the north side of the steps. These formed part of an arch made of tile which has almost completely been destroyed. Next to the arch, on its north side and integral with the Roman wall, was a rectangular tower. This is still clearly visible today. Morant records *(ibid)* that when St Mary-at-the-Walls Church was rebuilt in 1713-4, the boundaries of the churchyard were such that the postern gate lay inside the cemetery. This is in contrast to today where it lies at the end of Church Street, on the north side of the cemetery. More important, Morant went on to say, 'that Postern being low and inconvenient, part of the Wall was taken down in order to enlarge the Passage, and Stone-steps made, instead of the sloping ascent there.' The alterations to the passageway were part of a grander scheme to improve the area of the churchyard generally. In addition to rebuilding almost all of the church (which had lain in ruins since the siege of 1648), 'the churchyard was levelled, in the year 1714, and handsome gravel walks made all round the church, planted on each side with Lime-trees. . . . And they being the best Walks about the whole town, are much resorted to by people of the best fashion' *(ibid,* Bk 2, 4). Morant, being rector at St Mary's, clearly was proud of these works and shows in his plan of Colchester *(ibid)* not only the walks but also the new stone steps. His plan is of value in the context of the excavation

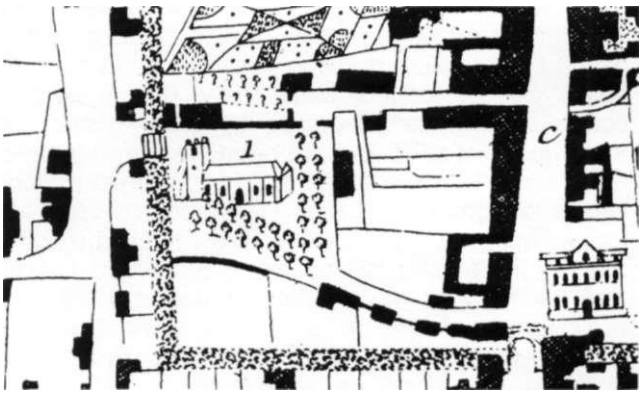


Fig 13.4 St Mary's Steps (SMS 72): extract from Morant's plan of Colchester.

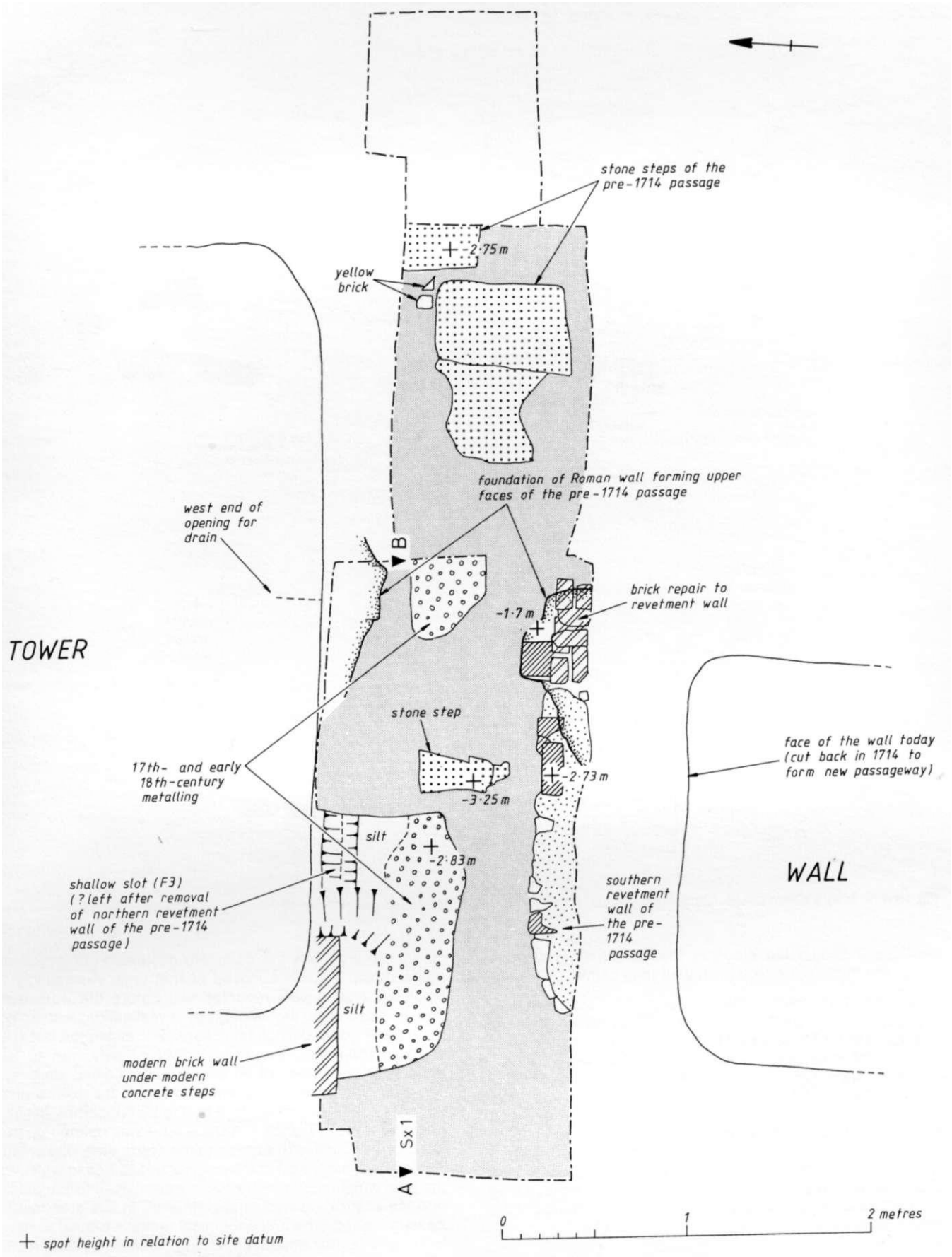
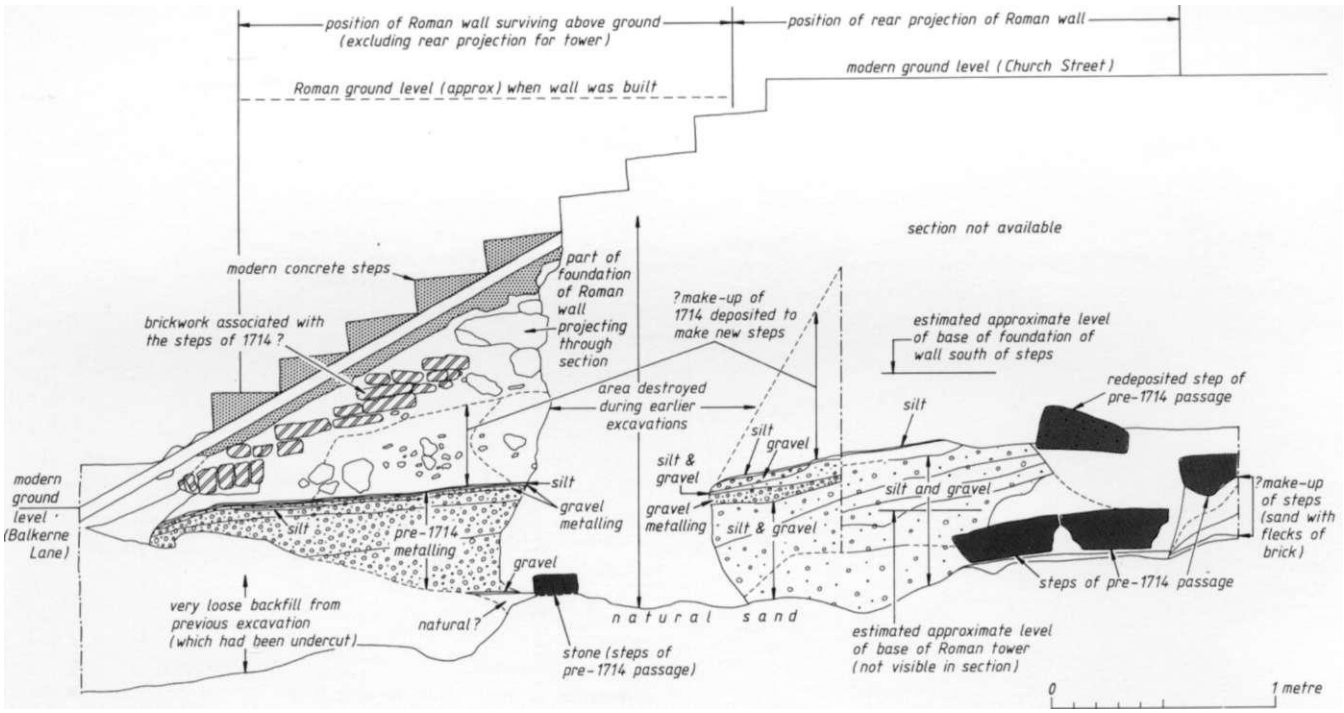


Fig 13.5 St Mary's Steps (SMS 72): plan. [Pages 324-8]



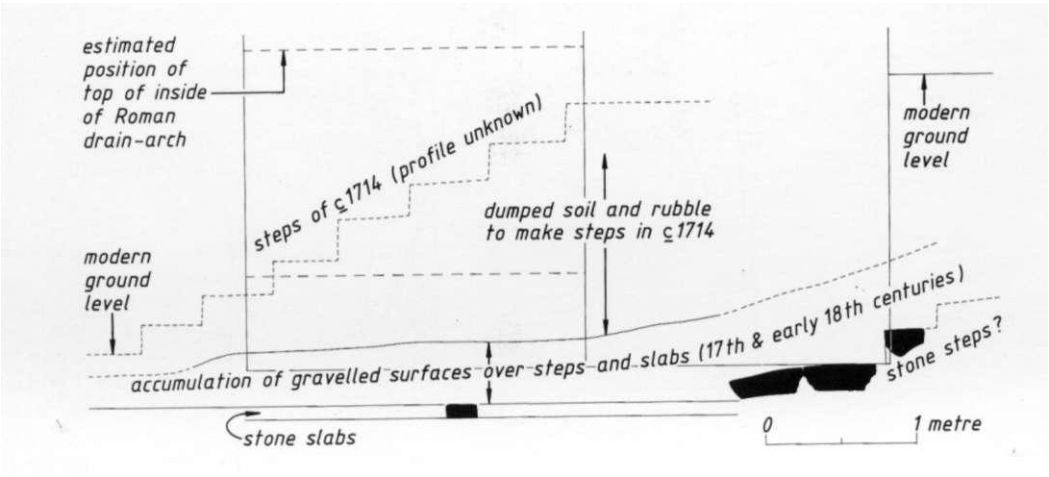


Fig 13.6 St Mary's Steps (SMS 72): section (above) and interpretation (pre-1714). [Pages 324-8]

because it shows the steps in their present position, ie within the thickness of the town wall *(see* below).

The site has been the subject of two previous archaeological inspections, one in 1920 by Mr W D Clarke and another by Mr M R Hull in 1938. Clarke concluded that the remains were part of a Roman drain but Hull disagreed and put forward the idea of a Roman gate instead (Hull 1958, 62). In 1920, the base of the passage was uncovered. The floor was formed of stone slabs, 'worn as if by traffic' with tiles along the sides. To the north and south lay the remains of two stone-and-tile walls 0.25 m (10 in) and 0.61 m (2 ft) high respectively. These indicated that the passage was 0.8 m (2 ft 7.5 in) wide. Hull believed he located a pilaster at the eastern end of the south face of the tower *(ibid).*

In 1972, a large sewer was laid through St Mary's Steps as part of the works for the Southern Section of the Inner Relief Road. The size and proposed depth of the new pipe meant more or less the complete destruction of whatever archaeological levels survived at that time. Accordingly a small excavation was mounted just before the work was due to start. The archaeological investigation had to be carried out under difficult conditions. For all but the last few days of the work, the public right of way had to be maintained by means of an overhead scaffolded walkway. The scaffolding limited the areas available for examination because of the way in which it had to be supported. Initially only one trench (Trench 1: 1.0 x 3.4 m) was opened up but later it was possible to expand to the north, east, and south. The eastern extension of the original trench had to wait until the final weekend when the steps were closed to the public and the scaffolding was removed. Work in this area had to be very rushed. The archaeological remains proved to have been very largely destroyed, mainly, it seemed, as a result of the work of 1920. However sufficient was intact to make clear the general sequence. Some of the stone slabs were still *in situ* and the southern wall also still survived,

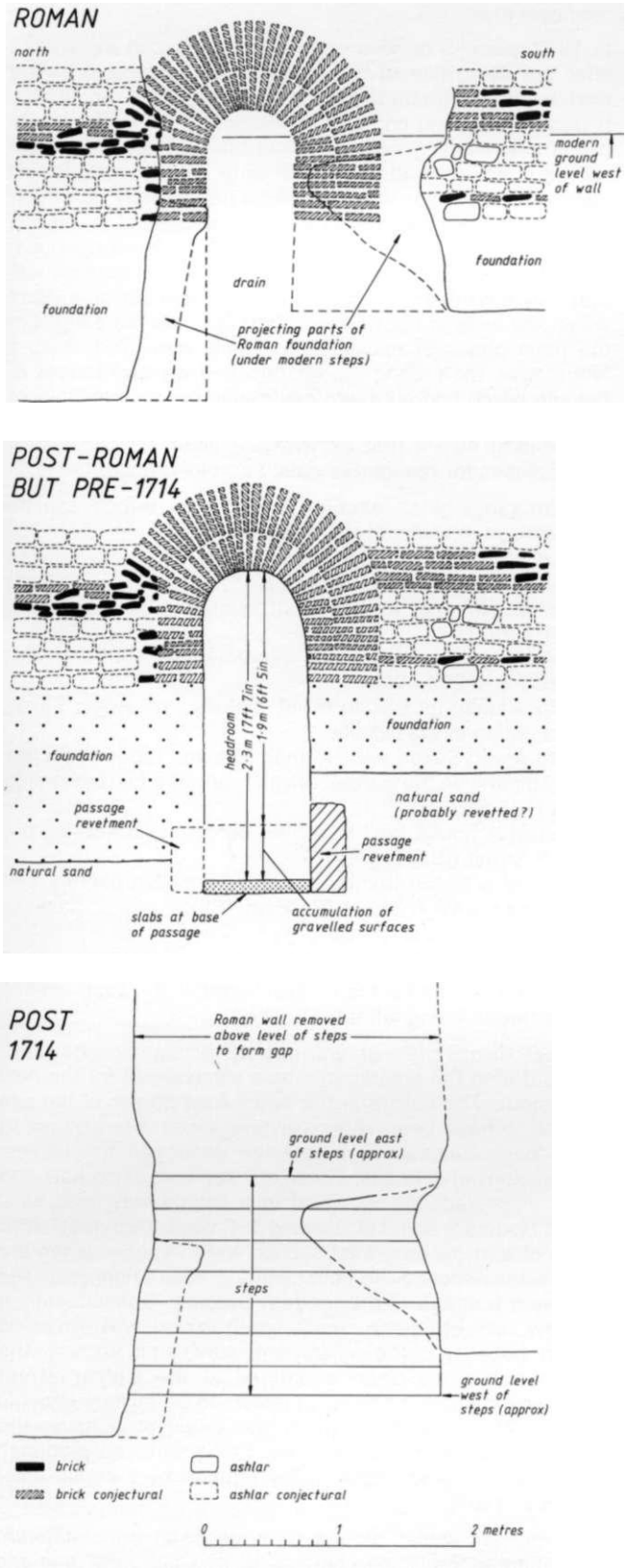


Fig 13.7 St Mary's Steps (SMS 72): interpretation (western elevation). [Pages 324-8]

apparently in much the same state as found in 1920. However, the northern wall was missing, its position perhaps indicated by a shallow slot (F3).

There is no doubt that in the Roman period the arch was for a drain. The relationship of the top of the arch to the foundation levels of the Roman wall make it quite clear that it was not a gate. Moreover, if the horizontal tile courses level with the upper part of the arch are followed through to the Balkerne Gate, about 100 metres to the north, then it will be seen that the top of the arch must have been at Roman ground level.

The work of 1972 showed that the arch for the drain was used as a postern in post-medieval times. A ramp had been made on the eastern side of the drain-arch so that the base of the passage would be more or less horizontal. The latter was below the bottom of the foundations of the Roman wall and tower. The earliest surface detected was formed by the stone slabs. Four of these lay *in situ* close to the natural if not directly on it. The three at the eastern end of the trench lay as if forming the base of a set of rudimentary steps. The stones were of reused Purbeck marble. They appeared to have been set in rather patchy mortar and were accompanied at one place by two fragments of yellow brick. No traces were found of the tiles of 1920. The slabs had been covered by a succession of gravelled surfaces. This had the effect of making the sloping ascent referred to by Morant and of slowly reducing the headroom in the arch. Thus by the time the final layer of gravel had been deposited, the passage was only about 1.9 m high. The base of the passage was below the bottom of the foundations of the Roman wall and tower. The walls uncovered in 1920 were revetments for the postern, built to hold back the soft sand under the Roman foundations. The southern wall was of alternate courses of septaria and tile; it had been repaired at the east end with unfrogged red brick. The dating evidence was limited but consistent. Sherds of pottery throughout the gravel point to its deposition in the 17th and early 18th centuries. Fragments of clay tobacco pipe stem in all but the very earliest gravel layers showed that these deposits could not predate c 1580 (the earliest possible date for pipes) and fragments of brick throughout the gravel and under the most easterly stone slab show that these contexts are unlikely to be earlier than the 16th century or so because brick had been scarce in post-Roman Colchester until that date. Important in the latter context are the two fragments of brick apparently contemporary with the use of the stone slabs. The brick repair of the southern revetment wall, although possibly earlier, is in keeping with work of c 1700 and later.

In 1714, the masonry above the arch was removed and the hole widened by removing a little of the wall on the south side to leave a gap 2.0 metres wide. The ramp on the east side of the wall was filled in and steps were built to pass through the thickness of the wall. No trace of these steps was found during the excavation.

The pilaster referred to by Hull (1958, 61-2) could not be found; indeed from what could be seen of the tower, it was hard to accept that there had ever been one.

The arch was not part of a freestanding tile drain like the one found in the Castle Park *(ibid,* 85-90) because the sloping tiles forming the upper part of it stopped at the rear projection of the tower and were continued as bands of horizontal tiles. In other words, the arch only existed in the thickness of the wall and can only have been an opening through which a wooden drain was to pass. Certainly, the excavations at Lion Walk, Culver Street, and elsewhere have shown that the streets were nearly always lined with drains and that only in very rare circumstances were these made of tile rather than wood. The presence of the arches

would have represented weak spots in the defensive circuit of the wall. Presumably the tower was built next to the drain-arch to enable the gap to be watched from overhead and given additional protection. The drain-arch at St Mary's Steps corresponded to the southern side of an east-west street with the tower being situated neatly at the end of it. A similar arrangement presumably existed at the ends of most streets, certainly at the west end of the street between Insula 9a & 17 and probably at Scheregate Steps (Fig 2.9 and *see* below).

It seems hard to accept that the original postern was no more than the unaltered Roman drain-arch but this seems to have been the case. Morant described it as 'low' *(see* above) suggesting that the arch was there until 1714. Also the two revetment walls provide the width of the passage which is only slightly wider than the internal dimension (0.60 m) of the two drain-arches visible for inspection elsewhere in the town (East Hill and Vineyard Street). The gap itself would have been similar in size to a narrow doorway in a house. It had only been possible to use the drain-arch as a postern because the ground-level inside the wall is much higher than outside. The difference stems from the accumulation of deposits inside the walled area of the town in contrast to the reduction of the ground-level at the foot of the wall caused by erosion into the ditch. In general, this situation occurs around the entire circuit of the wall except close to the Roman gates *(CAR 3,* 15).

In addition to St Mary's, there were two other postern gates in the medieval town (ie at Scheregate Steps and the Rye Gate). In the light of the discoveries described above, it seems possible that these were reused drain-arches. Scheregate Steps is like St Mary's in that it consists of a flight of steps built across the thickness of the wall. It also lies at the end of a Roman street and apparently next to a tower. The Roman wall, unlike the situation at St Mary's, is unbroken and passes under the steps (Hull 1958, 59). Thus, although no drain-arch is known to have existed here, the position of the steps in relation to a probable tower make it distinctly likely that there had been a drain-arch here and that this had been used a postern. The character of the third postern (Rye Gate) is very obscure. Its site is taken to be indicated by a gap in the Roman wall of 23 feet (Hull 1958, 34-5). This is smaller than the width of Duncan's Gate, the smallest Roman gate in the town. However the gap matches closely the distance occupied by the tower and the drain-arch at St Mary's suggesting that it too originated in the same way. This possibility need not be ruled out by the fact that a tower in this position would not have corresponded to the end of a street because a tower placed in just such a manner existed to the east on the north side of Insula 6.

Cups Hotel 1973-4 (CPS 1973-4)

High Street
Figs 13.8-20 and Sxs 13.1-6
1973-4
Reason: construction of office block
Record/report: AG/PC & AG

The site of the Cups Hotel was potentially of considerable archaeological interest because it lies in the centre of the Roman and medieval town. It is situated on the southern side of Insula 19 and on the northern frontage of the *decumanus maximus.* Moreover the remarkable remains of a Roman shop, discovered in 1927, lie on the west side of the redevelopment area. The shop, destroyed in 60/1, had substantial quantities of pottery and glass in stock (Hull 1958, 153-8; Millett 1987, 105-6). Also the site of the Cups Hotel is adjacent to the site of the Moot Hall *(CAR* **1**, 60-7), now occupied by the present town hall, and lies in the High Street in the centre of the northern frontage of what was the principal street and market area of the late Saxon and medieval town.

In 1973, permission was obtained for a rescue excavation after the demolition of the former Cups Hotel and before work was to begin on the construction of Greytown House. It was proposed to construct a basement under the whole of the new building with the effect that any archaeological remains which had survived until 1973 were to be destroyed. However the Cups Hotel had already contained extensive cellars (two-tiered in some places) so that much of the archaeological remains had already been removed. After the demolition work was completed, it became clear that only a north-south strip about 6 m wide survived intact within the area of the new building; this was the subject of the main phase of excavations. There were also strips a few metres wide along the eastern and western fringes of the site which had not been destroyed, but the proximity of tall buildings on both boundaries (the Town Hall and Lasts the bakers) meant that excavations were not possible in these places for reasons of safety and insurance.

The archaeological remains in the main trench can be summarised in terms of the following:

a) part of a burnt building with at least two partly sunken rooms or 'semi-cellars' (Building 152; Period 2, *c* 49-60/1)
b) small part of a house (Building 153; Period 3, 60/1 -*c* 225)
c) small part of a house with a 'semi-cellar' (Building 154; Period 4, *c* 225-400+)
d) indications, in the form of pottery, of Anglo-Saxon occupation in the vicinity
e) late Anglo-Saxon and Norman pits and robber trenches presumably in the garden or rear yard of a house fronting the High Street
f) part of a house built in *c* 13th century and fronting the High Street (Building 155)
g) part of a timber-framed house built *c* 15th century and fronting the High Street (Building 156)
h) the Cups Hotel.

Pressures on labour and finance from excavations elsewhere resulted in the earliest layers in the southern half of the trench being left unexcavated.

Further discoveries of archaeological significance were made during the contractor's bulk excavations for the new basement. The cellars in the south-east corner of the site proved to have been shallower than elsewhere and not to have been deep enough to have destroyed the earliest archaeological deposits. These still survived in pockets and were inspected and recorded in a limited way, and as a result Rooms 2 and 3 of Building 152 were uncovered. Also parts of a major east-west section were exposed when the contractor removed the cellar walls directly underneath the southern frontage of the modern building. Consequently a narrow, pre-Boudican, north-south street was revealed which, because of the cellars, only survived in section. The street has since been examined at the Culver Street excavation where it has been shown to be military in origin (pp 56-7). In addition, when the intact strip along the western boundary of the site was being removed, workmen found an unusual, copper-alloy figurine of a comic actor *(CAR* **2**, 4267).

The military street proved to have been on a different alignment to the Roman houses, all of which were later and civilian. The difference was a few degrees and is about the same as the difference between the alignments of the fortress and the eastern grid of the *colonia* laid out *c* 50/55 *(CAR* **3,** 5-9). The fact that the buildings share the alignment of the eastern grid indicates that the earliest

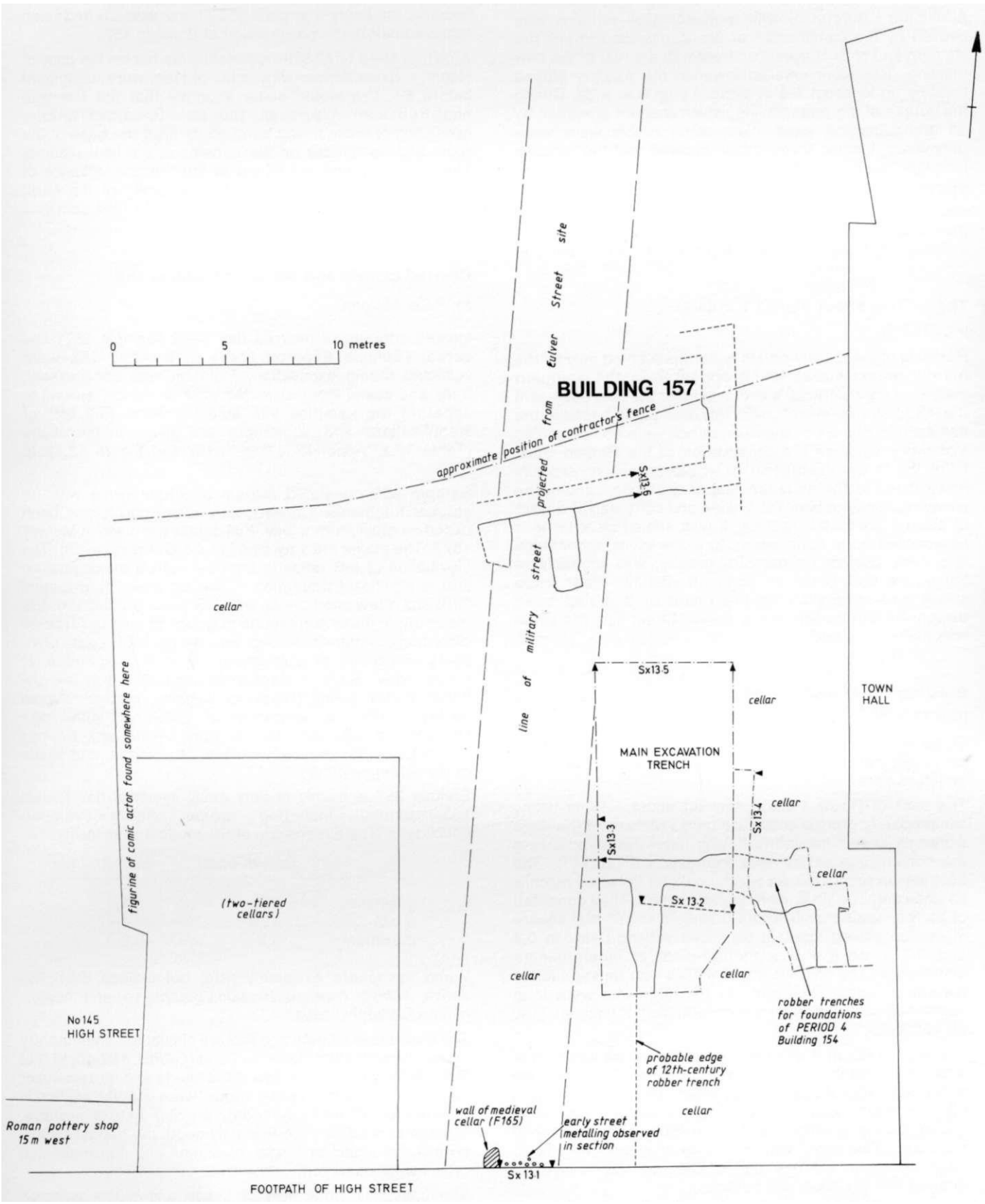


Fig 13.8 Cups Hotel (CPS 73-4): general site plan showing location of the main trench and discoveries recorded during the contractor's works. [Pages 328-38]

(Building 152) was of civilian origin and could not have been a reused military structure.

Additional interference with archaeological remains was caused by the construction of an access road to link the western end of St Runwald's Street with the rear of the new building. This work entailed lowering the existing ground level by up to about 1.0 m along a strip 6 m wide. During the course of the earthmoving, which was not preceded by an archaeological excavation, some rubble walls were uncovered. Limited investigation .showed that the remains belonged to an early medieval stone house (Building 157).

The High Street lies at the top of a natural slope forming the south side of the valley of the river Colne. Consequently the ground level at the northern side of the Cups Hotel site was substantially lower than that at the southern side of the site.

The military street (Period 1; *c* 44-9)

[Figs 13.8-9]

Remains of the military period were represented only by the narrow gravel street which appeared in the southern section of the contractor's excavation for the new basement (Sx 13.1, 35 mm microfiche). This was partly because the earliest deposits within the main trench were not excavated and partly because the construction of the Roman cellar F115 led to the destruction of whatever military deposits had existed in the southern half of the main trench. The surviving metalling was 1.8 m wide and consisted of a layer of packed gravel 0.2 m thick. It was sealed by a layer of redeposited burnt daub which, to judge by its appearance and early position in the stratigraphy, was probably of immediate post-Boudican origin. It was not clear if the street had survived until the revolt or if it had been dispensed with earlier. At the Culver Street site, the street was built over c 50/5.

Building 152 (Period 2; c 49-60/1)

[Figs 13.9-11]

Three rooms of Building 152 were examined. Two were semi-basements and all showed signs of destruction during an intense fire.

The floor of Room 1 had been set about 1.15 m below contemporary ground level. The bases of three of the walls were still *in situ,* the fourth having been destroyed during the construction of the later foundation (F140/147). The floor was of timber planks which could be detected patchily as charcoal. The walls were timber-framed. They consisted of vertical studs mostly about 0.30-0.35 m (?1 pM) square in section placed apart at distances varying between 0.4 and 0.7 m on top of a ground-plate of indeterminate dimensions. The stud-work was infilled with reused broken tile set in mortar. Many of the tile fragments were from segmental bricks used for the construction of columns (see pp 256 & 258).

The floor of Room 2 was not sunken but lay within 0.1 m of what appeared to be the top of the natural. Only the base of the east wall of the room survived. This proved to be a plinth of mortar and tile (including at least one segmental piece), the top of which stood 0.2 m above of the surface of the floor. The latter was of sandy clay and had been intensely burnt. On one part of the floor lay a layer of charred flax (Sx 13.4; *see* below).

Like Room 1, Room 3 was set into the natural sand although not by quite as much (0.8 m). No walls were found and, although only a very small part of its floor was exposed, it appears to have been of sandy clay rather than timber. Burnt cereals lay on the floor (Sx 13.4; *see* below). The limits of Room 3 were impossible to determine, partly because so little of the room was exposed and partly because the floors and partitions (if any existed) had been removed before the construction of Building 152.

A coin of Nero (*RIC* 329) apparently lay flat on the floor of Room 1. Since copper-alloy coins of Nero were not minted before 64, this would seem to imply that the fire was post-Boudican. However, the post-Boudican debris, consisting of finely mixed burnt daub, filled the base of the room and lay directly on the remains of the floor timbers. The uniformity and the extent of the fire, the absence of traces of an earlier fire, and the proximity of the burnt 'pottery shop', all suggest that the context of the coin was probably post-Boudican.

Charred cereals and flax from Building 152

by Peter Murphy

Limited spreads of charred flax seed (Sample 957) and cereal (Sample 950) on floors of Building 152 were collected during excavation. Flotation was unnecessary; fruits and seeds were extracted after gentle dry sieving to separate the samples into size fractions. Full lists of identifications and illustrations are given on microfiche (Table 13.1, Appendix 17, p 1076) and Figure 13.12 (p 333).

Sample 950 consisted largely of wheat grain with no spikelet fragments. Consequently identification has been based on grain morphology. Full details are given in Murphy 1977. The grains are very small (3.4-5.6 mm in length). The distribution of LB ratios is trimodal, with a major peak at 200, a significant proportion of slender grains (LB around 240) and a few short grains with LB ratios around 170. It is thought that these correspond to grains of emmer *(Triticum dicoccum),* under-developed emmer (cf Van Zeist 1970, 90-1) and bread or club wheat *(Triticum aestivum s. l.)* respectively. Rare contaminants include a few six-row hulled barley grains *(Hordeum vulgare),* probable naked barley grains, a cotyledon of vetch or small pea *(Vicia/Pisum* sp), caryopses of oats *(Avena* sp), *Bromus mollis/secalinus* and indeterminate Gramineae, and seeds of *Agrostemma githago.*

Sample 957 is mainly of very small seeds of flax *(Linum usitatissimum)* including some under-developed specimens. The dimensions of 50 seeds are as follows:

	Length (mm)	*Breadth (mm)*
minimum	2.7	1.5
mean	3.22	1.77
maximum	3.8	2.0

Weed seeds are extremely rare, but include *Camelina sativa, Thlaspi Arvense, Brassica/Sinapis* sp. and indeterminate Caryophyllaceae.

The deposits of wheats and flax are similar to contemporary cereal deposits from Balkerne Lane *(CAR* ***3,*** 108-10) in that they are very clean, with few weed seeds and no spikelet or capsule fragments. These crops were clearly efficiently cleaned by winnowing and/or sieving before storage. Storage conditions were evidently good; the deposits show no signs of insect or fungal infestation and no germinated grains were observed.

The unusually small size of seeds and grains is noted above; this is characteristic of material from Boudican destruction layers at Colchester. It is thought that this is partly related to conditions of carbonisation; the plant remains were carbonised slowly after being buried by the burning debris of buildings, allowing the loss of volatile

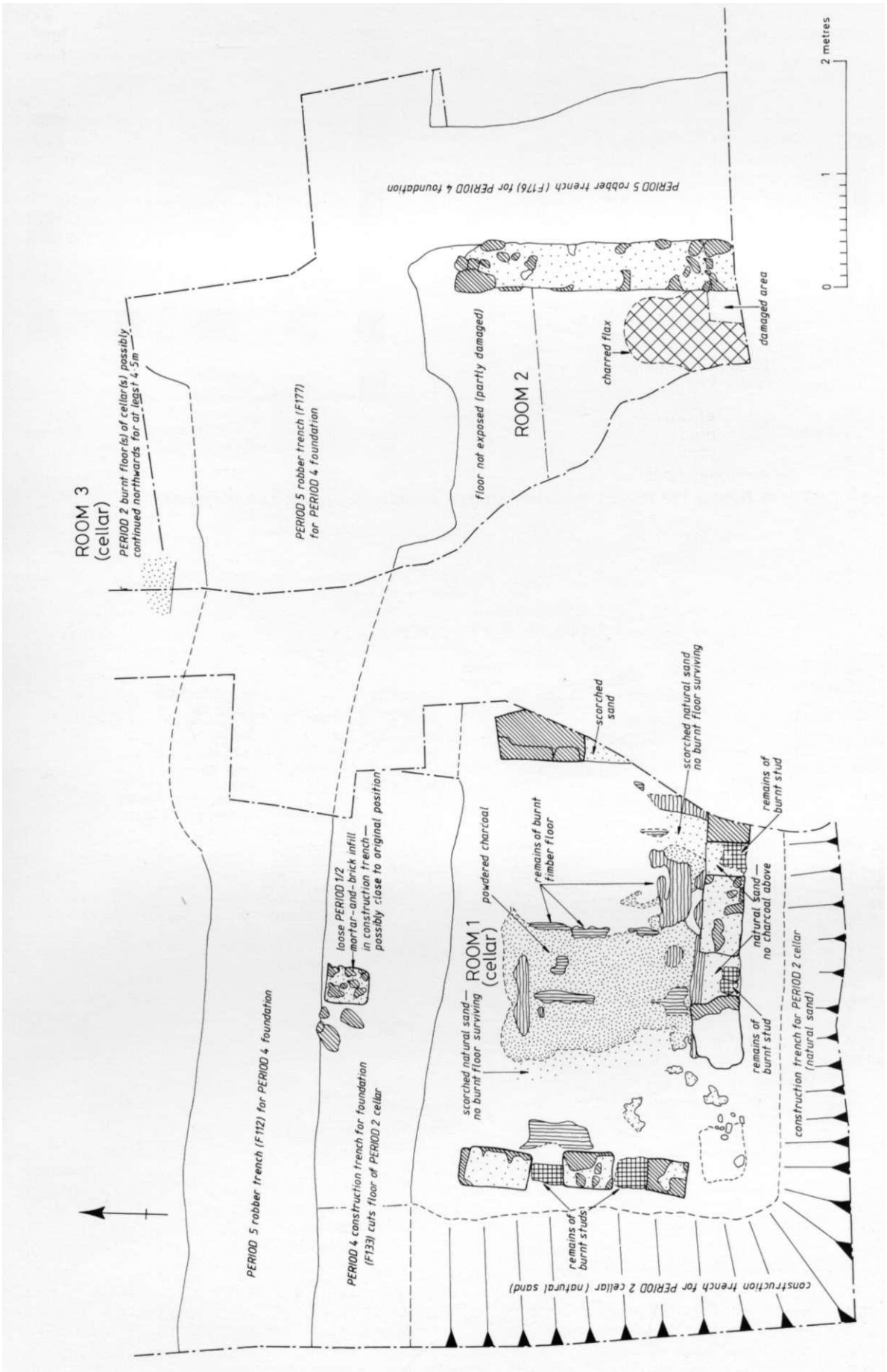


Fig 13.9 Cups Hotel (CPS 73-4): Building 152 (c 49 to 60/1). 1:50. [Pages 330-3]

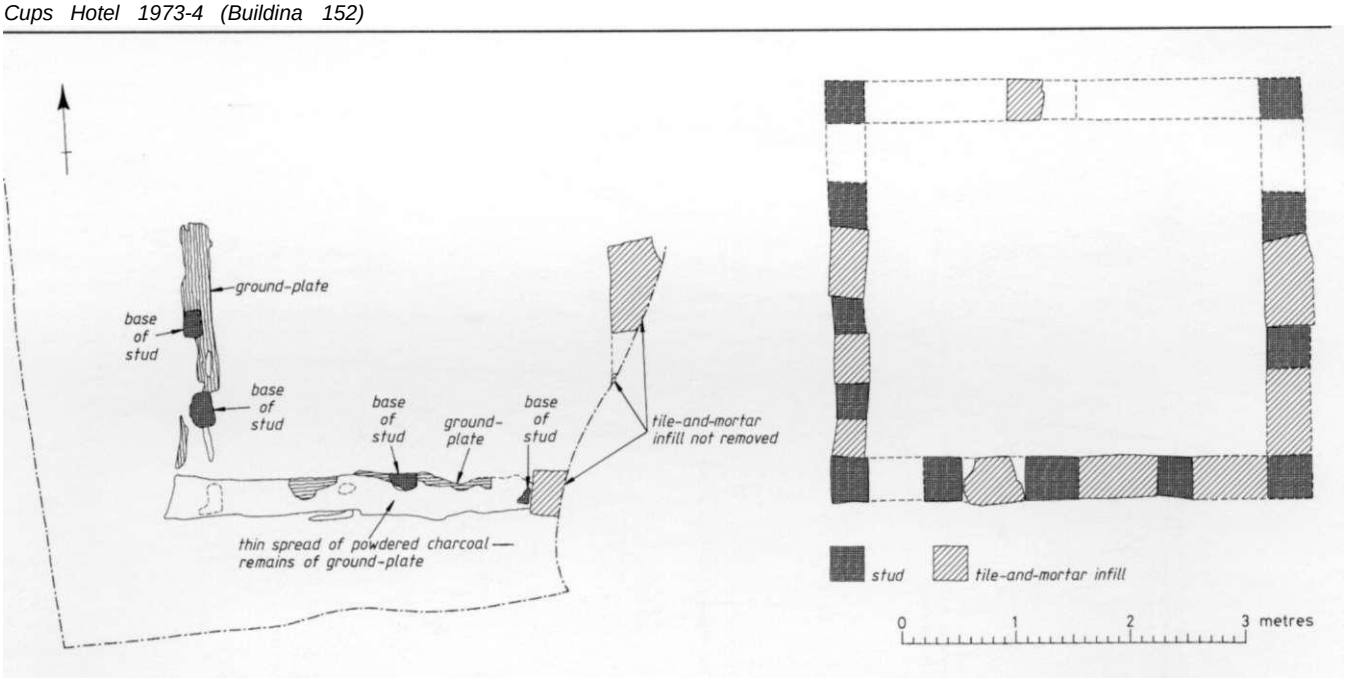


Fig 13.10 Cups Hotel (CPS 73-4): Building 152, Room 1; floor and walls (left), reconstruction (right). 1.66. [Pages 330-3]

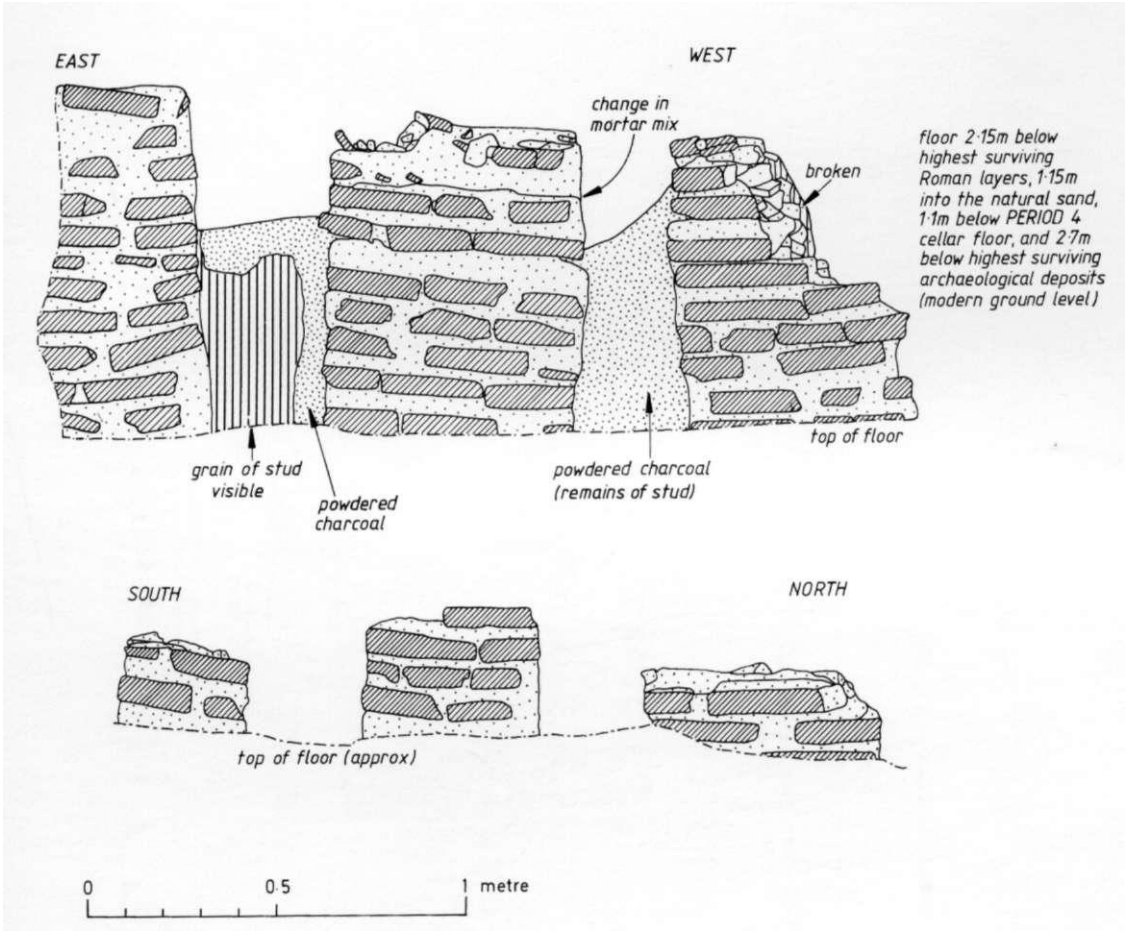


Fig 13.11 Cups Hotel (CPS 73-4): elevation of the walls of Room 1, Building 152. 1:20. [Pages 330-3]

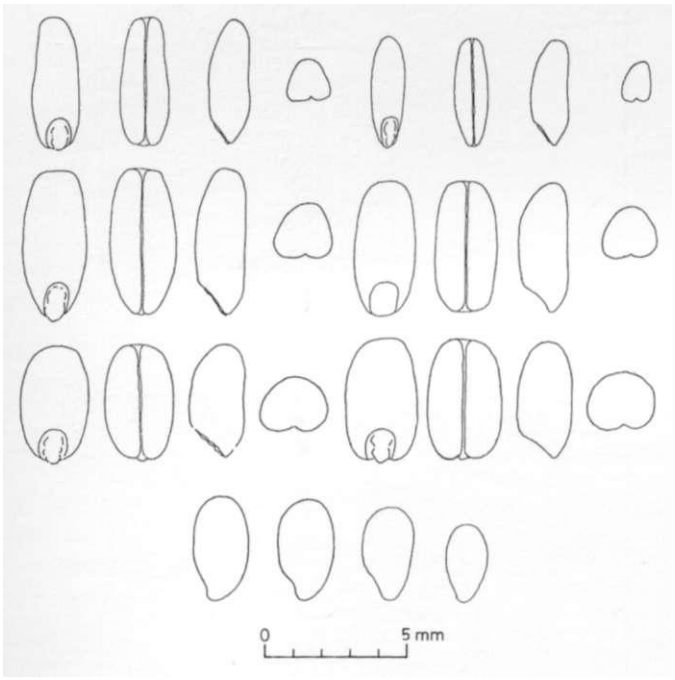


Fig 13.12 Cups Hotel (CPS 73-4): outline drawings of wheat caryopses and flax seeds from Samples 950 and 957. [Pages 330-3]
Top row: *Trilicum dicoccum; under-developed emmer caryopses.*
Second row: *Triticum dicoccum: emmer caryopses.*
Third row: *Triticum aestivum s. l.; bread/club wheat caryopses.*
Fourth row: *Linum usitatissimum; flax seeds.*

components and consequent shrinkage before full carbonisation. However, the high proportion of under-developed emmer grains from Sample 950 and apparently immature flax seeds from Sample 957 does suggest that growing conditions also influenced seed size and development. Flax, for example, is not well-adapted to light soils, particularly in areas of deficient rainfall (Renfrew 1973, 124). In the Colchester district large summer soil moisture deficits nowadays occur (Sturdy & Eldridge 1976). It cannot, of course, be determined whether this flax was locally produced: it could be an imported crop. However, if it was a newly-introduced crop grown locally, lack of experience could have resulted in a poor harvest. On the other hand, one might speculate that the disturbed political situation leading to the Boudican revolt encouraged premature harvesting.

Building 153 (Period 3; 60/1-*c* 225)
[Fig 13.13]

The remains of this house in the southern half of the main trench had been destroyed when the partly sunken floor in Building 153 was constructed *(see* below). Building 153 was represented by a hearth (F164) built against the only wall of this period uncovered (ie F157). The presence of the hearth was shown by a patch of intensely burnt daub edged in places with some fragments of tile laid flat. Elsewhere were thin patches of *opus signinum* and two small scatters of broken tile, all of uncertain origin. The wall survived as a stump of sandy clay a few centimetres high; it possibly had been made of sun-dried bricks because no indications of wattles were detected. The wall was probably the north wall of the house because the area to the north appeared to have been a garden.

Building 154 (Period 4; c 225-400+)
[Figs 13.8 & 13.14]

A massive construction trench (F140/147) at least 1.8 m deep was dug for an east-west foundation of septaria and mortar (F142). When the foundation was built, the remaining parts of the trench were backfilled. The foundation continued beyond the main area of excavation and branched southwards. Roman builders were usually careful to set their foundations on the natural sand *(CAR* ***3,*** 20) so presumably the construction trench was dug so that the foundation could penetrate the abnormally deep remains of Period 2 and thus lie directly on the natural. A large quantity of make-up was deposited north of the foundation to make up for the downwards slope of the ground level at that time. Much of this consisted of Boudican destruction debris, dug up when the large east-west foundation was made (Sx 13.4). A shallow cellar or basement (F115) in the southern part of the trench had a floor which was of plain *opus signinum* and was 1.0 m below the highest surviving Roman layers. The base of a small tile-built structure (F88) lay on top of the make-up; it was poorly preserved and its purpose is not clear. The northern end of the site was difficult to interpret because the area had been badly damaged by the digging of pits in post-Roman times. However north of the foundation F133 there seems to have been a garden or an area of dumped layers which were subsequently cultivated.

Sometime after c 350, the cellar ceased to be used and was gradually filled up with an accumulation of sandy clay floors interspersed with layers of occupation and charcoal (Sx 13.2). The material contained large quantities of late Roman pottery, a bone comb and a belt mount *(CAR* **1***, 7,* fig 8), and possibly part of a dispersed hoard of coins deposited *c* 350-60 (Hammerson 1980 & *CAR* **4,** 53-4).

Twenty-six fragments of window glass were recovered from the site, most if not all of which presumably derived from Building 154. Seven pieces were directly associated with the building, some in the destruction debris on the cellar floor. The rest were residual in later levels. Almost half the window glass was blown. This is a high proportion compared with the material from Culver Street (pp 117-9) and reflects the late date of the building.

Anglo-Saxon pottery

About 16 sherds of Anglo-Saxon pottery were found in the main excavation trench. All were grass-tempered and two from F106 were decorated with lines and pear-shaped stamps. The latter were probably parts of the same pot and were of 6th-century or later date *(CAR* **1,** 19, fig 21). None of the excavated features are likely to have been contemporary with this material except possibly a group of stake holes in the north-east corner of the trench and two shallow pits or depressions (F111 & F102; 0.2 m deep) containing only Roman pottery. The quantity of material concerned is so small that these features could have been Saxo-Norman.

Late Anglo-Saxon and Norman pits and robber trenches (Period 5)
[Figs 13.8 & 13.15]

The pottery from the largest pits belonging to the period from the 10th to the 12th centuries has already been described, illustrated, and discussed in relation to other groups of pottery of similar date from Colchester *(CAR* ***1,***

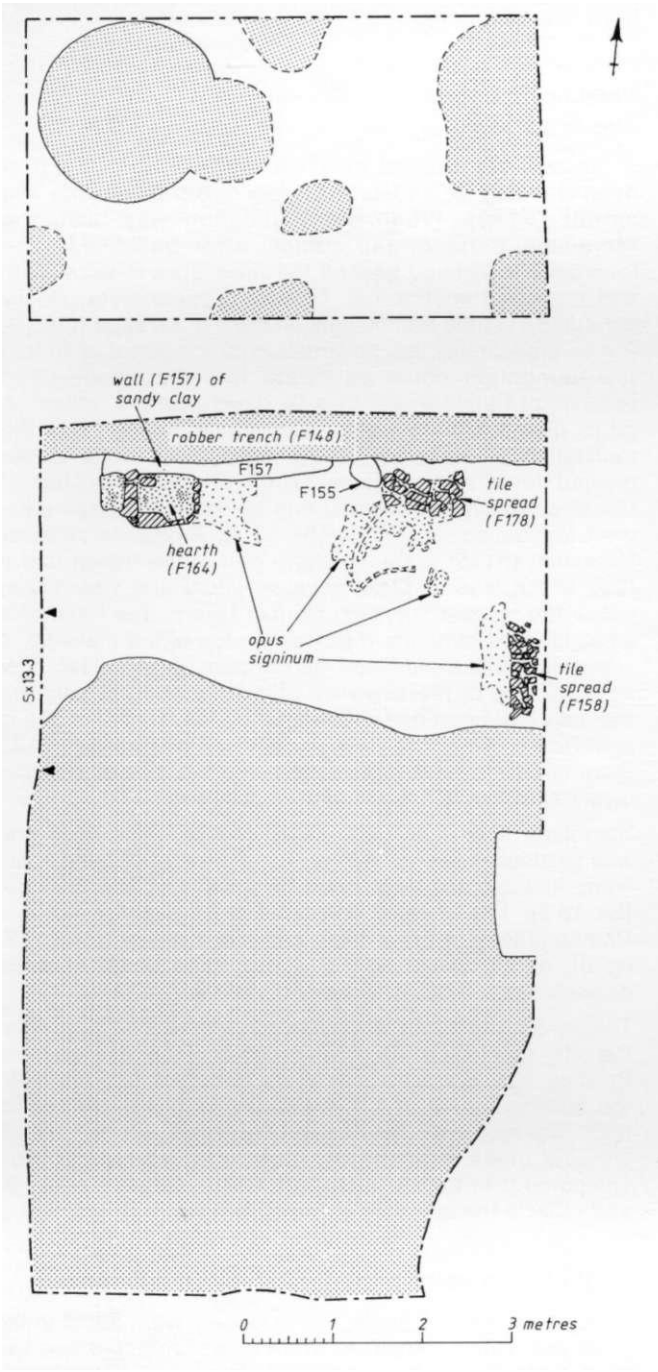


Fig 13.13 Cups Hotel (CPS 73-4): Building 153 (60/1 to c 225). 1:85. [Page 333]

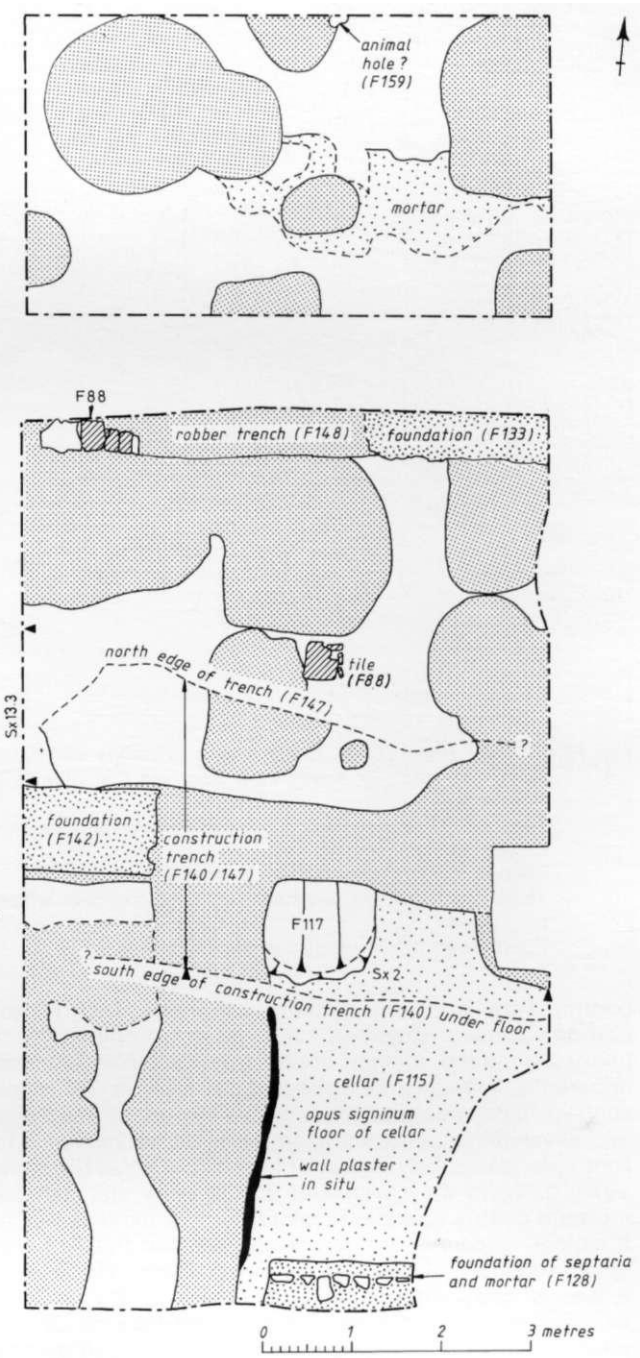


Fig 13.14 Cups Hotel (CPS 73-4): Building 154 (c 225 to 400+). 1:85. [Page 333]

33-40). Material from the smaller pits (F55, F62, F65, F109, F111, F102, F107, F131, & F135) was not included because of the small quantities involved.

The pits were of varying depths, the deepest being F46 (2.7 m). The largest (F45, F46, F99, F106, F113, & F114) were probably cess-pits. The robber trenches (F112/118 & F116/119) were exceptionally deep (1.8 m) because the Roman foundations themselves had been extensive. The backfill of the Roman cellar (F115) was very soft and consequently there had been considerable collapses of the robber trenches on the south (F112/118) and east sides (F116/119) when they were open. The robber trenches were dug in the late 11th or 12th century whereas the pits seem to have ranged in date from c 1000 or earlier to *c* 1200 *(ibid)*.

Other contemporary features were two post holes (F48 & F49), some shallow gullies (F136, F137, & F93) which may have been collapsed animal burrows, and perhaps the stake holes in the north-east corner mentioned above.

The pits and other features all lay to the north of the robber trenches and thus give the impression that they were dug at the rear of a building which fronted on to the High Street and which had a back wall coinciding approximately with the position of the robber trench F112/118. The robbing could not have been carried out unless any house which had stood over the foundations had been demolished. Conceivably the Roman wall on top of the foundation still survived until the late 11th or 12th century and formed an integral part of the Saxo-Norman building.

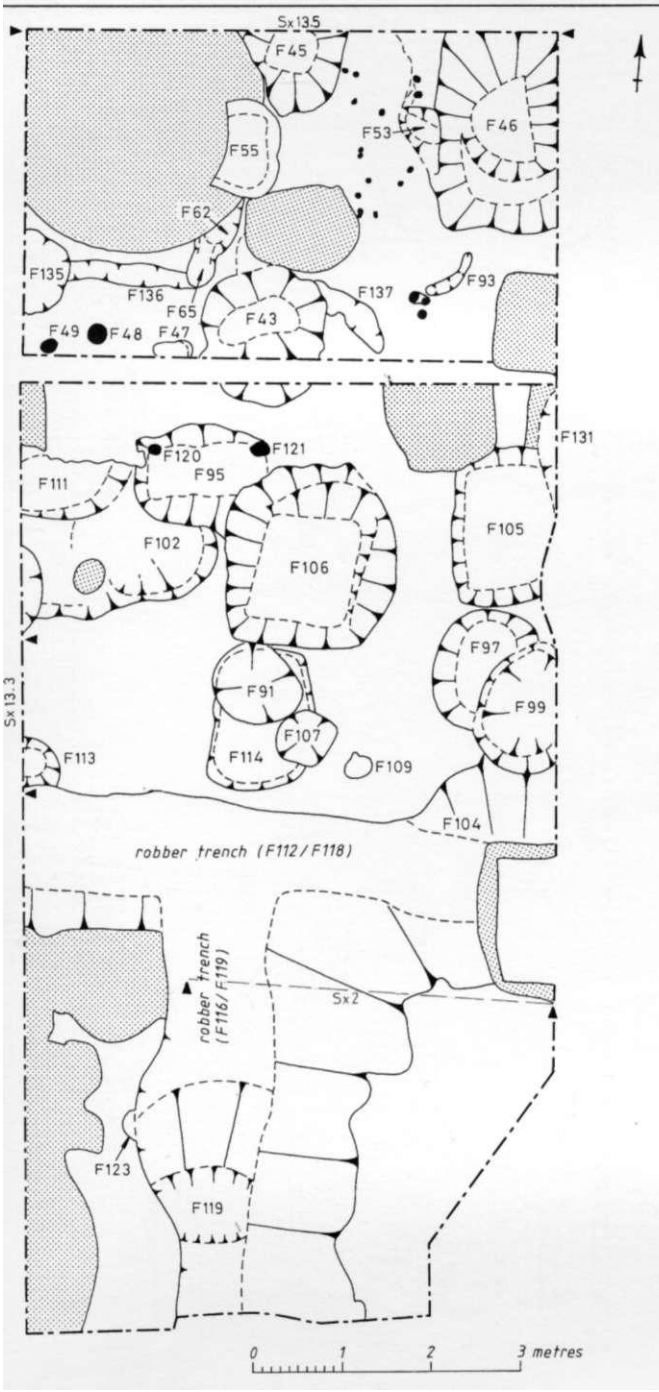


Fig 13.15 Cups Hotel (CPS 73-4): Saxo-Norman pits and robber trenches. 1:85. [Pages 333-4]

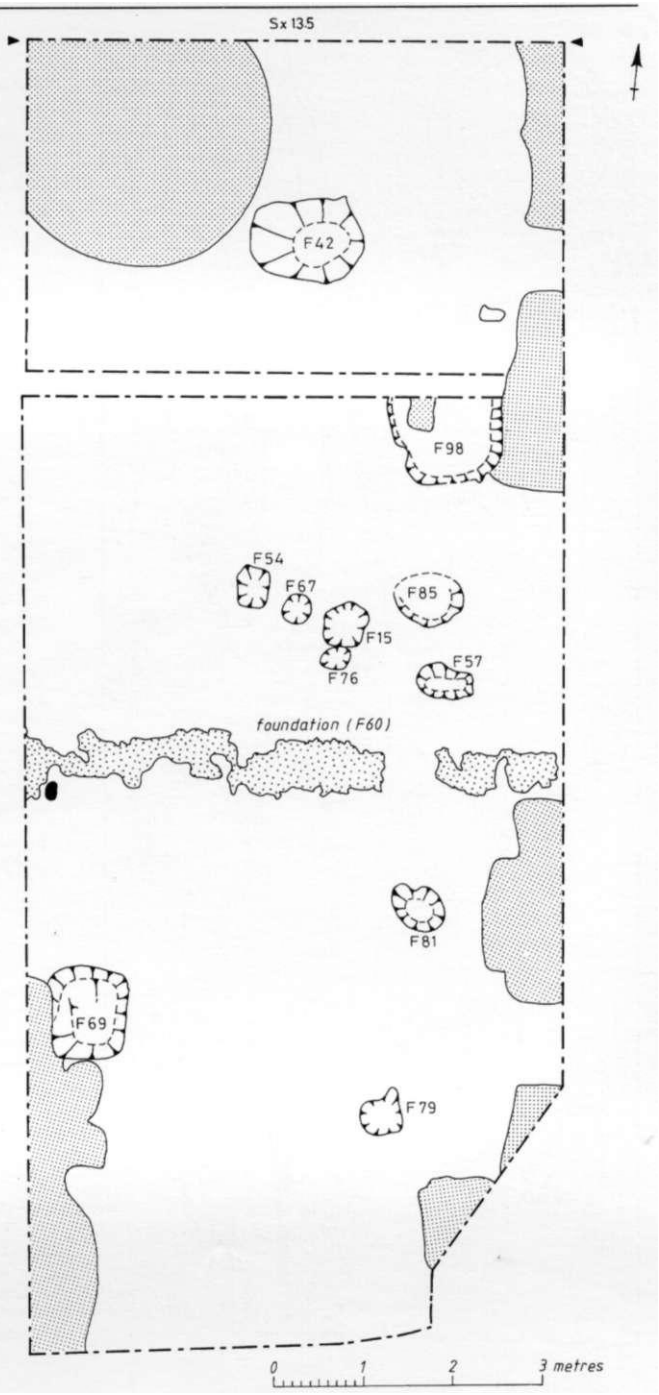


Fig 13.16 Cups Hotel (CPS 73-4): Building 155 (13th to 15th centuries). 1:85.

Building 155 (Period 6; c 13th-15th centuries)

[Fig 13.16]

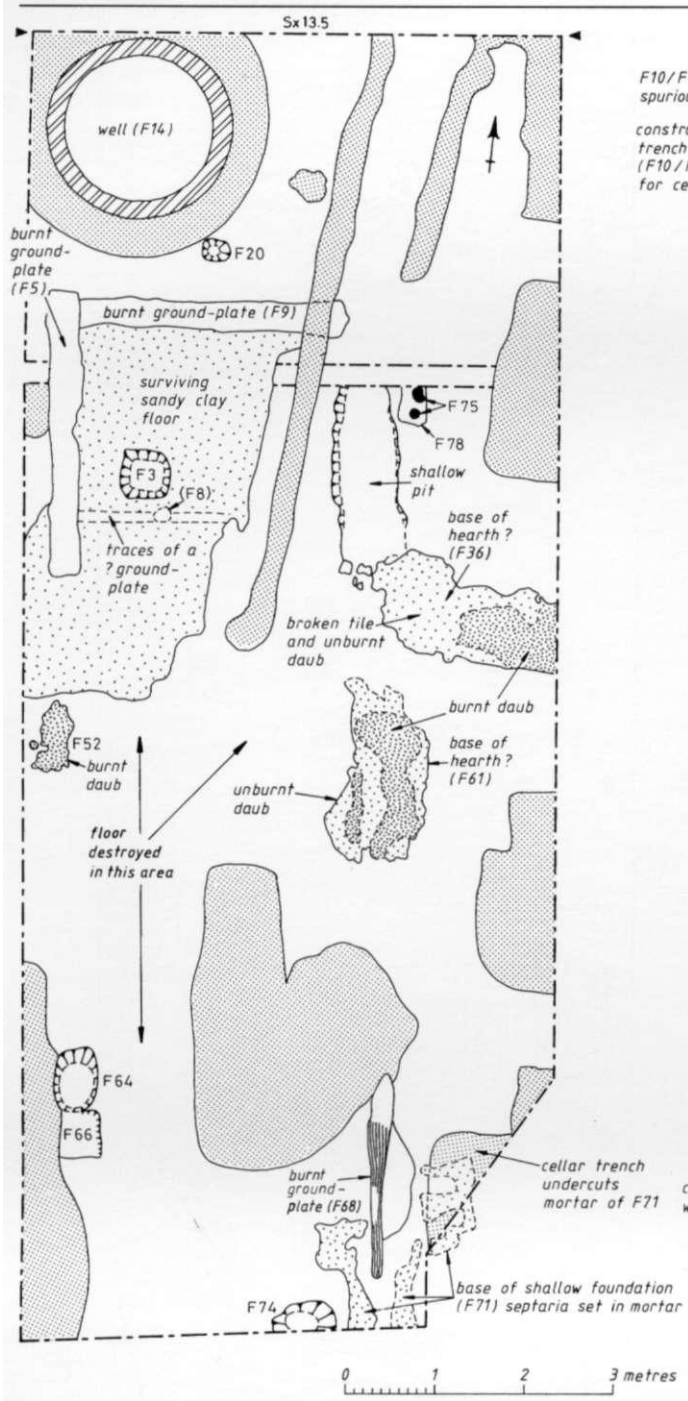
A shallow, patchy foundation of mortar and septaria (F60), 0.1 m deep, was all that survived of a building erected about the 13th century. The foundation appeared to have been the base of a rear wall of a house which fronted on to the High Street. To the north of the foundation were some small shallow pits (F15, F42, F54, F57, F67, F76, F85, & F98), apparently dug in a garden.

Building 156 (Period 7; c 15th-?18th centuries)

[Fig 13.17]

Probably in the 15th century a new building was erected. It had floors of yellow sandy clay and timber-framed walls with ground-plates laid directly on the soil. Parts of three ground-plates survived (F5, F9, & F68). They were burnt, indicating that the house had been destroyed by fire. Two patches of sandy clay (F36 & F61) were very burnt. The intensity of the heat was such that they may have been the bases of hearths or ovens rather than products of the fire.

A well, about 15 m deep and lined with peg tile and reused Roman building materials, lay in the north-west corner of the trench. Its date of construction is not known but to judge by the composition of its lining, especially the absence of brick, and the stratigraphic position of its construction trench, it was built probably in the late medieval or early post-medieval period. The well had been capped over in brick, probably in the 19th century, when it was no longer



13.17 Cups Hotel (CPS 73-4): Building 156 (15th-?18th century). 1:85. [Pages 335-6]

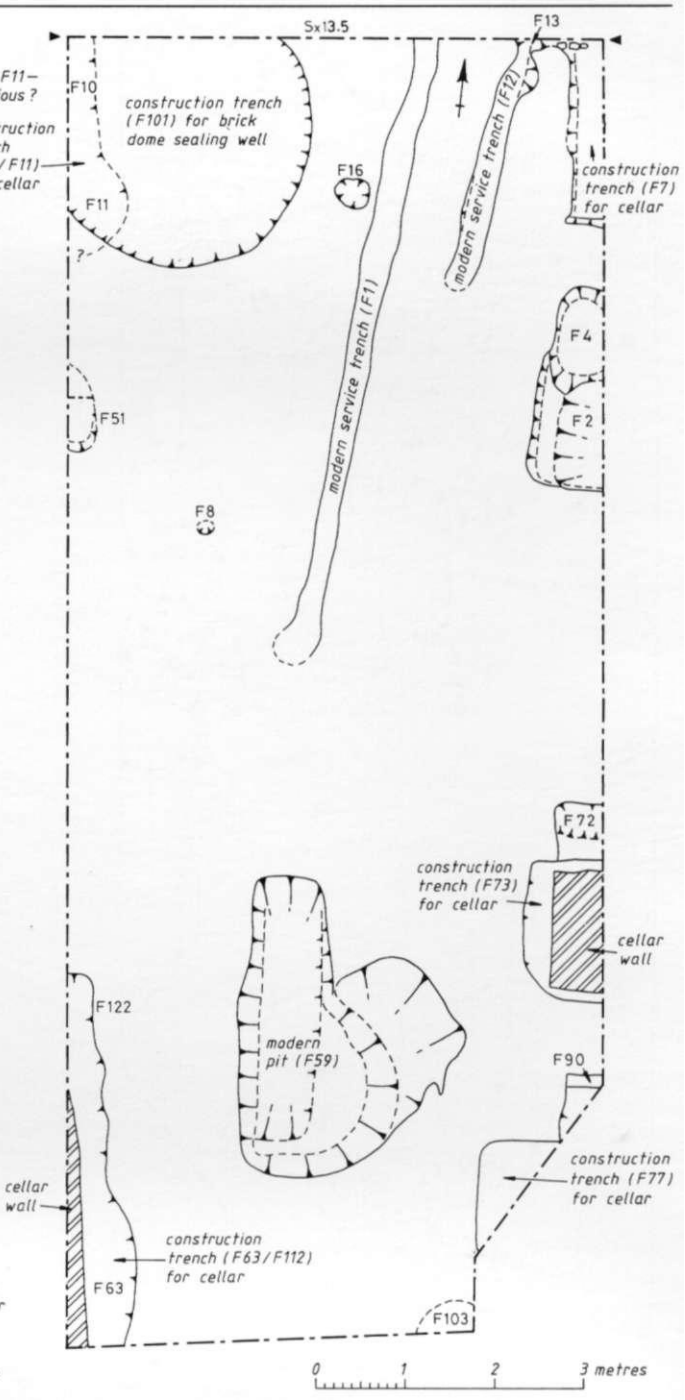


Fig 13.18 Cups Hotel (CPS 73-4): latest remains (c 18th-20th century). 1:85.

required. The well had not been backfilled and water was still available at the bottom. Members of the North-East Essex Subaqua Club explored it with little success. The lining proved to be in a dangerous condition and collapsed shortly afterwards.

The latest remains (Period 8; 18th-20th centuries)

[Fig 13.18]

The date of the construction of the Cups Hotel is obscure but it probably originated as a house which, by the 18th century, had been converted into an inn (see below). The original building may have been Building 156 or its replacement if the house had been burnt down completely. The area of the main excavation had been lowered within the last 200 years or so to enable a level metalled surface to be laid. As a result little survived of the 15th-century and later deposits. The laying of the surface may have been contemporary with the sealing of the well. Both these operations may have been associated with the covered market which was opened at the rear of the Cups Hotel in 1813 (see below).

A brief history of the Cups Hotel

by Andrew Phillips

Called originally 'The Falcon', it appears in records from 1411 onwards. Later it was called the 'Queen's Head', then

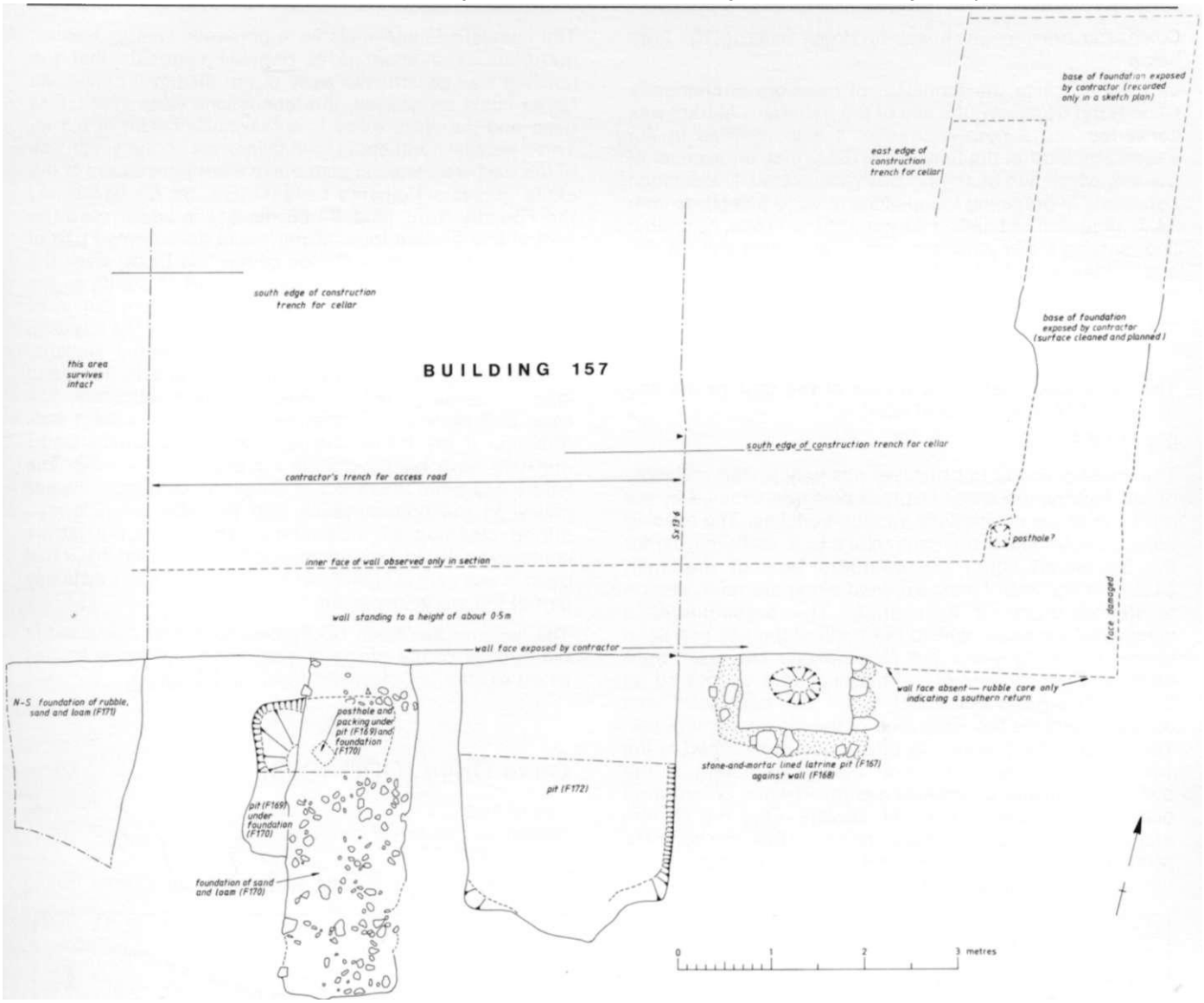


Fig 13.19 Cups Hotel (CPS 73-4): early medieval stone house at rear of site (Building 157). 1:70. [Page 338]

the 'Royal Three Cups'. Its heyday was the Regency period when the town's proximity to war-torn Europe and its military garrison led to many distinguished visitors including Nelson and the future Louis XVIII of France. With the closure of the White Hart in 1819, it became the town's leading inn and remained so until the 20th century. Early in the 19th century it absorbed a grocer's shop adjacent to its east side. The property was owned by John Eglonton Wallis whose bankruptcy in 1802 doubtless accelerated the sale. The two properties none the less kept their separate façades until the 1880s, as is clear from the surviving photographs. However the 1876 six-inch Ordnance Survey suggests that the buildings were run into one behind the façades.

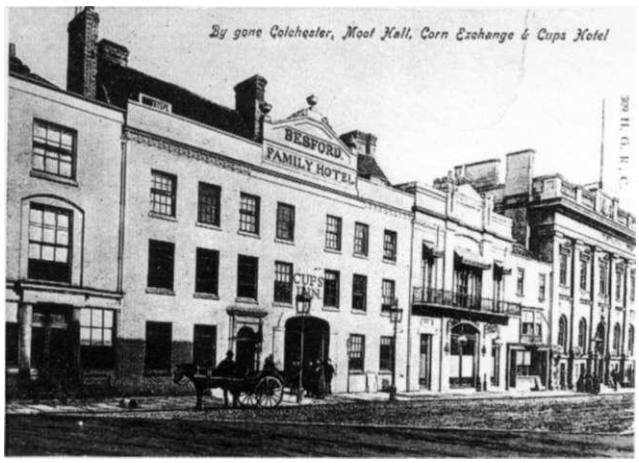


Fig 13.20 Cups Inn, c 1885. [Pages 336-7]

Behind Wallis's shop lay an open space, formerly his garden and grotto which contained a much visited mosaic pavement found in 1763 (Hull 1958, 151). Wallis's garden carried a right of way from his High Street shop to West Stockwell Street; this is clearly marked on the map of Colchester in Morant (1748). In 1813, this area was converted into a market (later called the Vegetable Market) for fish, fowl, fruit etc, access being by the stucco-arched entrance to the Cups. Despite an outlay of £10,000, it proved to be a failure, and was later partially demolished (Cromwell 1825, 199). The area was dug through to install drains in 1856, and Wire noted various finds. He also says the area had been extensively dug and filled in with rubble 'close to a lost stone house' (Wire's Diary, MS in ERO,

Colchester branch) which was no doubt Building 157 *(see* below).

In 1884 following the formation of the Corn Exchange & Cups Hotel Company, the site of the Vegetable Market was converted into a corn exchange. It was reported in the Essex Standard at the time (10/5/1884) that 'on account of the soil, which had been previously excavated, it was found necessary in preparing foundations to go to a depth of from 14 to 18 feet'. The building survived to the 1960s, its ground floor serving many purposes, including a roller skating rink and a dance hall. In 1889 the two old façades were removed and a uniform replacement put on to a rebuilt Cups, which survived until the building's destruction.

The early medieval stone house at the rear of the site (Building 157; medieval and later)

[Fig 13.19]

The investigation of this building was very limited and most unsatisfactory, the areas involved being determined by the positions of the contractor's various trenches. The building came to light during the contractor's bulk earth-moving for the basement when the southern face of the main east-west wall was neatly exposed along the north section of the contractor's excavation. The presence of a substantial east-west wall to the north of the site had been known for many years but its date and character were obscure. Further parts of the building were uncovered on three subsequent occasions when the contractor was operating outside the main area of the redevelopment site. The building itself seems to have been demolished in the 19th century. The remains of the northern part of the building were later completely destroyed when cellars were built, probably also in the 19th century. Only the eastern and southern walls were investigated in 1974; the surviving remains of the western end of the building were undisturbed and thus not inspected.

The foundations and walls were of reused Roman building materials. The absence of peg tile suggests that the building was constructed early in the medieval period. As far as could be gauged, the foundations were over 0.8 m deep and the walls stood to a maximum height of 0.5 m. Three parallel north-south foundations lay on the south side of the east-west wall. In plan these were reminiscent of the stone houses at Pelham's Lane *(CAR* **1***,* 56, 60, fig 52) and the Foundry Yard *(ibid,* 54-60, fig 51) in which case the central and eastern foundations would have formed part of a wing on the south-east side of the hall block whilst the western foundation would have been part of a wing on the south-west side of the hall block. The bottom 0.4 m of foundation F170 still survived and consisted of the following horizontal layers: septaria and sand, mortared septaria, chalky mortar, and, at the bottom, septaria in sand and loam. A latrine pit (F167), lined with mortared stone, had been built against the southern side of the southern wall. Although it lay inside the east wing, the latrine would originally have been outdoors if it predated the wing. The latrine had been about 2.5 m deep and contained a small hollow in the bottom which had probably been formed during cleaning-out operations. The fill of the latrine contained 17th- to 18th-century pottery indicating that it had been in use until at least that time. No floors survived in any part of the areas inspected.

The building has been briefly described and discussed in the context of the group of early medieval stone houses which existed in Colchester *(ibid,* 60, 69, fig 53).

Oaks Drive (ODC 1973)

Figs 13.21-2
Reason: construction of new road
Record/report: PC

Remains of three Roman kilns were uncovered during

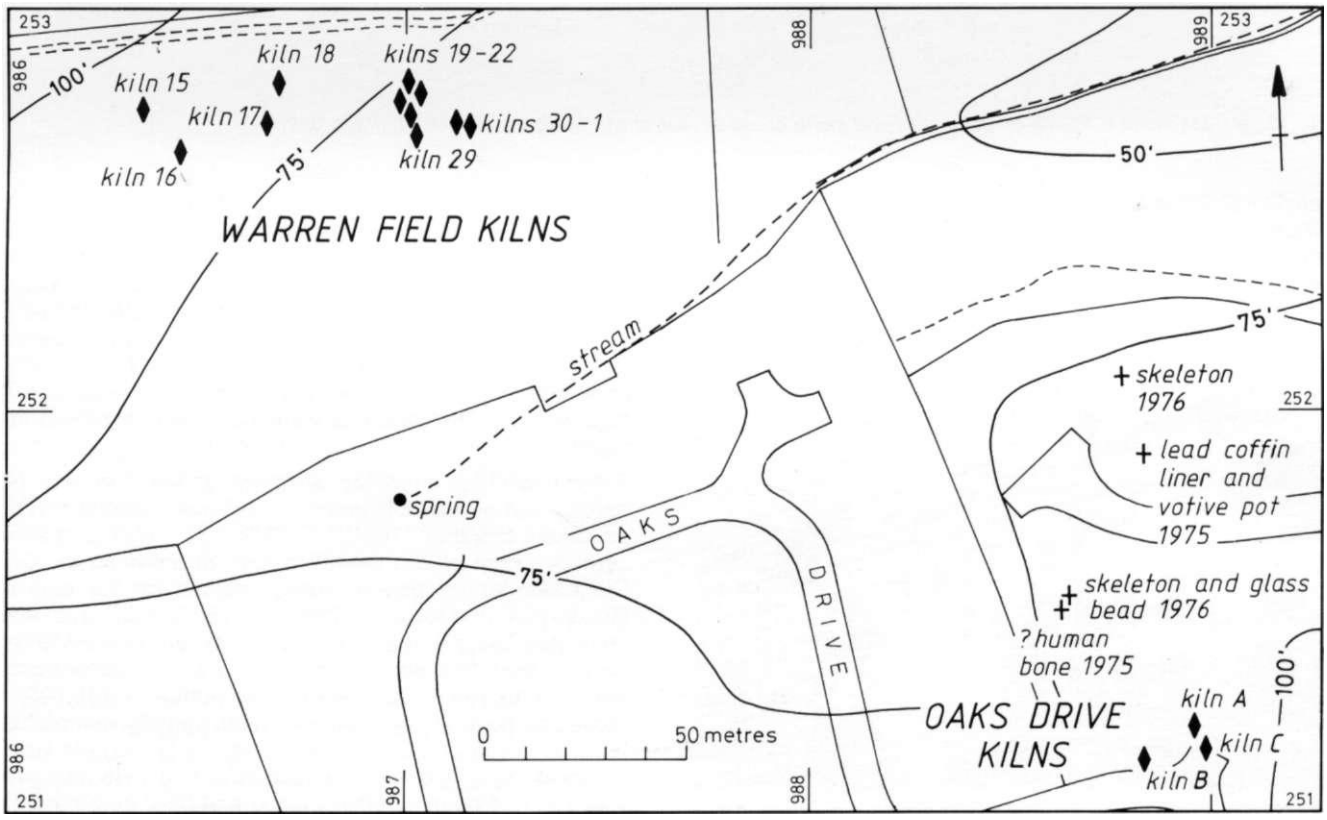


Fig 13.21 Location of the kilns at Oaks Drive (ODC 73) in relation to those at the Warren Field. [Pages 338-40]

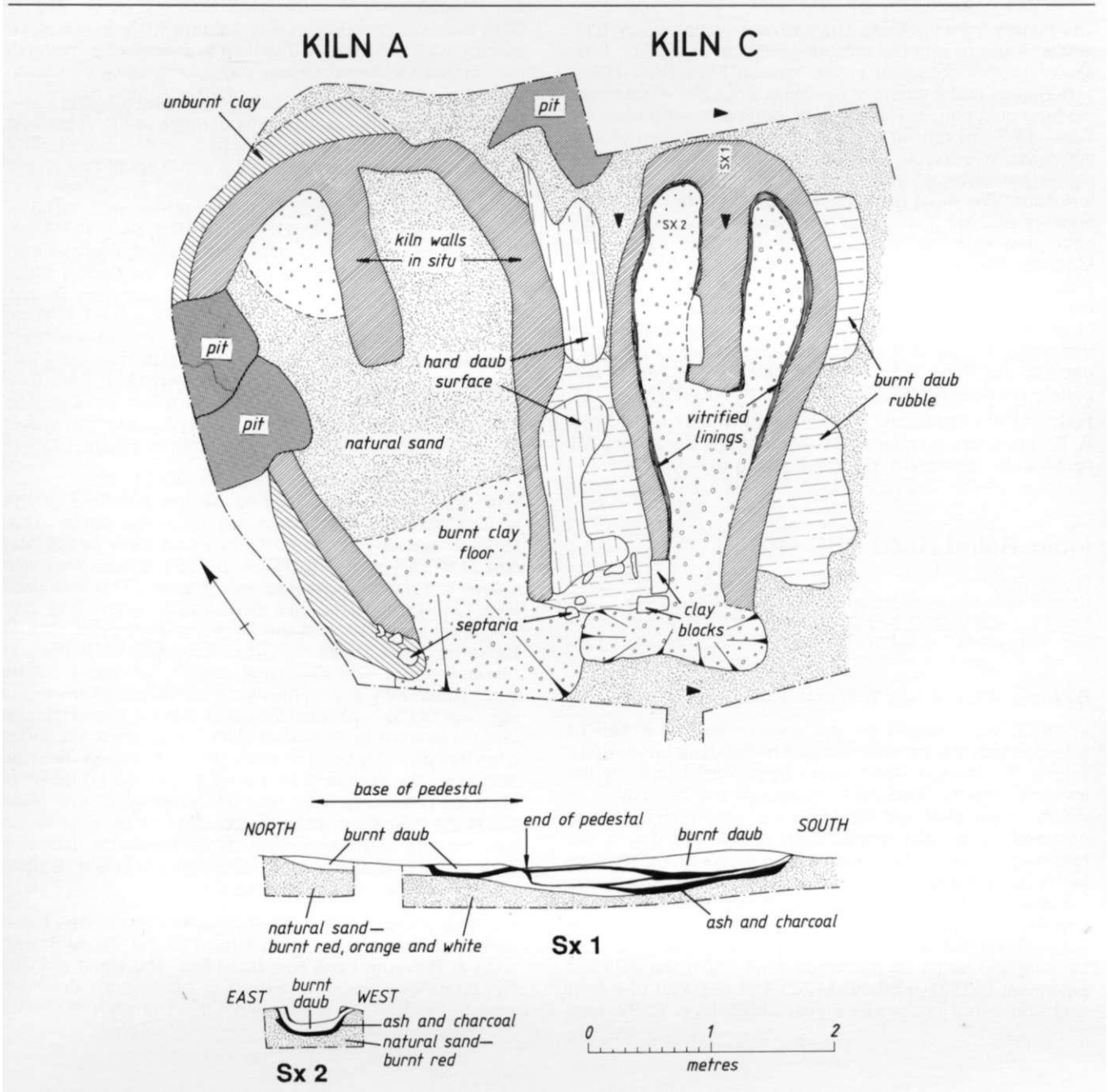


Fig 13.22 Oaks Drive Kilns A and C (ODC 73). 1:50. [Pages 338-40]

contractor's works for a new residential development at Oaks Drive, Colchester in 1973. The kilns came to light whilst ground was being cleared for a new road and pavement. They were excavated and recorded over a weekend to avoid disrupting building works. Most of what was excavated was covered over and is now preserved under the road.

The site was periodically visited throughout the contractor's earthmoving operations but no traces were detected of more kilns or other Roman features. A watching brief at an adjacent site (5/75b; Manor Road) in 1975-6 led to the discovery of a small Roman inhumation cemetery but no kilns. The subsoil is sand and gravel capped with a thin deposit of 'cover loam' (mostly loessic in origin).

The kilns dated approximately to the second half of the 2nd century. They were contemporary with the main group excavated in 1933 and 1959 in the Warren Field (Hull 1963, 13-148) but lay some distance to the south between the 75 and 100 foot contour lines on the opposite side of the valley. The structure and plan of Kilns A and B exemplify the so-called Colchester-type, identified by V G Swan (1984, 70, 92, 94, 276-7); Kiln B had been too badly damaged to recover details of its plan.

Kilns A and C appeared to have operated as a pair. Only the bottom 0.3 m or so of these kilns survived. They were similar in form to Colchester Kilns 17, 18,24, 30 (Hull 1963) and the Middleborough kiln *(CAR* **3,** 182-4), being pear-shaped with a single flue. They were constructed of clay and had been set into the ground at an indeterminate depth. Each had a long clay pedestal attached to the rear wall. Kiln C had been relined with clay at least twice. Kiln B had been completely destroyed except for a small part of the floor. The surviving vertical surfaces of the kilns were vitrified.

The pottery from the Oaks Drive kilns indicates a range of products which, with the notable exception of samian, was similar to that produced in the Warren Field (Hull 1963, 110-2) even to the extent of including a number of stamped mortaria of Martinus. The range of forms present is given in Table 13.2 (microfiche, p 788). There was no noticeable difference in products between the kilns except a slightly higher proportion of mortaria from Kiln B which could be fortuitous. The most common vessels seem to have been beakers of CAM 391 A, mainly rouletted rather than rough cast, and mortaria of form CAM 497. The stamps of Martinus were on mortaria of form CAM 497. Most of the indented body sherds probably derive from CAM 406 which was thus probably a commoner form here than the number of its identifiable rims would seem to imply. Wasters or underfired sherds of hunt cups were securely stratified in each of the three kilns. A more detailed account of the pottery will appear in *CAR* **10.**

Following the numbering system set out in Hull 1963, Kilns A, B, and C are numbered Colchester Kilns 34, 35 and 36 respectively (Rodwell 1983, 63).

Inner Relief Road (IRC 1973)

Crouch Street
Reason: construction of subway
Figs 13.23-4 (Fig 13.24 on p 789)
Record/report: PC

Building **162** and **two** ?defensive ditches

In 1973, work began on the construction of a pair of subways flanking the southern end of Balkerne Lane where it joins the Maldon Road roundabout. Whilst building the western subway, workmen uncovered the remains of a Roman hypocaust and two large ditches. Permission was obtained for a brief examination of the site during the following weekend. This enabled the extent of the remains to be established and some indications of date to be recovered. Most of the surviving remains were later destroyed during the final phase of the contractor's excavations for the subway. The hypocaust is almost certainly the same as that discovered under the adjacent pavement in 1925 (Hull 1958, 243 & pl 43). Part of a floor was uncovered in the same year about 12 m to the east *(ibid)* and was probably part of another room in the same building (ie Building 162). The floor is described as being of red cement and therefore was presumably *opus signinum.*

The digging of various pits and service trenches had some time before resulted in extensive damage to the hypocaust with the result that less than half of it survived. The remaining sub-floor sloped slightly to the south and ended at the very fragmentary remains of what presumably had been a central tile-built drain similar to the ones found in Buildings 19 and 71 in Colchester *(CAR* **3**, 54 & 177 resp). The subfloor was made of *opus signinum* and was about 80 mm thick. It appeared to lie directly over the backfill of the second ditch. The remains of eleven p/7ae were *in situ.* They were formed of tiles measuring 0.2 x 0.2 x 0.03 m. They were about 0.4 m apart and lay in three east-west rows apart from one *pila* at the western side. This stack had an unusually large tile as its lowest member (0.28 x 0.28 m), the others being of standard size but on a slightly different alignment. The heights of the p;7ae and the number of tiles which each contains are shown in Figure 13.23 in millimetres.

The two ditches were sealed by the sub-floor of the hypocaust. Only the bottom 1.0 m of the earlier ditch survived because it had mostly been cut away by the later one *(see* section in Fig 13.24, p 798). ft was filled with gravel and sand; no pottery was present. The later ditch (Fig 13.24) was filled with dark topsoil which was very similar in appearance to the fill of the Period 5/6 ditch at Balkerne Lane *(CAR* **3,** 145). It contained pottery of Antonine date. The depths of the ditches could not be established with any certainty. Their relationships to the sub-floor of the hypocaust indicated that the later ditch was unlikely to have been deeper than 2.1 m whilst the earlier ditch had probably been no more than 2.4 m deep. Time did not permit the ditches to be traced across the full length of the site. The earlier ditch was observed in just one place whilst the later ditch was only detected as far west as the western side of the hypocaust. Since the earlier ditch was detected at one spot only, it is therefore not certain, despite its appearance, that it was not a pit.

It seems possible that the later ditch was dug in the Flavian period when the north-south stretch of the Period 3 town ditch at Balkerne Lane was backfilled. The effect of these two operations would have been to increase the defended area of the town on its western side. The ditch at Crouch

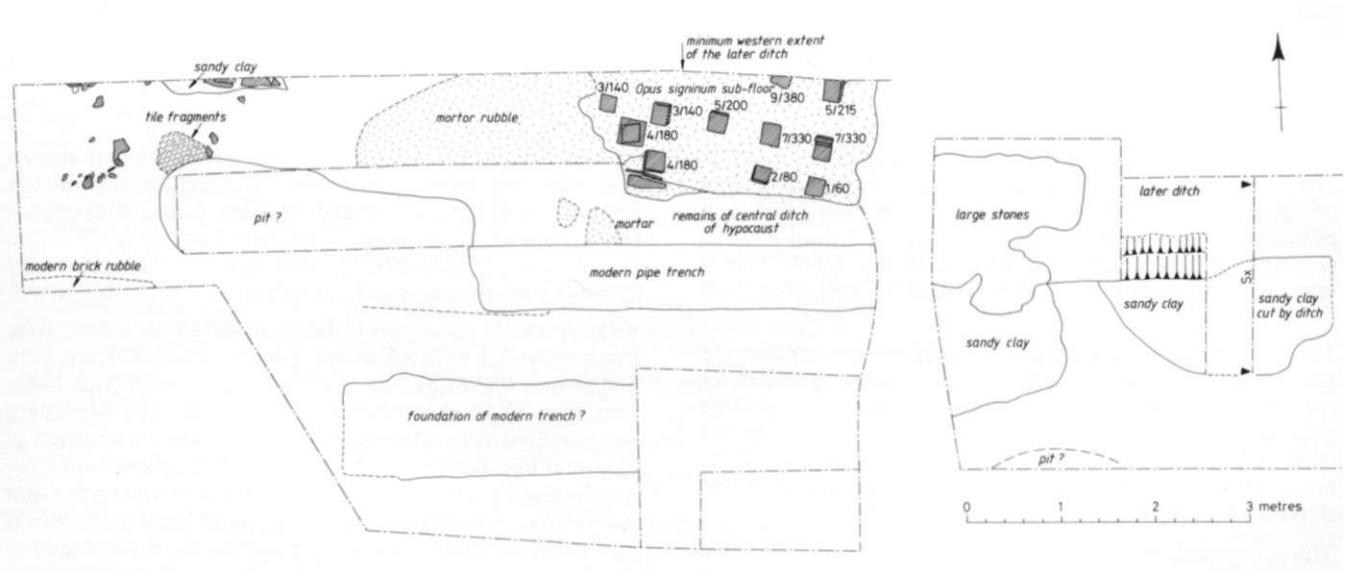


Fig 13.23 Crouch Street 1973 (IRC 1973): site plan. Building 162. 1:80. [Pages 338-40]

Street was probably on roughly the same line as the Period 3 ditch along the southern side of the town and thus in effect was a western extension of it. The pottery in the fill of the Crouch Street ditch suggests that the feature was dispensed with in the 2nd century in which case the defences around the western extension of the town must have been short-lived (*see* Figs 2.10-11, Periods 4 and 5).

The date of the earlier ditch is obscure. Its fill was very clean, giving the impression that it may have very early, perhaps military, but this is little more than a guess.

The hypocaust and thus the building to which it belonged was on a slightly different alignment to the ditches. Its alignment was the same as that of the small street discovered 120 m to the north at the southern end of the Balkerne Lane site in 1975 (*CAR* **3**, 138, fig 15). Possibly the building was within a property which fronted on to it.

No 11 Magdalen Street (MSC 74)

Figs 13.29-32
Reason: office development
Record/report: AG/PC

In 1974, a small archaeological excavation was carried out at No 11 Magdalen Street (Fig 13.29). A small house, in use at that time as a butcher's shop, had been demolished so that it could be replaced by an office block. The site is extra-mural and lies about 250 m south of the town wall. An archaeological investigation was thought worthwhile on the grounds that the site lay near to the find spots of Anglo-Saxon burials *(CAR* **1,** 14) and a large quantity of 15th-century pottery apparently from one or more kilns *(CMR* 1908, 18-9). Although no further graves or kilns were uncovered, the work proved to be of unexpected interest because of the light apparently thrown on the nature of medieval Grub Street and the development of its southern frontage.

The remains on the site can be phased as follows.

Period 1. Accumulation of gravel surfaces and layers of sand within the hollow way 'Grub Street' dating from the 11th or the 12th century until the 14th or the 15th century.

Period 2. Part of a house of three phases: Phase A — dating from the 14th or 15th century until the 15th or the early 16th century; Phase B — dating from the 15th or early 16th century until *c* 1700; Phase C — dating from *c* 1700 until the 19th or early 20th century;

Period 3. Brick house built in the 19th or early 20th century and demolished 1974.

It is possible that there was no clear distinction between Phases A and B of Period 2 and that all the remains associated with both phases can be amalgamated to form a single phase dating from around the 15th century.

The trench measured about 4.3 x 6.5 m and represented the area between the stumps of the walls of the Period 3 house. Two large pits (F21 & F22) were combined after their excavation to provide two north-south sections across the width of the site. The depth of the earliest deposits of the sunken street meant that, towards the final stages of the work, the northern and eastern sides of the trench had to be stepped in by about 0.3 m to avoid any risk of subsidence of the adjacent building and public footpath.

The sunken street (Grub Street)

[Figs 13.30 & 13.32]

The earliest feature proved to be the southern side of a sunken street or hollow way. It was filled with a succession of lightly gravelled, sometimes rather patchy surfaces separated by layers of sand make-up. The pottery, although of limited quantity, showed that the deposits within the sunken street spanned several centuries, beginning in the 11th or 12th century and continuing until the 14th or 15th century. The earliest surviving surface was 1.3 m below the top of the natural sand to the south and sealed a small pit or depression (F99). The southern side of the street sloped at about 45 degrees to the horizontal (Sx 2 — *see* Fig 13.32, microfiche) and was pierced by a series of small holes. On the surface these had the appearance of stake holes but, since many sloped at peculiar angles, they were more likely to be animal or root holes.

Building 158 (the Period 2 house)

[Figs 13.30-2]

Phase A (14th/15th - 15th/early 16th centuries)

[Fig 13.30]

The evidence for a substantial phase predating Phase B is provided principally by a patch of charcoal, some stake holes, and small pits, all of which were sealed by the sandy

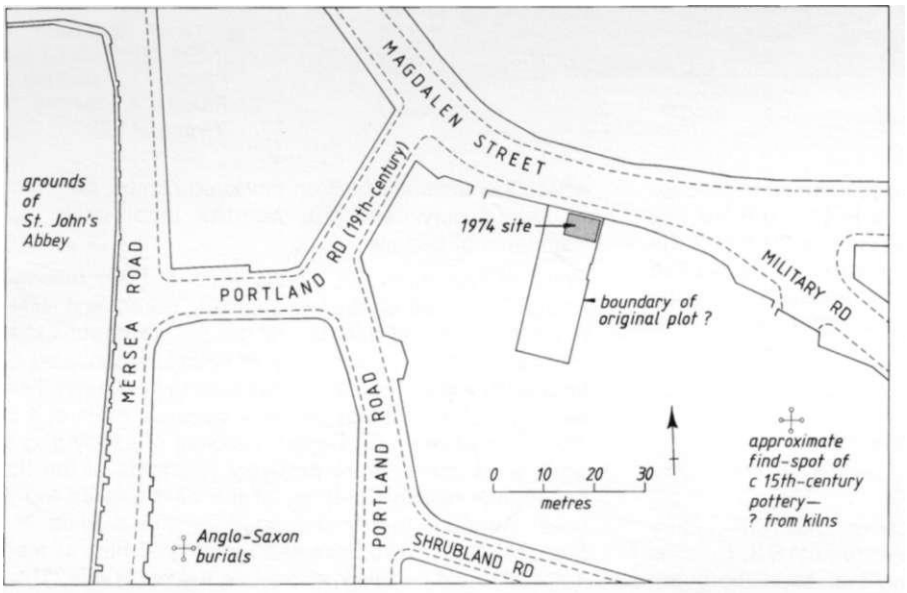


Fig 13.29 Location of the Magdalen Street site (MSC 74). [Pages 341-4]

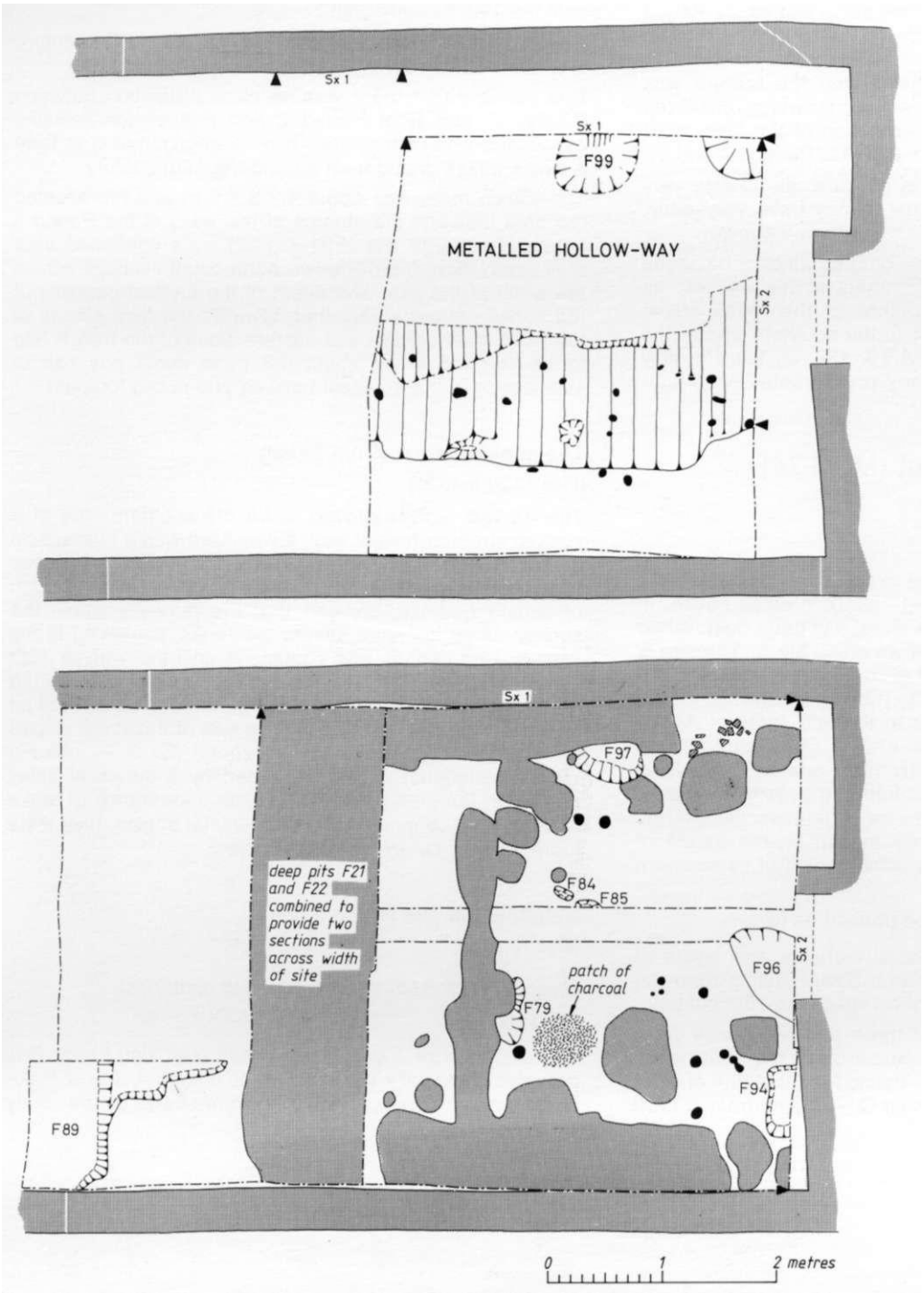


Fig 13.30 Magdalen Street (MSC 74): Period 1 (above): Period 2, Building 158, Phase A (below). 1:60. [Pages 341-2]

clay floor of Phase B. These features all seemed to predate the plinths F61 and F62 ascribed here to Phase B but this is by no means certain. They were all cut into the top of the fill of the sunken street. No floor levels could be associated with Phase A except perhaps in the north-east corner of the site. The remains of Phase A are tenuous and, as mentioned above, may in reality have been part of Phase B.

Phase B (15th/early 16th - 1700)

[Fig 13.31]

The remains of Phase B are typical of 15th/16th-century houses found elsewhere in Colchester (eg *CAR* ***3,*** Building 30 at Lion Walk & Buildings 75 & 76 at Middleborough) where the walls are built on mortared plinths, the floors are of sandy clay, and the hearths incorporate upright fragments of peg-tile.

Parts of two mortared plinths (F61 & F62) belonged to Phase B. These contained septaria, greensand, flint, and much peg-tile laid flat. Similar plinths no doubt existed to the east and south, probably in positions occupied by the later brick walls. The sandy clay floor did not extend into the western half of the site probably because most of it in that position had been destroyed. Patches of sandy clay in the north-west corner were probably remnants of the floor. A substantial hearth (F54) lay at the east end on top of the floor. Although badly damaged by the digging of later features, it seems to have had upright peg-tiles as a border, if not all round certainly at least on the north side. The limits

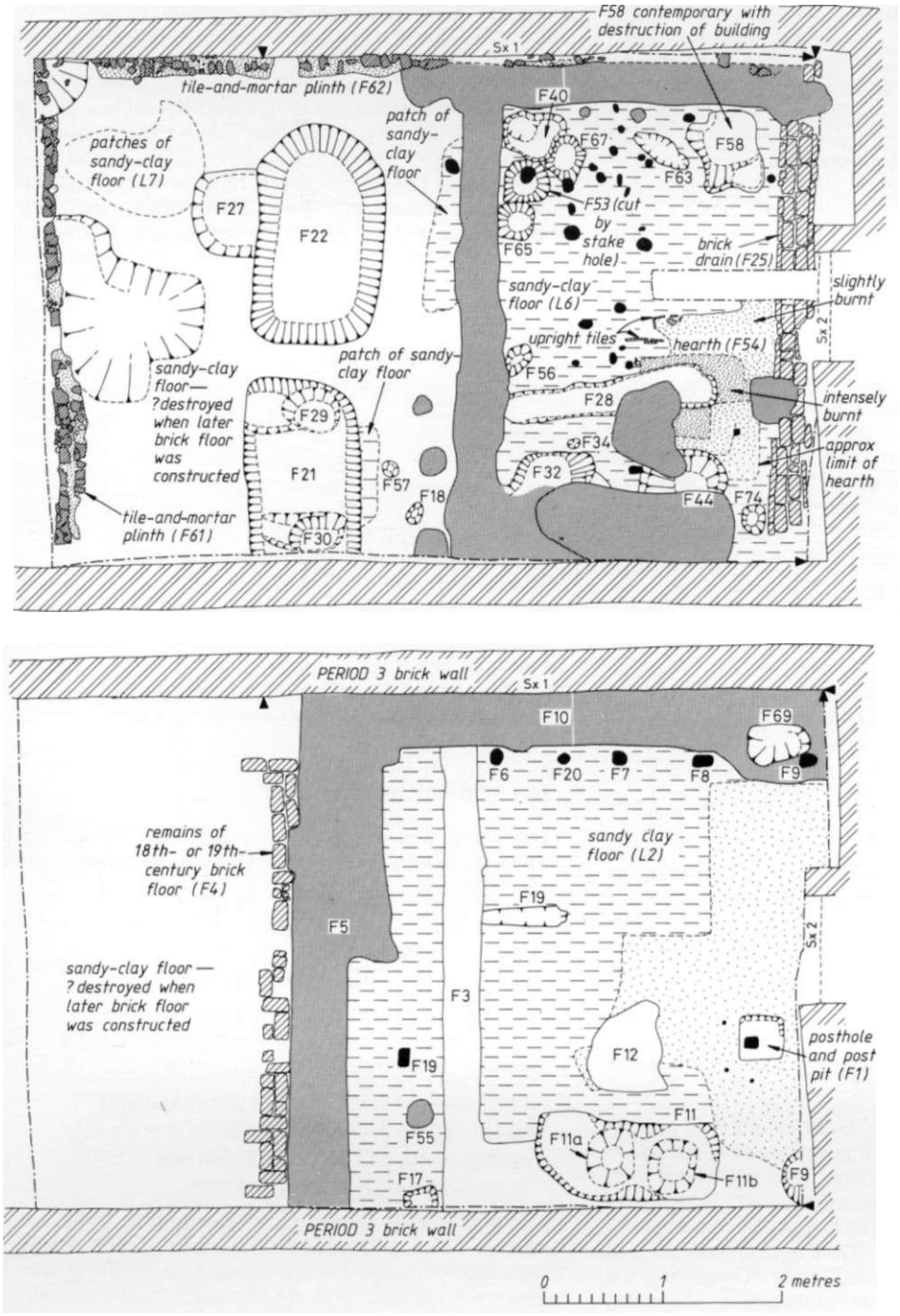


Fig 13.31 Magdalen Street (MSC 74): Period 2, Phase B (above), Period 2, Phase

of the hearth were not clear but to judge by the extent of the scorched surface it was probably square or at least nearly so and measured around 1.2 to 1.4 m across. The upright tiles on the north side were complicated in their layout, perhaps indicating two phases of hearth. Elsewhere the floor was cut by many stake holes and small pits. To the east of the hearth was a brick drain F25, similar in build and context to the tile drain found in Phases 2-3 of Building 75 at Middleborough *(CAR* **3,** 192-3, F177). The bottom of the drain was formed with two lines of bricks laid flat and each side was made with a single line of bricks laid on edge. The bricks were red, hand-made, and without frogs.

The principal dating evidence for the construction of the house came from the finds in the sandy clay floors and a pit (F89) which was sealed by the mortared plinth F61. The latest pottery in these contexts was of 15th- to early 16th-century date. Also the floor over the eastern half of the site contained a late medieval jetton *(CAR* 4, 83). The date of the end of Phase B (c 1700) is fixed by the material in the replacement floor of Phase C *(see* below). All the features, apart from the mortared plinths and the hearth, are secondary and belong within the period bracketed by these two dates. A group of pits (F21, F22, F27, F29, & F30) were dug *c* 1700. These may have held posts since F29 and F30 appear to have been postholes in the bottom of F21. The context of these features is unclear; perhaps they were associated with scaffolding for the modifications of Phase C.

The absence of a wall near the hearth suggests that it was a central hearth and that therefore the area of excavation

was within the hall of the house. Although the full width of the plot could not be excavated, it appears to have been wide enough (11.5 m) to have accommodated a typical 15th-century house with a hall and a cross-wing which would have been to the west if the hearth F54 had been in the hall.

Phase C (c 1700 to 19th/early 20th centuries)

[Fig 13.31]

A sandy clay floor was laid over the eastern half of the site in c 1700. This was formed from debris generated during the demolition operations at the start of Phase C and consisted of crushed daub and white wall-plaster. The surface of the eastern part of the floor had been scorched and was covered by a thin layer of charcoal dust. Presumably there had been a brick chimney-stack in the east wall of the house but nothing of this could be detected. A brick floor was laid over the western part of the site, probably in the 18th or 19th century. It sealed pits F21 and F22. Most of the floor had been destroyed. There were no traces of any internal partitions but the sandy clay floor appeared to stop along the line of the Period 3 slot F3 as if the latter replaced an earlier wall.

A line of deep stake holes (F6-8 & F20) lay in the north-east corner cutting through the Phase C floor. These gave the impression of being outside possibly as part of a fence and thus they may post-date the demolition of the Period 2 house. The same may also apply to stake hole F19, post hole and post-pit F1, and post-pit F11 with postholes F11a and F11b.

Period 3 house (no building number; 19th/early 20th centuries - 20th century)

The date of the demolition of the Period 2 house and the construction of the brick-built house of Period 3 is uncertain but it possibly belonged to the 19th rather than the 20th century. Internal partitions which had enclosed a stair were represented by a brick foundation (F3) and a slot (F5) filled with brick rubble.

The development of the southern frontage of Grub Street

That the sunken street was called Grub Street is of special significance in several respects. It suggests that the street was so-called because it was sunken, that the name is of some antiquity, and that the occurrence in Colchester of sunken, metalled streets was uncommon. Of the origin of the name Nina Crummy writes: In 1748 the Reverend Philip Morant listed in his *History and Antiquities of Colchester the* main streets of the town. In this list he describes Magdalen Street, at its junction with St Botolph's Street, as being called Grub Street. William Wire, in his Journal for 1856, says that Grub Street ran 'from St Botolph's Street to the Prince of Wales Inn'. The Prince of Wales lay, and still lies, on the south side of the street a short way west of the junction with Military Road. Grub-Street (Milton Street) in London was associated with booksellers' hacks and writers of low quality, but here Grub Street appears more likely to be associated with 'grub' as in 'dig', and thus with the German 'Grube' ('hole' or 'pit'). This leads to an interpretation of 'Grub' as 'sunken', as in the modern archaeological term 'Grubenhaus', 'sunken hut'. There is no known reference to Grub Street predating Morant's *History,* so a medieval origin for the name cannot be established, though Middle English 'grobe' is the early form of modern 'grub'.

The construction of Building 158 in about the 15th century suggests that the southern frontage of Grub Street was moved northwards by at least the width of the site (ie 5 m) and that houses were laid out where there had been none before. The substantial overlap on to the medieval street makes it highly unlikely that just one house was involved; it was probably a row along the whole frontage. The pottery from the nearby kilns has been dated to the late medieval period (Cunningham 1982, 367; *CAR* **7),** so that it is conceivable that when these houses were built, the kilns were dismantled and the pottery-making activities were resumed elsewhere where the smoke and ash were less of a nuisance to householders. Indeed the presence of kilns on the south side of Grub Street in the late medieval period may itself be an indicator that the area was not built up at that time.

5/75D

Manor Gardens ('Oaks Drive Phase 2')
Figs 13.44-5
June to August 1975
Reason: construction of housing estate
Record/report: Vicky Bishop

The site report is on microfiche pp 811-12. The lead lining from a wooden coffin of Roman date was discovered by workmen on the site who rolled'it up in readiness for transportation to a scrap-metal dealer. The lining is described below and illustrated in Fig 13.45.

The lead coffin-lining (PC)

The lining was carefully unrolled and flattened so that it could be drawn (Fig 13.45). The internal measurements of the coffin were as follows:

length — 1.73-5 m
height —0.39 m
width — 0.39 m tapering to 0.28 m

Allowing for the thickness of the lead (5 mm), this means that the wooden part of the coffin would have measured internally as follows:

length — 1.74-6 m (5.9 pM; 6 pM intended?)
height — 0.40 m (1.36 pM; 1.33 pM intended?)
width — 0.40 m (1.36 pM: 1.33 pM intended?)
tapering to 0.29 m (1.0 pM)

The lead is very decayed in places and as a result contains various holes and cracks. The remains of the lead welds were well-preserved and indicate how the lining was made. The lining consists of three separate sheets of lead, the two pieces for the ends being fully welded inside and out to the main sheet. The sides and ends of the lining were then folded up and spot welds applied just above the middle of the corners. The large sheet was trimmed to shape with shears, the position of the intended cut being first scored with a sharp point on the inner surface of the lining. The trimming of parts of the two long sides was poorly executed and consequently left tell-tale ragged edges. Surface tension caused the molten lead to creep up the sides of the mould in which the small sheets were cast to leave their edges slightly thickened. The small sheets were not trimmed to size. There were no holes in the lead to indicate that the lining had been nailed to the wooden part of the coffin. Presumably the lining was simply lowered in place and left unattached.

No other pieces of lead were found, the implication being that the lid was probably unlined.

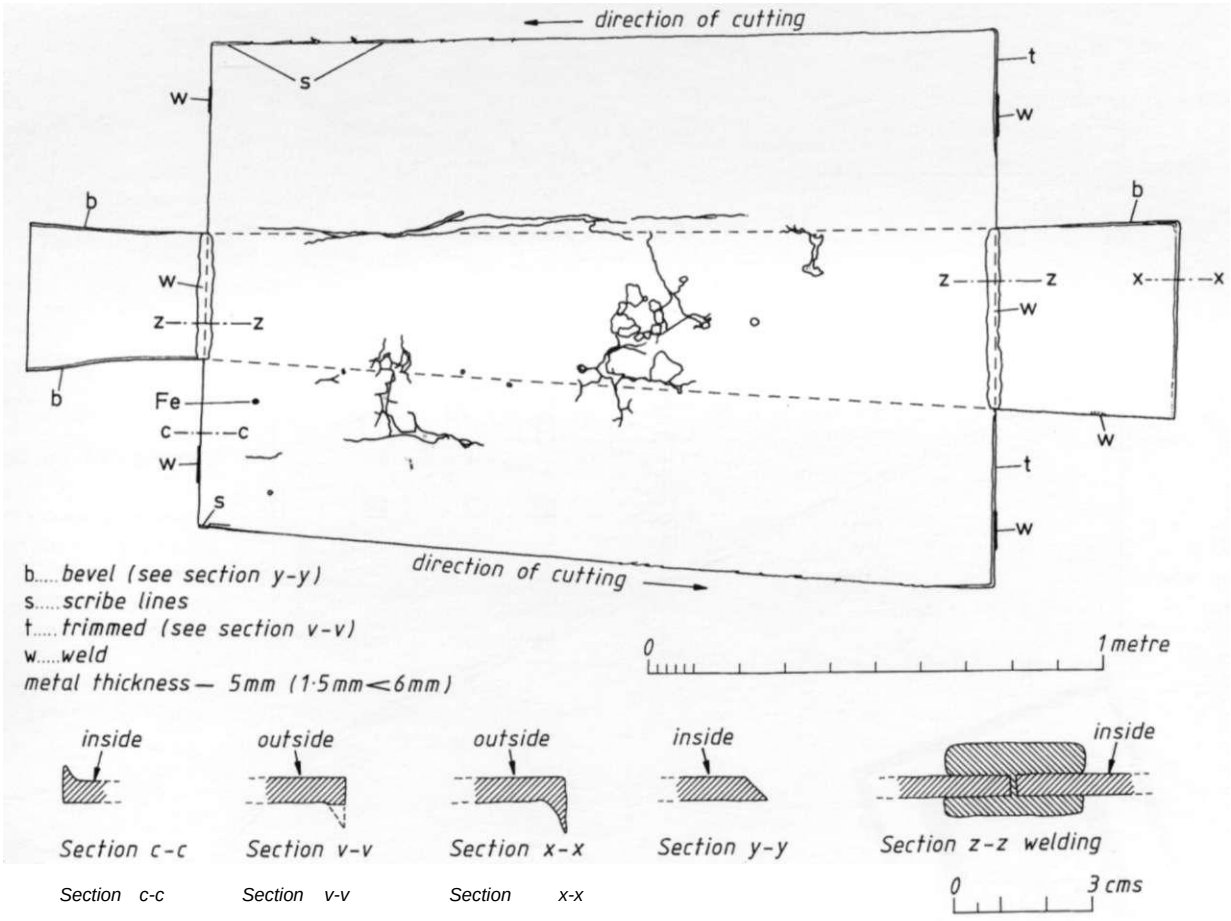


Fig 13.45 Oaks Drive (Phase 2) (5/75b): lead coffin-lining. [Page 344]

St Helena's School (HEC 1976)

Sheepen Road
January-February 1976
Figs 13.50-2
Reason: Extension to existing school
Record/report: CC/PC & CC

Early in 1976, a small excavation was undertaken in advance of the construction of an extension on the north side of St Helena's School. The existing school building lies within the site of the *temenos* of Temple 2 and on top of the remains of the southern half of the temple itself. The temple and *temenos* were excavated in the 1930s (Hull 1958, 224-33; Crummy 1980). Parch marks had been noticed on various occasions in the playing fields on the northern side of the school. These indicated the existence of a Roman building (Building 159) lying to the north of the *temenos* and on the same alignment. The parch marks were plotted in 1962 by a group of four pupils (who recorded themselves simply as Munson, Hewes, Gratton, and Stott); the original plan is in the Colchester Museums (ref D24). The parch marks were photographed by the Colchester Archaeological Trust in 1976.

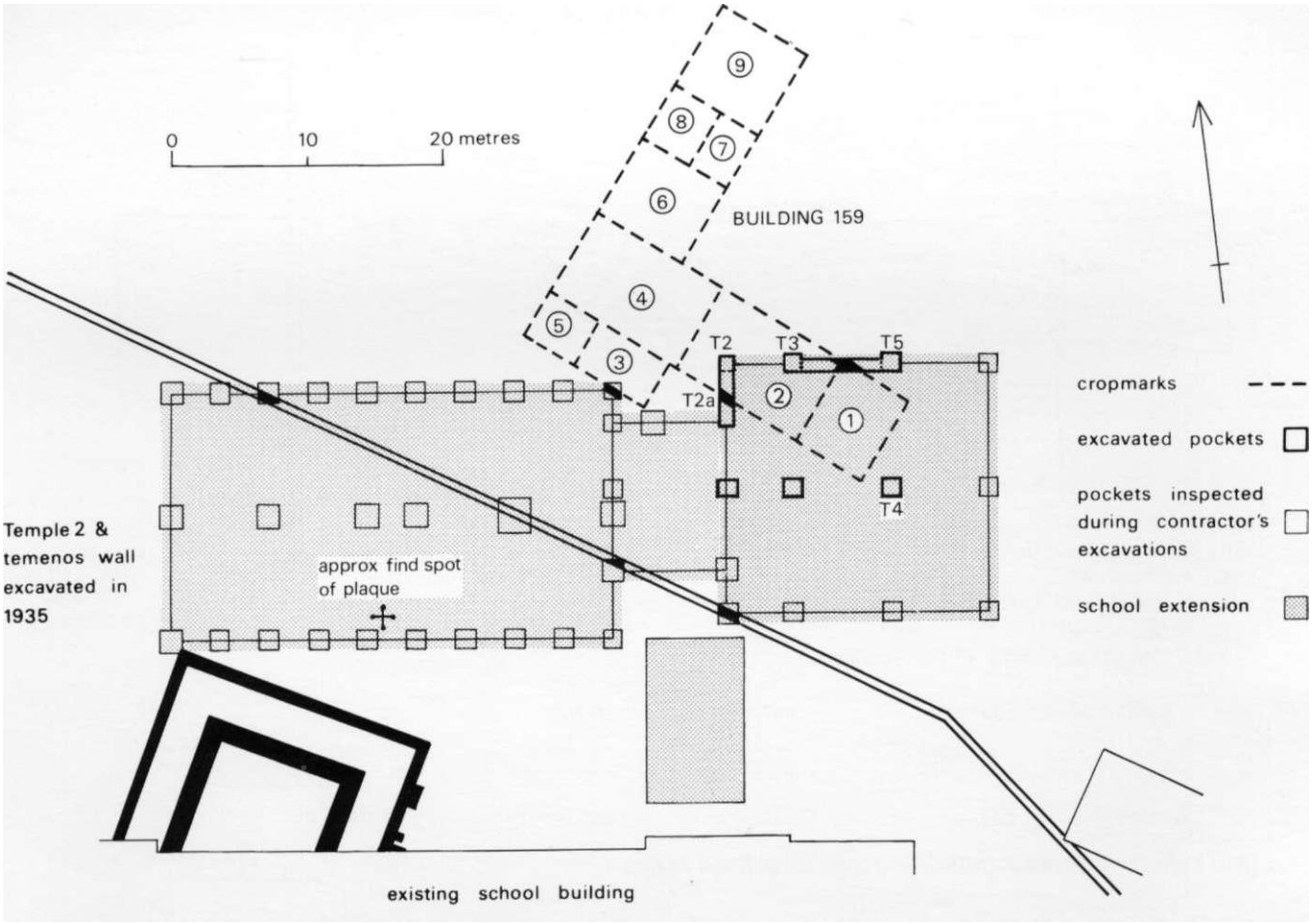
Ground disturbance for the new building was to be restricted to little more than the digging of pockets for stanchions. The temple was to escape the operation intact but parts of the *temenos,* its enclosing wall, and the southern end of Building 159 were to be affected. Rather than undertake an area excavation, six of these trenches were excavated by hand before building work began. The trenches chosen were those which were to cut though the parch marks of Building 159; those which were to lie within the *temenos* were not included, mainly on the grounds that this part of the site had been excavated already. The detailed site plan and sections (Figs 13.51-2) are on 35 mm microfiche.

During building works a copper-alloy plaque was found within the site of the precinct by a metal-detector user. The inscription indicates that Jupiter was worshipped in the temple *(Britannia,* **7** (1977), 427).

Building 159 (c 150/225-?4th century)
[Figs 19.50-2]

The northern foundation (F11) forming the north side of Rooms 1 and 2 of Building 159 consisted of a trench filled with lumps of septaria (mostly in the form of small chips) and a few fragments of brick or tile. The equivalent foundation (F5) on the south side of the building was of packed gravel. The north end of the partition wall between Rooms 1 and 2 was exposed in Trench 5. The partition was secondary because it was not contiguous with F11 but consisted of a trench containing comparatively large lumps of septaria. Proof that the partition had been rebuilt during the life of the building was provided by two post-pits, both originally about 1.0 m deep, which were sealed by the foundation.

The foundations were cut into cover loam. The latter contained pottery, the latest being of mid 2nd to early 3rd-century date. Despite being a natural deposit, cover loam often contains finds *(see* for example the cover loam at Culver Street, pp 37-8), which presumably found their way into the cover loam as a result of worm activity. The only layer which was contemporary with the building was a patch of packed gravel at the north side of F5 in Room 2. This appeared to be the remains of a floor or make-up for a floor. The foundations were sealed by a layer, 0.15 m thick, of soil and gravel (Fig 13.52). This deposit probably originates from the destruction of the gravel layer by



post-Roman cultivation, thus explaining its high gravel content. Cultivation presumably accounts for the scarcity on the site of layers contemporary with Building 159. The fact that this layer sealed the foundation indicates that it post-dated the use of the building.

The *temenos* wall was cut by four of the contractor's stanchion holes. The wall was 0.75 m wide and consisted of a trench 0.45 m deep filled with mortared gravel (lower half) and small stones (upper half).

From its plan, it is clear that Building 159 was a house of some kind. Nine rooms are visible from the parch marks but there may have been more. To judge by similar buildings elsewhere at Colchester (eg Building 59: *CAR* ***3,*** 130-2), a north wing matching that on the south is possible and so too is a passage behind Rooms 6, 7, and 9.

The building was presumably associated in some way with the running of the Sheepen Sanctuary of which Temple 2 was only part (Crummy 1980, 248-57). It may for example have served as a shop or provided accommodation for temple staff or pilgrims.

11/76

26 North Station Road
Figs 13.58-9
Reason: new office development
Record/report: CC/PC

The foundation work for the new building involved the digging of stanchion holes across most of the site. Many of these cut through the remains of a Roman house, the plan of which is reconstructed as far as possible on Figure 13.58. The foundations of the building consisted of trenches, 1.0 m or so deep, filled with septaria and mortar. The reconstructable elements of the plan point to an arrangement which is commonly found elsewhere, ie a range of rooms (Rms 1 & 2) and cross passages (P1), flanked by passages or ranges of narrower rooms one to each side (P2 & P3). The floor of the rear passage (P2) was at least in part of plain red tessellation whilst Rooms 1 and 2 seemed to have had plain mortar floors. A layer of red-painted wall plaster lay at the south end of the building and represents debris from the demolition of the building (section on Fig 13.59, microfiche p 825).

Other remains have been noted to the south of this building (Hull 1958, 240-1), notably a mosaic found in 1880 to the south-east. These are summarised on Figure 13.58. There is also a record of a black and white pavement of geometric design found in 1927 in Orfeur's Yard 100 feet back from the street frontage *(TEAS,* 29, 133). The pavement was destroyed during the installation of a petrol tank. Unfortunately the site of Orfeur's Yard is obscure but the indications are that the 1927 find was the 1880 pavement rediscovered.

Conceivably the 1880 mosaic could have lain in a south wing of the 1976 house. However the other foundations recorded in the area are widely spaced and positioned in such a way that it is hard to reconcile all the known remains with just one house.

The alignment and position of the Roman house noted in

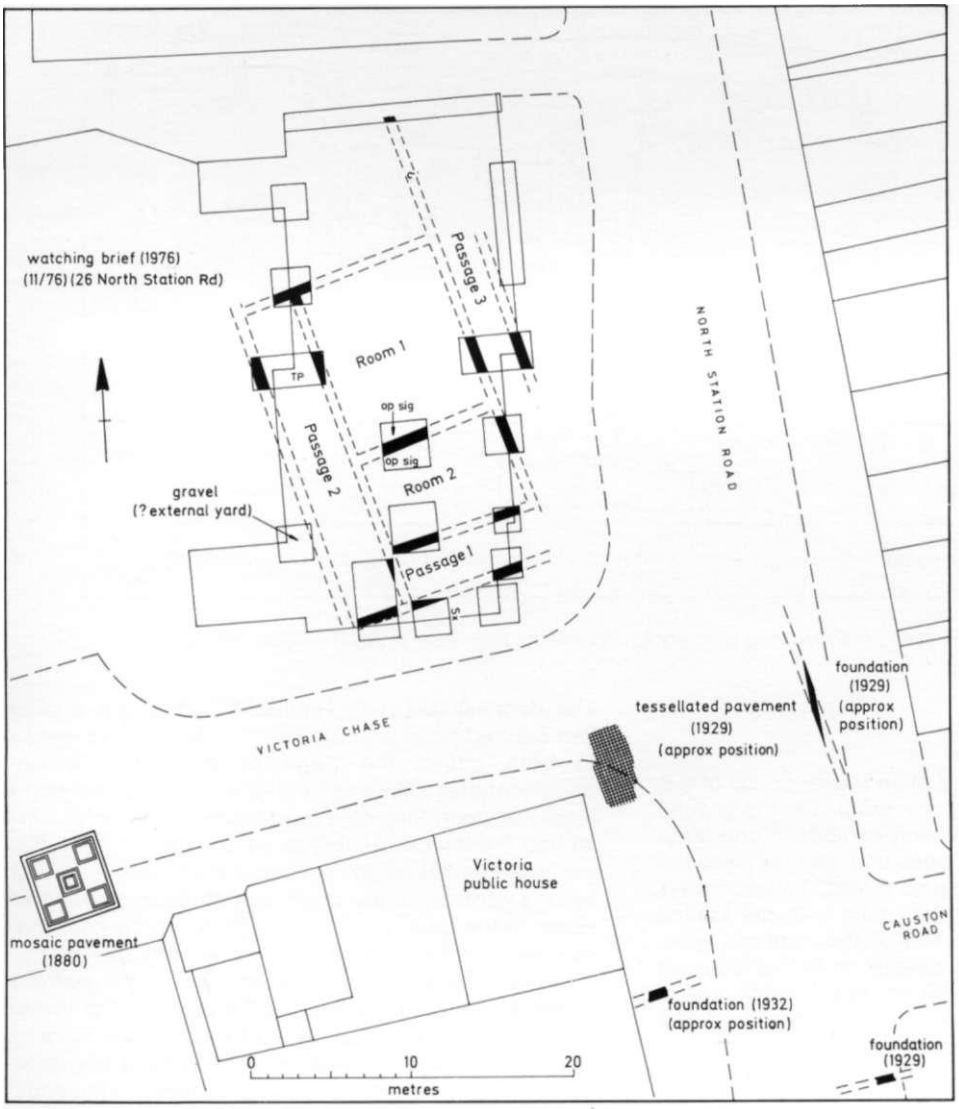


Fig 13.58 No 26 North Station Road (11/76) and the known Roman remains in the surrounding area.

1976 suggest that there was a Roman street to the east on to which the building fronted. The alignments suggest that the street led from a crossing point over the River Colne a short distance to the east of the site of the present North Bridge.

Nos 1-5 Trinity Street (TSC 1977)

by N A Smith

Figs 13.61-73

Reason: new office building and refurbishment of existing building
Record/report: NAS/NAS (& PC)

Summary

Nos 2 and 3 Trinity Street, now The Cups public house, are part of what was once one property incorporating nos 1 to 5 Trinity Street (Fig 13.61). No 3 was originally the north wing of an H-plan house built at the southern end of the property in the late 16th century. Nos 1 and 2 formed another wing which was added along the street frontage to the north in the early 17th century. The whole property was subsequently refronted and further enlarged during the second quarter of the 17th century (Fig 13.62). The house was subdivided into five tenements in the second quarter of the 19th century with the aid of considerable modifications. The 20th century saw further substantial alterations to the building including the demolition of No 1.

Background

In 1977 Nos 2 and 3 Trinity Street were extensively renovated during conversion for use as a public house, now known as 'The Cups'. During the next year building work on the then vacant site to the north revealed part of the cellars and foundations of No 1, which had been demolished in 1947. While this work was being carried out, the standing buildings and exposed foundations were surveyed. In this article is set out not only the information learned from that survey but also a description of the whole property of which Nos 2 and 3 originally formed a part.

The survey revealed five main phases of construction or major alterations between the late 16th and the second quarter of the 19th centuries (Fig 13.63); all the modifications carried out at various times since then have been grouped together as a sixth phase. The plans of the rear of the southern half of the building (Nos 4 and 5) in Phases 1, 2, 3, and 4 are based on Cole and Hale's survey of 1818 (ERO T/M 268) and are therefore conjectural for the first three phases.

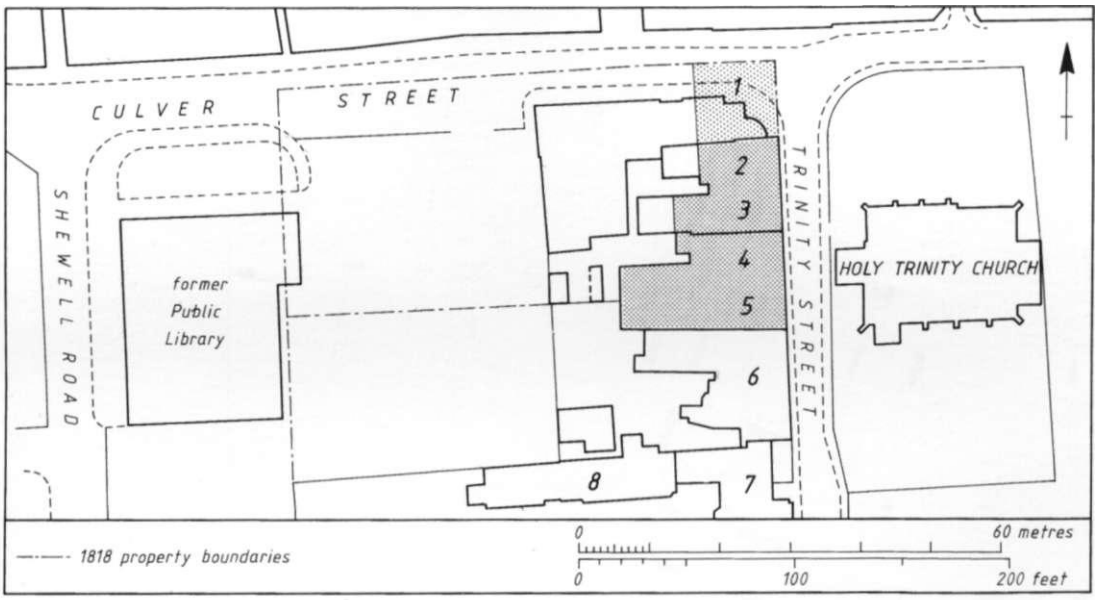


Fig 13.61 Trinity Street (TSC 77): location plan, including property boundaries as they were in 1818. [Pages 346-7]

Phase 1

[Figs 13.64-8]

The earliest standing remains are of an H-plan house of two storeys with attics and at least one cellar. On the ground floor, the front half of the north wing comprised one large room with a cellar under its west end and an external chimney stack in the centre of the north wall. Two doorways with four-centred heads linked this room with the central block and with the lower, rear half of the northern wing. Another doorway may have led directly on to the forecourt and there was probably a fourth door in the south wall of the rear half of the wing. The south wall of the rear block contained a splayed window reveal.

The walls were 540 mm (1 ft 9 in) thick and entirely of brick laid in English Bond. In size the bricks were 215/220 x 104 x 50 mm (8.5/8.75 x 4.0 x 2.0 in) and four courses rose 240-250 mm (9.5-9.75 in). The brick plinth was 500 mm (1 ft 8 in) high and was topped by a course of headers on edge with an ogee moulding. There was the base of a chimney stack against the north wall of Room 1. Only two door-heads of this phase survived, both on the ground floor; the doorway between Rooms 1 and the cross-room, Room 3, had a four-centred head on the south side with a plastered hand-cut ogee moulding on the head and jambs. The doorway between Rooms 1 and 2 had a plastered four-centred head with a plain chamfer to head and jambs. In both cases the head of the doorway on the non-decorative side was formed with a plain wooden lintel; blocks of stone (originally from foliated window heads) were let into the reveals as fixings for bolts and hinges. Straight joints in the brickwork indicated that there had probably been a doorway in the south wall of Room 2 giving access either to the back yard or perhaps a narrow passage. The existence of the latter (Room 4) is deduced solely from Cole and Hale's plan of 1818 since it was impossible to tell whether a wall had ever joined the south wall of the wing at this point. If Room 4 had existed, it could only have been a single storey high, otherwise it would have interfered with the window of Room 10 at first floor level. In the south wall of Room 1 there may have been a doorway opening on to the forecourt but, like Room 4, later modifications have made interpretation difficult here too. In the south wall of Room 2 was a window, 1.85 m (6 ft) high and at least 2 m (6 ft 7 in) wide, with splayed reveals, one of which survived.

Beneath the western end of Room 1 was a cellar with a brick floor. In its west wall, connecting with the outside, was a small window or chute. In the north side of the dividing wall were three shallow niches with triangular heads, each

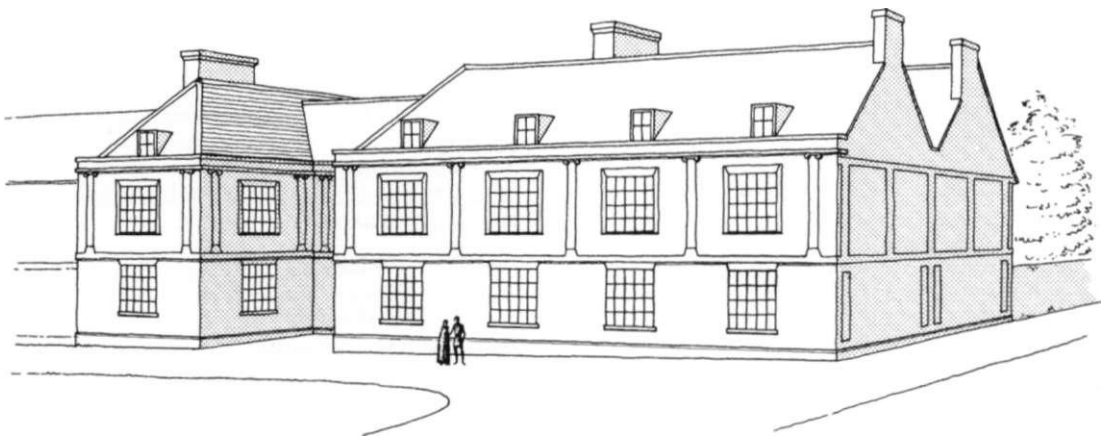


Fig 13.62 Trinity Street (TSC 77): reconstruction of the building as it appeared during Phase 3 (mid 17th century). [Pages 347-54]

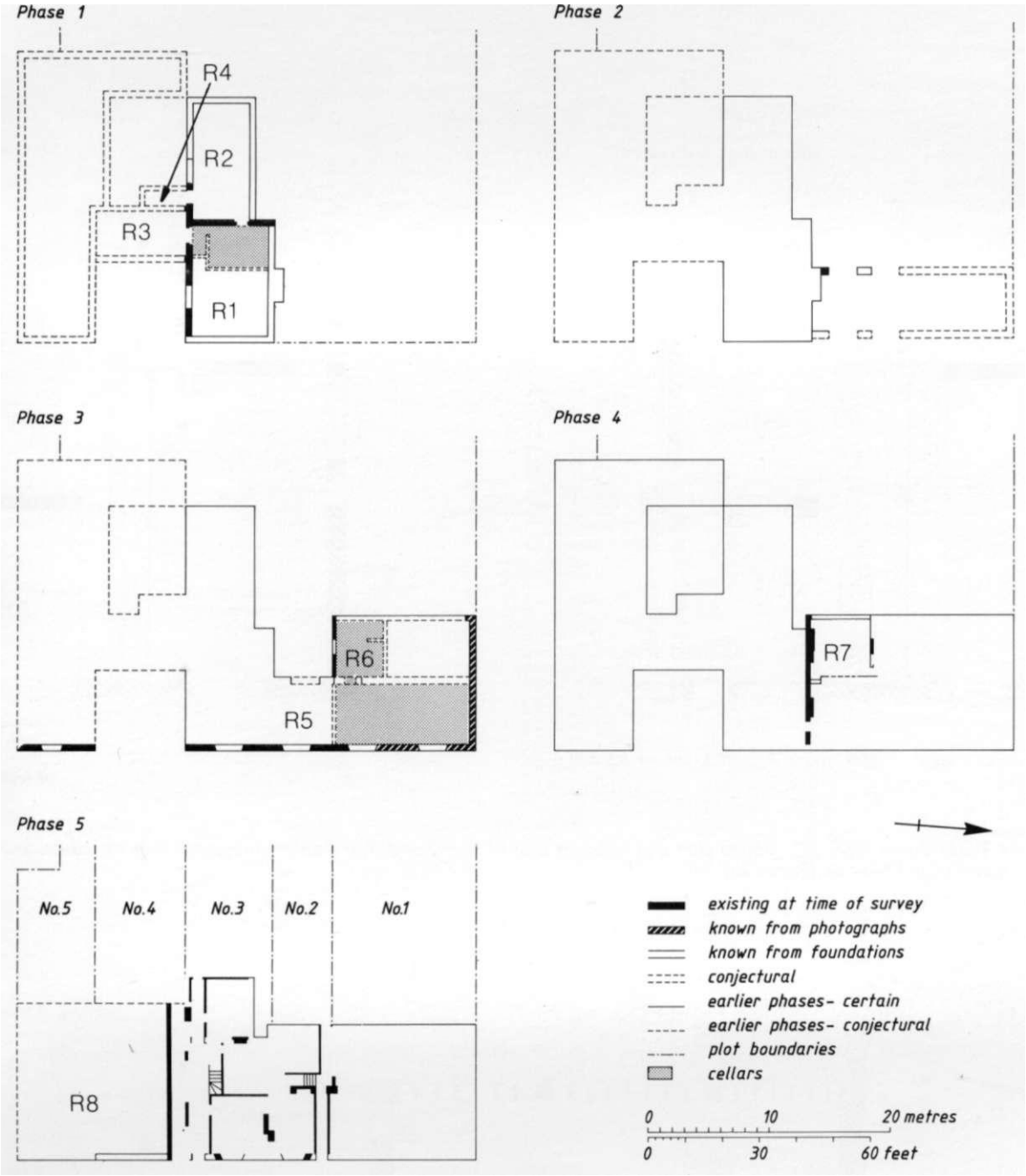


Fig 13.63 Trinity Street (TSC 77): ground-floor plans of the building during the first five phases of its development. [Pages 347-54]

formed of two inclined bricks. The original cellar entrance was apparently through a trap-door in the floor to the immediate south of the doorway between Rooms 1 and 2.

At first-floor level there was a doorway with a timber lintel at the west end of the south wall of Room 9; the presence of brick blocking made it impossible to determine if its south face had been decorated. A modern (Phase 6) door possibly replaced an original one between Rooms 9 and 10. In the south wall of Room 10 was a window with splayed reveals; it was wider than the ground-floor window directly below.

The only part of the Phase 1 roof still to remain was over the western block, above attic Room 17. It was of side-purlin construction; those couples that had collars were cut away on the underside to take the through-purlins. Longitudinal timbers of small section were tenoned into the sides of the collars to provide fixings for the attic ceiling. There was no sign of there ever having been dormer windows in this part of the roof.

The joists of the first and attic floors were of oak. The common joists were of deep section and were fitted with a central tenon with diminished haunch. The floor of Room 9 was supported only by two massive binding joists 390 mm (15 in) square, whereas the floor of Room 10 and the attic floors (Room 16 and 17) had both binding and bridging joists, jointed by varieties of central tenon with soffit bearings. In the attic were a few original oak boards 300 to 350 mm (12-14 in) wide. The joists of the floor over the cellar were squarer in section and their tenons were all raised 10 mm (0.5 in) above the soffits.

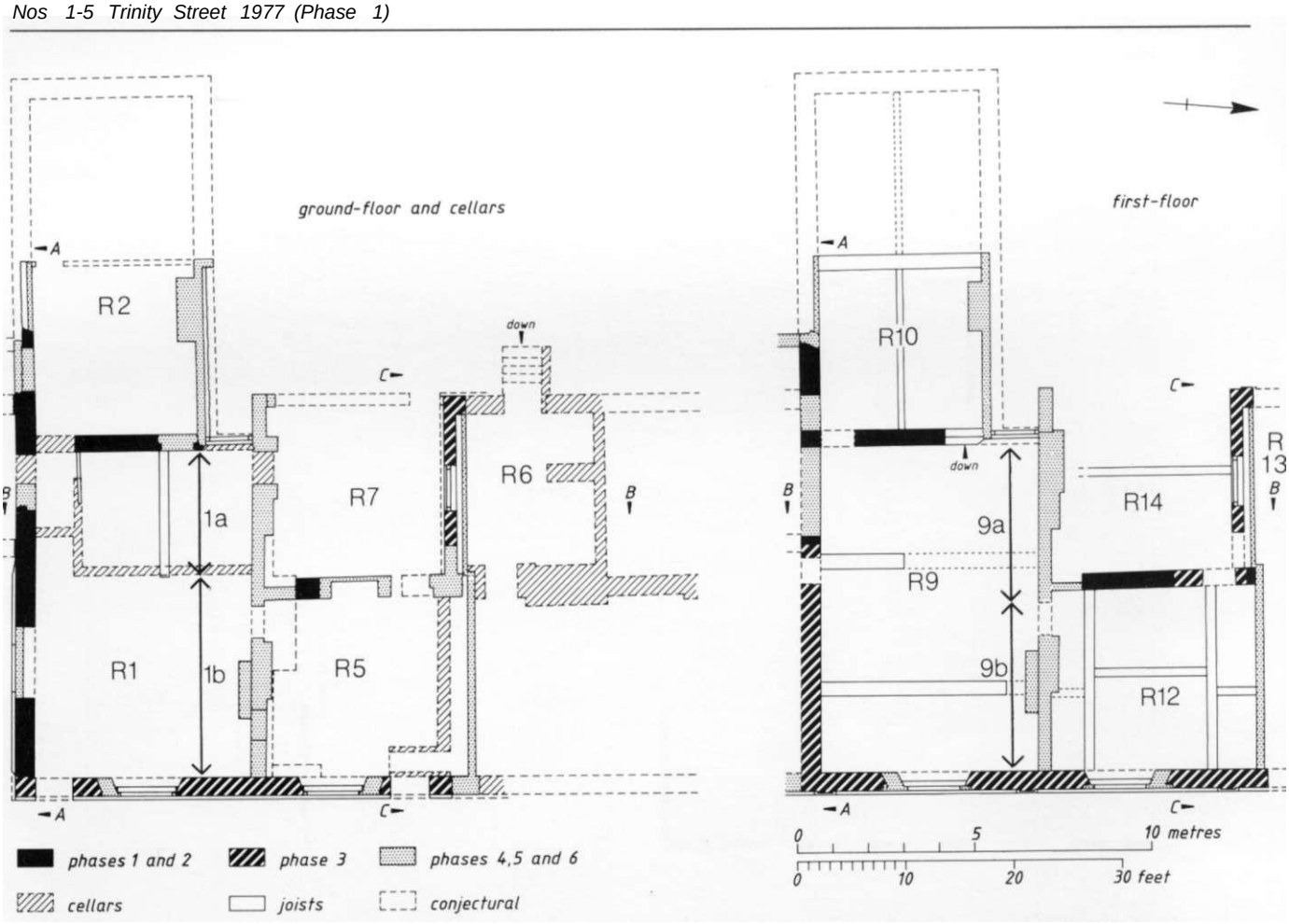


Fig 13.64 Trinity Street (TSC 77): ground plan and first-floor plan of Nos 2 and 3 at time of survey (omitting staircases and studwork partitions of Phase 5). [Pages 347-54]

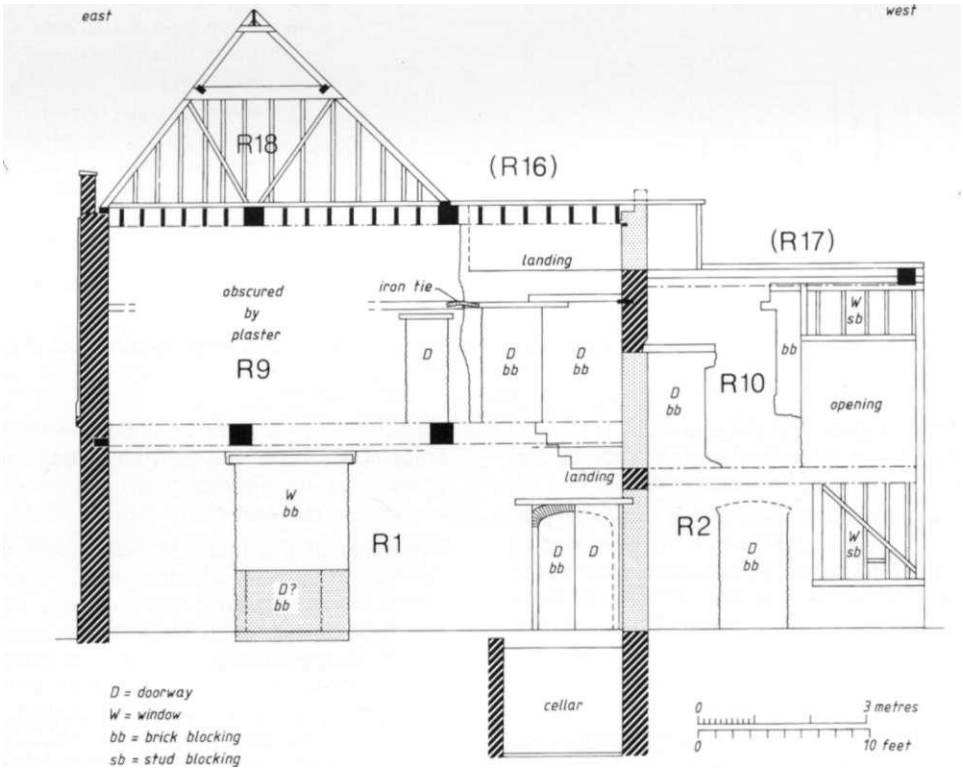


Fig 13.65 Trinity Street (TSC 77): Section A-A. [Pages 347-54]

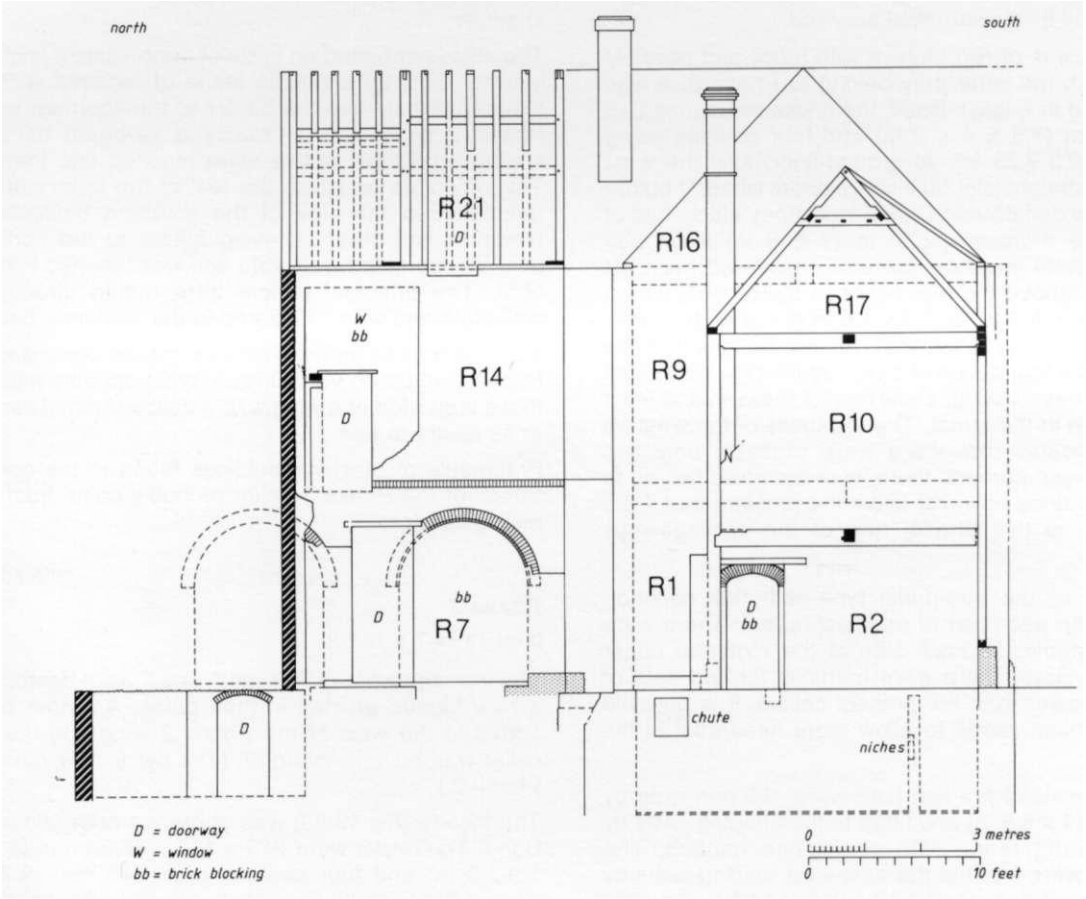


Fig 13.66 Trinity Street (TSC 77): Section B-B. [Pages 347-54]

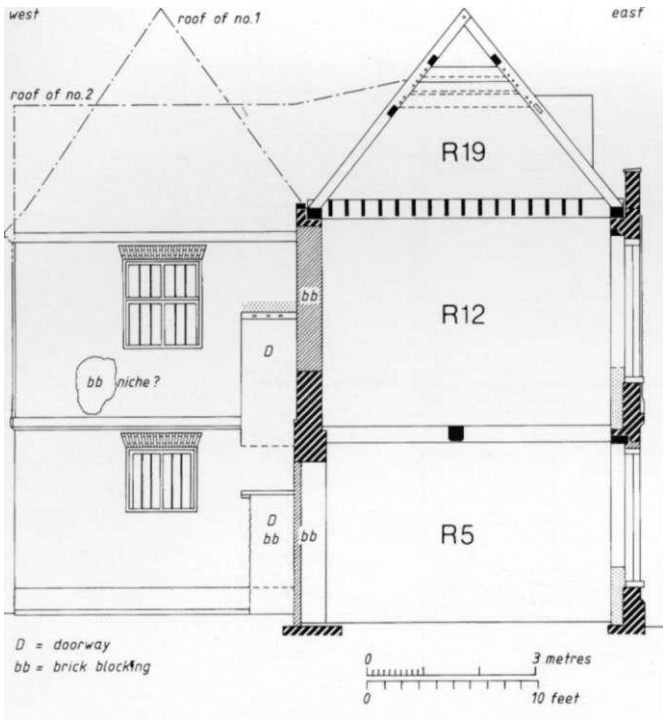


Fig 13.67 Trinity Street (TSC 77): Section C-C. [Pages 347-54]

The eastern ends of the bridging joists of the western block were lodged in recesses built in the wall. Since the joists elsewhere in the building were also built into the brickwork, this suggests that not only was the western block part of the original structure but that it must have been built after completion of the eastern block with which it is contemporary.

The lower ceilings of the western block suggest, as might be expected, that these rooms were of lower status than the rooms on the frontage to the east. This is further borne out by the fact that the decorative side of the doorway between Rooms 1 and 2 is the eastern side. The western side of this doorway was originally painted red. Room 3 is too narrow to be a reception room and was presumably simply an entrance hall. The moulded doorway in its north wall was plastered and originally painted yellow, but the wall itself seems to have been left unplastered.

There was no evidence for an original staircase in the north wing; the main staircase was possibly therefore located in the entrance hall Room 3. Probably a chimney, and possibly a stair, were lost when the western half of the western block was removed in Phase 5.

Phase 2

[Figs 13.64-8]

A block was constructed along the Trinity Street frontage to the north of the Phase 1 north wing. The carpenter's marks on the timbers of the first floor indicate that this new building probably extended as far as Culver Street. Interpretation of this part of the building is made difficult by

the fact that only its western wall survived.

The new block was of two storeys with attics and possibly cellars, although the latter may belong to Phase 3. It was built of brick laid in English Bond, the bricks measuring 215 x 100 x 50 mm (8.5 x 4 x 2 in) and four courses rising 240-250 mm (9.5-9.75 in). At ground-floor level the west wall, having a straight joint built with closers where it butted against the now demolished Phase 1 chimney stack, had at least two large archways 2.30 m (7 ft 6 in) wide with semicircular heads in neatly cut and chamfered brick. At first-floor level, above the pier between the arches, was a window 2.05 m (6 ft 8 in) wide by 1.6 m (5 ft 3 in) high with reveals at right angles to the wall. All that remained of the east wall was the foundation of a pier against the north-east corner of the Phase 1 wing, showing that there was at least one archway on to the street. The thickness of the western cellar wall indicates that there were probably only two arches to the west; perhaps there were therefore two on to the street. This does however leave the problem that if the cellars belong to this phase, one of the carriageways overlay a cellar.

The roof was of the butt-purlin type with five common couples between each pair of principal rafters. There were originally two purlins to each side of the roof (the upper ones joggled). Since there were mortices for two sets of collars a little lower than the present collars, it is possible that they had been raised to allow more headroom in the attic.

The common joists of the first floor were 100 mm wide by 165 mm deep (4 x 6.5 in) and fitted to the bridging joists by means of a soffit tenon with diminished haunch. The bridging joists were fitted to the east-west binding joists by a central tenon with diminished haunch and housed-soffit shoulder.

The attic floor rested on joists of deep section jointed to the binding joists by a double tenon of reduced width with a diminished haunch. The binder at the southern end of the Phase 2 block was in reality a tie-beam because the southern principal rafters were tenoned into the top of it. The wall-plate on which the feet of the rafters rested was tenoned into the side of the southern binderAie beam. However, the other surviving binder to the north lapped over the top of the wall-plate and was tenoned into the side of it. The principal couple here rested directly on the wall-plate and was not jointed to the binder/tie beam.

The absence of further evidence makes understanding the Phase 2 additions very difficult. What appears most likely is that it consisted of a wing with a double-arched carriageway at its southern end.

Fragments of plaster mouldings found in the construction trench of the Phase 3 cellar probably come from Phase 2 ceiling cornices.

Phase 3

[Figs 13.64-7 & 13.69]

The frontage walls of Phases 1 and 2 were demolished and a new façade erected in their place. A further block was added to the west of the Phase 2 wing and the northern cellar was built or enlarged. (The cellar may have been of Phase 2.)

The façade (Fig 13.69) was of orange brick laid in Flemish Bond. The bricks were 215 x 100 x 45/50 mm (8.5 x 4.0 x 1.9/2.0 in) and four courses rose 240 mm (9.75 in). At ground-floor level was a plinth capped with ogee-moulded

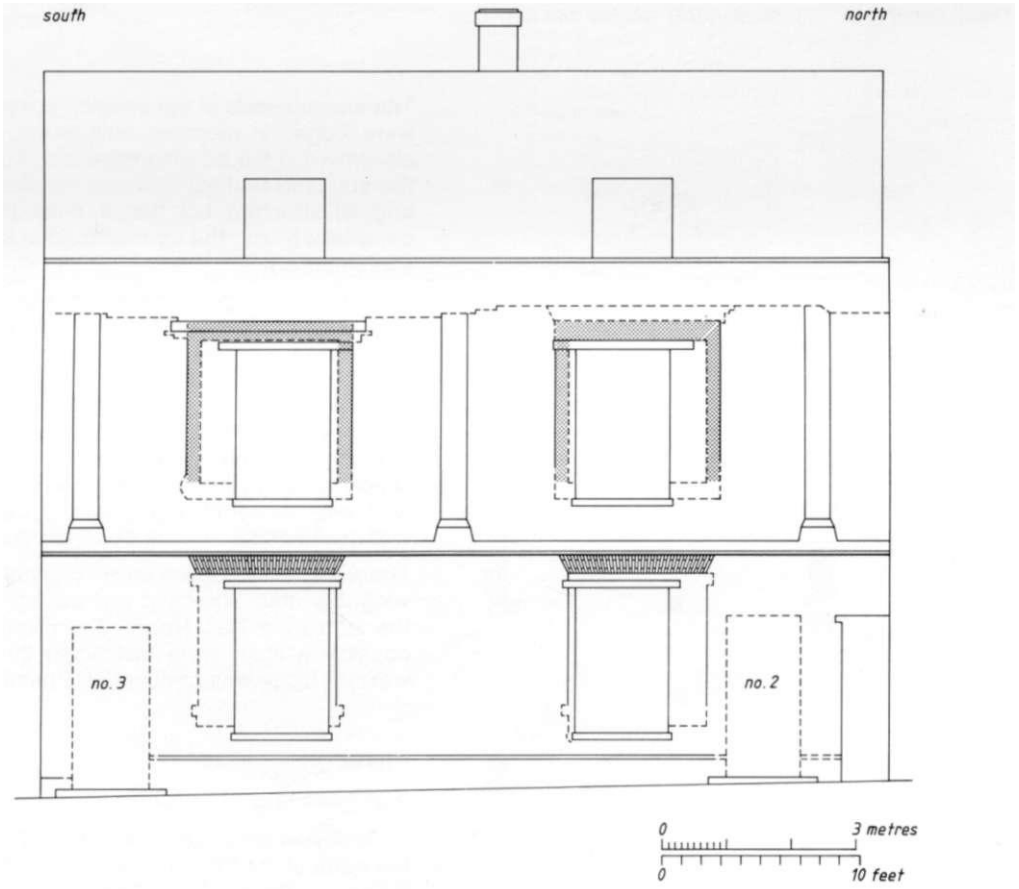


Fig 13.69 Trinity Street (TSC 77): façade of Nos 2 and 3 as it appeared after removal of rendering in 1977. [Pages 347-54, especially pages 52-3]

headers. At first-floor level was a projecting band of four courses of rubbed brick. The bottom course was of the same ogee-moulded headers which were used for the top of the plinth.

Above the band course were rubbed-brick pilasters with swelling bases and Ionic capitals (no capitals survived). The pilasters were very neatly made with fine joints. They projected 40 mm (1.5 in) from the wall-face (with which they were not bonded) and the bases swelled a further 40 mm (1.5 in) to attain the same projection as the band course. There were seven pilasters along the east fagade (excluding any there might have been round the three sides of the forecourt) and three on the west façade of the northern block. The double gable on the Culver Street façade had a band course with five pilaster strips above and four sunken panels below. The north wall of the forecourt was rebuilt from the first-floor level up. Here the Phase 1 ground-floor wall still exists. Although the Ionic capitals on the west were still in existence at the time of the Royal Commission Survey in 1921, details of form or composition are not known. The pilasters and band course on the new western block were of ordinary unrubbed brickwork, unlike those on the main east façade. The present parapet on the façade was built in Phase 5 or 6. The original Phase 3 parapet was presumably decorated with some form of cornice above the pilasters.

The window openings on the eastern front were 2.23 m high by 2.15 m wide (7 ft 4 in x 7 ft 1 in) and had flat arched heads with gauged brick voussoirs.

The interior reveals were splayed. The first-floor windows appear to have had projecting architraves which were probably of rubbed and gauged brick. There were two window openings in the south-facing wall of the Phase 3 western extension; both had flat arched heads with gauged voussoirs and reveals at right angles to the wall. The first-floor window was larger than that on the ground floor. Both windows retained their original oak frames with ogee mouldings on the inner and outer sides. They were divided centrally by a moulded mullion, to each side of which were two narrow uprights set diagonally. The upper-floor window was divided by a transom whilst the ground-floor one had iron hinges for an opening casement to one side.

The western extension included a doorway at first-floor level in the south wall of Room 13. Whether this was reached by an external stair is not known.

The cellars at the northern end of the building were probably added at this time (if not in part at least already built in Phase 2). The walls were of brick laid in English Bond, which was used up to a height of about 1.45 m (4 ft 9 in) above ground level in the south wall of the western block. The one surviving doorway in the cellar had a segmental head of uncut bricks set on edge. The cellar wall was of double thickness at the point where one of the Phase 2 piers had stood; this must mean either that the pier was still standing when the cellar was constructed or that the pier and this part of the cellar are contemporary. The arched carriageway was probably blocked at this time (or at least the northern half of ft).

Phase 4

[Figs 13.64-7]

The small square yard to the west was roofed in to form Rooms 7, 14 and 21. The west wall of this new block was of stud-work; many of the timbers, including the top-plate, were reused. The roof consisted of thirteen couples with collars. The couples were pegged at the apex, the collars being pegged and nailed. The five western couples were braced with two straight timbers nailed to their undersides, one in each half of the roof.

The Phase 1 north wall and chimney stack (ie the wall between Room 1 on the south and Rooms 7 and 5 on the north) was demolished and replaced by a narrower wall of reused bricks. Incorporated in it were six fireplaces and flues to serve Rooms 1a, 5, 7, 9a, 12, and 14. The fireplaces for Rooms 1 b and 9b are possibly later.

It was perhaps during this phase that a doorway was broken through the Phase 3 wall between Rooms 6 and 7. Rooms 1 and 9 were probably subdivided at this time in view of the number of fireplaces in the new east-west wall.

Phase 5

[Figs 13.64-7]

The forecourt that had existed since Phase 1 was now blocked over by a wall to the east to form Room 8 with first and attic floors above (Rooms 15 and 22). On the ground floor, a passage was constructed to allow access from the street through to the back yard. The Phase 1 roof over attic Room 18 was removed and a new roof with a north-south ridge erected over Room 18 and the old forecourt. This roof had a ridge-board and side-purlins supported on irregularly-spaced collars. Many of the timbers were reused. The parapet may have been rebuilt at this stage.

The western half of the Phase 1 western block was probably demolished at this time. The new west wall was of stud-work. Rooms 2, 10, and 17 were lit by windows newly set in the west wall whilst the original window openings in the south wall were blocked with stud-work.

All these modifications were probably carried out to divide the property into separate dwellings. This division involved several other changes; five front doors were inserted in the façade, the window openings were partly bricked up and smaller sash windows inserted (except in No 1). The splaying of the reveals was carried down to floor level and folding shutters were fitted. In No 2 a passage was constructed from front to back and stairs inserted against the east wall of Room 7. No 3 also had a passage and stairs inserted and rooms subdivided. Nos 4 and 5 were presumably similarly treated. No 1 was perhaps not so thoroughly altered because, in a bill of sale of 1903, the property is described as having a fine old staircase', which presumably survived from Phase 2 or 3.

Phase 6

[Figs 13.64-7]

This phase embraces all alterations carried out in the 20th century. The main events were the demolition of No 1 in 1947 and the amalgamation of Nos 2 and 3 and of Nos 4 and 5 to form two properties. In 1978, a new building was erected on the site of No 1 and additions were made to the back of Nos 2 and 3.

Dating evidence and architectural parallels for Phases 1-3

The six phases have been defined largely on the grounds of the structural relationships between the various parts of the building. Apart from considerations of architectural style, there is little evidence to give an absolute date to the phases. Between the first-floor floor-boards and the ground-floor ceiling of the rear room of No 3 was a late 16th- to early 17th-century Nuremburg token which, assuming it was dropped during its period of use, gives a *terminus ante quem* for the Phase 1 building. A coronation medallion of James II (1685) lay at the edge of the Phase 3 foundation. Its relationship to the foundation was not clear

enough to indicate whether the two were contemporary or if the medallion were later.

The later phases can be more closely defined. Cole and Hale's Parish Survey (ERO T/M 268) shows that the Phase 4 infilling on the west had taken place by 1818, but the forecourt on the east still existed. Between 1818 (Cole and Hale's survey) and 1823 (abuttals mentioned in deeds of No 6 Trinity Street) the property was acquired by Sarjant Lay. By the time of his death in 1843, the property had been divided into five and let to tenants (mentioned in the preamble to the deeds of Nos 1-5 in the care of the Colchester Borough Council). It seems likely that the infilling of the forecourt occurred when the property was subdivided and the beginning of Phase 5 must therefore be placed between 1818 and 1843. The forecourt had at any rate been filled in by the time of Monson's street map of 1848. Although let to tenants, the property remained under one ownership until disposed of as five separate dwellings by a sale in 1903. (This information is in the deeds of Nos 1 -5 referred to above.)

The Phase 1 plan, an H with the rear court perhaps enclosed on all four sides, is of a type that could have been used at almost any time between the early 16th and late 17th century. The rather flat four-centred arches suggest a date no later than the early 17th century and the apparent use of the central block simply as an entrance hall implies a date no earlier than the late 16th century in a building of this scale. The various forms of joint used in the construction of the floors do not conflict with a late 16th or early 17th-century date for Phase 1 but do not really enable the range of dates to be narrowed at all.

Phase 2, with its use of the semi-circular brick arch, would seem to be no earlier than the late 16th century. The use of English Bond brickwork suggests a date no later than the mid 17th century but by no means proves it.

The Phase 3 façade can be ascribed to the mid 17th century on comparative grounds. The projecting surrounds of the first-floor windows, although one cannot be sure of their details, appear to have been very similar in treatment to the window surrounds at Balls Park, Hertford (c 1640), Tyttenhanger Park, St Albans (1654) and Mackerye End, Wheathampstead, Herts (1655). The Tyttenhanger window surrounds are closely comparable because they are of rubbed brick and do not bond with the adjacent wall, giving the same effect as the Trinity Street windows. The White Hart Inn, Scole, Norfolk (1655) has several windows with projecting architraves and these also have the square proportions of the Trinity Street windows. The Trinity Street façade is unusual in having no windows of more upright proportions; its ground and first-floor windows are of the same square shape.

Another unusual feature is that the pilasters are restricted to the first floor only. A giant order extending through two or more storeys would be more common, as at Broome Park, Denton, Kent (c 1635), Pococks School, Rye, Sussex (pre-1638) and the White Hart Inn, Scole (1655), amongst many others. First-floor pilasters with Ionic capitals are found at Maison Dieu House, Dover (1665) but the pilasters are tapered in this instance.

The use of the Flemish Bond and the size and quality of the bricks would also tend to support a date in the mid 17th century for the construction of the Phase 3 façade. The James II medallion *(see* above), if it really did come from the foundation of the façade, would mean that the façade was built in a style already well out of fashion.

Further discussion of the plan of the building and the uses to which the rooms were put is not possible without a detailed survey of Nos 4 and 5.

Ownership

The ownership of the property can only be traced back to about 1800. Cole and Hale's 1818 Survey records a Mrs Smith as owner and occupier of what is now Nos 1-5. Abuttals mentioned in the deeds (held by the Colchester Borough Council) of No 6 for 1823 refer to the property as 'late of Mr Benjamin Smith'. Benjamin Smith was an eminent clothier whose will (made in 1801 and proved in 1810) left to his wife his house in Holy Trinity and his business premises adjoining Benjamin Craven's house (ie No 6 Trinity Street). The 'business premises' included a 'mill house' which was probably a building in which cloth was roughed on a rowing-mill. The existing deeds of Nos 1-5 and No 6 make no reference to any owner before Smith.

It is interesting that Morant (1748, Bk 3, p 9) states that Lady Mary Darcy lived in the parish of Holy Trinity 'in the great Brickhouse opposite the West end of the Church; where she died in 1644'. The deeds to the house now known as Tymperleys (now No 8 Trinity Street) show that Lady Darcy's house lay to the north of Tymperleys, ie that No 6 was Lady Darcy's property; but No 6 could hardly be described as a 'great Brickhouse' when the adjacent property, Nos 1-5, had a brick frontage more than twice as long. These facts could be resolved if Nos 1-5 and No 6 were all one property in Lady Darcy's time (ie the early 17th century) but were divided by the time the present façade of No 6 was built (ie apparently in the early 18th century).

Acknowledgements

I am grateful to Mr Curtis of the Town Clerk's Department for allowing me to examine the relevant deeds in his keeping and to Mr John Bensusan-Butt for the information about Benjamin Smith.

The archaeological excavations and watching brief (PC)

See microfiche, pp 828-33.

3/77e

17 North Hill
Fig 13.92
4th-5th March 1977
Reason: extension at rear of existing house
Record/report: HB/PC
Photographs: Misc Sites 1, 50-73
Finds: X133-9: 1st-3rd/4th century & PR pot, painted plaster, tesserae, animal bones, and others (all unstratified)

A contractor's trench for a foundation for an extension at the rear of No 17 North Hill led to the uncovering of parts of three pavements. The trench was about 1 m deep and extended down to the surface of the pavements. The pavements were cleaned, planned, and photographed and are now preserved under the new foundations.

One of the pavements is the black and white mosaic previously uncovered more fully and published in *Roman Colchester* (Hull 1958, 77-80 & pl 15). The other two pavements were of plain red tesserae; too little was uncovered to determine whether they were parts of rooms or passages. The positions of the north-south walls were indicated by robber trenches. The western one was 0.5 m wide. The width of the eastern foundation could not be determined but it was at most 1.0 m and presumably much less. The base of an east-west wall survived patchily along the south side of the pavement. It had been of daub on a foundation of gravel, apparently of shallow depth. The

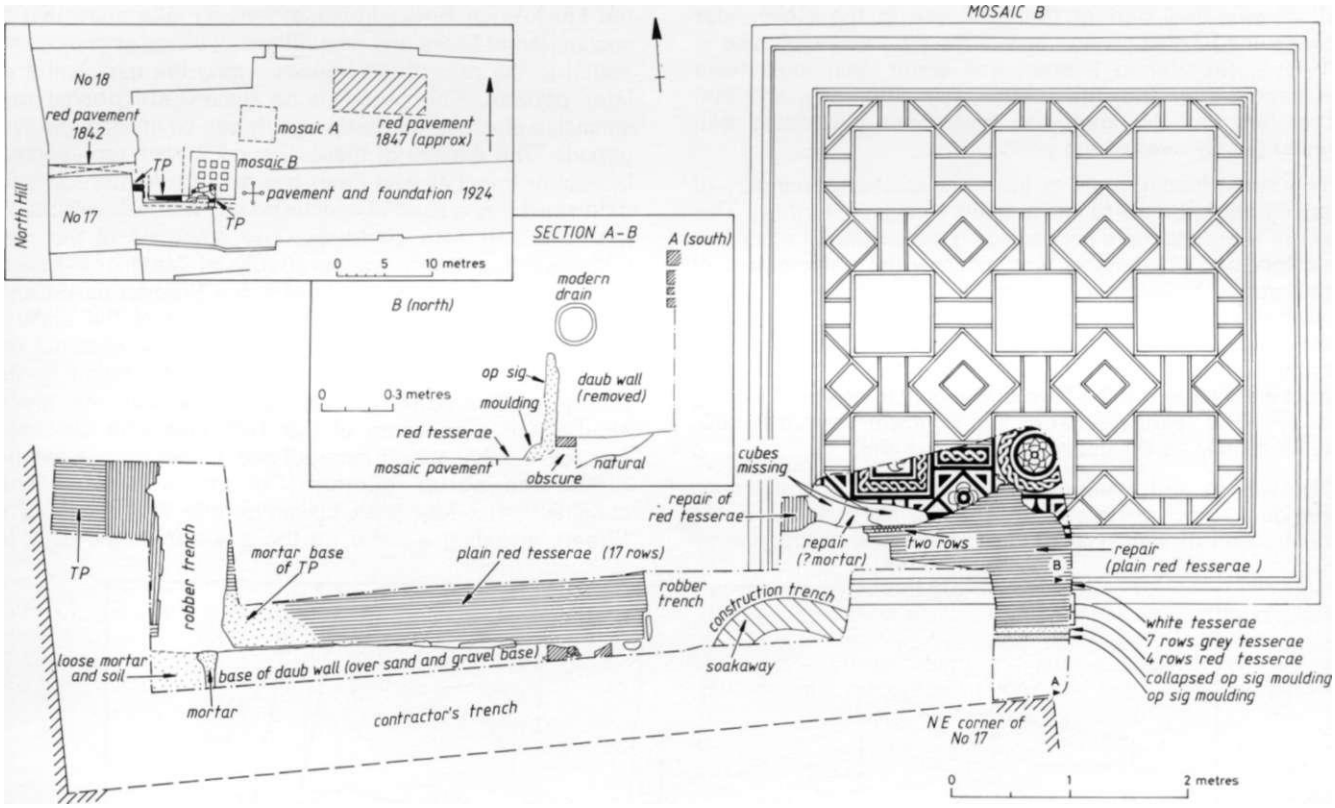


Fig 13.92 No 17 North Hill (3/77e). [Pages 354-5]

mosaic had been crudely repaired with plain red tessellation, the construction of the rows being unrelated to the alignment of the cubes in the mosaic. Part of a quarter-round moulding of *opus signinum* lay along the south side. The mortar had originally extended up the wall to a height of at least 0.35 m *(see* Section AB, Fig 13.92). The drawing of the mosaic published in *Roman Colchester* (Hull 1958) appears to be faithful to the original because the repaired areas uncovered in 1977 match the parts shown as missing on the bottom left-hand corner of the drawing.

Nos 7-15 Long Wyre Street (COC 1979)

1978-9
Figs 3.108-116
Reason: redevelopment of shops
Record/report: NS/PC

Introduction

The excavation was carried out over a period of 65 days between December 1978 and February 1979 immediately prior to the start of redevelopment of nos 7-15 Long Wyre Street. This was followed by a watching brief. The site, about a third of an acre in size, lies at the northern end of Long Wyre Street and straddles the intersection of the Roman streets between Insulae 29, 30, 37, and 38a.

The Roman remains can be described in terms of six periods. Period 1 (c44-9) was represented by the ditch and rampart of the fortress annexe discovered in the early 1970s at Lion Walk *(CAR* 3, 31-3). The Long Wyre Street exposure means that the annexe defences have now been traced over a distance of 61 m. The rampart at Long Wyre Street was demolished in Period 2 (49-60/1) when a large timber drain and a water-main were laid north to south across the site, possibly to serve the Temple of Claudius. An east-west street and a street leading north from it to form a T-junction were probably laid out at this time. The alignment of the drain, the main, and the streets was slightly different to that of the military defences but corresponded to the alignment of the street grid and the group of public buildings laid out c 49-55 on the site of the annexe when the town was founded *(CAR* **3***,* 5-9). Period 3 probably began sometime between 61 and c 75 (no Boudican destruction was detected on the site) and involved the building of the southern arm of the cross-roads with houses (Buildings 141 & 142) on both new frontages. This topographical change has wider implications, namely that, until at least the Boudican period, the built-up areas of the eastern end of the town had probably been confined to the site of the military annexe. Around AD 100, at the start of Period 4, the house in the south-east angle of the crossroads was demolished and replaced by another house (Building 143). The start of Period 5 was marked by the construction of houses on the southern angles of the crossroads (ie the north-eastern corner of Insula 37 and the north-western corner of Insula 38a); these buildings had tessellated floors and substantial stone-and-mortar foundations (Buildings 145 & 146). In Period 6, a timber-framed building (Building 148) was erected on the site of the Period 5 house in the south-west angle of the crossroads.

When the Co-operative Pharmacy was built in 1956 on the adjacent site, a length of Roman lead pipe was found which passed through a brick sump and down into a lead tank. Stratigraphically the pipe would have been equivalent to our Periods 5 or 6 and should have passed northwards through the south-east corner of the 1978-9 site. (Records of the

discovery and part of the pipe are in the Colchester Museums.) Although no trace of the pipe was observed in 1978-9, the Period 2 drain and water-main must have passed under the site of the pipe and tank and hint therefore that the area may have been associated with water supply over a long period.

The street leading east to form the southern boundary of Insula 30 appears to have been realigned slightly. This event seems to have happened no earlier than the late 3rd century and presumably was to allow the enlargement of the public building to the north (Crummy 1971, 107). Although the differences are rather too slight to be certain, the succession of buildings in the south-east angle of the crossroads seem to point to a realignment of the adjacent east-west street by the time of the construction of Building 145. This would place realignment around 150, substantially earlier than previously thought.

Nineteenth- and twentieth-century building operations (in Period 11) along the east side of the site resulted in the destruction of almost all traces of medieval occupation on the Long Wyre Street frontage, leaving little more that a succession of floors and foundations of wings or outhouses added to the rear of the houses during the medieval and later periods. The post-Roman occupation proved too difficult to phase neatly but probably can be divided into five periods. The earliest of these (Period 7) was represented by robber trenches and deep pits of 11th- to 12th-century date sealed by a layer of cultivation soil which developed in the 13th and 14th centuries. The presence of the pits indicates that there was probably at least one house fronting on to Long Wyre Street in the Norman period and the cultivated soil points to gardens behind the earliest house(s). The earliest post-Roman structure detected on the site was of 14th- or 15th-century date (Period 8). Its flimsy wattle construction contrasts with its more stoutly-built successors of the 16th and 17th centuries (approximately), which incorporated timber-frames set on rubble-and-mortar plinths (Periods 9 & 10). The construction of four brick buildings (nos 7-15 Long Wyre Street), including a cellar on the street frontage, point to

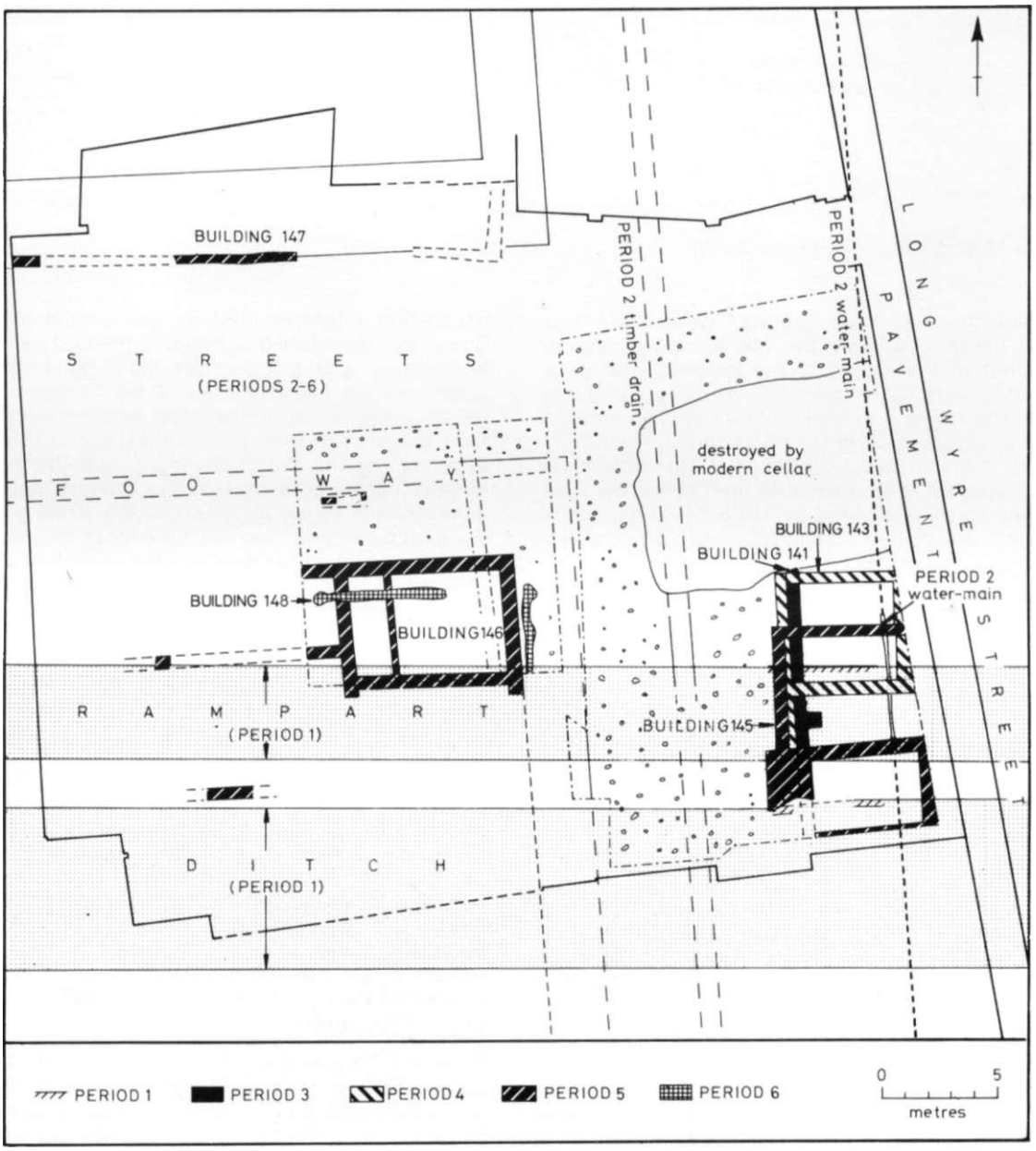
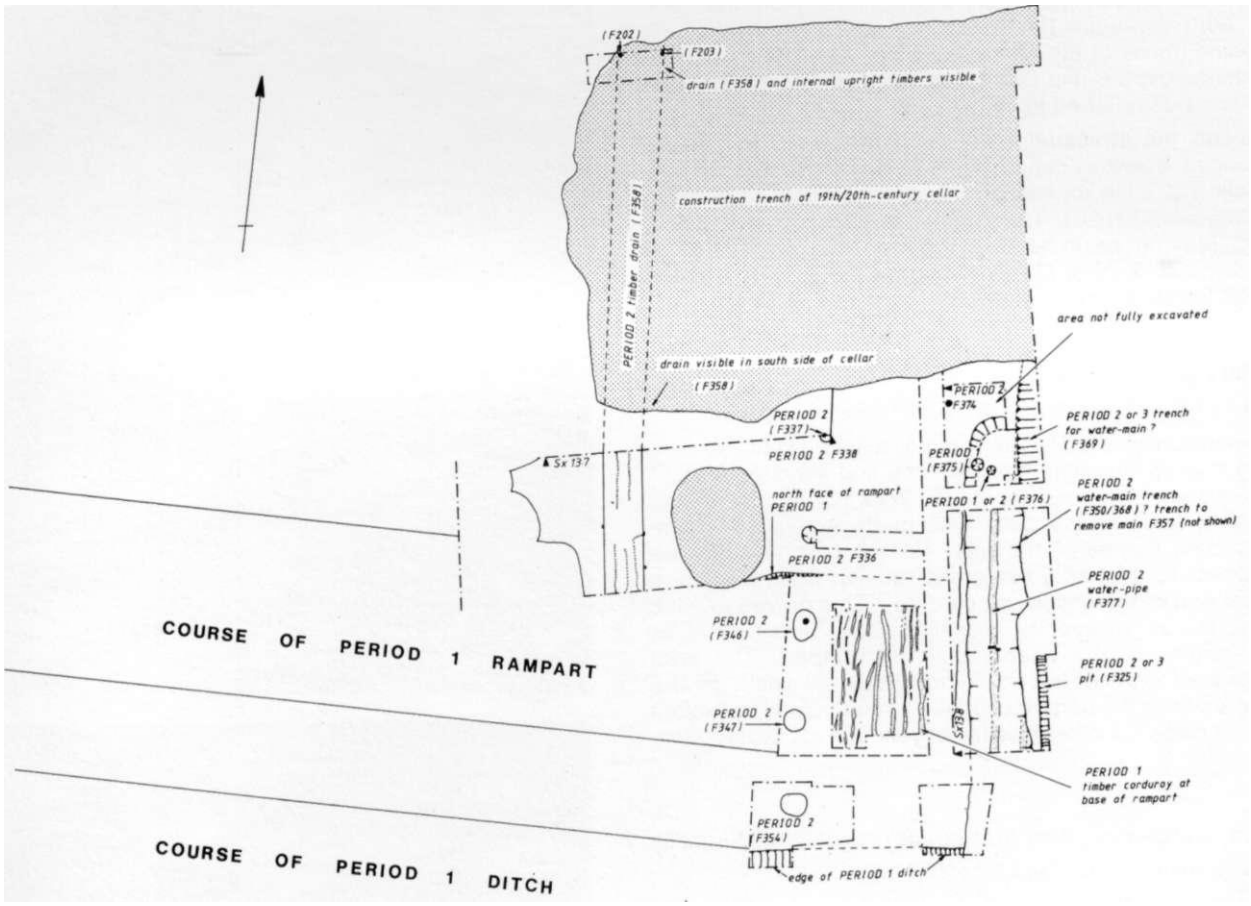


Fig 13.108 Long Wyre Street (COC 79): simplified plan showing the Roman phases. 1:300. [Pages 355-65]



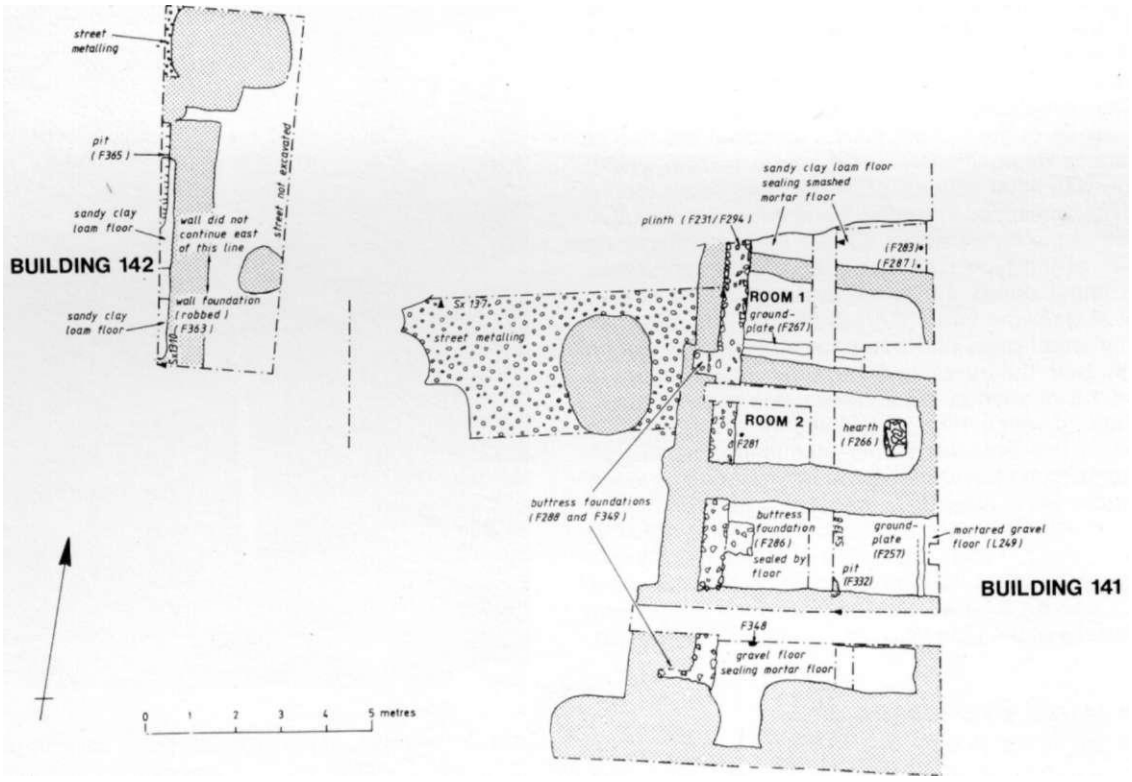


Fig 13.109 Long Wyre Street (COC 79): Periods 1 and 2 (above) and Period 3 (below). 1:167. [Pages 355-9]

substantial changes at different times throughout the 19th and 20th centuries (ie Period 11) which eradicated all standing traces of the earlier buildings. The latest was the southernmost building (No 15) which was built in 1956. All four were demolished in 1978.

Although the structural remains of Periods 8 to 10 are described below in terms of three buildings, it is almost certain that each represents the amalgamation of at least two adjacent houses. The frontage is about 25 m (c 80 ft) long, leaving room for two 40-foot-long houses (like Buildings 75 & 76 at Middleborough: *CARS,* 156) or more if their frontages were narrower.

Military remains (Period 1: c 44-49/55)

[Figs 13.109-110; Sxs 13.13.7 & 13.10]

Examination of the Period 1 remains was limited to little more than establishing the presence and exact position of the legionary defences. As at Lion Walk *(CAR **3,*** 31-3), the northern edge of the ditch was partly excavated at the south-east corner of the site. No full section could be obtained. To the north, part of the rampart was removed to reveal part of the underlying corduroy. This proved to have consisted of a layer of closely-packed timbers set at right-angles to the direction of the rampart. The area uncovered did not extend across the full width of the rampart. Only the north face of the rampart could be plotted exactly since the other face lay beyond the excavated area.

Drain, water-main, and first street (Period 2: 49/55-c 75)

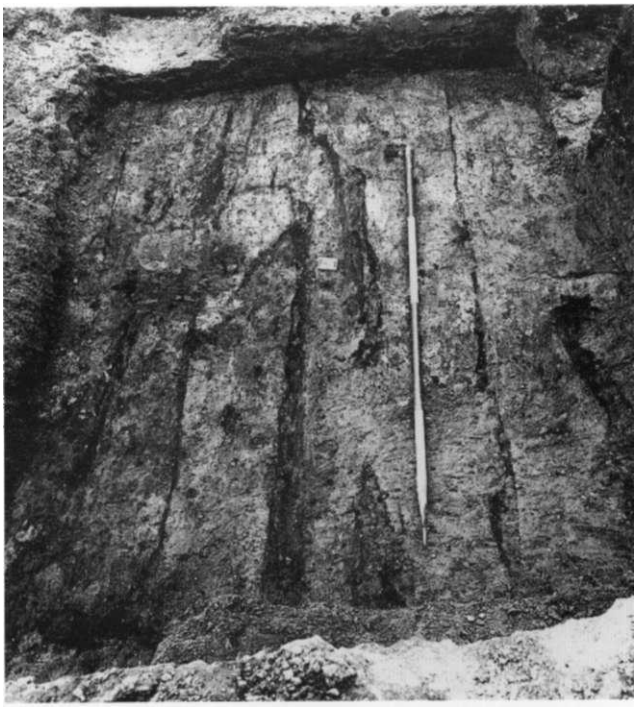
[Figs 13.109 & 13.110; Sxs 13.7 & 13.9-10]

The drain (F358) and the water-main (F377) cut the demolished remains of the annexe rampart. The drain (F358) was made of timber planks and was more substantial than the timber drains hitherto found in the town (eg *CAR* **3,** 47). The part uncovered had been set in the ground so that the top was 0.7 m below the ground level of the time. The drain was a four-sided box-construction which in section was 0.75 m (2.5 *pM)* square. The wood had rotted away completely but small rectangular voids along the outer edges of the upright planks indicated the use of upright battens approximately 6 x 4 mm in section which, presumably with other battens, provided fixing points for the 'lid'. The latter collapsed in Period 3 and caused substantial subsidence of the layers above (Sx 13.7). The water-main (F377) was of the type well-known from better-preserved examples found during earlier excavations in Colchester, especially at Balkerne Lane *(CAR* **3,** 26). An iron collar lay *in situ.* The water-main had been set in a shallow trench (F350/368). Both the trench and the water-main seemed to stop about 1.5 m short of the southern side of the modern cellar. Their absence here may indicate that the main terminated in this area (and thus presumably served an outlet of some type above) or that the two features were too faint to trace. Most notable amongst the other Period 2 features was a line of posts, each set in postholes (F337/8, F336, F346, F347, F354), indicating a structure of some kind.No part of the east-west street could be excavated but its position can be inferred with confidence and accuracy from the results of the Lion Walk excavation (CAR **3**, 37-9).

Buildings 141-2 (Period 3: c 75-c 100)

[Fig 13.109; Sxs 13.7 & 13.9-10]

The first buildings seem to have been post-Boudican. The west wall of Building 141 contained a stone-and-mortar plinth (F231/294) built of coursed septaria rubble overlying



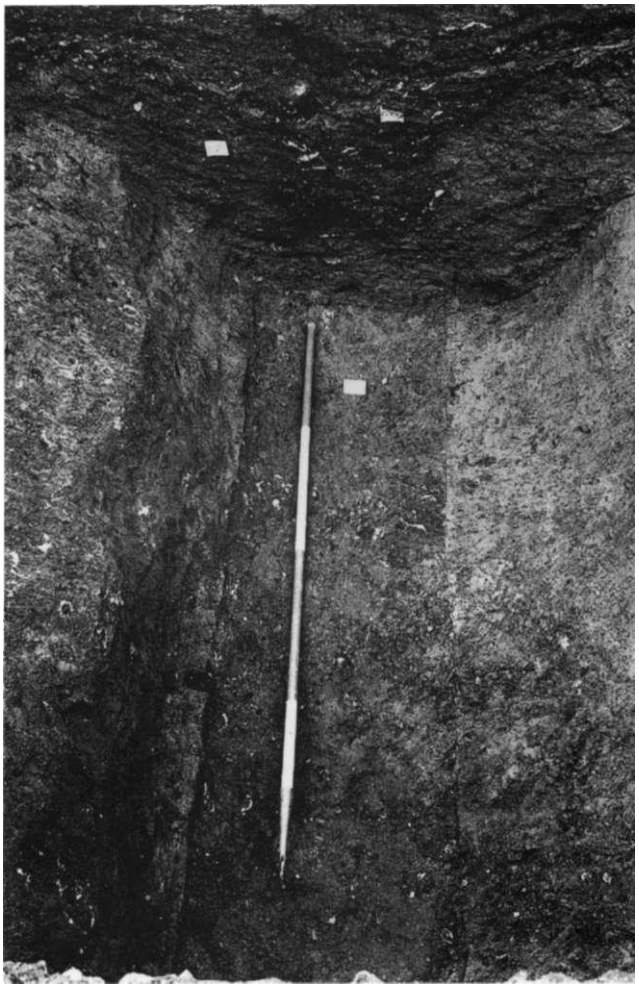


Fig 13.110
Above: Long Wyre Street (COC 79): timber corduroy at the base of the Period 1 rampart.
Below: Long Wyre Street (COC 79): Period 2 drain (F358) during excavation showing the top of the timber sides and an upright batten (on the left). [Pages 355-8]

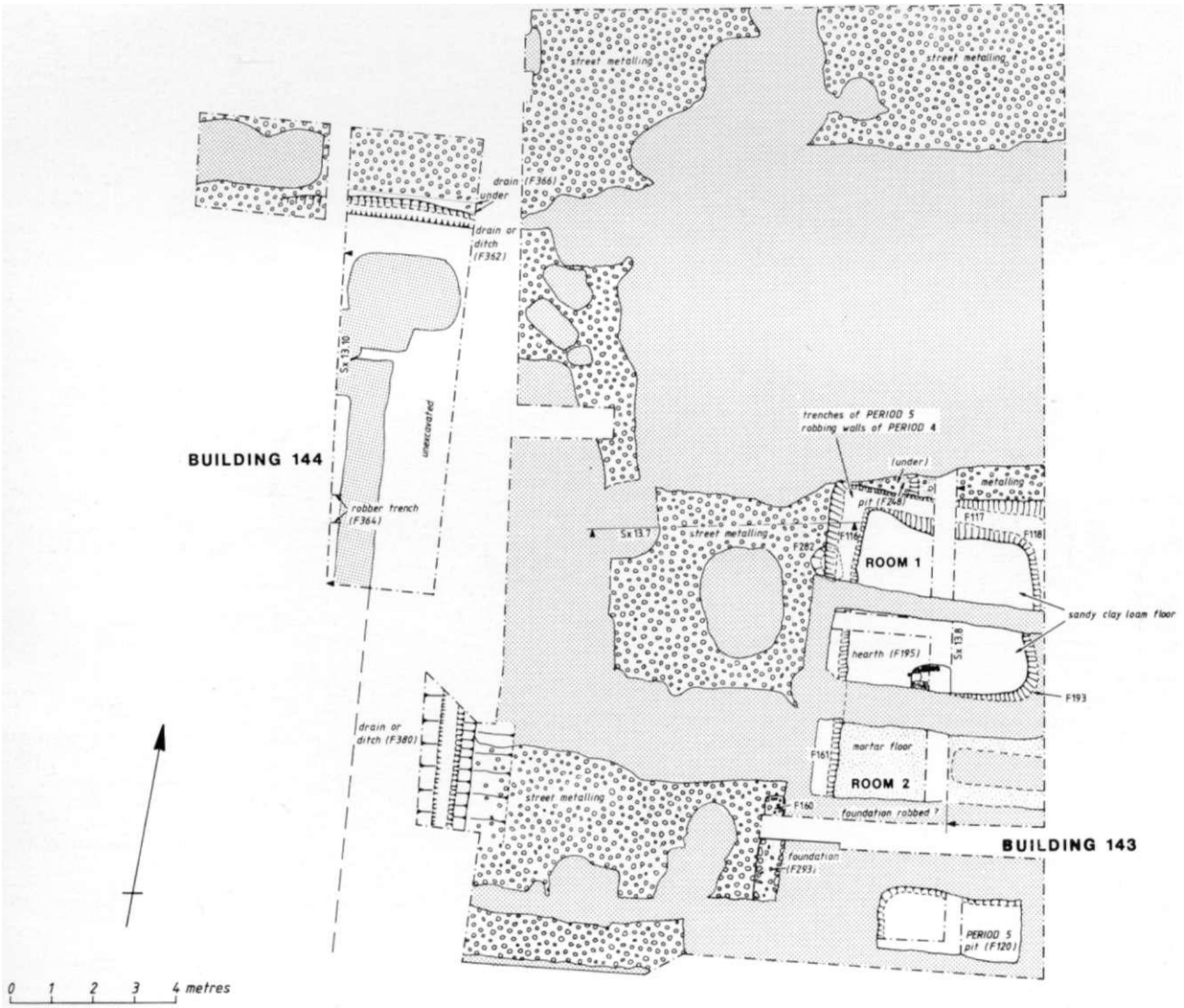


Fig 13.111 Long Wyre Street (COC 79): Period 4. 1:167.

a gravel-filled trench. The plinth had at least two buttresses on the west side (F288 & F349) and at least one on the east (F286). The internal partitions (F257 & F267) were walls which incorporated timber ground-plates, the presence of which was indicated by breaks in the occupation layers rather than slots. A hearth (F266) made of tile and brick lay adjacent to the line of F257 projected northwards as if it had been set against the east wall of a room.

A mortared-rubble plinth of such a substantial nature as F231/294 is unusual in domestic contexts in 1st-century Colchester (apart from the pre-Boudican plinths inherited from the fortress: *CAR* 3, 3) but clearly the buttresses set the wall apart from the normal examples and show that strength of construction was an important factor in its design. The presence of buttresses on both sides of the wall indicate that it may have been a high free-standing boundary wall although the ground-plates and the occupation layers to the east suggest otherwise. No structural features of Building 142 survived but its presence was shown by early floors and overlying occupation layers.

Buildings 143-4 (Period 4: *c* 100-*c* 150)

[Fig 13.111; Sxs 13.7 & 13.9-10]

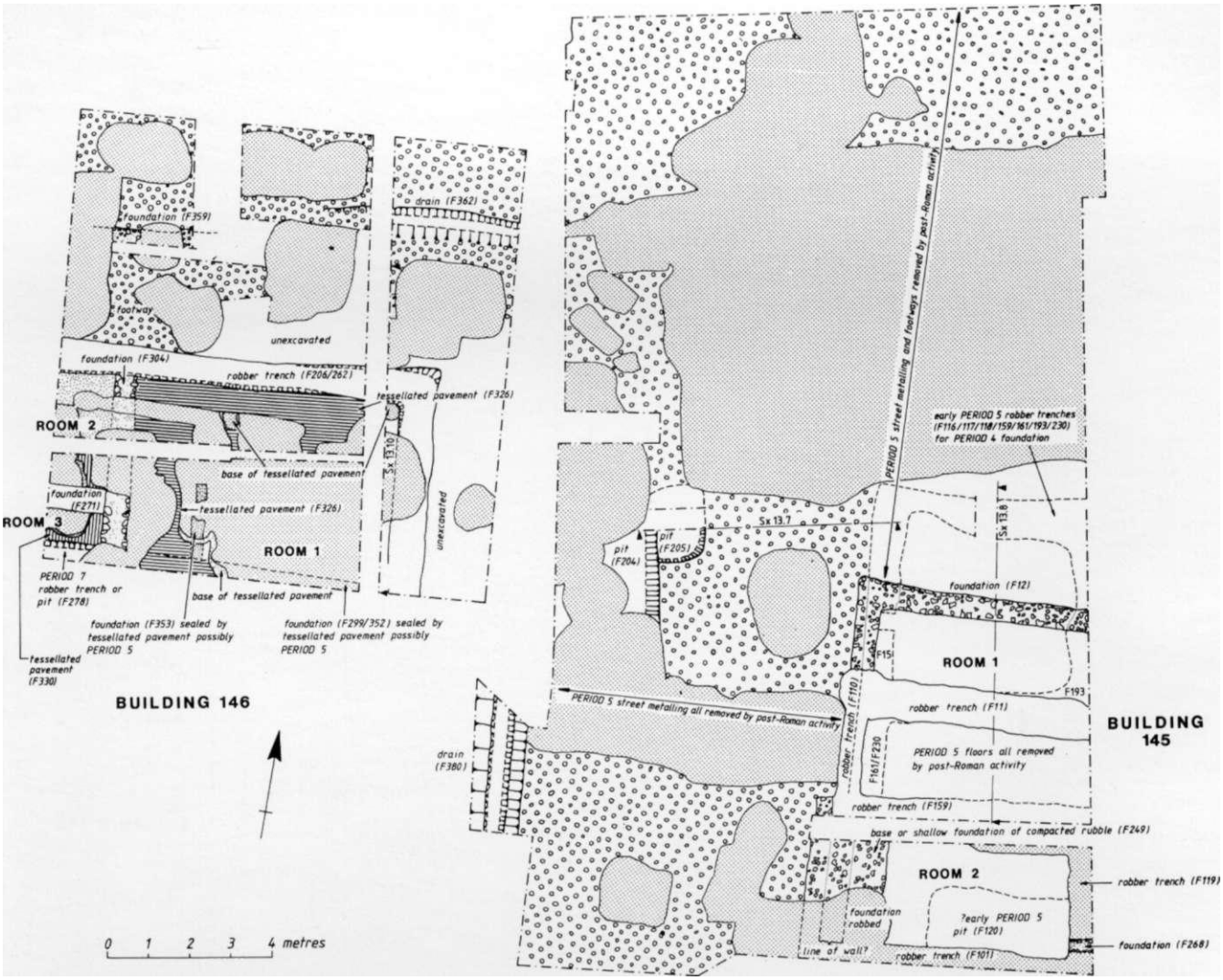
Little of Building 143 survived within the area of excavation because the foundations had been robbed at the start of Period 5 (F116-18, F161, & F193). The one surviving fragment (F160/293) showed the foundation to have been of septaria and ragstone rubble set in *opus signinum.* Parts of two rooms were uncovered. Room 1 had a floor of sandy-clay and a hearth (F195) built of brick fragments and set against the middle of the southern wall. Room 2 contained a plain mortar floor.

The evidence of structural features in Building 144 was limited to a very small length of foundation (F364) robbed in the early medieval period. Otherwise, like its predecessor Building 142, its presence was shown by early floors and overlying occupation layers. To the north, between the frontage wall and the east-west street, was a lightly-gravelled footway separated from the street by a shallow drain or ditch (F362).

Buildings 145-7 (Period 5: *c* 150-*c* 275/300)

[Fig 13.112; Sxs 13.7 & 13.9-10]

The foundations of Building 145 were of coursed septaria and ragstone set in hard yellow mortar. They were cut into backfilled robber trenches dug to remove the foundations of Building 143. The southern part of the western foundation (F249) was enlarged to 1.9 m in width. The reason for this arrangement is obscure. Two rooms were discernible but



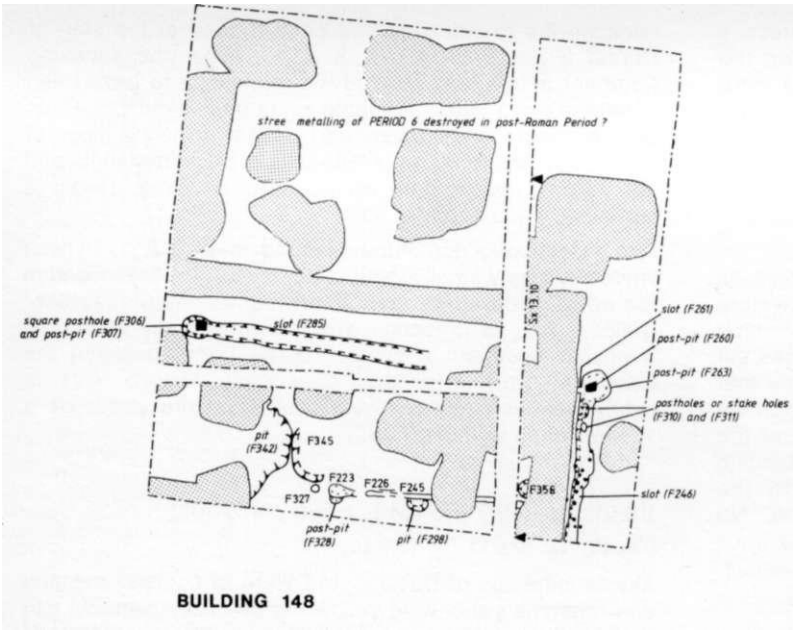


Fig 13.112 Long Wyre Street (COC 79): Period 5 (above) and Period 6 (below). 1:167. [Pages 359-61]

the floors of both had been destroyed in the 19th century when the ground level along the street frontage had been reduced. The south side of Room 2 was probably delineated by an east-west foundation (F268) of septaria set in a shelly mortar.

The small part of the plan of Building 146 which could be inspected makes little sense in terms of recognisable rooms or passages. Of the four 'rooms' examined, all had tessellated pavements. The foundation of the frontage wall (F206/262) of Building 146 and perhaps at least one of its internal walls (F278) had been robbed in early medieval times. Parts of the foundations of four other internal walls survived which together appeared to partition the area off into the three 'rooms'. The most substantial of these was a north-south foundation (F304) made of lumps of septaria set in mortar. Butting on to this foundation was one which, although of similar build (F271), was much shallower in depth (0.38 m). To the east lay a foundation in the form of a rubble-filled slot (F353) only 0.15m deep and filled with septaria and small stones. The fourth foundation (F299/352) was sealed by one of the tessellated pavements and, although the related layers under the pavement seemed to indicate that it was early Period 6, the feature may have belonged to the previous building. It was a rubble-filled slot which may have continued west of F304 in which case it appears to have been robbed out (F278) and the space between it and the foundation F271 seems too narrow for a room or passage (assuming that both at one stage had been contemporary). Another room was recorded superficially when it was discovered during the watching brief undertaken when rebuilding works began (Fig 13.116). Internally the room was 2.1 m, measured north to south.

The feature F271 apparently contained a coin of AD 337-41 which implies it should be dated up to 200 years later than proposed here. If the coin were indeed correctly stratified, it may be that F271 was a late insertion into Room 2/3 and that the end of Period 5 should be brought forward to at least c 350.

To the north, the Period 5 drain or ditch F362 survived into Period 5 and seems to have turned a right-angle to continue southwards as a more substantial feature of similar profile (F380).

Building 147 was discovered during the watching brief (Fig 13.116). All that was noted was part of a foundation made of ragstone and mortar. This seemed to turn northwards at its east end to form the limits of a building in the south-east corner of Insula 29.

Building 148 (Period 6: c275/300-c ?400+)

[Fig 13.112; Sxs 13.7 & 13.9-10]

Details relating to Building 148 are scarce but seem to suggest that perhaps around the end of the 3rd century Building 146 was demolished and replaced by a less substantial building. The structural remains consist of three shallow slots, some postholes and some stake holes. Two of the slots cut through the Period 5 tessellated pavements. The largest of the two (F285) terminated at the west end with a square posthole (F306) and post-pit (F307) 0.52 m deep. The smaller (F226/245) was parallel to it and seemed also to end with a posthole (not detected) and an associated post-pit (F223). The latter cut an earlier posthole (F328). Cutting into the gravelled surfaces forming the footway outside the eastern side of Building 145 was a north-south slot (F246) which was similar to F285. It too terminated in a square posthole (F260) set in a post-pit (F263) 0.31 m deep. Along the bottom and adjacent to its sides was a scatter of stake holes. Shallow scoops (F342 & F345), apparently contemporary with the slots, were responsible for the destruction of large parts of the tessellated pavements.

Whilst these features may represent late use of Building 146, the contrast in building style with the earlier structures has been taken to indicate a complete rebuilding.

The fate of Building 145 in Period 6 is obscure because, as already explained, the relevant layers no longer existed by the time of the excavation.

Robbing and the earliest post-Roman pits (Period 7: *c* 11th to 14th centuries)

[Fig 13.113; Sxs 13.7-10]

The earliest post-Roman activity was the robbing of some of the Roman foundations in the 11th to 12th centuries, followed by the digging of many pits. Probably all of these (F7, F146, F213, F224, F227, F235, F269, F277, & F289) were over 1.5 m deep (not all were fully excavated) and had sides which were nearly vertical. They therefore may have been cess pits in which case they would point to occupation on the street frontage.

The layer of cultivated soil sealing the robber trenches and pits survived in places to a depth of at least 0.3 m (Sxs 13.9-10) and contained sherds of pottery dating to the 13th or 14th centuries.

Building 149 (Period 8: *c* 14th to 15th centuries)

[Fig 13.113; Sxs 13.7-9]

The structural traces of Building 149 were very patchy and limited principally to a wide scatter of over 30 stake holes cutting into the cultivated soil of Period 7, part of a hearth or surface-built oven, some cess pits, and a small fragment of a possible plinth. Only part of the base of the hearth or oven (F232) survived. This was made of closely-packed peg-tile set on edge and subsequently burnt in use to a depth of about 150 mm. Two of the cess pits had solid walls. The best preserved (F19) pit was 0.9 m deep and was lined with walls of septaria and flint with a little peg-tile and brick. The latter hints that the structure may be no earlier than the 16th century and thus may belong to Period 9 or 10. The bottom of the pit extended about 0.2 m below the base of the lining. Presumably this discrepancy is the effect of cleaning out the waste material and is the result of a long period of use. The walls lining the other pit (F122) had been removed almost entirely (in Period 9) but sufficient survived to show that it had been built of coursed septaria and peg-tile set in pale brown lime mortar. The pit was probably 1.7 m deep. Three other pits (F27, F42, F212) were steep-sided and deep and thus may have been unlined cess pits. Only one of these (F212) was fully excavated; it proved to be 2.2 m deep.

Building 150 (Period 9: c 16th century)

[Fig 13.114; Sxs 13.7-9]

The principal element of Building 150 was a rear wing, the positions of the walls of which were indicated by shallow robber trenches (F142, F152, & F92/95/129). The surviving features reflect many of the domestic activities which took place at the rear of houses of the medieval and later periods. These included an oven, drains, and cess pits. About half of the base of the oven (F94) survived. This was made in the usual way, ie peg-tiles packed closely together on edge. The drain (F115) was simply a small slot measuring about 70 x 70 mm in section with sides formed of yellowish-brown clay. It presumably led to a cess pit. Of

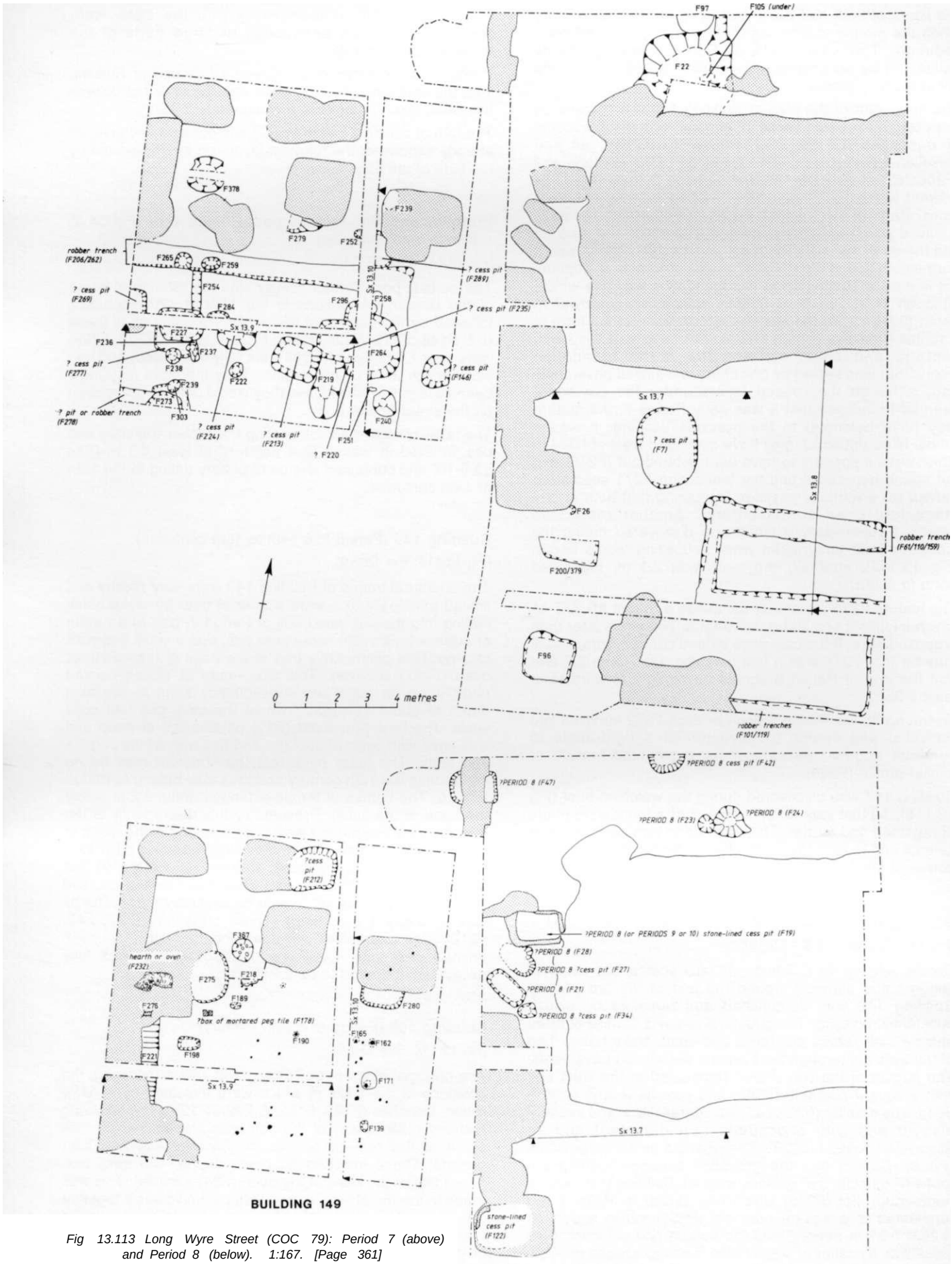


Fig 13.113 Long Wyre Street (COC 79): Period 7 (above) and Period 8 (below). 1:167. [Page 361]

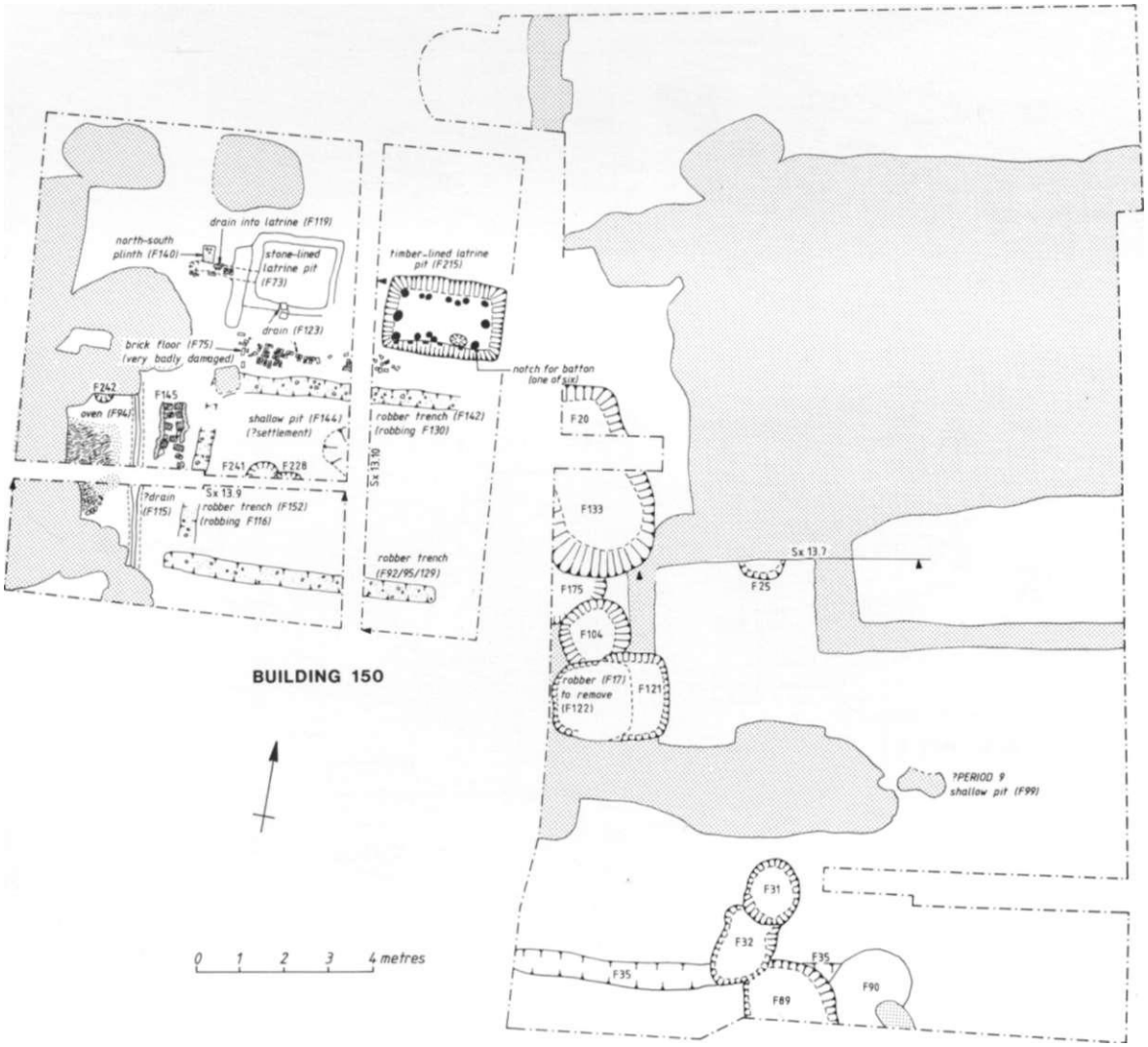




Fig 13.114 Long Wyre Street (COC 79).
Above: Period 9. 1:167
Below: timber latrine pit F215 viewed from the northwest showing the stake holes in the base of the pit and shallow slots in the sides for upright battons. [Pages 361 & 364]

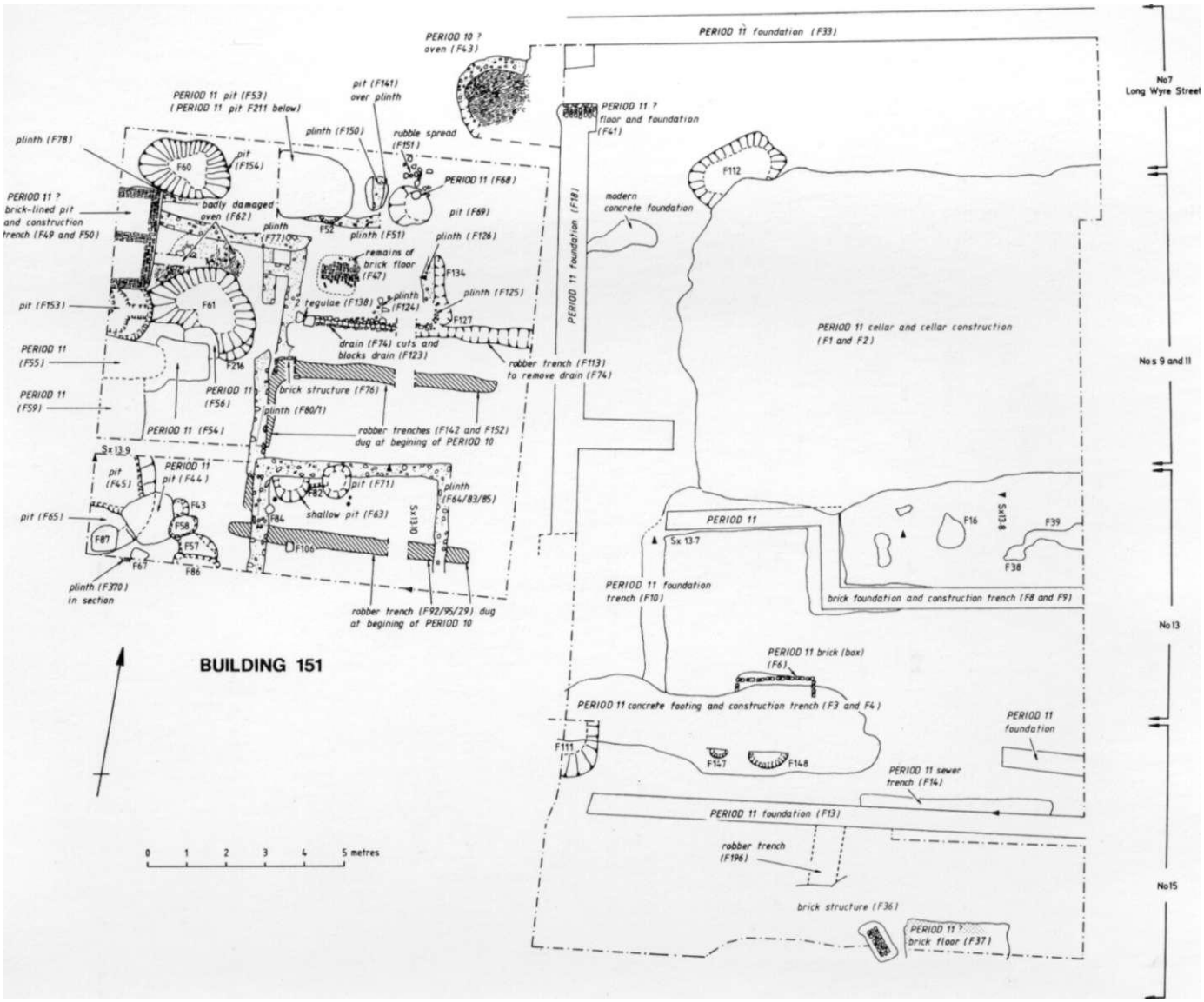


Fig 13.115 Long Wyre Street (COC 79): Periods 10 and 11. 1:167. [Pages 364-5]

the latter, there were at least four (F20, F32, F73, & F215). One (F73) was almost square and was lined with walls of mortared septaria with a little peg-tile and ?Roman tile or brick. It was 2.4 m deep and had a floor made of fragments of peg-tile and septaria set in pale brown sandy mortar overlying a layer, 0.2 m thick, containing similar materials but mixed with sand. Another of the pits (F215) was timber-lined. The wooden lining was kept in place by fixing it to narrow wooden battens along the side of the pit. Only traces of six of these were detected, all on the south side *(see* photograph in Fig 13.114); presumably they would have extended round the perimeter of the pit. They may have been attached with wooden pegs since no nails were found. The lining was propped up from the inside by stout round stakes hammered into the bottom of the pit. The fact that these were round rather than flat in section indicates that they would not have been attached to the lining but simply held it in place by pressure. The rather clumsy use of the stakes and the crude way in which they lay in relation to the lining strongly suggests that they represent a later repair (or series of repairs) done at a time when the original structure was beginning to disintegrate. The pit was 2.4 m deep, its floor being the underlying sand.

Other features included part of a very badly damaged brick floor (F75) and a shallow, roughly rectangular structure (F145) with a floor and mortared sides (100 mm deep) of peg-tile.

Building 151 (Period 10: c 17th to 18th centuries)
[Fig 13.115; Sxs 13.7-9]

The remains of Building 151 proved to be the best preserved of the post-Roman houses. Like Building 150 before it, all that survived were the remains of the usual range of structures found at the rear of houses of this time. In common with other houses of its period, the walls incorporated low mortared plinths (eg *CAR* **3,** 78-81 (Building 28) & 189-208 (Buildings 75-6)). These were made mainly of septaria rubble with some peg-tile and ragstone. Post-Roman brick was absent. Of the two oven floors uncovered (F43 & F62), one was almost completely

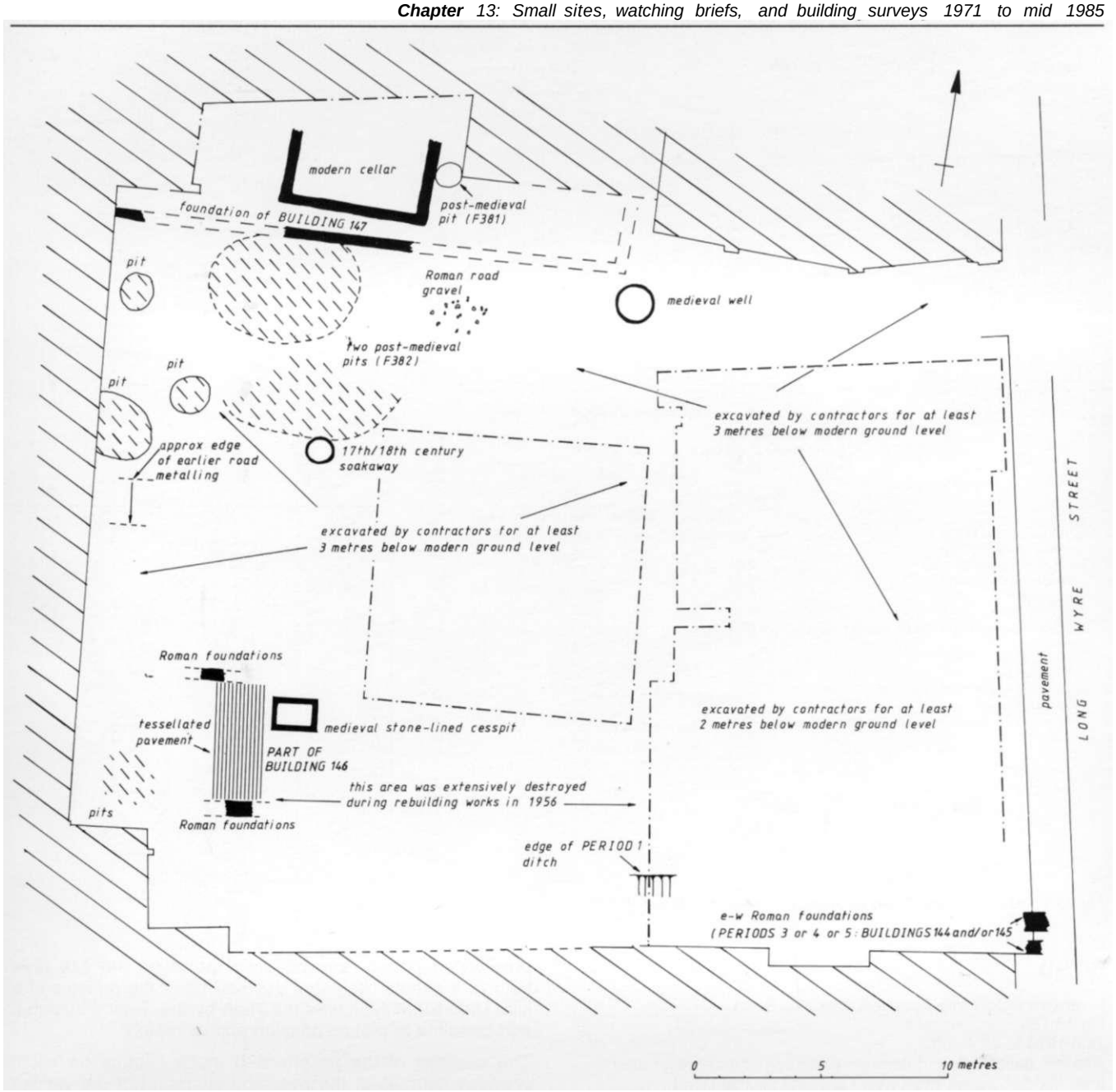


Fig 13.116 Long Wyre Street (COC 79): observations made during the watching brief. 1:250. [Page 365]

intact. Both were built in the same way as the earlier ovens mentioned above. A drain (F74) built of peg-tile led eastwards into the main part of the building. Its sides were formed of at least seven courses of tile and the floor a single layer.

Nos 7-15 Long Wyre Street (Period 11: c 19th to 20th centuries)

[Fig 13.115; Sxs 13.7-9]

Various brick foundations and other brick-built features belonging to this period represented the surviving structures for Nos 7-15. They included a large cellar on the street frontage (F1 & F2), a 'double ?cess pit' (F49/50) and a brick 'box' (F6) built in stretcher bond.

Watching brief

[Fig 13.116]

In addition to the Roman features already mentioned, other discoveries made during the watching brief included a well and a rectangular cess pit. Both were lined with rubble walls, and presumably dated to sometime within the range of Periods 8-10.

Acknowledgement

The excavation was funded by grants from the Department of the Environment, the Colchester Borough Council, the Essex County Council, and the Colchester and East Essex Co-operative Society.

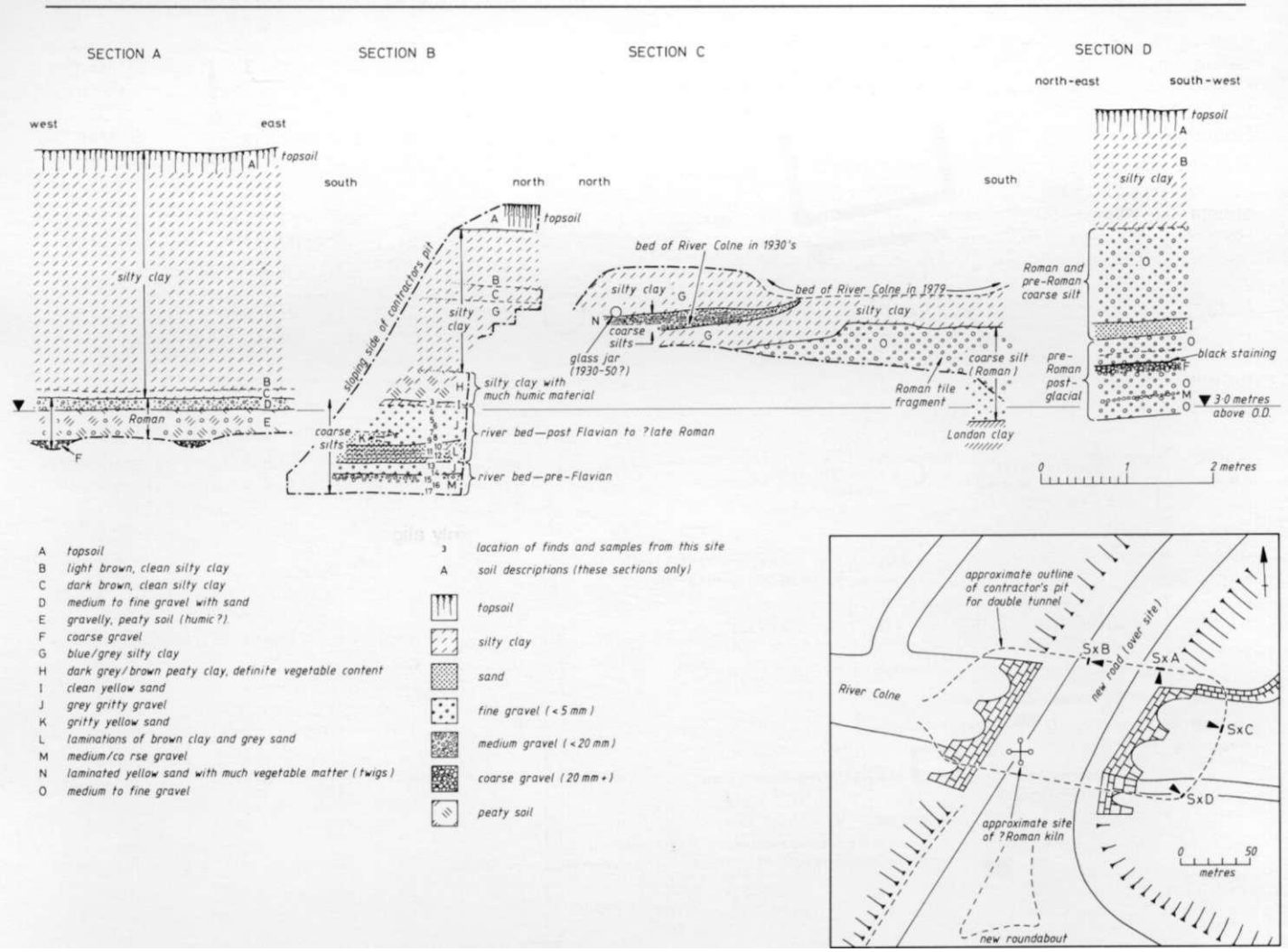


Fig 13.130 River Colne/Cowdray Avenue/Essex Hall Road.

6/79b

River Colne/Cowdray Avenue/Essex Hall Road
Fig 13.130
14.6.1979 to 25.4.1980
Reason: construction of northern extension of inner relief road from Middleborough roundabout to North Station Road
Record/report: HB & NS/PC
Photographs: Misc Sites 2, 183-91

The new road extends from the Middleborough roundabout to North Station Road. Its construction was observed at various points along its route, easily the most important being the part of the work linked to the diversion of the river Colne under the new road. The results of the latter operation are described below; the rest are outlined on microfiche, p 892.

Diversion of the river Colne ('BPC 79')

A new river channel was dug to direct the Colne slightly further south than its existing course. The river was to pass under the new road in two metal, prefabricated 'tunnels' set like huge pipes or tubes in a deeply-dug pit. The digging of the pit was watched and the sections formed by the sides of the pit were cleaned and drawn in four places (Fig 13.130; Sxs A, B, C, & D). During the contractor's excavations, an area of extensively burnt soil on the south bank of the river was noted by the workmen. In view of the pre-Flavian pottery subsequently found on the site *(see* below), it seems likely that this had been the remains of a kiln. Unfortunately, it was not seen by the Trust although it was possible to plot its position approximately.

The sections of the pit provided much information about previous courses of the river and character of the various silts. The northern boundary of the pit in effect yielded a longitudinal section along the length of the earliest river course. To study this further, a small trench (2 x 2 m) was laid out. The bottom of the trench was lowered until the water-table was reached. The trench was dug in horizontal spits, approximately 60 to 80 mm thick (Fig 13.130, Sx B, nos 3-17).

Of the four sections, Section C is particularly valuable because it shows: a) the profile of part of the bed of the river prior to its diversion in 1979, b) the bed of the river before its diversion for the construction of an open-air swimming pool between 1930 and 1950 immediately to the east of the site, and c) silts of the river in Roman and presumably later times.

The silt layers attributable to the Roman period were of sand and gravel with some silt. The lowest layers (Sx B, 13-17) contained substantial quantities of broken, unrolled, pre-Flavian pottery *(see* below). This included wasters and underfired sherds indicating that the material derived from a pottery kiln contemporary with the activities of the nearby Sheepen site (Hawkes & Hull 1947). Perhaps the material

derived from the possible kiln observed by workmen. No dating evidence was found in the gravel and sand silt just above the lowest levels (Sx B, nos 3-12) although fragments of rolled tile suggest that the layers may all be of Roman date.

The gravel silts slope down towards the north reflecting the position of the river bank in Roman times. There are substantial differences in height between the top of the Roman gravel silts in the northern edge of the site and the top of the Roman gravels on the south side. The former was consistently around 3.1 m above Ordnance Survey Datum whereas the latter is 5.2 m above it. The base of the river in 1979 was 2.5 m higher than it was in pre-Flavian times. Its course in 1979 seems to have been 25 to 50 m further south than in Roman times.

A distinct and apparently sudden change in the deposition pattern of silt occurred probably in the late Roman or Anglo-Saxon/early medieval period. The change was caused by the flow of the river becoming sluggish with the consequent deposition of fine silt. This resulted in an accumulation of silty clay (Layers G & H on Sx B, Layers B & C on Sx A, Layer B on Sx D). There are several possible explanations for the change, ie a) the cessation of routine dredging downstream (with the end of the Roman period?), b) the construction of an obstruction downstream associated with a water-mill or a bridge, and c) a widening of the river resulting from less effective river banks brought about either by neglect or by the rising level of the river.

The height difference between the uppermost silt on the site and the 1979 river bed is 1.7 m. This shows that, in recent years, the Colne has been eroding its own silt and reflects frequent dredging.

7/79b

Church Street and St Mary's Church
Figs 13.159-60
16.7.1979 to 7.8.1979
Reason: construction of new sewer
Record/report: HB/PC
Photographs: Misc Sites 2, 192

In 1979, the existing sewer in Church Street was partly replaced. The new pipe extended from Manhole 1 (Fig 13.159) westwards along the centre of the street. The pipe was joined to the sewer laid in 1973 through St Mary's Steps (the operation preceded by the archaeological excavation of the steps in that year — *see* pp 324-8). At the same time some alterations were taking place at St Mary's Church. Both projects were the subject of the same watching brief.

Roman street metalling was seen at the base of the whole length of the sewer trench from Manhole 4 to one metre west of Manhole 3. There was some metalling to the west of Manhole 4 but this was shallow and was only 0.4 m below the surface of Church Street. To the east of Manhole 3 the section contained much gravel, as if the street were nearby (it should not have been). A section was recorded near Manhole 3. This was typical except that it contained the remains of what might have been a demolished wall. Similar material existed in section about 3 m to the east.

The street metalling fits exactly the position of the east-west Roman street as calculated some years before on the basis of the position of the Roman drain opening at St Mary's Steps and the likely alignment of the street (pp 326-7 & Fig 2.9).

Inside the church, holes were knocked through brickwork for pipes at Points A & B on Figure 13.159, and outside the porch part of a brick floor or path was uncovered. Removal of floors inside the church at Point C revealed Victorian brickwork underneath and a hot water-pipe in a brick channel at Point D. A drain trench dug around the southwest corner of the church uncovered nothing of significance.

5/82d

Maidenburgh Street/William's Walk
18.5.1982
Figs 13.217-8
Reason: residential redevelopment by the Colchester Borough Council (part of the Dutch Quarter Phase 3)
Record/report: NS/PC

Trenches dug for new houses on the northern corner of the junction of Maidenburgh Street and William's Walk revealed archaeological information in five places.

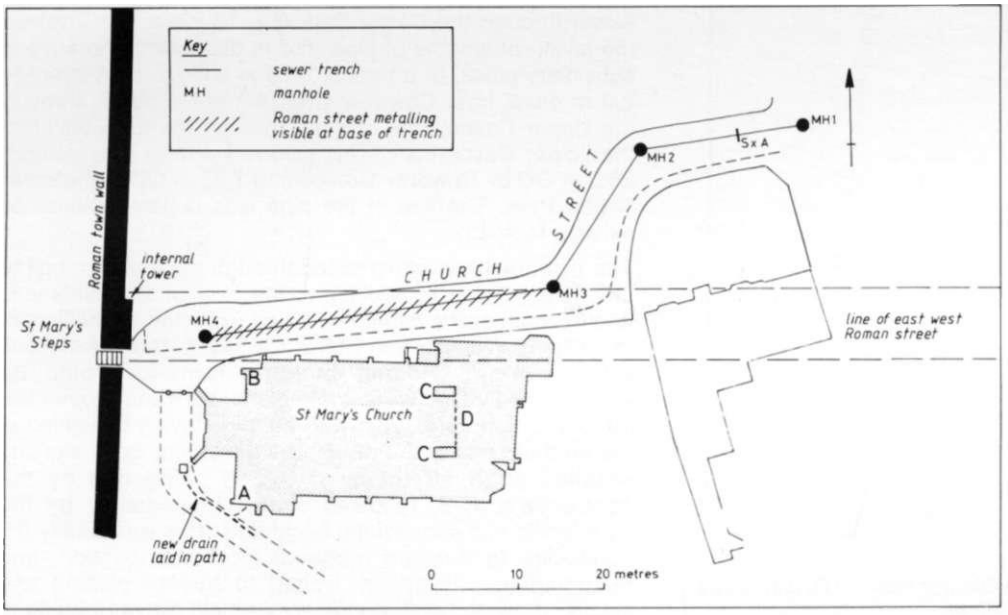


Fig 13.159 Church Street and St Mary's Church (7/79b): location plan.

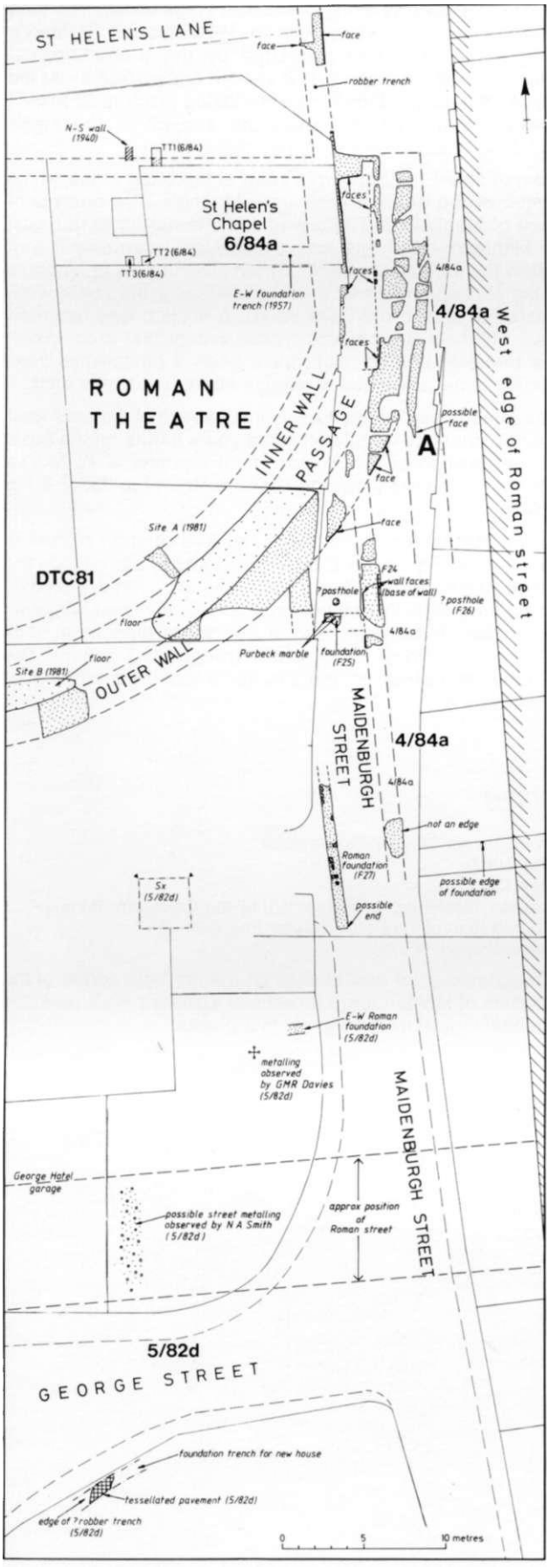


Fig 13.217 Maidenburgh Street/William's Walk (DTC 81, 5/82d, 4/84a, & 6/84a). [Pages 367-8]

a) An east-west Roman foundation lay close to the pavement. The top was 400 mm below pavement level and it was at least 800 mm deep. The width is not clear but seems to have been about 600 mm. To either side was soil and rubble (uncertain interpretation). To judge by its dimensions, the foundation is more likely to have been part of a house than a public building.

b) A stanchion hole north-west of the foundation was cut through a sequence of well-preserved Roman layers. These appeared to be a badly damaged *opus signinum* floor overlying a layer of demolished daub walls (make-up or debris *in situ).* The latter overlay a shallow lens of ?redeposited Boudican debris. No floors were detected under the latter, only natural sand.

c & d) Street metalling was observed to the south-west of the foundation by G M R Davies of the Colchester Museums. Further south, too far south to have been part of the same east-west street, was an area of sand and gravel observed by NS. This lay within 0.3 m of the modern ground level. NS thought it may possibly have been street metalling although it was not as compact or clear as is normal.

e) Part of a plain red tessellated pavement was revealed in the northern foundation trench for a new house at the south side of the junction of Maidenburgh Street and George Street. The rows of tesserae were east-west. The base of the pavement was traced in the section for 2.8 m east of the surviving area. The workmen found human bones above the surviving part of the pavement. They were not articulated (apparently) and were presumably mixed with soil and in a ?post-Roman feature.

Castle Park (CAP 1983)

by D Shimmin

1983-**4**

Figs 13.225-8, (Fig 13.228 on 35 mm microfiche)
Reason: new sewer pipe across the Castle Park
Record/report: DS & NS7DS

Introduction

Observation and some limited excavation of archaeological remains were possible during the construction of a new sewer through the Castle Park (Fig 13.225). This involved the laying of lengths of pipe (0.4 m diameter), and several subsidiary pipes, in a trench, 0.75 m wide and on average 2.0 m deep, from Cowdray Crescent in the south, through the Upper Castle Park and out through the town wall into the Lower Castle Park. This involved a drop in level from 25.3 m OD by Cowdray Crescent to 7.95 m OD in the lower Castle Park. The line of the pipe was largely confined to existing footpaths.

The pipe trench in effect sliced through the northern half of the Roman town. In addition to the Roman town defences and Norman castle defences, it was expected, in the light of the work of Wheeler and Hull in the 1920s, that substantial, well-preserved Roman building remains would be encountered. The work took place between November 1983 and February 1984, with the pipe-laying beginning at the northern end of the route. The usual method of working entailed short stretches of trench being dug by the contractor's JCB, followed almost immediately by the pipe-laying and subsequent backfilling. This was clearly not conducive to detailed archaeological investigation, and recording was invariably limited to hurried plotting and section drawing. In some instances it did prove possible to

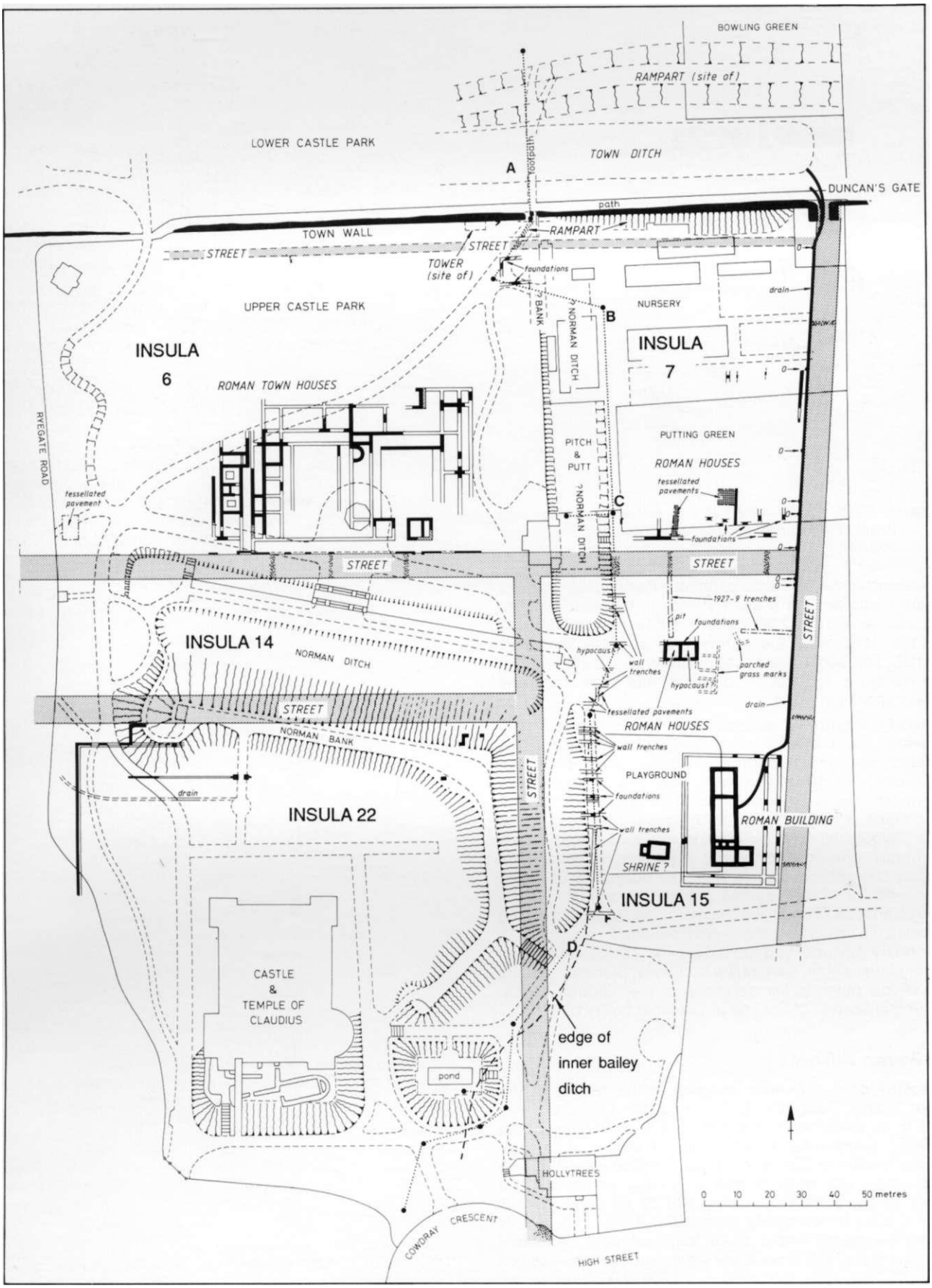


Fig 13.225 Castle Park (CAP 83-4): general plan. The course of the pipe trench is shown by a dotted line passing through Points A to D. The large dots indicate the positions of manholes. [Pages 368-73]

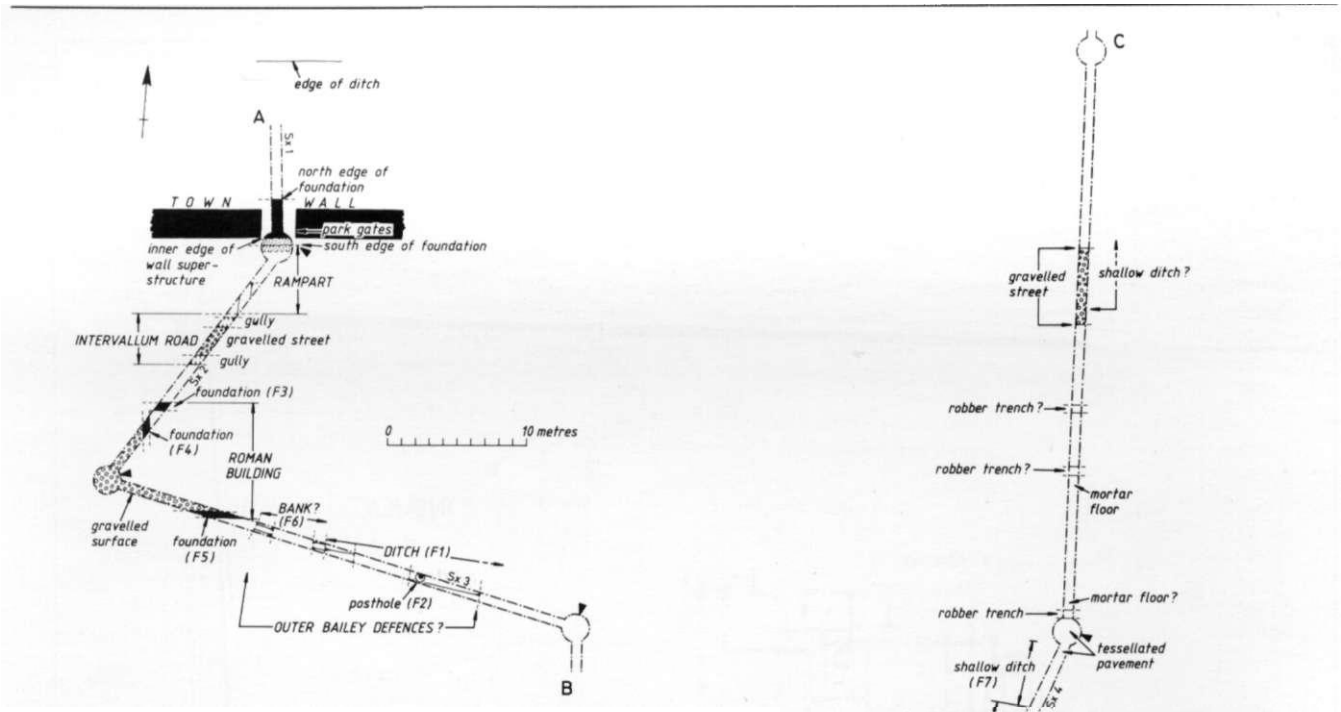


Fig 13.226 Castle Park (CAP 83-4): the northern part of the pipe trench. For location, see Fig 13.225 on page 369. [Pages 368-73]

work ahead of the contractors, notably immediately south of the town wall and for a short stretch in the middle of the park (Sx 4, Fig 13.228), where some excavation was possible. In general the recovery of portable finds was minimal. The subsoil is usually sandy clay loam, varying from orange to light brown in colour, and seals sand and gravel deposits in places.

A steady stream of archaeological information was recovered from the trench throughout its length. This included: sections through the Roman town ditch, the foundation for the town wall and the rampart; the *intervallum* road; a series of Roman town house foundations and floors, including tessellated pavements and a ?hypocaust, from buildings in Insulae 7 and 15, some previously unrecorded; street metalling between the insulae; two shallow ditches from the north end of Insula 15, neither of which seemed substantial enough for the fortress annexe ditch or the Flavian town ditch (both being expected in this area); the much denuded remains of a previously unrecorded post-Roman ?bank and ditch running north-south, west of the nurseries, probably forming part of the outer bailey defences of the Norman castle; further clarification of the line of the inner bailey ditch.

The Roman defences

A shallow ditch (F7) was revealed in the middle of the Upper Castle Park (Sx 4, Fig 13.228). The ditch was 0.7-1.0 m deep, with a width of 4.6 m initially being exposed, suggesting a total width of around 6 m. The primary backfill consisted of a layer of mixed greyish-brown sandy loam 0.2 m thick with a number of pronounced lenses of charcoal. This was sealed by an upper backfill layer of olive-brown sandy loam 0.5 m thick. Two marble veneer fragments and a shale fragment were recovered from this layer. The most likely explanation for the position

Fig 13.227 Castle Park (CAP 83-4): the central part of the pipe trench. For location, see Fig 13.225. [Pages 368-73]

of the ditch is that it belonged to the defences of the fortress annexe (*CAR* **3,** 3 & 31), although this is not supported by the shallow depth of F7.

An extensive layer of clean yellowish sand was observed to the south of, and contemporary with, the ditch. The layer was traced southwards for 80 m, being in general 0.2 m thick but increasing to 0.8 m near its southern extent. The sand sealed the natural sandy clay loam subsoil, which was capped by a well-pronounced turf-line, consisting of a rich brown clay loam with some charcoal flecks. The sand layer also sealed a pit of uncertain date. A possible explanation for the layer of sand, which was apparently the earliest substantial deposit in the area, is that it is the remnants of a levelled rampart associated with the ?fortress annexe ditch (F7) following its southward turn. However in view of the nature of the evidence the date and function of the ditch and the sand must remain inconclusive.

Further north another shallow, early ditch was revealed, sealed by the Roman street between Insulae 7 and 15, and cut to the north by a large ?post-Roman pit (Fig 13.227). The ditch was at least 4.5 m wide and 0.6 m deep. The backfill consisted of a light greyish-brown sandy loam with a slightly greenish hue, notably towards the bottom, and with a number of lenses of darker 'occupation' material. The position of the ?ditch suggests that this could be the Flavian town ditch (pp 15-17), although again the ditch did not seem to be deep enough and the evidence must be viewed as inconclusive.

The 50 m stretch of the pipe trench north of the town wall revealed the upper part of a large ditch. This was 16 m wide, with the inner edge being about 10 m distant from the town wall. Only 0.5 m of definite backfill was uncovered, suggesting a possible total depth of 3 m. The backfill consisted of dark greyish-brown sandy loam with some gravels. This was presumably the upper fill of the later Roman town ditch, as located further east (*see* Fig 13.97, microfiche).

There was no definite trace of the counterscarp bank which survived to the north of the town ditch until 1971 (CGC 78, microfiche pp 860-2). A layer of sand 0.3 m deep sealing the natural sandy clay loam in places (Sx 1, Fig 13.228) may perhaps represent the base of this bank. A ditch or large pit 5 m wide of uncertain date was observed 8 m north of the town ditch.

The pipe trench was excavated through a previous breach in a stretch of the town wall which has been much repaired (Fig 13.226). The foundation of the wall was however largely intact below the modern ground level, although this was subsequently dug away by the contractors. The foundation, 3.3 m wide and 1.0 m deep, was constructed of septaria blocks set in a hard whitish yellow mortar. This was set on an unmortared layer of gravel and septaria chips 0.15 m thick (Sx 2, Fig 13.228). A slight change in the character of the mortar indicated that the foundation may have been built in two stages. The northern edge of the foundation had an irregular facing of large septaria blocks and tile. It was not possible to determine the exact position of the northern face of the wall itself due to later disturbance. The upper stage of the foundation was absent on the south side where instead the wall face was continued downwards as uncoursed faced septaria blocks and tile to reach the top of the lower stage. The latter projected 0.5 m beyond the wall face, the angle thus formed being sealed by a layer of *opus signinum* 0.1 m thick. A similar layer was noted in the 1925 section in the garden of No 27 Roman Road (Hull 1958, 42-3), and was perhaps intended to prevent frost cracking at this critical point.

Immediately to the south of the town wall was an extensive deposit of clean, reddish-brown sandy loam with some gravels. This was presumably the base of the rampart, surviving 0.7 m thick and extending for 7 m south of the wall face (Fig 13.226). The rampart was clearly observed to post-date the construction of the wall, sealing the remains of the foundation and the layer of *opus signinum.* The make-up of the rampart apparently differs considerably from the destruction debris observed by Duncan (Hull 1958, 36), but appears more in accord with the clean, sterile loam deposit noted by Hull west of Duncan's Gate, and that excavated in the Roman Road section (Hull 1958, 36 & 43 resp). The sandy loam deposit was sealed by more mixed layers of sandy clay loam and sand and gravel 0.35 m thick, perhaps representing a second phase of rampart construction. The rampart sealed a thin gravel spread, perhaps a temporary layer of street metalling during construction work (*see CAR* **3,** 70).

Immediately to the south of the rampart, there was a thin layer of street metalling 0.1 m thick, presumably the remains of the *intervallum* road (Fig 13.226). The metalling was flanked to north and south by shallow gullies, 0.75 m wide and 0.25-0.30 m deep (Sx 2, Fig 13.228). The deposits sealing the metalling were somewhat disturbed and perhaps largely of post-Roman date, although traces of a gravel spread sealing dump material may possibly represent later Roman build-up (Sx 3, Fig 13.228).

Insula 7

To the south of the *intervallum* street the pipe trench cut through the first of three intact foundations from a previously unrecorded Roman building (Fig 13.226). These were of standard stone-and-mortar construction and consisted of septaria blocks with some tile set in a yellowish-white mortar. The foundations were approximately 0.5-0.6 m wide and were at least 1.0 m deep, being cut into the subsoil. The most northerly foundation (F3) lay east-west and had a tile course towards its upper surface. Immediately beyond the western edge of the trench, F3 met a north-south foundation (F4). The upper part of F4 was of standard construction. It was approximately 0.5 m deep, with the top being 0.35 m lower than the top of F3. The lower part of F4 however was unusual, consisting of large, intact tiles set vertically in mortar. A further east-west foundation (F5; Sx 3, Fig 13.228) was located approximately 7 m south of F3 after a dog-leg in the pipe trench. The stone-and-mortar foundation 1.1 m thick was sealed by two courses of tile.

There were no clearly defined floors associated with the foundations. The latter however cut a substantial deposit of brownish-yellow sandy clay loam make-up 0.40-0.75 m thick. The remains of an infant burial were recovered from this deposit immediately west of F5. The make-up was sealed in places by a gravelled surface (Sx 3, Fig 13.228). Earlier deposits, sealed by the make-up, included a greenish-brown sandy loam midden layer and a thin ?gravel spread (Sxs 2 & 3, Fig 13.228). A further layer of brownish-yellow sandy clay loam with some mortar fragments 0.20-0.35 m thick sealed the foundations and the gravelled surface, and probably represented demolition debris from the building.

It was not possible to clarify the plan or function of the building from the scanty remains recovered. As the north-south foundation F4 was not located in the dog-leg, there clearly must have been a return east-west wall north of F5. The gravelled surface perhaps belonged to a courtyard, although it is possible that it indicates the edge of a north-south Roman street.

Surprisingly, there was no clear-cut evidence for further

buildings in Insula 7. A gully/pit of probable Roman date was observed 4 m east of F1 (Sx 3, Fig 13.228). Further south there were some traces of Roman make-up/dump layers and ?pits, although these appeared to have been much disturbed by later cultivation. A fairly high concentration of gravels in the topsoil may possibly indicate the position of yard surfaces.

As expected, street metalling from the east-west street between Insulae 7 and 15 was located further south, adjacent to the stretches noted by Hull in 1927-30 (Hull 1958, 69). The street metalling was 0.15 m thick and at least 5 m wide, the northern edge having been disturbed by a later ?pit. The metalling consisted of a layer of orange sand and gravel, the upper surface of which was stained through use. The southern part of the street was sealed by a midden layer 0.25 m thick.

Insula 15

To the south of the street, the pipe trench cut through the remains of several buildings in the western part of Insula 15. These consisted of approximately 20 foundations, most of which had been robbed out and much disturbed by later activity, notably cultivation and ditch digging. The surviving foundations were of standard stone-and-mortar construction 0.60-0.75 m wide, surviving to a maximum of 0.50 m deep. The floors were also largely disturbed, although towards the northern end of the *insula* remains of tessellated pavements and a ?hypocaust did survive *in situ* 0.45 m below the modern ground level. It was not possible to define individual buildings or building plans positively, although it seems likely that at least three buildings were represented.

Three east-west robber trenches were observed in the first stretch of the pipe trench south of the street, the most southerly of which had some septaria and mortar surviving *in situ.* Traces of a disturbed mortar floor were noted to the north of this foundation, and there were fragmentary remains of. a tessellated pavement set on a mortar base immediately to the south. The robber trenches cut deposits of brownish-yellow sandy clay loam make-up 0.3-0.5 m thick.

It proved possible to excavate the next stretch of pipe trench rather more thoroughly (Sx 4, Fig 13.228). A badly disturbed series of tile stacks set in a yellowish mortar (F11-13) with burnt inner edges appeared to form channels and were perhaps the remains of a hypocaust. This room was bounded to the south by an east-west robber trench (F15), which met a north-south robber trench (F8) immediately beyond the western edge of the trench. The latter separated two rooms, both of which had tessellated pavements (L1 & L2; Sx 4, Fig 13.228). The western room was defined to the south by another robber trench (F9).

The lengthy stretch of pipe trench to the south began with a succession of five probable east-west robber trenches and one possible north-south robber trench. The first of these was shallow and was perhaps a pit, while it is possible that one or more of these trenches may result from Hull's excavations in 1927-9 (Hull 1958, 115).

The remains of three east-west foundations with septaria and mortar surviving *in situ* were noted further south. Immediately south of the second of these foundations was a ?robber trench containing unmortared septaria rubble, perhaps the remains of a drain. Further south there was an east-west robber trench joined with a north-south robber trench, the latter being traced for 12.75 m. Traces of a possible mortar floor, consisting of tile fragments in a whitish mortar 0.15 m thick, were noted to the east. There were remains of two further robber trenches immediately south of the next manhole, beyond which the Roman deposits had been destroyed by the inner bailey ditch (F14). The foundations and robber trenches were found to cut mixed, yellowish-brown, sandy clay loam make-up layers. In places the make-up sealed gravel spreads, thin occupation lenses, burnt patches and possible small pits, indicating an earlier (?Flavian) phase of occupation. Some further traces of mixed dump material and a pit of probable Roman date were noted next to the edge of the inner bailey ditch at Point D, Fig 13.227.

The inner and outer bailey defences

The inner bailey ditch (F14) was traced in two main lengths for a total of just over 100 m. In the more northerly length of approximately 43 m its eastern edge was located in two places. The edge had a fairly gently sloping profile, but the ditch could not be excavated beyond a depth of 2.75 m. The backfill was typically dark greyish-brown sandy loam with occasional lenses of brown loamy sand, although near the edge the fill was more mixed with sand and gravel. The eastern edge of the ditch was probably again located in a subsidiary pipe trench immediately south-east of the pond. The backfill of the ditch was similar here and in the second main length of ditch at the south end of the pipe trench. Immediately south-east of the penultimate manhole the lower backfill was more mixed and silty, perhaps suggesting proximity to the western edge of the ditch.

A shallow ditch (F1, Fig 13.226; Sx 3, Fig 13.228) was excavated inside the town wall towards the northern end of the pipe trench. The ditch survived approximately 1 m deep and over 10 m wide, although the edges had been much disturbed by later cultivation. The base of a posthole (F2) 1.30 m deep and 0.28 m in diameter with a 'clay'-filled post-pit 0.6 m in diameter was excavated in the bottom of the ditch and was presumed to be contemporary with it. The ditch backfill was dark greyish-brown sandy loam, the upper part of which contained large quantities of gravel and also a quantity of very large septaria blocks and some flint nodules. This was apparently unused material (not reused Roman), and perhaps represents a stockpile of medieval or later date for repairing the town wall. A further stretch of the same ditch was also revealed approximately 65 m further south in a subsidiary pipe trench at Point C. Immediately west of F1 were the remains of a much denuded bank (F6; Sx 3, Fig 13.228) approximately 5.5 m wide and 0.6 m high, consisting of layers of sand and gravel with some mixed sandy clay loam towards the top. Although this was not proved conclusively to be of human construction, it is likely that the ?bank and ditch were the remains of the outer bailey defences of the castle. The existence of these defences is suggested by the rise and pronounced dip in ground level running northwards from the Park Cafe. This forms a boundary of some antiquity *(see* for example a survey of the castle lands for Lord Stanhope in 1622, reproduced in Drury 1983, pi 41). Documentary evidence may suggest the construction of outer bailey defences in the later 12th century *(ibid,* 398).

Immediately north of the stretch of inner bailey ditch by Point D (Fig 13.227) the pipe trench cut a large pit approximately 3.4 m wide and 1.5 m deep with heavily burnt edges. This was probably the remains of a medieval lime kiln *(CAR* **3,** 30). A small associated pit, 1.5 m deep, was situated to the south.

Post-medieval and modern remains

The post-Roman topsoil or 'dark earth' varied in thickness from approximately 1 m thick north of the town wall and in places by the nursery to 0.3 m immediately south of the

rampart and 0.45 m over Insula 15. Post-medieval or modern features included a brick culvert by the pond steps, a cellar and other walls from ?outbuildings in the two manholes nearest to Hollytrees, and several brick foundations in small trial holes dug in the vicinity of the park gates at Cowdray Crescent. In addition there was a thick layer of stonemason's rubble at a depth of approximately 2 m to the south of the pond. This consisted of numerous lenses of stone working debris and mortar (L3) including a large number of offcuts of worked marble. Several fragments, including one complete example, were found of marble 'samplers', with the alphabet and figures inscribed in 'Roman' capitals providing examples of work for potential customers. This debris was probably largely of early 20th-century date when the area formed the premises of stonemasons, L J Watts Ltd, prior to demolition in 1921. A brick culvert similar to that noted above was sealed by L3, which in turn was sealed by 1.5 m or more of topsoil presumably resulting from landscaping activities.

Acknowledgements

The Trust would like to thank the staff of the Borough Engineers, the Town Park Nurseries, and the contractors, Badwell Engineering, for their help and co-operation during the work.

8/83a

Nos 2-3 Stanwell Street (adjacent to Scheregate Hotel)
Figs 13.246-7
August 1983
Reason: erection of new building
Record/report: NS/PC
Photographs: Misc Sites 3, 148-54

Because the floor level of the building just demolished had been considerably lower than the level of the street, the floor level of the new building had to be built up.

A small section under the modern pavement was visible in the side of the trench dug for the new wall along the northern boundary of the site. This revealed a sequence of layers, the earliest of which may have been Roman.

The foundation of the original north wall was mainly of 19th- or 20th-century brick but it incorporated (in its north face where it was presumably never visible) several pieces of worked limestone. These were mostly column capitals but some pieces derived from a lintel or slab of some sort. Every carved fragment that could be found was kept.

The carved stones

by Andrew Harris

[Fig 13.247]

All the stones (with the exception of an unworked granite fragment) are carved in a hard creamy white fine grained limestone of Caen type. The capitals have been fashioned from blocks whose actual size differs little, all being approximately 300 x 190 x 200 mm. Just over half of each stone remains uncarved and the rough tooling indicates this portion to have been set into the wall face. Tooling on the moulded surface is very fine and this contrasts with the unmoulded surfaces which display rough axed or adzed surfaces finished with close-set diagonal tooling. A lightly-scored mason's setting-out line is visible on the under-surface of most of the stones. The capitals sat upon engaged shafts with diameters between 140 and 150 mm.

The stones have been grouped into four types. The capitals in Group 1 (Fig 247.13,1-6) each have large fleshy leaves with a stylised stem rising prominently from between them. Those in Group 2 (Fig 13.247,7-11) are heavily fluted whilst the remaining capitals (Group 3, Fig 13.247,12-15) have decorative schemes which do not conform to the grouping above. Within Group 3 are two identical capitals (Fig 13.247,12). Group 4 stones (Fig 13.247,16-18) are not capitals: Fig 13.247,17 is a base, Fig 13.247,16 is an example of a string course or abacus, and Fig 13.247,18 a moulded arch voussoir.

Some of the stones show secondary tooling which could be contemporary with their reuse as foundation material. Two stones, Fig 13.247,5 and Fig 13.247,6, have had their front faces removed and, although these are worn, it is likely that this was deliberate so as to reduce the size of the ashlars. Damage is generally not severe. On only three instances, Fig 13.247,5, Fig 13.247,6 and Fig 13.247,9, is the damage so severe as to make reconstruction impossible. All the carving is crisp and unweathered which suggests that their original setting was interior.

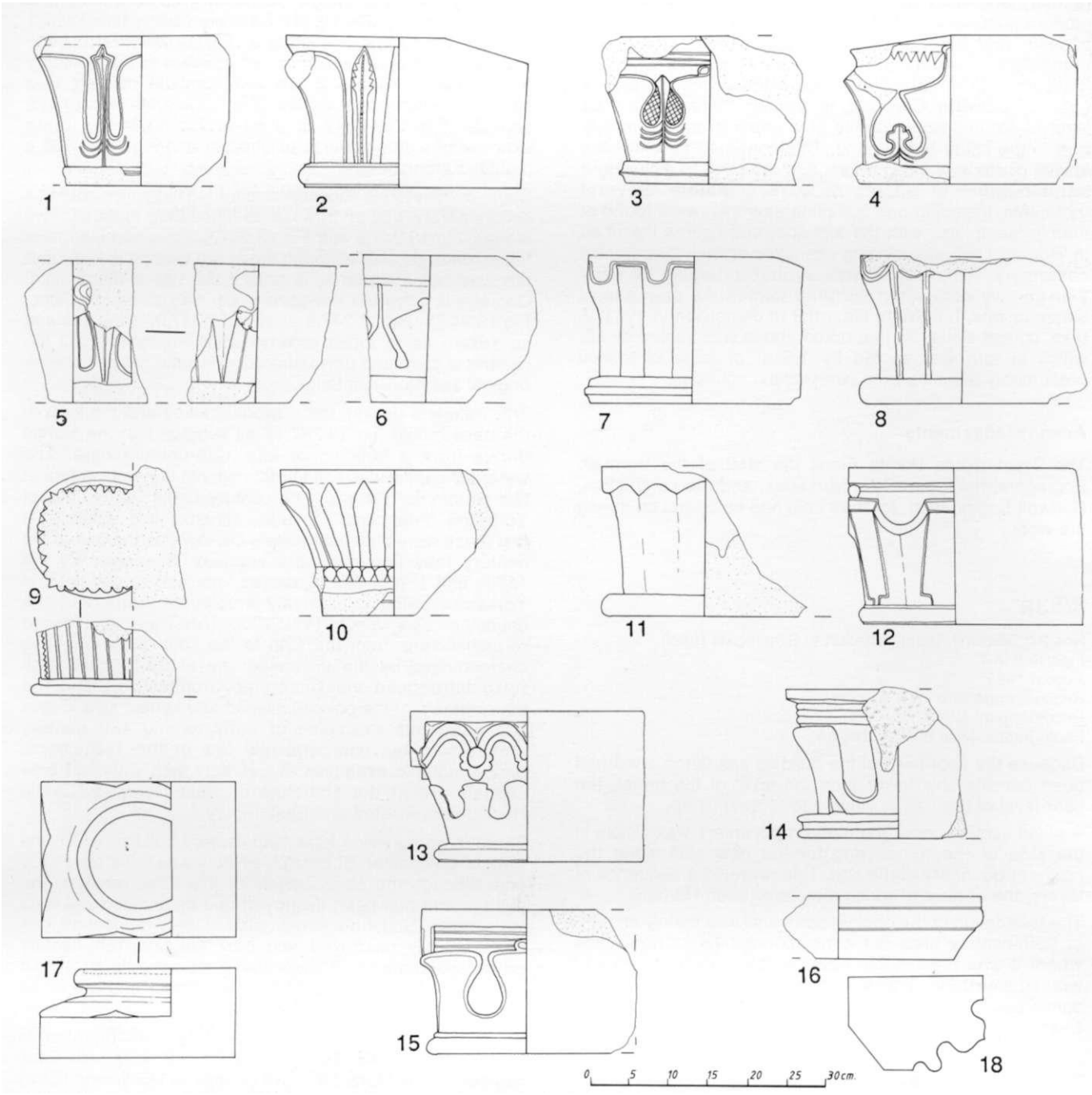
The waterleaf design, the diagonal tooling and the form of the base mould Fig 13.247,17 all suggest that the stones derive from a building of late 12th-century date. The waterleaf capital was first introduced into the architecture of this country by the mid 12th-century Cistercian houses of Yorkshire (Fountains, Rievaulx, Jervaulx and Byland). At first these were plain and simple but towards the end of the century they became more complex in design. By the 1180s and 1190s, this decorated form had spread beyond Yorkshire being extensively employed throughout the country on new work of 1180-1200. This Transitional period of architecture, from the 12th to the 13th century, is also characterised by the increased use of the pointed arch (also introduced via Cistercian architecture) and the development of the pointed, filleted and keeled rolls. Essex has numerous examples of early to mid 12th-century architecture but comparatively few of the Transitional period; notable examples of this date with waterleaf type capitals are at the churches of Little Dunmow, Castle Hedingham, Felsted and East Tilbury.

There is no surviving later 12th-century building within the town of Colchester. St Botolph's Priory was founded c 1100 and although the nave, largely of this date, remains, the eastern arm has been destroyed and its architectural style is unknown. St John's Abbey, also of early foundation, has been entirely destroyed and only the fine 15th-century gatehouse remains. Both of these monuments lie almost equidistant from the site of Stanwell Street and are prime candidates for the origin of the capitals.

Although St John's Abbey was destroyed shortly after its dissolution, several illustrations of its church remain. One, reproduced by Morant in 1748 (a copy of MS Cotton library Nero D VIII), shows that the building retained some Transitional or Early English features suggesting that this is possibly the origin of the Stanwell Street capitals. The size and form of the capitals, with engaged shafts, show them to have been wall-mounted and elements of minor architecture. A likely location would be the internal jambs of window openings or possibly blind arcading.

The form of arch mould Fig 13.247,18 is consistent with Transitional architecture. This type of mould however was long-lived and lasted into the early 13th century. The stone need not be exactly contemporary with the capitals. The crispness of the carving again indicates an internal arch.

There is little precise information regarding the post-dissolution development of the site of St John's Abbey and the fate of the church. Morant records that the site was leased to Sir Thomas Darcy in 1544, the reversion being granted to John Dudley, Earl of Warwick, in 1547. The site was soon acquired by Lucas who, according to Morant



F/g 73.247 A/os 2-3 *Stanwell Street (8/83a): carved stone. Drawn by A Harris. [Pages 373-4]*

(1748, Bk 2, 36), converted the remains of the monastery into 'a Seat'. Even though we are not told details of the changes, the inference is that some of the abbey buildings survived the dissolution and were converted (as was often the case) into a domestic residence. It is also quite likely that these converted buildings largely survived the subsequent siege of the town during the civil war when they were plundered and almost totally demolished (Morant 1748, II, 36).

With the exception of the abbey gateway and precinct wall, nothing of the abbey survived in Morant's day and unfortunately we are not told exactly when the site was finally cleared. However many of the structures seem to have been removed shortly after the siege for, in his account of the property, Morant refers to it as an estate rather than a residence after this period. It is possible that some ruinous structures remained until the 19th century although these need not have been monastic in origin. What is certain, whether or not the destroyed buildings were themselves surviving monastic structures, is that at the final demolition medieval material was released for reuse. There is every possibility that other buildings in the Stanwell Street area will yield more architectural detail of this type.

(Detailed descriptions of the stones can be found in Appendix 18 (microfiche pp 1077-8).)

8/83e

East Hill House (former kitchen garden), East Hill
Figs 13.250-3
August 1983 to January 1984
Reason: construction of Day Nursery (Essex County Council)
Record/report: NS & DS/PC
Photographs: Misc Sites 1, 147-59
Finds: human bone (X243-53), pot, unstratified or from post-Roman topsoil (X229, 232-3, 239-40), 3rd/4th century & PR pottery from upper backfill of graves (?may be contaminated) (X241-40).

Summary

The site is part of a scheduled ancient monument. Three trial holes were dug by the Trust to determine the depth of the uppermost surviving Roman deposits. The trenches indicate that the Roman material lay 0.7-0.8 m below the modern surface. This conclusion was generally borne out by the contractor's excavations. To protect the buried remains and thereby avoid the necessity of an archaeological excavation, the Essex County Council decided to erect the new building on a raft foundation. In theory, the latter required only the removal of soil over the whole area to a depth of about 0.7 m. Various trenches for drains and other services penetrated the Roman material and these were recorded where possible.

The area beneath the new building was stripped of topsoil to a depth of about 0.7 m in preparation for a foundation of rolled sand and gravel. Where the Roman material lay near

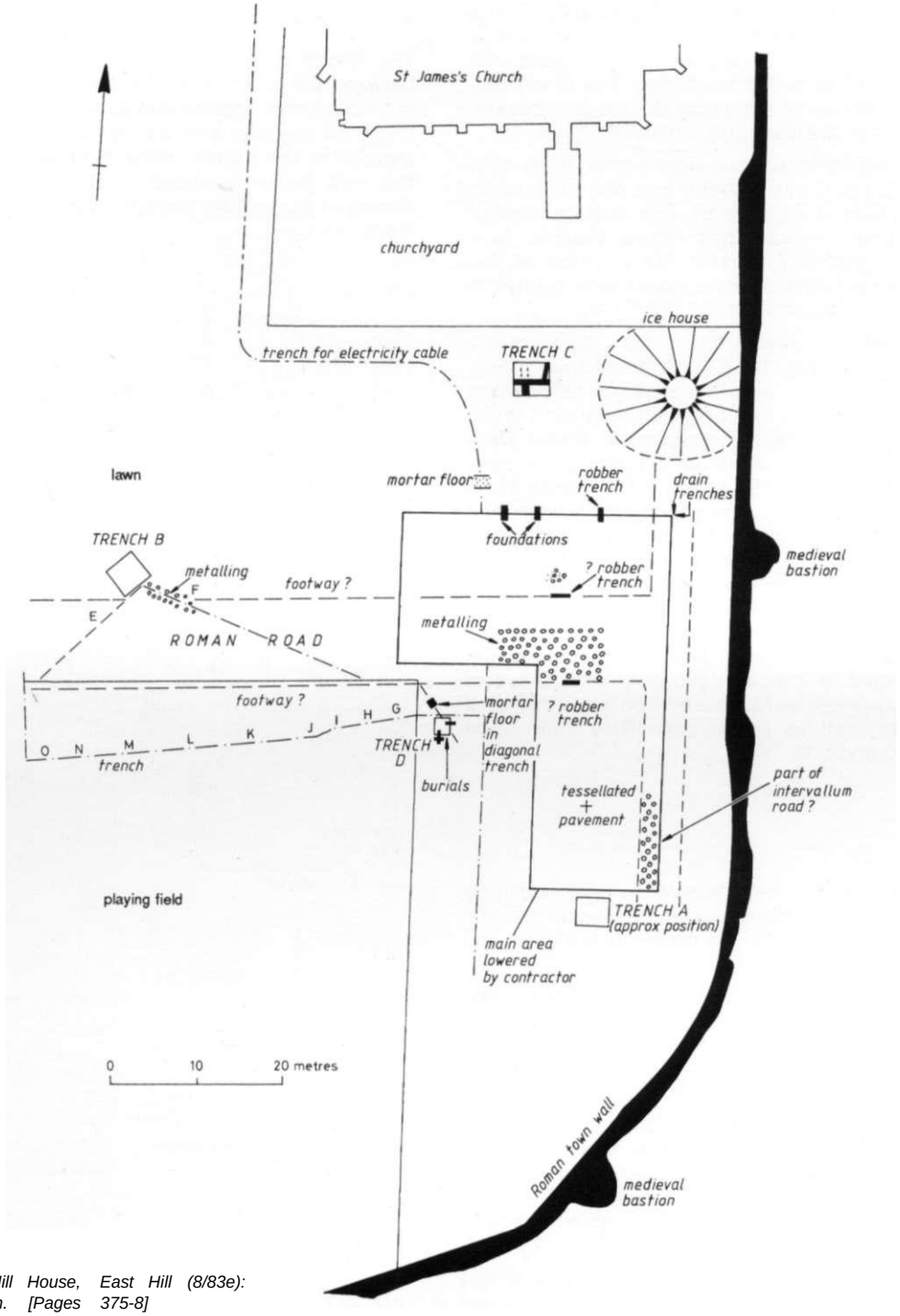


Fig 13.250 East Hill House, East Hill (8/83e): general plan. [Pages 375-8]

the surface (eg at a depth of 0.5 m over the Roman street) it was usually possible to leave it undisturbed. At the southern end of the site, a greater thickness of topsoil and post-medieval pits made it necessary to remove more material but this was achieved without damage to the Roman levels. As a result of this stripping, the top of the Roman remains was disturbed but not damaged to any great extent.

Three soakaways (Trenches A, B, & C), a cess pit (south side of Trench D) and various service trenches were dug at various points on the site (Fig 13.250). These cut through archaeological deposits.

Across the centre of the site of the new building lay an east-west Roman street (Fig 13.211). Roman buildings lay to either side. To the south was a small patch of tessellated pavement (disturbed), a probable robber trench, a mortar floor, and a probable hearth (Trench D, Fig 13.252). To the north were various foundations, robber trenches, and a mortar floor. The widths of the walls were consistent with houses (as opposed to public buildings). The street had been dug away in places by large post-Roman pits. Several small, post-medieval pits were also observed.

A patch of metalling lay in the south-east corner of the main trench (Fig 13.251) and was probably part of a north-south *intervallum* road behind the rampart. The western edge of the street was about 9 m out from the line of the inner face of the wall and matches closely the position of the corresponding street found on the opposite side of town at St Mary's Rectory (Dunnett 1971, 66-9 & fig 40).

Human bones were uncovered during the digging of the contractor's cess pit (Fig 13.252). A small trench was accordingly excavated to recover bones for radiocarbon dating and to observe their exact position in relation to the site's stratigraphy. As a result two shallow graves were uncovered, one of an adult about 33-45 years old and the other of a child of about 18 months. (The bones were examined by Rosemary Luff.) The bodies had been buried on their backs without coffins, the heads having been detached (presumably post-mortem) and placed between their legs. The upper three vertebrae were undamaged, suggesting careful removal of the head soon after death (Clarke 1979, 342-3). The legs of the adult were flexed with the knees upwards. The highest parts of the adult bones had been damaged in antiquity, probably as a result of ploughing or cultivation. A radiocarbon date for the adult bones suggests that the burial very likely took place between AD 200 and 500.

The main area

[Fig 13.251]

The depth of the contractor's excavation was nominally 0.7 m but was shallower (generally) where Roman material rose and deeper where topsoil was thicker (at the south end and in pits at west end).

Roman deposits were reached all over the site by the end of the stripping. In most places, the top was disturbed by the teeth of the machine. Positive interpretation was not possible because the surface of the stripped area was also partly obscured by metalling spread by trie machine tracks.

The east-west street was covered in places by only 0.5 m of topsoil. It did not extend to the eastern boundary of the trench where, instead, lay some sandy clay loam. The latter was thought originally to have possibly been the tail of the rampart but the presence of gravel further south suggests otherwise.

It was impossible to identify for certain any robber trenches or walls so that the exact width and position of the street could not be definitely established. The area of good solid gravel was 6.5 m wide and was bound by two patches of mortar and soil resembling robber trenches, thus giving the most likely position of the street. There were however patches of gravel to the north; these are tentatively interpreted as part of a northern footway.

Sandy clay loam, disturbed tessellated pavement, and mortar patches suggest that a building occupied most of the southern part of the excavated area.

Gravel along the northern edge of the area was neither thick enough nor consistent enough to belong to a street or footway.

Trench from East Hill to the northern end of the main area

[Fig 13.250]

The trench dug for an electricity cable varied in depth between 0.8 and 1.0 m. The trench sides showed nothing but topsoil and features containing stones, peg tile, mortar, brick fragments, and sandy lenses. The trench only penetrated the Roman material close to the north wall of the new building where there was a patch of badly damaged mortar floor overlying yellowish brown sandy clay loam.

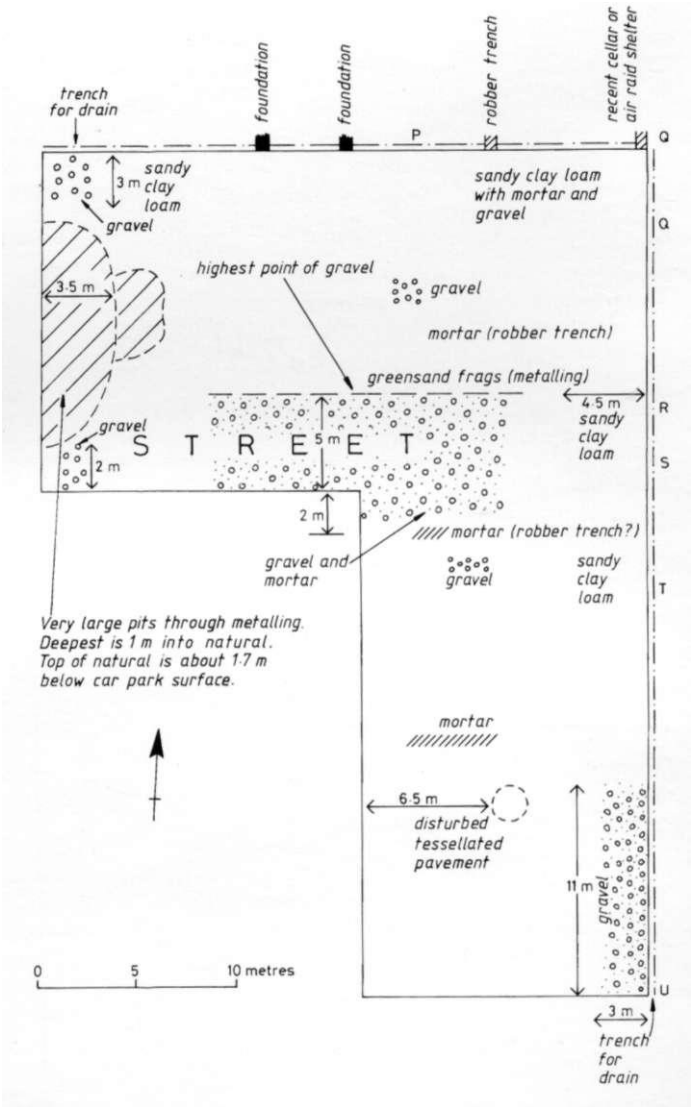


Fig 13.251 East Hill House, East Hill (8/83e): plan. [Pages 375-8]

No significant features were detectable in the trench where it deepened behind the wall adjacent to East Hill.

Trench along northern edge of playing field to the west of the new building

[Fig 13.250]

The level of the playing field is about 0.7 m lower than that of the car park north of the fence. The playing field is also lower than the ground level of the new building. The ground level in the area of the new building slopes gently southwards. The playing field is approximately level, having been cut into the natural slope at its north end and perhaps made up a little at the south.

The trench seemed to indicate that the construction of the playing field had terraced away almost all Roman material. A thin layer of ?disturbed Roman material seems to remain at the eastern side of the playing field whereas at the western side a thin topsoil layer rests directly on top of natural cover loam. This also suggests that the original (and thus presumably the Roman) ground level rose a little to the west.

A thick layer of burnt daub fragments occurred near the centre of the trench. This was not lying on a burnt surface. It looked very 'Boudican' but there was nothing datable recovered from it to provide any proof.

Trench for drains along the northern and eastern sides of the new building

[Fig 13.251]

The northern trench clipped the northern boundary of the contractor's original area excavation (Fig 13.251). Here the trench was 1.05 m deep and cut through two Roman foundations and one robber trench.

The eastern trench was at its deepest at the northern end. The trench is described here according to the letters on Fig 13.251. At Point Q the trench was 1.3 m deep. Dark topsoil overlay recent rubble down to about 1 m, below which is greyish sandy clay loam. At Point R the trench was 1.1 m deep. Mixed lenses of topsoil, sand, and gravel occurred down to about 0.9 m below which was a thin layer of stone fragments and pea-grit on top of sandy clay loam. This may have been the end of the east-west street, where it joined with the *intervallum* road. At Point S 0.9 m of topsoil overlay 0.2 m of grey sandy clay loam on top of 0.1 m of sand. At Point T the trench was 0.65 m deep and just penetrated some grey sandy loam. Finally, at Point U the trench at 0.4 m had cut only topsoil.

Trenches in the south-west angle of the new building

[Fig 13.250]

Trenches dug on the same alignment as the building (ie east-west and north-south) were 0.7-0.9 m deep and only barely touched the Roman levels. However a trench dug at an angle to Trench D revealed a mortar floor (Fig 13.250). In general, this trench did not completely cut through the topsoil although in places it revealed a gravelly 'natural' at a depth of about 1 m. At the north-west end of this trench, however, Roman deposits were uncovered at a depth of just under 1 m. These consisted of a rough mortar or rubble floor comprised of mortar lumps and septaria blocks and chips, some 0.1 to 0.15 m thick. The floor rested on a layer of yellow sandy clay loam (?floor or make-up). The thickness of the latter is not known but it extended beyond the mortar surfaces to the north-west. These deposits were sealed by about 0.15 m of dirty, mixed, yellowish brown sandy clay loam — probably demolition debris — and also a thick layer of pea-grit. These deposits appeared to form an 'island' of material, cut on either side by pits and/or robber trenches, probably of post-medieval date.

Three trenches for soakaways (Trenches A, B, & C)

[Figs 13.250 & 13.252-3]

Three large soakaways were dug by mechanical excavator as part of the scheme during the building operation, 3-4 m deep into natural sand/gravel. They were filled almost immediately with concrete collars set in large pebbles; however some observation of the stratigraphy in the sides of the holes was possible with results as follows.

Trench A (Fig 13.250) was of limited interest, comprising only **a** dump level, presumably of Roman date, sealing ?natural sand and gravel, and sealed by a dark topsoil. The trench measured 3.75 x 3.00 m.

Trench B (Fig 13.250) was again of limited interest, with no stratigraphy of much archaeological value. The main feature being a dump level, presumably of Roman date, sealed what was apparently a layer of cover loam. A large pit and a midden layer consisting of mainly oyster shell were apparently associated with the dump level. Trench B measured 3.75 x 3.50 m.

Trench C (Fig 13.252) was of more interest, producing definite evidence of a large Roman building, consisting of deep masonry foundations with a thick, substantial 'daub' floor. Again, the upper 0.75 m consisted of a dark greyish brown topsoil, which sealed a thin dump layer, which in turn sealed natural sand and gravel (although the upper c 0.3 m of this could possibly have been laid by man). The exception to this was in the south-east area, where a thickish (0.2 m) clean, daub floor was observed. This was apparently sealed by a fragmentary layer of pink/white mortar which may have been the remains of **a** mortar floor.

The main feature of the trench, however, were two foundations joined to form a T-shape with one, possibly two, robbed foundations extending northwards from them. The unrobbed foundations consisted of greensand blocks set in a yellowish mortar, with a bedding layer of greensand chips; they were about 0.65 m wide and over 1 m deep. They were clearly the remains of the foundations of a Roman (2nd century or later) building.

Trench D (excavation to the north of contractor's cess pit)

During the excavation of the cess pit for the contractor's site toilet, several human bones were uncovered, including a skull (X233). Subsequently, therefore, **a** small trench was dug to recover the remains of one of the disturbed skeletons and to establish their date (stratigraphically, or by obtaining a suitable sample for radiocarbon dating).

Trench D lay immediately north of the cess pit, the edge of which was located during the excavation. The topsoil was removed using contractor's plant. The soil consisted of very dark greyish brown sandy loam (0.5 m thick) overlying a layer of browner sandy loam (0.2 m thick). The soil sealed a layer of mixed sandy clay, up to 0.1 m thick, which was removed by hand. The lower part of the soil was probably a reworking and weathering of the underlying sandy clay deposit. The ends of human bones were encountered after the removal of sandy clay layer; the remains of a pelvis were discovered at much the same level in the side of the contractor's soakaway.

There were two graves, both with a brown sandy loam fill, and both cutting into the layer of Roman dump or floor. The larger, (Grave 1) had been cut by the soakaway, while the

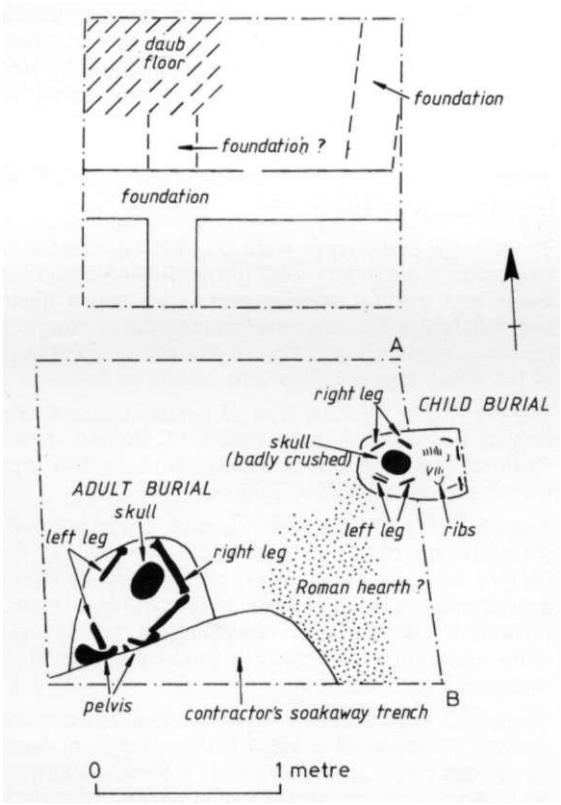


Fig 13.252 East Hill House, East Hill (8/83e): Trench C (above) and Trench D (below). [Pages 377-8]

smaller (Grave 2) extended into the east section of the trench, and was not fully excavated, although most, if not all, of the bones were recovered. At the time, the date of the graves, which were presumably contemporary, was unclear. Stratigraphically they appeared to be late or post-Roman.

Grave 1

Grave 1 was of an adult male. The grave was roughly oval in shape and was barely large enough for the body. It measured 0.8 x 0.7 m, and was 0.3 m deep.

The bones were well-preserved and consisted of the lower limb bones (leg, pelvis and foot bones), the cranium, the mandible, and the upper part of the spine (the atlas and axis vertebrae). The orientation was approximately north-south with the feet to the north. The body was on its back with the legs flexed knees upwards and slightly open. The limb bones were articulated but the skull had been detached from the body and placed between the open legs. Its mandible and the two vertebrae were still articulated but there was no evidence visible to the unaided eye to indicate the method of detachment thus suggesting that it had probably been carefully done after death (see Clarke 1979, 342-3). Some iron nails were found although there were no traces of a coffin and, in view of the shape of the grave and its relationship to the bones, none is likely to have existed. The grave had apparently been sheared off, probably before the formation of the reworked dump level (sealing Grave 1). This was shown by the fact that the left lower limb bones were cut off cleanly near the knee.

Radiocarbon dating (HAR-5986) of the bones produced a result of bp 1700±70. Using Stuiver and Becker 1986, the result can be recalibrated as AD 242-415 for one standard deviation and AD 132-533 for two standard deviations (P 323).

Grave 2

Grave 2 was of an eighteen-month old infant. Like Grave 1, it was oval in shape, but smaller, shallower, and orientated east-west. It was 0.55 m long, 0.35 m wide, and 0.15 m deep. Also like Grave 1, the grave must have been so shallow that the bones extended to within a few centimetres of the top. The bones were less well-preserved than those in Grave 1. Excavation of the grave was extended as far as practically possible into the section. All the surviving skeletal remains were recovered apart from possibly the lower cervical vertebrae. The bones were somewhat abraded and in the case of the skull, badly crushed. However, again, the head (the cranium and mandible) and the upper part of the spine had been removed from the body, and placed between the legs. The vertebrae have not as yet been examined microscopically but the absence of any obvious damage suggests careful post-mortem removal as apparently was the case with Grave 1. There is some doubt about where on the neck the incision was made but it seems to have been between the atlas and axis vertebrae. Several iron nails and some pottery were also recovered. Again the use of a coffin seems unlikely.

We are grateful to Rosemary Luff for her preliminary assessment of the bones.

Lion Walk United Reformed Church (234.84)

Figs 13.258-63
1984-5
Reason: demolition and replacement of church
Record/report: A Brady & M Neal/P Crummy & M Neal with contributions by R Luff, and P R Sealey

Introduction

A limited four-week excavation was carried out on the site of the Lion Walk United Reformed Church in the winter of 1984-5 during some of the coldest weather experienced for many years. The site lies next to the Lion Walk shopping precinct which, over a decade earlier, had been the subject of extensive rescue excavations *(CAR* **3,** 31-92). The new building incorporates a basement measuring about 12 x 35 m which, at its north end, links up with the underground service area of the Lion Walk precinct. The archaeological remains within the site of the new basement were to be given priority for excavation because, unlike the rest of the site, these were to be removed. However, on examination, the areas to the north and south of the church proved to have been almost completely destroyed for the construction of 18th- and 19th-century burial vaults leaving intact little more than the area directly under the church.

Archaeological work at Lion Walk in the 1970s indicated that the site should contain the following:
1) part of the defences of the legionary fortress (*CAR* **3,** 31)
2) part of a north-south street laid out around AD 50/55 over the backfilled legionary ditch *(CAR* **3,** 8 & 37) and
3) the eastern frontages (probably) of Buildings 14, 15, and 19 *(CAR* **3,** 49-62).

Also the discovery of an Anglo-Saxon hut, apparently against the remains of the northern wall of Building 19 *(CAR* **1**, 1-5; *CAR* **3,** 73-5), suggested the possibility of Anglo-Saxon occupation nearer the street frontage.

In the event, the circumstances allowed only partial examination of the above, namely the legionary defences and part of Building 19. Unexpected was a small Roman

building (Building 170) and an unusual type of drain alongside the north-south street. Finds included a fragment of a London 555 amphora with part of a painted inscription (Appendix 20, microfiche, pp 1080-1, Fig 13.263); this lay in the upper part of the section across the Roman street. No pottery or features could be associated with the Anglo-Saxon occupation of the area implied by the hut, although three residual sherds of mid to late Anglo-Saxon date (in Fabric 97, *see CAR* **7)** were recovered.

The new church is the third building of its kind to have existed on the Lion Walk site. The first was an octagonal chapel, built in 1765-6 and demolished in 1862. Its replacement, which served the congregation for 122 years, was knocked down in the winter of 1984-5 to make way for the third church which is at first-floor level with shops underneath. The spire of the Victorian church has been retained and incorporated in the latest building.

The military defences (c 44 -*c* 49)

[Figs 13.258-9]

The remains of the military period consisted of part of the eastern defences of the legionary fortress, namely a ditch and a rampart with a berm in between the two. There were

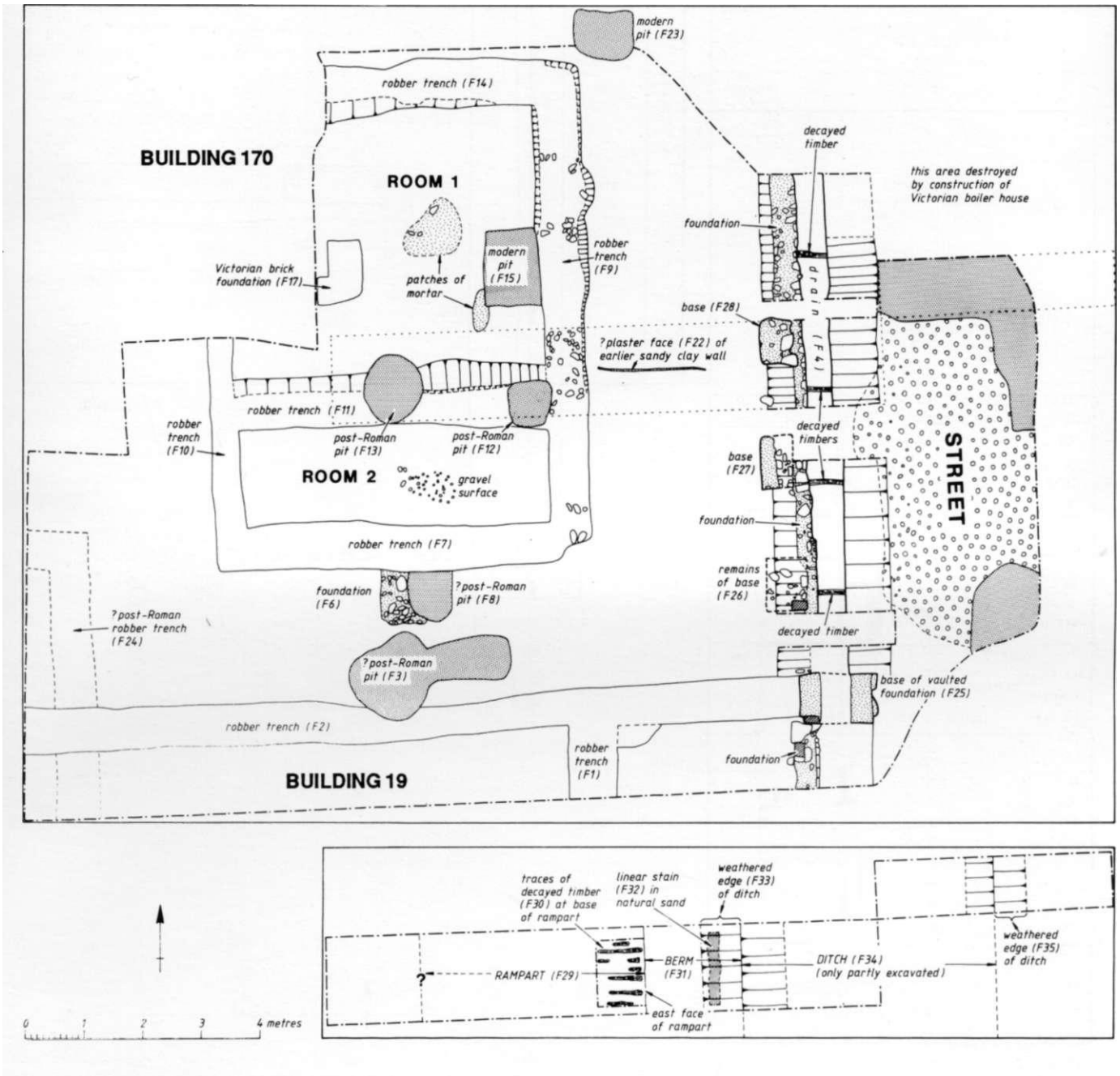


Fig 13.258 Lion Walk United Reformed Church (234.84). Discoveries in 1984-5: remains of the c 2nd to 4th centuries (above); the military defences (below). The position of the section through the military defences is dotted on the larger plan. [Pages 378-83]

no traces of any earlier features or occupation under the rampart.

A trench measuring 13.4 x 1.5 m was dug east-to-west across the site to find the fortress fortifications. The ditch (not fully sectioned) and the rampart proved to be 3.6 m and 3.0 m wide respectively. The eastern face of the rampart survived as three courses of unfired blocks of sandy clay standing to a height of 0.4 m. The precise edge of the western side could not be located but a layer of charcoal, possibly destroyed revetment, indicated where it may have been. Under the rampart were traces of the wooden corduroy. Seven east-west timbers, the longest being 0.76 m, could be discerned as stains on the surface of the underlying sand. Between the rampart and the ditch was a berm 1.6 m wide. There was insufficient time to extend the section westwards to pick up the *via sagularis* which, according to the earlier excavations at Lion Walk,

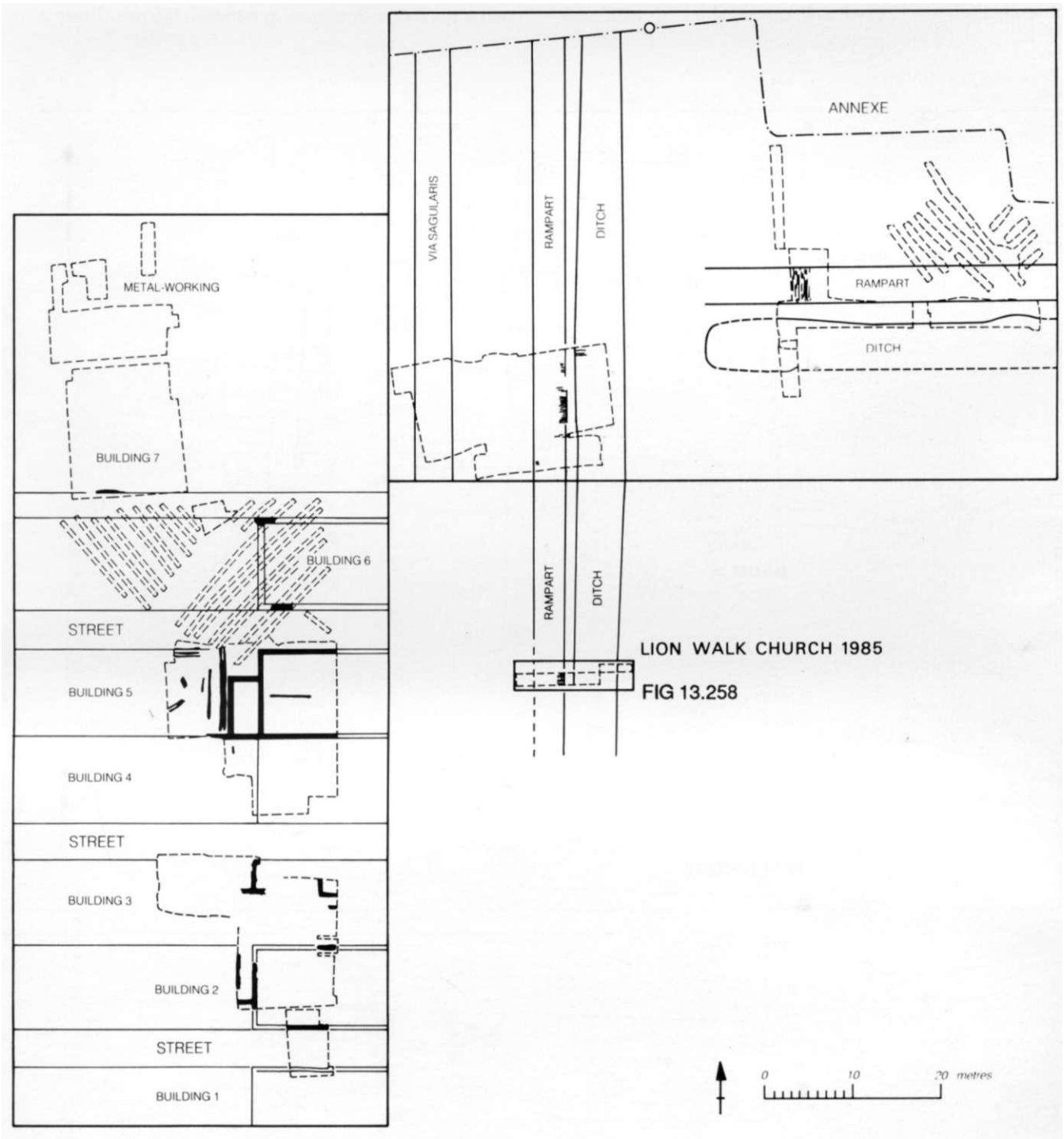


Fig 13.259 Lion Walk United Reformed Church (234.84). The Lion Walk Church site 1984-5 in relation to the military buildings and defences excavated at the Lion Walk site 1971-4. [Pages 378-81]

ought to have lain along the western boundary of the site.

The rampart had been demolished and the debris from its destruction used to backfill the military ditch. The first surface of the north-south street was laid directly on top of the levelled defences. No dating evidence for these events was recovered and no Boudican destruction layer was noted in section to provide any stratigraphical proof of a pre-Boudican context. However the stratigraphical relationships which were visible matched so closely those observed on the adjacent site at Lion Walk (Site B) that there can be little doubt about the date, ie the destruction of the defences and the subsequent construction of the street took place between AD 50 and 55 during the first few years of the life of the town *(CAR* **3,** 8-9).

Unusual were the remains of a butchered horse buried in the backfill of the ditch. All that survived was the skeletal part of what clearly had been 'waste', namely the head, spine, and part of the pelvis (Appendix 19, microfiche, p 1079). The rest must have been removed by a skilful butcher. Despite being found in the backfill, the horse presumably had not belonged to the army, because, as already indicated, the defences do not appear to have been demolished in the military period.

Building 170 (c ?2nd to ?4th centuries)

[Figs 13.258 & 13.260]

Building 170 was aligned north-south and consisted of only two rooms. One was roughly square in plan (5.3 x 4.9 m), whilst the other was narrow and rather passage-like (5.3 x 1.7 m). The foundations of the walls had been completely robbed in the 11th or 12th century leaving only robber trenches (F7, F9-11, & F14) to indicate their locations. Butting on to the centre of the southern side of the building was a small external buttress built of septaria set in mortar (F6). It measured 0.8 x 0.9 in plan and was 0.2 m deep. Apart from patches of mortar in the centre of Room 1, no floor surfaces or floor make-up appeared to have survived. Although neither room could be fully excavated, the depth of the underlying deposits combined with the pottery found in the area indicated that the building was likely to have been in existence by c 200 (very roughly).

To the east of the building was a north-south footway on to which the building had presumably fronted. The footway could only be examined superficially but 4th-century pottery was found in association with the latest surfaces. Because of the absence of suitable stratigraphical relationships, it was not clear if these surfaces had been contemporary with Building 170, although this may well have been the case, since the heights of the floor levels in the building and the footway were similar.

The purpose of the building is unclear. Probably it had been a small house although presumably the building could have been a shop, a store, or a workshop.

The north-east corner of Building 19 (2nd to 4th centuries)

[Figs 13.258 & 13.260]

Only a very small part of Building 19 proved to be available for excavation (Fig 13.258). No floors survived and the foundations had been robbed in the 11th or 12th century. The north foundation (F2) of the building had terminated at its east end with an arched channel (F25) which had been an integral part of a north-south drain (F4). On the western side of the site were slight traces of a trench lying south-north with a return to the west (Fig 13.258). This may have been a robber trench although, if so, it made little sense in relation to the building.

The drain and the adjacent ?arcade *(c* ?2nd to ?4th centuries)

[Figs 13.258 & 13.260]

The eastern boundary of the footway was demarcated by a timber drain (F4) of unusual construction. The west side was formed by an earlier foundation made of septaria set in mortar whilst the east side was simply the accumulation of layers through which the trench for the drain was cut. To judge by drains previously excavated in the town (eg *CAR* 3, 40-1), the sides, base, and top would have been formed of planks laid lengthways. The foundation on the west side is most unlikely to have been structural in any way but would simply have acted as a stop against which the trench for the drain was dug. The base of the drain sloped downwards to the south to give a fall of 1 in 50. On the base were four east-west stains representing the remains of timbers (Fig 13.258). Although no nails were present, presumably the stains were all that remained of battens to which the base of the drain had been fixed. The eastern end of the northern foundation of Building 19 incorporated a narrow vaulted passage (F25), built to allow the drain to pass underneath uninterrupted. The latest pottery in the fill of the drain indicates that the feature was in use in the 4th century.

There is a drain-arch through the Roman town wall south of the site but this is aligned on a drain which must have existed on the opposite side of the street. Presumably the waste material in the drain F4 must have been discharged through this arch, in which case the drain must have turned a right-angle further south to continue under the street and link up with the drain on the other side of the street.

On the upper edge of the west side of the drain were three septaria-and-mortar pad-foundations (F26-8), each about 0.8 x 0.6 m in area. These may have formed the base of an arcade of piers or columns. The small buttress on the southern side of Building 170 is odd but, being of a similar size, may have been associated with the pads in some way. Perhaps the part of the footway immediately adjacent to Building 170 was under an arcaded verandah which turned westwards to pass along the southern side of the building and incorporate the small buttress?

The Round House

[Fig 13.261]

The following summary is based almost entirely on E A Blaxill's *History of Lion Walk Congregational Church* (Blaxill 1938). Details about the physical appearance of the Round Meeting House derive mainly from a scale model of the building. This was made sometime between 1848 and 1862 and is currently in the possession of the church.

The first meeting house was built in 1692 in Moor Lane (now called Priory Street) probably on the site occupied today by St Botolph's Parish Hall. By 1763, the building in Moor Lane was showing signs of considerable dilapidation and consequently the trustees raised sufficient money by subscription to purchase land in Red Lion Walk on which to build a new meeting house. The land had been part of a long plot which made up the entire eastern frontage of Red Lion Walk. The original plot had been used mainly as gardens and partly as a timber yard and, until 1741, had been part of the Red Lion Inn (now the Red Lion Hotel) on the High Street. In 1722, George Gray, a Colchester glazier and father of Charles Gray (owner of Colchester Castle and a member of Parliament for Colchester), had bought the inn for £1,300 from Thomas Great. Nineteen years later, Gray

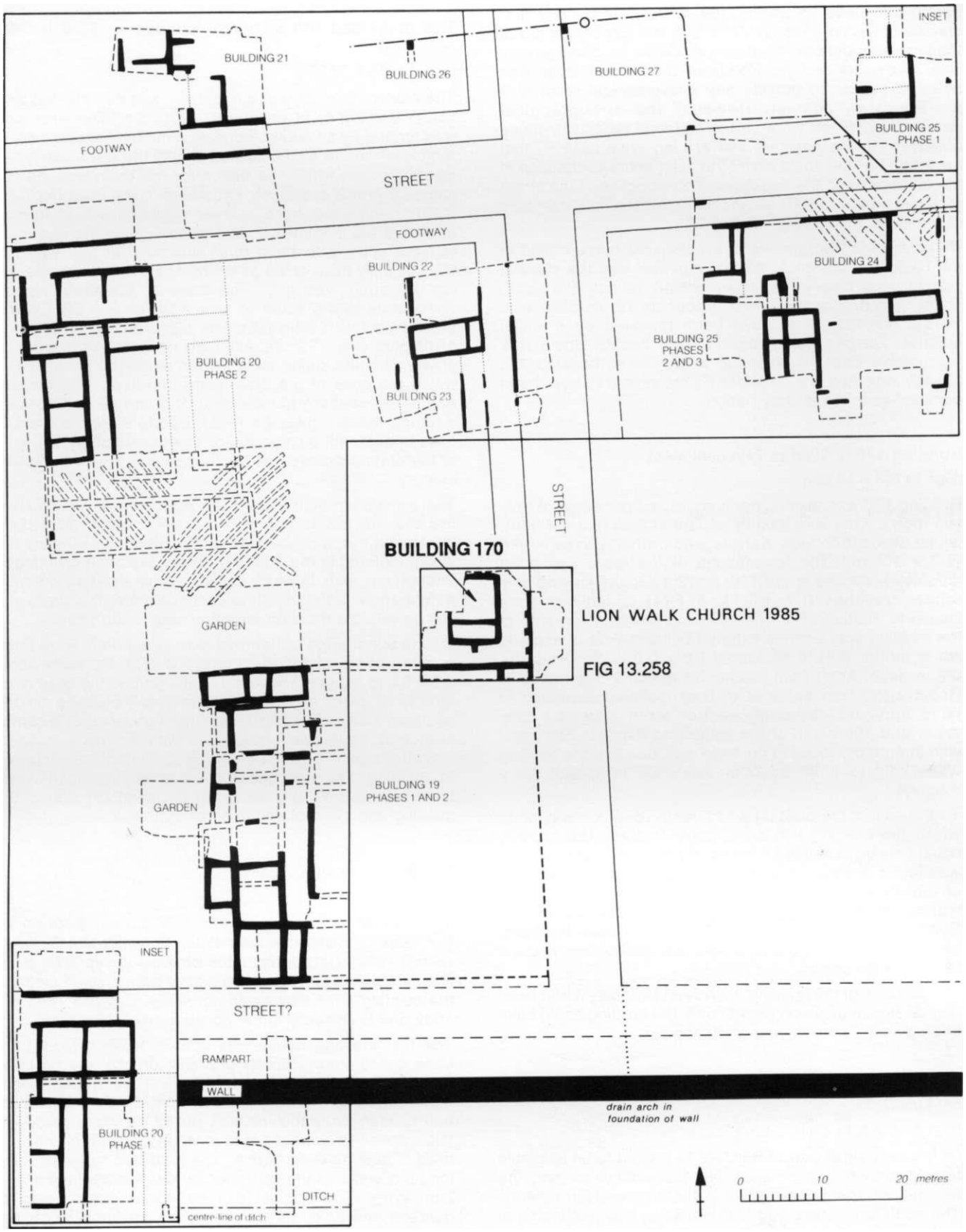


Fig 13.260 Lion Walk United Reformed Church (234.84). The Lion Walk Church site 1984-5 in relation to the 2nd- and 3rd-century buildings excavated at the Lion Walk site 1971-4. [Pages 381-2]

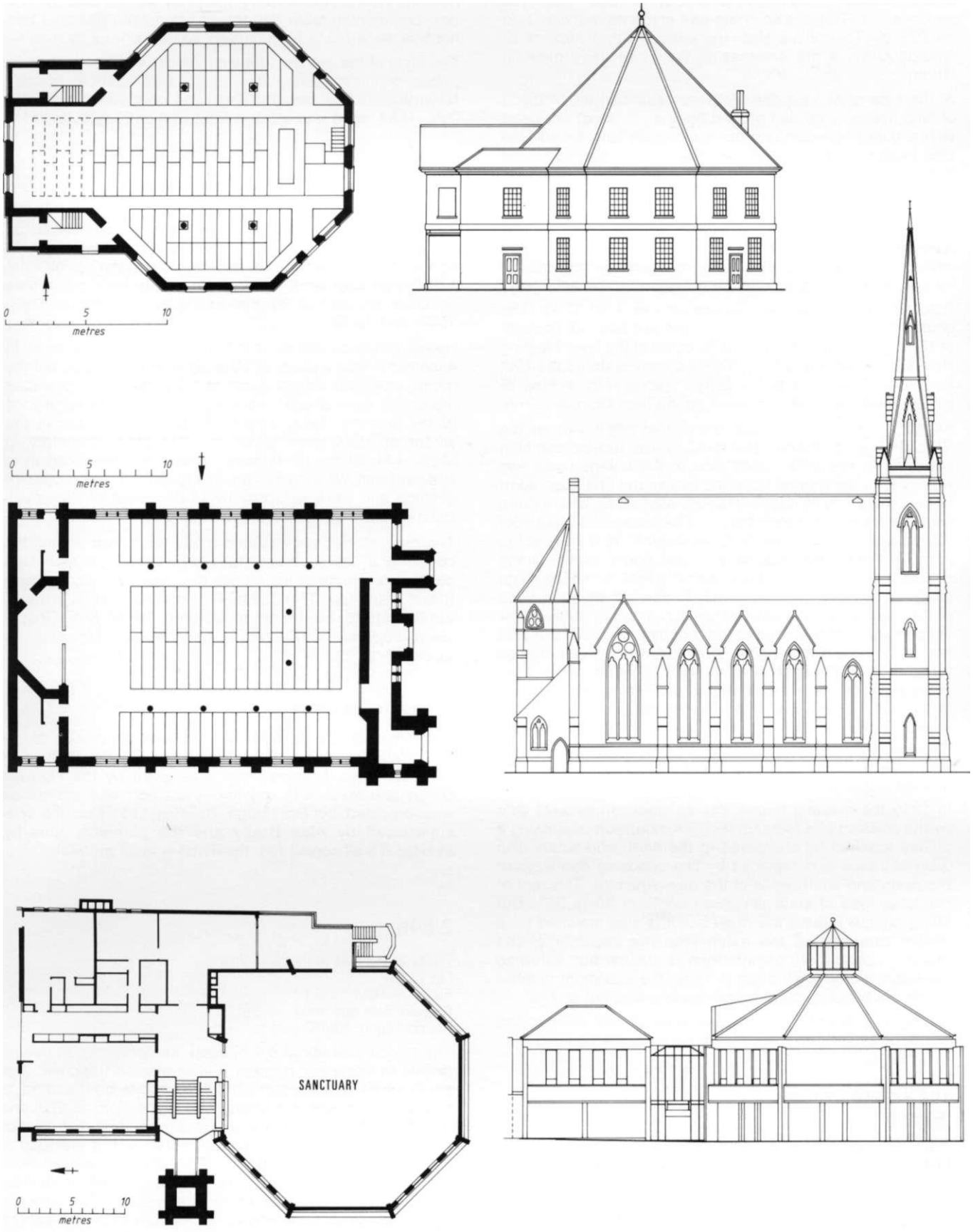


Fig 13.261 Lion Walk United Reformed Church (234.84). Above: the 'Round Meeting House' (1766-1862): ground plan and south elevation. Centre: the Victorian church (1863-1984): ground plan and north elevation. Below: the latest church (1986-); first-floor plan and west elevation minus the tower of the Victorian church. [Pages 381-4]

sold the inn, but retained the garden until his death. At this time the garden was the only land in St Nicholas' Parish not built over. In 1763, the southern part of the garden was sold for £75 by Theophilus Hall, the executor and nephew of George Gray, to the trustees of the Moor Lane meeting house.

At the time of its sale, the plot was described as, 'A piece of land (formerly garden ground but then cleared) enclosed with a pale fence abutting upon a certain lane called Red Lion Walk on the west and upon the Baptist Meeting House in part and a brick wall on the east, upon a house occupied by William Hitchcock on the north and upon Eld Lane on the south.' Originally, the plot measured 173 feet (north to south) and 95 feet 6 inches (east to west) but later six feet were lost at the southern boundary when Eld Lane was widened and, in 1823, the northern boundary was moved by over thirty feet to enable the graveyard to be enlarged.

Building work began on the site late in April 1765. The church possesses the accounts which are headed 'Account of Moneys Paid & Received on Account of the New Meeting House by J Tabor and Son'. The first entry is dated the 19th February, 1765 and is for 'whips' (apparently a kind of pulley). The chapel was opened on the 30th October, 1766.

Although octagonal in shape, the chapel was known as the 'Round Meeting House'. The building was two-storeys high and built in red brick. Each side of the octagon had two windows on the ground floor and two on the first floor, apart from the west, north-east and south-east sides, where there were doorways at ground-level. The octagonal slate roof sloped upwards at about 40 to 45 degrees to a finial at the apex. Between the ground and first floors was a string course of light-coloured brick, about a foot thick. The main entrance was in the west wall. It opened on to a wide central aisle which passed under a brass chandelier suspended from the apex of the roof by a chain. At the east end of the aisle and at right angles to it was the communion table. Beyond the latter a north-south aisle passed in front of the pulpit to link a door in the north-east wall with another in the south-east wall. The pulpit stood under a huge sounding box on the east wall. A deed of 1793 describes the land occupied by the meeting house as being enclosed with brick walls and gates on the west and south sides and a fence to the north.

In 1816 the meeting house was enlarged on its west side by the addition of a rectangular brick extension containing a gallery reached by staircases to the north and south. The west entrance was replaced by two opposing doorways in the north and south walls of the new structure. The roof of the latter was of slate set at an angle of 30 to 35°. The string course around the main building was matched by a similar one around the extension. The capacity of the meeting house in its original form is unclear but, following the installation of new pews in 1848, the maximum number which the building could accommodate was put at 734.

During the demolition and clearance of the area in the winter of 1984-5, no traces were noted of the building.

The Victorian church

[Fig 13.261]

Plans to build a new church had been made by 1862. The last service took place in the Round Meeting House on the 20th July of that year and a medal was struck to commemorate the laying of the foundation stone for the new church in the following October. Perhaps intentionally, the nave of the new building was almost exactly the width of the old meeting house. The new church boasted a 115-foot spire at the north-west corner of the nave. The building seated about 850 people and had a continuous gallery around the south, west and north walls. Material from the Round House was not entirely wasted because the new communion table and the chairs for the deacons and minister were made from timbers salvaged from its roof.

The style of the architecture was the cause of considerable public criticism, giving rise to jibes of 'steeple house'. Nevertheless the new building was opened on the 30th July, 1863, spire and all, at a total cost of £6,386. 4s. 7d.

The burials

[Fig 13.262]

The burial ground and the vaults were officially closed on 1st May, 1855, a year after the municipal cemetery was opened. The church burial register covers the period from 1767 until this time apart from three isolated burials specially sanctioned by the Secretary of State in 1863, 1864, and 1876.

Nearly all the burials were in family vaults made of brick. In each coffin was a piece of slate on which was recorded the name, age, and date of death of the occupant. Eighteen of the coffins were of lead, including all those in the large vault of the wealthy Tabor family. All burials removed in the winter of 1984 were taken to Colchester Cemetery in Mersea Road for reinterment. They were exhumed by a special team wearing breathing equipment and protective clothing and were recorded by M Chapman of Fairclough Building Ltd (Fig 13.262 & Appendix 21).

The gravestones were resited many years ago around the boundary of the southern graveyard. They have been kept on the site. Some of the stones are listed and discussed in Blaxill 1938 (pp 37-41). More comprehensive is a much earlier list to be found in volume 19 of S F Crisp's *Genealogical Collection: Colchester Monumental Inscriptions.*

Acknowledgements

The excavation took place with the kind permission of the Lion Walk United Reformed Church and Fairclough Building Ltd. Generous financial help was given by the Norwich Union and invaluable day-to-day support and assistance was provided by Fairclough Building Ltd. The site was supervised by Alan Brady and the planning done by M Neal. To all concerned, the Trust is most grateful.

2/84a

Trinity Street and Sir Isaac's Walk
Fig 13.267
February 1984
Reason: new gas main
Record/report: NS/PC

The trench was about 0.6 m deep. Its northern part seems mainly to have cut through earlier service trenches. The southern half cut through what appeared to be the remains of at least one Roman building, ie a foundation, floor(s), and a ?*pila* stack presumably *in situ* in a hypocaust. The floor or floors took the form of a layer of mortar with a make-up of Kentish ragstone (greensand). They may have been plain mortar floors or else bases for tessellated or mosaic pavements, the cubes of which were missing. The trench in Sir Isaac's Walk appeared to cut modern backfilled service trenches. However the soil contained a high proportion of yellowish brown sandy loam and gravel which was probably redeposited material from the Roman rampart behind the town wall.

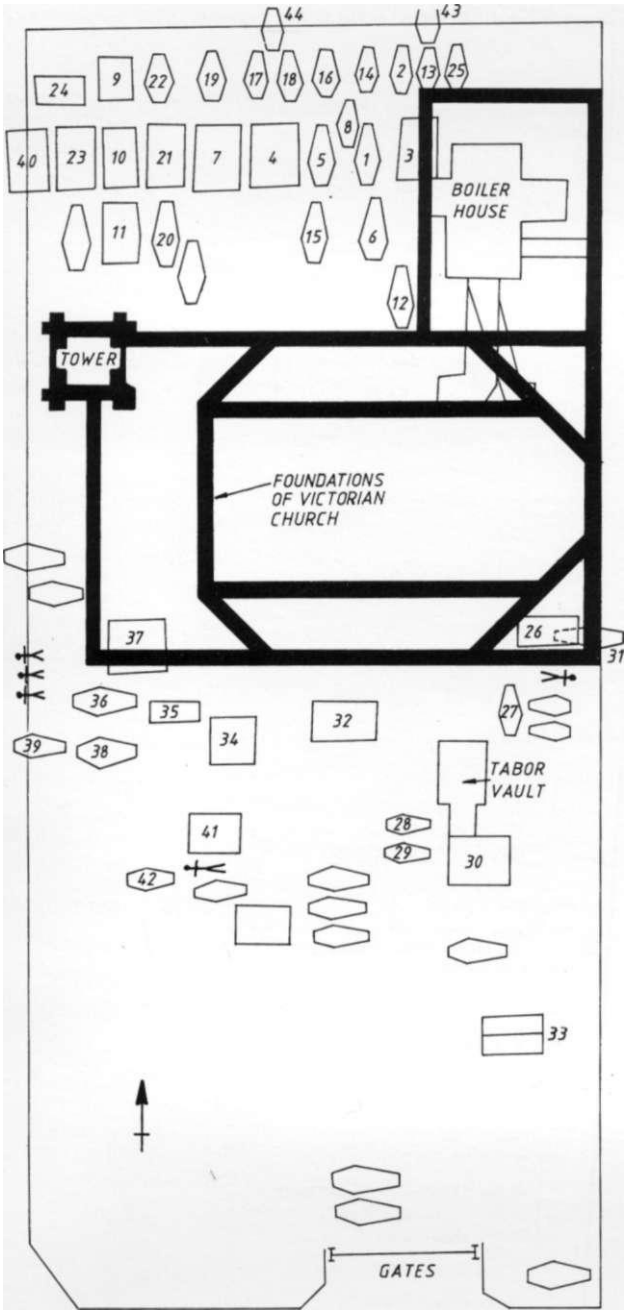


Fig 13.262 Lion Walk United Reformed Church (234.84). Sketch plan showing the approximate positions of the vaults and other graves in relation to the foundations of the Victorian church. Based on a sketch plan by Mr M Chapman of Fairclough Building Ltd. [Page 384]

4/84a

Maidenburgh Street
Fig 13.217
26th April 1984 to 2nd May 1984 and June 1985
Reason: the resurfacing of the street
Record/report: NS & DS/PC

The surface of the street and pavements of Maidenburgh Street between its junction with St Helen's Lane and George Street were replaced in 1984 by a single surface of paved bricks to make the street semi-pedestrianised. This followed the residential redevelopment which in 1981 had led to the discovery of the Roman theatre (Fig 13.217; DTC 81; Crummy 1982). The work was done in three phases, in each case the pavement on the west side being left as a pedestrian route until the adjacent street and the east pavement opposite were resurfaced. The modern surface and its underlying make-up were removed to a depth of about 0.2 to 0.3 m.

At the north end of the street, the foundations of the theatre proved to lie just under the surface (Fig 13.217). It had been so close that, in one place, tar was adhering to the foundation. No Roman floor levels or other layers survived in this area so that the modern street make-up directly overlay the Roman foundations, the natural sand into which they had been cut, and backfilled service trenches. In view of the proximity of the foundations to the surface and the fact that the make-up directly over it was modern, it seems likely that within the last century or so the foundations had already been exposed (perhaps in 1891 at the time of Goodyear's pipe trench? —*see* Hull 1958, 105-6). The site is steeply sloping so that perhaps, as happened elsewhere in the town, the steepest part of the hill had been lowered to reduce the incline and make the road safer for carriages during icy weather. *(See* watching brief 0/71, microfiche).

Roman layers survived under the southern half of the part of the street being resurfaced but were only exposed in the central area, being too deep to the south.

The archaeological work was in two phases and took place after the first and second of the three phases of the resurfacing work. In both cases the archaeological investigations lasted only a few days and were restricted to little more than surface clearing, planning, and photography. The Roman foundations had been extensively cut by a mass of service trenches. This, combined with the limited nature of the archaeological investigation, meant that it was difficult to interpret the layout of the foundations with any degree of clarity.

The northern end of the outer wall of the auditorium of the theatre proved to be unexpectedly wide. The foundation was 3.5 m across and appeared to have either a projection southwards beyond the line of the auditorium wall or else a north-south wall joined on to it (Point A on Fig 13.217). The southwards projection or wall was clearly an integral part of the original structure because there was no hint of a butt joint. The northern end of the inner wall of the passage around the perimeter of the auditorium lay directly under the east wall of St Helen's Chapel and was an integral part of it. The foundation here was straight, not curved as expected. This matched the corresponding western face of the outer wall which similarly was straight. Together they appeared to form a straight narrow passage, 2.0 m wide. No floor levels survived in this area because, as explained above, these had all been removed some time in the recent past.

South of the auditorium parts of the large north-south wall (F24, Fig 13.217) first recorded by Goodyear were uncovered. This had been particularly badly damaged by services. No traces were observed of the cross walls recorded by Goodyear. However part of another foundation was uncovered (F26, Fig 13. 217). The northern edge of this was intact and was formed by fragments of worked Purbeck marble set roughly in a line. The foundation seemed too rough to have been the base of a flight of stairs on the outside of the auditorium. Not far north of the foundation was a posthole (Fig 13.217), 0.45 m deep and apparently of Roman date.

A length of narrow north-south foundation (F27), 0.6 m wide, lay near the west pavement well south of the auditorium. It lined up with the stump of north-south wall

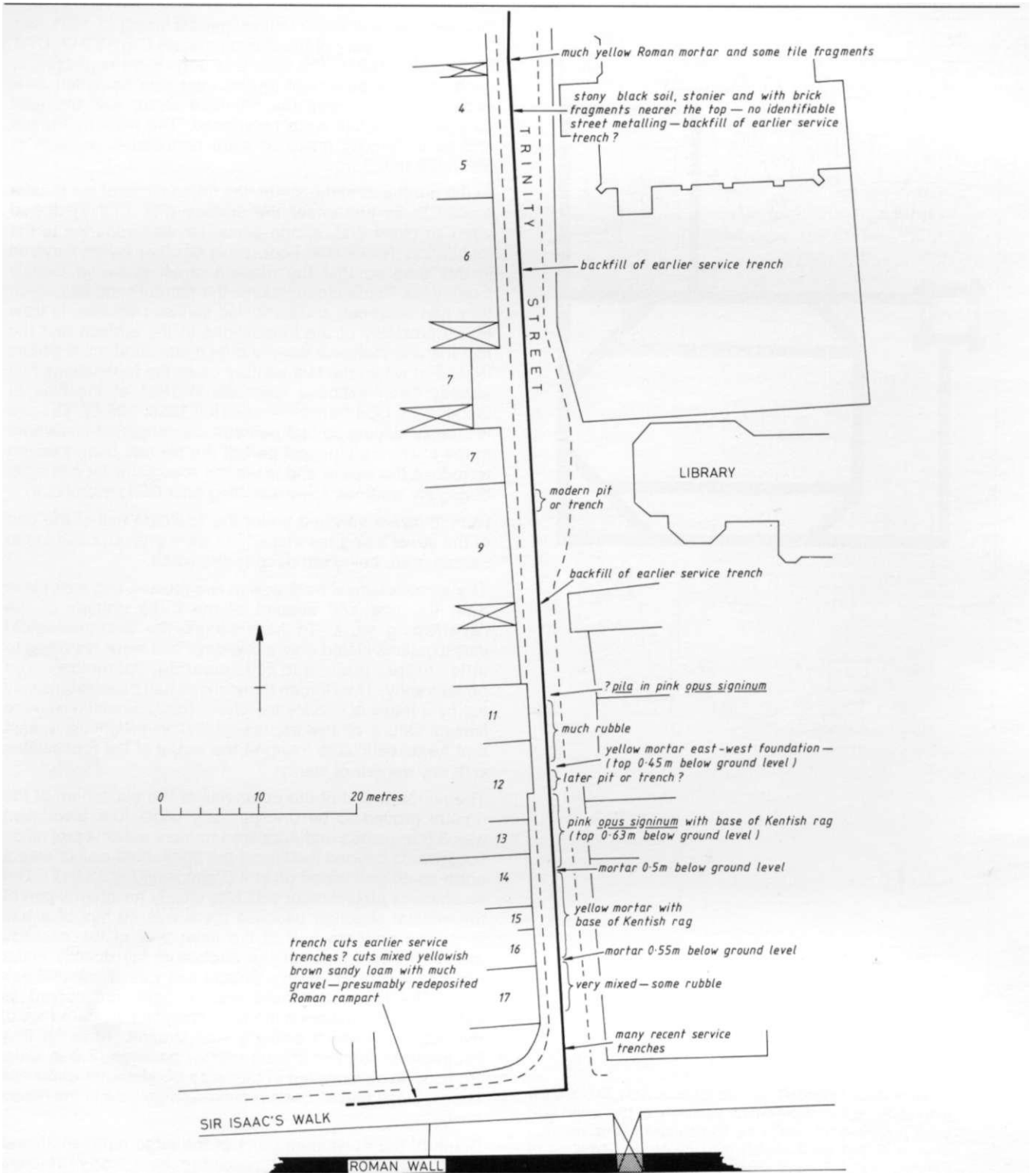


Fig 13.267 Trinity Street and Sir Isaac's Walk (2/84a). [Pages 384-5]

found in 1982 (Site A in Crummy 1982, 301) and, although only about half its width, may well have been a continuation of it. The foundation contained an *imbrex* set upside down as if to form a channel through the foundation.

Parts of only two Roman layers were examined (L18 and L19). These lay north of the foundation F26. Uppermost was a layer of brown sandy loam with septaria chips and some mortar fragments (L18). This may have been dump. It overlay a thin layer of white mortar which was either a construction layer for the nearby foundations or (less likely) the remains of a floor. The white mortar overlay sand which was probably not natural. Neither of the layers provided finds. The foundations were all of septaria. Tile was unusual and found only in F27.

(The likely relationship of the walls of St Helen's Chapel to those of the Roman theatre is discussed on microfiche under 6/84a.)

APPENDIX 1:
Summary list of projects undertaken by the Colchester Archaeological Trust from 1971 to mid 1985

The right-hand column indicates the relevant publication in the *CAR* series. The index at the end of this book gives the page references for the projects included in some way in this book. The principal volume is shown in italic bold. The full titles of the *CAR* volumes are given on page 408 in the bibliography.

Large- and medium-size excavations

1971	TL99132492	Maldon Road (MRC 71)	Roman cemetery	2,4,5,7,8,9,10,12
1971	TL98582519	Kiln Road (CAM 71)	Late Bronze Age & early Roman occupation site	11
1971-5	TL99702510	Lion Walk Sites A-V (LWC 71-5)	Roman, Saxon, medieval & post-medieval town sites	2,3,4,5,7,8,10,12
1972	TL99282481	St John's Abbey Grounds (IRB 72)	medieval & Roman cemeteries, & ?late Anglo-Saxon church	1,2,4,5,7,8,9,10,12
1973	TL96632904	Pitchbury hillfort (PB 73)	internal features ('earlier) & defences of the Iron Age hillfort	11
1973	TL9580265	Chitts Hill (CHC 73)	Deverel-Rimbury cemetery	Crummy 1979a
1973-4	TL99552524	Cups Hotel (CPS 73-4)	Roman, Saxon, medieval, & post-medieval town site	2,4,5,6,7,8,10,12
1973-6	TL99212517	Balkerne Lane sites A-V (BKC	Roman houses & Roman town defences	2,3,4,5,7,8,9,10,12
1974	TM00012479	Magdalen Street (MSC 74)	medieval & post-medieval houses & street	2,4,5,6,7,8,10,12
1975	TL99812482	St Giles's Church (STG 75)	excavations in nave	2,4,5,7,8,9,10,12
1975-6	TM03451970	Fingringhoe (FHF 75-6)	Late Bronze Age house	?
1976-9	TL99302484	Butt Road (BUC 76-9)	Roman cemeteries & mauseoleum	2,4,5,7,8,9,10,12
1978	TL99332554	Middleborough (MID 78)	Roman & medieval houses, kilns, street	2,3,4,5,7,8,10,12
1979	TL99792513	Long Wyre Street (COC 79)	Roman & medieval houses	2,4,5,6,7,8,10,12
1981-2 & 1984-5	TL99502506	Culver Street, Phases 1 & 2 (1.81)	Roman, Saxon, medieval & post-medieval town sites	2,4,5,6,7,8,10,12
1984-5	TL99292529	Gilberd School (GBS 84-5)	Roman military & civilian buildings	2,4,5,6,7,8,10,12

Small excavations

1971	TL99262490	22 Crouch Street (CSC 71)	post-medieval pits	2,4,5,6,7,8,10,12
1972	TL97601908	Blind Knights (BK 72)	medieval ditch	?
1971	TL99012494	Crouch Street (IRA 71)	Roman pits	2,4,5,6,7,8,10,12
1972	TL99242509	St Mary's Steps (SMS 72)	Roman drain-arch/medieval postern	2,4,5,6,7,8,10,12
1973	TL99202498	Crouch Street subway west (IRC 73)	Roman ditches & hypocaust	2,4,5,6,7,8,10,12
1973	TL98892511	Oaks Drive (Phase 1) (ODC 73)	Roman pottery kilns	2,4,5,6,7,8,10,12
1973	TL97532473	Lexden Tumulus (LTC 73)	Iron Age burial mound	11
1973-4	TL96412418	Oakland Avenue (OAC 73-4)	late Iron Age/early Roman ditches	11
1974	TL99812482	St Giles's Church graveyard (SUA 74)	medieval & later cemetery	2,4,5,7,8,9,10,12
11/75a	TL99242520	Balkerne Gate (BGC 75)	Phase 3 blocking wall & deposits at the rear	2,4,5,6,7,8,10,12
1976	TL98902485	St Helena's School (HEC 76)	Roman temple & house site	2,4,5,6,7,8,10,12
1977	TL99592513	Nos 2 & 3 Trinity Street (TSC 77)	Roman house & post-Roman ?kilns	2,4,5,6,7,8,10,12
1977	TL96272366	Gryme's Dyke (GDC 77)	early Roman dyke	11
1977	TL96802240	Gosbecks (GOS 77)	Romano-Celtic temple & theatre	11
10/78	TM00082563	Castle Gardens (CGC 78)	Roman town defences	
1983	TL99842518	61-2 High Street (SPT 83)	?Roman human inhumations, Roman drain & foundation	
1984	TL99722507	Lion Walk United Reformed Church (234.84)	Roman military & civilian buildings	2,4,5,6,7,8,10,12

4/84a	TL99772538	Maidenburgh Street (DTC 81)	Roman theatre	Crummy 1982
6/84a	TL99752538	St Helen's Chapel	Roman theatre & medieval chapel	

Exploratory trenches followed by watching briefs. (Unless shown otherwise, reports on these projects are included in this volume with some additional material being covered by *CAR* **2, 4, 5, 7, 8, 10,** and **12.)**

1971	TL99222492	Crouch Street (CSC 71)	post-medieval pits	
1971	TL99282481	St John's Abbey Grounds & Abbey wall (SUA 71)	medieval cemetery	
1972	TL98462521	Sheepen	early Roman cemetery	Niblett 1985
7/73	TL99952512	Queen Street (QSC 73)	Roman streets & houses	
0/74a	TL95952512	King Coel's Kitchen, King Coel Road	gravel pit	
1975	TL99552545	Dutch Quarter (DTC 75)	post-medieval features	
1/77c	TL99862479	St Botolph's roundabout	St John's Church (Anglo-Saxon)	
3/77e	TL99412540	17 North Hill	mosaic pavement, tessellated pavement, foundations	
4/78b	TL99322485	former Butt Road excavation sit©	negative	
5/79a	TL99502624	GPO Sorting Office, Clarendon Way	negative	
6/79b	TL99052605	River Colne/Cowdray Avenue/Essex Hall Road	Roman pottery from kiln, Roman deposits in bed of River Colne	
1983-4	TL99962551	Castle Park (CAP 83-4)	Roman houses & streets	
0/83a	TL99692547	Flory's Yard, 19 East Stockwell Street	Roman floors, a medieval robber trench	
8/83e	TM00172512	East Hill House, East Hill	Roman streets & houses, two ?Roman inhumations	
10/83a	TL99172549	Anglian Water Authority, Balkerne Hill	negative	

Watching briefs (all in this volume or the unpublished archive unless otherwise stated)

10/70	TL99822515	Caters, Long Wyre Street	Roman foundations & floors of public building	Crummy 1971
0/71 a	TL97372524	Tapwoods	Lexden Dyke	
0/71b	TL98712562	Sheepen	late Iron Age/early Roman pits	11
0/72b	TL99892482	St Giles's cemetery & St John's Abbey wall	early med dump & later burials	
0/73a	TL99702521	Hilton's, High Street	medieval cellar & excavation by G M R Davies	
0/73b	TL97522476	Fitzwalter Road	flagon & *terra nigra* platter	11
0/**73C**	TL99242498	Crouch Street subway east (IRD 73)	Roman town defences	
9/73	TL99302628	North Station Road	negative	
10/73b	TM019243	Hythe Walks, Hawkins Road	negative	
11/73a	TL99382518	Kenton's, Head Street	Roman floors, ?street & ?medieval wall	
11/73b	-	'Martins', Nayland Road	negative	
0/74b	TL99282624	North Station Road	negative	
1/74b	TM06101990	Quarry, Alresford Creek	site of Roman villa — negative	
2/74	TL99282494	20 Crouch Street	negative	
3/74b	TL98752446	115-7 Maldon Road	negative	
3/74c	TL96362318	Heath Dyke & Kidman's Dyke	ditches of the dykes cut by pipe-line	
4/74	TM022252	Greenstead housing estate	post-Roman ?well	
7/74	TL99632516	Red Lion Hotel, Culver Street	negative	
8/74a	TL99282678	St Michael's Church, Mile End Road	three post-Roman wells	
8/74b	TL99382537	49 North Hill	post-Roman well, soakaway, & cellar; Roman foundations & floors	
8/74c	-	36-60 Blackheath Road	negative	
12/74	TL99012473	43-5 Wellesley Road	negative	
0/75	TL99262526	Gilberd School	Roman military plinth & Roman streets; observation of excavations by Mr Askew	*see* p 127
2/75a	TL99172536	Nurses' Home, St Mary's Hospital	human bones, Roman destruction level	
2/75b	TL99802524	107 High Street	Roman foundation	
3/75a	TL98432480	15-17 The Avenue	Roman cremations	

3/75b	TL99622522	High Street	Roman foundations & burials in St Runwald's Church	
5/75a	TM00632565	Castle Gardens estate (Phase 2)	negative	
5/75b	TL98902520	Oaks Drive (Phase 2)	Roman inhumations, lead coffin lining	
6/75a	TL99242519	Balkerne Passage	Roman street metalling	
6/75b	TL99622522	5 High Street	negative	
6/75c	TL98312524	Kingswood House School, Sussex Road	negative	
6/75d	TL99292524	Balkerne Gardens	?Roman burnt deposits	
7/75	TL97482265	Gosbecks Farm	negative	
9/75a	TL99522530	GPO, West Stockwell Street	Roman op. *sig.* floor	
9/75b	TL98432433	54 Cambridge Road	negative	
9/75c	TM01131324	High Street North, West Mersea	negative	
11/75b	-	Western Relief Road	negative (finds: 'X series' 139)	
12/75	TL99382474	44/5 South Street	negative	
3/76	TL97763144	The Crescent, Great Horkesley	negative	
4/76a	TL99582552	St Peter's Street	drain outlet in Roman wall	
4/76b	TL98872478	2 Oxford Road	negative	
4/76c	TL99632515	Culver Street	Roman foundation	
4/76d	TL99622505	22 Trinity Street	negative	
5/76a	TM01492453	Harbour House, Hythe Quay	negative	
5/76b	TL99882520	65 High Street	Roman tile drain, two inhumations (?post-Roman), vaulted brick cellar	
5/76c	TL96332519	Ramparts School, Halstead Road	negative	
6/76a	TM00062557	Roman Road/Castle Road	Roman town wall, rampart, & ditch, pit, & Roman pottery	
6/76b	TL98172500	St Mary's School, Lexden Road	negative	
6/76c	TL98832475	19 Oxford Road	negative	
8/76a	TL99462516	9 High Street	post-Roman foundations, pits & robber trench	
8/76b	TL99742517	52-3 High Street/36 Culver Street	negative	
10/76	TL97392523	169 Lexden Road	negative	
11/76	TL99332579	26 North Station Road	Roman foundation & floor	
12/76a	TL99402485	22/30 Southway	negative	
12/76b	TM00901320	High Street North, West Mersea	negative	
0/77	TL97052402	King Harold Road	two ditches (late Iron Age or Roman)	11
1/77b	TL99532516	21 High Street	negative	
3/77a	TL99342523	Balkerne Gardens (Phase 1)	Roman foundations, coin hoard	
3/77b	TL98592445	Christchurch, Ireton Road	negative	
3/77C	TL98962575	Caretaker's house, St Helena's School	negative	
3/77d	TM00891247	Coast Road, West Mersea	Roman foundation, ?floor(s), & pottery	
4/77a	TL99542500	39 St John's Street	exposure of Roman town wall	
4/77b	TL99132496	42-4 Crouch Street	parts of probable Roman inhumations	
5/77a	TL99652484	Abbeygate House, St John's Green	north-south street (post-Roman?)	
5/77b	TM00032475	3-5 Military Road	negative	
7/77a	TL99752517	54 High Street/38 Culver Street	medieval & post-medieval floors & pits	
7/77b	TL98712527	Warren Field	recent illicit pit-digging	
8/77	TL99842497	Arthur Street	large pit or ditch of uncertain date	
9/77	TM00012520	Minories Garden, High Street	post-medieval wall	
10/77	TL99322476	68 Butt Road	Roman inhumation(s)	
11/77a	TL99232475	5 Alexandra Road	negative	
11/77b	TL96662393	149 Straight Road	Roman road; owner's excavation	11
12/77	TL99612495	Evangelical Church, Abbeygate Street	negative	
0/78	TM01401502	The Strood, West Mersea	Anglo-Saxon causeway (c 700)	Crummy et *al* 1983
1/78a	TL99782503	Eld Lane/Victoria Place	Roman foundations	
1/78b	TL96362505	former site of Sainsburys, London Road/Straight Road	negative	
3/78a	TL99322520	Balkerne Gardens (Phase 2)	Roman north-south street & foundations	

5/78	TL96362318	Kidman's Dyke	top of ditch of dyke
7/78	TL96272340	Bramble Tye, Stanway Green	negative
9/78a	TL99632501	1 & 1A Eld Lane	negative
9/78b	TL98192492	Maternity Hospital, Lexden Road	negative
10/78a	TL99052506	Rawstorn Road	Roman road
11/78a	TL99322491	Southway (behind cinema)	negative
11/78b	TM00062562	Castle Gardens (site of CGC 78 excavation)	edge of modern clay pit
11/78c	TL97022327	364-8 Straight Road	negative
11/78d	TL96312333	Gryme's Dyke	negative
12/78a	TL99112507	2 Papillon Road	Roman foundation
12/78b	TL99582494	Tesco's, St John's Street	three post-Roman wells & a culvert; Roman finds
2/79	TL99332554	Royal London building, Middleborough (site of MID 78)	Roman kiln, timber wells, street, wooden ?drain
3/79	TL99432523	St Peter's Church, North Hill	church foundation & buttress
4/79	TL99672534	9 East Stockwell Street	post-Roman well
5/79c	TL99032469	Maldon Road	disturbed inhumation
5/79d	TL98892493	Essex County Hospital	negative
6/79a	TL99762518	2-3 St Nicholas Passage	foundation, ?pits, ?Boudican wall
7/79b	TL99272509	Church Street & St Mary's Church	Roman street
7/79c	TL99592501	Sir Isaac's Walk	Roman wall, rampart, & early street
7/79d	TL96562439	Lexden & Shrub End area	various ditches cut by trench including Shrub End Dyke
7/79e	TL99282525	Balkerne Passage	Roman deposits
7/79f	TL99242495	Southway House, Southway	negative
8/79	TL99002553	Boys High School, Wellesley Road	negative
9/79a	TL99232573	Victoria Chase & North Station Road	negative
11/79a	TL99692446	former mortuary, Rye Gate	Roman deposit
11/79b	TL98902478	Essex County Hospital, Lexden Road	Roman pit & finds
12/79	TL99372543	40 North Hill	Roman deposits & post-medieval pits
1/80b	TL99262618	North Station Road/Essex Hall Road	negative
2/80b	TL98562491	22 Lexden Road	negative
3/80	TL99272623	North Station Road	negative
4/80a	TL99902524	Cowdray Crescent	Roman street, foundation, & floor
4/80b	TM00242504	St Mary's Convent School, Priory Street	negative
5/80b	TL99672526	East Stockwell Street	negative
6/80a	TL99652553	70-4 Northgate Street	Roman town wall
6/80b	TL99752528	6 George Street	negative
6/80c	TM00971267	Community Centre, High Street, West Mersea	negative
8/80a	TL99542538	7 Walters Yard	Roman floor, & a pit & foundation of uncertain date
8/80b	TL96412507	80 London Road	negative
8/80c	TL99072505	1 Rawstorn Road	negative
9/80a	TL99202513	St Mary's car park, Balkerne Lane	Roman finds
9/80b	TL96712368	252 Straight Road	negative
11/80	TL99532516	National Westminster Bank, 25 High Street	negative
0/81a	TL99462522	Albert Hall, High Street	negative
0/81b	TL99542499	39-40 St John's Street	post-Roman well, post-medieval pits, Roman town wall
3/81	TL99182495	32 Crouch Street	inhumations (probably Roman)
5/81	TL95952512	King Coel's Kitchen, King Coel Road	negative
0/82b	TL99592516	Culver Chambers, Culver Street West	negative
0/82C	TL99352502	Williams & Glynn's Bank, Head Street	post-medieval pottery & glass

0/82d	TL97402474	St Clare Road	pit	
0/82e	TM00232343	Cemetery Office, Mersea Road	negative	
2/82	TL99272602	St Mary's Cottage, Church Walk	Roman barrack(s), houses & drain, Anglo-Saxon pottery, early medieval rubble-lined graves	
3/82	TL99642503	40/1 Eld Lane	post-medieval ?pits & ?well	
4/82	TL96552443	Hunter's Rough, Straight Road/Heath Road	negative	
5/82a	TL99442499	Cameo Cinema, St John's Street	late medieval & later pottery	
5/82b	TL97362520	Lexden Road/Tapwoods	negative	
5/82d	TL99762531	Maidenburgh Street/William's Walk	human inhumation, Roman foundation, tessellated pavement, floors, street metalling	
6/82a	TM00092526	East Hill	negative	
6/82b	TL99972519	11 Queen Street	post-med cellar or soakaway	
6/82c	TL99612528	3-6 West Stockwell Street	negative	
8/82a	TL99702620	Cowdray Centre, Cowdray Avenue	negative	
8/82b	TL99582528	Victoria Chambers, St Runwald Street	negative	
8/82c	TL99922498	41 St Botolph's Street	negative	
8/82d	TL99962493	St Botolph's Church	negative	
8/82e	TL96692378	234 Straight Road	negative	
8/82f	TL96602390	199 Straight Road	negative	
8/82g	TL96632403	134 Straight Road	negative	
8/82h	TL96502422	153-9 Straight Road	negative	
8/82i	TL99482480	28 Chapel Street	negative	
8/82J	TL99632457	Civil Service Club, Flagstaff Road	negative	
8/82k	TL96762377	38 Worthington Way	negative	
8/82l	TL99152514	41 Crowhurst Road	negative	
8/82m	TL99702498	24 Osborne Street	negative	
8/82n	TL98822498	13 Lexden Road	negative	
8/82o	TL99212463	105 Butt Road	negative	
8/S2p	TL99002553	Boys High School, Wellesley Road	negative	
8/82q	TL99352499	17-21 Crouch Street	negative	
8/82r	TM00092543	14 Castle Road	negative	
12/82	TL95952512	King Coel's Kitchen, 24 King Coel Road	negative	
0/83b	TL99782529	Maidenburgh Street (former car park)	Roman street & ?robber trench	
0/83c	TL99712553	Ryegate/Northgate Street	Roman town wall & rampart, tessellated pavement & foundation	
0/83d	TMOO792475	54 Barrack Street	post-Roman well	
0/83e	TL958245	Winstree Road	negative	
3/83	TL99782481	St Giles's graveyard	negative	
4/83	TL492524	Williams & Griffins, High Street	Roman foundation & floors, post-Roman pits	
7/83a	TL98962520	St Albans Road	Roman dump	
7/83c	TL99952414	Plum Hall, Berechurch Road	negative	
8/83a	TL99652497	2-3 Stanwell Street	?Roman deposits, medieval carved stone capitals	
8/83b	TL99472473	24 South Street	post-Roman well, Roman pottery & other finds	
8/83c	TL99742490	Stanwell Street	Roman pottery	
8/83d	TL98692517	Nursing Home, Oaks Drive	negative	
9/83a	TL99492495	11 St John's Street	post-medieval finds	
9/83b	TL99602503	16-17 Trinity Street	Roman & later pottery, clay pipes	
10/83b	TL99632515	Culver Street West	negative	
12/83	TM01502431	Harbour Master's Office, Hythe Quay	negative	
0/84	TL99012501	107 Crouch Street	Roman street & building; observation of owner's excavation	Lockwood & Tripp 1985
1/84a	TL99352506	Post Office, Head Street	Roman military plinth, areas of tessellated pavement, foundation, & pit, & medieval robber trenches	
1/84c	TM00841249	Yew Tree House, Coast Road, West Mersea	negative	

2/84a	TL99622503	Trinity Street & Sir Isaac's Walk	Roman floor(s), foundation, & ?*pila* stack	
2/84b	-	Victoria House, Lexden	negative	
3/84a	TM03452115	Roman River at Rowhedge/East Donyland	timber wharf for gravel pit	
3/84b	TL97832504	76 Lexden Road	negative (finds: 'X series' 293)	
4/84b	TL99582528	Victoria Chambers, St Runwald Street	negative (finds: 'X series' 298)	
5/84a	TL99632532	43 East Stockwell Street	negative	
5/84b	TL99012504	56 Manor Road	Roman road & foundation	
6/84b	TL98302487	10 Vint Crescent	Roman cremations	
8/84a	TL99552500	37-8 St John's Street	Roman town wall	
8/84b	TL99352630	Post Office site, Clarendon Way	negative	
10/84	TL96592425	Former Royal Eastern Counties Hospital, Lexden Straight Road	Shrub End Dyke	
11/84a	TL99602162	Berechurch Dyke, near Berechurch Road	section across rampart & ditch of dyke	11
11/84b	TL99522500	42 St John's Street	Roman town wall	
11/84c	TL99242563	Sheepen Place	negative	
12/84	TL99812479	St Giles's	negative	
1/85	TL99562501	Sir Isaac's Walk	Roman town wall & rampart	
7/85a	TL99742509	Old Booking Office, Queen Street	Roman house, floors & foundations	
9/85	TL9962535	St Martin's churchyard	human bones	

Miscellaneous finds (all **in** this volume or the unpublished archive)

0/72a	TL99282481	?St Botolph's roundabout	?Roman pipeclay model of a bed (in private ownership)	
0/72C	TL990237	Googerat Barracks	late Iron Age - early Roman pottery (CM)	
0/73d	TL98182522	55 Endsleigh Court	Roman lead coffin	
10/73a	TL970224	Cheshunt Field, Gosbecks	tile concentration; field-walking ('X series' ?36)	
1/74a	TM01672286	29 Fingringhoe Road	?Iron Age pottery	
3/74a	-	Cobmarsh Island	medieval pottery from mudflats	
0/75	TM040216	Wivenhoe	two 19th-century bottles	
0/76a	TL99132492	?Crouch Street	Roman inhumation & flagon (unstrat) ('X series' 117)	
0/76b	TL99282481	?St John's Abbey Grounds	inhumations, pottery (unstrat) ('X series' 118)	
1/80a	TL97702507	86 Lexden Road	brooches & pottery from 1 st-century pit ('X series' 206)	CAR **2,** 12-13

Cropmark plotting

mid 1970s	TL969224	Colchester district esp Gosbecks	Roman settlement	11 & Crummy 1979b

Standing buildings: substantial surveys (all buildings 15th century or later unless otherwise stated)

1973	TM00552524	Portreeve's House, East Bay	timber-framed house	Crummy & Moyes 1976
7/76b	TL99232520	Balkerne Gate elevations	Roman gate	Crummy 1977, fig 17
1977	TL99592512	Trinity Street (TSC 77)	brick houses	
1978	TL99372554	Newmarket Tavern (MID 78)	timber-framed house	***3***
3/78b	TL99412629	Poplarhall Farm	timber-framed house	
1983-	TL99862532	Colchester Castle	Norman castle	place of publication to be decided

Standing buildings: miscellaneous notes and/or photographs (all in this volume or the unpublished archive, and all 15th century or later unless otherwise stated)

4/73a	TL9975252	57-8 High Street	timber-framed house
4/73b	TL9412520	?King Coel's Well, High Street	post-Roman well
7/76a	TM01612415	Hythe Maltings	maltings
1/77a	TL99632525	2 West Stockwell Street/134 High Street	former stable block

10/78b	TL99702501	Vineyard Street	Roman town wall
5/79b	TL99892522	93 High Street	timber-framed house
6/79c	TL99612501	6A & 6B Sir Isaac's Walk	timber-framed house
6/79d	TL99642499	62-3 Stanwell Street	timber-framed house
7/79a	TM00702533	Marriage's Mill	mill
2/80a	TL99402555	9 Middleborough	timber-framed house
5/80a	TM00732532	Siege House	timber-framed house
6/80a	TL99652553	70-4 Northgate Street	timber-framed houses
0/81c	TL93312404	The Old Forge, London Road, Copford	timber-framed house
0/82a	TM01332750	Rover's Tye Farmhouse, Ipswich Road	timber-framed house
9/82	TL94272567	Bakery Cottage, Halstead Road, Eight Ash Green	brick building
11/82	TL99642520	35-7 High Street	medieval cellar
6/83a	TM00422526	29 East Street	timber-framed house
6/83b	-	North Hill	timber-framed house
7/83b	TL98682230	Berechurch Road	timber-framed house
0/83f	TL99562531	St Martin's House, West Stockwell Street	18th-century brick house
1/84b	TM01332471	126 Hythe Hill	timber-framed house
4/84c	TL99742524	George Hotel, High Street	timber-framed building & wall painting
4/85	TM01422467	93 Hythe Hill	timber-framed house
6/85	TL99422505	Headgate House, Head Street	18th-century brick house
7/85b	TL99422509	34 Head Street (Shoe Fayre)	timber-framed house
8/85a	TL99422507	40 Head Street (Sketchley's)	timber-framed house
8/85b	TL24989949	48 St John's Street (Rice Bowl)	19th-century brick house
8/85c	TL99442508	Former Essex Standard Printing Works, behind 38 Head Street	19th-century industrial building

APPENDIX 2:
Building numbers for sites excavated 1971-85

For Buildings 1 to 76 (Lion Walk, Balkerne Lane, and Middleborough), *see CAR* ***3.***

No	*Period(s) to which building belongs*	*Date of building (construction/demolition)*
Culver Street 1981-2 & 1984-5 (1.81 or CUL)		
77	Sites A & B Periods 1 & 2	c 44-60/1
78	Sites B & C Periods 1 & 2	c 44-60/1
79	Sites C & J Periods 1 & 2	c 44-60/1
80	Sites G & J Periods 1 & 2	c 44-60/1
81	Sites G & H Periods 1 & 2	c 44-60/1
82	Sites G & H Periods 1 & 2	c 44-60/1
83	Site E Period 1	c 44-c 49(/55)
84	Sites E & M Period 1	c 44-c 49(/55)
85	Site K Period 1	c 44-c 49(/55)
86	Site E Period 2	c 49(/55)-60/1
87	Site E Period 2	c 49(/55)-60/1
88	Site E Period 2	c 49(/55)-60/1
89	Site E Period 2	c 49(/55)-60/1
90	Site E Period 2	c 49(/55)-60/1
91	Site M Period 2	c 49(/55)-60/1
92	Site K Period 2	c 49(/55)-60/1
93	Site A Period 3	765/75-c 7100/150
94	Site B Period 3	c 65/75-c 100
95	Site B Period 3	c 75/90-c 100/125
96	Sites C & J Period 3	c 75/90-c 100/125
97	Site G Period 3	c 150-c early 3rd century
98	Site G Period 3	c 150-c early 3rd century
99	Site E Period 3a	c 75/80-c 790/100
100	Site E Period 3a	c 75/80-c 790/100
101	Site E Period 3a	c 75/80-c 790/100
102	Site E Period 3a	c 75/80-c 790/100
103	Site E Period 3a	c 75/80-c 790/100
104	Site E Period 3b	c 790/100-c 150/200
105	Site E Period 3b	c 790/100-c 150/200
106	Site E Period 3b	c 790/100-c 150/200
107	Site E Period 3b	c 790/100-c 150/200
108	Site E Period 3b	c 790/100-c 150/200
109	Site E Period 3b	c 790/100-c 150/200
110	Site A Period 4	c 7100/150-c 7300+
111	Site A Period 4	c 7100/150-c 7300+
112	Site B Period 4	c 100-c 275/325
113	Site B Period 4	c 100/125-c 275/325
114	Sites C & J Period 4	c 100/125-c 275/325
115	Site H Period 5	c 225-c 275/325
116	Sites G, H, & J Period 5	c 225-c 275/325
117	Site G Period 4	c 200-c 225
118	Site G Period 4	c 200-c 225
119	Site G Period 4	c 200-c 225
120	Site G Period 5	c 225-c 7300
121	Sites D & M Period 3	765/75-c 150/200
122	Site E Period 4	c 150/200-c 275/325
123	Sites D, E, & M Period 4	c 150/200-c 275/325
124	Site E Period 4	c 150/200-c 275/325
125	Site K Period 3	2nd century
126	Not used	
127	Site E Period 5	c 275/325-c 400+
128	Sites G & J	711 th-12th centuries
129	Site H	?15th-16th centuries

130 Site W. . . . . 13th/15th centuries -19th/20th centuries

Silberd School (GBS)

131 Periods 1 & 2. . . . . *c* 44-60/1
132 Period 1. . . . . *c* 44-49
133 Period 2. . . . . 49-60/1
134 Period 2. . . . . 49-60/1
135 Period 2. . . . . 49-60/1
136 Period 2. . . . . 49-60/1
137 Period 3. . . . . 60/1-*c* 250/275
138 Period 4. . . . . *c* 250/275-*c* 350+

Butt Road (BUC)

139 Cemetery church. . . . . 4th century
140 ?Building at west end of church . . . .?4th century

Long Wyre Street (COC)

141 Period 3. . . . . c75-c100
142 Period 3. . . . . c75-c100
143 Period 4. . . . . c100-c150
144 Period 4. . . . . c100-c150
145 Period 5. . . . . c150-c275/300
146 Period 5. . . . . c150-c275/300
147 Period 5. . . . . c150-c275/300
148 Period 6. . . . . c275/300-c?400+
149 Period 8. . . . . c14th-15th centuries
150 Period 9. . . . . c16th century
151 Period 10. . . . . c17th-18th centuries

[19th/20th buildings (Period 11) not given building numbers]

Cups Hotel (CPS)

152 Period 2. . . . . c49-60/1
153 Period 3. . . . . 60/1-c225
154 Period 4. . . . . c225-c400+
155 Period 6. . . . . c13th-15th centuries
156 Period 7. . . . . c15th-?18th centuries
157 'Stone house'. . . . . medieval and later

Magdalen Street 1974 (MSC)

158 Period 2 . . . . . 14th/15th-19th/early 20th centuries
Period 3 (no building number). . . . . 19th/early 20th-20th centuries

St Helena's School 1976 (HEC)

159. . . . . *c* 150/225-?4th century

Maldon Road 1971 (MRC)

160. . . . . Flavian-early 2nd century

St John's Abbey Grounds 1972 (IRB)

161 St John's Church. . . . . Anglo-Saxon

Crouch Street 1973 (IRC)

162. . . . . ?*c* 150/200-?

Dutch Quarter 1975 (DTC)

163 Site A. . . . . ?early 19th century brick house foundations
164 Site A. . . . . Roman building
165 Site B. . . . . ?early 19th century brick house foundations
166 Site B. . . . . ?early 19th century brick house foundations
167 Site B. . . . . ?early 19th century brick house foundations
168 Site B. . . . . ?early 19th century brick house foundations
169 Site B. . . . . ?early 19th century brick house foundations

Lion Walk United Reform Church 1985 (234.85)

170. . . . . ?Mlc ?2nd-*c* ?4th centuries

APPENDIX 3:
The excavation of Head Gate in 1988

During resurfacing work at the junction of Sir Isaac's Walk and Head Street, several fragments of Roman wall were uncovered 0.3-0.5 m below the modern ground level. Although these remains had been extensively damaged during the laying of modern services, it was clear that they belonged to the eastern side of the south-west gate of the Roman town (Hull 1958, 59-60). The gate was one of several Roman gates which were used in post-Roman times. It was demolished around the middle of the 18th century.

Part of the west face of the east side of the gate survived intact to a height of 0.7 m above the probable original ground surface (Fig App 3.1). The north-west corner and parts of the northern face of this east side were also located. The surviving face was obscured by a thick coating of mortar (which was probably *opus signinum)* but sufficient was clear to establish that it was probably built of four courses of tile on top of two courses of septaria. The face, which was traced for approximately 1.3 m southwards, extended into the south section. The base of the face

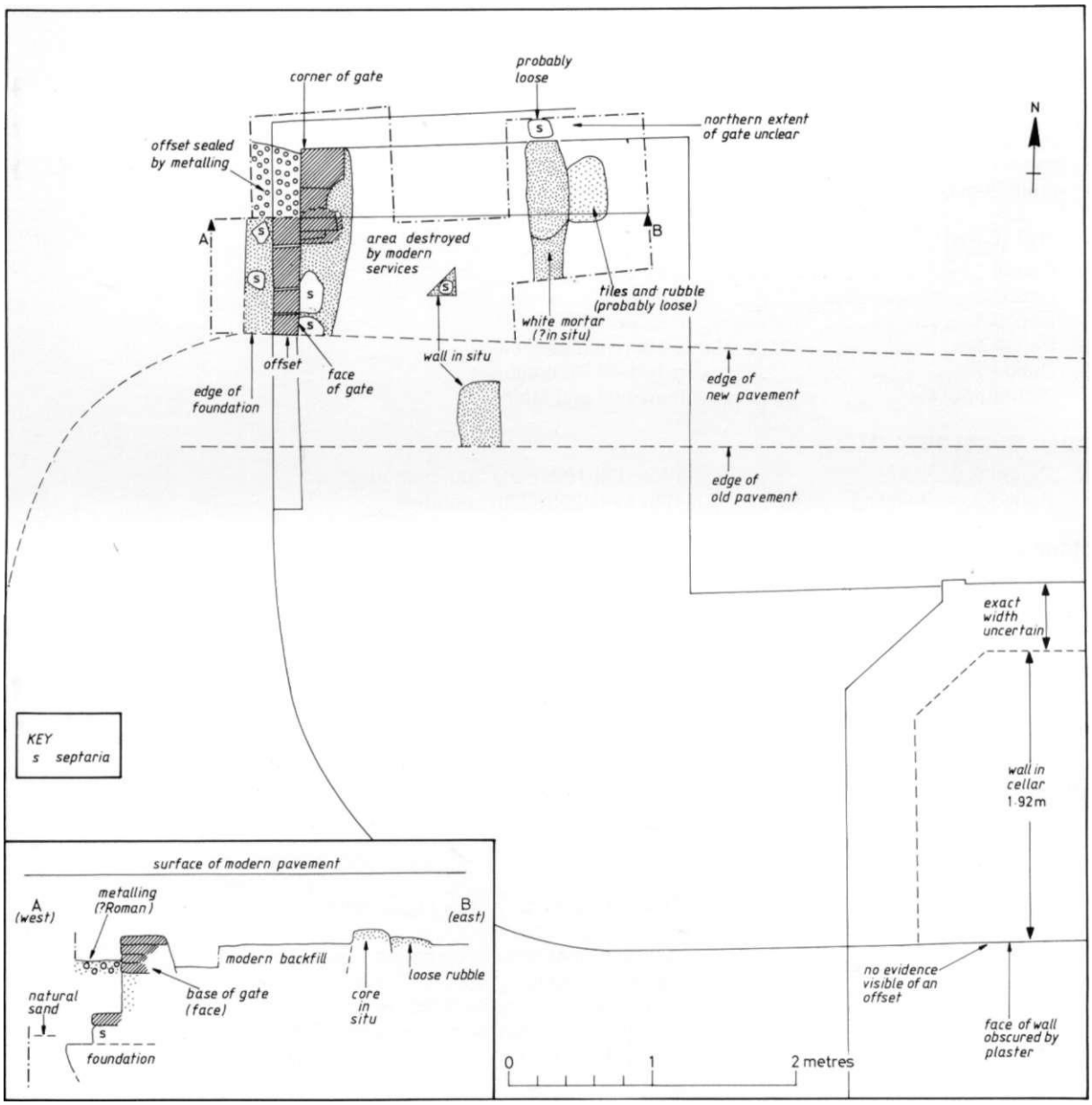


Fig App 3.1 The eastern side of Head Gate exposed in 1988.

was offset 200 mm. Like the smaller offset of the part of the town wall excavated further east (Fig 3.32), this consisted of an upper course of tile and a lower course of septaria (Fig App 3.1). The offset is much wider than the usual offset at the base of the Roman wall and consequently is likely to indicate the position of a reveal for a door. The western edge of the foundation was 200 mm to the west of the offset. Some ?Roman gravel metalling butted on to the face of the gate. Three other fragments of wall were found which appeared to be *in situ* (Fig App 3.1). The most important of these was a section of wall which included part of the north face. This lay 1.7 m east of the north-west corner of the gate. There was no evidence of any post-Roman repair work to the gate.

The shop on the south side of the junction of Sir Isaac's Walk and Head Street has a cellar in which a substantial part of the Roman wall still survives (Fig App 3.1). Most unusual is the fact that the south face of this section of wall appears to be intact. Although the position of the north face cannot be established precisely, the wall at this point appears to be about 2.5 m (8 ft 2 ins) wide.

Three other gates of the town have been excavated at least in part. The Balkerne Gate is anomalous because it was built around an existing monumental gateway (Fig 2.8; *CAR* **3**, 121-3). Duncan's Gate (the north-east gate) contained only one carriageway and, like the Balkerne Gate, has been fully excavated (Hull 1958, 36-41). Of particular interest here is the fact that the widths of the main carriageways in these gates are more or less the same, ie 3.3 m (Fig 2.8, p 14). This suggests a standard which can be applied to any hypothetical reconstruction of the plan of the Head Gate. The 'North Gate' was at the northern end of the street leading to the Head Gate. Only the eastern part of the gate has been recorded (Hull 1958, 32-4) and thus its overall plan is uncertain. However Hull felt that it only had a single arch in which case it would probably have been broadly similar in plan to Duncan's Gate.

The presence of the Roman town wall in the cellar in Head Street referred to above makes it possible to reconstruct the probable plan of the east side of the gate (Fig App 3.1). The result turns out to be very similar to the east and west halves of Duncan's Gate. North to south, the Head Gate measures about 5.6 m (18 ft 4 ins) which is practically the same as the equivalent measurement at Duncan's Gate (5.7 m, 18 ft 8 ins). If, as seems likely, the North Gate did not continue much further south than about a foot as Hull's description allows (1958, 33), then in plan the remains would be very similar to the reconstruction proposed here for the east side of the Head Gate. (Hull's 'offset', which he detected with the use of a 'sounding bar', is more likely to have been the edge of the foundation.) Thus the plans of the three gates would have much in common although there are significant differences. In contrast to Duncan's Gate, the curved parts of the North Gate were based on a large radius (equivalent to the width of the wall) and the reveals do not seem to have terminated before reaching the townside face of the gate. In these two aspects, the Head Gate has been reconstructed in Figure App 3.2 to match the North Gate rather than Duncan's Gate.

Reconstructing the complete plan of the Head Gate is largely guesswork. The position of the north-south street which is critical in any attempt to reconstruct the plan of the gate can be fixed to within one or two metres on the basis of the position of the North Gate and the assumption that the street was parallel to the streets to the immediate east and west which fortunately have been sufficiently exposed to allow

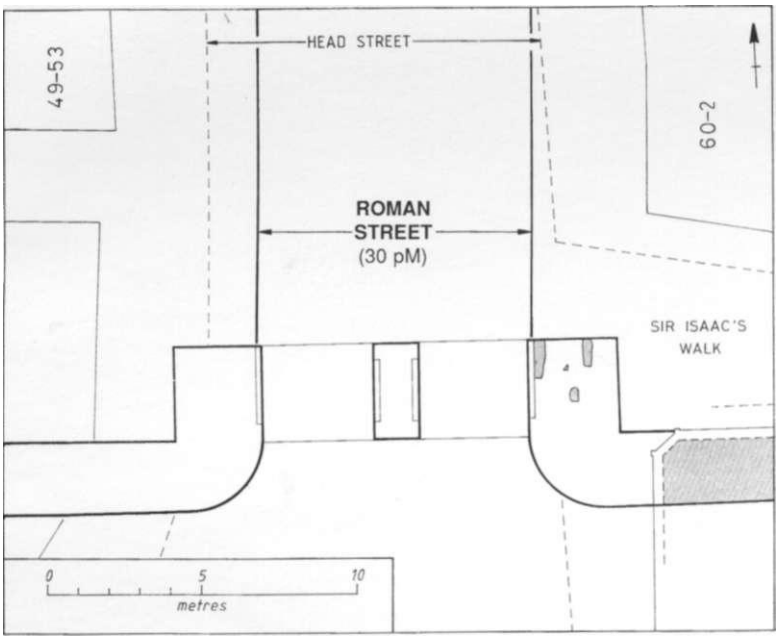


Fig App 3.2 Conjectural reconstruction of the ground plan of the Head Gate in the Roman period.

accurate plotting. Thus to judge by the probable position of the street, the gate is unlikely to have been wide enough for four arches like the Balkerne Gate.

One possible reconstruction based on two archways is given on Figure App 3.2. The width of the archways here has been made equal to the 'standard' described earlier and the width of the central pier has been put at 5 pM to match the one at the Balkerne Gate *(see* Fig 2.8). The resulting plan neatly fits the available space between the two opposing modern street frontages. The latter were in their present positions at least as far back as c 1750 when the gate was still standing (Morant 1748, plan of Colchester). The distance between the two frontages is about twice that between the corresponding frontages next to the North Gate before it was pulled down. The difference between these distances presumably reflects the difference in the sizes of the respective gates.

Alternatively the Head Gate could have contained just one carriageway and thus have been broadly similar to Duncan's Gate and presumably North Gate too. Such a supposition would allow it to be reconstructed as a gate 30 pM wide, which would mean that it neatly fitted the presumed width of the Roman street. However, the centre-line of the Roman street would need to have been 8.75 pM further east than the evidence currently suggests to agree with such a reconstruction. Some support for this reconstruction is provided by Morant who shows only one large arch straddling Head Street. On the other hand, Morant's treatment of the gate could be symbolic rather than representational or it could indicate a major rebuilding of the gate in post-Roman times.

APPENDIX 4:
Ceramic dating evidence for the rampart and town wall at Culver Street

The following list is a catalogue of the pottery from the section (Sx 3.35 on 35 mm microfiche) through the rampart and other deposits behind the town wall at Culver Street. For most of the contexts the material is grouped according to fabric and within fabric, by form, the weight being given in grams for each of these combinations. For example, 'BA SG, 27A (5 g)' indicates 'South Gaulish Samian, Form 27A (weighing a total of 5 grams)' or' KX, 118A (3g)' indicates 'black burnished-type grey ware, Form 118A (weighing 3 grams)'. Only the total weight and the range of fabrics present are given for the latest contexts because these are of less significance in terms of the dating of the defences. The codes are described and discussed in Colchester Archaeological Report **10** *(The Roman pottery from excavations in Colchester, 1971-85* by R P Symonds and S Wade). **'St'** indicates a stamp number. Other numbers in bold (always after weight) refer to vessels illustrated in *CAR* **10**. The data has been compiled from the fuller details in the Roman Pottery Archive (Excavations 1971-85) in the Colchester Museums. Where appropriate, the date of the latest pottery in each group is given after each context number.

RAMPART NORTH SECTION

Disturbed natural

GL3616
3662:
GX, 151 A (47 g)

Period 1/2 floors

GL3604 floor surface:
3664: Roman
AJ, 52D (92 g)

Robbed Period 1 plinth
(Building 82)

GL3602 upcast:
3663: Roman
DJ, 2D (50 g)

Thin Period 3a **street**
(early construction phase of wall(?))

GL3561:
*3607:*1 st century
BA SG, 29A (2 g); **TZ, 5Z** (60 g)

Period 3b silt/dump

GL3560:
*3582:*1 st century +
ON, 2M (5 g); DJ, 2D (5 g); **TZ,** 41 (8 g); GX, 2F (3 g)

Period 3c street
(septaria chippings & mortar) contemporary with construction of Roman wall (surface eroded early in Period 3d-4/5(?))

GF1562: (prob 2nd - 3rd century but probably contaminated by Period 3d-4 cultivation)
3527:
DJ, 2D (5 g); GX, 2F (23 g)

Period 3e-4 dump & ?cultivated soil
(area cultivated or eroded early in Period 3d-4(?))

GL1518:
*1543:*1 st century +
BA CG, 27C (42 g); BA EG, 27B (8 g); BA SG, 2A (5 g); BA SG, 18A (7 g); BA SG, 27B (8 g); BA SG, 27C (3 g); BA SG, 36A (8 g); BA SG, 37A (6 g); BA SG, 37C (5 g); GP, 17B (17 g); GQ, 37A (32 g), **32;** WA, 99A (12 g); AA 09, 9D (32 g); AA 17, 17D (30 g); AA 59, 59D (275 g), AJ, 52D (110 g), DJ, 2D (95 g), DJ, 3A (50 g); DJ, 3D (55 g), DJ, 118A (6 g); TZ, 2A (84 g); GX, 2F (176 g); GX, 3B (82 g); GX, 50A (32 g); GX, 94A (4 g); GX, 100A (6 g); GX, 154A (25 g); GX, 154B (10 g); HZ, 2E (13 g); HZ, 3C (15 g); HZ, 3D (30 g)
1630: early 1st century
BA SG, 28A (5 g); MP, 12A (15 g), 9; DJ, 2D (10 g)
*1815:*2nd century +
GX, 2F (10 g); GX, 239A (18 g)

GL1435
*1506:*1st century +
BA SG, 18A (5 g); BA SG, 27B (8 g); WA, 2B (11 g); DJ, 2D (5 g); DJ, 158H (15 g); GA, 21 (5 g); GX, 2F (332 g); GX, 3B (111 g); GX, 24A (49 g); GX, 25B (52 g); GX, 32A (56); GX, 50B (13 g); GX, 109B (2 g); GX, 154A (84); GX, 239A (4 g); HZ, 2C (13 g)
*1516:*2nd - 3rd century
BA SG, 27A (5 g); CZ, 3A (10 g); AA 17, 17D (16 g); AA 25, 15A (28 g); DJ, 94A (15 g); GX, 2C (20 g); GX, 2F (228 g); GX, 3B (90 g); GX, 3C (52 g); GX, 50A (190 g); GX, 100A (1 g); GX, 151A (24 g); GX, 154A (3 g); GX, 191A (17 g)

GL1436
1443: Roman
GX, 2F (6 g); GX, 154A (31 g)
1796: early 2nd - early 3rd century
AJ, 52D (190 g); DJ, 2D (50 g); GA, 153 (15 g); GX, 2C (5 g); GX, 2F (106 g); GX, 3B (32 g); GX, 32B (6 g); GX, 50A (56 g); GX, 109A (17 g); GX, 154B (11 g); GX, 239 (33 g)
1915: 3rd - 4th century
WA, 2E (23 g); DJ, 2A (2 g); DJ, 2D (72 g); DJ, 114A (25 g); GX, 2F (78 g); GX, 3C (10 g); GX, 151A (51 g); HZ, 3B (42 g)
*3682:*1 st century
BA SG, 33 (35 g)

GL1232
1232:
CZ, 3N (21 g)
1242: prob 3rd century +
BA SG, 37B (18 g), BA SG, 89B (2 g); AU, 2A (96 g); DJ, 2A (14 g); DJ, 2D (10 g); GX, 2F (51 g); GX, 3Z (8 g); GX, 106B (4 g); GX, 239A (18 g)
1794: Roman
DJ, 2D (3 g)

GL1189
1237: 2nd century +
BA SG, 2A (2 g); BA SG, 27A (3 g); BA SG, 42A (13 g); BA SG, 85B (1 g); CB, 20A (30 g); AA 12, 12D (5 g); AA 18, 17D (76); AJ 18, 17D (76 g); AJ, 52 D (24); DJ, 2A (5); DJ, 2D (80 g); GX, 2F (95 g); GX, 100A (2); GX, 109A (20); GX, 109A (2 g); GX, 154A (52 g); GX, 159A (14 g); GX, 239A (7 g); GX, 243A (29 g)
1430: Roman
GX, 2F (9 g); GX, 147A (16 g); HZ, 3E (25 g)
1792: Roman
GX, 2F (6 g); GX, 89A (40 g)

Period 4/5 **dump**

GL1055
1169: mid 2nd - 3rd century
CB, 2A (2 g); ON, 2A (25 g); GP, 38A (25 g); DJ, 158H (25 g); GA, 2K (7 g); GB, 21 (8 g); GB, 43A (11 g); GB, 11A (4 g); KX, 118A (3 g); GX, 2F (24 g); GX, 109B (6 g); GX, 146A (12 g); GX, 272B (7 g); HZ, 2B (62 g); HZ, 2B (62 g); HZ, 3E (76 g)
*1191:*1st - 2nd century
DJ, 3A (90 g); GX, 2F (36 g)

1870: mid 2nd - early 3rd century
BA CG, 37B (6 g); BA EG, 33B (15 g); DJ, 2B (5 g); DJ, 2D (15 g); DJ, 2D (25 g); GB, 2K (72 g); GB, 3B (13 g); GB, 3Q (20 g); GB, 43A (49 g); KX, 118A (3 g); GX, 2F (23 g); GX, 2F (23 g); GX, 50A (58 g)
1881: mid 2nd - early 3rd century
BA CG, 27A (2 g); BA SG, 19A (3 g); BA SG, 86B (10 g); BA SG, 86C (22 g); DJ, 2D (50 g); DJ, 108A (150 g); GA, 21 (7 g); GX, 2F (79 g); GX, 3B (9 g); GX, 50B (12 g); GX, 109B'(1 g); GX, 156A (25 g)

GL0865
0947: prob 4th century
BA CG, BA EG, BA SZ, DZ, WA, WB, DJ, GA, GB, KX, GX (1313 g)
1023: prob 4th century
BA CG, CB, DZ, EA, EZ, FJ, GP, WA, WC, DJ, GA, GB, KX„ GX, HZ (2238 g)
1047: mid 2nd - 3rd century
BA EG, ON, CZ, DJ, KX, GX (121 g)
1057: mid 2nd - 3rd century
BA CG, BA EG, BA MV, CB, ON, CZ, WA, WC, AA 18, AA 27, AJ, DJ, TZ, GA, GB, KX, GX, HZ (2254)
*1319:*3rd - 4th century
CZ, EA, TY TE, WA, DJ, GA, KX, GX (506 g)
7329:3rd century
BA CG, BA EG, CB, MQ, ON, CZ, DJ, GB, GX, HZ (473 g)
7393:3rd - 4th century
BA SG, CB, ON, EA, WA, AJ, DJ, TZ, GA, GB, KX, GX, HZ (933 g)
1750: mid 2nd - 3rd century
CB, DJ, GA, GB, KX, GX (280 g)

GL1054
*1186:*1 st century +
DJ, GX (37 g)
1420: mid 2nd - early 3rd century
BA SG, DJ, TZ, GB, GX, HZ (339 g)
*1788:*3rd century
BA CG, ON, EZ, AJ, DJ, GB, GX, HZ (885 g)

Period 5 dump

GL0877
OSS7:3rd - 4th century
BA SG, EA, TY TE, AA 27, KX, GX, HZ (297 g)
1328: mid 2nd - 3rd century
BA SG, CB, GX (203 g)

?Period 5 pit

GF0861
7370:3rd - 4th century
CH, 2A (25 g)

RAMPART SOUTH SECTION

Period 1/2 street

GL4359 road surface
*4370:*1st century
BA SG, 86B (7 g)

Silt on street (Periods 1/2 & 3a/b)

GL4358 road silt/eroded surface
*4364:*1 st century
BA SG, 89B (2 g)

GL4335 silt?
4346: Roman
DJ, 2D **(5** g)

GL4350 surface of street?
*4357:*1st century
UR, 44A (6 g); GX, 2F (47 g)

Subsided Period 3d dump

GL4351
4355: Roman
DJ, 2D (10 g)

GL4334
*4345:*1 st century
BA SG, 18A (9 g); BA SG, 89B (4 g); GX, 2F (51 g)

GL4333
4336: prob 1 st century
BA MV, 37B (g), **568;** BA SG, 37A (11 g), **295;** WA, 1E (29 g); DJ, 2D (80 g); DJ, 163A (40 g); TZ, 2A (118 g); TZ, 3A (275 g); GX, 2F (136 g); GX, 3B (48 g); GX, 3G (31 g); GX, 25B (90 g); GX, 50A (7 g); GX, 109A (6 g); GX, 151A (50 g); GX, 246C (122 g); HZ, 2B (924 g)

GL4326
*4343:*2nd - 3rd century
AA18, 17D(170g);AJ, 52D(12g);DJ, 2D (60 g); DJ, 3G (35 g); DJ, 97A (20 g); DJ, 165B (50 g); GX, 2F (134 g); GX, 25A (64 g); GX, 32A (5 g); GX, 32B (6 g); GX, 50B (8 g); GX, 154A (16 g)

GL4331
*4339:*1 st - 2nd century
KX, 21 (5 g); GX, 2F (5 g); GX, 32B (15 g)

GL4330
*4340:*2nd - 3rd century
BA SG, 18B (9 g); CB, 10A (10 g); GX, 2F (21 g)

GL4322
4324: prob 1 st century
BA MV, 37A (19 g), **658;** ON, 3G (25 g); WA, 28B (12 g); DJ, 2D (65 g); GX, 2F (14 g); GX, 3B (30 g); GX, 220A (17 g)

Period 3d dump

GL4321
4344: Roman
GX, 2F (4 g)

GL4310
4377: Flavian - Trajanic
BA SG, 18A (8 g); MQ, 2A (5 g); DZ, 2G (47 g); GQ, 36C (46 g); WA, 2A (4 g); AJ, 52D (47 g); DJ, 2D (85 g); DJ, 3D (50 g); DJ, 3G (55 g); DJ, 118A (5 g); DJ, 158H (10 g); GX, 2B (5 g); GX, 2F (472 g); GX, 3B (200); GX, 3G (37 g); GX, 24B (12 g); GX, 32A (11 g); GX, 50A (9 g); GX, 50A (94 g); GX, 100A (20 g); GX, 104 (102 g); GX, 106B (9 g); GX, 109B (11 g); GX, 154 (18); GX, 154B (14 g); GX, 156A (22 g); GX, 239A (6 g); GX, 240A (26 g); GX, 242A (9 g);HZ, 2C (150 g)
4374:
EZ, 2F (6 g)
*4323:*1st century
BA SG, 2A (1 g); BA SG, 90C (8 g), **St 204;** GX, 2F (13 g); GX, 3B (21 g); GX, 50A (39 g); GX, 154A (7 g); GX, 196B (264 g)

GL4309
4372: Claudian-Vespasianic
BA SG, 89B (6 g); ON, 2A (35 g); AA 95, 95D (12 g); DJ, 167B (3 g); TZ, 3A (265 g); GX, 2F (21 g); GX, 2F (208 g); GX, 20A (108 g); GX, 24B (8 g); GX, 106A (14 g); GX, 140B (16 g), **477;** GX, 151A (116 g)
*4320:*1st - 2nd century
BA SG, 18A (10 g); BA SG, 37A (61 g); AA 25, 15D (54 g); AA 29, 27D (34 g); AJ, 52D (226 g); DJ, 69A (90 g), **256;** DJ, 166A (275 g), **630;** GX, 2F (107 g); GX, 3B (21 g); GX, 3G (102 g); GX, 50A (32 g); GX, 106B (4 g); GX, 243A (12 g); GX, 246C (172 g); HZ, 15A (240 g)

Period 3d dump layer

GL4220
4233: Roman
GX, 2F (85 g); GX, 3B (45 g); GX, 3G (4 g); GX, 40A (14 g); GX, 50A (31 g); GX, 239A (8 g)

GL4219
*4236:*1st century
AA 10, 10D (12 g); AJ, 52D (183 g); GX, 2C (4 g); GX, 2F (144 g); GX, 109B (2 g); GX, 154A (7 g); GX, 156A (14 g); GX, 159A (17 g)
*4356:*2nd - early 3rd century
GX, 100A (7 g)

GL4218
4239: pre-Flavian
BA SG, 18C (120 g), **St 137;** BA SG, 24B (5 g); BA SG, 89B (2 g); BA SG, 93B (3 g); UR, 24A (26 g); WA, 2E (28 g); AJ, 52D (75 g); DJ, 2D (45 g); DJ, 118A (55 g); GA, 2B (6 g); GX, 2C (2 g); GX, 2C (12 g); GX, 2F (24 g); GX, 2F (262 g); GX, 2X (10 g); GX, 3B (42 g); GX, 3C (18 g); GX, 3G (6 g); GX, 46A (47 g); GX, 50A (55 g); GX, 106B (3 g);GX, 154A (6 g)
4266: prob 1st century
WA, 39A (17 g) **55;** GX, 2F (17 g)

GL4214
*4238:*1 st century +
BA SG, 29B (7 g); EC, 2B (2 g); TD, 51 (320 g); TZ, 2A (80 g); GX, 2F (16 g); GX, 100A (3 g); GX, 100B (8 g)

GL4213
*4234:*1st century +
AA 80, 81A (4 g); TZ, 2A (38 g); GX, 2F (88 g); GX, 3C (17 g); GX, 168A (12 g)

Rampart (Period 3e)
(subsided) (mainly sand/sandy loam)

GL4304
4373: early 2nd - early 3rd century
BA SG, 86B (4 g); DJ, 114A (15 g); DJ, 161A (40 g); GA, 115 (22 g); GX, 2D (4 g)

4316: prob 3rd century +
FJ, 2C (7 g); GA, 2K (56 g); GX, 2F (30 g)

GL3439
*3447:*2nd - 3rd century
BA SG, 15A (1 g); FJ, 60A (21 g), **61;** KX, 2L (11 g); GX, 2C (5 g)

?Rampart (Period 3e)
(north of drain/trench)

GL4212
4229: prob 1 st century
AJ, 54H (355 g), **St 70;** DJ, 3G (30 g); DJ, 48B (40 g); TZ, 40A (106 g); GX, 2F (16 g); GX, 3B (42 g); GX, 50A (5 g); GX, 154A (11 g); hZ, 2B (70 g); HZ, 14A (76 g)

GL4255
*4258:*1st century
BA CG, 37A (6 g); BA CG, 37A (14 g), **740;** BA SG, 27A (4 g); ON, 42A (60 g); AA 11, 10D (38 g); AA 18, 17D (118 g); DJ, 2D (15 g); DJ, 3Z (20 g); KX, 2L (4 g); GX, 2F (30 g); GX, 2F (90 g); GX, 32A (9 g); GX, 32B (5 g); GX, 50A (18 g); GX, 50B (21 g); GX, 154A (15 g)
*4269:*1st - 2nd century
BA SG, 37B (7 g); KX, 2L (13 g); GX, 2F (96 g); GX, 3G (16 g); GX, 20A (46 g); GX, 50B (36 g); GX, 94B (10 g); GX, 154A (6 g); GX, 190A (53 g); HZ, 2B (66 g)
4275: Antonine
BA SZ, 37B (52 g), **1155;** ON, 2A (25 g); ON, 42A (25 g); FJ, 32A (74 g), **52;** DJ, 2D (15 g); DJ, 3A (20 g); DJ, 67A (10 g); GB, 2E (4 g); GX, 2F (158 g); GX, 3B (39 g); GX, 154A (12 g); GX, 240A (5 g); HZ, 2B (17 g)
4288: 2nd - 3rd century
KX, 2L (9 g); GX, 2F (16 g); GX, 156A (29 g)

?Rampart (Period 3e)
(south of drain/trench)

GL4306
*4317:*2nd - 3rd century +
MQ, 71A (15 g); MQ, 81B (50 g); DJ, 119A (20 g); GX, 2F (44 g); GX, 3B (10 g); GX, 60A (56 g), **230**

GL4307
4319: prob 2nd century +
BA SG, 86B (4 g); MQ, 2A (15 g); AJ, 52D (10 g); DJ, 2D (5 g); GX, 2F (5 g); GX, 126A (12 g), **431**; GX, 156A (4 g)

GL4274
4279: mid 2nd - 3rd century
BA CG, 19A (34 g); BA CG, 27B (2 g); BA CG, 27B (16 g); BA CG, 31C (39 g); BA SG, 33B (5 g); BA CG, 50A (10 g); BA CG, 85C (6 g); BA CG, 89C (38 g); BA CG, 95B (2 g); BA MT, 18A (2 g); BA SG, 2A (1 g); CB, 2B (2 g); MQ, 2A (25 g); ON, 2A (1 g); FJ, 2C (4 g); AA 12, 66D (10 g)
4285: mid 2nd - 3rd century
BA SG, 18A (16 g); BA SG, 89B (5 g); CB, 2A (3 g); EZ, 3H (60 g), **39;** UX, 52A (6 g), **51**
4297: mid 2nd - 3rd century +
MQ, 2A (35 g)
4299: prob 3rd century +
BA SG, 33A (3 g); EZ, 14 (360 g), **20;** DJ, 2D(15g); DJ, 158C (280 g)
4318: mid 2nd - early 3rd century
BA SG, 37B (10 g)

?Modern drain or trench

GF2453
2457: mid 2nd - 3rd century
BA EG, EZ (23 g)
2621: mid 2nd - early 3rd century
BA CG, BA EG, BA MV **(616),** BA SG, BA TR, ON (98 g)

APPENDIX 11:
Coin Catalogue 1 (the most stratigraphically significant coins from the Culver Street and Gilberd School sites: listed by context)

CULVER STREET

Building 77, Sites A & B Periods **1** & 2, pp 39-44

Stake hole (group of) & small pit in Room 8: ?Period 1/Iron Age. B2054 F602: Cunobelin 10-40.

Construction level in Room 8: Period 1. B2152 L596: Caligula 37-41.

Make-up: Period 1. B2391 L687: Claudius I 43-64.

Large cess-pit: Period 1/2. B1063 F282: Caligula 37-41.

Partition wall between Rooms 2/3: Periods 1 & 2. B2032 F515: Agrippa 40-50.

Pit in Room 3: Period 2. B2528 F867: impression of Coritanian stater 10-40.

Street between Buildings 77 and 78, Site B Periods 1 & 2, pp 43-4

Gravel metalling: Period 1. B2197 L629: Caligula 37-41.

Make-up: Period 1. B2391 L687: Claudius I 43-64.

Building 78, Sites B & C Periods 1 & 2, pp 44-5

Slot/gully in Room 1: Period 1. B1922 F564: Claudius I 43-64.

Small pit (Building 78?): Period 1. B2001 F586: Augustus 31 BC-AD 14.

Floor/make-up, with occupation horizon in Room 6: Period 1/2. B1778 L428: ?Tasciovanus or Cunobelin 10-40.

Building 79, Sites C & J, Periods 1 & 2, pp 45-8

Dump layer/make-up in Room 1: Periods 1/2. C442 L82: Claudius I 43-64 x 2.

Burnt floor in Room 1: Period 2. C422 L58: Agrippa 40-50.

Make-up in Rooms 2/3: Period 1. C431 L76: Claudius I 43-64.

Occupation lenses in Rooms 2/3: Periods 1/2. C403 L63: Claudius I 43-64.

Sandy clay floor (traces of burnt Boudican) in Rooms 2/3: Period 2. C390 L60: Claudius I 43-64. C405 L60: Claudius I 43-64 x 2.

Clay floor: Period 1. C452 L87: Claudius I 43-64.

Drain: Period 1. J318 F309: Claudius I 43-64.

Destruction debris: Period 2. J334 L222: illegible 1st century.

Destruction debris: Period 2. J252 L222: *hoard* Claudius **I** 43-64 x 5, Agrippa 40-50.

Building 83, Site E Period 1, pp 50-4

Timber-lined latrine pit in Room 7: Period 1. E1334 F900: Augustus 28-26 BC.

Occupation: Period 1. E1219 L166: Antonia 43-64.

Building 87, Site E Period 2, pp 57-9

Occupation layers: Period 2. E893 L67: Claudius I 43-64,

Buildings 88/89, Site E Period 2, pp 57-9

Make-up: Period 2. E1100 L119: Claudius I 43-64.

Building 89, Site E Period 2, pp 57-9

Make-up: Period 2. E1360 L89: ?Agrippa 40-50.

Dump: Period 2. E1255 L108: Tiberius 14-37.

Layers of burnt colonial occupation: Period 2. E896 L56: Claudius I 43-64.

Building 90, Site E Period 2, pp 57-9

Rectangular pit: Period 2. E1090 F957: Caligula 37-41.

Building 91, Site M Period 2, p 59.

Burning (demolition?): Period 2 destruction. M217 L216: Claudius I 43-64.

Sandy clay floor: Period 2. M409 L403: Claudius I 43-64.

Building 93, Site A Period 3, pp 65-7

Occupation: Period 3. A535 L209: Claudius I 43-64. A542 L210: Cn Lentulus 88 BC.

Building 94, Site B Period 3, pp 67-9

Occupation in Room 5a: Period 3. B1444 L352: Vespasian 69-79.

Slot/gully: Period 3. B1448 F368: Titus 71-9.

Small pit/posthole in Room 2: Period 3. B1464 F420: Vespasian 69-79.

Small pit in Room 2: Period 3. B1697 F498: Nero 64-8.

Small pit/posthole in Room 5a: Period 3. B1684 F494: Vespasian 69-79.

Building 96, Sites C & J, pp 69-70

Redeposited Boudican destruction debris: early Period 3. C333 L49: Vespasian, 69-79.

Redeposited Boudican destruction debris: early Period 3. C365 L50: Nero 64-8.

Pre-building dump: early Period 3. C318 L39: Vespasian 69-79.

Redeposited Boudican destruction debris: early Period 3. C363 L47, Claudius I 43-64.

Redeposited Boudican destruction debris: : early Period 3. C336 L51: Claudius I 43-64. C391 L57: Agrippa 30-40.

Building 99/100, Site E Period 3a, pp 72-3

Make-up: Period 3a. E502 L21: Vespasian 69-79.

Destruction debris & make-up: Period 3a. E629 L24: Vespasian 72-4. E639 L24: illegible 1st century. E664 L24: Vespasian 69-79.

Building 108, Site E Period 3b, pp 73-4

Make-up: Period 3. E699 L33: Claudius I 43-64.

Building 112, Site B Period 4, pp 76-9

Occupation in Room 1: Period 4a. B735 L147: Lucilla 164-9.

Occupation in Room 1: Period 4b. B592 L120: Faustina II 145-61.

Dump/demolished clay wall in Room 1: Period 4/5. B393 L16: illegible *??denarius* late 2nd-early 3rd century. B394 L16: Severus Alexander 222-35.

Demolished daub walling in Room 1: Period 4/5. B366 L43: ?Valerian I 253-60.

Dump in Room 2: Period 4a. B815 L165: illegible *denarius* 2nd-3rd century. B834 L165: Trajan 98-117.

Footing in Room 2: Period 4a. B932 F268: illegible *Idenahus* ?3rd century.

Make-up in Room 2: Period 4b. B771 L142: barbarous radiate 270-84.

Dump patch in Room 2: Period 4. B553 L88: Septimius Severus 193-211.

Gully in Room 2: Period 4. B878 F265: Vespasian 69-79. B1042 F265: Vespasian 69-79.

Lens of occupation in Room 2: Late Period 4. B533 L79: Elagabalus or Severus Alexander *c* 220-40.

Make-up in Room 5: Period 4a. B1039 L236: Nero 64-8.

Slot in Room 5: Period 4b. B673 F116: Trajan 114-17.

Dump in Room 6: Period 4a. B1152 L244: Trajan 98-117.

Dump in Room 6a: Period 4b. B766 L137: ?Marcus Aurelius (or ??Hadrian) 161-80?.

Pit in Room 6a: Period 4b. B915 F278: Domitian 86-7.

Dump in Room 6a: Period 4b/c. B2165 L63: Vespasian 69-79.

Mixed dump in Room 6a: Period 4c. B340 L36: Septimius Severus 193-211.

Small pit in Room 6b: Period 4. B2265 F678: Antoninus Pius 138-61.

Gully between Buildings 112 & 113: Period 4. B752 F108: Faustina II 145-61.

Robber trenches for Building 112: medieval. B165 F79: Antoninus Pius 138-61. B243 F111: Valens 367-75.

Building 113, Site B Period 4, pp 79-82

Occupation lenses in Room 1: Period 4. B666 L133: illegible *as* late 2nd-early 3rd century

Dump in Room 1: Period 4. B890 L196: illegible fragment (if coin) 1st-3rd century.

Dump in Room 1: late Period 4. B534 L81: Trajan 98-117. B631 L102: Commodus 178.

Clay dump in Room 3: ?Period 4. B811 L170: Gordian III 238-44.

Demolition debris of Building 113: Period 4/5. B2561 ?L706: Valerian I 253-60.

Gully between Buildings 112 & 113: Period 4. B752 F108: Faustina II 145-61.

Robber trenches for Building 113: medieval. B14 F3: Valens 367-75. B44 F3: barbarous radiate 270-84. B41 F21: illegible fragment 3rd-4th century. B71 F32: Arcadius 393-5. B85 F38: Tetricus II 270-4, Carausius 287-93. B201 F38: House of Constantino 350-60.

Building 114, Sites C & J Period 4, pp 82-3

Dump/make-up in Room 1: Period 4. C247 L29: illegible *sestertius* (??Nerva) mid 1st-mid 2nd century.

Irregular gully in Room 1: Period 4. C246 F75: Lucilla 164-92.

Make-up in Room 2: Period 4. C19 L19: ?Septimius Severus 193-211. C34 L19: Hadrian 117-38.

Occupation in Room 3: Period 4. C215 L24: Lucius Verus 161-9.

Demolition of clay wall: Period 4. C298 L37: Marcus Aurelius 139-61.

Gully: late Period 4. C30 F12: Claudius **II** 270.

Robber trenches for Building 114: medieval. C5 F2: illegible fragment 3rd-4th century. C26 F4: ?Severus Alexander 222-35. C16 F6: barbarous radiate 270-84, Constantius II 337-41. C252 F6 Vespasian 69-79.

Building 116, Sites G & H Period 5, pp 83-8

Floor make-up/dump: Period 5. G3377 L1019: Hadrian 134-8.

Destruction debris: Period 5. G1067 L1066: Septimius Severus 202-10.

Robbed mosaic floor: Period 4. H242 L236: barbarous radiate 270-84.

Building 117, Site G Period 4, p 88

Occupation/trample: Period 5. G3091 L1344: Marcus Aurelius 168-9.

Building 118?, Site G Period 4, pp 89-90

Occupation (Building 118?): Period 4 or 5? G1609 L1605: illegible *dupondius* 1st century.

Building 120, Site G Period 5, pp 90-5

Floor foundation: Period 5a. G787 L786: Antoninus Pius 138-61.

Linear feature: Period 5a. G3861 F3853: Agrippa 40-50.

Floor: Period 5b. G734 L480: Marcus Aurelius 161-80.

Occupation: Period 5b. G816 L518: Septimius Severus 193-211.

Occupation/midden: Period 5b. G119 L119: illegible 3rd-4th century. G156 L119: Antoninus Pius 145-61.

Occupation debris/midden: Period 5b. G976 L177: Marcus Aurelius 161-80.

Small pit: Period 5b. G683 F626: Elagabalus 218-22.

Hearth/pit: Period 5b. G1285 F1227: illegible 3rd-4th century.

Destruction debris/floor: Period 5b. G584 L206: Marcus Aurelius 161-80.

Destruction debris/occupation: ?Period 5b. G327 L327: illegible *antoninianus* 260-94. G357 L327: barbarous radiate 270-84.

Destruction debris: Period 5 or 6. H388 L387: illegible *denarius* 2nd-3rd century.

Destruction debris: Period 5b. H401 L382: Severus Alexander 222-35.

Destruction debris/dump: Period 5b. H460 L450: Trajan 98-117.

Building 122, Site E Period 4, pp 95-6

Dilapidation debris/occupation: late Period 4 or early Period 5. E479 L19: barbarous radiate 270-84.

Building 123, Sites D, E, & M Period 4, pp 96-108

Dump: Period 4. D252 L78: barbarous radiate 270-84.

Stairwell: Period 4. D287 F624: illegible 3rd century.

Drain in Passage 1: Period 4. D839 F773: Marcus Aurelius 158-9.

Drains in Passage 2: Period 4. D1079 F352: barbarous radiate 270-84. D1080 F352: barbarous radiate 270-84. D1081 F352: barbarous radiate 270-84. D1391 F352: Victorinus 268-70. D1540 F352: barbarous radiate 270-84. D789 F782 (part of F686): illegible 3rd-4th century.

Demolition debris in Passage 2: Period 4. D601 L243: illegible 3rd-4th century.

Occupation in Passage 4: Period 4. D715 L714: barbarous radiate 270-84. D762 L714: barbarous radiate 270-84. D862 L714: barbarous radiate 270-84.

Dump in Passage 4: Period 4. D1157 L974: illegible *antoninianus* 259-75.

Demolition debris in Passage 4: Period 4. D802 L649: barbarous radiate 270-84. D1503 L1143: Domitian 81-96.

Dump in yard: Period 4. D1830 L1818: Philip I 244-9.

Large pit in yard: Period 4. D1296 F1291: illegible 3rd-4th century. D1325 F1291 barbarous radiate 270-84. D1962 F1291: Commodus 180-92.

Drain in yard: Period 4. D1370 F1492: Victorinus 268-70.

Robbed drain in yard: Period 4. D1061 F22: Victorinus 268-70. D1093 F22: barbarous radiate 270-84. D1094 F22: Tetricus I 270-4.

Demolition debris in yard: Period 4. D1190 L1162: Severus Alexander 231-5.

Dump/levelling in yard: Period 4 demolition or Period 5. D1150 L272: barbarous radiate 270-84. D1167 L272: barbarous radiate 270-84.

Destruction debris of Building 123: Period 4. D150 L60: Carausius 287-93. D185 L60: illegible 3rd-4th century.

Demolition debris of Building 123(?): Period 4. D1005 L1004: Constantius II 335-40.

Robber trenches for Building 123: Period 6. D42 F27: illegible *antoninianus* 259-75. D64 F30: Tetricus II 270-4. D39 F38: barbarous radiate 270-84. D118 F38: Victorinus 268-70. D880 F498: illegible minim 3rd-4th century. D1683 F498: barbarous radiate 270-84. D690 F577 (?continuation F498): barbarous radiate 270-84. M302 F300: Constantius II 346-50.

Building 127, Site E Period 5, pp 112-17

Pile hole: Period 5. E334 F223: illegible fragment 3rd-4th century.

Hut 3, Site B Anglo-Saxon, pp 119-21

Occupation: Anglo-Saxon. B260 L13: Constantinopolis 330-45. B326 L13: Constantine I 330-45. B384 L13: barbarous radiate 270-84. B385 L13: Tiberius 11-14, Gallienus 253-68.

Backfill: Anglo-Saxon. B109 L6: barbarous radiate 270-84, Theodora 337-41, Constans 337-41, Arcadius 388-402. B125 L12: barbarous radiate 270-84. B157 L12: Urbs Roma 330-45. B171 L12: Urbs Roma 330-5.

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Building 131, Periods 1 & 2, pp 128-31

Occupation in Room 5: Period 1. A1992 L209: 1st century.

Make-up for Room 6: Period 1. A2463 L277: Agrippa 40-50.

Pit in Room 10: Period 1 (or 2). B67 F12: Agrippa 40-50

Make-up for Rooms 12-13: Period 2. B329 L47, 1st century

Dump: Period 2. A1799 L151: Claudius I 43-64.

Dump: Period 2 demolition of Building 131. A1505 L11 O-Claudius I 43-64. A1497 L111: Claudius I 43-64. A1512 L111: Tiberius 14-37.

Building 132, Period 1, p 132

Occupation: Period 1. A1835 L156: Agrippa 40-50.

Building 134, Period 2, pp 134-5

Dump: Period 2. A2163 L231: Claudius I 43-64

Building 136, Period 2, p 135

Occupation (?weathered): Period 2. A1325 L61: Claudius I 43-64.

North-south street, Periods 1-4, p 136

Gravel metalling: Periods 1-3. A2508 L161: Nero 64-8.

Gravel metalling: Periods 3-4. A1699 L134: Constantius II 330-1.

APPENDIX 12:
Coin Catalogue 2 (coins from the Culver Street and Gilberd School sites: listed by numismatic identification)

CULVER STREET

British 4	Cunobelin *M* 253, ?Tasciovanus or Cunobelin, impression of Coritanian stater, Iceni 'Pattern-horse' type as *M* 423, 425b, 429, 430
Roman Republic 3	Cn Lentulus C 345/1, Marcus Antonius C 496/2, 544/20
Augustus 2	*RIC* 1:18, obv bare head right no legend visible, rev square altar with panels flame on top
Caius & Lucius 1	*RIC* 1: (Aug) 350
Tiberius 4	*RIC* 1: (Aug) as 368, 370; (Tib) 3 x 2
Agrippa 10	*RIC* 1: (Tib) 32 x 4, copy as 32 x 5, ?copy as 32
?Agrippa 1	*RIC* 1 (Tib) ?copy as 32
Caligula 4	*RIC* 1 30 x 2, 43 x 2
Claudius I 57	*RIC* 1: copy as 94 x 6, copy as 95, copy as 96 x 2, copy as 100 x 48
Antonia 4	*RIC* 1: (Claud) 92, copy as 92 x 3
Nero 14	*RIC* 1: 277, as 286, as 315, 329 x 4, as 329 x 2, 342, as 349, as 394, 543, 605
Vitellius 1	*RIC 2:* 18
Vespasian 22	*RIC* 2: 90, 479, as 488, 494 x 2, as 494, 497, as 497 x 2, 502, 740 x 2, 746, 747 x 2, 753a, illegible *as* x 6
Titus 1	*RIC* 2: (Vesp) 786
Domitian 7	*RIC2:* (Vesp) 701,791a; (Dom) 325, 335; *BMC* 86, *as* rev *Virtuti Augusti SC,* illegible as
Nerva 2	*RIC 2:* 83, illegible *as*
Trajan 12	*RIC* 2: 131, 400, as 454, 492, 534, 604, 642, illegible *sestertius* x 3, illegible *as* x 2
?Trajan 1	*as* rev uncertain
Hadrian 7	*RIC* 2: 568, 710-11, 741, 743, 830; *BMC* 1348, illegible *sestertius*
?Hadrian 1	*as* rev standing figure
Aelius Caesar 1	*RIC 2:* 1071
Antoninus Pius 9	*RIC* 3: 691a, 758/778, 872, 932, 934 x 2, as 1003, illegible *sestertius* x 2
Faustina I 5	*RIC 3:* (AP) 1102, 1117, 1154, 1155, illegible *as*
Marcus Aurelius 9	*RIC* 3: (AP) as 1231, 1348; (MA) 969, 1033, illegible x 4, illegible *dupondius*
?Marcus Aurelius 2	illegible *as, as* rev seated figure in front of trophy (or ??Hadrian)
Marcus Aurelius or Commodus 1	illegible *sestertius*
Faustina II 4	*RIC 3:* (AP) 1375, as 1392, 1395; (MA) 1702
Lucius Verus 1	*RIC* 3: (MA) 505
Lucilla 2	*RIC 3:* (MA) 1779, hybrid obv (MA) as 1732 rev (Comm) as 307
Commodus 4	*RIC* 3: (MA) 1591, *sestertius* rev Victory, illegible *sestertius* x 2
Crispina 1	illegible *sestertius*
Pertinax 1	*RICA:* 32a
Caracalla 6	*RIC* 4: 268, as 323; *BMC* 78, illegible *denarius* x 2, illegible *denarius* copy
Geta 1	*RIC* 4: 6
Septimius Severus 8	*RIC* 4: 63, 230, copy as 265, 289, as 350, 379, illegible *denarius* x 2
?Septimius Severus 1	*RIC* 4: as 97
?Julia Domna 1	*RIC* 4: (SS) as 580
Elagabalus 2	*RIC* 4: 45, illegible *denarius*
Aquilia Severa 1	*RIC* 4: (Elag) 229
Elagabalus or Severus Alexander 1	illegible *denarius*
Severus Alexander 11	*RIC* 4: as 7, 67, 83, 127, 133, 173, 205, 236, as 473, illegible *denarius* x 2
?Severus Alexander 2	*denarius* rev ?Iovi, illegible *denarius*
Julia Mamaea 1	illegible *denarius*
Paulina 1	*RIC* 4: 2
Gordian III 1	*RIC* 4: as 4
Philip I 2	illegible *antoninianus,* illegible *sestertius*

Volusian 1	illegible *antoninianus*
Valerian I 7	*RIC* 5: 2, as 106, 142, 224, 293, illegible *antoninianus* x 2
?Valerian I 2	*RIC* 5: as 22, 92
Gallienus 19	*RIC* 5: (J) 44, 145, 157, as 181; (S) 157, 194a, as 214, 233, 252/3, 297, 656 mint of Asia; Robertson 4 59; *antoninianus* rev *Dianae Cons Aug, antoninianus* rev *Neptuno Cons Aug,* illegible *antoninianus* eastern mint, illegible *antoninianus* x 4
Salonina 2	*RIC 5:* (S) 14, 32
Marius 1	*RIC 5:* 9
Claudius II 9	*RIC* 5: 48, 53, 57?, 63, 67, 98, 109, 261, as 261 irregular rev altar
Postumus 7	E as 125, as 129, 216, 336, 565, illegible *antoninianus* x 2
Victorinus 20	E 649, 653/683, 654, 675, 682 x 3, 683 x 3, 697 x 4, 699, 732 x 2, 743 x 2, illegible *antoninianus*
Tetricus I 20	E 764 x 3, 765 x 2, 771, 771/5, 775 x 4, as 775, 779, 779/88, 784, 786, 787, 789, *antoninianus* rev *Victoria Aug,* illegible *antoninianus*
Tetricus II 9	*E* 769 x 3, 773, 773/7, 777/8, 781, 791 x 2
Tetricus I/II 1	illegible *antoninianus*
regular radiates 3	*antoninianus* rev ?*Pax, antoninianus* rev uncertain, illegible *antoninianus*
barbarous radiates 173	obv Gallienus rev *Pax,* obv Gallienus rev *Virtus;* obv Claudius II, hybrid obv Claudius II rev eagle, obv Claudius II rev *Providentia,* obv Claudius II rev *Virtus,* obv Claudius II rev *Virtus Aug,* obv Divo Claudio rev altar x 5, obv Divo Claudio rev eagle x 2; obv Victorinus rev Invictus x 9, obv Victorinus rev *Pax,* obv Victorinus rev *Pax Aug* (vertical sceptre), obv Victorinus rev *Virtus Aug* x 2; obv Tetricus I x 6, obv Tetricus I rev *Comes,* obv Tetricus I rev *Fides Militum* x 4, obv Tetricus I rev *Hilaritas* x 2, obv Tetricus I rev *Hilaritas Augg* x 4, obv Tetricus I rev *Laetitia,* obv Tetricus I rev *Laetitia Augg* x 4, obv Tetricus I rev *Laetitia Aug N,* obv Tetricus I rev *Mars Victor,* obv Tetricus I rev *Pax* x 5, obv Tetricus I rev *Pax Aug* x 11, hybrid obv Tetricus I rev. *Princ luvent* obv Tetricus I rev sacrificial implements, obv Tetricus I rev *Salus* x 5, obv Tetricus I rev *Salus Augg* x 9, obv Tetricus I rev *Spes* x 2, obv Tetricus I rev *Spes Publica,* obv Tetricus I rev *Spes/Virtus,* obv Tetricus I rev *Victoria* x 3, obv Tetricus I rev *Victoria Aug,* obv Tetricus I rev *Virtus Augg,* obv Tetricus I rev hybrid; obv Tetricus II x 3, obv Tetricus II rev *Hilaritas,* obv Tetricus II rev *Pax Aug,* obv Tetricus II rev *Pietas* x 2, obv Tetricus II rev sacrificial implements x 4, obv Tetricus II rev *Salus Augg,* obv Tetricus II rev *Salus/Pax* hybrid, obv Tetricus II rev *Spes* x 2, obv Tetricus II rev *Spes Augg* x 4, obv Tetricus II rev *Spes Publica* x 3, obv Tetricus II rev design; obv Tetricus I/II rev *Pax* x 2, obv Tetricus I/II rev *Spes* x 2; obv Probus rev *Jupiter,* rev *Fides,* rev *Laetitia,* rev *Salus,* rev hybrid Spes/sacrificial implements, rev *Virtus;* illegible x 47
Diocletian 1	*RIC* 6: Trier 438a
Carausius 9	*RIC* 5: 98 x 2, 880 x 2, as 895, 983, *antoninianus* rev *Pax Aug,* illegible *antoninianus,* uncertain *antoninianus* no mm
Allectus 2	*RIC* 5: 55 x 2
Constantius I 1	*RIC* 6: Trier 652a
Constantine I 6	*RIC* 7: London 109, Trier 42, 369, 449; *HK* 63, copy as 291
Urbs Roma 8	*HK* copy as 51 x 3, copy of 184 x 2, copy as 184, copy of 190,205
Constantinopolis 10	*HK* copy as 52 x 4, copy as 59, 71, 86, copy of 185 x 2, copy as 185
Theodora 4	*HK* as 113 x 2, 129, 617
Constantine II 5	*HK* copy of 56, 88, copy of 193 x 2, copy as 226
Constans 10	*HK* copy of 95, as 111, 133, 136, copy as 136, 140, copy as 156-7, copy of 236, 443; *CK* as 400
Constantius II 9	*HK* as 89, 132 x 2, copy as 139, 141, 145; *CK* as 256, copy of 256, 455
House of Constantine 26	*HK copy as 48, as 87, copy as 87 x 2, as 132, as 137, copy as 145?, copy as 187, copy of 198, copy as 249, hybrid obv as 49 rev as 51, hybrid obv as 51 rev as 48; illegible; CK copy as 25 x 12, as 256*

Magnentius 1	*CK*15
Julian 1	*RIC* 8: Aries 309
Valentinian I 4	*CK* 350, 1011, 1028, 1409
Valens 6	*CK* as 280, 528, as 528, 968, as 1416, obv DN VALENS PF AVG rev URBS ROMA
Gratian 7	*CK* 111, 353 x 2, 529 x 2, as 529, 540
House of Valentinian 4	*CK* as 96 x 2, as 275, as 280
Theodosius I 1	*CK* 565
Arcadius 5	*CK as* 164 x 2, 167, 1107, 2578
House of Theodosius 5	*CK* as 796 x 4, 1105-7
?House of Theodosius 1	*CK* as 162
illegible Roman	??Galba as *RIC* 161 but bare head left (obv head like Agrippa rev *Aequitas August!),* 1st cent x 5, ?1st cent x 2, 1st-2nd cent x 7, 1st-3rd cent x 5, mid 2nd cent x 2, ?2nd cent, 2nd-3rd cent x 6, early 3rd cent x 2, 3rd cent x 12, ?3rd cent, 3rd-4th cent x 50, 4th
Edward the Confessor 1	North 830
Henry II 1	North 963
Edward I 1	long cross farthing
Edward II 1	long cross penny
Edward III 1	pre-treaty penny
Richard II 1	penny
Henry V 1	North 1409
Edward IV 1	North 1666
illegible medieval 1	long cross 1d
Henry VIII 1	North 1779
Edward VI 1	North 1918
Elizabeth I 2	North 2016 x 2
post-medieval tokens 4	German jetton, German jetton Venetian series, Nuremberg jetton French type, Wulf Laufer Barnard as 82
Charles I 1	Rose farthing token *N* 2293
Charles II 1	farthing
William & Mary 1	halfpenny
George III 2	halfpenny, shilling
William IV 1	penny
George V 1	penny
uncertain date 2	

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Tiberius 1	*RIC* 1: copy as 30
Augustus 1	countermarked *as* Lyons mint
Agrippa 4	*RIC* 1: (Tib) copy as 32 x 4
Claudius I 13	*RIC* 1: copy as 94 x 2, copy as 95, copy as 100 x 10
Antonia 1	*RIC* 1: (Clau) 92
Nero 2	*RIC* 1: 475, illegible *sestertius*
Vespasian 4	*RIC* 2: as 497, as 503 x 2, illegible *as*
Domitian 2	*RIC* 2: 302a, as 327
Trajan 2	*RIC* 2:411, illegible *dupondius*
Hadrian 1	*RIC* 2: as 600
Antoninus Pius 1	*RIC* 3: 950
Caracalla 1	*RIC 4:* 5
Gallienus 1	illegible *antoninianus*
barbarous radiates 5	obv Claudius II**,** obv Divo Claudio rev altar; obv Tetricus II, obv Tetricus II rev *Spes;* illegible
Carausius 1	*RIC* 5: as 44
Maximian 1	*RIC* 5: (Carausius) 34
Allectus 1	*RIC* 5: 57
Constantine I 3	*RIC* 7: London 10, Trier 368, copy as Lyons 280
Urbs Roma 2	*RIC 7: copy* as Lyons 242 x 2
Constantinopolis 3	*RIC* 7: copy as Lyons 246, copy x 2
Constantine II 1	*RIC 7:* copy as Lyons 238
Constans 3	*RIC* 8: Trier 195, 196, copy as Cyzicus 11
Constantius II 2	*RIC 7:* Trier 480, Aries 347
House of Constantine 4	*follis* copy, GEx1 copy x 2, FTR FH copy
Magnentius 1	*RIC 8:* Lyons 154
illegible Roman 7	1st cent x 2, 3rd-4th cent x 5
William IV 1	farthing
George V 2	penny x 2
uncertain date 2	

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ABBREVIATIONS

AM Lab	Ancient Monuments Laboratory of HBMC
Archaeol J	*The Archaeological Journal*
Arch	*Archaeologia* (Soc Ants London)
BAR	British Archaeological Reports
Barnard	Barnard 1916
BM	British Museum
BMC	*British Museum Catalogue*
CAR	*Colchester Archaeological Report*
CAR **1**	Philip Crummy, *Aspects of Anglo-Saxon and Norman Colchester,* CBA Research Report, **39**
CAR **2**	Nina Crummy, *The Roman small finds from excavations in Colchester 1971-9*
CAR **3**	Philip Crummy, *Excavations at Lion Walk, Balkerne Lane, and Middleborough, Colchester, Essex*
CAR **4**	Nina Crummy (ed), *The coins from excavations in Colchester 1971-9*
CAR **5**	Nina Crummy (ed), *The post-Roman small finds from excavations in Colchester 1971-85*
CAR **7**	John Cotter & Carol Cunningham, *Post-Roman pottery from excavations in Colchester, 1971-85*
CAR **8**	Hilary Cool & J Price, *Roman glass from excavations in Colchester, 1971-85*
CAR **9**	Philip Crummy (ed), *Excavations of Roman and later cemeteries, churches, and monastic sites in Colchester, 1971-88*
CAR **10**	Robin Symonds & Sue Wade, *Roman pottery from excavations in Colchester, 1971-85*
CAR **11**	C F C Hawkes & Philip Crummy, *Camulodunum II*
CAR **12**	Rosemary Luff, *Animal bones from excavations in Colchester, 1971-85*
Catalogue	Newsletter of the Friends of the Colchester Archaeological Trust, twice yearly 1977-1984
CBA	Council for British Archaeology
CM	Colchester Museums
ERO	Essex Record Office
GM	Gentleman's Magazine
HBMC	Historic Buildings and Monuments Commission
Ill Lon News	*The illustrated London news*
Lib Rom Brit Rems	*The library of Romano-British remains*
Mack	R P Mack 1975, *The coinage of ancient Britain,* 3rd edition
North	J J North, 1980, English hammered coinage, **1**
RCHM	Royal Commission on Historical Monuments
RCHM York	Royal Commission on Historical Monuments, *Eburacum, Roman York*
RIC	*Roman Imperial Coinage*
RIC 1923	Mattingly, H, & Sydenham, E A, 1923, *Roman Imperial Coinage,* **1** (1st edition)
RIC 1984	Sutherland, C H V, 1984, *Roman Imperial Coinage,* **1** (2nd revised edition)
Robertson IV	A S Robertson, 1978, *Roman Imperial Coinage in the Hunter Coin Cabinet,* IV, Valerian to Allectus
SF	small find number
TEAS, os/ns	*Transactions of the Essex Archaeological Society,* old series/new series
VCH	*The Victoria history of the counties of England*
Vet Mon	*Vetusta Monumenta* (Soc Ants London)
XRF	X-ray fluorescence

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20: United Reform Church, Lion Walk (234.84): a painted inscription on a fragment of a London 555 amphora *by P R Sealey* 1080

21: United Reform Church, Lion Walk (234.84): list of exhumations 1082

On 35 mm microfiche

Sections: Culver Street (Sxs 3.1-3.5, 3.7-3.29, 3.31-3.34, 3.36-3.42), Gilberd School (Sxs 4.3-4.7), Cups Hotel (13.1-13.6), and Long Wyre Street (13.7-13.10)

Figures 13.25, 13.49, 13.51-2, 13.104, 13.107, 13.228-9, 13.264

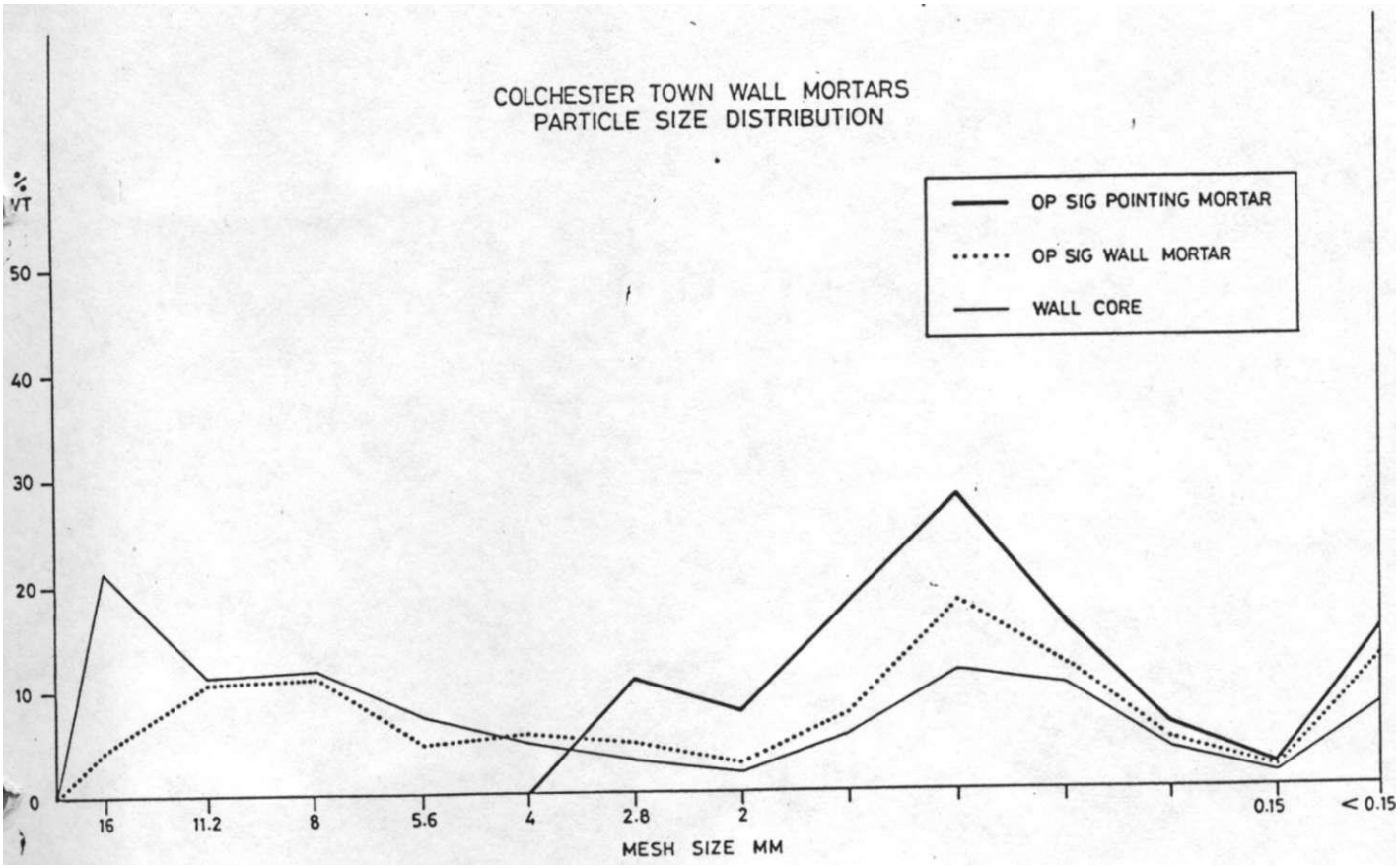


Fig 3.34 Particle size distribution in three mortar samples from the Roman town wall at Culver Street.

Appendix 5 (Chapters 3 and 5): Complete or partial remains of human and animal skeletons from the Culver Street and Gilberd School sites

by R Luff

HUMAN BABY BURIALS

Culver Street

Site B	
Period 4 gully, BF108, B386	Post-natal
Early Period 3 destruction?, BL402, B1673	Post-natal
Site C	
Period 4 grave, CF35, C116	Post-natal
Period 4 grave, CF70, C231	Foetal, 78 frags, excellent preservation of skull
Early Period 4 grave, CF92, C251 & C256	Post-natal
Site G	
Period 5 grave, GF1330, G1341	Neo-natal
Period 3 grave, GF1385, G1386 & G1496	Neo-natal
Period 5 grave, GL1050, G3621	
Site H	
Period 3 or 4 grave, HF638	
Site K	42 fragments, post-natal
Period 3a or 3c grave, KF51	
Period 3b or 3c grave, KF71, K83 & K104	Post-natal

Gilberd School

Site A	
Period 1 grave, F270, 2116	Foetal?/post-natal
Period 3a grave, F139, 1085	6 months post-natal

OTHER HUMAN BURIALS

Culver Street

Site E	
Period 7 robber trench, EF117, E167	Adolescent female

POSSIBLE BABY BURIALS

Culver Street

Site H	
Period 6 topsoil, site clearance, HL3, H182	3 long bones, post-natal baby

OTHER HUMAN BONE

Culver Street

Site A		
Period 3a dump, AL212, A555	Cranial fragment	Male
Site B		
Period 3 dump, BL387, B1590	Metacarpal	
Period 4a daub floor, BL228, B1103	Skull (baby)	16 fragments
Post-Roman pit, BF551, B1861	Fragment (baby)	
〃 〃	Femur	Right, shaft broken
Unstratified, B1234		Probably post-natal
Site C	Fragments (baby)	
Period 4 dump/make-up, CL29, C247		Right post-natal
Slte D	Femur (baby)	
Period 6 robber trench, DF498, D1535	Lumber vertebra & pelvic fragment	Female?
?Period 4 dump, DL455, D1740		
Site E	Tibia (baby)	Post-natal
Period 2 destruction debris?, EL22, E751	Clavicle	
Period 2 destruction debris & Period 3 make-up, EL24, E569	Fibula	
Period 3 ?trench, EF549, E750	Fibula	
Period 4 or 5 demolition debris?, EL2, E477	Skull fragments	
Period 5 grave, EF143, E197	First phalanx	
?Period 5 grave, EF361, E485	Cranial fragment	Mastoid, probably male
Period 7, Hut 4, EF166, E194	Pelvis, first phalanx	Female
Period 7 robber trench, EF17, E23	Ulna, fibula, rib, sacrum	Left distal
Period 8 pit, EF14, E13	Femur	Right, broken shaft
Period 8 pit, EF134, E354	Skull fragments	Cranium — pagers disease?
Unstratified, E1	Radius & fibula	
SIteG		
Period 3 ?pit, GF2362, G2379 & G2468/2616	Patella and femur	
Period 4 cultivated soil, GL1822, G2747	Humerus	Shaft, possible osteomyelitis
Unstratified, G4302	Humerus	Gnawed both ends by canids
Site J		
Period 2 destruction debris, JL222, J234	Radius	
Site K		
Unstratified, K50?	Fibula	
Period 3a or 3b pit, KF411, K412	Ulna	
Site M		
Period 3 pit, MF313, M697	Ulna	
Period 3 & 4 cultivated soil, ML171, M349	Humerus (baby)	Post-natal

Gilberd School

Site A

Period 2 trench, AF310, A2371	Fibula	
Period 3a dump, AL9, A440	Scapula	
Period 3 dump, AL48, A1110	Cranial fragment	
?Post-Roman dump, AL33, A771	Skull fragment	
Post-Roman pit, AF222, A1742	Cranial fragment	
Medieval lime kiln, AF11, A118	Humerus (baby)	Post-natal

Site B

Period 1 or 2 pit, BF12, B62	Femur (baby)	Post-natal
Period 2 destruction debris, BF1, B18	Radius	
Period 2 destruction debris, BF1, B56	Mandible	25-35 years old
Period 2 destruction debris, BL26, B406	Cranium	2 fragments
Period 2 destruction debris in gully BF72, B451	Clavicle	Possibly fractured
Period 3 dump, BL12, B193	Skull and cranial fragments, male	
Roman demolition debris, BL2, B4	Humerus	2 knife-cuts anterior
Unstratified, B28	Femur (baby)	Post-natal

ANIMAL SKELETONS

Culver Street

Site B

Period 3 gully, BF397, B1699	Dog	Partial burial	Skull, mandible. Old animal, some tooth sockets healed over.
Period 3 dump, BL309, B1364 & B1396	Dog	Partial burial	Skull, mandible, atlas, axis, & 6 vertebrae. 27 other fragments. Knife cut proximal left humerus. TL humerus 126 mm
Post-Roman, BL1, B2468	Dog	Partial burial 8 long bones, 2 scapula ribs	TL femur 158 mm

Site C

Early Period 3 destruction, CL50, C365	Dog	Partial burial	25 fragments
CL59, C375	Dog	Partial burial	37 fragments, TL humerus 109 mm

Site E

Period 1 ?, EF1414, E1680	Dog	Partial burial	TL femur 121 mm
Period 7 pit, EF206, E284	Dog	Partial burial	21 fragments, TL humerus 101 mm
Period 8 pit, EF11, E14	Pig	Whole burial	3rd molar just erupting, 17-12 months old at death
Period 8 pit. EF91, E106	Pig	Partial burials	At least 2 animals, 64 fragments
Period 8 pit, EF141, E172	Cat	Partial burial	46 fragments
Period 8 pit, EF118, E352	Dog	Partial burial	Skull, jaw, vertebrae and ribs
" " "	Pig	Partial burial	Humerus, radius and ulna, unfused
Period 8 pit, EF19, E507	Dog	Partial burial	38 fragments, TL fibula 112 mm

Site G

Period 5 pit, GF14, G499	Horse	Partial burial	20 fragments

Period 5 linear feature/drain?, GF266, G307	Dog	Burial	67 fragments, humerus TL 153 mm
Period 5 dump, GL605, G836	Dog	Partial burial	TL humerus 183
G887	Dog	Partial burial	11 fragments, femur distally canid gnawed
Period 6 pit, GF60, G82	Cat	Burial	70 fragments
Period 6 pit, GF163, G595	Cat	Partial burial	41 fragments
Period 6 pit, GF284, G306	Dog	Burial	95 fragments
Period 6 pit, GF370, G435	Pig	Burial	Molar 1 just erupting — 6 months old
G638	Cat	Partial burial	31 fragments
Period 6 pit, GF376, G492	Cat	Partial burial	
Period 6 pit, GF3458, G3461	Pig	Partial burial	Foetal
Site H	Cat	Partial burials	37 fragments, at least 2 individuals
Period 6 pit, HF365, H508	Cat	Burial	2 individuals
HF365?, H366	Cat	Partial burials	40 fragments, 2 individuals
Period 6 pit, HF418, H437	Cat	Partial burial	31 fragments
Site J			
Period 6 pit, JF183, J189	Dog	Burials	2 individuals, 1 very old with severe osteoarthritis, 129 fragments, skinning knife-cuts on radius and metapodials
J191	Dog	Partial burials	2 individuals, 94 fragments
Site K			
Period 3a pit, KF91, K156	Dog	Partial burial	Skinning knife-cuts
Unstratified, J40	Dog	Partial burial	TL radius 81 mm
Gilberd School			
Site A			
Period 3b pit, F27, 665	Dog	Partial burial	Tibia TL 169 mm
Dark earth, L1, 122	Dog	Partial burial	25 fragments
Site B			
Period 3 pit, F28, 127	Dog	Partial burial	25 fragments
Period 3 make-up, L7, 36	Dog	Partial burial	14 fragments, 3 fractured backbones

Appendx 6 (Chapter 4):
Archaeomagneti c dating , Gilber d Schoo l

by A J Clark

ARCHAEOMAGNETIC DATING.

GILBERD SCHOOL, COLCHESTER

Oven or furnace and flat hearth

Measurement Refs AJC-39, AJC-40

Report date
31 December 1988

Clark Consultancy

19 The Crossways, Onslow Village, Guildford, Surrey GU2 5QG
Tel 0483 64566
Fax 0483 39954

ARCHAEOMAGNETIC DATING : GILBERD SCHOOL, COLCHESTER

Clay oven and hearth

Excavator: D. Shimmin, Colchester Archaeological Trust

Sampled 25 September 1984

Two features found during the excavations in the grounds of the Gilberd School were of fired clay, and seemed suitable for archaeomagnetic dating. Samples were taken by A. J. Clark and P. Glover, then of the Ancient -Monuments Laboratory. Initial measurements were made in the Laboratory, and the final measurements and evaluation by the Clark Consultancy at Guildford. The methods and terms used are described in Clark et al (1988).

Samples were taken by the disc method, and their orientation related to true north by means of a Wild GAK 1 gyro theodolite.

Oven or furnace AF85

Fourteen samples were taken from the top inner edge of the two parallel walls of this feature. A strikingly sharp transition separated the pink 'oxidised' clay sampled (iron oxide present predominantly haematite) from black 'reduced' clay (predominantly magnetite) deeper in the wall. As a result of tests in the laboratory on two pilot samples, viscous magnetic components were removed in an AF field of 7.5 millitesla. The clay was of reasonable magnetic stability. Four closely grouped samples from the west wall gave results clearly at variance from the majority, presumably due to movement since firing, and were rejected. Final results were based on 10 samples.

Measurement ref. AJC-39

Dec = 23.0°E; Inc = 65.6°; alpha-95 = 2.0°

Date of last firing: cal AD 1050 - 1100 at the 68% confidence level

Hearth AF 106

This large flat hearth seemed to have been affected by slumping caused by the pit containing AF85, but it was possible to obtain five samples from the most stable part near its eastern edge. An AF demagnetisation level of 10 millitesla was required to remove viscous components from this clay, which was of good magnetic stability.

Measurement ref. AJC-40

Dec = 7.1°W; Inc = 65.7°; alpha-95 = 2.4°

Date of last firing: 80 cal BC - 1 cal BC at the 68% confidence level

CHAPTER 5

CATEGORY 1: OBJECTS OF PERSONAL ADORNMENT OR DRESS

BROOCHES

All the brooches are of copper alloy. The alloys have been analysed and identified using X-ray fluorescence by Justine Bayley and Paul Wilthew of the Ancient Monuments Laboratory. Where more than one alloy name is given it suggests an intermediate composition, though if a single descriptor is required the first alloy name is the most likely to be correct.

BOW BROOCHES

Group 1: La Tène III and Roman brooches with no hook and no arms

Type 11. Nauheim Derivatives with a single-curve bow (1-7). Date range: pre-Roman, dying out in the pre-Flavian period.

b) with narrow, flat bow

1 SF 1.81 229, A107 F45. Pit. Medieval or post-medieval. Only the tip of the pin of this brass brooch is missing. Length 33 mm.

2 SF 1.81 2298(C), E819 F650. Rubbish pit. Period 3. The pin and catchplate, with the tip of the bow, are missing from this bronze brooch. Length 37 mm.

3 SF 1.81 2619(C), E1643 L222. Street metalling. Period 2. Only the tip of the pin of this bronze/gunmetal brooch is missing. The catchplate is slightly damaged. Length 46 mm.

c) with round or wire bow

4 SF 1.81 595, C120 L16. Sinkage into pit F56. Period 4. A fragment of a brass/gunmetal brooch bow with the spring. Length 25 mm.

5 SF 1.81 620, C148 L14. Clay dump. Period 4. The pin has broken off this bronze brooch right at the spring. Length 42 mm.

6 SF 1.81 5092(C), K50. Unstratified. A bronze/gunmetal brooch complete except for the end of the catchplate. Length 35 mm.

7 SF 1.81 4186(C), H48 L3. Topsoil/clearance. Period 6. A brass brooch complete except for a damaged catchplate. Two groups of three slight grooves divide the bow into roughly equal thirds. Length 47 mm.

Group 2: Brooches with cylindrical spring-cover

Type 27. Simple rosette brooch with applied moulded plate (Fig 5.1; 8).

Catalogued in printed text.

Group *4a: Eye-brooches*

Type 42? Eye-brooch with a strongly-angled bow and long foot, separated by a button (Fig 5.1; 9) .

Catalogued in printed text.

Group 4b: Early hinged brooches

Type 51. Aucissa brooch (9a). Date range: 43-60/5.

9a SF 1.81 3800 (C), G1994 L1480. Dump under Building 120. Period 3d. The pin of this brass brooch is missing, along with the copper-alloy terminal knobs from the axial bar and all but a small part of the iron bar itself. The catchplate is slightly damaged. The worn mouldings on the head were probably knurled. The bow has marginal mouldings and a knurled central bridge. The junction of bow and foot is marked by transverse mouldings. The foot-knob has been slotted and soldered on to the end of the catchplate. Length 55 mm.

Type 60. Simple Hod Hill brooches (10-11). Date range: 43 to 60/5.

10 SF 1.81 1219(C), C316 L50? Dump (redeposited Boudican): Destruction of Buildings 78/79. Early Period 3. The pin is missing from this brass/gunmetal brooch. The bow tapers a little and has slight marginal mouldings and two central mouldings flanking a raised wavy line. There are knurled transverse mouldings on the foot. Length 55 mm.

11 SF 1.81 3535(C), D812. Unstratified. The lower part of the bow and the foot are all that survive of this brass brooch (in two pieces). The bow has marginal mouldings and three central mouldings. The junction of bow and foot is marked by transverse mouldings. There is a large foot-knob. Most of the catchplate is missing. Length 30 mm.

Type 63. Hod Hill brooch with lateral lugs at the top of the bow (12). Date range: 43 to 60/5.

12 SF 1.81 3948(C), G2212 L2185. Dump: Building 97. Period 3. The foot and the lower part of the pin of this brass brooch are missing. The bow has two ridges at each side. There are transverse mouldings at the junction with the foot. Length 35 mm.

Type 71. Hod Hill brooch with narrow bow and bold cross-mouldings at the head and base of the bow (Fig 5.1; 13). Date-range: 43 to 60/75.

Catalogued in printed text.

Type 79+. Miscellaneous brooch of Hod Hill type (14).

14 SF 1.81 1640(C), B1666 L396. Make-up: Building 94, Room 2. Period 3. The bow, part of the foot, and part of the hinge of a tinned gunmetal brooch exactly similar to CAR **2,** fig 5, 35, with four crescents of niello (?copper sulphide) on each side of the bow. Length 29 mm.

Unidentified fragments of Hod Hill brooches (15-16)

15 SF 1.81 364, B3. Clearance. Modern. A fragment of the head of a bronze ?Hod Hill brooch. Length 14 mm.

16 SF 1.81 5122(C), K143 F141. Linear feature. Period 3a. The broad triangular foot of a tinned bronze Hod Hill brooch. The brooch has broken just above a prominent transverse moulding at the junction of foot and bow. There is another transverse moulding just above the foot-knob. The damaged catchplate is solid. Length 28 mm.

Group 5: Early sprung brooches

Type 90. Colchester brooches (Fig 5.1; 17-18). Made in one piece, with a simple curved bow, flat side-wings, and forward hook to secure the external chord. Date range: Tiberius-Nero,

a) with decorated bow

17 SF 1.81 2609(C), E1627 L205. Dump. Period 2. A large brass brooch of which most of the pin and catchplate are missing. The decoration, which runs the full length of the bow, consists of a wavy line set in a slight depression. The side-wings are plain. Length 70 mm.

Type 92. Colchester B brooches (19-20). A two-piece brooch. The spring is secured by passing the external chord and the axial bar through a lug with two perforations behind the head. The side-wings are semicylindrical. There is a crest running on a flat ridge down the head to the bow. The ridge continues down the bow, flanked by cavetto mouldings, and may be decorated. Date range: 50 to 70.

19 SF 1.81 1703(C), B1829 L326. Gravel surface ?for alleyway. Period 3. A corroded plain leaded-bronze brooch, as CAR **2,** fig 6, 50. The pin, with most of the spring, is missing. Length 36 mm.

20 SF 1.81 686(C), C181 L49. Demolition debris (redeposited Boudican): destruction of Building 78. Early Period 3. Only the pin is missing from this leaded-bronze brooch. The ridge on the bow is decorated with a zig-zag line. The side-wings are plain. Similar to CAR **2,** fig 6, 52. Length 43 mm.

Type 93. Colchester BB brooches (21-2). Similar to Type 92, but lacking the cavetto mouldings on the bow. Date range: c 65 to 80, but possibly going out of use earlier.

21 SF 1.81 965(C), C257 F86. Posthole/post-pit: Building 96, Room 1. ?Period 3. The pin of this brooch is missing. The bow is plain, and there is a small foot-knob. The catchplate is solid. The alloy is leaded gunmetal. Length 42 mm.

22 SF 1.81 4968(C), M600 F587. Pit. Period 3? The pin and most of the catchplate of this large corroded brooch are missing. The alloy is leaded bronze. The bow and semicylindrical side-wings are plain. The catchplate seems to have been fretted. Length 62 mm.

Type 94. Dolphin brooches (Fig 5.1 23-4). Dolphins have a comma-shaped bow and semicylindrical side-wings. The spring is attached by a rearward-facing hook over the external chord. Date range: Claudian.

24 SF 1.81 2415(C), E1154 F1006. Pit. Period 2. A corroded example of bronze/gunmetal. Most of the pin is missing. The side-wings are grooved and moulded. The bow is plain and rectangular in section. Length 47 mm.

Group 6: Polden Hill brooches

Type 95. Brooch with the comma-shaped profile of Type 94 (dolphin) but with the spring attached by means of an axial bar fixed in the returned ends of the semicylindrical cross-bar

(Polden Hill arrangement) (Fig 5.1; 25).
Catalogued in printed text.

Group 7: T-shaped brooches

Type 148. Lamberton Moor brooch (Fig 5.1; 26).
Catalogued in printed text.

Group 9: Knee-brooches

Type 176. Knee-brooches with a bow of rectangular section, rounded in profile and expanding to a square foot with a transverse catch (27). Date range: probably 2nd century.
27 SF 1.81 4842(C), M201 F121. Large pit. Period 7. Only the bow and foot of this leaded-gunmetal brooch survive. It is similar, though slightly smaller, to CAR **2,** fig 11, 70. Length 25 mm.

Group 10: Various enamelled bow-brooches

Type 182. Brooches with triangular bow, the foot zoomorphic or astragaloid (Fig 5.1 28).
Catalogued in printed text.

PLATE BROOCHES

Type 225. Flat cruciform brooches with incurving sides (Fig 5.1; 29-30).
Catalogued in printed text.

Unclassified (Fig 5.1; 31)
Catalogued in printed text.

PENANNULAR BROOCHES

Fowler Type A. Penannular brooch with bulbous terminals (Fig 5.1; 32)
Catalogued in printed text.

Fowler Type C. Penannular brooches with the terminals coiled and twisted so that the coil is at right angles to the plane of the ring (Fig 5.1; 33-5).
35 SF 1.81 3699(C), G1589 L1391. Dump/construction debris: Building 116. Period 4. A fragment of copper/brass? wire, circular in section and tapering to a flattened terminal,

which is slightly turned upwards. This may be a fragment of a penannular brooch. Length 22 mm.

HAIRPINS

BONE PINS

Unless otherwise stated the tip of each pin is missing.

Type 1. Pins with a plain conical head (36-56).

36 SF 1.81 472, A192 L7. Make-up/demolition debris. Period 5. Repointed. Length 87 mm.

37 SF 1.81 791, B227 L16. Dump/demolished clay wall: Building 112, Room 1. Periods 4/5. Length 79 mm.

38 SF 1.81 979, B451 L48. Dump: Building 112, Room 5. Period 4b. Length 39 mm.

39 SF 1.81 1025, B478 L66. Make-up: Building 112, Room 5. Period 4b. Central part of shaft missing, minimum length 115 mm.

40 SF 1.81 1107, B627 L120. Occupation: Building 112, Room 1. Period 4b. Length 81 mm.

41 SF 1.81 1165, B688 L133. Occupation lenses: Building 113, Room 1. Period 4. Length 58 mm.

42 SF 1.81 1173, B710 L139. Occupation: Building 112, Room 4. Period 4a. Complete. Length 88 mm.

43 SF 1.81 1241, B815 L165. Dump: Building 112, Room 2. Period 4a. Length 50 mm.

44 SF 1.81 1331, B904 L203. Dump/midden or cess: Building 112?, Room 2. ?Period 4. Length 98 mm.

45 SF 1.81 2681, B196 F90. Robber trench for Building 112. Medieval. Length 87 mm.

46 SF 1.81 771, B229 F107. Gully. Period 5. Possibly broken and reused, but not truly repointed. Length 83 mm.

47 SF 1.81 1058, B567 F193. Pit. Period 4. Length 90 mm.

48 SF 1.81 1572, B956 F282. Large cess-pit: Building 77, Room 5. Periods 1/2. Length 81 mm.

49 SF 1.81 521, C105 L14. Clay dump. Period 4. Length 112 mm.

50 SF 1.81 3865, D1595 L1560. Dump: Building 123, Passage 4. Period 4. Length 84 mm.

51 SF 1.81 3998, D1832 L1818. Dump: yard of Building 123. Period 4. Length 33 mm.

52 SF 1.81 3561, D1056. Unstratified. Length 61 mm.

53 SF 1.81 3618, G1428 L987. Floor make-up/dump: Building 116. Period 4. Length 52 mm.

54 SF 1.81 4858, G3974 L3954. Occupation: Building 116. Period 4. Length 89 mm.

55 SF 1.81 4565, H462 L3. Topsoil/clearance. Period 6. Complete. Length 86 mm.

56 SF 1.81 4512, H291 L283. Dump. Period 5. Length 52 mm.

Type 2. Pins with 1-4 transverse grooves beneath a conical head (57-87).

57 SF 1.81 1123, A253 Lll. Make-up. Period 4. Length 47 mm. One groove.

58 SF 1.81 1214, B291 L24. Occupation. Period 4. Length 69 mm. Two grooves.
59 SF 1.81 1442, B597 L25. Dump? Period 4/5. Length 31 mm. Two grooves.
60 SF 1.81 1246, B813 L159. Make-up: Building 112, Room 4. Period 4a. Length 75 mm. Two grooves.
61 SF 1.81 1281, B843 L183. Topsoil/midden/cess? Building 112. Period 4. Length 81 mm. Two grooves.
62 SF 1.81 1310, B877:L187. Clay dump: Building 112, Room 3. Period 4b. Length 46 mm. Two grooves.
63 SF 1.81 1361, B962 L218. Clay floor: Building 112, Room 3. Period 4a. Complete. Length 118 mm. Two grooves.
64 SF 1.81 1362, B962 L218. Clay floor: Building 112, Room 3. Period 4a. Complete. Length 101 mm. Two grooves.
65 SF 1.81 1561, B1429 L346. Occupation debris & lenses: Building 112, Room 6. Period 4. Complete. Repointed. Length 61 mm. Two grooves.
66 SF 1.81 1084, B634 F196. Pit. Period 4. Complete. Length 128 mm. Two grooves. Red.
67 SF 1.81 1790, B2106. Unstratified. Probably Period 4. Length 73 mm. Two grooves.
68 SF 1.81 3659, D1193 L1183. Make-up: Building 123, Room 8. Period 4. Length 61 mm. Two grooves.
69 SF 1.81 3684, D1337 L1322. Demolition debris: yard of Building 123. Period 4. Length 41 mm. Two grooves.
70 SF 1.81 3927, D1579 L1372. Dump: Building 123, Room 8. Period 4. Length 56 mm. Two grooves.
71 SF 1.81 1918, E148 F5. Robber trench. Period 7. Length 31 mm. Green.
72 SF 1.81 1988, E228 F165. Pit. Period 8. Length 32 mm.
73 SF 1.81 1832, El. Site clearance. Unstratified. Length 41 mm. Two grooves.
74 SF 1.81 3632, G1375 L73. Floor/destruction debris B: Building 116. Period 4. Length 61 mm. Two grooves.
75 SF 1.81 2999, G220 L167. Occupation/midden: Building 120. ?Period 5b. Complete. Length 86 mm. Two very slight grooves beneath a flat head. This pin is quite thick, head diameter 5 mm. Very slight hip high up beneath head.
76 SF 1.81 3176, G407 L406. Destruction debris B: Building 116. Period 4. Length 43 mm. Two grooves.
77 SF 1.81 3508, G1023 L865. Dump. Period 3d/4. Length 85 mm. Two grooves.
78 SF 1.81 3738, G1657 L1391. Dump/construction debris: Building 116. Period 4. Length 65 mm. Two grooves.
79 SF 1.81 4585, G3263 L3191. Occupation: Building 118. Period 4. Length 44 mm. Two grooves.
80 SF 1.81 5184, G4340 L4330. Dump. Period 3d. Length 63 mm. One groove.
81 SF 1.81 4042, G2345 F79. Pit. Period 3. Complete. Length 107 mm. Two grooves.
82 SF 1.81 3726, G1547 F1390. Path. Period 4. Length 78 mm. Two grooves.
83 SF 1.81 3986, G2238 F1768. Midden. Period 3 or 4. Length 63 mm. Two grooves.
84 SF 1.81 4587, H397 L3. Topsoil/clearance. Period 6. Length 77 mm. Two grooves.
85 SF 1.81 4744, H569 L565. Horticultural soil. Period 3. Length 70 mm. Two grooves.
86 SF 1.81 4382, H307 F146. Robber trench? Period 6. Complete.

Length 126 mm. Two grooves.

87 SF 1.-81 5145, K160 F121. Pit. Period 3c. Length 49 mm. Two grooves.

Type 3. Pins with a more or less spherical head (Fig 5.2; 88-219).

89 SF 1.81 536, A222 L14. Make-up: Building 110, Room 2. Period 4. Complete. Length 88 mm. Head B.

90 SF 1.81 60, A17 FIT. Pit. Medieval or post-medieval. Length 60 mm. Head D.

91 SF 1.81 111, A48 F18. Pit. Medieval or post-medieval. Length 59 mm. Head B.

92 SF 1.81 730, A2. Unstratified. Post-Roman. Length 54 mm. Head B.

93 SF 1.81 431, B27 L2. Dump/midden build-up. Period 5. Length 67 mm. Head B.

94 SF 1.81 1010, B484 L16. Dump/demolished clay wall: Building 112, Room 1. Periods 4/5. Complete. Length 89 mm. Head B.

95 SF 1.81 910, B349 L37. Occupation: Building 112, Room 6a. Period 4c. Length 91 mm. Head B.

96 SF 1.81 1082, B660 L54. Dump. Periods 4/5. Length 84 mm. Head B.

97 SF 1.81 2687, B430 L58. Patches of gravel surface: Building 112?, Room 3. Periods 4/5. Length 49 mm. Head B.

98 SF 1.81 1027, B493 L71. Demolished clay walls: Building 112, Room 2. Periods 4/5. Complete. Length 91 mm. Head B.

99 SF 1.81 1028, B493 L71. Demolished clay walls: Building 112, Room 2. Periods 4/5. Complete. Length 104 mm. Head B.

100 SF 1.81 1029, B493 L71. Demolished clay walls: Building 112, Room 2. Periods 4/5. Complete. Length 101 mm. Head B.

101 SF 1.81 1052, B531 L77. Demolition of clay walls: Building 113, Room 3. Periods 4/5. Complete. Length 99 mm. Head B.

102 SF 1.81 1412, B533 L79. Lens of occupation: Building 112, Room 2. Period 4. Length 43 mm. Head B.

103 SF 1.81 1064, B558 L89. Dump patch: Building 112, Room 2. Period 4b. Length 62 mm. Head B.

104 SF 1.81 1063, B559 L89. Dump patch: Building 112, Room 2. Period 4b. Length 27 mm. Head B.

105 SF 1.81 1090, B631 L102. Dump: Building 113, Room 1. Late Period 4. Complete. Length 103 mm. Head A.

106 SF 1.81 1120, B666 L133. Occupation lenses: Building 113, Room 1. Period 4. Length 48 mm. Head A.

107 SF 1.81 1121, B666 L133. Occupation lenses: Building 113, Room 1. Period 4. Complete. Length 103 mm. Head B.

108 SF 1.81 1161, B687 L133. Occupation lenses: Building 113, Room 1. Period 4. Complete. Length 87 mm. Head B.

109 SF 1.81 1168, B688 L133. Occupation lenses: Building 113, Room 1. Period 4. Length 97 mm. Head B.

110 SF 1.81 1065, B557 ?L189. Demolition? Building 112. Period 4b. Length 42 mm. Head B.

111 SF 1.81 1326, B905 L196. Dump: Building 112, Room 2. Period 4. Length 65 mm. Head B.

112 SF 1.81 1519, B1241 ?L208. Rubble spread: Building 112. ?Period 4. Complete. Length 93 mm. Head B.

113 SF 1.81 423, B14 F3. Robber trench for Building 113. Medieval. Length 47 mm. Head B.

114 SF 1.81 427, B10 F6. Small pit. ?Post-Roman. Complete. Length 70 mm. Head A.

115 SF 1.81 2703, B2497 F40. Robber trench for Building 113.

Medieval. Complete. Length 95 mm. Head C.

116 SF 1.81 614, B131 F73. Robber trench for Building 112. Early medieval. Length 70 mm. Head B.

117 SF 1.81 640, B163 F73. Robber trench for Building 112. Early medieval. Length 59 mm. Head B.

118 SF 1.81 624, B154 F78. Pit. ?Post-Roman. Complete. Repointed. Length 58 mm. Head B.

119 SF 1.81 820, B256 F114. Small pit. ?Post-Roman. Length 52 mm. Head B.

120 SF 1.81 1143, B350 F124. Oven? Period 4. Length 58 mm. Head B.

121 SF 1.81 1012, B501 F173. Flue/oven/small pit. Period 4. Complete. Length 82 mm long. Head B.

122 SF 1.81 446, B6. Site clearance. Modern. Length 45 mm. Head B.

123 SF 1.81 1032, B523. Unstratified. Complete. Length 110 mm. Head B.'

124 SF 1.81 2717, B2521 L71. Demolished clay walls: Building 112, Room 2. Periods 4/5. Complete. Length 87 mm. Head B.

125 SF 1.81 4901, B2551. Unstratified. Complete. Length' 97 mm. Head C.

126 SF 1.81 4877, B2553. Unstratified. Length 44 mm. Head A.

127 SF 1.81 4878, B2553. Unstratified. Complete. Length 95 mm. Head A.

128 SF 1.81 4862, B2555. Drain (= CF33). Period 4. Length 60 mm. Head A.

129 SF 1.81 407, C74 LI. Topsoil (Roman?). ?Period 5. Length 93 mm. Head B.

130 SF 1.81 408, C74 LI. Topsoil (Roman?). ?Period 5. Complete. Length 74 mm. Head B.

131 SF 1.81 23, C10 ?L8. Dump/demolition. Period 4. Complete. Length 100 mm. Head A.

132 SF 1.81 691, C151 L13. Demolition: Destruction of Building 114. Period 4. Length 53 mm. Head B.

133 SF 1.81 228, C35 F5. Pit? Medieval. Length 61 mm. Head B.

134 SF 1.81 603, C48 F20. Small pit. ?Period 5. Length 58 mm. Head B.

135 SF 1.81 350, C63 F27. Large pit/pit complex. Periods 4/5. Length 55 mm. Head B.

136 SF 1.81 3947, D1633 L328. Make-up: Building 123, Passage 4. Period 4. Length 62 mm. Head A.

137 SF 1.81 3349, D670 F684. Robber trench of Building 123. Period 6? Complete. Length 103 mm. Rough head A.

138 SF 1.81 3708, D1226 L1214. Demolition debris: Building 123, Room 8. Period 4. Length 54 mm. Head B.

139 SF 1.81 3813, D1552 L1372. Dump: Building 123, Room 8. Period 4. Length 65 mm. Head B.

140 SF 1.81 3830, D1528 L1517. Topsoil. Period 7. Length 58 mm. Head B.

141 SF 1.81 3987, D1831 L1818. Dump: yard of Building 123. Period 4. Length 55 mm. Head A.

142 SF 1.81 3526, D1048 F22. Robbed drain: yard of Building 123. Period 4. Length 71 mm. Head B.

143 SF 1.81 3536, D1049 F22. Robbed drain: yard of Building 123. Period 4. Complete. Length 80 mm. Head B.

144 SF 1.81 3358, D549 F203. Gully: yard of Building 123. Period 5. Complete. Length 105 mm. Head A.

145 SF 1.81 3369, D552 F203. Gully: yard of Building 123. Period 5. Length 44 mm. Head A.

146 SF 1.81 3228, D366 F353. Pit. Period 7. Complete. ?Repointed. Length 69 mm. Head A.
147 SF 1.81 3493, D888 F498. Robber trench for Building 123. Length 79 mm. Head A.
148 SF 1.81 3415, D786 F782. Drain: Building 123, Passage 2. Period 4. Complete. Length 78 mm. Head B.
149 SF 1.81 3416, D786 F782. Drain: Building 123, Passage 2. Period 4. Complete. Length 86 mm. Head A.
150 SF 1.81 3749, D1371" F1492. Drain: yard of Building 123. Period 4. Length 68 mm. Head B.
151 SF 1.81 1830, Dl. Unstratified. Length 95 mm. Head B.
152 SF 1.81 1893, E75 F108. Pit. Period 8. Complete. ?Repointed. Length 59 mm. Head A/B.
153 SF 1.81 1936, E157 ?F117. Robber trench. Period 7. Complete. Length 88 mm. Head C.
154 SF 1.81 1957, E226 F166. Sunken hut. Late Period 7. Length 24 mm. Head A.
155 SF 1.81 2041, E389 F274. Pit. Period 8. Head B.
156 SF 1.81 2729, Gl LI. Topsoil/clearance. Period 6. Complete. Length 82 mm. Head B.
157 SF 1.81 2735, Gl LI. Topsoil/clearance. Period 6. Length 51 mm. Head B.
158 SF 1.81 2750, Gl LI. Topsoil/clearance. Period 6. Complete. Length 58 mm. Head A.
159 SF 1.81 2804, Gl LI. Topsoil/clearance. Period 6. Length 43 mm. Head B.
160 SF 1.81 2888, G119 L119. Occupation/midden: Building 120. Period 5b. Length 61 mm. Head A.
161 SF 1.81 2889, G146 L119. Occupation/midden: Building 120. Period 5b. Complete. Length 74 mm. Head B.
162 SF 1.81 2939, G164 L164. Occupation/midden? ?Period 5 or 6. Complete. Length 79 mm. Head B.
163 SF 1.81 2940, G164 L164. Occupation/midden? ?Period 5 or 6. Complete. Repointed. Length 60 mm. Head B.
164 SF 1.81 2932, G177 L177. Occupation debris/midden: Building 120. Period 5b. Complete. Length 89 mm. Head B.
165 SF 1.81 2976, G177 L177. Occupation debris/midden: Building 120. Period 5b. Complete. Length 96 mm. Head B.
166 SF 1.81 2977, G177 L177. Occupation debris/midden: Building 120. Period 5b. Length 52 mm. Head B.
167 SF 1.81 2978, G177 L177. Occupation debris/midden: Building 120. Period 5b. Length 55 mm. Head A.
168 SF 1.81 3360, G697 L581. Destruction debris/occupation: Building 120. Period 5b. Length 66 mm. Head B^
169 SF 1.81 3594, G1321 L1157. Destruction debris' $: Building 120. Period 5b. Complete. Length 119 mm. Head B.
170 SF 1.81 3162, G402 F14. Sand pit. Period 5. Complete. Length 81 mm. Head B.
171 SF 1.81 3204, G473 F14. Sand pit. Period 5. Complete. Length 92 mm Head B.
172 SF 1.81 3231, G515 F14. Sand pit. Period 5. Length 84 mm.

173 SF 1.81 3157, G388 F16. Robber trench. Period 6. Complete. Length 96 mm. Head B.
174 SF 1.81 2800, G23 F20. Sand pit. ?Period 6. Complete. Length 104 mm. Head B.
175 SF 1.81 2876, G117 F55. Robber trench. ?Period 6. Length 62 mm. Head A.
176 SF 1.81 2851, G110 F56. Robber trench. Period 6. Complete.

Length 75 mm. Head B.

177 SF 1.81 2828, G62 F60. Pit. Period 6. Complete. Length 84 mm. Rough head A.

178 SF 1.81 2860, G112 F103. Robber trench. Period 6. Complete. Length 82 mm. Head B.

179 SF 1.81 3229, G511 F163. Pit. Period 6. Length 41 mm. Head B.

180 SF 1.81 2912, G165 F165. Robber trench. Period 6. Complete. Repointed. Length 55 mm. Head B.

181 SF 1.81 3267, G561 F174. Pit. Period 6. Length 87 mm. Head A.

182 SF 1.81 3302, G613 F174. Pit. Period 6. Length 28 mm. Head B.

183 SF 1.81 2973, G190 F184. Small pit. Period 6. Length 74 mm. Head B.

184 SF 1.81 3160, G391 F352. Pit. Period 5. Length 39 mm. Head A.

185 SF 1.81 3387, G752 F661. Pit. Period 6. Complete. Length 107 mm. Head A.

186 SF 1.81 3491, G1048 F862. Robber trench. Period 6. Complete. Length 57 mm. Head B.

187 SF 1.81 3424, G884 L883. Destruction debris B: Building 120? Period 5b? Complete. Length 83 mm. Head A.

188 SF 1.81 3425, G884 L883. Destruction debris B: Building 120? Period 5b? Complete. Length 65 mm. Head B.

189 SF 1.81 3426, G884 L883. Destruction debris B: Building 120? Period 5b? Length 57 mm. Head A.

190 SF 1.81 4182, G2956 F2934. Robber trench. Period 6. Length 77 mm. Head A.

191 SF 1.81 2848, G49. Unstratified. Period 4-6. Complete. Repointed, or possibly chewed at the tip. Length 63 mm. Head B.

192 SF 1.81 2901, G150. Unstratified. Period 4-6. Complete. Length 73 mm. Head B.

193 SF 1.81 2904, G150. Unstratified. Period 4-6. Length 45 mm. Head B.

194 SF 1.81 2923, G150. Unstratified. Period 4-6. Length 62 mm. Head A.

195 SF 1.81 2947, G159. Unstratified. Period 4-6. Length 37 mm. Head B.

196 SF 1.81 2960, G159. Unstratified. Period 4-6. Complete. Length 92 mm. Head B.

197 SF 1.81 3675, G1421. Unstratified. Period 6. Length 59 mm. Head B.

198 SF 1.81 5056, G4200. Unstratified. Period 1-6. Complete. Length 91 mm. Head B.

199 SF 1.81 4705, H114 L3. Topsoil/clearance. Period 6. Length 47 mm. Head B.

200 SF 1.81 4390, H286 L3. Topsoil/clearance. Period 6. Tip very slightly damaged. Length 56 mm. Head D. Possibly unfinished. The swell on the shaft of this pin is quite high, possibly indicating a post-Roman date, though the presence of seven other pins of this type in the context supports its allocation to the Roman period.

201 SF 1.81 4452, H342 L3. Topsoil/clearance. Period 6. Complete. Length 90 mm. Head B.

202 SF 1.81 4453, H342 L3. Topsoil/clearance. Period 6. Complete. Length 71 mm. The head is crude and set asymmetrically on the shaft.

20**3** SF 1.81 4450, H346 L3. Topsoil/clearance. Period 6. Length 62 mm. Head B.
204 SF 1.81 4418, H380 L3. Topsoil/clearance. Period 6. Complete. Length 91 mm. Head B.
205 SF 1.81 4422, H380 L3. Topsoil/clearance. Period 6. Complete. Length 79 mm. B.
206 SF 1.81 4764, H529 L3. Topsoil/clearance. Period 6. Complete. Length 79 mm. Head A.
207 SF 1.81 4293, H139 F59. Trench. Period 5. Complete. Length 101 mm. Head B.
208 SF 1.81 4365, H254 F81. Pit. Period 6. Length 54 mm. Head B.
209 SF 1.81 4416, H403 F402. Robber trench. Period 6. Length 42 mm. Head A.
210 SF 1.81 4633, J2 L1. Site clearance. Period 6. Length 54 mm. Head A.
211 SF 1.81 4819, J196 L193. Destruction debris/topsoil. Period 6. Length 39 mm. Head A.
212 SF 1.81 4718, J29 F27. Pit. Period 6. Length 24 mm. Head B.
213 SF 1.81 4608, M6 L1. Surface cleaning. Unstratified. Length 73 mm. Head A.
214 SF 1.81 4604, M10 L1. Surface cleaning. Unstratified. Length 61 mm. Head C.
215 SF 1.81 4966, M633 L448. Surface cleaning. Unstratified. Length 63 mm. Rough and damaged head A?
216 SF 1.81 4687, M130 F15. Robber pit. Period 6. Length 21 mm. Head A.
217 SF 1.81 4827, M223 F220. Pit: yard of Building 123. Complete. Length 79 mm. Head B.
218 SF 1.81 5383, W70 F56. Cellar. Medieval. Complete. ?Repointed. Length 68 mm. Head A.
219 SF 1.81 5382, W61. Unstratified. Complete. Length 105 mm. Head B.

Type 4. Pins with a faceted cuboid head (Fig 5.2; 220–34).
221 SF 1.81 471, B45. Site clearance. Modern. Complete. Length 50 mm.
222 SF 1.81 162, C31 L2. Topsoil (Roman(?). ?Period 5. Length 77 mm.
223 SF 1.81 3696, D1338 L1322. Demolition debris: yard of Building 123. Period 4. Complete. Length 65 mm.
224 SF 1.81 3001, G207 L207. Occupation: Building 120. Period 5b. Complete. Length 81 mm.
225 SF 1.81 2975, G187 F14. Sand pit. Period 5. Length 81 mm.
226 SF 1.81 3258, G580 F104. Robber trench. Period 6. Length 71 mm.
227 SF 1.81 3250, G589 F174. Pit. Period 6. Length 64 mm.
228 SF 1.81 3009, G208 F208. Robber trench. Period 6. Length 73 mm.
229 SF 1.81 3085, G306 F284. Pit. Period 6. Length 52 mm.
230 SF 1.81 2959, G172 L59. Destruction debris A: Building 116. Period 4. Length 69 mm.
231 SF 1.81 4283, H133 L3. Topsoil/clearance. Period 6. Complete. Repointed. Length 74 mm.
232 SF 1.81 4583, H361 L3. Topsoil/clearance. Period 6. Complete. Length 85 mm.
233 SF 1.81 4774, J69 L1. Site clearance. Period 6. Complete. Length 93 mm.
234 SF 1.81 4567, K2 L1. Site clearance. Period 5. Complete. ?Repointed. Length 64 mm.

Type 5. Pin with 1-5 reels beneath a conical or ovoid head (235-7).

235 SF 1.81 2, A17 Fll. Pit. Medieval or post-medieval. Complete. ?Repointed. Length 78 mm. Ovoid head. One reel.

236 SF 1.81 3198, D345 L244. Dump? Building 123, Passage 2. Period 4. Length 62 mm. Conical head. Two reels.

237 SF 1.81 3802, D1527 L1517. Topsoil. Period 7. Complete. Repointed. Length 63 mm. Ovoid head. One reel.

Type 6. Pins with a reel- or bead-and-reel-shaped head (238-48).

238 SF 1.81 1022, A117 F35. Ditch. Period 5. Length 60 mm. Reel/bead/reel.

239 SF 1.81 1169, B688 L133. Occupation lenses: Building 113, Room 1. Period 4. Length 57 mm. Reel/bead/reel/reel.

240 SF 1.81 2430, B2227 L206. Clay dump/demolished wall: Building 112. ?Period 4. Complete. Length 79 mm. Reel.

241 SF 1.81 830, C222 L22. Dump/floor. Period 4. Length 66 mm. Reel.

242 SF 1.81 704, C130 F12. Gully. Late Period 4. Complete. Length 83 mm. Reel.

243 SF 1.81 349, C63 F27. Large pit/pit complex. Periods 4/5. Complete. Length 77 mm. Reel/bead/reel.

244 SF 1.81 3695, D1256 L1214. Demolition debris: Building 123, Room 8. Period 4. Length 41 mm. Reel.

245 SF 1.81 3073, G312 L302. Occupation? ?Period 5b? Length 60 mm. Reel.

246 SF 1.81 2771, G19 F4. Pit. ?Period 6. Length 41 mm. Bead/reel/triangle.

247 SF 1.81 2806, G22 F20. Sand pit. ?Period 6. Complete. Length 66 mm. Bead/bead/reel/reel.

248 SF 1.81 4942, J214 L1. Site clearance. Period 6. Length 47 mm. Reel.

Miscellaneous (Fig 5.2; 249-64)

263 SF 1.81 1594, B1103 L228. Daub floor: Building 112, Room 5. Period 4a. A pin with a plain, slightly spatulate head, possibly a Type 1. Length 62 mm.

264 SF 1.81 481, B63. Site clearance. Unstratified. The head of this pin is similar to that of CAR **2,** fig 23, 437. Length 66 mm. Brownish-red.

JET PINS

Type 2. Pins with a faceted cuboid head (265-6).

265 SF 1.81 1030, B493 L71. Demolished clay walls: Building 112, Room 2. Periods 4/5. The head of this pin is quite small and the shaft long. It is therefore a much more delicate example of the type than those illustrated in CAR **2,** fig 24. Complete, in two fragments. Length 86 mm.

266 SF 1.81 4912, B2559. Unstratified. Length 23 mm.

Shaft fragments (267-71)

Fragments of jet pin shafts came from the following contexts:

267 SF 1.81 1015, B485 L16. Dump/demolished clay wall: Building 112, Room 1. Periods 4/5.

268 SF 1.81 523, B85 F38. Robber trench for Building 113.

Medieval.

269 SF 1.81 3685, D1270 F1291. Large pit: yard of Building 123. Period 4.

270 SF 1.81 4730, J151 F20. Robber trench. Period 6.

271 SF 1.81 5386, W71 F66. Pit. Period 4.

GLASS PIN

272 SF 1.81 4984, G4033 L3624. Cultivated soil. Period 3. A fragment of a rod of translucent bluish glass, possibly a pin shaft. The section is elliptical. Length 41 mm.

METAL PINS

All the pins are of copper alloy.

Type 1. Pin with a plain conical head (273).

273 SF 1.81 1392(C), C388 L45. Occupation/midden. Early Period 3. Possibly not a hairpin. Length 75 mm.

Type 2. Pin with head of bead, reel and spool motifs surmounted by a flattened sphere (274).

274 SF 1.81 547(C), Clll ?L22. Dump/floor. Period 4. As CAR **2,** fig 27, 472, with reel/bead/spool/flattened sphere. Length 60 mm, tip missing.

Type 3. Pins with a more or less spherical head (275-7).

275 SF 1.81 2085(C), E499 L22. Destruction debris: Buildings 86/87. Period 2. The head is made by twisting a strip of metal around the top of the shaft. Length 58 mm.

276 SF 1.81 1937(C), E142 F117. Robber trench. Period 7. The head has a conical upper and rounded lower half. Length 97 mm.

277 SF 1.81 4554, J2 LI. Site clearance. Period 6. Length (bent) 118 mm.

Miscellaneous (Fig 5.3; 278-91)

285 SF 1.81 637 (C), A267 F95. Inverted half amphora: Building 110, Room 1. Period 4. White-metal pin with a very small globular head beneath which is a reel. Length 82 mm, tip missing.

286 SF 1.81 429(C), B27 L2. Dump/midden build-up. Period 5. Pin similar to SF 1.81 637 above, but the head is larger, and consists of an inverted cone above a reel. There is a very slight raised dot in the centre of the upper face of the cone. Length 65 mm.

287 SF 1.81 888(C), B310. Unstratified. Site clearance. A bent pin similar to CAR **2,** fig 31, 506, but with a head of bead/bead/baluster/bead. Length approximately 97 mm, tip missing.

288 SF 1.81 561(C), C85 L8. Dump/demolition. Period 4. ?Pin with a flat lozenge-shaped head and flat shaft. Length (bent) 78 mm.

289 SF 1.81 753(C), C206. Unstratified. Pin similar to CAR **2,** fig 31, 508, with a groove around the top of the shaft, which

tapers below a small reel. Length 105 mm.

290 SF 1.81 3062, D232 F88. Settlement in drain. Period 5 or 6. Pin with a head consisting of two reels above and two below a biconical bead motif. Length (bent) 98 mm, tip missing.

291 SF 1.81 4721, M52 L1. Surface cleaning. Unstratified. The head consists of a cone decorated with six radiating grooves. The shaft widens out towards the base of the head, from which it is separated by a groove. Similar to CAR **2,** fig 31, 500. Length (bent) 90 mm.

GADROONED BEADS

Melon beads (292-313). Most of these beads derive from 1st- or early 2nd-century contexts, which, together with their absence from the large assemblage of beads found in the late 3rd- to 4th-century Butt Road cemetery, reinforces the view that their popularity waned in the later Roman period.

292 SF 1.81 828, A388 L138. Occupation (rubbish?). Period 3. Turquoise frit. Fragment. Length 19 mm

293 SF 1.81 886, A425 L149. Make-up: Build:.ng 110. Period 4. Turquoise frit. Length 13 mm, diameter 15 mm.

294 SF 1.81 1048, A512 L199. Floor: Building 93. Period 3. Turquoise frit. Length 11 mm, diameter 114 mm.

295 SF 1.81 1457, B1103 L228. Daub floor: Building 112, Room 5. Period 4a. Turquoise frit. Length 12 mm diameter 15 mm.

296 SF 1.81 1652, B1669 L400. Boudican demolition debris: destruction of Building 77. Early Period 3. Turquoise frit. Length 11 mm, diameter 14 mm.

297 SF 1.81 1735, B1879 L463. Make-up: Building 78, Room 1. Period 2. Turquoise frit. Length 14 mm, diameter 15 mm.

298 SF 1.81 857, B306 F108. Gully between Buildings 112 & 113. Period 4. Turquoise frit. Fragment. Length 10mm.

299 SF 1.81 1765, B1936 F508. Drain?/cess-pit: Building 78, Room 1. Period 1. Turquoise frit. Length 16 mm, diameter 18 mm.

300 SF 1.81 560, C85 L8. Dump/demolition. Period 4. Turquoise frit. Length 21 mm, diameter 25 mm.

301 SF 1.81 2175, E627 L24. Destruction debris & make-up: Building 99/100. Period 3a. Turquoise frit. Fragment. Length 13 mm.

302 SF 1.81 2185, E665 L24. Destruction debris and make-up: Buildings 99/100. Period 3a. Turquoise frit. Length 13 mm, diameter 14 mm.

303 SF 1.81 1941, E134 F112. Robber trench. Period 7. Translucent mid blue glass. Fragment. Length 13 mm, diameter approximately 20 mm.

304 SF 1.81 2582, E1494 F549. Trench? Period 3. Turquoise frit. Fragment. Length 14 mm.

305 SF 1.81 2243, E763. Cobbled surface (metalling) around robber pit F105. Period 3. Turquoise frit. Fragment. Length 13 mm.

306 SF 1.81 3537(C), G1176 L1137. Floor make-up/dump: Building

120. Period 5a. Turquoise frit. Length 18 mm diameter 23 mm. Found in soil filling a bell (Fig. 000, SF 1.81 3537).

307 SF 1.81 3768, G1875 L1716. Destruction, debris A occupation: Building 119. Period 4. Decayed turquoise frit. Length 9 mm, diameter 12 mm.

308 SF 1.81 3115, G314 F208. Robber trench. Period 6. Decayed turquoise frit. Length 12 mm, diameter 17 mm.

309 SF 1.81 4467, G3175 F3173. Pit. Period 3a or 3b. Turquoise frit. Fragment. Length 15 mm.

310 SF 1.81 2862, G49. Unstratified. Periods 4 to 6. Translucent cobalt blue glass with many air holes. Length 21 mm, diameter 32 mm.

311 SF 1.81 4945, G4000. Unstratified. Periods 1 to 6. Decayed turquoise frit. Fragment. Length 17 mm.

312 SF 1.81 5202, K200. Unstratified. Turquoise frit. Fragment. Length 17 mm, diameter 20 mm.

313 SF 1.81 4872, M405 L403. Sandy clay floor: Building 91. Period 2. Very decayed turquoise frit. Length 15 mm, diameter 19 mm.

ANNULAR BEADS

With marvered trail (Fig 5.4; 314)

Catalogued in printed text.

Plain (315-18)

315 SF 1.81 865, A419 L139. Make-up. Building 110, Room 1. Period 4. Opaque greenish glass. Length 5 mm, diameter 11 mm.

316 SF 1.81 1456, B1103 L228. Daub floor: Building 112, Room 5. Period 4a. ?Translucent mid blue glass. Length 9 mm, diameter 18 mm.

317 SF 1.81 959, C247 L29. Dump/make-up: Building 114, Room 1. Period 4. Translucent dark blue glass. Length 8 mm, diameter 16 mm.

318 SF 1.81 1414, C392 L57. Dump (redeposited Boudican): destruction of Building 79. Early Period 3. ?Opaque very dark blue glass. Length 8 mm, diameter 16 mm.

SHORT BEADS

(length more than 1/3 but less than 9/10 diameter

Short oblate beads (Fig 5.4; 319-22)

320 SF 1.81 5058, G956 L894. Occupation: Building 120. Period 5b. Translucent dark blue glass. Length 5 mm, diameter 7 mm.

321 SF 1.81 5059, G956 L894. Occupation: Building 120. Period 5b. Opaque white glass. Length 2 mm, diameter 3 mm.

322 SF 1.81 4167, G unstratified. Corroded ?opaque dark blue glass. Length 3 mm, diameter 4 mm.

Short biconical bead (323)

323 SF 1.81 1820, El. Site clearance. Unstratified. Opaque mid green glass. Length 2 mm, diameter 4 mm.

STANDARD BEADS

(length more than 9/10 but less than 1 1/10 diameter)

Standard spherical beads (324-5)

324 SF 1.81 4170, G418 F393. Pit. Period 6. Corroded ?opaque dark blue glass. Length 4 mm, diameter 4 mm.

325 SF 1.81 4312, H128 L3. Topsoil/clearance. Period 6. Opaque dark blue glass. Length 4 mm, diameter 4 mm.

Standard barrel bead (326)

326 SF 1.81 5082, D1697 F352. Drain: Building 123, Passage 2. Period 4. Corroded ?translucent glass, possibly dark blue. Length 3 mm, diameter 4 mm.

LONG BEADS

(length more than 1 1/10 diameter)

Long barrel bead (Fig 5.4; 327)

Catalogued in printed text.

Long cylinder beads (328-37)

328 SF 1.81 628, B138 L7 Backfill of gully F39. Period 5. ?Opaque mid green glass. Hexagonal (prism-shaped) section. Length 10 mm, width 6 mm.

329 SF 1.81 1602, B1583 L385 Dump: Buildrng 94, Room lb. Period 3. Corroding, ?translucent ?green glass. Hexagonal section. Length 7 mm, width 6 mm

330 SF 1.81 489, B66 F34. (Sully. Period 5. Opaque mid blue glass. Rectangular section. Length 19 mm, width 5 mm.

331 SF 1.81 931, B389 F108. Gully between Buildings 112 & 113. Period 4. ?Variscite as *CAR* **2,** fig 36, 1444-1446. Octagonal section. Only partly pierced. Length 6 mm, width 4 mm.

332 SF 1.81 528, C106 F10. Robber trench for Building 114. Early medieval. Opaque dark green glass. Hexagonal section. Length 9 mm, width 5 mm.

333 SF 1.81 5084, D1697 F352. Drain: Building 123, Passage 2. Period 4. Opaque dark blue glass. Rectangular section. Length 5 mm, width 3 mm.

334 SF 1.81 2958, G164 L164. Occupation/midden? ?Period 5 or 6. Opaque mid green glass. Rectangular section. Length 4 mm, width 3 mm.

335 SF 1.81 3799 G1904 L1641. Floor make-up/dump: Building 116? Period 3 or 4. Corroded ?opaque ?green glass. Subrectangular section. Length 10 mm, width 5 mm.

336 SF 1.81 4162, G423 F14. Sand pit. Period 5. ?Jet. Irregular hexagonal section. Length 9 mm, width 5 mm.

337 SF 1.81 4528, G3200. Unstratified. Periods 1 to 6. Corroded opaque mid green glass. Pentagonal section. As CAR **2,** fig 36, 1421. Length 10 mm, width 6 mm.

OTHER BEADS

Semicircular jet bead with decorated upper edge and wedge-shaped section (338)

338 SF 1.81 655, C97 L8. Dump/demolition. Period 4. Fragment, with decoration similar to *CAR* **2,** fig 37, 1496, but NNIN

rather than NNNN. Length approximately 29 mm, maximum width 17 mm.

ARMLETS

SHALE AND JET ARMLETS

Plain (339-51)

339 SF 1.81 939, B6. Site clearance. Modern. Shale. Fragment.
340 SF 1.81 2489, B2344 L100. Dump. Period 4. Shale. Fragment.
341 SF 1.81 486, B64 F43. Small pit. ?Post-Roman. Shale. Fragment.
342 SF 1.81 1211, B196 F90. Robber trench for Building 112. Medieval. Shale. Fragment.
343 SF 1.81 5081, B2594 F894. Pit. Periods 4/5. Shale. Fragment, in two pieces.
344 SF 1.81 1771, C496 L3. Modern topsoil. Post-Roman. Shale. Fragment.
345 SF 1.81 601, C79 F12. Gully: Building 114. Late Period 4. Shale. Fragment.
346 SF 1.81 575, C122 F36. Foundation? Building 95, Room 9. ?Late Period 3. Shale. Fragment.
347 SF 1.81 2820, G1 L1. Topsoil/clearance. Period 6. Jet. Fragment.
348 SF 1.81 4806, G3440 F46. Robber trench. ?Period 6. Shale. Fragment. Internal diameter approximately 60 mm. Circular section of 6 mm diameter.
349 SF 1.81 4700, M101 F37. Pit. Period 7. Shale. Fragment.
350 SF 1.81 4805, M191 F179. Robber trench for Building 123. Period 6. Shale. Fragment.
351 SF 1.81 4918, M304 F300. Robber trench for Building 123. Period 6. Shale. Fragment, in two pieces.

Cable decoration (Fig 5.5; 352)

Catalogued in printed text.

Latitudinal grooves and ridges (Fig 5.5; 353-5)

355 SF 1.81 1212, B133 L7. Backfill of drainage gully F39. Period 5. Shale. Two fragments. These pieces may not be from an armlet.

Notched (356-60)

356 SF 1.81 1054, B126. Unstratified. Jet. Fragment. Opposed notches, as CAR **2,** fig 38, 1560.
357 SF 1.81 1239, B126. Unstratified. Shale. Fragment. Alternating notches, as CAR **2,** fig 38, 1561.
358 SF 1.81 1786, D1. Site clearance. Unstratified. Shale. Fragment. Alternating notches, as CAR **2,** fig 38, 1561, but the notches are less deeply cut.
359 SF 1.81 5073, G751 F661. Pit. Period 6. Shale. Fragment. Alternating notches with a central ?rib.
360 SF 1.81 5214, K333. Unstratified. Shale. Fragment. Slight alternating notches with a central groove.

COPPER-ALLOY ARMLETS

Early (Fig 5.5; 361-2)
Catalogued in printed text.

Wire (363-4)
363 SF 1.81 3236, G517 L516. Destruction debris. Period 5. Circular section. Twisted expanding clasp as CAR **2,** fig 41, 1601.
364 SF 1.81 3188, G473 F14. Sand pit. Period 5. Circular section. Penannular. Maximum diameter 52 mm.

Cable (365-9)
a) two strands
365 SF 1.81 230, C26 F4. Robber trench for Building 114. Early medieval. Fragment.
366 SF 1.81 3003, G202 F154. Robber trench. Period 6. Fragment.
b) three strands
367 SF 1.81 2732(C), G1 L1. Topsoil/clearance. Period 6. Fragment.
368 SF 1.81 2853(C), G108 F55. Robber trench. ?Period 6. Fragment, with part of a clasp of hook-and-eye type.
369 SF 1.81 2879(C), G49. Unstratified. Periods 4-6. Fragment.

Plain (370)
370 SF 1.81 183(C), A70 F31. Pit. Medieval or post-medieval. Fragment.

Notched, crenellated (371-2)
a) alternating notches
371 SF 1.81 403(C), A179 F70. Pit. Medieval or post-medieval. Fragment. Alternating notches, as CAR **2,** fig 43, 1654. Eye for fastening.
b) crenellated
372 SF 1.81 609(C), B126. Unstratified. Fragment. Crenellated, with teething between the crenellations.

Transverse grooves (Fig 5.5; 373)
Catalogued in printed text.

Multiple motifs (374-7)
374 SF 1.81 1023(C), A117 F35. Ditch. Period 5. Fragment.
375 SF 1.81 607(C), B126. Unstratified. Fragment.
376 SF 1.81 3944(C), D1696 F352. Drain: Building 123, Passage 2. Period 4. Fragment.
377 SF 1.81 3131, G363 F14. Sand pit. Period 5. Fragment.

GLASS ARMLET (Fig 5.5; 378)

Catalogued in printed text.

FINGER-RINGS

BONE FINGER-RINGS

Plain (379)

379 SF 1.81 1242, B815 L165. Dump: Building 112, Room 2. Period 4a. Plain. Fragment. Internal diameter 15 mm, height 4 mm.

COPPER-ALLOY FINGER-RINGS

Plain (380-2)

380 SF 1.81 1517, B1190 F333. Rubbish pit. Period 3. Plain. Fragment. Internal diameter 17 mm, height 2 mm. Possibly part of the hoop from a ring with decorated bezel.

381 SF 1.81 2163(C), E568. Dump. ?Period 3? Penannular. Internal diameter 18 mm, height 6 mm.

382 SF 1.81 4072(C), G3000. Unstratified. Periods 1-6. Penannular. Possibly an earring. Internal diameter 15 mm, height 3 mm.

Plain, with decorative clasp (Fig 5.6; 383)
Catalogued in printed text.

Coiled (Fig 5.6; 384)
Catalogued in printed text.

Cable (385)

385 **SF 1.81 584(C), B126. Unstratified. Fragment. Three-strand cable. Possibly cut down from an armlet.**

Transverse grooves (386)

386 **SF 1.81 2047, E386. Post-medieval. Fragment. Continuous transverse grooves as CAR** 2, **fig 53, 1770.**

With moulded bezel (Fig 5.6; 387)
Catalogued in printed text.

With glass or enamel setting (Fig 5.6; 388-90)

390 SF 1.81 1791, C499 F27. Large pit/pit complex. Periods 4/5. Rectangular inset from a finger-ring. Corroding translucent turquoise glass. Dimensions 17 by 14 mm, 3 mm thick.

IRON FINGER-RINGS

With glass setting (Fig 5.6; 391-2)
Catalogued in printed text.

?Plain (393)

393 SF 1.81 4570(X), H33 L3. Topsoil/clearance. Period 6. An iron ?finger-ring, apparently plain. The bezel may be wider than the hoop. Internal diameter 21 mm.

INTAGLIOS (Fig 5.6-7; 392, 394-8)

Catalogued in printed text.

EARRINGS (399-400)

399 SF 1.81 2061, E396 L1. Topsoil. Post-Roman. A copper-alloy penannular ring, round in section, tapering to wire at each end. The ends may originally have been coiled. Internal diameter 22 mm, maximum thickness 3 mm.

400 SF 1.81 2374, E1037 F1100. Timber-lined drain: Building 83, Room 7. Period 1. A copper-alloy ?earring, round in section. Both ends are broken. A small length of wire is wrapped round the section near one of the breaks. Internal diameter 19 mm. This ring may be a link from a chain.

MISCELLANEOUS JEWELLERY (Fig 5.8; 401-5)

405 SF 1.81 3189, G473 F14. Sand pit. Period **5.** A Z-shaped clasp fitting from a necklace. Length 13 mm.

BUCKLES AND BELT-PLATES (406-9)

406 SF 1.81 482, A206 ?L15. Make-up. Period 4. A corroded copper-alloy D-shaped buckle loop. Length 24 mm, maximum width 35 mm.

407 SF 1.81 809, A372 L17. Make-up. Period 3. A small copper-alloy D-shaped buckle loop with thick terminals for the hinge (possibly a handle?). Length 18 mm, maximum width 19 mm.

408 SF 1.81 2299, E805 L49. Dump. Period 2. A large copper-alloy rectangular ?buckle loop. The remains of an iron hinge-bar are visible in the terminals. Length 32 mm, width 76 mm. Possibly from harness.

409 SF 1.81 2295, E817. Unstratified. (Period 2 or earlier.) A corroded copper-alloy D-shaped buckle loop as 1 above. Length 22 mm, maximum width 39 mm.

FOOTWEAR (Hobnails) (410-13)

410 SF 1.81 1302, B865 L192. Top of occupation sills (Building 112). Period 4. Corroded ?hobnails.

411 SF 1.81 2659, B803 F243. Large cess-pit. Periods 4/5. The imprint of a sole with hobnails in iron-impregnated soil.

412 SF 1.81 3308(X), D368 F259. Robbing pit. Period 6. Seventeen iron hobnails with convex heads. Average head diameter 10 mm, average length 18 mm.

413 SF 1.81 4372(X), G3010 F3009. Linear feature: Building 118. Period 4. About twenty-three iron ?hobnails, probably flat-headed, and two ?nail fragments. Average head diameter 7 mm, average length approximately 13 mm.

STIRRING RODS (Fig 5.9; 414-21)

415 SF 1.81 1596, B1190 F333. Rubbish pit. Period 3. Fragment. Translucent bluey-green glass. Length 22 mm.

416 SF 1.81 6000, G1737 L1567. Cultivation. Period 3. Fragment. Translucent bluey-green glass. Length 38 mm.

417 SF 1.81 4065, G2319 L1746. Cultivated soil. Period 3. Fragment. Translucent bluey-green glass. Length 28 mm.

418 SF 1.81 3775, G1770. Unstratified. Period 6. Fragment. Translucent brownish-yellow glass. Length 36 mm.

419 SF 1.81 6001, H531 L3. Topsoil/clearance. Period 6. Fragment. Decaying translucent bluey-green glass. Length 44 mm.

420 SF 1.81 6002, H652. Unstratified. One end of a translucent yellowish-green rod. Length 88 mm. Diameter of expanded end 8 mm.

421 SF 1.81 6003, H626. Unstratified. Fragment. Narrow twisted translucent brown glass. Length 28 mm.

MIXING PALETTES (422-6)

422 SF 1.81 1083, B660 L54. Dump. Periods 4/5. A bevelled corner fragment broken from a mixing palette of creamy-white marble.

423 SF 1.81 2694, C277 L34. Dump? Period 3. A corner fragment possibly from a palette with very slightly bevelled edges. Stone unidentified.

424 SF 1.81 3864, D1566 L1372. Dump: Building 123, Room 8. Period 4. A bevelled corner fragment from a palette of greenstone. A depression has been worn in the stone towards the centre of the flat side.

425 SF 1.81 5063, J357 L222. Destruction debris: Building 79. Period 2. A fragment from a palette of banded limestone with bevelled edges. A depression has been worn towards the centre of the flat side. Length 95 mm, maximum surviving width 48 mm.

426 SF 1.81 5354, G1550 L1050. Dump: Building 116. Period 4. A fragment of an irregularly-shaped thin stone slab with one highly-polished surface which has been worn down in one area around which are marks from a circular polishing/grinding motion. This may be a fragment of a mixing palette which was set into a frame. Unidentified stone. Maximum dimensions 46 by 36 mm, 6 mm thick.

MIRRORS (Fig 5.10; 427-32)

430 SF 1.81 1496, B1156 L267. Make-up: Building 112?, Room 4 Periods 3/4. A fragment of copper-alloy sheet with one

surviving curved edge marked by a row of perforations. Surviving length 33 mm.

431 SF 1.81 1808, E1. Site clearance. Unstratified. A triangular fragment from a ?speculum mirror. As with Fig 5.10, 428, the piece has been deliberately cut, but one of the cut edges curves inwards, and a small incurved cut has also been made at the junction of the outer rim and the cut straight edge. Surviving length 55 mm.

432 SF 1.81 4898(C), M401 F399. Hearth: Building 91. Period 2. A small fragment of copper-alloy (probably speculum) sheet possibly from a mirror.

NAIL-CLEANERS

All are of copper-alloy.

Type la. Nail-cleaners with a more or less straight, flat, thickish shaft (433-6). The suspension loop rises directly from the shaft and is on the same plane. Mid to late 1st century, possibly continuing into the 2nd century.

433 SF 1.81 1525, B1222 F348. Posthole: Building 95, Room 2. Period 3. The suspension loop seems to have been folded over rather than cast. The blade is very slightly waisted above the points. On each side of the blade, just below the suspension loop, there is a slight incised cross set between transverse lines. Length 45 mm. Possibly from the same set as the toilet spoon **458** below.

434 SF 1.81 2423, B2246 L655. Make-up. Periods 3/4. The points are missing. Length 32 mm.

435 SF 1.81 615, C144 L17. Gravel & mortar floor: Building 95, Room 9. Period 3. The points are missing. Length 27 mm.

436 SF 1.81 832, C224 L20. Dump. Period 3. The points are damaged. Length 34 mm.

Type 2a. Nail-cleaners with a leaf-shaped blade and suspension loop often, though not invariably, at right angles to the plane of the blade (Fig 5.11; 437-41). Mid to late 1st-century, probably continuing into the 2nd century.

439 SF 1.81 442, C76 L1. Topsoil (Roman?). ?Period 5. One point is missing. The junction of blade and suspension loop is marked by decorative mouldings. The suspension loop, at right angles to the plane of the blade, is very worn. Length 44 mm.

440 SF 1.81 2289, E817. Unstratified (Make-up. Period 2?). The lower part of the leaf-shaped blade is missing. The suspension loop is at right angles to the plane of the blade. Length 31 mm.

441 SF 1.81 4000(C), G2290 L1703. Cultivation. Period 3. One point is missing. The suspension loop is at right angles to the plane of the blade. The blade has a marginal groove. Length 44 mm.

Type 2b. Nail-cleaners with a stylised leaf-shaped blade (442). Dated to the 2nd century, possibly running into the 3rd century.

442 SF 1.81 2255, E756 L38. Occupation. Period 3. Copper-alloy. The points are missing. The blade is marked below the bulge of the exaggerated leaf-shape by slight transverse incised grooves. The terminal holds an ?iron rivet indicating that the nail-cleaner formed part of a set held together thus. Length 41 mm.

Type 4. Nail-cleaners which have been beaten out, rather than cast (Fig 5.11; 443-4). *See* also the nail-cleaner in the toilet set **479.**
Catalogued in printed text

TWEEZERS (445-56)

All are of copper—alloy. *See* also the tweezers in the toilet set **479.**

445 SF 1.81 1462, B1126 L256. Dump/make-up: Building 113?, Room 2. Periods 3/4. A flared blade with part of the loop. The blade has marginal grooves. Length 43 mm.

446 SF 1.81 1518, B1218 L222. Daub floor: Building 112, Room 6. ?Period 4. In three fragments, corroded. The blades are flared and have marginal grooves. Length approximately 40 mm.

447 SF 1.81 622, C149 F42. Gully/drain: Building 114. Early Period 4. In three fragments, corroded. The blades are flared, the end of one is missing. Length 59 mm.

448 SF 1.81 1390, C388 L45. Occupation/midden. Early Period 3. The ends of the flared blades have been broken off. There may be marginal grooves on the blades. Surviving length 55 mm.

449 SF 1.81 3856(C), D1666 F1485. Scoop. Period 7. Tweezers with flared blades. Only one of the blades curves in at the end. Length 57 mm.

450 SF 1.81 3273, G539 L518. Occupation: Building 120. Period 5b. A flared ?tweezer blade with part of the loop. In three fragments. Length approximately 30 mm.

451 SF 1.81 3803, G1977 L1744. Construction debris: Building 116? Period 3 or 4. The lower half of one blade is missing. The surviving blade is flared. Length 51 mm.

452 SF 1.81 4011, G2447 L1746. Cultivated soil. Period 3. A corroded pair of tweezers in three fragments. The blades are flared. Length 38 mm.

453 SF 1.81 4228, G2925 L2924. Dump. Period 3d or 3d/4. Four strips, possibly representing a pair of tweezers with flared blades.

454 SF 1.81 5120, K50. Unstratified. A pair of tweezers in three fragments. The blades are flared. Length approximately 60 mm.

455 SF 1.81 4834, M141 F139. Large pit. Period 7. A flared blade and part of the loop. Length (bent) 58 mm.

456 SF 1.81 5397, W41. Unstratified. A flared tweezer blade. Length 58 mm.

TOILET SPOONS (Fig 5.11; 457-68)

All are of copper alloy.

with small rounds-flat or cupped scoop

458 SF 1.81 1271, B834 L165. Dump: Building 112, Room 2. Period 4a. In four fragments. Flat scoop. Length approximately 105 mm.

459 **458** SF 1.81 1542(C), B1269 ?L269. Dump. Period 3. The top of the shaft has been folded over to form a suspension loop. The very small scoop is cupped. The flat shaft tapers and has marginal grooves. Length 47 mm. Possibly from the same set as the nail-cleaner **433** above.

460 SF 1.81 288, C50 L13. Demolition: destruction of Building 114. Period 4. The top of the shaft is missing, and the flat scoop is either very worn, or has been distorted. Length 99 mm.

461 SF 1.81 4555, J2 L1. Site clearance. Period 6. The top of the shaft is missing. Flat scoop. Length 47 mm.

462 SF 1.81 4095(C), G2606 F2605. Pit. Period 4. The top of the shaft is missing and the very slightly cupped scoop is either damaged or worn. Length 88 mm.

463 SF 1.81 4148(C), G2841 L2815. Dump: Building 119? Periods 3 or 4. In three fragments. Slightly cupped scoop. The shaft is swollen at one point, suggesting that this scoop may belong to a double-ended instrument. Length of fragment with scoop 42 mm. Length of swollen shaft fragment) 61 mm.

464 SF 1.81 3785(C), G1789 L1054. Dump. P e r i o d s 3d/4. Flat shaft with rounded terminal pierced for suspension. Cupped scoop. From toilet set. Length 57 mm.

with long cupped scoop

465 SF 1.81 699, A320 L79. Destruction debris (redeposited). Period 3. Bent. The junction of shaft and scoop is marked by decorative moulding. Length 108 mm.

466 SF 1.81 1187, B756 L146. Occupation lenses: Building 112, Room 2. Period 4b. The shaft is missing. Length of scoop 44 mm.

467 SF 1.81 2770, Gl L1. Topsoil/clearance. Period 6. The top of the shaft is missing. The scoop is broken. Just above the scoop the shaft swells slightly and is decorated with two grooves which form a false cordon. Length 61 mm.

468 SF 1.81 4644, J3 L1. Site clearance. Period 6. The top of the shaft is missing. The tip of the scoop is broken off. There are bead-and-reel mouldings on the shaft just above the scoop. Length 72 mm.

SPOON-PROBES (Fig 5.12; 469-72)

All are of copper alloy.

471 SF 1.81 866, A421 L138. Occupation (rubbish?). Period 3. Probably a spoon-probe, but the spoon is missing. There is a

decorative moulding on the circular-section shaft at the end furthest from the probe, similar to **472** below. Beyond this moulding the short length of shaft surviving is elliptical in section. Length 108 mm.

472 SF 1.81 1556, B1341 L303. Tile spread alleyway. Period 3. Part of the spoon is missing. A decorative moulding marks the junction of spoon and shaft. Length 124 mm.

PROBES (473-8)

All these probes have short broken shafts and are probably from double-ended instruments. All are of copper alloy.

473 SF 1.81 1787, C499 F27. Large pit/pit complex. Periods 4/5. Probe with short length of shaft.

474 SF 1.81 3831, D1554 L1372. Dump: Building 123, Room 8. Period 4. Probe with short length of shaft.

475 SF 1.81 2067, E476 L1. Machine clearance. Unstratified. A small probe. The top of the shaft is missing. Length 65 mm.

476 SF 1.81 3473, G1087 L1050. Dump: Building 116. Period 4. Probe with short length of shaft.

477 SF 1.81 4321, G3036 L2820. Dump/cultivation. Period 3d. Probe with a short bent length of shaft.

478 SF 1.81 3080, G281. Unstratified. Periods 4-6. Probe with short length of shaft.

TOILET SET (479)

479 SF 1.81 1247(C), B834 L165. Dump: Building 112, Room 2. Period 4a. 1) Nail-cleaner of Type 4. The blade is tapering, and changes from flat in section to round (wire). 2) Tweezers with flared blades (in fragments; one blade is incomplete). 3) A wire shaft from an instrument with the operative end missing, probably from a toilet spoon. Both the nail-cleaner and the ?spoon have a suspension loop formed by turning the shaft over and passing it down parallel to the main section for some distance before twisting it several times around the shaft. Similar to *CAR* **2,** fig 67, 1943.

MISCELLANEOUS TOILET INSTRUMENT (480)

480 SF 1.81 4393, G3098 L3085. Dump. Period 3d. A fragment from the shaft of a toilet instrument. At one broken end the shaft narrows before a group of mouldings (bead/grooved cylinder/bead), and for some distance above, the other is decorated with notching. Length 40 mm.

CATEGORY 3: OBJECTS USED IN THE MANUFACTURE OR WORKING OF TEXTILES

NEEDLES

SEWING NEEDLES

Type 1. Needles with a pointed head (481-96).
a) with a rectangular eye
481 SF 1.81 1831, E1. Site clearance. Unstratified. Bone. Repointed. Length 67 mm.
482 SF 1.81 2291, E813 L52. Demolition debris (redeposited). Period 3a. Copper-alloy. Complete. Length 131 mm.
483 SF 1.81 4920, G3969 L3954. Occupation: Building 116. Period 4. Bone. Complete. Length 105 mm.
484 SF 1.81 4356, H263 L78. Destruction debris B: Building 116. Period 4 or 5. Bone. Complete. Length 77 mm.
485 SF 1.81 5175, K122 F121. Pit. Period 3c. Copper-alloy. Broken just below the eye. Length 36 mm.
486 SF 1.81 4869, M282 L280. Dump. Period 3. Copper-alloy. Tip missing. Length 59 mm.
b) with a round eye
487 SF 1.81 4440, H337 L283. Dump. Period 5. Bone. Complete. Length 83 mm.
488 SF 1.81 4909, M154 F143. Large pit. Period 7. Bone. Stained green. Tip missing. Length 67 mm.
c) with a figure-of-eight eye
489 SF 1.81 1320, B914 F278. Pit: Building 112, Room 6a. Period 4b. Bone. Tip missing. Length 71 mm.
490 SF 1.81 310, C58. Clearance. Unstratified. Period 5? Bone. Tip missing. Length 67 mm.
491 SF 1.81 3647, D1186. Unstratified. Bone. ?Repointed. Length 77 mm.
492 SF 1.81 3773, G1751 L865. Dump. Period 3d/4. Bone. Complete. Length 140 mm.
493 SF 1.81 3995, G2344 F79. Pit. Period 3. Bone. Tip missing. Length 79 m.
494 SF 1.81 4049, G2456 F2453. Drain. Period 6. Bone. The point is missing. Length 79 mm.
495 SF 1.81 4050, G2454 F2453. Drain. Period 6. Bone. The point is missing. Length 83 mm.
d) with a triangular eye
496 SF 1.81 835, C233 L20. Dump. Period 3. Copper-alloy. Complete except for the extreme tip. Length (bent) 103 mm.

Type 2. Needles with a flat spatulate head (Fig 5.13; 497-517).
a) with a rectangular eye
499 SF 1.81 559, A239 F92. Pit. Period 5? Bone. Complete. Length 90 mm.
500 SF 1.81 896, B332 L31. Occupation: Building 112, Room 5. Period 4c. Bone. The point is missing. Length 97 mm.
501 SF 1.81 1364, B967 L100. Dump. Period 4. Copper-alloy. Complete. Length (bent) approximately 126 mm.
502 SF 1.81 1499, B1164 F302. Gully. Period 3. Copper-alloy. The point is missing. Length 69 mm.
503 SF 1.81 1417, B1065 F304. Slot/drip trench: Building 95, Room 4. Period 3. Copper-alloy. Complete (in two pieces) except for the extreme tip. Length (bent) 151 mm.
504 SF 1.81 516, C97 L8. Dump/demolition. Period 4. Copper-

alloy. Very bent. Tip missing. Length approximately 109 mm.

505 SF 1.81 491, C89 L9. Dump/demolition: destruction of Building 114. Period 4. Bone. Tip missing. Length 49 mm.

506 SF 1.81 502, C98 L9. Dump/demolition: destruction of Building 114. Period 4. Bone. Complete. Length 113 mm.

507 SF 1.81 1250, C323 L39 + L43. Early Period 3. Copper-alloy. Complete, in two pieces. Length 87 mm.

508 SF 1.81 794, C67 F27. Large pit/pit complex. Periods 4/5. Bone. Tip missing. Length 70 mm.

509 SF 1.81 3942, G2178 L1702. Dump/cultivation: Building 116? Period 3 or 4. Copper-alloy. Complete. Length (bent) 122 mm.

510 SF 1.81 4156, G2872 L1760. Floor make-up: Building 117. Period 4. Copper-alloy. The top of the head only.

511 SF 1.81 4173, G2916 L2374. Occupation/cultivation. Period 3d. Copper-alloy. Tip missing. Length 60 mm.

512 SF 1.81 3096, G338 F14. Sand pit. Period 5. Bone. Repointed. Length 78 mm.

513 SF 1.81 4460, G3199 F2695. Pit. ?Period 3. Copper-alloy. Complete. Length (bent) 121 mm.

514 SF 1.81 4780, J30 L1. Site clearance. Period 6. Bone. Tip missing. Length 60 mm.

515 SF 1.81 4629, J100 L1. Site clearance. Period 6. Bone. Complete. Length 68 mm.

b) with a figure-of-eight eye

516 SF 1.81 464, B31 L2. Dump/midden build-up. Period 5. Bone. Tip missing. Length 45 mm.

517 SF 1.81 4611, G3425 F3424. Plinth: Building 118. Period 4. Bone. Complete. Length 94 mm.

Type 3. Copper-alloy needles with a groove above and below the eye (518-21).

518 SF 1.81 1034, B518 L72. Dump: Building 112, Room 6a. Period 4. Complete. Length 67 mm. The eye, at 13 mm, is very long.

519 SF 1.81 3760, D1377 F1252. Timber-lined drain: yard of Building 123. Period 4. Tip missing. Eye damaged. Length 92 mm.

520 SF 1.81 3717, G1523 L1344. Occupation/trample: Building 117. Period 4. Head only. Length 21 mm.

521 SF 1.81 5187, G4283 L4274. Dump. Period 3d or 3d/4. Tip missing. Length 90 mm.

SPINDLE (Fig 5.13; 522)

Catalogued in printed text.

SPINDLEWHORLS (523-5)

523 SF 1.81 456, B6. Site clearance. Modern. Wall sherd of grey ware. Chipped. Diameter fairly regular, 35 mm. Thickness 6 mm. The perforation is straight-sided, diameter 6 mm.

524 SF 1.81 2914, G150. Unstratified. Periods 4-6. Base of colour-coat beaker. The junction of wall and base is smooth

but irregular. Diameter 34 mm, thickness 10 mm. The perforation is 9 mm in diameter.

525 SF 1.81 3101, G356 F183. Robber trench. Period 6. Wall sherd of grey ware. Chipped. Diameter regular, 48 mm. Thickness 12 mm. The perforation is straight-sided, diameter 9 mm.

CATEGORY 4: HOUSEHOLD UTENSILS AND FURNITURE

SPOONS

Type 1. Spoons with a round bowl (526-38). Date range: mid 1st to 2nd century.

526 SF 1.81 1093(C), A519 L202. Destruction debris (redeposited). Period 3. A copper-alloy spoon, complete except for the very tip of the shaft. Length 99 mm.

527 SF 1.81 535(C), A227. Unstratified. Roman. A copper-alloy spoon plated with tin. Complete except for damage to the bowl. Bent. Length 117 mm.

528 SF 1.81 1220, B783 L160. Weathering/dump horizon: Building 112, Room 6a. Period 4b. Four fragments from a copper-alloy spoon. Most of the bowl is present and part of the shaft. Length 77 mm.

529 SF 1.81 1464, Blll L177. Clay dump/redeposited Boudican: Building 95?, Room 3. Period 3. A copper-alloy spoon bowl with part of the shaft. Length 37 mm.

530 SF 1.81 815, B250 F116. Slot: Building 112, Room 5. Period 4b. A flattened copper-alloy spoon bowl with a very small part of the shaft. Length 31 mm.

531 SF 1.81 1104, B600 F196. Pit. Period 4. Part of a bone spoon. Most of the bowl is missing, as is the tip of the shaft. Length 77 mm.

532 SF 1.81 1086, B634 F196. Pit. Period 4. A copper-alloy spoon bowl with a short piece of the shaft. Length (bent) 39 mm.

533 SF 1.81 818, C215 L24. Occupation: Building 114, Room 3. Period 4. A bone spoon, complete except for the tip of the shaft and slight damage to the bowl. Length 99 mm.

534 SF 1.81 4113, G300 F284. Pit. Period 6. A fragment from a bone spoon. Only a small part of the bowl and a short length of the shaft remain. Length 33 mm.

535 SF 1.81 4965, B2577 L710. Occupation (industrial?): Building 78, Room 9. Periods 1/2. The shaft of a bone spoon. The tip is missing, and a small part of the bowl remains. In three pieces. Length 81 mm.

536 SF 1.81 3862, D1643 L779. Make-up? Building 123, Passage 2. Period 4. Part of a copper-alloy spoon. Most of the bowl is missing, as is the upper part of the shaft. Length 49 mm.

537 SF 1.81 4958, M582 L333. Sandy clay floor: Building 121. Period 3. Part of a bone spoon. Most of the bowl and the tip of the shaft are missing. Length 94 mm.

538 SF 1.81 3513(C), G1173 L1156. Dump/make-up: Building 120. Period 5a. The bowl and part of the shaft of a copper-alloy spoon. Length 70 mm.

Type 3. Spoon with a mandolin-shaped bowl (539).

539 SF 1.81 140(C), C22 F4. Robber trench for Building 114. Early medieval. A copper-alloy spoon bowl. The handle was offset slightly from the bowl, and the thickened end at the junction survives. This is decorated with enamelled geometric motifs. The enamel may have been red. Length 56 mm.

OBJECTS USED FOR THE PREPARATION OR SERVING OF FOOD

Shale vessel (540)

540 SF 1.81 4807, J6 L1. Site clearance. Period 6. A sherd from the base of a large thin-walled dish or platter with a small footring.

Copper-alloy vessels (Figs 5.14-15; 541-9)

547 SF 1.81 1767, B1749 L419. Boudican destruction debris: destruction of Building 77. Early Period 3. Possibly a rim sherd from a vessel, perhaps a flagon. Length 29 mm.

548 SF 1.81 1354, B687 L133. Occupation lenses: Building 113, Room **1.** Period 4. A circular-section handle from a large vessel, with horizontal central section, 155 mm long, curving to vertical side pieces. Most of one only remains. It has a round flat pierced terminal for attachment, and is 80 mm long. Possibly a drop-handle, but large and probably too thin (maximum diameter 5 mm).

549 SF 1.81 2213, E713 F519. Pit? Period 3. Vessel handle as CAR **2,** fig 76, 2039, 2044. Length 84 mm.

Quernstones (Figs 5.16-18; 550-91)

561 SF 1.81 1157, A537 F153. Posthole in post pit. Period 3? Lava, lower-stone fragment, 390/90/- mm Vertical tooling on the edge, undersurface rough, grinding surface smooth.

562 SF 1.81 870, B313 L30. Occupation horizon: Building 112, Room 6a. Period 4c. Lava, upper-stone fragment, 420/26 mm. Vertical tooling on the side, harp dressed on the grinding surface. Part of the grinding surface is very smooth, possibly from reuse (?as a flagstone).

563 SF 1.81 1011, B504 F3. Robber trench for Building 113. Medieval. Lava, fragment. Grooved on one face. Probably Roman.

564 SF 1.81 1158, B686 F205. Foundation: Building 113. Period 4. Lava, lower-stone fragment, maximum thickness 45 mm. No grooving, undersurface rough. Grinding angle 10°.

565 SF 1.81 1388, B1014 L231. Midden/dump: Building 112. Period 4a. Lava, upper-stone fragment, maximum thickness at edge 55.0 mm. Kerb on upper edge 55.0/mm wide. Vertical tooling on the edge, grooving on the top almost radial, very worn radial grooves on the grinding, surface. Grinding angle 15°.

566 SF 1.81 2097, E494. Site clearance. Unstratified, a) Lava, fragment, maximum thickness 80 mm. b) Lava, upper-stone fragment, 500/85 mm. Roman. Grinding surface has radial grooves, the upper edge kerb is c 20 mm wide, and part of a key slot 15 mm deep survives on the upper surface.

567 SF 1.81 2098, E494. Site clearance. Unstratified. Nine lava fragments which may join. Probably Roman, the edge and grinding surface being grooved.

568 SF 1.81 2134, E538 F374. Foundation: Buildings 105/106. Period 3b. Three joining lava lower-stone fragments, 380/45/- mm. Vertical tooling on the side, underside rough, grinding surface harp dressed.

569 SF 1.81 2153, E561 F102. Robber trench. Period 7. Millstone grit, upper-stone fragment, 380/55 mm. Pecked top surface and rough grinding surface. Low grinding angle.

570 Not used.

571 SF 1.81 2198, E623 L22. Destruction debris: Buildings 86/87.

Period 2. Two small lava chips from the edge of an upper-stone, with grooving.

572 SF 1.81 2233, E673 F474. Slot. Period 3a. Lava, upper-stone fragment, -/85 mm. Roder Type 4 with square handle hole in the side 45 mm wide. Kerb on upper edge 40 mm wide.

573 SF 1.81 2286, E673 F474. Slot. Period 3a. Very small lava quernstone fragment.

574 SF 1.81 2234, E760 F551. Slot? Period 3. Six joining lava upper-stone fragments, 440/100 mm. Vertical tooling on the edge, may have had radial tooling on the eroded grinding surface. Kerb on upper edge, broken, 40 mm wide.

575 SF 1.81 2276, E777 F560. Ditch. Period 3. Two non-joining lava lower-stone fragments, a) 300/80 mm. b) -/80 mm. These may be from the same stone, both have vertical tooling on the edge. One piece has been worn around the circumference by the upper-stone.

576 SF 1.81 2306, E812. Dump. Period 3. Lava, upper-stone fragment, -/60 mm. Roder Type 4 with handle through the side which has been worn through at the bottom. Vertical tooling on the edge and traces of harp dressing on the top surface. Kerb on upper edge 40 mm wide.

577 SF 1.81 2370, E871 F745. Pit. Period 2. Lava, upper-stone edge fragment. Thickness greater than 40 mm. Vertical tooling on edge, radial grooving on top surface. Grinding surface broken away.

578 SF 1.81 2380, E1047 F657. Slot. Period 3. Lava, lower-stone fragment, 360/70/60 mm. Pecked grinding surface, rough undersurface. Central hole perforates the stone.

579 SF 1.81 4599, G3311 L3133. Dump/floor surface. Period 3b or 3c. Lava, small fragment (in four pieces) of upper-stone.

580 SF 1.81 5197, G4246 L4240. Dump. Period 3d. Lava, small fragment of top of rim of upper-stone, 360/- mm. Vertical tooling on edge. Parallel grooving on rim top.

581 SF 1.81 3575, G1100 F43. Robber trench. Period 6. Lava, upper-stone fragment, 420/49 mm. Vertical tooling on edge. Parallel grooving on both surfaces. May fit SF 4471 below, but fractured edges very abraded. A groove delineates a rudimentary kerb.

582 SF 1.81 4059, G2433 F2363. Pit. Period 3. Lava, lower-stone fragment, 380/27/- mm. Fragment seems to be broken just before a slight projection on the circumference. Parallel grooving on the grinding surface. Undersurface rough.

583 SF 1.81 4471, G3061 F3051. Scoop: Building 120. Period 5b. Lava, upper-stone fragment, 420/48 mm. Vertical tooling on edge. Bi-directional grooving on both surfaces. May fit SF 3575 above, but fractured edges very abraded. A groove delineates a rudimentary kerb.

584 SF 1.81 5232, G4206 F4001. Hearth? Building 98. ?Period 3. Lava, upper-stone fragment, reworked for building stone, covered with traces of mortar. Parallel grooving still visible on one face.

585 SF 1.81 4350, H43 L3. Topsoil/clearance. Period 6. Lava, lower-stone fragment, 440/35/- mm. Worn parallel grooving on upper surface.

586 SF 1.81 4515, H277 F146. Robber trench? Period 6. Lava, small fragment of ?upper-stone.

587 SF 1.81 5315, J357 L222. Destruction debris: Building 79. Period 2. Lava, upper-stone fragment, 380/49 mm. Vertical tooling on edge. Bi-directional grooving on upper surface.

Grinding surface worn smooth.

588 SF 1.81 4609, J7 F5. Robber trench. Period 6. Lava, small fragment with traces of parallel grooving on at least one surface.

589 SF 1.81 5326, J335 F236. Robber trench. Period 3. Lava, four fragments of ?upper-stone with traces of grooving.

590 SF 1.81 5325, J345 F342. Post-pit: Building 79. Period 2. Lava, small fragment of ?upper-stone.

591 SF 1.81 5302, J344 F343. Linear feature: Building 79. Period 1 or 2. Lava, small fragment (in two pieces) of ?upper-stone.

Stone mortars (592-6)

592 SF 1.81 1207, B225 L15. Clay dump level. Periods 4/5. A fragment of a dished mortar of ?Purbeck stone. Internal diameter at the rim approximately 150 mm.

593 SF 1.81 1686, B1182 F334. Gully: Building 95, Room 2. Period 3. Small fragment possibly from the footring of a mortar. Weathered limestone?

594 SF 1.81 2074, E378 L1. Topsoil/clearance. Post-Roman. A fragment of a ?straight-walled limestone mortar. Internal diameter at the rim approximately 190 mm. Possibly post-Roman.

595 SF 1.81 2892, D49 F30. Robber trench for Building 123. Period 6. A small fragment of white marble possibly from a dished mortar, or possibly architectural.

596 SF 1.81 4123, G2698 L2374. Occupation/cultivation. Period 3d. A fragment of ?limestone, probably from the base of a mortar.

Stone pestles (Fig 5.19; 597-8)

598 SF 1.81 1205, B239 F109. Small pit. ?Period 5. A fragment of what may be the grinding end and part of the arm of a large elbow-shaped limestone pestle, or possibly a fragment of sculpture. Maximum diameter of the end 83 mm, surviving length 130 mm.

LAMPS

A full catalogue of the ceramic lamps will be published in a future volume of CAR.

Ceramic lamps (Fig 5.20; 599-605)

Catalogued in printed text

Lead lamp (Fig 5.21; 606)

Catalogued in printed text.

Lamp-hook (607)

607 SF 1.81 2620(C), E1650 L149. Dump. Period 2. A copper-alloy lamp-hook, similar to CAR **2**, fig 84, 2113, but lacking the mouldings below the suspension loop. Length 86 mm.

CANDLESTICK (fig 5.21; 608)

Catalogued in printed text.

FURNITURE FRAGMENTS AND FITTINGS

Handles (Fig 5.22; 609-28). *See* also the ring-handles Fig 5.23, **640-2.**

610 SF 1.81 2665(C), A201 F81. Pit. Period 5. An iron ?strap-handle with roughly formed terminals. Each terminal has a rectangular perforation for a nail or rivet. Length 117 mm.

611 SF 1.81 1617, A753 L211. Destruction debris (redeposited): Building 93. Period 3. A copper-alloy moulded bead-and-reel terminal from a drop-handle(?) with part of the curved handle surviving. Length 43 mm.

612 SF 1.81 1044, B510 L60. Dump levels. Period 4. A fragment of a copper-alloy ring-handle. Diameter approximately 26 mm.

613 SF 1.81 1163, B688 L133. Occupation lenses: Building 113, Room 1. Period 4. A copper-alloy acorn-shaped terminal probably from a drop-handle. Length 31 mm.

614 SF 1.81 1539, B1246 L302. Dump level. Period 3. A copper-alloy ring-handle with a split-spike loop. Diameter of ring 25 mm. Length of loop (points damaged) 42 mm.

615 SF 1.81 1764(C), B1718 L415. Boudican destruction debris: destruction of Building 77. Early Period 3. A fragment from a very thick (diameter 13 mm) copper-alloy drop- or ring-handle with part of a split-spike loop attached.

616 SF 1.81 1702, B1832 F96. Large pit. Post-medieval. A copper-alloy drop-handle with both split-spike loops surviving. The handle is of lozenge section changing to circular at the bud-shaped terminals. Length of handle 44 mm, length of loops 23 and 28 mm.

617 SF 1.81 2453, B2275 L212. Occupation sills: Building 112, Room 3. Period 4a. A fragment from a copper-alloy ring-handle. Diameter approximately 33 mm.

618 SF 1.81 2469, B2280 L139. Occupation: Building 112, Room 4. Period 4a. A corroded copper-alloy ?ring-handle. Diameter 19, mm.

619 SF 1.81 339, C63 F27. Large pit/pit complex. Periods 4/5. A fragment of an iron vessel or furniture drop-handle. Length 109 mm.

620 SF 1.81 410, C68 F27. Large pit/pit complex. Periods 4/5. A copper-alloy ring-handle. Diameter 28 mm.

621 SF 1.81 2559, E703 L34. Dump. Early Period 3. A fragment of an iron vessel or furniture drop-handle. Length 195 mm.

622 SF 1.81 2254, E756 L38. Post-Boudican occupation layer: Building 108. ?Period 3b. A copper-alloy ring-handle. Diameter 20 mm.

623 SF 1.81 2639, E1675 L173. Dump/demolition. Period 2. A distorted fragment possibly from an iron drop-handle? Length 115 mm.

624 SF 1.81 5025(C), G3880 L3125. Cultivated soil. Period 3. A copper-alloy drop-handle in three fragments. The centre of the bar and the terminals have decorative transverse

mouldings. Length approximately 90 mm.

625 SF 1.81 5036, J333. Unstratified. Periods 1-5. A copper-alloy ?D-section ring-handle and a split-spike loop. One of the points of the loop is missing. Diameter of ring 29 mm, length of loop (clenched) 22 mm.

626 SF 1.81 4758, G3705 L3549. Dump/floor surface: Building 97. Period 3. A fragment from a copper-alloy ring-handle of complex section. Diameter approximately 27 mm.

627 SF 1.81 4986, K37 F12. Oven. Period 3 (backfill = Period 4). A fragment of a copper-alloy drop-handle. One terminal survives. Length 55 mm.

628 SF 1.81 4194, H99 F39. Cellar? Period 6. A twisted copper-alloy handle probably from a vessel. The handle is of thick D-shaped section with the underside slightly concave rather than straight. Part of one pierced terminal survives, broken across the perforation. Length (bent) 118 mm.

Copper-alloy furniture fragments (Fig 5.22; 629-31)

631 SF 1.81 1634, B1661 L386. Occupation: Building 94, Room lb. Period 3. A ?foot from a piece of furniture, possibly from a folding stool or tripod. Height 16 mm.

Bone inlay (Fig 5.22; 632-3)

Catalogued in printed text.

Ring-key (Fig 5.22; 634)

Catalogued in printed text.

Box fittings (Fig 5.22; 635-9)

637 SF 1.81 1061, B559 L89. Dump patch: Building 112, Room 2. Period 4b. A copper-alloy fitting similar to the winged lobate fittings on the first Butt Road box (CAR **2,** fig 90,2175-2177) with feathering all round the circumference. The piece is roughly figure-of-eight-shaped, with a curved cut-out on the upper element. The edge of this cut-out is also feathered, indicating that it formed a deliberate part of the design and was probably cut to accommodate a stud. The fitting is broken at the return. Length 46 mm. Width 27 mm. Also a stud similar to those from the first Butt Road box (ibid, 2179 etc), with copper-alloy head filled with a ?lead solder, and an iron shaft.

638 SF 1.81 2319, E871 F745. Pit. Period 2. A copper-alloy rectangular fitting with two long projections on the underside for attachment. The length of the projections probably indicates that the fitting was from a piece of wooden furniture. At one end of the object is a single large vertical lug, probably part of a hinge. Length 59 mm, width 12 mm. Maximum length of underside projections 18 mm.

638a SF 1.81 1973, E283 F206. Pit. Period 7. A corroded copper-alloy bell-shaped stud as Allason-Jones 1985, fig 3. *See* also CAR **2,** fig 137,4143 where a similar object was catalogued as a lock-pin. Length 46 mm.

639 SF 1.81 3064, G310 F14. Sand pit. Period 5. Several fragments of a strip of sheet copper-alloy with a convex moulding on each long side beneath which are traces of ?lead solder. Also part of a stud similar to **637,** with a copper-alloy head filled with ?lead solder. The shaft (probably of iron) is missing. This stud probably originally fitted above a rivet hole on one fragment of the sheet. These pieces almost certainly derive

from a box. Maximum length of sheet 62 mm. Diameter of stud approximately 31 mm.

Site J Box (Fig 5.23; 640-4)
Catalogued in printed textS

CATEGORY 5: OBJECTS USED FOR RECREATIONAL PURPOSES

COUNTERS FOR BOARD GAMES

BONE COUNTERS

Type 1. Plain counters (Fig 5.24; 645-64). All have a central compass or lathe centre mark unless otherwise stated.

649 SF 1.81 729, A46. Unstratified. Post-Roman. The upper surface is countersunk. There is an X on the reverse, scratched into the surface with a broad-tipped instrument. Th lines are approximately 2 mm across. Diameter 19 mm, thickness 4 mm.

650 SF 1.81 836, B259 L13. Occupation in Hut 3. Anglo-Saxon. The edge is bevelled and at one part bears three more or less vertical incised lines, possibly for VI rather than III as the first two lines converge slightly towards the bottom. Diameter 16 mm, thickness 4 mm.

651 SF 1.81 929, B391 L49. Dump/clay lens: Building 112, Room 5. Period 4b. The central area is countersunk with a flat inner area which carries a ring-and-dot mark, probably indicating the use of a spurred lathe centre. The edge is bevelled. Diameter 20 mm, thickness 4 mm.

652 SF 1.81 1327, B921 L100. Dump. Period 4. Both faces are flat. The edge is slightly bevelled. There is an incised X on the reverse. Diameter 19 mm, thickness 4 mm.

653 SF 1.81 1072, B652 L131. Dump: Building 112, Room 4. Period 4a. The central area is countersunk and may also carry the mark of a spurred lathe centre as **651**. The upper edge is bevelled. Diameter 20 mm, thickness 4 mm.

654 SF 1.81 1176, B697 L136. Occupation: Building 112, Room 3. Period 4b. The upper surface is countersunk with a central perforation. This may be accidental, as the bone seems to be of poor quality. Diameter 22 mm, thickness 4 mm.

655 SF 1.81 1681, B1762 L425. Dump. ?Period 2. There is no central mark. Both faces are flat. The edge is bevelled. Diameter 13 mm, thickness 3 mm.

656 SF 1.81 3597, D1099 F196. Hearth? Building 123, Room 10. Period 4. Both faces are flat. The edge is bevelled. Diameter 21 mm, thickness 3 mm.

657 SF 1.81 1880, Ell F9. Extensive robber trench. Period 7. The central area is countersunk. The upper edge is bevelled in places. Diameter 20 mm, thickness 4 mm.

658 SF 1.81 1829, E1. Site clearance. Unstratified. The upper surface is countersunk. The upper edge is bevelled. Diameter 21 mm, thickness 3 mm.

659 SF 1.81 3322, G636 L518. Occupation: Building 120. Period 5b. The upper surface is countersunk. The upper edge is bevelled in places. Diameter 20 mm, thickness 5 mm.

660 SF 1.81 3712, G1586 L1439. Dump/construction debris: Building 116. Period 4. Both faces are flat. The upper face is roughly divided into quadrants by two faint incised lines which cross slightly off-centre, immediately to one side of the centre mark. The edge is bevelled. Diameter 20 mm, thickness 2 mm.

661 SF 1.81 4617, G3544 L3407. Occupation: Period 2 or 3a. Both faces are flat. The edge is bevelled. Diameter 18 mm, thickness 4 mm.

662 SF 1.81 3091, G339 F293. Pit. Period 6. The upper face is

countersunk. The upper edge is bevelled. Diameter 22 mm, thickness 5 mm.

663 SF 1.81 3523, G1222 F1196. Robber trench. Period 6. The upper surface is countersunk. The compass or centre mark is off-centre. The edge is slightly curved. Diameter 17 mm, thickness 4 mm.

664 SF 1.81 5396, W41. Unstratified. Both faces are flat. There is no central mark. The edge is bevelled. Diameter 17 mm, thickness 2 mm.

Type 2. Counters decorated on the obverse with concentric grooves, usually set obliquely into the surface (Fig 5.24; 665-74). All have a central compass or lathe centre mark.

666 SF 1.81 1287, B846 L156? Dump: Building 112, Room 6b. Period 4b. The upper face has four obliquely-cut grooves. Diameter 22 mm, thickness 3 mm.

667 SF 1.81 1252, B814 F250. Pit: Building 112, Room 1. Period 4a. The upper face bears four equidistant slight grooves. These are not cut obliquely into the face as is usual, but appear to have been made by a compass-like tool. A crude X has been incised on the reverse with a broad instrument. Diameter 18 mm, thickness 2 mm.

668 SF 1.81 3413, D770. Unstratified. The upper face has four grooves. The edge is bevelled. Diameter 21 mm, thickness 3 mm.

669 SF 1.81 3534, G1168 L865. Dump. Period 3d/4. The upper face bears three deeply-cut grooves. The edge is bevelled. Diameter 18 mm, thickness 4 mm.

670 SF 1.81 3533, G1151 F1144. Pit. Period 5 or 6. The upper face has three obliquely-cut grooves. The edge is bevelled. Diameter 18 mm, thickness 3 mm.

671 SF 1.81 3614, G1369 F1367. Possible baby burial. Period 4 or 5. The upper face has four grooves. The upper edge is bevelled. Diameter 21 mm, thickness 3 mm.

672 SF 1.81 3624, G1369 F1367. Possible baby burial. Period 4 or 5. The upper face has four obliquely-cut grooves. The edge is bevelled. Diameter 19 mm, thickness 3 mm.

673 SF 1.81 5204, G4280 L4274. Dump. Period 3d or 3d/4. The upper face has four slight grooves (see SF 1.81 1252 above). The counter does not lie flat, but curves markedly upwards on one side. Diameter 21 mm, thickness 3 mm.

674. SF 1.81 4433, H339 L283. Dump. Period 5. The upper face has five grooves. The counter is extremely thin on one side, giving a triangular section at the thinnest point. Diameter 21 mm, maximum thickness 3 mm.

Type 3. Convex counter (675).

675 SF 1.81 1060, B753. Unstratified. The upper surface has a compass or lathe centre mark. The reverse is flat. Diameter 23 mm, thickness 4 mm.

GLASS COUNTERS **(676-682)**

676 SF 1.81 1077, B654 L124. Collapsed clay wall: Building 113, Passage 1. Late Period 4. A convex counter of translucent greeny glass. Maximum diameter 14 mm, thickness 6 mm.

677 SF 1.81 1431, Bl. Site clearance. Modern. A decaying convex

counter possibly of an opaque mid blue glass. Diameter 19 mm, thickness 6 mm.

678 SF 1.81 3994, D1829 F1728. Dump or make-up. Period 4. A convex counter of opaque white glass. One part of the edge is flat as if the counter lay against an obstruction as it set. Diameter 15 mm, thickness 6 mm.

679 SF 1.81 2511, E1271 Fllll. Hearth: Building 83, Room 4. Late Period 1. A convex counter of decaying ?opaque white paste. Diameter 14 mm, thickness 6 mm.

680 SF 1.81 4472, G3147 L3137. Road foundation. Period 1. A convex counter of opaque white glass. Diameter 14 mm, thickness 6 mm.

681 SF 1.81 5048, J333. Unstratified. Periods 1-5. A convex counter of opaque white glass. Diameter 12 mm, thickness 6 mm.

682 SF 1.81 4956, M370 L367. Sandy clay floor: Building 91. Period 2. A convex counter of opaque white glass. Diameter 11 mm, thickness 6 mm.

POTTERY COUNTERS

In all cases the given dimensions are the maximum. Descriptions of the fabrics are by Philip Kenrick and Robin Symonds, and are those used in the analysis of the Roman pottery from Colchester (CAR **10).** The code used in that analysis are given in brackets. The fabrics represented in this group of counters are also listed below, with their codes. All the counters are Roman.

Fabric key

AA amphorae
BA all *terra sigillata*
CH Hadham ware
CL 'Rhenish' wares
CZ Colchester/other colour-coated red wares
DB coarse unslipped red wares
EA Nene Valley wares
GA black-burnished ware Type 1
GB black-burnished ware Type 2
GZ other coarse grey wares
HZ tempered wares
JZ coarse unslipped white wares
MQ Oxford-type white wares, with brown painted decoration
ON mica-gilt wares
UZ fine/decorated grey wares
WA micaceous light grey wares

Counters with a ground edge and at least one abraded surface (Fig 5.24; 683-843).

688 SF 1.81 1139, A192 L7. Make-up/demolition debris. Period 5. Fragment. Wall sherd. Coarse grey ware (GZ). The inner face is abraded. Diameter 54 mm, thickness 11 mm. Graffito X.

689 SF 1.81 1140, A192 L7. Make-up/demolition debris. Period 5. Wall sherd. Tempered ware (HZ). Both faces are abraded. Diameter 53 mm, thickness 11 mm.

690 SF 1.81 55, A18 F15. Ditch. Period 5. Wall sherd. Fine/decorated grey ware (UZ). Internal surface abraded at

edges. Diameter 34 mm, thickness 6 mm.

691 SF 1.81 305, A156 (F42 + F48). Medieval or post-medieval. Wall sherd. Coarse grey ware (GZ). The outer face may be abraded. Diameter 21 mm, thickness 5 mm.

692 SF 1.81 240, A120 F46. Pit. Medieval or post-medieval. Wall sherd. Tempered ware (HZ). Both faces are abraded. Diameter 52 mm, thickness 13 mm.

693 SF 1.81 268, A127 F47. Pit. Period 5. Fragment. Coarse grey ware (GZ). Wall sherd. Both faces are abraded. Diameter 46 mm, thickness 6 mm. An incised graffito AV/- is cut into one face.

694 SF 1.81 421, A182 F72. Timber drain. Period 4. ?Base sherd. Black-burnished ware Type 2 (GB). Both faces are abraded. Diameter 23 mm, thickness 7 mm. The edge is damaged. Graffito PN.

695 SF 1.81 1100, A187 F73. Ditch. Period 4. Base sherd. Black-burnished ware Type 1 (GA). The inner face is abraded. Diameter 29 mm, thickness 10 mm.

696 SF 1.81 963, A45. Unstratified. Post-Roman. Wall sherd. Black-burnished ware Type 1 (GA). Edge damaged. Internal surface slightly abraded. Diameter 38 mm, thickness 7 mm.

697 SF 1.81 567, B99 L6. Backfill of Hut 3. Anglo-Saxon. Base. Coarse grey ware (GZ). Wall/base junction smoothed. Inner face abraded. Diameter 64 mm, thickness 15 mm.

698 SF 1.81 539, B100 L6. Backfill of Hut 3. Anglo-Saxon. Wall sherd. Coarse grey ware (GZ). Inner face abraded; outer face ?abraded. Diameter 31 mm, thickness 7 mm.

699 SF 1.81 649, B167 L7. Backfill of drainage gully F39. Period 5. Base sherd. Black-burnished ware Type 1 (GA). Both faces abraded. Diameter 33 mm, thickness 12 mm.

700 SF 1.81 801, B222 L13. Occupation in Hut 3. Anglo-Saxon. Wall sherd. Coarse grey ware (GZ). Damaged. Inner face abraded. Diameter 39 mm, thickness 6 mm.

701 SF 1.81 916, B385 L13. Occupation in Hut 3. Anglo-Saxon. Wall sherd. Coarse grey ware (GZ). Both faces abraded. Diameter 21 mm, thickness 5 mm.

702 SF 1.81 927, B393 L16. Dump/demolished daub walls: Building 112, Room 1. Periods 4/5. Wall sherd. Tempered ware (HZ). Outer face abraded. Diameter 68 mm, thickness 15 mm.

703 SF 1.81 1420, B484 L16. Dump/demolished daub walls: Building 112, Room 1. Periods 4/5. Wall sherd. Colchester/other colour-coated red ware (CZ). Both faces slightly abraded. Diameter 37 mm, thickness 7 mm.

704 SF 1.81 889, B298 L37. Occupation: Building 112, Room 6a. Period 4c. Wall sherd. Black-burnished ware Type 2 (GB). Inner face abraded. Diameter 21 mm, thickness 6 mm.

705 SF 1.81 1458, B578 L71. Demolished clay walls: Building 112, Room 2. Periods 4/5. Subrectangular counter. Base sherd. Black-burnished ware Type 1 (GA). Outer face abraded. 32 by 34 mm, thickness 7 mm.

706 SF 1.81 1075, B598 L102. Dump: Building 113, Room 1. Late Period 4. Wall sherd. Fine/decorated grey ware (UZ). Both faces slightly abraded. Diameter 31 mm, thickness 5 mm.

707 SF 1.81 1491, B718 L142. Make-up: Building 112, Room 2. Period 4b. Wall sherd. Black-burnished ware Type 2 (GB). Both faces abraded. Diameter 35 mm, thickness 8 mm.

708 SF 1.81 1510, B890 L196. Dump: Building 112, Room 2. Period 4. Subrectangular counter. Base sherd. Coarse grey ware (GZ). Both faces abraded. 49 by 55 mm, thickness 12 mm.

709 SF 1.81 1656, B1727 L434. Occupation & make-up: Building 78, Room 4. Periods 1/2. Wall sherd. Fine/decorated grey ware (UZ). Damaged. Inner face slightly abraded. Diameter 23 mm, thickness 3 mm.

710 SF 1.81 478, B51 F27. Robber trench for Building 113. Medieval. Wall sherd. Fine/decorated grey ware (UZ). Inner face abraded. Diameter 43 mm, thickness 8 mm.

711 SF 1.81 1293, B267 F107. Gully. Period 5. Wall sherd. Coarse grey ware (GZ). Inner face abraded. Possible graffito X on inner face, very abraded and scarcely visible. Diameter 45 mm, thickness 8 mm.

712 SF 1.81 803, B249 F108. Gully between Buildings 112 & 113. Period 4. Wall sherd? Tempered ware (HZ). Inner face abraded. Diameter 52 mm, thickness 17 mm.

713 SF 1.81 1292, B302 F120. Gully. Period 4. Wall sherd. Coarse grey ware (GZ). Inner face abraded. Edge damaged. Diameter 43 mm, thickness 6 mm.

714 SF 1.81 1232, B803 F243. Large cess-pit. Periods 4/5. Wall sherd. Black-burnished ware Type 1 (GA). Inner face slightly abraded. Diameter 37 mm, thickness 8 mm.

715 SF 1.81 1236, B803 F243. Large cess-pit. Periods 4/5. Wall sherd. Fine/decorated grey ware (UZ). Inner face abraded; outer face may be slightly abraded. Diameter 31 mm, thickness 8 mm.

716 SF 1.81 713, B183. Unstratified. Wall sherd. Coarse grey ware (GZ). Inner face abraded. Diameter 38 mm, thickness 9 mm.

717 SF 1.81 5234, B183. Unstratified. Rim sherd. Black-burnished ware Type 1 (GA). Inner face abraded. Diameter 38 mm, thickness 10 mm.

718 SF 1.81 5236, B2514. Unstratified. ?Wall sherd. Black-burnished ware Type 2 (GB). Fragment. Both faces abraded. Diameter 59 mm, thickness 10 mm.

719 SF 1.81 4861, B2555. Drain (CF33). Period 4. Wall sherd. Black-burnished ware Type 2 (GB). Both faces slightly abraded. Diameter 30 mm, thickness 5 mm.

720 SF 1.81 4867, B2559. Unstratified. Base sherd. Black-burnished ware Type 1 (GA). Both faces very abraded. Partly obliterated graffito X on inner face. Diameter 74 mm, thickness 8 mm.

721 SF 1.81 2686, C91 L8. Dump/demolition. Period 4. Wall sherd. Coarse grey ware (GZ). Fragment. Inner face abraded. Diameter approximately 40 mm, thickness 6 mm.

722 SF 1.81 513, C97 L8. Dump/demolition. Period 4. ?Wall sherd. Black-burnished ware Type 2 (GB). Fragment. Both faces slightly abraded. Diameter 21 mm, thickness 6 mm.

723 SF 1.81 922, C89 L9. Dump/demolition: destruction of Building 114. Period 4. Wall sherd. Black-burnished ware Type 1 (GA). Fragment. Both faces abraded. Diameter approximately 48 mm, thickness 7 mm.

724 SF 1.81 569, Cll F4. Robber trench for Building 114. Early medieval. Wall sherd. Tempered ware (HZ). Both faces abraded. Diameter 54 mm, thickness 13 mm.

725 SF 1.81 768, C79 F12. Gully. Late Period 4. Roman. Damaged. Wall sherd. Tempered ware (HZ). Both faces slightly abraded. Diameter 78 mm, thickness 18 mm.

726 SF 1.81 842, C46. Clearance. Early medieval. Damaged. ?Base sherd. Black-burnished ware Type 2 (GB). One face slightly abraded. Diameter 37 mm, thickness 7 mm.

727 SF 1.81 2809, D1. Unstratified. Wall sherd, from close to wall/base junction. Coarse grey ware (GZ). Both faces abraded. Diameter 44 mm, thickness 11 mm.

728 SF 1.81 3714, D1119 L272. Dump/levelling: yard of Building 123. Period 4 demolition or 5. Wall sherd. Black-burnished ware Type 1 (GA). Fragment. Both faces abraded. Diameter 34 mm, thickness 5 mm.

729 SF 1.81 3791, D1502 L1143. Demolition debris: Building 123, Passage 4. Period 4. Wall sherd. Black-burnished ware Type 2 (GB). Both faces abraded. Diameter 43 mm, thickness 5 mm.

730 SF 1.81 3704, D1198 L1171. Demolition of Building 123? Building 123, Room 8. Period 4. Wall sherd. Coarse grey ware (GZ). Both faces abraded. Diameter 33 mm, thickness 8 mm.

731 SF 1.81 3816, D1199 L1171. Demolition of Building 123? Building 123, Room 8. Period 4. Wall sherd. Black-burnished ware Type 1 (GA). Damaged. Both faces abraded. Diameter 29 mm, thickness 7 mm.

732 SF 1.81 3719, D1221 L1214. Demolition debris: Building 123, Room 8. Period 4. Base. Coarse grey ware (GZ). Both faces abraded. Diameter 48 mm, thickness 14 mm.

733 SF 1.81 3730, D1222 L1214. Demolition debris: Building 123, Room 8. Period 4. Wall sherd. Black-burnished ware Type 2 (GB). Both faces slightly abraded. Diameter 27 mm, thickness 7 mm.

734 SF 1.81 3727, D1223 L1214. Demolition debris: Building 123, Room 8. Period 4. Wall sherd. Coarse grey ware (GZ). Both faces abraded. Diameter 27 mm, thickness 5 mm.

735 SF 1.81 3819, D1228 L1214. Demolition debris: Building 123, Room 8. Period 4. Base. Coarse grey ware (GZ). Upper face and footring abraded. Diameter 57 mm, thickness 13 mm.

736 SF 1.81 3692, D1255 L1214. Demolition debris: Building 123, Room 8. Period 4. ?Wall sherd. Coarse grey ware (GZ). Fragment. Both faces abraded. Graffito X on inner face. Diameter 34 mm, thickness 7 mm.

737 SF 1.81 3570, D1058 F22. Robbed drain: yard of Building 123. Period 4. Wall sherd. Coarse grey ware (GZ). Both faces abraded. Diameter 35 mm, thickness 7 mm.

738 SF 1.81 3595, D1098 F22. Robbed drain: yard of Building 123. Period 4. Wall sherd from junction of wall and base. Black-burnished ware Type 2 (GB). Both faces abraded. Diameter 22 mm, thickness 9 mm.

739 SF 1.81 3676, D1098 F22. Robbed drain: yard of Building 123. Period 4. Base sherd. Black-burnished ware Type 2 (GB). Both faces abraded. Diameter approximately 35 mm, thickness 6 mm.

740 SF 1.81 3439, D733 F686. Drain: Building 123, Passage 2. ?Period 4. Wall sherd. Coarse grey ware (GZ). Both faces abraded. Diameter 37 mm, thickness 9 mm.

741 SF 1.81 3603, D815 F773. Drain: Building 123, Passage 1. Period 4. Base. Nene Valley ware (EA). Fragment. Both faces abraded. Diameter 83 mm, thickness 14 mm.

742 SF 1.81 3836, D1327-30 F1291. Large pit: yard of Building 123. Period 4. (All the finds from D1327-30 were marked D1328 in error. See tile counters **965-7** and marble counters **970-1.)** Wall sherd. Black-burnished ware Type 2 (GB). Fragment. Both faces slightly abraded. Diameter 47 m, thickness 7 mm.

743 SF 1.81 3912, D1465. Unstratified. ?Wall sherd. Black-burnished ware Type 2 (GB). Both faces slightly abraded. Diameter 25 mm, thickness 8 mm.

744 SF 1.81 3900, D1672 F1485. Scoop. Period 7. Wall sherd. Coarse grey ware (GZ). Inner face abraded. Diameter 20 mm, thickness 6 mm.

745 SF 1.81 3980, D1768 F1766. Drain: yard of Building 123. Period 4. Wall sherd. Nene Valley ware (EA). Damaged. Both faces abraded. Diameter 45 mm, thickness 7 mm.

746 SF 1.81 5413, E621 L27. Make-up. Period 3. Base sherd. Terra *sigillata* (BA). Footring abraded, probably during life as complete vessel, not as counter. Junction of wall and base smooth but irregular. There is a hole (?worn/broken, not a deliberate perforation) just off-centre. Diameter 39 mm, thickness 7 mm.

747 SF 1.81 5412, E830 L49. Dump. Period 2. Base sherd. Coarse grey ware (GZ). The underside is slightly abraded, which may have occurred during life as a complete vessel. Diameter 53 mm, thickness 3 mm.

748 SF 1.81 1956, E226 F166. Pit. Early medieval. Base sherd. Black-burnished ware Type 2 (GB). Both faces abraded. Diameter 33 mm, thickness 8 mm.

749 SF 1.81 5414, E480 F264. Foundation: Building 127. Period 5. Fragment. ?Wall sherd. Black-burnished ware Type 2 (GB) . Both faces abraded. Diameter 33 mm, thickness 6 mm.

750 SF 1.81 1828, E1. Site clearance. Unstratified. Wall sherd. Hadham ware (CH). Inner face abraded. Diameter 21 mm, thickness 5 mm.

751 SF 1.81 1884, E1. Site clearance. Unstratified. ?Base sherd. Coarse grey ware (GZ). Both faces abraded. Diameter 55 mm, thickness 12 mm.

752 SF 1.81 1985, E1. Site clearance. Unstratified. Base sherd. Black-burnished ware Type 2 (GB). Both faces abraded. Diameter 43 mm, thickness 6 mm.

753 SF 1.81 2706, E1. Site clearance. Unstratified. Wall sherd. Coarse grey ware (GZ). Both faces slightly abraded. Diameter 24 mm, thickness 7 mm.

754 SF 1.81 5411, E1. Site clearance. Unstratified. Fragment. Wall sherd. Tempered ware (HZ). Both faces abraded. Diameter 49 mm, thickness 10 mm.

755 SF 1.81 2125, E314. Unstratified. Periods 4/5. Wall sherd. Coarse unslipped white ware (JZ). Fragment. Inner face slightly abraded. Diameter 56 mm, thickness 8 mm.

756 SF 1.81 2774, G1 L1. Topsoil/clearance. Period 6. Base sherd. Coarse grey ware (GZ). Fragment. Inner face abraded. Diameter 36 mm, thickness 7 mm.

757 SF 1.81 2807, G1 L1. Topsoil/clearance. Period 6. Wall sherd. Tempered ware (HZ). Both faces abraded. Diameter 63 mm, thickness 12 mm.

758 SF 1.81 2961, G164 L164. Occupation/midden? ?Period 5 or 6. Wall sherd. Tempered ware (HZ). Both faces abraded. Diameter 64 mm, thickness 17 mm.

759 SF 1.81 3331, G686 L164. Occupation/midden? ?Period 5 or 6. Wall sherd. Black-burnished ware Type 2 (GB). Damaged. Both faces abraded. Diameter 32 mm, thickness 9 mm.

760 SF 1.81 3284, G400 L279. Occupation: Building 120. Period 5b. Wall sherd. Coarse grey ware (GZ). Damaged. Inner face abraded. Diameter 34 mm, thickness 5 mm.

761 SF 1.81 3154, G379 L327. Destruction debris ^/occupation: Building 120? Period 5b? Wall sherd. Coarse grey ware (GZ). Both faces abraded. Diameter 33 mm.

762 SF 1.81 3252, G456 L351. Occupation: Building 120. Period

5b. Wall sherd. Micaceous light grey ware (WA). Fragment. Both faces abraded. Diameter 29 mm, thickness 6 mm.

763 SF 1.81 3383, G795 L581. Destruction debris/occupation. Building 120. Period 5b. Base sherd. Coarse grey ware (GZ). Both faces abraded, especially the inner. Diameter 34 mm, thickness 7 mm.

764 SF 1.81 3365, G606 L605. Dump. Period 5. Wall sherd. Black-burnished ware Type 1 (GA). Both faces slightly abraded. Diameter 52 mm, thickness 9 mm.

765 SF 1.81 3336, G668 L644. Destruction debris Building 120? Period 5b? Wall sherd. Amphora (AA). Inner face abraded. Diameter 42 mm, thickness 12 mm.

766 SF 1.81 3381, G755 L644. Destruction debrisrB: Building 120? Period 5b? ?Base sherd. Black-burnished ware Type 2 (GB). Both faces abraded. Diameter 34 mm, thickness 6 mm.

767 SF 1.81 3579, G742 L741. Occupation? Period 5. Wall sherd. Amphora (AA). Inner face abraded. Diameter 73 mm, thickness 22 mm.

768 SF 1.81 3463, G784 L784. Destruction debris/occupation: Building 120. Period 5b. Base sherd. Black-burnished ware Type 2 (GB). Both faces slightly abraded. Diameter 64 mm, thickness 9 mm.

769 SF 1.81 3388, G793 L784. Destruction debris/occupation: Building 120. Period 5b. Wall sherd. Black-burnished ware Type 1 (GA). Both faces slightly abraded. Diameter 35 mm, thickness 8 mm.

770 SF 1.81 3389, G793 L784. Destruction debris/occupation: Building 120. Period 5b. Base. Black-burnished ware Type 1 (GA). Fragment. Outer face abraded. Diameter approximately 48 mm, thickness 5 mm.

771 SF 1.81 3420, G885 L848. Destruction debris 'B: Building 120. Period 5b. Base. Coarse grey ware (GZ). Both'faces 'slightly abraded. Diameter 40 mm, thickness 10 mm.

772 SF 1.81 3421, G885 L848. Destruction debris B: Building 120. Period 5b. Base sherd. Black-burnished ware Type 2 (GB). Both faces abraded. Diameter 49 mm, thickness 7 mm.

773 SF 1.81 3487, G1023 L865. Dump. Period 3d/4. Wall sherd. Fine/decorated grey ware (UZ). Both faces slightly abraded. Diameter 32 mm, thickness 6 mm.

774 SF 1.81 3557, G1031 L936. Floor surface: Building 120. Period 5a or 5b. Wall sherd. Black-burnished ware Type 2 (GB). Fragment. Outer face abraded. Diameter 47 mm, thickness 5 mm.

775 SF 1.81 3828, G2010 L1892. Floor make-up: Building 116. Period 4. ?Base. Black-burnished ware Type 2 (GB). Fragment. Inner face abraded. Diameter 31 mm, thickness 7 mm.

776 SF 1.81 3344, G515 F14. Sand pit. Period 5. Wall sherd. Black-burnished ware Type 2 (GB). Inner face abraded. Diameter 20 mm, thickness 5 mm.

777 SF 1.81 3217, G330 F16. Robber trench. Period 6. Wall sherd. Black-burnished ware Type 2 (GB). Both faces abraded. Diameter 34 mm, thickness 9 mm.

778 SF 1.81 4919, G3908 F47. Trench. ?Period 6. Wall sherd. Terra *sigillata* (BA). Fragment. Both faces abraded. Diameter approximately 34 mm, thickness 8 mm.

779 SF 1.81 2951, G117 F55. Robber trench. ?Period 6. Wall sherd. Coarse grey ware (GZ). Both faces abraded. Diameter 36 mm, thickness 7 mm.

780 SF 1.81 2893, G60 F60. Pit. Period 6. Wall sherd. Black-

burnished ware Type 2 (GB). Both faces abraded. Diameter 58 mm, thickness 12 mm.

781 SF 1.81 4073, G2315 F79. Pit. Period 3. Wall sherd. Black-burnished ware Type 1 (GA). Outer face abraded,inner slightly abraded. Diameter 46 mm, thickness 6 mm.

782 SF 1.81 2883, G142 F104. Robber trench. Period 6. Wall sherd. Fine/decorated grey ware (UZ). Diameter 32 mm, thickness 7 mm.

783 SF 1.81 3559, G1006 F163. Pit. Period 6. ?Wall sherd. Black-burnished ware Type 2 (GB). Both faces abraded. Diameter 40 mm, thickness 7 mm.

784 SF 1.81 2972, G185 F185. Pit. Period 6. Wall sherd. Black-burnished ware Type 1 (GA). Both faces very abraded, though not at the thickest parts. Diameter 43 mm, thickness 11 mm.

785 SF 1.81 3114, G237 F185. Pit. Period 6. Base sherd. Terra *sigillata* (BA). Both faces abraded. Diameter 27 mm, thickness 9 mm.

786 SF 1.81 3251, G337 F270. Pit. ?Period 4. Wall sherd. Coarse grey ware (GZ). Inner face abraded. Diameter 42 mm, thickness 6 mm.

787 SF 1.81 3283, G337 F270. Pit. ?Period 4. Wall sherd. Black-burnished ware Type 2 (GB). Fragment. Both faces abraded. Diameter 41 mm, thickness 8 mm.

788 SF 1.81 3722, G1308 F304. Robber trench. Period 6. Base. Colchester/other colour-coated red ware (CZ). Fragment. Both faces abraded. Diameter 36 mm, thickness 6 mm.

789 SF 1.81 3282, G436 F352. Pit. Period 5. Wall sherd. Coarse grey ware (GZ). Fragment. Outer face abraded. Diameter approximately 48 mm, thickness 5 mm.

790 SF 1.81 3342, G541 F542. Robber trench. Period 6. Base sherd. Coarse grey ware (GZ). Both faces abraded. Diameter 42 mm, thickness 11 mm.

791 SF 1.81 3390, G663 F542. Robber trench. Period 6. Wall sherd. Black-burnished ware Type 2 (GB). Damaged. Both faces slightly abraded. Diameter 53 mm, thickness 7 mm.

792 SF 1.81 3558, G972 F478. Pit. Period 6. Base sherd. Coarse grey ware (GZ). Both faces abraded. Diameter 52 mm, thickness 10 mm.

793 SF 1.81 3616, G1360 F1144. Pit. Period 5 or 6. Wall sherd. Coarse unslipped white ware (JZ). Both faces slightly abraded. Diameter 35 mm, thickness 7 mm.

794 SF 1.81 3766, G1850 F1265. Gully. Period 5. Wall sherd. Black-burnished ware Type 2 (GB). Both faces slightly abraded. Diameter 16 mm, thickness 6 mm.

795 SF 1.81 4070, G2429 F2384. Pit. Period 3. Wall sherd. *Terra sigillata* (BA). Both faces slightly abraded. Diameter 29 mm, thickness 5 mm.

796 SF 1.81 4276, G3007 F2951. Pit. Period 6. Base. Colchester/other colour-coated red ware (CZ). Fragment. Both faces abraded. Diameter 41 mm, thickness 8 mm.

797 SF 1.81 2859, G49. Unstratified. Periods 4-6. Wall sherd. Coarse grey ware (GZ). Both faces abraded. Diameter 17 mm, thickness 4 mm.

798 SF 1.81 2882, G49. Unstratified. Periods 4-6. Wall sherd. Black-burnished ware Type 2 (GB). Both faces abraded. Diameter 39 mm, thickness 7 mm.

799 SF 1.81 2887, G49. Unstratified. Periods 4-6. Wall sherd. Tempered ware (HZ). Both faces abraded. Diameter 41 mm, thickness 13 mm.

800 SF 1.81 2907, G150. Unstratified. Periods 4-6. Wall sherd. Coarse grey ware (GZ). Outer face abraded. Diameter 22 mm, thickness 5 mm.
801 SF 1.81 2911, G150. Unstratified. Periods 4-6. Wall sherd. Tempered ware (HZ). Damaged. Both faces abraded. Diameter 51 mm, thickness 14 mm.
802 SF 1.81 2943, G159. Unstratified. Periods 4-6. Wall sherd. Coarse grey ware (GZ). Damaged. Both faces abraded. Diameter 33 mm, thickness 10 mm.
803 SF 1.81 2971, G200. Unstratified. Periods 4-6. Wall sherd. Tempered ware (HZ). Both faces slightly abraded. Diameter 66 mm, thickness 19 mm.
804 SF 1.81 3234, G342. Unstratified. Period 6. Wall sherd. Tempered ware (HZ). Inner face abraded. Diameter 55 mm, thickness 11 mm.
805 SF 1.81 3246, G567. Unstratified. Periods 4-6. Wall sherd. Black-burnished ware Type 1 (GA). Both faces slightly abraded. Diameter 32 mm, thickness 7 mm.
806 SF 1.81 3483, G1033. Unstratified. Period 6. Wall sherd. Coarse grey ware (GZ). Both faces abraded. Diameter 25 mm, thickness 9 mm.
807 SF 1.81 3484, G1033. Unstratified. Period 6. Wall sherd. Coarse grey ware (GZ). Fragment. Outer faces slightly abraded. Possibly trace of central indentation on inner face. Diameter 31 mm, thickness 7 mm.
808 SF 1.81 3706, G1351. Unstratified. Periods 4-6. Wall sherd. Tempered ware (HZ). Damaged. Inner face abraded. Diameter 51 mm, thickness 17 mm.
809 SF 1.81 3798, G1588 F652. Drain: Building 116. Period 4. Wall sherd. Black-burnished ware Type 2 (GB). Fragment. Inner face abraded. Diameter approximately 40 mm, thickness 8 mm.
810 SF 1.81 5012, G4000. Unstratified. Periods 1-6. Wall sherd. Black-burnished ware Type 2 (GB). Fragment. Inner face abraded. There is a central indentation from a compass-like tool or lathe centre on each face. On the inner face the indentation is quite deep. Diameter 53 mm, thickness 9 mm.
811 SF 1.81 4481, H131 L3. Topsoil/clearance. Period 6. ?Wall sherd. Black-burnished ware Type 1 (GA). Fragment. Both faces abraded. Diameter 28 mm.
812 SF 1.81 4533, H131 L3. Topsoil/clearance. Period 6. Wall sherd. Oxford-type white ware (MQ). Both faces abraded. Diameter 37 mm, thickness 9 mm.
813 SF 1.81 4473, H342 L3. Topsoil/clearance. Period 6. Wall sherd. Black-burnished ware Type 2 (GB). Fragment. Both faces abraded. Diameter 51 mm, thickness 9 mm.
814 SF 1.81 4793, H462 L3. Topsoil/clearance. Period 6. Base. Coarse grey ware (GZ). Fragment. Both faces abraded. Diameter 51 mm, thickness 9 mm.
815 SF 1.81 4395, H325 L283. Dump. Period 5. Base. Coarse grey ware (GZ). Damaged. Both faces slightly abraded. Diameter 57 mm, thickness 11 mm.
816 SF 1.81 4600, H399 L382. Destruction debris: Building 120. Period 5b. Base sherd. Black-burnished ware Type 2 (GB). Both faces slightly abraded. Diameter 48 mm, thickness 9 mm.
817 SF 1.81 4315, H140 F59. Trench. Period 5. Wall sherd. Coarse grey ware (GZ). Outer face slightly abraded. Diameter 45 mm, thickness 11 mm.
818 SF 1.81 4346, H175 F59. Trench. Period 5. Wall sherd.

Tempered ware (HZ). Both faces abraded. Diameter 40 mm, thickness 12 mm.

819 SF 1.81 4324, H228 F59. Trench. Period 5. Wall sherd. Coarse grey ware (GZ). Both faces abraded. Diameter 44 mm, thickness 10 mm. On the inner face there is a very faint graffito N preceded by two unidentifiable letters.

820 SF 1.81 4364, H265 F59. Trench. Period 5. Wall sherd. Coarse grey ware (GZ). Both faces abraded. Diameter 41 mm, thickness 7 mm.

821 SF 1.81 4483, H201 F171. Pit. Period 6. Wall sherd. Tempered ware (HZ). Both faces slightly abraded. Diameter 64 mm, thickness 13 mm.

822 SF 1.81 4516, H426 F418. Pit. Period 6. Wall sherd. Coarse grey ware (GZ). Both faces abraded. Diameter 31 mm, thickness 7 mm.

823 SF 1.81 5028, H500. Unstratified. Periods 4-6. Wall sherd. Coarse grey ware (GZ). Both faces abraded. The inner face is very abraded and partly broken away. Diameter 30 mm, thickness 7 mm.

824 SF 1.81 4606, J2 L1. Site clearance. Period 6. Wall sherd. Nene Valley ware (EA). Both faces abraded. Diameter 31 mm, thickness 5 mm.

825 SF 1.81 4711, J3 L1. Site clearance. Period 6. ?Base sherd. Black-burnished ware Type 2 (GB). Both faces abraded. Central indentation from compass-like tool or lathe centre on each face. Diameter 30 mm, thickness 7 mm.

826 SF 1.81 4712, J3 L1. Site clearance. Period 6. Wall sherd. Black-burnished ware Type 1 (GA). Damaged. Both faces abraded. Diameter 38 mm, thickness 9 mm.

827 SF 1.81 4779, J30 L1. Site clearance. Period 6. Wall sherd. Black-burnished ware Type 1 (GA). Both faces abraded. Diameter 29 mm, thickness 10 mm.

828 SF 1.81 4690, J157 L1. Site clearance. Period 6. Wall sherd. Coarse grey ware (GZ). Fragment. Both faces abraded. Diameter approximately 37 mm, thickness 6 mm.

829 SF 1.81 4812, J175 L1. Site clearance. Period 6. Wall sherd. Coarse grey ware (GZ). Fragment. Both faces very slightly abraded. Diameter 75 mm, thickness 5 mm.

830 SF 1.81 4613, J62 F39. Pit. Period 6. ?Wall sherd. Black-burnished ware Type 2 (GB). Small fragment. Both faces slightly abraded. Diameter approximately 60 mm, thickness 7 mm.

831 SF 1.81 4737, J63 F42. Pit. Period 6. Wall sherd. Black-burnished ware Type 2 (GB). Both faces abraded. Diameter 31 mm, thickness 6 mm.

832 SF 1.81 4864, J107 F55. Oven/kiln. Period 6. Wall sherd. Coarse grey ware (GZ). Damaged. Outer face abraded. Diameter 25 mm, thickness 4 mm.

833 SF 1.81 4663, J172 F169. Pit. Period 6. ?Base sherd. Amphora (AA). Both faces abraded. Diameter 32 mm, thickness 15 mm.

834 SF 1.81 4743, K2 L1. Site clearance. Period 5. Wall sherd. Coarse grey ware (GZ). Inner face slightly abraded. Diameter 75 mm, thickness 7 mm.

835 SF 1.81 5398, K159 F121. Pit. Period 3c. Wall sherd. Coarse unslipped white ware (JZ). Fragment. Both faces abraded. Diameter 43 mm, thickness 6 mm.

836 SF 1.81 5146, K168 F121. Pit. Period 3c. Wall sherd. Black-burnished ware Type 2 (GB). Both faces abraded. Diameter 32 mm, thickness 5 mm.

837 SF 1.81 5211, K333. Unstratified. Wall sherd. Coarse grey ware (GZ). Fragment. Both faces abraded. Diameter 37 mm, thickness 6 mm.

838 SF 1.81 4742, M60 L1. Surface cleaning. Unstratified. Wall sherd. *Terra sigillata* (BA). Both faces slightly abraded. Diameter 42 mm, thickness 6 mm.

839 SF 1.81 4831, M155 L1. Site cleaning. Unstratified. ?Wall sherd. Black-burnished ware Type 2 (GB). Both faces abraded. Diameter 50 mm, thickness 6 mm.

840 SF 1.81 4778, M190 F179. Robber trench for Building 123. Period 6. ?Wall sherd. Coarse grey ware (GZ). Both faces abraded. Diameter 31 mm, thickness 8 mm.

841 SF 1.81 5029, M221 F220. Pit: yard of Building 123. Period 4. Wall sherd. Black-burnished ware Type 2 (GB). Both faces abraded. Diameter 35 mm, thickness 7 mm.

842 SF 1.81 5405, W62 F56. Cellar. Building 123, Room 13. ?End Period 4 backfill. Wall sherd. Black-burnished ware Type 1 (GA). Both faces abraded. Diameter 41 mm, thickness 7 mm.

843 SF 1.81 5395, W74 F66. Pit. Period 4. Wall sherd. Black-burnished ware Type 1 (GA). Both faces abraded. Diameter 43 mm, thickness 8 mm.

Counters with no abraded surface but with an edge ground for at least part of its circumference (844-897)

844 SF 1.81 1136, A192 L7. Make-up/demolition debris. Period 5. Wall sherd. Tempered ware (HZ). Diameter 51 mm, thickness 14 mm.

845 SF 1.81 1138, A221 L13. Make-up: Building 110, Room 2. Period 4. Wall sherd. Coarse unslipped white ware (JZ). Diameter 31 mm, thickness 9 mm.

846 SF 1.81 1582, A509 L192. Road metalling. Period 3. Wall sherd. Coarse unslipped red ware (DB). Diameter 65 mm, thickness 11 mm.

847 SF 1.81 126, A69 F14. Pit. Medieval or post-medieval. Wall sherd. Fine/decorated grey ware (UZ). Diameter 27 mm, thickness 6 mm.

848 SF 1.81 1057, A142 F57. Pit. Medieval or post-medieval. Base sherd. Colchester/other colour-coated red ware (CZ). Diameter 41 mm, thickness 15 mm.

849 SF 1.81 1459, B698 L132. Daub floor: Building 112, Room 4. Period 4a. Base sherd. Black-burnished ware Type 2 (GB). Diameter 50 mm, thickness 10 mm.

850 SF 1.81 1245, B813 L159. Make-up: Building 112, Room 4. Period 4a. Wall sherd. Tempered ware (HZ). Diameter 47 mm, thickness 10 mm.

851 SF 1.81 1772, B1749 L419. Boudican destruction debris: destruction of Building 77. Early Period 3. Wall sherd. Coarse grey ware (GZ). Diameter 39 mm, thickness 7 mm.

852 SF 1.81 1053, B103 F51. Pit. ?Post-Roman. ?Base sherd. Coarse grey ware (GZ). Diameter 52 mm, thickness 11 mm.

853 SF 1.81 1231, B802 F243. Large cess-pit. Periods 4/5. Base. 'Rhenish' ware (CL). Wall/base junction slightly abraded in places. Diameter 36 mm, thickness 6 mm.

854 SF 1.81 1233, B803 F243. Large cess-pit. Periods 4/5. Base sherd. Black-burnished ware Type 1 (GA). Diameter 43 mm, thickness 6 mm.

855 SF 1.81 1234, B803 F243. Large cess-pit. Periods 4/5. Wall sherd. Coarse grey ware (GZ). Diameter 51 mm, thickness 7 mm.

856 SF 1.81 1235, B803 F243. Large cess-pit. Periods 4/5. Base. Coarse unslipped red ware (DB). Wall/base junction slightly smoothed. Diameter 60 mm, thickness 9 mm.

857 SF 1.81 1773, B1681 F389. Pit: Building 112, Room 5. Period 4a. Wall sherd. *Terra sigillata* (BA) (1st century). Diameter 56 mm, thickness 9 mm.

858 SF 1.81 395, B6. Site clearance. Modern. Base. Colchester/other colour-coated red ware (CZ). Diameter 26 mm, thickness 11 mm.

859 SF 1.81 5235, B171 L12. Backfill of Hut 3. Anglo-Saxon. Wall sherd. Black-burnished ware Type 2 (GB) . Diameter 33 mm, thickness 7 mm.

860 SF 1.81 970, B178. Unstratified. Wall sherd. Coarse grey ware (GZ). Diameter 34 mm, thickness 6 mm.

861 ' SF 1.81 634, C85 L8. Dump/demolition. Period 4. Wall sherd. Black-burnished ware Type 2 (GB). Diameter 21 mm, thickness 6 mm.

862 SF 1.81 904, C97 L8. Dump/demolition. Period 4. Wall sherd. Colchester/other colour-coated red ware (CZ). Diameter 36 mm, thickness 7 mm.

863 SF 1.81 921, C100 L8. Dump/demolition. Period 4. Base. Hadham ware (CH). Wall/base junction slightly smoothed. Diameter 39 mm, thickness 6 mm.

864 SF 1.81 974, C130 F12. Gully: Building 114. Late Period 4. Damaged. ?Wall sherd. Black-burnished ware Type 1 (GA). Diameter 50 mm, thickness 7 mm.

865 SF 1.81 3665, D971 L464. Dump: yard of Building 123. Period 4. Wall sherd. Coarse grey ware (GZ). Fragment. Diameter approximately 32 mm, thickness 6 mm.

866 SF 1.81 3815, D1199 L1171. Demolition debris of Building 123? Building 123, Room 8. Period 4. Base. Nene Valley ware (EA). Junction of wall and base slightly smoothed. Diameter 46 mm, thickness 11 mm.

867 SF 1.81 3702, D1220 L1214. Demolition debris: Building 123, Room 8. Period 4. Wall sherd. Coarse grey ware (GZ). Fragment. Diameter approximately 36 mm, thickness 7 mm.

868 SF 1.81 3970, D1762 L1372. Dump: Building 123, Room 8. Period 4. Wall sherd. Black-burnished ware Type 2 (GB). Diameter 42 mm, thickness 9 mm.

869 SF 1.81 3648, D1047 F22. Robbed drain: yard of Building 123. Period 4. Wall sherd. Amphora (AA). Diameter 47 mm, thickness 13 mm.

870 SF 1.81 3438, D551 F203. Gully (- drain F22): yard of Building 123. Period 5. Wall sherd. Tempered ware (HZ). Diameter 28 mm, thickness 13 mm.

871 SF 1.81 1997, E42 F4. Large rectangular pit. Period 8. Wall sherd. Coarse grey ware (GZ). Diameter 33 mm, thickness 7 mm.

872 SF 1.81 1984, E1. Site clearance. Unstratified. Wall sherd. Coarse grey ware (GZ). Diameter 33 mm, thickness 5 mm.

873 SF 1.81 2769, G1 L1. Topsoil/clearance. Period 6. Wall sherd. Black-burnished ware Type 2 (GB). Diameter 40 mm, thickness 7 mm.

874 SF 1.81 3371, G569 L568. Destruction debris fe:' Building 120. Period 5b. Base sherd. Black-burnished ware Type 2 (GB). Fragment. Diameter approximately 56 mm, thickness 8 mm.

875 SF 1.81 3384, G795 L581. Destruction debris/occupation: Building 120. Period 5b. Wall sherd. Coarse grey ware (GZ). Diameter 32 mm, thickness 8 mm.

876 SF 1.81 3478, G797 L581. Destruction debris/occupation: Building 120. Period 5b. Wall sherd. Black-burnished ware Type 2 (GB) . Diameter 35 mm, thickness 8 mm

877 SF 1.81 3501, G953 L906. Destruction debris B: Building 120. Period 5b. ?Wall sherd. Black-burnished ware Type 2 (GB). Fragment. Diameter 44 mm, thickness 6 mm.

878 SF 1.81 3734, G1414 L1389. Dump: Building 116. Period 4. Wall sherd. Coarse grey ware (GZ). Damaged. Diameter 42 mm, thickness 7 mm.

879 SF 1.81 3794, G1575 L1391. Dump/construction debris: Building 116. Period 4. Wall sherd. Coarse grey ware (GZ). Diameter 46 mm, thickness 10 mm.

880 SF 1.81 3112, G231 F14. Sand pit. Period 5. Wall sherd. Terra *sigillata* (BA) (decorated). Diameter 33 mm, thickness 7 mm.

881 SF 1.81 3343, G515 F14. Sand pit. Period 5. Base sherd. Black-burnished ware Type 1 (GA). The outer face is very abraded, but seems to have been so before the counter was formed, ie the abrasion was caused while the pot was whole. Diameter 45 mm, thickness 10 mm.

882 SF 1.81 3220, G356 F183. Robber trench. Period 6. Base. Coarse grey ware (GZ). Fragment. Diameter 65 mm, thickness 10 mm.

883 SF 1.81 3139, G260 F260. Pit. Period 6. Wall sherd. Coarse grey ware (GZ). Diameter 22 mm, thickness 7 mm.

884 SF 1.81 3655, G1249 F304. Robber trench. Period 6. Wall sherd. Hadham ware (CH). Diameter 30 mm, thickness 4 mm.

885 SF 1.81 3304, G430 F394. Pit? Period 5 or 6. Base. Colchester Fabric GX (CAR **10).** Diameter 71 mm, thickness 12 mm. There is a graffito inscription, AESRIA"LINXI, around the perimeter of the underside. Read by Mark Hassall.

886 SF 1.81 2909, G150. Unstratified. Periods 4-6. Wall sherd. *Terra sigillata* (BA). Diameter 23 mm, thickness 7 mm.

887 SF 1.81 3049, G200. Unstratified. Periods 4-6. Wall sherd. Amphora (AA). Damaged. Diameter 47 mm, thickness 13 mm.

888 SF 1.81 3175, G268 L268. Destruction debris B: Building 116. Period 4. Base sherd. Coarse grey ware (GZ). Damaged. Diameter 56 mm, thickness 12 mm.

889 SF 1.81 3464, G784 L784. Destruction debris/occupation: Building 120. Period 5b. Wall sherd. Amphora (AA). Diameter 45 mm, thickness 11 mm.

890 SF 1.81 3729, G1324 L1. Topsoil/clearance. Period 6. Wall sherd. Coarse grey ware (GZ). Diameter 33 mm, thickness 5 mm.

891 SF 1.81 3880, G1586 L1439. Dump/construction debris: Building 116. Period 4. Wall sherd. Coarse grey ware (GZ). Diameter 38 mm, thickness 7 mm.

892 SF 1.81 4674, H603 L600. Horticultural soil. Period 3. Wall sherd. Coarse grey ware (GZ). Diameter 45 mm, thickness 10 mm.

893 SF 1.81 4863, J107 F55. Oven/kiln. Period 6. Wall sherd. Mica-gilt ware (ON). Damaged. Diameter 62 mm, thickness 9 mm.

894 SF 1.81 4980, J235. Unstratified. Periods 2-5. Base. Coarse unslipped red ware (DB). Junction of wall and base partly smoothed. Diameter 58 mm, thickness 16 mm.

895 SF 1.81 5399, K159 F121. Pit. Period 3c. Wall sherd. Amphora (AA). Diameter 47 mm, thickness 10 mm.

896 SF 1.81 5033, M358 L280. Dump. Period 3. Wall sherd. Coarse

unslipped red ware (DB). Damaged. Diameter 32 mm, thickness 7 mm.

897 SF 1.81 4653, M98 F37. Pit. Period 7. Base sherd. Coarse grey ware (GZ). Diameter 47 mm, thickness 15 mm.

Counter rough-outs (898-926)

898 SF 1.81 439, A187 F73. Ditch. Period 4. Base. Colchester/other colour-coated red ware (CZ). Diameter 41 mm, thickness 12 mm.

899 SF 1.81 2683, A190 F74. Ditch or trench (for pipes). Period 3 or 4. Base. Coarse grey ware (GZ). Diameter 61 mm, thickness 7 mm.

900 SF 1.81 5415, B658 L25. Dump? Period 4/5. Base. Colchester/other colour-coated red ware (CZ). Diameter 26 mm, thickness 5 mm.

901 SF 1.81 422, B14 F3. Robber trench for Building 113. Medieval. Base. Colchester/other colour-coated red ware (CZ). Diameter 27 mm, thickness 9 mm.

902 SF 1.81 1259, B192 F89. Posthole. Period 5. Wall sherd. Terra *sigillata* (BA) (East Gaulish). Diameter 49 mm, thickness 17 mm.

903 SF 1.81 1000, B389 F108. Gully between Buildings 112 & 113. Period 4. Wall sherd. Coarse unslipped red ware (DB). Diameter 24 mm, thickness 5 mm.

904 SF 1.81 65, C11 F4. Robber trench for Building 114. Early medieval. Base. 'Rhenish' ware (CL). Diameter 32 mm, thickness 7 mm.

905 SF 1.81 925, C106 F10. Robber trench for Building 114. Early medieval. Base. Coarse grey ware (GZ). Diameter 55 mm, thickness 7 mm.

906 SF 1.81 928, C151 L13. Demolition: destruction of Building 114. Period 4. Base. 'Rhenish' ware (CL). Diameter 38 mm, thickness 10 mm.

907 SF 1.81 3635, D1119 L272. Dump/levelling: yard of Building 123. Period 4 demolition or 5. Wall sherd. Black-burnished ware Type 1 (GA). Diameter 24 mm, thickness 6 mm.

908 SF 1.81 3732, D1353 F1291. Large pit: yard of Building 123. Period 4. Wall sherd. Oxford-type white ware (MQ). Diameter 37 mm, thickness 9 mm.

909 SF 1.81 3367, G607 L164. Occupation/midden? ?Period 5 or 6. Wall sherd. Coarse grey ware (GZ). Fragment. Diameter 57 mm, thickness 4 mm.

910 SF 1.81 3477, G797 L581. Destruction debris/occupation: Building 120. Period 5b. Wall sherd. Coarse grey ware (GZ). Diameter 29 mm, thickness 7 mm.

911 SF 1.81 4080, G2299 L2090. Occupation: Building 118. Period 4. Wall sherd. Amphora (AA). Diameter 56 mm, thickness 12 mm.

912 SF 1.81 4132, G2762 L2758. Dump. Period 3d or 3d/4. Wall sherd. Tempered ware (HZ). Diameter 35 mm, thickness 13 mm.

913 SF 1.81 3195, G310 F14. Sand pit. Period 5. Wall sherd. Micaceous light grey ware (WA). Diameter 44 mm, thickness 9 mm. Both faces are abraded.though the edge is rough.

914 SF 1.81 3233, G474 F14. Sand pit. Period 5. Wall sherd. Black-burnished ware Type 2 (GB). Diameter 31 mm, thickness 6 mm.

915 SF 1.81 3221, G388 F16. Robber trench. Period 6. ?Base sherd. Black-burnished ware Type 2 (GB). Diameter 39 mm,

thickness 10 mm. The outer face is abraded, though the edge is rough.

916 SF 1.81 3034, G175 F158. Robber trench. Period 6. Base. Micaceous light grey ware (WA). Fragment. Diameter 43 mm, thickness 6 mm. There is much scoring on the outer face.

917 SF 1.81 2974, G174 F174. Pit. Period 6. Wall sherd. Tempered ware (HZ). Diameter 51 mm, thickness 15 mm.

918 SF 1.81 3219, G356 F183. Robber trench. Period 6. ?Base sherd. Black-burnished ware Type 1 (GA). Diameter 39 mm, thickness 8 mm.

919 SF 1.81 3340, G534 F438. Robber trench. Period 6. Base sherd. Black-burnished ware Type 2 (GB). Diameter 43 mm, thickness 8 mm. There is a slight indentation at the centre of the inner face.

920 SF 1.81 4860, G3902 F3418. Pit. Period 6. Base. Colchester/other colour-coated red ware (CZ). Diameter 42 mm, thickness 4 mm.

921 SF 1.81 2952, G150. Unstratified. Periods 4-6. Base sherd. Black-burnished ware Type 1 (GA). Diameter 34 mm, thickness 6 mm.

922 SF 1.81 2967, G159. Unstratified. Periods 4-6. Wall sherd. Coarse grey ware (GZ). Diameter 36 mm, thickness 8 mm.

923 SF 1.81 3247, G567. Unstratified. Periods 4-6. Wall sherd. Tempered ware (HZ). Diameter 45 mm, thickness 12 mm.

924 SF 1.81 3427, G840. Unstratified. Periods 4-6. Wall sherd. Black-burnished ware Type 2 (GB). Diameter 36 mm, thickness 10 mm.

925 SF 1.81 4751, M61 L1. Surface cleaning. Unstratified. Wall sherd. Tempered ware (HZ). Diameter 43 mm, thickness 16 mm.

926 SF 1.81 4654, M38 L1. Surface cleaning. Unstratified. Wall sherd. Tempered ware (HZ). Diameter 51 mm, thickness 14 mm.

Pierced pottery counters (Fig 5.24; 927-937)

929 SF 1.81 926, C146 F42. Gully/drain: Building 114. Early Period 4 (?contaminated). Wall sherd. Black-burnished ware Type 1 (GA). Both faces are slightly abraded. Diameter irregular, 35 by 41 mm, thickness 5 mm. The perforation is straight-sided, diameter 4 mm.

930 SF 1.81 3743, D1219 L1214. Demolition debris: Building 123, Room 8. Period 4. ?Base sherd. Black-burnished ware Type 2 (GB). Fragment. Both faces are abraded. Diameter 28 mm, thickness 7 mm. The perforation is hour-glass-shaped, diameter 6 mm.

931 SF 1.81 3332, G579 L164. Occupation/midden? ?Period 5 or 6. Base sherd. Coarse grey ware (GZ). Fragment. Both faces are slightly abraded. Diameter 31 mm, thickness 7 mm. The counter is partly pierced. The indentation is V-shaped.

932 SF 1.81 3728, G1530 L1477. Occupation/destruction debris: Building 120. Period 5a. Rim sherd. Black-burnished ware Type 2 (GB). Both faces are slightly abraded. Diameter 25 mm, thickness 7 mm. The perforation is straight-sided, diameter 4 mm.

933 SF 1.81 4118, G2679 F2370. Drain? Period 4 or 5. Wall sherd. Tempered ware (HZ). Both faces are slightly abraded. Diameter 52 mm, thickness 11 mm. The perforation is straight-sided, diameter 10 mm.

934 SF 1.81 1807, E1. Site clearance. Wall sherd. Coarse grey ware (GZ). Both faces are slightly abraded. Diameter irregular, 45 by 52 mm, thickness 8 mm. The perforation is

straight-sided, diameter 8 mm.

935 SF 1.81 5014, J318 F309. Drain: Building 79. Period 1 (fill = Period 2). Wall sherd. Coarse grey ware (GZ). Both faces are abraded. Diameter 32 mm, thickness 7 mm. The perforation is hour-glass-shaped, diameter 4 mm.

936 SF 1.81 4832, M155 L1. Site cleaning. Unstratified. Base sherd. Black-burnished ware Type 2 (GB). Fragment. Both faces are abraded. Diameter 59 mm, thickness 6 mm. The perforation is hour-glass-shaped, diameter 11 mm.

937 SF 1.81 4825, M162 L1. Site cleaning. Unstratified. Base sherd. Black-burnished ware Type 2 (GB). Both faces are slightly abraded. Fragment. Diameter approximately 48 mm, thickness 7 mm. The perforation is hour-glass-shaped, diameter 8 mm.

TILE COUNTERS (938-67)

938 SF 1.81 1137, A240 F37. Ditch. Period 4. Flue tile. The edge is ground and the underside is abraded. Diameter 66 mm, thickness 19 mm.

939 SF 1.81 564, B109 L6. Backfill of Hut 3. Anglo-Saxon. The edge is ground and both faces are abraded. Diameter 53 mm, thickness 16 mm.

940 SF 1.81 1198, B2. Site clearance. Modern. The edge is ground and both faces are abraded. Diameter 50 mm, thickness 19 mm.

941a-b SF 1.81 654, C97 L8. Dump/demolition. Period 4. Two counters, a) The edge is ground and both faces are abraded. Diameter 51 mm, thickness 14 mm. b) The edge is ground and both faces are abraded. Diameter 51 mm, thickness 21 mm.

942 SF 1.81 3032, D215 L210. Surface cleaning. Unstratified. Split from one face of a tile. Diameter 37 mm, thickness 7 mm.

943 SF 1.81 1986, E1. Site clearance. The edge is ground and both faces are slightly abraded. Diameter 56 mm, thickness 15 mm.

944 SF 1.81 4152, G2887 L1. Topsoil/clearance. Period 6. The edge is ground and both faces are abraded. There is a graffito X on one face. Diameter 44 mm, thickness 14 mm.

945 SF 1.81 3868, G1692 F260. Pit. Period 6. ?Tile. A rough-out. Diameter 56 mm, thickness 14 mm.

946 SF 1.81 2970, G200. Unstratified. Periods 4-6. Flue tile, roller-stamped. A rough-out. Diameter 48 mm, thickness 16 mm.

947 SF 1.81 4596, H13 L3. Topsoil/clearance. Period 6. A rough-out. Diameter 63 mm, thickness 19 mm.

948 SF 1.81 4521, H262 L78. Destruction debris B: Building 116. Period 4 or 5. An oval counter. The edge is ground and the upper surface is abraded. Diameter 96 mm, thickness 23 mm.

949 SF 1.81 3323, G445 F376. Large pit. Period 6. The edge is ground and both surfaces are abraded. Diameter 53 mm, thickness 25 mm.

950 SF 1.81 3027, G243 F201. Pit. Period 5 or 6. Fragment. The edge is partly ground. Thickness 18 mm.

951 SF 1.81 3007, G177 L177. Occupation debris/midden: Building 120. Period 5b. The edge is partly ground. Diameter 52 mm, thickness 15 mm.

952 SF 1.81 3437, G632 L425. Occupation/burning: Building 120?

Period 5b? Fragment. The edge is ground. Diameter 70 mm, thickness 19 mm.

953 SF 1.81 2779, Gl L1. Topsoil/clearance. Period 6. The edge is ground and both surfaces are abraded. Diameter 51 mm, thickness 18 mm.

954 SF 1.81 2886, G49. Unstratified. Periods 4-6. The edge is ground and both surfaces are abraded. Diameter 44 mm, thickness 18 mm.

955 SF 1.81 3398, D523 L464. Dump: yard of Building 123. Period 4. A small part of the edge is ground. Diameter 53 mm, thickness 16 mm.

956 SF 1.81 3409, D807 L805. Demolition debris of Building 123: Building 123, Passage 4. Period 4. The edge is partly ground. Diameter 71 mm, thickness 18 mm.

957 SF 1.81 2768, Gl L1. Topsoil/clearance. Period 6. The edge is ground and both surfaces are abraded. Diameter 86 mm, thickness 26 mm.

958 SF 1.81 3232, G402 F14. Sand pit. Period 5. Imbrex. The edge is partly ground. Diameter 48 mm, thickness 14-mm.

959 SF 1.81 3721, D1243 L1214. Demolition debris: Building 123, Room 8. Period 4. Waster. Fragment. The edge is very slightly ground. Diameter 52 mm, thickness 15 mm.

960 SF 1.81 3700, D1231 L1214. Demolition debris: Building 123, Room 8. Period 4. The edge is ground and both surfaces are abraded. Diameter 85 mm, thickness 22 mm.

961 SF 1.81 3026. G243 F201. Pit. Period 5 or 6. Fragment. The edge is ground and both surfaces are abraded. Tapering in section (truncated cone). Diameter 47 mm, thickness 33 mm.

962 SF 1.81 3663, D1064 F22. Robbed drain: yard of Building 123. Period 4. Tegula end. Part of a signature survives (two finger-marks in ?semicircle +) . A rough-out. Diameter 68 mm, thickness 20 mm.

963 SF l.81-3645, D1199 L1171. Demolition debris of Building 123? Building l23, Room 8. Period 4. Flue tile. The edge is ground and both surfaces are abraded. Diameter 55 mm, thickness 16 mm.

964 SF 1.81 3634, D1119 L27. Dump/levelling: yard of Building 123. Period 4 demolition or 5. Tegula. Part of a signature survives (one finger-mark, curved). The edge is very slightly ground. Diameter 81 mm, thickness 30 mm.

965 SF 1.81 3837, D1327-30 F1291. Large pit: yard of Building 123. Period 4. (See pottery counter **742,** tile counters **966-7,** and stone counters **970**-1.) The edge is ground and both surfaces are abraded. Diameter 56 mm, thickness 14 mm.

966 SF 1.81 3838, D1327-30 F1291. Large pit: yard of Building 123. Period 4. (See **965.)** The edge is partly ground and one face may be abraded. Diameter 58 mm, thickness 18 mm.

967 SF 1.81 3839, D1327-30 F1291. Large pit: yard of Building 123. Period 4. (See **965.)** The edge is ground and both surfaces are abraded. Diameter 55 mm, thickness 15 mm.

STONE COUNTERS (968-71)

968 SF 1.81 3093, G259 F165. Robber trench. Period 6. A rough-out for a counter made from Cipollino marble. Diameter 33 mm, thickness 11 mm.

969 SF 1.81 3646, D1199 L1171. Demolition debris of Building 123? Building 123, Room 8. Period 4. Grey-white marble. Diameter 84 mm, thickness 19 mm.

970 SF 1.81 3834, D1327-30 F1291. Large pit: yard of Building 123. Period 4. (See pottery counter **742,** tile counters **965-7,** and stone counter **971).** Off-white marble. Fragment. Traces of opus *signinum* on the underside and edge. Possibly not a counter, but association with the tile counters **965-7** supports the identification. Diameter 64 mm, thickness 15 mm.

971 SF 1.81 3835, D1327-30 F1291. Large pit: yard of Building 123. Period 4. (See **970.)** Off-white marble. Fragment. Traces of opus *signinum* on the underside. Probably part of **970** above. Thickness 15 mm.

DICE (Fig 5.24; **972-3)**

Catalogued in printed text.

DICE-BOX (Fig 5.24; 974)

Catalogued in printed text.

MUSICAL INSTRUMENT (Fig 5.25; 975)

Catalogued in printed text.

CATEGORY 6: OBJECTS EMPLOYED IN WEIGHING AND MEASURING

SCALES

Balance (scale with beam arms of equal length) (976)

976 SF 1.81 1429, B631 L102. Dump: Building 113, Room 1. Late Period 4. Possibly part of an iron balance with a central triangular lug. Length 138 mm.

Balance fittings (Fig 5.26; 977)

Catalogued in printed text.

CATEGORY 7: OBJECTS USED FOR OR ASSOCIATED WITH WRITTEN COMMUNICATION

SEAL-BOX (978)

Miscellaneous

978 SF 1.81 1371, B954 F282. Large cess-pit: Building 77, Room 5. Periods 1/2. The base of a copper-alloy seal-box, lozenge-shaped with a pierced lug to take the hinge pin at the top corner, a knob at the bottom corner, and two small knobs at the two side corners. The wall is grooved at the side corners to allow the string to pass through, and the small knobs do not reach above the level of the groove so as not to impede the string. The wall is also grooved to permit the string to pass at one side of the pierced lug. The upper part of the wall is inset to allow the lid to fit closely. The base has four circular perforations. Length 34 mm.

STYLI (Fig 5.27; 979–980)

Catalogued in printed text.

CATEGORY 8: OBJECTS ASSOCIATED WITH TRANSPORT

HARNESS

Hipposandal (Fig 5.28; 981)
Catalogued in printed text

Bridle (Fig 5.29; 982)
Catalogued in printed text.

Harness fitting (983)
983 SF 1.81 621, B138 L7. Backfill of drainage gully F39. Period **5.** Possibly an iron harness fitting, in three fragments. Roughly triangular with a circular element at the top of the triangle. Length 114 mm, maximum width 86 mm.

CART FITTING

Linch-pin (984)
984 SF 1.81 1434, B478 L66. Make-up: Building 112, Room **5.** Period 4b. Possibly a fragment of a linch-pin. The head is very small. Length, incomplete, 128 mm.

WALL VENEER AND OTHER ARCHITECTURAL STONE FRAGMENTS (Figs 5.30-4; 985-1178)

1021 SF 1.81 125, A46. Unstratified. Post-Roman. ?Purbeck marble. Moulded veneer with one rounded and one bevelled edge. 22 mm thick.

1022 SF 1.81 912, A461 L93. Trench fill: Building 110. Period 3. Purbeck marble. Veneer with three rough edges, two parallel and one at right angles. The fourth edge may be mitred, but curves slightly. The upper surface is scored in places. Thickness 42 mm.

1023 SF 1.81 2685, B2. Site clearance. Modern. Chalk. Veneer, 9 mm thick. Three edges.

1024 SF 1.81 1209, B6. Site clearance. Modern. Purbeck marble. Veneer strip, 69 mm long, 14 mm thick.

1025 SF 1.81 1386, B85 F38. Robber trench for Building 113. Medieval. ?Purbeck stone. Veneer, 7 mm thick. At least three edges, two straight but not parallel, one curved. Possibly another curved edge.

1026 SF 1.81 1213, B91. Site clearance. Unstratified. Unidentified stone. ?Veneer, 4 mm thick. Moulded.

1027 SF 1.81 1146, B143 F69. Large pit. Modern. White marble with very slight grey veining. Veneer, 25 mm thick. Three edges, two parallel, one at right angles to them. ?Modern.

1028 SF 1.81 1208, B202 F94. Large stake hole: Hut 3. Anglo-Saxon. Purbeck marble. Veneer, 24 mm thick. One rough edge.

1029 SF 1.81 853, B277 F107. Gully: Building 126. Period 5. White marble, with very slight grey veining and a reddish tinge. Disc with roughly bevelled edge. Diameter 183 mm, thickness 7 mm. Possibly from a column, but more likely veneer in view of the rough edge.

1030 SF 1.81 1204, B468 L50. Demolished daub wall: Building 112, Room 1. Periods 4/5. Purbeck marble. Veneer, 34 mm thick. One bevelled edge.

1031 SF 1.81 1411, B549. Unstratified. Greensand. Oval section ?rod fragment, 37 mm long, 25 by 23 mm diameter.

1032 SF 1.81 1402, B629 L101. Make-up: Building 112, Room 6a. Period 4c. Two pieces of grey/white marble, a) Veneer, 13 mm thick. One edge. Single convex moulding, b) Veneer, 13 mm thick. One edge. Traces of a groove on edge.

1033 SF 1.81 1477, B803 F243. Large cess-pit. Periods 4/5. Weathered Purbeck marble. Veneer, 13 mm thick. One edge, possibly with another contiguous and at right angles to it.

1034-1035 SF 1.81 1352, B927 F112. Gully/slot: Building 112, Room 5. Period 4. **1034** Purbeck marble moulded cornice fragment. Length 108 mm, height 60 mm, depth 43 mm. **1035** Purbeck marble moulded cornice fragment with dowel hole. Length 205 mm, height 77 mm, depth 124 mm. Much rougher than a.

1036-1037 SF 1.81 1625, B965 L215. Dump? Period 3. Two pieces of dark pink/grey marble. **1036** Veneer, 13 mm thick. No edges? **1037** Veneer, 14 mm. One edge.

1038 SF 1.81 1692, B973 L204. Make-up: Building 112, Room 6b. Period 4b. Purbeck marble. Veneer, 24 mm thick. One edge and part of another, contiguous but not at right angles.

1039 SF 1.81 1383, B978 L217. Daub floor: Building 112, Room 1. Period 4a. Purbeck marble. Veneer, 25 mm thick. Two edges,

contiguous but not at right angles.

1040 SF 1.81 1387, B1018 F260. Slot/gully/pit. Period 3. Weathered Purbeck marble. Veneer, 40 mm thick. One edge.

1041 SF 1.81 1645, B1135 L270. Dump. Period 3. Marble with a purple ground-mass and white breccia, varying considerably in size. Veneer, 17 mm thick. No edges.

1042 SF 1.81 1748, B1304 F108. Gully between Buildings 112 & 113. Period 4. Yellow/white marble with purple veins. Veneer, 10 mm thick. ?No edges.

1043 SF 1.81 1716, B1443 L351. Occupation sills: Building 94, Room 5b. Period 3. Chalk. Veneer, 21 mm thick. Two contiguous edges at right angles.

1044 SF 1.81 1751, B1496 L366. Boudican destruction debris: destruction of Building 78. Early Period 3. Chalk. Veneer strip, 5 by 6 mm, 27 mm long.

1045 SF 1.81 1715, B1592 L343. Destruction debris: destruction of Building 77? Early Period 3. Purbeck marble. Veneer, 15 mm thick. No edges.

1046 SF 1.81 1731, B1679 F333. Rubbish pit. Period 3. Purbeck marble. Veneer, 15 mm thick. One curved edge.

1047 SF 1.81 2408, B2196 L623. Dump against plinth. Periods 1/2. Weathered Purbeck marble. Veneer, 32 mm thick. Three roughly bevelled contiguous edges. Possibly part of a triangular piece.

1048 SF 1.81 2435, B2227. Building 112. Period 4? Purbeck marble. Veneer, 46 mm thick. One edge?

1049 SF 1.81 2464, B2263 F672. Large shallow pit: Building 112, Room 3. Period 4. Unidentified stone. Veneer strip, split? One end survives. 16 by 54 mm, 94 mm long.

1050 SF 1.81 5371, B2590. Unstratified. White marble, externally discoloured. Veneer, 29 mm thick. One edge 122 mm long.

1051 SF 1.81 5369, B2595 F894. Pit. Periods 4/5. Purbeck marble. Veneer, 30 mm thick. No edges.

1052 SF 1.81 1358, C293 L36. Dump (redeposited Boudican). Early Period 3. White/buff marble with brown veins. Veneer, 20 mm thick. One edge, possibly with part of another parallel to it.

1053 SF 1.81 2695, C318 L39. Occupation. Early Period 3. Greensand. Possibly part of a sculpture. Approximately oval in section, 23 by 26 mm. Maximum length 21 mm.

1054 SF 1.81 1569, C324 L43. Dump. Early Period 3. Purbeck marble. Veneer, 13 mm thick. One edge.

1055 SF 1.81 2684, C354 F117. Post-pit? Period 3? Unidentified stone. Veneer, 4 mm thick. Two bevelled edges, not at right angles.

1056 SF 1.81 1701, C489 F138. Military cess-pit: Building 79, Room 2. Periods 1/2. Purbeck marble. Veneer, 30 mm thick. Three contiguous edges, two are parallel.

1057 SF 1.81 1785, D1. Site clearance. Unstratified. Purbeck marble moulded cornice fragment. 63 by 67 by 22 mm long.

1058 SF 1.81 2516, D1. Site clearance. Unstratified. Dull white marble. Veneer, 8 mm thick. One edge, possibly another. Post-Roman?

1059 SF 1.81 2517, D1. Site clearance. Unstratified. Purbeck marble. Veneer, 30 mm thick. One edge.

1060 SF 1.81 2679, D1. Site clearance. Unstratified. White marble, externally discoloured. Veneer, 20 mm thick. Three edges, two contiguous and at right angles. The third opposite, and at a tangent to, these two.

1061 SF 1.81 3152, D213 F38. Robber trench for Building 123. Period 6. Micaceous purple sandstone. Strip fragment, 58 mm long. Only one dimension of section complete, 18 mm.

1062 SF 1.81 3324, D379 F259. Robbing pit. Period 6. Pavonazetto marble. Veneer, 10 mm thick. One edge, 54 mm long.

1063 SF 1.81 3309, D414 F259. Robbing pit. Period 6. White marble *(see* BM Lab report below, after entry **1178)**. Veneer, 14 mm thick. No edges.

1064 SF 1.81 3314, D455 F259. Robbing pit. Period 6. Purbeck marble. Veneer (in two pieces), 29 mm thick. One edge, 179 mm long.

1065 SF 1.81 3313, D461 F259. Robbing pit. Period 6. Purbeck marble. ?Veneer ?rhomboid, 44 mm thick. Three contiguous edges, giving a width at the narrower end of 108 mm. Length of the incomplete edges 249 and 290 mm. Maximum width at the wider end approximately 138 mm.

1066 SF 1.81 5373, D1572 L457. Floor make-up: Building 123, Room 9. Period 4. A rectangular block of limestone, 270 by 130 by 145 mm.

1067 SF 1.81 3578, D682 F684. Robber trench for Building 123. Period 6? Purbeck marble. ?Veneer, 42 mm thick. One edge, 354 mm long. Maximum surviving width 283 mm.

1068 SF 1.81 3576, D785 F782. Drain (part of F686): Building 123, Passage 2. Period 4. White ?limestone *(see* BM Lab report below, after entry **1178)**. ?Veneer, 32 mm thick. No edges.

1069 SF 1.81 3649, D1068 F637. Pit (part of drain F686): Building 123, Passage 2. Period 4. ?Purbeck marble. Veneer, 28 mm thick. No edges.

1070 SF 1.81 3788, D1132 L973. Demolition debris: Building 123, Passage 2. Period 4. Weathered Purbeck marble. Veneer, 19 mm thick. One edge 37 mm long.

1071 SF 1.81 3888, D1333 F1291. Large pit: yard of Building 123. Period 4. Purbeck marble. Veneer, 27 mm thick. ?Edges.

1072 SF 1.81 3917, D1447 L1426. Dump: Building 123, Room 10. Period 4. White marble, externally discoloured. Veneer, 27 mm thick. No edges.

1073 SF 1.81 4038, D1543 F991. Robber trench for Building 123. Period 6. Purbeck marble. Veneer, 23 mm thick. No edges.

1074 SF 1.81 3965, D1584 F352. Drain: Building 123, Passage 2. Period 4. Mudstone. ?Veneer, 9 mm thick. One edge, 61 mm long.

1075 SF 1.81 4032, D1610 L1588. Dump: Building 123, Passage 2. Period 4. Limestone. ?Worked.

1076 SF 1.81 4027, D1658 L1620. Dump: Building 123, Room 8. Period 4. Purbeck marble. Moulded veneer, 18 mm thick. No edges. Single groove.

1077 SF 1.81 3898, D1680 L694. Topsoil? Period 6? Purbeck marble(?). Veneer strip, 9 mm thick. One end survives. Length 46 mm, width 31 mm.

1078 SF 1.81 3972, D1760 L1372. Dump: Building 123, Room 8. Period 4. ?Pavonazetto marble. Veneer strip, 15 mm thick. Length 88 mm, width 52 mm.

1079 SF 1.81 3974, D1760 L1372. Dump: Building 123, Room 8. Period 4. ?Cipollino marble. Moulded veneer. Chip, 12 mm thick.

1080 SF 1.81 4017, D1795 F1728. Dump or make-up. Period 4. Limestone fragment with tool marks.

1081 SF 1.81 4045, D1810 F1291. Large pit: yard of Building 123. Period 4. Purbeck marble. Veneer, 19 mm thick. No edges.

1082 SF 1.81 4046, D1810 F1291. Large pit: yard of Building 123. Period 4. Purbeck marble. Veneer, 21 mm thick. No edges.
1083 SF 1.81 4047, D1810 F1291. Large pit: yard of Building 123. Period 4. Purbeck marble. Veneer, 19 mm thick. No edges.
1084 SF 1.81 1873, E1. Site clearance. Unstratified. Purbeck marble moulded veneer, 19 mm thick. One edge.
1085 SF 1.81 1989, E1. Site clearance. Unstratified. Imperial (red) porphyry. Veneer strip, 7 by 36 mm, 87 mm long, one end survives.
1086 SF 1.81 1878, E10 F9. Extensive robber trench. Period 7. Purbeck marble. Veneer, 22 mm thick. One rounded edge.
1087 SF 1.81 1939, E72 F231. Robber pit. Period 7. a) Cipollino marble. A small piece of veneer, 14 mm thick. One edge, possibly two others, b) Unidentified stone. Veneer strip, 19 by 24 mm, 49 mm long.
1088 SF 1.81 1987, E111 F102. Robber trench. Period 7. Dull white marble with orangey-brown veins. Veneer, 16 mm thick. Two rough ?edges at right angles.
1089 SF 1.81 2052, E161 F137. Pit. Period 8. Unidentified stone. Veneer, 26 mm thick. One rounded edge.
1090 SF 1.81 1976, E170 F137 & F140. Pits. Period 8. Dull white ?marble. A small piece of veneer ?strip, 11 by 15 mm, 58 mm long.
1091 SF 1.81 1974, E190 F109. Pit. Period 8. Purbeck marble. Veneer 19 mm thick. Triangular, 86 by 94 by 114 mm.
1092 SF 1.81 2034, E349 F247. Pit. Period 7. Purbeck marble. Veneer, 25 mm thick. One rounded edge.
1093 SF 1.81 2504, E385 L7. Robbing debris. Period 7. Unidentified stone. Veneer, 17 mm thick, underside split off. Triangular, 51 by 53 by 71 mm.
1094 SF 1.81 2558, E425 F298. Slot. Period 4. Cipollino marble. A very small chip of veneer, 17 mm thick. No edges.
1095 SF 1.81 2079, E473 F261. Stone slab set in floor (L9): Building 123, Room 5. Period 4. Very weathered and worn Purbeck marble rectangular slab (in two pieces). 110 by 200 by 36 mm thick. Close to, but not in, a doorway.
1096 SF 1.81 2199, E669 L27. Make-up. Period 3. Purbeck marble. Veneer, 26 mm thick. Three edges, possibly indicating an originally square (120 by 120 mm) tile.
1097 SF 1.81 2232, E675 L30. Dump debris: Buildings 101/102. Period 3a. Purbeck marble. Veneer, 52 mm thick, ?split. Possibly part of one edge.
1098 SF 1.81 2366, E773 F558. Ditch. ?Period 3. Purbeck marble. Veneer, 24 mm thick. One bevelled edge.
1099 SF 1.81 2340, E895 F557. Pit? Period 3. Burnt whitish marble. Veneer, 21 mm thick. Two contiguous edges, not at right angles.
1100 SF 1.81 2471, E1165 F1019. Pit. Periods 1-2. Sandstone. ?Veneer, 23 mm thick. One rounded edge.
1101 SF 1.81 2451, E1202 F1037. Ditch. Period 2. Brecciated white and purple marble. A very small chip of veneer, 7 mm thick. No edges.
1102 SF 1.81 4407, G2949 L1. Topsoil/clearance. Period 6. Weathered Purbeck marble. Veneer (in two pieces), 36 mm thick. One edge, 53 mm long.
1103 SF 1.81 3679, G1375 L73. Floor/destruction debris B: Building 116. Period 4. Unidentified stone, as SF 1.81 3789 below. ?Veneer, 8 mm thick. ?Edges.
1104 SF 1.81 3518, G922 L906. Destruction debris B: Building 120.

Period 5b. Purbeck marble. Veneer, 20 mm thick. No edges.

1105 SF 1.81 3789, G1542 L1391. Dump/construction debris: Building 116. Period 4. Unidentified stone, as SF 1.81 3679 above. ?Veneer, 8 mm thick. ?Edges.

1106 SF 1.81 3886, G1665 L1439. Dump/construction debris: Building 116. Period 4. Purbeck marble. Veneer, 39mm. No edges.

1107 SF 1.81 4100, G2592 L2494. Dump: Building 116. ?Period 4. Gastropodic limestone (not Purbeck marble?). ?Veneer. Chip.

1108 SF 1.81 5077, G4066 L3221. Dump. ?Period 4 or 5. Weathered Purbeck marble. Veneer, 22 mm thick. No edges.

1109 SF 1.81 5359, G3583 L3566. Dump/levelling: Building 116. Period 4. Purbeck marble. Veneer, 37 mm thick. One edge 120 mm long.

1110 SF 1.81 3170, G402 F14. Sand pit. Period 5. Purbeck marble. Veneer, 27 mm thick. One roughly bevelled ?edge, 83 mm long.

1111 SF 1.81 3171, G402 F14. Sand pit. Period 5. White marble, externally discoloured. Veneer (in two pieces), 10 mm thick. One edge, 91 mm long.

1112 SF 1.81 2897, G86 F17. Robber trench. Period 6. Sandstone. ?Veneer, 10 mm thick. ?Edges.

1113 SF 1.81 4076, G2315 F79. Pit. Period 3. Purbeck marble. Veneer, 17 mm thick. No edges.

1114 SF 1.81 3395, G708 F174. Pit. Period 6. Micaceous sandstone. ?Veneer, 19 mm thick. No edges.

1115 SF 1.81 3317, G287 F264. Pit. Period 6. Purbeck marble. Veneer, 15 mm thick. ?No edges.

1116 SF 1.81 3318, G287 F264. Pit. Period 6. Micaceous sandstone. ?Veneer, 19 mm thick. No edges.

1117 SF 1.81 3396, G794 F352. Pit. Period 5. ??Africano marble. Veneer, 28 mm thick. One edge 123 mm long.

1118 SF 1.81 3397. G794 F352. Pit. Period 5. Purbeck marble. Veneer, 12 mm thick. No edges.

1119 SF 1.81 3610, G1094 F778. Plinth stone: Building 120. Period 5a. Weathered Purbeck marble. Three fragments, underside very rough, a) 23 mm thick. No edges, b) Chip. No edges, c) Chip. No edges.

1120 SF 1.81 3731, G1689 F1644. Construction trench: Building 116. Period 4. Purbeck marble. Veneer, chip. No edges.

1121 SF 1.81 4053, G2470 F2362. Pit? Period 3. Purbeck marble. Veneer, 8 mm thick. No edges.

1122 SF 1.81 4088, G2614 F2612. Pit. Period 3. Purbeck marble. Veneer, 17 mm thick. No edges.

1123-1124 SF 1.81 4634, G3157 F2695. Pit. ?Period 3. Yellow marble with some white veining. Two fragments veneer, 16 mm thick. **1123** One edge, 39 mm long; another ?edge opposite and at an angle to the first, 108 mm long, possibly slightly rounded at each end. **1124** One edge, 72 mm long; another opposite and an angle to the first, 75 mm long.

1125 SF 1.81 5330, G3176 F2695. Pit. ?Period 3. Marble with a grey to black ground-mass and some purple breccia. Small fragment of veneer, 21 mm thick. One edge, 35 mm long.

1126 SF 1.81 4551, G3031 F2951. Pit. Period 6. Purbeck burr(?). Fragment with one worked face.

1127 SF 1.81 2908, G150. Unstratified. Periods 4-6. Purbeck marble. Veneer, 17 mm thick. Two contiguous edges at right angles, 87 and 53 mm long.

1128 SF 1.81 2954, G150. Unstratified. Periods 4-6. White marble, externally discoloured. Veneer, 21 mm thick. ?Edges.

1129 SF 1.81 3577, G900. Unstratified. Periods 3-6. Sandstone. Slab, 41 mm thick. One edge, 210 mm long.

1130 SF 1.81 4086, G2500. Unstratified. Periods 3-6. ??Africano marble. Veneer, 9 mm thick. No edges.

1131 SF 1.81 4413, G2660. Unstratified. Purbeck marble. Veneer, 38 mm thick. ?Edges.

1132 SF 1.81 5374, G3873. Unstratified. ?Period 5. Purbeck marble. Veneer, 31 mm thick. ?No edges.

1133 SF 1.81 5375, G3873. Unstratified. ?Period 5. Purbeck marble. Veneer, 44 mm thick. Two contiguous edges at right angles, 207 and 47 mm long. (Maximum measurement of latter dimension 172 mm.)

1134 SF 1.81 4510, H286 L3. Topsoil/clearance. Period 6. Limestone. Strip, grooved on two long edges. 62 mm long, 18 mm wide, 13 mm thick.

1135 SF 1.81 4412, H324 L283. Dump. Period 5. Purbeck marble. Veneer, thickness varies from 44 to 29 mm. Two contiguous edges at right angles, and part of a third which gives one complete dimension, 290 mm. Maximum measurement of incomplete dimension 183 mm.

1136 SF 1.81 4181, H105 F39. Cellar? Period 6. Limestone. Large block with chamfered edge. Length 385 mm, width 160 mm, height 150 mm.

1137 SF 1.81 4525, H206 F146. Robber trench? Period 6. Limestone. Veneer, 10 mm thick. Two contiguous edges at right angles, 54 and 36 mm long.

1138 SF 1.81 4591, H366 F365. Pit. Period 6. ?Limestone. Veneer, 25 mm thick. ?Edges.

1139 SF 1.81 4581, H484 F443. Robber trench. Period 5. ?Greensand. Veneer, 34 mm thick. Two opposite edges giving a complete dimension of 153 mm. Maximum measurement of second dimension 120 mm.

1140 Fig 5.34 SF 1.81 5364, H625 F454. Threshold: Building 120. Period 5a. Two fragmented slabs of Purbeck marble, set within tessellated floors on opposite sides of a timber ground-plate (as in Fig 5.34) . One slab, the smaller, is practically square, 315 by 308 mm, approximately 30 mm thick. One corner has worn/weathered away. The other is irregular in shape, and in many fragments. Maximum dimensions 500 by 348 mm, thickness approximately 30 mm.

1141 SF 1.81 4917, H538 L536. Make-up/foundation: Building 120. Period 5a. Purbeck marble. Veneer, 43 mm thick. One edge, 107 mm long.

1142 SF 1.81 5289, H573 F310. Wall: Building 116. Period 4. Purbeck marble. Slab, 74 mm thick. One edge, 142 mm long.

1143 SF 1.81 5321, J29 F27. Pit. Period 6. Purbeck marble. Cornice moulding fragment, 179 mm long. Both ends broken. Width 69 mm, height 50 mm. The back face is roughly keyed. The underside is smooth except for a small ridge along the inner edge.

1144 SF 1.81 4739, J30 L1. Site clearance. Period 6. Micaceous purple sandstone. Veneer, 13 mm thick. One edge 63 mm long.

1145 SF 1.81 5319, J111 F18. Pit. Period 6. Purbeck marble. Veneer (in two pieces), 47 mm thick. No edges.

1146 SF 1.81 5320, J111 F18. Pit. Period 6. Weathered Purbeck marble. Veneer (in two pieces). Both faces weathered and probably not original. Maximum thickness 36 mm. No edges.

1147 SF 1.81 5305, J145 F14. Robber trench. Period 6. Very dark grey unidentified stone. Veneer, 6 mm thick. Two contiguous

edges, not at right angles, 31 and 46 mm long.

1148 SF 1.81 4938, J203 F183. Pit. Period 6. Greek green porphyry. Veneer, 5 mm thick. No edges.

1149-1150 SF 1.81 4988, J244 F237. Pit? Period 3. Cream to yellowish marble with brown veins. Two fragments of veneer **1149** Thickness 17 mm. No edges. **1150** Thickness 15 mm. ?Edges.

1151 SF 1.81 5017, K42 L39. Demolition debris. Period 3. Sandstone. ?Worked.

1152 SF 1.81 5165, K361 L358. Horticultural soil. Period 3. Purbeck marble. ?Flange, 17mm thick. Length 76 mm. *Opus signinum* on broken edges.

1153 SF 1.81 5425, K373 L358. Horticultural soil. Period 3. Marble, red with creamy-white breccia. Thickness 8 mm. No edges.

1154 SF 1.81 5000, K19 F12. Oven. Period 3 (backfill Period 4). White marble, externally discoloured. Veneer, 18 mm thick. One edge 52 mm long.

1155 SF 1.81 5240, K249 F79. Large pit. Period 3a. Purbeck marble. Veneer, 30 mm thick. Two contiguous edges at right angle, 186 and 154 mm long. The edge measuring 186 mm may be complete.

1156 SF 1.81 5115, K126 F113. Linear feature/drain. Period 3b? ?Sandstone. Veneer strip. One end survives. Length 43 mm, width 14 mm, thickness 8 mm.

1157 SF 1.81 5304, K123 F120. Linear feature. Period 3b or 3c. Purbeck marble. Veneer, 25 mm thick. Two edges at right angles, 78 and 51 mm long.

1158 SF 1.81 5420, K259 F233. Trench/drain. Period 3a. Purbeck marble. Thickness 24 mm. No edges.

1159 SF 1.81 5423, K434 F411. Pit. Period 3a or 3b. Cream/white marble. Thickness 16 mm. No edges.

1160 SF 1.81 5424, K434 F411. Pit. Period 3a or 3b. Thin sliver of pinky-grey marble (?Pavonazetto) . Thickness 20 mm. No edges.

1161 SF 1.81 5099, K50. Unstratified. White marble. Veneer, small triangular piece. Three edges survive. 14 mm thick.

1162 SF 1.81 5242, K50. Unstratified. Purbeck marble. ?Veneer, thickness tapers from 59 mm to 42 mm. One edge, 128 mm long. There may be two other edges, one 386 long.

1163 SF 1.81 5243, K50. Unstratified. Dark grey marble with light grey veins. Veneer with small step, thickness 26 cut down to 25 mm. One edge 86 mm long.

1164 SF 1.81 5421, K200. Unstratified. Dark blue-grey/red marble. Thickness 10 mm. No edges.

1165 SF 1.81 5426, K304. Unstratified. Purbeck marble. Thickness 49 mm. One rough curved edge.

1166 SF 1.81 4747, M25 L1. Surface cleaning. Unstratified. Purbeck marble. ?Flange, 17 mm thick. Length 73 mm.

1167 SF 1.81 4752, M43 L1. Surface cleaning. Unstratified. Purbeck marble. Veneer, 19 mm thick. No edges.

1168 SF 1.81 4689, M65 F13. Trench or drain. Period 7. Purbeck marble. Veneer, 15 mm thick. Chip.

1169 SF 1.81 4686, M95 F27. Robber trench. Period 6. Mudstone. Off-cut, roughly curved, 12 mm thick.

1170 SF 1.81 4833, M155 L1. Surface cleaning. Unstratified. Weathered white marble. Veneer, 14 mm thick. One edge, 75 mm long.

1171 SF 1.81 4811, M158 F15. Robber pit. Period 6. Weathered

Purbeck marble. ?Flange. Length 62 mm, width 30 mm, height 44 mm.

1172 SF 1.81 4838, M222 F220. Pit: yard of Building 123. Period 4. ?White marble, externally discoloured. Veneer, 18 mm thick. No edges.

1173 SF 1.81 5001, M602 F585. Slot. Period 3. Weathered Purbeck marble. Veneer, 45 mm thick. One edge, 118 mm long. Possibly two others at right angles.

1174 SF 1.81 5273, M722 L448. Surface cleaning. Unstratified. Sandstone block. Maximum dimensions 205 by 240 mm, 107 mm thick. One face partly cut down to 40 mm thick.

1175 SF 1.81 5401, W57 F56. Cellar: destruction of Building 123, Room 13. ?Period 4 (end). Purbeck marble. Cornice moulding fragment, 167 mm long. One end survives. Maximum surviving width 52 mm, height 40 mm.

1176 SF 1.81 5387, W100 F99. Drain?/posthole? Period 1 or 2. Purbeck marble. Veneer rectangle, 40 mm thick. Two opposite edges giving a width of 106 mm. Maximum length 197 mm.

1177 SF 1.81 5404, W112 L111. Gravel surface. ?Period 2 or 3. Cream to yellowish marble with dark brown/grey veins. Veneer, 13 mm thick. No edges.

1178 SF 1.81 5400, W58. Unstratified. White marble, externally discoloured. Veneer, 21 mm thick. ?Edges.

REPORT ON THE ANALYSIS OF MARBLE FRAGMENTS FROM CULVER STREET

by Keith J Matthews

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Introduction

Three fragments from Colchester were submitted for stable isotope analysis via Dr Susan Walker of the Department of Greek and Roman Antiquities. The first is a table-leg (Fig 5.33, **1020**) of Greek origin. The other two (**1063, 1068**), excavated after the leg, were thought to be either pieces of the table top or, if they were not of the same origin as the leg, fragments of wall veneer.

Experimental procedure

The experimental procedure is based on the work of McCrea (1950), although it was not applied to the provenancing of classical white marble until the early 1970s (see, for example, Craig & Craig 1972). Samples were obtained from the objects by drilling into a broken surface using a 3/16 inch tungsten carbide tipped masonry bit. The initial drillings were discarded to remove any effects of weathering or conservation. From the resulting powder 10 mg was reacted with 100 per cent orthophosphoric acid under vacuum. The carbon dioxide thus obtained was isotopically analysed using a VG Micromass 602D mass-spectrometer. The isotopic ratio (8) obtained is given in parts per mil (‰) (per thousand) relative to the PDB standard (Craig 1957), where

$$\delta \text{ in } ‰ = \frac{(\text{Rsample} - \text{Rpdb}) \times 1000}{\text{Rpdb}}$$

where R = 13C/12C or 180/160.

The gas regeneration was performed three times to provide replicate samples; the standard error on these measurements is typically ±0.05 per cent.

Results

The results are given in the following table. Two of the results are also plotted graphically *(see* Fig 5.34 below) as the carbon isotope ratio δ13C versus the oxygen isotope ratio δ180. Also shown on the graph are the 'fields' of isotopic ratios for several of the marble quarries used in classical times. These data were obtained by Craig and Craig (1972), Manfra *et al* (1975), and Dean (1977). The results for the large fragment (1068) have not been plotted as they are so unlike any data available for comparison that any graphical representation would be meaningless.

Table of results

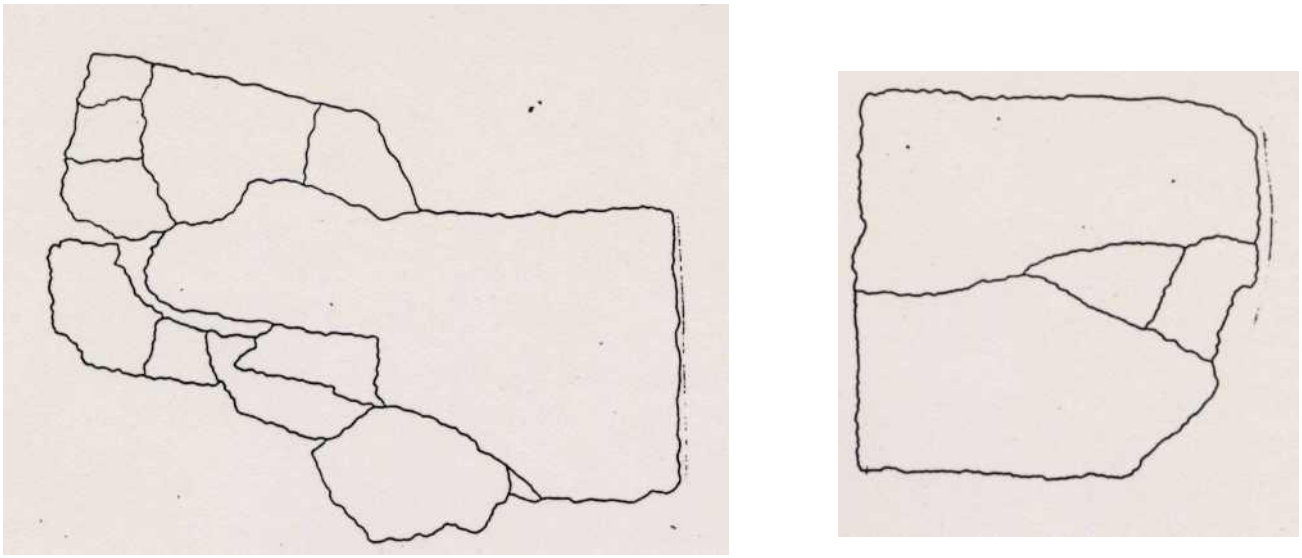
BMRL	Sample details (catalogue no)	δ13C ‰	δ18O ‰
23535R	table leg (1020)	5.29	-2.70
24126Z	1st sample large fragment (1068)	-9.78	-4.64
24126Z	2nd sample large fragment (1068)	-9.80	-4.71
24127X	small fragment (1063)	1.77	-3.93

Discussion

It is seen from the diagram that the leg (1020) would appear to be carved from Parian marble. This result is in accordance with expectations based on the fine-grained appearance of the marble and also the high standard of workmanship in the carving. (Much Parian marble was used in classical times for portrait busts and these exhibit a similar style of working.) The isotopic composition of Parian marble is quite different to that of marble from the other major known quarries exploited in antiquity. Thus there is little doubt that Paros is the source of the marble of this artefact.

The large fragment (1068), thought to perhaps have been the table top, has a most unusual carbon ratio. Almost all of the marble samples previously analysed at this laboratory have had positive carbon delta values, and where negative values have occurred, they have been in the order of about -1 to -2 ‰. In many instances this has been due to severe weathering of the marble, and subsequent resampling and remeasurement has produced a different and expected result. Weathering affects carbonates of which marble is one form, and is usually caused by ground-waters bearing carbonate ions exchanging these ions with the solid carbonate of the marble. This generally affects the outer surfaces to a depth of a few millimetres. However, where the particular carbonate is either very coarse grained, thus allowing deeper penetration, or where exposure to such weathering is prolonged, especially where the temperature changes (as in Britain with a range from subzero in winter to upwards of 25°C in summer), then these isotopic changes will be more pronounced. In this case resampling from a depth of about 15 mm (over twice the normal sampling depth) from one of the broken edges and equidistant from the two flat surfaces produced an identical result, thereby disproving the idea that weathering was the cause of this strange carbon ratio. It is possible that the stone is a limestone, and may even be of British origin. Andrew Middleton of this laboratory has examined the crystalline structure of this fragment and has confirmed that it is calcite. More detailed petrographic study may give a better idea of its origin.

The small fragment (1063), recovered from the same archaeological context as the table leg, is probably of Greek or Turkish origin, but as its carbon and oxygen isotope ratios are similar to those of several marbles from that area of the Aegean, such as Dokimeion or Aphrodisias, it is not possible to more precise. Petrographic analysis may perhaps eliminate some of these possible sources.



cm

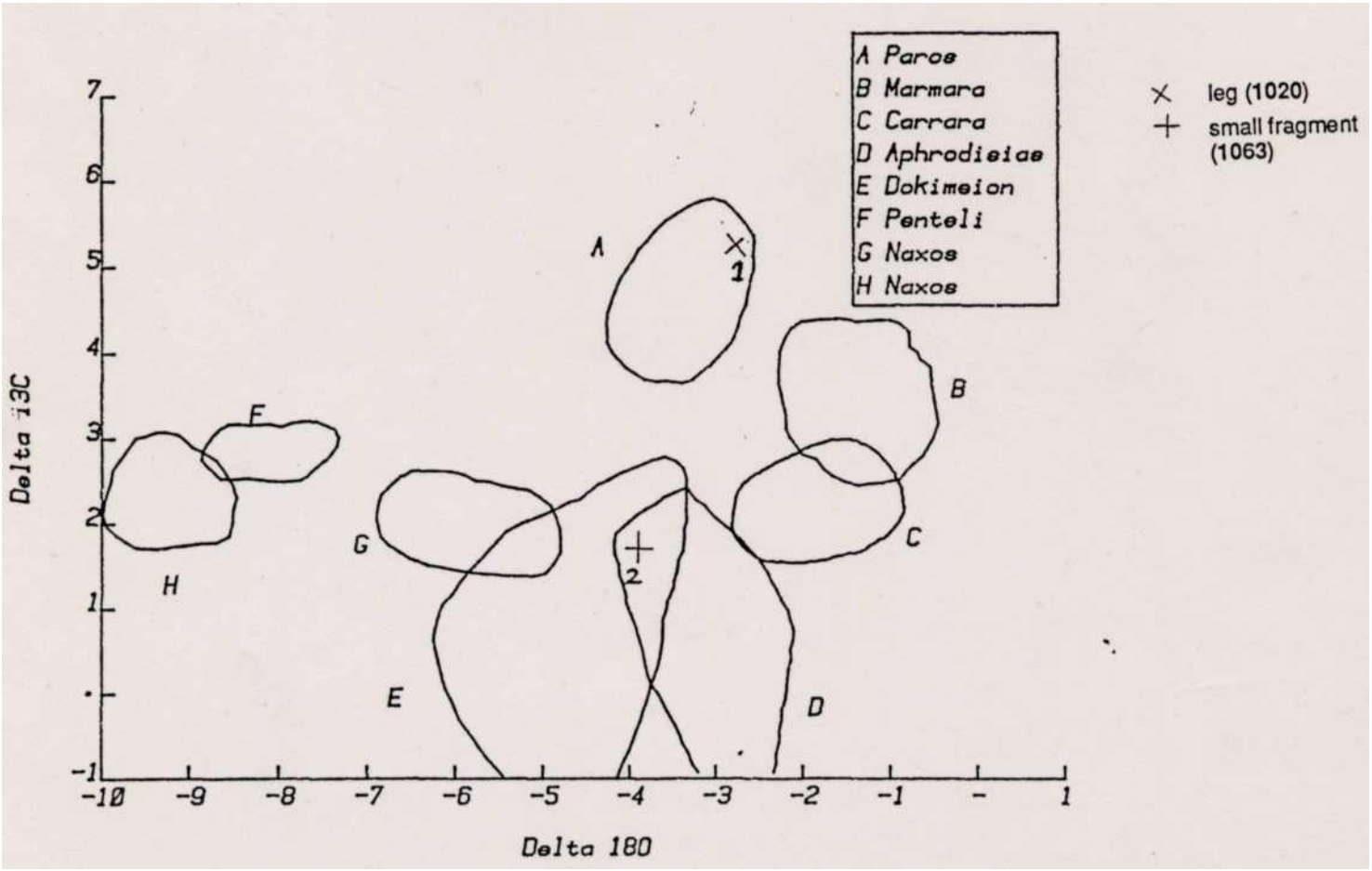


Fig 5.34 ***Above:*** two Purbeck marble slabs (1140) which were set in a tessellated floor. They are shown in the relationship as found in the ground. Scale in cm.
Below: diagram showing carbon isotope ratios versus oxygen isotope ratios in Colchester marble fragments 1020 (table leg) and 1063.

MOSAICIST'S STRIP (Fig 5.32; 1179)

Catalogued in printed text.

TESSERAE

GLASS TESSERAE **(1180-1228)**

1180-1181 SF 1.81 2819, D18 L9. Topsoil. Period 7. Two tesserae. One of translucent turquoise glass; one of opaque green glass.
1182 SF 1.81 3779, D1393 L329. Demolition debris of Building 123: Building 123, Passage 4. Period 4. One tessera of ?translucent turquoise glass.
1183-1184 SF 1.81 2788, D1. Unstratified. Two tesserae. One of opaque green glass; one of translucent green glass.
1185 SF 1.81 3546(i), D830. Unstratified. One tessera of opaque dark blue glass. Found with two chalk tessera, **1264-1265.**
1186 SF 1.81 2066, E483 L10. Demolition: Building 127. Period 5. One tessera of opaque mid blue glass.
1187-1188 SF 1.81 2250, E491 L10. Demolition: Building 127. Period 5. Two tesserae. One of opaque mid blue glass; one of opaque turquoise glass.
1189-1192 SF 1.81 1967, E190 F109. Pit. Period 8. Four tesserae of opaque mid blue glass.
1193-1194 SF 1.81 1964, E239 F109. Pit. Period 8. Two tesserae of opaque mid blue glass.
1195-1197 SF 1.81 1926, E146 F126. Small pit? Period 8. Three tesserae of opaque mid blue glass.
1198 SF 1.81 1975, E161 F137. Pit. Period 8. One tessera of opaque mid blue glass.
1199 SF 1.81 1965, E214 F154. Small pit. Period 8. One tessera of opaque mid blue glass.
1200-1201 SF 1.81 1963, E232 F155. Pit. Period 8. Two tesserae of opaque mid blue glass.
1202 SF 1.81 1970, E222 F160. Small pit. Period 8. One tessera of opaque mid blue glass.
1203 SF 1.81 2008, E302 F216. Shallow pit. Period 8. One tessera of opaque mid blue glass.
1204 SF 1.81 2037, E369 F252. Robber pit. Period 7. One tessera of opaque mid blue glass.
1205 SF 1.81 2039, E379 F260. Pile hole: Building 127. Period 5. One tessera of opaque mid blue glass.
1206-1220 SF 1.81 1814, E1. Site clearance. Unstratified. Fifteen tesserae. Thirteen of opaque mid blue glass; one **of** opaque whitish paste; one of opaque turquoise glass.
1221 SF 1.81 1866, E1. Site clearance. Unstratified. One tessera of opaque mid blue glass.
1222-1224 SF 1.81 1874, E1. Site clearance. Unstratified. Three tesserae. Two of opaque mid blue glass; one of opaque turquoise glass.
1225 SF 1.81 1968, E185. Unstratified. Late Period 4. One tessera of opaque mid blue glass.
1226 SF 1.81 1966, E250. Unstratified. One tessera of opaque mid blue glass.
1227 SF 1.81 3607, G1182 L1. Topsoil/clearance. Period 6. One tessera of ?opaque turquoise glass.

1228 SF 1.81 3321, G624 L359. Destruction debris A: Building 120? Period 5b? One tessera of opaque mid green glass.

STONE TESSERAE (1229-1310)

1229-1263 SF 1.81 2644, B15 F7. Trench robbing mosaic in Building 113, Room 2. Modern. Thirty-five tesserae of septaria and chalk.
1264-1265 SF 1.81 3546(ii), D830. Unstratified. Two chalk tesserae. Found with a glass tessera, **1185.**
1266 SF 1.81 5409, G2359 F79. Pit. Period 3. One chalk tessera.
1267-1275 SF 1.81 2834, D67 F30. Robber trench for Building 123. Period 6. Nine chalk tesserae set in opus *signinum.*
1276-1292 SF 1.81 2823, D45 F38. Robber trench for Building 123. Period 6. Seventeen tesserae set in white mortar above opus *signinum.* Eleven septaria, six chalk.
1293-1301 SF 1.81 2837, D66 F38. Robber trench for Building 123. Period 6. Nine tesserae. Seven of chalk set in white mortar above *opus signinum;* two loose septaria tesserae.
1302-1310 SF 1.81 2821, D38 F38. Robber trench for Building 123. Period 6. Nine tesserae. Six of septaria and three of chalk, all with traces of white mortar above *opus signinum.*

WATER-PIPE JUNCTION COLLARS (Fig 5.35; 1311-1318)

1312 SF 1.81 412, A181 F35. Ditch. Period 5. Fragment.
1313 SF 1.81 2667, A285 F99. Wooden water-pipe. Period 3. Fragment.
1314 SF 1.81 2209, E720 F523. Wooden water-pipe. Period 3. Fragments.
1315 SF 1.81 2221, E720 F523. Wooden water-pipe. Period 3. Fragments.
1316SF 1.81 2244, E762 F523. Wooden water-pipe. Period 3. Fragments.
1317 SF 1.81 3466(X), D768 F259. Robbing pit. Period 6. A fragment possibly from a water-pipe collar with traces of mineralised wood.
1318 SF 1.81 4039(X), D1723 L1721. ?Occupation: Building 123, Room 10. Period 4. A water-pipe collar in ten fragments. Traces of mineralised wood survive in several places, identified by Jacqui Watson (Ancient Monuments Laboratory) as *Quercus* sp (oak).

CATEGORY 10: TOOLS

TOOL HANDLES

BONE AND ANTLER HANDLES

One-piece handles

a) plain (Fig 5.36; **1319-1322).**

1321 SF 1.81 1203, B734 L147. Occupation: Building 112, Room 1. Period 4a. Polished antler handle, oval in section, tapering from 28 to 22 mm. An iron tang remains in the handle, with iron-replaced wood shavings packed around it to hold it in position (CAR **2,** 107). The tang passes right through the handle. Length 99 mm.

1322 SF 1.81 2930 (X), G150. Unstratified. A bone (?antler) handle and an iron tang, in fragments. The handle is plain but polished. The end of the handle is covered by a copper-alloy disc, through which the tang passes. The end of the tang has been hammered flat against the disc, thus securing both blade and disc in position. Length 72 mm. ?Post-Roman.

b) with waisted end (Fig 5.36; **1323-1328)**. These handles can be dated to the Claudian-Neronian period *(ibid).*

i) plain

1324 SF 1.81 2438, B2260 L658. Fill of cess-pit F282: Building 77, Room 5. Periods 1/2. An oval-section complete handle as CAR **2,** fig 110, 2921, 2922. The iron tang remains in the handle. Length 70 mm, maximum diameter 16 mm.

1325 SF 1.81 1729, C485 F138. Military cess-pit: Building 79, Room 2. Periods 1/2. A similar handle with the tang remaining. Length 78 mm, maximum diameter 16 mm.

1326 SF 1.81 2089, E494. Unstratified. A fragment of a similar handle with most of the tang remaining. Length 72 mm, maximum diameter 14 mm.

ii) decorated

1327 SF 1.81 1708, B1593 L389. General Boudican demolition layer: destruction of Building 77. Early Period 3. A fragment of a handle similar to CAR **2,** fig 110, 2926, with rectangular section (6 by 12 mm) and central rib. As with 2926 there are two iron pins to one side of the rib on one face. Part of the tang remains. Length 43 mm.

1328 SF 1.81 4859, M274 L216. Burning: Building 91 (demolition)? Period 2 destruction. A fragment of a similar handle of rectangular section and with a central rib. The tang remains in the handle fragment and part of the blade also survives. There are two further fragments of handle and tang. There are no obvious signs of iron pins anywhere on the handle. Length of the largest piece 75 mm.

c) with incised decoration **(1329).**

1329 SF 1.81 5027, H500. Unstratified. Periods 4-6. A fragment of a handle of circular section with a single groove close to the end. Length 61 mm.

Two-piece handle (1330)

1330 SF 1.81 903, B339 L37. Occupation: Building 112, Room 6a. Period 4c. A fragment of a bone handle with a broad end pierced for suspension. The iron tang is held between the

two plates of the handle by three iron rivets, and both tang and handle have broken at a fourth rivet. The handle tapers slightly. Length 54 mm, maximum width 10 mm, thickness 6 mm.

Clasp-knife handle (Fig 5.36; 1331)
Catalogued in printed text.

COPPER-ALLOY HANDLE (Fig 5.36; **1332)**

Catalogued in printed text.

IRON KNIFE AND CLEAVER BLADES (Fig 5.36-7; 1320, 1333-1359)

1339 SF 1.81 1295, A628 L230. Make-up: Building 77, Room 9. Period 1. A ?blade with a copper-alloy collar. Length 181 mm. Diameter of collar 25 mm.

1340 SF 1.81 602, B126. Unstratified. A knife with a suspension loop at the end of the tang, which seems to be folded back on itself to form the loop, though this is unclear. The blade has an arched back and is damaged. Length 124 mm.

1341 SF 1.81 1719, B1651 L399. Midden accumulation: Early Period 3. A fragment of a blade and a fragment of a tang. The blade has a straight edge parallel to the back. The tang is rectangular in section. Length 136 mm.

1342 SF 1.81 2405, B2190 L612. Make-up. Periods 1/2. A ?blade fragment.

1343 SF 1.81 504, C97 L8. Dump/demolition. Period 4. A ?blade and tang fragment. Length 94 mm.

1344 SF 1.81 522, C97 L8. Dump/demolition. Period 4. A ?blade fragment with arched back. Length 84 mm.

1345 SF 1.81 568, C127 F39. Small slot/gully: Building 95? Late Period 3. A ?blade fragment.

1346 SF 1.81 3335(C), D521 F498. Robber trench for Building 123. Period 6. A ?blade fragment with central tang.

1347 SF 1.81 3792(C), D1248 F624. Stairwell: Building 123. Period 4. A ?blade fragment with long central tang of rectangular section.

1348 SF 1.81 3666(X), D919 F918. Pit. Period 6. A blade with handle, possibly socketed. In two pieces. Length 153 mm.

1349 SF 1.81 2678, E282 F205. Pile hole: Building 127. Period 5. A blade fragment with a straight back.

1350 SF 1.81 2335, E876 L57. Unburnt colonial occupation: Buildings 86/87. Period 2. A blade fragment with arched back and curved edge. Length 106 mm.

1351 SF 1.81 2631, E1638 F1203. Trench for revetment. Period 1. A curved ?blade fragment.

1352 SF 1.81 4590(X), G3363 L1. Topsoil/clearance. Period 6. A blade with part of the tang. The tang has been distorted. It was probably originally straight. The back curves very

gently down towards the tip. The straight edge runs upwards to the tip. Surviving length 146 mm. ?Post-Roman.

1353 SF 1.81 3136(C), G283 L205. Destruction debris A: Building 116. Period 4. A ?blade fragment.

1354 SF 1.81 3460(X), G970 L206. Destruction debris B/floor: Building 120. Period 5b. A blade with a curved back and straight edge, in two pieces. What remains of the tang continues the line of the back.

1355 SF 1.81 5341(X), G3112 L3046. Burning: Building 120. Period 5b. Possibly most of a blade as Manning 1985, fig 28, Type 12a, with straight back and strongly curved convex edge. The ?edge seems to be too thick for a blade, though as it has laminated badly the true section cannot be established. Length 119 mm.

1356 SF 1.81 3678(C), G1149. Unstratified. Periods 5 or 6. Possibly a large blade with straight back and edge and rounded tip. The ?tang continues the line of the back. Length 142 mm.

1357 SF 1.81 5259(X), M396 L248. Sandy clay floor: Building 121? Period 3? A ?blade tip.

1358 SF 1.81 5260 (X), M396 L248. Sandy clay floor: Building 121? Period 3? A ?blade tip.

1359 SF 1.81 5263(C), M729 F313. Large pit. Building 121. Period 3. A narrow blade fragment with a straight back and a straight edge which runs gently up towards the edge, curving more markedly at the end to form the tip. Length 73 mm, maximum width 14 mm.

HONES (Fig 5.38; 1360-1381)

1364 SF 1.81 258, A131 F48. Pit. Medieval or post-medieval. A fragment of a hone rectangular to ovoid in section, maximum width 29 mm. Neither end survives. Length 79 mm. Calcareous sandstone.

1365 SF 1.81 1665, A608 F188. Hearth: Building 77, Room 11. Period 2. A fragment of a rectangular-section (12 by 34 mm) hone with bevelled edges on one face. One end survives. Length 73 mm. Calcareous sandstone.

1366 SF 1.81 1471, B816 L171. Clay floor: Building 112, Room 5. Period 4b. A complete hone, only slightly used. Rectangular in section, 27 mm broad and tapering from 19 to 16 mm thick. Length 136 mm. Calcareous sandstone.

1367 SF 1.81 1774, B1671 L398. Make-up: Building 94?, Room 2. Early Period 3. A fragment split from one face of a hone. Neither end survives. Sandstone.

1368 SF 1.81 1536, B1238 F296. Stone footing/slot: Building 112, Room 5. Period 4. A fragment of a rectangular-section (18 by 32 mm) hone. Neither end survives. Length 76 mm. Calcareous sandstone.

1369 SF 1.81 1700, B1817 F532. Cess-pit? Building 77, Room 1. Periods 1/2. A complete hone of rectangular section, 24 by 29 mm. Very slightly waisted. Length 125 mm. Weathered calcareous sandstone.

1370 SF 1.81 1796, E1. Site clearance. Unstratified. A complete hone, rectangular in section, (22 by 28 mm). Length 75 mm. Calcareous sandstone.

1371 SF 1.81 2707, E1. Site clearance. Unstratified. A fragment split from one end of a hone of rectangular section, 30 mm wide. Length 71 mm. Micaceous sandstone.

1372 SF 1.81 2526, E1279 L187. Demolished daub walls: demolition of Building 84. Early Period 2. A fragment of a rectangular-section (19 by 30 mm) hone. One end survives. Length 43 mm. Calcareous sandstone.

1373 SF 1.81 2288, E685 F509. Slot? Building 99. Period 3a. A complete short hone of rectangular section (13 by 34 mm), worn on all faces. Length 66 mm. ?Calcareous sandstone.

1374 SF 1.81 3911, G2098 L1974. Destruction debris B: Building 116. Period 4. A fragment of a hone of ovoid section (originally rectangular), maximum dimensions 14 by 22 mm. One end survives. Length 58 mm. Calcareous sandstone.

1375 SF 1.81 3197, G308 F270. Pit. ?Period 4. A rectangular-section hone, 18 by 25 mm. One end survives. Length 72 mm. Calcareous sandstone.

1376 SF 1.81 3630, G1365 F701. Daub wall: Building 120. Period 5a. A complete hone of rectangular section, 13 by 25 mm. Length 77 mm. Calcareous sandstone.

1377 SF 1.81 2881, G49. Unstratified. Periods 4-6. A fragment of a rectangular-section waisted hone, 18 by 21 mm (maximum). One end survives. Burnt? Calcareous sandstone. Length 36 mm.

1378 SF 1.81 4839, H626. Unstratified. Periods 1-6. A fragment of a hone of rectangular section, 21 by 28 mm. One end survives but is damaged. Length 48 mm. Calcareous sandstone with mica flakes.

1379 SF 1.81 5205, K448 F411. Pit. Period 3a or 3b. A fragment split from a hone of probable subrectangular section. Length 52 mm. Calcareous sandstone with mica flakes.

1380 SF 1.81 5151, K200. Unstratified. A fragment of a hone originally of rectangular section but now worn to more or less figure-of-eight shape, maximum dimensions 17 by 24 mm. One end survives. Length 46 mm. Calcareous sandstone with mica flakes.

1381 SF 1.81 4961, M394 L333. Sandy clay floor: Building 121. Period 3. A fragment of a hone of subrectangular-section (13 by 18 mm). Neither end survives. Length 51 mm. Calcareous sandstone with mica flakes.

IRON TOOLS (Fig 5.39; 1382-1383)

1383 SF 1.81 341, C63 F27. Large pit/pit complex. Periods 4/5. A ?scraper with triangular blade with returned edge. The tang is square in section and tapers to a point. Blade 76 mm wide, approximately 94 mm long. Total length 178 mm.

CATEGORY 11: FASTENERS AND FITTINGS

NAILS AND STUDS

COPPER-ALLOY NAILS

Nail shafts are incomplete unless otherwise stated.

Nails with a globular, bun-shaped or biconical head (1384-1424).

1384 SF 1.81 1240, A612 L208. Make-up: Building 93. Period 3. Head diameter 4 mm. Length, 10 mm.

1385 SF 1.81 309, A140. Unstratified. ?Roman. Head diameter 7 mm. Length 12 mm.

1386 SF 1.81 578, B112 L4. Rubble spread. Period 5. Head diameter 6 mm. Length, complete, 23 mm

1387 SF 1.81 1078, B662 L128. Trample/dump layer of occupation material: Building 112, Room 1. Period 4b. Head diameter 8 mm. Length 15 mm.

1388 SF 1.81 1395, B728 L147. Occupation: Building 112, Room 1. Period 4a. Head diameter 8 mm. Length, complete, 34 mm.

1389 SF 1.81 1365, B952 L210. Gravel spread. Periods 3/4. Head diameter 5 mm. Length, ?complete, 13 mm.

1390 SF 1.81 1436, B1078 L252. Dump: Building 113, Room 4. Early Period 4. Head diameter 9 mm. Length 19 mm, clenched.

1391 SF 1.81 1632, B1653 L406. Dump. ?Period 3. Head diameter 14 mm. Length 45 mm.

1392 SF 1.81 1704, B1843 L419. Boudican destruction debris: destruction of Building 77. Early Period 3. Head diameter 6 mm. Length 11 mm.

1393 SF 1.81 2401, B2206 L632. Occupation: Building 112. Late Period 4. Head diameter 7 mm. Length, complete, 29 mm.

1394 SF 1.81 2439, B2266 F282. Large cess-pit: Building 77, Room 5. Periods 1/2. Head diameter 6 mm. Length, ?complete, 15 mm.

1395 SF 1.81 548, B25 F33. Oven. Period 5. Head diameter 8 mm. Length 22 mm.

1396 SF 1.81 864, B150 F62. Large pit/lime pit. Medieval. Head diameter 9 mm. Length, complete, 35 mm.

1397 SF 1.81 1007, B470 F173. Flue/oven/small pit. Period 4. Head diameter 6 mm. Length, complete, 22 mm (bent).

1398 SF 1.81 1102, B567 F193. Pit. Period 4. Head diameter 7 mm. Length 21 mm.

1399 SF 1.81 1484, B738 F229. Slot (?for timber beam): Building 113, Room 1. Period 4. Head diameter 6 mm. Length 14 mm.

1400 SF 1.81 1595, B1222 F348. Posthole: Building 95, Room 2. Period 3. Head diameter 5 mm. Length, complete, 20 mm.

1401 SF 1.81 1738, B1908 F561. Posthole: Building 77, Room 2? ?Period 2. Head diameter 5 mm. Length 10 mm.

1402 SF 1.81 1269, B753. Unstratified. Head diameter 8 mm. Length 21 mm.

1403 SF 1.81 16, C3. Site clearance. Head diameter 6 mm. Length, complete, 25 mm.

1404 SF 1.81 782, C206. Unstratified. Head diameter 7 mm. Length, complete, 27 mm.

1405 SF 1.81 3514, D1001 F297. Wall: Building 123. Period 4. Head diameter 7 mm. Length, ?complete, 20 mm.

1406 SF 1.81 3988, D1827 F1492. Drain: yard of Building 123. Period 4. Head diameter 6 mm. Length 18 mm.

1407 SF 1.81 1972, E291 L6. Demolition/make-up: Building 122. Early Period 4. Head diameter 4 mm. Length, ?complete, clenched, approximately 16 mm.
1408 SF 1.81 2159, E590 L24. Destruction debris and make-up: Buildings 99/100. Period 3a. Head diameter 6 mm. Length, complete, 21 mm.
1409 SF 1.81 2373, E1027 L84. Make-up: Building 89. Early Period 2. Head diameter 7 mm. Length, complete, 18 mm.
1410 SF 1.81 2600, E1597 L184. Dump/demolition of daub walls: demolition of Building 84. Early Period 2. Head diameter 5 mm. Length, complete, 16 mm.
1411 SF 1.81 2316, E831 F557. Pit. Period 3. Head diameter 15 mm. Length, complete, clenched, 42 mm. (Possibly two nails corroded together.)
1412 SF 1.81 2094, E494. Unstratified. Head diameter 6 mm. Length 14 mm.
1413 SF 1.81 2610, E1640. Unstratified. Head diameter 7 mm. Length, complete, 14 mm.
1414 SF 1.81 3185, G414 L327. Destruction debris B/occupation: Building 120? ?Period 5b? Head diameter 9 mm. Length 20 mm.
1415 SF 1.81 38237 G1972 L1744. Construction debris: Building 116? Periods 3 or 4. Head diameter 10 mm. Length 26 mm.
1416 SF 1.81 4051 G2404 L1823. Upcast/construction debris: Building 120? Period 4 or 5a. Head diameter 7 mm. Length 20

1417 SF 1.81 4135, G2770 L2364. Destruction debris. Period 3. Head diameter 6 mm. Length 11 mm.
1418 SF 1.81 4128, G2731 L2374. Occupation/cultivation. Period 3d. Head diameter 7 mm. Length, complete, 29 mm.
1419 SF 1.81 4400, G3053 L2706. Floor surface: Building 81. Period 1. Head diameter 6 mm. Length 22 mm.
1420 SF 1.81 4317, H131 L3. Topsoil/clearance. Period 6. Head diameter 6 mm. Length, complete, 23 mm.
1421 SF 1.81 4339, H182 L3. Topsoil/clearance. Period 6. Head diameter 5 mm. Length, complete, 21 mm.
1422 SF 1.81 4769, H531 L3. Topsoil/clearance. Period 6. Head diameter 6 mm. Length, complete, 24 mm.
1423 SF 1.81 4815, H626. Unstratified. Periods 1-6. Head diameter 10 mm. Length, complete, 38 mm.
1424 SF 1.81 4865, M299 L280. Dump. Period 3. Head diameter 5 mm. Length 9 mm.

Nails with a flat head (1425-1449)
1425 SF 1.81 499, A205 ?L15. Make-up. Period 4. Head diameter 5 mm. Length, complete, 11 mm.
1426 SF 1.81 531, A228 L17. Make-up. Period 3. Head diameter 5 mm. Length, complete, 10 mm.
1427 SF 1.81 1318, A630 L219. Road silt. Period 2. Head diameter 7 mm. Length, complete, 24 mm.
1428 SF 1.81 627, B148 L8. Dump material? ?Periods 4/5. Head diameter 5 mm. Length, complete, 11 mm.
1429 SF 1.81 2543, B2406 L22, Dump levels. Periods 4 (or 5). Head diameter 7 mm. Length 12 mm.
1430 SF 1.81 1179, B707 L137. Dump: Building 112, Room 6a. Period 4b. Head diameter 9 mm. Length, complete 12 mm.
1431 SF 1.81 1188, B756 L146. Occupation lenses: Building 112, Room 2. Period 4b. Head diameter 8 mm. Length, complete, 28 mm. Corroded, but possibly decorated with concentric mouldings.

1432 SF 1.81 1264, B788 L169. Clay dump? Building 113?, Room 5. Periods 3/4. Head diameter oval, 8 by 12 mm. Length 19 mm.
1433 SF 1.81 1589, B1489 L353. Dump: Building 94, Room la. Periods 3/4. Head diameter 9 mm. Length 18 mm.
1434 SF 1.81 1591, B1496 L366. Boudican destruction debris: destruction of Building 78. Early Period 3. Head diameter 7 mm. Length 17 mm.
1435 SF 1.81 1655, B1703 L410. Dump: Building 94, Room 3a. Period 3. Head diameter oval, 4 by 7 mm. Length, ?complete, 13 mm.
1436 SF 1.81 1007, B470 F173. Flue/oven/small pit. Period 4. Head diameter 6 mm. Length, ?complete, 16 mm.
1437 SF 1.81 3848, D1571 L1372. Dump: Building 123, Room 8. Period 4. Head diameter 9 mm. Length 21 mm.
1438 SF 1.81 2208, E714 L24. Destruction debris and make-up: Buildings 99/100. Period 3a. Head diameter 7 mm. Length, ?complete, 5 mm.
1439-1440 SF 1.81 2230, E730 L24. Destruction debris and make-up: Buildings 99/100. Period 3a. **1439** Head diameter 6 mm. Length 4 mm. **1440** Head diameter 7 mm. Length, complete, 7 mm.
1441 SF 1.81 2633, E1714 L292. Make-up below road. Period 1. Head diameter 14 mm. Length, complete, 42 mm.
1442 SF 1.81 2204, E690 L32. Dump: Building 100. Period 3a. Head diameter 7 mm. Length 12 mm.
1443 SF 1.81 2222, E737 L27. Make-up. Period 3. Head diameter 8 mm. Length, complete, 9 mm.
1444 SF 1.81 2313, E847 F675. Slot: Building 101. Period 3. Head diameter 6 mm. Length, complete, 5 mm.
1445 SF 1.81 2331, E882 F766. Shallow pit: Building 89. Period 2. Head diameter 12 mm. Length 16 mm.
1446 SF 1.81 3863, G1816 L1568. Surface make-up: Building 117. Period 4. Head diameter 4 mm. Length, complete, 10 mm.
1447 SF 1.81 4116, G2783 L2375. Destruction debris B/burning: Building 117. Period 4. Head diameter 7 mm. Length, complete, 14 mm.
1448 SF 1.81 5168, K376 F374. Pit. Period 3c. Head diameter 7 mm. Length 11 mm.
1449 SF 1.81 4886, M303 F300. Robber trench for Building 123. Period 6. Head diameter 6 mm. Length, complete, 14 mm.

Nails with a convex head (1450-1459)
1450 SF 1.81 537, A222 L14. Make-up: Building 110, Room 2. Period 4. Head diameter 8 mm. Length 26 mm.
1451 SF 1.81 1297, A629 L228. Floor: Building 77, Room 9. Period 1. Head diameter 4 mm. Length 8 mm.
1452 SF 1.81 1193, B734 L147. Occupation: Building 112, Room 1. Period 4b. Head diameter 7 mm. Length 19 mm.
1453 SF 1.81 1433, B1067 L178. Silt over gravel alley. Period 3. Head diameter 7 mm. Length 15 mm.
1454 SF 1.81 1606, B1577 L381. Dump: Building 94, Room lb. Period 3. Head diameter 5 mm. Length, complete, 14 mm.
1455 SF 1.81 1611, B1610 F108. Gully between Buildings 112 & 113. Period 4. Head diameter 17 mm. Length 18 mm.
1456 SF 1.81 2483, E1242 L175. Dump. Period 2. The head only, diameter 16 mm, with traces of an iron shaft.
1457 SF 1.81 4064, G2319 L1746. Cultivated soil. Period 3. Head diameter 15 mm. Length, complete, 37 mm. With either a sightly domed centre or a concentric convex moulding.
1458 SF 1.81 3922, G2154 L1814. Horticulture. Period 3. Head diameter 6 mm. Length 17 mm.

1459 SF 1.81 4111, G2739 L2705. Occupation/trample: Building 81. Period 1 or 2. Head diameter 7 mm. Length 12 mm.

COPPER-ALLOY STUDS

Stud shafts are incomplete unless otherwise stated.

Studs with a flat head (1460-1495)

1460 SF 1.81 532, A228 L17. Make-up. Period 3. Head diameter 11 mm. Length, complete, 5 mm.

1461 SF 1.81 580, A250 L37. Road metalling. Period 4. Head diameter 16 mm. Shaft missing.

1462 SF 1.81 1437, A699 L261. Occupation: Buildings 77, Room 10. Period 1. Head diameter 15 mm. Length, complete, 8 mm.

1463 SF 1.81 2484, A779. Unstratified. Post-medieval. Head diameter 16 mm. Shaft missing. The head is decorated with concentric mouldings.

1464 SF 1.81 2711, B2505 L60. Dump levels. Period 4. Head diameter 34 mm. Shaft missing.

1465 SF 1.81 1067, B553 L88. Dump patch: Building 112, Room 2. Period 4. Head diameter 26 mm. Length 27 mm.

1466 SF 1.81 1159, B712 L141. Dump/floor: Building 112, Room 1. Period 4a. Head diameter 18 mm. Length, complete, 11 mm.

1467 SF 1.81 1164, B746 L147. Occupation: Building 112, Room 1. Period 4a. Head diameter 15 mm. Length, complete, 6 mm.

1468 SF 1.81 1290, B849 L178. Silt over gravel alley. Period 3. Head diameter 14 mm. Length, ?complete, 5 mm.

1469 SF 1.81 1685, B1766 L418. Boudican destruction debris: destruction of Building 77. Early Period 3. Head diameter 20 mm. Length, complete, 7 mm.

1470 SF 1.81 2454, B2266 L658. Fill of cess-pit F282: Building 77, Room 5. Periods 1/2. Head diameter 19 mm. Length, complete, 5 mm.

1471 SF 1.81 1251, B814 F250. Pit: Building 112, Room 1. Period 4a. Head diameter 20 mm. Shaft missing.

1472 SF 1.81 1756, B1936 F508. Drain?/cess-pit: Building 78, Room 1. Period 1. Head diameter 15 mm. Length 3 mm.

1473 SF 1.81 612, B126. Unstratified. Head diameter 16 mm. Length, complete, 10 mm.

1474 SF 1.81 722(C), B183. Unstratified. Head diameter 25 mm. Shaft broken close to head.

1475 SF 1.81 715, C195 L23. Dump: Building 95, Room 9. Period 3. Head diameter 17 mm. Shaft missing.

1476 SF 1.81 441, C78 F12. Gully: Building 114. Late Period 4. Head diameter 27 mm. Length, complete, 25 mm.

1477 SF 1.81 996, C263 F92. Pit with infant skeleton: Building 114, Room 1. Early Period 4. Head diameter 10 mm. Length, ?complete, 7 mm.

1478 SF 1.81 1407, C397 F134. Pit. Period 3. Head diameter 15 mm. Shaft missing.

1479 SF 1.81 4034, D1861 F1819. Drain: yard of Building 123. Period 4. Head diameter 8 mm. Length, clenched, ?complete, 7 mm.

1480 SF 1.81 2342, E913 L62. Dump: Building 108. Period 3b. Head diameter 7 mm. Length 4 mm.

1481 SF 1.81 2626, E1654 F1267. Ditch. Period 1. Head diameter 20 mm. Shaft missing.
1482 SF 1.81 2669, E1917. Unnumbered: make-up. Period 4 or 5. Head diameter 22 mm. Length, complete, 26 mm.
1483 SF 1.81 3628, G1359 L1050. Dump: Building 116. Period 4. Head diameter 11 mm, Length, complete, clenched, 5 mm. With concentric convex mouldings.
1484 SF 1.81 3543, G1154 L1127. Construction debris? Building 120. Period 5a. Head diameter 19 mm. Length, complete, 21 mm. With turned-down rim.
1485 SF 1.81 3608, G1321 L1157. Destruction debris B: Building 120. Period 5b. Head diameter 29 mm. In two pieces. Shaft missing.
1486 SF 1.81 3656(C), G1453 L1332. Dump/cultivation: Building 120. Period 5a. Head diameter 23 mm. With concentric convex mouldings and turned down rim. Shaft missing.
1487 SF 1.81 3762, G1876 L1366. Construction debris/upcast: Building 120. Period 5a. Head diameter 11 mm. Shaft bent to lie against head. With convex moulding at rim.
1488 SF 1.81 3808, G1982 L1478. Dump under Building 120. Period 3d. Head diameter 11 mm. Length, clenched, ?riveted, 6 mm.
1409 SF 1.81 4124, G2803 L1822. Cultivated soil. Period 4. Corroded. ?Stud. Head diameter 30 mm. Shaft missing.
1492 SF 1.81 4728, G3675 L3650. Dump. Period 4. Corroded. Head diameter 9 mm. Length 12 mm.
1491 SF 1.81 3122, G337 F270. Pit. ?Period 4. Head diameter 12 mm. Length 5 mm.
1492 SF 1.81 3971, G2279 F2109. Stake-hole: Building 117. Period 4. Very corroded. Head diameter 15 mm. Pierced by a dome-headed rivet made from a different alloy. Shaft missing.
1493 SF 1.81 5173, K366 L358. Horticultural soil. Period 3. Crushed and distorted. Head diameter 18 mm. With concentric convex mouldings and turned-down rim. Shaft missing.
1494 SF 1.81 5193, K131 F81. Trench. Period 3b or 3c. Head diameter 17 mm. Length 5 mm.
1495 SF 1.81 5131, K146 F140. Pit. Period 3. Head diameter 25 mm. With concentric convex mouldings. Shaft missing.

Nails with a convex head (1496-1542)

1496 SF 1.81 1661, A759 L195. Floor: Building 93. Period 3. Head diameter 11 mm. Length, ?complete, 9 mm.
1497 SF 1.81 1421, A694 L265. Floor: Building 77, Room 10. Period 1. Head diameter 11 mm. Length 7 mm.
1498 SF 1.81 299, A159 F63. Pit(?). Period 5 or later. Head diameter 23 mm. Length, complete, 8 mm.
1499 SF 1.81 520, A219 F88. Pit. Period 4. Head diameter 26 mm. Shaft broken close to head.
1500 SF 1.81 861, B294 L25. Dump? Periods 4/5. Head diameter 16 mm. Length, ?complete, 7 mm.
1501 SF 1.81 898, B339 L37. Occupation: Building 112, Room 6a. Period 4c. Head diameter 13 mm. Iron shaft, length 7 mm. Head filled with ?lead solder.
1502 SF 1.81 1013, B455 L39. Dump accumulation. Periods 4/5. Head diameter 26 mm. Length, complete, 19 mm.
1503 SF 1.81 1020, B481 L42. Dump levels. Period 4. Head diameter approximately 25 mm. Shaft missing. The head is filled with ?lead solder and has a convex moulded rim and a high convex centre.
1504 SF 1.81 998, B466 L66. Make-up: Building 112, Room 5. Period

4b. Head diameter 19 mm. Shaft missing.

1505 SF 1.81 1483, B724 L136. Occupation: Building 112, Room 3. Period 4b. Head diameter 13 mm. Shaft not visible. The head is filled with ?lead solder.

1506 SF 1.81 1226, B780 L153. Occupation horizon: Building 113, Room 2. Period 4. Head diameter 11 mm. Length, ?complete, 6 mm.

1507 SF 1.81 1306, B857 L187. Clay dump: Building 112, Room 3. Period 4b. Head diameter 7 mm. Length, ?complete, 6 mm.

1508 SF 1.81 1753, B1949 L438. Occupation/burnt Boudican floor: Building 77, Room 5. Period 2. Head diameter 15 mm. Length 9 mm. The head is decorated with concentric mouldings.

1509 SF 1.81 1802, B2138 L578. Make-up: Building 77. Periods 1/2. Head diameter 17 mm. Length, complete, 6 mm.

1510 SF 1.81 1151, B685 F225. Posthole. ?Period 4. Head diameter 20 mm. Shaft broken close to head.

1511 SF 1.81 1381, B1018 F260. Slot/gully/pit. Period 3. Head diameter 9 mm. Shaft broken close to head.

1512 SF 1.81 1415, B1065 F304. Slot/drip trench: Building 95, Room 4. Period 3. Head diameter 22 mm. ?Shaft.

1513 SF 1.81 1571, B1448 F368. Slot/gully: Building 94. Period 3. Head diameter 12 mm. ?Shaft. The head may be filled with ?lead solder.

1514 SF 1.81 1031, B523. Unstratified. Head diameter 21 mm. Shaft not visible. The head is filled with ?lead solder.

1515 SF 1.81 527, C97 L8. Dump/demolition. Period 4. Head diameter 12 mm. Shaft missing.

1516 SF 1.81 673, C166 L19. Make-up: Building 114, Room 2. Period 4. Head diameter 21 mm. Length, complete, clenched, 33 mm.

1517 SF 1.81 1451, C420 L63. Occupation lenses: Building 79, Rooms 2/3. Periods 1/2. Head diameter 20 mm. Shaft missing.

1518 SF 1.81 833, C220 F56. Large pit. Period 3. Fragments only of a solder-filled stud.

1519 SF 1.81 31, C3. Site clearance. Head diameter 17 mm. Shaft missing.

1520 SF 1.81 3694, D1339 L1322. Demolition debris: yard of Building 123. Period 4. Head diameter 15 mm. Length, complete, 27 mm.

1521 SF 1.81 3954, D1673 L1482. Dump or make-up: Building 123, Passage 2. Period 4. Head diameter 14 mm. Length 11 mm.

1522 SF 1.81 3846, D1565 L1512. Occupation? Building 123, Room 10. Period 4. Head diameter 19 mm. Length 9 mm.

1523 SF 1.81 3725, D1277 F624. Stairwell: Building 123. Period 4. Head diameter 15 mm. Length 10 mm.

1524 SF 1.81 2186, E664 L24. Destruction debris and make-up: Buildings 99/100. Period 3a. Head diameter 17 mm. Shaft missing?

1525 SF 1.81 2315, E838 L53. Dump and make-up: Building 90. Period 3. Head diameter 13 mm. ?Shaft. The head is filled with ?lead solder.

1526 SF 1.81 2575, E1477 L101. Dump/make-up: ?demolition of Building 84. Early Period 2. Head diameter 10 mm. Length, complete, 7 mm.

1527 SF 1.81 2271, E786 F549. Trench? Period 3. Head diameter 24 mm. Shaft missing. The head is decorated with concentric mouldings.

1528 SF 1.81 2323, E881 F745. Pit. Period 2. Head diameter 21 mm. Length 9 mm.

1529 SF 1.81 3255, G579 L164. Occupation/midden? ?Period 5 or 6.

Head diameter 31 mm. Shaft missing.

1530 SF 1.81 3538, G1206 L1156. Dump/make-up: Building 120. Period 5a. Head diameter 16 mm. Corroded composite stud with copper-alloy cap filled with lead-based solder around an iron shaft. Traces of mineralised organic material (almost certainly wood) are preserved around the base of the shaft.

1531 SF 1.81 3643, G1506 L1435. Dump/midden. Period 3d. Fragments of a composite stud.

1532 SF 1.81 5216, G4252 L4218. Dump. Period 3d. Head diameter 24 mm. Shaft missing.

1533 SF 1.81 4621, G3573 L3561. Gravel surface. Period 3b. Head diameter 4 mm. Length, ?complete, clenched, 7 mm.

1534 SF 1.81 3181, G412 F14. Sand pit. Period 5. Head diameter 13 mm. Only tiny fragment of shaft left.

1535 SF 1.81 3910, G2102 F1545. Oven: Building 117. Period 4. Head diameter 7 mm. Length, complete, 7 mm.

1536 SF 1.81 4789, G3528 F1562. Construction level/road. Period 3c. Head diameter 7 mm. Shaft missing.

1537 SF 1.81 3975, G2268 F1813. Linear feature/drain? Periods 2 or 3. Head diameter 5 mm. Length, complete, clenched, 6 mm.

1538 SF 1.81 4509, H286 L3. Topsoil/clearance. Period 6. Head diameter 24 mm. Length 27 mm.

1539 SF 1.81 4328, H227 F59. Trench. Period 5. Head diameter 13 mm. Length, complete, clenched, 12 mm.

1540 SF 1.81 4936, J213 F5. Robber trench. Period 6. Head diameter 19 mm. Length, riveted, 13 mm.

1541 SF 1.81 5158, K384 F374. Pit. Period 3c. Very corroded. Head diameter 13 mm. Length 20 mm.

1542 SF 1.81 5166, K432 F416. Robber trench. Periods 3b or 3c. Head diameter 20 mm. Shaft missing.

Decorated studs (Fig 5.40; 1543-1546)

1545 SF 1.81 4085, G2625 L2535. Dump. Period 3. A small flat-headed stud with a ring of enamel (?red) around a central copper-alloy 'eye'. Head diameter 5 mm. Length, complete, 10 mm.

1546 SF 1.81 3914, G2079 F1768. Midden. Periods 3 or 4. Flat leaf-shaped head, maximum length 11 mm. Length 7 mm.

IRON NAILS AND STUDS

The iron nails and large studs from Culver Street Phase One have been measured and listed but are not catalogued here. All but a few of the iron nails from Culver Street Phase Two are missing.

Nails from Phase One contexts associated with Roman buildings are listed below, in building number order, and within building by period.

Building 77

Period 1: Room 1: Dump B2015 L518
Cess-pit B2028/B2237 F538
Slot B2084 F558
Room 6: Shallow pit/sinkage B1911 F566
Occupation B2104 L567

Room 8: Gully/drain(?) B2111 F619
Pit B2126 F622
Room 10: Floor A673 L245
Floor with occupation A692 L260
Occupation A705 L261
Room 11: Occupation A652 L239
Make-up B2373 L676
Make-up B2368/B2392 L677
Temporary hearth? B2405/B2411 F820
Drainage gully A712 F232

Periods 1/2: Room 1: Floor B1979 L514
Cess-pit? B1817 F532
Beam slot B2120 F584
Room 2: Burnt beam 'in situ' B1966 F560
Stake hole B2362 F787
Floor B2031 L533
Floor B2328/B2331 L647
Floor surface B2370 L679
Rooms 2/3: Partition wall B2032 F515
Room 5: Large cess-pit B1020/B1692 F282
Room 6: Slot/gully B1937 F570
Make-up B1895 L474
Room 7: Clay floor/dump B1976 L513
Room 8: Posthole B2381 F809
Sandy floor? B2116 L582
Room 9: 'Clay' floor A621 L226
Room 11: Occupation A625 L232
Drain? B1783 F529
Posthole B2376 F808
Clay wall B2125 F533
Partition wall B1986 F534
Clay floor/dump B2112 L563

Period 2: Room 1: Clay dump/floor B1954 L492
Room 2: Burnt floor B1905 L479
Room 5: Gully B2079 F490 (Building 77?)
Room 8: Dump B1775 L430
Room 10: Cess-pit A739 F218
Pit A700 F228
Rooms 10/11: A662 Pit F162
Room 11: Occupation A651/A657 L234
Clay floor/make-up B1965/B2016/B2047 L509
Slot A697 F227

Early Period 3: General Boudican demolition layer B1593/B1764 L389
Boudican demolition debris Bl622/B2364/B2413 L395
Boudican demolition debris B1702 L400
Boudican demolition debris B1627/B1753 L401
Boudican demolition debris B1659/B1720 L408
Boudican demolition debris B1660/B1772 L409
Boudican demolition debris B1717 L413
Boudican demolition debris B1718/B1769 L415
Boudican demolition debris B1719 L416
Boudican demolition debris B1743/B1766 L418
Boudican demolition debris B1749 L419
Boudican demolition debris B1812 L421
Destruction debris B1592 L343 (Building 77?)
Boudican demolition debris B1767 L402 (Building 77?)
?Redeposited Boudican debris B1742/B2347 L414

Buildings 77/78
Periods 1/2: Clay floor/make-up B1917 L482

Building 78
Period 1: Room 1: Slot/gully B1899 F564
Rooms 5/6: Gully/slot B1926 F598
Passage 1: Beam slot C456 F184
Construction trench B1983 F581
Make-up/clay floor C437 L86
Periods 1/2: Room 1: Drain?/cess-pit B1838/B1936 F508
Room 3: Make-up B2007 L522
Room 4: Occupation & make-up B1727 L434
Room 6: Floor/make-up B1778 L428
Burnt clay wall B1836 F435
Make-up C432 L75
Period 2: Room 1: Floor B1860 L454
Floor/make-up/occupation B1921 L457
Occupation B1794 L435
Room 5: Make-up for floor B2006/B2096 L476
Occupation/burnt Boudican floor B1821 L442
Room 9: Floor C428 L73
Early Period 3: Destruction debris B1496 L366
Demolition debris B1337 L322 (Building 78?)
Boudican destruction debris B1596 L376
Dump; redeposited Boudican debris B1288 L305 (Building 78?)
Demolition debris C359/C384/C385 L54
Demolition/destruction debris C357 L56

Buildings 78/79
Early Period 3: Dump (redeposited Boudican) C348/C365/C373 L50
Layers in sinkage; redeposited Boudican debris C351 L55

Building 79
Period 1: Room 1: Pit/post-pit? C471 F197
Room 2: Occupation C440 L83
Beam slot/gully C462 F193
Military sand floor C473 L90
Periods 1/2: Room 1: Hearth C450 F164
Dump/make-up C442 L82
Room 2: Military cess-pit C411/C481/C487 F138
Rooms 2/3: Occupation C403 L63 (403)
Floor C444/C455 L85
Period 2: Room 1: Burnt floor C422 L58
Rooms 2/3: Clay floor (traces of burnt Boudican) C404 L60
Early Period 3: Boudican dump C360/C370/C377 L52
Redeposited Boudican debris C371 L47
Demolition debris (redeposited Boudican) C479 L53
Redeposited Boudican dump C337 L51
Dump (redeposited Boudican) C376 L57

Building 83
Period 1: Room 7: Latrine pit, timber-lined E1324 F900

Drain, timber-lined E1233 F1100
Post-pit E1435 F1254
Post-trench? E1223 F1070
Post-trench E1543 F1287
Slot (& ground-plate) E1629 F1364
Rotted floorboards? - occupation E1716 L177
Make-up E1416 L209
Occupation E1247 L181 (?Building 83)
Period 2: Dump/make-up E1119 L145

Building 84
Period 1: Room 4: Hearth? E1626 F1337
Occupation E1613 L261
Posthole E1328 F1183
Make-up below occupation E1609 L266
Period 2: Trench E1800 F1455
Early Period 2: Clay wall (demolished) E877 L55
Demolition of Period 1 wall E722/E1476 L219
Dump from demolition of clay walls E1260 L182
Dump/demolition of clay walls E1261 L184
Demolished clay walls E1279 L187

Buildings 86/87
Period 2: Burnt ground-plate E850 F586
Pit E1036 F893
Destruction debris E610/E623/E709/E872 L22
Floor in footway E1070 L104
Make-up E1232 L169

Unburnt colonial occupation E876 L57

Building 87
Period 2: Pit? E860 F736
Occupation E893 L67
Occupation & make-up E1069 L82
Building 88

Period 2: Occupation (burnt) E851 L23

Buildings 88/89
Period 2: Destruction of Period 1 buildings E897 L65
Dump/make-up E945/E963 L71
Building 89
Period 2: Dump E1255 L108
Gully E848 F697
Hearth E921 F576
Hearth E922/E932 F577
Hearth E783 F579
Pit E870 F731
Pit E907 F823
Pit E931 F834
Pit E930 F856
Post-pit E976 F878

Make-up? or dump E982 L85
Occupation? E980 L79
Late Period 2: Pit & stake hole E1052 F943

Building 90
Period 2: Charcoal E1507 F1288
Slot E1044 F904
Make-up/floor E1017 L98
Period 3a: Slot E697 F507
Dump & make-up E838 L53

Building 93
Period 3/4: Trench A492 F181
Period 3: Hearth or oven A530 F191
'Clay' wall A522 F182
Floor A528 L203
Make-up A331/A340 L80
Make-up A418/A426 L96
Make-up A760 L193
Make-up A534 L208
Redeposited destruction debris A549/A587 L211

Building 94
Early Period 3: Room 2: Make-up B1671 L398 (Building 94?)
Period 3: Room la: Pit? B1617 F466
Room la: Posthole B1210 F343
Room lb: Occupation B1524/B2218 L368
Occupation B1585 L386
Room 1: Clay wall B1751 F417
Make-up B1752 L422
Rooms 1/2: Slot/gully B1313 F374
Rooms 1/3: Slot B1405 F403
Room 2: Gully (clay-filled ?wall) B1453 F410
Pit B1691 F414
Pit/posthole B1372 F390
Make-up B1574 L379
Dump/(make-up?) B1571 L380
Clay floor B1356/B1368 L323
Make-up B1358 L328
Make-up B1371 L332
Make-up B1572 L348
Occupation B1370 L331
Rooms 2/4: Slot B1406 F402
Rooms 2/6: Gully/slot B1435 F407
Room 3a: Gravel spread B1223 L294
Occupation debris & ash from hearth B1547 L345
Room 3b: Make-up B1260 L276 (Building 94?)
Rooms 3/4: Posthole B1394 F393
Room 4a: Pit B1611 F469
Room 4b: Occupation/midden B1580 L330
Room 5a: Occupation B1470 L358
Room 5b: Pit B2283 F704
Room 6: Pit B1755 F522 (Building 94?)
Daub floor B1153 L275
Occupation B1143 L274

Occupation B1736 L388
Clay-filled slot B1300 F372 (Building 94?)
Periods 3/4: Room la: Dump B1446/B1459/B1489/B1491 L353
Room lb: Dump/clay floor? B1399/B1421 L340
Room 4: Dump/floor make-up B1376/B1387/B1462 L341
Room 4b Clay floor/make-up B1359 L329 (Building 94?)

Building 95
Period 3: Room 1: Occupation B1543 L373 (Building 95?)
Room 2: Gully (robbed clay walls) B1161 F332
Gully B1181 F334
Gravel foundation/pit B1256/B1257 F359
Posthole B1220 F347
Posthole B1222 F348
Room 4: Slot/drip trench B1070/B1073 F304
Clay dump B1545 L310
Dump B1641 L405
Occupation B1343 L325
Room 9: Dump C194 L23
Gully C110/C143/C153/C171 F43
Posthole/slot C173 F52
Slot C156 F45
Pit C289 F99 (Building 95?)
Small slot/gully C127/C128 F39 (Building 95?)
Hollow drain? B809/B1074 F251 (Building 95?)

Building 96
Period 3: Room 1: Make-up C270 L30
Rooms 1/2: Gravel foundation pit C311 F107
Gravel foundation pit C321 F111
Room 2: Occupation C272 L31

Building 99
Period 3a: Pit E580 F422
Slot? E739 F508

Buildings 99/100
Period 3a: Pit E826 F658
Destruction debris & make-up E569/E584/E609/E757/E767 L24
Make-up E502 L21

Building 100
Period 3a: Slot E736 F464
Dump E690 L32

Buildings 100/101
Period 3a: Pit E687 F503

Building 101
Period 3a: Pit E634 F472

Pit E887 F788
Period 3: Pit E1111/E1466 F1266

Buildings 101/102
Period 3a: Dump debris E675 L30
Period 3: Posthole in post-pit E991 F891

Buildings 103/104
Period 3a: Post-pit? E904 F808

Building 105
Period 3b: Foundation E514 F375
Foundation E607 F413

Buildings 105/106
Period 3b: Foundation E550 F370

Building 106

Period 3b: Foundation E511 F379

Building 107

Period 3b: Foundation? E573 F418

Building 110

Period 3: Trench fill A347 L93
Drain A299 F100
Trench fill A439/A538 L93
Period 4: Room 2: Wall foundation/base A198 F79
Room 1: Make-up A419 L139
Make-up A755 L149

Building 111

Period 4: Wall foundation A235 F61

Building 112

Periods 3/4: Room 2: Dump B1199/B1291/B1413/B1416 L266 (Building 112?)
Period 4: Room 1: Occupation B716 L145
Room 2: Gully B953/B1041/B1042 F265
Dump B553 L88
Dump B890 B905 L196
Dump B904 L203 (Building 112?)
Make-up B2239 L653
Occupation B533 L79
Trample/flooring? B717 L112
Room 3: Gully/pit B800 F185
Slot B1508 F399
Occupation B2273 L660

Room 4: Pit B832 F254
Room 5: Gully/slot B335 F112
Pit B620 F206
Demolition B299/B300/B301/B304 L21
Room 6a: Pit B1054 F301
Posthole B797 F247
Dump B518 L72
Dump/ash waste B895 L195
Dump/trample B784 L166
Make-up B594/B629 L101
Occupation B795 L167
Room 6b: Pit B918 F275
Room 6: Daub floor B1230 L222
Timber ?slot/?joist B491 F179
Partly robbed wall with foundation B2288 F669
Dump B925 L207
Dump/collapsed wall B2205 L631
Clay dump/?demolished wall B924 L206
Topsoil/midden/cess? B843 L183
Rubble spread B926 L208

Period 4a: Room 1: Pit B814 F250
Dump B861/B880 L188
Daub floor B993 L217
Occupation B1029 L147
Occupation B1059 L230
Room 2: Footing B933 F268
Dump B815/B834 L165
Occupation B835 L173
Occupation/weathering B860 L173
Room 3: Clay floor B962/B1095/B2278 L218
Occupation B944/B2275 L212
Room 4: Make-up B776/B793/B794/B813 L159
Daub floor B698 L132
Occupation B710 L139
Room 5: Gully B1252/B1273 F362
Slot (for timber beam/structure) B1038 F298
Make-up B997/B998 L229
Make-up B996/B1039 L236
Daub floor B937 L199
Daub floor B1016/B1102/B1157/B1158 L228
Pit B1360/B1361 F389
Room 6a: Clay floor B1055/B1056 L237
Clay floor lens B1057 L241
Make-up B935 L211
Occupation B1195/B1229 L271
Room 6b: Gravel spread B1030 L226
Occupation B1003/B1011 L224
Occupation B1090 L227
Room 6: Floor & dump B1280/B1284/B1297 L285
Debris B1036 L235
Midden/dump B1013/B1094 L231

Period 4b: Room 1: Dump B682/B726 L129
Occupation B405 L104
Occupation B626/B627/B838 L120
Tile spread B836 L121
Room 2: Dump B558/B559 L89
Make-up B718 L142
Occupation B756 L146
Room 3: Pit B748 F237

Dump B857/B858/B877/B2271 L187
Occupation B697/B747 L136
Room 4: Daub floor B521/B539 L64
Gravel surface B650 L99
Room 5: Gully/slot B452/B453/B612 F169
Gully/slot B755 F232
Slot B268/B648/B754 F116
Slot (for timber beam?) B729/B731 F186
Make-up B478/B613 L66
Clay floor B816/B840 L171
Occupation B448 L62
Occupation B820 L74
Room 6a: Timber-lined pit B646 F217
Tile feature B891 F264
Debris B706 L40
Demolition of kiln/oven/tile spread B695 L111
Dump B707/B708 L137
Weathering/dump horizon B783 L160
Dump/collapse B886 L201
Make-up B948 L209
Build-up/dump B799 L135
Occupation B950 L190
Occupation B870 L192
Room 6b: Dump/topsoil B426 L148
Dump B828 L156
Gravel spread B1002 L205
Occupation B883 L202
Demolition B867 L189
Occupation B569 L95
Period 4b/c: Room 5: Dump B561/B566 L84
Room 6a: Dump B465 L63
Dump B602 L93
Dump B709 L125
Period 4c: Room 4: Demolition B296/B390/B456 L26
Room 5: Occupation B315 L31
Room 6a: Demolition B359 L29
Dump B340 L36
Dump B560/B601 L92
Dump/demolition B404 L47
Occupation horizon B313 L30
Occupation B349 L37
Occupation/weathering B623 L110
Periods 4/5: Room 1: Dump/demolished clay wall B227/B228/B234 L16
Demolished daub wall B431/B2290 L50
Dump/demolished clay wall B393/B486 L16
Demolished daub walling B358/B366 L43
Room 2: Demolished clay walls B493 L71
Room 3: Dump B541 L76
Demolition of clay walls B531 L77
Gravel surface B429 L58 (Building 112?)
Room 4: Demolition B323/B407 L35
Dump/demolition B494 L65

Buildings 112/113
Period 4: Gully B474/B750 F175

Building 113

Periods 3/4: Room 2: Dump/make-up B1106/B1126 L256
Room 5: Dump? B1110 L169 (Building 113?)
Period 4: Room 1: Gully/dip B737 F183
Slot (?for timber beam) B781 F229
Dump/gravel spread B665 L113
Dump B822 L174
Dump B862 L194
Dump/clay floor B736 L144
Mortar floor B791 L152
Occupation B664/B666/B687/B790 L133
Room 2: Mortar floor B812 L154
Occupation B780/B792 L153
Room 3: Occupation B635 L115
Room 4: Make-up B808 L164
Room 7: Construction trench B2321 F740
Late Period 4: Room 1: Dump B534/B573 L81
Dump B598/B631 L102
Occupation B639 L123
Passage 1: Collapsed clay wall B640 L124
Periods 4/5: Room 1: Clay dump/demolition B447/B505 L61

Building 114

Late Period 3/early Period 4: Room 1: Irregular gully C246 F75
Period 4: Room 1: Dump C151 L13
Dump/make-up C247 L29
Clay dump/?collapsed wall C71 L5
Room 2: Small pit/slot C112 F29
Make-up C165/C166/C216/C242 L19
Make-up C238/C239/C241 L28
Occupation C163 L12
Room 3: Slot C108 F31
Occupation C215 L24
Room 9: Wall C99 F25
Gully C78/C79/C130 F12
Gully C87 F33
Gully C119 F40
Gully/drain C132/C145/C146/C149/C169/C184 F42
Dump/demolition C89/C98 L9

Building 122

Early Period 4: Demolition/make-up E291 L6
?Late Period 5: Demolished clay walls E474 L17
Demolished clay walls E478 L18

Building 126

Period 5: Gully B217/B229/B246/B267 F107
Gravel & mortar surface B287 L3
Pit B365 F134 (Building 126?)

Building 127

Period 5: Pile-hole E50 F32
Pile-hole E60 F41

Pile-hole E535 F45
Pile-hole E59 F80
Pile-hole E245 F148
Pile-hole E221 F149
Pile-hole E251 F178
Pile-hole E255 F183
Pile-hole E258 F187
Pile-hole E282 F205
Pile-hole E294 F212
Pile-hole E295 F214
Pile-hole E359 F245
Pile-hole E356 F248
Pile-hole E379 F260
Pile-hole E426 F299
Pile-hole E438 F311
Demolition E461/E472/E483/E491 L10

LEAD NAILS AND STUDS (Fig 5.40; **1547-1550)**

1548 SF 1.81 1089, B634 F196. Pit. Period 4. A nail with a rough head which tapers into the shaft. The tip is missing. Length 62 mm.
1549 SF 1.81 2693, B918 F275. Pit: Building 112, Room 6b. Period 4. A ?headless nail (brad). Length 73 mm.
1550 SF 1.81 880, C101 L8? Dump/demolition. Period 4. A stud with distorted lozenge-shaped head, 13 by 29 mm. Length 25 mm.

RIVETS (1551-1553)

1551 SF 1.81 805, B237 F109. Small pit. ?Period 5. A copper-alloy rivet with conical head, diameter 7 mm. Length 9 mm.
1552 SF 1.81 543, C112 F29. Small pit: Building 114, Room 2. Period 4. A copper-alloy rivet with conical head, diameter 5 mm. Length 7 mm.
1553 SF 1.81 2280, E804. Dump. Period 3. A copper-alloy flat-headed rivet, diameter 6 mm. Length 2 mm.

BOSSES (1554-1566)

a) plain
1554 SF 1.81 2500, B2352 F773. Large pit. ?Period 3. Copper-alloy. Diameter 24 mm, height 13 mm.
1555 SF 1.81 2251, E491 L10. Demolition: Building 127. Period 5. Copper-alloy. Diameter 13 mm, height 6 mm.
1556 SF 1.81 3689(C), G1588 F652. Drain: Building 116, Period 4. Copper-alloy. Diameter 27 mm, height 3 mm. Leather is preserved on the underside.
1557 SF 1.81 4469, G3190 F3173. Pit. Periods 3a or 3b. Copper-

alloy. Diameter 31 mm, height 5 mm. With domed centre and wide rim.

1558 SF 1.81 4792, J187 F184. Pit? Period 6. Copper-alloy. Diameter 33 mm, height 7 mm.

b) with ?lead solder

1559 SF 1.81 3761, D1425 L246. Demolition debris: Building 123, Passage 2. Period 4. Copper-alloy. Diameter 17 mm, height 7mm.

1560 SF 1.81 3806, D1556 L1372.Dump: Building 123, Room 8. Period 4. Copper-alloy. Diameter 11 mm, height 8 mm.

1561 SF 1.81 3552, D1097 F22. Robbed drain: yard of Building 123. Period 4. Copper-alloy. Diameter 20 mm, height approximately 14 mm. Remains of an iron shaft embedded in the solder.

1562 SF 1.81 3525, G1221 L1. Topsoil/clearance. Period 6. Copper-alloy. Diameter 9 mm, height 5 mm.

1563 SF 1.81 3256, G579 L164. Occupation/midden? ?Periods 5 or 6. Copper-alloy. Diameter 9 mm, height 7 mm.

1564 SF 1.81 3756, G1674 L1366. Construction debris/upcast: Building 120. Period 5a. Copper-alloy. Diameter 15 mm, height 7 mm.

1565 SF 1.81 2998, G226. Unstratified. Periods 4-6. Copper-alloy. Diameter 21 mm, height 12 mm.

1566 SF 1.81 4978, J249 L222. Destruction debris: Building 79. Period 2. Copper-alloy. Diameter 23 mm, height 4 mm.

HINGE FITTINGS (Figs 5.41-2; 1567-1584)

1569 SF 1.81 1026, B479 F169. Gully/slot: Building 112, Room 5. Period 4b. A unit from a bone hinge. One peg hole. Length 26 mm, diameter 20 mm.

1570-1573 SF 1.81 1718, B1769 L415. Boudican destruction debris: destruction of Building 77. Early Period 3. Four units, each represented by one fragment, from a bone hinge. **1570** The side of a unit with one peg hole and its accompanying internal indentation (see CAR **2,** fig 131,4096). Length 26 mm, diameter approximately 18 mm. **1571** The bottom of a unit with an internal indentation. Length 26 mm, diameter approximately 19 mm. **1572** The bottom of a unit with an internal indentation. Length 27 mm, diameter uncertain. **1573** A fragment from the bottom or side of an end or spacer unit with two grooves at one end. (The grooves are empty, but *see CAR* **2,** 4097 for a possible filling.) Length 27 mm, diameter approximately 20 mm.

1574 SF 1.81 3583, B2549. Clearance. Unstratified. A unit from a bone hinge. One peg hole. Length 37 mm, diameter 29 mm.

1575 SF 1.81 2350, E943 F824. Pit? Building 89. Period 2. A unit from a bone hinge with one peg hole. Length 26 mm, diameter 26 mm.

1576 SF 1.81 3824, G1971 L1726. Horticultural soil. Period 3. A unit from a bone hinge. One peg hole. Length 27 mm, diameter 23 mm.

1577 SF 1.81 3068, G313 F284. Pit. Period 6. A unit from a bone hinge. One peg hole. Length 31 mm, diameter 28 mm.

1578 SF 1.81 4960, M463 F454. Pit or trench? Building 91. Period 2. A unit from a bone hinge. One peg hole. Length 26 mm, diameter 27 mm.

1581 SF 1.81 3587(X) , D829 F91. Pit. Period 6. An iron strip with rivet holes. Possibly part of a hinge. Length 85 mm, width 22 mm.

1582 SF 1.81 4007 (X), G2187 F2165. Gully: Building 118. Period 4. One plate from an iron loop-hinge. The plate has two large rivet holes, and a looped terminal. Length 102 mm, maximum width 28 mm.

1583 SF 1.81 4058(X), G2480 L1605. Occupation: Building 118? Periods 4 or 5. Two iron strip fragments, possibly from a hinge. One is 67 mm long, 16 mm wide. The other is 63 mm long, 26 mm wide.

1584 SF 1.81 5334(X), G3104 L3081. Occupation: Building 120. Period 5b. Five iron strip fragments with rivet holes. Possibly from a hinge. The two largest pieces are each approximately 87 mm long and 26 mm wide.

BINDING (Fig 5.43; 1585-1599)

1586 SF 1.81 534, A228 L17. Make-up. Period 3. Copper-alloy. U-section strip, bent. Length 37 mm, width 4 mm.

1587 SF 1.81 1762, A770 F218. Cess-pit: Building 77, Room 10. Period 2. Iron. A strip folded over lengthways. Length 54 mm, width 17 mm.

1588 SF 1.81 1124, B666 L133. Occupation lenses: Building 113, Room 1. Period 4. A copper-alloy tube. Possibly from a ferrule. Length 31 mm, maximum diameter 19 mm.

1589 SF 1.81 1590, B1546 L374. Dump. Period 3. Copper-alloy. U-section strip, bent. Length 28 mm, width 6 mm.

1590 SF 1.81 1770, B1971 F561. Posthole: Building 77, Room 2? Period 2. Copper-alloy. U-section strip in three fragments. Length approximately 182 mm, plus a 65 mm length which is folded back over one fragment. Width 26 mm. One, possibly two, rivet holes. Possibly shield binding, but unlikely. The section is very irregular in places.

1591 SF 1.81 747, C166 L19. Make-up: Building 114, Room 2. Period 4. A copper-alloy tube. Length 20 mm, diameter 16 mm.

1592 SF 1.81 4108, D1951 L1021. Floor: Building 123, Passage 4. Period 4. Copper-alloy. Curved U-section strip with fragments of charcoal inside. Length 45 mm, width 7 mm.

1593 SF 1.81 2156, E568. Dump. ?Period 3. A length of copper-alloy binding folded into three. Length 24 mm, width 17 mm.

1594 SF 1.81 2172, E599 L24. Destruction debris and make-up: Buildings 99/100. Period 3a. A fragmentary copper-alloy U-section strip. Length 49 mm, width approximately 19 mm.

1595 SF 1.81 2329, E888 L62. Dump: Building 108. Period 3b. Copper-alloy. U-section strip. Length 55 mm, width 30 mm.

1596 SF 1.81 3510, G1023 L865. Dump. Periods 3d/4. Copper-alloy. Tube. Length 19 mm, diameter 9 mm.

1597 SF 1.81 4517, G3118 L2966. Dump. Period 3d. Copper-alloy. Tube. Length 52 mm, diameter 5 mm.

1598 SF 1.81 5180, K447 F390. Pit. Period 3. Copper-alloy. Three fragments of U-section curved strip. Total length 113 mm, width 8 mm.

1599 SF 1.81 4905, M468 F454. Pit or trench? Building 91. Period 2. Copper-alloy. Tube. Length 52 mm, diameter 8 mm.

MISCELLANEOUS FITTINGS (Fig 5.44; 1600-1601)

Catalogued in printed text.

RING-HEADED PIN (Fig 5.45; 1602)

Catalogued in printed text.

HOLDFASTS (Fig 5.45; 1603-1605)

1604 SF 1.81 3512(X), D959 F686. Drain: Building 123, Passage 2. ?Period 4. An iron holdfast with a small circular head and large circular rove. Length 56 mm, diameter of rove 43 mm. There are traces of mineralised wood on the underside of the rove and on the shaft, identified as *Quercus* sp.

1605 SF 1.81 3224(X), G373 L279. Occupation: Building 120. Period 5b. Possibly four fragments of an iron holdfast.

LOOP-HEADED STRAP (Fig 5.45; 1606)

Catalogued in printed text.

SPLIT-SPIKED LOOPS (1607-1622)

1607 SF 1.81 700, A320 L79. Destruction debris (redeposited). Period 3. Copper-alloy. Length 27 mm.

1608 SF 1.81 2658, B533 L79. Lens of occupation: Building 112,

Room 2. Late Period 4. Iron. Length, clenched, 53 mm.

1609 SF 1.81 2663, B345 F122. Small pit. ?Period 4. Iron. Length, clenched, 71 mm. The end of one spike is missing.

1610 SF 1.81 3454(X), D597 L247. Demolition debris? Building 123, Passage 2. Period 4. Iron. Length 70 mm.

1611 SF 1.81 3500(X), D658 L585. Occupation: Building 123, Passage 2. Period 4. Iron. Only the loop survives.

1612 SF 1.81 3877(X), D1272 F624. Stairwell: Building 123. Period 4. Iron. Either two interlinking split-spiked loops, or a hook attached to a split-spiked loop. Length of both objects 85 mm.

1613 SF 1.81 2292, E813 L52. Demolition debris (redeposited). Period 3a. Copper-alloy. Length, clenched, 31 mm.

1614 SF 1.81 2335(X), E876 L57. Unburnt colonial occupation: Building 86/87. Period 2. Iron. Length 110 mm.

1615 SF 1.81 2270, E786 F549. Trench? Period 3. Copper-alloy. Length 24 mm.

1616 SF 1.81 3243(X), G368 L302. Occupation? ?Period 5b? Iron. Only the loop survives.

1617 SF 1.81 3503(C), G944 L901. Destruction debris B: Building 120. Period 5b. Possibly an iron ring with split-spike loop.

1618 SF 1.81 3883(X), G1707 L1643. Floor make-up/dump: Building 116. Period 4. Iron. One point survives. It is bent round so that the end (?original) is almost level with the mid point of the loop. Length 42 mm.

1619 SF 1.81 3879(X), G1652 L1647. Floor make-up/dump: Building 119. Period 4. Iron. Points missing. Length 63 mm.

1620 SF 1.81 4946(X), H652. Unstratified. Iron. Only the loop and a short length of the points survive. Length 45 mm.

1621 SF 1.81 5116, K153 L78. Horticultural soil. Period 3. Copper-alloy. One point missing. Length 25 mm.

1622 SF 1.81 5231(X), K401 L358. Horticultural soil. Period 3. Iron. Length 66 mm. (May be broken and distorted figure-of-eight chain link.)

JOINER'S DOG (1623)

1623 SF 1.81 2656, B2154 F634. Small pit: Building 77, Room 8. Period 1. Two fragments possibly from an iron joiner's dog.

STAPLES (1624-1626)

1624 SF 1.81 3850(X), D1568 L1372. Dump: Building 123, Room 8. Period 4. Iron. Length 27 mm.

1625 SF 1.81 2356, E875 F747. Slot: Building 90. Period 2. Copper-alloy. Distorted. Length 36 mm.

1626 SF 1.81 2330, E882 F766. Shallow pit: Building 89. Period 2. Copper-alloy. Length 28 mm.

T-STAPLE (1627)

1627 SF 1.81 2661, B939 L210. Gravel spread. Periods 3/4. Iron. Most of the vertical bar is missing. Width 89 mm.

TIE-STRIPS (1628-1632)

1628 SF 1.81 1337, B890 L196. Dump: Building 112, Room 2. Period 4. An iron ?tie-strip, broken at each end. Tapering in width from 51 to 32 mm. Length 120 mm. No rivets or nails are visible.

1629 SF 1.81 951, C247 L29. Dump/make-up: Building 114, Room 1. Period 4. An iron tongue-ended tie-strip fragment (possibly from a loop-hinge). Length 74 mm, maximum width 30 mm, tapering slightly. There is a rivet approximately 39 mm from the end.

1630 SF 1.81 1359, C293 L36. Dump (redeposited Boudican). Early Period 3. An iron tongue-ended tie-strip fragment (possibly from a loop-hinge). In two pieces. Parallel-sided. Width 22mm. Length 93 mm. There are rivets centred at 39 mm and 71 mm from the end.

1631 SF 1.81 1559, C349 F116. Shallow pit/scoop. Early Period 3. An iron tie-strip fragment (possibly from a loop-hinge). Width 24 mm, tapering slightly. Length 54 mm. No rivets or nails are visible.

1632 SF 1.81 3786(X), G1504 L1477. Occupation/destruction debris: Building 120. Period 5a. An iron L-shaped strip. Possibly a bracket or tie-strip. Length of arms 81 and 63 mm.

COLLARS AND FERRULES (1633-1639)

1633 SF 1.81 1581, B1496 L366. Boudican destruction-debris: destruction of Building 78. Early Period 3. A copper-alloy collar with convex sides. Length 34 mm, diameter 46 mm.

1634 SF 1.81 2638, E1675 L173. Dump/demolition. Period 2. An iron ?collar fragment. Length 25 mm, diameter approximately 47 mm.

1635 SF 1.81 2643, E1798 L253. Demolition of daub walls: demolition of Building 84. Early Period *2.* A copper-alloy collar with a lap joint. Length 19 mm, diameter 27 mm.

1636 SF 1.81 4888 (X), M464 F454. Pit or trench? Building 91. Period 2. An iron collar or ring. Internal diameter 22 mm.

1637 SF 1.81 812, B246 F107. Gully: Building 126. Period 5. An iron rough-edged disc, possibly from a ferrule. Diameter 46 mm, approximately 5 mm thick.

1638 SF 1.81 1622, B1631 F474. Small pit: Building 94, Room 4b. Period 3. A fragment of a copper-alloy ferrule. Diameter 17 mm. Only a small part of the wall remains.

1639 SF 1.81 1460, C425 L70. Occupation: Building 79, Rooms 2/3. Period 1. A fragment from a copper-alloy ferrule. Diameter 18 mm, maximum surviving length 5 mm.

LOCKS AND KEYS

Lock-plates (Figs 5.46-7; 1640-1643)
Catalogued in printed text.

Padlock case (Fig 5.46; 1644)
Catalogued in printed text.

Lock-bolts (Fig 5.48; 1645-1650)
All are of copper alloy.
1646 SF 1.81 1524, B1222 F348. Posthole: Building 95, Room 2. Period 3. Length 55 mm. Too corroded to distinguish the shape of the perforations.
1647 SF 1.81 5067, B2592. Unstratified. Fragment. Length 49 mm.
1648 SF 1.81 4079, D1942. Unstratified. Fragment. Length 43 mm.
1649 SF 1 . 81 3494, G979. Unstratified. Periods 4-6. Fragment. Length 32 mm.
1650 SF 1.81 3950, G2065. Unstratified. Period 6. Fragment possibly from the end of a lock-bolt. Length 19 mm.

Tumbler lock lift key (Fig 5.49; 1651-1652)
1652 SF 1.81 2487, B2275 L212. Occupation sills: Building 112, Room 3. Period 4a. An iron T-shaped key. The top is missing. Length 125 mm, width 34 mm.

Tumbler lock slide keys (Fig 5.48; 1653-1660)
1656 SF 1.81 3881(C), D1290 L358. Floor: Building 123, Room 10. Period 4. A complete iron key. The number of teeth is uncertain. The handle is pierced for suspension. Length approximately 83 mm.
1657 SF 1.81 3368(X), G569 L568. Destruction debris B: Building 120. Period 5b. The teeth of an iron key. Width 36 mm.
1658 SF 1.81 3968(C), G2056 L1195. Floor make-up/dump: Building 116. Period 4. An iron key with four teeth set in a dog-leg. The handle is pierced for suspension. Length 82 mm.
1659 SF 1.81 4002(ii)(X), G2308 L2140. Road make-up. Periods 1 & 2. An iron key in two pieces. The number of teeth is uncertain but may be three. The handle is pierced for suspension. Length very approximately 65 mm.
1660 SF 1.81 3024(C), G245 F165. Robber trench. Period 6. The bit and part of the shaft of a small copper-alloy key with three teeth set in a line. Surviving length 15 mm, width 17 mm.

CATEGORY 12: OBJECTS ASSOCIATED WITH AGRICULTURE, HORTICULTURE, AND ANIMAL HUSBANDRY

SPADE SHEATH (Fig 5.50; **1661)**

Catalogued in printed text.

PLOUGHSHARE TIP (Fig 5.50; **1662)**

Catalogued in printed text.

BELLS (Fig 5.51; **1663-7)**

1664 SF 1.81 514, C97 L8. Dump/demolition. Period 4. A round copper-alloy bell. The suspension loop is broken and the clapper missing. Diameter at the base 17 mm, height 14 mm.

1665 SF 1.81 1374, C372 L50. Dump (redeposited Boudican): destruction of Buildings 78/9. Early Period 3. A round corroded copper-alloy bell. The clapper may be missing. Diameter at the base 26 mm, height 28 mm.

1666 SF 1.81 2473, E1224 L138. Dump. Period 2. A round copper-alloy bell with an iron clapper. Diameter at the base 28 mm, height 30 mm.

1667 SF 1.81 4745(C), M59 Ll. Surface cleaning. Unstratified. A crushed copper-alloy bell with an iron clapper. The suspension loop is missing. Height 15 mm.

CATEGORY 13: MILITARY EQUIPMENT

ARMOUR

Belt and apron fittings of copper-alloy (Fig 5.52; **1668-80)**

1672 SF 1.81 1437, A699 L261. Occupation; Building 77, Room 10. Period 1. A fragment of a rosette stud with inlaid niello petal decoration and indented edge. Diameter 15 mm. The shaft is slightly bent, length 8 mm.

1673 SF 1.81 2578, E1480. Dump. Period 2. A fragment of a rosette stud with indented edge. The surface appears to be plain. Diameter 22 mm. The shaft is bent, approximate length 25 mm.

Copper-alloy fittings from laminated body armour (Fig 5.53; **1681-6)**

1682 SF 1.81 2321, E871 F745. Pit. Period 2. A buckle from a cuirass or baldric strap as *CAR **2*** fig 145,4183. Length of the bar 26 mm.

1685 SF 1.81 2523, E1323 F1142. Roadside ditch. Period 1. An iron plate with a copper-alloy fitting attached and only partly visible. These pieces can probably be identified as a fragment of laminated armour with a girdle-plate tie hook.

1686 SF 1.81 5182, K442 F411. Pit. Period 3a or 3b. A fragment of a girdle-plate tie hook. Length 19 mm.

Copper-alloy fitting from mail armour (Fig 5.54; **1687)**
Catalogued in printed text.

ARMS

Spear heads (Fig 5.55; **1688-9)**
Catalogued in printed text.

Javelin (1690)

1690 SF 1.81 5262 (X), M701 F485. Pit. Period 3? Possibly four fragments (?fit together) from a javelin shaft. This identification is uncertain. Total length 288 mm.

TOOLS

Pickaxe (Fig 5.56; **1691)**
Catalogued in printed text.

CAVALRY HARNESS FITTINGS

Strap-loops (Fig 5.57; 1692-4)

1694 SF 1.81 5112(C), K158 F91. Large pit. Period 3a. The terminal of the upper plate of a strap-loop. Surviving length 25 mm.

EQUIPMENT PROBABLY BELONGING TO THE 2 N D AND/OR 3RD CENTURIES (Figs 5.52, 5.58; 1695-7)

Catalogued in printed text.

PHALLIC AMULET USUALLY ASSOCIATED WITH THE ROMAN ARMY (Fig 5.59; 1698)

Catalogued in printed text.

CATEGORY 14: OBJECTS ASSOCIATED WITH RELIGIOUS BELIEFS AND PRACTICES

FIGURINES (Figs 5.60-1; **1699-1703)**

Catalogued in printed text.

MODEL (?VOTIVE) OBJECTS (Fig 5.61; **1704-1710)**

1708 SF 1.81 1627, A421 L138. Occupation (rubbish?). Period 3. A small fragment of moulded pipeclay, possibly part of the mouldings of an *aedicula.*

1709 SF 1.81 1413, C317 F100. Scoop/dump. Early Period 3. A small fragment from a pipeclay object, possibly part of a base for a figurine, or from an *aedicula.*

1710 SF 1.81 3653, G1209. Unstratified. Periods 4 to 6. A fragment of a pipeclay object, possibly an animal figurine. Maximum surviving length 39 mm, width 24 mm.

CATEGORY 15: OBJECTS AND WASTE MATERIAL ASSOCIATED WITH METAL WORKING

TONGS (Fig 5.62; **1711)**

Catalogued in printed text.

CRUCIBLES AND OTHER METALLURGICAL DEBRIS FROM CULVER STREET PHASE ONE

by Justine Bayley

The report on the crucible sherds is in the printed text (pp 194-8). The non-crucible material (from AM 822880 and AM 822881) is listed below. The pieces marked with an asterisk are probably further debris from the copper-alloy working industries described above. The rest of the pieces are accidentally overheated, the sort of material commonly found in destruction layers. The scrap metal (AM 830765) was, with one exception, dribbles and flows of molten lead. These were probably all accidental spillages of metal that was melted within a burning building. The exception (B1332) was a few thick pieces of sheet tin-lead alloy. This could be considered as pewter which was commonly used for vessels in the 3rd and 4th centuries or as a large mass of solder. The shape is not quite what is expected for either.

Other metallurgical debris

Site A Period 1 (c 44-49)

A402	L121	Occupation/occupied natural
		* Hearth lining; XRF: Zn Pb Cu
"	"	?Daub

Building 77 (c 44-60/1)

B2403	L678	Occupation
		Three lumps of dark brown fired clay

Destruction debris of Building 77 (60/1)

B1669	L400	Boudican demolition debris
		* Metal-rich fuel/ash slag

Building 78 (Site C Period 2: c 49-60/1))

C417	L66	Burnt occupation floor
		* Corroded metal lumps

Destruction deris of Building 79 (60/1)

C367	L57	Dump (redeposited Boudican)
		Molten glass and burnt clay on sherd
	"	Sherd with fluxed surface
C376	"	* Fuel/ash slag with traces of Cu

C376 " * Fuel/ash slag with traces of Cu

Site B Period 3 (c 60/75-100/125)
B1232 L296 Gravel surface
* Metal-rich fuel/ash slag; XRF: Cu Pb Sn
B1417 L319 Clay dump over gravel surface
* Spilt metal on fixed clay; XRF: Cu Pb

Building 110 (c ?100/150-?300)
A461 L93 Trench fill
Overheated sherd

Building 112 (c 100-275/325)
Period ?4a
B1128 L250 Dump, Room 6b
Fragment of overheated ceramic (?tile)
Period 4b
B448 L62 Occupation lens, Room 5
Calcined and vitrified flint
" " Overheated sherd

Site B ?Period 4 (c 100/125-275/325)
B345 F122 Small pit
* Cu-rich hearth lining?

Medieval or post-medieval
A15 F3 (Post) pit
* Corroded lump of Cu alloy
A9 F4 Pit
* Dribble of molten Cu alloy
A20 F8 Pit
* Corroded lump of Cu alloy
E302 F216 Shallow pit
Fuel/ash slag; blue colour due to traces of iron
E421 L1 Topsoil. Post-Roman. Overheated vesicular ceramic with traces of copper corrosion products; not a crucible

Unstratified
B1848 * Dribble of molten Cu alloy; XRF: Cu Zn (Sn Pb)

METALLURGICAL DEBRIS (EXCLUDING CRUCIBLES) FROM CULVER STREET PHASE TWO

by Paul Budd

Building 92
(Site M Period 2: c 49-60/1)

MF315	M331	Slot Iron-rich fuel ash slag

Building 121

(Site M Period 3:		c 765/75-150/200)
ML333	M410	Floor Iron-rich fuel ash slag plus coke

Building 123

(Site D Period 4:		*c* 150/200 - c 275/325)
DF38	D125	Oven in Room 10 Fuel ash slag associated with copper-alloy working
DF195	D195	Stairwell into Room 9 Iron-rich fuel ash slag
DF624	D1141	Oven in Room 10 Natural
DF842	D1034	Yard Probably natural
DL1480	D1694	Coarsely metalled surface in Passage 2 Reduced fired clay which has been heated strongly from one side vitrifying surface, probably furnace lining, associated with copper and lead traces

Demolition debris of Building 123

(end of Site D Period 4:		c 275/325
DF1291	D1961	Copper/lead alloy casting waste
DL805	D810	(?Gunmetal) easting waste
DL1171	D1195	Copper/lead-alloy casting waste

Probably residual Roman

(early medieval robber trenches for Building 123 (Site I Period 6))

DF30	D527	Large piece of iron-rich fuel ash and slag attached to fired clay, probably hearth lining associated with iron working
	D869	Iron-rich fuel ash slag
	D823	Iron-rich fuel ash slag
DF166	D240	Soil sample containing fired clay fragments

Building 117

(Site G Period 4:		c 150 - c 225)
GF1555	G1804	Accumulation of ash (?from oven GF1545) Reduced fired clay mould fragment plus fired clay
"	G1805	Soil sample containing shell and charcoal flecks
G1507	G1910	Occupation Soil sample containing shell and charcoal flecks

Building 118?

(Site G Period 4:		c 150 -c 225)
GL3239	G3306	?Occupation Soil sample containing shell, fired clay

		fragments, animal bone, charcoal flecks, hammer scale (bloom scale) and a pot sherd

Building 119

(Site G Period 4: c 150 -c 225)

GL1716	G1829	?Period 4 occupation Soil sample containing solid iron fragment (?iron object), shell, fired clay fragments, animal bone, charcoal flecks, and hammer scale (bloom scale)

Residual material, probably from pre-Boudican contexts

(Periods 1 or 2)

GF2363	G2531	Period pit Natural deposit
GL1423	G1457	Top of ?cultivated soil of Periods 3 or 4 Leaded bronze casting waste
GL1746	G2351	?Cultivated soil of Period 3 Bronze casting waste/slag
	G2378	Bronze casting waste
GL1814	G2306	?Cultivated soil of Period 3 Iron rich fuel ash slag with attached copper alloy casting waste (possibly bronze)
GL2024	G2172	Period 3d ?dump (?Bronze) casting waste
GL2535	G2625	Base of cultivation of Period 3 Bronze casting waste
GL3133	G3325	Dump of Period 3b or 3c (contemporary with wall) Fuel ash slag associated with leaded bronze working
GL4331	G4339	Dump of Period 3d Iron rich fuel slag with attached copper alloy casting waste

Post-Roman topsoil ('dark earth')

(probably residual Roman)

HF150	H153	Base of post-Roman topsoil Piece of debased silver (green colouration due to corrosion of copper 'impurity')
HL3	H54	Topsoil/clearance layer Copper/lead alloy casting waste

Pits, ditches/slots and related deposits

(Site K Period 3:60/1 - 400+ but probably all material derives from Site K Period 3a: 60/1 - c 150, the rest beinq residual)

KF55	K57	Period 3a pit Iron smithing slag
"	K116	Furnace lining and fuel ash slag associated with the working of leaded bronze plus iron fuel ash slag and an iron fragment/object
KF84	K86	Period 3c linear feature (?Leaded bronze) casting waste
KF112	K125?	Period 3b pit Fuel ash slag associated with the working of leaded bronze
KF132	K133	Period 3a pit Leaded bronze casting waste/slag

"	K329	Fuel ash slag, some associated with the working of leaded bronze, and some iron rich. Also a piece of charcoal
KF135	K164	Period 3b or 3c linear feature Fuel ash slag plus furnace lining associated with the working of a (high tin) bronze
KF290	K295	Period 3b or 3c ditch Fuel ash slag associated with the working of bronze
KF390	K433	Period 3 pit Iron-rich fuel ash slag
"	K444	Fuel ash slag
KL80	K187	Period 3a charcoal spread Furnace lining associated with leaded bronze
KL117	K118	Period 3b: base of rampart? Leaded bronze casting waste

Miscellaneous

	M186	scrapped Iron smithing slag

	A	B	C	D
Building 77 (c 44-60/1)		1	2	
Building 77 dest (early Per 3) (60/1-c 65/75)	1			
Building 78 (c 44-60/1)	1	1		
Building 78 dest (60/1)			1	
?Building 78 dest (?60/1)			1	
Building 84 Room 2 (EF1170 hearth) (c 44-49(55))			1	
" (EF1255 hearth)			1	
" Room 4 (EF1283 hearth)	1	1	1	
Building 89 (c 49-60/1)			1	
Building 91 (c 49-60/1)	2			
Building 94 Room la (c 65/75-100)	1			
Building 94 Room 4			1	
Building 94 Room 5a			1	
" Room 5a	2			
Building 94		1		
?Building 95 (c 75/90-100/125)			1	
Building 96 Room 2 (c 75/90-100/125)	1			
" Room 3	1			
Building 97 (c ?150-early 3rd century)	1			
Building 99/100 (c 75/80-?90/100)	1			
Building 107 (?c 90/100-150/200)	1			
Building 112 Room 3 (Period 4b: c 200-250/275)	1			
" Room 5 (Period 4b)	2		1	
Building 113 (c 100/125-275/325)		1		
Building 114 (c 100/125-275/325)	1			
Building 116 (c 150-225)	2			
Building 117 (c 200-225)	2			
Building 120 (c 225-?300)	1		1	
Building 121 (c ?65/75-150/200)	2			
Building 123 Room 8 (c 150/200-275/325)				1
Building 123 Room 10	1			
Building 123 Passage 2			1	
" yard	1			
Building 127 (c 275/325-400+)	1			
Period 1 (c 44-49)		2		
Site A Period 3 (60/1-c 100/150)			1	
Site B Period 2 (c 49-60/1)			1	
Site B Period 3 (c 65/75-100/125)	2			
Site B ?Period 3 (?c 65/75-100/125)		1		
Site B Period 4 (c 100/125-275/325)	6	1	1	
Site B ?Period 4 (?c 100/125-275/325)		2	1	
Site B Period 4 (or 5) (c 100/125-350+)			1	
Site B Period 4b (c 200-250/275)	1		2	
Site B Periods 4/5 (c 100/125-275/325)	2			
Site B Period 5 (c 275/325-350+)	2			
Site B ?Period 5 (?c 275/325-350+)	1	1		
Site E Boudican dest (60/1)			1	
Site E Period 3 (60/1-c 150/200)	1		1	
Site G Period 3 (60/1-c 225)	4		1	3
Site G Period 3b or c (c 65/80)				1
Site G Period 3d (c 65/80-150)	1		1	1
Site G ?Period 3d ?(c 65/80-150)	1			1
Site G Period 3e (c 150)			1	

Table 5.4 continued over page

continued from previous page

	A	B	C	D	
Site G Period 3 or 4 (c 65/80-225)	2			1	
Site G Period 4 (c 150-225)	3			1	*
Site G Period 4 or 5 (c 150-275/325)	1				
Site G Period 3d to 5 (c 65/80-275/325)	3				
Site M Period 3 (c 65/75-100/125)	1				
Site K Period 3 (60/1-400+)	3				
Site K Period 3a (60/1-c 150)	10		2	1	*
Site K Period 3b or c (c 150-400+)	7			1	
"	3			1	*
Anglo-Saxon	3				
Post-Roman (excluding Anglo-Saxon)	172	2	6	2	
?Post-Roman	5				

* copper alloy tap slag

Table 5.4 The numbers of contexts containing metallurgical debris according to type and context (crucible fragments excluded) . Column heading: **A**... tap slag (iron), **B**...forging slag, **C**...furnace/hearth lining or bottom, **D**... copper alloy slag.

CATEGORY 16: OBJECTS AND WASTE MATERIAL ASSOCIATED WITH ANTLER, HORN, BONE, AND TOOTH WORKING

ANTLER OFFCUTS OR UNFINISHED OBJECTS (1712-1720)

All the pieces are of red deer antler.

1712 SF 1.81 437, B31 L2. Dump/midden build-up. Period 5. Fragment of an antler with one tine remaining. The beam below the tine has been trimmed to rectangular section, then cut inwards (chamfered). It is broken below the chamfer.

1713 SF 1.81 2527, B2373 L676. Make-up: Building 77. Period 1. A fragment from an antler tine drilled through the centre. The lower end is rough with saw marks (it has been very slightly smoothed). The upper end is smoothed and polished. The diameter at the upper end has been trimmed, possibly on a lathe with a chisel or gouge. Length 26 mm, maximum diameter 18 mm.

1714 SF 1.81 1296, B854 F192. Drain/slot. Period 3. A ring cut from an antler beam. One cut edge has been smoothed and polished, the other is still rough with saw marks. The internal tissue of the beam has been trimmed away. Diameter 44 mm, height 15 mm.

1715 SF 1.81 1357, C318 L39. Occupation. Early Period 3. An antler tine with a notch cut into it. Half a slice has been cut from the tine and then one side of the cut roughly chamfered. A hole has been drilled in the piece from one end up as far as the notch. It is reminiscent of the ?cheekpiece *CAR* **2,** fig 109,2538. Length 82 mm.

1716 SF 1.81 2824, D26 F26. Large pit: yard of Building 123. An antler tine (in two pieces), the bottom end of which has been sawn across. Length approximately 290 mm.

1717 SF 1.81 3482, D671 F684. Robber trench for Building 123. Period 6? The tip of a thick antler tine which has been partly sawn and partly broken off. Length 129 mm.

1718 SF 1.81 2989, G167 L167. Occupation/midden: Building 120. Period 5b. A fragment of a shed antler with coronet and burr. The beam and brow tine have broken. On each side at the junction of beam and brow tine a small patch of the corrugated surface has been roughly trimmed off, leaving fairly smooth concave patches, and a hole drilled through the antler. Maximum length 217 mm.

1719 SF 1.81 2988, G177 L177. Occupation debris/midden: Building 120. Period 5b. A fragment of antler from the upper end of the junction of the beam and brow tine. Similarly trimmed and perforated as SF 1.81 2989 above.

1720 SF 1.81 2995, G177 L177. Occupation debris/midden: Building 120. Period 5b. The tip of an antler tine which has been sawn off. Length 141 mm.

HORN-WORKING WASTE (1721)

1721 SF 1.81 3325, G552 L206. Destruction debris B floor: Building 120. Period 5b. A fragment of a horn core cut across at one end.

BONE OFFCUTS OR UNFINISHED OBJECTS (Fig 5.63; **1722-1731)**

1726 SF 1.81 868, A421 L138. Occupation (rubbish?). Period 3. An unfinished bone ?needle fragment. The point has been made. . The top is broken off, but a small circular hole has been drilled just below the break. Length 103 mm.

1727 SF 1.81 3705, D1198 L1171. Demolition debris of Building 123? Building 123, Room 8. Period 4. A fragment of a roughly-worked bone disc. Diameter 30 mm, thickness 1 mm.

1728 SF 1.81 3739, D1245 L1214. Demolition debris: Building 123, Room 8. Period 4. A short length of bone of oval section. Possibly worked. Both ends are broken. Length 36 mm, maximum width 6 mm.

1729 SF 1.81 3058, G177 L177. Occupation debris/midden: Building 120. Period 5b. A long bone with a nail shaft embedded in the marrow cavity. Both articulations are missing. Length 111 mm.

1730 SF 1.81 4077, G2306 L1814. Horticulture. Period 3. A worked bone ?shaft encrusted with iron pan. Both ends are broken. Length 79 mm, diameter 7 mm.

1731 SF 1.81 5024, M51 L1. Surface cleaning. Unstratified. A bos femur head (unfused), with traces of copper alloy on the inner surface.

CATEGORY 17: OBJECTS AND WASTE MATERIAL ASSOCIATED WITH THE MANUFACTURE OF POTTERY VESSELS OR PIPECLAY OBJECTS

No object related to the manufacture of pipeclay objects has been recovered. Any material associated with the manufacture of pottery vessels will be dealt with in *CAR* **10.**

CATEGORY 18: OBJECTS THE FUNCTION OR IDENTIFICATION OF WHICH IS UNKNOWN OR UNCERTAIN

RINGS (1732-1758)

1732 SF 1.81 948, B393 L16. Dump/demolished clay wall: Building 112, Room 1. Periods 4/5. An iron ring of rectangular section. Internal diameter 15 mm.

1733 SF 1.81 873, B304 L21. Demolition: Building 112, Room 5. Period 4. A fragment of a distorted copper-alloy ring of circular section. Internal diameter approximately 25 mm.

1734 SF 1.81 950, B405 L104. Occupation: Building 112, Room 1. Period 4b. A copper-alloy ring of ovoid section. Internal diameter 20 mm.

1735 SF 1.81 1156, B682 L129. Dump: Building 112, Room 1. Period 4b. A distorted penannular ring of lead (or lead-alloy) with roughly circular section. Internal diameter 30 mm.

1736 SF 1.81 1243, B815 L165. Dump: Building 112, Room 2. Period 4a. A copper-alloy ring of circular section. Internal diameter 15 mm.

1737 SF 1.81 1515, B1195 L271. Occupation: Building 112, Room 6a. Period 4a. A copper-alloy ring of circular section. Internal diameter 16 mm.

1738 SF 1.81 2507, B2368 L677. Make-up: Building 77. Period 1. A penannular copper-alloy ring of circular section. The section tapers towards the blunt terminals. Internal diameter 24 mm.

1739 SF 1.81 2653, B2131 F624. Slot: Building 77. Period 1. An iron ring, too corroded for the shape of the section to be distinguished. Internal diameter approximately 28 mm.

1740 SF 1.81 3351(X), D458 F259. Robbing pit. Period 6. A broken iron oval ring of circular section. Internal diameter 22 mm.

1741 SF 1.81 3895(X), D1225 L1214. Demolition debris: Building 123, Room 8. Period 4. An iron ring of circular section. Internal diameter 38 mm.

1742 SF 1.81 2173, E628 L22. Destruction debris: Buildings 86/87. Period 2. A copper-alloy ring of D-shaped section. Possibly a finger-ring? Internal diameter 16 mm.

1743 SF 1.81 2604, E1587 F1329. Pit. Period 2. A distorted penannular copper-alloy ring of circular section.

1744 SF 1.81 3110, G271 F269. Pit. ?Period 4. A copper-alloy ring of ?D-shaped section. Possibly a finger-ring. Internal diameter 16 mm.

1745 SF 1.81 3109(X), G322 L209. Destruction debris B/floor: Building 120. Period 5b. An iron ring of rectangular section. Internal diameter 37 mm.

1746 SF 1.81 3401(X), G797 L581. Destruction debris/occupation: Building 120. Period 5b. An iron ring of ?rectangular section. Internal diameter 22 mm.

1747 SF 1.81 4074(X), G2294 L1703. Cultivation. Period 3. An iron ring of ?circular section. Internal diameter 31 mm.

1748 SF 1.81 5342(C), G3249 L2233. Occupation: Building 97. Period 3. A fragment of an iron ring.

1749 SF 1.81 3053, G280 F269. Pit. ?Period 4. A fragment of a thick copper-alloy ?ring of rectangular section. Internal diameter approximately 38 mm.

1750 SF 1.81 3193(C), G436 F352. Pit. Period 5. A copper-alloy penannular ring of circular section. Maximum internal

diameter 21 mm.

1751 SF 1.81 2979, G177 L177. Occupation debris/midden: Building 120. Period 5b. Two pieces of a copper-alloy ring of ?circular section. Internal diameter 21 mm.

1752 SF 1.81 3724, G1537 L1536. Floor make-up: Building 116. Period 4. A copper-alloy penannular ring of circular section. Maximum internal diameter 18 mm.

1753 SF 1.81 3770, G1848 L1767. Horticultural topsoil. Period 3. A copper-alloy ring of ?rectangular section. Internal diameter 8 mm.

1754 SF 1.81 3098(C), G334. Unstratified. Periods 4 to 6. A copper-alloy ring of thick rectangular section. Internal diameter 14 mm. Possibly a finger-ring.

1755 SF 1.81 4498(X), H271 L78. Destruction debris B: Building 116. Periods 4 or 5. A broken iron ring of rectangular section, (internal diameter 16 mm.

1756 SF 1.81 4716 H588 L585. Dump/make-up: Building 120. Period 5a. A copper-alloy ring (in two pieces) of circular section. Internal diameter 19mm.

1757 SF 1.81 4963, J251 L222. Destruction debris: Building 79. Period 2. Three fragments of a thin rectangular-section ring. One fragment is embedded in an iron loop. The size and section of the ring precludes its identification as a ring handle with the loop of a split-spike loop attached, similar to those from the same layer in Fig. 000 in the printed catalogue. Internal diameter approximately 24 mm.

1758 SF 1.81 4967 (X), M628 F584. Drain. Period 3. An iron ring of circular section. Internal diameter 22 mm.

CHAINS (1759-1769)

1759 SF 1.81 1154, B682 L129. Dump: Building 112, Room 1. Period 4b. A copper-alloy penannular oval link of thin rectangular section. Maximum internal diameter 8 mm.

1760 SF 1.81 19, C3. Unstratified. Two copper-alloy penannular oval links of circular section. Maximum internal diameter 7 mm.

1761 SF 1.81 642, C151 L13. Demolition: destruction of Building 114, Room 1. Period 4. A copper-alloy round penannular link of rectangular section. Internal diameter 5 mm.

1762 SF 1.81 1069, C271 L32. Dump: Building 96, Room 2. Period 3. Three fragments from a copper-alloy double loop-in-loop chain.

1763 SF 1.81 3956, D1729 F1291. Large pit: yard of Building 123. Period 4. Two lengths of copper-alloy chain with penannular links. Internal link diameter 4 mm.

1764 SF 1.81 4044(X), D1810 F1291. Large pit: yard of Building 123. Period 4. An iron oval link. Maximum internal diameter 46 mm.

1765 SF 1.81 4025, D1855 F1842. Pit. Period 4. Sixteen fragments of copper-alloy thin loop-in-loop chain.

1766 SF 1.81 3709, G1521 F1164. Construction trench: Building 120. Period 5a. A copper-alloy penannular link. Internal

diameter 7 mm.

1767 SF 1.81 3090, G326 L302. Occupation? Period 5b? A short length of copper-alloy chain with penannular links. Internal diameter 4 mm.

1768 SF 1.81 3953, G2209 L1702. Dump/cultivation: Building 116? Period 5. Several copper-alloy twisted wire fragments, possibly from a chain.

1769 SF 1.81 5113, K148 F147. Pit. Period 3a. A copper-alloy penannular link. Internal diameter 8 mm.

WIRE (1770-1790)

1770 SF 1.81 546, A233 L21. Make-up. Period 4. Copper-alloy.

1771 SF 1.81 819, A394 L108. Occupation/weathered natural. Period 1. Copper-alloy.

1772 SF 1.81 656, A299 F100. Drain: Building 110. Period 3. Copper-alloy.

1773 SF 1.81 1313, B873 L200. Dump. Period 4. Copper-alloy.

1774 SF 1.81 1636, B1653 L406. Dump. ?Period 3. Copper-alloy.

1775 SF 1.81 968, B331 F108. Gully between Buildings 112 & 113. Period 4. Copper-alloy.

1776 SF 1.81 1283, B848 F255. Scoop. Period 4. Copper-alloy.

1777 SF 1.81 552, C121 L8. Dump/demolition. Period 4. Copper-alloy.

1778 SF 1.81 742, C198 F56. Large pit. Period 3. Copper-alloy.

1779 SF 1.81 2245, E756. Period 3. Copper-alloy.

1780 SF 1.81 2264, E756. Period 3. Copper-alloy.

1781 SF 1.81 2265, E756. Period 3. These three pieces may be part of a wire object, perhaps a clasp? Copper-alloy.

1782 SF 1.81 2345, E882 F766. Shallow pit: Building 89. Period 2. Copper-alloy.

1783 SF 1.81 5190(X), G4372. Unstratified (from rampart). Periods 3 to 6. Iron.

1784 SF 1.81 3486, G1023 L865. Dump. Period 3d/4. Copper-alloy.

1785 SF 1.81 5098, K129 F128. Pit/posthole. Period 3b or 3c. Copper-alloy.

1786 SF 1.81 5154, K352 F237. Pit/post-pit. Period 3b or 3c. Copper-alloy.

1787 SF 1.81 5111, K150 F105. Linear feature. Period 3a? Copper-alloy.

1788 SF 1.81 4502, H253 F81. Pit. Period 6. Copper-alloy.

1789 SF 1.81 3330, G684 L581. Destruction debris/occupation: Building 120. Period 5b. Copper-alloy.

1790 SF 1.81 5085, D1697 F352. Drain: Building 123, Passage 2. Period 4. Copper-alloy.

BONE ?PEGS (1791-1801)

1791 SF 1.81 1037, B519 L16. Dump/demolished clay wall: Building 112, Room 1. Periods 4/5. Tip missing. Length 67 mm. Maximum diameter 6.5 mm.
1792 SF 1.81 1115, B577 F194. ?Floor joists: Building 112. Period 4b. Complete. Length 87 mm. Maximum diameter 7.5 mm.
1793 SF 1.81 3307, D415 F259. Robbing pit. Period 6. Possibly the tip of a bone peg. Length 57 mm. Maximum diameter 7 mm.
1794 SF 1.81 3592, G1321 L1157. Destruction debris B: Building 120. Period 5b. Complete. Length 98 mm. Maximum diameter 7 mm. Bird bone?
1795 SF 1.81 5178, G4315 L4310. Dump. Period 3d. The head of either a very thick Type 1 pin, or of a ?peg (see CAR **2,** 162-3). The late Roman date of the context of this piece would seem to support the latter identification. Length 69 mm.
1796 SF 1.81 3051, G200. Unstratified. Periods 4-6. Tip missing. Length 61 mm. Maximum diameter 7 mm.
1797 SF 1.81 4765, H529 L3. Topsoil/clearance. Period 6. Tip missing. Length 61 mm. Maximum diameter 5 mm.
1798 SF 1.81 4759, M146 L1. Surface cleaning. Unstratified. Tip missing. Length 45 mm. Maximum diameter 6 mm.
1799 SF 1.81 4849, M207 L1. Surface cleaning. Unstratified. Tip missing. Length 40 mm. Maximum diameter 6 mm.
1800 SF 1.81 4605, J116 F114. Pit. Period 6. Complete. Length 87 mm. Maximum diameter 6 mm.
1801 SF 1.81 4513, H291 L283. Dump layer. Period 5. Only the top survives. Length 22 mm. Maximum diameter 8 mm.

SHEET COPPER-ALLOY (1802-1976)

Only the small find number and context details are given for these pieces. They are listed by site, and within site by period.

Site A

Period 1
1802 SF GBS 849, A402 L121. Occupation/occupied natural.

Period 1/2
1803 SF GBS 723, A319 L78. Occupation? or road silt? Periods 1 or 2.

1804 SF 1.81 787, A361 L98. Occupation. Periods 1 (or 2).

Period 2

1805 SF 1.81 1435, A696 F227. Slot: Building 77.

Period 3
1806 SF 1.81 530, A228 L17. Make-up.
1807 SF 1.81 598, A259 L40. Road metalling.
Period 4
1808 SF 1.81 510, A212 F73. Ditch.

Site B

Period 1

1809 SF 1.81 2131, B2177 L606. Gravel spread.

Period 1/2

1810 SF 1.81 1823, B2128 L563. Clay floor/dump: Building 77.
1811 SF 1.81 2449, B2266 F282. Large cess-pit: Building 77, Room 5.
1812 SF 1.81 2456, B2266 F282. Large cess-pit: Building 77, Room 5.

Period 2

1813 SF 1.81 1857, B2149 L598. Dump.

Period 3

1814 SF 1.81 1504, B1135 L270. Dump.
1815 SF 1.81 1693, B1827 L355. Redeposited Boudican demolition. ?Period 3.
1816 SF 1.81 1584, B1530 L371. Metalling. ?Period 3.
1817 SF 1.81 1638, B1669 L400. Boudican demolition debris: destruction of Building 77. Early Period 3.
1818 SF 1.81 1727, B1669 L400. Boudican demolition debris: destruction of Building 77. Early Period 3.
1819 SF 1.81 1653, B1702 L400. Boudican demolition debris: destruction of Building 77. Early Period 3.
1820 SF 1.81 1761, B1702 L400. Boudican demolition debris: destruction of Building 77. Early Period 3.
1821 SF 1.81 2491, B2347 L414. Probably redeposited Boudican debris: destruction of Building 77. Early Period 3.
1822 SF 1.81 1766, B1766 L418. Boudican destruction debris: destruction of Building 77. Early Period 3.
1823 SF 1.81 1508, B1221 F349. Posthole: Building 95, Room 2.
1824 SF 1.81 1620, B1631 F474. Small pit: Building 94, Room 3b.

Periods 3/4

1825 SF 1.81 1577, B1449 L267. Make-up: Building 112?, Room 4.

Period 4

1826 SF 1.81 891, B328 L32. Silt lens.
1827 SF 1.81 1009, B428 L42. Dump levels.
1828 SF 1.81 976, B438 L52. Dump horizon.
1829 SF 1.81 1506, B440 L56. Lens of occupation: Building 112, Room 4. Period 4c.
1830 SF 1.81 985, B459 L60. Dump levels.
1831 SF 1.81 987, B459 L60. Dump levels.
1832 SF 1.81 1225, B744 L60. Dump levels.
1833 SF 1.81 2710, B2504 L60. Dump levels.
1834 SF 1.81 1051, B548 L94. Dump.
1835 SF 1.81 1171, B699 L94. Dump.
1836 SF 1.81 1148, B405 L104. Occupation: Building 112, Room 1. Period 4b.
1837 SF 1.81 1108, B638 L116. Dump: Building 113, Room 5.
1838 SF 1.81 1190, B747 L136. Occupation: Building 112, Room 3. Period 4b.
1839 SF 1.81 1315, B828 L156. Dump: Building 112, Room 6b. Period 4b.
1840 SF 1.81 1277, B835 L173. Occupation/weathering: Building 112, Room 2. Period 4a.

1841 SF 1.81 1005, B470 F173. Flue/oven/small pit.
1842 SF 1.81 1006, B470 F173. Flue/oven/small pit.
1843 SF 1.81 1262, B817 F187. Tile hearth: Building 112, Room 5. Period 4b.
1844 SF 1.81 1087, B634 F196. Pit.
1845 SF 1.81 1170, B721 F226. Small pit & stake hole. ?Period 4.
1846 SF 1.81 1196, B725 F231. Shallow scoop/pits. ?Period 4.
1847 SF 1.81 1485, B839 F262. Small pit. Period 4a.
1848 SF 1.81 2431, B2227 L206. Clay dump/?demolished wall: Building 112. ?Period 4.

Periods 4/5
1849 SF 1.81 807, B252 L20. Dump. ?Periods 4/5.
1850 SF 1.81 2544, B2406 L22. Dump level. Periods 4 (or 5).
1851 SF 1.81 890, B323 L35. Demolition: Building 112 Room 4. Periods 4/5.

1852 SF 1.81 1447, B455 L39. Dump accumulation. Periods 4/5.

Period 5

1853 SF 1.81 596, B112 L4. Rubble spread.

Post-Roman

1854 SF 1.81 844, B271 F26. Posthole. ?Post-Roman.

Anglo-Saxon
1855 SF 1.81 837, B259 L13. Occupation: Hut 3.
Unstratified
1856 SF 1.81 638, B169.
1857 SF 1.81 824, B183.
1858 SF 1.81 1455, B1104.
1859 SF 1.81 1710, B1738.

Site C

Periods 1/2
1860 SF 1.81 1695, C489 F138. Military cess-pit: Building 79, Room 2.

Period 3
1861 SF 1.81 1150, C293 L36. Dump (redeposited Boudican debris). Early Period 3.

Period 4
1862 SF 1.81 501, C91 L8. Dump/demolition.
1863 SF 1.81 590, C129 L8. Dump/demolition.
1864 SF 1.81 641, C151 L13. Demolition: destruction of Building 114.
1865 SF 1.81 769, C79 F12. Gully: Building 114. Late Period 4.
1866 SF 1.81 1742, C494 F133. Pit. ?Period 4.

Periods 4/5
1867 SF 1.81 347, C63 F27. Large pit/pit complex.
1868 SF 1.81 411, C68 F27. Large pit/pit complex.
1869 SF 1.81 440, C68 F27. Large pit/pit complex.

Period 5
1870 SF 1.81 164, C31 L2. Topsoil (?Roman). ?Period 5.
1871 SF 1.81 177, C25. ?Period 5.

Site D

Period 4
1872 SF 1.81 3741, D1202 L267. Dump.
1873 SF 1.81 3451, D763 L714. Occupation: Building 123, Passage 4. Repousse-decorated strip.
1874 SF 1.81 3601, D1130 L973. Demolition debris: Building 123, Passage 4.
1875 SF 1.81 3758, D1373 L1372. Dump: Building 123, Room 8.
1876 SF 1.81 4012, D1895 F1647. Pit: yard of Building 123.

Period 6
1877 SF 1.81 3174, D307 L301. Fill.
1878 SF 1.81 3328, D511 F91. Pit.
1879 SF 1.81 3089, D249 F259. Robbing pit.
1880 SF 1.81 3406, D630 F259. Robbing pit.

Period 7
1881 SF 1.81 3810, D1530 L1517. Topsoil.

Site E

Period 1
1882 SF 1.81 2425, E1160 L146. Occupation: Building 83.
1883 SF 1.81 2509, E1269 F1142. Ditch (roadside).

Period 2
1884 SF 1.81 2581, E1440 L101. Dump/make-up: demolition of Building 84? Early Period 2.
1885 SF 1.81 2387, E1099 L138. Dump.
1886 SF 1.81 2482, E1224 L138. Dump.
1887 SF 1.81 2338, E892 F745. Pit.
1888 SF 1.81 2393, E1036 F893. Pit: Buildings 86/87.
1889 SF 1.81 2418, E1182 F1037. Ditch.
1890 SF 1.81 2550, E1339 F1164. Pit.

Period 3
1891 SF 1.81 2190, E660 L24. Destruction debris and make-up: Buildings 99/100. Period 3a.
1892 SF 1.81 2326, E888 L62. Dump: Building 108. Period 3b.
1893 SF 1.81 2171, E633 L27. Make-up. Period 3.
1894 SF 1.81 2196, E669 L27. Make-up. Period 3.
1895 SF 1.81 2211, E669 L27. Make-up. Period 3.
1896 SF 1.81 2351, E909 F489. Sinkage. Period 3.
1897 SF 1.81 2242, E750 F549. Trench? Period 3.
1898 SF 1.81 2269, E791 F549. Trench? Period 3.
1899 SF 1.81 2317, E831 F557. Pit? Period 3.

Post-Roman
1900 SF 1.81 2028, E378 LI. Topsoil.

Unstratified
1901 SF 1.81 2090, E494.
1902 SF 1.81 2140, E494.
1903 SF 1.81 2138, E553.
1904 SF 1.81 2249, E753.
1905 SF 1.81 2419, E1187.

Site G

Period 3
1906 SF 1.81 3652, G1516 L1435. Dump/midden. Period 3d.
1907 SF 1.81 3827, G2020 L1480. Dump under Building 120. Period 3d.
1908 SF 1.81 3902, G2095 L2024. Occupation/destruction. Period 3d.
1909 SF 1.81 3925, G2119 L2024. Occupation/destruction. Period 3d.
1910 SF 1.81 3946, G2215 L2024. Occupation/destruction. Period 3d.
1911 SF 1.81 4033, G2418 L2181. Floor surface. Period 3d.
1912 SF 1.81 4142, G2901 L2374. Occupation/cultivation. Period 3d.
1913 SF 1.81 4302, G2971 L2820. Dump/cultivation. Period 3d.
1914 SF 1.81 5183, G4263 L4255. Dump. Period 3d.
1915 SF 1.81 3978, G2272 L1703. Cultivation.
1916 SF 1.81 4056, G2378 L1746. Cultivation soil.
1917 SF 1.81 3811, G1980 L1814. Horticultural soil.
1918 SF 1.81 3933, G2130 L1814. Horticultural soil.
1919 SF 1.81 4067, G2350 L1938. Cultivation soil?
1920 SF 1.81 3996, G2170 L2164. Floor make-up/dump.
1921 SF 1.81 4052, G2465 L2444. Cultivated soil?
1922 SF 1.81 4899, G3938 L3624. Cultivated soil.
1923 SF 1.81 5006, G4032 L3624. Cultivation soil.
1924 SF 1.81 5002, G4004 L3985. Cultivated soil.
1925 SF 1.81 5003, G4005 L3985. Cultivation soil.

Period 3/4
1926 SF 1.81 3777, G1790 L1054. Dump. Periods 3d/4A
1927 SF 1.81 4271, G2856 L2852. Dump. Periods 3d or 3d/4.
1928 SF 1.81 4175, G2769 L2758. Dump. Periods 3d or 3d/4.
1929 SF 1.81 4144, G2851 L2758. Dump. Periods 3d or 3d/4.
1930 SF 1.81 3787, G1750 L865. Dump. Periods 3d/4.
1931 SF 1.81 4177, G2918 F2893. Small pit.
1932 SF 1.81 3943, G2196 L1702. Dump/cultivation: Building 116?
1933 SF 1.81 3829, G1991 L1744. Construction debris: Building 116?
1934 SF 1.81 3804, G1827 L1824. Dump.
1935 SF 1.81 5005, G4026 L3871. Gravel surface.
1936 SF 1.81 4642, G3244 L3229. Floor surface? Building 116?

Period 4
1937 SF 1.81 3928, G2113 L1507. Occupation/burning: Building 117.
1938 SF 1.81 4149, G2843 L1760. Floor make-up: Building 117.
1939 SF 1.81 4155, G2873 L1760. Floor make-up: Building 117.
1940 SF 1.81 4121, G2674 L2332. Floor surface? Building 119.
1941 SF 1.81 3690, G1588 F652. Drain: Building 116.
1942 SF 1.81 3046, G292 F270. Pit. ?Period 4.

Period 5

1943 SF 1.81 4584, G3359 L3348. Gravel/mortar surface: Building 120. Period 5a.
1944 SF 1.81 3540, G1121 F914. Hearth/burning: Building 120. Period 5b.
1945 SF 1.81 2913(C), G152 L119. Occupation/midden: Building 120. Period 5b.
1946 SF 1.81 3271, G550 L119. Occupation/midden: Building 120. Period 5b.
1947 SF 1.81 2918, G141 L141. Destruction debris A: Building 120. ?Period 5b.
1948 SF 1.81 2938, G170 L170. Occupation: Building 120. Period

1949 SF 1.81 3125, G368 L302. Occupation? ?Period 5b?
1950 SF 1.81 4420, G3170 L946. Floor surface: Building 120? Period 5b?
1951 SF 1.81 3052, G266 F266. Linear feature/drain? ?Period 5.

Period 5/6

1952 SF 1.81 4560, G3294 F3292. Robber trench. ?Period 5 or 6.
1953 SF 1.81 2957, G164 L164. Occupation/midden? ?Period 5 or 6.
1954 SF 1.81 2902, G164 L164. Occupation/midden? ?Period 5 or 6.

Period 6

1955 SF 1.81 3527, G1024 F862. Robber trench.
1956 SF 1.81 4895, G3740 F3245. Robber trench.

Unstratified

1957 SF 1.81 2982, G200. Unstratified. Periods 4-6.
1958 SF 1.81 3495, G979. Unstratified. Periods 4-6.
1959 SF 1.81 3485, G1033. Unstratified. Period 6.

Site H

Period 4

1960 SF 1.81 4750, H606 L595. Make-up/dump: Building 116.

1961 SF 1.81 4493, H275 L236. Robbed mosaic floor: Building 116.

Period 5

1962 SF 1.81 4531, H461 L450. Destruction debris/dump: Building 120. Period 5b.

Period 6

1963 SF 1.81 4270, H105 F39. Cellar?

Site J

Period 1 or 2

1964 SF 1.81 5086, J373 F360. Wall: Building 79.
1965 SF 1.81 5094, J371 F364. Wall: Building 79.

Period 3
1966 SF 1.81 4935, J240 F236. Robber trench.

Site K

Period 3
1967 SF 1.81 5100, K250 F79. Large pit. Period 3a.
1968 SF 1.81 5104, K254 F251. Slot. Period 3a?
1969 SF 1.81 5126, K186 L60. Dump in road (rather than base of rampart). Period 3a?
1970 SF 1.81 5118, K97 F66. Posthole. Period 3b or 3c.
1971 SF 1.81 5103, K122 F121. Pit. Period 3c.
1972 SF 1.81 5106, K152 L78. Horticultural soil.
1973 SF 1.81 5153, K362 L358. Horticultural soil.

Site M

Period 2

1974 SF 1.81 4868, M457 F245. Pit/slot: Building 91.

Period 3
1975 SF 1.81 5043, M729 F313. Large pit: Building 121.
1976 SF 1.81 4870, M282 L280. Dump.

MISCELLANEOUS UNIDENTIFIED COPPER-ALLOY OBJECTS (Figs 5.64-6; **1977-2030)**

1989 SF 1.81 879, A429 L52. Make-up: Building 110. Period 4. A lunular fitting, possibly with a suspension loop broken off from the top. Maximum width 25 mm.
1990 SF 1.81 716, A319 L78. Occupation? or road silt? Period 1 or 2. A circular-section rod with a rectangular-section point at one end and a triangular-section point at the other. Length 144 mm.
1991 SF 1.81 1439, A690 L256. Road metalling/make-up. ?Period 2. A distorted strip.
1992 SF 1.81 780, B226 L15. Clay dump level. Periods 4/5. A Type 3 hairpin bent to form a loop, possibly used as a penannular brooch? Maximum diameter of loop 30 mm.
1993 SF 1.81 961, B407 L35. Demolition: Building 112, Room 4. Period 4c. A crude pin with a flattened globular head. Probably not a hairpin. Length 99 mm.
1994 SF 1.81 1505, B440 L56. Lens of occupation: Building 112, Room 4. Period 4c. A corroded rod with grooves visible at one end. Length 58 mm.
1995 SF 1.81 1109, B638 L116. Dump: Building 113, Room 5. Period 4. A suspension loop with a small pedestal below the loop and the remains of a shaft projecting from below the pedestal. Diameter 18 mm.
1996 SF 1.81 1449, B1110 L169. Clay dump? Building 113?, Room 5.

Periods 3/4. A disc with a large ?suspension loop. Diameter of disc 18 mm; diameter of loop 18 mm.

1997 SF 1.81 1289, B850 L181. Gravel spread. Period 3. A small bar with a hook projecting from the centre. Length 7 mm.

1998 SF 1.81 1304, B867 L189. Demolition? level: Building 112. Period 4b. A flat horseshoe-shaped object, with one side slightly longer than the other. Length 28 mm.

1999 SF 1.81 2496, B2355 L237. Clay floor: Building 112, Room 6a. Period 4a. A disc with a slight hollow in the centre of each face. Diameter 18 mm.

2000 SF 1.81 1699, B1816 L362. Dump. ?Period 3. A hollow tapering spike. Length 100 mm, maximum diameter 8 mm.

2001 SF 1.81 1793, B2096 L476. Make-up for floor: Building 78, Room 5. Period 2. A disc with a burred central circular perforation. On the upper (not burred) side two slight circular projections flank the perforation. Diameter 20 mm.

2002 SF 1.81 2056, B2170 L604. Alleyway silt. Period 1. Two fragments of a hinged fitting, too small for positive identification but possibly military.

2003 SF 1.81 2455, B2266 282. Large cess-pit: Building 77, Room 5. Periods 1/2. A fragment of a disc 36 mm in diameter.

2004 SF 1.81 4957, B2566 L709. Boudican destruction debris: destruction of Building 78. Early Period 3. Two rectangles of copper-alloy with rounded ends held tightly together by a rivet. Possibly a crude strap-fitting. Length 27 mm, width 12 mm.

2005 SF 1.81 682, B187 F86. Robber trench for Building 112. Medieval. A mount similar to CAR **2,** fig 203,4640. Diameter 28 mm.

2006 SF 1.81 608, B126. Unstratified. A curved circular-section tapering rod with a slight hook at one end.

2007 SF 1.81 1047, B523. Unstratified. A rod with bud-like terminals. Possibly from a balance, but no gradations are visible. Length 295 mm.

2008 SF 1.81 515, C97 L8. Dump/demolition. Period 4. A fragment of a hook with a moulded terminal, possibly made from a hairpin. Length 24 mm.

2009 SF 1.81 892, C242 L19. Make-up: Building 114, Room 2. Period 4. A disc with a slight moulding near the edge. Diameter 28 mm.

2010 SF 1.81 1303, C285 L34. Dump? Period 3. A leaf-shaped object with a curved transverse section. There is an iron rivet through one end. Reminiscent of the bone leaves from Butt Road (*CAR* **2,** fig 187-8). Length 45 mm.

2011 SF 1.81 739, C205. Unstratified. A suspension loop similar to **1995** but without the small pedestal. Diameter 16 mm.

2012 SF 1.81 3375, D676 F684. Robber trench for Building 123. Period 6? A large blunt-ended hook-shaped object of tapering circular section. Length 137 mm, maximum diameter 10 mm.

2013 SF 1.81 4063, D1943 F1842. Large pit. Period 4. Two thick tapering strips each with marginal grooves and transverse mouldings at one end. Probably tweezers. Length of the longest 71 mm.

2014 SF 1.81 2580, E1440 L101. Dump/make-up: demolition of Building 84?. Early Period 2. A fragment of a rectangular plate with a rivet. Possibly a belt-plate. Length 21 mm.

2015 SF 1.81 2432, E1184 L158. Dump (redeposited destruction debris). Period 3a. A corroded ?terminal, or possibly a lock-pin. Length 41 mm.

2016 SF 1.81 2524, E1323 F1142. Ditch (roadside). Period 1. A fragment of a disc with a central rivet which attaches a small rectangular piece of sheet copper alloy to the disc. Diameter 15 mm.

2017 SF 1.81 2587, E1515 F1142. Ditch (roadside). Period 1. A corroded disc with a circular projection on the reverse. Diameter 18 mm.

2018 SF 1.81 1824, E1. Site clearance. Unstratified. A mount similar to *CAR* **2,** fig 203,4640 and **2005** above. Diameter 23 mm.

2019 SF 1.81 2092, E494. Unstratified. A peg with decorative mouldings. Possibly a furniture fitting. Length 29 mm.

2020 SF 1.81 2226, E748. Unstratified. A large hooked object, possibly a distorted nail. Length 107 mm.

2021 SF 1.81 2910, G156 L119. Occupation/midden: Building 120. Period 5b. Part of a rectangular strip with a damaged ?rounded terminal. There is a square perforation near the end with the terminal. Length 68 mm, width 25 mm.

2022 SF 1.81 4287, G2973 L2816. Upcast/dump. Period 3d. A flat irregularly-shaped ??stud with a shaft developing from a straight part of the edge. Maximum width 37 mm, length 11 mm.

2023 SF 1.81 4649, G3395 F3393. Hearth: Building 120. Period 5b. A flat disc, slightly damaged at one place on the circumference, with faint trances of iron on one side. Diameter 34 mm, thickness 1 mm.

2024 SF 1.81 2854, G49. Unstratified. Periods 4 to 6. A thick stud-shaped object, with a dished central area. Length 17 mm, diameter 28 mm.

2025 SF 1.81 4777, H531 L3. Topsoil/clearance. Period 6. A fragment of a shaft with a tapering triangular terminal. Possibly a toilet instrument. Length 55 mm.

2026 SF 1.81 4896, H663 F661. Pit: Building 81. Period 1 or 2. A large cast stud-like object, with convex head and thick shaft. Diameter of head 28 mm, diameter of shaft 17 mm, length 32 mm.

2027 SF 1.81 5037, J352. Unstratified. Periods 1 to 3? A thin copper-alloy bar of circular section. Each terminal is corroded, but seems to be folded over, beaten flat, and pierced (by a fragment of iron(?)). There is a small projection either side of the bar at the centre, and part of a flat projection rises from the ?upper side. Possibly part of a balance. Very possibly modern. Length 107 mm.

2028 SF 1.81 4640, K11 F10. Trench. Period 3? A roughly octangular piece of sheet copper alloy with a thick piece of lead solder (mostly now detached). Dimensions of sheet 39 mm by 37 mm by 1 mm thick. Lead 19 mm thick.

2029 SF 1.81 4889, M345 F314. Slot: Building 91. Period 2. A small flat mushroom-shaped object, apparently complete. Length 17 mm, width 24 mm.

2030 SF 1.81 5384, W69 F64. Robber trench. ?Period 6. A strip tapering gently to a point at one end. The other end is damage, but probably also originally tapered to a point. Length 82 mm, maximum width 11 mm.

MISCELLANEOUS UNIDENTIFIED IRON OBJECTS (Figs 5.67; **2031-2190)**

All have been X-rayed.

2037 SF 1.81 463 (X), B31 L2. Dump/midden build-up. Period 5. Strip.
2038 SF 1.81 2660 (X), B324 L34. Dump level. Periods 4/5. Rectangular plate with a projection at right angles.
2039 SF 1.81 1445(X), B393 L16. Dump/demolished clay wall: Building 112, Room 1. Periods 4/5. Strip.
2040 SF 1.81 1081 (X), B625 L118. Demolition of clay wall: Building 113, Room 9. Late Period 4. Spike. Length approximately 335 mm.
2041 SF 1.81 1427 (X), B631 L102. Dump: Building 113, Room 1. Late Period 4. Strip.
2042 SF 1.81 1450 (X), B688 L133. Occupation lenses: Building 113, Room 1. Period 4. Tongue-ended strip.
2043 SF 1.81 1472(X), B710 L139. Occupation: Building 112, Room 4. Period 4a. Strip.
2044 SF 1.81 1478(X), B813 L159. Make-up: Building 112, Room 4. Period 4a. Strip.
2045 SF 1.81 1476(X), B814 F250. Pit: Building 112, Room 1. Period 4a. Fragment of sheet iron broken across a perforation.
2046 SF 1.81 1470(X), B843 L183. Topsoil/midden/cess? Building 112. Period 4. Strip.
2047 SF 1.81 2657(X), B854 F192. Drain/slot. Period 3. Strip.
2048 SF 1.81 1679(X), B1225 L281. Midden/occupation. Period 3. Strip (in two fragments).
2049 SF 1.81 1759(X), B1768 F527. Pit. ?Periods 3/4. Sickle-shaped fragment.
2050 SF 1.81 1705(X), B1769 L415. Boudican destruction debris: destruction of Building 77. Early Period 3. Fragment of sheet iron with rivet.
2051 SF 1.81 1795(X), B1979 L514. Dump: Building 77, Room 1. Periods 1/2. Four fragments of curved object of shallow U-shaped section.
2052 SF 1.81 2654(X), B2048 L572. Occupation: Building 77, Room 3. Period 1. Sheet.
2053 SF 1.81 2402(X), B2186 F639. Stake-hole. Period 1. Thick sheet.
2054 SF 1.81 2709(X), B2502 L53. Clay dump. Period 4. Strip with rivet hole.
2055 SF 1.81 462(X), C80 F27. Large pit/pit complex. Periods 4/5. Strip.
2056 SF 1.81 563(X), C106 F10. Robber trench for Building 114. Early medieval. Large irregular-shaped sheet.
2057 SF 1.81 551(X), C121 L8. Dump/demolition. Period 4. Strip.
2058 SF 1.81 1266(X), C315 L34. Dump? Period 3. Sheet.
2059 SF 1.81 1356(X), C315 L34. Dump? Period 3. Strip.
2060 SF 1.81 2666(X), C327 L43. Dump. Early Period 3. Sheet.
2061 SF 1.81 2997(C), D176 L155. Demolition debris of Building 123: Building 123, Passage 4. Period 4. Object with one end turned over to form a suspension loop. Possibly a key.
2062 SF 1.81 3821(X), D1279 L266. Dump? Period 4. Sheet.
2063 SF 1.81 3874(X), D1201 L267. Dump. Period 4. Sheet.
2064 SF 1.81 3875(X), D1201 L267. Dump. Period 4. Rod.
2065 SF 1.81 3637 (X), D1119 L272. Dump/levelling: yard of Building 123. Period 4 demolition or Period 5. Curved strip.

2066 SF 1.81 3683(X), D1286 L272. Dump/levelling: yard of Building 123. Period 4 demolition or Period 5. Strip.
2067 SF 1.81 3531(X), D978 L482. Dump: Building 123, Room 9. Period 4. An iron loop with a broken projection. The outer face of the loop and both sides of the projection are coated with copper alloy. Possibly a handle. Diameter of loop 24 mm, length 34 mm.
2068 SF 1.81 3966(X), D1583 L647. Occupation/dump: Building 123, Passage 2. Period 4. Sheet.
2069 SF 1.81 3492(X), D653 L652. Demolition debris of Building 123: Building 123, Passage 4. Period 4. Sheet or strip.
2070 SF 1.81 4031(X), D1669 L652. Demolition debris of Building 123: Building 123, Passage 4. Period 4. Strip.
2071 SF 1.81 3502(X), D713 L714. Occupation: Building 123, Passage 4. Period 4. Strip.
2072 SF 1.81 3795(X), D1200 L1171. Demolition debris of Building 123? Building 123, Room 8. Period 4. Bent strip.
2073 SF 1.81 3885(X), D1218 L1214. Demolition debris: Building 123, Room 8. Period 4. Tapering strip.
2074 SF 1.81 3833(X), D1553 L1372. Dump: Building 123, Room 8. Period 4. Strip with rivet hole at one end.
2075 SF 1.81 3849(X), D1568 L1372. Dump: Building 123, Room 8. Period 4. Sheet.
2076 SF 1.81 3937(X), D1577 L1372. Dump: Building 123, Room 8. Period 4. Sheet.
2077 SF 1.81 3936(X), D1578 L1372. Dump: Building 123, Room 8. Period 4. Curved strip.
2078 SF 1.81 5372(C), D1794 L1372. Dump: Building 123, Room 8. Period 4. Thick sheet stuck to tile fragment.
2079 SF 1.81 4016(C), D1882 L1745. Dump or make-up? yard of Building 123. Period 4. An iron strip covered with mineralised wood, with a copper-alloy fitting riveted to one end.
2080 SF 1.81 3673(X), D1098 F22. Robbed drain: yard of Building 123. Period 4. ?Sheet.
2081 SF 1.81 3674(X), D1098 F22. Robbed drain: yard of Building 123. Period 4. ?Socket fragment with mineralised wood.
2082 SF 1.81 3316(C), D229 F88. Settlement in drain. Period 5 or 6. Large sheet, two contiguous edges at right angles. Maximum dimensions 245 by 180 mm.
2083 SF 1.81 3582(X), D1086 F352. Drain: Building 123, Passage 2. Period 4. ?Sheet.
2084 SF 1.81 3353(X), D636 F582. Hearth? Building 123, Room 9. Period 4. Sheet.
2085 SF 1.81 3385(X), D681 F684. Robber trench for Building 123. Period 6? Strip.
2086 SF 1.81 3893(X), D1304 F203. Gully (= F22): yard of Building 123. Period 5. Strip.
2087 SF 1.81 4036(X), D1682 F498. Robber trench for Building 123. Period 6. ?Shaft.
2088 SF 1.81 3876(X), D1294 F1252. Timber-lined drain: yard of Building 123. Period 4. Sheet.
2089 SF 1.81 3832(X), D1332 F1291. Large pit: yard of Building 123. Period 4. Sheet.
2090 SF 1.81 2333(X), E901 L64. Building debris: Building 108. Period 3b. Hook.
2091 SF 1.81 2606(X), E1580 L205. Dump. Period 2. Strip.
2092 SF 1.81 2640(X), E1625 L268. Make-up beside road. Period 1. Sheet.

2093 SF 1.81 2285 (X), E690 L32. Dump: Building 100. Period 3a. Strip.
2094 SF 1.81 2591 (X), E1352 F1166. Post-trench: Building 84. Period 1. Strip (in three fragments).
2095 SF 1.81 2571 (X), E1442 F1250. Pit. Late Period 2. Bar.
2096 SF 1.81 2596 (X), E1466 F1266. Pit: Building 101. Period 3. Sheet.
2097 SF 1.81 2081 (X), E494. Unstratified. Oval ring with projection at right angles.
2098 SF 1.81 2141 (X), E494. Unstratified. Tongue-ended strip with rivets, possibly from a hinge.
2099 SF 1.81 3143 (X), G164 L164. Occupation/midden? ?Period 5 or 6. Bar.
2100 SF 1.81 3144 (X), G164 L164. Occupation/midden? ?Period 5 or 6. Two strip fragments.
2101 SF 1.81 3145 (X), G164 L164. Occupation/midden? ?Period 5 or 6. Strip.
2102 SF 1.81 3146 (X), G164 L164. Occupation/midden? ?Period 5 or 6. Strip.
2103 SF 1.81 3169 (X), G230 L177. Occupation debris/midden: Building 120. Period 5b. Strip.
2104 SF 1.81 3066(X), G209 1209. Destruction debris/floor: Building 120. Period 5b. Sheet with rivet hole (also ?nail fragment).
2105 SF 1.81 3168 (X), G249 F14. Sand pit. Period 5. ?Socketed object.
2106 SF 1.81 3227 (X),
2107 SF 1.81 3244 (X),
2108 SF 1.81 3245 (X),
strip.
G338 F14. Sand pit. Period 5. Bent strip.
G363 F14. Sand pit. Period 5. Curved sheet.
G363 F14. Sand pit. Period 5. Tapering
2109 SF 1.81 3190 (X),
strip.
2110 SF 1.81 3012 (X),
7wire object.
2111 SF 1.81 3225 (X), G308 F270. Pit. ?Period 4. Right-angled sheet fragment (in two pieces) with three rivets.
2112 SF 1.81 3348 (X), G671 1359. Destruction debris: Building 120? Period 5b? Sheet with turned over edge. ?Binding.
2113 SF 1.81 3326 (X), G687 L164. Occupation/midden? ?Period 5 or 6. Sheet.
2114 SF 1.81 3404 (X),
G473 F14. Sand pit. Period 5. Tapering
G243 F201. Pit. Period 5 or 6. Part of
G712 1631. Destruction debris: Building
120? Period 5b? Strip.
2115 SF 1.81 3504 (X), G823 L581. Destruction debris/occupation: Building 120. Period 5b. Strip.
2116 SF 1.81 3520 (X), G826. Tile spread: Building 116. Period 5. ?Hook, with tapering rectangular section.
2117 SF 1.81 3452 (X), G858 1857. Occupation? ?Period 5 or 6. Sheet.
2118 SF 1.81 3506 (X),
G896 1894. Occupation: Building 120. Period
5b. ?Sheet.
2119 SF 1.81 3467 (X),
G948 1883. Destruction debris: Building
120? Period 5b? Strip?
2120 SF 1.81 3615 (C), G1181 F1144. Pit. Period 5 or 6. Short bar, trefoil-shaped in section, coated with copper alloy.
2121 SF 1.81 3651 (X), G1251. Periods 4-6. Unstratified. Sheet.
2122 SF 1.81 3588 (X), G1266 F1227. Hearth/pit: Puilding 120. Period 5b. Folded sheet.
2123 SF 1.81 3746(X), G1316 L1230. Dump/make-up: Building 120. Period Sa. Sheet.

2124 SF 1.81 3894 (X), G1318 L1304. Floor foundation? Building 120. Period Sb. Sheet (in two pieces).
2125 SF 1.81 3633 (X), G1359 L1050. Dump: Building 116. Period 5. Six sheet fragments.
2126 SF 1.81 3707 (X), G1359 L1050. Dump: Building 116. Period 5. Sheet.
2127 SF 1.81 3638 (X), G1372. Unstratified. Periods 3d/4-6. Identification uncertain. Possibly an agricultural implement.
2128 SF 1.81 3733(x), G1428 1987. Floor make-up/dump: Building 116. Period 5. Bar, flat at one end, square/rectangular section at the other. ?Wedge.
2129 SF 1.81 3735 (X), G1488 F1467. Pit: Building 120. Period 5b. Two fragments of sheet.
2130 SF 1.81 3783 (X), G1523 L1344. Occupation/trample: Building 117. Period 4. Sheet with ?rivet.
2131 SF 1.81 3873 (X), G1557 L1373. Floor make-up/dump. Period 3 or 4. Flat ?pear-shaped object, possibly with rivet placed centrally in the rounded part.
2132 SF 1.81 3884 (X), G1664 1981. Floor foundation: Building 116. Period 5. Bar or shaft.
2133 SF 1.81 3882 (X), G1733 L1391. Dump/construction debris: Building 116. Period 5. St:ip.
2134 SF 1.81 3855 (X), G1901 L1894. Demolition debris? Building 116? Period 5. Sheet (in three pieces).
2135 SF 1.81 3818 (X), G1936 L1935. Destruction debris? Period 6. Strip.
2136 SF 1.81 3967 (X), G2056 L1195. Floor make-up/dump: Building 116. Period 5. Strip or bar.
2137 SF 1.81 3920 (C), G2174 L1974. Destruction debris: Building 116. Period 5. ?Hinge fragment.
2138 SF 1.81 4005 (X), G2198 L1745. Burning. Period 3. Bar.
2139 SF 1.81 4002 (1) (X), G2308 12140. Road make-up. Periods 16 2. Strip or bar.
2140 SF 1.81 4008 (C), G2479 F2326. Hearth. Period 1 or 2. Strip.
2141 SF 1.81 4078 (X), G2516 F2326. Hearth. Period 1 or 2. Strip.
2142 SF 1.81 4105 (X), G2546 12522. Dump: Building 116. Period 5. Ferrule.
2143 SF 1.81 4083 (X), G2597 F2594. Pit. Period 3. Thin rectangular section strip in two pieces.
2144 SF 1.81 4138 (X), G2630 F2594. Pit. Period 3. Sheet.
2145 SF 1.81 4137 (X), G2633 F2363. Pit. Period 3. Two fragments of sheet.
2146 SF 1.81 4136 (X),
Strip.
G2681 12494. Dump: Building 116. ?Period 5.
G2683 L2364. Destruction debris. Period 3.
2147 SF 1.81 4102 (X),
Strip.
2148 SF 1.81 4272 (x),
G2839 L1825. Gravel surface. Period 3 or 4.
Two fragments of sheet.
2149 SF 1.81 4273 (X), G2840 12815. Dump: Building 119? Period 3 or 4. ?Sheet.
2150 SF 1.81 4408 (X),
G2918 F2893. Small pit. Period 3 or 4.
?Handle.
2151 SF 1.81 4409 (X), G2921 F2875. Sunken structure/tank. Period 3d. Lump (X-ray uniformative).
2152 SF 1.81 4405 (X), G2944 L1601. Destruction debris: Building 118? Period 4 or 5. Iron nail shaft embedded in a mass of mineral-preserved wood chips possibly Salix sp (willow) or Populus sp (pcplar). This probably represents carpentry

waste (Jacqui Watson, Ancient Monuments Laboratory).
2153 SF 1.81 4475 (X), G3113 L3046. Burning: Building 120. Period 5b. 7Bracket fragment, no rivets (or rivet holes) located.
2154 SF 1.81 5337 (X), G3121 L3081. Occupation: Building 120. Period 5b. Three sheet fragments. ?Lock-plate.
2155 SF 1.81 5338 (X), G3123 L3106. Silting. Period 6. Strip, in two pieces.
2156 SF 1.81 5343 (x), G3197 L3191. Occupation: Building 118. Period 4. Two sheet fragments.
2157 SF 1.81 4548 (X), G3263 L3191. Occipation: Building 118. Period 4. Sheet or blade fragment.
2158 SF 1.81 5329 (X), G3460 F3458. Pit. Period 6. Long thin strip with elongated leaf-shaped terminal at one end, perforated terminal (broken) at the other.
2159 SF 1.81 5328 (X), G3524 L3505. Dump: Building 118. Period 4. Strip or bar.
2160 SF 1.81 5327 (x), G3565 L2233. Occupation: Building 97. Period 3. Two strips.
2161 SF 1.81 5339 (X), G3577 L3361. Dump. Period Sb. Strip. (?Blade.)
2162 SF 1.81 5346 (X), G3813 L3780. Dump. Period 3. A rectangular plate with two projections on one short side. Probably a hinged strap-plate. Length 57 mm, width 41 mm.
2163 SF 1.81 5348 (X), G3930 L3624. Cultivated soil. Period 3. Strip.
2164 SF 1.81 5057 (X), G4120 L4030. Dump. Period 1. Three fragments of sheet.
2165 SF 1.81 5356 (C), G4145 F4136. Pit: Building 98. Period 3. An object with a handle of circular section. Possibly a knife.
2166 SF 1.81 5349 (X), G4200. Unstratified. Periods 1-6. Strip with one large and six small perforations.
2167 SF 1.81 5224 (X), G4233 L4220. Dump. Period 3d. Strip.
2168 SF 1.81 4266 (X), H53 L3. Topsoil/clearance. Period 6. Tongue-ended strip.
2169 SF 1.81 4349 (x), H192 L3. Topsoil/clearance. Period 6. Strip with rivet holes.
2170 SF 1.81 4511 H286 L3. Topsoil/clearance. Period 6. Strip with split end. Possibly post-Roman.
2171 SF 1.81 5281 (X), H275 1236. Robbed mosaic floor: Building 116. Period 5. A large hook of rectangular section with a flattened terminal pierced by two large rivet/nail holes. Length 184 mm.
2172 SF 1.81 4595 (X), H388 L387. Destruction debris: Building 120? Period 5 or 6. Thick ?bar.
2173 SF 1.81 5279 (X), H513 1497. Burning: Building 120. Period 5a. ?Blade fragment.
2174 SF 1.81 4534 (X), H253 F81. Pit. Period 6. Bent and broken strip?
2175 SF 1.81 5278 (X), H500. Unstratified. Periods 4-6. Three strip fragments.
2176 SF 1.81 5294 (X), J30 L1. Site clearance. Unstratified. Strip.
2177 SF 1.81 5301 (X),
2178 SF 1.81 5313 (X),
pieces.
2179 SF 1.81 5324 (X),
2. Sheet, in two pieces.
2180 SF 1.81 5228 (X),
2181 SF 1.81 5239 (X),
390 F84. Posthole. Period 5. Strip.
J160 F114. Pit. Period 6. ?Blade, in two
J337 F248. Wall: Building 79. Period 1 or
K101 F81. Trench. Period 3b or 3c. Bar.
K245 F92. Trench. Period 3b or 3c. Four

fragments of sheet.
2182 SF 1.81 5230 (X), K248 F79. Large pit. Period 3a. Strip.
2183 SF 1.81 5244 (X), M129 F128. Pit. Period 3. Sheet.
2184 SF 1.81 5030 (C), M221 F220. Pit: yard of Building 123. Period 4. Bar covered with mineralized wood.
2185 SF 1.81 5252 (X), M230 L1. Site cleaning. Unstratified. Strip with rectangular perforation (nail/rivet hole).
2186 SF 1.81 4933 (X), M330 F319. Pit. Period 3. ?Handle.
2187 SF 1.81 5266 (X), M383 1243. Clay floor: Building 91? Period (1 or) 2. Four sheet fragments.
2188 SF 1.81 4900 (X), M465 F454. Pit or trench? Building 91. Period 2. Sheet.
2189 SF 1.81 5251 (X), M626 F584. Drain. Period 3. ?Blade fragment.
2190 SF 1.81 5229 (X), M730 F472. Pit: Building 91. Period 2. Curved strip.

MISCELLANEOUS UNIDENTIFIED LEAD OBJECTS (Fig 5.68; 2191–2211)
2192 SF 1.81 545, A233 121. Make-up. Period 4. Hook.
2193 SF 1.81 759, A352 L98. Occupation. Period 1 (or 2). Strip.
2194 SF 1.81 900, A447 L170? Charcoal (occupation?). Period 3. Strip.
2195 SF 1.81 813, B250 F116. Slot: Building 112, Room 5. Period 4b. Right-angled strip.
2196 SF 1.81 1105, B600 F196. Pit. Period 4. Rectangular sheet.
2197 SF 1.81 1131, 8681 F223. Slot. ?Period 4. Strip.
2198 SF 1.81 1282, B847 F252. Small pit. Period 3. Folded sheat.
2199 SF 1.81 1288, B853 L148. Dump/topsoil: Building 112, Room 6b. Period 4b. Sheet.
2200 SF 1.81 1573, B1039 1236. Make-up: Building 112, Room 5. Period 4a. Disc, diameter 21 mm.
2201 SF 1.81 1523, B1199 L266. Dump: Building 112? Room 2. Period 3/4. Sheet.
2202 SF 1.81 1646, B1214 L292. Dump. Period 3. ?Disc fragment.
2203 SF 1.81 4970, B2573 F889. Shallow scoop/small pit: Building 78, Room 2. Period 2. Strip with large lump of nomogenous solder.
2204 SF 1.81 914, C246 F75. Irregular gully: Building 114, Room 1. Late Period 3/early Period 4. Fragment of sheet with iron nail.
2205 SF 1.81 1110, C281 L35. Dump. Period 3. Sheet.
2206 SF 1.81 4006, D1803 F1802. Small animal hole: Building 123, Room 10. Period 4. Sheet with iron strip adhering.
2207 SF 1.81 4141, G2889 12284. Floor surface. Period 3 or 4. Sheet. 70ffcut.
2208 SF 1.81 4715, G3585 L3566. Dump/levelling: Building 116. Period 5. Thin strip.
2209 SF 1.81 3985, G2121 L1814. Horticultural soil. Period 3. Two strips held together by an iron rivet.
2210 SF 1.81 4282, H170 F81. Pit. Period 6. Sheet. 20ffcut.
2211 SF 1.81 3939, G2143 F1976. Pit. Period 3 or 4. Sheet.

MISCELLANEOUS UNIDENTIFIED BONE OBJECTS (Fig 5.69; 2212-2224)
2222 SF 1.81 1717, B1718 1415. Boudican destruction debris: destruction of Building 77. Early Period 3. A fragment of bone with XI (or IX) crudely scraped into the surface.
2223 SF 1.81 1432, C285 L34. Dump? Period 3. A burnt 'cap' terminal, very similar to the one on the military bone buckle from Lion Walk (CAR 2, fig 144,4176). Length 9 mm.
2224 SF 1.81 2993, D186 F259. Robbing pit. Period 6. A ?hairpin with a flattened head, or a blank for a needle. The tip is missing. Length 80 mm.

MISCELLANEOUS UNIDENTIFIED CLAY OBJECTS (rig 5.70; 2225-2228)
Catalogued in printed text.

UNIDENTIFIED STONE OBJECT (Fig 5.71; 2229)
Catalogued in printed text.

CHAPTER 6

The Roman small finds from the Gilberd School site

by Nina Crummy

CATEGORY 1: OBJECTS OF PERSONAL ADORNMENT OR DRESS

BROOCHES

BOW BROOCHES

Group *1: La Tene III and Roman brooches with no hook and no arms*

Type 14. Copper-alloy and iron brooches with a hinged pin and single curve to the bow (1). Iron examples of this type are pre-conquest in origin, and die out in the pre-Flavian period.

1 SF GBS 1277, A220 LI. Topsoil. Post-Roman. An iron strip bow brooch which has been bent and partly split in the centre of the bow. The head, which would have been rolled over downwards to take the axial bar that fixed the pin, has been forced open away from the back of the brooch, possibly to enable the bar and/or hinge pin to be reused. The catchplate is solid and complete except for the catch that held the pin. Length 85 mm.

Group *2: Brooches with cylindrical spring-cover*

Type 27. Simple rosette brooch with applied moulded plate (Fig 6.1; 2).

Catalogued in printed text.

Group 4b: Early hinged brooches

Type 51. Aucissa brooch (Fig 6.1; 3-4).

b) with a stout rib down the centre of the bow

4 SF GBS 761(C), A1634 L100. Make-up. Period 2. A brass brooch complete except for most of the pin. The rolled-over head is corroded but seems to have decorative mouldings. The terminal knobs holding the axial bar survive. The flat part of the head has knurled transverse mouldings and a pair of lateral notches. The bow is similar to Fig 6.1, **3,** with marginal mouldings and a knurled central moulding. The bow is separated from the short foot by transverse (almost diagonal) grooves and a slight moulding. There are further slight mouldings above the foot-knob. Length 50 mm.

Type 60. Simple Hod Hill brooch (Fig 6.1; 5-7).

5 SF GBS 469(C), A770 L35. Dump (weathered). Period 3b. The head and bow of a brass brooch. The narrow bow has stout marginal mouldings but seems otherwise to be plain. The

junction of bow and foot is marked by a transverse moulding. Length 27 mm.

Type 61. Hod Hill brooch with lateral lugs at the base of the bow (8).

8 SF GBS 33(C), A45 F3. Large rubbish pit. Modern. The foot and only a small part of the bow of a brass/gunmetal brooch probably of this type. The bow has marginal mouldings, a central moulding, and a small semicircular lug on each side. A transverse moulding separates bow and foot, and there is another, possibly knurled, above the foot-knob. Most of the catchplate is missing. Length 35 mm.

Type 62. Hod Hill brooch with lateral lugs set in the middle of each side of the bow (9) .

9 SF GBS 837(C), A1916 L168. Occupation. Period (1 or) 2. A very corroded and damaged tinned brass brooch. Part of the rolled-over head, most of the pin, a small part of the catchplate,and one side of the bow are missing. The head has two slight transverse mouldings, probably knurled, at the junction with the bow, which is short and has three widely-spaced knurled ridges. The surviving side has a knurled marginal ridge and the lug, the end of which is missing, has a further ridge. The upper part of the foot is obscured by corrosion products, but on the lower pronounced transverse mouldings are clearly visible. The catchplate is solid. Length 44 mm.

Type 63. Hod Hill brooches with lateral lugs at the top of the bow (10-11).

10 SF GBS 455(C), A797. Unstratified. Roman. A very corroded and damaged tinned brass brooch. The lateral lugs are missing but are indicated by corrosion products at either side of the top of the bow. The hinged pin is missing. The junction of head and foot is marked by a knurled transverse moulding. The bow has broad grooves and three central knurled ridges. It is separated from the foot by transverse grooves and mouldings. The base of the foot and most of the catchplate are missing. Length 49 mm.

11 SF GBS 836(C), A1998 F259. Pit. Period 1. A distorted and damaged tinned brass brooch. The pin, one lateral lug, and part of the catchplate are missing. The narrow bow has marginal mouldings and a central ridge. The surviving lug also appears to be moulded. The bow and foot are separated by two transverse mouldings, and there is another above the terminal knob. The catchplate is solid. Length 51 mm.

Group 5: Early sprung brooches

Type 84. Almgren's 'strongly-profiled brooch' (Fig 6.1; 12).
Catalogued in printed text.

Type 89. The Continental *£orm* of the Colchester brooch (Fig 6.1; 13)
Catalogued in printed text.

Type 90. Colchester brooch (Fig 6.1; 14-16).

15 SF GBS 662(C), A1316 L66. Dump. Period 3. A small bronze example of the type, very corroded but complete except for the forward hook and the lower part of the pin. The spring is of six turns. The bow is of flattened D-section. The catchplate is solid. Length 33 mm.

16 SF GBS 1012(C), A2317 L110. Dump: demolition of Building 131. Period 2. A large brass brooch, complete except for the lower part of the pin and the catchplate. The short side-wings are grooved. The spring is of eight turns. The forward hook projects for only a short distance down the head. The bow is more or less lenticular in section, but is not as sharply formed as Fig 6.1, **14.** Length 80 mm.

Type 92. Colchester B brooch (Fig 6.1; 17-18).

18 SF GBS 1093(C), B191 L8. Midden. Period 3. A distorted brooch, complete except for most of the pin. Each side-wing has a terminal groove. The spring is of ten turns. The bow ridge is plain. The catchplate has a triangular perforation. Length 64 mm.

PLATE BROOCH

Unclassified (Fig 6.1; 19).

Catalogued in printed text.

PENANNULAR BROOCHES

Fowler Type A (1960, 152). Penannular brooch with rounded bulbous terminals (20) .

20 SF GBS 646(C), A1287 **L60.** Dump. Period 3a. Three fragments of a very corroded copper-alloy (not analysed) penannular ring, possibly a brooch of Fowler **(1960,** 152) Type A. Internal diameter approximately 30 mm.

Fowler Type B (1960, 152). Penannular brooches with the terminals coiled and folded back on the same plane as the ring (Fig 6.1; 21-22).

22 SF GBS 1178(C), B447 F67. Pit: Building 131, ?Room 13. Period 1. An iron brooch. Maximum diameter 36 mm.

HAIRPINS

BONE PINS

Pins are incomplete unless otherwise stated.

Type 1. Pins with a plain conical head (Fig 6.2; 23-27) .

24 SF GBS 44, A37 L1. Topsoil. Post-Roman. Length 46 mm.

25 SF GBS 244, A167 L1. Topsoil. Post-Roman. Length 51 mm.

26 SF GBS 48, A45 F3. Large rubbish pit. Modern. Length 40 mm.

27 SF GBS 323, A438 F79. Shallow pit. Period 3b. Length 54 mm.

Type 2. Pins with 1-4 transverse grooves beneath a conical head (Fig 6.2; 28-47).

33 SF GBS 12, A28 L1. Topsoil. Post-Roman. Two grooves. Length 99 mm.

34 SF GBS 255, A131 L1. Topsoil. Post-Roman. Damaged head, one groove discernible. In two pieces. Length 47 mm.

35 SF GBS 165, A156 L1. Topsoil. Post-Roman. Two grooves. Length 41 mm.

36 SF GBS 62, A59 F14. Row of ?post-holes. Post-medieval. Two grooves. Length 30 mm.

37 SF GBS 270, A302 F57. Shallow pit. Period 3b. Two grooves. Length 63 mm.

38 SF GBS 509, A888 F66. Pit. Period 3b. Damaged head, one groove discernible. Stained green. Length 64 mm.

39 SF GBS 549, A900 F66. Pit. Period 3b. Two grooves. Length 63 mm.

40 SF GBS 550, A900 F66. Pit. Period 3b. One groove. Length 71 mm.

41 SF GBS 317, A456 F79. Shallow pit. Period 3b. Two grooves. Length 47 mm.

42 SF GBS 318, A456 F79. Shallow pit. Period 3b. Two grooves. Length 37 mm.

43 SF GBS 412, A672 F107. Shallow pit. Period 3b. Two grooves. Length 48 mm.

44 SF GBS 417, A672 F107. Shallow pit. Period 3b. Two grooves. Length 88 mm.

45 SF GBS 416, A690 F107. Shallow pit. Period 3b. Two grooves. Length 41 mm.

46 SF GBS 463, A805 F117. Pit. Period 3. Two grooves. Length 60 mm.

47 SF GBS 1233, B567. Unstratified. Two faint grooves. Length 53 mm.

Type 6. Pins with a reel- or bead-and-reel-shaped head (Fig 6.2; 48).

Catalogued in printed text.

Miscellaneous (Fig 6.2; 49-52).

52 SF GBS 985, B26 L4. Dump. Period (2 or) 3a. ?Pin of flattened section with a crudely pointed head. Length 100 mm.

JET PIN

53 SF GBS 507, A846 F123 (lower fill). Pit. Period 3. A fragment of the shaft of a jet pin. Length 34 mm.

METAL PINS

Type 5. Pins with a groove or grooves beneath a flattened spherical head (Fig 6.3; 54).

Catalogued in printed text.

Miscellaneous (Fig 6.3; 55-56)

56 SF GBS 1077, B191 L8. Midden. Period 3. A copper-alloy ?pin with a very corroded head of apparently circular section. Length 65 nun.

BEADS

GADROONED BEADS

Melon beads (Fig 6.4; 57-65).

58 SF GBS 744, A1604 L47. Scorched floor: Building 134. Period 2. Turquoise frit. Length 12 mm diameter *3* mm.
59 SF GBS 804, A1759 L126. 'Midden'. Period 3. Turquoise frit. Fragment. Length 14 mm, diameter 18 mm.
60 SF GBS 352, A516 F90. Pit. Period 3b. Turquoise frit. Fragment. Length 11 mm.
61 SF GBS 470, A802 F119. Gully: Building 134. Period 2 (or 3a). Turquoise frit. Length 12 mm, diameter 14 mm.
62 SF GBS 495, A819 F119. Gully: Building 134. Period 2 (or 3a). Decayed turquoise frit. Length 13 mm, diameter 15 mm.
63 SF GBS 147, A129. Unstratified. Post-Roman. Decayed turquoise frit. Length 11 mm, diameter 14 mm.
64 SF GBS 1104, A2459. Unstratified. Decayed turquoise frit. Length 15 mm, diameter 17 mm.
65 SF GBS 1087, B205 L8. Midden. Period 3. Turquoise frit. Fragment. Length 11 mm, diameter 14 mm.

ANNULAR BEAD

Plain annular bead (Fig 6.4; 66).
Catalogued in printed text.

SHORT BEADS

(length more than 1/3 but less than 9/10 diameter)

Short biconical beads (Fig 6.4; 67-68).
68 SF GBS 1114, B240. Unstratified. Opaque ?green glass. Length 2 mm, diameter 5 mm.

LONG BEAD
(length more than 1 1/10 diameter)

Long cylinder bead (Fig 6.4; 69).
Catalogued in printed text

ARMLETS

SHALE ARMLETS

Plain (70-71).

70 SF GBS 170, A96 L1. Topsoil. Post-Roman. Fragment, laminated. Only part of the height of the section survives.

71 SF GBS 537, A614 F105. Small pit. Post-Roman. Fragment. Oval section, thickness 8 mm, height 10 mm.

FINGER-RINGS (Fig 6.5-6; 72-73)

Catalogued in printed text.

EARRINGS (Fig 6.5; 74)

Catalogued in printed text.

BUCKLES AND BELT-FITTINGS (Fig 6.7; 75-76)

76 SF GBS 251(C), A255 L7. Dump. Period 3a. A broken and distorted copper-alloy buckle with the remains of an iron tongue. Length 23 mm.

FOOTWEAR (77-87)

77 SF GBS 405, A653 F27. Pit. Period 3b. Ten iron hobnails. Average head diameter 10 mm, average length 12 mm.

78 SF GBS 722, A1481 F27. Pit. Period 3b. Fourteen iron hobnails, corroded together into five groups. One groups forms a heel-shaped curve. Average head diameter 9 mm, average length 12 mm.

79 SF GBS 725, A1481 F27. Pit. Period 3b. At least 43 iron hobnails. Average head diameter 8 mm, average length 11 mm. Where the tip of the shaft survives it is clenched.

80 SF GBS 867, A2034 F213. Large pit. Period 1. Seventeen iron hobnails, average head diameter 10 mm, average length 13 mm. Also the flat circular head of a ?stud. Diameter 23 mm.

81 SF GBS 1134, A2060 F213. Large pit. Period 1. A group of three iron hobnails corroded together. Average head diameter 11 mm, average length 13 mm.

82 SF GBS 860, A2061 F213. Large pit. Period 1. At least twelve iron hobnails. Average head diameter 9 mm, average length 13 mm. Where the tip of the shaft survives it is clenched.

83 SF GBS 908, A2065 F213. Large pit. Period 1. At least 104 iron hobnails. Many corroded together in groups. Average head diameter 8 mm, average length 13 mm. Where the tip of the shaft survives it is clenched.

84 SF GBS 909, A2066 F213. Large pit. Period 1. Seventy-one iron hobnails, many corroded together. Average head diameter 11 mm, average length 16 mm.

85 SF GBS 1014, B51 F12. Pit: Building 131, Room 10. Period 1 or 2. At least 28 iron hobnails, many corroded together. Average head diameter 8 mm, average length 12 mm. Also a stud with a flat head, diameter 15 mm, surviving length 10 mm.

86 SF GBS 1237, B62 F12. Pit: Building 131, Room 10. Period 1 or 2. At least 91 iron hobnails, several corroded together in strips, both straight and curved. Average head diameter 8 mm, average length 11 mm. Where the tip of the shaft survives it is clenched.

87 SF GBS 1175, B446 F92. Hobnails *in situ* on sand surface near gully F73: Building 133, Room 2. Period 2 or 3. Fourteen iron hobnails. Average head diameter 9 mm, average length 12 mm.

CATEGORY 2: TOILET, SURGICAL OR PHARMACEUTICAL INSTRUMENTS

All objects are of copper-alloy unless otherwise stated.

MIRRORS (Fig 6.8; 88-89)

Catalogued in printed text.

NAIL-CLEANER (FIG 6.8; 90)

Catalogued in printed text.

TWEEZERS (91)

91 SF GBS 852(C), A1943 L188. Midden. Period 3a. Probably a fragment of a blade from a pair of tweezers. Length 34 mm.

TOILET SPOONS (Fig 6.8; 92-95)

a) with small round flat or cupped scoop

95 SF GBS 828(C), A1976 L188. Midden. Period 3a. A flat ?scoop from a toilet spoon and a ?shaft. Length (bent) 45 mm.

TOILET SET (Fig 6.8; 96)

Catalogued in printed text.

SPATULA-PROBE (Fig 6.8; 97)

Catalogued in printed text.

SPATULA (Fig 6.8; 98)

Catalogued in printed text.

PROBES (99-101)

99 SF GBS 678, A1369 L55. Dump. Period 3. A probe with no shaft remaining. Length 21 mm.

100 SF GBS 614, A1169 F153. Scoop. Period 3a. A probe with a shaft which thickens towards the broken end, probably indicating an originally double-ended instrument. Length 77 mm. *See* **101** below.

101 SF GBS 617, A1169 F153. Scoop. Period 3a. A probe with a shaft which thickens towards the broken end, probably indicating an originally double-ended instrument. Length 89 mm. Though this probe and **100** both seem to have been double-ended, they do not form one instrument between them.

MISCELLANEOUS INSTRUMENTS (Fig 6.8; 102-103)

103 SF GBS 258, A262 F55. Pit. Roman. A shaft thicker towards the middle than at either end and therefore possibly of a toilet instrument. Length 111 mm.

CATEGORY 3: OBJECTS USED IN THE MANUFACTURE OR WORKING OF TEXTILES

NEEDLES

SEWING NEEDLES

Type 1. Needles with a pointed head (Fig 6.9; 104-111).
b) round eye
107 SF GBS 441, A734 F115. Shallow pit (scoop). Period 3b for 4. Bone. Fragment of the head only. Length 19 mm.
c) figure-of-eight eye
109 SF GBS 47, A45 F3. Large rubbish pit. Modern. Bone Tip missing. Length 37 mm.
110 SF GBS 46, A45 F3. Large rubbish pit. Modern. Bone. Tip missing. Length 72 mm.

Type 2. Needles with a flat spatulate head (Fig 6/9; 112-118).
a) rectangular eye
114 SF GBS 989, B44 L10. Midden. Period 3a. Copper-alloy. Complete. Bent to form a hook. Length (full) 116 mm. See **115.**
115 SF GBS 320, A456 F79. Shallow pit. Perod 3b. Copper-alloy. Complete. Bent to form hook. Length (full) 119 mm. The angles to which this needle and **114 h**ave been bent are very close. This could imply that they have both been bent for an identical specific purpose.
116 SF GBS 1144, B317 F25. Pit. Period 3 or 4. Copper-alloy. Tip missing. Length 121 mm.
117 SF GBS 898, A2178 L161. Street metalling. Periods 1-3. Copper-alloy. Tip missing. Length 87 mm.
118 SF GBS 1106, B220 L9. Make-up. Period 3. Copper-alloy. Complete. Length (bent) 143 mm.

Needle fragments (119)
119 SF GBS 298, A359 F71. Pit. Post-Roman. Bone. Stained green. Only the head above the eye is missing. Length 59 mm. Probably of Type 1. The green staining indicates a date in the late 1st or 2nd century.

WEAVING COMB (Fig 6.10; 120)

Catalogued in printed text.

CATEGORY 4: HOUSEHOLD UTENSILS AND FURNITURE

SPOONS

Type 1. Spoons with a round bowl (Fig 6.11; 121-124)

123 SF GBS 843, A1838 L154. Pit fill. Post-Roman. The handle and a small part of the bowl of a bone spoon. Length 82 mm.

124 SF GB lp63, A2431 L263. Daub floor: Building 131, Room 5. Periords 1 or 2. Most of a copper-alloy spoon in eight fragments. Length approximately 110 mm.

Type 3. Spoons with a mandolin-shaped bowl (125) .

125 SF GBS 1105, B215. Unstratified. Roman. A fragment of a spoon, possibly of mandolin-shape, with the bowl offset from the handle, and a fragment of the handle.

OBJECTS USED IN THE PREPARATION OR SERVING OF FOOD

Shale trays (Fig 6.11; 126-128)

127 SF GBS 197(C), A181 L1. Topsoil. Post-Roman. A corner of a rectangular shale object, probably a tray. Only a small part of a finished surface survives. There is no trace of any decoration. Maximum dimensions 82 by 74 by 15 mm thick.

128 SF GBS 338, A338. Unstratified. Roman. A fragment of worked shale with part of an edge surviving. Possibly from a rectangular tray. Length of surviving edge 20 mm.

Shale vessel (Fig 6.11; 129)

Catalogued in printed text

Copper-alloy vessels (Figs 6.11-12; 130-134)

134 SF GBS 476(C), A726 L13. Dump (possibly make-up for Building 138). Periods 3b or 4. Eight fragments of sheet copper-alloy and a curved piece which may represent part of a vessel rim or footring. All the pieces are burnt and corroded.

Gridiron (Fig 6.13; 135)

Catalogued in printed text.

Quernstones (136-143)

136 SF GBS 946, A2148 L47. Scorched floor: Building 134. Period 2. Lava, fragment, possibly from the edge of an upper-stone, with traces of grooving.

137 SF GBS 429, A676 L24. Dump. Period 3. Lava, fragment from the edge of an upper-stone, with vertical grooving on the edge and traces of grooving on the surviving face.

138 SF GBS 1002, B47. Unstratified. Roman. Lava, ?lower-stone fragment.

139 SF GBS 1245, B206 L8. Midden. Period 3. Lava, two fragments with no obvious worked faces.

140 SF GBS 1069, B143 F28. Pit. Period 3. Fragment of lava with no obvious worked face.

141 SF GBS 882, A1921 L178. Occupation. Period (2 or) 3a. Lava, ?upper-stone fragment, all surfaces are very weathered.
142 SF GBS 802, A1698 LI. Topsoil. Post-Roman. Lava, fragment, with traces of grooving on both surfaces.
143 SF GBS 711, A1325 L61. (?Weathered) occupation: Building 136. Period 2. Lava, two very weathered fragments with no obvious worked faces.

Stone mortars (Fig 6.13; 144-145)
145 SF GBS 622, A1070 L45. Boudican destruction debris (redeposited) : destruction of Building 134. Period (2 or) 3a. A large fragment of very weathered ?gastropodic limestone, possibly from a dished mortar. Also over forty smaller fragments. Internal diameter of the large fragment approximately 250 mm.

LAMPS (Fig 6.14; 146-153)

Catalogued in printed text.

FURNITURE FRAGMENTS AND FITTINGS

Handles (Fig 6.15; 154-156)
155 SF GBS 881, A1895 L146. Occupation (weathered?). Period 1 & 2. A fragment of an iron strip, broken at one end and hooked at the other. Probably part of a handle. Length 109 mm.
156 SF GBS 847, A1961 L194. Dump. Period 1 or 2. A fragment of an iron strip hooked at one end. Possibly part of a handle. Length approximately 90 mm.

BOX FITTINGS (Fig 6.15; 157-158)

158 SF GBS 826, A1961 L194. Dump. Period 1 or 2. A fragment of a stud of a type usually associated with wooden boxes with decorative copper-alloy fittings (as CAR **2,** 2179-82). The stud has an iron shaft and a convex copper-alloy head filled with ?lead solder. Surviving length 24 mm, surviving.....

CATEGORY 5: OBJECTS USED FOR RECREATIONAL PURPOSES

COUNTERS FOR BOARD GAMES

BONE COUNTERS

Type 1. Plain counters (Fig 6.16; 159-167) .

164 SF GBS 560, A1012 L28. Dump. Post-Roman. Both surfaces are flat. There is an indentation from a lathe centre on one face. The edges are bevelled. Diameter 17 mm, thickness mm.

165 SF GBS 602, A1126 F143. Pit: Building 131. Period 1 ***or 2.*** Both surfaces are flat. The edges are bevelled. Diameter 14 mm, thickness 3 mm.

166 SF GBS 666, A1337 L84. Occupation. Period 1 or 2. Both surfaces are flat. The edges are bevelled. Diameter 12 mm, thickness 2 mm.

167 SF GBS 1204, A2524 L281. Dump. Period 3. Both surfaces are flat. There is an indentation from a lathe centre on one face. Diameter 18 mm, thickness 3 mm.

GLASS COUNTERS (Fig 6.16; **168-174)**

171 SF GBS 598, A110 L48. Dump (demolition?). Period 3. Half counter of opaque white glass. Diameter 20 mm, thickness 6 mm.

172 SF GBS 755, A1623 L112. ?Occupation: Building 131. Period 1 or 2. Opaque cobalt blue glass. Diameter 18 mm, thickness 7 mm.

173 SF GBS 781, A1747 F232. Timber drain: Building 131. Period 1 (& ?2). Corroded opaque ?white glass. Diameter 18 mm, thickness 6 mm.

174 SF GBS 1094, B191 L8. Midden. Period 3. Opaque white glass. Diameter 14 mm, thickness 6 mm.

POTTERY COUNTERS

Counters with a ground edge and at least one abraded surface (175-184).

175 SF GBS 1269, B322 F7. Pit. Modern. Fragment. Base sherd. Black burnished ware. Diameter approximately 42 mm, thickness 6 mm.

176 SF GBS 337, A179 LI. Topsoil. Post-Roman. Fragment. Base sherd. Grey ware. Diameter approximately 45 mm, thickness 9 mm.

177 SF GBS 343, A220 LI. Topsoil. Post-Roman. Fragment. ?Base

sherd. Grey vegetable-tempered ware. Diameter approximately 65 mm, thickness 15 mm.

178 SF GBS 348, A318 F27. Pit. Period 3b. Wall sherd. Black burnished ware. The inner curve of the junction of wall and base shows that this sherd came from the very bottom of the wall. Both faces, particularly the outer, are abraded. The edge is rough in places. Diameter 43 mm, thickness 7 mm.

179 SF GBS 1121, B233 F17. Pit. Period 3b. Base. Coarse grey ware. Diameter 57 mm, thickness 10 mm.

180 SF GBS 515, A89 F10. ?Foundation. Post-medieval. ?Base sherd. White-painted Oxford-type ware. Diameter 32 mm, thickness 10 mm. Part of one face has broken off.

181 SF GBS 1072, B153 F31. Pit. Period 3. Body sherd. Black burnished ware. Diameter 35 mm, thickness 6 mm. Both faces are abraded.

182 SF GBS 1251, A865 L10. Midden/dump. Period 3b. Rim sherd. *Terra sigillata*. Diameter 19 mm, thickness 6 mm. Both faces are abraded.

183 SF GBS 1290, A865 L10. Midden/dump. Period 3b. Fragment. Base. Coarse grey ware. Diameter approximately 48 mm, thickness 8 mm. Both faces are abraded. There may be traces of an incised inscription on the outer face.

184 SF GBS 1289, A249 L2. 'Topsoil'. Period (3 &) 4. Fragment. ?Base sherd. Coarse grey ware. Diameter approximately 54 mm, thickness 8 mm.

Counters with no abraded surface but with an edge ground for at least part of its circumference (185-186).

185 SF GBS 361, A530 F80. Large pit. Medieval. Wall sherd. Grey vegetable-tempered ware. Diameter 50 mm, thickness 12 mm.

186 SF GBS 548, A900 F66. Pit. Period 3b. Wall sherd. Black burnished ware. Diameter 49 mm, thickness 10 mm.

Counter rough-outs (187).

187 SF GBS 392, A437 F79. Shallow pit. Period 3b. Base sherd. Black burnished ware. Diameter 57 mm, thickness 9 mm.

Pierced pottery counters (188).

188 SF GBS 304, A125 L1. Topsoil. Post-Roman. Base. Fragment. Coarse grey ware. The edge is ground and both faces are abraded. Diameter 59 mm, thickness 112 mm. The wall of the hour-glass-shaped hole is smooth. Diameter of hole 6 mm.

TILE COUNTERS (Fig 6.17; **189-191)**

190 SF GBS 1281, B530 L56. Midden/dump. Period 3. Fragment. Possibly not a counter.

191 SF GBS 399, A550 L13. Dump (possibly make-up for Building 138). Period 3b or 4. The edge may be partly ground. Diameter 70 mm, thickness 19 mm.

BONE DICE (Fig 6.16; 192-194)

194 SF GBS 368, A530 F80. Large pit. Medieval. A fragment of a burnt die similar to Fig 6.16, **193,** with the marrow cavity running from the four side to the three side. The surviving complete dimension is 21 mm, making it very close to **193** in size. The two dice may have been a pair, a possibility supported by this fragment having been burnt, almost certainly in the Boudican destruction of Phase 2.

CATEGORY 6: OBJECTS EMPLOYED IN WEIGHING AND MEASURING

SCALES (Fig 6.18; 195)

Catalogued in printed text.

CATEGORY 7: OBJECTS USED FOR OR ASSOCIATED WITH WRITTEN COMMUNICATION

SEAL-BOXES

Type 1. Ovate (Fig 6.19; 196)
Catalogued in printed text.

Type 2. Round (197).

197 SF GBS 482(C), A791 L28. Dump. Post-Roman. The base of a round seal-box with part of the contents preserved by metal corrosion products. The underside is damaged, but seems to have been pierced by three circular holes. Diameter 18 mm.

STYLI (Fig 6.20; 198-199)

Catalogued in printed text.

CATEGORY 8: OBJECTS ASSOCIATED WITH TRANSPORT

HARNESS

Hipposandal (Fig 6.21; 200)
Catalogued in printed text.

Bridles (Fig 6.22; 201-202)
Catalogued in printed text.

?Horse furniture (Fig 6.21; 203)
Catalogued in printed text.

WALL VENEER AND OTHER ARCHITECTURAL STONE FRAGMENTS (Figs 6.23-4; 204-234)

213 SF GBS 1285, A18 L1. Topsoil. Post-Roman. Imperial porphyry. No edges. Maximum dimensions 97 by 81 mm, 19 mm thick.

214 SF GBS 762, A1639 L1 Topsoil. Post-Roman. Grey marble with dark grey veins and some purple flecks. One edge 45 mm long. Maximum dimensions 55 by 45 mm, 10 mm thick.

215 SF GBS 801, A1698 L1. Topsoil. Post-Roman. Shelly limestone, probably from the Purbeck beds (as Purbeck burr). A strip with a rounded edge, possibly used as skirting. Maximum dimensions 108 by 40 mm, 30 mm thick. Possibly post-Roman.

216 SF GBS 479, A628 L13. Dump (possibly make-up for Building 138). Period 3b or 4. Limestone, probably from the Purbeck beds. Weathered The upper face has a groove at one end, 47 mm long, with a ?miscut immediately adjacent, not quite parallel. Maximum dimensions 78 by 53 mm, 22 mm thick.

217 SF GBS 480, A628 L13. Dump (possibly make-up for Building 138 Period 3b or 4. Purbeck marble, weathered. One edge, smooth and bevelled, 90 mm long. Maximum dimensions 91 by 63 mm, 25 mm thick.

218 SF GBS 623, A1088 L46. Boudican destruction debris (redeposited). Period (2 or) 3a. Purbeck marble, burnt and split. Two contiguous edges at right angles, 190 by 121 mm. Maximum dimensions 190 by 151 mm, 52 mm thick. The underside is very rough, and coarsely bevelled towards the edges.

219 SF GBS 764, A1625 L112. ?Occupation: Building 131. Period 1 or 2. Burnt whiteish marble. Maximum dimensions 100 by 54 mm, 12 mm thick.

220 SF GBS 777, A1665 L122. Hearth waste. Periods (1 or) 2. ?Chalk, very weathered. Two contiguous ?edges, not quite at right angles. Maximum dimensions 70 by 50 mm, 11 mm thick.

221 SF GBS 1213, A2520 L161. Street metalling. Periods 1-3. Purbeck marble, worn and weathered. Maximum dimensions 85 by 63 mm, 30 mm thick. The upper and lower faces of this piece are well finished, but the broken edges are worn. **It** has been discarded, presumably being broken during building works or possibly surplus to requirements, and reused as street metalling.

222 SF GBS 313, A377 F27. Pit. Period 3b. ?Chalk, very weathered. Maximum dimensions 41 by 24 mm, 6mm thick.

223 SF GBS 256, A335 F33. Robber trench for Building 138. Medieval. Purbeck marble, burnt. Maximum dimensions 67 by 37 mm, 14 mm thick.

224 SF GBS 363, A427 F41. Remnants of north-south foundation: Building 138. Period 4. Purbeck marble. One edge, bevelled, 118 mm long. Maximum dimensions 118 by 47 mm, 27 mm thick.

225 SF GBS 449, A565 F90. Pit. Period 3b. Discoloured off-white marble. A fragment with one smooth surface, and one smooth edge, 102 mm long. The smooth edge does not extend for the full sickness of the veneer, but stops short 5 mm from the smooth surface, leaving what is now a rough rib along the junction of face and edge. Maximum dimensions 107 by 37 mm, 25 mm thick.

226 SF GBS 649, A1305 F177. Small pit. Period 3a. Purbeck marble. Maximum dimensions 125 by 123 mm, 27 mm thick.

227 SF GBS 1004, A2290. Unstratified. Purbeck marble. One edge, 94 mm long. The upper face has a fine polish. Maximum dimensions 94 by 63 mm, 15 mm thick.

228 SF GBS 1236, B579 L1. Topsoil. Post-Roman. Limestone. ?Discoloured whiteish marble. Purbeck beds. One good edge, 63 mm long. Possibly another, contiguous but not at right angles, 70 mm long. Maximum dimensions 81 by 70 mm, 23 mm thick.

229 SF GBS 1101, B183 L8. Midden. Period 3. Purbeck marble, ?burnt and weathered. Two edges, contiguous and at right angles, 116 by 21 mm. Maximum dimensions 116 by 66 mm, 17 mm thick.

230 SF GBS 1122, B233 F17. Pit. Period 3b. Micaceous sandstone. Two roughly-worked edges, contiguous and more or less at right angles, 72 by 51 mm. Maximum dimensions 90 by 51 mm, 24 mm thick.

231 SF GBS 1123, B233 F17. Pit. Period 3b. Cipollino marble. One edge, 49 mm long. This edge has a return at right angles, which has been cut and finished for the full thickness of the veneer only at that corner. The cut curves to a depth of only 3 mm at the other end of the fragment. Below the cut section the marble has broken off, with the broken face sticking out beyond the cut face at the shallower end, but being well inside it towards the finished end. This cannot be a piece which broke while being sawn, as the cut face has been polished. Maximum dimensions 81 by 49 mm, 19 mm thick.

232 SF GBS 1005, B50. Unstratified. Period 3a. Purbeck marble. One edge, 139 mm. There is a smooth slight projection on the edge which may be for keying the piece in. Maximum dimensions 138 by 127 mm, 28 mm thick.

233 SF GBS 1263, B547. Unstratified. Purbeck marble, weathered (in two fragments). The piece has no edges, and neither surface is smooth. The stone is not so weathered that a smooth surface would not have survived. It may be part of a rough fragment waiting to be worked. Maximum dimensions 205 by 177 mm, 47 mm thick.

234 SF GBS 1264, B547. Unstratified. Purbeck marble. One ?edge. Maximum dimensions 109 by 74 mm, 29 mm thick.

TESSERAE (235-244)

235 SF GBS 4, A9 L1. Topsoil. Post-Roman. One chalk tessera.

236 SF GBS 393, A275 L9. Dump. Period 3a. One chalk tessera.

237 SF GBS 648, A1174 L73. Demolition debris. Period 3a. Two small chalk tesserae set in a bed of white mortar with a grout of opus *signinum*.

238 SF GBS 362, A540 F90. Pit. Period 3b. One chalk tessera.

239 SF GBS 238, A236. Unstratified. Post-Roman. One tessera, unidentified grey stone.

240 SF GBS 499, A630 L13. Dump (possibly make-up for Building 138). Periods 3b or 4. Twenty-eight small tesserae, apparently of unfired clay. Many show signs of having been cut (?sawn) from a larger block.

241 SF GBS 335, A205 L1. Topsoil. Post-Roman. One small tessera

of ?unfired clay, as **240** above.

242 SF GBS 273, A311 F46. ?Foundation. Post-medieval. Two small tesserae of ?unfired clay, as **240** above.

243 SF GBS 274, A259 F46. ?Foundation. Post-medieval. Ten small tesserae of ?unfired clay, as **240** above.

244 SF GBS 717, A762 F119. Gully: Period 2 (or 3a). Two small tesserae of ?unfired clay, as **240** above.

CATEGORY 10: TOOLS

TOOL HANDLES

BONE AND ANTLER HANDLES

One-piece handles (Fig 6.25; 245-248)

248 SF GBS 1283, A1679 L129. ?Dump. Post-Roman. The lower (blade) end of a plain bone handle with a waisted end, as CAR **2,** fig 110, 2921-2. Part of the iron tang survives. Length 46 mm.

Two-piece handles (Fig 6.25; 249-250)

Catalogued in printed text.

COPPER-ALLOY HANDLE (Fig 6.25; 251)

Catalogued in printed text.

BLADES (Fig 6.26; 252-257)

254 SF GBS 637, A1274 F144. Slot: for partition wall? Building 136. Period 2. Possibly a fragment of an iron blade. Length 68 mm, maximum width 13 mm.

255 SF GBS 790, A1749 L136. Occupation (weathered?). Period 1 or 2. Possibly a fragment of an iron blade. Possibly part of **256** below. Length 69 mm, width 10 mm.

256 SF GBS 792, A1770 L136. Occupation (weathered?). Period 1 or 2. A fragment of a narrow iron blade, with a straight edge and a back which lies parallel to the edge then curves gently to the tip. **255** above may be part of then blade. Length 62 mm, maximum width 12 mm.

257 SF GBS 731(C), A1542. Unstratified. Period 3a. An iron blade with the back and edge parallel at the upper end and both curving gently to meet at the tip. The upper end is obscured by corrosion products but would seem to be broken. Length 167 mm, maximum width 27 mm.

HONES (Fig 6.27; 258-263)

262 SF GBS 564, A1016 L52. Dump. Period 3a. A fragment of a ?hone of circular section, split longitudinally and used after splitting. Both ends are broken. Coarse micaceous

sandstone. Length 66 mm, width 30 mm.

263 SF GBS 904, A2160 L93. Dump. Period 2. A fragment of a rectangular-section hone of calcareous sandstone. Maximum length 56 mm, section 16 by 34 mm.

CATEGORY 11: FASTENERS AND FITTINGS

NAILS AND STUDS

COPPER-ALLOY NAILS

Nails with a globular, bun-shaped or biconical head (264-270).

264 SF GBS 268, A279 L9. Dump. Period 3a. Diameter of head 9 mm. Length (incomplete) 21 mm.

265 SF GBS 532, A902 L10. Midden/dump. Period 3b. Diameter of head 6 mm. Length 18 mm.

266 SF GBS 563, A1016 L52. Dump. Period 3a. Diameter of head 5 mm. Circular section shaft. Length 23 mm.

267 SF GBS 590, A1039 L52. Dump. Period 3a. A nail attached to a flint pebble by corrosion products.

268 SF GBS 825, A1890 F237. Pit(s). Period 3. Diameter of head 9 mm. Length 26 mm.

269 SF GBS 1169, B402 L52. Occupation: Building 131, Rooms 10-11. Period 1 or 2. Diameter of head 8 mm. Length 27 mm.

270 SF GBS 1053, B151 F29. Robber trench for Building 137. Medieval. Diameter of head 9 mm. Polygonal section shaft. Length 43 mm.

Nails with a flat head (Fig 6.28; 271-273)

272 SF GBS 433, A628 L13. Dump (possibly make-up for Building 138). Period 3b or 4. Diameter of head 6 mm. Length (incomplete; bent) 19 mm.

273 SF GBS 1130, B282 F42. Stake hole. Period 1 or 2. Diameter of head 5 mm. Length (bent) 5 mm.

Nails with a convex head (Fig 6.28; 274-278)

275 SF GBS 659, A1325 L61. (?Weathered) occupation: Building 136. Period 2. Diameter of head 6 mm. Circular section shaft. Length 15 mm.

276 SF GBS 1046, A2421 L262. Daub floor: Building 131, Room 6. Period 1 or 2. Diameter of head 17 mm. Circular section shaft. Length (bent) 37 mm.

277 SF GBS 1041, A2419 L268. Daub floor: Building 131, Room *4.* Period 1 or 2. Only a fragment of the head survives. Diameter approximately 9 mm. Length (incomplete) 12 mm.

278 SF GBS 459, A805 F117. Pit. Period 3. Diameter 9 mm. Length (incomplete) 31 mm.

COPPER-ALLOY STUDS

Studs with a flat head (Fig 6.28; 279-289)

284 SF GBS 88(C), A101 L1. Topsoil. Post-Roman. Corroded fragment. Diameter 12 mm. The shaft has been bent over to lie close to the head and is obscured by corrosion.

285 SF GBS 964, A2280 L109. Occupation (?weathered). Period (1 or) 2. Fragment. Diameter 11 mm. Length (?complete) 5 mm.

286 SF GBS 90(C), A80 F3. Large rubbish pit. Modern. Fragment of stud head with concentric convex mouldings. Diameter approximately 21 mm.

287 SF GBS 437(C), A752 F42. Pit(s). Post-medieval. Fragment of

stud head with concentric convex mouldings. Diameter 14 mm.

288 SF GBS 426, A669 F107. Pit. Period 3b. Possibly fragment of stud with flat head.

289 SF GBS 987, A2351 F310. Trench: Building 131. Period 2. Possibly fragment of stud with flat head.

Studs with a convex head (Fig 6.28; 290-300)

292 SF GBS 530(C), A929 L14. Dump. Period 3. Fragment of stud with slightly convex head and turned-down rim. Diameter approximately 22 mm. Square section shaft. Length (incomplete) 6 mm.

293 SF GBS 575, A1035 L45. Boudican destruction debris (redeposited): destruction of Building 134. Period (2 or) 3a. ?Convex-headed corroded stud in five fragments.

294 SF GBS 1279, A1918 L157. Occupation: Building 131. Period 1 or 2. Complete. Diameter 12 mm. Length 15 mm.

295 SF GBS 510, A888 F66. Pit. Period 3b. Tip of shaft missing. Diameter 13 mm. Square section shaft. Length (incomplete; bent) 12 mm.

296 SF GBS 468, A732 F117. Pit. Period 3. Complete. Diameter 12 mm. Square section shaft. Length (clenched) 8 mm.

297 SF GBS 693, A1391 F190. Scoop. Period 3. Fragment of stud with slightly convex head. Diameter approximately 16 mm. Square section shaft. Length 7 mm.

298 SF GBS 1128, B290 L34. Make-up. Period 1 (or 2). Small stud with convex head. Diameter 6 mm. ?Square section shaft. Length approximately 9 mm.

299 SF GBS 1059(C), B164 F32. Gully. Period 3. Fragment of convex-headed stud. Shaft missing. Diameter approximately 14 mm.

300 SF GBS 1000, B47. Unstratified. Roman. Fragment of stud with slightly convex head and turned-down rim. Diameter 22 mm. ?Square section shaft. Length 10 mm.

Other studs (Fig 6.28; 301-302)

Catalogued in printed text.

IRON NAILS

Contexts directly associated with Period 1 and Period 2 buildings and containing iron nails are listed below by building number, and within buildings by period.

Building 131

Period 1

A1985	L197	Occupation: Room 3
A2436	L269	Occupation: Room 3
A2442	L271	Occupation: Room 4
A2444	L271	" "
A2015	L209	
A2465	F330	Occupation: Room 5
A2467	F336	Hearth/oven: Room 5
A2446	L273	Slot: Room 5
A2454	L277	Occupation: Room 6
B553	L64	Make-up: Room 6
B605	L64	Make-up: Rooms 10-13
B612	L64	" " " "
B616	L64	" "
B620	L64	" "
B606	L82	?Occupation spread: Rooms 10-13
B439	L60	Occupation: Room 11
B347	F58	Slot (for timber-framed partition): Rooms 11/12
B378	L55	Occupation: Room 12
B398	L55	
B397	F63	Shallow pit: Room 12
B365	L53	Make-up: Room 13
B396	F67	Pit: ?Room 13
A2325	L220	Make-up
B432	F85	?Drain

Period 1/2

A2355	L251	(1 or 2)	Dump: Room 3
A2386	L251	"	" "
A2407	L260	"	Dump: Room 3
A1617	L120	"	Occupation: Rooms 3 & 4
A1618	L120	"	" "
A1729	L120	"	" "
A1791	F225	(1 (+ 21))	Slot for partition wall: Rooms 3/4
A1580	LI13	(1 or 2)	Dump: Room 4
A1778	L144	"	Daub floor: Room 4
A1788	L149	"	Occupation: Room 4
A2397	L264	"	Occupation: Room 4
A2403	L264	"	" "
A2417	L268	((1 or) 2)	Daub floor: Room 4
A2418	L268	"	" " "
A2425	L268	"	" " "
A1780	F212	"	Hearth?: Room 4
A2307	F302	(1 or 2)	Posthole: Room 4
A2432	F208	(1 (+ 21))	Slot: Rooms 4/5
A1990	L208	(1 or 2)	Make-up: Room 5
A2396	L258	((1 or) 2)	Occupation: Room 5
A2422	L263	(1 or 2)	Daub floor: Room 5
A2430	L263	"	" "
A2440	L263	"	" "
A1656	F217	((1 or) 2)	Pit: Room 5

A2457 F224 (1 (+ 21)) ?Partition wall slot: Rooms 5/6
A1899 L128 (1 or) 2) Daub floor: Room 6
A2415 L262 (1 or 2) Daub floor: Room 6
A2420 L262 " ""
A2429 L262 " ""
A2439 L262 " ""
B402 L52 " Occupation: Rooms 10-11
B401 F71 ((1 or) 2) Pit: Room 11
B419 F71 " ""
B404 F70 (1 (or 2)) Pit: Room 12
A2127 L130 (1 or 2) Occupation
A1863 L142 " Occupation (?weathered)
A1958 L142 " ""
A2005 L157 " "
A2130 L228 " "
A2132 L229 ((1 or) 2) Make-up
A1101 F143 (1 or 2) Pit
A1876 F232 (1 (+ 2)) Timber drain
B341 L38 (1 (or 2)) Dump
B335 L38 "
B356 L48 " Occupation
B306 F38 (1 + 2) Drain
B367 F38 " "
B405 F38 " "
B433 F38 " "

Period 2

B334 L35 Burnt floor: Rooms 12-13
B377 L47 Make-up: Rooms 12-13
A1798 L151 Dump
A1849 L151 "
A2004 L151 "
A2333 L247 "
A2340 L247 "
A2347 L250 Occupation
A2361 L250 "
A2375 L250 "
A2377 L250 "
A1440 F196 Posthole
A1577 F207 Slot for timber frame
A1595 F207 " "
A1993 F207 " "
A1564 F210 Slot for robbed-out daub wall
A1582 F210 " " "
A1607 F210 " " "
A1725 F221 ?Decayed timber partition wall/collapsed beam
A2345 F310 Trench

Period 2 or 3a destruction

B283 L25 Dump/destruction debris

Building 132

Period 1

A2537 F339 Posthole

Building 133

Period 2

B426 F73	Gully: Room 2
B437 F73	" "
B448 F73	" "
B500 F73	" "
B429 F79	Beam slot: Room 2
B490 F83	Charred timber plank 'floor': Room 2
B497 F115	Slot (for timber partition): Room 2
B510 F115	" " "
B644 F159	Posthole: Room 2
B653 F160	Posthole: Room 2
B555 L69	Occupation (burnt floor): Room 3
B577 L69	" " "
B591 L69	" " "
B592 L69	" " "
B594 L69	" " "
B456 F60	Beam slot & remains of daub block wall: Room 3
B595 F144	?Posthole: Room 3
B602 L87	Burnt floor & occupation: Room 4
B604 L90	Make-up: Room 4
B619 L91	Occupation: Room 4
B455 F93	Slot: Room 4
B546 F93	" "
B642 F93	" "
B450 F66	Robbed-out partition wall: Rooms 4/7
B372 L33	Occupation: Room 6
B551 L33	" "
B371 F61	Slot: Rooms 6/7
B575 L81	Occupation (burnt): Room 7
B633 L97	Make-up: Room 7
B641 L97	" "
A1536 F205	Timber drain?
A1574 F205	" " "
B626 L95	Occupation spread
B83 F18	Charred timber ?revetting
B451 F72	Gully
B514 F72	"
B531 F72	"
B586 F72	"
B527 F117	Pit/gully
B596 F117	"
B529 F131	Post-pit (with 6 post/pile holes)
B540 F131	" "
B561 F135	Post-pit (with post/pile holes)
B589 F142	Group of post/pile holes
B624 F151	Group of pile holes

Period 2 destruction

B268 L27	dump (redeposited Boudican destruction debris)

Period 2/3 destruction

A2393 F178 (2 (or 3a))	Backfilled 'terrace'
B394 L26 (2 or 3a)	Dump (redeposited Boudican destruction debris)
B406 L26	" " " "
B415 L26	" " " "
B422 L26	" " " "
B428 L26	" " " "

B440 L26 " " " "
B573 L26 " " " "
B269 L28 (2 or 3) Boudican destruction debris (?in situ)
B254 L28 " " " "
B387 L28 " " " "
B391 L28 " " " "
B18 Fl (2 or 3a) Terraced area
B53 Fl " " "
B54 Fl " " "
B55 Fl " " "
B61 Fl " " "
B73 Fl " " "
B74 Fl " " "
B80 Fl " " "
B82 Fl " " "
B84 Fl " " "
B92 Fl " " "
B101 Fl " " "
B112 Fl " " "
B323 Fl " " "
B326 Fl " " "
B360 Fl " " "
B369 Fl " " "

Building l34

Periods 1/2
A2149 L232 ((1 or) 2) Dump

Period 2
A1606 L47 Scorched floor
A1644 L47 " "
A1716 L47 " "
A1949 L47 " "
A1963 L47 " "
A2147 L47 " "
A2483 L47 " "
A2144 L158 ?Make-up
A2145 L231 Dump
A2150 ?L231 "
A2167 ?L231 "

Period 2 destruction
A1068 L45 (2 or 3a) Boudican destruction debris (redeposited)
A1051 L46 " " " "
A1071 L46 " " " "
A1089 L46 " " " "
A1092 L46 " " " "
A1980 L46 " " " "

Building 135

Period 2
B339 L39 Burnt floor
B349 F46 Remains of ?daub wall

Peripds 2/3a destruction

B248	L20	(2 or 3a)	Dump/redeposited destruction debris	
B284	L20	"	"	"
B301	L20	"	"	"
B634	L20	"	"	"

Building 136

Period 2

A1078	L61	Occupation (?weathered)	
A1313	L61	"	"
A1324	L61	"	"
A1283	F144	Slot: for partition wall?	
A1243	F145	Narrow slot: for thin partition wall?	
A1257	F173	Posthole (?Building 136)	
A1457	F203	Slot with tile footing	

Period 2 destruction

A1175	L67	(2 or 3a)	Dump; redeposited Boudican destruction debris

RIVETS (Fig 6.28; 303-306)

305 SF GBS 562(C), A1006 L45. Boudican destruction debris (redeposited): destruction of Building 134. Period (2 or) 3a. A small copper-alloy stud with a flat head (damaged) and riveted shaft similar to the group from Fig 6.28,**304.** The underside is smooth. Diameter of head 9 mm. The shaft is obscured by the irregular piece of metal used to form the lower riveted end.

306 SF GBS 496, A819 F119. Gully: Building 134. Period 2 (or 3a). A copper-alloy riveted stud as those from Fig 6.28, **304.** Diameter 9 mm.

BOSS (307)

307 SF GBS 694(C), A1386 F186. Gully. Period **1.** A copper-alloy boss with concentric convex mouldings. There are traces of a lead-based solder on the reverse. Diameter 38 mm.

HOLDFASTS (Fig 6.29; 308-312)

310 SF GBS 1052, B128 F15. Large pit. Period 3b or 4. An iron holdfast as Fig 6.29, **309.** Length 43 mm, maximum diameter of

head (broken) 25 mm, rove (broken) 29 by approximately 24 mm.

311 SF GBS 1102, B165 F15. Large pit. Period 3b or 4. An iron holdfast as Fig 6.29, **309.** Length 55 mm, maximum diameter of head 32 mm, rove 23 by 22 mm.

312 SF GBS 1021, B88 F15. Large pit. Period 3b or 4. The circular head of an iron holdfast as Fig 6.29, **309,** and a rectangular fragment which may be part of the rove. Maximum diameter of head 30 mm.

DOUBLE-SPIKED LOOPS (Fig 6.29; 313-316)

316 SF GBS 609(C), A1143 L62. ?Weathered occupation/topsoil. Period 3. A fragment of a distorted copper-alloy double-spiked loop. One of the tapered blades is missing. Length 50 mm.

JOINER'S DOG (Fig 6.29; 317)

Catalogued on printed text.

T-STAPLES (Fig 6.29; 318-319)

319 SF GBS 485, A813 F121. Pit. Period 3. Possibly the head of an iron T-staple. The arms of the head are short. Surviving length 50 mm.

RING-HEADED PINS (320-321)

320 SF GBS 582, A1046 F133. ?Pit (not a feature). Period 3b. The head of a ring-headed pin, length 57 mm.

321 SF GBS 556, A1008 L45. Boudican destruction debris (redeposited): destruction of Building 134. Period (2 or) 3a. The head and possibly part of the shaft of a ring-headed pin. A pierced terminal, or possibly the head of another

pin, is fitted to the head. Length of head 64 mm, length of ?shaft fragment 92 mm.

HINGE FITTINGS (Fig 6.29; 322-328)

326 SF GBS 561, A887 F66. Pit. Period 3b. A fragment of a bone hinge unit as CAR **2,** fig 131, 4096, with one perforation Length 34 mm, diameter approximately 23 mm.

327 SF GBS 870, A2131 L228. Occupation: Building 131. l or 2. An iron tongue-ended strap from a loop-hinge. The rounded end is pierced, and the strap has a central rivet hole and a rivet *in situ* at the straight end. Length (curved) approximately 125 mm, width 25 mm.

328 SF GBS 1291, A2588 F232. Timber drain. Period 1 (& *?2)* . An iron bent tongue-ended strap from a loop-hinge. A ?nail-head is corroded to the strap near a perforation close to the rounded end. Length 61 mm, width 31 mm.

COLLAR AND FERRULE (329-330)

329 SF GBS 1090, B205 L8. Midden. Period 3. A fragment of a collar with terminal ridges and a central moulding. Length 12 mm, diameter 16 mm.

330 SF GBS 1032, A2405 L265. Make-up: Building 131, Room 4. Period 1 or 2. A fragment of an iron ?ferrule or possibly of a weapon with a split socket. Length 25 mm.

LOOP-HEADED STRAP (Fig 6.29; 331)

Catalogued in printed text.

BINDING (332-340)

332 SF GBS 523, A880 L9. Dump. Period 3a. A fragment of sheet copper-alloy folded in half, possibly binding. No edges are distinguishable.

333 SF GBS 567, A990 L9. Dump. Period 3a. A fragment of a sheet of copper-alloy folded into a curved tube. Length 65 mm, diameter 5 mm.

334 SF GBS 539, A922 L36. ?Topsoil/dump. Period 3. Two fragments of copper-alloy curved binding of acute V-shaped section. Total length 48 mm, width 4 mm.

335 SF GBS 654, A1218 L55. Dump. Period 3. A fragment of copper-alloy U-shaped binding with a fragment of sheet copper-alloy held inside it. Length 25 mm, width 5 mm.

336 SF GBS 751, A1634 L100. Make-up. Period 2. Two fragments of U-shaped copper-alloy binding. Length (bent) 159 mm, width 3 mm.

337 SF GBS 718, A1446 F121. Pit. Period 3. A fragment of copper-alloy binding of pear-shaped section, with a rivet at the one surviving complete end. Surviving length 19 mm, width 20 mm.

338 SF GBS 868, A2046 F263. Shallow pit. Period 1. A copper-alloy tube made from sheet metal, in two fragments and crushed at each end. Length 66 mm, diameter 9 mm.

339 SF GBS 1188, B498 F115. Slot (for timber partition): Building 133, Room 2. Period 2. Two fragments of copper-alloy binding of U-shaped section. One fragment is in two pieces. Total length 57 mm, width 12 mm.

340 SF GBS 1115, B240. Unstratified. Site clearance. A small length of a distorted tube made from sheet copper alloy. Length 13 mm, diameter 6 mm.

LOCKS AND KEYS

Lift key (341)

341 SF GBS 933, A1806 L23. Dump. Period 3. The handle and a very small part of the bit of an iron L-shaped lift-key. The rounded terminal of the handle is pierced for suspension. Length 79 mm.

Slide keys (342-343)

342 SF GBS 554, A900 F66. Pit. Period 3b. An iron slide key with a large hole for suspension in the rounded terminal. X-ray indicates a minimum of four teeth. Length 82 mm. Height of teeth 18 mm.

343 SF GBS 1119, B231 L9. Make-up. Period 3. A fragment of an iron slide key with three teeth set on an L-shaped bit. Height of the teeth 28 mm.

CATEGORY 12: OBJECTS ASSOCIATED WITH AGRICULTURE, HORTICULTURE, AND ANIMAL HUSBANDRY

RAKE (Fig 6.30; 344)

Catalogued in printed text.

BELLS (Fig 6.31; 345)

Catalogued in printed text.

CATEGORY 13: MILITARY EQUIPMENT

ARMOUR

Belt and apron fittings of copper alloy and bone (Fig 6.32; 346-360)
Catalogued in printed text.

Copper-alloy and iron fittings from laminated body armour (Fig 6.32; 361-367)

365 SF GBS 432(C), A677 L24. Dump. Period 3. A corroded rectangular fitting pierced by a long-shafted dome-headed tack. One end terminates in a thin loop, now mostly missing, the other end is broken. Possibly an insubstantial strap-loop, or possibly a girdle-plate tie-hook from laminated armour. The downwards curve of the loop, and the length and position of the tack militate against the latter identification, but the thin narrow plate with its lack of moulded decoration is not truly compatible with a strap-loop. Length 38 mm, width 11 mm. Length of tack 26 mm.

366 SF GBS 893(C), A2146 L231. Make-up: Building 134. Period 2. A corroded copper-alloy buckle and strap-plate probably similar to Fig 6.32,**363.**

367 SF GBS 1216, A2532 L288. ?Dump. Period (1 or) 2. A corroded and distorted iron buckle for a strap, and a fragment which may possibly be a strap-plate, though this latter identification is very uncertain. Width of the buckle at the bar 17 mm.

Laminated armour (Fig 6.33; 368)
Catalogued in printed text

Scale armour (Fig 6.34; 369-370)
Catalogued in printed text.

Helmet (Fig 6.34; 371)
Catalogued in printed text.

ARMS

Shield (Fig 6.35; 372)
Catalogued in printed text.

Sword (Fig 6.36; 373-374)
Catalogued in printed text

Dagger (Fig 6.37; 375)
Catalogued in printed text.

Javelin (376)

376 SF GBS 1260, A2553 F248. Shallow gully. Period 1. A long

shaft of circular section, probably part of the shaft of a javelin. Length 202 mm, diameter 6 mm.

Caltrop (Fig 6.39; 377)
Catalogued in printed text.

CAVALRY HARNESS FITTINGS

Strap-loops (Fig 6.40; 378-380)
Catalogued in printed text.

Button-and-loop fastener Fig 6.40; 381)
Catalogued in printed text.

Pendant (Fig 6.40; 382
Catalogued in printed text.

CATEGORY 14: OBJECTS ASSOCIATED WITH RELIGIOUS BELIEFS AND PRACTICES

FIGURINES (FIG 6.41; 383-385)

Catalogued in printed text.

CATEGORY 15: OBJECTS AND WASTE MATERIAL ASSOCIATED WITH METAL WORKING

EVIDENCE FOR THE MANUFACTURE/REPAIR OF MILITARY EQUIPMENT (Figs 6.42-3; 386-388)

Catalogued in printed text.

METALLURGICAL WASTE

Discussed by Paul Budd in printed text (p 138).

METALLURGICAL DEBRIS FROM GILBERD SCHOOL

Debris examined by Paul Budd of the Ancient Monuments Laboratory (excluding crucible fragment)

Period 1 (c 44-49)

AF338	A2535	Gully Iron rich fuel ash slag

Building 131, Room 4 (c 44-60/1)

AF323	A2409	Gully Large piece of reduced fired clay, probably hearth lining, with added layer of deeply vitrified material

Building 133, Room 2 ***(c*** 49-60/1)

BF159	B639	Iron rich fuel ash slag

Building 136

Period 2 (c 49-60/1)

AF180	A1339	Slot Iron rich fuel ash slag
	A1356	Iron rich fuel ash slag and reduced fired clay

Period 3a (early post-Boudican)

AF144	A1283	Slot Fuel ash slag

Dump layers

		Period (2 or) 3a dump (c 49-100/125)
AL43	A1264	Iron rich fuel ash slag
		Period 3a dump (60/1-c 100/125)
AL81	A1265	Iron rich fuel ash slag
		Period 3 dump (60/1- c 250/275)
AL52	A1075	Iron rich fuel ash slag
		?Period 3 dump (60/1- c 250/275)
AL24	A676	Piece of fired and partly vitrified clay which may contain metal working waste

Medieval casting pit

AF80	A473	Bronze casting waste
	A411	(High tin) bronze casting waste, some attached to fired clay

	A384	(High tin) bronze casting waste, some attached to fired clay. Some fairly large pieces. (Also copper corrosion products attached to shell fragment)
	A432	Bronze casting waste mixed with fragments of solid iron (possible iron object)
	A385	Soil sample containing a number of pieces of fired clay (possibly mould fragments), also charcoal fragments and hammerscale splatter
	A489	Bronze casting waste
AF85	A435	Bronze casting waste
	A606	?Fuel ash slag with high lead signal
	A471	Three large pieces of fired clay . Probably part of a mould for a large object. Traces of bronze or gunmetal detected
	A710	Two probable mould fragments associated with the casting of a copper alloy object
	A675	Reduced fired clay, probable mould fragment, traces of copper and lead detected

Post-medieva1

AF42	A2003	Pit
		Copper alloy casting waste
	A1292	(High tin) bronze casting waste
	A280	Bronze casting waste

Post-Roman topsoil

AL1	A825	Bronze casting waste

Debris not examined by the Ancient Monuments Laboratory

Tap slag

Building 136 slot AF180 A1417 (c 49-60/1)
Period 3 scoop AF86 A449 (60/1- c 250/275)
Period 3a dump AL9 A275 (60/1-c 100/125)
?Period 3a pit AF95 A552 (?60/l-c 100/125)
Period 3b pit AF107 A670 (*c* 100/125-250/275)
Period 3b scoop AF87 A463 (*c* 100/125-250/275)
Medieval casting pit AF80 A472
Post-Roman topsoil AL1 A29
" " " A18
Modern AF59 A460

Copper alloy waste

Post-medieval pit(s) AF42 A351
Modern pit AF2 A35

Slag & burnt daub ?hearth structure

?Period 3b or 4 pit AF292 A2493

CATEGORY 16: OBJECTS AND WASTE MATERIAL ASSOCIATED WITH ANTLER, HORN, BONE, AND TOOTH WORKING

ANTLER OFFCUTS OR UNFINISHED OBJECTS (Fig 6.44; 389-393)

390 SF GBS 750, A1629 L117. Make-up. Period (1 or) 2. The tip from an antler tine, partly sawn across, partly broken. Length 58 mm.

391 SF GBS 378, A401 F27. Pit. Period 3b. A fragment of an antler tine partly cut and partly broken at the upper end. Maximum length 225 mm.

392 SF GBS 488, A511 F27. Pit. Period 3b. 1) A shed antler with a complete coronet and burr, the brow tine cut away, and the bez and trez tines broken off, and the beam above the trez tine also broken. Maximum length approximately 440 mm. 2) A fragment split from an antler tine with the lower end sawn across. Length 109 mm. 3) A fragment split from an antler tine with no signs of working. Length 128 mm.

393 SF GBS 999, B49. Unstratified. A fragment of antler tine, sawn across at both ends. Length 89 mm.

BONE OFFCUTS OR UNFINISHED OBJECTS (Figs 6.44-5; 394-396)

Catalogued in printed text.

WORKED TOOTH FRAGMENTS (Fig 6.44-5; 397-398)

Catalogued in printed text.

CATEGORY 17: OBJECTS AND WASTE MATERIAL ASSOCIATED WITH THE MANUFACTURE OF POTTERY VESSELS OR PIPECLAY OBJECTS

See printed text.

CATEGORY 18: OBJECTS THE FUNCTION OR IDENTIFICATION OF WHICH IS UNKNOWN OR UNCERTAIN

RINGS (399-410)

399 SF GBS 1116, A2474 F207. Slot (for timber-framing, resting on ?plinth, F214). Period 2. Copper-alloy ring of circular section, diameter varying from 3 to 5 mm. Internal diameter 33 mm.

400 SF GBS 833, A1890 F237. Pit(s). Period 3. Corroded fragment of a copper-alloy ring of circular section, diameter varying from 4 to 7 mm. Internal diameter 32 mm.

401 SF GBS 773, A1655. Unstratified. Three fragments of a copper-alloy ring of ovoid section. Internal diameter 18 mm.

402 SF GBS 797, A1735 L116. Make-up. Period 2. An iron ring of roughly rectangular section. Internal diameter 12 mm.

403 SF GBS 377, A605 F90. Pit. Period 3b. Either a fragment of an iron oval penannular ring, or part of a hook. Maximum diameter 60 mm.

404 SF GBS 262. A297 L9. Dump. Period 3a. A small fragment from an iron ring of circular section.

405 SF GBS 1045, A2426 L268. Daub floor: Building 131, Room 4. Period 1 or 2. An iron ring. Diameter 20 mm.

406 SF GBS 1076, B177 F17. Pit. Period 3b. An iron ring. Diameter 24 mm.

407 SF GBS 677, A1375 L88. Dump/make-up. Period 2. An iron ring of rectangular section. Internal diameter 34 mm.

408 SF GBS 1131, B273 L11. Dump. Period 3a. An iron ring. Maximum diameter 34 mm.

409 SF GBS 785, A1682 L100. Make-up. Period 2. An iron ring of ?rectangular section. Diameter approximately 38 mm.

410 SF GBS 669, A1299 L73. Demolition debris. Period 3a. An iron distorted penannular ring, possibly a buckle loop. Maximum diameter 45 mm.

CHAINS (Fig 6.46; 411-417)

413 SF GBS 312, A377 F27. Pit. Period 3b. A thick bent copper-alloy strip, possibly from a chain. Length 27 mm.

414 SF GBS 419, A695 L28. Dump. Post-Roman. An iron hook-shaped fragment, possibly from a chain link. Length 85 mm.

415 SF GBS 998, A2378 L250. Occupation: Building 131, Rooms 3, 4, & 5. Period (1 or) 2. Two short lengths of copper-alloy loop-in-loop chain with a ring terminal.

416 SF GBS 1029/1034(0, B99/106 F15. Large pit. Period 3b or 4. A fragment of chain consisting of four copper-alloy links and part of an iron loop-headed pin. The links are of figure-of-eight shape, with the two circles of the eight at right angles to each other. Length 70 mm.

417 SF GBS 32, A26 L1. Topsoil. Post-Roman. An iron ?link, with a rectangular element and a circular element, reminiscent of cheekpieces from curb bits (Manning 1985, fig 17,1), but

much smaller. Length 45 mm. Possibly post-Roman.

WIRE (418-421)

418 SF GBS 603, A1096 L46. Boudican destruction debris (redeposited): destruction of Building 134. Period (2 or) 3a. A twisted length of iron wire, possibly passed through a fragment of sheet iron.
419 SF GBS 334, A468 F91. ?Pit (not a feature). Roman. Copper-alloy. Length (bent) 38 mm.
420 SF GBS 595, A1113 F138. Pit. Period 3a. Copper-alloy. Length 24 mm. One end knobbed.
421 SF GBS 787, A1737. Unstratified. Period 1 or 2. Copper-alloy. Length (bent) 24 mm.

BONE ?PEG (422)

422 SF GBS 519, A866 L10. Midden/dump. Period 3b. Cancellous tissue is exposed on one side of the head. Tip missing. Length 71 mm.

SHEET COPPER ALLOY (423-476)

Fragments and strips of sheet copper alloy came from the following contexts arranged by Period:

Period 1
423 SF GBS 674, A1373 F186. Gully.
424 SF GBS 855, A2062 F213. Large pit.
425 SF GBS 861, A2062 F213. Large pit.
426 SF GBS 872, A2113 F213. Large pit.
427 SF GBS 877, A2113 F213. Large pit.
428 SF GBS 878, A2113 F213. Large pit.
429 SF GBS 1278, A1939 F250. Pit.
430 SF GBS 845, A1952 F250. Pit.
431 SF GBS 1244, A2560 F340. Pit?

Periods 1 or 2
432 SF GBS 911, A2239 L89. Occupation (?weathered). Period (1 op) 2.
433 SF GBS 967, A2301 L89. Occupation (?weathered). Period (1

or) 2.
434 SF GBS 794, A1779 L143. Occupation: Building 131, Room 4.
435 SF GBS 809, A1801 L157. Occupation: Building 131.
436 SF GBS 942, A2161 L230. Occupation: Building 131. Period 1 (or 2).
437 SF GBS 926, A2243 L244. Dump. Period (1 or) 2.
438 SF GBS 1225, A2542 L290. Dump. Period (1 or) 2.
439 SF GBS 1129, B290 L34. Make-up: Building 131. Period 1 (or 2).
440 SF GBS 1167, B421 F71. Pit: Building 131, Room 11. Period (1 or) 2.

Periods 1-3

441 SF GBS 900, A2178 L161. Street metalling.

Period 2

442 SF GBS 884, A2148 L47. Scorched floor: Building 134.
443 SF GBS 675, A1359 L70. Make-up: Building 136.
444 SF GBS 724, A1470 F203. Slot, with tile footing: Building 136.
445 SF GBS 1176, B452 F72. Gully: Building 133.
446 SF GBS 1212, B512 F117. Pit/gully: Building 133.
447 SF GBS 1246, B630 F157. Pit: Building 133?

Period 2 and/or 3

448 SF GBS 586, A1073 L46. Boudican destruction debris (redeposited): destruction of Building 134. Period (2 or) 3a.
449 SF GBS 820, A2008 L202. Dump. Period 2 (or 3a).
450 SF GBS 991, A2353 L249. Dump: ?demolition of Building 131. Period 2 (or 3).
451 SF GBS 1205, A2529 L284. Gravelled surface. Period 2 or 3a.
452 SF GBS 1172, B410 L26. Dump (redeposited Boudican destruction debris): destruction of Building 133. Period (2 or) 3a.

Period 3

453 SF GBS 428, A667 L9. Dump. Period 3a.
454 SF GBS 253, A327 Lll. Dump. Period 3a.
455 SF GBS 366, A557 L24. Dump.
456 SF GBS 591, A1100 L38. Dump.
457 SF GBS 572, A1064 L48. Dump (demolition?).
458 SF GBS 588, A1059 L52. Dump. Period 3a.
459 SF GBS 966, A2295 L66. Dump.
460 SF GBS 834, A1907 L187. Dump.
461 SF GBS 822, A1943 L188. Midden. Period 3a.
462 SF GBS 841, A1943 L188. Midden. Period 3a.
463 SF GBS 342, A485 F87. Shallow scoop(s). Period 3b.
464 SF GBS 446, A759 F117. Pit.
465 SF GBS 461, A805 F117. Pit.
466 SF GBS 607, A1145 F151. Small pit. Period 3a.
467 SF GBS 477, A715. Unstratified. Period 3b.
468 SF GBS 1092, B205 L8. Midden.

Period 3 or 4

469 SF GBS 243, A232 L2. Top soil. Period (3 and) 4.

Roman

470 SF GBS 611, A1161 F149. Small pit.

471 SF GBS 292, A365. Unstratified.
472 SF GBS 295, A375. Unstratified.
473 SF GBS 1171, B383 L3. Dump/topsoil.

Post-Roman
474 SF GBS 444, A776 L28. Dump.
475 SF GBS 467, A432 F82. Slot.

Unstratified
476 SF GBS 163, A146.

SHEET IRON (477-504)

Fragments of sheet iron came from the following contexts arranged by Period:

Period 1
All SF GBS 858, A2033 F213. Large pit.
478 SF GBS 853, A1938 F250. Pit.
479 SF GBS 1112, A2466 F330. Hearth/oven: Building 131, Room 5.
480 SF GBS 1166, B379 L55. Occupation: Building 131, Room 12.

Period 1 or 2

481 SF GBS 775, A1689 L115. Make-up. Period (1 or) 2.

Period 2
482 SF GBS 776, A1676 L100. Make-up.
483 SF GBS 734, A1598 F207. Slot (for timber-framing, resting on ?plinth, F214).
484 SF GBS 1153, B350 F46. Remains of ?daub wall.
Period 3
485 SF GBS 339, A295 L9. Dump. Period 3a.
486 SF GBS 690, A1369 L55. Dump.
487 SF GBS 938, A1848 L55. Dump.
488 SF GBS 702, A1303 L81. Dump. Period 3a.
489 SF GBS 915, A1942 L188. Midden. Period 3a.
490 SF GBS 345, A267 F27. Pit. Period 3b.
491 SF GBS 314, A377 F27. Pit. Period 3b.
492 SF GBS 340, A301 F57. Shallow pit. Period 3b.
493 SF GBS 410, A602 F107. Pit. Period 3b.
494 SF GBS 382, A646 F107. Pit. Period 3b.
495 SF GBS 425, A690 F107. Pit. Period 3b.
496 SF GBS 427, A690 F107. Pit. Period 3b.
497 SF GBS 411, A691 F107. Pit. Period 3b.
498 SF GBS 640, A1260 F175. Pit.
499 SF GBS 1126, B259 L10. Midden. Period 3a.
500 SF GBS 1125, B232 F17. Pit. Period 3b.
501 SF GBS 1060, B136 F28. Pit.

Period 4
502 SF GBS 364, A427 F41. Remnants of north-south foundation: Building 138.

Roman

503 SF GBS 406, A467 F91. ?Pit (not a feature).

Post-Roman

504 SF GBS 494, A723 L28. Dump.

MISCELLANEOUS UNIDENTIFIED COPPER-ALLOY OBJECTS (Fig 6.47; 505-531)

517 SF GBS 506, A891 L10. Midden/dump. Period 3b. A thick strip of rectangular section, tapered to a point at each end and bent into a hook. Length 52 mm.

518 SF GBS 650(C), A1284 F144. Slot; for partition wall? Building 136. Period 2. A fragment of a object composed of two plates of thin sheet metal, seemingly circular except for a folded (?hinged) projection. The ?circular element consists of a rim, at which the two plates lie touching each other, and a central hollow roundel with convex/concave mouldings on both upper and lower plates. No part of the rim is undamaged, and there is a slight possibility that it may not have been circular, though this is unlikely. Possibly a military belt-fitting. Diameter (incomplete) 21 mm. Length including the projection. 27 mm.

519 SF GBS 899, A2178 L161. Street metalling. Periods 1-3. A thick tapering shaft of circular section. Both ends appear to be broken. Possibly a peg.

520 SF GBS 906(C), A2195 L188. Midden. Period 3a. A roughly tongue-shaped object. Length 35 mm.

521 SF GBS 1183, A2504. Unstratified. A fragment of a strip of varying section.

522 SF GBS 976, B37 L7. Make-up. Period 3. A ?shaft from a toilet instrument/pin/needle stuck to a fragment of oyster shell. Length 85 mm.

523 SF GBS 379, A624 L27. Dump/?silt. Period 3. A lozenge-shaped object with a thin shaft. Possibly a crushed stud. Length 26 mm.

524 SF GBS 422, A672 F107. Pit. Period 3b. A thick curved tongue-shaped object, possibly part of a handle from a metal vessel. Length 33 mm.

525 SF GBS 977, B35. Unstratified. A thin shaft of circular section pointed at each end. Length 112 mm.

526 SF GBS 992, A2348 L250. Occupation: Building 131, Rooms 4 & 5. Period (1 or) 2. A fragment of a strip, possibly with a rounded terminal. Length 32 mm.

527 SF GBS 457, A740 L33. Dump. Post-Roman. A fragment of a strip. Length 23 mm.

528 SF GBS 511, A867 L39. Dump. Period 3. A small cylindrical object. Diameter 10 mm, length 6 mm.

529 SF GBS 574, A1072 L46. Boudican destruction debris (redeposited): destruction of Building 134. Period (2 or) 3a. A tapering strip of rectangular section. Length 55 mm.

530 SF GBS 541, A900 F66. Pit. Period 3b. A small corroded ?tube

bent roughly into a triangle, approximately 15 by 12 by 11 mm.

531 SF GBS 692, A1386 F186. Gully. Period 1. A fragment of an oval sheet metal object. Maximum length 35 mm.

MISCELLANEOUS UNIDENTIFIED IRON OBJECTS (Fig 6.48; 532-569)

542 SF GBS 177, A149 L1. Topsoil. Post-Roman. Two fragments of irregularly-shaped sheet iron, possibly from a vessel. Possibly post-Roman. Maximum dimensions of the largest piece 135 by 76 mm.

543 SF GBS 252, A255 L7. Dump. Period 3a. A strip of rectangular section. Length 206 mm, width 23 mm.

544 SF GBS 1143, A2484 L47. Scorched floor: Building 134. Period 2. A large curved fragment of rectangular section, burnt and with mineralised wood adhering to it. Length 136 mm, maximum thickness 14 mm.

545 SF GBS 685, A1369 L55. Dump. Period 3. A tapering rectangular-section strip pierced by two ?rivet holes and broken at the broader end across a third. Length 50 mm, maximum width 19 mm.

546 SF GBS 664(C), A1341 L81. Dump. Period 3a. A split socket or tube, length 113 mm, maximum diameter 26 mm.

547 SF GBS 691, A1379 L81. Dump. Period 3a. A hook of rectangular form, the hook tip is parallel to the long upright element, which has a sharp outwards curve at the top. Length 60 mm.

548 SF GBS 914, A1945 L155. Dump: Building 131 demolition. Period 2. A strip of rectangular section with a small return at right angles at one end. Possibly a structural fitting. Length 128 mm.

549 SF GBS 846, A1861 L169. Make-up: Building 131, Room 4. Period 1. A small disc with traces of mineral-preserved wood on both sides. Possibly the head of a structural fitting. Maximum diameter 35 mm.

550 SF GBS 848, A2011 L204. Dump. Period 2 or 3. A stout bar of ?circular section. Length 124 mm, diameter 12 mm.

551 SF GBS 929, A2214 L241. Topsoil. Roman. A thick strip of rectangular section, with a central shallow groove towards one end. Length (one end is broken) 86 mm, maximum width 23 mm.

552 SF GBS 1027, A2411 L257. Occupation: Building 131, Room 6. Period (1 or) 2. Possibly the shaft of an object. Length approximately 94 mm.

553 SF GBS 1050, A2414 L265. Make-up: Building 131, Room 4. Period 1 or 2. Either the shaft of an object, or a double-ended instrument. Both ends are pointed. Length 126 mm.

554 SF GBS 1191, A2512 L271. Occupation: Building 131, Room 4. Period 1. A bar of circular section, bent at right angles. Possibly part of a large buckle. Length of one side 68 mm, length of the other side 53 mm, diameter 9 mm.

555 SF GBS 386, A536 F90. Pit. Period 3b. A small disc. Maximum diameter 24 mm.

556 SF GBS 418, A672 F107. Pit. Period 3b. A rectangular strip, 53 by 21 mm.

557 SF GBS 435, A690 F107. Pit. Period 3b. A thick shaft of circular section, slightly thicker at one end. Possibly a structural fitting. Length 218 mm, diameter 12 mm.

558 SF GBS 483, A813 F121. Pit. Period 3. A tongue-ended strip with a circular rivet hole. Probably part of a hinge fitting. Surviving length 61 mm, width 29 mm.

559 SF GBS 638, A1276 F171. Pit. Period 3. A twisted strip with a rivet hole and a rivet at one end. Length approximately 110 mm, width 26 mm.

560 SF GBS 709(C), A1391 F190. Scoop. Period 3. A tapering rectangular-section strip. Length 70 mm, maximum width 10 mm.

561 SF GBS 923, A1889 F237. Pit(s). Period 3. A strip of ?rectangular section. Length 76 mm, width 18 mm.

562 SF GBS 902, A2180 F279. Pit. Period 1. A strip of thin rectangular section, broken at both ends. Length 91 mm, width 24 mm.

563 SF GBS 897, A2228 F279. Pit. Period 1. A strip of ?rectangular section, bent at right angles and with one end bent in. Possibly a broken and distorted buckle frame, or possibly a nail shaft. Length of one side 58 mm, length of the other side (including the bent part) 62 mm.

564 SF GBS 246, A165. Unstratified. Roman. A hooked tapering fragment. Maximum width 43 mm, length 56 mm.

565 SF GBS 643, A1205 L55. Dump. Period 3. A strip of rectangular section. Length 70 mm, width 21 mm.

566 SF GBS 968, A2303. Clearance. Unstratified. A short broad strip, slightly convex on the longitudinal section, with a central rivet and a rectangular rivet hole near one end. Length 59 mm, maximum width 28 mm.

567 SF GBS 1148, B375 L3. Dump/topsoil. Roman. A strip broken at both ends, at one end across a circular perforation. Length 61 mm, width 10 mm.

568 SF GBS 1120, B231 L9. Make-up. Period 3. A strip rectangular in section at one end, circular at the other. Length 129 mm, maximum width 7 mm.

569 SF GBS 1194, B474 F75. Slot: Building 133, Rooms 1/3. Period 2. A strip (in two pieces) of rectangular section, bent at right angles. Length approximately 82 mm, width 18 mm.

MISCELLANEOUS UNIDENTIFIED LEAD OBJECTS (Fig 6.49; 570-580)

572 SF GBS 308, A398 L1. Topsoil. Post-Roman. A small drip of lead.

573 SF GBS 1040, A2419 L268. Daub floor: Building 131, Room 4. Period 1 or 2. A fragment of a strip probably distorted by heat. Length 39 mm.

574 SF GBS 1044, A2426 L268. Daub floor: Building 131, Room 4. Period 1 or 2. A piece of sheet metal probably distorted by heat.

575 SF GBS 285, A262 F55. Pit. Roman. A circular lead object,

possibly a damaged ferrule. Diameter 65 mm.

576 SF GBS 458, A787 F121. Pit. 3. A twisted fragment of a strip. Length (bent) 40 mm, maximum width 8 mm.

577 SF GBS 573, A1084 F140. Shallow slot. Roman. A fragment of a strip. Length 65 mm, width 20 mm.

578 SF GBS 880, A2096 F219. Post-hole: Building 133. Period 2. Two pieces of sheet metal irregular in plan and irregular in section. Probably distorted by heat.

579 SF GBS 1197, A2519. Unstratified. A bent sheet metal quarter circle. Radius 40 mm.

580 SF GBS 1174, B449 F73. Gully: Building 133, Room 2. Period 2. A drip of lead with pieces of gravel and charcoal adhering to one surface.

MISCELLANEOUS SHALE OBJECTS (Fig 6.49; 589-594)

590 SF GBS 528, A907 L42. Dump. Period 3a. A small fragment of shale, possibly originally worked.

591 SF GBS 1282, A1710 L132. Make-up: demolition of Building 131. Period (1 or) 2. Four fragments of laminated shale, possibly originally worked.

592 SF GBS 916, A2133 L229. Make-up: Building 131. Period (1 or) 2. A fragment of laminated shale with one straight ?worked edge. Neither face seems to have been worked flat. Possibly a fragment of a rectangular tray, with the polished faces split off. Length 68 mm, width 53 mm, thickness 18 mm.

593 SF GBS 585, A956 F102. Pit. Period 3. Two fragments of laminated shale, possibly originally worked.

594 SF GBS 656, A1301 L66. Dump. Period 3. A large damaged rectangular slab of shale, 156 by 134 mm, maximum thickness 53 mm.

MISCELLANEOUS STONE OBJECT (Fig 6.50; 595)

Catalogued in printed text.

CHAPTER 7

THE ROMAN AND POST-ROMAN TILE AND DAUB

by Nina Crummy
(with contributions in the printed text by Dr I M Betts, J Cotter and E Black)

CULVER STREET: tile associated with buildings

Building 77, Sites A & B, Periods 1-2

A complete block of sandy clay from the barrack block wall BF533 measured 285 by 230 mm (the latter dimension is incomplete) and 80 mm thick. The wall BF546 yielded one fragment of an *imbrex* and an unidentifiable tile fragment. A ?Period 1 pit, BF641, contained a fragment of the flanged side of a *tegula.* The hearth AF188 also contained a side fragment of a *tegula.* From BL492, clay dump/floor of Period 2, came two side fragments of *tegulae,* a fragment of a signed flat tile (?tegula), and the bottom left corner of a signed *tegula.* The large cess-pit BF282 in Room 5, the contents of which are phased Period 1/2, contained fragments of *tegulae, imbrices*, a corner of a brick, and one reused piece of Type B10 box tile.

The destruction debris of Building 77 contained pieces of roof tiles, a fragment of a Type B13 box tile, and a fragment of a brick (associated with the mortared plinth BF487) which may be of the same form as the wedge-shaped objects in a hard tile-like fabric which also derive from the Boudican demolition debris of this building (published in the printed small finds report; **2226-8**, Fig 5.70).

Building 78, Sites B & C, Periods 1-2

Little tile was directly associated with this building. The destruction levels produced pieces of *tegulae* and one *imbrex* fragment.

Building 79, Sites C & J, Periods 1-2

A clay block from this building, found in Boudican dump ?*in situ* (CL52) measures 155 by 135 mm (the latter dimension is incomplete) by 90 mm thick. Very little tile, other than roof tile in the destruction levels, is associated with this building. Of considerable interest, however, are several fragments of decorated keyed daub from the destruction debris. One piece (Fig 7.2,1: C370 L52) represents the corner of a plain square or rectangular panel defined by at least two mouldings. Two others (Fig 7.2,2-3: C370/L52 & J366/L222) show right-angled corners

filled with narrow radiating mouldings. Some of the smaller fragments from CL52 may show the lozenge pattern most frequently found on daub in Colchester, and there is a least one piece with scored hatching (Fig 7.2,4, cf *CAR* **3,** fig 13). Another fragment from CL52 bears mouldings which meet irregularly at an angle below 90° but do not form a lozenge. Three very unusual patterns are also represented. The first (Fig 7.2,5) seems to show large and small mouldings radiating outwards from either a plain circular centre or a plain circle set in a right-angled corner. The second (Fig 7.2,6) shows four radiating mouldings which terminate at a finger-made curve. Running close to this curve is a straight line made by pressing a length of string into the damp daub. These two designs are from CL52. The third pattern (Fig 7.2,7) shows an imbricated design, as of overlapping lozenge-shaped or hexagonal tiles. Two fragments survive, both from C362 L47.

Building 83, Site E, Period 1

The Period 1 post-trenches of this building contained several fragments of tile: in EF995 were four pieces from unidentifiable tiles; EF1075 contained two *imbrex* fragments; EF1106 contained a side fragment of a *tegula* and a piece of an imbrex; and EF1143 contained a piece of an unidentifiable tile.

The occupation levels of the building, which was demolished early in Period 2, contained numerous pieces of tile. The timber latrine pit EF900 in Room 7 held many fragments of unidentifiable tiles, five *imbrex* fragments, and a short length of a brick 264 mm wide and 52 mm thick. The Period lb hearth EF1245 in Room 10 was made up of two *tegula* fragments, a fragment of a signed brick 73 mm thick, part of a *lydion* (in four fragments) 251 mm long (incomplete), 272 mm wide, and 67 mm thick, and four unidentified fragments. From the late Period 1 hearth EF1111 in Room 4 came a bottom left corner of a *tegula* with the flange deliberately removed. A Period 1 pit EF1044, possibly associated with Building 83, contained a corner of a flat tile on the upper surface of which is a sunken circular area outlined by finger-marks.

Building 84, Sites E & M, Period 1

As with Building 83 the Period 1 post-trenches of Building 84 contained fragments of tile: one unidentified fragment came from EF1386; EF1166 held a piece of a *tegula;* and EF1197 contained a bottom left corner of a *tegula* from which the flange had been deliberately removed. One *tegula* fragment came from the raised hearth EF1283.

Building 87, Site E, Period 2

Little tile was directly associated with this building, apart from four unidentified fragments and four roof tile fragments (two *imbrex,* two tegula) from the drain slot EF1027.

Building 89, Site E, Period 2

The hearths associated with this building, EF561, EF577, EF579, and EF693, contained pieces of tile, mostly unidentifiable fragments, and the oven EF435 contained one *tegula* fragment and fifteen unidentified fragments.

Building 94, Site B, Period 3

From the construction layers for this building came *imbrices, tegulae,* one piece of Type B1 box tile, and two fragments of keyed tile of uncertain type. Fragments of roof tiles and brick were found in the occupation levels, with the hearth BF459 containing three side fragments of tegula and one piece of an *imbrex.*

Building 95, Site B, Period 3

Little tile was found associated with this building. A gully, BF334, in Room 2 contained fragments of a *tegula,* an imbrex, and a Type B13 box tile. This latter fragment was reused (ie showed traces of mortar on the broken edges).

Building 96, Sites C & J, Period 3

Building 96 also produced little tile, of which the only noteworthy piece is a fragment of a *tegula* from the ?Period 3 oven CF84 in Room 1.

Building 97, Site G, Period 3

The occupation levels of this building produced fragments of roof tiles and bricks. A flooring brick (opus *spicatum)* was found in Period 3 dump, G2224 L2185. Bricks of very similar dimensions were also found associated with Buildings 116 and 120 and in Period 3 cultivated soil on Site G. These very possibly all derived from the same original floor, which has not been located, but was presumably of Period 1 or 2, or possibly early Period 3 date. The pre-Boudican levels on Site G were not well preserved, having been largely destroyed by cultivation during Period 3. Also from Site G is a flooring brick of slightly different form, greater in length (which is unfortunately incomplete) but lesser in width than the other four. Other flooring bricks from Culver Street exhibit a wide range of possible dimensions, while still remaining within the extremes given by Brodribb (1987, 52).

Building 100, Site E, Period 3a

Only one noteworthy tile fragment, derived from a pit within this building, part of a signed brick, 53 mm thick.

Buildings 101/102, Site E, Period 3a

A flooring brick 125 mm long, 72 mm wide and 32 mm thick was found in a Period 3a rubbish layer (EL61), associated with Buildings 102/102.

Buildings 104/105, Site E, Period 3b

A Period 3b foundation, EF367, associated with Buildings 104/105 contained fragments of rectangular bricks, an *imbrex* fragment, two fragments of semicircular column bricks, and a further five column brick fragments, one of which has a tally mark on its edge. It is impossible to say whether these five are fragments of semicircular or quadrantal bricks, though their association with semicircular brick fragments suggests the former.

Brodribb (1987, 55) cites only 28 examples of semicircular bricks from fifteen sites in Britain. They vary in thickness from 40 to 80 mm, and in diameter from 230 to 520 mm, with an average of 344 mm. They occur at Fishbourne in both Period 1 and Period 3 levels, being used in Period 3 to make seats rather than columns. Quadrantal bricks are only slightly less scarce in Britain than semicircular, with 30 examples from 19 sites *(ibid,* 142). These bricks too could be used other than for columns: at Stebbing, Essex, they were used to make *pila* stacks *(ibid,* 55).

The examples from EF367, reused in a Period 3b foundation, were probably originally used in a Period 1 or 2 building, or possibly Period 3a. The earliest column brick fragment from Culver Street occurs in a Period 1 level on Site B, with the piece from Period 3 make-up on Site B also probably indicating a pre-Boudican origin. However, the three complete, or almost complete, pieces recorded from Site K are probably of later date. Two, one semicircular, one quadrantal, are from the backfill of the corn-drying oven KF12. This oven was built of fragments of reused keyed tile and column bricks sometime between c 300 and 450. The bricks from the structure were not preserved. The other, a quadrantal brick, derives from an unstratified context.

Building 106, Site E, Period 3b

The Period 3b foundations for this building yielded several fragments of tile. EF369 contained a piece of an *imbrex* and several unidentifiable fragments, of which one is a waster. EF393 and EF385 each contained an unidentifiable fragment. From EF379 came two fragments of rectangular bricks with mortar traces on their broken edges.

Building 107, Site E, Period 3b

As with Building 106, the Period 3b foundations of Building 107 were the only contexts associated with the structure which produced tile. EF394 contained a fragment of a *tegula,* a corner piece from a rectangular brick with a tally mark and a ?signature (applied with an implement rather than a finger (p 259), and a fragment of a waster. EF520 contained a single fragment from an

unidentifiable tile.

Building 108, Site E, Period 3b

The Period 3b foundations of this building, like the two contemporary structures Buildings 106 and 107 and the foundation EF367 associated with Buildings 104/105, contained several pieces of tile. EF455 produced one fragment of *tegula* and one of brick. From EF456 came fragments of *tegulae* and of unidentifiable tiles and from EF592 came a piece of a brick and several fragments of unidentifiable tiles. The ?foundation EF600 produced one piece each of *tegula* and *imbrex,* and an unidentified fragment.

Building 112, Site B

From the Period 4 construction levels for Building 112 come fragments of roof tiles and bricks. The occupation levels produced a wide range of tiles: scored *pila* brick, box tile of Types B7 and B6, voussoir tile of Type V1, *imbrices, tegulae,* and bricks. The small oven BF327 in Room 6a was constructed from the bottom right corner of a *tegula* and a fragment of a brick, probably a *lydion* but possibly a *pedalis,* 288 mm wide, 40 mm thick, and with 208 mm surviving of the length. Forming part of the Period 4b oven BF269 in Room 6a was a *tegula* with its flanges ?deliberately removed and bearing an exuberant S-shape signature on the surface. From Period 3/4 dump BL266 in the area of Room 2 in Building 112 came a flooring brick 102 mm long, 70 mm wide, and 17 mm thick. The date of BL266 is uncertain, it may predate the construction of Building 112, thus setting the date of the brick at Period 3 or earlier. This agrees well with the date of flooring bricks from Site G (see Building 97 above) which appear to be pre- or immediately post-Boudican in date.

The dump/demolished clay wall L16 in Room 1 of Building 112, dated Periods 4/5, contained a piece of *tegula mammata,* 34 mm thick. *Tegula mammata* is not common on Culver Street, though several fragments, all much thicker than this example, were found on the Gilberd School site. All the *mammae* from both sites are of Brodribb's Type A, round and shallow, which he suggests implies use of the tile for flooring, where the *mammae* helped to bond the tile into the mortar. He sees tiles with his Type B *mammae,* high and conical, as used for cavity walling (1987, 62).

From the demolition of Building 112 came fragments of *tegulae* and a piece of a Type B10 box tile, while fragments of *imbrices* were found in the robber trenches for the building.

Building 113, Site B, Period 4

A sandy clay block, like those used in the construction of the Period 1 fortress buildings, was found in the Period 4 foundation BF205 for Building 113. Its surface was slightly scored. From the occupation levels for the building came fragments of roof tiles, box tiles of Types B2 and B10, and voussoir tile of Type V4. From the demolition layers came roof tiles, and a robber trench for the building contained a piece of a Type B10 box tile.

Building 114, Sites C & J, Period 4

The only noteworthy tiles from Building 114 are three side fragments of *tegulae* found in CF70, a small pit containing an infant burial.

Building 116, Sites G, H & J, Period 5

The Period 5 wall foundations for this building contained several fragments of tile. In GF1690 were an unidentified fragment and a reused piece of box tile Type B6/B11, a single *tegula* fragment was in GF31, and HF335 contained a fragment of a Type B7 box tile. The floor foundation GL772 contained a fragment of an *Imbrex.* Occupation levels for the building contained more fragments of roof tiles, pieces of box tile of Types B8 and B11, and a flooring brick, possibly pre-Boudican in date, from dump GL989 of similar size (100 x 70 x 27 mm) to that from Building 97. Destruction debris A for this building held fragments of roof tiles, box tiles of Types B8 and B13, voussoirs of Types V1 and V7, and keyed tile fragments of uncertain identification. Destruction debris B contained roof tile fragments, pieces of box tile of Types B8 and B10, and two unidentifiable keyed tile fragments.

Building 117, Site G, Period 4

The only group of tiles of note from Building 117 derive from the oven GF1545. This was of tile and stone construction, with a clay lining, and a floor composed of two layers of *tegula* and amphora sherds. In all the oven produced 32.5 kg of tile, composed of 59 fragments (corners and sides) of *tegulae,* 51 unidentified fragments, of which many were probably from *tegulae,* and one signed brick fragment, 192 mm long (incomplete), 177 mm wide (incomplete), and 34 mm thick.

Building 118, Site G, Period 4

Building 118 contained little tile of note. A fragment of a signed tegula was found in the Period 4 posthole GF1037, and occupation contexts held fragments of a scored *pila* brick and a Type B5 box tile, and an unidentifiable piece of keyed tile.

Buildings 118 & 120, Site G, Periods 4 & 5

The tank GF1558, originally in Building 118, backfilled and capped for use as a ?foundation for a similar structure in Building 120, was built of fragments of flat tiles set in opus *signinum,* and included a complete *lydion* 415 mm long, 297 mm wide, and 35 mm thick, weighing 9 kg.

Building 119, Site G, Period 4

Little tile derived from this building, which consisted of only one room. Nevertheless, a most unusual characteristic of the assemblage is that most of the identifiable tile fragments are of *imbrices.* The construction debris GL1592 produced an unidentifiable fragment, but GL1647, floor make-up/dump, contained two *imbrex* fragments, floor make-up GL1645 one, burning GL1959 one, and oven GF1798 one. GL1716, described as destruction debris A/occupation, produced one *imbrex* fragment and a piece of a semicircular column brick. Thus, of eight tile fragments directly associated with the building, six are of *imbrices.*

This suggests that an element of 'sorting' appears to be present. The tile fragments themselves are unlikely to be of manufacture contemporary with Building 119, but residual, or deliberately reused. If deliberately reused, then the use of *imbrices* implies that either these were the preferred material, or, more likely, the only material available. Deliberate reuse is unlikely in view of the very low number of pieces as a whole from the building, therefore the fragments must be residual, but again with the implication that the bulk of the material available to be redeposited was composed of fragments of *imbrices*. The *tegulae* from the same pile of roof debris must have been deliberately removed for reuse elsewhere. One feature which was of similar date to Building 119 and composed largely of *tegulae* is the oven GF1545 in Building 117. There is no means of proving beyond any doubt that the *tegulae* used in the oven are from roof debris which also produced the *imbrices* in Building 119, but the example serves to illustrate that *tegulae,* being flat and therefore much more suitable for reuse, could be selected from an original assemblage leaving only *imbrices.*

It should here be noted that apparently roofs may be made solely of *imbrices* (Brodribb 1987, 22-4), though there seems to be no archaeological evidence for this in Britain, and for literary evidence Brodribb quotes Virgil *(Georgics* 4, 296) which describes a hut as covered '*imbrice'* (with an *imbrex) .* Surely the demands of the metre have here dictated that only one type of tile be described, as they have surely limited the number of tiles used on the hut roof to the singular. However, Building 119 did consist of a single room, which could justify it being called a ^hut'. Perhaps there is some architectural truth in Virgil's use of *'imbrice' ?*

Building 120, Sites G & H, Period 5

Building 120 produced a considerable quantity of tile, much of which is almost certainly residual. Few features or layers contained more than one tile fragment, not even some of the hearths. From the Period 5a construction of the building came a *tegula* fragment and a reused piece of voussoir of Type V10 in the beam slot GF565; an unidentifiable fragment from slot GF543; an *imbrex* fragment from beam slot GF467; and a *tegula* fragment from the daub wall GF701. Period 5a occupation levels produced pieces of roof tiles and a flooring brick, while from Period 5b occupation came more fragments of roof tiles, a *lydion* or *pedalis* 275 mm wide, box tile of Types B6/B11, B7 and B12 and voussoirs

of Types V2 and V5. From the destruction debris (B) of Building 120 came further fragments of roof tiles and brick, and pieces of box tiles of Types B6/B11 and B11, with a further two pieces of Type Bll in debris possibly associated with the destruction of the building.

Also possibly associated with Period 5b of Building 120 is a piece of a segmental column brick, either semicircular or quadrantal, which derives from a floor surface GL946.

Building 123, Sites D, E & M, Period 4

A large quantity of tile, including much box and voussoir tile, was recovered from Building 123, though comparatively little derived from construction levels. Foundation DF927 contained a fragment of a *tegula;* wall DF451 contained two *tegula* fragments and an unidentified fragment; in the floor foundation DF1188 in Room 8 was a piece of a keyed tile of uncertain type; the mortar floor DL1486 contained a fragment of a signed *tegula;* and the rubble wall DF845 at the entrance to the cellar of Building 123 contained a piece of an *imbrex.*

The Period 4 occupation levels of the building were much more productive and included many pieces of roof tiles, among them two large signed *tegula* fragments, one 400 mm long and 215 mm wide (incomplete) from clay dump DL89 in Passage 2, and the other 242 mm long (incomplete) and 288 mm wide from the robbed drain DF22 in the yard of Building 123. Also from DF22 is a flooring brick 75 mm long (incomplete), 58 mm wide, and 28 mm thick, and from dump DL1588 in Passage 2 is an oblong brick 403 mm long, 148 mm wide, and 46 mm thick.

Brodribb (1987, 142) cites 27 examples of oblong bricks from thirteen sites, with an average width of 140 mm and thickness of 47 mm. He found that the length of these bricks clustered around two measurements, 240 mm and 440 mm, with one example of the larger size coming from Colchester *(ibid,* 57). The example from Building 123 falls into neither group, being the length of a *lydion* and half the width. Two other fragments of oblong bricks have been recovered, with a further two pieces being of similar width to the half *lydion* (153 and 142 mm) but of varying thickness (33 mm and 65 mm respectively). The wider but thinner tile comes from Site D, in ?Period 5 wall collapse, the narrower but thicker comes from Room 3b of Building 94 on Site B, dated to Period 3. The two other oblong bricks conform more to Brodribb's average thickness as well as width. One was found associated with EF264, a Period 5 foundation for Building 127 which contained much broken brick and tile set in opus *signinum.* This fragment was 149 mm wide, 40 mm thick and 197 mm long. The second derives from DF27, a Period 6 robber trench for Building 123, and measures 263 mm long (incomplete), 157 mm wide, and 47 mm thick.

Many fragments of box and voussoir tile also derived from the Period 4 occupation of Building 123. The types represented are box tile Types B6, B9, B10, B13, and voussoir Types V3 and V11. Several of the ovens and hearths in Building 123 contained pieces of tile. From DF582, a ?hearth, came a piece of voussoir of Type V6, a fragment of box tile of Type B10, ten pieces of

tegulae, one of an *imbrex,* and an unidentifiable fragment. In Room 9 oven debris DL475 contained one piece each of *imbrex, tegula,* and brick, and DL641 contained two pieces of voussoir of Type V6, one *tegula* fragment, two unidentifiable fragments, and a piece of a *lydion* or *pedalis,* 215 mm long (incomplete), 285 mm wide, and of uncertain thickness. Also in Room 9 the hearth DF452 contained a fragment of a tegula, and the hearth DF453 a piece of an imbrex. The oven DF1044 in Passage 1 contained a piece of box tile of Type B10.

Further pieces of keyed tile derived from the Period 4 destruction of Building 123, one from a box tile of Type B6 and four of uncertain form, of which one was reused as a counter (Cat 207, on microfiche). Also from the destruction debris come fragments of roof tile, including a piece of an imbrex of which the full width (131 mm) survives. The early medieval robber trenches for Building 123 have also produced a considerable number of keyed tile fragments: box tile of Types B3, B4, B5, B6, B6/11, B7, and B10; voussoir tile of Types V5 and V11; a fragment of a combed flat tile; and seven fragments of keyed tile of uncertain type. Pieces of *imbrices* and *tegulae* were also found in the robber trenches, one tegula fragment being 305 mm long (incomplete) by 334 mm wide, and another 252 mm long (incomplete) by 302 mm wide. A complete signed *bessalis,* measuring 180 by 189 mm and 38 mm thick, was also found in a robber trench, as was a fragment from an oblong brick (see above).

Building 127, Sites E, Period 5

The destruction of the Period 4 buildings which preceded the aisled Building 127 on the site contained fragments of roof tiles, voussoir tiles of Type VI, and box tiles of Types B5, B9, and B10.

The Period 5 pile holes and foundations of Building 127 contained much reused tile. From the pile holes came brick and roof tile fragments, four fragments of unidentified keyed tile, and box tile of Type B10. Possibly the feature producing the most tile from the whole site is the foundation EF264, which contained many pieces of keyed tiles, bricks, and at least one piece of *tegula.* Almost 90 kg of tile set in thick mortar came from the feature, the mortar being mainly *opus signinum,* but some *lydion/pedalis* fragments from E480 F264 had buff mortar as well as opus *signinum* adhering to them. Large mortared pieces from the foundation were not broken up to examine the tile set within. From E394 F264 came a piece 43 kg in weight containing many pieces of tegula and brick and at least one piece of box tile of Type B6/B11. Other keyed tile types present in the foundation were box tiles of Type B6, B9, and B10, and a voussoir of Type V2. Five keyed tile fragments of uncertain form were also found. An oblong brick 197 mm long (incomplete), 149 mm wide, and 40 mm thick came from E480 F264. Oblong bricks are discussed above under Building 123.

This foundation provides a *terminus ante quern* for the tile types reused within it, as do the pile holes for Building 127 which also contained keyed tile. The original structure in which they were used is uncertain. On Site E, Building 127 was preceded in Period 4 by Building 122 and part of its south-west corner, which

lay on Site D, by the courtyard house, Building 123. Unfortunately, lack of money for the excavation necessitated the stripping on Site E of the Period 4 and Period 3 levels beneath Building 127, so that the precise nature of the buildings of these periods, and thus the tile used within them was lost. Ernest Black has argued (see printed text p 27l that the keyed tile fragments from Building 127 originally derived from hypocaust jacketing in Building 123.

Such an argument cannot be accepted unequivocally as correct. It presupposes no hiatus between, the destruction of Building 123 and the construction of Building l27. Moreover 122 could have been the source of the material ? as indeed could a building elsewhere. That keyed tile was used in Period 4 on Site E is demonstrated by the ten fragments from EL10, the demolition layer of Period 4 (the types present are given above). The Period 5 aisled Building 127 lay over the sites of both Building 122 and Building 123 so that both Period 4 buildings were a potential source of keyed tile. Therefore the tile reused in the construction of Building 127 could as well have derived from Building 122 as from Building 123, or from both buildings.

Hut 3, Site B, Anglo-Saxon

The occupation layers of Hut 3 contained unidentifiable fragments of Roman tile, and the backfill layers two pieces of box tile of Type B10, and one of Type B6/B11.

CULVER STREET: Other tile

Only 10 kg of tile was recovered from Site A, with no individual piece being worthy of note. Two signatures are recorded, both unidentified fragments, one from Period 3 and the other from Period 4.

Site B

Site B produced 185 kg of tile, with nineteen signatures recorded: one from Period 1 (possibly not a true signature), one from the fill of the Period 1/2 cess pit F282 in Room 5 of Building 77, one from Period 1 (&, 2), two from Period 2, one from early Period 3, two from Period 3 two from Period 3/4, seven from Period 4, and one from Period(or 5). Most were on *tegulae* or bricks, some on unidentifiable fragments.

Period 1 street metalling BL682 contained a fragment of tile, 14/15 mm thick, with very shallow grooving on the surface. Ernest Black does not consider it to be box tile (Cat 288; Appendix 8, microfiche). From Period 1, in silt BL610, came a fragment of a column brick, either semicircular or quadrantal, with only one straight edge surviving. A second brick fragment came from Period 1 in stake hole BF639, though it was too small to tell what form

of brick it derived from. Another piece of column brick, also of uncertain form, came from Period 3 make-up BL239.

Site C

Twenty-two kg of tile came from Site C. This figure includes the decorated daub from Building 79. Only one signature was noted, on an unidentified fragment of tile from Period 4, in a posthole of Room 3 in Building 114. Two flooring bricks were found on Site C. Both confirm the early date suggested by the bricks from Sites G and B *(see* Building 97 and Building 112 above).

Site D

Site D produced 255 kg of tile, with much deriving from the demolition debris of and robber trenches for Building 123. Twelve signatures came from Period 4 contexts, seven on *tegulae,* one on a brick, the other four on unidentifiable fragments. Two other signatures came from Periods 5 or 6, six from Period 6, two on *tegulae* in a Period 7 pit, and one from an uncertain context.

The oblong tile from ?Period 5 wall collapse on Site D is discussed under Building 123 above. One other Roman tile should be mentioned, a complete *tegula* 427 mm long, 283 mm wide at the lower end, about 325 mm wide at the upper end, and with a maximum thickness at the flange of 48 mm.

Period 7 of Site D sees the appearance of peg tile, with three fragments coming from the pit CF121.

Site E

Site E produced the greatest weight of tile of the Culver Street sub-sites, 412 kg. This weight is obviously enhanced by the 90 kg of tile set in mortar from EF264, a foundation for Building 127.

Twenty-one signatures are recorded from Site E. One is on a brick, 73 mm thick, from the Period lb hearth EF1245 in Room 10 of Building 83. Period 2 produced three signatures, two on *tegulae.* Seven signatures came from Period 3, one on a brick fragment with a tally mark on the edge, two from Period 3/4 and one from Period 4. Seven signatures came from post-Roman contexts.

Twenty-nine fragments of tiles derived from Period 1 contexts other than those mentioned under Buildings 83 and 84 above. Most were unidentifiable, though *tegulae, imbrices,* and brick were also present. From a Period 2 pit EF1329 came a flooring brick, and two more came from Period 3: one in early Period 3 dump EL34, and one from Period 3a rubbish layer EL61, confirming the early date set on flooring bricks from Culver Street suggested under Buildings 97 and 112.

Several post-Roman tiles were found on Site E. Most in pits of Period 8. Peg tiles were most prolific, and four Period 8 pits (EF7, EF106, EF209, EF240) produced peg tiles with two

immediately adjacent nail holes in the surviving corners. A small fragment from a floor tile about 40 mm thick, with a yellow glaze streaked with brown, came from pit EF155, and pit EF133 contained a green glazed floor tile 125 mm by 125 mm by 24 mm thick. A fragment of a glazed crested ridge tile came from Period 8 pit EF14. It is in a hard sandy fabric, fired orange with a grey core. The glaze is dark brown. The crest is knife-cut and rather irregular. A similar tile was found associated with Building 28 on the Lion Walk site, Colchester, and is discussed by Paul Drury in *CAR* 3, 81-2. He dates tiles of this type in Essex to sometime between the mid to late 13th and the end of the 14th century. Small fragments possibly from ridge tiles also came from the Period 8 pit EF29 and Period 7 rubber pit EF13. The latter piece is glazed. A fragment of an unglazed ridge tile was found on Site M.

Site G

Site G produced 333 kg of tile, almost all of it small fragments, though a complete *lydion,* and several flooring bricks were also in the assemblage. The flooring bricks have been discussed under Building 97. Another complete brick from the site, found in a post-Roman pit, is of unusual dimensions, 232 mm long, 217 mm wide, and 35 mm thick. These measurements have no similarity to those of any of the non-standard bricks listed by Brodribb (1987, 57). Fragments of other non-standard bricks have also been found on Site G. Twenty-three signatures are recorded from Site G, fourteen on *tegulae.* Two are from Period 3 levels, one from Period 3 or 4, five from Period 4, twelve from Period 5, one from Period 5 or 6 (on a *tegula* with a complete length of 438 mm and 60 mm thick at the flange), and one from Period 6.

The tile from Period 3 or 4, in GL1975, occupation/destruction debris, carries part of a semicircular signature made by single finger-mark and is also marked by a number of fine incised lines, cut into the tile before firing but after the signature was applied. These lines occur in pairs about 10 mm apart. Two pairs are straight, one parallel to the edge of the tile, the other rising from one end of the first group at about 45 degrees. Two pairs are curved, one set just above the end of the latter straight pair, the other at the same height but some 30 mm to one side.

The Period 1 and 2 levels on Site G were not well preserved, so that little stratified pre-Boudican tile was found. An exception may be tile from the drain GF2160, dated to Periods 1, 2 and 3. This included a reused Type V7 voussoir tile and a non-standard brick 234 mm long (incomplete), 320 mm wide, and 40 mm thick. Tile was used in the construction of the path GF1390 from which came a top left corner of *tegula* and a fragment of a brick. Two post-Roman (Period 6) pits, GF1212 and GF284 each contained a fragment of a column brick. In neither case could it be determined if the brick was originally quadrantal or semicircular. A large group of box and voussoir tiles of Types B11, V5, V8, and V9 derived from Period 6 wall collapse GL3047. All the pieces were reused.

Site H

Site H, which lay immediately adjacent to Site G, produced 24 kg of tile, much of it post-Roman, deriving from Period 6 pits and site clearance. Of the Roman tile, a high proportion was keyed, with box and voussoir tile both present, as well as many fragments of uncertain identification and a piece of a scored *pila* brick. Some of the fragments are associated with the destruction of Buildings 116 and 120, though many are residual in post-Roman pits, robbers, and site clearance. Other Roman tiles of note are a fragment of a column brick from site clearance and an unstratified half *tegula,* 415 mm long. Only three signed Roman tiles were found, all on *tegulae,* one from Period 5, one from Period 6, and one unstratified.

On Site H lay Building 129, a group of three ?outbuildings dated to the ?15th-16th centuries. Seven glazed floor tiles and fragments of four others may originally have derived from Building 129, though all but two were found in Period 6 pits and site clearance. From pit HF176 came two fragments, both with the surface very worn, but what remains suggests a glaze applied over a white slip, similar to the Flemish tiles from Building 28 on the Lion Walk site, Colchester (Drury 1984, 81). One piece is 30 mm thick and has only one surviving edge, the other is 125 mm square and is 28 mm thick. Two tiles were also found in pit HF158. Both show little wear. One is a square green glazed tile with one complete dimension of 120 mm, 30 mm thick, and the other a triangular yellow-glazed tile from the edge of a floor using tiles of a similar size to the latter. The one complete surviving edge (not the diagonal) measures 123 mm, and the tile is 29 mm thick. From site clearance HL3 come three glazed tiles: two are triangular with a dark green glaze, 30 mm thick, each representing half a 125 x 125 mm square; the third is a fragment of a square tile with a glaze of yellow streaked with brown, again 125 mm across and 30 mm thick. From pit HF157 comes a small right-angled corner fragment of a green-glazed tile, 30 mm thick. This could be from either a square or a triangular tile. Pit HF374 also produced a right-angled corner fragment, again 30 mm thick, and again from either a square or triangular tile. All these tiles presumably derive from the same original floor.

Only one of the two tiles from the cellar HF39 associated with Building 129 may belong to the above group. It is a small fragment, glazed yellow over a white slip, 30 mm thick, and very worn. Only a small part of one edge survives, 70 mm long. The original size of this piece cannot be ascertained. It may be from a tile about 120-125 mm square, or it may belong to a much larger tile as does the second fragment from the cellar. This is a fragment from a large ?square tile with a maximum surviving dimension of 155 mm. It has a dark brown glaze, and is 30 mm thick. From Building 28 on Lion Walk came tiles 235-240 mm square, and this piece may derive from one of that size. The backfill of the cellar HF39 contained no pottery later than early 16th century in date. Drury dated the large Lion Walk tiles to the 15th or early 16th century, and the smaller ones to the late 14th to mid 15th century (ibid).

Site J

Site J produced twelve kg of tile. This figure includes daub from the destruction debris of Building 79. One signature is recorded from a Period 6 context. Most of the tile was Roman, with a high proportion of box tile present, and almost all derived from post-Roman pits and robber trenches. Two post-Roman glazed floor tile fragments were found on Site J, one in a Period 6 pit, one unstratified. Both have a greenish-brown glaze. One is 25 mm thick, the other 30 mm. Peg tile was found in Period 6 pits and site clearance.

Site K

Thirteen kg of tile was recovered from Site K. One signature, on a fragment of a *tegula,* came from Period 3 horticultural topsoil. The Period 1 or 2 drain KF301 contained a side fragment of a *tegula.* The most important tiles from Site K are the column bricks (discussed under Building 104/105 above) associated with the Period 3 corn-drying oven KF12. This was built using fragments of tile including keyed tile (probably mainly box tile) and column bricks. The tiles used to build the oven were not preserved after the excavation, but tiles found in the Period 4 backfill almost certainly were originally part of the structure. No *tegulae* were noted as being used in the construction of the oven, though a bottom right corner fragment was found in the Period 4 backfill.

Site M

Sixteen kg of tile came from Site M. Only two signatures were noted, one from an unstratified context, one from Period 3 and 4 cultivated soil. One post-Roman pit, MF121, produced several fragments of peg tile, a fragment of a floor tile, 30 mm thick, with a dark greenish-brown glaze, and a piece from an unglazed crested ridge tile. The pottery from the pit dates to the late 15th and early 16th century.

Site W

Only two pieces of tile were recovered from Site W, the watching brief on Culver Street after the excavation proper. One is a piece of box flue tile, the other an unusual medieval tile.

Building 131, Period 1

From the Period 1 timber drain AF232 associated with the barrack block, Building 131, came a side fragment of a *tegula,* and in ?Period 1 dump AL308 were two side fragments of *tegulae.* In Room 5 the Period 1 hearth/oven AF330 produced two side pieces of *tegulae*, one measuring 55 mm deep externally at the flange and the other 57 mm, and in Room 6, Period 1 make-up AL190 produced a side fragment measuring 58 mm.

Many more pieces of *tegulae* were found in levels ascribed to either Period 1 or 2: one in occupation AL157; two in occupation AL230; one (62 mm deep externally at the flange) in occupation AL142; four in pit AF143; one in make-up AL229; eight in occupation AL250, with external depths at the flange ranging from 34 to 65 mm. In Room 4 fragments of *tegulae* came from posthole AF302, posthole with post-pit AF303, posthole AF314, occupation AL264, make-up AL265, daub floor AL268, dump AL266, and gully AF323, and in Room 5 from daub floor AL263 and pit AF217. The daub floor AL171 in Room 6 produced three *tegula* fragments and a piece of an *imbrex,* and occupation AL257 also in Room 6 produced a *tegula* fragment.

Though Building 131 is dated to Period 1, and most of it was demolished and replaced by Building 133 in Period 2, there is some evidence that at least part of the barrack block survived for reuse in Period 2. This secondary occupation has been ascribed a date of Period 1 or 2.

Two fragments of brick came from Period 1 or 2 contexts: a corner fragment from a brick, 61 mm thick, was found in Room 11 in pit BF71 and hearth waste AL122 produced a fragment of a signed brick. Dump AL113 in Room 4 produced two fragments of *tegulae.* In Room 6, two fragments of *tegulae,* one a bottom right corner with part of a signature, were found in a daub floor AL128, and another daub floor AL262 contained eleven pieces of *tegulae,* including three corners, one top left, one top right, and one bottom left. Period 1 or 2 make-up AL255 for Rooms 4 and 5 contained a fragment of a *tegula mammata* with one central boss.

Much tile came from the Period 2 destruction of Building 131. Apart from two tesserae, all the identifiable fragments were of roof tiles, mainly *tegulae* but also some imbrices. Of the remaining unidentifiable fragments all were flat and probably also derived from *tegulae.* From dump AL101 associated with the destruction of the building came fragments of twenty-two *tegulae,* including two top left corners, one top right corner, and one bottom right corner. The maximum external depths ranged from 47 to 64 mm. Also from AL101 came five fragments of *imbrices* and two tesserae. Dump AL111 produced five fragments of *tegulae,* one a bottom left corner, and an antefix fragment with a foliate design and one imbrex fragment were round in dump/destruction debris BL25.

Building 132, Period 1

Apart from three side fragments of *tegulae* from AL224, dump dated to Period (1 or) 2 and only possibly associated with Building 132, no tile was recovered from this barrack block.

Building 133, Period 2

Most of the tiles associated with Building 133, which was built on the site of Building 131, were roof tiles, with *tegulae* predominating. Many were in contexts attributable to an individual room, or in features representing divisions between rooms. BF94 and BF96, rectangular post-pits with ?pile holes between Rooms 1 and 2, each produced a fragment of a *tegula,* and a *tegula* fragment came from slot BF75 between Rooms 1 and 3. A bottom right *tegula* fragment came from BF115, a slot for a timber partition, in Room 2. Also in Room 2, four (possibly five) *tegula* fragments were found in gully BF73, and one fragment came from Posthole BF159. In Room 3 an *imbrex* fragment was found in make-up BL86, an unidentifiable fragment in the burnt floor BL69, and a side fragment of a *tegula* in BF60, a beam slot with remains of a daub block wall. Slot BF93 in Room 4 produced a fragment of a *tegula* and part of a *tegula mammata,* 69 mm thick, with a single central boss. Make-up BL99 in Room 5 contained a reused fragment of a Type B1 box-tile, dated to the 1st century, and an *imbrex* fragment came from make-up BL97 in Room 7.

Tile finds not directly associated with individual rooms in Building 133 include ten fragments of *tegulae* and three unidentified fragments from the timber drain AF205, and roof tile fragments from gully BF72 and dump layers BL57 and BL92. *Tegulae* only were found in slot BF61, post-pit BF106, and pit/gully BF117.

As with Building 131, the destruction debris of Building 133 included large amounts of tile, mostly roof tile. BL28, Boudican destruction debris possibly *in situ* ascribed to Period 2 or 3, contained two fragments of *tegulae,* one signed. BF1, the terraced area from the destruction of Building 133, dated Period 2 and 3a, produced 45 side fragments of *tegulae,* one signed, with external depths at the flange ranging from 41 to 63 mm, and thirty-two corners of *tegulae,* six top left, fourteen bottom left of which one (possibly two) was signed, seven top right, and five bottom right. Also from BF1 came a fragment of *tegula mammata* with a boss close to the surviving edge. BL26, redeposited Boudican destruction debris from Building 133, dated Period 2 or 3a, contained 86 side fragments of *tegulae* with external depths ranging from 45 to 60 mm, seven top left *tegula* corners, one signed, twelve bottom left corners, seven top right corners, and seventeen bottom right corners, four signed. The complete bottom width of only one *tegula* survived, measuring 353 mm. Also from BL26 came three fragments of *imbrices,* two pieces of box tiles, two brick fragments, one 69 mm thick, and a corner of a *tegula mammata,* 65 mm thick, with a boss set in the corner. Period 3a dump AL131 from the destruction debris of Building 133 contained another corner piece of a *tegula mammata,* 63 mm thick, also with a boss set in the corner.

Building 134, Period 2

Roof tiles form most of the assemblage from Building 134. Three *tegula* fragments were found in ?dump AL245, dated to Period (1 or) 2. AF119, described as a gully and dated to Period 2 or 3a, contained nine side fragments of *tegulae* with external depths ranging from 46 to 55 mm. AL46, Period 2 or 3a destruction debris from Building 134, produced nine fragments of *imbrices*, sixteen side fragments of *tegulae,* three bottom right corners of *tegulae,* three top right corners, and one top left corner. Several fragments from tiles of unidentified form were also found, one a corner from a flat tile with maximum surviving dimensions of 135 by 90 mm, and only 23 mm thick. From AL45, redeposited Boudican destruction debris of Period 2 or 3a, came eight side fragments of *tegulae,* with external depths ranging from 41 to 65 mm, and two top right corners.

Building 135, Period 2

Only five fragments of *tegulae* came from contexts directly associated with Building 135. One lay in Period 2 daub floor(s) BL84, and four, including a top left corner, in dump/redeposited Boudican destruction debris BL20 of Period 2 or 3a.

Building 137, Period 3

Only five tile fragments came from Building 137. Two, one a piece of a *tegula,* from Period 3 ?dump BL17, and three from medieval robber trenches for the building. Two of these three are Type B10 box tiles, one reused.

Building 138, Period 4

Period 3b or 4 dump material AL13, which may possibly be from Room 2 in Building 138, contained six fragments of *imbrices, a* piece of keyed tile of uncertain type, and thirteen pieces of *tegulae.* Fragments of *tegulae* also came from the north-south foundation AF41, post base(?) AF76, clay foundation AF93, and tile spread AL6, all of Period 4.

GILBERD SCHOOL: other tile

Three fragments of *tegulae* of unusual form were found on the Gilberd School site. Two are cut slantwise from top to bottom to form a shape suitable for use at a junction of two roofs. The larger fragment is from the middle of a *tegula,* and clearly shows that the tile was trimmed by eye. It was found in AL1, post-Roman topsoil. The smaller tile, which is unstratified but may derive from a Period 3b or 4 pit, is a top right corner of a *tegula,* with the very corner missing, but showing that the line of the cut began on the top edge, running from within a few mm of the right hand edge at the corner down across the tile at an angle of

approximately 45°.

The third unusual *tegula* fragment represents about one quarter of a tile with a central hole found in AF123, a Period 3 pit. Around the hole, which is approximately 220 mm in diameter, is a tall flange projecting about 40 mm above the upper surface of the tile. The junction of this flange with the upper surface is defined on the upper surface by a finger-made groove for at least the part of its circumference closest to the side flange, which is also defined by a finger-made groove. Tiles of this type are discussed by Brodribb (1987, 19-20). The function of the hole seems to have been as a vent to let in light or air, or it may have let out smoke. If the former, the hole could have been closed with a simple flat circular tile or piece of wood or alternatively it may have been covered by a louvre *(ibid,* fig 15). (I am grateful to Dr E M Evans of the Glamorgan-Gwent Archaeological Trust Ltd for information on this tile and its use.)

One *tegula* has its full length, 440 mm, surviving. Its external depth at the flange is 49 mm. Three *tegulae* have the full width surviving, measuring 353, 360 and 365 mm. The external depths of these tiles are 47, 49, and 63 mm respectively. No full length *imbrices* survive, but four fragments indicate complete widths of 120, 138, 150, and 158 mm.

Only one complete brick has been noted from the Gilberd School, a *bessalis,* 204 mm square and 30 mm thick. It derives from an unstratified context.

A fragment of an antefix was found in dump destruction debris BL25 of Building 131. This had a foliate design similar to that on another antefix from the town (Hull 1958, pl 30b, top left) . On the same plate Hull illustrates two antefixes decorated with a Medusa head, one of which comes from Insula 33, from the old GPO site in Head Street (ibid, 209) . The Gilberd School site has produced a third antefix with a Medusa head, which was found in AF53, a large pit/terrace of Roman date (no closer date can be assigned to this feature) . The Gilberd School site is in Insula 17, two *insulae* north of Insula 33. Too few of these Medusa-head antefixes have been found to give weight to any pattern of distribution, but it may be worth noting that of the three published from Colchester two come from *insulae* in the extreme west of the walled area of the town. Hull gives no provenance to the third Medusa-head antefix.

Fragments of nine *tegulae mammatae* of Brodribb's Type A (1987, 60-2) have been found on the Gilberd School site. One is associated with Building 131 and four with Building 133, thus dating their earliest presence on the site as pre-Boudican. The bricks show a thickness ranging from 53 to 69 mm, and are quite roughly made. They were presumably used for flooring or in walls. The *mammae* are simply roughly circular blobs of clay applied to the surface which would assist the bricks to bond into mortar. A single fragment of *tegula mammata* only 34 mm thick was found on Culver Street in a Period 4/5 context in Building 112 (see above). Though almost certainly residual in its context, this tile may be post-Boudican, with the thinner section indicating either a different manufacturer, perhaps operating at a later

date, or a different use.

Fifty-eight signatures have been recorded from the Gilberd School site. Two, on fragments possibly from *tegulae,* come from Period 1 contexts pit AF250 and gully AF186. The latter also bears an impression from a piece of string similar to those found on daub in Colchester *(see* Building 79: Fig 7.2; Building 8: *CAR* 3, fig 13). One is on a brick from hearth waste AL122 in Building 131, ascribed to Period (1 or) 2. Nine signatures come from Period 2 levels, four from Building 131 (three in destruction debris), and four from Building 133. One of the Period 2 signatures is on a *tegula,* the others are on fragments of tile which may be from either *tegulae* or bricks. From the Period 2 and/or 3a destruction debris of Building 133 come eleven signatures, ten on *tegulae.* Twenty-two signatures derive from levels attributed to either Period 3, Period 3a, or Period 3b, and one comes from Period 3b or 4 dump AL13, which is possibly associated with the Period 4 building B138. Nine of the nineteen are on *tegulae,* one on a fragment of brick 34 mm thick, and the remainder on unidentified fragments. Post-Roman and unstratified contexts have produced fifteen signatures, one on a brick 55 mm thick, four on *tegulae,* and ten on unidentified fragments.

TILE FROM THE SPENDRITE SITE

Large fragments of box tile made up a high proportion of the assemblage of Roman tile from the Spendrite site. These have been identified by Ernest Black in his report on the keyed tile, where he suggests that they should be dated to the later 2nd century. A large quantity of brick fragments also came from the site, and many of these may also have derived from a hypocaust or associated flooring.

Spendrite has only two Roman phases, A (1st century) and B (2nd-4th century). Phase A ?dump L46 contained pieces of both *tegulae* and *imbrices*, and many small unidentifiable fragments. Two of the tegulae had had their flanges deliberately removed. Other Phase A context produced little tile, but it is noticeable that box tile and brick do not occur in Phase A contexts, but make their appearance in contexts phased A or B.

A fragment of either a *sesquipedalis,* or the larger *bipedalis,* is recorded from an unstratified context. The piece is 400 mm long, 384 mm wide, and 39 mm thick. This is rather thin for both these forms of tile, which more usually occur with thicknesses of around 50 or 60 mm, but Brodribb cites an example of 40 mm (1987, 41).

Phases C and D produced many fragments of peg tiles and some pieces of post-Roman brick, but no other post-Roman tiles were recovered.

TILE FROM THE CUPS HOTEL SITE

The most important part of the tile assemblage from the Cups Hotel site is a collection of 35 column brick fragments. All but one derive from Building 152. They were used, set in mortar, as infill in between stud-work (Figs 13.10-11). The remaining example was found in Building 154, in Period 4 make-up, which was composed of recycled destruction debris of Period 3. This piece too may have originally derived from Building 152.

Column bricks are usually either semicircular or quadrantal (Brodribb 1987, 55). The exact form of some bricks from the Cups Hotel is uncertain, but some are quadrantal, while others clearly represent approximately one sixth of a circle. The thickness of the bricks ranges from 52 to 77 mm, with most being between 57 to 65 mm, and the radius, where it can be measured, ranges from 210 to 300 mm.

The date of reuse of these column bricks is particularly informative, as it yields more information about the bricks used in the military fortress. Building 152 is dated to Period 2, the veteran's *colonia* of *c* 49-60/1. The reuse of these bricks implies that they were originally in use in Period 1. A fragment of a column brick was found in Period 1 silt BL610 on Culver Street Site B, confirming the use of these bricks in the military period.

APPENDIX 7

Tile catalogue 1: keyed tiles listed by type

by Ernest Black

Tile fragments from each context were bagged together. A number was assigned to each bag when it was examined. If the bag contained a single tile fragment the number of the bag was assigned to the fragment. If the bag contained several fragments these were assigned the bag number plus an individual identifying letter, eg 178a, 178b, etc. Where, as in a few cases, a context was represented by more than one bag, each bag was assigned a separate number. The numbers assigned during the examination of the tiles have become the tile catalogue numbers and are cited here and in the published report preceded by Cat, eg Cat 178a.

In this catalogue the tiles are listed by type. Within each type the fragments are listed by numerical order of catalogue number. After the catalogue number the figure reference for illustrated pieces is given. This is followed by the site code and context numbers, and a brief description of the context and its period. In the case of tile fragments from contexts significant for dating the tile type, the catalogue number and the Period code are printed in bold. Where appropriate the tile is then described as mortared or reused. The thickness of the keyed surface is then given, prefixed by T. Comments on keying, any available dimensions, and any other features such as cutaways then follow.

Box flue tiles are open at top and bottom and have four sides, two keyed, two unkeyed. Keyed sides are here described as 'faces', unkeyed sides as 'sides'. Voussoir tiles taper and are open on the two narrowest sides. Thus they have a top (with the greater width) and a base (with the lesser width), and two tapering faces.

Box flue tiles

Type B1

Cat 58 1.81 K401. Unstratified. No mortar traces. Two adjoining surfaces, T5 mm & T8 mm. There is a slight groove, possibly a comb tooth mark, on the exterior of the thicker surface. On the interior of the thinner surface there is a deeper groove parallel to the long axis of the tile.

Cat 185 1.81 B1664 L396. Make-up: Building 94, Room 2. **Period 3.** T10-11 mm. Fragment with scored lattice keying.

Cat 227 Fig 7.3 1.81 A472 L181. Dump. **Period 3.** T14-15 mm. Part of a face with scored lattice keying making a rounded junction with an unkeyed side. There is part of a

cutaway at about 25 mm from the junction with the face.

Cat 302 GBS B647 L99. Make-up: Building 133, Room 5. **Period 2.** Reused (mortar on interior and over broken edges). T8/9 mm. Scored lattice keying.

Cat 322 Fig 7.3 GBS A567 L8. Midden. **Period 3a.** T9-10 mm. Part of the side with 'ribbing' on the interior surface. There is the base of a cutaway about 19/20 mm wide at least 25 mm from the junction with a face (the tile is broken as it begins to form a rounded angle). Estimated depth 90 mm (2 x 25 mm + 2 x 10 mm + 20 mm).

Cat 323 Fig 7.3 GBS A1856 L163. Make-up. **Period 1 or 2**. Reused (mortar on interior and over broken edge). T6-9 mm. Cutaway about 17 mm from junction. Scored lattice keying on face. There is 'ribbing' on the interior.

Type B2

Cat 190a Fig 7.3 1.81 B912 F271. Gully: Building 113, Room 1. ?Period 4. No mortar traces. T13-14 mm. The face has a band of straight combing parallel to the junction and towards the break traces are visible of a second band which meets the first at an angle. The unkeyed side has part of a circular cutaway about 39/42 mm from the junction. It appears that a hollow cylinder was placed against the side of the tile and the cut made around the interior face, since the impression of the rim of such an object survives around the cutaway.

Cat 231 Fig 7.3 1.81 K360 L358. Horticultural soil. Period 3. Mortared. T17-20 mm. The internal width is about 142 mm. What seems to be part of a circular cutaway survives in the unkeyed side 21 mm from the junction with the face. The keying consists of two marginal bands of straight combing, adjacent and parallel to the junctions with each side. Two further bands of straight combing intersect these and cross in the gap between.

Cat 338 Fig 7.3 GBS A2477 F42. Large pit(s). Post-medieval. Mortared. ?Reused. T15-17 mm. The face has a band of straight combing parallel to the junction with the side and two further intersecting bands of straight combing which meet this at an angle. There is a small portion of a circular cutaway in the unkeyed side about 35 mm from the junction with the face.

Type B3

Cat 61f ?SPT/?1.81. Unstratified. Mortared. Combed face T12 mm, unkeyed side T14/15 mm. Cutaway in side 28-30 mm from junction. The same comb as Cat 247b in this type. (N Crummy: this comb parallel may indicate that the tiles from this bag, which lacked any context label, derive from the Spendrite site.)

Cat 77 1.81 G150. Unstratified (Periods 4-6). Reused. T14-16 mm. One band of straight and one of wavy combing survive.

Cat 112a 1.81 E10 F9. Extensive robber trench. Period 7. Reused. T15/16 mm. Part of an unkeyed side and a face with one band of straight and one of wavy combing.

Cat 147 1.81 E unstratified. Mortared. T15 mm. Burnt. One band of straight and one of wavy combing crossed by a band of straight combing. Comb as Cat 311b and Cat 312a in this type.

Cat 154c Fig 7.3 1.81 E unstratified. Reused. T17/18 mm. Complete width 181/182 mm. A band of straight combing at each side and a central band of slightly wavy combing.

Cat 210a 1.81 D213 F38. Robber trench for Building 123. Period 6. **or** 1.81 D425 L298. Demolition debris: Building 123, Passage 4. Period 4. (N Crummy: this bag contained two context labels.) Slight mortar traces on broken edges. T18-20 mm. Part of a combed face and an unkeyed side with a cutaway 44/46 mm from the junction.

Cat 235 Site west of Marks & Spencer, 15/11/1982. Mortared T15/16 mm. Part of a combed face and an unkeyed side with a cutaway 43/44 mm from the junction.

Cat 246b SPT 96 L43. Phase C. Mortared. T15-18 mm. Part of a combed face with a band of straight and a band of wavy combing parallel to the junction, and an unkeyed side with part of a cutaway 36 mm from the junction.

Cat 247b Fig 7.3 SPT 18 F2. Pit. Phase C. Mortared. T11-12 mm. Part of a combed face with one band of straight and one of wavy combing, and of an unkeyed side (T16 mm) with a cutaway 39-40 mm from the junction.

Cat 254 SPT 105 L48. Cess-pit fill. Phase C. T15 mm. Part of combed face and unkeyed side with a cutaway 24/25 mm from the junction.

Cat 311b Fig 7.3 1.81 D337 F299. Robber trench for Building 123. Period 6. T15/16 mm. Combed face with a band of wavy combing adjacent to the junction and a band of straight combing, both crossed at one end of the tile by a further band of straight combing. The unkeyed side has a cutaway at least 167 mm long set 36/37 mm in from the junction and about 127 mm from the end of the tile. If placed equidistant from the two ends the height of the tile can be estimated at 2 x 127 mm + 167 = about 420 mm.

Cat 312a 1.81 D303 F259. Robbing pit. Period 6. Reused. T16-18 mm. Corner fragment. Style of combing and comb the same as Cat 311b.

Cat 318b 1.81 D343 F259. Robbing pit. Period 6. Reused. T19-20 mm. Internal width about 150 mm.

Type B4

Cat 33 1.81 D1153 F86. Robber trench for Period 4 hypocaust base F85 in Building 123, Room 8. Period 6. Chip of tile (the full thickness does not survive) with unkeyed side and face stamped with Lowther's die 14 (1948, fig 12).

Cat 179a 1.81 B1848. Unstratified. Clearance. Mortared. T19 mm. Unkeyed side and face stamped with parts of two impressions of Lowther's die 14.

Cat 208 Illustrated in small finds report, Fig 6.17,**189.** GBS B11. Unstratified. Clearance. Part of the face of a box flue tile stamped with Lowther's die 29 (ibid, fig 18), reused as a counter.

Cat 344b GBS A89 F10. Foundation? Post-medieval. Mortared. T16/17 mm. Part of the face of a box flue tile stamped with Lowther's die 27 (ibid, fig 16).

Type B5

Cat 10a 1.81 H262. Unstratified (Periods 4-6). T13-15 mm. The attribution of this fragment to this type is uncertain as only one band of straight combing survives, parallel to and about 20 mm in from the junction with the unkeyed side. Between this band of combing and the broken edge there is a gap of at least 28 mm where no further combing occurs.

Cat 19 1.81 D61 F28. Robber trench for Building 123. Period 6. Mortared. T12 mm. One band of wavy combing survives adjacent to the junction with the unkeyed side. The attribution of this fragment to this type is uncertain.

Cat 26 Fig 7.3 1.81 D470 F259. Robbing pit. Period 6. Mortared. T13-14 mm. There are two intersecting bands of wavy combing with a gap of about 35 mm between them and the junction with the unkeyed side (T about 10 mm).

Cat 28c 1.81 D10 L9. Topsoil. Period 7. Mortared. T10 mm. The keying is very similar to Cat 19.

Cat 54 1.81 H225 F59. Trench. Period 5. Mortared. T15/16 mm. There are three bands of straight combing with a gap of about 8 mm between the junction with the unkeyed side and the first band, and one of about 11-15 mm between the first and second bands.

Cat 61g Fig 7.3 ?SPT/?1.81. Unstratified (no context label in bag). Mortared. T15 mm. A slightly wavy band of combing adjoining the junction, with a central band of straight combing. The end of the tile (top/base) is folded over creating a flange towards the interior. This can be matched by Cat 184 in Type B8, and by Cat 153 (Type B6) which has an 'extension'.

Cat 114a 1.81 E491. Unstratified. (From Period 5 L10 (see Cat 136d below) but contaminated). Reused. T14-16 mm. Part of a band of wavy combing survives with a gap between it and the junction with the side of the tile.

Cat 118 Fig 7.3 1.81 E494. Machine stripping. Unstratified. T14-16 mm. There is a band of straight and a band of wavy combing with a gap of 22-30 mm between them.

Cat 121 1.81 E126 F5. Robber trench. Period 7. T12-13 mm. There is a band of straight and a band of wavy combing with a gap of 28-34 mm between them.

Cat 136d 1.81 E481 L10. Demolition for Period 4 buildings: Building 127. Period 5. Reused. The face (T14 mm) has part of a band of wavy combing with a gap between it and the junction with the unkeyed side. There is a cutaway surviving for 48 mm set 37 mm in from the junction.

Cat 144 1.81 E108 F30. Robber trench. Period 7. T15-16 mm. Two intersecting bands of combing, one straight and one wavy, and a single tooth-mark from a third impression, with an adjoining unkeyed gap of at least 38 mm.

Cat 155 1.81 E1331 F1000. Pit. Period 8. T15/16 mm. Corner fragment with two bands of straight combing with a gap between them and adjoining the junction with the unkeyed side (T9-12 mm). The comb is very close to that used on Cat 262a in this type.

Cat 239 GBS B274. Unstratified. Reused. T14/15 mm. Corner fragment with two bands of straight combing with a gap between them. One is parallel and adjacent to the junction with the side. The band further from the junction lies at an angle to it.

Cat 241a GBS B166 F15. Large pit. **Period (3b or) 4.** Mortared. T14/15 mm. Part of the top/bottom edge survives. Two bands of wavy combing are separated by a gap.

Cat 241b GBS B166 F15. Large pit. **Period (3b or) 4.** Reused. T17 mm. Combing resembles Cat 278c and Cat 278d in this type.

Cat 256c SPT 7 F5. Trench. Phase D. Reused. T15/16 mm. Corner fragment with band of wavy combing separated from junction and adjoining missing band of combing by gaps.

Cat 262a Fig 7.3 SPT 36 L18. Topsoil. Phase C or D. Mortared. ?Reused. The face (T13-18 mm) has an internal width of about 112/115 mm. There is a slight flange on the interior at the top/bottom end of the tile, a feature matched in Cat 61g and in Type B6 and on one example in Type B8. The face has a central band of wavy combing separated by gaps from a band of straight combing on each side. The side of the tile is only 12 mm thick.

Cat 262b SPT 36 L18. Topsoil. Phase C or D. Two joining fragments. T12-14 mm. Three bands of fairly straight

combing separated by gaps.

Cat 278c Fig 7.3 1.81 G3343 L3238. Floor surface: Building 118. **Period 4.** T16/17-19 mm. Internal width about 110/111 mm. There are three bands of straight combing separated from each other and from the junction with the surviving side by gaps. The same comb as Cat 278d.

Cat 278d 1.81 G3343 L3238. Floor surface: Building 118. **Period 4.** Two joining fragments. T15-18 mm. Internal width at least 122 mm. There are three bands of straight combing separated from each other and from the junction with the surviving side by gaps. The same comb as Cat 278c.

Cat 300 1.81 J33 F18. Pit. Period 6. T14-16 mm. There is a band of straight and a band of wavy combing separated by a gap. The top/bottom edge of the tile is trimmed back at an angle from the face.

Cat 306b 1.81 D379 F259. Robbing pit. Period 6. Reused. T15 mm. One band of straight and one of wavy combing with a gap between them.

Cat 308 1.81 D344 F299. Robber trench for Building 123. Period 6. Reused. T16-17 mm. The face has two bands of straight combing separated by a gap and the comb is the same as in 278c and 278d in this type. Almost the complete depth survives measuring 87/88 mm internally. There is the base of a cutaway in the unkeyed side measuring 42 mm across, set at 21 and about 55 mm from the junctions with the sides, and more than 104 mm from the top/bottom edge.

Cat 315 Fig 7.3 1.81 D346 F224. Robber trench for Building 123. Period 6. The face (T15-16 mm) has two bands of slightly wavy combing separated by gaps from each other and the side (T13/14 mm). The internal depth is approximately 82 mm.

Cat 327 GBS A2218 L241. Topsoil. ?Roman. T16 mm. One band of straight combing is present set at 90° to the top/bottom edge, with a gap to one side. The attribution of this fragment to Type B5 is not certain.

Cat 345a GBS A85 L1. Topsoil. Post-Roman. T16-18 mm. There are two bands of straight combing separated by a gap.

Cat 345b GBS A85 L1. Topsoil. Post-Roman. T16/17 mm. There is a band of wavy/curved combing between two bands of straight combing. The band of wavy combing and one of the bands of straight combing intersect, and the attribution of this piece to Type B5 is thus not certain.

Type B6

Cat 22 Fig 7.3 1.81 D1579. Unstratified (contaminated Period 4

L1372) . Reused. T12-13 mm. Internal width approximately 116-120 mm. There is a central band of wavy combing with two flanking bands of straight combing. The same comb as Cat 221 in this type.

Cat 61k Fig 7.3 ?SPT/?1.8l. Unstratified (no context label in bag). Reused. T15-17 mm. Internal width about 117/118 mm. There are three bands of wavy combing. The edge of a cutaway survives for 76 mm in the unkeyed side (T11-13 mm), set 40 mm in from the junction.

Cat 89a 1.81 G287 F264. Pit. Period 6. Mortared. T12-14 mm. There are intersecting bands of wavy and straight combing. The width of the comb is similar to that used on Cat 101 in this type, though it is probably not the same.

Cat 101 Fig 7.3 1.81 B1280 L285. Make-up: Building 112, Room 6. ?Period 4a. Two joining fragments. Mortared. T14 mm. A central band of wavy combing is flanked by bands of straight combing. The same comb as Cat 176a, Cat 176d, Cat 203, and Cat 204 in this type. It may also be the same comb as Cat 149 (this type), though this has an additional tooth.

Cat 113 Fig 7.3 1.81 E152 F108. Oval pit. Period 8. Mortared. T14/15 mm. There is a central wavy band of combing flanked by bands of straight combing. The comb may be the same as that used on Cat 101 and/or Cat 149 (this type). The top/bottom edge is folded over creating a flange towards the interior at the end of the tile.

Cat 143 1.81 E750 F549. Trench? **Period 3.** Reused. T15-20 mm. A central band of slightly wavy combing and a band of straight combing adjacent to the junction with the side. The same comb as Cat 217 in this type.

Cat 149 1.81 E462 F264. Foundation: Building 127. Period 5. Two joining fragments. Reused. T16-18 mm. A central band of straight combing and a band of wavy combing adjacent to the side. The comb seems to be the same as that used on Cat 101 (this type) but has one extra tooth. If the same comb, a tooth was presumably broken at some time between the keying of the two tiles.

Cat 153 Fig 7.3 1.81 E110 F101. Robber trench. Period 7. Reused. T14/15 mm. There is a central band of wavy combing and a band of straight combing adjacent to the surviving side. The comb is the same as used on Cat 218a (this type). There is a projection or 'hood' recessed 6-8 mm from the interior surface of the face of the tile and extending about 28 mm above the top edge.

Cat 176a 1.81 B1848. Unstratified. Clearance. Mortared. T14-16 mm. A band of straight combing parallel to the junction with the side. The same comb as Cat 101 etc (this type).

Cat 176d 1.81 B1848. Unstratified. Clearance. T13/14 mm. One band of straight and one of wavy combing. Comb as Cat 101 etc

(this type).

Cat 177b 1.81 B2249 F90. Robber trench for Building 112. Medieval. Mortared. T13/14 mm. Band of wavy combing adjoining junction with unkeyed side. Comb similar to Cat 101 (this type).

Cat 203 1.81 B112 L4. Rubble spread. Period 5. Reused. T17/18 mm. One band of straight and one of wavy combing. Same comb as Cat 101 (this type).

Cat 204 1.81 B1861 F551. Pit. Post-Roman. Reused. T15/16 mm. One band of straight combing and one of wavy combing. Same comb as Cat 101 (this type).

Cat 217 Fig 7.3 1.81 D49 F30. Robber trench for Building 123. Period 6. Reused. T13/14 mm. One band of straight combing adjoining unkeyed side and central band of wavy combing. The comb is the same as that used on Cat 143 (this type). There is a cutaway 32-34 mm from the junction.

Cat 218a 1.81 D1119 L272. Dump/levelling: yard of Building 123. Period 4 demolition or Period 5. Mortared. ?Reused. T13/14 mm. There is a band of wavy combing between two of straight combing. The comb is that used on Cat 153 (this type). A flange is present on the interior at the end of the tile.

Cat 221 1.81 D1577 L1372. Dump: Building 123, Room 8. Period 4. Mortared. T14/15 mm. Band of straight combing adjacent to unkeyed side and central band of slightly wavy combing. Comb the same as Cat 22 (this type).

Cat 246c SPT 96 L43. Phase C. Mortared. T19-21 mm. Internal width approximately 120 mm. Central band of wavy combing flanked by bands of straight combing.

Cat 307a 1.81 D333 F299. Robber trench for Building 123. Period 6. T16-18 mm. Internal width about 118 mm.

Type B7

Cat 6 1.81 H367 F335. Wall foundations: Building 116. Period 5. T17-20 mm. Three intersecting bands of straight combing.

Cat 28a+l 1.81 D10 L9. Topsoil. Period 7. Two joining fragments. T15/16 mm. Corner fragment. Band of wavy combing.

Cat 29 1.81 D401 F259. Robbing pit. Period 6. Mortared. ?Reused. T14 mm. Band of combing at an angle to the side of the tile. The same comb as Cat 89c, Cat 282 and Cat 290a (all in this type). The edge of a cutaway survives for 59 mm in the unkeyed side (T19 mm), set 32/34 mm in from the junction with the face.

Cat 79 Fig 7.4 1.81 G295 F14. Sand pit. Period 5. Mortared.

T18-20 mm. The edge of a cutaway survives for 188 mm (probably its full length). It is set 50/55 mm in from the junction with the face and about 70 mm from the broken end of the tile. A band of straight combing is adjacent to the surviving side. Short impressions of combing cross the side of this combing at an angle and extend over the central part of the face, where they meet, at 90 degrees, similar bands extending from the break on the other side of the tile.

Cat 89c 1.81 G287 F264. Pit. Period 6. T17/18 mm. One band of straight combing and one at an angle to it. Part of an unkeyed side survives. The same comb as Cat 29 etc (this type).

Cat 92 1.81 G587 F557. Pit. Period 6. T16/17 mm. One band of straight combing and two further bands at an angle to this.

Cat 94 1.81 G1600. Unstratified (Periods 3-6). T17/18 mm. Parts of two comb impressions.

Cat 115b 1.81 E146 F126. Small pit? Period 8. T21 mm. There is one band of straight combing parallel to the junction with the side. The side (T16 mm) has the edge of a cutaway set about 35 mm in from the junction.

Cat 129 1.81 E180 F146. Pit. Period 8. Mortared. T18-20 mm. Band(s) of wavy combing similar to Cat 28a+b (this type).

Cat 132a 1.81 E240 F109. Pit. Period 8. Two joining fragments. Burnt. T14/15 mm. The side of a box flue tile with the base of a cutaway about 96/97 mm from the end of the tile, surviving for 43 mm across the width of the side.

Cat 156 1.81 E494. Unstratified. T19 mm. A band of straight combing parallel to the junction with the side and one tooth impression of a second band meeting this at an angle. There is the edge of a cutaway set 57 mm in from the junction.

Cat 163b 1.81 E98. Junction of F90/F97. Period 8. Reused. T17 mm. One band of straight combing and a second at an angle to it.

Cat 179d 1.81 B1848. Unstratified. Clearance. T12/13 mm. Part of one band of combing. There is a cutaway in the unkeyed side (T11-13 mm) set about 38 mm in from the junction.

Cat 193 Fig 7.4 1.81 B1036 L235. Debris: Building 112. Period 4a. T15-17 mm. Corner fragment. There are three bands of combing similar in style to Cat 79 (this type). A cutaway survives in the side (T12-14 mm) for 46 mm and is broken off at about 72 mm from the end of the tile. It is set 39 mm in from the junction with the face.

Cat 195c 1.81 B126. Unstratified. Clearance. T19 mm. Two intersecting bands of combing.

Cat 220 1.81 D127 F27. Robber trench for Building 123. Period 6. Mortared. T20 mm. Part of an unkeyed side with the edge of a cutaway ending about 71 mm from the end of the tile and set about 62 mm in from the surviving junction with the face.

Cat 232b 1.81 G2000. Unstratified (Periods 3-6). Reused. T18-20 mm. There are three intersecting comb impressions on the face. The side is 12/13 mm thick.

Cat 248 SPT 120 L68. Robber trench fill. Phase C. Reused. Part of an unkeyed side (T15 mm) with the base of a cutaway about 41 mm wide set approximately 59 mm from the end of the tile.

Cat 253a SPT 50 F14. Corner wall. Phase D. T14-16 mm. Band of wavy combing. The attribution of this fragment to Type B7 is not certain.

Cat 265c Fig 7.4 SPT 93 L53. Robber trench fill. Phase C. Reused. T16/17 mm. A band of wavy combing and a band of straight combing at an angle.

Cat 268a Fig 7.4 236.84 57. Surface cleaning. Unstratified (Post-Roman). T18-20 mm. Corner fragment. Three intersecting bands of combing.

Cat 273 GBS A401 F27. Pit. Period 3b. T16-18 mm. Corner fragment. Wavy combing at an angle to the corner.

Cat 276 1.81 G3328 F3245. Robber trench. Period 6. Mortared. T18 mm. Corner fragment. Keying as Cat 273.

Cat 279 1.81 G212 L206. Destruction debris B/floor: Building 120. Period 5b. Mortared. T18/19 mm. Two bands of combing, one parallel to the junction with the side, the second at an angle to this, as in Cat 79. There is a cutaway surviving for 81 mm in the unkeyed side, 43 mm in from the junction.

Cat 282 1.81 G3031 F2951. Pit. Period 6. T13/14 mm. Two impressions of combing crossing at an angle. The same comb as Cat 29 etc (this type).

Cat 290a 1.81 J147 L1. Site clearance. Period 6. T11/12 mm. Parts of two impressions of combing crossing at an angle. The same comb as Cat 29 etc (this type).

Cat 319 Fig 7.4 1.81 G200. Unstratified (Periods 4-6). Reused. T13 mm. A band of straight combing parallel to the junction and a band of wavy combing are linked by a shorter band of straight combing. The unkeyed side (T18/19 mm) has part of a cutaway set 31/32 mm from the junction.

Cat 347b GBS A95 F10. Foundation? Post-medieval. Mortared. T17/18 mm. Two short bands of wavy combing lie at an angle.

Type B8

Cat 7 1.81 H525 L3. Topsoil/clearance. Period 6. Mortared. T14 mm. Scored lattice keying.

Cat 47 1.81 H626. Unstratified. Reused. T12/13 mm. Scored lattice keying. A cutaway survives for 103 mm set 42 mm in from the junction.

Cat 53a 1.81 H269 L235. Destruction debris B: Building 116. Period 5. Mortared. T13/14 mm. Scored lattice keying.

Cat 61e ?SPT/?1.81. Unstratified (no context label in bag). Reused. T15-17 mm. Scored lattice keying.

Cat 62 1.81 G2038 L1195. Floor make-up/dump: Building 116. Period 5. T14/15 mm. Corner fragment. Scored lattice keying.

Cat 63 1.81 G471 F293. Pit. Period 6. T17/18 mm. Scored lattice keying. Cutaway set 44 mm in from the junction.

Cat 180 1.81 B365 F134. Pit. ?Period 5. Mortared. T12/13 mm. Scored lattice keying.

Cat 184 Fig 7.4 1.81 B285 L23. Dump. **Period 4.** ?Reused. Face (T17/18 mm) with flange projecting on the interior at the end of the tile. This was probably made on the same former as Cat 153 (Type B6). Scored lattice keying.

Cat 186a+b 1.81 B2314 L23. Dump. **Period 4.** Two joining fragments. Mortared. T13 mm. Scored lattice keying.

Cat 226 1.81 A192 L7. Make-up/demolition debris. Period 5. Two joining fragments. T15/16 mm. Scored lattice keying.

Cat 232a Fig 7.4 1.81 G2000. Unstratified (Periods 3-6). Scored lattice keying. Cutaway 34 mm in from junction.

Cat 256a SPT 7 F5. Trench. Phase D. Mortared. Trench 12-13/14 mm. Corner fragment. The rounded angle of a cutaway is present set about 47 mm in from the junction with the face and about 50 mm from the end of the tile. Scored lattice keying.

Cat 275 1.81 G256 L205. Destruction debris A: Building 116. Period 5. Two joining fragments. Mortared. T16/17 mm. Scored lattice keying.

Cat 295 1.81 J189 F183. Pit. Period 6. T14/15 mm. Scored lattice keying.

Type B9

Cat 14 1.81 H42 L3. Topsoil/clearance. Period 6. Mortared. tl4 mm. One band of wavy combing.

Cat 15a 1.81 H366 F365. Pit. Period 6. T12-13 mm. One band of straight combing. The same comb as Cat 37 and Cat 111a in this type.

Cat 37 1.81 D565 L472. Topsoil. Period 7. Reused. T13 mm. One band of straight combing. The same comb as Cat 15a and Cat 111a in this type.

Cat 42a 1.81 D1459 L1426. Dump: Building 123, Room 10. Period 4. Three joining fragments. T11/12 mm. Two intersecting bands of combing.

Cat 64 Fig 7.4 1.81 G19 F4. Pit. ?Period 6. T15 mm. One band of wavy combing. There is a cutaway in the unkeyed side set 29/30 mm in from the junction.

Cat 93 1.81 G404 F293. Pit. Period 6. Tll/12 mm. One band of wavy combing.

Cat 111a 1.81 E384 L1. Topsoil. Post-Roman. Reused. T13 mm. Probably the same comb as Cat 15a and Cat 37 in this type. Cutaway set about 30/31 mm in from the junction. The base of the cutaway is at least 37 mm wide, with a knife mark about 3 mm wide on the surviving side.

Cat 125 1.81 E509 F4. Large rectangular pit. Period 8. T17 mm. One band of wavy combing. Probably the same comb as Cat 136f in this type.

Cat 136f Fig 7.4 1.81 E481 L10. Demolition for Period 4 buildings: Building 127. Period 5. Reused. T13-16 mm. Intersecting bands of straight and wavy combing. Probably the same comb as Cat 125 in this type.

Cat 137a 1.81 E1. Unstratified. Clearance. Mortared. T15/16 mm. One band of wavy combing.

Cat 140 1.81 E157 F117. Robber trench. Period 7. Reused. T15/16 mm. One band of straight and one of wavy combing.

Cat 162a 1.81 E302 F216. Shallow pit. Period 8. The thickness is not preserved. Corner fragment. One band of wavy combing.

Cat 176b 1.81 B1848. Unstratified. Clearance. Mortared. Tll/12 mm. One band of straight combing.

Cat 176c 1.81 B1848. Unstratified. Clearance. T19 mm. One band of straight combing.

Cat 178 1.81 B182 F84. Posthole. ?Post-Roman. T13 mm. One band of wavy combing.

Cat 252a 1.81 E480 F264. Foundation: Building 127. Period 5. Reused. T16/17 mm. One band of wavy combing.

Cat 257a SPT 120 L68. Robber trench fill. Phase C. Reused. T11-13 mm. One band of wavy combing.

Cat 344a GBS A89 F10. Foundation? Post-medieval. Mortared. T12/13 mm. Complete depth, about 117/118 mm. Band of wavy combing on face.

Cat 347c Fig 7.4 GBS A95 F10. Foundation? Post-medieval. T14 mm. The face has a band of wavy combing. There is the side of a cutaway surviving for 100 mm set 31 mm in from the junction.

Type B10

Cat 5 1.81 H173 F59. Trench. Period 5. Mortared. T15/16 mm. Parts of two comb impressions lying at an angle.

Cat 11 1.81 H131 L3. Topsoil/clearance. Period 6. T14/15 mm. Parts of two comb impressions lying at an angle. The same comb as Cat 32, Cat 136a, Cat 136g, Cat 136h, and Cat 137e in this type.

Cat 12 1.81 H447 F438. Pit. Period 6. Mortared. T15/16 mm. Parts of two comb impressions intersecting at an angle.

Cat 20c 1.81 D421 F259. Robbing pit. Period 6. Mortared. T18-22 mm. Two comb impressions forming a St Andrew's Cross, bisected by a third impression.

Cat 25c 1.81 D444 F259. Robbing pit. Period 6. Mortared. T18/19 mm. Two intersecting impressions of combing, one curved and one straight.

Cat 31a+b 1.81 D1593 L1560. Dump: Building 123, Passage 4. **Period 4.** Reused. T17/18 mm. Two non-joining fragments keyed with the same comb. Cat 31a has two intersecting bands of straight combing.

Cat 32 1.81 D1792 F1790. Large modern pit. Period 7. Reused. T16/17 mm. There is the side of a cutaway surviving for 92 mm set about 38 mm in from the junction. The comb is the same as Cat 11 etc in this type. There is one impression of straight combing.

Cat 35b 1.81 D635 F582. ?Hearth: Building 123, Room 9. Period 4. Reused. T14-16 mm. Two intersecting impressions of straight combing.

Cat 45 1.81 H398 F377. Robber trench. Period 6. T15 mm. Two intersecting impressions of straight combing.

Cat 46a 1.81 K21 F12. Oven backfill. Period 4. T19 mm. Corner fragment with one impression of straight combing. Attribution of this piece to Type B10 is not certain.

Cat 51 1.81 M56 L1. Surface cleaning. Unstratified. Mortared. T19 mm. The unkeyed side has the edge of a cutaway surviving for 100 mm at 45-47 mm from the junction.

Cat 53c 1.81 H269 L235. Destruction debris B: Building 116. **Period 5.** T17-19 mm. Parts of two intersecting diagonal bands of combing between two vertical bands.

Cat 55 1.81 M394. Unstratified (contaminated Period 3 L333). T19-21 mm. Two intersecting bands of combing. These do not lie at a definite angle and thus the attribution of this fragment to Type BIO is not certain.

Cat 56 1.81 H627. Unstratified. T20/21 mm. Two intersecting bands of straight combing.

Cat 59 1.81 H43 L3. Topsoil/clearance. Period 6. Reused. T19 mm. Two intersecting bands of straight combing.

Cat 60h SPT 92 L51. Robber trench F22 fill. Phase C. Reused. T16-20 mm. Parts of two impressions of combing.

Cat 61b ?SPT/?1.81. Unstratified (no context label in bag). Reused. T16-19 mm. Parts of three bands of straight combing.

Cat 61c ?SPT/?1.81. Unstratified (no context label in bag). Mortared. T17-19 mm. Parts of four bands of straight combing.

Cat 61h ?SPT/?1.81. Unstratified (no context label in bag). Reused. T15 mm. Impressions of straight combing lie parallel to the side of the tile. The edge of a cutaway survives for 78 mm set 45-47 mm in from the junction.

Cat 61j ?SPT/?1.81. Unstratified (no context label in bag). Reused. T15 mm. Two intersecting bands of straight combing.

Cat 76 1.81 G424 F163. Pit. Period 6. T16/17 mm. Two bands of straight combing lying at an angle. The comb apparently has only three teeth.

Cat 90 1.81 G unstratified. Two joining fragments. Mortared. T16-18 mm. Two bands of straight combing lying parallel to the side, crossed by a diagonal band of combing.

Cat 102 1.81 B687 L133. Occupation lenses: Building 113, Room 1. **Period 4.** Two joining fragments. Mortared. T15 mm. Two bands of straight combing lying at an angle.

Cat 103 Fig 7.4 1.81 B286 L23. Dump. Period 4. T17–19 mm. Two diagonal bands of combing (St Andrew's Cross) cut by two vertical bands.

Cat 104 1.81 B101 L12. Backfill of Hut 3. Anglo-Saxon. Mortared. T18 mm. Two parallel bands of diagonal combing.

Cat 106 1.81 B358 L43. Demolished daub walling: Building 112, Room 1. Periods 4/5. Two joining fragments. Reused. T21-25/26 mm. Two intersecting bands of straight combing. The same comb as Cat 230 in this type.

Cat 107 1.81 B213 F102. Posthole?/small pit or slot. ?Period 5. T18 mm. Two intersecting bands of straight combing.

Cat 108 1.81 E160 F136. Pit. Period 8. T17-19 mm. Two intersecting bands of straight combing and one of curved combing.

Cat 109a 1.81 E1. Unstratified. Clearance. T17-19 mm. Two intersecting bands of straight combing.

Cat 110 1.81 E30 F23. Robber trench. Period 7. Reused. T18/19 mm. One band of straight combing survives. The attribution of this fragment to Type B10 is uncertain.

Cat 111b 1.81 E384 L1. Topsoil. Post-Roman. T16 mm. Two intersecting bands of curved combing.

Cat 112b 1.81 E10 F9. Extensive robber trench. Period 7. Reused. T14-16 mm. Two bands of straight combing lying at an angle.

Cat 116 1.81 E465 L16. Make-up. **Period 4.** Mortared. T19-21 mm. Two intersecting bands of straight combing.

Cat 120 1.81 E182 F148. Pile-hole: Building 127. Period 5. T16-18 mm. Two intersecting bands of straight combing.

Cat 123 1.81 E462 F264. Foundation: Building 127. Period 5. ?Reused. T17/18 mm. Corner fragment with overall keying lying in bands between the end and the side of the tile.

Cat 126 1.81 E203 F164 & F165. Pits. Period 8. Burnt. T15/16-21/22 mm. There are probably five bands of combing. Two lie adjacent and parallel and cross the other three, one of which lies at right angles to the first two. The angles formed are bisected by the other two bands. The complete design may have been a St Andrew's Cross, bisected both horizontally and vertically.

Cat 134a 1.81 E31 F10. Robber trench. Period 7. Reused. T15/16 mm. Two intersecting bands of straight combing.

Cat 134b 1.81 E31 F10. Robber trench. Period 7. Reused. T20-22 mm. Two intersecting bands of straight combing.

Cat 136a Fig 7.4 1.81 E481 L10. Demolition of Period 4 buildings: Building 127. Period 5. Mortared. T16/17 mm. Parts of three bands of straight combing. Two lie parallel and the third lies at an angle between them and intersects one of them on the surviving fragment. The comb is the same as Cat 11 etc (this type).

Cat 136b+c 1.81 E481 L10. Demolition of Period 4 buildings: Building 127. Period 5. Two joining fragments. Mortared. T19 mm. Corner fragment with two bands of straight combing forming a St Andrew's Cross.

Cat 136g 1.81 E481 L10. Demolition of Period 4 buildings: Building 127. Period 5. ?Reused. T14 mm. One band of

straight combing is present. The comb is the same as Cat 11 etc (this type).

Cat 136h 1.81 E481 L10. Demolition of Period 4 buildings: Building 127. Period 5. Mortared. T14 mm. Two intersecting bands of straight combing are present. The comb is the same as Cat 11 etc (this type).

Cat 137e 1.81 E1. Unstratified. Clearance. T15-17 mm. Two bands of straight combing lying at an angle. The same comb as Cat 11 etc (this type).

Cat 145 1.81 E189 F140. Pit. Period 8. ?Reused. T17-19 mm. Two intersecting bands of straight combing.

Cat 151b 1.81 E472 L10. Demolition of Period 4 buildings: Building 127. Period 5. ?Reused. T17/18 mm. Parts of two parallel bands of straight combing with further straight combing lying at an angle between them.

Cat 154b 1.81 E unstratified. Reused. T16-18 mm. A band of straight combing parallel to the side with a second band meeting it at an angle.

Cat 157a 1.81 E unstratified. Mortared. T19 mm. A band of straight combing and a small portion of a second band at an angle to it. There is the corner of a rectangular cutaway in the unkeyed side set 42 mm in from the junction with the face.

Cat 157b 1.81 E unstratified. T17 mm. keyed with the same comb as Cat 157a above.

Cat 157c 1.81 E unstratified. Mortared.. T16 mm. Two intersecting bands of straight combing.

Cat 157d 1.81 E unstratified. Reused. T18-20 mm. Three intersecting bands of straight combing.

Cat 161 1.81 Ell. Unstratified (contaminated from Period 7 F9). Reused. T19 mm. Two bands of straight combing lying at an angle.

Cat 175 Fig 7.4 1.81 B221 F100. Pit. Modern. Two joining fragments. Reused. T19 mm. Maximum surviving width 160 mm. A band of straight combing lies at an angle between two parallel bands adjacent to the junctions with the sides of the tile.

Cat 191 1.81 B955 F282. Large cess-pit: Building 77, Room 5. Periods 1/2, but this context number is contaminated by sinkage from later features. Reused. T16-20 mm. A band of straight combing is parallel to the junction with the side and a second band intersects it at an angle.

Cat 194 1.81 B27 L2. Dump/midden build-up. Period 5. Reused. T20/21 mm (unkeyed side about T12 mm). One band of wavy combing and two of curved combing intersect and provide an overall keying.

Cat 195a 1.81 B126. Unstratified. Clearance. T19/20 mm. One band of straight combing. The attribution of this piece to Type B10 is not certain.

Cat 196 1.81 B29. Site clearance. Mortared. T16 mm. Two intersecting bands of curved combing.

Cat 198 1.81 B14 F3. Robber trench for Building 113. Medieval. T16-18 mm. Intersecting bands of straight combing.

Cat 201 1.81 B169. Clearance. Unstratified. Two joining fragments. Mortared. T19 mm. Two intersecting bands of straight combing.

Cat 202 1.81 B109 L6. Backfill of Hut 3. Anglo-Saxon. Mortared. T19 mm. A band of straight combing intersected by two bands of curved combing.

Cat 210b 1.81 D213 F38. Robber trench for Building 123. Period 6. **or** 1.81 D425 L298. Demolition debris: Building 123, Passage 4. Period 4. (N Crummy: this bag contained two context labels.) Reused. T21 mm. One band of straight combing apparently done with a three-toothed comb. The attribution of this piece to Type B10 is not certain.

Cat 214 1.81 D1053 F1044. Oven: Building 123, Passage 1. ?Period 4. T18/19 mm. Three intersecting bands of straight combing.

Cat 219c 1.81 D47 F28. Robber trench for Building 123. Period 6. Mortared. T14-18 mm.

Cat 224 1.81 D733 F686. Drain: Building 123, Passage 2. ?Period 4. Reused. T15/16 mm. Bands of straight combing giving an overall keying.

Cat 228 1.81 A187 F73. Ditch. **Period 4.** Reused. T21 mm. Two intersecting bands of straight combing.

Cat 230 1.81 C203. Unstratified. T18 mm. Keyed with faint and apparently random lines of combing. Seems to be the same comb as Cat 106 in this type.

Cat 246d SPT 96 L43. Phase C. T14-16 mm. Two intersecting bands of straight combing.

Cat 249 SPT 14 L8. ?Make-up/dump. Phase D. T13-15 mm. Two intersecting bands of straight combing.

Cat 250 SPT 184 F31. Robber trench. Phase C. Mortared. T15-18 mm. Three intersecting bands of straight combing.

Cat 257b SPT 120 L68. Robber trench fill. Phase C. Reused. T19-21 mm. Two intersecting bands of straight combing.

Cat 260a SPT 97 L50. ?Fill of robber trench/pit. Phase C. Two joining fragments. Reused. T19 mm. One band of straight combing parallel to the junction with the side and a second band meeting it at an angle at the corner of the

tile.

Cat 260b SPT 97 L50. ?Fill of robber trench/pit. Phase C. Mortared. T17-19 mm. Two bands of straight combing lying at an angle. The same comb as Cat 260a above.

Cat 260c SPT 97 L50. ?Fill of robber trench/pit. Phase C. Reused. T19-21 mm. Two intersecting bands of straight combing.

Cat 260d SPT 97 L50. ?Fill of robber trench/pit. Phase C. T21 mm. Two intersecting bands of straight combing.

Cat 261b SPT 97 L50. ?Fill of robber trench/pit. Phase C. T15/16 mm. A band of straight combing lies at an angle to the end of the tile.

Cat 261e SPT 97 L50. ?Fill of robber trench/pit. Phase C. Mortared. T21 mm. Two impressions of straight combing meeting at an angle. The end of the tile has been pressed inwards, apparently by something resting or pressing on it.

Cat 263a SPT 64 L1. Demolition debris. Phase D. Two joining fragments. Mortared. T15/16 mm. Two bands of straight combing lying at an angle.

Cat 263b SPT 64 L1. Demolition debris. Phase D. Mortared. T18 mm. One band of straight combing adjoining the junction with the side of the tile. The attribution of this piece to Type B10 is not certain.

Cat 264 SPT 8 L1. Demolition debris. Phase D. Mortared. ?Reused. T19 mm. There is a band of straight combing parallel to the junction with the side. The junction is rounded. There is the side of a cutaway surviving for about 84 mm set about 45 mm in from the junction. The attribution of this fragment to Type B10 is not certain.

Cat 265b SPT 93 L53. Robber trench fill. Phase C. T19-21 mm. Two intersecting bands of straight combing.

Cat 268c 236.84 57. Surface cleaning. Unstratified (Post-Roman). T15-17 mm. Two intersecting bands of straight combing.

Cat 286 1.81 B231 F108. Gully between B112 & B113. **Period 4.** Mortared. T21 mm. One band of straight combing at an angle to the end of the tile.

Cat 287 1.81 B294 L25. Dump? Periods 4/5. One band of straight combing. The attribution of this tile to Type B10 is not certain.

Cat 293 1.81 J2 L1. Site clearance. Period 6. T16/17 mm. Two bands of straight combing lying at an angle.

Cat 297 1.81 J155 F152. Pit. Period 6. T19/20 mm. Two adjoining impressions of combing parallel to the junction with the side of the tile (broken away). Appears to be the same comb as Cat 55 in this type. The attribution of this fragment to Type B10 is uncertain.

Cat 303 X295. Post Office Site, Head Street, Colchester (watching brief). Mortared. T18-20 mm. The complete height is 398-402 mm, and the complete width 160 mm. There is a cutaway in one unkeyed side about 102 mm long by 29 mm wide, set 44 mm from the junction with the surviving face. The surviving length of the cutaway in the other side is about 100 mm, and it is set about 48-50 mm from the junction. The estimated depth of the tile is approximately 120 mm, and the internal width 128/129 mm. A band of straight combing is aligned from each corner to just past the mid-point of the opposing side. A six-toothed comb was used, about 32-34 mm across.

Cat 305 1.81 D341 F299. Robber trench for Building 123. Period 6. Reused. T17 mm. Parts of three bands of straight combing.

Cat 306e 1.81 D379 F259. Robbing pit. Period 6. Mortared. T17/18 mm. Two intersecting bands of straight combing.

Cat 309a 1.81 D375 F299. Robber trench for Building 123. Period 6. Mortared. T15-17 mm. Two intersecting bands of straight combing.

Cat 320e 1.81 G200. Unstratified (Periods 4-6). T17 mm. Three intersecting bands of straight combing giving an overall keying on this fragment.

Cat 320g 1.81 G200. Unstratified (Periods 4-6). Reused. T17 mm. Two intersecting bands of straight combing.

Cat 320h 1.81 G200. Unstratified (Periods 4-6). Reused. T16/17 mm. Two intersecting bands of straight combing. The same comb as Cat 320g above.

Cat 324 SPT 97 L50. ?Fill of robber trench/pit. Phase C. Mortared. T19 mm. Two intersecting bands of straight combing.

Cat 328a GBS B22 F2. Robber trench for Building 137. Medieval. Reused. T19/20 mm. One band of straight combing lies at an angle to the end of the tile.

Cat 328b GBS B22 F2. Robber trench for Building 137. Medieval. Mortared. T17/18 mm. Two intersecting bands of straight combing.

Cat 332 GBS A1793 F7. Foundation? Post-medieval. Mortared. T16-19 mm. Two intersecting bands of straight combing.

Cat 333 GBS B152 F31. Pit. Period 3. Reused. T18 mm. Two intersecting bands of combing, one straight and one curved. The same comb as Cat 337 in this type.

Cat 337 Fig 7.4 GBS A2219 L242. ?Pit fill/scraped-up road silt. Period 3b or 4. Reused. T18/19 mm. Two intersecting bands of straight combing, and one of wavy combing. The same comb as Cat 333 above.

Cat 343 GBS A1677 L1. Topsoil. Post-Roman. T18 mm. Three intersecting bands of straight combing and one of wavy combing. The style is similar to Cat 337, and the same comb was probably used.

Cat 346 GBS A817 F117. Pit. **Period 3.** Reused. T17 mm. Three intersecting bands of straight combing.

Cat 349a GBS B97 F15. Large pit. Period (3b or) 4. Mortared. T20 mm at break, increasing to 28 mm at the end of the tile. Two intersecting bands of straight combing.

Cat 34 9b GBS B97 F15. Large pit. Period (3b or) 4. T16/17 mm. Two parallel bands of straight combing at least one of which is intersected by a band of combing lying at an angle in the gap between them.

Type B11

Cat 9a 1.81 H485 L387. Destruction debris B: ?Building 120. Period 5 or 6 Mortared. T18-20 mm. One end of the tile is present. External width at least 140 mm. Internal width 125+ mm. There is a band of straight combing adjacent to the junction with each side, and between these is a band of wavy combing. The same comb as Cat 65, Cat 66, & Cat 205 in this type.

Cat 9b Fig 7.4 1.81 H485 L387. Destruction debris B: ?Building 120. Period 5 or 6. Four joining fragments. Mortared. T14 mm. External width 149/159 mm. Internal width about 124/126 mm. Depth 116/118 mm. There is a cutaway measuring about 34 x 100 mm set 38/39 mm in from the junction with one face and 41/42 mm in from the other, and about 150 mm in from the end of the tile. There is a central band of wavy combing framed on each side by a band of straight combing.

Cat 65 1.81 G2387 L2367. ?Floor surface: Building 116. Period 5. T17/18 mm. Possibly the same comb as Cat 9a above.

Cat 66 1.81 G908 L853. Destruction debris B: Building 120. Period 5b. Reused. T17/18 mm. The same comb as Cat 9a above.

Cat 205 1.81 A240 F37. Ditch. **Period 4.** Mortared. Reused as a counter (see small finds report entry **983)**. T18 mm. The same comb as Cat 9a above.

Cat 310 1.81 D371 F91. Pit. Period 6. Reused. T15/16 mm. A band of straight combing lies on each side of a central band of wavy combing. External width about 161 mm. Internal width about 130 mm.

Cat 321e 1.81 G3069 L3047. Wall collapse. Period 6. Reused. T18-20 mm. Internal width 125/127 mm. A central band of wavy combing is flanked on each side by a band of straight combing.

Cat 321h 1.81 G3069 L3047. Wall collapse. Period 6. Reused. T18-

20 nun. One end of the tile survives. Internal width about 130 mm. A central band of wavy combing is flanked on each side by a band of straight combing.

Either Type B6 or Type B11

Cat 15b 1.81 H366 F364. Pit. Period 6. T16/17 mm. Parts of a band of straight and another of slightly wavy combing.

Cat 21 1.81 D1854 F1842. Large pit. **Period 4.** Reused. T16/17 mm. Parts of one band of straight and one of wavy combing.

Cat 25a 1.81 D444 F259. Robbing pit. Period 6. Reused. T17 mm. One band of straight and one of wavy combing.

Cat 44 1.81 D187 F38. Robber trench for Building 123. Period 6. T19 mm. One band of straight and one of wavy combing.

Cat 46b 1.81 K21 F12. Oven backfill. Period 4. Reused. T15-19 mm. One band of straight and one of wavy combing.

Cat 48 1.81 H415 L414. Destruction debris: Building 120. Period 5b. Mortared. T17 mm. One band of straight combing and one lying parallel of wavy combing.

Cat 61a ?SPT/?1.81. Unstratified (no context label in this bag). Reused. T16/17 mm. One band of straight and one of wavy combing.

Cat 61d ?SPT/?1.81. Unstratified (no context label in this bag). Reused. T17 mm. One band of straight and one of wavy combing.

Cat 61i ?SPT/?1.81. Unstratified (no context label in this bag). Mortared. T16-18 mm. Parts of ?two bands of slightly wavy combing.

Cat 67 1.81 G388 F16. Robber trench. Period 6. Reused. T19 mm. Bands of straight combing flanking a central band of wavy combing.

Cat 71 1.81 G811 L581. Destruction debris/occupation: Building 120. Period 5b. Mortared. T15-17 mm. Part of one end of the tile survives. There is one band of straight and one of wavy combing lying parallel.

Cat 80b 1.81 G172. Unstratified. Period 4. Mortared. T17 mm. Part of a band of wavy combing.

Cat 81 1.81 G1691 F1690. Wall foundation: Building 116. Period 5. Reused. T14/15 mm. One band of straight and one of wavy combing.

Cat 82 1.81 G290 F270. Pit. ?Period 4. T16 mm. One band of straight and one of wavy combing.

Cat 85 1.81 G2104 L1746. Cultivated soil. **Period 3.** Reused. T16

mm. One band of straight and one of wavy combing.

Cat 130 1.81 Ell. Unstratified (contaminated from Period 7 F9). Reused. T16 mm. Corner fragment. One band of straight and one of slightly wavy combing.

Cat 135 1.81 E718. Unstratified. Reused. T15 mm. There is the side of a cutaway set 34 mm in from the junction with the face. One band of straight and one of wavy combing.

Cat 165 1.81 E208 F167. Large pit. Period 8. Reused. T17 mm. One band of straight combing and one tooth impression of a band of wavy combing.

Cat 182 1.81 B181 L12. Backfill of Hut 3. Anglo-Saxon. Mortared. T17-19 mm. One band of straight and one of wavy combing.

Cat 183 1.81 B2356 L370. Make-up? ?Period 3. Reused. T16 mm. Corner fragment with one band of straight and one of wavy combing.

Cat 210c 1.81 D213 F38. Robber trench for Building 123. Period 6. **or** 1.81 D425 L298. Demolition debris: Building 123, Passage 4. Period 4. (N Crummy: this bag contained two context labels.) Reused. T17-19 mm. One band of straight and one of wavy combing.

Cat 238 GBS B568 L26. Dump (redeposited Boudican destruction debris): destruction of Building 133. **End of Period 2 or early 3.** Mortared. T17-19 mm. One band of straight and **one** of wavy combing.

Cat 271 GBS A420 L1. Topsoil. Post-Roman. Mortared. T17/18 mm. A band of wavy combing between bands of straight combing.

Cat 291a 1.81 J145 F14. Robber trench. Period 6. Mortared. T15/16 mm. One band of straight and one of wavy combing.

Cat 311a 1.81 D337 F299. Robber trench for Building 123. Period 6. Reused. T14-17 mm. One band of straight and one of slightly wavy combing.

Cat 312b 1.81 D303 F259. Robbing pit. Period 6. Reused. T15-17 mm. One band of slightly wavy combing survives.

Cat 320f 1.81 G200. Unstratified (Periods 4-6). Mortared. T19/20 mm. There is a central band of wavy combing between bands of straight combing.

Type B12

Cat 8 1.81 H5 L3. Topsoil/clearance. Period 6. Mortared. T24/25 mm. The face has a band of wavy combing and there is a small part of an unkeyed side.

Cat 69 1.81 G167 L167. Occupation/midden: Building 120. ?Period 5b. Reused. T21-23 mm. A small portion of the side survives. The face has a band of wavy combing.

Cat 179b 1.81 B1848. Unstratified. Clearance. T20-23 mm. There is a band of straight combing adjoining the unkeyed side (T about 17 mm), flanking a band of wavy combing.

Type B13

Cat 68 Fig 7.4 1.81 G500. Unstratified (Periods 4-6). T10-12 mm. Three (possibly four) intersecting bands of straight combing.

Cat 98 1.81 G546 L205. Destruction debris A: Building 116. Period 5. Two joining fragments. T10/11 mm. Two intersecting bands of straight combing.

Cat 142 1.81 E332. Unstratified (possibly part of Period 7 F117). Reused. T6-8 mm. Part of one tooth impression only survives.

Cat 181 1.81 B1181 F334. Gully (wall trench): Building 95, Room 2. **Period 3.** Reused. T10/11 mm. Impressions of four very fine teeth survive. They are extremely shallow.

Cat 189 1.81 B1593 L389. General Boudican demolition layer: destruction of Building 77. **Early Period 3.** T11 mm. Five evenly spaced tooth impressions survive of a band of straight combing.

Cat 215 1.81 D1234 L328. Make-up: Building 123, Passage 4. Period 4. Reused. T10/11 mm. Part of a band of curved or wavy combing. Parts of the impressions of six evenly spaced teeth survive.

Cat 290b 1.81 J147 L1. Site clearance. Period 6. T9/10 mm. Part of a band of wavy combing. Parts of the impressions of five evenly spaced teeth survive.

Voussoir tiles

Type V1

Cat 80a 1.81 G172. Unstratified (Period 4). Mortared. T14 mm. Scored lattice keying on top. Part of an oval cutaway in unkeyed face about 49 mm down from the top.

Cat 99 Fig 7.5 1.81 B465 L63. Dump: Building 112, Room 6a. Periods 4b/c. ?Reused: slight mortar trace on interior surface. Face T15/16 mm. Oval cutaway (measuring 59 by about 48 mm along its axes) set about 60/61 mm down from the top, about 60 mm up from the base, 71 mm in from one edge, and 51 mm in from the other. No keying. Greater width 191 mm. Lesser width 162 mm. Height 170 mm. Scored lattice keying on top. Base has three bands of combing in a Z pattern. Base T15-18 mm. Internal depth 155/156 mm. Estimated complete depth 185/186 mm.

Cat 132b 1.81 E240 F109. Pit. Period 8. Reused. T20 mm. Three bands of combing in a Z pattern, though a different comb from that used on Cat 99 above.

Cat 151a 1.81 E472 L10. Demolition of Period 4 buildings: Building 127. Period 5. Reused. Top (T18 mm) has small portion of scored lattice keying. Unkeyed face, T18 mm.

Cat 274 1.81 G203 L68. Destruction debris A: Building 116. Period 5. Face T14/15 mm. Unkeyed with part of an oval cutaway 47 mm up from the base. It is not centrally placed in relation to the side edges. Base T15 mm. Width 161/162 mm. Portion of combed keying.

Cat 325 GBS B129 F15. Large pit. Period (3b or) 4. Mortared. T18-21 mm. Base with three bands of keying in a Z pattern, though the comb used is different from those on Cat 99 and Cat 132b in this type. The size of the base matches that of Cat 99.

Type V2

Cat 18 Fig 7.5 1.81 G636 L518. Occupation: Building 120. Period 5b. ?Reused. The top (T20 mm) has two teeth of a band of combing preserved. The face (T16 mm) is unkeyed and has a circular cutaway about 48/49 mm in diameter (measured on the exterior surface). The cutaway is set 44 mm down from the top and 59 and 62 mm in from the edges. Estimated greater width 176 mm. Estimated lesser width 160 mm. Estimated height 162/163 mm.

Cat 150a 1.81 E462 F264. Foundation: Building 127. Period 5. Mortared. ?Reused. T15-17 mm. Part of an unkeyed face with part of a circular cutaway about 69 mm in from one edge.

Cat 339a GBS B46. Unstratified. Reused. Unkeyed face (T16-19 mm) has part of a circular cutaway about 54 mm down from the top and about 62 mm in from one edge. The top (T18 mm) has three teeth of a band of combing preserved.

Type V3

Cat 24a 1.81 D426 L89. Dump (clay): Building 123, Passage 2. Period 4. T20 mm. Unkeyed face with part of an oval cutaway which has a raised rim round it on the interior surface.

Cat 24b 1.81 D426 L89. Dump (clay): Building 123, Passage 2. Period 4. T15-19 mm. Unkeyed face with part of an oval cutaway about 57 mm from the top/base and 74 mm in from one edge. There is a raised rim round the cutaway on the interior surface.

Cat 60d SPT 92 L51. Fill of robber trench F22. Phase C. T13/14 mm rising to 18 mm nearer to the cutaway. Unkeyed face with part of an oval cutaway with a raised rim on the interior surface.

Cat 60e SPT 92 L51. Fill of robber trench F22. Phase C. T19 mm. Part of an unkeyed face with part of an oval cutaway with a raised rim on the interior surface.

Cat 242 Fig 7.5 1.81 W78 F66. Pit. **Period 4.** Mortared. Unkeyed face (T16-17 mm) with an oval cutaway measuring about 62 by 50 mm along its axes. There is a raised rim on the interior surface of the cutaway, which is set 100 mm in from the surviving edge and 67 mm down from the top. Surviving height 153 mm. If this tile is broken at the junction with the base the complete height can be estimated at 168 mm. Maximum surviving width 172 mm. The top (T14-15 mm) has the impression of five teeth of a band of combing.

Cat 246a SPT 96 L43. Phase C. Unkeyed face (T17 mm) with part of an oval cutaway with raised rim on interior surface set 28 mm down from the top and 69 mm in from one edge. Top (T18 mm) has three teeth of a band of combing.

Cat 261c SPT 97 L50. ?Fill of robber trench/pit. Phase C. Mortared. Unkeyed face (T13 mm) with part of oval cutaway with raised rim on interior surface.

Type V4

Cat 154a Fig 7.5 1.81 E unstratified. Reused. Unkeyed face (T23/24 mm) with part of a roughly circular or oval cutaway about 64 mm in from one edge and about 43 mm from the base/top. Surviving width 164 mm. Base/top (T20 mm) has two bands of combing, one parallel and adjacent to the junction with the face and the second at 45° to the corner.

Cat 190b 1.81 B912 F271. Gully: Building 113, Room 1. ?Period 4. Burnt. Part of an unkeyed face (T18/19 mm) with a small part of a circular/oval cutaway about 45 mm from the junction with the base/top. Base/top (T17-18 mm) is keyed with a band of straight combing parallel to the junction.

Type V5

Cat 39 1.81 D52 F38. Robber trench for Building 123. Period 6. T22/23 mm. Two intersecting bands of combing: comb as for Cat 88 below.

Cat 88 1.81 G119 L119. Occupation/midden: Building 120. Period 5b. Mortared. T17-20 mm. Part of face of voussoir with one band of keying adjacent and parallel to the top of the tile, and two more at 45° to the corners. No keying on the surviving part of the top of the tile (T15-17 mm). Greater width 151 mm.

Cat 223 1.81 D423 L422. Dump. Period 7. Mortared. ?Reused. Face (T20 mm) is combed with the same comb as Cat 88 above.

Top/base (unkeyed) is 15-24 mm thick.

Cat 321a Fig 7.5 1.81 G3069 L3047. Wall collapse. Period 6. Reused. T17 mm. Complete face. Height 164/166 mm. Greater width 160 mm. Lesser width 145 mm. No keying on surviving portions of top and base (T16-18 mm). There is no cutaway. The face has been given an overall keying with bands of combing at 45° to the corners and parallel to the top and base.

Type V6

Cat 23/30/35a Fig 7.5 Three joining fragments. Cat 23 1.81 D727 L641. Oven debris: Building 123, Room 9. Period 4. Cat 30 1.81 D696 L641. Oven debris: Building 123, Room 9. Period 4. Cat 35a 1.81 D635 F582. ?Hearth: Building 123, Room 9. Period 4. Cat 23, Cat 30 and Cat 35a all join to form the face of a voussoir broken at the junction with the top and with one edge surviving. The surviving height is 225 mm, and the surviving width 140 mm. It has mortar traces and traces of burning. T16-18 mm. The keying has bands of combing between opposite corners crossed in the middle by a further horizontal band.

Cat 200 1.81 B168 L7. Backfill of gully F39. Period 5. Reused. T18-20 mm. Three intersecting bands of combing as in Cat 23/30/35a.

Type V7

Cat 16 1.81 H500. Unstratified (Periods 4-6). T17 mm. Corner fragment broken at junction with face. There is part of a band of straight combing parallel to this junction. The same comb as Cat 78 in this type.

Cat 70 1.81 G283 L205. Destruction debris A: Building 116. Period 5. Reused. T16 mm. Corner fragment. No keying on surviving portion of face (T about 14 mm). Base/top has a band of straight combing parallel to the junction with the face, then a band of wavy combing. The same comb as Cat 78 below.

Cat 78 Fig 7.5 1.81 G14 F14. Sand pit. Period 5. Mortared. ?Reused. T15-19 mm. Base/top with internal depth of 160 mm. Width 190 mm. There are three bands of keying parallel to the junctions with the faces, a central band of wavy combing, flanked on each side by a band of straight combing.

Cat 234 1.81 G234 9 F2160. Drain. Periods 1 & 2 & 3. Two joining fragments. Reused. T16-17 mm. The same comb' as Cat 78 above.

Type V8

Cat 4b 1.81 H442 L3. Topsoil/clearance. Period 6. T17-21 mm. Unkeyed face with part of a roughly circular cutaway

about 52/54 mm in diameter.

Cat 320a Fig 7.5 1.81 G200. Unstratified (Periods 4-6). Reused. Unkeyed face (T16-19 mm) with part of a circular cutaway set 98 mm down from the top. Greater width 168 mm. Top (T15-17 mm) has overall keying with bands of combing at 45° to the corner and horizontal bands crossing these parallel to the junctions.

Cat 320b+c 1.81 G200. Unstratified (Periods 4-6). Two joining fragments. Reused. Unkeyed face T19-20 mm. Base/top (T18-20 mm) has keying as Cat 320a.

Cat 320d 1.81 G200. Unstratified (Periods 4-6). Mortared. T16-17 mm. Part of base/top. Combing as Cat 320a.

Cat 321b 1.81 G3069 L3047. Wall collapse. Period 6. Reused. Unkeyed face (T19-21 mm) has part of a circular cutaway set 91 mm down from the top. Greater width 175 mm. Small part of keyed top (T18-22 mm) has part of a band of combing parallel to the junction.

Cat 321c 1.81 G3069 L3047. Wall collapse. Period 6. Reused. T19 mm. Unkeyed face with circular cutaway set 98 mm down from the top. Small portion of combed top present.

Cat 321d 1.81 G3069 L3047. Wall collapse. Period 6. Reused. T16-18 mm. Unkeyed face with part of circular cutaway 92 mm from break which occurs at junction with base. The width at the break is 149 mm. By allowing about 18 mm for the missing thickness of the base the lesser width can be estimated at about 144 mm.

Cat 321f 1.81 G3069 L3047. Wall collapse. Period 6. Reused. Unkeyed face (T18 mm) with a circular cutaway set 115 mm down from the top. Greater width 175 mm. A small portion of the top with combing parallel to the junction is present.

Type V9

Cat 321g Fig 7.5 1.81 G3069 L3047. Wall collapse. Period 6. Reused. T18-21 mm. Unkeyed face 162 mm wide at the break which occurs at the junction with the base. There is part of a circular cutaway 102 mm from the break near the base and 70 and 63 mm in from the edges. It is about 40 mm in diameter.

Type V10

Cat 84 1.81 G695 F565. Beam slot: Building 120. Period 5a. Reused. T20-21 mm. The attribution of this fragment to Type V10 is not certain. Only three teeth impressions of one band of combing survive. However, the surface also shows scored lines similar to those on Cat 199a+b below.

Cat 199a Fig 7.5 1.81 B253 F117. Small pit. ?Period 5. Reused.

The face (T21-25 mm) is keyed with two impressions of combing which do not intersect. There is a circular cutaway with a rim round it on the exterior surface set about 55 mm from the junction with the top/base. The maximum surviving height is about 99 mm and the maximum surviving width is about 100 mm. A small area of the top/base survives (T about 21 mm) with part of a single band of combing at right angles to the junction.

Cat 199b 1.81 B253 F117. Small pit. ?Period 5. (T21-25 mm) This piece may belong to the same voussoir as Cat 199a but the two pieces do not fit together. It has three bands of combing, none of which intersect. Two of the bands are linked by scored lines.

Cat 245 GBS A977 F80. Large pit. Medieval. ?Mortar on interior surface. Corner fragment. One surface (T23 mm) has a large unkeyed area and three bands of combing, at least two of which intersect. There are also on this surface two curved scored lines which intersect. There is a small portion of the adjoining surface (T18 mm). The attribution of this fragment to Type V10 is not certain.

Cat 272 GBS A398 F80. Large pit. Medieval. Mortared. ?Reused (possibly mortar on interior surface). Unkeyed surface (T19/20 mm). Adjoining surface (T18-24 mm) has a band of straight combing parallel to the junction. The attribution of this fragment to Type V10 is not certain.

Type V11

Cat 2 1.81 D227 F224. Robber trench for Building 123. Period 6. Mortared. Two adjoining keyed surfaces (T16-19 mm and 17-18 mm), one with a band of curved combing, and one with three intersecting bands of straight combing.

Cat 3 1.81 D822 F30. Robber trench for Building 123. Period 6. Reused. Two adjoining keyed surfaces (T19 mm and 15-16 mm), one keyed with two bands of curved combing, and the other with intersecting bands of curved combing.

Cat 25b 1.81 D444 F259. Robbing pit. Period 6. Mortared. Two adjoining keyed surfaces (T17 mm and T20 mm). One surface has a band of straight combing at 45° to the corner. The other has traces of two bands of straight combing, one parallel to the junction.

Cat 209 Fig 7.5 1.81 D78 L78. Dump: Building 123. Period 4. Mortared. T16-17 mm. An almost complete face. Height 240/244 mm. Greater width 179 mm. Lesser width about 163 mm. There is no cutaway. In the middle is a vertical band of keying with a curved band on each side. There is a small part of a horizontal band parallel and adjacent to the top of the face. A small portion of the base (T18-20 mm) has a band of curved combing and a band of straight combing at right angles to the junction.

Cat 210d 1.81 D213 F38. Robber trench for Building 123. Period 6.

or 1.81 D425 L298. Demolition debris: Building 123, Passage 4. Period 4. (N Crummy: this bag contained two context labels.) Reused. Fragment of voussoir face (T17-19 mm) with part of one edge remaining, keyed as the face of Cat 209.

Cat 306a 1.81 D379 F259. Robbing pit. Period 6. Mortared. Corner fragment. One surface (T23/24 mm) has three intersecting bands of combing (one straight, one wavy, one curved). The other (T16 mm) is too damaged to show any pattern.

Cat 313 1.81 D368 F259. Robbing pit. Period 6. ?Reused. Two adjoining keyed surfaces, one (T12/13 mm) has a band of combing parallel to the junction, and the other (T19-23 mm) has three intersecting bands of combing (one curved and two straight).

Cat 314 1.81 D377 F299. Robber trench for Building 123. Period 6. Reused. Two adjoining keyed surfaces, one (T13 mm) has one band of combing at right angles to the junction, the other has two bands of combing at right angles to the junction and is 16-20 mm thick.

Cat 316 1.81 D309 F259. Robbing pit. Period 6. Reused. Two adjoining keyed surfaces, one (T15-18 mm) has a band of straight combing at 45° to the corner, and the other (T18-23 mm) has three bands of intersecting combing (one curved, one straight, one wavy).

Cat 318a 1.81 D343 F259. Robbing pit. Period 6. Mortared. Corner fragment. One surface has a band of straight combing at 45° to the corner and is 15 mm thick. The second (T17/18 mm) has a band of straight combing at 45° to the corner.

***Parietalis*/half-box tile**

Cat 237 GBS A1796 L156. Occupation. **Period 1.** No mortar traces. T26/27 mm. Maximum surviving dimensions 240 by 183 mm. Part of one edge survives for about 97 mm.

Cat 267 GBS A391. Unstratified. No measurements. The lattice pattern stands out in relief, the effect of placing a keyed tile on top of one that was not dry and then applying some pressure. Presumably accidental rather than intentional.

Cat 270 GBS A399. Unstratified. Mortared on keying and slight mortar traces on breaks. T26-30 mm. Part of one edge survives for about 62 mm.

Insufficient of the tiles' edges survives to be certain whether they are from *parietalis* or half-box tiles.

Combed flat tiles

Cat 177c 1.81 B2249 F90. Robber trench for Building 112. Medieval. Reused. T28/30 mm. Corner fragment. Same comb as Cat 229 below. For keying see Cat 233 below.

Cat 219a 1.81 D47 F28. Robber trench for Building 123. Period 6. Burnt. T29 mm. Part of one edge survives for 66 mm. Same comb as Cat 229 below. For keying *see* Cat 233 below.

Cat 229 Fig 7.5 1.81 C501. Unstratified (no such find number used in site notes). ?Reused. T28/30 mm. Part of one edge survives for about 70 mm. For keying see Cat 233 below.

Cat 233 1.81 G2142 F1976. Pit. Period 3 or 4. No mortar traces. T24/25 mm. No edge or junction surviving. The keying seems to be alternate bands of straight and wavy combing as the three tiles above. The type is uncertain, but provisionally is a keyed ?*lydion.*

Cat 261a SPT 97 L50. ?Fill of robber trench/pit. Phase C. No mortar traces. T3CP-34 mm. About 26 mm of one edge survives. Two faint impressions of a four-toothed comb.

Scored *pila* bricks

Cat 197 1.81 B1029 L147. Occupation. Building 112, Room 1. **Period 4a.** No definite mortar traces. T28/29 mm. There is a possibility that this specimen is from a *parietalis*/half-box tile.

Cat 244 1.81 H321. Unstratified (contaminated Period 5 dump L283). Mortared. T33 mm. Part of one edge.

Cat 256b SPT 7 F5. Trench. Phase D. Mortared. ?Reused. Only the top surface of the brick survives with deep scored lattice keying.

Cat 278a & b 1.81 G3343 L3238. Floor surface: Building 118. **Period 4.** Cat 278a T33 mm. Cat 278b T32-36 mm. Very deep scoring on both these specimens, as Cat 256b.

Cat 285 1.81 G3269 F432. Robber trench. Period 6. Reused. T32-35 mm. Part of one edge.

Fragments of uncertain classification

Cat 1 1.81 D821 L60. Destruction debris of Building 123. Period 4. Reused. T19/20 mm. One band of straight combing.

Cat 10b 1.81 H262. Unstratified (Periods 4-6). Burnt. T19/20 mm. Five surviving teeth impressions.

Cat 13 1.81 H277 F146. Robber trench? Period 6. T17 mm. Part of a band of wavy combing.

Cat 17 1.81 H223 F176. Pit. Period 6. T14/15 mm. One band of sharply peaked wavy combing survives.

Cat 20a 1.81 D421 F259. Robbing pit. Period 6. A corner fragment from a voussoir since it is combed on adjoining surfaces. Reused. T18 mm and 21 mm. The larger surface has a band of straight combing lying diagonally to the corner, and a second band parallel to the junction.

Cat 20b 1.81 D421 F259. Robbing pit. Period 6. T15 mm. A band of straight combing lies parallel to the junction with the unkeyed side.

Cat 27 1.81 D1262 F1188. Floor foundation: Building 123, Room 8. Period 4. Reused. T16/17 mm. Fine teeth impressions of a band of ?slightly curved combing.

Cat 34 1.81 D184 L60. Destruction debris of Building 123. Period 4. Burnt. T17 mm. Two intersecting bands of straight combing.

Cat 36 1.81 D227 F224. Robber trench for Building 123. Period 6. T11-13 mm. Intersecting bands of straight and wavy combing.

Cat 38 1.81 D161 L151. Demolition debris. Period 6. Full thickness not preserved. One band of straight combing.

Cat 40 1.81 D414 F259. Robbing pit. Period 6. Reused. T18/19 mm.

Cat 41 1.81 D408 L408. Trample. Unstratified. T16 mm.

Cat 43 1.81 D1536 F498. Robber trench for Building 123. Period 6. Reused. T12-14 mm. Indistinct impressions of groups of two and three teeth.

Cat 49 1.81 H155 F154. Scoop. Period 6. T12-14 mm. Impressions of six teeth survive.

Cat 50 1.81 H203 F183. Robber trench. Period 6. Mortared on keyed surface and sides. Cut square as a tessera, 33 by 29 mm. Burnt a dark grey throughout. T18 mm. There are impressions of five teeth.

Cat 52 1.81 H290 L95. Destruction debris. Period 6. Mortared. T19 mm. Two intersecting bands of straight combing.

Cat 53b 1.81 H269 L235. Destruction debris B: Building 116. Period 5. T14/15 mm. Two intersecting bands of combing.

Cat 57 1.81 H179 F74. Pit. Period 6. T17 mm. Four teeth impressions survive of a slightly curved band of combing.

Cat 60a SPT 92 L51. Fill of robber trench F22. Phase C.

Mortared. ?Reused. T10/11 mm. There seem to be slight traces of ?combed keying below the mortar on the tile.

Cat 60b SPT 92 L51. Fill of robber trench F22. Phase C. T11 mm. Unkeyed.

Cat 60c SPT 92 L51. Fill of robber trench F22. Phase C. Not a keyed tile fragment.

Cat 60f SPT 92 L51. Fill of robber trench F22. Phase C. Mortared. T15 mm. Burnt. There are impressions of three teeth. The adjoining unkeyed side is 12 mm thick.

Cat 60g SPT 92 L51. Fill of robber trench F22. Phase C. Mortared. T18-20 mm. Two adjoining fragments with parts of two impressions of combing.

Cat 72 1.81 G339 F293. Pit. Period 6. T17/18 mm. One band of straight combing.

Cat 73 1.81 G343 F165. Robber trench. Period 6. Mortared. Tll/12 mm. One band of straight combing.

Cat 74 1.81 G1609 L1605. Occupation: Building 118? Period 4. Burnt. The full thickness does not survive. There are five teeth impressions of a band of straight combing.

Cat 75 1.81 G417 F393. Pit. Period 6. T12 mm. One band of straight combing.

Cat 83 1.81 G680. Unstratified (Periods 4-6). T16 mm. Two intersecting bands of straight combing and one tooth impression of a third band.

Cat 86 1.81 G336 F264. Pit. Period 6. T13/14 mm. One band of straight combing.

Cat 87 1.81 G1 L1. Topsoil/clearance. Period 6. T16/17 mm. One band of straight combing and one tooth impression of a band of ?wavy combing.

Cat 89b 1.81 G287 F264. Pit. Period 6. T20 mm. There are five surviving teeth impressions.

Cat 91a 1.81 G728 L653. Destruction debris A: Building 116. Period 5. T13/14 mm. There are the impressions of three teeth forming part of a band of straight combing.

Cat 91b 1.81 G728 L653. Destruction debris A: Building 116. Period 5. Two joining fragments. T15 mm. Two intersecting bands of straight combing.

Cat 95 1.81 G825 F376. Large pit. Period 6. Mortared. T20 mm. There are six teeth impressions forming a band of straight combing.

Cat 96 1.81 G1731 F260. Pit. Period 6. The full thickness is not preserved. There are impressions of three broad teeth.

Cat 97 1.81 G826 ?L773. Destruction debris B: Building 116. Period 5. Two joining fragments. T17 mm. One straight and two slightly curved impressions of a five toothed comb.

Cat 100 1.81 B957 F239. Small hearth. Period 4a. Two joining fragments. ?Reused. T17 mm. Three intersecting bands of straight combing.

Cat 105 1.81 B3. Unstratified. T14-16 mm. The fragment is rectangular (30/35 by 35 mm) and has probably been cut as a tessera. It has combed keying.

Cat 109b 1.81 E1. Unstratified. Clearance. T13-17 mm. There is one band of straight combing and one of wavy combing produced by a four-toothed comb, with a wide gap (about 30 mm) between them.

Cat 114b 1.81 E491. Unstratified (from contaminated Period 5 L10). T15/16 mm. Unkeyed side of box tile with the base of a cutaway surviving about 50 mm across on the exterior and rounded on the surviving corner, set 139 mm in from the end of the tile.

Cat 115a 1.81 E146 F126. Small pit? Period 8. T14/15 mm. A band of wavy combing and one tooth impression of a band of straight combing. The comb had at least five widely spaced teeth (about 39 mm across).

Cat 117 1.81 E166 F134. Pit. Period 8. T13/14 mm. At least two bands of straight combing give an overall keying and lie at an angle to the junction with the side of the tile.

Cat 122 1.81 E1144 F1001. Pit. Period 8. Reused. T9-11 mm. The unkeyed side of a box tile with a maximum surviving depth of 96 mm.

Cat 124 1.81 E34 F25. Robber trench. Period 7. Reused and burnt. T18/19 mm. There is an overall keying with bands of straight combing lying parallel to the junction with the side of the tile.

Cat 127 1.81 E388 F273. Shallow pit. Period 8. Two joining fragments. T14 mm. Part of a band of curved or wavy combing.

Cat 128 1.81 E109 F15. Robber trench. Period 7. Mortared. T20 mm. There are six teeth impressions of a band of straight combing.

Cat 131 1.81 E232 F155. Pit. Period 8. Reused. T16-18 mm. Six teeth impressions survive of a band of wavy combing, measuring about 72 mm across.

Cat 133 1.81 E246 F182. Pit. Period 8. Burnt. Mortared. T18 mm. One band of straight combing.

Cat 134c 1.81 E31 F10. Robber trench. Period 7. Reused. T11-14

mm. Bands of straight combing give an overall keying and lie parallel to the junction with the side of the tile.

Cat 134d 1.81 E31 F10. Robber trench. Period 7. Reused. T16-20 mm. One band of straight combing lies parallel to the junction with the side of the tile. There are also four teeth impressions of what was a band of curved or wavy combing.

Cat 136e 1.81 E481 L10. Demolition of Period 4 buildings: Building 127. Period 5. Mortared. T16 mm. Part of a band of straight combing.

Cat 136i 1.81 E481 L10. Demolition of Period 4 buildings: Building 127. Period 5. Reused. T17 mm. A band of straight combing.

Cat 137b 1.81 E1. Unstratified. Clearance. T14/15 mm. Three (possibly four) intersecting bands of straight combing.

Cat 137c 1.81 E1. Unstratified. Clearance. Reused. T14/15 mm. One band of straight combing.

Cat 137d 1.81 E1. Unstratified. Clearance. ?Reused. T17/18 mm. One band of straight and one of ?wavy combing.

Cat 138 1.81 E27 F19. Rubbish pit. Period 8. T13-15 mm. Straight combing.

Cat 139 :1.81 E479 L19. Dilapidation debris/occupation?: Building 122. Late Period 4/early Period 5. Reused. TL3/14 mm. One band of straight combing.

Cat 141 1.81 E194 F166. Sunken hut. Late Period 7. Reused. T14 mm. One band of straight and one of curved or wavy combing.

Cat 146 1.81 E4 F4. Large rectangular pit. Period 8. Corner fragment. T16 mm. Straight combing parallel to the junction with the side.

Cat 148 1.81 E361 L7. Robbing debris. Period 7. ?Burnt. Mortared. T17-19 mm. Two bands of straight combing.

Cat 150b 1.81 E462 F264. Foundation: Building 127. Period 5. Part of a band of wavy combing.

Cat 150c 1.81 E462 F264. Foundation: Building 127. Period 5. A large lump of opus *signinum* adheres to the keying. T21 mm. Overall straight combing.

Cat 152 1.81 E313 F225. Pit. Period 8. ?Reused. Mortared. T24 mm. Two intersecting bands of straight combing.

Cat 158 1.81 E411 F288. Pile hole: Building 127. Period 5. Three joining fragments. ?Reused. Mortared. T14 mm. One band of straight and one of wavy combing.

Cat 160 1.81 E301 F5. Robber trench. Period 7. T12 mm. Parts of

two bands of straight combing.

Cat 162b 1.81 E302 F216. Shallow pit. Period 8. Reused. T18 mm. Curved impressions of two teeth.

Cat 163a 1.81 E98. Junction of F90/F97. Period 8. T13/14 mm. One band of straight combing.

Cat 166 1.81 E402 F281. Pile hole: Building 127. Period 5. Reused. T19 mm. One band of slightly curved keying.

Cat 168 1.81 E386. Top of pits F293/F294. Post-medieval. T16-18 mm. Straight combing.

Cat 169 1.81 E232 F155. Pit. Period 8. T21 mm. Parts of two bands of combing, one slightly curved.

Cat 170 1.81 E159 F22. Robber trench. Period 7. T14/15 mm. One band of straight combing parallel to the junction with the side.

Cat 171 1.81 E218 F109. Pit. Period 8. Reused. T15/16 mm. Overall straight combing.

Cat 172a+b 1.81 E434 F307. Pile hole: Building 127. Period 5. Two joining fragments. Reused. T16 mm. One band of straight combing parallel to the junction with the side.

Cat 172c 1.81 E434 F307. Pile hole: Building 127. Period 5. Reused. T18/19 mm. Uncertain traces of keying.

Cat 173 1.81 E383 F255. Pit. Period 8. Reused. T15 mm. One band of straight combing.

Cat 174a 1.81 B1296 F371. Gully/slot: Building 94, Rooms 2/4. Period 3. T13/14 mm. Corner fragment. Unkeyed side. Face has a band of straight combing parallel to the junction.

Cat 174b 1.81 B1296 F371. Gully/slot: Building 94, Rooms 2/4. Period 3. The thickness and comb used are the same as for Cat 174a.

Cat 177a 1.81 B2249 F90. Robber trench for Building 112. Medieval. Mortared. Full thickness not preserved. Six teeth impressions survive of a band of slightly curved combing.

Cat 179c 1.81 B1848. Unstratified. Clearance. T15 mm. A band of straight combing.

Cat 179e 1.81 B1848. Unstratified. Clearance. T13/14 mm. One band of straight combing.

Cat 179f 1.81 B1848. Unstratified. Clearance. Full thickness not preserved. Impressions of two teeth parallel to the junction with the side.

Cat 187a 1.81 B3. Unstratified. Clearance. Corner fragment. Mortared. One surface (T16/17 mm) has overall straight

keying parallel to the junction. The other surface (T18 mm) seems also to have traces of keying, and if this is correct, the fragment will have belonged to a voussoir.

Cat 187b 1.81 B3. Unstratified. Clearance. T18 mm. A band of straight combing parallel to the junction with an unkeyed side.

Cat 188 1.81 B249 F108. Gully between Buildings 112 and 113. Period 4. Reused. T14-16 mm. Apparently one band of straight and one of curved/wavy combing.

Cat 192 1.81 B2385 F810. Robber trench for Building 113. Medieval. Mortared. T23/24 mm. Eight regularly spaced teeth about 40 mm across survive of a band of combing.

Cat 195b 1.81 B126. Unstratified. Clearance. Mortared. T19 mm. One band of curved/wavy combing.

Cat 195d 1.81 B126. Unstratified. Clearance. Mortared. T16 mm. Parts of two bands of straight combing.

Cat 206 1.81 G200. Unstratified (Periods 4-6). Reused as a counter (see under small finds report, Chapter 5, microfiche, under entry **946)**. T14 mm. Two intersecting bands of straight combing.

Cat 207 1.81 D1199 L1171. Demolition debris of Building 123? Building 123, Room 8. Period 4. Reused as a counter ((see under small finds report, Chapter 5, microfiche, under entry **963)**). Mortared. T13-15 mm. One band of straight combing is present.

Cat 211a 1.81 D627 F500. Small pit. Period 7. T22 mm. Roughly rectangular fragment (about 31 by 41 mm) with four surviving teeth impressions. Possibly cut as a tessera.

Cat 211b 1.81 D627 F500. Small pit. Period 7. Full thickness not preserved. Two impressions of combed keying.

Cat 212 1.81 D776 F91. Pit. Period 6. T15/16 mm. Straight combing parallel to the junction with the unkeyed side.

Cat 213 1.81 D692 F577. ?Continuation of F498, robber trench for Building 123. Period 6. T17-20 mm. Two intersecting bands of straight combing.

Cat 218b> 1.81 D1119 L272. Dump/levelling: yard of Building 123. Period 4 demolition or Period 5. T13/14 mm. Three teeth impressions.

Cat 219b> 1.81 D47 F28. Robber trench for Building 123. Period 6. T17/18 mm. Straight combing parallel to junction with unkeyed side.

Cat 222 1.81 D1681 L694. Topsoil? ?Period 6. Mortared. T13 mm. Combed keying.

Cat 225 1.81 A173 F57. Pit. Medieval or later. Reused. T14/15

mm. Five surviving teeth impressions of an uneven width and spacing.

Cat 236 X313 L8. Watching brief. T11-14 mm. Faint traces of combing.

Cat 240 GBS B212 F17. Pit. Period 3b (or4). Mortared. T20 mm. Five teeth impressions from part of a band of straight combing.

Cat 243 1.81 D1516. Unstratified. T12 mm. Combed keying.

Cat 246e SPT 96 L43. Phase C. Unkeyed fragment with two adjoining surfaces, one of which has an edge set 39 mm from the junction. It is probable that this is a fragment of tegula.

Cat 247a+c SPT 18 F2. Pit. Phase C. Two joining fragments. Mortared. T12 mm. Only three teeth impressions survive parallel to the junction with the unkeyed side.

Cat 247d SPT 18 F2. Pit. Phase C. Mortared. T15/16 mm. Two teeth impressions only survive. The adjoining unkeyed side (T16/17 mm) has the base of a rectangular cutaway surviving for about 34 mm, set about 28-30 mm from the junction with the face and about 164/165 mm from the end of the tile.

Cat 251 GBS B428 L26. Dump (redeposited Boudican demolition debris): destruction of Building 133. **Period 2 or 3.** T18/19 mm. Two intersecting impressions of a comb with four teeth about 18 mm across.

Cat 252b 1.81 E480 F264. Foundation: Building 127. Period 5. Mortared. T15-17 mm. Straight combing parallel to the junction with an unkeyed side.

Cat 252c 1.81 E480 F264. Foundation: Building 127. Period 5. Reused. T14/15 mm. Eight surviving teeth from a band of straight combing.

Cat 252d 1.81 E480 F264. Foundation: Building 127. Period 5. Mortared. T14-16 mm. One band of straight and one of slightly curved (?) combing.

Cat 253b SPT 50 F14. Corner wall. Phase D. T18 mm. Four teeth impressions forming part of a band of straight combing parallel to the junction with an unkeyed side.

Cat 255 SPT 41 L18. Topsoil. Phase C or D. Reused. Full thickness not preserved. Four teeth survive forming part of a band of straight combing.

Cat 257c SPT 120 L68. Fill of robber trench. Phase C. Mortared. T16-18 mm. Combing indistinct.

Cat 257d SPT 120 L68. Fill of robber trench. Phase C. T13 mm? (Full thickness may not be preserved.) Two intersecting bands of straight combing.

Cat 258 SPT 5 L3. Topsoil. ?Phase C. Mortared. T15/16 mm. Corner fragment. Band of straight combing parallel to the junction with the side.

Cat 259 SPT 101 L54. Make-up. Phase A or B. Two joining fragments. Burnt. T16-19 mm. One band of straight or slightly curved combing parallel to the junction with the side.

Cat 261d SPT 97 L50. ?Fill of robber trench/pit. Phase C. Mortared. T18 mm. Three teeth form part of a band of straight combing.

Cat 265a SPT 93 L53. Robber trench fill. Phase C. Mortared. Full thickness not preserved. One tooth impression survives.

Cat 266 SPT 148 L78. Silting/primary fill of pit or ditch. Phase B. Reused. T11-18 mm. Part of the unkeyed side of a box tile.

Cat 268b 236.84 57. Surface cleaning. Unstratified (Post-Roman). T15 mm. Part of a band of straight combing.

Cat 269 236.84 17. Surface cleaning of pavement. Post-Roman. Mortared. T13-15 mm. Two intersecting bands of straight combing.

Cat 277 1.81 G260 F260. Pit. Period 6. T15/16 mm. One band of straight combing.

Cat 278e 1.81 G3343 L3238. Floor surface: Building 118. Period 4. T14/15 mm. A band of wavy combing.

Cat 280 1.81 G205 L205. Destruction debris A: Building 116. Period 5. T11/12 mm. Overall straight combing at right angles to the end of the tile.

Cat 281 1.81 G3213 L3212. Dump/destruction. Period 4 or 5. T10/11 mm. Unkeyed side with the corner of a rectangular cutaway set 131 mm in from the end of the tile.

Cat 283 1.81 G3037 L1599. Occupation: Building 118. Period 4. Two joining fragments. Burnt. Reused. Band of straight combing parallel to the junction with the side.

Cat 284 1.81 G3325 L3133. Dump/floor surface. Period 3b or 3c. T17/18 mm. Unkeyed fragment.

Cat 288 1.81 B2382 L682. Street metalling. Period 1. Two joining fragments. T14/15 mm. Very shallow grooving. This is unlikely to be a fragment of box tile.

Cat 289 1.81 J96 F14. Robber trench. Period 6. Burnt. T19/20 mm. Two intersecting bands of straight combing.

Cat 291b 1.81 J145 F14. Robber trench. Period 6. Mortared. T16/17 mm. One band of straight combing parallel to the junction with the side.

Cat 292 1.81 J106 F104. Robber trench. Period 6. T12-16 mm. One band of straight combing.

Cat 294 1.81 J213 F5. Robber trench. Period 6. T17/18 mm. One band of straight combing.

Cat 296 1.81 J148 F124. Robber trench. Period 6. Burnt. T17/18 mm. Two intersecting bands of straight combing.

Cat 298 1.81 J30 L1. Site clearance. Period 6. T17-19 mm. Four teeth survive of a band of straight combing.

Cat 299 1.81 J357. Unstratified (Periods 2-5). Unkeyed side at least 128 mm deep. Reused. T11/12 mm.

Cat 301 1.81 J214 L1. Site clearance. T17-19 mm. There are three surviving teeth impressions.

Cat 304 1.81 D362 F91. Pit. Period 6. ?Reused. Mortared. T13/14 mm. There is a band of slightly curved combing adjoining the junction with the unkeyed side. A cutaway survives for 96 mm set 40-45 mm in from the junction.

Cat 306c 1.81 D379 F259. Robbing pit. Period 6. Mortared. T14/15 mm. One band of straight and one of wavy combing. The comb has a very wide gap betwen two of the teeth.

Cat 306d 1.81 D379 F259. Robbing pit. Period 6. Reused. T15 mm. One band of straight and one of peaked wavy combing.

Cat 306f 1.81 D379 F259. Robbing pit. Period 6. Mortared. T12 mm. Three teeth survive, forming part of a band of straight combing.

Cat 307b 1.81 D333 F299. Robber trench for Building 123. Period 6. Reused. T16-18 mm. One band of straight combing.

Cat 309b 1.81 D375 F299. Robber trench for Building 123. Period 6. Reused. T14 mm. Part of a band of straight combing.

Cat 312c 1.81 D303 F259. Robbing pit. Period 6. Reused. T13/14 mm. One band of curved/wavy combing adjoining the junction with the side, and a small part of a band of straight combing.

Cat 317 1.81 D360 F299. Robber trench for Building 123. Period 6. ?Reused. T13 mm. One band of straight combing.

Cat 321i 1.81 G3069 L3047. Wall collapse. Period 6. Reused. T15/16 mm. One impression of straight combing is present lying at an angle to the junction with the adjoining surface. The adjoining surface (T16/17 mm) has one edge of a cutaway measuring 50 mm across and ending 35/36 mm from the junction of the surfaces. It also lies 169 mm in from the end of the tile. It is not clear whether this fragment is from a voussoir or a box tile.

Cat 329a GBS A350 F42. Large pit(s). Post-medieval. T13 mm. One

band of straight combing.

Cat 329b GBS A350 F42. Large pit(s). Post-medieval. T16/17 mm. Corner fragment. There is the impression of a single, isolated, tooth of a comb.

Cat 330 GBS A2174 F281. Foundation/?soakaway. Post-Roman. T20/21 mm. Two intersecting bands of straight combing.

Cat 331 GBS A629 L13. Dump: ?Building 138, Room 2. Period 3b or 4. T22-25 mm. Two isolated tooth impressions.

Cat 334 GBS A36 LI. Topsoil. Post-Roman. T18 mm. Part of a band of straight combing.

Cat 335 GBS A410 F80. Large pit. Medieval. Possibly burnt. T19/20 mm. A band of straight combing parallel and adjacent to the junction with a side, in the side there is the possible edge of a cutaway set 39 mm from the junction.

Cat 336 GBS A2183 L1. Topsoil. Post-Roman. T15 mm. Part of a band of straight and part of a band of curved/wavy combing.

Cat 339b GBS B46. Unstratified. Roman. Reused. T14/15 mm. Faint band of straight combing. The unkeyed side has a small part of the edge of a cutaway cut at a marked slant. Externally the cutaway is about 63 mm from the junction.

Cat 340 GBS A848 F116. Large stone slab set in scoop/pit. ?Period 3b or 4. T17/18 mm. One band of straight and one of curved/wavy combing.

Cat 341 GBS A190 F42. Large pit(s). Post-medieval. T18 mm. Part of a band of straight combing lying at an angle to the end of the tile.

Cat 342 GBS A764 L1. Topsoil. Post-Roman. T17 mm. One band of straight combing and part of a band of wavy combing lying at an angle to it.

Cat 347a GBS A95 F10. Foundation? Post-medieval. Mortared. T17 mm. Part of a band of straight combing.

Cat 348 GBS A422. Unstratified. T21-24 mm. The fragment has the surface keyed on one side with intersecting bands of straight combing lying at an angle to an edge. On the other side this edge has been extended to form a flange about 9 mm high.

APPENDIX 8

Tile catalogue 2: keyed tile listed by site and period

by Ernest Black

In this catalogue the site context details are listed in period order and within period by feature and then layer. The individual tile fragments are described by tile type (eg Type V3, or uncertain), Catalogue number (preceded by Cat), and where appropriate whether or not the tile was mortared (ie has mortar on an external surface only), or reused (ie had mortar on an interior surface or a broken edge).

Find	*Lay/Feat*	*Context description & date*	Cat *no*	*Tile description*
Culver Street (1.81)				
Site A				
Period 3				
A472	L181	Dump. Period 3	Cat 227	Type Bl
Period 4				
A240	F37	Ditch. Period 4	Cat 205	Type B11 mortared, reused as a counter
A187	F73	Ditch. Period 4	Cat 228	Type B10 reused
Period 5				
A192	L7	Make-up/demolition debris. Period 5	Cat 226	Type B8
Post-Roman				
A173	F57	Pit. Medieval or later	Cat 225	Uncertain reused
Site B				
Period J				
B2382	L682	Street metalling. Period 1	Cat 288	Uncertain
Periods 1/2				
B955	F282	Large cess-pit: Building 77, Room 5. Periods 1/2, but this context number is contaminated by sinkage from later features	Cat 191	Type B10 reused
Period 3				
B1593	L389	General Boudican demolition layer: destruction of Building 77. Early Period 3	Cat 189	Type B13
B1181	F334	Gully (wall trench): Building 95, Room 2. Period 3	Cat 181	Type B13 reused
B1296	F371	Gully/slot: Building 94, Rooms 2/4. Period 3	Cat 174a	Uncertain

Find	*Lay/Feat*	*Context description & date*	*Cat no*	*Tile description*
B1296	F371	Gully/slot: Building 94, Rooms 2/4. Period 3	Cat 174b	Uncertain
B1664	L396	Make-up: Building 94, Room 2. Period 3	Cat 185	Type B1
B2356	L370	Make-up? ?Period 3	Cat 183	Type B6/B11 reused
Period 4				
B957	F239	Small hearth. Period 4a	Cat 100	Uncertain ?reused
B1029	L147	Occupation. Building 112, Room 1. Period 4a	Cat 197	Scored *pila* brick
B1036	L235	Debris: Building 112. Period 4a.	Cat 193	Type B7
B1280	L285	Make-up: Building 112, Room 6. ?Period 4a	Cat 101	Type B6 mortared
B465	L63	Dump: Building 112, Room 6a. Period 4b/c	Cat 99	Type V1 ?reused
B231	F108	Gully between Buildings 112 & 113. Period 4	Cat 286	Type B10 mortared
B249	F108	Gully between Buildings 112 & 113. Period 4	Cat 188	Uncertain reused
B285	L23	Dump. Period 4	Cat 184	Type B8 ?reused
B286	L23	Dump. Period 4	Cat 103	Type B10
B2314	L23	Dump. Period 4	Cat 186a+b	Type B8 mortared
B687	L133	Occupation lenses: Building 113, Room 1. Period 4	Cat 102	Type B10 mortared
B912	F271	Gully: Building 113, Room 1. ?Period 4	Cat 190a	Type B2
B912	F271	Gully: Building 113, Room 1. ?Period 4	Cat 190b	Type V4
Periods 4/5				
B294	L25	Dump? Periods 4/5	Cat 287	Type B10
B358	L43	Demolished daub walling: Building 112, Room 1. Periods 4/5	Cat 106	Type B10 reused
Period 5				
B27	L2	Dump/midden build-up. Period 5	Cat 194	Type B10 reused
B112	L4	Rubble spread. Period 5	Cat 203	Type B6 reused
B168	L7	Backfill of gully F39. Period 5	Cat 200	Type V6 reused
B213	F102	Posthole?/small pit or slot. ?Period 5	Cat 107	Type B10
B253	F117	Small pit. ?Period 5	Cat 199a?+b	Type V10 reused
B365	F134	Pit. ?Period 5	Cat 180	Type B8 mortared
Post-Roman				
B1861	F551	Pit. Post-Roman	Cat 204	Type B6 reused
B182	F84	Posthole. ?Post-Roman	Cat 178	Type B9
B109	L6	Backfill of Hut 3. Anglo-Saxon	Cat 202	Type B10 mortared
B101	L12	Backfill of Hut 3. Anglo-Saxon	Cat 104	Type B10 mortared
B181	L12	Backfill of Hut 3. Anglo-Saxon	Cat 182	Type B6/B11 mortared
B14	F3	Robber trench for Building 113. Medieval	Cat 198	Type B10
B2249	F90	Robber trench for Building 112. Medieval	Cat 177a	Uncertain mortared

Find	*Lay/Feat*	*Context description & date*	*Cat no*	*Tile description*
B2249	F90	Robber trench for Building 112. Medieval	Cat 177b	Type B6 mortared
B2249	F90	Robber trench for Building 112. Medieval	Cat 177c	Combed flat tile reused
B2385	F810	Robber trench for Building 113. Medieval	Cat 192	Uncertain mortared
B221	F100	Pit. Modern	Cat 175	Type B10 reused
Unstratified				
B3		Unstratified. Clearance	Cat 105	Uncertain ?reused as a tessera
B3		Unstratified. Clearance	Cat 187a	Uncertain mortared
B3		Unstratified. Clearance	Cat 187b	Uncertain
B29		Site clearance	Cat 196	Type B10 mortared
B126		Unstratified. Clearance	Cat 195a	Type B10
B126		Unstratified. Clearance	Cat 195b	Uncertain mortared
B126		Unstratified. Clearance	Cat 195c	Type B7
B126		Unstratified. Clearance	Cat 195d	Uncertain mortared
B169		Unstratified. Clearance	Cat 201	Type B10 mortared
B1848		Unstratified. Clearance	Cat 176a	Type B6 mortared
B1848		Unstratified. Clearance	Cat 176b	Type B9 mortared
B1848		Unstratified. Clearance	Cat 176c	Type B9
B1848		Unstratified. Clearance	Cat 176d	Type B6
B1848		Unstratified. Clearance	Cat 179a	Type B4 mortared (Lowther's die 14)
B1848		Unstratified. Clearance	Cat 179b	Type B12
B1848		Unstratified. Clearance	Cat 179c	Uncertain
B1848		Unstratified. Clearance	Cat 179d	Type B7
B1848		Unstratified. Clearance	Cat 179e	Uncertain
B1848		Unstratified. Clearance	Cat 179f	Uncertain

Site C

Unstratified				
C203		Unstratified	Cat 230	Type B10
C501		Unstratified (no such find number used in site notes)	Cat 229	Combed flat tile ?reused

Site D

Period 4				
D1777	F1712	Robber trench for Building 121. Early Period 4	Cat 216	Type B6/B11 reused
D635	F582	?Hearth: Building 123, Room 9. Period 4	Cat 35a	Type V6
D635	F582	?Hearth: Building 123, Room 9. Period 4	Cat 35b	Type B10 reused
D1262	F1188	Floor foundation: Building 123, Room 8. Period 4	Cat 27	Uncertain reused
D184	L60	Destruction debris of	Cat 34	Uncertain

Find	*Lay/Feat*	Context *description & date*	*Cat no*	*Tile description*
		Building 123. Period 4		
D821	L60	Destruction debris of Building 123. Period 4	Cat 1	Uncertain reused
D78	L78	Dump: Building 123. Period 4	Cat 209	Type V11 mortared
D426	L89	Dump (clay): Building 123, Passage 2. Period 4	Cat 24a	Type V3
D426	L89	Dump (clay): Building 123, Passage 2. Period 4	Cat 24b	Type V3
D1234	L328	Make-up: Building 123, Passage 4. Period 4	Cat 215	Type B13 reused
D696	L641	Oven debris: Building 123, Room 9. Period 4	Cat 30	Type V6
D727	L641	Oven debris: Building 123, Room 9. Period 4	Cat 23	Type V6
D1199	L1171	Demolition debris of Building 123? Building 123, Room 8. Period 4	Cat 207	Uncertain mortared, reused as a counter
D1577	L1372	Dump: Building 123, Room 8. Period 4	Cat 221	Type B6 mortared
D1459	L1426	Dump: Building 123, Room 10. Period 4	Cat 42a	Type B9
D1593	L1560	Dump: Building 123, Passage 4. Period 4	Cat 31a+b	Type B10 reused
D1854	F1842	Large pit. Period 4.	Cat 21	Type B6/B11 reused
D733	F686	Drain: Building 123, Passage 2. ?Period 4	Cat 224	Type B10 reused
D1053	F1044	Oven: Building 123, Passage 1. ?Period 4	Cat 214	Type B10
Period 4 or Period 5				
D1119	L272	Dump/levelling: yard of Building 123. Period 4 demolition or Period 5	Cat 218a	Type B6 mortared, ?reused
D1119	L272	Dump/levelling: yard of Building 123. Period 4 demolition or Period 5	Cat 218b	Uncertain
Period 6				
D127	F27	Robber trench for Building 123. Period 6	Cat 220	Type B7 mortared
D47	F28	Robber trench for Building 123. Period 6	Cat 219a	Combed flat tile
D47	F28	Robber trench for Building 123. Period 6	Cat 219b	Uncertain
D47	F28	Robber trench for Building 123. Period 6	Cat 219c	Type B10 mortared
D61	F28	Robber trench for Building 123. Period 6	Cat 19	Type B5 mortared
D49	F30	Robber trench for Building 123. Period 6	Cat 217	Type B6 reused
D822	F30	Robber trench for Building 123. Period 6	Cat 3	Type V11 reused
D52	F38	Robber trench for Building 123. Period 6	Cat 39	Type V5
D187	F38	Robber trench for Building 123. Period 6	Cat 44	Type B6/B11
D1153	F86	Robber trench for Period 4	Cat 33	Type B4 (Lowther's

Find	*Lay/Feat*	*Context description & date*	*Cat no*	*Tile description*
		hypocaust base F85 in Building 123, Room 8. Period 6		die 14)
D362	F91	Pit. Period 6	Cat 304	Uncertain mortared, ?reused
D371	F91	Pit. Period 6	Cat 310	Type B11 reused
D776	F91	Pit. Period 6	Cat 212	Uncertain
D227	F224	Robber trench for Building 123. Period 6	Cat 2	Type V11 mortared
D227	F224	Robber trench for Building 123. Period 6	Cat 36	Uncertain
D346	F224	Robber trench for Building 123. Period 6	Cat 315	Type B5
D303	F259	Robbing pit. Period 6	Cat 312a	Type B3 reused
D303	F259	Robbing pit. Period 6	Cat 312b	Type B6/B11 reused
D303	F259	Robbing pit. Period 6	Cat 312c	Uncertain reused
D309	F259	Robbing pit. Period 6	Cat 316	Type V11 reused
D343	F259	Robbing pit. Period 6	Cat 318a	Type V11 mortared
D343	F259	Robbing pit. Period 6	Cat 318b	Type B3 reused
D368	F259	Robbing pit. Period 6	Cat 313	Type V11 ?reused
D379	F259	Robbing pit. Period 6	Cat 306a	Type V11 mortared
D379	F259	Robbing pit. Period 6	Cat 306b	Type B5 reused
D379	F259	Robbing pit. Period 6	Cat 306c	Uncertain mortared
D379	F259	Robbing pit. Period 6	Cat 306d	Uncertain reused
D379	F259	Robbing pit. Period 6	Cat 306e	Type B10 mortared
D379	F259	Robbing pit. Period 6	Cat 306f	Uncertain mortared
D401	F259	Robbing pit. Period 6	Cat 29	Type B7 mortared, ?reused
D414	F259	Robbing pit. Period 6	Cat 40	Uncertain reused
D421	F259	Robbing pit. Period 6	Cat 20a	Uncertain reused
D421	F259	Robbing pit. Period 6	Cat 20b	Uncertain
D421	F259	Robbing pit. Period 6	Cat 20c	Type B10 mortared
D444	F259	Robbing pit. Period 6	Cat 25a	Type B6/B11 reused
D444	F259	Robbing pit. Period 6	Cat 25b	Type V11 mortared
D444	F259	Robbing pit. Period 6	Cat 25c	Type B10 mortared
D470	F259	Robbing pit. Period 6	Cat 26	Type B5 mortared
D333	F299	Robber trench for Building 123. Period 6	Cat 307a	Type B6
D333	F299	Robber trench for Building 123. Period 6	Cat 307b	Uncertain reused
D337	F299	Robber trench for Building 123. Period 6	Cat 311a	Type B6/B11 reused
D337	F299	Robber trench for Building 123. Period 6	Cat 311b	Type B3
D341	F299	Robber trench for Building 123. Period 6	Cat 305	Type B10 reused
D344	F299	Robber trench for Building 123. Period 6	Cat 308	Type B5 reused
D360	F299	Robber trench for Building 123. Period 6	Cat 317	Uncertain ?reused
D375	F299	Robber trench for Building 123. Period 6	Cat 309a	Type B10 mortared
D375	F299	Robber trench for Building 123. Period 6	Cat 309b	Uncertain reused
D377	F299	Robber trench for Building 123. Period 6	Cat 314	Type Vll reused
D1536	F498	Robber trench for Building	Cat 43	Uncertain reused

Find	*Lay/Feat*	*Context description & date*	*Cat no*	*Tile description*
		123. Period 6		
D692	F577	?Continuation of F498, robber trench for Building 123. Period 6	Cat 213	Uncertain
D161	L151	Demolition debris. Period 6	Cat 38	Uncertain
D1681	L694	Topsoil? ?Period 6	Cat 222	Uncertain mortared
Period 7				
D1792	F1790	Large modern pit. Period 7	Cat 32	Type B10 reused
D627	F500	Small pit. Period 7	Cat 211a	Uncertain
D627	F500	Small pit. Period 7	Cat 211b	Uncertain
D10	L9	Topsoil. Period 7	Cat 28a+b	Type B7
D10	L9	Topsoil. Period 7	Cat 28c	Type B5 mortared
D423	L422	Dump. Period 7	Cat 223	Type V5 mortared, ?reused
D565	L472	Topsoil. Period 7	Cat 37	Type B9 reused
Unstratified				
D408	L408	Trample. Unstratified	Cat 41	Uncertain
D1516		Unstratified	Cat 243	Uncertain
D1579		Unstratified (from Period 4 L1372 but contaminated)	Cat 22	Type B6 reused

One bag of Site D tile contained two context labels. The contents should be considered as unstratified, but the contexts are given here in case the tiles derived from the earlier, more significant, layer. D425 L298 Demolition debris: Building 123, Passage 4. Period 4; **or** D213 F38 Robber trench for Building 123. Period 6.

Cat 210a	Type B3, slight mortar traces on broken edges	
Cat 210b	Type B10 reused	
Cat 210c	Type B6/B11 reused	
Cat 210d	Type V11 reused	

Site E

Period 3				
E750	F549	Trench? Period 3	Cat 143	Type B6 reused
Period 4				
E465	L16	Make-up. Period 4	Cat 116	Type B10 mortared
Period 4 or *Period 5*				
E479	L19	Dilapidation debris/occup-ation?: Building 122. Late Period 4/early Period 5	Cat 139	Uncertain reused
Period 5				
E182	F148	Pile-hole: Building 127. Period 5	Cat 120	Type B10
E394	F264	Foundation: Building 127. Period 5	Cat 119	Type B6/B11 reused
E462	F264	Foundation: Building 127. Period 5	Cat 123	Type B10 ?reused
E462	F264	Foundation: Building 127. Period 5	Cat 149	Type B6 reused
E462	F264	Foundation: Building 127. Period 5	Cat 150a	Type V2 mortared, ?reused

Find	*Lay/Feat*	*Context description & date*	*Cat no*	*Tile description*
E462	F264	Foundation: Building 127. Period 5	Cat 150b	Uncertain mortared
E462	F264	Foundation: Building 127. Period 5	Cat 150c	Uncertain mortared
E480	F264	Foundation: Building 127. Period 5	Cat 252a	Type B9 reused
E480	F264	Foundation: Building 127. Period 5	Cat 252b	Uncertain mortared
E480	F264	Foundation: Building 127. Period 5	Cat 252c	Uncertain reused
E480	F264	Foundation: Building 127. Period 5	Cat 252d	Uncertain mortared
E402	F281	Pile hole: Building 127. Period 5	Cat 166	Uncertain reused
E411	F288	Pile hole: Building 127. Period 5	Cat 158	Uncertain mortared, ?reused
E434	F307	Pile hole: Building 127. Period 5	Cat 172a+b	Uncertain reused
E434	F307	Pile hole: Building 127. Period 5	Cat 172c	Uncertain reused
E472	L10	Demolition of Period 4 buildings: Building 127. Period 5	Cat 151a	Type VI reused
E472	L10	Demolition of Period 4 buildings: Building 127. Period 5	Cat 151b	Type BIO ?reused
E481	L10	Demolition of Period 4 buildings: Building 127. Period 5	Cat 136a	Type BIO reused
E481	L10	Demolition of Period 4 buildings: Building 127. Period 5	Cat 136b+c	Type BIO reused
E481	L10	Demolition of Period 4 buildings: Building 127. Period 5	Cat 136d	Type B5 reused
E481	L10	Demolition of Period 4 buildings: Building 127. Period 5	Cat 136e	Uncertain mortared
E481	L10	Demolition of Period 4 buildings: Building 127. Period 5	Cat 136f	Type B9 reused
E481	L10	Demolition of Period 4 buildings: Building 127. Period 5	Cat 136g	Type BIO ?reused
E481	L10	Demolition of Period 4 buildings: Building 127. Period 5	Cat 136h	Type BIO mortared
E481	L10	Demolition of Period 4 buildings: Building 127. Period 5	Cat 136i	Uncertain reused
Period 7				
E126	F5	Robber trench. Period 7	Cat 121	Type B5
E301	F5	Robber trench. Period 7	Cat 160	Uncertain
E10	F9	Extensive robber trench. Period 7	Cat 112a	Type B3 reused

Find	*Lay/Feat*	*Context description & date*	*Cat no*	*Tile description*
E10	F9	Extensive robber trench. Period 7	Cat 112b	Type B10 reused
E31	F10	Robber trench. Period 7	Cat 134a	Type B10 reused
E31	F10	Robber trench. Period 7	Cat 134b	Type B10 reused
E31	F10	Robber trench. Period 7	Cat 134c	Uncertain reused
E31	F10	Robber trench. Period 7	Cat 134d	Uncertain reused
E109	F15	Robber trench. Period 7	Cat 128	Uncertain mortared
E159	F22	Robber trench. Period 7	Cat 170	Uncertain
E30	F23	Robber trench. Period 7	Cat 110	Type B10 reused
E34	F25	Robber trench. Period 7	Cat 124	Uncertain reused
E108	F30	Robber trench. Period 7	Cat 144	Type B5
E110	F101	Robber trench. Period 7	Cat 153	Type B6 reused
E157	F117	Robber trench. Period 7	Cat 140	Type B9 reused
E361	L7	Robbing debris. Period 7	Cat 148	Uncertain mortared
E194	F166	Sunken hut. Late Period 7	Cat 141	Uncertain reused
Period 8				
E4	F4	Large rectangular pit. Period 8	Cat 146	Uncertain
E509	F4	Large rectangular pit. Period 8	Cat 125	Type B9
E14	F11	Animal (pig) burial. Period 8	Cat 159	Type B6/B11 mortared
E27	F19	Rubbish pit. Period 8	Cat 138	Uncertain
E152	F108	Oval pit. Period 8	Cat 113	Type B6 mortared
E218	F109	Pit. Period 8	Cat 171	Uncertain reused
E240	F109	Pit. Period 8	Cat 132a	Type B7
E240	F109	Pit. Period 8	Cat 132b	Type V1 reused
E146	F126	Small pit? Period 8	Cat 115a	Uncertain
E146	F126	Small pit? Period 8	Cat 115b	Type B7
E166	F134	Pit. Period 8	Cat 117	Uncertain
E160	F136	Pit. Period 8	Cat 108	Type B10
E189	F140	Pit. Period 8	Cat 145	Type B10 ?reused
E180	F146	Pit. Period 8	Cat 129	Type B7 mortared
E232	F155	Pit. Period 8	Cat 131	Uncertain reused
E232	F155	Pit. Period 8	Cat 169	Uncertain
E203	F164 & F165	Pits. Period 8	Cat 126	Type B10
E208	F167	Large pit. Period 8	Cat 165	Type B6/B11 reused
E246	F182	Pit. Period 8	Cat 133	Uncertain mortared
E302	F216	Shallow pit. Period 8	Cat 162a	Type B9
E302	F216	Shallow pit. Period 8	Cat 162b	Uncertain reused
E313	F225	Pit. Period 8	Cat 152	Uncertain mortared, ?reused
E383	F255	Pit. Period 8	Cat 173	Uncertain reused
E388	F273	Shallow pit. Period 8	Cat 127	Uncertain
E1331	F1000	Pit. Period 8	Cat 155	Type B5
E1144	F1001	Pit. Period 8	Cat 122	Uncertain reused
E1146	F1007	Pit. Period 8	Cat 167	Type B6/B11 reused
E98		Junction of F90/F97. Period 8	Cat 163a	Uncertain
E98		Junction of F90/F97. Period 8	Cat 163b	Type B7 reused
E244	F174	Pit. ?Period 8	Cat 164	Type B6/B11 reused
Post-Roman				
E384	L1	Topsoil. Post-Roman	Cat 111a	Type B9 reused
E384	L1	Topsoil. Post-Roman	Cat 111b	Type B10
E386		Top of pits F293/F294. Post-medieval	Cat 168	Uncertain

Find	*Lay/Feat*	Context *description & date*	Cat *no*	*Tile description*
Unstratified				
E1		Unstratified. Clearance	Cat 109a	Type B10
E1		Unstratified. Clearance	Cat 109b	Uncertain
E1		Unstratified. Clearance	Cat 137a	Type B9 mortared
E1		Unstratified. Clearance	Cat 137b	Uncertain
E1		Unstratified. Clearance	Cat 137c	Uncertain reused
E1		Unstratified. Clearance	Cat 137d	Uncertain ?reused
E1		Unstratified. Clearance	Cat 137e	Type B10
E11		Unstratified (from Period 7 F9 but contaminated)	Cat 130	Type B6/B11 reused
E11		Unstratified (from Period 7 F9 but contaminated)	Cat 161	Type B10 reused
E332		Unstratified (possibly from Period 7 F117)	Cat 142	Type B13 reused
E491		Unstratified (from Period 5 L10 but contaminated)	Cat 114a	Type B5 reused
E491		Unstratified (from Period 5 L10 but contaminated)	Cat 114b	Uncertain
E494		Unstratified	Cat 118	Type B5
E494		Unstratified	Cat 156	Type B7
E718		Unstratified	Cat 135	Type B6/B11 reused
E unstratified			Cat 147	Type B3 mortared
E unstratified			Cat 154a	Type V4 reused
E unstratified			Cat 154b	Type B10 reused
E unstratified			Cat 154c	Type B3 reused
E unstratified			Cat 157a	Type B10 mortared
E unstratified			Cat 157b	Type B10
E unstratified			Cat 157c	Type B10 mortared
E unstratified			Cat 157d	Type B10 reused

Site G

Periods 1, 2 & 3				
G2349	F2160	Drain. Periods 1 & 2 & 3	Cat 234	Type V7 reused
Period 3				
G3325	L3133	Dump/floor surface. Period, 3b or 3c	Cat 284	Uncertain
G2104	L1746	Cultivated soil. Period 3	Cat 85	Type B6/B11 reused
Period 3 or Period 4				
G2142	F1976	Pit. Period 3 or 4	Cat 233	Combed flat tile
Period 4				
G3037	L1599	Occupation: Building 118. Period 4	Cat 283	Uncertain reused
G1609	L1605	Occupation: Building 118? Period 4	Cat 74	Uncertain
G3343	L3238	Floor surface: Building 118. Period 4	Cat 278a & b	Scored *pila* brick
G3343	L3238	Floor surface: Building 118. Period 4	Cat 278c	Type B5
G3343	L3238	Floor surface: Building 118. Period 4	Cat 278d	Type B5
G3343	L3238	Floor surface: Building	Cat 278e	Uncertain

Find	*Lay/Feat*	*Context description & date*	Cat *no*	*Tile description*
		118. Period 4		
G290	F270	Pit. ?Period 4	Cat 82	Type B6/B11
Period 4 or Period 5				
G3213	L3212	Dump/destruction. Period 4 or 5	Cat 281	Uncertain
Period 5				
G695	F565	Beam slot: Building 120. Period 5a	Cat 84	Type V10 reused
G119	L119	Occupation/midden: Building 120. Period 5b	Cat 88	Type V5 mortared
G212	L206	Destruction debris B/floor: Building 120. Period 5b	Cat 279	Type B7 mortared
G636	L518	Occupation: Building 120. Period 5b	Cat 18	Type V2 ?reused
G811	L581	Destruction debris/occup-ation: Building 120. Period 5b	Cat 71	Type B6/B11 mortared
G908	L853	Destruction debris B: Building 120. Period 5b	Cat 66	Type B11 reused
G167	L167	Occupation/midden: Building 120. ?Period 5b	Cat 69	Type B12 reused
G14	F14	Sand pit. Period 5	Cat 78	Type V7 mortared, ?reused
G295	F14	Sand pit. Period 5	Cat 79	Type B7 mortared
G1691	F1690	Wall foundation: Building 116. Period 5	Cat 81	Type B6/B11 reused
G203	L68	Destruction debris A: Building 116. Period 5	Cat 274	Type V1
G205	L205	Destruction debris A: Building 116. Period 5	Cat 280	Uncertain
G256	L205	Destruction debris A: Building 116. Period 5	Cat 275	Type B8 mortared
G283	L205	Destruction debris A: Building 116. Period 5	Cat 70	Type V7 reused
G546	L205	Destruction debris A: Building 116. Period 5	Cat 98	Type B13
G728	L653	Destruction debris A: Building 116. Period 5	Cat 91a	Uncertain
G728	L653	Destruction debris A: Building 116. Period 5	Cat 91b	Uncertain
G826	?L773	Destruction debris B: Building 116. Period 5	Cat 97	Uncertain
G2038	L1195	Floor make-up/dump: Building 116. Period 5	Cat 62	Type B8
G2387	L2367	?Floor surface: Building 116. Period 5	Cat 65	Type B11
Period 6				
G388	F16	Robber trench. Period 6	Cat 67	Type B6/B11 reused
G424	F163	Pit. Period 6	Cat 76	Type B10
G343	F165	Robber trench. Period 6	Cat 73	Uncertain mortared
G260	F260	Pit. Period 6	Cat 277	Uncertain
G1731	F260	Pit. Period 6	Cat 96	Uncertain
G336	F264	Pit. Period 6	Cat 86	Uncertain
G287	F264	Pit. Period 6	Cat 89a	Type B6 mortared
G287	F264	Pit. Period 6	Cat 89b	Uncertain
G287	F264	Pit. Period 6	Cat 89c	Type B7
G339	F293	Pit. Period 6	Cat 72	Uncertain

Find	*Lay/Feat*	*Context description & date*	*Cat no*	*Tile description*
G404	F293	Pit. Period 6	Cat 93	Type B9
G471	F293	Pit. Period 6	Cat 63	Type B8
G825	F376	Large pit. Period 6	Cat 95	Uncertain mortared
G417	F393	Pit. Period 6	Cat 75	Uncertain
G3269	F432	Robber trench. Period 6	Cat 285	Scored *pila* brick reused.
G587	F557	Pit. Period 6	Cat 92	Type B7
G3031	F2951	Pit. Period 6	Cat 282	Type B7
G3328	F3245	Robber trench. Period 6	Cat 276	Type B7 mortared
G1	L1	Topsoil/clearance. Period 6	Cat 87	Uncertain
G3069	L3047	Wall collapse. Period 6	Cat 321a	Type V5 reused
G3069	L3047	Wall collapse. Period 6	Cat 321b	Type V8 reused
G3069	L3047	Wall collapse. Period 6	Cat 321c	Type V8 reused
G3069	L3047	Wall collapse. Period 6	Cat 321d	Type V8 reused
G3069	L3047	Wall collapse. Period 6	Cat 321e	Type B11 reused
G3069	L3047	Wall collapse. Period 6	Cat 321f	Type V8 reused
G3069	L3047	Wall collapse. Period 6	Cat 321g	Type V9 reused
G3069	L3047	Wall collapse. Period 6	Cat 321h	Type B11 reused
G3069	L3047	Wall collapse. Period 6	Cat 321i	Uncertain reused
G19	F4	Pit. ?Period 6	Cat 64	Type B9
Unstratified				
G150		Unstratified (Periods 4-6)	Cat 77	Type B3 reused
G172		Unstratified (Period 4)	Cat 80a	Type V1 mortared
G172		Unstratified (Period *1)*	Cat 80b	Type B6/B11 mortared
G200		Unstratified (Periods 4-6)	Cat 206	Uncertain reused as a counter
G200		Unstratified (Periods 4-6)	Cat 319	Type B7 reused
G200		Unstratified (Periods 4-6)	Cat 320a	Type V8 reused
G200		Unstratified (Periods 4-6)	Cat 320b+c	Type V8 reused
G200		Unstratified (Periods 4-6)	Cat 320d	Type V8 mortared
G200		Unstratified (Periods 4-6)	Cat 320e	Type B10
G200		Unstratified (Periods 4-6)	Cat 320f	Type B6/B11 mortared
G200		Unstratified (Periods 4-6)	Cat 320g	Type B10 reused
G200		Unstratified (Periods 4-6)	Cat 320h	Type B10 reused
G500		Unstratified (Periods 4-6)	Cat 68	Type B13
G680		Unstratified (Periods 4-6)	Cat 83	Uncertain
G1600		Unstratified (Periods 3-6)	Cat 94	Type B7
G2000		Unstratified (Periods 3-6)	Cat 232a	Type B8
G2000		Unstratified (Periods 3-6)	Cat 232b	Type B7 reused
G unstratified			Cat 90	Type B10 mortared

Site H

Period 5				
H415	L414	Destruction debris: Building 120. Period 5b	Cat 48	Type B6/B11 mortared
H173	F59	Trench. Period 5	Cat 5	Type B10 mortared
H225	F59	Trench. Period 5	Cat 54	Type B5 mortared
H367	F335	Wall foundations: Building 116. Period 5	Cat 6	Type B7
H269	L235	Destruction debris B: Building 116. Period 5	Cat 53a	Type B8 mortared
H269	L235	Destruction debris B: Building 116. Period 5	Cat 53b	Uncertain

Find	*Lay/Feat*	Context *description & date*	Cat *no*	Tile *description*
H.269	L235	Destruction debris B: Building 116. Period 5	Cat 53c	Type B10
Period 5 or Period 6				
H485	L387	Destruction debris B: ?Building 120. Period 5 or 6	Cat 9a	Type B11 mortared
H485	L387	Destruction debris B: ?Building 120. Period 5 or	Cat 9b	Type B11 mortared
Period 6				
H179	F74	Pit. Period 6	Cat 57	Uncertain
H277	F146	Robber trench? Period 6	Cat 13	Uncertain
H155	F154	Scoop. Period 6	Cat 49	Uncertain
H223	F176	Pit. Period 6	Cat 17	Uncertain
H203	F183	Robber trench. Period 6	Cat 50	Uncertain mortared on keyed surface and sides, reused as a tessera
H366	F365	Pit. Period 6	Cat 15a	Type B9
H366	F365	Pit. Period 6	Cat 15b	Type B6/B11
H398	F377	Robber trench. Period 6	Cat 45	Type B10
H447	F438	Pit. Period 6	Cat 12	Type B10 mortared
H5	L3	Topsoil/clearance. Period 6	Cat 8	Type B12 mortared
H42	L3	Topsoil/clearance. Period 6	Cat 14	Type B9 mortared
H43	L3	Topsoil/clearance. Period 6	Cat 59	Type B10 reused
H131	L3	Topsoil/clearance. Period 6	Cat 11	Type B10
H442	L3	Topsoil/clearance. Period 6	Cat 4b	Type V8
H525	L3	Topsoil/clearance. Period 6	Cat 7	Type B8 mortared
H290	L95	Destruction debris. Period 6	Cat 52	Uncertain mortared
Unstratified				
H262		Unstratified (Periods 4-6)	Cat 10a	Type B5
H262		Unstratified (Periods 4-6)	Cat 10b	Uncertain
H321		Unstratified (contaminated Period 5 dump L283)	Cat 244	Scored *pila* brick mortared
H500		Unstratified (Periods 4-6)	Cat 16	Type V7
H626		Unstratified	Cat 47	Type B8 reused
H627		Unstratified	Cat 56	Type B10

Site J

Period 6				
J213	F5	Robber trench. Period 6	Cat 294	Uncertain
J96	F14	Robber trench. Period 6	Cat 289	Uncertain
J145	F14	Robber trench. Period 6	Cat 291a	Type B6/B11 mortared
J145	F14	Robber trench. Period 6	Cat 291b	Uncertain mortared
J33	F18	Pit. Period 6	Cat 300	Type B5
J106	F104	Robber trench. Period 6	Cat 292	Uncertain
J148	F124	Robber trench. Period 6	Cat 296	Uncertain
J155	F152	Pit. Period 6	Cat 297	Type B10
J189	F183	Pit. Period 6	Cat 295	Type B8
J2	LI	Site clearance. Period 6	Cat 293	Type B10
J30	LI	Site clearance. Period 6	Cat 298	Uncertain

Find	*Lay/Feat*	*Context description & date*	Cat *no*	*Tile description*
J147	L1	Site clearance. Period 6	Cat 290a	Type B7
J147	L1	Site clearance. Period 6	Cat 290b	Type B13
J214	L1	Site clearance. Period 6	Cat 301	Uncertain
Unstratified				
J357		Unstratified (Periods 2-5)	Cat 299	Uncertain reused

Site K

Period 3				
K360	L358	Horticultural soil. Period	Cat 231	Type B2 mortared
Period 4				
K21	F12	Oven backfill. Period 4	Cat 46a	Type B10
K21	F12	Oven backfill. Period 4	Cat 46b	Type B6/B11 reused
Unstratified				
K401		Unstratified.	Cat 58	Type B1

Site M

Unstratified				
M56	L1	Surface cleaning. Unstratified	Cat 51	Type B10 mortared
M394		Unstratified	Cat 55	Type B10

Site W

Period 4				
W78	F66	Pit. Period 4	Cat 242	Type V3 mortared

Find	*Lay/Feat*	Context	*description & date*	Cat no	*Tile description*
Gilberd School					
Site A					
Period 1					
A1796	L156	Occupation. Period 1		Cat 237	*Parietalis*/half box tile
Period 1 or Period 2					
A1856	L163	Make-up. Period 1 or 2		Cat 323	Type B1 reused
Period 3					
A567	L8	Midden. Period 3a		Cat 322	Type B1
A401	F27	Pit. Period 3b		Cat 273	Type B7
A817	F117	Pit. Period 3		Cat 346	Type B10 reused
Period 3b or *Period 4*					
A629	L13	Dump: ?Building 138, Room 2. Period 3b or 4		Cat 331	Uncertain
A2219	L242	?Pit fill/scraped-up road silt. Period 3b on 4		Cat 337	Type B10 reused
A848	F116	Large stone slab set in scoop/pit. ?Period 3b or 4		Cat 340	Uncertain
?Roman					
A2218	L2 41	Topsoil. ?Roman		Cat 327	Type B5
Post-Roman					
A2174	F281	Foundation/?soakaway. Post-Roman		Cat 330	Uncertain
A36	L1	Topsoil. Post-Roman		Cat 334	Uncertain
A85	L1	Topsoil. Post-Roman		Cat 345a	Type B5
A85	L1	Topsoil. Post-Roman		Cat 345b	Type B5
A420	L1	Topsoil. Post-Roman		Cat 271	Type B6/B11 mortared
A764	L1	Topsoil. Post-Roman		Cat 342	Uncertain
A1677	L1	Topsoil. Post-Roman		Cat 343	Type B10
A2183	L1	Topsoil. Post-Roman		Cat 336	Uncertain
A398	F80	Large pit. Medieval		Cat 272	Type V10 mortared, ?reused (possibly mortar on interior surface)
A410	F80	Large pit. Medieval		Cat 335	Uncertain
A977	F80	Large pit. Medieval		Cat 245	Type V10 ?mortar on interior surface
A1003	F85	Hearth for casting pit. Medieval		Cat 326	Type B6/B11 reused
A1793	F7	Foundation? Post-medieval		Cat 332	Type B10 mortared
A89	F10	Foundation? Post-medieval		Cat 344a	Type B9 mortared
A89	F10	Foundation? Post-medieval		Cat 344b	Type B4 mortared (Lowther's die 27)
A95	F10	Foundation? Post-medieval		Cat 347a	Uncertain mortared
A95	F10	Foundation? Post-medieval		Cat 347b	Type B7 mortared
A95	F10	Foundation? Post-medieval		Cat 347c	Type B9
A190	F42	Large pit(s). Post-medieval		Cat 341	Uncertain
A350	F42	Large pit(s). Post-medieval		Cat 329a	Uncertain
A350	F42	Large pit(s). Post-medieval		Cat 329b	Uncertain
A2477	F42	Large pit(s). Post-medieval		Cat 338	Type B2 mortared, ?reused
Unstratified					
A391		Unstratified		Cat 267	Parietalis/half box tile with lattice keying in relief
A399		Unstratified		Cat 270	Parietalis/half box tile

Find	*Lay/Feat*	*Context description & date*	*Cat no*	*Tile description*
				mortared on keying and slight mortar traces on breaks
A422		Unstratified	Cat 348	Uncertain

Site B

Period 2				
B647	L99	Make-up: Building 133, *Room* 5. Period 2	Cat 302	Type B1 reused
Period 2 or Period 3				
B428	L26	Dump (redeposited site destruction debris): destruction of Building 133. Period 2 or 3	Boudican	Cat 251 Uncertain
B568	L26	Dump (redeposited Boudican destruction debris): destruction of Building 133. Period 2 or 3.	Cat 238	Type B6/B11 mortared
*Period **3***				
B152	F31	Pit. Period 3	Cat 333	Type B10 reused
Period 3b or Period 4				
B129	F15	Large pit. Period (3b or) 4	Cat 325	Type V1 mortared
B166	F15	Large pit. Period (3b or) 4	Cat 241a	Type B5 mortared
B166	F15	Large pit. Period (3b or) 4	Cat 241b	Type B5 reused
B97	F15	Large pit. Period (3b or) 4	Cat 349a	Type B10 mortared
B97	F15	Large pit. Period (3b or) 4	Cat 349b	Type B10
B212	F17	Pit. Period 3b (or 4)	Cat 240	Uncertain mortared
B22	F2	Robber trench for Building 137. Medieval	Cat 328a	Type B10 reused
B22	F2	Robber trench for Building 137. Medieval	Cat 328b	Type B10 mortared
B11		Unstratified. Clearance	Cat 208	Type B4 (Lowther's die 29) reused as a counter
B46		Unstratified. Roman	Cat 339a	Type V2 reused
B46		Unstratified. Roman	Cat 339b	Uncertain reused
B274		Unstratified	Cat 239	Type B5 reused

Find	*Lay/Feat*	*Context description & date*	Cat *no*	*Tile description*

Spendrite

Phase A or Phase B				
101	L54	Make-up. Phase A or B	Cat 259	Uncertain
Phase B				
148	L78	Silting/primary fill of pit or ditch. Phase B	Cat 266	Uncertain reused
Phase C				
18	F2	Pit. Phase C	Cat 247a+c	Uncertain mortared
18	F2	Pit. Phase C	Cat 247b	Type B3 mortared
18	F2	Pit. Phase C	Cat 247d	Uncertain mortared
184	F31	Robber trench. Phase C	Cat 250	Type B10 mortared
96	L43	Phase C	Cat 246a	Type V3
96	L43	Phase C	Cat 246b	Type B3 mortared
96	L43	Phase C	Cat 246c	Type B6 mortared
96	L43	Phase C	Cat 246d	Type B10
96	L43	Phase C	Cat 246e	Uncertain
105	L48	Cess-pit fill. Phase C	Cat 254	Type B3
97	L50	?Fill of robber trench/pit. Phase C	Cat 260a	Type B10 reused
97	L50	?Fill of robber trench/pit. Phase C	Cat 260b	Type B10 mortared
97	L50	?Fill of robber trench/pit. Phase C	Cat 260c	Type B10 reused
97	L50	?Fill of robber trench/pit. Phase C	Cat 260d	Type B10
97	L50	?Fill of robber trench/pit. Phase C	Cat 261a	Combed flat tile
97	L50	?Fill of robber trench/pit. Phase C	Cat 261b	Type B10
97	L50	?Fill of robber trench/pit. Phase C	Cat 261c	Type V3 mortared
97	L50	?Fill of robber trench/pit. Phase C	Cat 261d	Uncertain mortared
97	L50	?Fill of robber trench/pit. Phase C	Cat 261e	Type B10 mortared
97	L50	?Fill of robber trench/pit. Phase C	Cat 324	Type B10 mortared
92	L51	Robber trench fill. Phase C	Cat 60a	Uncertain mortared, ?reused
92	L51	Robber trench fill. Phase C	Cat 60b	Uncertain
92	L51	Robber trench fill. Phase C	Cat 60c	Not a keyed tile
92	L51	Robber trench fill. Phase C	Cat 60d	Type V3
92	L51	Robber trench fill. Phase C	Cat 60e	Type V3
92	L51	Robber trench fill. Phase C	Cat 60f	Uncertain mortared
92	L51	Robber trench fill. Phase C	Cat 60g	Uncertain mortared
92	L51	Robber trench fill. Phase C	Cat 60h	Type B10 reused
93	L53	Robber trench fill. Phase C	Cat 265a	Uncertain mortared
93	L53	Robber trench fill. Phase C	Cat 265b	Type B10
93	L53	Robber trench fill. Phase C	Cat 265c	Type B7 reused
120	L68	Robber trench fill. Phase C	Cat 248	Type B7 reused
120	L68	Robber trench fill. Phase C	Cat 257a	Type B9 reused
120	L68	Robber trench fill. Phase C	Cat 257b	Type B10 reused
120	L68	Robber trench fill. Phase C	Cat 257c	Uncertain mortared
120	L68	Robber trench fill. Phase C	Cat 257d	Uncertain
5	L3	Topsoil. ?Phase C	Cat 258	Uncertain mortared

Find	Lay/Feat	Context	description & date	Cat no	Tile	description
Phase C or Phase D						
36	L18	Topsoil. Phase C or D		Cat 262a	Type B5 mortared, ?reused	
36	L18	Topsoil. Phase C or D		Cat 262b	Type B5	
41	L18	Topsoil. Phase C or D		Cat 255	Uncertain reused	
Phase D						
1	F5	Trench. Phase D		Cat 256a	Type B8 mortared	
7	F5	Trench. Phase D		Cat 256b	Scored *pila* brick mortared, ?reused	
7	F5	Trench. Phase D		Cat 256c	Type B5 reused	
50	F14	Corner wall. Phase D		Cat 253a	Type B7	
50	F14	Corner wall. Phase D		Cat 253b	Uncertain	
8	L1	Demolition debris. Phase D		Cat 264	Type B10 mortared, ?reused	
64	L1	Demolition debris. Phase D		Cat 263a	Type B10 mortared	
64	L1	Demolition debris. Phase D		Cat 263b	Type B10 mortared	
14	L8	?Make-up/dump. Phase D		Cat 249	Type B10	

Find	*Lay/Feat*	*Context description & date*	*Cat no*	*Tile description*
Lion Walk Church (236.84)				
Post-Roman				
17		Surface cleaning. Post-Roman	Cat 269	Uncertain mortared
57		Surface cleaning. Unstratified (Post-Roman)	Cat 268a	Type B7
57		Surface cleaning. Unstratified (Post-Roman)	Cat 268b	Uncertain
57		Surface cleaning. Unstratified (Post-Roman)	Cat 268c	Type B10

Find Lay/Feat Context description & date Cat no Tile description

?SPT/?1.81

Many box tiles were found in a large crate without an external label or an internal detailed context label. The tiles probably derived from the Spendrite site, but there is a possibility that they may have come from Culver Street.

Cat 61a Type B6/B11 reused
Cat 61b Type B10 reused
Cat 61c Type B10 mortared
Cat 61d Type B6/B11 reused
Cat 61e Type B8 reused
Cat 61f Type B3 mortared
Cat 61g Type B5 mortared
Cat 61h Type B10 reused
Cat 61i Type B6/B11 mortared
Cat 61j Type B10 reused
Cat 61k. Type B6 reused

Watching briefs

Cat 235 Site west of Marks & Spencer, 15/11/1982 Type B3 mortared
X295 Post Office, Head Street Cat 303 Type B10 mortared
X313 L8 Cat 236 Uncertain

Appendix 9 (Chapter 8):
Culver Street environmental tables

by Peter Murphy

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A46	unstratified, clearance against south section
AF27	med or later pit(s)
AF30	med or later pit
AF57	med or later pit
BF138	post-Roman
BF265/L658	Building 112, Room 2, gully, Site B Period 4
BF282	Building 77, Room 5, latrine pit, Site B Period 1/2
BF421	Building 94, Room 5a, gully, Site B Period 3
BF580	Building 77, Room 3, pit/latrine pit, Site B Period 1
BL438	Building 77, Room 5, occupation/burnt floor, Site B Period 2
BL439	Building 77, Room 3, occupation/burnt floor, Site B Period 2
BL440	Building 77, Room 1, occupation/burnt floor, Site B Period 2
CF138	Building 79, Room 2, latrine pit, Site C Period
CL8	dump/demolition, Site C Period 4
CL11	Building 114, Rooms 2+3, mortar spread, Site C Period 4
CL19	Building 114, Room 2, make-up, Site C Period 4
CL30	Building 96, Room 1, make-up, Site C Period 3 (or 4a)
D535/DF203	Building 123 yard, gully, Site D Period 5
DF352	Building 123, Passage 2, drain, Site D Period 4
DF854	Building 123, Room 10, oven, Site D Period 4
DF858	Building 123, Room 10, oven, Site D Period 4
DL349/F259	Site D Period 6 robber trench for cellar (Room 9) in Building 123
EF14	pit, Site E Period 8
EF133	pit, Site E Period 8
EF164	pit, Site E Period 8
EF166	late Site E Period 7 ?hut
EF900	Building 83, Room 7, latrine pit, Site E Period 1
G377/F376	top of Site G Period 6 pit
G378/F165	top of Site G Period 6 robber trench
G803/F450	Site G Period 6 pit
G814/F450	Site G Period 6 pit
G825/F376	Site G Period 6 pit
G2981/F2951	pit, Site G Period 6
GF14	pit, Site G Period 5
GF79	pit, Site G Period 3
GF163	pit, Site G Period 6
GF185	pit, Site G Period 6
GF293	pit, Site G Period 6
GF360	Building 120, hearth, Site G Period 5b
GF376	pit, Site G Period 6
GF478	pit, Site G Period 6

GF557	pit, Site G Period 6
GF626	pit, Site G Period 5b
GF661	pit, Site G Period 6
GF914	Building 120, hearth/burnt area, Site G Period 5b
GF1545	Building 117, oven, Site G Period 4
GF1555	Building 117, hearth, Site G Period 4
GF1983	Building 116, oven/hearth, Site G Period 5
GF1995	Building 119, oven, Site G Period 4
GF2218	?pit, Site G Period 3
GF2326	hearth, Site G Period 1 or 2
GF2362	?pit, Site G Period 3
GF2363	pit, Site G Period 3
GF2594	pit, Site G Period 3
GF2612	pit, Site G Period 3
GF2695	pit, Site G ?Period 3
GF3064	pit, Site G Period 3d
GL235	Building 120, occupation, Site G Period 5b
GL279	Building 120, occupation, Site G Period 5b
GL518	Building 120, occupation, Site G Period 5b
GL783	Building 120, destruction debris/occupation, Site G Period 5b
GL894	Building 120, occupation, Site G Period 5b
GL1507	Building 117, burnt deposit, Site G Period 4
GL1745	burnt area, Site G Period 3
GL1932	burnt area, Site G Period 3
GL1959	burnt area, Site G Period 4
GL2520	burnt area, Site G Period 3
GL3239	burnt area, Site G Period 3
GL3297	burnt area, Site G Period 4 or 5
H101/F39	?cellar, Site H Period 6
H178/F176	pit, Site H Period 6
H221/F176	pit, Site H Period 6
HF335	?Building 116, possibly from foundations, Site H Period 5
HF443	robber trench, Site H Period 4
HL78	Building 116, destruction debris, Site H Period 5
HL477	Building 120, wall, Site H Period 5a
HL497	Building 120, burnt area, Site H Period 5b
HL522	Building 120, burnt area, Site H Period 5b
JL222	Building 79, Boudican destruction debris, end of Site J Period 2
KF12	Site K ?Period 4 backfill of Period 3 corn-drier
KF74	pit, Site K Period 5
M198/F121	pit, Site M Period 7
MF31	pit, Site M Period 7
MF121	pit, Site M Period 7
ML28	?topsoil, Site M ?Period 7

Soil Profile Description: Culver St, Colchester Site E

depth, cms.
(157: Roman Levels)

C 0-20 (EL300)	Brown (7.5 YR4/4) moderately weak 6andy loam; massive; few small pieces of pottery; very low in humus; many root traces; charcoal present; fine ferro-manganiferous coatings and mottles; gradual, smooth boundary.
C2 20-48 (EL350)	Brown (7.5YR5/4) weak sandy 6ilt loam; massive; stone free; very low in humus; few root traces; very few fine ferro-manganiferous mottles; few very thin cutans, in narrow bands; abrupt, smooth boundary.
2C 48 +	Strong brown (7.5YR5/8) weak, structureless medium sand; iron pans present.

Analytical Data % **Grain Size**

Horizon	pH	%loss on ignition	%Org. Carbon	Clay	VFZ.	MZ.	CZ.	Silt	VFS.	FS.	MS.	CS.	VCS.	Sand
C1 layer EL300	8.1	0.65	0.24	14	2	16	11	29	8	10	30	6	2	56
C2 layer EL350	8.0	0.62	0.15	11	4	21	1	44	10	9	19	5	2	45
2C	7.8	0.45	ND.	6	2	0	0	2	0	26	60	3	1	90

Table 8.1

Table 8.2

Culver Street: micromorphological descriptions of samples from EL300/EL350 Site E) (p 274)

by Dr R MacPhail

C EL300 (0-0.20 m)

*Structure:*weak coarse blocky to massive; channel microstructure.

Porosity: 10-15 percent; very dominant medium (450 mm), interconnected, elongate channels; frequent medium vughs.

*Mineral:*Coarse/Fine: limit at 50 mm (silt): Coarse/Fine: 60/40.

Coarse: very dominant moderately sorted fine and medium sand size quartz; few very coarse; subangular to subrounded; very few very coarse flint: very few, very fine to very coarse opaques and sharp-edge nodules.

Fine: (very dominant angular to subangular silt-size; quartz; well sorted):
a) very dominant very pale brown; b) with frequent very dark brown (PPL);
a) very pale orange; and b) brown to black (RL);
a) speckled; b) opaque.

Organic: coarse:very few charcoal fragments;
fine: a) very few charcoal; common amorphous organic matter; cells; grass phytoliths present;
b) charcoal as (a); dominant amorphous organic matter.

Groundmass:a) grey 'silasepic'; porphyric (compacted).

Pedofeatures:excrements: very few possibly extremely thin, organic fragments or excrements;
textural:very rare, extremely thin (10 mm) mineral grain, clay coatings.

*Depletion:*possible depletion of most fabric of iron.

*Amorphous:*frequent diffuse to clear ferro-manganiferous nodules (fabric b); including organic matter replacement: generally unreferred.

C2 EL350 (0.20-0.48 m)

*Structure:*medium subangular blocky and massive; channel microstructure.

Porosity: 10-15 per cent; as above.

Mineral: coarse/fine: 50/50.

Coarse (as above).

Fine: a) very dominant as above (a):
b) very few, as (b) above:
c) frequent (common in lowest 20 mm) pale brown (PPL); orange (RL); limpid; horizontally banded every 400 mm.

*Organic:*very rare charcoal; common amorphous organic matter.

Groundmass:a) as (a) above;
b) as (b) above:
c) dark brownish; moderately high birefringence; moderately striated; porphyric.

*Pedofeatures: Textural:*in fabric c), bands of finer material (micas present; see Fabric) here frequent clay coatings; in voids, channels and as plasma infills; very few limpid; dominant moderately dusty.

Fabric: area of bands — fabric c) it is compacted; has better structure, contains more clay and micas than soils above includes fragments of oriented clay:

*Amorphous:*area b) as above:
c) dominant clear ferruginous impregnation of fine material; few ferro-manganiferous nodules.

COLCHESTER: CULVER STREET GL1814 ANALYTICAL DATA

Sample Grain Size

	Clay	FZ	MZ	CZ	Silt	VFS	FS	MS	CS	VCS	Sand
L1814	10	5	7	22	32	11	10	33	9	3	66

	% Org. Carbon	% $CaCO_3$.	% Loss on ignition (400°C)	(800°C-%$CaCO_3$)
L1814	0.4	0.6	1.52	3.0

Table 8.3

CULVER STREET MICROMORPHOLOGICAL DATA. (GL18l4)

Building Materials		%
Bcickearth "clay wall":	heavily burned	16
	burned	14
	unburned	13
Daub fabric:	burned	5
	unburned	7
Plaster (fine temper in calcltic fabric)		1
Mortar (coarse " " " ".)		1
Charcoal:	fragments	7
	included in "clay wall"	4
Ash		2
Large Stones:	Flint	5
	Sandstone	1
	Iron Nodule	1
Coarse gravel		15
Inclusions	Pottery	1
	Bone	3
Pedologically formed fabric		
Slaked or biologically mixed daub material		4

Table 8.4

Table 8.5:
Culver Street, Colchester micromorphological descriptions of samples from GL1814) (pp 273-4)

by Dr R MacPhail

GL1814 (0.14 m thick)

*Structure:*weakly massive: massive and vughy microstructure.

Porosity:extremely variable because of mix of anthrop. materials. Areas of 30 per cent in biologically worked open brickearth daub, medium, smooth wall vughs and very coarse chambers and fine channels; generally only 10-15 percent, and only 5 per cent in 'brickearth' inclusions. Also few plant pseudomorph voids — eg up to 7 mm long.

*Mineral:*coarse: fine limit 10μm. A C:F ratio is rather meaningless in this type of deposit — the grain size analysis (Table 8.3) is only an average of all the mineral components — for example the brickearth mainly comprises silt and clay (C:F, 75:25), with minor calcific brickearth of mainly claysize material with a C:F of 10-90.
Coarse/first coarse inclusions (Table 8.3).

Common 'brickearth' wall fragments; very dominantly silly, porphyric, grano-striate with few textural pedofeatures (relic silt laminae, silt and clay intercalations, and dusty clay void in fills); very little organic matter.

Strongly burned: brickearth is dark reddish-brown (Plane Polarised Light — PPL) and speckled; bright orange (Oblique Incident Light — OIL); and moderately birefringent (Crossed Polarised Light — XPL) — low amounts of organic matter allowing the birefringence to show through. Brickearth which has been affected by *lower burning temperatures,* is of a similar character, but, pale brown, speckled (PPL), pale orange, except for nodules and textural features which are orange because iron concentration (OIL), with moderately high birefringence. Very few calcareous fine brickearth (small stone-size angular fragment), porphyric, calcitic clay with frequent silt-size quartz, very few neo-formed calcite, and very abundant manganese, is dark grey-brown, highly speckled (PPL); yellow (OIL): highly birefringent (XPL). All these occur as angular or sub-round fragments, or as whole very large layers — and are associated with burned daub ie extending out of clay wall fabric; plaster wall coating and 'brickearth/daub/2' which is a mixture of brickearth with coarser elements including sand grains (see below).

Burned daub: these (few) are porphyric, blackish (PPL), greyish (OIL) and non-birefringent (XPL): often with coarse plant pseudomorphs; mainly medium sand-size quartz set in 'non-birefringent brickearth' fabric — without very much clay size material; and organic matter of fine fabric has been oxidised — like the pseudomorph — by burning. Burned in reducing conditions.

Brickearth/daub: this is a very common component varies from i) very dominant little mixed brickearth to frequent quite dark-brownish organic fabrics, i) Moderately vughy, perphyric darkish-brown, very speckled (PPL), pale orange (OIL) — therefore somewhat burned; moderate birefringence (XPL), is rather heterogeneous with sand size quartz set in silty/clay fine fabric — the latter with common textural pedofeatures (mainly unsorted intercalations and few very dusty void coatings). The fine fabric is moderately calcitic either in part from calcite ash or 'weathered plaster'. Also the fine fabric contains very abundant fine charcoal and charred materials included 'grass' material further indicated by common phytoliths.

Ash: an ash and charcoal band some 3 mm wide by 50 mm wide [???both 'wide'] contains mineral material, but is dominated by charcoal of all sizes and calcite crystals of wood ash — all within high temperature burned brickearth clay wall. This probably has a structural origin, ie timbers in buildings.

Mineral: material also includes very few pottery, 'cement/plaster' fragments. The common presence of gravel-size very coarse, coarse and medium sand-size quartz and flint are indicative of these materials also being imported (with brickearth silt and clay for temper for building materials such as *opus*: *signinum*— although a high percentage of the sand and silt could be local (MacPhail 1984) [ref? No 'MacPhail 1984' in bibliography] some gravel may be derived from the breakdown of a calcitic cement with coarse inclusions of gravel.

Organic: materials such as the brickearth clay bricks and burned daub are almost devoid of organic matter, but they sometimes feature porosity pseudomorphs of plant tempering. Few coarse charcoal are present throughout the slide. Rare bone (not human (K Dobney, *pers comm*).

Fine:even at the fine level the brickearth is very 'purely' mineral, although few fine charred organic matter and amorphous organic matter occurs in the daub type fabrics.

*Groundmass:*brickearth — porphyric, speckled birefringence — the less burned the higher the birefringence. Daub-porphyric, speckled birefringence. 'Weathered' daub — porphyric, speckled birefringence.

Pedofeatures:features within the building materials which are relic or developed by their preparation for construction (such as calcite-cement fabrics and textural-daub- slated fabrics) are not described here (*see* mineral). Only those features pertaining 'to processes post-dating the deposition of this sediment are described.

Textural:rare (not relic) impure clay (matrix material) coatings, and intercalations. Very dark-brown, poorly birefringent; slaked fines from brickearth/daub fabrics.

Excrements:rare faunal dissagregation of weathered burned daub; dissagregated earthworm?

Interpretation:careful scrutiny of this slide reveals very

few pedological changes in this sediment which to all intents and purposes appears to be a spread of destruction debris. Presumably, rubble from the destruction of the Roman barracks was spread, and appears to have been little affected by later activities, probably because in this context it was sealed by tessellated floors. In short there is no evidence of cultivation, or soil formation of any kind, or even re-use of this building debris in this context.

Site	B	D	D	D	D	G	G	G	G	G	G	G	G	G
Sample No.	-	26	27	36	41	13	15	22	23	33	37	38	42	58
Context No.	F421	F854	F858	F352	F352	L235	F626	L894	F360	L1507	F914	F914	L1745	F3064
Bag No.	1477	856	860	1391	1697	350	683	956	426	2128	1092	1110	2199	3156
Valvata cristata Müller	-	-	-	-	-	-	2	-	-	-	-	-	-	-
Lymnaea truncatula (Müller)	1	-	-	-	-	3	2	1	-	3	-	-	-	12
Anisus leucostoma (Millet)	-	-	-	-	-	-	-	-	-	-	-	-	-	4
Carychium minimum Müller	-	-	-	-	-	-	2	-	-	-	-	-	-	-
Carychium sp.	-	-	-	-	-	3	5	-	-	-	-	-	-	-
Succineidae indet.	-	-	-	-	-	-	4	-	-	-	-	-	-	-
Cochlicopa sp.	-	-	-	1	3	-	-	-	1	-	-	-	-	-
Vertigo antivertigo (Draparnaud)	-	-	-	-	-	-	1+cf2(b)	-	-	-	-	-	-	-
Vertigo pygmaea (Draparnaud)	-	-	-	-	-	1	13+10cf(b)	-	-	-	-	-	-	1
Vertigo angustior Jeffreys	-	-	-	-	-	-	1	-	-	-	-	-	-	-
Vertigo sp. (a)	-	-	-	-	-	3	26	-	-	-	-	-	-	4
Vertigo sp. (b)	-	-	-	-	-	-	8	-	-	-	-	-	-	-
Pupilla muscorum (Linne)	-	-	-	-	-	-	-	-	2	-	-	-	-	-
Vallonia costata (Müller)	-	-	1	-	-	1	-	1	-	-	-	-	-	-
Vallonia excentrica Sterki	-	-	-	-	-	-	-	-	-	-	1	-	-	-
Vallonia sp.	-	-	-	-	-	-	2	-	-	-	3	-	-	-
Punctum pygmaeum (Draparnaud)	-	-	-	-	-	-	-	-	-	-	-	-	-	1
Discus rotundatus (Müller)	-	1cf.	-	1	-	-	-	-	-	-	-	-	-	-
Vitrina pellucida (Müller)	-	-	-	-	-	-	-	-	1	-	-	-	-	-
Vitrea sp.	-	-	-	-	-	1	-	-	-	-	-	-	-	-
Zonitidae indet.	-	1	-	-	2	1	-	2	1	-	-	-	-	-
Clausilia bidentata (Strom)	-	-	-	-	-	1	-	-	-	-	-	-	-	-
Clausiliidae indet.	-	-	-	1	1	-	-	-	-	-	-	-	-	-
Helicella sp.	-	-	-	-	-	-	1	-	-	-	-	-	-	-
Trichia sp.	-	4	-	4	6	2	-	3	3	-	2	1	-	-
Trichia cf. striolata (Pfeiffer)	-	-	-	2	-	-	-	-	-	-	-	-	-	-
Helix aspersa Muller	-	-	-	2	-	-	-	-	-	1	-	-	-	-
Ostracods	-	-	-	-	-	-	+	-	-	-	-	-	-	-
Indeterminate (mineralised)	-	-	-	-	-	-	-	-	-	-	-	-	1	-

Tableg.6: Land and freshwater molluscs

Notes (a) Apices, (b) Intact shells with apertures obscured by concretions.
Shells of Cecilioides acicula are present in several samples, but have not been counted.

For descriptions of contexts, *see* the start of this appendix.

	B1477 F421	B1797 L438	B1798 L438	B1800 L438	B1801 L439	B1802 L439	B1803 L439	B1804 L439	B1808 L440
Mytilus edulis L.	+	-	1	+	+	+	+	+	-
Ostrea edulis L.	+	+	+	+	+	+	+	+	+
Cerastoderma sp.	+	-	-	-	-	-	-	-	-

	B1936 F508	B2011 F580	B2266 F282	C486 F138	C487 F138	C485 F138	E1125 F900	E1340 F900
Mytilus edulis L.	-	-	+	+	+	1	-	-
Ostrea edulis L.	+	5	3	3	+	2	+	2
Cerastoderma sp.	-	-	-	-	-	-	-	-
Indet bivalve (fragment)	-	-	+	-	-	-	-	-

Table 8.7: Marine mollusca extracted from soil samples at Sites B, C and E

+ indicates non-hinge fragments. Counts refer to bivalve umbones (left and right valves not distinguished).

For descriptions of contexts, see the start of this appendix.

Sample No.	25	26	27	36	41	-	-
Context No.	D:L349	D:F854	D:F858	D:F352	D:F352	H:L497	H:L522
Bag No.	418	856 (a)	860 (a)	1391	1697	517	524 (a)(c)
Littorina littorea (L)	-	-	-	1	-	-	-
Litton'na sp.	+	-	-	-	-	-	-
Hydrobia ulvae (Pennant)	-	-	1	-	1	-	-
Buccinum undatum L.	-	+	+	1	+	+	1
Indeterminate gastropod	-	-	-	-	-	+	-
Nucula sp.	-	-	-	-	-	-	-
Mytilus edulis L.	4	8	12	11	18	83	46
Ostrea edulis L.	28	2(b)	4	13	8	4+2(b)	3
cf. Pecten maximus (L)	-	-	-	-	-	+	-
Cerastoderma edule (L)	-	-	-	-	-	-	-
Cerastoderma cf. lamarcki (Reeve)	-	-	-	-	-	-	-
Cerastoderma sp.	-	2	+	-	1	+	-
Venerupis rhomboides (Pennant)	-	-	-	-	-	-	-
Venerupis decussata (L)	-	1	+	+	2	-	4
Macoma balthica (L)	-	-	-	-	-	-	-
Tellinacea indet.	-	-	-	-	-	-	-
Indeterminate bivalve	-	-	-	-	1	+	-
Foraminifera	-	-	-	-	-	-	-
Barnacles	+	+	+	+	+	+	+
Carcinus maenas L.	-	-	-	-	-	-	-

Table 8.8: Marine invertebrates from Sites D and H

Notes (a) Some grey in colour (burnt), (b) Small immature shells, (c) This sample also included chalk fragments, refer to umbones of bivalves and apices of gastropods. Other fragments are indicated by a cross.

For descriptions of contexts, *see* the start of this appendix.

Sample No.	13	14	15	19	22	23	28	29	31	32	33
Context No.	L235	F14	F626	L783	L894	F360	L1932	L1959	F1545	F1545	L1507
Bag No.	350	423	683	796	956	426	2021	2022	2048	2103	2128
			(a)								
Littorina littorea (L)	-	-	-	-	-	-	-	-	-	-	-
Littorina sp.	-	-	-	-	-	-	1	-	-	-	-
Hydrobia ulvae (Pennant)	-	-	-	-	1	-	-	-	-	-	-
Buccinum undatum L.	+	4	2	-	1	1+1cf.	+	+	-	+	+
Indeterminate gastropod	-	-	-	-	-	-	-	-	-	-	-
Nucula sp.	-	-	-	-	-	1	-	-	-	-	-
Mytilus edulis L.	23	15	4	-	51	8	2	+	6	2	15+?2(c
Ostrea edulis L.	2	18	3	+	5	2+2(b)	6	+	+	1	9
cf. Pecten maximus (L)	-	-	-	-	-	-	-	-	-	-	-
Cerastoderma edule (L)	-	-	-	-	-	-	-	-	2	1	-
Cerastodenna cf. lamarcki (Reeve)	-	-	-	-	-	-	-	-	-	-	-
Cerastoderma sp.	1	+	-	+	+	3	-	-	3	1	1+1(b)
Venerupis rhomboides (Pennant)	-	-	-	-	-	-	-	-	2	1	-
Venerupis decussata (L)	-	+	1	-	+	+	+	-	1	6	2
Macoma balthica (L)	-	-	-	-	-	1	-	-	-	-	-
Tellinacea indet.	-	-	-	-	-	-	-	-	-	-	1(e)
Indeterminate bivalve	-	-	-	-	-	-	-	-	-	-	+
Foraminifera	-	-	-	-	-	-	-	-	-	-	-
Barnacles	+	+	-	-	+++	+	+	-	+	+	+
Carcinus maenas L.	-	-	-	-	-	-	-	-	-	-	+(d)

Table 8.9 Marine invertebrates from Roman contexts at Site G. (Sheet 1)

(a) Some grey in colour (burnt), (b) Immature, (c) Paired valves just under 2 mm. in length, (d) Cheliped fragment: matches C. maenas and is certainly not Cancer pagurus. (e) Abraded. Counts refer to umbones of bivalves and apices of gastropods. Other fragments are indicated with a cross.

For descriptions of contexts, *see* the start of this appendix.

Sample No.	34	35	37	38	39	40	42	43	44	45
Context No.	L1507	F1555	F914	F914	F914	L1959	L1745	F1995	F2218	F79
Bag No.	2129	1621	1092	1110	1111	2158	2199	2206	2340	2359
Littorina littorea (L)	-	-	-	-	-	-	-	-	-	-
Littorina sp.	-	-	-	-	-	-	-	-	-	-
Hydrobia ulvae (Pennant)	-	-	-	-	-	-	-	-	-	-
Buccinum undatum L.	+	1	-	+	+	-	-	-	-	4
Indeterminate gastropod	-	-	-	-	-	-	-	-	1	-
Nucula sp.	-	-	-	-	-	-	-	-	-	-
Mytilus edulis L.	11	14	12	+	1	+	-	1	103(c)	43
Ostrea edulis L.	2(a)	3	+(b)	+	+	+	1	1	3(b)	3
cf. Pecten maximus (L)	-	-	-	-	-	-	-	-	-	-
Cerastoderma edule (L)	-	-	-	-	-	-	-	-	7(d)	1
Cerastoderma cf. lamarcki (Reeve)	-	-	-	-	-	-	-	-	2(d)	-
Cerastoderma sp.	-	1	+(b)	+	-	1	-	-	2(b)	-
Venerupis rhomboides (Pennant)	-	-	-	-	-	-	-	-	-	-
Venerupis decussata (L)	3	3	+	+	-	-	-	-	-	-
Macoma balthica (L)	-	-	-	-	-	-	-	-	-	1
Tellinacea indet.	-	-	-	-	-	-	-	-	-	-
Indeterminate bivalve	-	+	+(b)	-	-	-	-	-	+(b)	-
Foraminifera	-	-	-	-	-	-	-	-	-	-
Barnacles	+	+	+	+	-	-	+	+	+	+
Carcinus maenas L.	-	-	-	-	-	-	-	-	-	-

Table 8.9: Marine invertebrates from Roman contexts at Site G. (Sheet 2)

(a) Immature. (b) These bivalves are encrusted with bryozoans externally and internally. (c) External bryozoan encrustation only. (d) External bryozoan encrustation with barnacles; 3 show internal bryozoans.

For descriptions of contexts, *see* the start of this appendix.

Sample No.	51	53	54	55	57	58	-	
Context No.	F2362	L2520	F2594	F2363	F2695	F3064	L3239	L3297
Bag No.	2407	2563	2634	2636	3162	3156	3305	3323
Littorina littorea (L)	-	-	-	-	-	-	-	-
Littorina sp.	+	-	-	-	-	-	-	-
Hydrobia ulvae (Pennant)	-	-	-	-	-	-	-	-
Buccinum undatum L.	?1(b)	-	-	-	-	?1(b)	2	1(a)
Indeterminate gastropod	-	-	-	-	-	-	-	-
Nucula sp.	-	-	-	-	-	-	-	-
Mytilus edulis L.	3(a)	-	-	-	-	-	21	8(a)
Ostrea edulis L..	2	+(a)	2	+	18	3(a)	+	1(a)
cf. Pecten maximus (L)	-	-	-	-	-	-	-	-
Cerastoderma edule (L)	-	-	-	-	-	-	-	-
Cerastoderma cf. lamarcki (Reeve)	-	-	-	-	-	-	-	-
Cerastoderma sp.	-	-	-	-	-	1(a)	-	-
Venerupis rhomboides (Pennant)	-	-	-	-	-	-	-	-
Venerupis decussata (L)	-	-	-	-	-	-	+	+
Macoma balthica (L)	-	-	-	-	-	-	-	-
Tellinacea indet.	-	-	-	-	-	-	-	-
Indeterminate bivalve	-	-	-	-	-	-	-	-
Foraminifera	-	-	-	-	-	+	-	-
Barnacles	+	-	-	-	-	+	-	+
Carcinus maenas L..	-	-	-	-	-	-	-	-

Table 8.9: Marine invertebrates from Roman contexts at Site G. (Sheet 3)

(a) Grey in colour (burnt), (b) Columella.

For descriptions of contexts, *see* the start of this appendix.

Sample No.	11	12	16	17	18	20	21	24
Context No.	F185	F185	F293	F557	F661	F376	F478	F163
Bag No.	346	345	501	587	751	837	971	995
Littorina sp.	-	-	-	-	1	-	-	-
Buccinum undatum L.	1	+	-	-	-	-	2	-
Mytilus edulis L.	1	+	+	1	3	7	3	1
Ostrea edulis L.	7	+	2	5	6	12	8	10
Cerastoderma sp.	-	-	-	-	-	-	+	-
Barnacles	+	-	-	+	-	+	-	-

Table 8.10 Marine invertebrates from medieval pits at Site G.

Counts refer to umbones of bivalves and apices of gastropods.

Other fragments are indicated by a cross.

For descriptions of contexts, see the start of this appendix.

TABLE 8.11 is printed — see page 277

Table 8.12. Roman Deposits Containing Fish Bones.

Context	Eel	Her	Sal	Sme	Cod	Had	Whi	LGd	Sti	Gur	TnM	TkM	Dra	Mac	Pla	Flo	Fla	Uni	Total	
Site B F508	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1	1	
F580	-	-	-	-	-	-	-	-	-	-	-	-	-	1	-	-	-	24	25	
F265/L658	1	-	-	-	-	-	-	-	-	-	-	-	-	2	-	-	-	33	36	
L439	1	-	-	-	-	-	-	-	-	-	-	-	-	3	-	-	-	39	43	
Site C F138	5	2	-	-	-	-	-	-	-	-	1	5	-	2	-	-	-	195	210	
* 97 L8	-	-	-	-	3	-	-	2	-	-	-	-	-	-	-	-	-	1	6	
*162 L11	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1	-	1	
*242 L19	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1	-	-	-	1	
*270 L30	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1	-	-	-	1	
Site D F854	1	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	30	32	
F858	1	1	-	-	-	2	-	-	-	-	-	-	-	-	-	-	-	10	14	
535	2	2	1	3	-	-	-	-	15	-	-	-	-	-	2	1	10	147	183	
Site E F900	15	6	-	-	-	-	-	-	3	-	-	-	-	10	1	-	1	160	196	Fla = cflemon sole
Site G F14	-	1	-	1	-	-	-	-	-	-	-	-	-	-	-	-	7	81	90	
L235	1	-	-	-	-	-	5	-	-	-	-	-	1	1	1	-	5	117	131	
F626	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	7	7	
L783	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	4	4	
L894	2	-	-	-	-	-	3	4	-	1	-	-	-	-	4	1	2	234	251	
F360	-	-	-	-	-	-	-	-	-	-	2	-	-	-	1	-	2	52	57	
L1932	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1	-	-	29	30	
L1959	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1	7	8	
F1983	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1	1	
F1545	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	10	10	
L1507	12	7	-	-	-	-	-	-	-	-	-	-	-	-	1	-	1	155	176	
F1555	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1	-	1	21	23	
F914	-	-	-	-	-	-	1	-	-	-	-	-	-	-	-	-	-	32	33	
L1959	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	3	3	
L1745	1	-	-	-	-	-	1	-	-	-	-	-	-	-	-	-	-	7	9	
F2218	-	6	-	-	-	-	-	-	-	-	-	-	-	-	4	-	-	45	55	
F79	8	3	-	-	-	1	-	-	-	-	-	-	-	-	11	-	2	122	147	
F2362	1	3	-	-	-	-	-	-	1	-	-	-	-	-	2	-	-	31	38	
L2520	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	9	10	
L2594	1	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	7	9	
F2363	-	-	-	-	-	-	-	1	-	-	-	-	-	-	-	-	-	3	4	
F2695	1	-	-	-	-	1	-	1	-	-	-	-	-	-	4	-	4	29	40	Fla 1 is cf dab
F3064	-	1	-	-	-	-	-	-	-	-	-	-	-	-	2	-	-	16	19	
L3239	1	5	-	-	-	-	-	-	-	-	-	-	-	1	3	-	-	23	33	
L3297	3	1	-	-	-	1	-	-	-	-	-	-	-	-	-	3	2	71	81	
* G608 L518	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	28	28	
* G400 L279	-	-	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1	
*G2614F2612	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	3	3	
Site H L477	-	2	-	-	-	-	-	-	-	-	-	-	-	-	-	-	7	63	72	
L522	-	16	-	-	-	-	-	-	-	-	-	-	-	-	3	-	-	87	106	
* H444 F443	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1	-	-	1	
* H266 L78	-	-	-	-	1	-	-	-	-	-	-	-	-	-	-	-	-	-	1	
* H367 F335	-	-	-	-	2	-	-	-	-	-	-	-	-	-	-	-	-	-	2	
Total	58	58	2	4	6	5	20	8	19	1	3	5	1	20	43	6	46	1937	2232	

Table 8.12

For descriptions of contexts, *see* the start of this appendix.

* = handpicked, all the rest are sieved samples.
In Site G the contexts are ordered in sample number
Eel = Eel Her = Herring Sal = Salmonid
Sme = Smelt Cod = Cod Had = Haddock
Whi = Whiting LGd = Large Gadoid Sti = Stickleback
Gur = Gurnard TnM = Thin lipped grey mullet
TkM = Thick lipped grey mullet Dra = cf Dragonet
Mac = Mackerel Pla = Plaice Flo = Flounder
Fla = Flatfish. Uni = Unidentifiable

Culver Street; Colchester.

Table 8.13; Post-Roman Deposits Containing Fish Bones.

Context	Cod	LGd	H/T	Uni	Total
* A46	3	—	—	—	3
* G377	1	-	-	-	1
* G378	3	2	-	3	8
* G803	1	-	-	-	1
* G8l4	1	-	-	-	1
* G825	1	-	-	-	1
* G2981	2	-	-	1	3
* H101	1	-	-	2	3
* H178	-	-	1	2	3
* H221	2	1	—	_	3
Total	15	3	1	8	27

Table 8.13
All handpicked
Cod = Cod LGd = Large Gadoid H/T = Halibut/Turbot
Uni = Unidentifiable

For descriptions of contexts, *see* the start of this appendix.

Table 8.14. Medieval and later Deposits Containing Fish Bones.

Context	Ela	Ray	Eel	Her	Clu	Sme	Cod	Whi	LGd	Sti	Wra	Mac	Pla	P/F	Sol	Fla	Uni	Total
Site E #324 F166	-	-	-	-	-	-	-	-	1	-	-	-	-	-	-	-	-	1
Site A #58 F27	-	-	-	-	-	-	-	-	1	-	-	-	-	-	-	-	28	29
#63 F30	-	-	-	-	-	-	3	-	-	-	-	-	-	-	-	-	-	3
#142 F57	-	-	-	-	-	-	1	-	-	-	-	-	-	-	-	-	-	1
Site E #15 F14	-	-	-	-	-	-	3	-	-	-	-	-	-	-	-	-	-	3
#205 F164	-	-	-	-	-	-	7	-	1	-	-	-	-	-	-	-	-	8
#353 F133	-	-	-	-	-	-	1	-	-	-	-	-	-	-	-	-	-	1
Site G F185	1	-	1	4	-	-	-	-	-	-	-	-	1	-	-	-	38	45
F185	1	-	100	101	95	7	-	3	1	1	1	1	-	-	-	1	458	770
F293	-	-	-	1	-	-	-	1	-	-	-	-	-	1	-	-	28	31
F557	1	2	139	299	5	6	-	4	2	-	-	1	-	-	-	3	358	820
F661	1	-	2	6	1	-	-	2	-	-	-	-	-	-	-	-	86	98
F376	-	1	8	18	2	-	-	3	1	-	-	-	1	-	-	-	71	105
F478	-	-	20	30	15	-	-	1	-	-	-	-	3	1	-	-	103	173
F163	1	-	4	11	8	-	-	2	1	-	-	1	-	-	-	3	40	71
Site K #75 F74	-	-	-	-	-	-	71	-	6	-	-	-	-	-	-	-	-	77
Site M #85 F31	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1
#86 L28	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1	1
#123 F121	-	-	-	-	-	-	-	-	-	-	-	-	-	-	3	-	30	33
#198	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1	-	1
Total	5	3	274	470	126	13	86	16	15	1	1	3	5	2	3	8	1241	2542

Table ?.|4-
* = Handpicked, all other are sieved samples.
In Site G the contexts are ordered in sample number.
Ela = Elasmcbranch Ray = Ray Eel = Eel
Her = Herring Clu = Clupeid Sme = Smelt
Cod = Cod Whi = Whiting LGd = Large Gadoid
Sti = Stickleback Wra = cf Wrasse Mac = Mackerel
Pla = Plaice P/F = Plaice/Flounder
Sol = Sole Fla - Flat-fish Uni = Unidentifiable

For descriptions of contexts, *see* the start of this appendix.

Site		B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	C	C	C	E	E	E
Sample No.		1716	1792	1793	1794	1797	1798	1799	1800	1801	1802	1803	1804	1805	1806	1807	1808	1867	1477	1936	2266	485	486	487	M25	1340	1357
Layer/feature no.		L435	L435	L435	L435	L438	L438	L438	L438	L439	L439	L439	L439	L440	L440	L440	L440	L459	L421	L508	F282	F138	F138	F139	F900	F900	F900
Description		Period 2 floor levels																	Gulley	Drain	Cess Pit		Cess Pit			Cess Pit	
Cereals																																	
Cereal indet	ca	18	1	2	-	-	-	3	-	-	-	-	-	-	frags	-	-	-	frags	-	frag	-	4+fr	-	-	frag	-
Triticum sp	ca	941	-	-	-	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	6	-	-	-	-
Triticum sp	ri	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	frag	-	-	-	6	-	-	-	1
Triticum sp	gb	2	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	3	23	1	-	-	-
Triticum spelta L	gb	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1	-	-	-	-
Triticum spelta L	spf	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1	-	-	-	-
Triticum cf dicoccum Schübl	gb	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	2	-	-	-	-
Hordeum sp	ca	2	-	-	-	-	-	1	-	-	-	-	1	-	-	-	-	-	-	-	-	-	-	-	-	-	1
Hordeum vulgare L	ca	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1	-	-	-	2	-	-	-	-
Avena sp	ca	1	-	-	-	-	-	1	-	-	-	-	1	-	-	-	-	-	-	-	-	-	1	-	-	-	-
Cereal/grass	cn	-	-	-	-	-	-	-	-	-	-	-	-	-	1	-	-	-	-	-	-	-	-	-	-	-	-
Pulses																											
cf Pisum sativum L		-	-	-	-	-	-	-	-	-	-	-	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Leguminosae indet		-	frag	-	1	-	-	-	-	-	2	1	-	-	-	2	-	-	-	-	-	-	-	10*	-	-	-
Opium poppy Papaver somniferum L		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1	-	-	-	-	-	-
Prunus spinosa L		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1+frags*	-	45+frags*	-
Prunus sp		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Rubus fruticosus agg		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	10*	2*
Rubus cf idaeus L		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1*	-
Vitis vinifera L		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	3*	-	2	5*	49*	12*
Ficus carica L		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	frags*	frags*	frags*	-
Sambucus nigra L		1	-	-	-	-	-	-	-	4*	-	1*	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Nut Corylus avellana L	frags	-	+	+	-	-	-	+	+	-	-	-	+	-	-	-	-	+	-	-	-	-	-	-	-	-	-
Ranunculus acris/repens-type		-	-	-	-	-	-	-	-	-	-	-	-	-	-	2	-	-	-	-	-	-	-	-	-	-	-
Agrostemma githago L		2	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Stellaria media-type		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Spergula arvensis L		-	-	-	-	-	-	-	-	-	-	-	-	-	-	11	-	-	-	-	-	-	-	-	-	-	-
Caryophyllaceae indet		-	-	-	-	-	-	-	-	-	-	-	-	-	-	6	-	-	-	-	-	-	-	-	-	-	-
Montia fontana ssp chondrosperma		-	-	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Chenopodium sp		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1*	-	-	-
Chenopodium album L		-	-	-	-	-	-	-	-	-	1	-	-	8	1	27	-	-	-	-	-	-	-	-	-	-	-
Chenopodiaceae indet		-	-	2	-	-	-	-	-	-	-	-	-	-	1	7	-	-	-	-	-	-	-	-	-	-	-
Polygonum aviculare agg		-	-	-	-	-	-	-	-	-	-	-	-	-	-	1	-	-	-	-	-	-	-	-	-	-	-
Polygonum persicaria/lapathifolium		-	-	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Polygonum lapathifolium L		-	-	-	-	-	-	-	-	-	-	-	-	1	-	2	-	-	-	-	-	-	-	-	-	-	-
Polygonum cf convolvulus L		-	-	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Rumex sp		1	-	-	-	-	-	-	-	-	-	-	-	9	3	83	-	-	-	-	-	-	1+1*	-	-	-	-
Polygonaceae indet		-	2	6	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1*	3*	-	-	-	-	-	-	-
Quercus sp	ch	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Quercus sp	bu	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Compositae indet		-	-	-	-	-	-	-	-	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Eleocharis sp		-	-	8	-	-	-	1	-	-	-	-	-	26	14	55	1	-	-	-	-	-	-	-	-	-	-
Carex spp		-	-	1	-	-	-	-	-	-	-	-	-	-	-	17	-	-	-	-	-	-	-	-	-	-	-
Bromus mollis/secalinus		48	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1	-	-	-	2	-	-	-	-
Gramineae indet		-	-	12	-	-	-	-	-	1	-	-	1	-	-	2	-	-	1	-	1*	-	-	-	-	-	-
Indeterminate seeds		4	5	13	-	-	4	-	1	4	-	2	9	5	4	113	8	-	-	5*	-	1*	1*	17*	6*	13*	6*
Indeterminate bud		-	-	-	-	-	-	-	-	-	-	-	-	-	-	1	-	-	-	-	-	-	-	-	-	-	-
Sample wt (kg)		1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	-	1	10	10	10	6.5	9	10	20	3.5

Table 15: Plant macro fossils from Culver Street (Sites B, C and E)

Most specimens are carbonised; mineralised seeds etc. Indicated by asterisks.

Abbreviations

bu - bud; ca - caryopsis; ch - charcoal; cn - culm node; frags - fragments; gb - glume bases; ri - rachis internodes; spf - spikelet forks. All other specimens are fruits or seeds.

For descriptions of contexts, *see* the start of this appendix

Sample No.	25	26	27	36	41
Context No.	L349	F854	F858	F352	F352
Bag No.	418	856	860	1391	1697
Cereal indet.	99	3	5	4	-
Triticum sp.	1cf.	1	3	3	1
Hordeum sp.	111	3	5	3	2
Avena sp.	48	-	-	1	1cf.
Secale cereale L.	76	-	-	1	-
Secale cereale L. (rn)	2	-	-	-	-
Agrostemma githago L.	2+3cf.	-	-	-	-
Spergula arvensis L.	1	-	-	-	-
Chenopodium album L.	1	-	-	-	-
Vicia/Lathyrus sp.	1	-	-	1+1co.	-
Rumex sp.	-	-	1	-	-
Rumex acetosella agg.	1	-	-	-	-
Centaurea sp.	1	-	-	-	-
Anthemis cotula L.	1cf.	-	-	-	-
Eleocharis sp.	1	-	-	-	-
Bromus mollis/secalinus	2	-	-	-	1
Gramineae indet.	5	-	2	-	1
Indeterminate seeds etc.	4	2	-	-	2
Morus nigra L. (min)	-	-	-	1	-
Vitis vinifera L. (min)	1	-	-	-	-
Indeterminate (min. seeds)	4	-	-	-	-
Sample size (no. of buckets, approx. 12 l. capacity)	4	3	2	2	4

Table 16: Site D, carbonised and mineralised plant remains

Taxa are represented by fruits or seeds except where indicated.
Abbreviations: co - cotyledon; min - mineralised; rn - rachis node.

For descriptions of contexts, see the start of this appendix.

Sample No.	35	52
Context No.	F1555	F2326
Bag No.	1621	2338
Cereal indet.	43	-
Triticum sp.	1040	566
Triticum sp. (gb)	1	2
Triticum sp. (spb)	1	-
Triticum spelta L. (spf)	-	1
Hordeum sp.	4	3
Avena sp.	cf.2	-
Secale cereale L.	5	-
Ranunculus sp.	1	-
Agrostemma githago L.	4	4
Chenopodiaceae indet.	1	-
Vicia/Lathyrus sp. (co)	2	-
Corylus avellana L. (fr)	+	-
Eleocharis sp.	6	-
Carex sp.	3	-
Bromus mollis/secalinus	7	38
Sieglingia decumbens (L) Bernh.	1cf.	-
Gramineae indet.	2	3
Indeterminate seeds etc.	9	-
Sample size (number of buckets, approx. 12 l. capacity)	4	0.5 approx.
% flot sorted	100	25

Table 17: Site G, Prime grain assemblages. (Roman)

Taxa are represented by fruits or seeds except where indicated.
Abbreviations: co - cotyledon; fr - fragment; gb - glume base; spb - spikelet base; spf - spikelet fork.

For descriptions of contexts, see the start of this appendix

Sample No.	15	42	53	54	58
Context No.	F626	L1745	L2520	F2594	F3064
Bag No.	683	2199	2563	2634	3156
Hordeum vulgare L. emend. Lam.	300	1	174	1	28
Triticum sp.	2	5	2	-	3
Triticum sp. (gb)	1	2	3+3fr.	-	-
Triticum spelta L. (gb)	-	-	4	-	-
Avena sp.	4	1+cf2	1+cf2	-	-
Avena sativa L. (fb)	-	1	-	-	-
cf. *Secale cereale* L.	-	-	1	-	-
Cereal indet.	174	6	53	-	19
Olea europaea	-	1fr.	-	-	-
Caltha palustris L.	-	-	-	-	2
Ranunculus acris/repens/bulbosus	51	4	1	-	9+cf8
Ranunculus parviflorus L.	-	-	-	-	4cf.
Ranunculus sp.	1	-	-	-	-
Raphanus raphanistrum L.	4	-	-	-	-
Cruciferae indet.	-	-	-	1	-
Agrostemma githago L.	-	-	1	-	-
Dianthus sp.	5	-	-	-	-
Stellaria media-type	-	-	-	-	4
Stellaria palustris/graminea	1	11	8	7	6
Spergula arvensis L.	1cf.	-	-	-	-
Caryophyllaceae indet.	-	-	1	-	4
Montia fontana L. subsp. *chondrosperma*	-	-	-	-	1
Chenopodium album L.	-	-	12	-	-
Chenopodiaceae indet.	6	1	-	-	1
Malva sp.	-	1	-	-	-
Medicago/Lotus/Trifolium spp. (a)	65	39	20	2	89
Vicia/Lathyrus sp. (s)	4	8	10	-	9
Vicia/Lathyrus sp. (co)	3	6	14	-	4
Vicia sp. (s)	1	-	-	-	-
Lathyrus nissolia L. (s)	7	2	2	-	-
Lathyrus nissolia L. (co)	-	3	2	-	-
Leguminosae (p.fr)	+	-	-	-	-
Potentilla sp.	4	1	-	-	-
Umbelliferae indet.	1	-	-	-	-
Polygonum aviculare agg.	2	-	-	-	-
Polygonum persicaria L.	-	-	cf2	-	-
Polygonum persicaria/lapathifolium	2	1	-	-	-
Polygonum convolvulus L.	4	-	2+cf5	-	-
Rumex acetosella agg.	5	1	3	4	38
Rumex spp.	152	492	26	1	43
Primulaceae indet.	-	-	-	-	1
Rhinanthus minor s.l.	37	1	41	1	4
Euphrasia/Odontites sp.	12	-	-	-	2
Prunella vulgaris L.	2	2	2	1	1
Plantago lanceolata L.	47	3	8	1	16
Galium aparine L.	-	2	-	1	-
Anthemis cotula L.	1	-	-	-	-
Chrysanthemum leucanthemum L.	47	-	-	-	-
Cirsium sp.	1	-	-	-	-
Compositae indet.	-	-	1	-	-
Juncus sp. (b)	+	-	-	-	-
Eleocharis sp.	10	18	5	-	7
Carex spp.	128	4	6+cf6	1cf.	5
Sieglingia decumbens (L) Bernh.	70	3	21	3	3
Bromus mollis/secalinus	22	12	4	-	14
Gramineae spec. div. (c)	638	83	572	83	224
Gramineae (cfr)	+	+	+	-	+
Indeterminate (seeds etc)(d)	320	138	177	19	158
" stem fragments	+	+	+	-	+
" buds	1	-	-	-	-
" capsules	-	1	-	1	-
Charred insects	-	+	-	-	-
Sample size (no. of buckets, approx. 12 litre capacity)	4	1	1	2	2
% flot sorted	25	100	12.5	100	100

Table 18: Site C: Fodder crop assemblages. (Roman)

Taxa are represented by fruits or seeds except where indicated.

Abbreviations: c - culm; CO - cotyledon; ft - floret bast; fr - fragment; gb - glume base; p - pod; s - seed.

Notes (a) A range of small leguminous seeds similar to seeds of *Medicago*, *Lotus* and *Trifolium* spp. is present, but identification has not been attempted In the absence of pod fragments since the seeds have probably been more or less deformed during carbonisation.

(b) Aggregates of seeds, representing the retains of seed-filled capsules. The capsule themselves have been burnt away.

(c) A wide range of grasses is represented, from small *Poa*-type caryopses to large caryopses of *Bromus*. Only the distinctive caryopses of *Avena*. *Bromus* and *Sieglingia* have been identified, though others art potentially identifiable.

(d) These are merely minimum figures for unidentified seeds: there were in addition many seed fragments which were not readily quantifiable.

For descriptions of contexts, see the start of this appendix.

Sample No.	13	14	19	22	23	28	29	30	31	32	33	34	37	38	39	40	43	44	45	51	55	57
Context No.	L235	F14	L783	L894	F360	L1932	L1959	F1983	F1545	F1545	L1507	L1507	F914	F914	F914	L1959	F1995	F2218	F79	F2362	F2363	F2695
Bag No.	350	423	796	956	426	2021	2022	2042	2048	2103	2128	2129	1092	1110	1111	2158	2206	2340	2359	2407	2636	3162
Triticum sp.	5	-	-	2	-	2	1	2	-	1	2	-	-	-	-	1	1	-	-	2	-	5
Triticum sp. (gb)	-	1	-	-	-	-	-	-	1	-	-	-	-	-	-	-	-	-	-	-	-	-
Triticum spelta L. (gb)	-	-	-	-	-	2	-	-	1	-	-	-	-	-	-	2+1cf.	-	-	-	-	-	-
...um cf. spelta L. (ri)	-	-	-	-	-	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
...m vulgare L. emend Lam.	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	4	-	-
...um sp.	-	-	-	-	-	1	-	-	1	1	2	-	-	-	-	-	1	-	-	-	-	-
...ea sp.	-	-	-	1cf.	-	-	-	-	-	-	-	-	-	-	-	1	-	-	-	2	-	-
Cereal indet.	4	1	-	1	1	3	1	3	1	+	+	-	1	+	-	+	16	-	+	5	-	2
Ranunculus acris/repens/bulbosus	1	-	-	-	-	4+2cf.	-	1	-	-	-	-	-	-	-	1	7	-	-	-	-	-
Ranunculus sp.	-	-	-	-	-	-	-	-	-	1	-	-	-	-	-	-	2	-	-	-	-	-
Stellaria graminea/palustris	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1	-	-	-	-	-
Chenopodium album L.	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1+1cf.	-	-	-	-	-	-
Chenopodium sp.	-	-	-	-	-	-	1	-	-	-	-	-	-	-	-	-	1	-	-	-	-	-
Medicago lupulina-type	1	-	-	-	-	2	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Medicago/Trifolium-type	-	-	-	-	-	6	1	-	-	-	-	-	-	-	-	3	-	-	-	1	-	-
Vicia/Lathyrus sp.	1+1co.	-	-	-	-	1+2co.	-	1	-	-	-	-	-	1	-	1co.	-	-	-	-	-	-
Lathyrus nissolia L.	-	-	-	-	-	-	-	-	-	-	-	-	1	-	-	-	-	-	-	-	-	-
Pisum-type	1+1co.	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Lens esculenta	-	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Leguminosae indet.	-	-	-	1	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	frags.
Prunus sp. (fragments)	+	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Umbelliferae indet.	-	5	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	13	-	-
Polygonum aviculare agg.	-	-	-	-	1	-	-	-	-	-	-	-	-	-	-	-	1	-	-	-	-	-
Polygonum cf. persicaria L.	-	-	-	-	-	-	-	-	-	-	1	-	-	-	-	-	-	-	-	-	-	-
Rumex sp.	2	-	-	-	-	6	-	-	-	1	1	-	1	-	-	-	6	-	-	11	-	-
Rumex acetosella agg.	-	-	-	-	-	2+cf1	1	-	-	-	-	-	-	-	-	1cf.	1	-	-	-	-	-
Polygonaceae indet.	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1	-	-	-	-	-	-
Juglans regia L. (frag)	-	-	-	-	-	-	-	-	-	-	-	-	-	+	-	-	-	-	-	-	-	-
Corylus avellana L. (frags)	+	-	-	-	-	-	-	-	-	+	-	-	-	-	-	-	+	-	-	+	+	-
Sambucus nigra L.	-	-	-	-	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Plantago lanceolata L.	-	-	-	-	-	8	-	-	-	-	-	-	-	-	-	1	-	-	1	1	-	-
...m aparine L.	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1	-	-
...itae indet.	-	-	-	-	-	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
...nthemum leucanthemum L.	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1	-
...haris sp.	-	-	-	-	-	1	1	-	6(frags)	1	1	-	-	-	-	3	7+fr.	1	1	-	-	-
Carex sp.	-	-	-	-	-	1	2	-	3	-	-	-	-	-	-	4	6	-	-	-	-	-
Bromus mollis/secalinus	-	-	-	-	-	-	-	-	-	-	2	-	-	-	-	-	-	-	-	6	-	-
Sieglingia decumbens (L) Bernh.	1cf	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1	-	-
Gramineae indet.	4	-	-	-	-	11	-	-	3	1	-	-	-	-	-	10	3	-	-	4	1	-
Gramineae indet. (c.fr.)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	+	-	-	-	+	-	-
Indeterminate seeds etc.	2	3	-	1	2	18	1	1	13	7	3	-	-	-	-	7	18	-	6	3	3	2
Indeterminate buds	-	-	-	-	-	-	1	2	-	-	1	-	-	1	-	-	-	-	-	-	-	-
Sample size (no. of buckets, approx. 12 litres capacity)	4	4	0.5	4	3	3	0.5	1	1	2	4	1	1	1	1	1	0.25	0.3	4	2	2	2
% flot sorted	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	50	50

Table 19: Site G, Plant remains from other Roman contexts

Taxa are represented by fruits or seeds except where indicated.
Abbreviations: c.fr. - culm fragments; co - cotyledon; fr/frag - fragment;
gb - glume base; ri - rachis internode.

For descriptions of contexts, *see* the start of this appendix

Site No.	J	K	K	K
Context No.	L222	F12	F12	F12
Bag No.	269	46 (Interior)	47 (Northflue)	48 (Stokepit)
Cereal indet.	-	2	6	56
Cereal indet. (m)	-	-	-	1+fr.
Triticum spp.	752(g)	-	-	-
Triticum aestivum/compactum	-	3	-	26
Triticum sp. (gb)	3	-	-	-
Triticum sp. (spb)	1	-	-	-
Triticum spelta L. (gb)	2	-	-	-
Triticum cf. dicoccum (gb)	2	-	-	-
Hordeum sp.	-	-	-	14
Hordeum vulgare L. emend Lam.	75(g)	15	10	-
Secale cereale L.	-	2	1	16+1cf.
Avena sp.	-	-	1cf.	1
Vicia faba L. var. minor	-	-	-	1
Agrostemma githago L.	1	-	-	-
Chenopodiaceae indet.	-	1	-	-
Polygonum convolvulus L.	-	-	1	-
Polygonum sp.	-	-	-	1
Sambucus nigra L. (m)	-	1	-	-
Carex sp.	-	1	-	-
Bromus sp.	-	1fr.	-	4
Indeterminate (seeds etc)	-	-	-	3
Sample weight (kg)	1.6	5.5	3.4	6

Table 20: Sites J and K, carbonised and mineralised plant remains

These were all small samples, collected in haste towards the close of the excavation. Taxa are represented by fruits or seeds except where indicated. Abbreviations: g - most grains germinated; gb - glume base; m - mineralised; spb - 'spikelet base'.

For descriptions of contexts, *see* the start of this appendix.

Sample No.	11	12	16	17	18	20	21	24
Context No.	F185	F185	F293	F557	F661	F376	F478	F163
Bag No.	346	345	501	587	751	837	971	995
Cereal (frags)	-	+	+	+	+	+	+	+
Cereal indet.	2	3	1	9	3	2	2	3
Cereal indet (m)	-	1	-	-	-	-	-	-
Triticum sp. (ca)	1	-	4	13	5	1	2	-
Secale cereale L. (ca)	-	-	2cf.	7	2	1	-	1
Secale cereale L. (rn)	-	-	-	-	1	-	-	-
Hordeum vulgare L. emend Lam.	-	-	-	16	-	-	-	-
Hordeum sp.	-	-	-	-	2	2	-	1
Avena sp.	-	-	-	1	2+cf4	2	1cf.	-
Cereal indet. (cn)	-	-	1	-	1	-	-	-
Pteridium-type (pi:m)	-	+	-	+	-	-	-	-
Papaver sp. (m)	-	1	-	-	-	-	-	-
Stellaria sp.	-	-	-	-	1	-	-	-
Agrostemma githago L.	-	-	-	1+1cf.	2	-	-	-
Agrostemma githago L. (fr:m)	-	+	-	+	-	-	-	-
Chenopodium album L.	-	-	-	-	3	-	-	1
Chenopodium sp. (m)	-	-	-	1	-	-	-	-
Chenopodiaceae indet.	-	-	2	1	-	-	-	2(m)
Malva sp. (m)	-	2	-	-	-	-	-	-
Trifolium-type	-	-	1	-	-	-	-	-
Medicago lupulina-type	-	-	-	-	-	-	1	-
Vicia/Lathyrus spp. (s)	-	-	-	6	9	1	2	-
Vicia/Lathyrus spp. (co)	3	-	-	1	-	-	-	-
Vicia faba L. (h:m)	-	-	-	1	-	-	-	-
Pisum-type (m)	-	-	-	1s(c)+ 2s+1co.	-	-	-	-
Rubus fruticosus agg. (m)	-	4	-	-	-	-	5+fr.	1
Prunus sp. (m)	-	147	-	283	-	-	21+fr.	fr.
Malus sylvestris/domestica (m)	-	1	-	4	1fr.	-	-	-
cf. Conium-type (m)	-	1	-	-	-	-	-	-
Polygonum aviculare agg.	-	-	1cf.	-	-	-	-	1
Polygonum lapathifolium L.	-	-	-	1	-	-	-	-
Rumex sp.	-	-	2	-	1	-	1	1
Rumex sp. (m)	-	-	-	3cf.	-	-	-	-
Polygonaceae indet.	-	-	-	-	1	-	-	-
Urtica dioica L. (m)	-	-	-	1	-	-	3	-
Corylus avellana L.	-	-	-	-	-	+	-	-
Atropa bella-donna L. (m)	-	-	-	-	-	-	-	2
Solanum nigrum L.	-	-	-	1	-	-	-	-
Prunella vulgaris L.	-	-	1	-	-	-	-	-
Labiatae indet. (m)	-	1	-	-	-	-	3	16
Plantago lanceolata L.	-	1	-	1	1	-	-	-
Galium aparine L.	1	-	-	1	2	-	-	-
Sambucus nigra L. (m)	-	+	1(c)	+	-	-	+	+
Anthemis cotula L.	-	1	-	-	12	-	-	-
Lapsana communis L. (m)	-	-	-	1	-	-	-	-
Centaurea sp.	-	-	-	-	3	-	1	-
Compositae indet.	-	2(m)	-	-	-	1(c)	-	1(c)
Carex sp. (m)	-	-	-	1	-	1	-	-
Anisantha sterilis (L) Nevski	-	-	-	-	1	-	-	-
Bromus sp.	-	-	-	5	5+cf1	6	3	2
Gramineae indet.	1	-	14	1	1	-	-	-
Gramineae indet. (m)	-	1	-	-	-	-	-	-
Indeterminate seeds etc.	-	-	7	7	4	-	6	3
Indeterminate seeds etc. (m)	-	27	-	74	-	6	8	1
Stem fragments (m)	-	+		+	-	-	+	-
Samples size (no. of buckets, approx. 12 litre capacity)	4	4	?	4	4	4	4	4

Table 21: Site G. Mineralised and carbonised plant remains from medieval pits

Taxa are represented by fruits or seeds except where indicated.

Abbreviations: c - carbonised; ca - caryopsis; co - cotyledon; cn - culm node; fr - fragments; gb - glume base; h - hilum; m - mineralised; pi - pinnule; s - seed.

TABLE 8.22 is printed - see page 285

Table 8.23
Charcoal samples from Culver Street

by Maisie Taylor

-		EF1321	E1427	*Quercus* sp. (oak), twigs	Prehistoric pit
-		EF1362	E1730	*Quercus* sp. (oak)	?Fuel from early Period 1 ?oven
East-west street		EL250	E1511	*Quercus* sp. (oak) — some round wood	Charcoal in make-up for street between Buildings 83 and 84
Building 77, Room 1		BF537	B2062	*Quercus* sp. (oak)	Period 1/2 ground-plate
"	"	BF542	B1955	*Quercus* sp. (oak)	Period 2 floor joist
"	"	BF584	B2061	*Quercus* sp. (oak)	Period 1/2 ground-plate
"	Room 1/5	BF539	B1961	*Quercus* sp. (oak)	Period 1/2 ground-plate
"	Room 2	BF665	B2396	Very fine particles; few large enough to identify; all identifiable pieces *Quercus* sp. (oak)	Period 2 ground-plate
"	Room 2	BF721	B2395	*Quercus* sp. (oak)	Plank of Period 2 wooden floor
"	Room 2/3	BF515	B2032	*Quercus* sp. (oak)	Period 1/2 ground-plate
"	Room 6/7	BF528	B2051	Planks? of *Quercus* sp. (oak)	Period 1/2 ground-plate
"	Room 8	BF600	B2110	*Quercus* sp. (oak)	Period 2 ground-plate
"		BF530	B2020	*Quercus* sp. (oak)	Period 1/2 ground-plate
"		BF533/BF487		*Quercus* sp. (oak)	Period 1/2 ground-plate on mortar plinth
"		BF534	B2083	*Quercus* sp. (oak)	Period 1/2 ground-plate
"		BF534	B2052	*Quercus* sp. (oak)	Period 1/2 ground-plate
"		BF548	B2017	Very compressed; probably oak — *Quercus* sp. (oak)	Period 1/2 plate on mortar plinth
"		BF679	B2268	*Quercus* sp. (oak)	Period 1/2 ground-plate
"		BF781	B2424	Very compressed; *Quercus* sp. (oak)	Period 1/2 plate on mortar plinth
"		BF781	B2461	*Quercus* sp. (oak)	Period 1/2 plate on mortar plinth
"		BF791	B2423	*Quercus* sp. (oak)	Period 2 post
Building 77?		BL343	B1593	Not wood; apparently not vegetable	Destruction debris (early Period 3)
Building 78, Room 1		BF509	B1931	*Quercus* sp. (oak)	Period 2 ground-plate
"	Room 2/3	BF505	B1930	*Quercus* sp. (oak)	Period 1/2 ground-plate
"	Room 6	BF843	B2443	*Quercus* sp. (oak) probably	Period 2 stud or door jamb?
"	Room 6	BF844	B2442	*Quercus* sp. (oak)	Period 2 ground-plate
"	P1	CF132	C406	*Quercus* sp. (oak)	Period 1/2 ground-plate
"		CF191	C459	*Quercus* sp. (oak)	?Period 1 stake
"		CL75	C432	*Quercus* sp. (oak), round wood	Period 1/2 make-up
Building 79, Room 2		CF138	C411	?*Corylus avellana* (hazel)	Period 1/2 latrine pit
"	Room 2/3	CL60	C404	Some round wood; all identifiable pieces — *Quercus* sp. (oak)	Period 2 daub floor
"	Room 2/3	CL63	C420	Some round wood; some split wood; all *Quercus* sp. (oak)	Period 1/2 occupation
"		CL51	C344	*Quercus* sp. (oak)	Destruction debris (Period 3)
Building 81		GF2938	G3048	Quercus sp. (oak)	Remains of wattle in 'daub' wall, burnt in 60/1 (Periods 1 & 2; *c* 44-60/1)
"		GF2931	G3049	Quercus sp. (oak)	Remains of timber burnt in 60/1: probably a ground-plate of a 'daub' wall of Periods 1 & 2 (*c* 44-60/1)
"		GF2664	G2936	Quercus sp. (oak)	Remains of burnt timber ground-plate (Periods 1 & 2; *c 44-60/1)*
Building 83, Room 4		EF1124	E1264	Very mineralised and distorted; some bark; some *Quercus* sp. (oak); some has very strange structure, could be many pieces, some half rotted and then mineralised together	Period 1 ?joist (part of a wooden floor)
Building 83, Room 7		EF900	E1325	*Quercus* sp. (oak)	In Period 1 latrine pit: ?collapsed timber in base of fill
"	"	EF1253	E1434	*Quercus* sp. (oak)	Period 1 ?post
"	"	EF900	E1335	Some very young twigs — no identifiable pieces; some twigs with bark — ?*Corylus avellana*?; two long splinters *Quercus* sp. (oak)	In fill of pit: ?collapsed side
"		EF900	E1432	Very decayed; probably *Quercus* sp. (oak)	Part of north side of timber lining

"	EF900	E1463	*?Corylus avellana*? (hazel)	Part of south side of timber lining
"	EF1083	E1258	Probably *Quercus* sp. (oak)	Period 1 ?drain
"	EF1083	E1259	Very compressed *Quercus* sp. (oak)	Period 1 ?drain
Building 84, Room 2	EF1255	E1437	*Quercus* sp. (oak) 1 piece round wood, 1 piece radially split	?Fuel in Period 1 hearth
Building 84, Room 4	EF1214	E1519	*Quercus* sp. (oak)	?Fuel in Period 1 hearth
Building 84, Room 4	EF1363	E1635	Unidentifiable	?Fuel in Period 1 hearth
Building 84	EF1406	E1684	Unidentifiable	Period 1 stake
Building 84	EF1407	E1685	Unidentifiable	Period 1 stake
Building 84	EF1408	E1686	Unidentifiable	Period 1 stake
Building 84	EF1409	E1688	Unidentifiable	Period 1 stake
Building 84	EF1410	E1687	Unidentifiable	Period 1 stake
Buildings 86/7	EF690	E900	Unidentifiable	Period 2 ground-plate
Building 90	EF1288	E1506	*Quercus* sp. (oak) some round wood	Period 2 dump of charcoal
Building 90	EF1288	E1553	*Quercus* sp. (oak) some round wood	Period 2 dump of charcoal
Building 90	EF1289	E1541	Round wood, *Quercus* sp. (oak)	Period 2 dump of charcoal
"	EF883	E981	*Quercus* sp. (oak)	Period 2 stake
"	BF435	B1836	*Quercus* sp. (oak)	Period 3 stakes
Building 116	GF98	G118	Quercus sp. (oak)	Part of burnt wood from Period 4 floor (*c* 150-*c* 225)
Building 117, Room 2	GF1545	G2048	Quercus sp.	?Fuel from metal-working hearth/furnace (Sample 310
Building 118	GF3384	G3413	Betula sp. bark (birch) (bark roll)	Period 4 burnt stake (*c* 150-*c* 225)
Building 119	GL1959	G2158	Quercus sp. (oak) - 80% Betula/sp. (birch) - 10% Too small for identification - 10%	?Fuel from oven(s) (Sample 40: 2 of 2)
" "	GL1932	G2021	Quercus sp. (oak) - 68% Quercus sp. (immature) - 16% Unidentifiable - 8% Nut casings - 8%	?Fuel from oven(s) (Sample 28)
" "	GF1995	G2206	Quercus sp. (oak) - 40% Quercus sp. (immature) - 12% Betula sp. (birch) - 4% Corylus avellana/Alnus glutinosa Unidentifiable - 24% Nut casings - 4%	?Fuel from oven(s) (Sample 43)
Building 120, Room 13	HL497	H517	Quercus sp. (oak) - 80% Quercus sp. (immature) - 4% Corylus avellana/Alnus glutinosa (hazel/alder) - 12% Unidentifiable - 4%	?Fuel from hypocaust (Period 5; *c* 225-*c* ?350/400+)
Building 123, Room 10	DF854	D856	Quercus sp. (oak) - 60% Possible Quercus sp. - 10% Betula sp. (birch) - 10% Corylus avellana/Alnus glutinosa (hazel/alder) (very immature) - 6% Bark (very thin) - 6% Unidentifiable - 2%	Oven DF854 in ?kitchen (Period 4: *c* 150/200-*c* 275/325) (Sample 26: 2 of 2)
" " " "	DF858	D860	Quercus sp. (oak) - 84% Betula sp. (birch) - 12%	Oven DF858 in ?kitchen (Period 4: *c* 150/200-*c* 275/325) (Sample 27: 1 of 2)
" " " " "	"	"	Salix sp./Populus sp. (willow/poplar) - 4%	Sample 27: 2 of 2)
" " " " "	"	D1071	Quercus sp.	
Late Roman corn drier	KF12	K38	Quercus sp. (oak)	?Fuel: south flue (Period 3c: 4th century or later)
" " " " "	"	K46	Quercus sp. (oak) Corylus avellana/Alnus glutinosa hazel/alder — few small fragments	?Fuel: stoke-pit
" " " " "	"	K48	Quercus sp. Salix sp.: 50:50	?Fuel: interior
" " " " "	"	K47	Quercus sp. ?Fuel: north flue Salix sp. — few small fragments	

Appendix 10 (Chapter 9): Gilberd School environmental tables

by Peter Murphy

Sample no.	1	2	3	4	5	6	7	8	9	10	46	47	48	49	50	56	59	60	61	62
Context no.	AL47	AF27	AL47	AL47	AL47	AL47	AL47	AF254	AF232	AL123	BL35	BL35	BL35	BL39	BL39	BL69	BL69	BL89	BL89	BF25
Bag no.	1649	1476	1599	1601	1600	1648	1711	2245	2244	1762	312	314	315	316A	316B	559	599	600	607	608
Triticum sp	-	4	-	-	1	1	-	-	-	-	-	-	-	-	6	-	-	-	-	-
Triticum sp (spb)	-	-	-	-	-	-	-	-	-	-	1	-	-	-	-	-	-	-	-	-
Triticum spelta L (spf)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1	-	-	-	-	-
Hordeum vulgare L emend Lam	-	-	-	-	-	-	-	7	-	-	-	-	-	-	-	-	-	-	-	-
Hordeum sp	1	-	-	-	-	-	-	-	-	-	-	-	-	-	2	-	-	10	2	-
Avena sp	1	-	-	-	-	-	-	-	-	-	-	cf1	-	-	-	1	-	-	-	-
Cereal indet	-	1	-	-	-	1	1	3	-	-	2	1	-	-	-	-	-	2	3	4
Cereal indet (frags)	-	-	+	+	+	-	-	-	-	-	+	+	-	-	+	-	+	+	+	+
Vicia faba L var minor	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1
Ranunculus acris/repens/bulbosus	-	-	-	-	-	-	-	-	-	-	-	-	-	13	-	-	1	-	-	-
Ranunculus cf flammula L	1	-	-	-	-	-	-	-	-	-	-	-	-	1	-	-	-	-	-	-
Ranunculus sp	-	-	-	-	-	-	-	-	-	-	-	-	-	2	-	-	-	-	-	-
Stellaria palustris/graminea	-	-	-	-	-	-	-	-	-	-	-	-	-	6	-	-	-	-	-	-
Montia fontana L subsp chondrosperma	-	-	-	-	-	-	-	-	-	-	-	-	-	6	-	-	-	-	-	-
Atriplex patula/hastata	-	-	-	-	-	-	-	-	-	-	1	-	-	-	-	-	-	-	-	-
Chenopodium album L	-	-	-	-	-	-	-	-	-	-	-	1	-	4	-	-	-	-	-	-
Chenopodiaceae indet	-	-	-	-	-	-	-	-	-	-	-	-	1	1	1	-	-	-	-	-
Malva sp	-	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Medicago lupulina-type	-	-	-	-	-	-	-	-	-	-	1	-	-	-	-	-	-	-	-	-
Medicago/Trifolium-type	-	-	-	-	-	-	-	-	-	-	-	3	-	3	-	-	1	13	-	1
Trifolium sp	-	-	-	-	-	-	-	-	-	-	-	-	-	2	-	-	-	-	-	-
Vicia/Lathyrus sp	1co	-	-	-	-	-	-	-	-	-	2co	-	1	-	1co	-	-	-	-	1
Leguminosae indet	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1	-	-	-
Potentilla sp	-	-	-	-	-	-	-	-	-	-	-	1	-	1	-	-	-	-	-	-
Rubus fruticosus agg	-	-	-	-	-	-	-	-	-	-	-	-	-	4	-	-	-	-	-	-
Prunus spinosa L	-	-	-	-	-	-	-	-	-	-	-	4+frags-		-	-	-	-	-	-	-
Polygonum aviculare agg	-	-	-	-	1	-	-	-	-	-	-	-	1	3	-	-	-	-	-	-
Polygonum cf lapathifolium L	-	-	-	-	-	-	-	1	-	-	-	-	-	-	-	-	-	-	-	-
Polygonum convolvulus L	-	-	-	-	-	-	-	1frag	-	-	-	-	-	-	-	-	-	-	-	-
Rumex acetosella agg	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	2	-
Rumex sp	-	-	1	1	-	1	-	2	-	-	1	2	-	27	3	-	-	25	-	1
Polygonaceae indet	-	-	-	-	-	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Corylus avellana L (frags)	-	-	-	-	-	-	-	-	-	-	+	+	+	-	+	-	-	-	-	-
Veronica hederifolia L	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1	-	-	-	-	-
Prunella vulgaris L	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	2	-	-
Labiatae indet	-	-	-	-	-	-	-	-	-	-	-	-	-	1	-	-	-	-	-	-
Plantago lanceolata L	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1	-	-
Galium aparine L	1	-	-	-	-	-	-	-	-	-	1	-	-	-	1	-	-	-	-	-
Eleocharis sp	-	-	-	-	-	cf1	-	1	-	-	1	4	3+cf2	11	3	-	-	5+cf3	-	1
Carex spp	-	-	-	-	-	1	-	-	-	-	-	-	1	9	-	-	-	-	-	-
Bromus mollis/secalinus	-	2	-	-	-	-	1	-	-	-	-	-	-	-	2	-	1	1+frags	-	-
Gramineae indet	-	-	1	1	-	-	-	-	-	-	-	-	-	17	7	-	-	13	2	-
Gramineae indet (culm fragments)	-	-	-	-	-	-	-	+	-	-	-	-	-	-	+	-	-	-	-	-
Indeterminate seeds	-	5	2	1	-	-	1	-	-	-	2	4	3	40	6	2	3	2	3	3
Indeterminate seeds (mineralised)	-	2	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Indeterminate stem frags (mineralised)	-	+	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Sample size (number of buckets, approx. 12 *litre* capacity)	1	5	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	2

Table 9.1 Carbonised and mineralised plant microfossils from the Gilberd School (GBSA and B). Unless otherwise stated taxa are represented by fruits or seeds.

Building 131: Samples 8-10 and 46-8
Building 133: Samples 56 and 59-61
Building 134: Samples 1 and 3-7
Building 135: Samples 49-50
Period 3: Sample 2
Period 3:or 4: Sample 62

Abbreviations: co....cotyledon, frag....fragment, indet....indeterminate, spb....spikelet base, spf....spikelet fork.

Building 131	BF38	B414	Quercus sp. (oak)	Periods 1 & 2 timber drain (military or civilian)
Building 133	AF205	A2063	Quercus sp. (oak)	Period 2 timber drain
" "	AF205	A1581	Quercus sp. (oak)	" " " "
" " , Room 2	BF82	B517	Quercus sp. (oak)	" " " " " "
Building 134	AF228	A2141	Quercus sp. (oak)	Period 2 stump of upright in building
" "	AF228	A2084	Fraxinus excelsior (ash)	" " " " " " "
" "	AF230	A2067	Quercus sp. (oak)	Period 2 *in situ* timber of building

Table 9.2 Identification of the charcoal samples from the Gilberd School. By Maisie Taylor.

[All samples of timber features burnt in the fire of 60/1]

APPENDIX 13

Coin Catalogue 3 (coins from the Culver Street and Gilberd School sites): listed by site and then by date of context

SF	Find	L/F	Context and Period	Identification	Date
CULVER STREET					
Site A					
Period 1 or 2					
754	A351	L95	Occupation? or road silt? Period 1 (or 2)	Antonia, *RIC* (Clau) copy as 92	43-64
Period 2					
829	A389	L118	Road metalling. Period 2	Nero, *RIC* 342	64-8
Period 3					
902	A439	L93	Trench fill: Building 110. Period 3	Claudius I, *RIC* copy as 100	43-64
937	A472	L181	Dump. Period 3	Domitian, *RIC* (Vesp) 701	69-79
1002	A500	L194	Demolition debris?/make-up? Period 3	Claudius I, *RIC* copy as 100	43-64
1142	A535	L209	Occupation: Building 93. Period 3	Claudius I, *RIC* copy as 100	43-64
1144	A542	L210	Occupation: Building 93. Period 3	Cn Lentulus, Crawford 345/1	88 BC
635	A277	F100	Drain: Building 110. Period 3	*as*, ?Hadrian, rev standing figure	117-38
1039	A508	F185	Stake hole. Period 3	Trajan, *RIC* 131	98-117
Period 3 or 4					
519	A209	F159	Drain. Period 3 or 4	illegible	?2nd century
Period 4					
500	A205	?L15	Make-up. Period 4	illegible fragment	3rd-4th century
260	A122	F37	Ditch. Period 4	barbarous radiate, obv Tetricus I, rev *Salus*	270-84
476	A180	F37	Ditch. Period 4	regular *antoninianus*, rev uncertain	260-90
605	A258	F72	Timber-lined drain. Period 4	Constantinopolis, *HK* 71	330-5
558	A204	F76	Drain. Period 4	Trajan, *RIC* 492	98-117
495	A204	F76	Drain. Period 4	Antoninus Pius, *RIC* as 1003	138-61
Period 5					
186	A100	F15	Ditch. Period 5	Constantine II, *HK* copy of 193	330-45

SF	Find	L/F	Context and Period	Identification	Date
145	A73	F36	Trench. Period 5	barbarous radiate, obv Tetricus I, rev sacrificial implements	270-84
Early medieval					
142	A74	F28	Robber trench. Early medieval	barbarous radiate, obv Tetricus II, rev *Spes*	270-84
223	A98	F28	Robber trench. Early medieval	Tetricus I, Elmer 771	270-4
224	A98	F28	Robber trench. Early medieval	barbarous radiate, obv Tetricus I, rev *Salus*	270-84
175	A98	F28	Robber trench. Early medieval	Constantinopolis, *HK* copy as 52	330-45
172	A98	F28	Robber trench. Early medieval	Constans, *HK* 136	337-41
222	A98	F28	Robber trench. Early medieval	House of Constantine, hybrid *HK* obv as 49, rev as 51	330-45
176	A98	F28	Robber trench. Early medieval	Henry V, North 1409	*c* 1413-50
213	A72	F33	Robber trench. Early medieval	Postumus, Elmer as 125	259-68
214	A72	F33	Robber trench. Early medieval	Urbs Roma, *HK* copy of 184	330-45
244	A130	F54	Robber trench. Early medieval	barbarous radiate, obv Tetricus I	270-84
243	A130	F54	Robber trench. Early medieval	barbarous radiate, rev hybrid *Spes*/ sacrificial implements	270-84
Medieval or post-medieval					
1674	A773	L1	Topsoil. Medieval or post-medieval	Victorinus, Elmer 683	268-70
1676	A773	L1	Topsoil. Medieval or post-medieval	Allectus, *RIC* 55	293-6
70	A24	F4	Pit. Medieval or post-medieval	Tetricus II, Elmer 769	270-4
353	A64	F4	Pit. Medieval or post-medieval	Vespasian, *RIC* 479	69-79
1215	A568	F5	Pit. Medieval or post-medieval	Elizabeth I, North 2016	*c* 1558-1625
14	A5	F7	Pit. Medieval or post-medieval	Wulf Laufer, Nuremberg jetton Barnard as 82	*c* 1618-60
297	A144	F7	Pit. Medieval or post-medieval	illegible fragment	3rd-4th century
32	A6	F8	Pit. Medieval or post-medieval	Theodora, *HK* as 113	337-41
67	A20	F8	Pit. Medieval or post-	Tetricus II, Elmer	270-4

SF	Find	L/F	Context and Period	Identification	Date
			medieval	as 781	
4	A17	F11	Pit. Medieval or post-medieval	barbarous radiate, obv Tetricus I/II, rev *Pax*	270-84
59	A17	F11	Pit. Medieval or post-medieval	barbarous radiate, illegible	270-84
3	A17	F11	Pit. Medieval or post-medieval	Valentinian I, *CK* 1409	367-75
98	A44	F11	Pit. Medieval or post-medieval	Carausius, *RIC* 98	287–93
109	A44	F11	Pit. Medieval or post-medieval	illegible long cross penny	*c* 1500
92	A29	F14	Pit. Medieval or post-medieval	barbarous radiate, obv Tetricus II	270-84
91	A29	F14	Pit. Medieval or post-medieval	barbarous radiate, illegible	270-84
116	A45	F14	Pit. Medieval or post-medieval	Tetricus I, Elmer 775	270-4
191	A30	F16	Pit. Medieval or post-medieval	?Valerian I, *RIC* as 22 192	253-60
	F16 Pit Medival		Medieval or post-medieval	Victorinus, Elmer 743	268-70
216	A110	F16	Pit. Medieval or post-medieval	regular *antoninianus*, rev ?Pax	260-90
128	A59	F25	Post-pit. Medieval or post-medieval	barbarous radiate, illegible	270-84
119	A61	F26	Pit. Medieval or post-medieval	barbarous radiate, illegible	270-84
148	A63	F30	Pit. Medieval or post-medieval	Severus Alexander, *RIC* as 7	222-35
169	A77	F34	Pit. Medieval or post-medieval	barbarous radiate, rev *Virtus*	270-84
170	A77	F34	Pit. Medieval or post-medieval	Arcadius, *CK* as 164	388-402
143	A77	F34	Pit. Medieval or post-medieval	Theodosius I, *CK* 565	388-92
220	A112	F46	Pit. Medieval or post-medieval	Constantinopolis, *HK* copy as 52	330-45
242	A129	F46	Pit. Medieval or post-medieval	Marius, *RIC* 9	268
272	A137	F48	Pit. Medieval or post-medieval	Volusian, illegible *antoninianus*	251-3
271	A123	F50	Pit(s). Medieval or post-medieval	?Severus Alexander, illegible *denarius*	early 3rd century
269	A123	F50	Pit(s). Medieval or post-medieval	barbarous radiate, obv Tetricus II, rev *Spes Augg*	270-84
351	A172	F51	Pit. Medieval or post-medieval	Constantine I, *RIC* 7 Trier 449	324-30
238	A125	F52	Pit. Medieval or post-medieval	Carausius, *RIC* as 895	287-93
286	A136	F57	Pit. Medieval or post-	Antoninus Pius,	138-61

SF	Find	L/F	Context and Period	Identification	Date
			medieval	*RIC* 934	
361	A142	F57	Pit. Medieval or post-medieval	illegible fragment	3rd-4th century
280	A141	F58	Pit. Medieval or post-medieval	House of Constantine, *HK* copy as 145?	346-50
Unstratified					
327	A165		Unstratified. Roman	Tetricus II, Elmer 781	270-4
225	A2		Unstratified. Post-Roman	barbarous radiate, illegible	270-84
80	A46		Unstratified. Post-Roman	Constantine I, *RIC* 7 Trier 369	320
85	A47		Unstratified. Post-Roman	Gratian, *CK* 353	367-75
215	A111		Unstratified. Post-Roman	House of Constantine, *CK* copy as 25	350-60
302	A148		Unstratified. Post-Roman	Nero, *RIC* as 329	64-8
728	A336		Unstratified. Post-Roman	illegible	3rd-4th century
1533	A486		Unstratified. Post-Roman	copy of *dupondius*?	mid 2nd century
144	A76		Unstratified. ?Post-Roman	Diocletian, *RIC* 6 Trier 438a	300-1
966	A1		Unstratified	Claudius II, *RIC* 48	268-70
30	A1		Unstratified	barbarous radiate, illegible	270-84
227	A1		Unstratified	Constantius II, *CK* as 256	355-60
967	A1		Unstratified	illegible *as*	1st-2nd century
336	A1		Unstratified	Edward VI, North 1918	*c* 1547-61

SF	Find	L/F	Context and Period	Identification	Date
Site B					
Period 1 or Iron Age					
1781	B2054	F602	Stake hole (group of) & small pit: Room 8, Building 77. ?Period 1/ Iron Age	Cunobelin, Mack 253	10-40
Period 1					
1856	B2152	L596	Construction level: Room 8, Building 77. Period 1	Caligula, *RIC* 43	37-41
2397	B2197	L629	Gravelled surface. Period 1	Caligula, *RIC* 30	37-41
2534	B2391	L687	Make-up: Building 77. Period 1	Claudius I, *RIC* copy as 100	43-64
1758	B1922	F564	Slot/gully: Room 1, Building 78. Period 1	Claudius I, *RIC* copy as 100	43-64
1784	B2001	F586	Small pit: Building 78? Period 1	Augustus, obv bare head right, no legend visible, rev square altar with panels, flame on top	31 BC-AD 14
Periods 1 & 2					
1690	B1778	L428	Floor/make-up, with occupation horizon: Room 6, Building 78.Period 1/2	?Tasciovanus or Cunobelin	10-40
1394	B1063	F282	Large cess-pit: Building 77. Period 1/2	Caligula, *RIC* 30	37-41
1779	B2032	F515	Partition wall: Rooms 2/3, Building 77. Periods 1 & 2	Agrippa, *RIC* (Tib) copy as 32	40-50
Period 2					
2718	B2528	F867	Pit: Room 3, Building 77. Period 2	impression of Coritanian stater	10-40
Periods 2 and 3					
1671	B1740	F514	Posthole. Period 2/3	Claudius I, *RIC* copy as 100	43-64
Period 3					
1492	B1150	L255	Gravel spread. Period 3	Claudius I, *RIC* copy as 100	43-64
1480	B1134	L269	Dump. Period 3	Nero, *RIC* as 286	64-8
1567	B1366	L309	Dump. Period 3	Claudius I, *RIC* copy as 100	43-64
1560	B1444	L352	Occupation sills: Room 5a, Building 94. Period 3	Vespasian, *RIC* as 494	69-79
1616	B1627	L401	Boudican demolition debris: destruction of Building 77. Early Period 3	?young Marcus Aurelius, illegible *as*	139-61?
1660	B1723	L417	Dump/midden. Early	Agrippa, *RIC* (Tib)	40-50

SF	Find	L/F	Context and Period	Identification	Date
			Period 3	32	
1490	B1164	F302	Gully. Period 3	Tiberius, *RIC* 3	14-37
1570	B1448	F368	Slot/gully: Building 94. Period 3	Titus, *RIC* (Vesp) 786	71-9
1562	B1425	F397	Ditch. Period 3	Claudius I, *RIC* copy as 100	43-64
1578	B1464	F420	Small pit/posthole: Room 2, Building 94. Period 3	Vespasian, *RIC* as 497	69-79
1630	B1684	F494	Small pit/posthole: Room 5a, Building 94. Period 3	Vespasian, *RIC* 494	69-79
1637	B1697	F498	Small pit: Room 2, Building 94. Period 3	Nero, *RIC* as 394	64-8
Periods 3 and 4					
1372	B952	L210	Gravel spread. Period 3/4	Claudius I, *RIC* copy as 100	43-64
Period 4a					
1202	B735	L147	Occupation: Room 1, Building 112. Period 4a	Lucilla, *RIC* (MA) 1779	164-9
1230	B815	L165	Dump: Room 2, Building 112. Period 4a	illegible *denarius*	2nd-3rd century
1248	B834	L165	Dump: Room 2, Building 112. Period 4a	Trajan, illegible *sestertius*	98-117
1401	B1039	L236	Make-up: Room 5, Building 112. Period 4a	Nero, rev altar, *RIC* as 315	64-8
1493	B1152	L244	Dump: Room 6, Building 112. Period 4a	Trajan, *RIC* 400	98-117
1339	B932	F268	Footing: Room 2, Building 112. Period 4a	illegible ?*denarius*	?3rd century
Period 4b					
1112	B592	L120	Occupation: Room 1, Building 112. Period 4b	Faustina II, *RIC* (AP) 1395	145-61
1229	B766	L137	Dump: Room 6a, Building 112. Period 4b	?Marcus Aurelius, rev seated figure in front of trophy (or Hadrian), *as*	161-80?
1224	B771	L142	Make-up: Room 2, Building 112. Period 4b	barbarous radiate, illegible	270-84
1127	B673	F116	Slot: Room 5, Building 112. Period 4b	Trajan, *RIC* 642	114-17
1335	B915	F278	Pit: Room 6a, Building 112. Period 4b	Domitian, *RIC* 325	86-87
Period 4b/c					
2054	B2165	L63	Dump: Room 6a, Building 112. Period 4b/c	Vespasian, illegible *as*	69-79
Period 4c					
897	B340	L36	Mixed dump: Room 6a, Building 112. Period 4c	Septimius Severus, *RIC* as 350 G1	193-211
Period 4					
1068	B553	L88	Dump patch: Room 2,	Septimius Severus,	193-211

SF	Find	L/F	Context and Period	Identification	Date
			Building 112. Period 4	*RIC* 379	
1125	B666	L133	Occupation lenses: Room 1, Building 113. Period 4	illegible *as*	late 2nd-early 3rd century
1336	B890	L196	Dump: Room 1, Building 113. Period 4	illegible fragment (if coin)	1st-3rd century
1185	B752	F108	Gully between Buildings 112 & 113. Period 4	Faustina II, *RIC* (AP) 1375	145-61
884	B319		Above gully F108. Period 4	Caracalla, *RIC* as 323	196-211
1309	B878	F265	Gully: Room 2, Building 112. Period 4	Vespasian, illegible *as*	69-79
1397	B1042	F265	Gully: Room 2, Building 112. Period 4	Vespasian, *RIC* 746	69-79
2444	B2265	F678	Small pit: Room 6b, Building 112. Period 4	Antoninus Pius, *RIC* 934	138-61
1050	B533	L79	Lens of occupation: Room 2, Building 112. Late Period 4	Elagabalus or Severus Alexander, illegible *denarius*	*c* 220-40
1049	B534	L81	Dump: Room 1, Building 113. Late Period 4	Trajan, illegible *sestertius*	98-117
1091	B631	L102	Dump: Room 1, Building 113. Late Period 4	Commodus, *RIC* (MA) 1591	178
1275	B811	L170	Clay dump: Room 3, Building 113. ?Period 4	Gordian III, as *RIC* 4	238-44
Periods 4 and 5					
949	B393	L16	Dump/demolished clay wall: Room 1, Building 112. Period 4/5	illegible *denarius*	late 2nd-early 3rd century
934	B394	L16	Dump/demolished clay wall: Room 1, Building 112. Period 4/5	Severus Alexander, *RIC* 83	222-35
930	B366	L43	Demolished daub walling: Room 1, Building 112 Period 4/5	?Valerian I, *RIC* 92	253-60
4875	B2561	?L706	Demolition debri.. Building 113. Period 4/5	Valerian I, *RIC* 5 2	253-60
Period 5					
465	B31	L2	Dump/midden build-up. Period 5	Tetricus I, Elmer 775	270-4
577	B112	L4	Rubble spread. Period 5	illegible	3rd-4th century
599	B134	L7	Backfill of gully F39. Period 5	Postumus, Elmer as 129	259-68
666	B168	L7	Backfill of gully F39. Period 5	barbarous radiate, obv Victorinus, rev *Invictus*	270-84
665	B168	L7	Backfill of gully F39. Period 5	barbarous radiate, obv Tetricus I, rev *Pax*	270-84
664	B168	L7	Backfill of gully F39. Period 5	barbarous radiate, obv Tetricus II	270-84
839	B274	L9	Dump. Period 5	illegible fragment	1st-3rd

SF	Find	L/F	Context and Period	Identification	Date
409	B25	F33	Oven. Period 5	Tetricus I, Elmer 784	century 270-4
490	B66	F34	Gully. Period 5	copy, illegible fragment	3rd-4th century
493	B67	F34	Gully. Period 5	barbarous radiate, obv Tetricus II	270-84
710	B192	F89	Posthole. Period 5	barbarous radiate, rev *Salus*	270-84
770	B229	F107	Gully: Building 126. Period 5	Gallienus, *RIC* 656, mint of Asia	260-8
789	B229	F107	Gully: Building 126. Period 5	barbarous radiate, obv Tetricus II, rev *Salus Augg*	270-84
850	B267	F107	Gully: Building 126. Period 5	barbarous radiate, obv Tetricus I, rev *Hilaritas*	270-84
852	B267	F107	Gully: Building 126. Period 5	?House of Theodosius, *CK* as 162	388-402
851	B267	F107	Gully: Building 126. Period 5	illegible fragment	3rd-4th century
758	B217		Trowelling over gully F107. Period 5	Gallienus, *RIC* 157	260-8
477	B55	F5	Small pit. ?Period 5	barbarous radiate, obv Tetricus II, rev sacrificial implements	270-84
764	B216	F99	Small pit: Building 126? ?Period 5	Gallienus, illegible *antoninianus*	253-68
762	B216	F99	Small pit: Building 126? ?Period 5	barbarous radiate, obv Victorinus, rev *Invictus*	270-84
763	B216	F99	Small pit: Building 126? ?Period 5	barbarous radiate, obv Tetricus I, rev *Pax*	270-84
761	B216	F99	Small pit: Building 126? ?Period 5	barbarous radiate, illegible	270-84
765	B216	F99	Small pit: Building 126? ?Period 5	illegible fragment	3rd-4th century
908	B364	F133	Posthole/stake hole: Building 126? ?Period 5	Tetricus I, illegible *antoninianus*	270-4
Post-Roman					
671	B173	F81	Pit. Post-Roman	Aquilia Severa, *RIC* (Elag) 229	218-22
670	B173	F81	Pit. Post-Roman	Constantius II, *CK* copy of 256	355-60
1733	B1883	F562	Contaminated. Post-Roman	barbarous radiate, obv Tetricus II, rev sacrificial implements	270-84
370	B10	F6	Small pit. ?Post-Roman	barbarous radiate,	270-84

SF	Find	L/F	Context and Period	Identification	Date
				obv Tetricus I, rev *Salus Augg*	
457	B43	F22	Small pit. ?Post-Roman	barbarous radiate, obv Tetricus I/II, rev *Spes*	270-84
473	B56	F41	Small pit. ?Post-Roman	barbarous radiate, illegible	270-84
487	B64	F43	Small pit. ?Post-Roman	Victorinus, Elmer 732	268-70
488	B64	F43	Small pit. ?Post-Roman	barbarous radiate, illegible	270-84
581	B128	F68	Small pit. ?Post-Roman	Gratian, *CK* 353	367-75
1298	B256	F114	Small pit. ?Post-Roman	Faustina I, illegible *as*	140-61
Anglo-Saxon					
838	B260	L13	Occupation in Hut 3. Anglo-Saxon	Constantinopolis, *HK* copy of 185	330-45
872	B326	L13	Occupation in Hut 3. Anglo-Saxon	Constantine I, *HK* copy as 291	330-45
919	B384	L13	Occupation in Hut 3. Anglo-Saxon	barbarous radiate, obv Divo Claudio, rev eagle	270-84
1516	B385	L13	Occupation in Hut 3. Anglo-Saxon	Tiberius, *RIC* (Aug) 370	11-14
917	B385	L13	Occupation in Hut 3. Anglo-Saxon	Gallienus, illegible *antoninianus*	253-68
566	B109	L6	Backfill of Hut 3. Anglo-Saxon	barbarous radiate, obv Tetricus I/II, rev *Pax*	270-84
565	B109	L6	Backfill of Hut 3. Anglo-Saxon	Theodora, *HK* as 113	337-41
554	B109	L6	Backfill of Hut 3. Anglo-Saxon	Constans, *HK* as 111	337-41
553	B109	L6	Backfill of Hut 3. Anglo-Saxon	Arcadius, *CK* 167	388-402
592	B125	L12	Backfill of Hut 3. Anglo-Saxon	barbarous radiate, illegible	270-84
639	B157	L12	Backfill of Hut 3. Anglo-Saxon	Urbs Roma, *HK* copy as 51	330-45
724	B171	L12	Backfill of Hut 3. Anglo-Saxon	Urbs Roma, *HK* 205	330-45
454	B39		Cleaning over Hut 3, F4. ?Anglo-Saxon	Constantinopolis, *HK* copy as 52	330-45
Medieval					
435	B14	F3	Robber trench for Building 113. Medieval	Valens, *CK* 528	367-75
1270	B44	F3	Robber trench for Building 113. Medieval	barbarous radiate, illegible	270-84
458	B41	F21	Robber trench for Building 113. Medieval	illegible fragment	3rd-4th century
484	B71	F32	Robber trench for Building 113. Medieval	Arcadius, *CK* 2578	393-5

SF	Find	L/F	Context and Period	Identification	Date
525	B85	F38	Robber trench for Building 113. Medieval	Tetricus II, Elmer 773	270-4
524	B85	F38	Robber trench for Building 113. Medieval	Carausius, *RIC* 98	287-93
731	B201	F38	Robber trench for Building 113. Medieval	House of Constantine, *CK* copy as 25	350-60
604	B108	F52	Large pit/lime pit. Medieval	Constans, *HK* 133	337-41
651	B130	F52	Large pit/lime pit. Medieval	barbarous radiate, obv Tetricus I, rev *Laetitia*	270-84
652	B130	F52	Large pit/lime pit. Medieval	barbarous radiate, illegible	270-84
629	B130	F52	Large pit/lime pit. Medieval	Constantine I, *HK* 63	330-5
669	B165	F79	Robber trench for Building 112. Medieval	Antoninus Pius, illegible *sestertius*	138-61
778	B243	F111	Robber trench for Building 112. Medieval	Valens, *CK* as 1416	367-75
Post-medieval					
571	B120	F67	Large pit. Post-medieval	barbarous radiate, illegible	270-84
Modern & Unstratified					
1305	B855		Unstratified. Period 3	Faustina II, *RIC* (AP) as 1392	145-61
907	B367		Unstratified. ?Period 4	Claudius I, *RIC* copy as 96	43-64
997	B467		Unstratified. ?Period 4	Galba as *RIC* 161, but bare head left. Obv head like Agrippa, rev *Aequitas Augusti*	1st cent
406	B5	F2	Trench. Modern	barbarous radiate, obv Tetricus I, rev hybrid	270-84
366	B5	F2	Trench. Modern	House of Valentinian, *CK* as 275	364-78
460	B23	F2	Trench. Modern	barbarous radiate, obv Victorinus, rev *Pax*	270-84
505	B69	F2	Trench. Modern	Constans, *HK* copy of 236	335-45
529	B97	F15	Foundation trench. Modern	illegible fragment	3rd-4th century
474	B54	F30	Pit. Modern	regular *antoninianus*	260-90
475	B54	F30	Pit. Modern	illegible fragment	3rd-4th century
617	B142	F71	Brick soakaway. Modern	barbarous radiate, obv Gallienus, rev *Pax*	270-84

SF	Find	L/F	Context and Period	Identification	Date
316	B1		Unstratified. Modern	Carausius, *RIC* 880	287-93
320	B1		Unstratified. Modern	Tetricus I, Elmer 764	270-4
319	B1		Unstratified. Modern	Constantius II, *HK* 132	337-41
317	B1		Unstratified. Modern	Valentinian I, *CK* 1011	367-75
318	B1		Unstratified. Modern	illegible fragment	3rd-4th century
796	B2		Unstratified. Modern	barbarous radiate, obv Tetricus I, rev *Salus*	270-84
379	B2		Unstratified. Modern	Urbs Roma, *HK* copy of 184	330-45
358	B2		Unstratified. Modern	Constantius II, *HK* 141	346/7-8
356	B2		Unstratified. Modern	House of Constantine, *HK* copy as 87	335-45
354	B2		Unstratified. Modern	illegible ?*denarius*	?late 2nd-early 3rd century
795	B2		Unstratified. Modern	illegible *denarius*	early 3rd century
359	B2		Unstratified. Modern	illegible fragment	3rd-4th century
936	B3		Unstratified. Modern	Gallienus, illegible *antoninianus*	253-68
360	B3		Unstratified. Modern	Carausius, uncertain *antoninianus*, no mm	287-93
468	B3		Unstratified. Modern	Henry VIII, North 1779	*c* 1509-47
417	B6		Unstratified. Modern	Vitellius, *RIC* 18	69
399	B6		Unstratified. Modern	Marcus Aurelius, illegible *sestertius*	161-80
400	B6		Unstratified. Modern	Salonina, *RIC* 14	260-8
591	B6		Unstratified. Modern	Claudius II, *RIC* 57?	268-70
416	B6		Unstratified. Modern	Victorinus, Elmer 697	268-70
385	B6		Unstratified. Modern	Tetricus I, Elmer 764	270-4
450	B6		Unstratified. Modern	Tetricus I, Elmer 764	270-4
414	B6		Unstratified. Modern	Tetricus I, Elmer 789	270-4
373	B6		Unstratified. Modern	barbarous radiate, obv Tetricus I, rev *Fides Militum*	270-84
386	B6		Unstratified. Modern	barbarous radiate, obv Tetricus I, rev *Hilaritas*	270-84
420	B6		Unstratified. Modern	barbarous radiate,	270-84

SF	Find	L/F	Context and Period	Identification	Date
				obv Tetricus I, rev *Pax*	
470	B6		Unstratified. Modern	barbarous radiate, obv Tetricus I, rev *Pax*	270-84
449	B6		Unstratified. Modern	barbarous radiate, obv Tetricus I, rev *Spes/Virtus*	270-84
389	B6		Unstratified. Modern	barbarous radiate, obv Tetricus II, rev *Hilaritas*	270-84
418	B6		Unstratified. Modern	barbarous radiate, obv Tetricus II, rev sacrificial implements	270-84
387	B6		Unstratified. Modern	Carausius, *RIC* 880	287-93
383	B6		Unstratified. Modern	Carausius, *RIC* 983	287-93
376	B6		Unstratified. Modern	Urbs Roma, *HK* copy as 51	330-45
384	B6		Unstratified. Modern	Constans, *HK* 140	346/7-8
396	B6		Unstratified. Modern	House of Constantine, *HK* as 132	337-41
415	B6		Unstratified. Modern	House of Constantine, *HK* as 137	346/7-8
485	B6		Unstratified. Modern	House of Constantine, *CK* copy as 25	350-60
375	B6		Unstratified. Modern	Magnentius, *CK* 15	350-3
391	B6		Unstratified. Modern	Valentinian I, *CK* 350	367-75
448	B6		Unstratified. Modern	Valentinian I, *CK* 1028	367-75
388	B6		Unstratified. Modern	Gratian, *CK* as 529	367-75
394	B6		Unstratified. Modern	House of Theodosius, *CK* as 796	388-402
374	B6		Unstratified. Modern	illegible fragment	3rd-4th century
390	B6		Unstratified. Modern	illegible fragment	3rd-4th century
424	B26		Unstratified. Modern	Tetricus I, Elmer 765	270-4
426	B26		Unstratified. Modern	House of Constantine, *CK* as 256	350-60
402	B17		Unstratified	Elagabalus, *RIC* 45	221-2
511	B88		Unstratified	Tetricus I, Elmer as 775	270-4
825	B88		Unstratified	barbarous radiate, obv Tetricus I, rev *Spes*	270-84
826	B88		Unstratified	barbarous radiate, obv Tetricus I/II,	270-84

SF	Find	L/F	Context and Period	Identification	Date
				rev *Spes*	
512	B88		Unstratified	illegible	3rd-4th century
786	B91		Unstratified	barbarous radiate, illegible	270-84
797	B91		Unstratified	Valens, *CK* as 280	364-7
541	B102		Unstratified	Severus Alexander, *RIC* 205	222-35
588	B126		Unstratified	Gallienus, *RIC* 194a	260-8
734	B126		Unstratified	Claudius II, *RIC* 109	268-70
744	B126		Unstratified	barbarous radiate, obv Tetricus I, rev *Comes*	270-84
738	B126		Unstratified	barbarous radiate, obv Tetricus I, rev *Victoria*	270-84
736	B126		Unstratified	barbarous radiate, obv Tetricus I, rev *Spes*	270-84
735	B126		Unstratified	barbarous radiate, rev *Laetitia*	270-84
695	B126		Unstratified	barbarous radiate, illegible	270-84
737	B126		Unstratified	barbarous radiate, illegible	270-84
610	B126		Unstratified	Constantinopolis, *HK* copy of 185	330-45
746	B126		Unstratified	Constantine II, *HK* copy of 193	330-45
587	B126		Unstratified	House of Constantine, *HK* copy of 198	330-45
743	B126		Unstratified	illegible fragment	3rd-4th century
643	B160		Unstratified	illegible *as*	mid 2nd century
668	B172		Unstratified	barbarous radiate, obv Tetricus II, rev sacrificial implements	270-84
774	B183		Unstratified	Septimius Severus, illegible *denarius*	193-211
823	B183		Unstratified	House of Constantine, *CK* copy as 25	350-60
821	B183		Unstratified	Valens, obv DN VALENS PF AVG, rev URBS ROMA	364-78
822	B183		Unstratified	House of Valentinian, *CK* as 96	364-78
776	B183		Unstratified	Gratian, *CK* 529	367-75
697	B190		Unstratified	barbarous radiate.	270-84

SF	Find	L/F	Context and Period	Identification	Date
696	B190		Unstratified	obv Tetricus I, rev *Victoria* barbarous radiate, rev *Fides*	270-84
777	B242		Unstratified	House of Constantine, *HK* copy as 187	330-45
1267	B753		Unstratified	Vespasian, illegible *as*	69-79
1722	B1848		Unstratified	Allectus, *RIC* 55	293-96
1788	B2099		Unstratified	Gratian, *CK* 540	375-8
2719	B2514		Unstratified	Constans, *CK* as 400	346-50
2720	B2514		Unstratified	House of Theodosius, *CK* as 796	388-402
5069	B2590		Unstratified	Severus Alexander, illegible *denarius*	222-35
5053	B2597		Unstratified	George V, penny	1919
5188	B2598		Unstratified	Caracalla, BMC 78	198-217
2724	B u/s			barbarous radiate, obv Victorinus, rev *Invictus*	270-84
2704	?B u/s			barbarous radiate, obv Tetricus I, rev *Fides Militum*	270-84

SF	Find	L/F	Context and Period	Identification	Date
			Building 79. Early Period 3		
1217	C317	F100	Scoop/dump. Early Period 3	Claudius I, *RIC* copy as 100	43-64
800	C221		Clearance. ?Period 3	Faustina II, *RIC* (MA) 1702	175-80
Period 4					
597	C129	L8	Dump/demolition. Period 4	Nero, *RIC* 329	64+8
78	C19	L19	Make-up: Room 2, Building 114. Period 4	?Septimius Severus, *RIC* as 97	193-211
182	C34	L19	Make-up: Room 2, Building 114. Period 4	Hadrian, *RIC* 830	117-38
956	C247	L29	Dump/make-up: Room 1, Building 114. Period 4	illegible *sestertius* (Nerva)	mid 1st-mid 2nd century
811	C215	L24	Occupation: Room 3, Building 114. Period 4	Lucius Verus, *RIC* 505	161+9
1122	C298	L37	Demolition of clay wall: Building 114. Period 4	Marcus Aurelius, *RIC* (AP) as 1231	139-61
935	C246	F75	Irregular gully: Room 1, Building 114. Period 4	Lucilla, hybrid, *RIC* obv (MA) as 1732, rev (Comm) as 307	164-92
165	C30	F12	Gully: Building 114. Late Period 4	Claudius II, as *RIC* 261, ?copy	270
Periods 4 & 5					
323	C63	F27	Large pit/pit complex. Periods 4/5	Severus Alexander, *RIC* 133	222-35
346	C63	F27	Large pit/pit complex. Periods 4/5	Claudius II, *RIC* 98	268-70
345	C63	F27	Large pit/pit complex. Periods 4/5	Tetricus II, Elmer 791	270-4
348	C63	F27	Large pit/pit complex. Periods 4/5	barbarous radiate, illegible	270-84
324	C63	F27	Large pit/pit complex. Periods 4/5	Urbs Roma, *HK* copy as 184	330-45
342	C63	F27	Large pit/pit complex. Periods 4/5	Constantinopolis, *HK* copy as 59	330-45
322	C63	F27	Large pit/pit complex. Periods 4/5	Constantius II, *CK* 455	353-4
367	C67	F27	Large pit/pit complex. Periods 4/5	Victorinus, Elmer 654	268-70
368	C67	F27	Large pit/pit complex. Periods 4/5	barbarous radiate, obv Tetricus I, rev *Victoria*	270-84
Period 5					
156	C28	L1	Topsoil (Roman?). ?Period 5	Gallienus, *RIC* as 181	253-60
226	C41	L1	Topsoil (Roman?). ?Period 5	Constans, *HK* 443	337-41
267	C42	L1	Topsoil (Roman?). ?Period 5	House of Theodosius, *CK* as	388-402

SF	Find	L/F	Context and Period	Identification	Date
				796	
163	C31	L2	Topsoil (Roman?). ?Period 5	Urbs Roma, *HK* copy of 190	330-45
Roman					
434	C69	F24	?Pit. Roman	Victorinus, Elmer 732	268-70
445	C70	F24	?Pit. Roman	House of Constantine, *HK* copy as 249	335-45
Post-Roman					
1840	C496	L3	Modern topsoil. Post-Roman	Pertinax, *RIC* 32a	193
Medieval					
21	C5	F2	Robber trench for Building 114. Medieval	illegible fragment	3rd-4th century
153	C26	F4	Robber trench for Building 114. Early medieval	?Severus Alexander, rev ?*Iovi*, *denarius*	222-35
83	C16	F6	Robber trench for Building 114. Medieval	barbarous radiate, obv Tetricus I, rev *Salus*	270-84
74	C16	F6	Robber trench for Building 114. Medieval	Constantius II, *HK* 132	337-41
847	C252	F6	Robber trench for Building 114. Medieval	Vespasian, *RIC* 740	69-79
82	C15	F7	Pit. Medieval	barbarous radiate, obv Tetricus I, rev *Salus*	270-84
Unstratified					
17	C3		Unstratified	Geta, *RIC* 6	200-202
15	C3		Unstratified	House of Theodosius, *CK* as 796	388-402
287	C21		Unstratified	Constantine II, *HK* copy of 56	330-45
498	C90		Clearance. Unstratified	House of Constantine, *CK* copy as 25	350-60
2671	C503	NO SUCH FIND LISTED		?Julia Domna, *RIC* (SS) as 580	196-211

SF	Find	L/F	Context and Period	Identification	Date
Site D					
Period 4					
3092	D252	L78	Dump: Building 123. Period 4	barbarous radiate, obv Tetricus I, rev *Laetitia Augg*	270-84
3429	D715	L714	Occupation: Passage 4, Building 123. Period 4	barbarous radiate, obv Victorinus, rev *Virtus Aug*	270-84
3446	D762	L714	Occupation: Passage 4, Building 123. Period 4	barbarous radiate, illegible	270-84
3496	D862	L714	Occupation: Passage 4, Building 123. Period 4	barbarous radiate, illegible	270-84
3621	D1157	L974	Dump: Passage 4, Building 123. Period 4	illegible *antoninianus*	259-75
3989	D1830	L1818	Dump: yard of Building 123. Period 4	Philip I, illegible *antoninianus*	244-9
3565	D1079	F352	Drain: Passage 2, Building 123. Period 4	barbarous radiate, obv Divo Claudio , rev altar	270-84
3556	D1080	F352	Drain: Passage 2, Building 123. Period 4	barbarous radiate, obv Victorinus, rev *Invictus*	270-84
3563	D1081	F352	Drain: Passage 2, Building 123. Period 4	barbarous radiate, obv Tetricus I, rev *Fides Militum*	270-84
5065	D1391	F352	Drain: Passage 2, Building 123. Period 4	Victorinus, Elmer 682	268-70
3901	D1540	F352	Drain: Passage 2, Building 123. Period 4	barbarous radiate, illegible	270-84
3121	D287	F624	Stairwell: Building 123. Period 4	illegible	3rd century
3461	D839	F773	Drain: Passage 1, Building 123. Period 4	Marcus Aurelius, *RIC* 2 1348	158-9
3417	D789	F782	Drain (part of F686): Passage 2, Building 123. Period 4	illegible	3rd-4th century
3688	D1296	F1291	Large pit: yard of Building 123. Period 4	illegible	3rd-4th century
3715	D1325	F1291	Large pit: yard of Building 123. Period 4	barbarous radiate, obv Tetricus I,	270-84
4092	D1962	F1291	Large pit: yard of Building 123. Period 4	Commodus, illegible *sestertius*	180-92
3759	D1370	F1492	Drain: yard of Building 123. Period 4	Victorinus, Elmer 699	268-70
3573	D1061	F22	Robbed drain: yard of Building 123. Period 4	Victorinus, Elmer 683	268-70
3553	D1093	F22	Robbed drain: yard of Building 123. Period 4	barbarous radiate, illegible	270-84
3554	D1094	F22	Robbed drain: yard of Building 123. Period 4	Tetricus I, *antoninianus* rev Victoria Aug	270-4

SF	Find	L/F	Context and Period	Identification	Date
3362	D601	L243	Demolition debris: Passage 2, Building 123. Period 4	illegible	3rd-4th century
3462	D802	L649	Demolition debris: Passage 4, Building 123. Period 4	barbarous radiate, obv Tetricus I, rev *Salus Augg*	270-84
3769	D1503	L1143	Demolition debris: Passage 4, Building 123. Period 4	Domitian, illegible *as*	81-96
3654	D1190	L1162	Demolition debris: yard of Building 123. Period 4	Severus Alexander, *RIC* 4 236	231-5
2987	D150	L60	Destruction debris of Building 123. Period 4	Carausius, *antoninianus*	287-293
2994	D185	L60	Destruction debris of Building 123. Period 4	illegible	3rd-4th century
3516	D1005	L1004	Demolition debris of Building 123? Period 4	Constantius II, *HK* as 89	335-40
Period 4 or 5					
3626	D1150	L272	Dump/levelling: yard of Building 123. Period 4 demolition or Period 5	barbarous radiate, obv Tetricus I, rev *Hilaritas Augg*	270-84
3658	D1167	L272	Dump/levelling: yard of Building 123. Period 4 demolition or Period 5	barbarous radiate, illegible	270-84
Period 5 or 6					
3060	D233	F88	Settlement in drain. Period 5 or 6	illegible	3rd-4th century
3130	D269	F88	Settlement in drain. Period 5 or 6	illegible fragment	3rd-4th century
Period 6					
2817	D34	L33	Demolition debris in robber trench? Period 6	barbarous radiate, obv Tetricus I, rev *Spes Publica*	270-84
2871	D115	L33	Demolition debris in robber trench? Period 6	Tetricus I, Elmer 771/5	270-4
2813	D42	F27	Robber trench for Building 123. Period 6	illegible *antoninianus*	259-75
2803	D64	F30	Robber trench for Building 123. Period 6	Tetricus II, Elmer 791	270-4
2810	D39	F38	Robber trench for Building 123. Period 6	barbarous radiate, illegible	270-84
2855	D118	F38	Robber trench for Building 123. Period 6	Victorinus, Elmer 683	268-70
3432	D777	F91	Pit. Period 6	illegible *denarius* fragment	1st-3rd century
3028	D214	F259	Robbing pit. Period 6	Tetricus II, Elmer 769	270-4
3159	D302	F259	Robbing pit. Period 6	barbarous radiate, obv Tetricus II, rev *Spes Publica*	270-84
3265	D379	F259	Robbing pit. Period 6	illegible minim	4th

SF	Find	L/F	Context and Period	Identification	Date
				copy	century
3300	D445	F259	Robbing pit. Period 6	illegible	1st-2nd century
3301	D460	F259	Robbing pit. Period 6	illegible	3rd-4th century
3441	D608	F259	Robbing pit. Period 6	illegible *follis* fraction	294-313
3611	D638	F259	Robbing pit. Period 6	Carausius, illegible *antoninianus*	287-93
3393	D662	F259	Robbing pit. Period 6	barbarous radiate, obv Tetricus I, rev *Fides Militum*	270-84
3392	D662	F259	Robbing pit. Period 6	Constantius I, *RIC* 6 Trier 652a	305-7
3472	D880	F498	Robber trench for Building 123. Period 6	illegible minim copy	3rd-4th century
3903	D1683	F498	Robber trench for Building 123. Period 6	barbarous radiate, obv Divo Claudio rev eagle	270-84
3405	D690	F577	?Continuation of robber trench F498 of Building 123. Period 6	barbarous radiate, illegible	270-84
3440	D718	L717	Demolition debris (robber?). Period 6?	barbarous radiate, obv Tetricus I, rev *Virtus Augg*	270-84
Period 7					
2792	D12	L9	Topsoil. Period 7	Tetricus I, Elmer 779/88	270-4
2793	D13	L9	Topsoil. Period 7	Nerva, illegible *as*	96-8
2794	D14	L9	Topsoil. Period 7	Faustina I, *RIC* 3 (AP) 1154	141-61
2795	D15	L9	Topsoil. Period 7	Gallienus, *RIC* 5(S) 233	260-8
2796	D17	L9	Topsoil. Period 7	barbarous radiate, obv Tetricus I, rev *Salus Augg*	270-84
3623	D1147	F5	Well or soakaway. Period 7	George III, halfpenny	1770-5
2791	D11	F6	Large pit. Period 7	Charles I, Rose farthing token, North 2293	1635-44
2849	D111	F106	Pit. Period 7	barbarous radiate, obv Tetricus I	270-84
3179	D326	F278	Large pit. Period 7	Victorinus, Elmer 649	268-70
3442	D719	F497	Pit. Period 7	Gallienus, *RIC* 5(S) as 214	260-8
3444	D720	F497	Pit. Period 7	illegible	3rd-4th century
3341	D507	F500	Small pit. Period 7	House of Constantine, illegible	330-48

SF	Find	L/F	Context and Period	Identification	Date
Unstratified					
3295	D447	L448	Trample. Unstratified	Claudius I, *RIC* 1 copy as 100	43-64
2789	D7		Unstratified	barbarous radiate, obv Tetricus I, rev *Hilaritas Augg*	270-84
2790	D8		Unstratified	Victorinus, Elmer 697	268-70
1789	D1		Unstratified	Antoninus Pius, *RIC* 872	138-61
2872	D109		Unstratified	Tetricus I, Elmer 786	270-4
3359	D616		Unstratified	Septimius Severus, *RIC* 4 230	209

SF	Find	L/F	Context and Period	Identification	Date
Site E					
Period 1					
2468	E1219	L166	Occupation: Building 83. Period 1	Antonia, *RIC* (Clau) copy as 92	43-64
2561	E1413	L185	Road metalling. Period 1	Claudius I, *RIC* copy as 95	43-64
2630	E1677	L263	Road metalling. Period 1	Claudius I, *RIC* copy as 94	43-64
2636	E1721	L298	Build-up below road. Period 1	Claudius I, *RIC* copy as 100	43-64
2537	E1334	F900	Timber-lined latrine pit: Room 7, Building 83. Period 1	Augustus, plated *quinarius*, *RIC* 18	28-26 BC
2601	E1590	F1142	Ditch (roadside). Period 1	illegible burnt *as*	1st-2nd century
Period 2					
2337	E896	L56	Layers of burnt colonial occupation: Building 89. Period 2	Claudius I, *RIC* copy as 100	43-64
2332	E893	L67	Occupation layers: Building 87. Period 2	Claudius I, *RIC* copy as 100	43-64
2548	E1360	L89	Make-up: Building 89. Period 2	?Agrippa, *RIC* (Tib) copy as 32?	40-50
2492	E1255	L108	Dump: Building 89. Period 2	Tiberius, *RIC* 3	14-37
2383	E1100	L119	Make-up: Buildings 88/89. Period 2	Claudius I, *RIC* copy as 100	43-64
2474	E1224	L138	Dump. Period 2	Claudius I, *RIC* copy as 94	43-64
2481	E1224	L138	Dump. Period 2	Claudius I, *RIC* copy as 94	43-64
2628	E1668	L149/L173	Period 2	Caius & Lucius, *RIC* (Aug) 350	2 BC-AD 14
2359	E1012	L89 or F834?	Building 89. Period 2	Marcus Antonius, Crawford 544/20, mark + on rev	*c* 31 BC
2360	E1012	L89 or F834?	Building 89. Period 2	Marcus Antonius, Crawford 496/2	*c* 42 BC
2318	E871	F745	Pit. Period 2	Claudius I, *RIC* copy as 100	43-64
2346	E927	F850	Shallow pit. Period 2	Agrippa, *RIC* (Tib) copy as 32	40-50
2388	E1090	F957	Rectangular pit: Building 90. Period 2	Caligula, *RIC* 43	37-41
2382	E1105	F977	Stake hole? Period 2	Icenian 'Pattern-horse' type, as Mack 423, 425b, 429, 430	50-60
2413	E1154	F1006	Pit. Period 2	Claudius I, *RIC* copy as 100	43-64
2428	E1190	F1034	Pit. Period 2	illegible	1st cent
2420	E1192	F1037	Ditch. Period 2	Claudius I, *RIC* copy as 94	43-64

SF	Find	L/F	Context and Period	Identification	Date
2426	E1192	F1037	Ditch. Period 2	illegible burnt *as*	1st-2nd century
2458	E1197	F1037	Ditch. Period 2	Claudius I, *RIC* copy as 100	43-64
2576	E1447	F1250	Pit. Late Period 2	illegible burnt	1st century
Period 3a					
2107	E502	L21	Make-up: Buildings/99/100 Period 3a	Vespasian, *RIC* 494	69-79
2181	E629	L24	Destruction debris/ make-up: Buildings/99/100 Period 3a	Vespasian, *RIC* 740	72-4
2176	E639	L24	Destruction debris and make-up: Buildings/99/100. Period 3a	illegible	1st century
2189	E664	L24	Destruction debris & make-up: Buildings/99/100 Period 3a	Vespasian *RIC* 747	69-79
Period 3					
2442	E1205	L106	Dump. Early Period 3	Claudius I, *RIC* copy as 100	43-64
2195	E669	L27	Make-up. Period 3	Agrippa, *RIC* (Tib) 32	30-40
2203	E699	L33	Make-up: Building 108. Period 3	Claudius I, *RIC* copy as 100	43-64
2252	E759	L37	Street metalling. Period 3	Nero, *RIC* 329	64-8
2174	E633	F462	Dump & occupation. Period 3	Agrippa, *RIC* (Tib) 32	30-40
2223	E737	F462	Dump & occupation. Period 3	Claudius I, *RIC* copy as 94	43-64
2267	E791	F549	Trench? Period 3	illegible *as*	?1st century
2268	E791	F549	Trench? Period 3	illegible *denarius*	early 3rd century
2322	E895	F557	Pit? Period 3	Claudius I, *RIC* copy as 100	43-64
2348	E895	F557	Pit? Period 3	?Trajan, rev uncertain, *as*	98-117?
2246	E773	F558	Ditch. ?Period 3	Vespasian, *RIC* 753a	77-9
2164	E568		Dump. ?Period 3	Claudius I, *RIC* copy as 100	43-64
Period 4 or 5					
2076	E479	L19	Dilapidation debris/ occupation: Building 122. Late Period 4 or early Period 5	barbarous radiate, illegible	270-84
Period 5					
1999	E334	F223	Pile hole: Building 127. Period 5	illegible fragment	3rd-4th century

SF	Find	L/F	Context and Period	Identification	Date
Period 7					
1946	E188	?L5	Dump. Period 7	Edward III, post-treaty 1d	*c* 1351-1420
1883	E11	F9	Robber trench. Period 7	Constantinopolis, *HK* 86	330-5
2004	E335	F94	Pit. Late Period 7	Domitian, *RIC* 335	85-90
1886	E47	F113	Robber trench. Period 7	House of Constantine, *CK* copy as 25	350-60
1953	E181	F147	Pit. Late Period 7	illegible	3rd-4th century
1906	E72	F231	Robber pit. Period 7	Nero, *RIC* 277	64-8
2051	E380	F262	Robber pit. Period 7	Vespasian, *RIC* 497	69-79
Period 8					
1922	E42	F4	Large rectangular pit. Period 8	illegible fragment	3rd-4th century
1855	E13	F14	Pit. Period 8	Valens, *CK* 968	364-7
2115	E510	F14	Rubbish pit. Period 8	Nuremberg token, French type	?16th century
2102	E507	F19	Rubbish pit. Period 8	Edward IV, North 1666	*c* 1471-83
1900	E43	F21+F30+F7	Period 8	Trajan, *RIC* 604	112-14
2032	E357	F95	Pit. Period 8	Elizabeth I, North 2016	*c* 1558-1625
2180	E589	F95	Pit. Period 8	barbarous radiate, obv Divo Claudio, rev altar	270-84
1927	E146	F126	Small pit? Period 8	illegible fragment	3rd-4th century
1933	E166	F134	Pit. Period 8	Nero, *RIC* as 349	64-8
1948	E186	F155	Pit. Period 8	Domitian, *RIC* (Vesp) 791a	69-79
2005	E333	F232	Pit. Period 8	barbarous radiate, obv Tetricus I, rev *Pax*	270-84
Unstratified					
2411	E1155		Unstratified. Dump? Period 2	Antonia, *RIC* (Clau) copy as 92	43-64
1803	E1		Unstratified	Marcus Aurelius or Commodus, illegible *sestertius*	161-92
1809	E1		Unstratified	Postumus, Elmer 216	259-68
1862	E1		Unstratified	Claudius II, *RIC* 261	268-70
1891	E1		Unstratified	Victorinus, Elmer 697	268-70
1821	E1		Unstratified	barbarous radiate, obv Claudius II, rev *Virtus*	270-84
1907	E1		Unstratified	Constans, *HK* copy of 95	335-45
1825	E1		Unstratified	House of	330-45

SF	Find	L/F	Context and Period	Identification	Date
1804	E1		Unstratified	Constantine, *HK* copy as 48 House of Constantine, *CK* copy as 25	350-60
1834	E1		Unstratified	Valens, *CK* as 528	367-75
1815	E1		Unstratified	illegible	3rd-4th century
2096	E494		Unstratified	odd portrait, as Nero	?1st cent
2088	E499		Unstratified.	Vespasian, *RIC* as 497	69-79
2179	E625		Unstratified	Claudius I, *RIC* copy as 100	43-64
2210	E718		Unstratified	Claudius I, *RIC* copy as 100	43-64
2239	E753		Unstratified	Nero, *RIC* as 329	64-8
?416	E1187		Unstratified	Claudius I, *RIC* copy as 100	43-64
2443	E1206		Unstratified	Claudius I, *RIC* copy as 100	43-64
Site G					
Period 2 or 3					
4112	G2688	L2686	Dump/floor surface. Period 2 or 3	Nero, *RIC* 1 543	66-8
Period 3					
4887	G3941	F3939	Pit. Period 3	Vespasian, illegible *as*	69-79
Period 3a or 3b					
4631	G3545	L3284	Destruction debris/dump. Period 3a or 3b	Claudius I, *RIC* 1 copy as 100	43-64
Period 3b or 3c					
4550	G3368	L3133	Dump/floor surface. Period 3b or 3c	Vespasian, *RIC* 2 502	71
Period 3 or 4					
3693	G1396	L1373	Floor make-up/dump. Period 3 or 4	Claudius I, *RIC* 1 copy as 100	43-64
4191	G2942	L2284	Floor surface. Period 3 or 4	Vespasian, illegible *as*	69-79
Period 4					
4652	G3377	L1019	Floor make-up/dump: Building 116. Period 4	Hadrian, *RIC* 2 741	134-8
3469	G1067	L1066	Destruction debris B: Building 116. Period 4	Septimius Severus, *RIC* 4 289	202-10
4388	G3091	L1344	Occupation/trample: Building 117. Period 4	Marcus Aurelius, *RIC* 3 969	168-9

SF	Find	L/F	Context and Period	Identification	Date
Period 4 or 5					
3711	G1609	L1605	Occupation: Building 118? Period 4 or 5	illegible *dupondius*	1st century
3801	G1973	L1894	Demolition debris? Building 116? Period 4 or 5	Aelius Caesar, *RIC* 2 1071	137
3913	G2072	L1894	Demolition debris? Building 116? Period 4 or 5	Trajan, *RIC* 2 as 454	103
Period 5					
3430	G836	L605	Dump. Period 5	Severus Alexander, *RIC* 4 173	222-8
2782	G14	F14	Sand pit. Period 5	Valerian I, illegible *antoninianus*	253-60
2949	G173	F14	Sand pit. Period 5	Commodus, illegible *sestertius*	180-92
3014	G227	F14	Sand pit. Period 5	barbarous radiate, obv Probus, rev *Jupiter*	270-84
3018	G248	F14	Sand pit. Period 5	Crispina, illegible *sestertius*	180-92
3177	G402	F14	Sand pit. Period 5	illegible	1st-3rd century
3187	G409	F14	Sand pit. Period 5	illegible	3rd century
3182	G410	F14	Sand pit. Period 5	Valerian I, *RIC* 5 293	253-60
3183	G411	F14	Sand pit. Period 5	Valerian I, *RIC* 5 as 106	253-60
3180	G413	F14	Sand pit. Period 5	Hadrian, *RIC* 2 710-11	132-4
3178	G422	F14	Sand pit. Period 5	Gallienus, *RIC* 5(J) 145	253-60
3200	G434	F14	Sand pit. Period 5	Gallienus, *RIC* 5(J) 44	253-60
3156	G390	F352	Pit. Period 5	barbarous radiate, illegible	270-84
3126	G266	F266	Linear feature/drain? ?Period 5	barbarous radiate, illegible	270-84
Period 5a					
3361	G787	L786	Floor foundation: Building 120. Period 5a	Antoninus Pius, illegible *sestertius*	138-61
5021	G3861	F3853	Linear feature: Building 120. Period 5a	Agrippa, *RIC* (Tib) copy as 32	40-50
Period 5b					
2850	G119	L119	Occupation/midden: Building 120. Period 5b	illegible	3rd-4th century
2906	G156	L119	Occupation/midden. Building 120. Period 5b	Antoninus Pius, *RIC* 3 758/778	145-61
3459	G976	L177	Occupation debris/midden: Building 120. Period 5b	Marcus Aurelius, illegible *dupondius*	161-80

SF	Find	L/F	Context and Period	Identification	Date
3260	G584	L206	Destruction debris B/ floor: Building 120. Period 5b	Marcus Aurelius, illegible *sestertius*	161-80
3449	G734	L480	Floor: Building 120. Period 5b	Marcus Aurelius, illegible *sestertius*	161-80
3377	G816	L518	Occupation: Building 120. Period 5b	Septimius Severus, illegible *denarius*	193-211
4163	G683	F626	Small pit: Building 120. Period 5b	Elagabalus, illegible *denarius*	218-22
3550	G1285	F1227	Hearth/pit: Building 120. Period 5b	illegible	3rd-4th century
3059	G312	L302	Occupation? ?Period 5b?	barbarous radiate, obv Tetricus I, rev *Pax Aug*	270-84
3117	G327	L327	Destruction debris B/ occupation: Building 120? ?Period 5b?	illegible *antoninianus*	260-94
3104	G357	L327	Destruction debris B/ occupation: Building 120? ?Period 5b?	barbarous radiate, obv Tetricus I, rev *Laetitia Augg*	270-84
Period 5 or 6					
3207	G441	L440	Occupation/ trample Period 5 or 6 trample	Tetricus I, Elmer 775	270-74
3206	G441	L440	Occupation/ Period 5 or 6	barbarous radiate, obv Tetricus I, rev *Pax Aug*	270-84
2965	G201	F201	Pit. Period 5 or 6	barbarous radiate, illegible	270-84
3548	G1151	F1144	Pit. Period 5 or 6	Caracalla, illegible *denarius*	198-217
3598	G1273	F1212	Pit. Period 5 or 6	Postumus, Elmer 336	259-68
3275	G549	L164	Occupation/midden? ?Period 5 or 6	Victorinus, Elmer 653/683	268-70
3436	G858	L857	Occupation? ?Period 5 or 6	illegible	3rd-4th century
Period 6					
2745	G1	L1	Topsoil/clearance. Period 6	Faustina I, *RIC* 3 (AP) 1117	141-61
2730	G1	L1	Topsoil/clearance. Period 6	Gallienus, Robertson 4 59	260-68
2776	G1	L1	Topsoil/clearance. Period 6	Gallienus, illegible *antoninianus*, eastern mint	260-68
2758	G1	L1	Topsoil/clearance. Period 6	Tetricus II, Elmer 777/8	270-74
2746	G1	L1	Topsoil/clearance. Period 6	barbarous radiate, obv Claudius II, rev eagle, hybrid	270-84
2738	G1	L1	Topsoil/clearance. Period 6	barbarous radiate, obv Victorinus, rev *Invictus*	270-84

SF	Find	L/F	Context and Period	Identification	Date
2747	G1	L1	Topsoil/clearance. Period 6	barbarous radiate, obv Tetricus I	270-84
2751	G1	L1	Topsoil/clearance. Period 6	barbarous radiate, obv Tetricus I, rev *Hilaritas Augg*	270-84
2816	G1	L1	Topsoil/clearance. Period 6	barbarous radiate, obv Tetricus I, rev *Pax Aug*	270-84
2734	G1	L1	Topsoil/clearance. Period 6	barbarous radiate, obv Tetricus I, rev *Salus Augg*	270-84
2754	G1	L1	Topsoil/clearance. Period 6	barbarous radiate, illegible	270-84
2755	G1	L1	Topsoil/clearance. Period 6	barbarous radiate, illegible	270-84
2760	G1	L1	Topsoil/clearance. Period 6	barbarous radiate, illegible	270-84
2773	G1	L1	Topsoil/clearance. Period 6	Constantine II, *HK* 88	335-40
2759	G1	L1	Topsoil/clearance. Period 6	Theodora, *HK* 617	337-40
2737	G1	L1	Topsoil/clearance. Period 6	Urbs Roma, *HK* copy as 51	330-45
2757	G1	L1	Topsoil/clearance. Period 6	Julian, *RIC* 8 Arles 309	360-3
2743	G1	L1	Topsoil/clearance. Period 6	illegible *antoninianus*	3rd century
2752	G1	L1	Topsoil/clearance. Period 6	illegible	3rd-4th century
2808	G58	L1	Topsoil/clearance. Period 6	Victorinus, illegible *antoninianus*	268-70
3605	G1182	L1	Topsoil/clearance. Period 6	barbarous radiate, obv Victorinus, rev *Pax Aug* (vertical sceptre)	270-84
3606	G1182	L1	Topsoil/clearance. Period 6	illegible	3rd century
3604	G1288	L1	Topsoil/clearance. Period 6	Victorinus, Elmer 675	268-70
3609	G1288	L1	Topsoil/clearance. Period 6	Victorinus, Elmer 682	268-70
4143	G2755	L1	Topsoil/clearance. Period 6	barbarous radiate, illegible	270-84
4158	G2898	L1	Topsoil/clearance. Period 6	George III, shilling	1817
4140	G2899	L1	Topsoil/clearance. Period 6	barbarous radiate, obv Divo Claudio, rev altar	270-84
4193	G2947	L1	Topsoil/clearance. Period 6	illegible	3rd-4th century
2826	G61	F60	Pit. Period 6	illegible *antoninianus*	260-94
2843	G84	F60	Pit. Period 6	illegible *antoninianus*	260-94

SF	Find	L/F	Context and Period	Identification	Date
2896	G151	F103	Robber trench. Period 6	Philip I, illegible *sestertius*	244-9
3205	G424	F163	Pit. Period 6	Constantinopolis, *HK* copy as 52	330-45
3208	G424	F163	Pit. Period 6	illegible	3rd-4th century
3214	G449	F163	Pit. Period 6	barbarous radiate, obv Victorinus, rev *Invictus*	270-84
3213	G449	F163	Pit. Period 6	barbarous radiate, illegible	270-84
3240	G503	F163	Pit. Period 6	Edward the Confessor, North 830	1062-1065
3287	G530	F163	Pit. Period 6	illegible	
3278	G562	F163	Pit. Period 6	barbarous radiate, obv Tetricus II, rev *Pietas*	270-84
3279	G562	F163	Pit. Period 6	barbarous radiate, obv Tetricus II, rev *Spes Augg*	270-84
3023	G245	F165	Robber trench. Period 6	illegible	3rd-4th century
3263	G588	F174	Pit. Period 6	Hadrian, *RIC* 2 743	119-38
3296	G613	F174	Pit. Period 6	Hadrian, illegible *sestertius*	117-38
3022	G213	F183	Robber trench. Period 6	barbarous radiate, obv Tetricus I, rev *Salus Augg*	270-84
3752	G1694	F260	Pit. Period 6	Victorinus, Elmer 682	268-70
3751	G1694	F260	Pit. Period 6	barbarous radiate, obv Victorinus, rev *Virtus Aug*	270-84
3753	G1694	F260	Pit. Period 6	House of Constantine hybrid, obv *HK* as 51, rev as 48	330-45
3754	G1694	F260	Pit. Period 6	House of Theodosius, *CK* 1105-7	388-93
3048	G262	F262	Robber trench. Period 6	barbarous radiate, obv Tetricus I, rev *Hilaritas Augg*	270-84
3142	G262	F262	Robber trench. Period 6	barbarous radiate, obv Tetricus I	270-84
3044	G265	F264	Pit. Period 6	illegible	
3079	G288	F264	Pit. Period 6	barbarous radiate, obv Divo Claudio rev altar	270-84
3075	G288	F264	Pit. Period 6	barbarous radiate, obv Tetricus I, rev *Laetitia Augg*	270-84
3076	G288	F264	Pit. Period 6	House of Constantine, *HK* as	335-40

SF	Find	L/F	Context and Period	Identification	Date
				87	
3078	G288	F264	Pit. Period 6	illegible	3rd-4th century
3106	G336	F264	Pit. Period 6	barbarous radiate, obv Tetricus I, rev *Mars Victor*	270-84
3065	G313	F284	Pit. Period 6	Caracalla, core of illegible *denarius*	197-200
3116	G325	F293	Pit. Period 6	barbarous radiate, illegible	270-84
3129	G348	F293	Pit. Period 6	barbarous radiate, obv Tetricus I, rev *Salus Augg*	270-84
3216	G435	F370	Pit. Period 6	illegible fragment	3rd-4th century
3191	G476	F376	Large pit. Period 6	barbarous radiate, illegible	270-84
3270	G529	F376	Large pit. Period 6	barbarous radiate, obv Tetricus I, rev *Pax Aug*	270-84
4168	G418	F393	Pit. Period 6	Constans, *HK* copy as 136	335-45
4169	G418	F393	Pit. Period 6	House of Constantine, *CK* copy as 25	350-60
4308	G2963	F2951	Pit. Period 6	barbarous radiate, illegible	270-84
4335	G3023	F2951	Pit. Period 6	Marcus Aurelius, illegible *sestertius*	161-80
4572	G3246	F3245	Robber trench. Period 6	illegible	3rd-4th century
2815	G19	F4	Pit. ?Period 6	illegible	3rd-4th century
2865	G114	F20	Sand pit. ?Period 6	Constantine I, *RIC* 7 Trier 42	313-15
2875	G122	F20	Sand pit. ?Period 6	Marcus Aurelius, *RIC* 3 1033	171-2
3402	G665	F47	Trench. ?Period 6	Nerva, *RIC* 2 83	97
2864	G117	F55	Robber trench. ?Period 6	Julia Mamaea, illegible *denarius* core	222-35
Unstratified					
3718	G1600		Unstratified. Periods 3-6	Severus Alexander, *RIC* 4 as 473	222-35
3842	G2000		Unstratified. Periods 3-6	Vespasian, *RIC* 2 90	75
2867	G49		Unstratified. Periods 4-6	barbarous radiate, obv Tetricus I, rev *Laetitia Augg*	270-84
2880	G49		Unstratified. Periods 4-6	barbarous radiate, obv Tetricus II, rev *Spes Augg*	270-84
2856	G49		Unstratified. Periods 4-6	barbarous radiate, illegible	270-84

SF	Find	L/F	Context and Period	Identification	Date
2874	G49		Unstratified. Periods 4-6	barbarous radiate, illegible	270-84
2832	G49		Unstratified. Periods 4-6	illegible *antoninianus*	3rd century
2919	G150		Unstratified. Periods 4-6	Antoninus Pius, *RIC* 3 691a	140-4
2925	G150		Unstratified. Periods 4-6	Postumus, illegible *antoninianus*	259-68
2926	G150		Unstratified. Periods 4-6	barbarous radiate, obv Tetricus I, rev *Pax Aug*	270-84
2905	G150		Unstratified. Periods 4-6	illegible *as*	1st-2nd century
2927	G150		Unstratified. Periods 4-6	illegible	3rd-4th century
2937	G159		Unstratified. Periods 4-6	illegible	3rd-4th century
3021	G200		Unstratified. Periods 4-6	barbarous radiate, obv Gallienus, rev *Virtus*	270-84
2968	G200		Unstratified. Periods 4-6	barbarous radiate, obv Tetricus I, rev *Princ Iuvent*, hybrid	270-84
2984	G200		Unstratified. Periods 4-6	barbarous radiate, illegible	270-84
3015	G200		Unstratified. Periods 4-6	House of Constantine, *CK* copy as 25	350-60
2981	G200		Unstratified. Periods 4-6	Arcadius, *CK* 1107	388-93
2983	G200		Unstratified. Periods 4-6	Arcadius, *CK* as 164	388-92
3002	G226		Unstratified. Periods 4-6	barbarous radiate, obv Tetricus I, rev *Pax Aug*	270-84
3008	G229		Unstratified. Periods 4-6	Constans, *HK* copy as 156-7	346-50
3030	G250		Unstratified. Periods 4-6	barbarous radiate, illegible	270-84
3029	G251		Unstratified. Periods 4-6	barbarous radiate, obv Divo Claudio, rev altar	270-84
3099	G334		Unstratified. Periods 4-6	House of Constantine, *CK* copy as 25	350-60
3237	G500		Unstratified. Periods 4-6	Hadrian, BMC 1348	119-38
3253	G500		Unstratified. Periods 4-6	Caracalla, *RIC* 4 268	215
3239	G500		Unstratified. Periods 4-6	Valerian I, *RIC* 5 142	254-6
3261	G567		Unstratified. Periods 4-6	Paulina, *RIC* 4 2	235-8
3476	G1107		Unstratified. Period 5b?	Tetricus I/II, illegible *antoninianus*	270-4

SF	Find	L/F	Context and Period	Identification	Date
4213	G2923		Unstratified	Constantinopolis, *HK* copy as 185	330-45

SF	Find	L/F	Context and Period	Identification	Date
Site H					
Period 4					
4568	H242	L236	Robbed mosaic floor: Building 116. Period 4	barbarous radiate, obv Tetricus I, rev *Laetitia Aug N*	270-84
Period 5					
4296	H141	F59	Trench. Period 5	Caracalla, copy illegible *denarius*	213-217
Period 5b					
4598	H401	L382	Destruction debris: Building 120. Period 5b	Severus Alexander, illegible *denarius*	222-35
4529	H460	L450	Destruction debris/dump: Building 120. Period 5b	Trajan, illegible *as*	98-117
Period 5 or 6					
4586	H388	L387	Destruction debris B: Building 120? Period 5 or 6	illegible *denarius* fragment	2nd-3rd century
Period 6					
4198	H8	L3	Topsoil/clearance. Period 6	Gallienus, *RIC* 5(J) 157	253-60
4201	H11	L3	Topsoil/clearance. Period 6	barbarous radiate, illegible	270-84
4257	H13	L3	Topsoil/clearance. Period 6	barbarous radiate, obv Tetricus II, rev *Spes*	270-84
4205	H13	L3	Topsoil/clearance. Period 6	illegible	3rd century
4258	H13	L3	Topsoil/clearance. Period 6	illegible	3rd-4th century
4203	H14	L3	Topsoil/clearance. Period 6	Septimius Severus, *RIC* 4 63	195
4217	H15	L3	Topsoil/clearance. Period 6	barbarous radiate, obv Tetricus I	270-84
4204	H19	L3	Topsoil/clearance. Period 6	barbarous radiate, obv Claudius II	270-84
4202	H20	L3	Topsoil/clearance. Period 6	Gallienus, *RIC* 5(S) 252/3	260-268
4206	H25	L3	Topsoil/clearance. Period 6	barbarous radiate, obv Tetricus I, rev *Victoria Aug*	270-84
4224	H32	L3	Topsoil/clearance. Period 6	barbarous radiate, obv Tetricus I, rev *Pax Aug*	270-84
4225	H34	L3	Topsoil/clearance. Period 6	barbarous radiate, obv Tetricus II, rev *Pax Aug*	270-84
4196	H35	L3	Topsoil/clearance. Period 6	Edward II, long cross penny	1307-27
4214	H42	L3	Topsoil/clearance. Period	Gallienus,	260-268

SF	Find	L/F	Context and Period	Identification	Date
			6	*antoninianus* rev *Neptuno Cons Aug*	
4189	H44	L3	Topsoil/clearance. Period 6	Valerian I, *RIC* 5 224	253-60
4190	H47	L3	Topsoil/clearance. Period 6	barbarous radiate, obv Tetricus II, rev *Spes Publica*	270-84
4221	H49	L3	Topsoil/clearance. Period 6	barbarous radiate, obv Tetricus I, rev *Pax Aug*	270-84
4223	H50	L3	Topsoil/clearance. Period 6	Severus Alexander, *RIC* 4 67	227
4183	H52	L3	Topsoil/clearance. Period 6	Faustina I, *RIC* 3 (AP) 1155	141-61
4184	H57	L3	Topsoil/clearance. Period 6	Gallienus, illegible *antoninianus*	260-8
4220	H96	L3	Topsoil/clearance. Period 6	Severus Alexander, *RIC* 4 127	222-8
4211a	H97	L3	Topsoil/clearance. Period 6	barbarous radiate, illegible	270-84
4211b	H97	L3	Topsoil/clearance. Period 6	barbarous radiate, illegible	270-84
4219	H102	L3	Topsoil/clearance. Period 6	barbarous radiate, obv Tetricus II, rev *Spes Augg*	270-84
4215	H103	L3	Topsoil/clearance. Period 6	Valerian I, illegible *antoninianus*	257-8
4238	H109	L3	Topsoil/clearance. Period 6	Claudius II, *RIC* 5 67	268-70
4235	H109	L3	Topsoil/clearance. Period 6	Tetricus II, Elmer 769	270-4
4240	H109	L3	Topsoil/clearance. Period 6	barbarous radiate, obv Tetricus I	270-84
236	H109	L3	Topsoil/clearance. Period 6	illegible *antoninianus*	260-94
237	H109	L3	Topsoil/clearance. Period 6	House of Constantine, *CK* copy as 25	350-60
4234	H109	L3	Topsoil/clearance. Period 6	House of Valentinian, *CK* as 280	364-78
4239	H109	L3	Topsoil/clearance. Period 6	illegible	3rd-4th century
4318	H131	L3	Topsoil/clearance. Period 6	Tetricus I, Elmer 779	270-4
4411	H187	L3	Topsoil/clearance. Period 6	barbarous radiate, obv Tetricus I, rev *Pax Aug*	270-84
4361	H240	L3	Topsoil/clearance. Period 6	Salonina, *RIC* 5 32	260-8
4362	H240	L3	Topsoil/clearance. Period 6	barbarous radiate, illegible	270-84
4468	H420	L3	Topsoil/clearance. Period	barbarous radiate,	270-84

SF	Find	L/F	Context and Period	Identification	Date
			6	obv Tetricus I, rev *Pax Aug*	
4530	H462	L3	Topsoil/clearance. Period 6	Septimius Severus, *RIC* 4 copy as 265	202-10
4573	H462	L3	Topsoil/clearance. Period 6	House of Valentinian, *CK* as 96	364-78
4722	H463	L3	Topsoil/clearance. Period 6	Gratian, *CK* 111	367-75
4770	H525	L3	Topsoil/clearance. Period 6	barbarous radiate, obv Victorinus, rev *Invictus*	270-84
4768	H531	L3	Topsoil/clearance. Period 6	Tetricus I, Elmer 775	270-274
4218	H98	F39	Cellar? Period 6	Edward I, long cross farthing	272-307
4222	H113	F63	Linear feature. Period 6	Antoninus Pius, *RIC* 3 932	154-155
4313	H120	F67	Cess-pit. Period 6	barbarous radiate, obv Claudius II, rev *Providentia*	270-84
4310	H148	F76	Pit. Period 6	Commodus, *sestertius* rev Victory	180-92
4301	H126	F88	Cellar. Period 6	barbarous radiate, obv Victorinus, rev *Invictus*	270-84
4401	H207	F146	Robber trench? Period 6	barbarous radiate, obv Victorinus, rev *Invictus*	270-84
4504	H277	F146	Robber trench? Period 6	House of Constantine, *HK* copy as 87	335-45
4303	H152	F150	Disturbance. Period 6	Faustina I, *RIC* 3 (AP) 1102	141-61
4304	H152	F150	Disturbance. Period 6	Tetricus I, Elmer 787	270-274
4569	H246	F157	Pit. Period 6	German jetton	16th century
4496	H172	F171	Pit. Period 6	illegible *denarius* fragment	2nd-3rd century
4320	H202	F171	Pit. Period 6	barbarous radiate, obv Tetricus II, rev *Pietas*	270-84
4566	H496	F183	Robber trench. Period 6	Postumus, Elmer 565	259-68
4788	H507	F365	Pit. Period 6	barbarous radiate, obv Tetricus II, rev *Salus/Pax* hybrid	270-84

SF	Find	L/F	Context and Period	Identification	Date
Site J					
Period 1					
5004	J318	F309	Drain: Building 79. Period 1	Claudius I, *RIC* 1 copy as 96	43-64
Period 2					
5008	J334	L222	Destruction debris: Building 79. Period 2	illegible	1st century
hoard					
4972	J252	L222	Destruction debris: Building 79. Period 2	Claudius I, *RIC* 1 copy as 100	43-64
4973	J252	L222	Destruction debris: Building 79. Period 2	Claudius I, *RIC* 1 copy as 100	43-64
4974	J252	L222	Destruction debris: Building 79. Period 2	Claudius I, *RIC* 1 copy as 100	43-64
4975	J252	L222	Destruction debris: Building 79. Period 2	Claudius I, *RIC* 1 copy as 100	43-64
4976	J252	L222	Destruction debris: Building 79. Period 2	Claudius I, *RIC* 1 copy as 100	43-64
4977	J252	L222	Destruction debris: Building 79. Period 2	Agrippa, *RIC* (Tib) copy as 32	40-50
Period 3					
5035	J245	F236	Robber trench. Period 3	Claudius I, *RIC* 1 copy as 100	43-64
Period 6					
4543	J3	L1	Clearance. Period 6	illegible *denarius*	1st-3rd century
4552	J3	L1	Clearance. Period 6	William IV, penny	1830-7
4734	J49	L1	Clearance. Period 6	Trajan, *RIC* 2 534	103-11
4735	J49	L1	Clearance. Period 6	Claudius II, *RIC* 5 53	268-70
4736	J49	L1	Clearance. Period 6	Constantius II, *HK* 145	346/348
4772	J69	L1	Clearance. Period 6	Theodora, *HK* 129	337-40
4635	J100	L1	Clearance. Period 6	House of Constantine, *CK* copy as 25	350-60
4704	J99	F80	Pit. Period 6	William & Mary, halfpenny	1688-94
4607	J117	F114	Pit. Period 6	German jetton, Venetian series	early 17th century

SF	Find	L/F	Context and Period	Identification	Date
Site K					
Period 3					
4997	K43	L39	Demolition debris. Period 3	Domitian, *as* rev *Virtuti Augusti SC*	86-96
5149	K404	L358	Horticultural soil. Period 3	Claudius I, *RIC* 1 copy as 94	43-64
Period 3b					
4998	K17	F12	Oven. Period 3b (backfill 4)	Victorinus, Elmer 697	268-70
4991	K36	F12	Oven. Period 3b (backfill 4)	illegible	3rd-4th century
5109	K127	F113	Linear feature/drain? Period 3b?	Domitian, BMC 86	80
Period 3b or 3c					
5105	K176	F92	Trench. Period 3b or 3c	Antonia, *RIC* 1 (Clau) 92	41-50
Unstratified					
4650	K9		Unstratified	barbarous radiate, illegible	270-84
5088	K50		Unstratified	Victorinus, Elmer 743	268-70
5133	K200		Unstratified	illegible	1st-2nd century
5191	K333		Unstratified	barbarous radiate, obv Tetricus I, rev *Salus Augg*	270-84

SF	Find	L/F	Context and Period	Identification	Date
Site M					
Period 2					
4822	M217	L216	Burning: Building 91 (demolition?). Period 2 destruction	Claudius I, *RIC* 1 copy as 100	43-64
4906	M409	L403	Sandy clay floor: Building 91. Period 2	Claudius I, *RIC* 1 copy as 100	43-64
Period 6					
4908	M302	F300	Robber trench for Building 123. Period 6	Constantius II, *HK* copy as 139	346-50
Period 7					
4664	M102	F37	Pit. Period 7	Tetricus II, Elmer 773/7	270-4
4795	M77	F76	Pit. Period 7	Constantine I, *RIC* 7 London 109	317
4854	M202	F121	Pit. Period 7	Henry II, halved penny, North 963	1180-9
4853	M202	F121	Pit. Period 7	Richard II, penny	1377-99
Unstratified					
4754	M39	L1	Surface cleaning. Unstratified	barbarous radiate, obv Tetricus I, rev *Pax Aug*	270-84
4723	M46	L1	Surface cleaning. Unstratified	illegible	3rd-4th century
4707	M58	L1	Surface cleaning. Unstratified	Tetricus I, Elmer 765	270-4
4784	M70	L1	Surface cleaning. Unstratified	barbarous radiate, obv Claudius II, rev *Virtus Aug*	270-84
4655	M92	L1	Surface cleaning. Unstratified	Gallienus, *RIC* 5(S) 297	260-8
4669	M93	L1	Surface cleaning. Unstratified	barbarous radiate, illegible	270-84
4670	M107	L1	Surface cleaning. Unstratified	Gallienus, *antoninianus*, rev *Dianae Cons Aug*	260-8
4790	M163	L1	Surface cleaning. Unstratified	Hadrian, *RIC* 2 568	119-21
4786	M187	L1	Surface cleaning. Unstratified	barbarous radiate, obv Tetricus I, rev *Salus Augg*	270-84
4890	M290	L1	Surface cleaning. Unstratified	Vespasian, illegible *as*	69-79
4855	M226	L224	Unstratified	Nero, *RIC* 1 605	64-8
4907	M297		Unstratified	barbarous radiate, obv Tetricus I, rev *Salus Augg*	270-84
4962	M579		Unstratified	Trajan, illegible *as*	98-117

SF	Find	L/F	Context and Period	Identification	Date
Site W					
5172	W33	F30	Footway. ?Period 5	barbarous radiate, obv Tetricus II, rev *Spes Publica*	270-84
5237	W26		Unstratified	Charles II, farthing	1660-85

Appendix 14 (Chapter 11):
Analysis of the painted wall plaster from the Culver Street and the Gilberd School sites

	Area (cm^2)	% of Area
077	18	0.0
077 destruction debris	6830	3.7
077 Room 1	340	0.2
077 Room 1/2	2011	1.1
077 Room 2/3	20	0.0
077 Room 5	1805	1.0
077 Room 7/8	291	0.2
077? destruction debris	8765	4.7
078 destruction debris	56	0.0
078 Room 4	1	0.0
078 Room 5	31	0.0
078 Room 6	2078	1.1
078? destruction debris	2617	1.4
079	259	0.1
081	72	0.0
083	90	0.0
083 Room 7	184	0.1
087	121	0.1
090	101	0.1
094 Room 1a	20	0.0
094 Room 2	96	0.1
094 Room 5	354	0.2
094 Room 5a	2	0.0
094? Room 2	37	0.0
095 Room 3/4	960	0.5
095 Room 4	1957	1.1
095 Room 4a	23	0.0
095 Room 4b	200	0.1
095? Room 1	30	0.0
099/100	44	0.0
103	1	0.0
108	3119	1.7
110	48	0.0
112	5	0.0
112 Room 1	1269	0.7
112 Room 2	7003	3.8
112 Room 3	50	0.0
112 Room 4	80	0.0
112 Room 5	9	0.0
112 Room 6a	17	0.0
112 Room 6b	3078	1.7
112? Room 3	22	0.0
113 Room 1	2034	1.1
113 Room 3	63	0.0
113 Room 5	66	0.0
113 Room 8	329	0.2
113? Room 5	1332	0.7

Table 11.1 continued over page...

...continued from previous page

	Area (cm^2)	% of Area
114	771	0.4
115	186	0.1
116	2826	1.5
116?	32	0.0
117	15	0.0
118	504	0.3
118?	1253	0.7
119	4	0.0
119?	6	0.0
120	5235	2.8
120 Room 8	13749	7.4
120?	3300	1.8
122 Room 3	18	0.0
123	62	0.0
123 (robbers)	5108	2.8
123 demo.	377	0.2
123 P2	532	0.3
123 P4	3355	1.8
123 Room 10	74	0.0
123 Room 12 (demo.)	32245	17.4
123 Room 13	1292	0.7
123 Room 8	3765	2.0
123 Room 9	31	0.0
123 yard	28	0.0
127	418	0.2
127?	31	0.0
131 destruction debris	402	0.2
136	693	0.4
136 destruction debris	12	0.0
GBS AL73	61047	32.9
ALL	185309	100.0

Table 11.1 Areas of Roman wall plaster from the Culver Street and Gilberd School sites.

	Area (cm^2)	% of Area
red	5	7.9
yellow with black stripe	58	92.1
ALL	63	100.0

Table 11.2 Building 123.

	Area (cm^2)	% of Area
abraded brownish red & yellow with dark red stripe	88	1.7
black & green (mottled black)	24	0.5
blue grey & curved ?brown band	117	2.3
bright blue (grains)	18	0.4
browny red with dark red stripe	81	1.6
cream & red	16	0.3
dark red	98	1.9
dark red & green	77	1.5
dark red & grey	12	0.2
dark red & mottled orangey red	30	0.6
dark red & orangey brown & yellow & red (band & vertical & diagonal lines)	130	2.5
dark red & red & cream & orangey brown band with diagonal ends	112	2.2
dark red & white	24	0.5
dark red & white & yellow with black stripe	63	1.2
dark red & yellow	6	0.1
dark red & yellow (diagonal edges)	16	0.3
dark red & yellow with black stripe	49	1.0
dark red & yellow with dark red band	36	0.7
dark red with green & black & indeterminate band	120	2.3
dark red with green band & cream stripe & grey stripe	120	2.3
decayed ?pink	36	0.7
green	114	2.2
green & ?cream	6	0.1
green & cream with grey stripe	100	2.0
green & pink with red splodges & yellow band	8	0.2
green & white	12	0.2
green & yellow with black stripe	12	0.2
green & yellowy brown	63	1.2
green with pinky streaks	21	0.4
grey & green & pale brown (?geometric pattern)	36	0.7
grey & red	1	0.0
grey with ?brown band	6	0.1
mottled orangey red	455	8.9
mottled orangey red & white with dark red band	60	1.2
mottled orangey red & yellowy brown with green splodges & geometric patterns	24	0.5
orange & dark red	55	1.1
orange & yellow with red stripes & green splodges	25	0.5
orange with dark red band & red splodge	36	0.7
orangey brown	55	1.1
orangey brown & green	6	0.1
pale brown	158	3.1
pale brown & discoloured white	40	0.8
pink	6	0.1
pink (mottled yellow) with red splodge	12	0.2
purple	221	4.3
red	212	4.2
red & ?discoloured white with red band	20	0.4
red & ?pale blue with ?grey band & 2 incised lines	4	0.1
red & dark red	20	0.4

Table 11.3 continued over page...

...continued from previous page

	Area (cm^2)	% of Area
red & streaky pinky grey	8	0.2
red & white	20	0.4
red & white with black stripe	117	2.3
red & yellow	30	0.6
red with curved grey band	35	0.7
red with grey splodges	20	0.4
red with reddish brown band	32	0.6
red with white band	63	1.2
red with yellow band	110	2.2
reddish brown with dark reddish brown stripe	12	0.2
streaky pinky grey	18	0.4
white & cream band (secondary coat)	42	0.8
white & dark grey	15	0.3
white & green with black stripe	100	2.0
white & green with dark brown & orange stripes	20	0.4
white & purple	20	0.4
white & red (in situ secondary coat)	42	0.8
white & red with black stripe	132	2.6
white & yellow with black & red bands	24	0.5
white & yellow with black stripe	12	0.2
white & yellow	25	0.5
white (decayed white)	231	4.5
white or yellow & red with orange splodges or lines	15	0.3
white with black stripe	340	6.7
white with red pattern	77	1.5
white with red stripe	195	3.8
yellow & browny red with dark red band	20	0.4
yellow & yellowish brown	4	0.1
yellow (?yellow)	230	4.5
yellow with brown ?streaks	6	0.1
yellowy brown & ?grey (base of wall)	32	0.6
ALL	5108	100.0

Table 11.3 Building 123 robber trenches.

	Area (cm^2)	% of Area
black	12	3.1
grey & green with cream stripe	13	3.4
grey with blue patch	48	12.6
pink	112	29.4
pink with black on top	10	2.6
pink with yellow on top	16	4.2
red with cream stripe & green overlay	24	6.3
red with yellow stripe	144	37.8
yellow with red patch & green on top	2	0.5
ALL	381	100.0

Table 11.4 Building 123 demolition debris (from CUL Phase One only).

	Area (cm^2)	% of Area
?white	2	0.4
black	2	0.4
black & white & green	35	6.6
dark red & white	9	1.7
dark red (decayed)	9	1.7
pink	8	1.5
pink with red splodges	10	1.9
red	1	0.2
red & white	76	14.3
red & yellow with ?white stripe	3	0.6
red (abraded)	6	1.1
white	114	21.4
white (decayed)	105	19.7
white (some green overpainted dark red)	6	1.1
yellow	146	27.4
ALL	532	100.0

Table 11.5 Building 123, Passage 2.

	Area (cm^2)	% of Area
?green	2	0.1
?white	8	0.2
abraded green (secondary)	24	0.7
abraded pink	18	0.5
black	21	0.6
green & brown	5	0.1
mottled orangey red	1288	38.4
pink	76	2.3
pink (very abraded)	3	0.1
pink with large red splodges	173	5.2
pink with red splodges	291	8.7
purple & white	24	0.7
red	286	8.5
red & ?yellow	9	0.3
red & abraded yellow	15	0.4
red & black with white stripe	4	0.1
red & browny red	20	0.6
red & dark red	16	0.5
red & grey	25	0.7
red & white	149	4.4
red (& white?)	8	0.2
red (abraded)	32	1.0
red (dappled)	86	2.6
red (mottled or decayed)	88	2.6
red with curved grey stripe	30	0.9
red with faint ?green stripe	1	0.0
secondary coat; red	160	4.8
white	152	4.5
white & dark red	24	0.7
white & dark red with two orangey brown stripes	36	1.1
white & red	42	1.3
white (?abraded)	54	1.6
white with ?curved yellow line	15	0.4
white with grey stripe	4	0.1
white with pale brown stripe	36	1.1
white with V-shaped line	30	0.9
yellow	6	0.2
yellow & red with white band	9	0.3
yellow & white	15	0.4
yellow (?abraded)	45	1.3
yellow (inc.?abraded)	25	0.7
ALL	3355	100.0

Table 11.6 Building 123, Passage 4.

	Area (cm^2)	% of Area
?browny yellow	62	1.6
?mottled pink?	2	0.1
?pink	6	0.2
?white	2	0.1
dark red & red	69	1.8
green	4	0.1
greeny blue (decayed)	215	5.7
mottled orangey red with dark red stripe	21	0.6
mottled pink	8	0.2
painted pink?	76	2.0
orange with various dark red stripes	110	2.9
orangey brown & dark red (V-shaped)	48	1.3
pale pink (?red)	50	1.3
pink	9	0.2
pink & dark red with red splodges	16	0.4
pink (light chalky base)	15	0.4
pink with large red splodges	694	18.4
pink with red splodges	2	0.1
pink with red splodges & red lines	500	13.3
red	271	7.2
red (abraded)	18	0.5
red (very abraded)	80	2.1
secondary coat; red	20	0.5
secondary coat; white	195	5.2
secondary coat; white & red	12	0.3
secondary coat; white with red band	10	0.3
white	305	8.1
white & green	16	0.4
white & green with black stripe	28	0.7
white & red	27	0.7
white (?discoloured)	135	3.6
white (discoloured)	4	0.1
white with black band & green band bordered by black stripes	81	2.2
white with black stripe	360	9.6
white with black stripe & thin pointed red stripes	36	1.0
white with green band bordered by black stripes	120	3.2
white with two black stripes	30	0.8
yellow	84	2.2
yellow & black with green splodges	24	0.6
ALL	3765	100.0

Table 11.7 Building 123, Room 8.

	Area (cm^2)	% of Area
dark red	12	38.7
red (abraded)	6	19.4
red (abraded) with ?grey stripe	4	12.9
white (discoloured)	9	29.0
ALL	31	100.0

Table 11.8 Building 123, Room 9.

	Area (cm^2)	% of Area
black	16	21.6
red	27	36.5
white	4	5.4
yellow	9	12.2
yellow (?Room 13)	18	24.3
ALL	74	100.0

Table 11.9 Building 123, Room 10.

	Area (cm^2)	% of Area
abraded ?green	136	0.4
abraded ?green or ?black	88	0.3
blue	20	0.1
dark red	151	0.5
dark red & ?grey	97	0.3
dark red & abraded ?green with yellow band	18	0.1
dark red & green with white stripe	154	0.5
dark red & grey with white stripe	3	0.0
dark red & orange	35	0.1
dark red & yellow	15	0.0
dark red band & grey with orange stripe	80	0.2
dark red with yellow stripe	54	0.2
green	4176	13.0
green & ?grey (with blue & yellow streaks)	99	0.3
green & black	42	0.1
green & black & yellow with white stripe	25	0.1
green & pinkish grey	12	0.0
green & red	254	0.8
green & red & yellow with white band	6	0.0
green & streaky greeny yellow	12	0.0
green & white	300	0.9
green with white stripe	59	0.2
green with yellow stripe	6	0.0
grey	404	1.3
grey & dark red with yellow stripe	348	1.1
grey & green	256	0.8
grey & green with white stripe	175	0.5
grey & yellow	24	0.1
grey with green & red stripe	24	0.1
grey with yellow stripe	16	0.0
indeterminate	500	1.6
mottled orangey red	16885	52.4
mottled orangey red & abraded ?green	300	0.9
mottled orangey red & green	10	0.0
mottled orangey red & grey with white stripes	24	0.1
mottled orangey red & red	225	0.7
mottled orangey red & white	28	0.1
mottled orangey red with dark red band	1413	4.4
mottled orangey red with dark red splodges	450	1.4
orange	100	0.3
orangey white	100	0.3
orangey white & green	252	0.8
orangey white & green with white stripe	372	1.2
orangey white & grey	36	0.1
red	408	1.3
red & black	64	0.2
red & green with white band	134	0.4
red & green with yellow stripe	6	0.0
red & grey	36	0.1
red & grey with yellow stripe	80	0.2
red & white	64	0.2
red with dark red stripe	361	1.1
red with green decoration	6	0.0
red with light red stripe	16	0.0
red with white stripe	35	0.1
white (?white or decayed white)	2988	9.3
white with light brown stripe	15	0.0

Table 11.10 continued over page...

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	Area (cm^2)	% of Area
yellow	151	0.5
yellow & dark red with white band	3	0.0
yellow & green with white band	94	0.3
ALL	32245	100.0

Table 11.10 Building 123, Room 12 (demolition debris).

	Area (cm^2)	% of Area
red	36	2.8
red & yellow	6	0.5
yellow	800	61.9
yellow with black stripe	150	11.6
yellow with red stripe	300	23.2
ALL	1292	100.0

Table 11.11 Building 123, Room 13.

	Area (cm^2)	% of Area
bright blue (with grains)	1	3.6
white with red band	27	96.4
ALL	28	100.0

Table 11.12 Building 123, yard.

APPENDIX 15 (Chapter 12): Descriptions of the illustrated prehistoric pottery

by N.R.Brown

Fabrics present in the assemblage from Colchester are:-

A. Flint, S, 2, well sorted
B. Flint, S-M, 2
D. Flint, S-L, 2, poorly sorted
E. Flint and sand, S-M, 2
F. Sand, S-M, 2-3, and occasional large flint
I. Sand, S-M, 2-3
M. Grog, often with some sand or flint and occasional small rounded or sub-angular voids
O. Quartz and flint, S-L, 2, poorly sorted with some sand
P. Sparse very fine sand, occasional M-L flint and sparse irregular voids
Q. Flint, S-L and grog S-M, 2

Size of inclusions:

S = less than 1 mm diameter
M = 1-2 mm diameter
L = more than 2 mm diameter

Density of inclusions:

1 = less than 6 per cm^2
2 = 6-10 per cm^2
3 = more than 10 per cm^2

Catalogue of illustrated pottery (pp 315-8; Figs 12.1-2)

Earlier Neolithic plain bowls

1. 1.81 E1860. EL357. Cover loam. D. Slightly everted rounded rim. Grass wiped surfaces.

2. 1.81 E1870. EL357. Cover loam. B. Rolled rim. Smoothed exterior.

3. 1.81 E1937. EL211. Part of pit EF1321. D. Rolled rim.

4. 1.81 E1986. EL345. Cover loam. D. Roughly rolled rim.

5. R GBS A1144. AL36. E. Thickened rounded rim. Surfaces abraded probably originally smoothed.

6. R BKC E987. EL289. A. Flat topped rim.

Grooved Ware

7. R HEC. 6. M. Plain rounded rim.

8. R 1.81 E1663. L251. Period 2. M. Body sherd, inside missing. One side of the sherd has double applied vertical cordons with sloping grooved lines between forming a rough ladder pattern. The panel between these cordons, and part of a single vertical cordon on the other side, is filled with horizontal grooved lines.

9. 1.81 E1885. EF1457. Neolithic pit. Body sherds. Plain smoothed exterior. Traces of complex incised decoration on interior.

10. 1.81 E2087. EL345. Cover loam. M. Body sherd. Irregular rows of oval stabbed impressions on exterior.

11. ?R. 1.81 G3001. ?Disturbed natural. M. Lower wall and part of flat base.

12. 1.81 E1901. EF1457. Neolithic pit. M. Upper part of bucket shaped vessel. Rim Durrington Walls Form 9 (Longworth 1971, 57). Body plain. Four horizontal rows of stab and drag lines below rim.

13. 1.81 E1901. EF1457. Neolithic pit. M. Body sherd of bucket shaped vessel. Abraded exterior. Two triple settings of vertical cordons with parts of two further cordons surviving at the edges of the sherd. Grooved strokes between two of the cordons of one of the triple settings form a ladder pattern. The upper parts of the panels between the settings of cordons have sloping grooved lines.

14. 1.81 E1901. EF1457. Neolithic pit. M. Lower wall sherd divided into panels by vertical cordons. Panels filled by sloping incised lines. Possibly same vessel as 17.

15. 1.81 E1901. EF1457. Neolithic pit. M. Upper part of bucket shaped vessel. Rim Durrington Walls Form 13 (Longworth 1971, 57). Horizontal lines of stab and drag below rim. Between these and a single horizontal cordon stab and drag lines form a pattern of irregular filled triangles. A series of vertical cordons, marked by finger impressions where they join the horizontal cordon, divide the body into panels. The panels are filled with sloping grooved and stab and drag lines. Probably same vessel as 16.

16. 1.81 E1901. EF1457. Neolithic pit. M. Upper body of bucket shaped vessel. Part of a single horizontal cordon survives. Vertical cordons, marked by finger impressions where they join the horizontal cordon, divide the body into panels. The panels are infilled with opposed stab and drag lines. Probably same vessel as 15.

17. 1.81 E1901. EF1457. Neolithic pit. M. Lower part of bucket shaped vessel flat base with rough protruding foot. The body is divided into panels by a series of vertical cordons. The panels are infilled by opposed stab and drag or grooved lines. Possibly same vessel as 15 and 16.

Beaker coarse ware

18. R. 1.81 H626. F. Body sherd with rows of finger tip impressions on exterior.

19. R. LWC A309. O. Body sherd with paired finger

impressions on exterior.

20. R. 1.81 M578. D. Flat topped rim, with ridge on exterior below rim. Part of a row of fingernail impressions survives between rim and ridge.

Collared urn

21. R. 1.81 E1460. EL191. D. Part of two lines of round toothed comb impressions survive on collar.

Deverel Rimbury

22. 1.81 E1864. EL357. Cover loam. Q. Rim of slightly biconical vessel. Row of finger impressions on top of rim and second row below rim on exterior.

23. 1.81 E1349. EL215. Part of pit EF1321. B. Rim of bucket urn. Row of finger impressions on top of rim with a second row immediately below rim on exterior.

24. R. 1.81 E1508. EF1289. Q. Rim of bucket urn. Row of finger impressions on top of rim with a second row immediately below rim on exterior.

25. R. 1.81 M729. MF313. B. Rim of ?bucket urn. Row of finger impressions on rim. Row of oval impressions immediately below rim on exterior.

26. 1.81 E1526. EF1224. Pit. Q. Rim of bucket urn. Row of finger impressions on top of rim with a second row immediately below rim on exterior. Body sherd possibly from same vessel with finger tip decoration on exterior.

27. 1.81 E1430. EF1224. Pit. M. Upright plain rim of slightly biconical vessel, with plain applied cordon at shoulder.

28. 1.81 E1899. EL345. Cover loam. M. Rim of ?bucket urn. Part of a row of finger impressions surviving on top of rim. Exterior surfaces missing.

29. R. GBS A930. Top of natural sand. D. Body sherd of slightly biconical vessel with applied cordon with deep thumb impression.

30. R. 1.81 C463. CF196. D. Body sherd of bucket urn with finger impressed horizontal cordon.

31. 1.81 E1428. EL211. Part of pit EF1321. D. Body sherd of ?bucket urn with single row of finger impressions above slight slack shoulder.

32. 1.81 E1835. EL358. Cover loam. B. Body sherd of slightly biconical vessel with row of finger impressions on slight shoulder and finger nail rustication above.

33. 1.81 E1865. EL357. Cover loam. D. Body sherd of bucket urn. Row of finger impressions on exterior.

Late Bronze Age

34. 1.81 E2002. EL361. Cover loam? S. Plain rim of hooked rim jar. I.

35. 1.81 E2157. EL345. Cover loam. D. Flattened rim of shouldered jar. I.

36. R. IRB 38, F20. D. Rounded rim of hooked rim jar. I.

37. R. GBS B536. BF133. D. Body sherd with applied slashed neck cordon. I.

38. 1.81 E1855. EL338. Cover loam. D. Body sherd with lug/handle attached. One end of the handle has a plug like extension fitted into a perforation in the wall the other end lacks the plug and was probably simply luted to the vessel wall. I.

39. R. 1.81 A745. AL277. B. Flat topped rim of round bodied bowl. Abraded. III.

40. 1.81 E1976. EL361. ?Cover loam. D. Slightly everted rounded rim of shouldered bowl. III.

41. 1.81 E1401. EL215. Part of pit EF1321. A. Round bodied bowl smoothed surfaces. IV.

42. 1.81 E2074. EL345. Cover loam. E. Flat topped rim of small shouldered bowl. IV or V.

Middle Iron Age

43. 1.81 E1836. EL357. Cover loam. J. Everted rounded rim and round shoulder of jar. Little Waltham Form 1 (Drury 1978, 53).

44. 1.81 E1851. EL338. Cover loam. I. Footring base of bowl, smoothed surfaces partly abraded.

Miscellaneous

45. 1.81 E1835. EL338. Cover loam. D. Flat base and lower wall sherd. Rows of circular stabbed impressions on exterior. Finger impressions where wall joins base. Abraded.

46. R. 1.81 E1759. EF1441. B. Body sherd with row of stabbed circular impressions on exterior.

47. R. GBS B679. BF166. B. Body sherd with row of deeply stamped circlets. Abraded.

APPENDIX 16 (Chapter 12):
Catalogue of flints from the Culver Street and the Gilberd School sites

by John Wymer and Julie P Gardiner

[The flints are catalogued by small finds number order according to site.]

Culver Street: Phase 1

by John Wymer

Site A

SF 1.81 270. A123 AF50. Pit(s). Medieval or later. Flake.

Fig 12.3.1, SF 1.81 1666. A661. Unstratified Roman. End scraper on blade. Made on a true blade from a prismatic core. High quality black flint. Mesolithic.

Site B

SF 1.81 1608. B1579 BL380. Dump (make-up for BL324?): Building 94, Room 2. Period 3. Flake.

SF 1.81 1633. B1685 BF495. Small pit/posthole: Building 94, Room 5a. Period 3. Flake.

SF 1.81 1673 B1741 BL389. General Boudican destruction layer: destruction of Building 77. Early Period 3. Three flakes, one burnt.

Fig 12.3.3, SF 1.81 1728. B1860 BL454. Floor: Building 78, Room 1. Period 2. Flake with shallow secondary working along one edge. Neolithic or Early Bronze Age.

SF 1.81 1768. B1937 BF570. Slot/gully: Building 77, Room 6. Period 1/2 Two flakes.

SF 1.81 1942. B2121 BL584 Sand make-up/floor: Building 77. Period 1/2. Broken part of distal end of flake or blade. Brown stained grey flint. Recent breaks.

Site E

SF 1.81 2546. E1230 EF1098. Posthole: Building 83. Period 1. Flake.

SF 1.81 2512. E1282 EF1321 (EL191). Prehistoric pit. Spall (ie greatest length 20 mm).

SF 1.81 2513. E1281 EF1321 (EL191). Prehistoric pit. Segment of single-ridged blade. Faint polish on one edge could indicate use.

SF 1.81 2515. E1290 EF1321 (EL191). Prehistoric pit. Flake-blade. Prominent bulb and platform.

SF 1.81 2514. E1291. Unstratified. Period 1 or 2. Potboiler.

Fig 12.3.5, SF 1.81 2530. E1314. On cover loam. Knife on large cortical flake. Neolithic.

SF 1.81 2519. E1316 EF1321 (EL215). Prehistoric pit. Flake.

SF 1.81 2522. E1317 EF1321 (EL215). Prehistoric pit. Small flake-blade. Rolled, patinated and slightly stained, and thus presumably Palaeolithic, derived from gravel. Blade-like shape fortuitous.

Fig 12.3.4, SF 1.81 2535. E1348 EF1321 (L211). Prehistoric pit. Round scraper made on thick cortical flake. Neolithic.

SF 1.81 2552. E1364 EL192. Cover loam. Period 1. Two spalls.

SF 1.81 2564. E1396. Layer below EL170 (Period 1 occupation). Period 1. Fire-fractured flake.

SF 1.81 2579. E1420 EL181. Occupation: ?Building 83. Period 1. Flake.

SF 1.81 2562. E1421 EF1321 (EL211). Prehistoric pit. Spall.

SF 1.81 2577. E1478 EL345. Cover loam. Flake.

SF 1.81 2621. E1522 EF1321 (EL215). Prehistoric pit. Shatter-piece.

SF 1.81 2622. E1523 EF1321 (EL191). Prehistoric pit. Spall.

SF 1.81 2594. E1526 EF1224. Pit. Flake or blade segment.

SF 1.81 2593. E1527 EF1321 (EL215). Prehistoric pit. Flake.

Fig 12.3.2, SF 1.81 2598. E1562 EF1321 (L211). Prehistoric pit. Blade, 60 mm long. Punch or soft hammer struck. Dark grey-black flint. Signs of use. Faint polish on one edge. Mesolithic.

SF 1.81 2617. E1587 EF1329. Pit. Period 2. Flake.

SF 1.81 2637. E1744 EL227. Wash off military road. Period 1. Spall.

SF 1.81 2648. E1862 EL361. Cover loam? Proximal end of broken blade. Ancient break.

SF 1.81 2645. E1864 EL357. Cover loam. Flake.

SF 1.81 2672. E1885 EF1457. Pit. Flake and potboiler.

Fig 12.3.6, SF 1.81 2677. E1910 EL345. Cover loam. Butt end of broken flaked axe. Made of poor quality brown-stained gravel flint. Probably unfinished and broken in manufacture. Most likely Mesolithic.

Fig 12.3.7, SF 1.81 2712. E2172 EL361. Cover loam?

Scraper. Clark's (1960) Type C Disc, with slight bifacial working on bulbar end.

SF 1.81 2713. E2172 EL361. Cover loam? Flake. A freak striking which has resulted in two bulbar faces each side of the same cortical platform. Slight signs of use.

SF 1.81 2714. E2172 EL361. Cover loam? Flake. With hinge fracture, but shallow flaking on dorsal face suggests possibly waste from axe manufacture.

SF 1.81 2715. E2172 EL361. Cover loam? Flake. Cortical platform. Slight secondary working or heavy use on both edges.

Culver Street: Phase 2

by Julie P Gardiner

This small collection of eight flints is mostly dubious in terms of identification. SF 1.81 5408 is a quite neatly worked scraper with retouch occurring around almost the entire circumference of the piece. SF 1.81 5174 is the broken tip of what would have been a rather fine, bifacially-retouched, leaf-shaped arrowhead, although the piece is too fragmentary to identify its form more closely. SF 1.81 4940 also stands out as a long thin blade of translucent brown flint struck from a prismatic core. It may be Mesolithic in date but the apparent thinning of the butt and notch at the distal end are recent.

The remaining pieces are all crudely struck unretouched flakes, mostly broken and with recently damaged edges. SF 1.81 3497 appears to be an accidental percussion flake and the apparent retouch on one edge is rather irregular and probably post-depositional. The large thermally-detached lump, SF 1.81 5368, is just possibly a core, but the quality of the flint is so obviously awful that it seems unlikely to have been deliberately worked. Many of the removals are clearly recent, since they remove patina, and the edges are badly crushed. The nodule is large (565 g) and chalky, with a pitted white/pale brown cortex reminiscent of surface chalk flint. It seems most likely that it was introduced to the site in historic times as building material and is unlikely to be of prehistoric origin.

In addition there are two spherical natural flints, the larger of which (SF 1.81 5288) could conceivably have been selected for use as a cannon-ball at some stage during Colchester's more recent history.

Site D

SF 1.81 2818. D19 DL9. Topsoil. Period 7. Struck flake with hinge fracture.

Site G

SF 1.81 2992. G230 GL177. Occupation debris/midden: Building 120. Period 5b. Natural spherical flint.

SF 1.81 5015. G4006 GL3985. Cultivated soil. Period 3. Struck flake.

SF 1.81 3497. G1048 GF862. Robber trench. Period 6. Percussion flake. Possible retouch but irregular and more probably damage. Could be recent.

SF 1.81 5368. G1667 GF1653. Posthole: Building 118. Period 4. Large thermally-detached lump. Much recent damage. Very poor quality flint. Probably building debris. Weight 565 g.

Fig 12.3.8, SF 1.81 4941. G3651 GL3282. Dump. Period 3. Palaeolithic hand-axe of pointed type.

Site H

SF 1.81 5288. H512 HL450. Destruction debris/dump: Building 120. Period 5b. Natural spherical flint with sponge impression. Could have been used as a cannonball?? Weight 471 g.

SF 1.81 4940. H652. Unstratified. Struck blade from prismatic core. Retouch seems to be accidental.

SF 1.81 4952. H664. Unstratified. Struck blade, broken.

Site K

SF 1.81 5174. K401. Unstratified. Leaf-shaped arrowhead fragment. Fine, bifacial retouch.

Site M

SF 1.81 4951. M554 MF533. Pit: Building 91. Period 2. Struck flake, hinge fractured.

Site W

SF 1.81 5408. W41. Unstratified. Scraper. Quite neatly worked round most of circumference.

The Gilberd School

by Julie P Gardiner

A small number of residual flints was recovered from various contexts on the Gilberd School site. The raw material appears to be a poor quality flint with rolled cortex and of small nodular size. Colour varies from light brown and grey to black with numerous flaws and inclusions. It seems to be of gravel origin, presumably local.

The material may be classified as follows:

smashed lump	1
?core frag	1
waste flakes	16
?retouched flake	2
plano-convex knives	2
?borer	1
total	**23**

Most flakes seem to have been detached by means of a sharp, and occasionally brutal, blow with a hard hammer. Many pieces show considerable post-depositional damage. This is hardly surprising given the many centuries of building and other activities in the area. It does mean, however, that traces of possible retouch must be viewed with caution and some of the struck pieces may not be prehistoric in origin. SF GBS 672 is apparently a (broken) bifacially retouched point, possibly a borer, but there is also clear subsequent damage. SF GBS 375 is also damaged but has a slightly concave edge with traces of utilisation and

edge-gloss.

Only two pieces (SF GBS 402 & SF GBS 1215) are undoubtedly prehistoric artefacts. Both are unifacially scale-flaked plano-convex knives of Late Neolithic/Early Bronze Age date. Both pieces are carefully worked but the presence of incompletely detached flakes betrays the generally poor quality of the raw material.

Site A

SF GBS 113. A105 AF11. Lime pit. Medieval. Struck flake.

SF GBS 200. A174 AF36. Raking-out pit. Medieval. Struck flake.

SF GBS 241. A230 AF33. Robber trench (for Building 138). Medieval. Struck flake.

SF GBS 408. A511 AF27. Pit. Period 3b. Snapped triangular flake with possible retouch on one edge.

SF GBS 402. A587 AF100. Posthole. Period 3. Plano-convex knife of Late Neolithic/Early Bronze Age date. Unifacial. Scale-flaking on one long edge, some flakes not properly detached. Cortical 'back'.

SF GBS 374. A657 AF53. ?Large pit/terrace. Roman. Struck blade-like flake. Possible retouch on one edge.

SF GBS 375. A657 AF53. ?Large pit/terrace. Roman. Utilised flake. Blade-like, one edge slightly concave with traces of utilisation and edge-gloss.

SF GBS 376. A657 AF53. ?Large pit/terrace. Roman. Smashed lump.

SF GBS 514. A850 AL3. Gravelled surface for street or footway. Period 3. Snapped blade.

SF GBS 512. A871 AL3. Gravelled surface for street or footway. Period 3. Struck flake.

SF GBS 513. A871 AL3. Gravelled surface for street or footway. Period 3. Struck flake.

SF GBS 533. A902 AL10. Midden/dump. Period 3b. Struck flake.

SF GBS 639. A1062 AL52. Dump. Period 3. Struck flake, broken.

SF GBS 672. A1081 AL48. Dump (demolition?). Period 3a. ?Borer. Bifacially retouched snapped flake with considerable recent damage.

SF GBS 739. A1518 AL101. Dump: destruction of Building 131. Period 2. Struck flake.

SF GBS 1215. A2532 AL288. ?Dump. Period (1 or) 2. Plano-convex knife of Late Neolithic/Early Bronze Age date. Scale-flaked along one edge and distal end, but poor quality flint. Cortical, probably unfinished or abandoned.

SF GBS 901. A2182 AF284. ?Posthole: ?Building 132. ?Period 1. Struck flake, broken.

SF GBS 645. A1194. Unstratified. Roman. Struck flake, broken.

Site B

SF GBS 1177. B452 BF72. Gully: Building 133. Period 2. Struck flake, broken.

SF GBS 1158. B359. Unstratified. Struck blade-like flake.

SF GBS 1198. B503 BF73. Gully: Building 133, Room 2. Period 2. Possible core fragment.

SF GBS 1252. B637 BL64. Struck flake, broken.

SF GBS 1247. B662. Unstratified. Struck blade-like flake.

MICROFICHE SUPPLEMENT: SMALL SITES, WATCHING BRIEFS, AND BUILDING SURVEYS 1971 TO MID 1985

The reports

Most of the watching briefs which produced no new substantial archaeological information are omitted from the reports which follow either in printed form or on microfiche. The larger excavations are referred to by means of a three-letter code followed by the year or years in which the excavation took place. Codes for the smaller projects take the form of the month/year in which the work started. A zero is used when the month is uncertain. The reports are arranged as far as possible in chronological order according to starting date. The reports for most of the sites with three-letter codes have been placed at the beginning of the year in which they started. Those responsible for the field record and the published report are shown at the start of each report after 'Record/report'. An oblique line separates those responsible for the field record from those responsible for the report where different people were involved.

Abbreviations:

HB	Howard Brooks
GC	G Carter
AC	Alison Colchester
CC	Carl Crossan
PC	Philip Crummy
SG	Simon Garrod
AG	A G Gouldwell
JH	Jim Heathcote
JS	Jan Sewter
DS	Donald Shimmin
NS	Nicholas A Smith
BW	Barbara Whitehouse
PR	post-Roman

Crouch Street (CSC 1971)

Reason: construction of new road

Fig 13.1

Record/report: PC

A trial excavation was carried out in 1971 in the garden of No 22 Crouch Street to establish the depth and likely nature of any archaeological remains in the vicinity. The excavation showed that there was an accumulation of topsoil in the area at least two metres in depth. It was homogeneous in appearance apart from slight indications of horizontal layers consistent with its origin as an accumulation. It was dark greyish brown in colour, the greyish element increasing with depth. The upper metre of the soil was removed in spits and, to judge by its contents, spanned a period of about five hundred years. At this level, the tops of four pits were detected. These were of *c* 15th to early 16th century date and cut at least another metre of accumulated soil. There was no indication of the base of the topsoil. Since the site was where it was proposed to construct a new roundabout which was to involve little disturbance to the ground, the excavation was stopped and the trench was backfilled.

It is normally the case in the walled area of Colchester that an accumulation of topsoil, the so-called 'dark earth', seals the Roman deposits by a depth of up to one metre (*CAR* **3**, 92). At Crouch Street, the soil is exceptionally deep because it overlies a small valley. The latter is now not very marked because of the soil accumulation. The valley seems to have begun near what is now the northern end of Maldon Road and to have extended eastwards to the area of St Botolph's Corner and beyond. A small underground stream appears to flow eastwards along the foot of the valley. It was cut in 1971-2 and great nuisance caused when a trench at St Botolph's Corner was dug for services for the new Inner Relief Road. Similar trenches elsewhere indicated that the depth of topsoil found at the Crouch Street site seems to be typical for all of the route of the road between the two roundabouts.

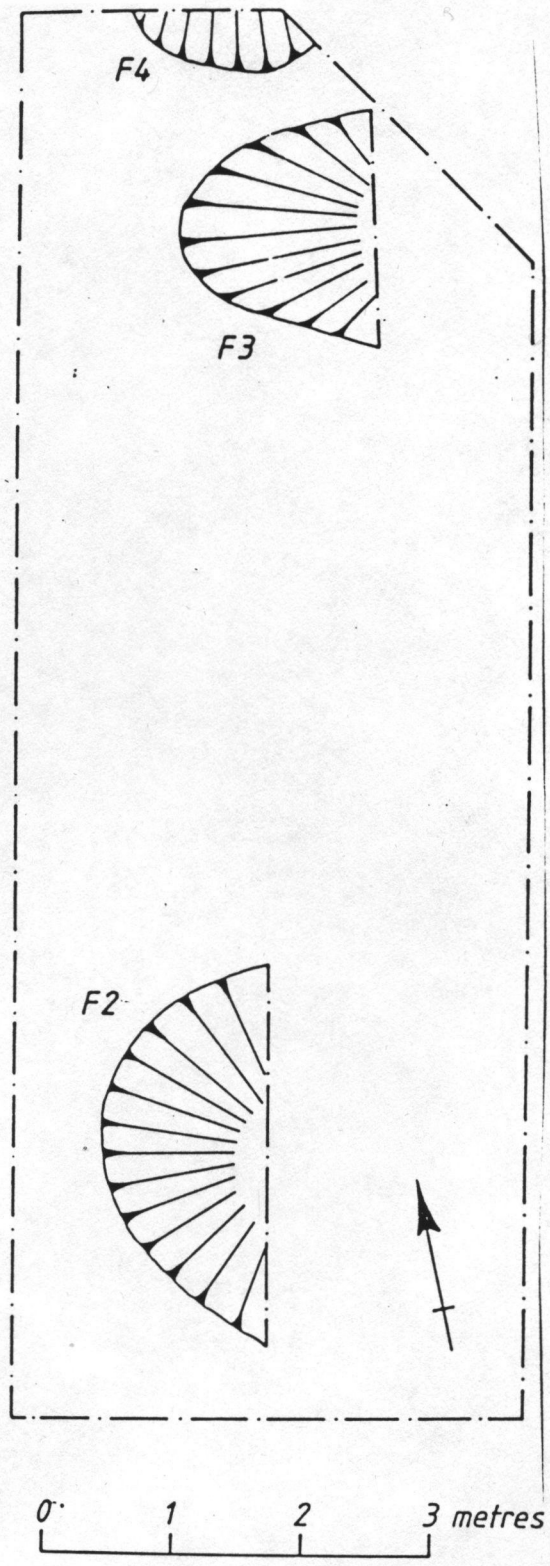


Fig 13.1. Crouch Street 1971 (CSC 1971): site plan.

Inner Relief Road (IRA 1971)

Southway

Fig 13.2

Reason: construction of new road

Record/report: PC

In 1971, the contractor reduced the ground surface by machine between Wellesley Road and Maldon road along the course of the new road. Subsequent visual inspection of the exposed surface revealed no distinct features apart from at the very west end of the site where there appeared to be some pits. With the help of some members of the Colchester Archaeological Group, a small area measuring 5 x 8 m was partly excavated during the following weekend. Parts of five pits were found some of which could only be partly excavated. The pottery from the pits indicates that they are to be dated as follows:

Pit 5	Flavian/Trajanic
Pit 4	Hadrianic+
Pit 1	early 2nd to early 3rd century.
Pit 2	3rd/4th century
Pits 3, 6, & 7	no pottery

Pit 3 was a grave for a dog. Although this feature contained no pottery or other dating evidence, its appearance and proximity to the other pits indicate that it too is likely to have been Roman.

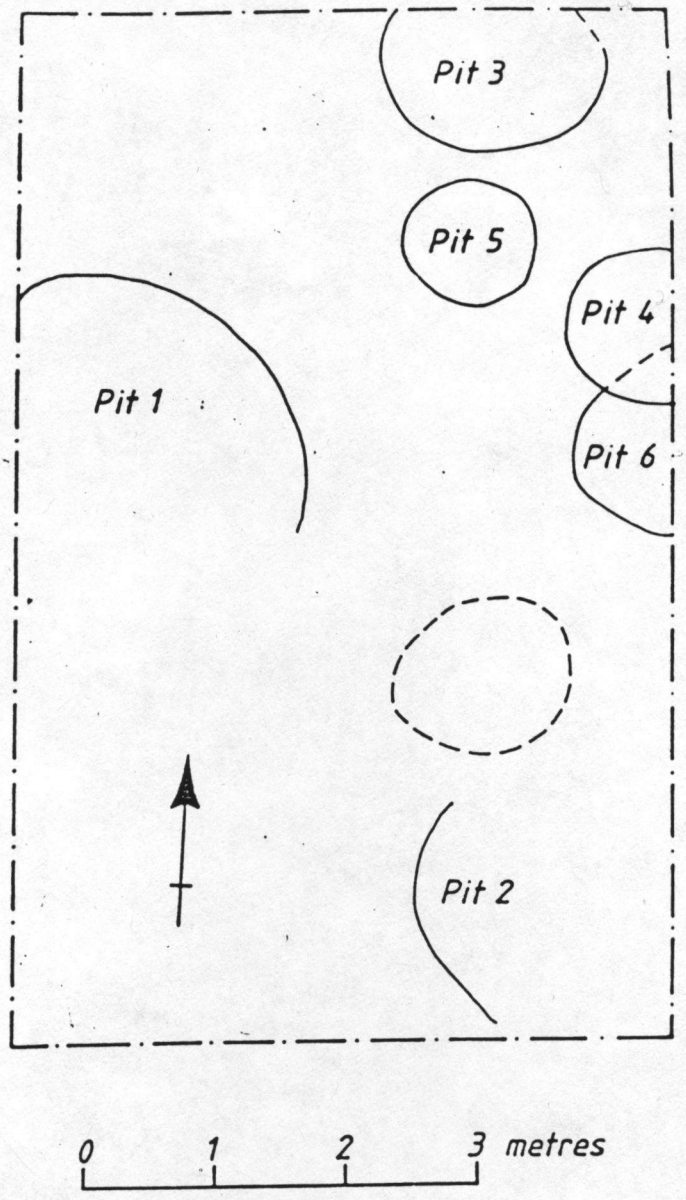


Fig 13.2. Inner Relief Road (IRA 1971).

0/71a

Tapwoods

Summer 1981

Reason: construction of new road

Record/report: PC

Photographs: Misc Sites 3, 1-4

A part of the ditch of Lexden Dyke was recovered when the road Tapwoods was constructed. The ditch was revealed in the north section of the cut.It was V-shaped and 12.5 feet deep. It measured 35 ft along the side of the trench, giving an estimated width of about 20 ft. A 4th-century coin was picked out of the section (by PC), about 3 feet from the base of the ditch.

0/72a

?St John's Abbey Grounds

1972

Record/report: PC

Finds: model bed

Location of finds: Colchester and Essex Museums

A model pipeclay bed with occupant (head missing) was apparently found by workmen in a town-centre site in Colchester in 1972. The object was acquired by Denis Gamble (of the Colchester Borough Engineer's Department) from somebody in south Essex. Although the find-spot is not known, the description of it, the apparent date of its discovery and the difficulties experienced during the excavation in St John's Abbey Grounds in 1972 (where workmen were recovering various objects and not made to hand them in) make it highly likely that this is where the object came from. It measures 80 mm wide, 65 mm high, and 140 mm long.

vessel type	Hull Form No	Kiln A	Kiln (A)	Kiln B	Kiln C	Kiln (Q	unstrat	totah
pedestal vase	CAM 207 1	-	-	1	-	-	•	1
cooking pot	CAM 268B	-	-	-	2	-	1	3
bowl	CAM 30*	-	4	1	1	4	-	10
flagon	CAM 3/4 (prob)		-	-	-	2	2	4
	CAM 367	-	1	-	-	-	-	1
unguent pot	CAM 389	2 .	1	-	1	1	-	5
beaker	CAM 391A (rouletted)	2	9	1	19	5	5	41
	CAM 391A (rough cast)	*1	*3	-	-	1	1	6
	CAM 391A or CAM 392 (hunt cup) 1	*1	*6	*1	*1	-	3	12
	CAM 391A (plain)	3	3	-	-	-	•	6
	CAM 391A (decoration unknown (if any))	-	11	-	11	4	3	29
	CAM 392 (rouletted)	1	6	-	-	-	-	7
	CAM 392 (plain)	-	5	-	3	-	2	10
	CAM 396	-	-	-	7	-	-	7
	CAM 406	-	2	-	1	-	-	3
	CAM 396 406	1	2	1	4	3	2	13
beaker body other beaker sherds	rouletted (CAM 391A, 392, 396?, 406)	-	33	4	35	13	36	126
	indented (CAM 391A. 406)	-	13	•	23	2	2	45
	rough cast (CAM 391A, 392, 396)	1	17	3	9	19	-	49
	indented and rouletted (CAM 406)	-	2	1		-	-	3
	indented and rough cast	-	-	1	-	3	-	4
	barbotine scales	-	1	-	-	-	1	2
mortarium	CAM 497		17	8	3	4	2	34
	CAM 495	-	•	2	2	-	5	9
	CAM 501	1	8	5	2	-	3	19
	CAM 504	-	-	1	3	-	-	4
large mortarium	unclassifiable	-	1	-	-	-	-	1
TOTALS		13	150	30	132	61	68	454

Table 13.2. Contents of the Oaks Drive kilns in terms of the Hull form type series. Brackets indicate in vicinity of kilns, eg clearing around kiln or from a pit cutting it. ' includes waster of hunt cup.

Inner Relief Road (IRC 1973; 0/73c)

Crouch Street
Figs 13.23-4
Reason: construction of subway
Record/report: PC

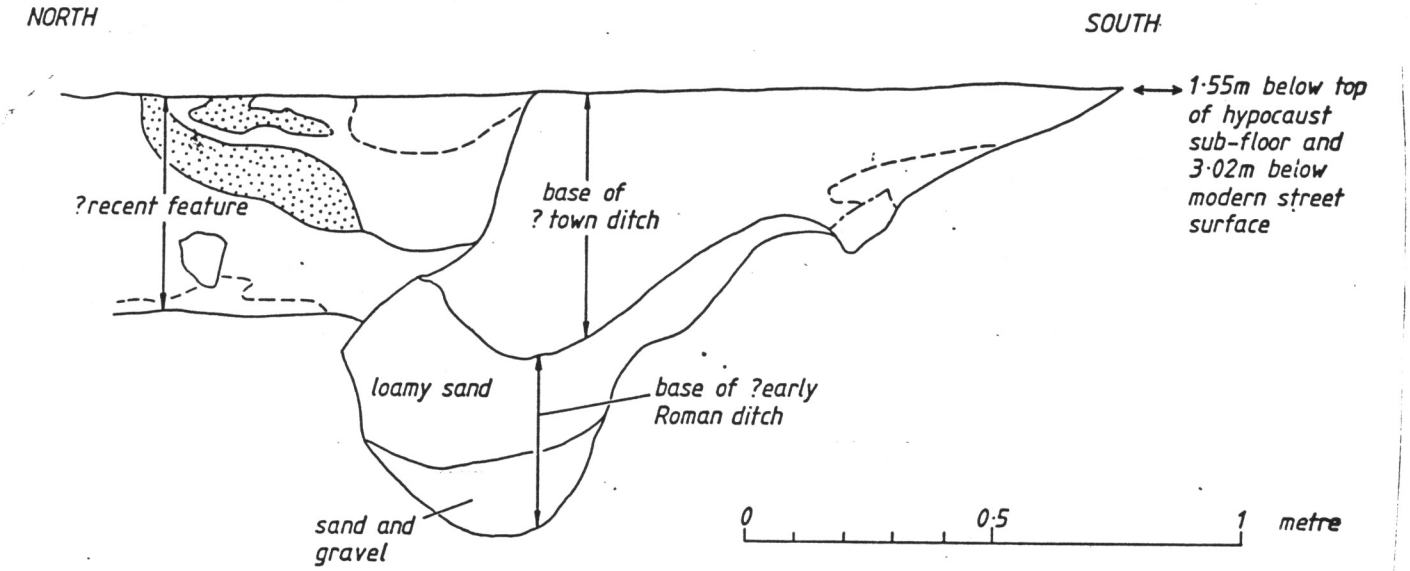


Fig 13.24 Crouch Street 1973 (IRC 1973): section.

Inner Relief Road (IRD 1973; 0/73c)

Crouch Street
Fig 13.25 [See 35 mm microfiche]
Reason: construction of subway
Record/report: JS/PC
Photographs: Misc Sites 2

The eastern subway lies on the line of the town defences with the result that the construction trench for the subway provided some useful sections although, being at an oblique angle and partly obscured by shoring, they were difficult to interpret.

The centre-line of a large ditch was clipped by the south-west corner of the trench. It appeared to be the southern end of the Period 5/6 ditch at Balkerne Lane (*CAR* **3**, 145). Its fill was greyish brown soil. The original depth of the ditch could not established but its base was 3.7 m below the modern street level.

The centre-line of what appeared to be a second ditch was observed in Sections CD and EF. Its depth is uncertain but in Section CD the bottom of the ditch was 2.6 m below the modern ground level. (The relationship between the bottom of the ditch and the modern ground level in Section EF was not determined.) The sequence of defences at Balkerne Lane indicates that this was possibly a ditch of either Period 1 or 3 (*CAR* **3**, 93, 110-11). However, the fill of the second ditch at Crouch Street, like that of the first, contained much dark topsoil and therefore was possibly of a similar date to it. The fill, the so-called 'dark earth', seems to have been principally, if not wholly, of post-Roman origin and thus would seem to indicate that the ditch was open at the end of the Roman period (*CAR* **3**, 92). Another explanation is that this ditch was the same the small ditch U1 found at Balkerne Lane north of the main street through the Balkerne Gate (*CAR* **3**, 145). The fill is similar and it also lay between the main ditch and the town wall.

Some thick layers of very hard and substantial gravel street metalling were cut at eastern end of the trench (Sx AB in Fig 13.25). These sealed one metre of dark topsoil which presumably lay one or other of the two ditches. Since the metalling overlay the dark topsoil, it is probably of medieval or later origin. The full depth of the ditch concerned could not be established because the section cut the northern half of the ditch longitudinally at an indeterminate point in its profile.

0/73D

55 Endsleigh Court

71973 or early 1974

Record/report: PC

Mr Lithgall, a local treasure hunter with a metal-detector, reported the discovery of it lead coffin under the porch of 55 Endsleigh Court/The coffin is apparently still there but what was described as a 'double-headed urn' associated with A was taken by workmen.

Mr Lithgall also showed a collection of bronzes from a 'ploughed field near Colchester' including several figurines (published in Not Only a Matter of Time) and coins of Constans(?). He wduld not disclose the precise location of the field/ Perhaps it is in the Sheepen area?

7/73

Queen Street

Figs 13.26-7

July-August 1973 and November 1973

Reason: construction of supermarket

Record/report: JS & JH/PC

Photographs: Misc Sites 2, 10-20

Finds: X40 (Roman pot)

The work was in two stages. First, after demolition of the existing buildings, the surface of the site was quickly cleared and sections drawn which were obtained by the removal of a petrol tank. Later, after the contractors had dug their foundation trenches, further discoveries were added. The plan (Fig 13.26) is a composition of both operations.

The field plans contain a few slight internal inconsistencies and do not exactly match the boundaries of the site as shown on large-scale maps of the area. There is therefore some uncertainty in the precise positions of the features recorded on these plans.

The site lies on the junction of an east-west street with a north-south one. The position of the latter is now well fixed. The observation of it on the Queen Street site fits well with the observations of the street made north of the High Street, namely in the Castle Park (Hull 1958, 73) and especially in Cowdray Crescent (watching brief 4/80a). On the assumption that the street was about 9 metres wide, it also agrees to within about 2 metres with the position of the western edge plotted to the south of the Queen Street site in 1938 by Hull (op cit). The position of the east-west street is also well fixed, ie at Culver Street (Fig 3.7, p 32), Lion Walk (CAR 3, 53), and Long Wyre Street (Fig 13.108, p 356) to the west and at the Bus Park site (Richardson 1961) and East Hill House Kitchen Garden (watching brief 8/83e, Fig 13.250, p 375) to the east. Metalling attributed to an east-west street was found on the Queen Street site but, according to the plans, does not appear to be in the anticipated position. However the sections in the sides of the pit for the petrol tank showed that the north-south street was not primary but overlay a substantial accumulation of material including what appeared to be floors. Also metalling in the southwest corner of the site, although not apparently part of the street, also overlay a gully and a layer of mortar, both of which were likely to have been associated with a building. Other structural remains, all noted in the contractor's trenches, consisted of two exposures of opus signinum, a substantial area of plain, red tessellated pavement, and part of a daub wall. This group of remains lay in the line of the east-west street implying that i) the street is not in its expected location or ii) the remains have been wrongly plotted or iii) that they were sealed by the street metalling. The last of these possibilities seems the most likely especially since the west exposure of opus signinum also lies on the line of the north-south street, the existence and location of which are quite well established.

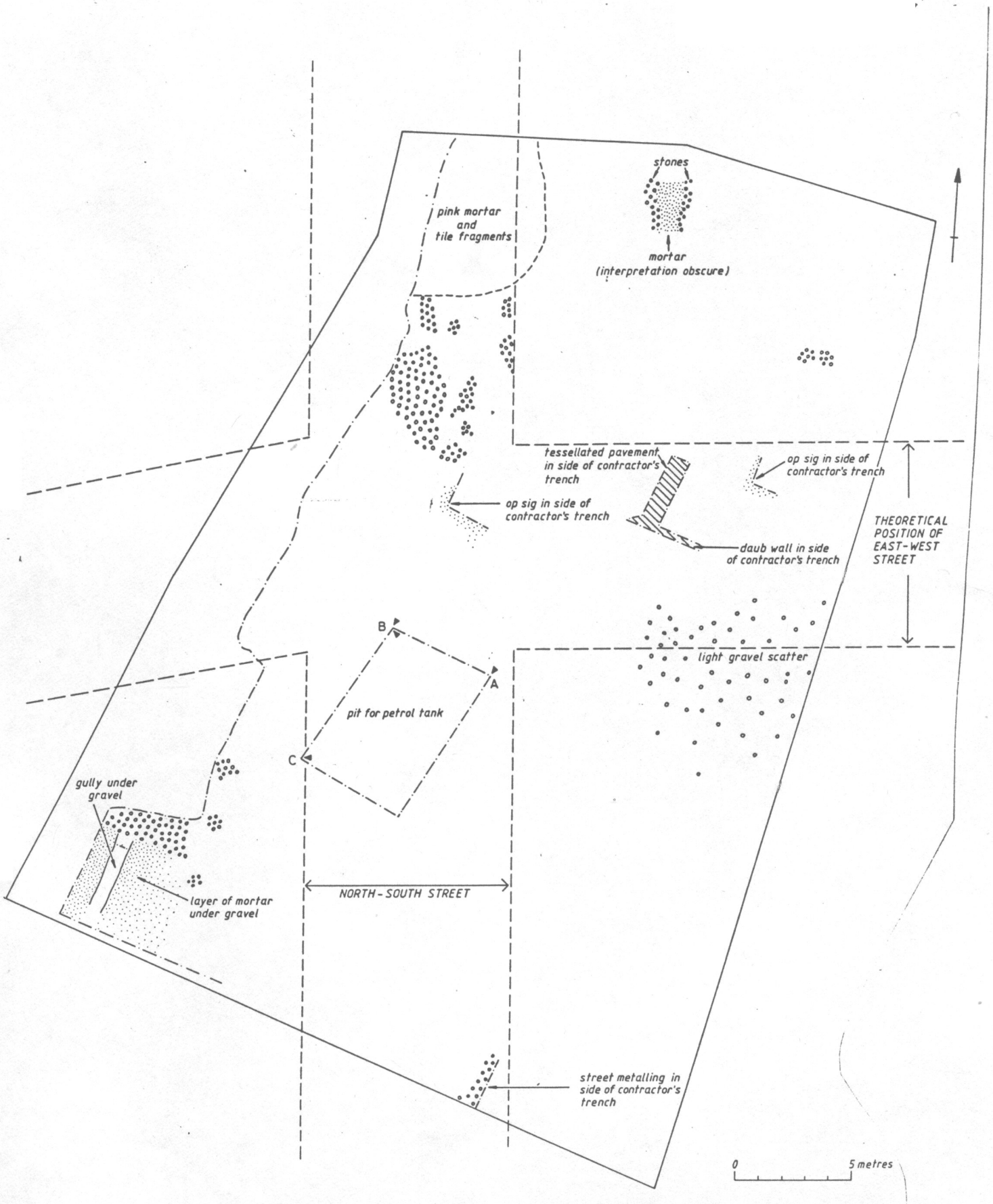
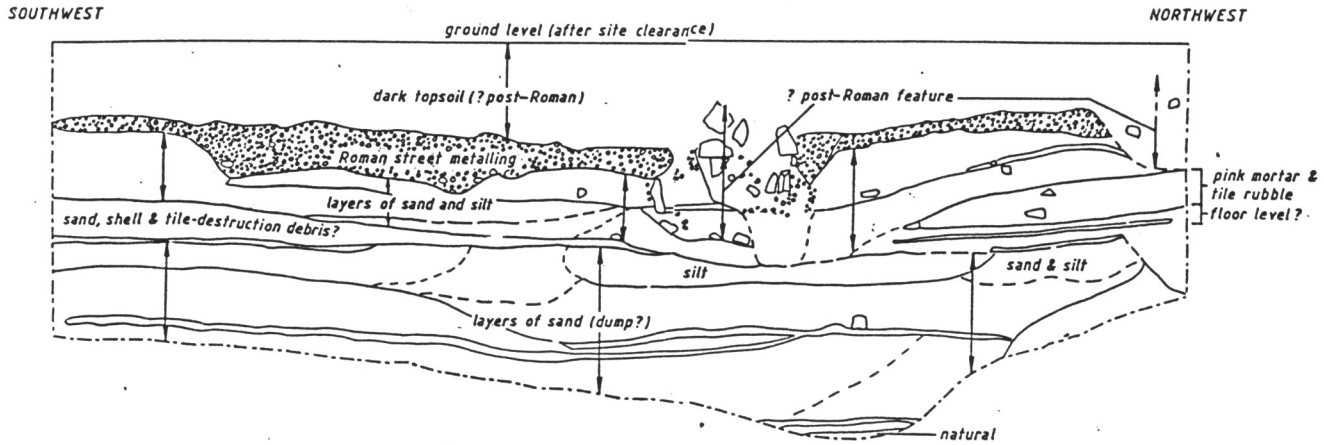
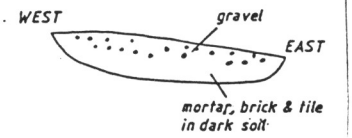


Fig 13.26. Queen Street (7/73): site plan.

Sections of pit for petrol tank



Section across gully



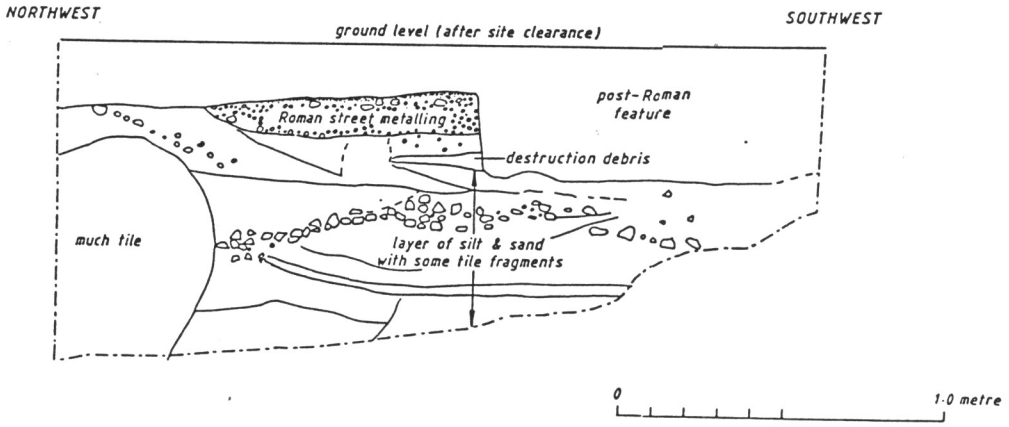


Fig 13.27. Queen Street (7/73): sections.

9/73

North Station Road

27th September to 20th November 1973

Reason: pipe-line across field (N-S) east of North Station Road and south of railway (now occupied by British Telecom)

Record/report: JS/PC

Finds: X41 (unstrat: few Roman sherds, 1 ?coin)

No structures or other features observed. Only loose finds.

10/73a

Cheshunt Field

9th October 1973

Reason: field walking after ploughing

Record/report: JS/PC

Finds: few sherds

A concentration of tile and other material was observed on the eastern side of the field, in the southern half of it.

10/73b

Motor Products Ltd, Insulation Materials, Hythe Walks,

Hawkins Road, Colchester

4th and 22nd October 1973

Reason: dumping material over site of ?modern cropmark

Record/report: JS/PC

It was suggested (possibly by the Harbour Master) that the cropmark is the result of a bomb crater. Otherwise the watching brief produced nothing of value.

11/73a

Kenton's Shop, Head Street, Colchester

Fig 13.28

19th November 1973-21st January 1974

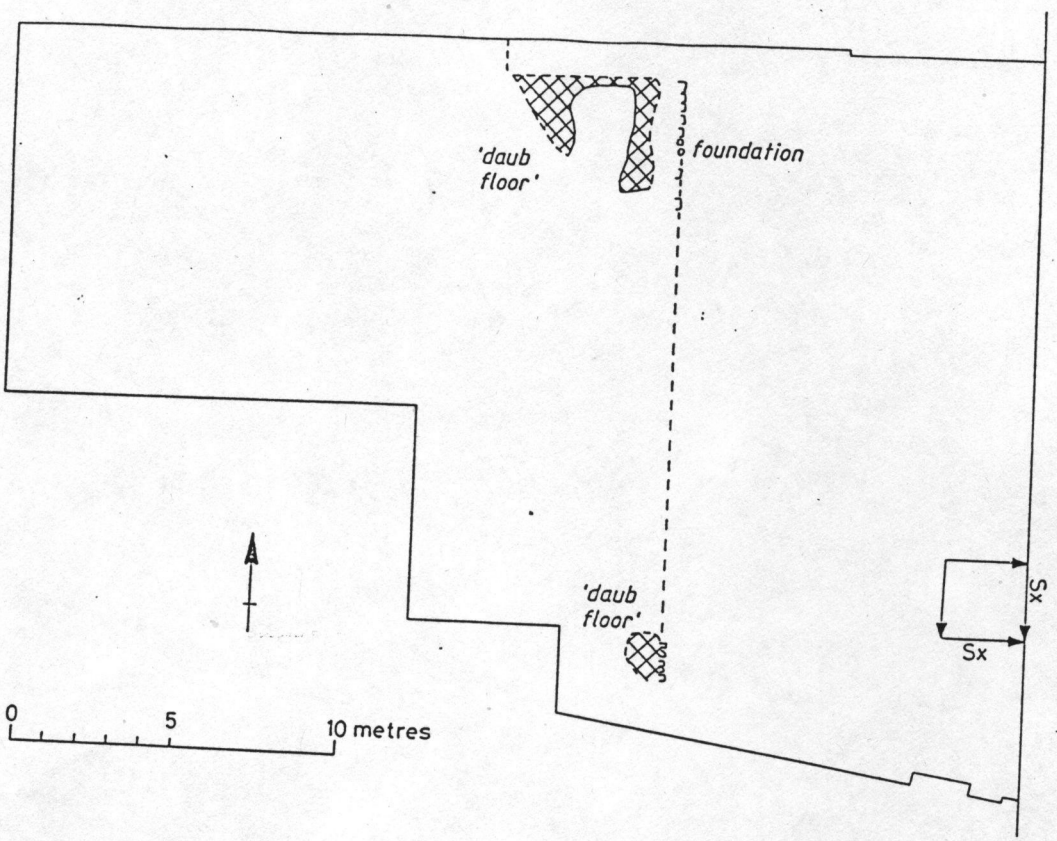
Reason: demolition of existing premises and the construction of a new shop

Record/report: JS/PC

Photographs: Misc Sites 1, 49

Finds: X34-5 (1st-century pot)

The removal of the topsoil resulted in the exposure of a ?medieval wall with a daub floor. The site was planned (as far as possible) and a section was drawn. The site was subsequently visited to observe the removal of the modern demolition debris and further topsoil as well as the emptying of recent cellars. One stanchion hole cut through some Boudican destruction debris, the burnt floor of a Boudican building, and part of a later gravel-packed Roman foundation.



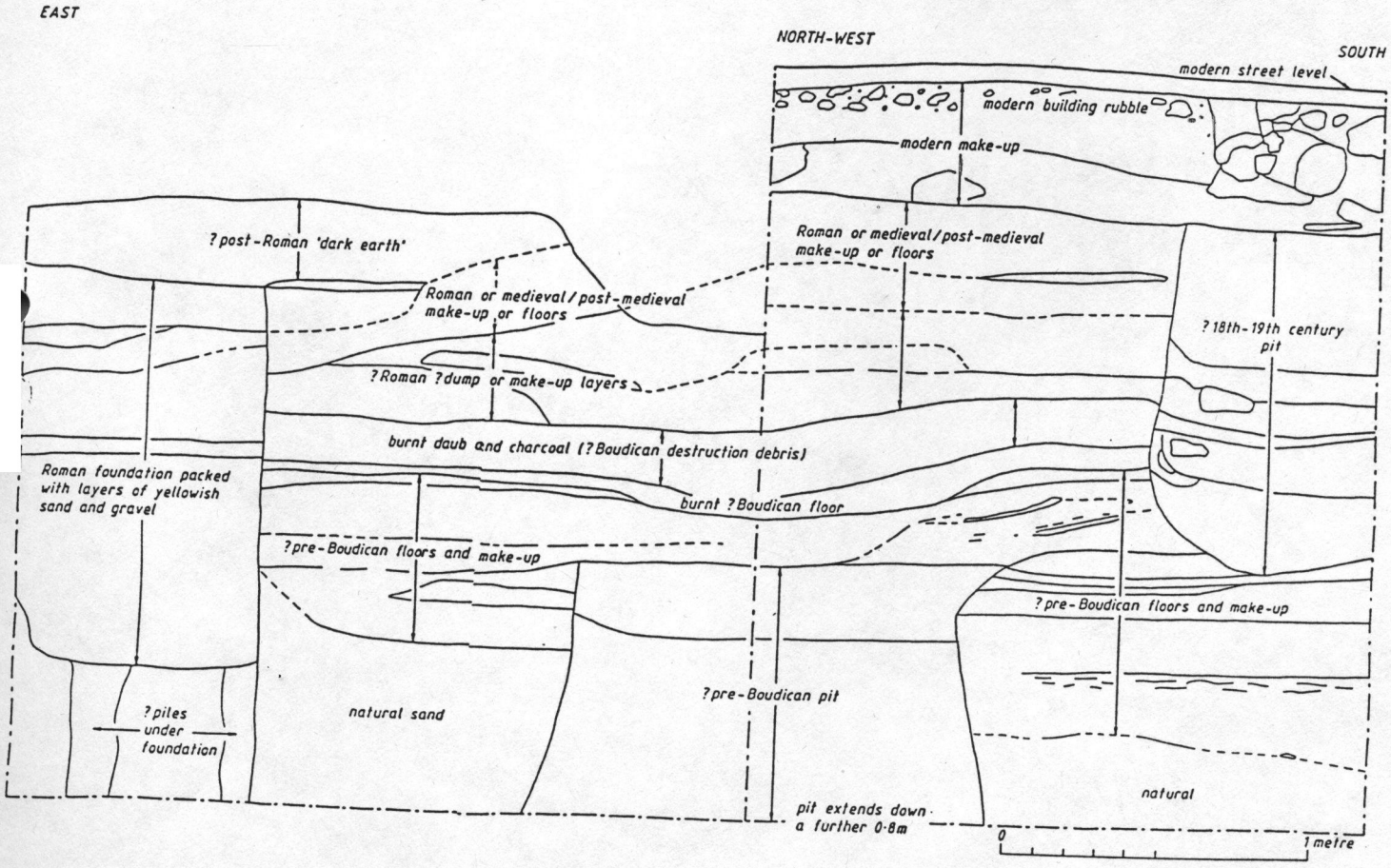


Fig 13.28. Kentons (11/73a): site plan and section.

11 /73 b

MrHarley, *'Martins', Nayland Road*

26th November 1973

Reason: to examine pottery' found when digging postholes in a paddock behind the house

Record/report: PC

Finds: several pieces of peg tile, one possible Roman tile

Location of finds: Mr Harley or discarded?

No pottery – all tile.

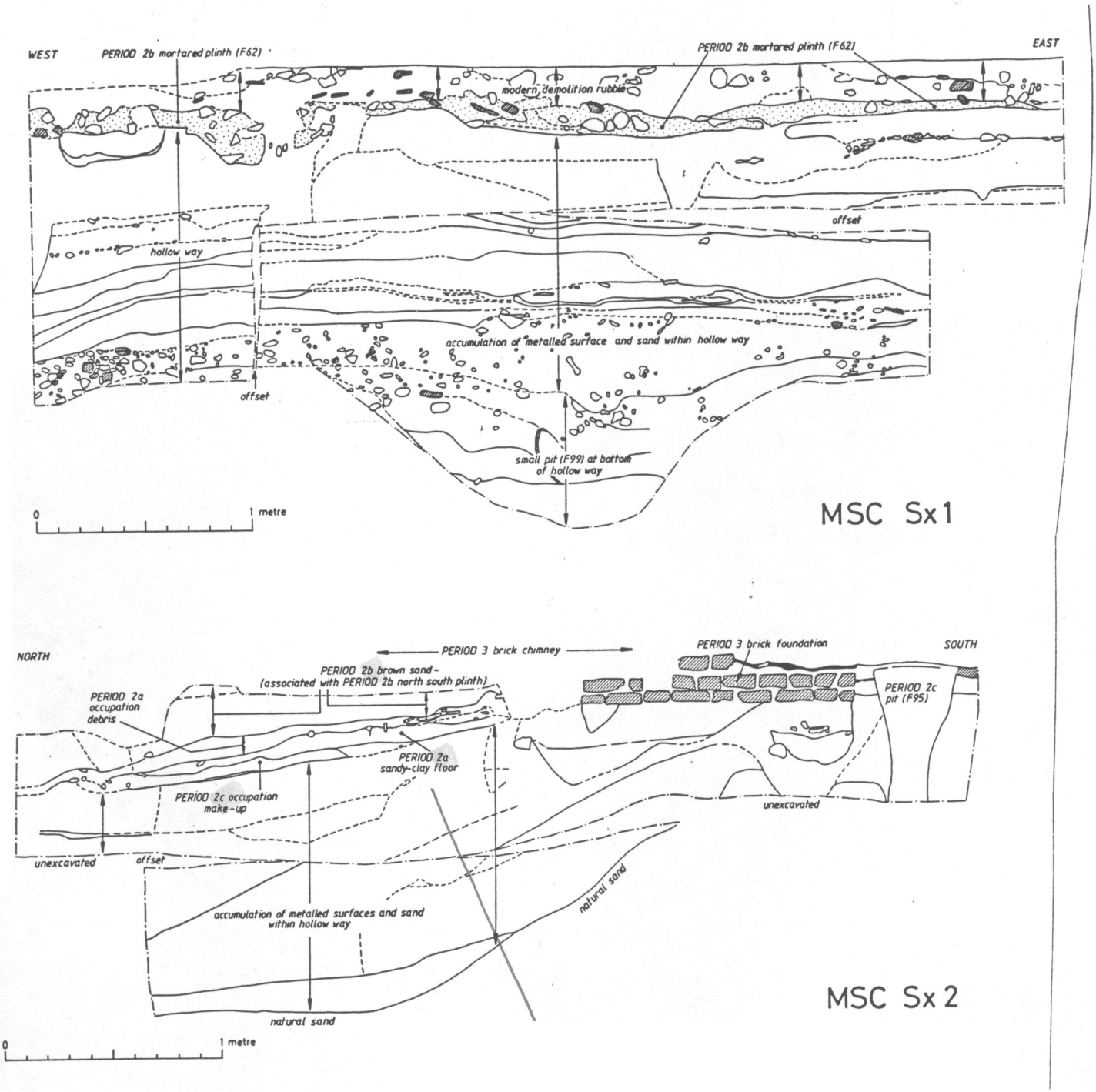


Fig 13.32. Magdalen Street (MSC 74): sections.

0/74a

King Coel's Kitchen, King Coel Road

1974?

Record/report: PC

Photographs: Misc Sites 2, 3-6

The owner of King Coel's Kitchen invited PC to direct a JCB, hired at her expense, in the digging of some trial trenches to establish the nature of the kitchen. Several long trenches were dug in the bottom and side of the site. From the outset of the work it was clear that the kitchen is a former gravel pit. At the bottom of the pit a thin layer of topsoil overlies layers of gravel. There were no intervening layers of any deposits which could be interpreted as floors, occupation or make-up. The gravel in places consisted of stones of unusually large size. This *appeared to have the result of grading gravel and were large rejects redeposited in pockets or small holes in the base of the pit. The sides exhibited the same sequence as the bottom, againwith no hint of any significant archaeological layers. Nothing was found to date the quarry.*

0/74b

North Station Road/Clarendon Way

1974?

Reason: construction of pipeline

Record/report: JS/PC

A wide trench for a pipe was dug diagonally south-west to north-east of the field subsequently built over in 1984 by the GPO (Watching Brief 8/84b). No features were observed.

1/74a

Tientsin, 29 Fingringhoe Road, Fingringhoe

9th January 1974 and 16th March 1974

Reason: digging an inspection pit in a domestic garage

Record/report: JS/PC

Finds: a complete Iron Age pot (drawn) (now in the Colchester and Essex Museums

A complete Iron Age pot was found during the digging of an inspection pit in the garage of a house at Fingringhoe. A follow-up visit on 9th January 1974 established that no other finds had been made subsequently.

1/74b

Quarry at Alresford Creek (site of Roman villa)

16th January 1974

Reason: ploughing

Record/report: JS/PC

Finds: X33? (Roman pot)

Visited quarry. Workmen said that they never found anything. The 'black patch' recorded on the Museum 6 inch map was not visible. Alresford villa was ploughed on 15th January 1974. The find spots of red tesserae, mortar, and two grey sherds are marked on Museum 6 inch map.

2/74

20 Crouch Street

20th February 1974

Reason: to inspect two trial holes at rear

First trial hole — black topsoil to a depth of 2 m, upper 0.75 m (approx) modern. Second trial hole — black topsoil to a depth of 2.30 m.

3/74a

SE part of Cobmarsh Island

Before 6th March 1974

Record/report: JS/PC

Part of a medieval pot found in the SE part of Cobmarsh Island, on a part normally covered by tidal mudflats. 13/14th century. Rough grey core with sand grits. Shown to J Sewter by Keith Harrison of the Department of Planning, Colchester.

3/74b

115-7 Maldon Road

25th March 1974

Reason: building plot on site of possible Roman burial area

The upper part of the site had been removed by machine so that the natural was cut into by about a foot. Nothing visible although the site was very muddy and considerably churned up by machinery.

3/74c

Heath Dyke and Kidman's Dyke

29th March 1974, 10th April 1974

Fig 13.33

Reason: gas pipeline

Record/report: JS/PC

Photographs: Misc Sites 2, 21-3

The pipeline was being laid from the Maldon Road end, working northwards towards Gryme's Dyke. The trench cut Heath Farm Dyke and Kidman's Dyke.

Heath Farm Dyke

The remains of the bank, about 0.5 m high, was detected to the inside of the ditch. It was made of

gravel and reddish-brown sand. A thin grey line at 0.5 m down was probably the old ground surface. The bank was about 7 m wide. The ditch was 2.4 m deep and 7.8 m wide. A tree (marked on Fig 13.33) is just off the centre-line of the ditch. The ditch is also visible in the face of the quarry (*see* photographic archive). The backfill of the ditch is coarse sand. The bottom of the ditch has silted to about 0.4 m with finer sand and gravel. The sides were also silted and gravelly. The bottom of the ditch, although obscured by the pipe, seems to be V-shape in profile.

Kidman's Dyke

The section across the bank was cleaned and photographed. Several tip-lines in the bank were visible. These were all modern and represent upcast along the edge of the modern quarry. The bank of the dyke underlies a considerable depth of modern dump. It is of reddish brown coarse sand and gravel. An old ground surface was visible in the section in the quarry. This is probably the old ground surface of Kidman's Dyke (as opposed to Heath Dyke). The estimated height of the present bank is about 0.1 m.

The pipe trench was very shallow at this point with the top of the pipe reaching the surface where it passed through the top of the ditch. For this reason it was hard to be certain about the exact position of the ditch.

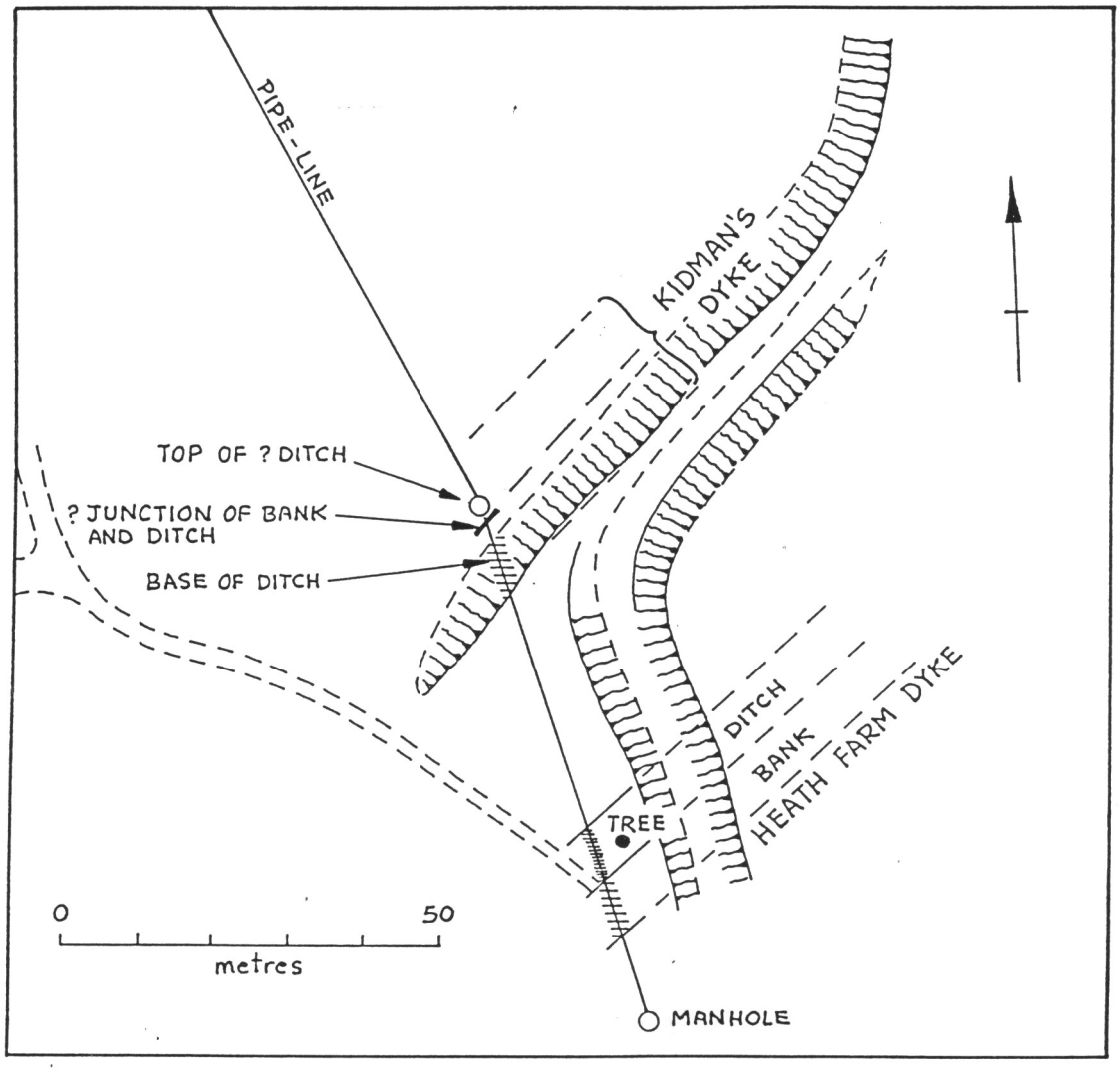


Fig 13.33. Heath Farm Dyke and Kidman's Dyke (3/74c): location plan.

4/74

Greenstead housing estate (precise site not given)

16th April 1974

Reason: housing development (Colchester Borough Council)

Record/report: JS/PC

There seemed to be a well cut into the natural on a site cleared for a house but it was too churned up by machinery to be sure. The topsoil had been spread elsewhere.

7/74

Red Lion Hotel, Culver Street

July/August 1974

Reason: rebuilding of the rear part of the Red Lion Hotel

Record/report: NS/PC

It was not possible to carry out a proper watching brief (far less excavation) on this site. The site manager maintained that all the soil dug through (to a depth of 10 m) was dark topsoil. There may have been something in this since other sites at the rear of High Street properties (where these have been seen or dug) tend to been badly damaged as a result of the digging of pits.

8/74a

St Michael's Church, Mile End

20th August 1974

Reason: redevelopment around site of ruined church

Record/report: NS/PC

The site was visited when the building work was well underway. The topsoil overlies a layer of clay, about 3 m thick (according to the workmen). The site agent and the workmen said nothing had been found except three wells and some fragments of clay pipe. The ruins of the church have been left as a tree-covered space.

8/74b

49 North Hill

Fig 13.34

August 1977

Reason: extension to rear of existing building

Record/report: NS/PC & NS

Photographs: Misc Sites 1, 50-73

About 1.4 m of topsoil was removed from the site with the effect that the uppermost surviving layers were exposed. The topsoil was very dark brown. The only obvious post-Roman features were a brick soakaway of 18th- or 19th-century date, a well, a cellar, and a topsoil-filled pit in the north-east corner of the site. Foundation trenches were dug along all four sides of the site. Two more were dug east-west across the centre (one across the well). These trenches were dug down a further 0.75 m. The bottom of the cellar was 1.5 m below present ground level. Bottles in its fill indicated that it had been backfilled *c* 1860. The bottom of the pit in the north-east corner was not reached.

The well was built of septaria, Roman tile and a few tiles of a red brick clay measuring 16 x 21(+1) x 1 cm. The mortar was very hard and pale yellow, sometimes pinkish, in colour. It contained small white flecks and pieces of shell. The interior of the well was lightly rendered with white mortar. A metal spike was stuck into the side of it about 1 m from the top. The well had been capped with a dome of red bricks measuring 6 x 11 x 22 cm. Water, 0.9 m deep, was noted at a depth of 6.8 m.

Three Roman foundations and parts of mortar bases for tessellated floors were uncovered. The width of the foundations are consistent with houses rather than public buildings. Foundation 1 was at least 0.6 m wide and was of tile courses set in pink mortar. Foundation 2 was 0.7 m wide and 0.4 m deep. It was made of septaria set in mortar, the wall it supported being of mortared septaria faced with coursed tile. Foundation 3 was 0.6 m wide. It had been heavily robbed, the trench being visible to the north. All that survived of the foundation was yellow mortar, the stones having been robbed. The foundation rested on top of the mortar base for the floor and therefore was later than it..

To the south of Foundation 1 and to the west of Foundation 2 was the base of a tessellated or mosaic pavement. No cubes of any sort were found *in situ*. The base was of hard pink and white mortar. The pavement was presumably contemporary with Foundations 1 and 2 but predated Foundation 3. Above and below the base was yellow-brown dump material which included some plaster and was presumably remains of demolished daub walls. To the north of Foundation 2 was yellow-brown material with wall plaster. No clear floor levels were noted in this area. Similar to these were the Roman levels to the north-west.

Finds X133-6 were in material overlying the pavements. X138 is a collection of loose tesserae from the pavement and mosaic.

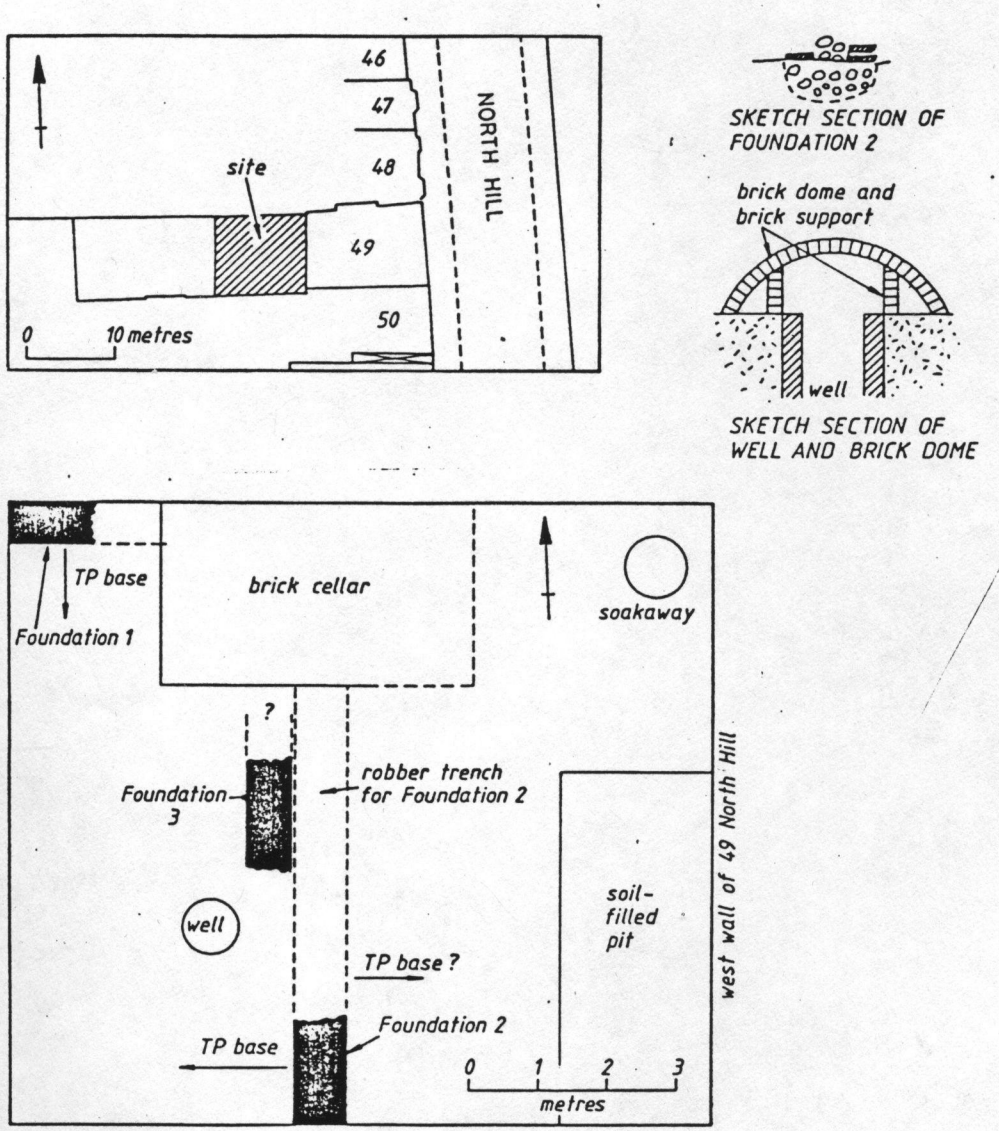


Fig 13.34. 49 North Hill (8/74b).

12/74

43-45 Wellesley Road

December 1974

Reason: redevelopment; block of eight flats

Record/report: CC

No significant features. The foundation trenches (*see* archive sketch) along the Wellesley Road frontage had to be cut to a depth of 2.5 m because of the presence of a shallow 19th-century basement. Elsewhere on the site natural sand was revealed at a depth of 0.5 m from ground level.

Dutch Quarter 1975 (DTC)

North end of West Stockwell Street

Figs 13.35-9

August 1975

Reason: residential redevelopment

Record/report: CC/PC

Photographs: DTC

Summary

Three areas (Sites A, B, and C) were examined to assess the state and quality of any surviving post-Roman archaeological remains and to judge how susceptible these would be to damage during the impending building works. In the event, excavation was limited to investigating little more than the very latest remains when it became clear that the level of destruction was going to be modest. The determining factors were the use of piles to construct the new houses, the substantial depth of most of the remains, and the absence of much significant post-Roman remains predating the 18th century.

Sites A and B were located on areas which had been used as public car parks until the start of the excavations. Site C was in the playground of Stockwell School which shortly afterwards was demolished as part of the redevelopment works. On Sites A and B were excavated part of the remains of brick houses apparently built around the early 19th century(Buildings 163 & 165-9)

Two small trial trenches were dug on Site A.These confirmed the map evidence suggesting that in post-Roman times the area had been open land until the construction of a house sometime between 1766(Sparrow) and 1848(Monson). Under the house deep of the dark earth overlying the remains of at least one Roman building (Building 164).

If Speed's map of Colchester is accurate, then the latest buildings on Site B must have originated between 1610 and 1748. Modern realignment and rebuilding of the adjacent part of West Stockwell Street meant that only the rear half of the remains of these buildings lay on the site and that the remains were comparatively deep.

On Site C, a long trench was dug north-south down the steep slope. Little more was encountered than 19th-century dumped deposits, modern service trenches, dark earth, and the water-table which was at a depth of 2 m at the south end and 1 m at the north end.

Site A

On Site A, machine clearance of the car park surface revealed the early 19th-century foundations of numbers 32 and 33 (Building 163) on the southern half of the West Stockwell Street frontage. Excavation also included a 2.0 x 1.2 m trial trench (Trial Trench 1) in the extreme south-western corner and a 2.5 x 1.2 m trial trench (Trial Trench 2) on the northern side of the site.

Building 163 seems originally to have been one building with at least three rooms on the ground floor. The rear of the building looks to have consisted of two rooms (Rooms 3 and 4) although there were no clear surviving traces of a partition between the two. The front two rooms each contained a fireplace, that in Room 1 possibly being inserted when the building was split into two dwellings. Rooms 1-3 had suspended wooden floors; a similar arrangement probably existed in Room 4 but there were no surviving traces of any timbers. The floor of Room 3 had been a mixture of wood and brick; the patches of brick suggest the positions of doorways. Room 5 was a later addition to Room 3 and may have been a replacement kitchen. A small brick area to the south-west of Room 5 indicates the likely positions of doorways leading from Rooms 4 and 5 into the rear yard.

The building was constructed of red unfrogged bricks, 60-5 mm thick.

Trial Trench 2 and a 7 m strip to the east, which was superficially cleaned, lay within the area which had originally been the yard of the former public house at No 35. The uppermost layers consisted of part of a gravelled yard sealing the remains of an extension which had been added to the south wing of this house and demolished in the late 19th century. The extension contained two successive brick floors (F7 & F12). To the west of the extension, a length of drainage trench predating the demolition was excavated in the hope that the construction of this feature may have been the source of the record of a tessellated floor with a problematic provenance (Hull 1958, 80). However examination of the trench sides revealed an apparently featureless layer of 'dark earth' extending downwards for more or less the full depth of the trench (1.15 m). The bottom of trench was augered to a further depth of 0.5 m with no noticeable change. Dark earth was also encountered in Trial Trench 2 where it reached a depth of 0.6 m. Finds in the dark earth were sparse but suggested that the material was accumulating between the medieval period and the 18th century.

The dark earth in Trial Trench 2 sealed the backfill of

a 0.9 m deep robber trench which had resulted in the almost complete removal an east-west Roman foundation to leave only a thin layer of mortar at the bottom of the trench. The fill of the robber trench was dark earth mixed with lumps of mortar and septaria. To the south of the trench, the interface between this disturbance and the underlying Roman deposits consists of a 0.1 m thick layer of dark earth with small fragments of tile, mortar, greensand, and *opus signinum*. The uppermost surviving layer of Roman occupation lies at 9.42 m OD.

Excavation ceased at this point since the deposits at this level seemed unlikely to be seriously affected by the redevelopment. However, visible in the south side of the robber trench was a floor made of a layer of white mortar (40 mm thick) with a pale yellow upper surface. Beneath the mortar is a make-up layer, 80 mm thick, of light brown soft mortar overlying 30 mm of yellowish red loamy sand mixed with crushed tile resting on a bed, up to 80 mm deep, of small greensand chips. The latter was a form of hardcore levelling over a 0.7 m thick deposit of yellowish brown sandy clay which extended to the bottom of the trench. The line of the Roman foundation F48, when projected 5 m to the west, coincided with the position of the 19th-century drainage trench (F9) and it is possible that the material encountered when auguring the bottom of this feature was the backfill of the western continuation of the robber trench. The drain continues north-westwards into the modern yard of no 35 so that the missing tessellated floor might on the north side of the Roman foundation.

In Trial Trench 1, which was situated at the deepest proposed drainage invert level for the redevelopment, 19th-century brick foundations had been set into a thick deposit of dark earth. This continued for a depth of 1.5 m and sealed a layer of olive brown loamy sand with many small fragments of mortar and some Roman tile at an overall level of 9.78 m OD. Excavation did not progress below this level.

Site B

Clearance of Site B revealed a complex of modern foundations corresponding to the rear halves of the properties shown on the 1876 1:500 Ordnance Survey map (Buildings 165-9). These were unusually deep in relation to the modern street level as road widening and levelling after demolition has elevated this stretch of West Stockwell Street by up to 0.4 m. A 0.7 m wide strip cut through the modern material down to the proposed foundation depth did not reveal any significant earlier levels and area excavation ceased at a depth of 0.6 m from the street surface.

Like Building 163 on Site A, these buildings had been built of red unfrogged brick, 60-5 mm thick. Most of the excavation work on the remains took place on the site of Building 168 where removal of a layer of demolition rubble under the recent car park surface revealed the remains of a suspended wooden floor.

Site C

Site C, in the playground of Stockwell School, consisted of a north-south trench, 23 m long, lying parallel with and 2 m west of Ball Alley. The south-to-north drop in modern ground level is more pronounced here than on Sites A and B. Consequently the new development needed to be terraced with the effect that the foundations reach considerably lower than elsewhere. The excavation trench was cut by machine to a depth of 2 m over most of its length with a 1 m deep offset along the eastern side. Flooding and the danger of partial collapse of the western side necessitated a further offset to the west. Although the flooding hampered examination of the deepest 0.6 m of the trench, it was possible to determine that no Roman levels were encountered, even in the deepest parts of the trench. In general the lower level of the section was made up of the normal accumulation of dark earth. This material was sealed by a mass of dumped deposits which steadily increased in volume towards the southern end of the trench. This deposit, which probably results from the late 19th century redevelopment of the immediate area, may account for the difference in level and gradient between the school grounds and the adjacent Ball Alley. The southern end of Ball Alley is stepped and drops steeply in level whereas it continues northwards at shallower gradient.

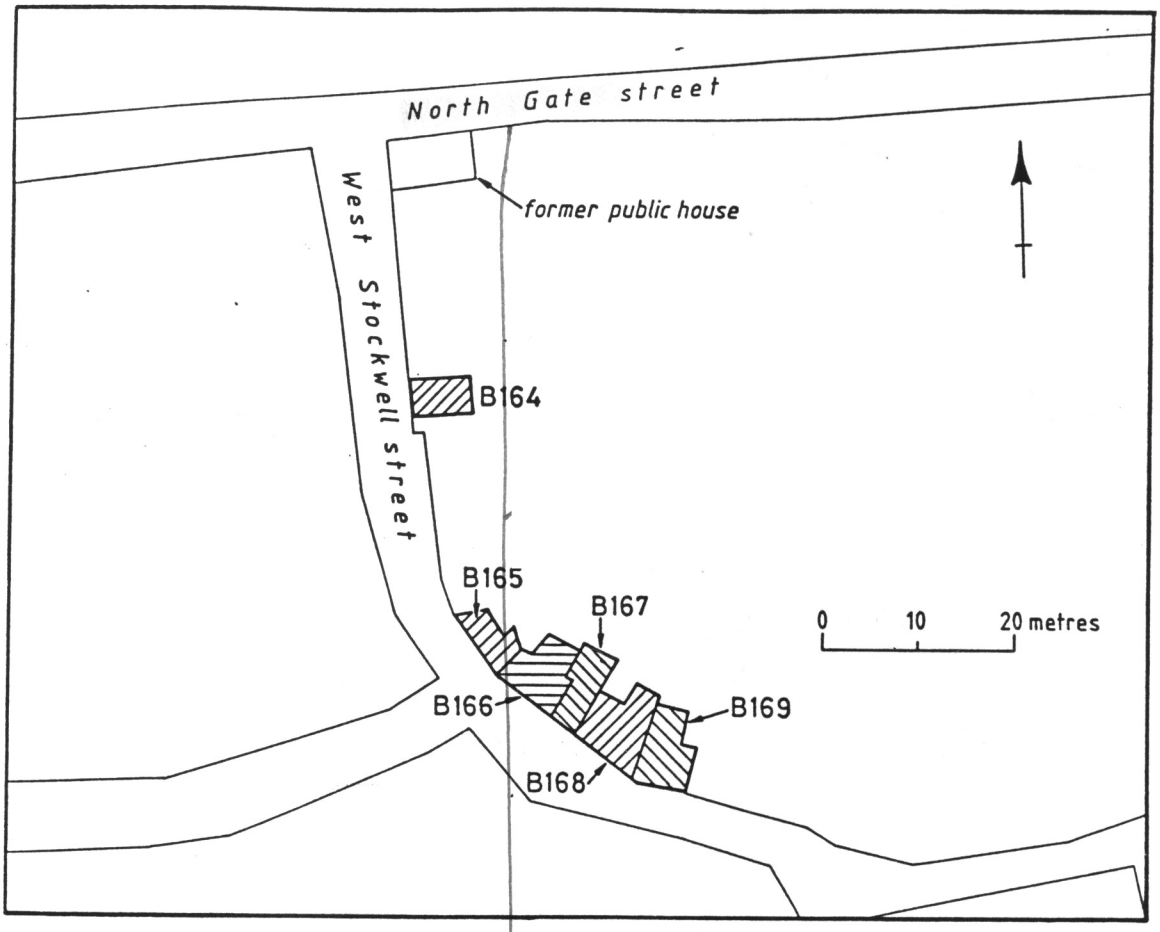


Fig 13.35. Dutch Quarter (DTC 75): location plan of Buildings 164-9.

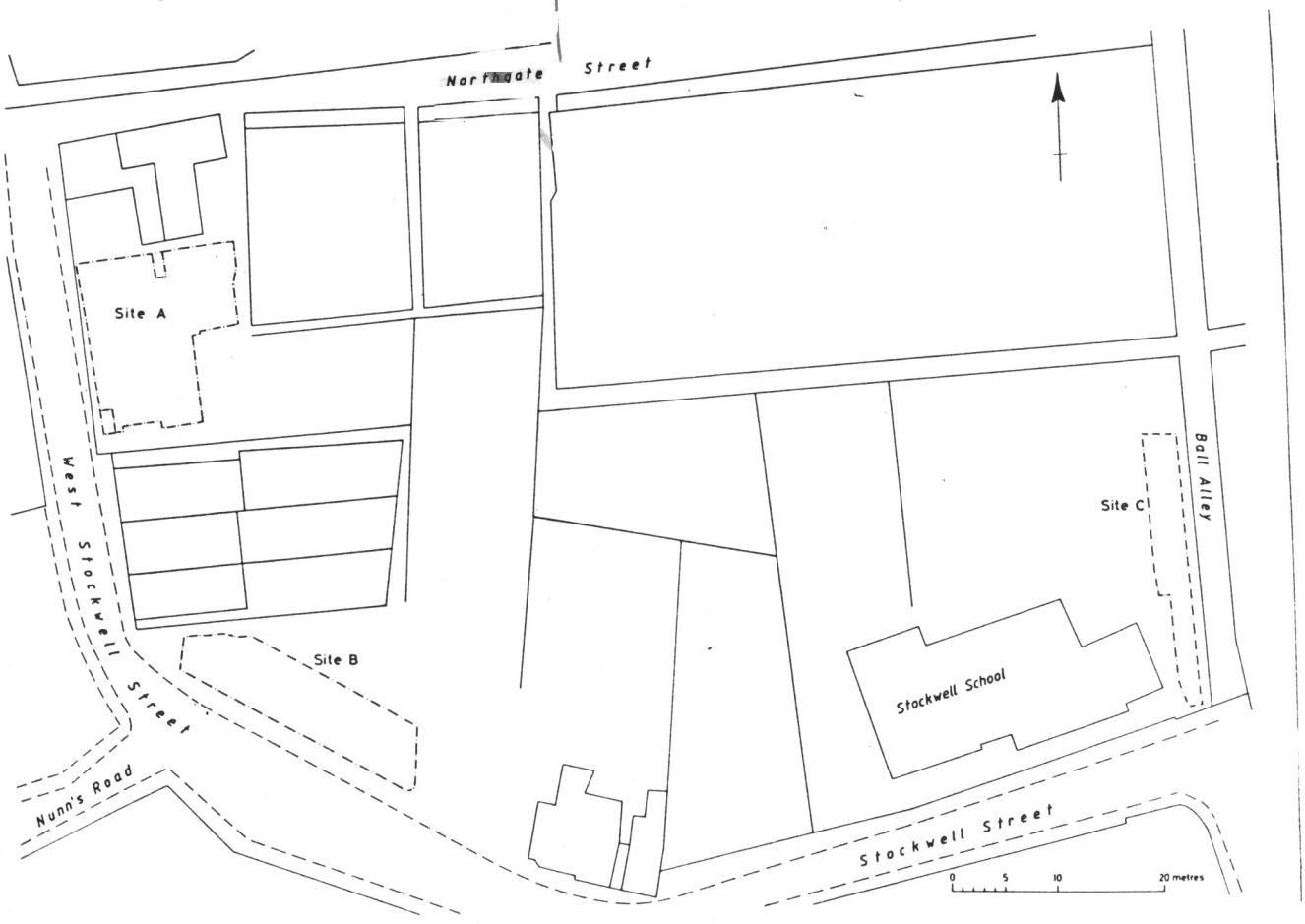


Fig 13.36. Dutch Quarter (DTC 75): location plan of Sites A and B.

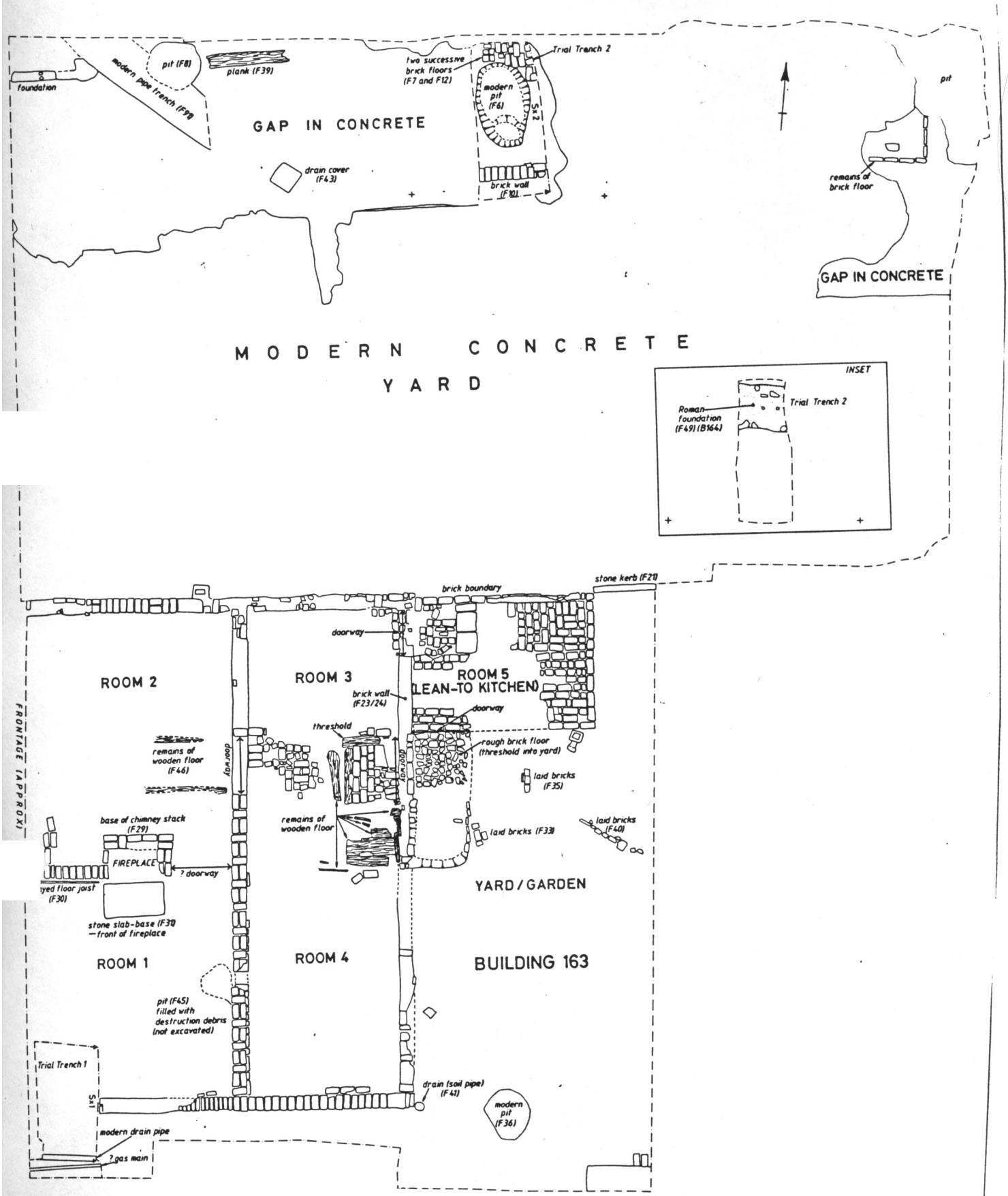


Fig 13.37. Dutch Quarter (DTC 75): Site A plan.

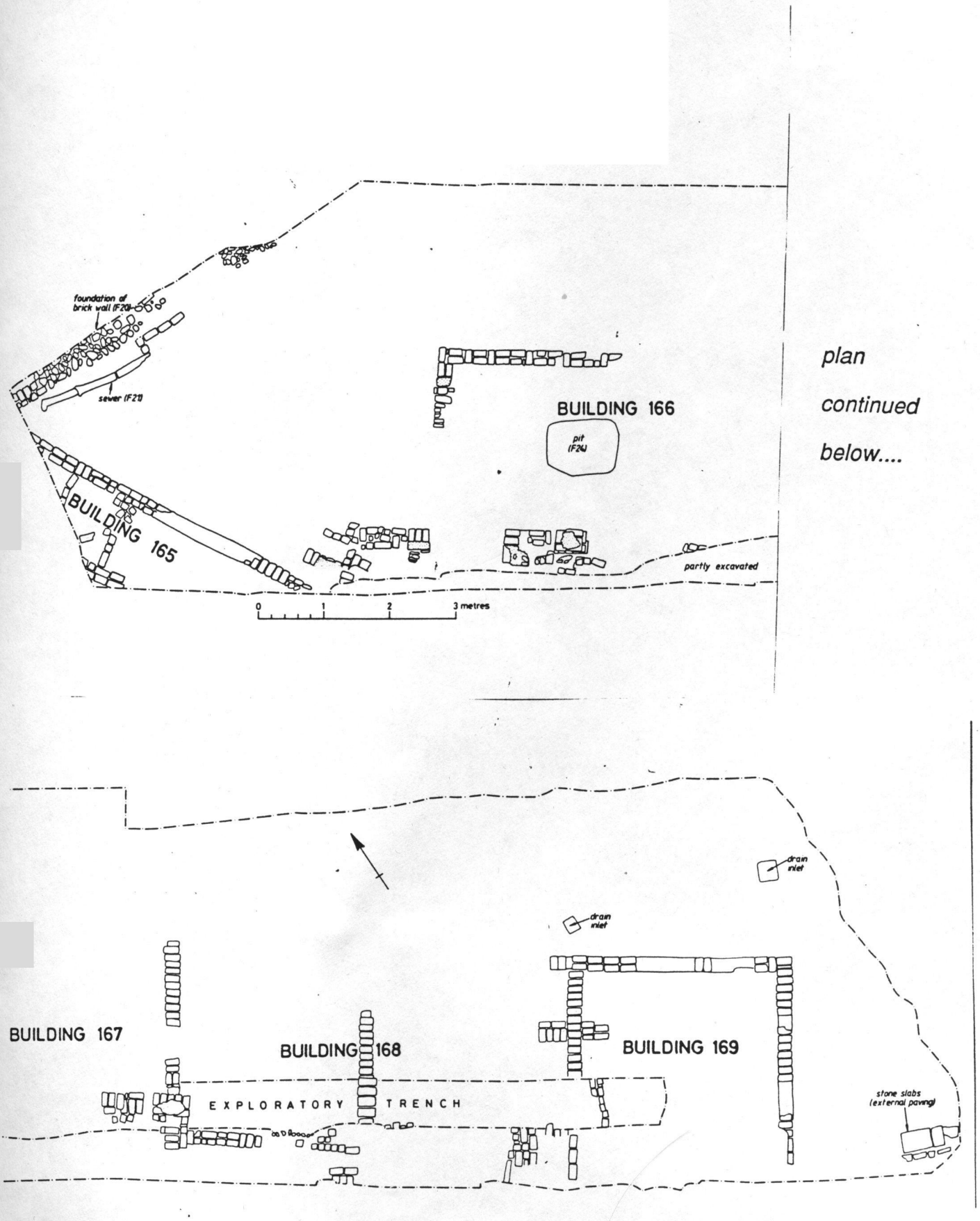


Fig 13.38. Dutch Quarter (DTC 75): Site B plan.

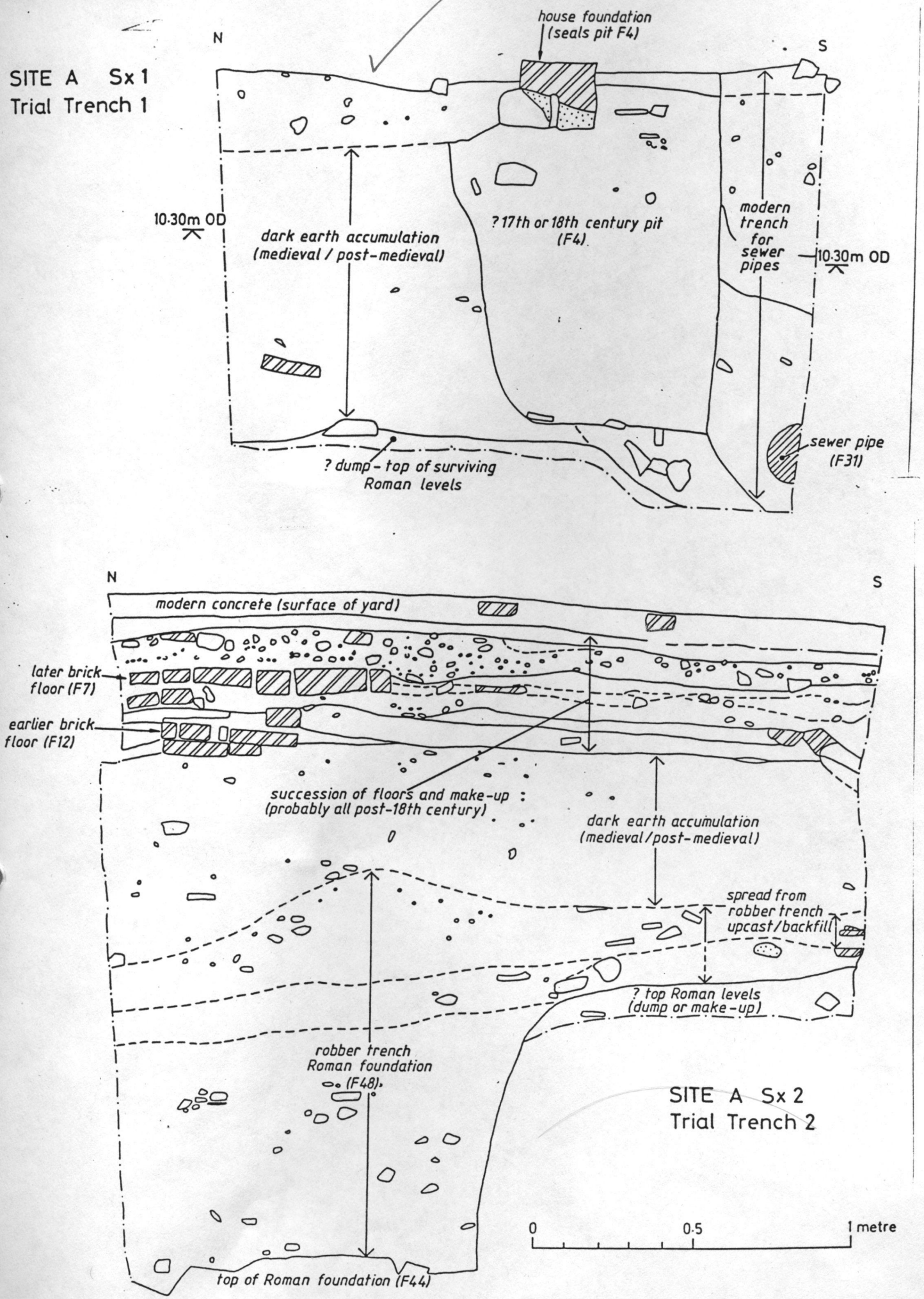


Fig 13.39 Dutch Quarter (DTC 75): sections.

2/75a

St Mary's Hospital Nursing Home

Fig 13.40

17.2.1975

Reason: construction of nurses' home

Record/report: CC

Photographs: Misc Sites 1, 13

Finds: X3 (Had-Ant pot)

The site lies on the terrace approximately 70 m south of the former waterworks near the bottom of Balkerne Hill. An area of about 200 square metres was stripped by machine. The groundwork was well advanced at the time of the final visit; detailed observation was hindered by the movement of heavy plant and the resultant 'trample' embedded in the surface of the site.

At the south-east corner of the site, the removal of up to 1.5 m of topsoil exposed Roman levels, mainly composed of loamy sand. To the west, the sand was sealed by a substantial deposit of burnt daub and charcoal. The most notable feature was a short wall foundation of solid mortar aligned north-south and situated immediately to the east of the burnt material. The area from 5 to 8 m to the east of the foundation contained a scattering of Roman roof and building tile. Taken together, these remains point to the site of a Roman building. This lies about 100 m to the east of the site of the presumed Romano-Celtic temple (Colchester Temple 7) recorded by Dr P G Laver (Hull 1958, 240).

In the south-west quarter of the site, removal of the topsoil exposed natural sand with no intervening Roman deposits.

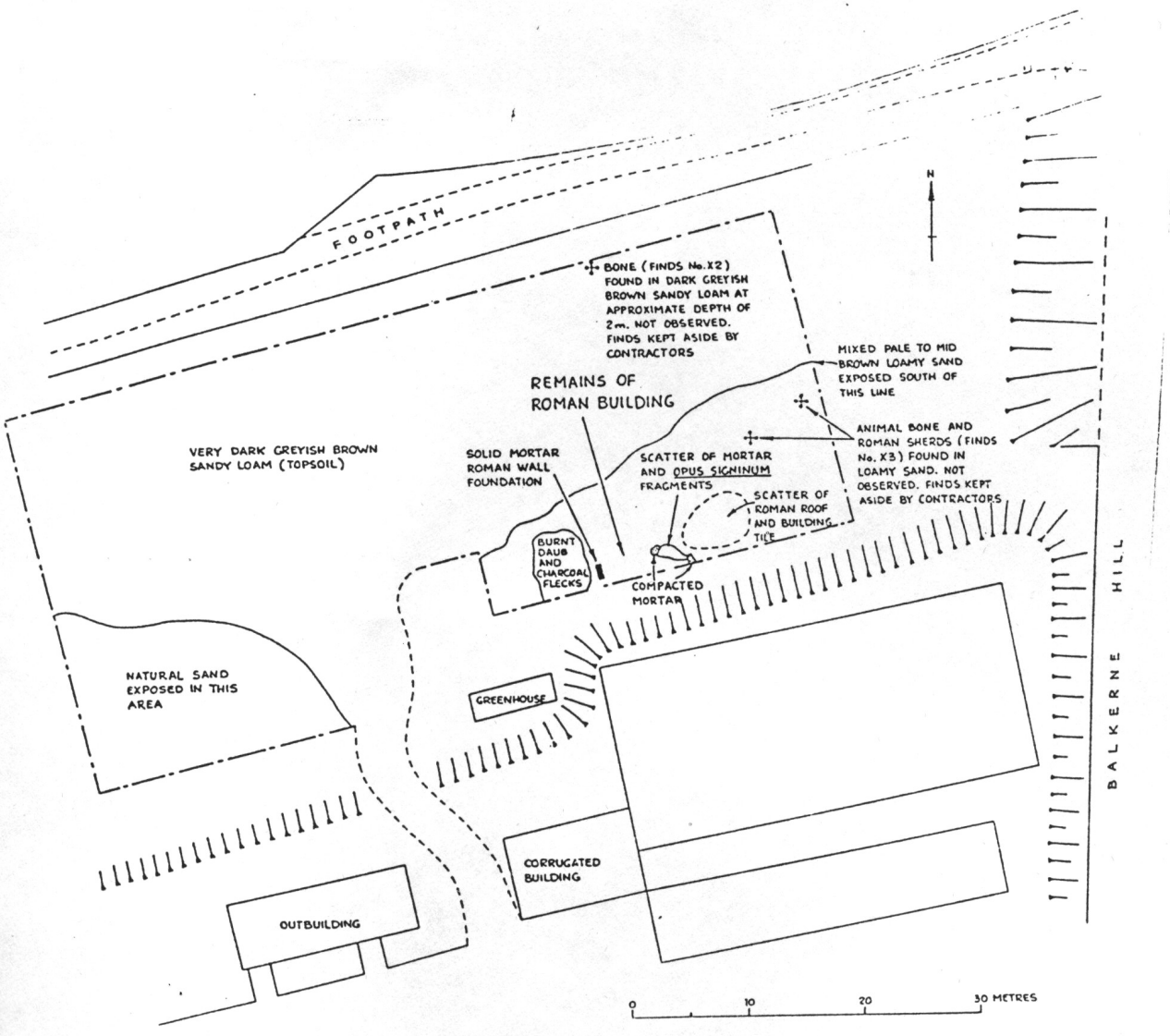


Fig 13.40. Nurses' Home, St Mary's Hospital (2/75a).

2/75b
rear of 107 High Street
Fig 13.41
February 1975
Reason: extension to Conservative Club
Record/report: CC
Photographs: Misc Sites 1, 14-15
Trenches for an extension at the north-west corner of the Conservative Club revealed a north-south wall foundation constructed mainly of mortared septaria with occasional tile fragments in the west face. To the east of the foundation was a thick clay loam deposit assumed to be make-up associated with the wall. The wall and clay deposit appears to be Roman and perhaps marks the westem boundary of the temple precinct. However, the position of this wall is 5 m west of the line plotted on the published plan of the 1960s excavations. The original extent of the clayey material is unknown since the eastern part was cut by a large feature with sloping sides, possibly the castle bailey ditch. A clay layer of similar appearance was noted at the south-west comer of the site where it was present to within 0.4 m of the modem ground surface.
The trench along the Maidenburgh Street frontage cut across a soakaway, 1.0 m in diameter and lined with 50 mm thick red bricks.

Fig 13.41.
107 High Street (2/75b).



Fig 13.41. 107 High Street (2/75b).

3/75a
15-17 The Avenue
Fig 13.42
March 1975
Reason:pipe trench
Record/report: CC
Finds: X10 (two Flavian cremation urns with contents)

On 23rd March 1975, workmen engaged in cutting a pipetrench reported a find of two Roman cremation urns under the pavement adjacent to Nos 15-17. The Avenue and a bungalow, then under construction. The site was visited and the finds, broken and mixed when removed by a mechanial digger, were collected. The find spot was noted and part of the north face of the pipe trench was sketched. Two layers were apparent throughout the 10.5 m length of the trench: a brown sandy loam topsoil, typically 0.5 m deep, which gradually merged with the underlying reddish brown stoney sand.The latter was exposed to a depth of 0.4 m and appeared to be natural sand. The pots were discovered in the sandy loam at a depth of 0.45 m from the pavement surface. According to the workmen the pots were removed from the centre of the 0.7 m wide trench:there was no discernible cut in the section opposite the find spot.

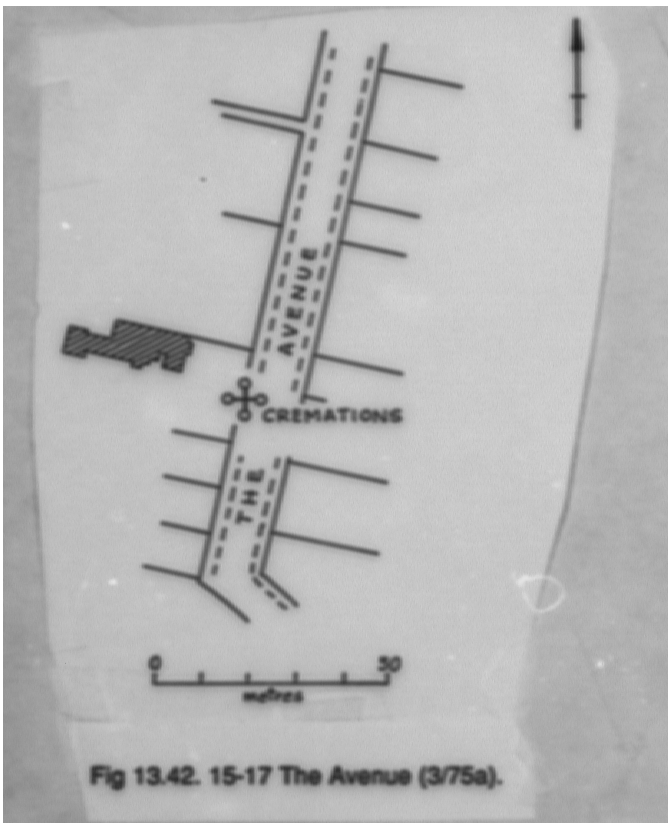


Fig 13.42. 15-17 The Avenue (3/75a).

3/75b
High Street
Fig 13.43
March 1975
Reason:Installation of gas main along the length of the street
Record/report:CC/CC&PC
Photographs:Misc Sites 1, 16-21
Finds: XS & X7 &X3 (Roman pot)

Summary of observations (see Fig 13.43):

1) North-south wall foundation of mortared tile close to projected boundry line between the Bay and Say and the Hippodroma.
2)North-south with foundation of heavily mortared saptaria on boundary line between 132 and 133 High Street projected southwards.
3)North-south wall foundations of mortared septaria on boundry line between 133 and 134 Hight Street projected southwards.
4)North-south wall close to line of west boundry of 134 High Street projected southwards. Probably part of east wall St.Runwald's Church. Later wall of a 16th-century brick in same position. Also a number of human bones probably from St.Runwald's.
5)Modern underground public convenience, filled with rubble.
6 to 9) A succesion of layers of gravel street metalling noted at intervals between Pelhams Lane and The Red Lion.
The tops of the foundations were 0.25-0.35 m below the modern street surface.

The foundations are part of the same group observed by M R Hull in 1927(Hull 1958, 159, fig 80) who thought them to be Roman. However excavations at Angel Yard at Nos 133-4 High Street in 1989 indicated that the Roman levels were probably deeper than these foundations. This suggests that the foundations were medieval or early post-medieval. The foundations at Point 4 coincide with the east end of the chancel was altered in the 16th or 17th centuries.(See Angel Yard report which it is expected will be published in a future volume of Essex Archaeology and History.)

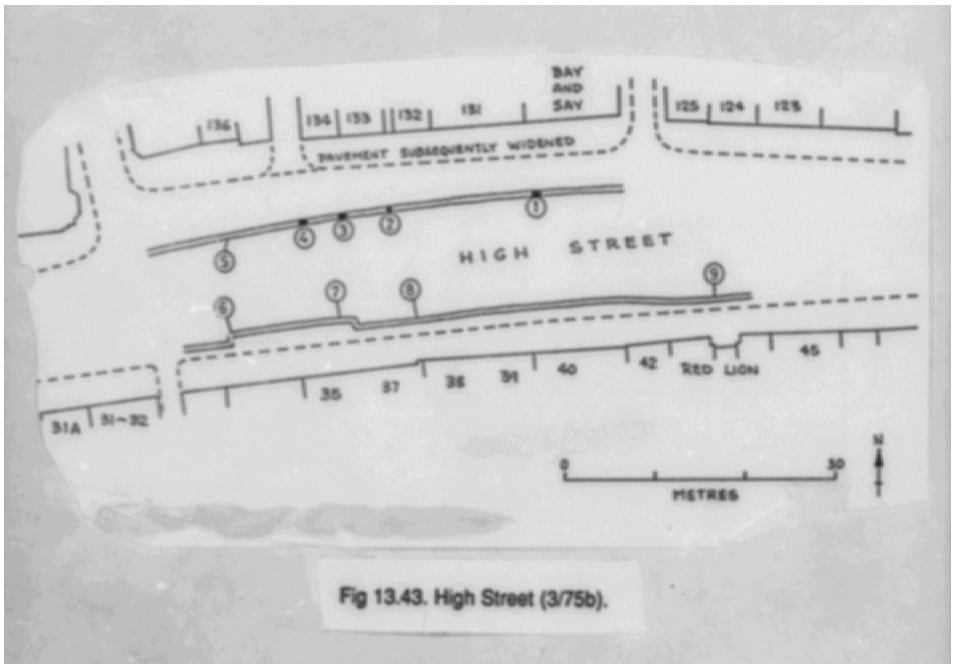


Fig 13.43. High Street (3/75b).

5/75b
Manor Gardens(Oaks Drive Phase 2)
Figs 13,44-5
June to August 1975
Reason: construction of housing estate
Record/report:Vicky Bishop
Finds: X43-6 & X47-59 &X62-8 & X72-80 & X83-7 &X89-90 &X92-3 &X95-8 &X119 &X121-2 &X152 (predominantly 3th- and 4th-century pot). The finds are mainly from the contractor's spoil tip and thus are unstratified but some are provenanced. (See X-Series Book.)

There appear to be no stratified Roman layers above the natural sand except in the south-west corner of the site, where layers of clay loam were observed. Elsewhere on the site there is a large build-up of dark brown "topsoil" with ocal and brick rubble in it, resting many oysters and has produced much Roman pottery.Reputedly this material was dumped on the site when the foundations for St Mary's hospital were being dug out. The fact that the material rests directly upon the natural sand, however, suggests that quarrying activity of some kind had removed all Roman and subsequere layers to reach the sand.So it seems that the soil resting on the natural sand is most likely to belong to the site, but, having been removed in the course of quarrying, was dumped back in a mixed-up condition.Except in the south-west corner of the site, where the stratified layers of clay loam survive, the stratification is non-existent and the features surviving are those out into natural sand. The sub-contractor's foreman reported that a foundation was seen during the construction of the hammer-head and the houses to the south. It was probably first observed to the north of the houses and continued in a north-westerly direction, with a slight ourve, underneath the hammer-head, stopping just beyond the north side of it. The workman thought the foundation looked modern.

The foreman mentioned a patch of reddish burnt clay at the west end of the hammer-head. He thought this could have been a kiln. Unfortunately, both the possible kiln and the foundation were uncovered before observation of the site had begun.

Bones, thought by the foreman to be human, were noted when the foundation for No 52 were being dug.

A pipe trench was dug along the whole length of the hammar-head.In the south side of the trench was a small pit, out into natural sand. This was approxinately 0.3 m wide and 0.2 m deep. Another feature on the north side of the pipe trench, also cut into natural sand, was about 0.9 m wide and 0.3 m deep.
Only the pit on the south side of the trench produced shreds, all of which were Roman.
The area cut by the section formed on the north side of the new road was disturbed and meaningless. The equivalent section on the south side was photographed. It revealed a ditch out into the natural sand which continued in both directions, south-west to north-east (fig 13.44). The fill was a dark, sticky brownish-black material of modern appearance and a piece of modern glass was found in it. A layer of brown sandy loam with burnt flecks overlay over this dark fill. the width of the ditch was approximately 3.0 m and its depth approximately 1.5 m.Also observed in this section was a small feature(width 0.45 m, depth 0.9 m) out into the natural sand.Another possible shallow feature with a very sandy fill(width 1.95 m, depth 0.3 m) was also out into the natural sand.

Two deep pits were dug just outside the north-eastern corner of the hammer-head for works conneced with the new drainage system. Borht showed the usual dark brown topsoil immediately above the natural sand which gives way to a band of natural gravel about 1,5 m down. No features were observed in the sides of the pits. Pipe trenches were dug on both sides of the entrance road to the site.Neither showed any features, but only a dark modern topsoil, more disturbed than elsewhere on the site, extending down to the natural sand.

A deep pipe trench was excavated right across the northern end of the site. Once again no Roman stratification was observed but only an accumulation of dark soil. The natural sand varied in depth across the pipe trench quite considerably, but not in such a way that would indicate features out into it.

A lead coffin lining was discovered on the site of No 41(pp 344-5, Fig 13.45 in printed book). It had been damaged by machine and then rolled up by a workman in readiness for delivery to a scrap yard. Close by and presumably from the same grave was a large grey-ware pot.No bones were recovered with the lining. The latter is in the Colchester Museums and the pot was retained by the workman who found it. Showing in a foundation trench of the same house was a Roman pit or ditch out into natural sand (as was the pit containing the coffin).

Workman reported two more skeletons.One was found when a drain was being laid to the south of No 52, paralel with its western wall. A glass bead was with the skeleton. The grave was in approximately the same are where, the previous summer, human boneshad been reportedly found. The bead is in the possession of Mr Moss, Max Cottage, Halstead Road, Aldham.

Some pottery was recovered from the general foundation digging for No 41. Pottery was also recovered from the coffin pit(which was excavated and contained only a few shreds).Overlying the sand in the area of the foundations of No 41 was a mixed, sandy Roman deposit into which the coffin pit appeared to have been out. this layer continued for

about 0.15 m below the top of the foundation trench.
the coffing pit appeared to be about 0.8 m deep.

The lead coffin-living(PC) (see pages 344-5 and Fig 13.45 (printed book)

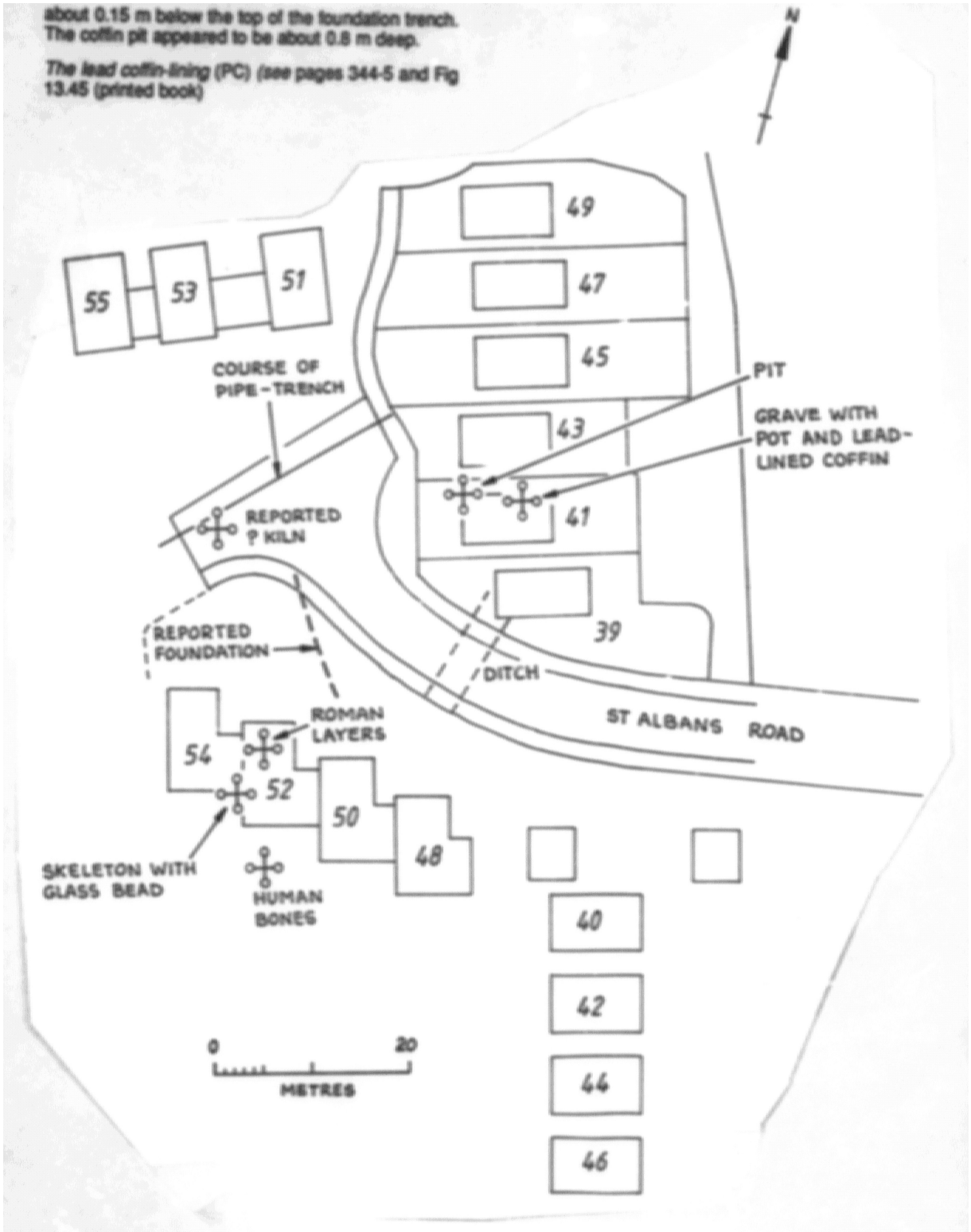


Fig 13.44. Oaks Drive (Phase 2) (5/75b).

6/75a
Balkerne Passage
Fig 13.46
Reason: road trench
Record/report: CC
Finds: X32 &X38 &X91 (3rd-4th century with a little PR pot)
A series of four layers of compact stoney road metalling was observed in the north face of a 2 m deep trench situated on the line of the south carriageway of the Balkerne Gate. This extended from a depth of 1.15 m to 1.55 m below the surface of the road south of 'The Hole in the Wall' public house. Beneath the metalling was a thick layer of loamy sand, probably make-up, which continued beyond the bottom of the trench.

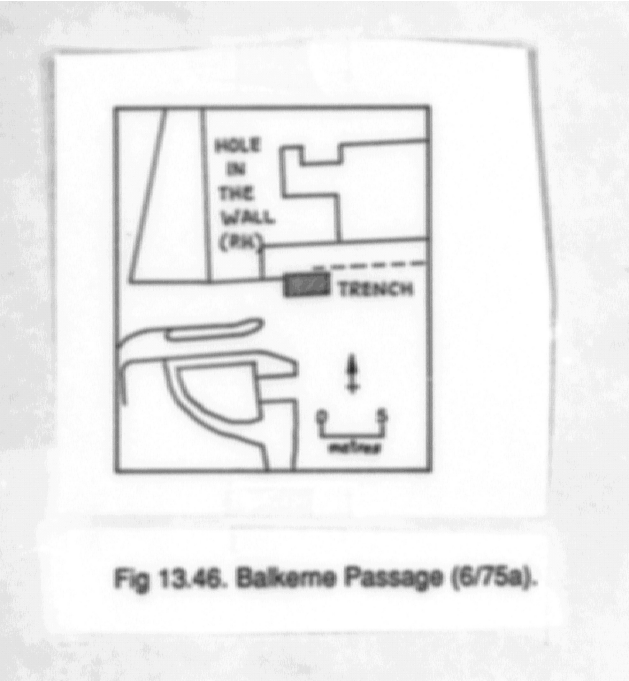


Fig 13.46. Balkerne Passage (6/75a).

6/75c
Kingswood House School, Sussex Road
June 1975
Reason: construction of small single-storey extension
on south side of main school building
Record/record:CC
Finds: X94 (unstrat:probably c 2nd+)
No significant features. Foundation trenches revealed a dark brown topsoil which extended from the surface to a depth of approximately 0.6m where it merged with neutral sand. Finds from the spoil heap (X94) include Roman sherds, probably dating from 2nd century onwards.

6/75d
Balkerne Gardens
Fig 13.47
June 1975
Reason: trench for gas main around perimeter of Balkerne Gardens central lawn
Record/report:CC
Finds:X60 sherds (3rd-4th), X69 (bone, 4th & PR pot), X71 (probably 3rd+pot)
A gas board trench, 0.65 m deep, revealed a thick featureless layer of dark greyish brown sandy loam which contained various sherds (X60) of 3rd-to 4th-century date. This material is possibly a topsoil accumulation from the late Roman period onwards. A patch of burnt daub was exposed at the bottom of the trench in front of Nos 5 and 6 Balkerne Gardens. Elsewhere the dark sandy loam extended beyond the bottom of the trench.

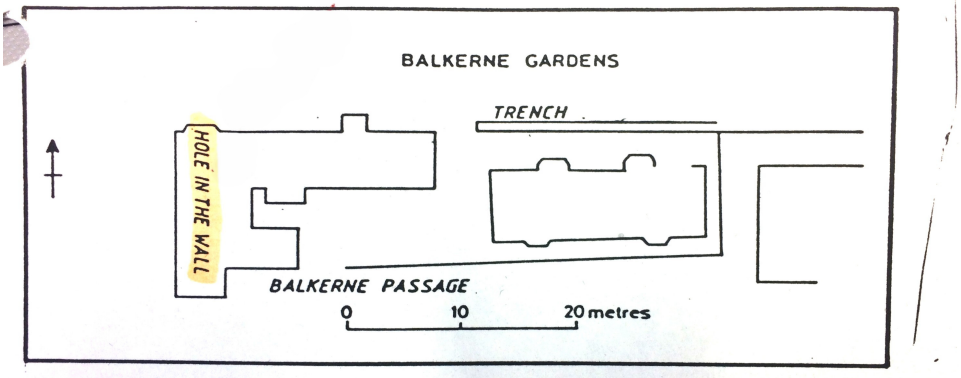


Fig 13.47. Balkerne Gardens (6/75d).

9/75a
Telephone Exchange, West Stockwell Street
September 1975
Fig 13.48
Reason:extension on south side of main building
Record/report: CC
The groundwork was limited to the digging of the single foundation trench for pillars to support an extension at first-floor level. As a result of terracing during the construction of the telephone exchange, the ground to the north side of the trench was 0.8 m lower than that to the south. The south face of the trench formed an east-west section, approximately 1.3 m in depth. Beneath the concrete yard surfacing, in the uppermost 0.8 m, was a thick deposit of dark greyish brown sandy loam, probably of post-Roman date. This material was absent from the north side due to the earlier terracing which has reduced the ground level with the result that the yard surfacing at this point on the hill now lies directly on Roman strata. The layers beneath the dark sandy loam were of distinctively Roman appearance and consisted of a thin deposit of olive loamy sand above a 25 mm thick spread of crumbly opus signinum (a floor or destruction debris?) which extended across the section for 3 m without interruption. The opus signinum rested on a further layer of olive loamy sand which continued beyond the bottom of the trench.

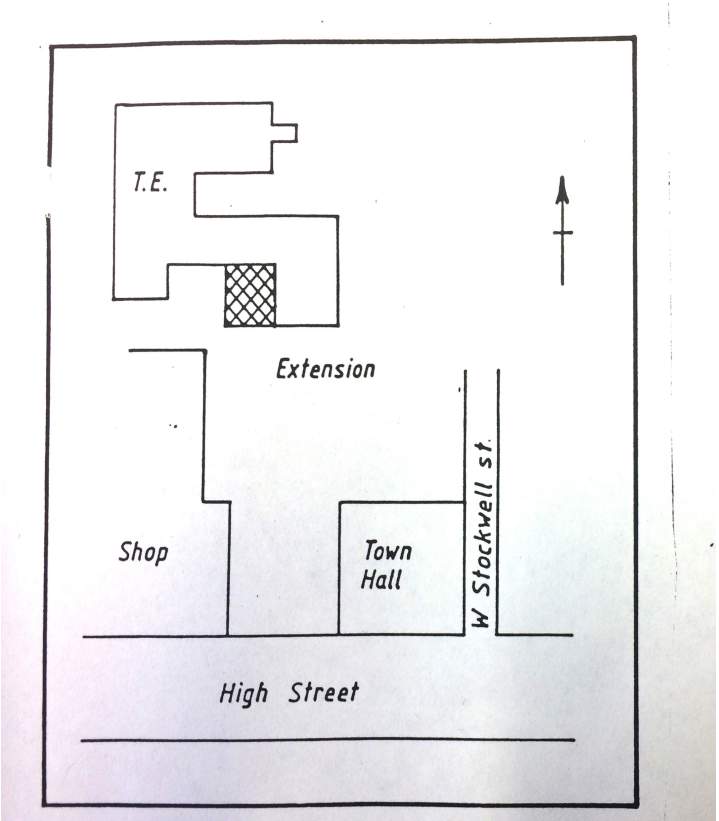


Fig 13.48. GPO, West Stockwell Street (9/75a).

9/75b

54 Cambridge Road

September 1975

Reason: construction of two-storey rear extension

Record/report: CC

No significant features. The foundation trenches, only 0.6 m deep, cut 19th-century deposits. The owner of this property, Mr Hopkins, is the chief building inspector for the Borough. From past observations in this area, he believes that up to 2 m of make-up was laid in the southern part of Cambridge Road before construction of the present buildings.

Balkerne Gate (BGC 75; 11/75a)

Fig 13.49 [See 35 mm microfiche]

1976

Reason: replacement of existing balcony

Record/report: PC

Photographs: Misc Sites 1, 22-4

In 1975, the balcony of the Hole-in-the-Wall public house was demolished and replaced with a new open-plan structure, designed to display the remains of the Balkerne Gate to more effect. A few years earlier, the gate had been re-examined with result that the conventional interpretation of the remains had to be modified (*CAR 2,*121-3).

A small trial hole was dug in the flower bed in the terrace of the old balcony with the following aims:

i) to establish the eastern limit of the blocking wall of the Balkerne Gate
ii) to confirm that the central pier did not stand to such a height that it would be damaged by a new stair along the west wall of the public house
iii) to establish the date and nature of the archaeological deposits likely to be destroyed by the insertion of a new stair as described in ii) above.

Most of the area examined had/been destroyed by the digging of a late 19th- or 20th-century pit which may have been the result of the archaeological excavations of 1913-17. Some stratified deposits had survived however at the northern end of the trial trench and consisted of layers of dark soil with fragments of oysters, mortar, tile, septaria, and tufa. The possibility of a rampart was considered but discounted on the basis of the horizontal nature of the deposits and their content, which seemed to imply a slow accumulation of soil and debris at the foot of the wall. No datable finds other than Roman tile fragments were recovered from this accumulation and no part of the central pier was located.

The accumulation of material behind the blocking wall was 10YR 3/2 very dark greyish brown sandy loam containing many small fragments of pink and white mortar and gravel and small stones. Although there were no clear layers in it, there were distinct lenses of lighter and darker soil. Most of the oyster shells and many of the larger Roman tile fragments were horizontal. The material penetrates the joints and cracks of the blocking wall.

The trench was at first confined to the flower bed but later was extended westwards to locate the blocking wall. The latter, where it crosses the remains of the monumental arch, appeared to be about 0.2 m wider than shown on the plans published in *CAR **3***.

12/75

44-5 South Street

December 1975

Reason: construction of a block of four flats

Record/report: CC

Finds: X103 (unstratified Roman pot) from trench from five visits

No significant features. The 2 m deep foundation trenches revealed a uniform, very dark greyish brown, sandy loam topsoil which extended from the present surface to a depth of approximately 1.0 m. Below this point it gradually became lighter and sandier, eventually merging with natural sand at a depth of 1.5 m.

The evidence from these trenches suggests that this small area was subject to an uninterrupted accumulation of topsoil from earliest times up to the 20th century.

St Helena's School (HEC 76)

For text and general site plan, *see* pp 344-46. For site plan and section, *see* Figs 13.51-2 on 35 mm microfiche.

4/76a

St Peter's Street (Council Computer Centre, west side of Ryegate House)

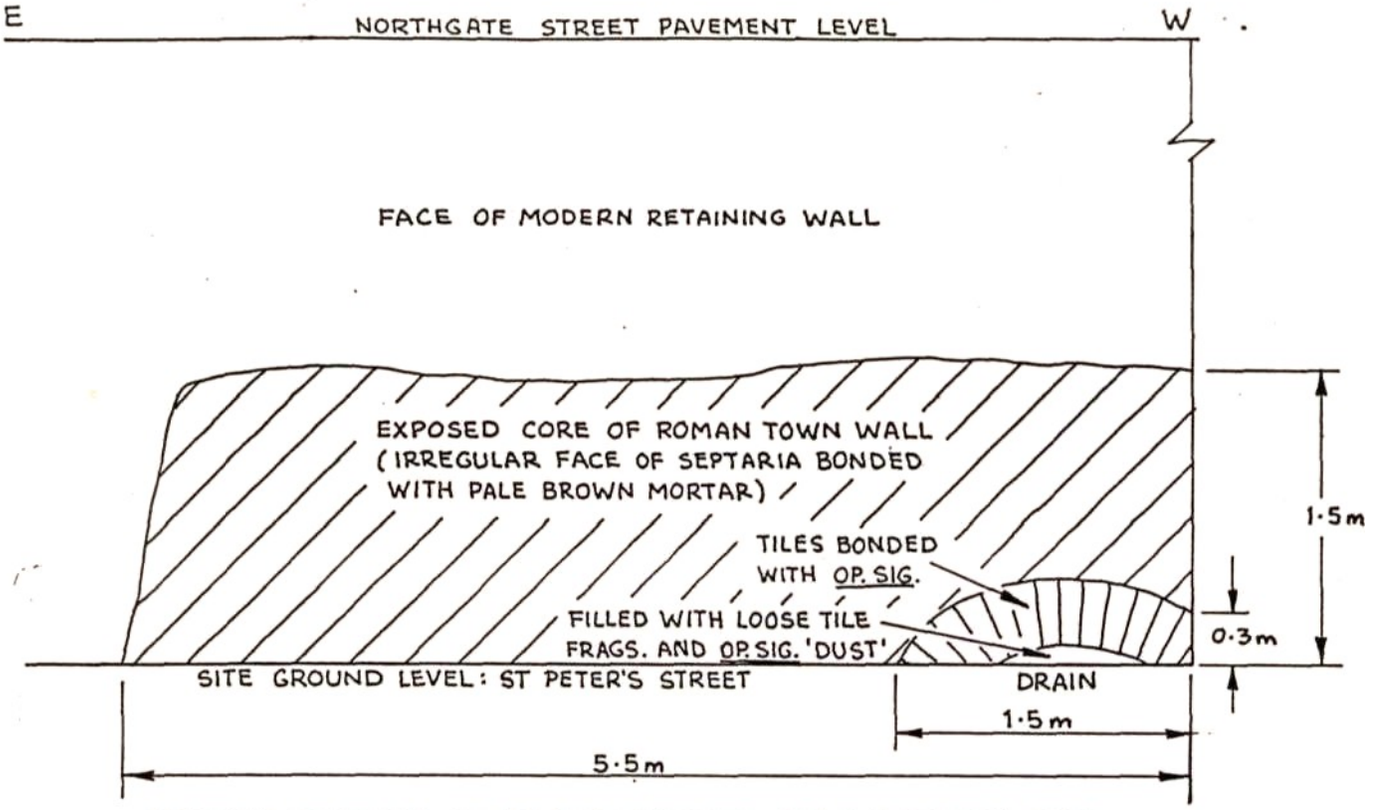
Fig 13.53

April 1976

Reason: construction of office extension

Record/report: CC

During the contractor's initial clearance of the site, the retaining wall against the Northgate Street boundary collapsed, revealing the top of an arched drain outlet in the north side of the town wall. The position of the drain is shown on the accompanying plan; the dimensions are approximate since it was not possible to carry out a close inspection for safety reasons.



SKETCH SECTION OF DRAIN EXPOSED BELOW NORTH SIDE OF NORTHGATE STREET. (not to scale)

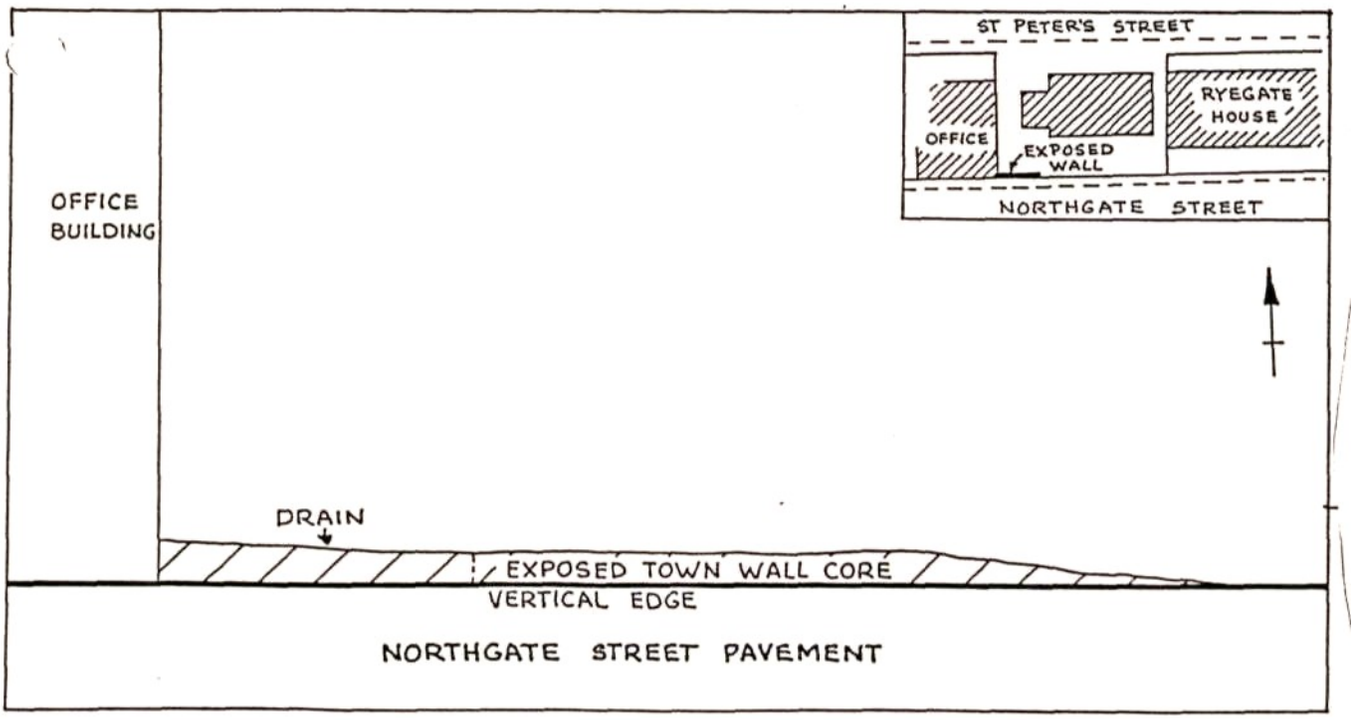


Fig 13.53 St Peter's Street (4/76a).

4/76b

2 Oxford Road (Oxford House School)

April 1976

Reason: construction of small extension on south side of main building

Record/report: CC

No significant features. The 1 m deep foundation trench revealed natural sand at depths of between 0.7 m to 0.9 m. Between the natural and the site surface was a dark greyish brown sandy loam topsoil, the upper levels of which were subject to much 19th-century disturbance.

4/76C

Culver Street West (north of the church yard of Holy Trinity Church)

- *June 1976*

Fi9 13.54

Reason: road trench

Record/report: G J Tann/CC

Photographs: Misc Sites I, 28&83

A possible north-south Roman wall foundation of septaria was observed in a trench against the ntorth side of the boundary wall between Trinity church yard and Culver Street. The feature was sealed by approximately 0.8 m of topsoil and extended to a depth of approximately 1.25 m from the street surface. To the west were deposits of gravel and mortar.

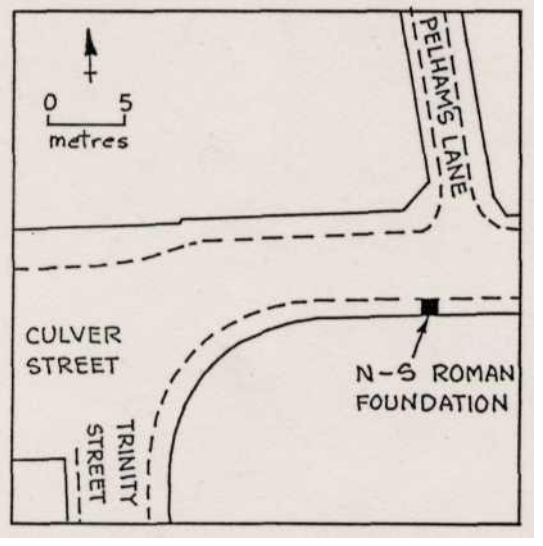


Fig 13.54. Culver Street (4/76c).

5/76a

Harbour House, Hythe Quay

May 1976

Reason: redevelopment for new warehouse

Record/report: CC

No significant features. The groundwork exposed thick deposits of 19th- to 20th-century dumped material including large amount's of soot, perhaps waste from steam ships. This material extended beyond the bottom of the 1.15 m deep trenches.

5/76 b

65 High Street

Fig 13.55

May 1976

Reason: redevelopment

Record/report: HB & CC/PC

Photograph: Misc Sites 1,27

Practically all of the site was destroyed because of cellars. The southern half of the plot contained a complicated brick cellar containing several vaulted passages.

The important discoveries lay in a metre-wide strip of surviving stratigraphy between the northern cellar and the High Street frontage and consisted of a north-south Roman drain and two human skeletons. The drain was built of red and pale buff-red tiles set in yellow/light brown mortar. One piece of septaria was set in the apex. The base consisted of a slab of marble (X105) bedded in mortar.

The skeletons (X105) were discovered and removed by the workmen. They appeared to have been complete but it was unclear how they had originally lain in the ground or how they related to the surrounding layers.

In addition there were two wells (one of which may have been a soakaway rather than a well) and a fragment of foundation of probable Roman date. The size of the foundation does not seem to point to the presence of a public building.'

Layers and features in section:

1. modern ground level
2. layer of orange/brown sand and gravel (top of Roman levels?)
3. daub layer, orange clay mixed with black soil
4. thin charcoal burning layer
5. dark area — possibly a grave
6. vaulted drain
7. light brown sandy clay, absent on the other side of the section
8. layers indistinct in this area — may have been disturbed
9. dark brown soil, possible a robber trench but containing no mortar

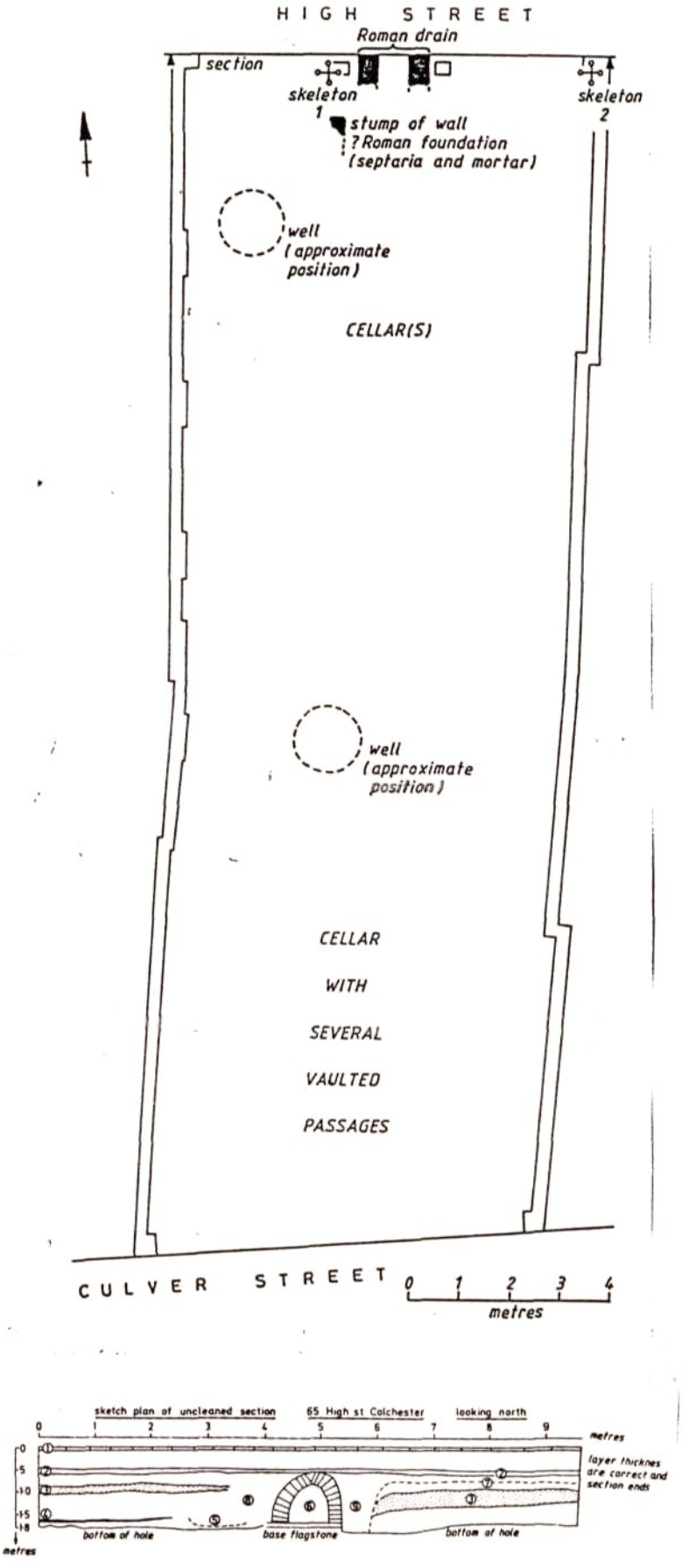


Fig 13.55. 65 High Street (5/76b).

5/76C

Ramparts School, Halstead Road

May 1976

Reason: cutting for swimming pool

Record/report: HB/CC

Finds: 17th/18th century sherd, unstratified-discarded

No significant features. A 0.85 m deep cutting to the north of the school buildings exposed undisturbed sand and gravel at a depth of approximately 0.6 m. Above this was 0.25 m of loamy sand and gravel, covered by 0.35 m of topsoil.

6/76a

Roman Road/Castle Road

Fig 13.56

15th June-28th July 1976

Reason: the Colchester Borough Council laid a new sewerage system

Record/report: HB/PC

The trench for this new pipe, cut to a depth of over 2.5 m, exposed west of the eastern boundary of the bowling green (ie from between manholes MH2 and MH3 to Manhole A) only dark soil containing possibly in the top part only flower pot fragments, modem glass and shoe leather. The impression gained was that the area had been disturbed possibly quite recently. A large animal, either a horse or a cow, had been buried in modern times 4 m north of manhole MH1.

East of the eastern boundary of the bowling green, the stratigraphy changed markedly. Subsoil was exposed along the length of the trench, the only features being two pits or ditches apparently of recent origin. No sign was detected in any part of the trench of the town ditch. This is in accordance with previous observations of the ditch (Castle Gardens excavation, CGC 78, pp 860-1) which indicated that it lay to the north of the trench.

To preserve the town wall, the pipe was set in a trench bored under the wall. Although the latter was left untouched, a deep cutting had to be made through the rampart. A scaled sketch was made of the section. The rampart was made of greyish brown loam. It seemed to be split into two rough phases (Layers 2 and 3 in the section). There was no clear street metalling either at the base of it or in the body of it as at Lion Walk *(CAR* **3,** 70-3) although the base of the rampart near the centre was noticeably more gravelly and perhaps indicative of a Roman' street? The rampart contained a small quantity of Antonine pottery (X112-3).

The foundation of the wall appeared to be only about 0.6/m deep which is remarkably shallow.

North of the wall the ground sloped downwards north of the present east-west hedge. The soil on the slope was 0.3 to 0.4 m deep and overlay subsoil. The topsoil contained modern and post-medieval finds. It merged with the fill of a slight ditch (a field boundary?) at the foot of the slope as well as the fill of a trench for an electric cable.

Once into Roman Road, the new trench followed the line of the trench for the old sewer with the result that no layers were visible in Castle Road and Roman Road apart from the backfill of the old sewer trench. One exception was a small pit observed outside No 55 Castle Road. This contained Roman pottery sherds and septaria.

The finds were as follows:

MHA to MH1:3rd/4th pot (X107: unstratified)

Topsoil on slope north of town wall: PR pot (X108)

Layer 1 (modern) in rampart section: PR pot (X109)

Northernmost 10 m stretch of trench in Castle Road: X110-1 (unstratified)

Layers 2 and 3 in rampart (see section): X112-3 (probably Ant & probably Had+ pottery respectively)

Unstratified in Castle Road: X114 (four flints)

20 m stretch of trench south of X110-1: X115 (unstratified: probably Ant pottery)

Between MH4 and MH6: X116 (mid 2nd-eat1y 3rd century & PR pottery)

The layers in the section through the rampart are as follows:

1. Topsoil containing post-medieval finds (X109). Very dark brown, slightly sandy loam.
2. Rampart. Grey humic soil with the occasional lens of medium brown clay loam and a few stones of all sizes.
3. Rampart. Medium brown to slightly orange/brown clay loam with some water worn pebbles, mainly medium and small in size. Also tile fragments and oyster shells. Finds X112 and 113 are from Layers 2 and 3.
4. Very silty clay loam (in texture and appearance). Medium brown in colour. Hardly any stones but one fragment of mortar observed in section. Interpretation uncertain but pre-rampart?
5. Natural. Orange/brown sand and gravel.

The layers in the sketch section north of the wall are as follows:

1. Modern tarmac (path).
2. Path foundation merging with 3.
3. Post-medieval/modern topsoil.
4. Sandy gravel, merges into fill of ditch and trench for cable.
5. Natural.
6. Topsoil — more recent than that over the slope?

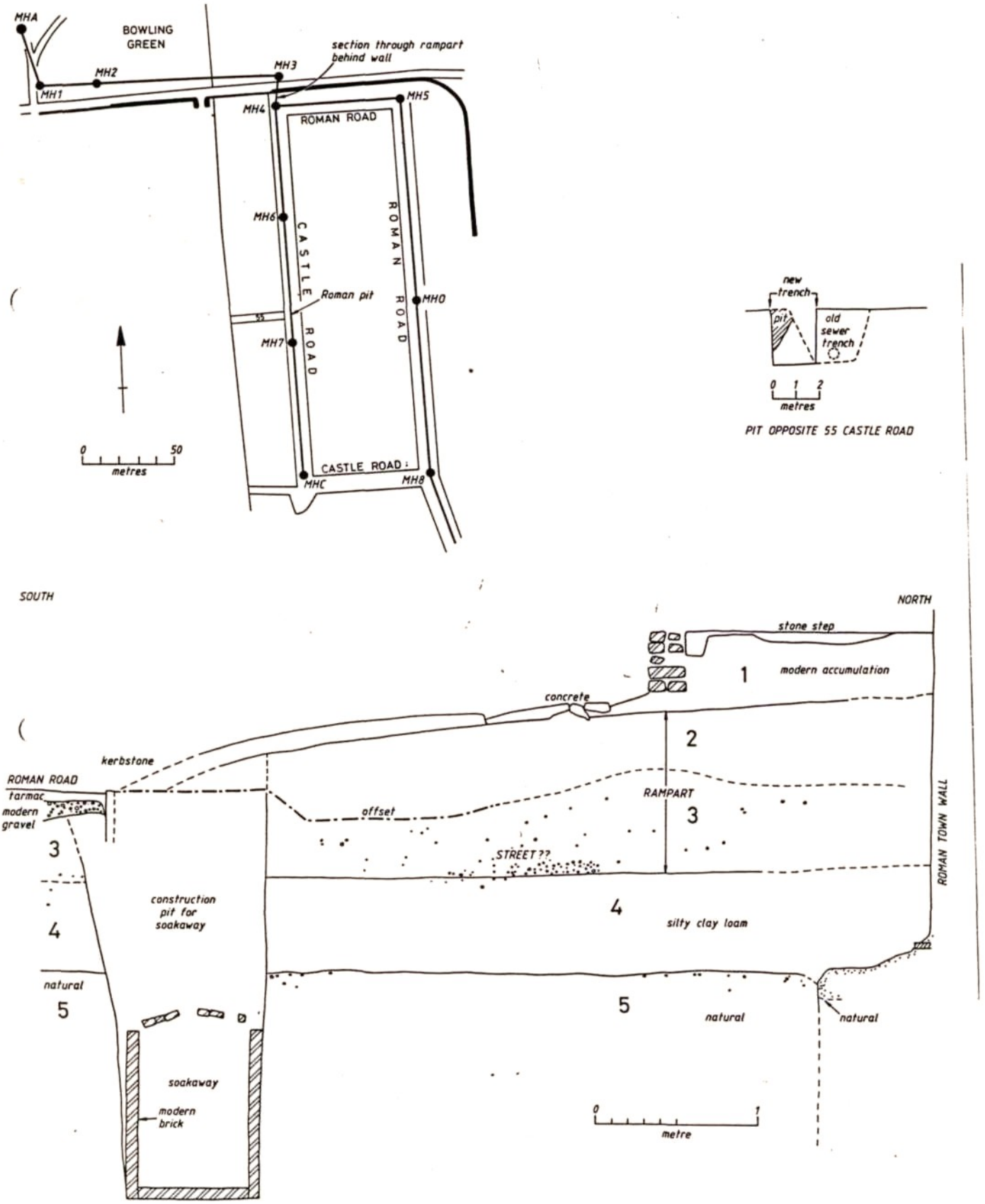


Fig 13.56. Roman Road/Castle Road (6/76a).

6/76C

19 Oxford Road

June 1976

Reason: construction of extension (11 flatlets)

Record/report: HB & CC/CC

No significant features. A 0.9 m thick layer of topsoil covered a light brown clay loam which extended down to the natural which is an orange brown gravelly sand lying at a depth of 1.1 m from the surface.

7/76A

The Hythe Mattings

July 1976

Reason: demolition

Record/report: A Colchester/CC

Photographs: Buildings & Churches, 43-50

This derelict Grade II listed industrial building was photographed from various viewpoints shortly before demolition took place.

8/76a

Rear of 9 High Street (Barclays Bank)

Fig 13.57

August 1976

Reason: construction of rear extension

Record/report: CC

Foundation trenches for the north and east walls of the new building were observed. Trenches elsewhere were either concreted or obscured by shoring.

No convincing Roman deposits could be seen. The area was extensively pitted, possibly in the medieval period. The sections were largely composed of slightly differing shades of dark brown sandy loam pit-fill flecked with oyster and tile fragments. In one trench this material was cut by the base of a 3 m long, north-south wall built mainly of reused septaria with some peg-tile. Sealed by a layer of modern concrete, the exposed eastern side of the wall was smooth-faced and extended to a depth of 0.7 m.

Approximately midway along the contractor's northern trench, the corner of a 2 m deep flat-bottomed feature with vertical sides could be seen behind a partly shored enlargement of the cutting. The fill, a dark sandy loam flecked with mortar, suggests that the feature was a robber trench. If a robbed foundation, the part exposed appears to have been at the north-east comer of a structure, the date of which is unclear.

Natural sand was noted at depths of 1.65 m (in the north-east corner) and 1.9 m (in the south-east corner) from the present pavement level in Culver Street.

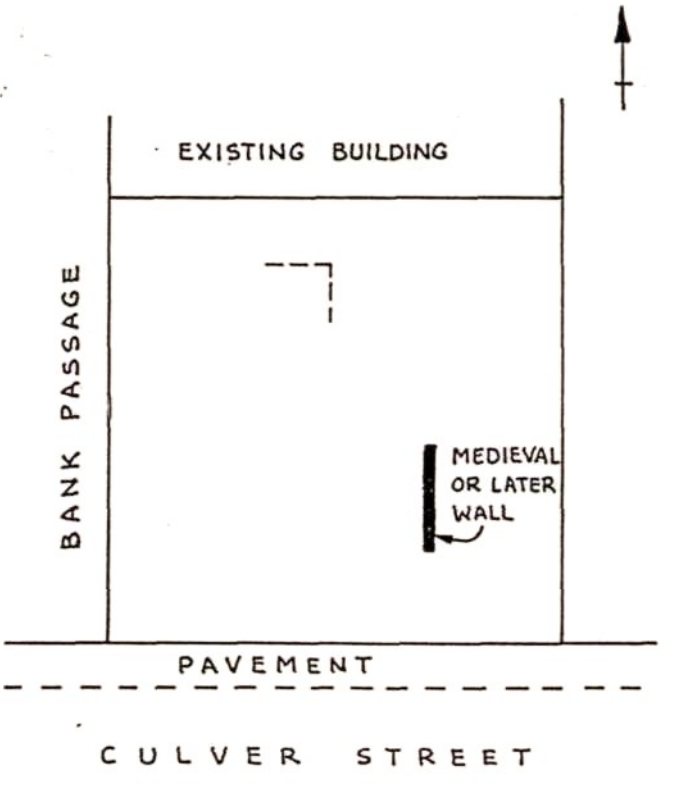
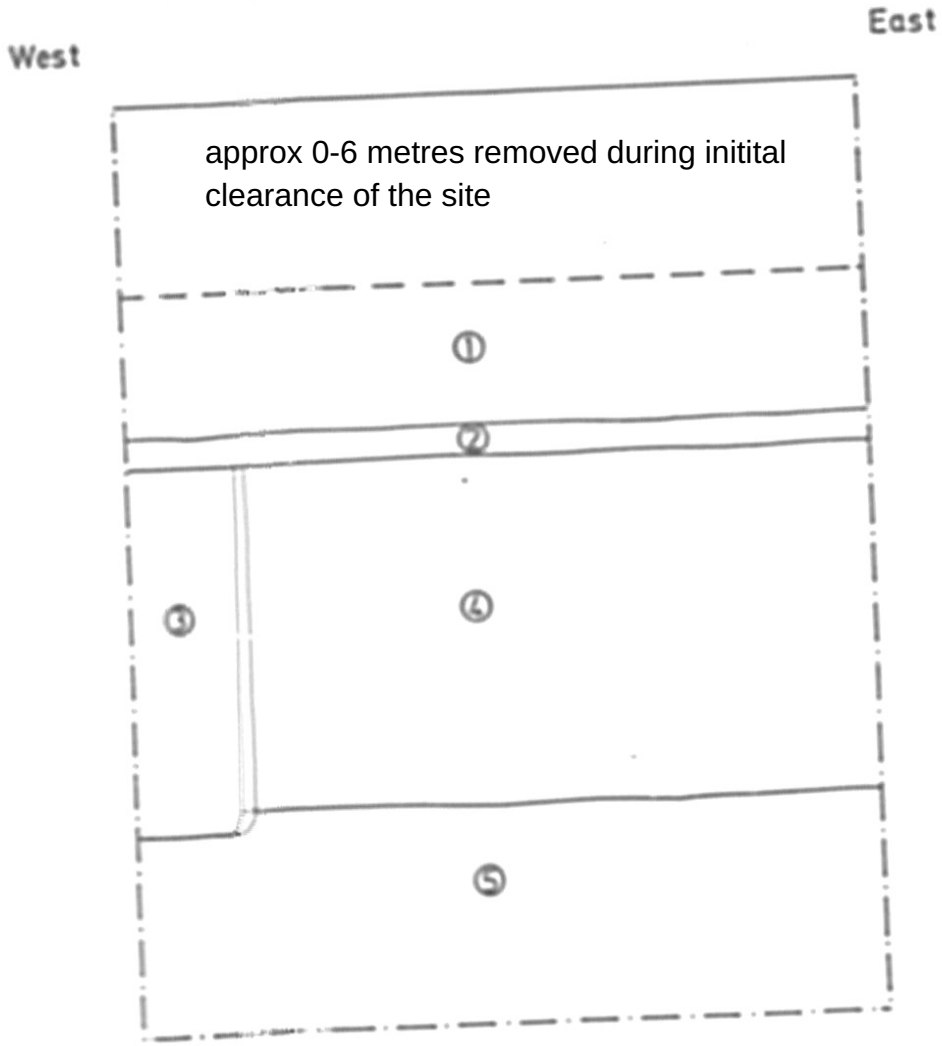


Fig 13.57. 9 High Street (8/76a).

8/76b
36 Culver Street and rear of 52/53 High Street
August 1976
Reason: redevelopment
Record/report:CC
No significant features. No deep trenches.
Entire site stripped to a depth of 0.7 m from present street level.
New building stands on a concrete raft.



1. mixed mainly very dark greyish brown sandy loam. Post Roman topsoil
2.demolition debris including red painted wallplaster
3.mortared septeria wall fopundation
4.dark brown sandy clay with occasional patch of burnt daub
5.natural gravel

Fig. 13.59 26 North Station Road (11/76:section). (See pages 344-5 in printed book).

12/76a
22/30 Southway
Fig 13.60
December 1976
Reason:construction of office building
Record/report:CC
No significant feature.Although dug to depths of up to 3 m. the contractor's foundation trenches did not reach natural strata. The sections were composed mainly of very dark greyish brown sandy loam, merging into aa dirty brown sander material near the bottoms of the trenches.

The exceptional depth of deposits is presumably due to the gradual filling of the Chiswell valley, within which the site lies.



Fig 13.60 22/30 Southway (12/76a)

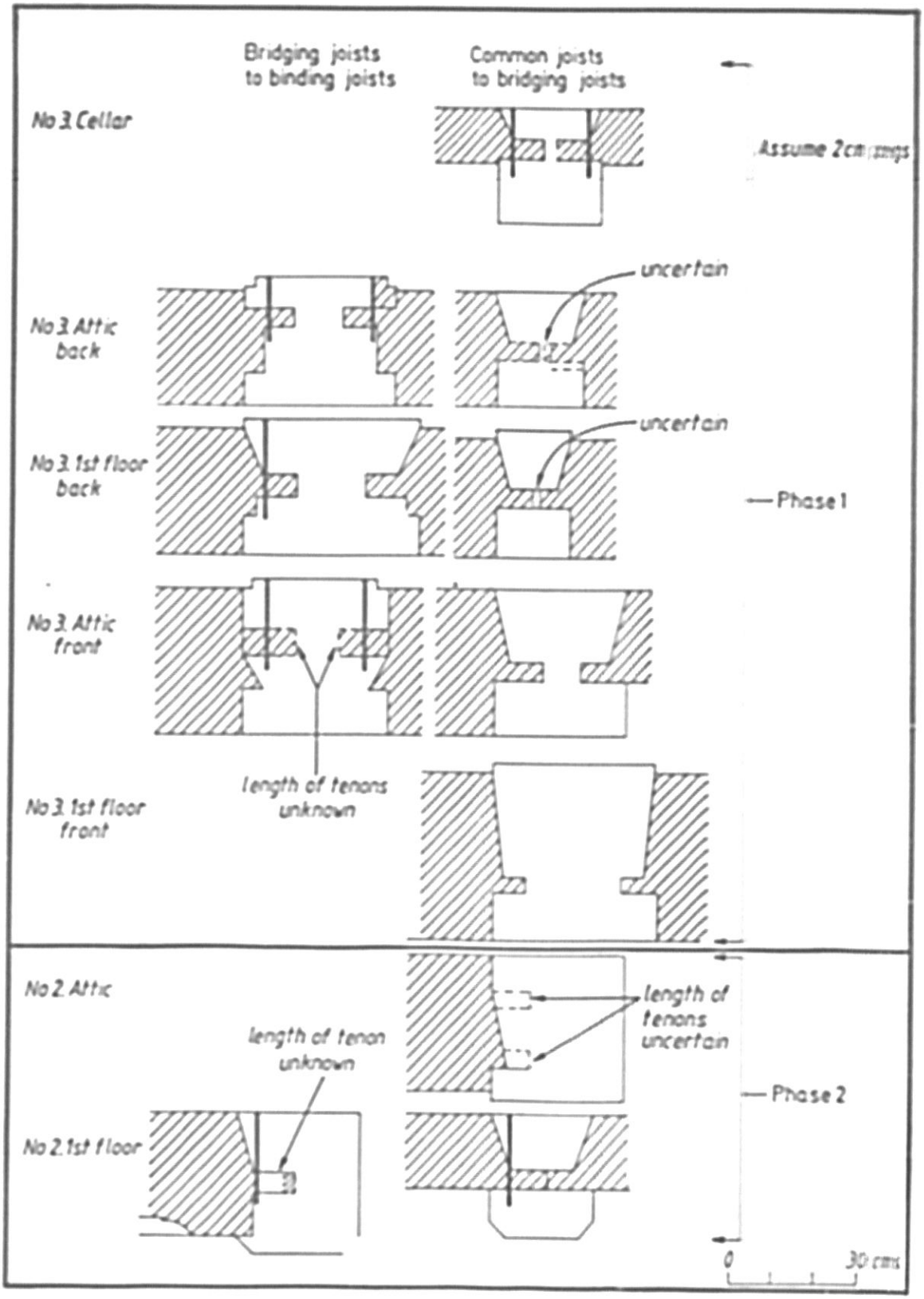


Fig 13.68 Trinity Street (TSC 77): joints of joists [See pages 349-50 in printed book.]

1-5 Trinity Street (TSC 1977)
Figs 13.61-73
Reason: new office building and refurbishment of existing building
Record/report: NAS/HAS (&PC)
See pp 347-54 for report on standing buildings

The archaeological excavations and watching brief (PC)

Trinity Street is probably of 10th or early 11th century origin (CAR1, 50-2). The site occupies the important section of street frontage directly opposite Holy Trinity Church and thus is a primary candidate for late Saxon and early medieval remains. Although the resources were not available to dig the site properly(like so many other sites in Colchester in the 1970s), some potential of the site in the event of a future opportunity for further work in the area. This work and the subsequent watching brief proved that,in the 3rd and 4th centuries, the area was occupied by at least one house.Evidence of medieval occupation was limited to medieval finds, pits, kilns or oven, and the robbing of Roman foundations. No indications were noted of late Anglo-Saxon occupation. Apart from the brick buildings described in detail above, no traces were noted anywhere of any post-Roman buildings or floors.

The exploratory work took the form of two trenches. The largest(Trench A) measured approximately 2.0 x 4.0 m and was placed on the car parking area on the site of No1 as near to the frontage of Trinity Street as the cellar would allow. This was done before building works began. The second trench (Trench B) was intended to help with the interpretation of the standing structures and was undertaken during the building operations. It measure 2/0 x 1.5 m and was dug against the inner face of the frontage wall of No2.

The builder dug a number of deep trenches for strip foundations in which was observed a series of archaeological features of Roman and later date.

Trench A (Fig 13.71 & 13.73)

The earliest remains examined consisted of part of a Roman house which the results of the susequent watching brief showed had extended over most if not all of the site.In Trench A the remains of two robbed-out foundations were uncovered(F39&F40/2). The only floor to survive was in the western angle of the two foundations, this proved to have been tasselated. Elsewhere most of the latest Roman remains had been destroyed by the digging of pits in post-Roman times. Although finds were obtained which could throw useful light on the date of the building, the use of tasselated floors (CAR3, 25)and the fact that it was the latest Roman building encountered point to its having been built probably somewhere between the mid 2nd and the late 4th centuries. It was not possible to examine the earlier buildings.

The earliest post-Roman activity was represented by the robber trenches referred to above and two pits (F43&F44). The pits may have predated the robber trenches because in plan they look as if they could have been dug down the side of the Roman foundation in robber trench F42.The relationship of F43 to the robber trench F42 is standing in this respect. One of pits(F44) contained a small quantity of late 11th to early 12th century pottery.None was found in the other.

Of the other pits and gullies, F30 was unusual in that it contained large quantities of burnt daub but had no signs of scorching on its sides.The burnt daub seems to have derived from a nearby kiln or oven discoevered about 2 m away during the contractor's excavations (see below). The pit may have been a structural part of the feature(eg a stoke hole).It contained a small quantity of pottery dating to the 14th of 15th century.

The latest remains in the trench included a drain(F18)with sides of drick and a base of peg-tile,and part of the steps leading down into cellars of Phases 2/3 of the brick house. The latter had been backfilled at the time of the demolition of No1.

Trench B(Figs 13 72.3)
Trench B was incoclusive. The latest significant deposits consisted of the remains of rotted wooden floor joists which belonged to an early phase of the standing building. The earliset feature uncovered was part of what appeared to have been a brick foundation for a pier. The most significant discovery was of a medallion of James II which lay at the edge of the Phase 3 foundation (p 364).

The watching brief

The various archaeological remaims obserbved during the contractor's excavations on the site of N01 Trinity Street are incdicated on the plan in Figure 13.70 At least one Roman house was represented by the cellar, seven or more robber trenches, three plain mortar floors,and a probable hypocaust(this is all in addition to the small part of a red tassellated pavement in Trench A). The character of the cellar walls could not be established because the soft backfill of the cellar caused extensive collapse of the contractor's trench making close inpsection too dangerous. Pits and trenches dating from the eaarly medieval period to the 20th century were noted, the earliest of the group probably being the rubber trenches.

Most notable amongst the post-Roman features were two or more kilns or ovens. The clearest of these was in the side of Trench A.
It was about 2.5m long(or wide?)with walls of peg-tile set in daub. A sunken area between the walls was about 0.3m deep and

although extremely burnt, had not been subjected to heat intense enough.
The latter fact probably rules out the feature being a pottery of tile kiln and apparent absence of crushed shell or lime as at Lion Walk(CAR3,30) makes a lime kiln unlikely. The function of this feature is thus obscure. The kiln sealed the robber trench F42.

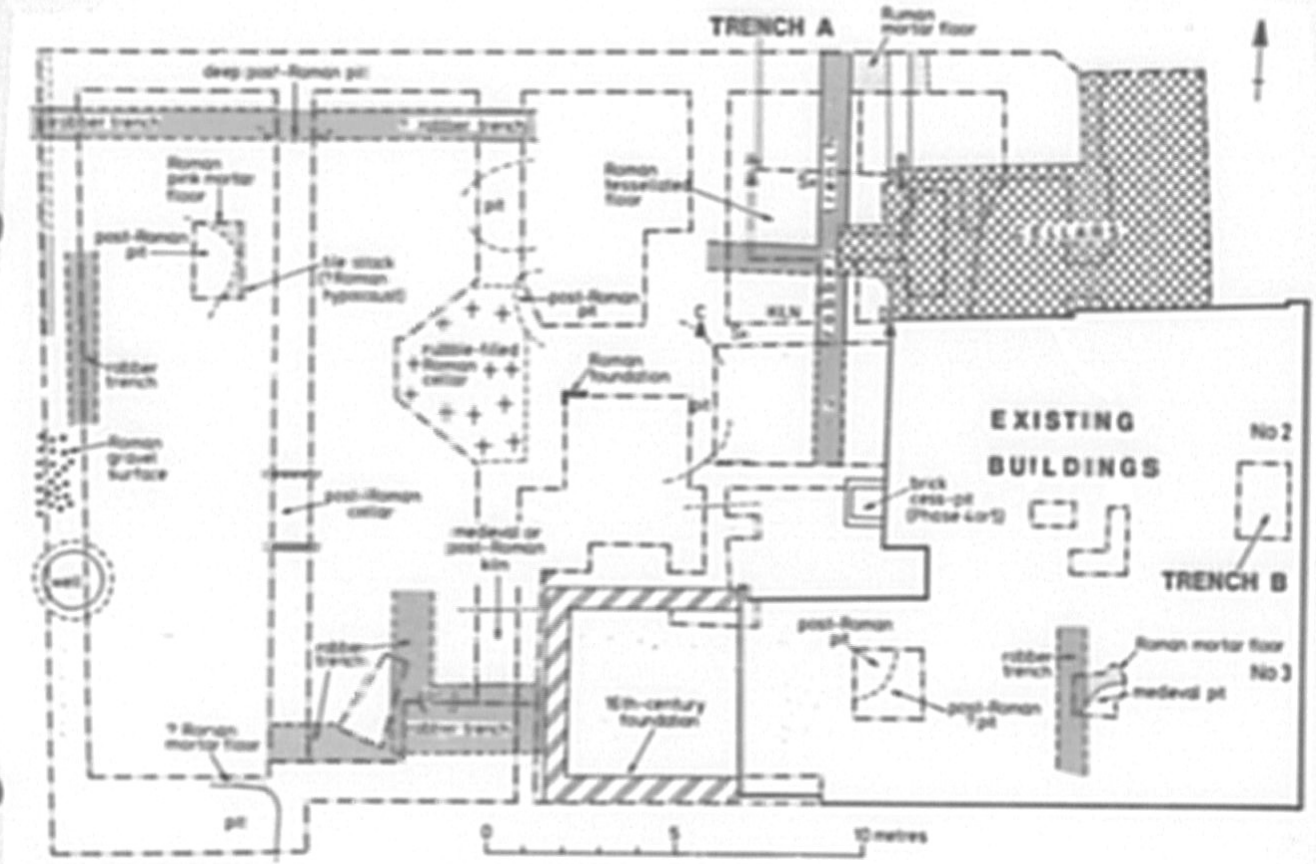


Fig 13.70. Trinity Street (TSC 77): general site plan of the archaeological remains observed during the contractor's excavation and the locations of the archaeological trial trenches.

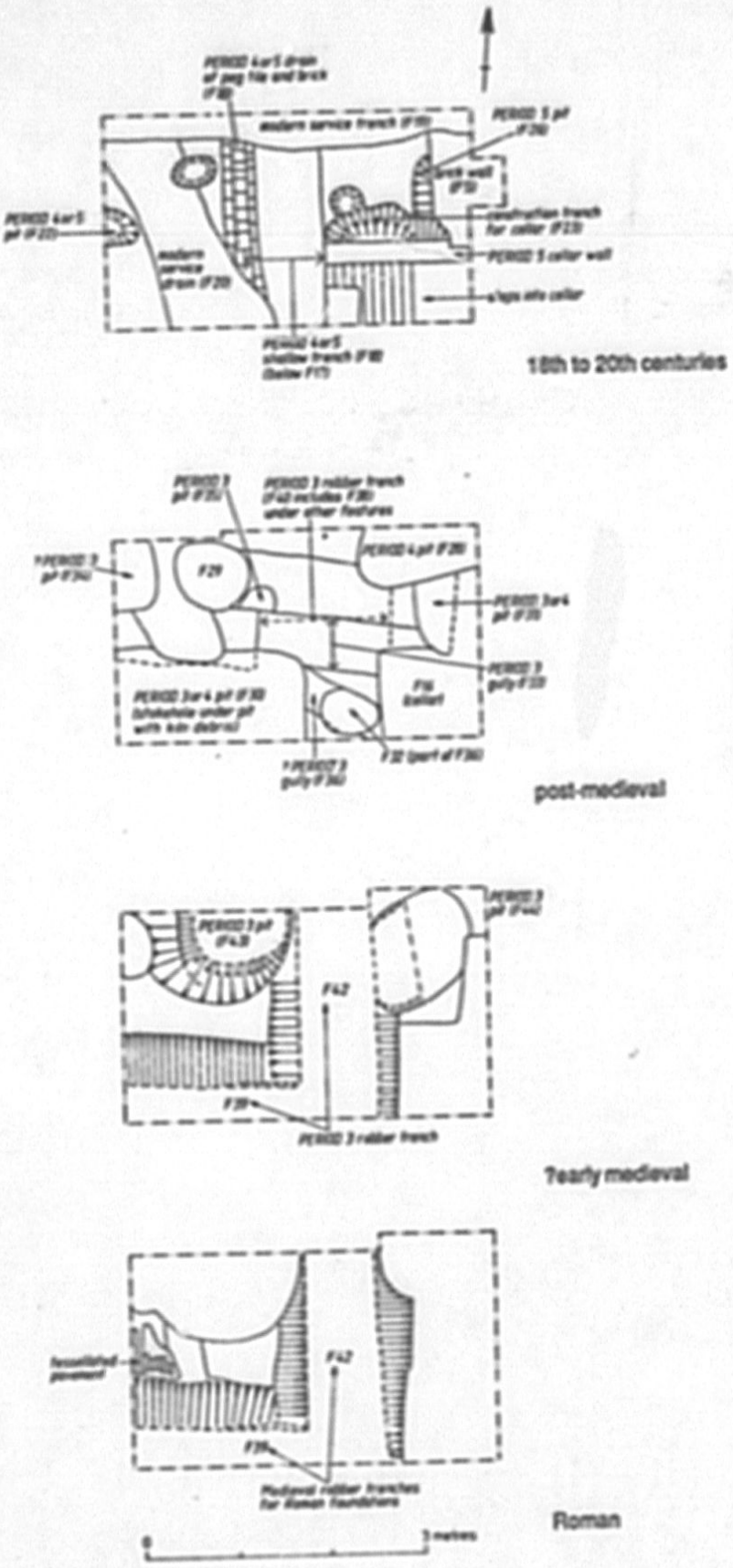


Fig 13.71. Trinity Street (TSC 77): Trench A.

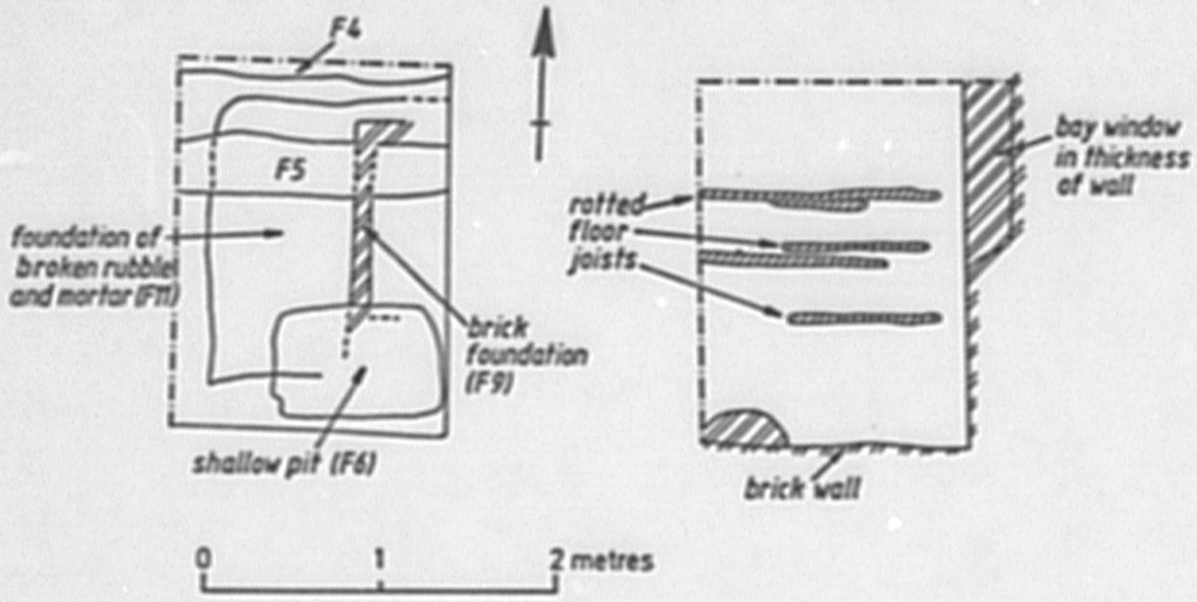


Fig 13.72 Trinity Street (TSC 77): Trench B.

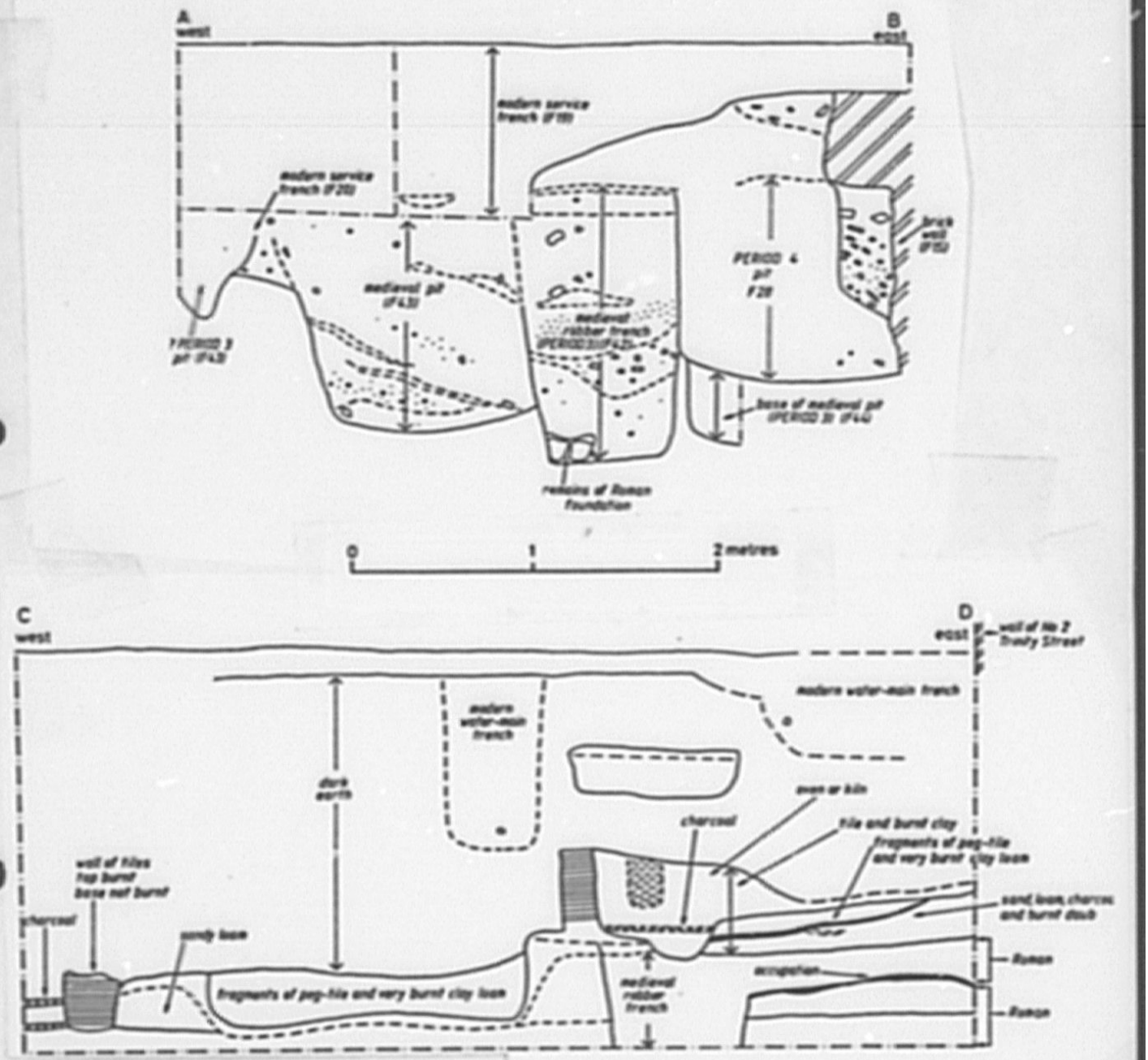


Fig 13.73. Trinity Street (TSC 77): Sections AB and CD.

0/77

King Harold Road

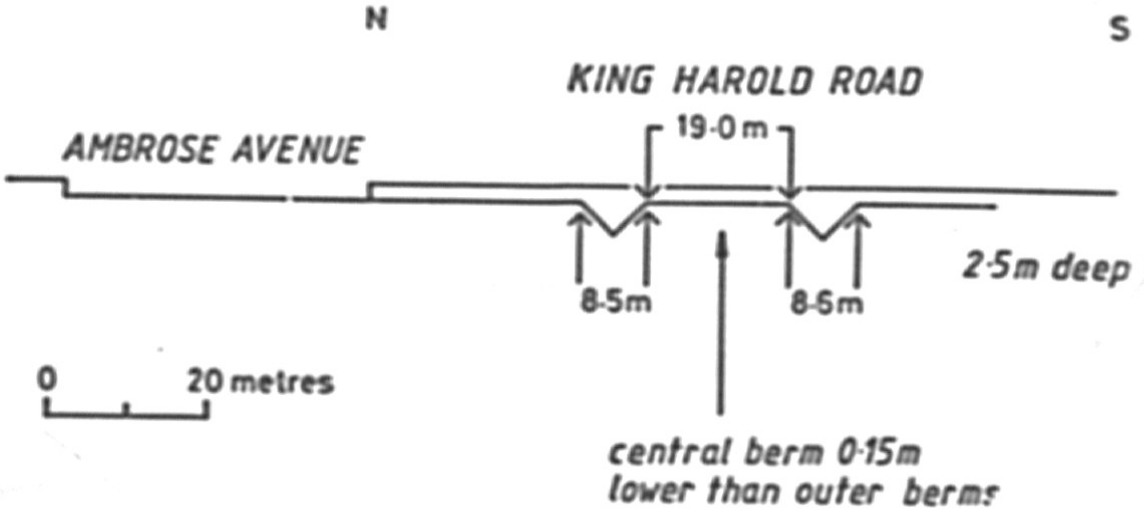
Fig 13.74

1977

Reason: new sewerage system

Record/report: Dennis Gamble/PC

The contractor's trench in King Harold Road cut through Prettygate Dyke. The profiles of two ditches were recorded by Dennis Gamble (of the Department of Engineering of the Colchester Borough Council). The ditches were about 2.5 m deep, roughly V-shaped, and about 19 m apart.



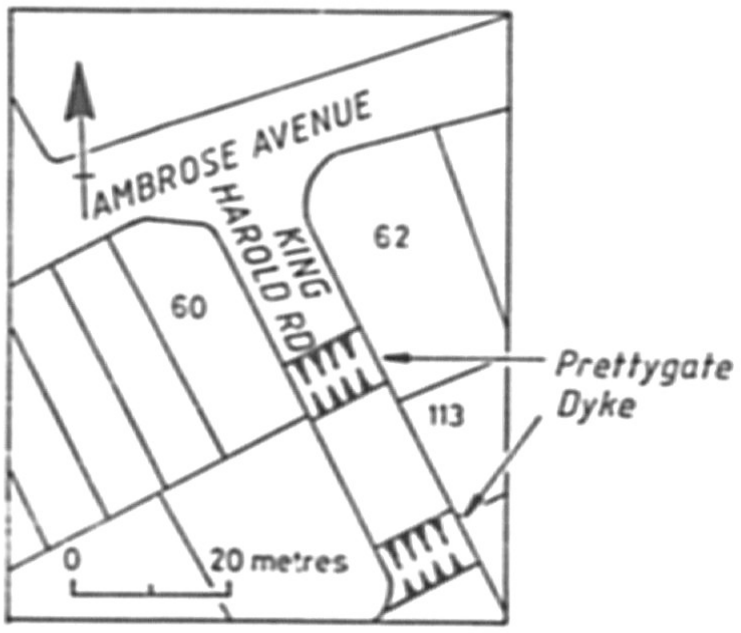


Fig 13.74. King Harold Road (0/77).

1/77a
Rear of 134 High Street and 2 West Stockwell Street
January 1977
Reason:demolition of outbuildings
Record/report:A Colchester/CC
Photographs:Buildings&Churches 66-71

Dilapidated outbuildings, including a brick-built stable block associated with The Angel Inn were photographed from various viewpoint prior to demolition.

No significant features.Some three-quarters of the area at the rear of this property was occupied by a filled-in basement.
Groundwork elsewhere on the site extended no deeper than 0.6 m.

1/77c
St Botolph's Roundabout
Published in CAR1, 44(T5,T6,T7).

3/77a
Balkerne Gardens(Phases 1 and 2)
Figs 13.75-90
March 1977 to April 1978
Reason:residential development
Record/report:CC/PC&CC
Finds:coin hoard(X153-154&X158),flagon base (X164)
The development was watched at three stages in its progress: Stage 1(3/77a).Five trial holes, dug by the engineers in March 1977. Their locations and stratigraphy were noted.

Stage 2(3/77a). Groundwork for an extension to the rest home immidiately north of the main entrance to the grades.This took place in August 1977 and involved the reduction of the site ground level by about 0.15 m over the entire site, followed by excavation of 0.6m wide foundation trenches to a depth typically of 2.0 m from the reduced level.

Stage 3(3/78a)
In March 1978 the site for Parsley House along the south side of the gardens, was cleared of up to 0.8m of topsoil. The series of 0.6m wide foundations trenches was then cut depths of 2.5 to 3.0 m.

The north-east corner of Parsley House occupies part of the former site of No5 Balkerne Gardens,where excavtions took place in 1965 under the direction of Miss B R K Dunnett(Dunnet 1971, 50-61).

Near the centre of the Parsley House site(Sx G.), the contractor's trenches cut the north-south Roman street between Insula 17a and 17b.Apart from one east-west wall foundation(Sx D),few tangble features were noted in Insula 17a: the deposits seemed to represent a series of layers of Roman make-up material and levelled demolition debris.

To the east of the street, the trenches in Insula 17b revealed a generally similar statigraphy to that noted in the 1965 excavations. The early gravel surface observed in Sxs A, B, D and E on the site of the extension in almost certainly the nothern continuation of the mid 1st-century material encountered in the earlier excavations and indicates a sizeable yard which, north to south, measures at least 25 m.A similar layer of gravel was also present 20m to the south-west in Sxs A nd B of the Parsley House site.However, there was no continuity between this deposit and the yard to the north;the earliest surviving layers in the sections between two areas weer mainly site clays and sands which aer possibly the equivalent of the Phase 2(pre-Flavian) and/or Phase 3(pre AD 160) layers of make up and occupation recorded in 1965.One such silly clay layer(Layer 4 in Parsley House Section H) contained the only stratified sherd from the site: a flagon base of 1st or 2nd century date(X164).

On the extension site, the gravel yard was sealed by substantial deposits of burnt daub which were also noted in the adjacent north-east quarter of the Parsley House site,there sealing the silty clay layers referred to above. The burnt daub discovered in the course of the 1965 excavations in this area was found at that time to be c post-160 in date. The road section(Sx G on the Parsley House site) is of interest in this connweection since the burnt daub appeared to predate the earliest surviving road layer,thus hinting that the burnt material may have derived from the Boudican fire after all.

Mortared septaria wall foundations were found in three trenches(H,J and P) at the Parsley House site and two(B and E) on the extension site. The latter also containeda a foundation of mortar and pebbles(in the corner of trench F)and two possible robber trenches(in E and, less convincingly, in A). From their appeaarance and relationships,these foundations are almost certainly associated with the Period 4(ie c post 160) buidling discovered in 1965.

An important find from the lae Roman levels in Insula 17b was a 4th century hoard of over 120 coins(CAR 4,71).The coins were found by workman whilst moving spoil from trenches between Sxs Cand E in the north-east corner of the extension site.

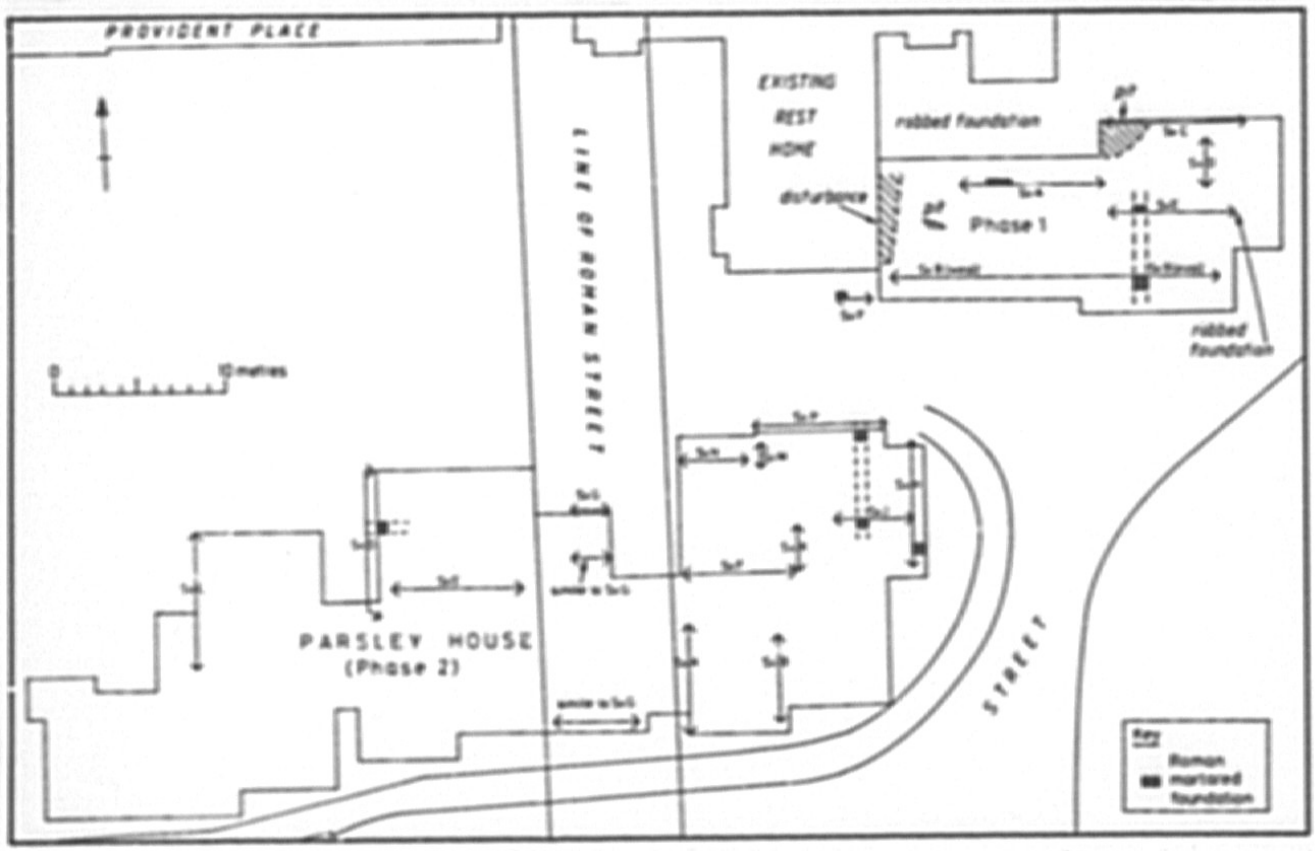


Fig 13.75. Balkerne Gardens (Phases 1 and 2) (3/77a and 3/78a resp).

3/77a

BALKERNE GARDENS, Phase 1
EXTENSION TO REST HOME

NB: INITIAL CLEARANCE REDUCED SITE LEVEL BY ≤ 1·5m.
DESCRIPTIONS ON SEPARATE SHEET.

SECTION A (NOT TO SCALE)

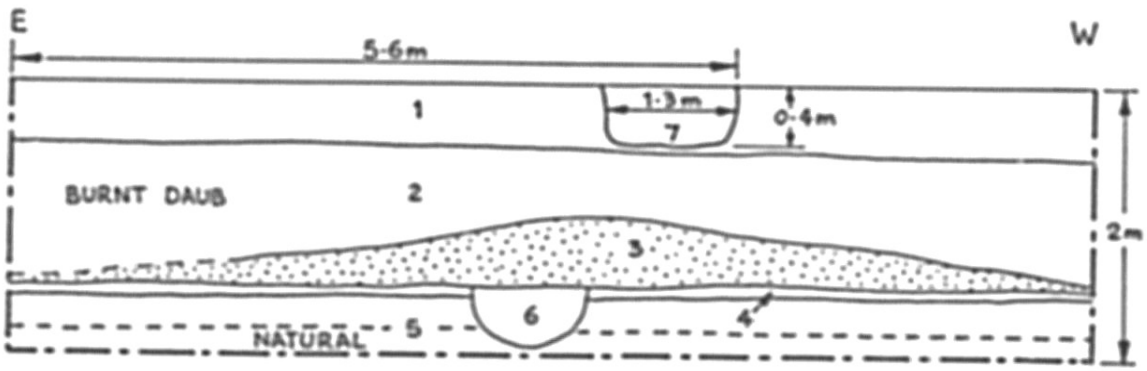


Fig 13.76. Balkerne Gardens (Phase 1, 3/77a): Section A.

3/77a

BALKERNE GARDENS, Phase 1
SECTION B (WEST AND EAST)
NOT TO SCALE

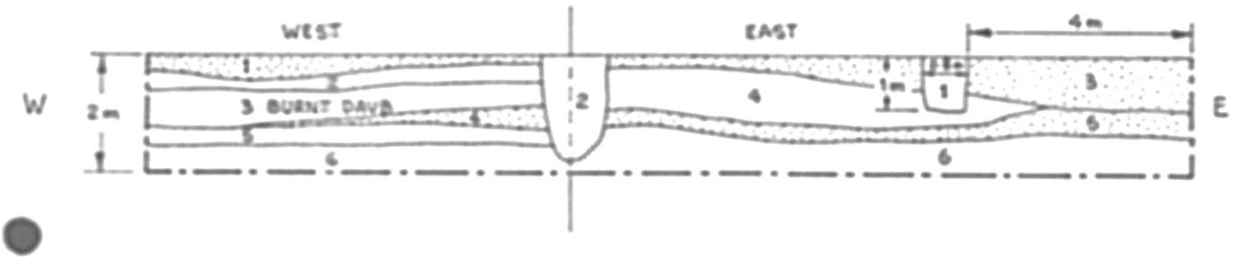
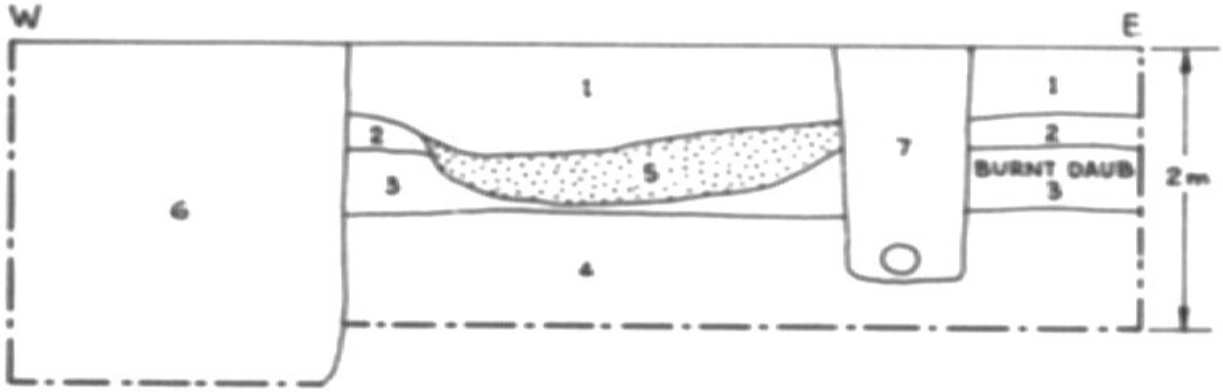


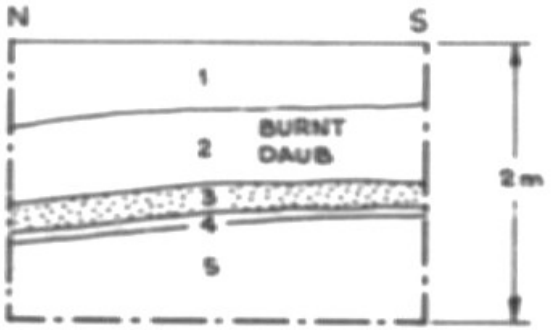
Fig 13.77. Balkerne Gardens (Phase 1, 3/77a): Section B.

3/77a
BALKERNE GARDENS, Phase 1

SECTION C



SECTION D



SECTION E

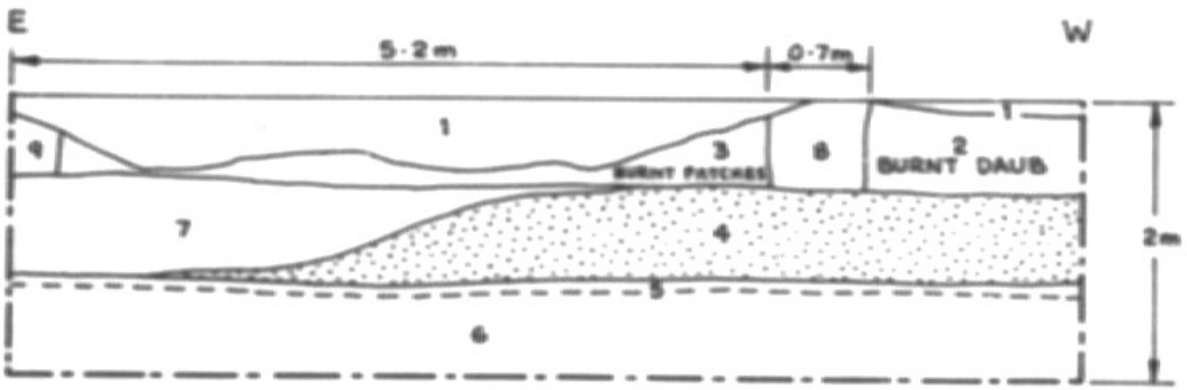


Fig 13.78. Balkerne Gardens (Phase 1, 3/77a): Section C.

839

3/77a
BALKERNE GARDENS, Phase 1

SECTION F

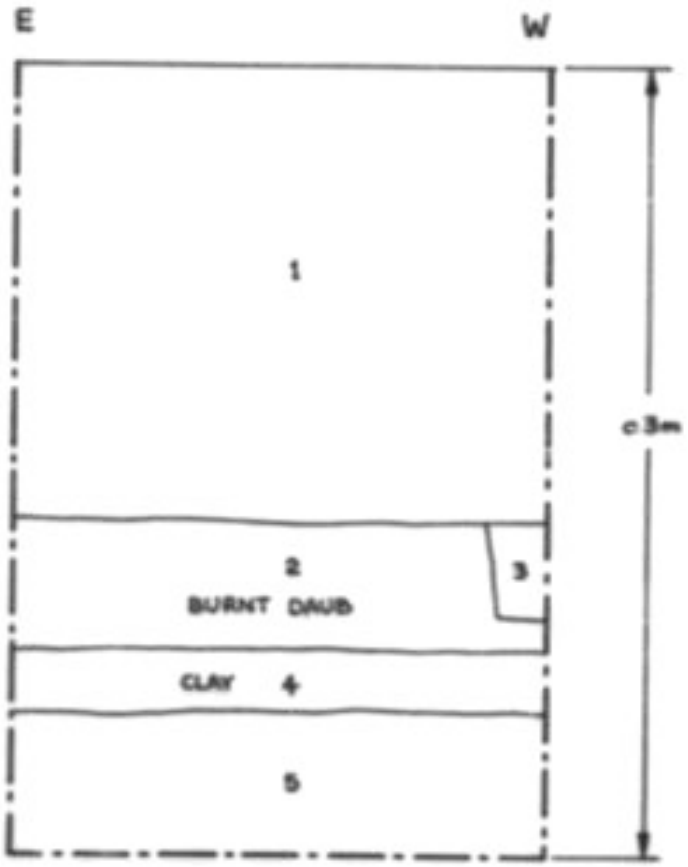


Fig 13.79. Balkerne Gardens (Phase 1, 3/77a): Section F.

Balkerne Gardens Watching Brief 3/77a
Soil descriptions
Phase 1

Section A
1. Very mixed-mainly dark brown sandy loam with fragments of oyster and pale brown mortar,
Dark content mainly pit fill-not clearly defined but evidently a number of small pits. Depth 0.3-0.5 metres.
2. Burnt daub deposit. Depth 0.5-0.7 metres
3. Road or yard? Compacted gravel within olive-brown sand. Depth 0.3 metres.
4. Clean yellow sand. Depth 0.1 metres.
5. Dark brown loamy sand merging to clean natural sand. Depth 0.6 metres.
6. Pits patchy dark loamy sand fill. Probably high organic content as fill has shrunk,
creating depression into which sealing laying 3 has subsided.
7. Possible wall trench or pit 1.3 metres wide, 0.4 metres deep containing loose blocks of septaria
and mortar fragments. Probable robber trench.

Section B (West End)
1. Compacted gravel within olive-brown sand. East-west or yard? 0.25 metres.
2. Same as layer 1 in Section A. 0.2 metres.
3. Red burnt daub deposit. 0.25 metres.
4. Road-same as layer 3 in Section A.0.3 metres
5. Very dark brown streaks mixed with sand. 0.2 metres.
6. Same as layer 5 in Section A. 0.8 metres.

Section B(East End)
1. Wall footing of very large lumps of septaria, lightly mortared. 0.8 metres wide x 1 metre deep
2. Pit, very dark fill-probably post-Roman.
3. Same as layer 1 in Section B(west end).
4. Red burnt daub.
5. Rubbish-olive-brown sandy loam with high gravel content.
6. Natural sand, gradually darkening at top.

Fig 13.80. Balkerne Gardens (Phase 1, 3/77a): Descriptions of sections.

Phase 1(contd)

Section C

1. Mixed:same as layer 1 in Section A. Depth 0.6 metres.
2. Roman dump.

Strong olive-brown loamy sand. Depth 0.2 metres.

3. Burnt daub. Depth 0.4 metres.
4. Same as layer 5 in Section A natural.
5. Very mixed:mainly olive-brown loamy sand, very stony and loamier than layer 2.
6. Pit c 17th century
7. Modern pipe trench.

Section D

Section D layers are the same as in Section A but all deposits dip about 0.3 metres in a northward direction.

Section E

1. Very dark gayish-brown sandy loam with scattering of oyster fragments.
2. Burnt daub.
3. Patchy clay with occasional burnt daub patches.
4. Gravel(yard?) Same as gravel in other trenches.
5. Same as layer 5 in Section B.
6. Same as layer 6 in Section B.
7. Very mixed:mainly mid-brown loamy sand.
8. Wall foundation. 0,7 metres wide. Coarse mortared septaria lumps.

According to the digger driver's description, the wall may have continued eastward along the line of the trench perhaps turning at layer 9.

9. Possible robber trench with loamy/mortary mixed fill.

Section F

1. Very dark greyish-brown sandy loam. Post-Roman.
2. Burnt daub.
3. Wall footing of stony mortar.
4. Dirty yellow clay.
5. Sand-natural?

Fig 13.81. Balkerne Gardens (Phase 1, 3/77a): Descriptions of sections.

3/78a

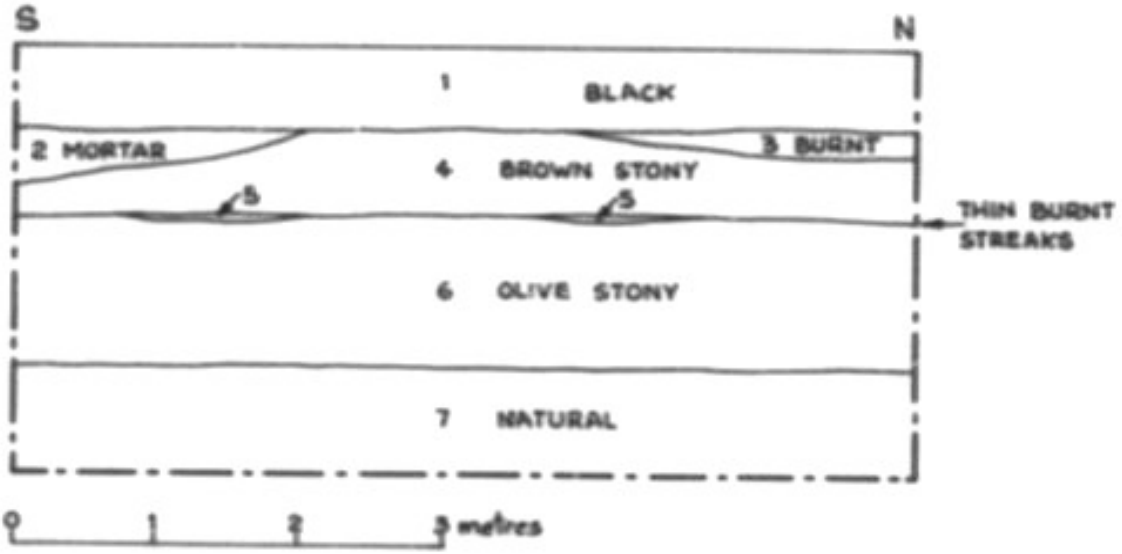
BALKERNE GARDENS, Phase 2

PARSLEY HOUSE

NB: INITIAL CLEARANCE REDUCED SITE GROUND LEVEL BY 0·7 to 0·8m
ALL VERTICAL MEASUREMENTS ARE APPROXIMATE

SEE SEPARATE SHEET FOR DESCRIPTIONS

SECTION A



SECTION B

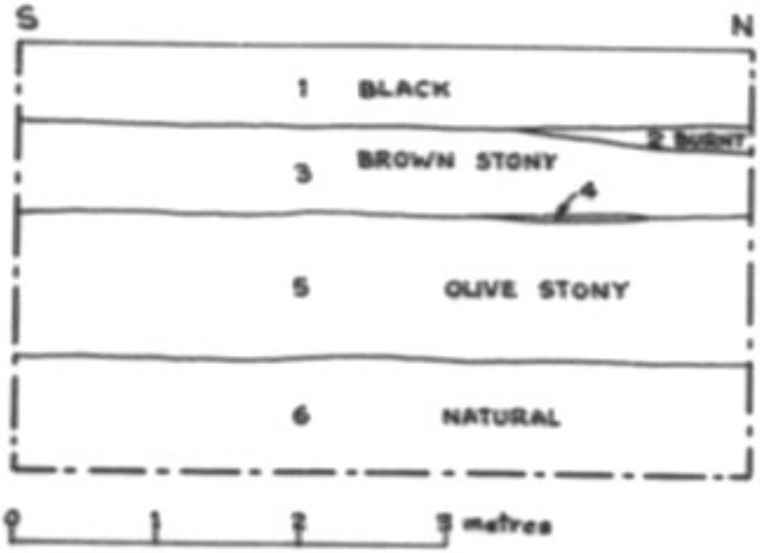
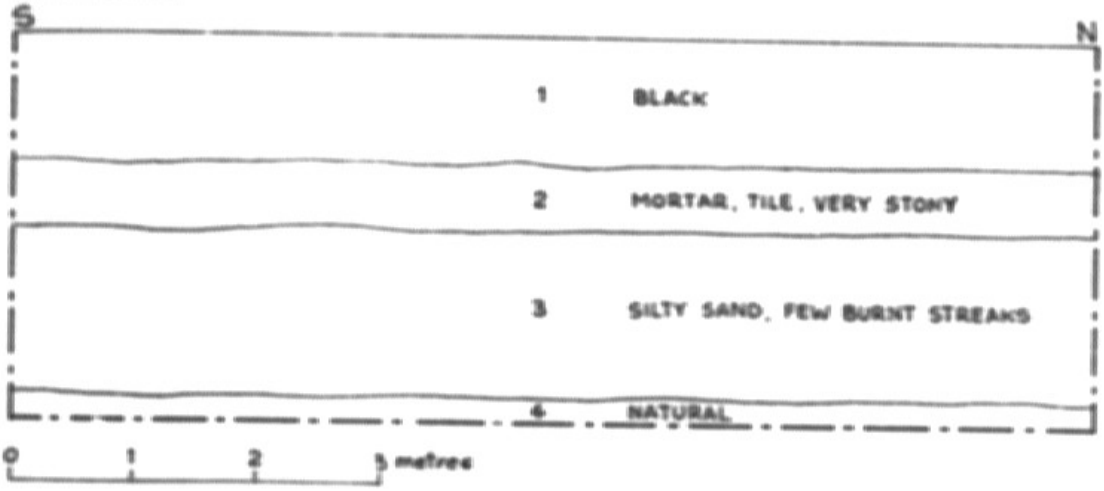


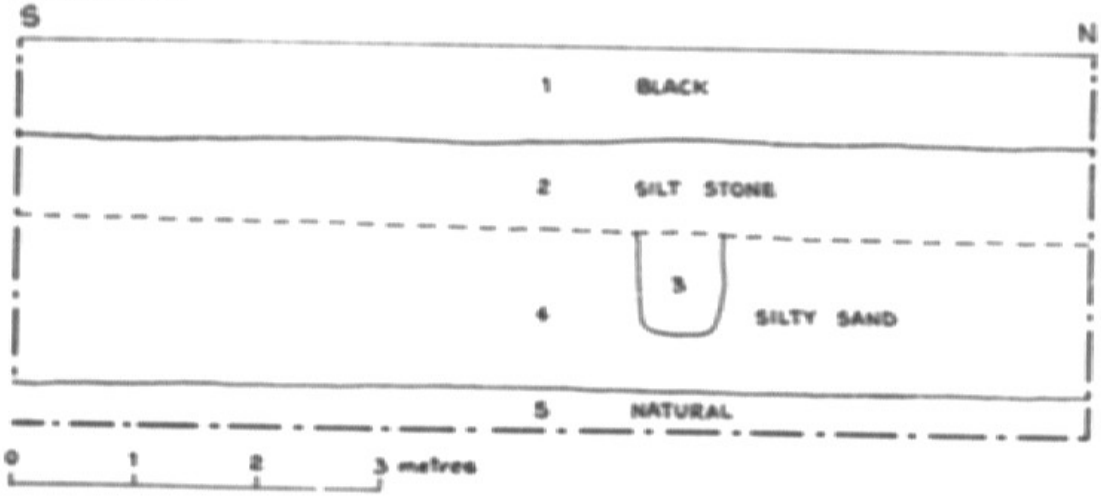
Fig 13.82. Balkerne Gardens (Phase 2, 3/78a): Sections A and B.

3/78a
BALKERNE GARDENS, Phase 2

SECTION C



SECTION D



SECTION E

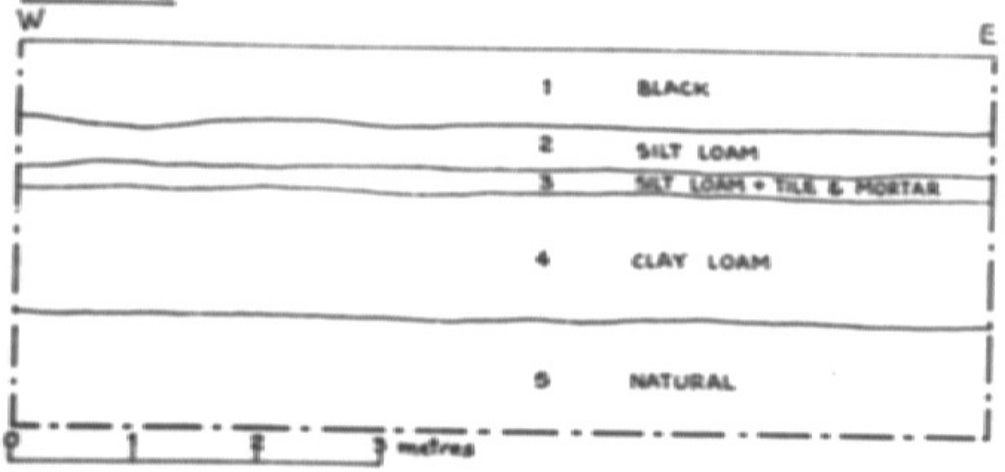
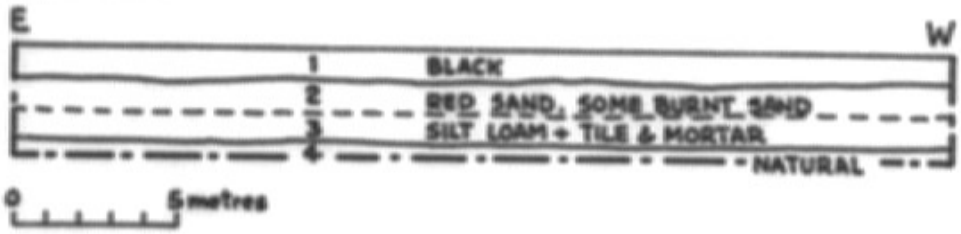


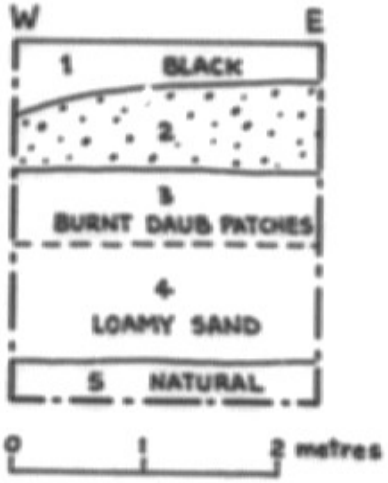
Fig 13.83. Balkerne Gardens (Phase 2, 3/78a): Sections C, D, and E.

3/78a
BALKERNE GARDENS, Phase 2

SECTION F



SECTION G



SECTION H

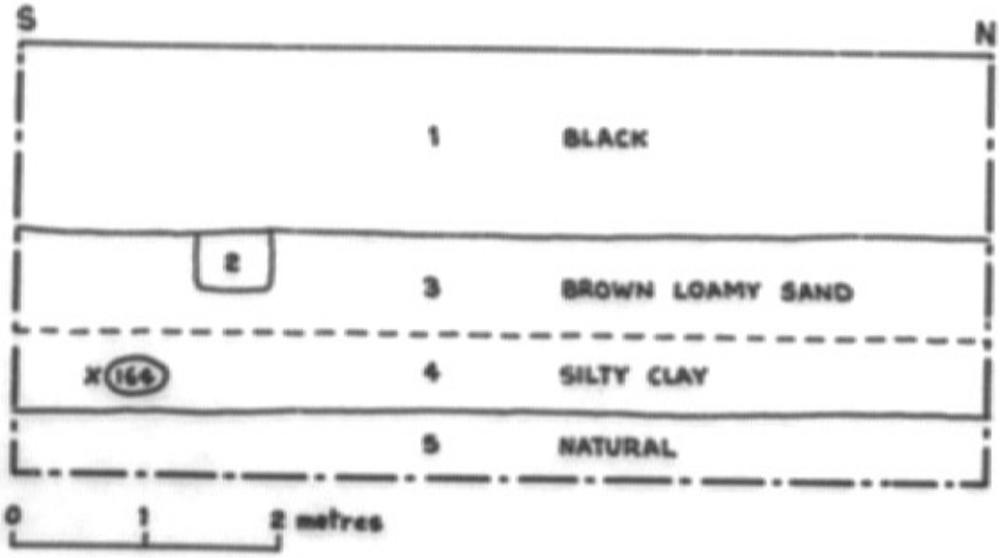
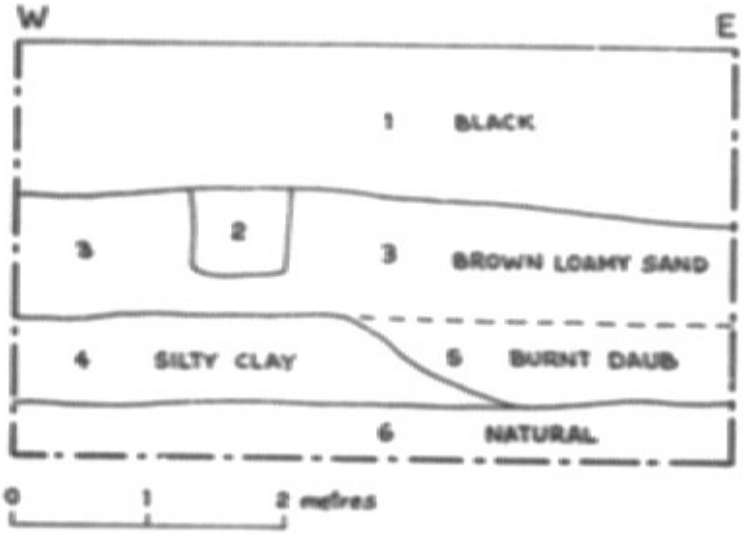


Fig 13.84. Balkerne Gardens (Phase 2, 3/78a): Sections F, G, and H.

3/78a
BALKERNE GARDENS. Phase 2

SECTION J



SECTION K

SAME AS WESTERN END OF SECTION J (LAYERS 1, 3, 5 & 6)

SECTION L

NO FEATURES. LAYER SEQUENCE FROM TOP:
1. BLACK TOPSOIL.
2. BURNT DAUB.
3. SILTY CLAY MAKE-UP.
4. NATURAL SAND.

SECTION M



Fig 13.85. Balkerne Gardens (Phase 2, 3/78a): Sections J, K, L, and M.

3/78a
BALKERNE GARDENS, Phase 2

Section N
Much disturbed by modern features
traces of wood(see section 4)
at west end.Tile and mortar fragments resting on road gravel
-as if swept onto road rather than in situ.

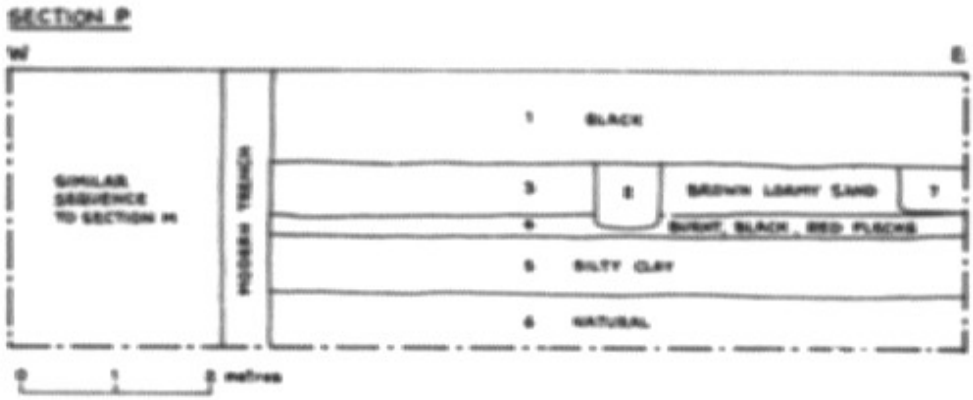


Fig 13.86. Balkerne Gardens (Phase 2, 3/78a): Sections N and P.

Balkerne Gardens Watching Brief 3/78a
Soil descriptions
Phase 3(Parsley House)

Section A
1. Very dark greyish-brown sandy loose. Post-Roman.
2. Compacted stony mortar.
3. Burnt daub.
4. Mid-brown stony material.
5. Burnt streaks.
6. Olive stony material.
7. Natural sand.

Section B
1. Very dark greyish-brown sandy loam.
2. Burnt daub.
3. Brown stone material
4. Burnt streak.
5. Olive stony material
6. Natural sand

Section C
1. Very dark sandy loam. Post-Roman.
2. Mixed.Very stony with crushed mortar and occasional tile fragments.
3. Pale greyish-brown silty sand. Some small red burnt streaks.
4. Natural sand.

Section D
1. Very dark greyish-brown sandy loam. Pst-Roman
2. Greyish-brown silt loan
3. East-west wall foundation of pale brown mortar with large and medium (0.2 metre) lumps of septaria. 0.7 metres wide.
4. Pale greyish-brown silty sand. Some small red burnt streaks. Same as (3) in Section C
5. Natural sand

Fig 13.87. Balkerne Gardens (Phase 2, 3/78a): descriptions of sections.

Section E
1. Very dark greyish-brown sandy loan. Post-Roman.
2. Medium greyish-brown sandy silt loam, some small stones and oyster flocks.
Same as (2)in Section D.
3.Same as layer 2 but with small tile fragments and mortar lumps.
Possibly the same as layer 2 in Section C.
4.Dark brown clay loan. Make-up?
5. Natural sand.

Section F
1. Very dark greyish-brown sandy loam. Post-Roman. Cut by modern basements.
2.Reddish-brown sandy material with occasional lumps of red and black burnt daub.
3. Medium greyish-brown sandy silt loan with some small stones, anall oyster flecks,
small tile fragments and mortar lumps. Same as (3) in Section E.
4. Natural sand.

Section G
1. Very dark greyish-brown sandy loan. Post-Roman.
2. Road. Compacted gravel and small stones. Six different layers distinguishable,
also apparent in sections of trenches to south.
Thicker at eastern side (0.6 metres) than vest (0.4 metres) with possible camber at
interface with layer 1.
3. Slightly stony with lumps and patches of burnt daub and flecks of charcoal.
Similar to layer 2 in Section F.
4. Mid-brown loamy sand with some red burnt streaks. Similar to layer 3 in Section C.
5. Natural sand.

Section H
1. Very dark greyish-brown sandy loas. Post-Roman.
2. Wall foundation of mortared septaria.
3.Mid-brown loamy sand with moderate content of small stones. Same as layer 3 in Section J.
4.Pale brown silty clay. Similar to that found in other sections ie layer 3 in Section C,
layer in Sections D, E, F etc. Flagon base X164 is from this material.
Subsequently identified as first or second century type.
5. Natural sand.

Fig 13.88. Balkerne Gardens (Phase 2, 3/78a): descriptions of sections.

Section J
1. Very dark greyish-brown sandy loan. Post-Roman.
2. Wall foundation. Large lumps of septaria (uncoursed)
with yellowish- brown soft mortar.
Continuation of wall in Section P.
3. Mid-brown loany sand with moderate content of small stones.
Same as layer 3 in Section B
and layer 3 in Section K.
4.Pale brown silty clay. Similar to layer in Section H, etc.
5. Burnt daub, dumped. Boudican, or later?
6. Natural sand.

Section K
Same as vestern end of Section 3 (layers 1, 3, 5 and 6).

Section L
No features. Layer sequence from the top:
1. Black topsoil.
2.Burnt daub.
3. Silty clay make-up.
4. Natural sand.

Section M
1. Very dark greyish-brown sandy loan. Post-Roman.
2. Lumps and flecks of red burnt daub.
3. Light olive-brown loamy sand with few small stones.
4. Mid-brown silty clay. Make-up? Similar to layer in Section H, etc.
5. Natural sand.

Section N
Fig 13.89. Balkerne Gardens (Phase 2, 3/78a): descriptions of sections.

Section P
1. Very dark greyish-brown sandy loan. Post-Roman.
2. Wall, same as in Section J.
3.Mid-brown loany sand with moderate content of small stones.
Same as layer 3 in Section 3 and layer 3 in Section M.
4.Thin layer of mainly black burnt material with red flecks.
5. Pale yellow silty clay loan.
6. Natural sand.
7. Wall foundation of small lumps and fragments of septaria with strong yellowish-brown mortar.
Possible corner.

Fig 13.90. Balkere Gardens (Phase 2, 3/78a): descriptions of sections.

3/77c

Caretaker's House, St Helena's School, Sheepen Road

March 1977

Reason: construction of house in garden by east gate of school

Record/report: CC

This site is within the Sheepen scheduled area. It lies approximately 30 m beyond the eastern temenos wall of Temple 2. No significant features were noted during the watching brief. The site was formerly a sunken garden. Machine clearance of loose topsoil further reduced the overall level to between 0.3 m (northern side) and 0.6 m (southern side) below the surface of the school yard. Foundation trenches revealed a uniform accumulation of very dark greyish brown sandy loam topsoil which merged with the underlying reddish brown natural sand at a point approximately 0.5 m below the reduced site level.

According to one of the schoolmasters, several Roman coins were found in the past when the area was used as a school garden.

3/77d

Coast Road, West Mersea (between No 3 Coast Road and New Orleans)

Fig 13.91

21st March 1977-24th March 1977

Reason: housing development

Record/report: NS/PC

Photographs: Misc Sites I, 40-7

The site lies south of West Mersea church and is the centre of an area about 100 m square where over the years various mosaic and tessellated pavements and foundations have been recorded.

The contractor dug trenches for foundations. These varied in depth from about 0.7 to 1.0 m. The sections provided by the trenches were difficult to interpret but clearly they cut through the remains of a Roman building. Only one Roman foundation was detected. This was made of greensand set in yellow mortar and it lay obliquely across the site. To the south of the foundation was the remains of a layer of yellowish mortar about 50 mm thick. In one place this had an upper skin of white plaster indicating that it may have been a base for a tessellated or mosaic pavement. Several red tesserae were found but none in situ. South of the mortar was a layer of gravel and yellowish brown loamy sand. This may have formed a surface in its own right or else may have been the base for a mortar floor which no longer exists. To the east of the mortar floor was a layer of sand with fragments of mortar and plaster; its interpretation is obscure.

A foundation for a post-medieval wall lay north to south across the site. It was of frogless bricks 230 x 65 x 110 mm with a foundation of smaller bricks, fragments of septaria, greensand, Roman tile and one fragment of carved stone. The last was probably the left hand side of a spandrel of a trefoil-headed window (sketch in site notes).

All the finds (other than those from the post-medieval wall) were unstratified. All are under X132. Notable are moulded fragments of Roman plaster. Others are probably 2nd+ pottery and clay-pipe fragments.

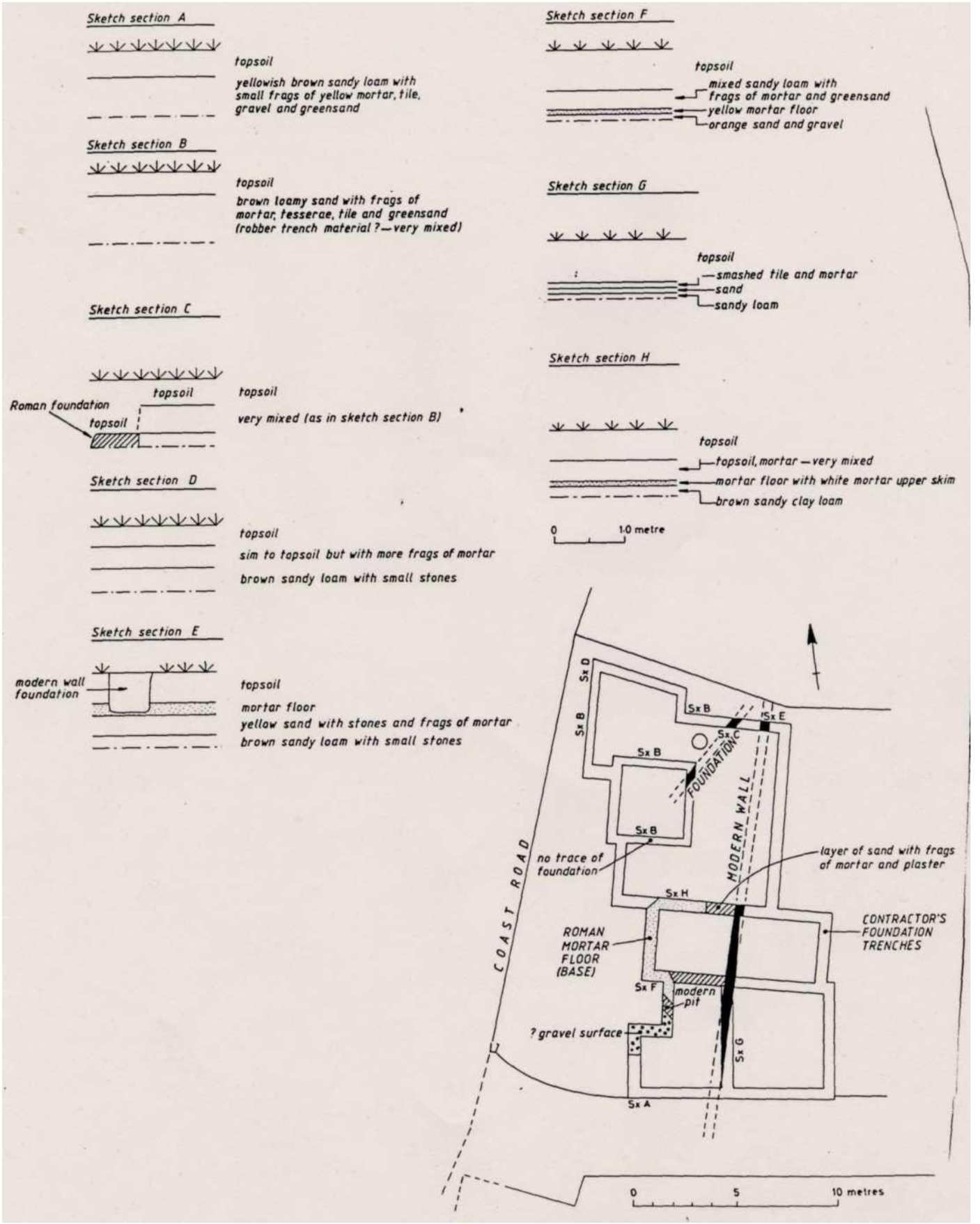


Fig 13.91. Coast Road, West Mersea (3/77d).

4/77a

Pilkingtons, 39 St John's Street

April, 1977

Reason: Roman town wall exposed

Record/report: PC

Photographs: Misc Sites 1, 48

Demolition of some cottages behind No 39 St John's Street resulted in part of the southern face of the Roman town wall being uncovered. Redevelopment of the site was delayed but followed in 1981 (0/81 b).

4/77b

42-4 Crouch Street

Fig 13.93

4th April 1977

Reason: refilling of existing building for use as car showroom

Record/report: PC

Two stanchion holes were dug to a depth of 10 m (Hole A and B) along the street frontage as part of a refitting operation. The holes were dug on the inside edges of two existing piers which supported the north-east and the north-west corners of the existing building.

In Hole A were found the skull and upper part of the rib cage of a skeleton lying east-west. In Hole B more fragments of human bone were uncovered. These were long bones of another east-west burial and were observed only in section. Other bones could be seen in the sections of both trenches but mostly these were not articulated.

Both trenches were dug into sandy brown loam. The burials in Hole A may have extended under the street frontage but it was impossible to be sure.

The burials were part of an intensively used cemetery. It was not possible to date them; they could have belonged to the Crouched Friars and thus have been 13th century at the earliest or else they were Roman and part of the same complex excavated in 1971 during the 'Maldon Road' excavation (MRC 71, *CAR* **9**).

Note the ?Roman burials under 3/81 below (32 Crouch Street).

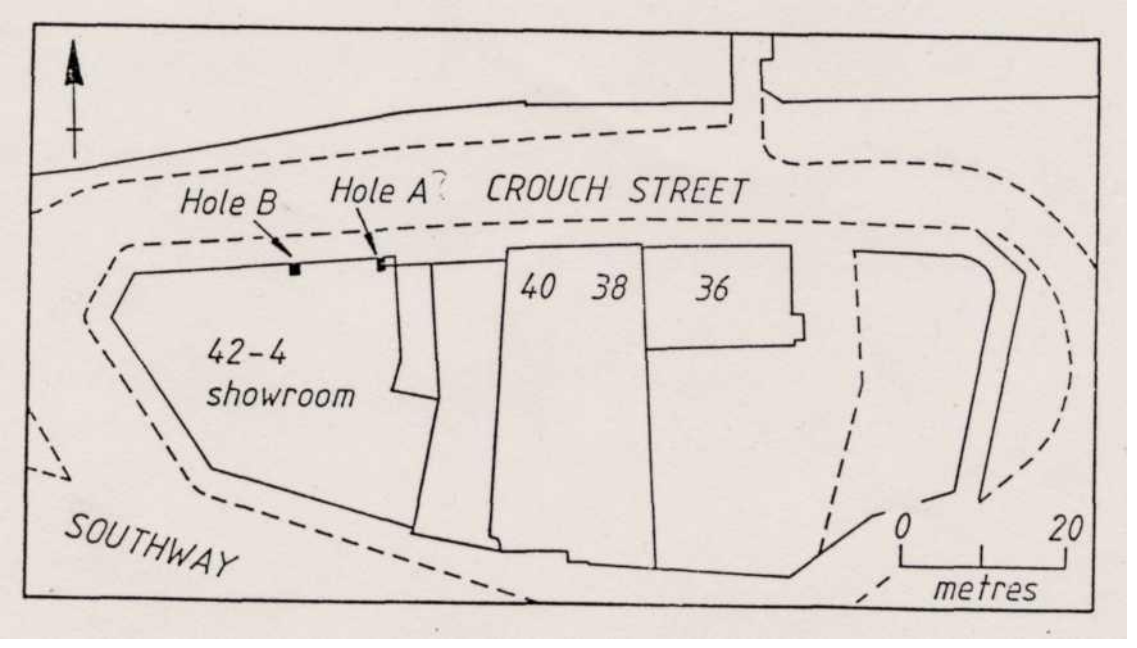


Fig 13.93. 42-4 Crouch Street (4/77b).

5/77a

Abbeygate House, St Johns Green

May 1977

Reason: extension to south side of existing building

Record/report: CC

The bottom of a cutting into the side of a bank of earth between Abbeygate House and Southway exposed a layer of tightly packed small stones which was probably part of a road. Although the precise alignment could not be accurately gauged from the small area uncovered, the feature seemed, from the limited indications of a camber, to lie in a north-south direction. It was sealed by a 1.1 m thick layer of very dark greyish brown sandy loam topsoil containing a few minute fragments of oyster shell. A probe beyond the bottom of the cutting revealed clean sand which was possibly undisturbed natural.

The stratigraphy seemed to indicate that the gravel feature was relatively early, perhaps Roman. However the position of such a roadway, on a line between Scheregate and the west side of St John's Abbey Green, might be more in keeping with a medieval context.

7/77a

54 High Street/38 Culver Street

July 1977

Reason: commercial redevelopment

Record/report: NAS & HB/PC

Photographs: Buildings and Churches, 81-6

The main focus of the watching brief was the digging of two trenches, one in the south-west corner of the site and the other in the south-east.

Trench 1 was up to about 1.8 m deep. It passed through 0.1 m of modern concrete, 0.5 m of floors and dump levels belonging to a post-medieval or modern building, and then 1.1 m of very dark grey-brown sandy loam topsoil. The top of the Roman deposits were reached at 1.7 m where the uppermost part of a rubble foundation was uncovered. In the upcast from the trench were several large fragments of yellow mortar 70 mm thick containing small stones. These seemed to have derived from the remains of two successive mortar floors, one directly on top to the other. No floor was seen *in situ.*

Trench 2 cut through similar post-medieval floor levels. The trench did not appear to have been deep enough to penetrate Roman levels.

Finds (X146-50) include various sherds, tile, mortar, and bone. The stratigraphy was as follows:

0.00-0.14 m	modern concrete floor
0.14-0.19 m	loose bones, glass, and building debris
0.19-0.28 m	mortar floor containing peg-tile
0.28-0.42 m	sandy-clay loam (dump?)
0.42 m	burnt surface
0.42-0.55 m	'daub' floor
0.55 m	lightly burnt surface
0.55-0.96 m	sandy clay loam (includes peg-tile) (dump?)
0.96-1.43 m	brown sandy clay loam (mainly post-Roman topsoil?)

7/77D

Warren Fields, Sheepen

Figs 13.94-6

July 1977

Reason: illicit digging by unknown persons on the site of kilns excavated in the 1930s and 1959

Record/report: HB/PC

Photographs: Misc Sites 1, 74-81

Some small pits of irregular shapes and depths were dug illicitly on the site of some of the kilns on the Warren fields (Fig 13.94). The exact extent of the holes was not clear because of mounds of loose earth. Part of a Roman wall of tile and Kentish ragstone was exposed. This was first uncovered during the excavation of 1959 (Hull 1963, 14-15, pi viib). Also exposed was the south-west part of Kiln 30 (Hull 1963, 35-41). A further area of disturbed ground to the east (Fig 13.95) produced a fragment of samian mould (X160), fragments of kiln wall (X161), and fragments of pottery (X162-3). The area concerned lies well to the east of the samian kiln (Kiln 21) and therefore finds of a mould fragment and parts of a kiln wall may indicate either the presence of a second samian kiln or else material from the first kiln either redeposited in Roman times or left as spoil from the 1959 excavations.

The bulk of the finds consisted mainly of 2nd/3rd century pottery (all unstratified).

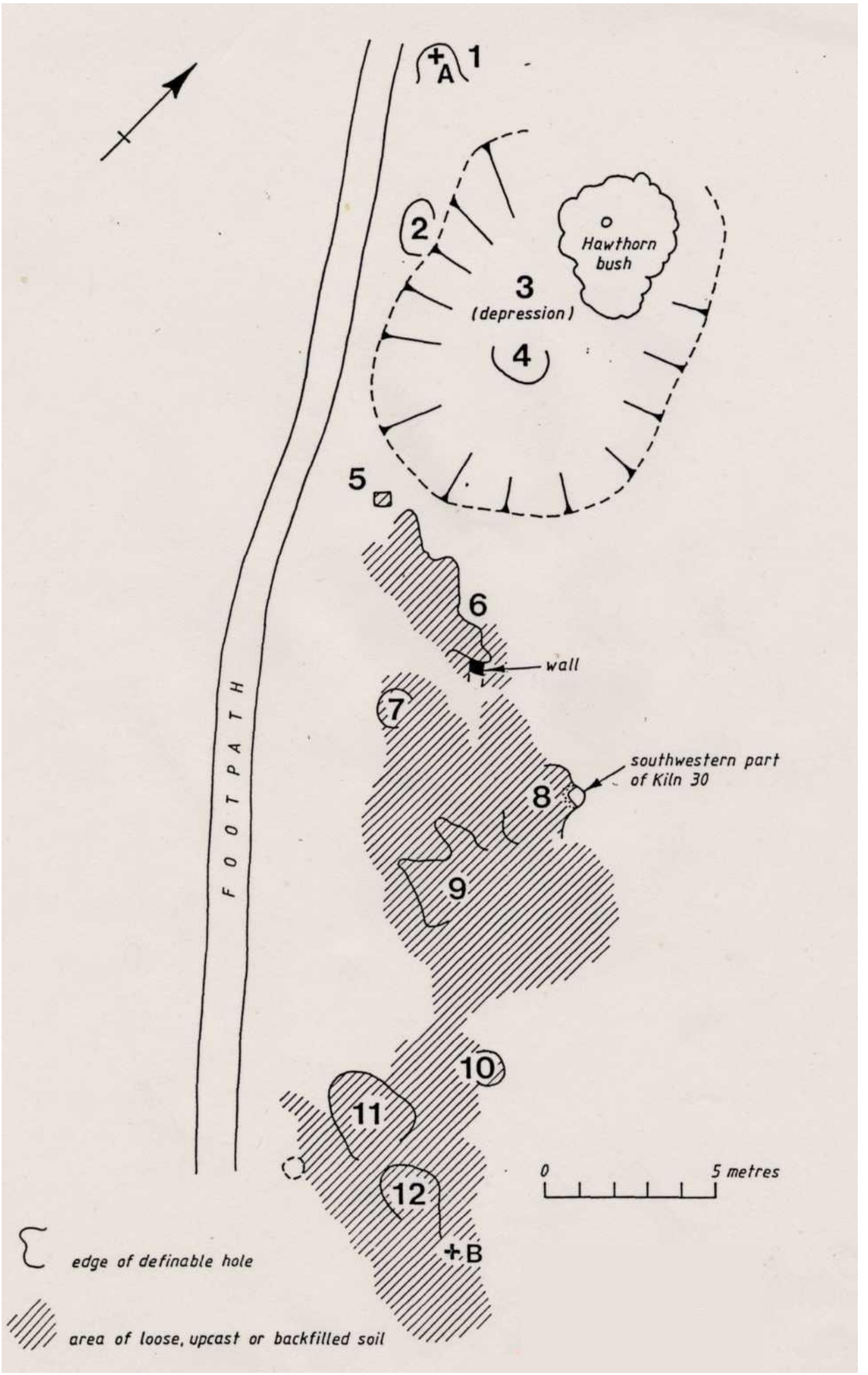


Fig 13.94. Hilly Pfelds (7/77b): plan.

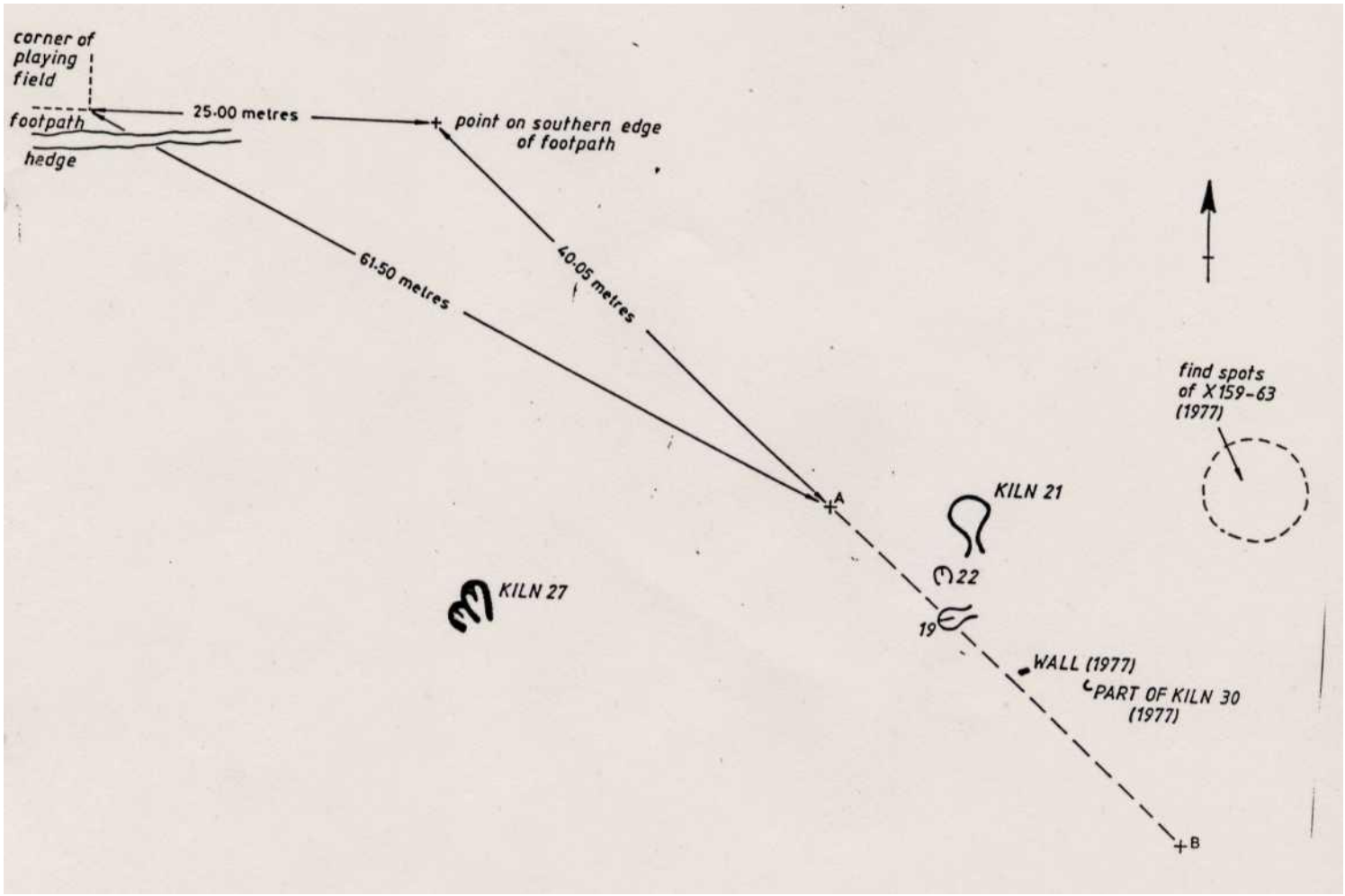


Fig 13.95 Hilly Fields (7/77b): location plan. Points A and B locate Fig 13.94.

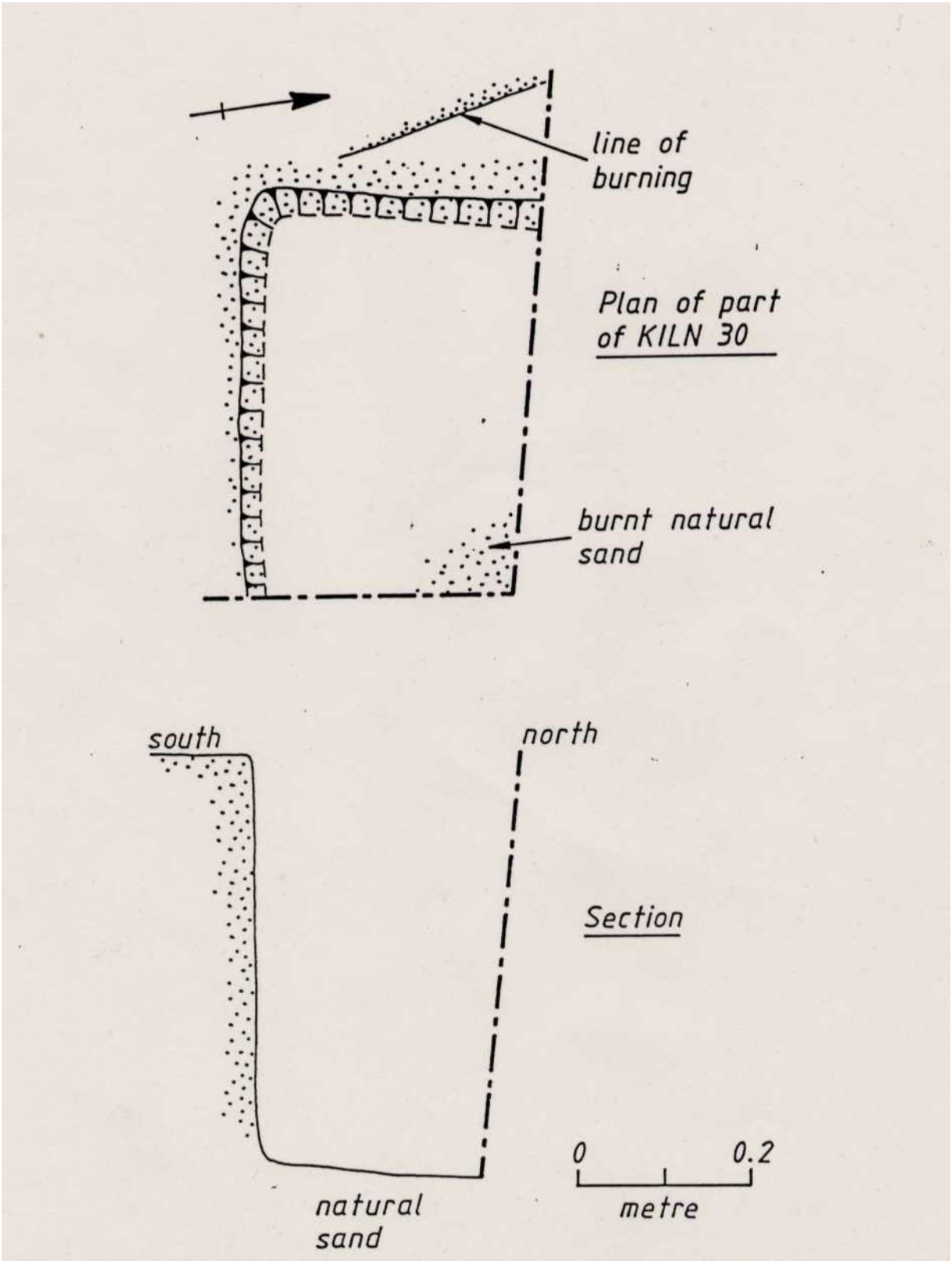


Fig 13.96. Hilly Fields (7/77b): plan and section through part of Kiln 30.

8/77

Arthur Street

August 1977

Reason: installation of 3,000 gallon underground petrol tank in yard of Anglian Autos

Record/report: CC

No datable material evident in section or spoil heap. With the exception of one feature about one metre deep, any early deposits which may have been present in the area of the yard at the northern end of Arthur Street were stripped away, probably when the yard was formed. The feature appeared to be a pit or an east-west ditch; it could not be dated.

9/77

The Minories Garden, High Street

August 1977

Reason: trenches in garden (advised of find by Minories staff)

Record/report: CC

Two shallow trenches in the garden of The Minories (see sketch in archive) revealed parts of a north-south wall footing constructed of plain red bricks, each 210 x 100 x 60 mm. The wall formerly marked the garden boundary between Nos 73 and 75 High Street and is probably that shown on the 1923 Ordnance Survey. A wall in a similar position also appears on Monson's 1848 map of the town. However, the alignment of the\foundation differs slightly from that shown in both maps.

10/77

68 Butt Road

October 1977

Rear extension to Chinese take-away

Record/report: HB/PC

A fragment of human bone (X157), unstratified but presumably from a human inhumation, was found during building works.

11/77a

5 *Alexandra Road*

November 1977

Reason: small trench in back garden

Record/report: HB/CC

Photographs: Misc Sites 1, 84

Finds: X159 (clay pipe, animal bone, 3rd/4th sherds, tile)

A hole was dug in the back garden to locate a water-pipe. The hole measured 1.4 x 1.3 m and was 1.55 m deep. Natural subsoil appeared 0.85 m below ground level. Objects recovered from topsoil, right down to subsoil level, included clay pipe, tile, Roman coarse ware and burnished ware, and animal bone. No human bones or burials were visible. Judging from the variety of finds, the material between natural and the garden topsoil is the backfill of one or more pits. This is probably associated with the 19th-century sand extraction which is known from documentary records *(see* 1845 Tithe Map and the sketch plan accompanying the entry in Wire's Diary for 1.12.1848) to have extended at least as far south as the rear boundary of the properties on the north side of Alexandra Road.

Excavation north-east of Duncan's Gate (CGC 1978)

In the area of the Castle Gardens estate

Figs 13.97-8

Reason: construction of housing estate
Record/report: GS/PC
Photographs: Misc Sites 2

In 1978, work began erecting private houses over the large backfilled quarry pit which was part of Everett's Brickyard (Hull 1958, *257).* Over the years, various archaeological discoveries have been made during quarrying, indicating/that this was an a site of some archaeological value. However, being mostly backfilled, the precise position of the southern boundary of the pit was obscure and therefore it was decided to attempt to locate this by means of an exploratory trench. In the event, it transpired that the boundary of the pit coincided almost exactly with that of the new estate so that there was unlikely to be further disturbance of areas of archaeological value.

The area is situated outside the walled part of the Roman town and to the north-east of Duncan's Gate. It lies to the north of the site of a low rampart which has been levelled in stages over a long period of time. The last-surviving section (a scheduled ancient monument) was destroyed in *c* 1971. The rampart lay on the outer side of the ditch around the north-east corner of the walled town, its course being known over a distance of about 475 m (Hull *ibid,* pl 42). The date of the rampart is uncertain but it is possible that, like the dumped soil just to the west of the wall at the western end of the town (*CAR* **3***,* 140), this had been a counterscarp bank laid along the outer lip of the town ditch in *c* 275 so as to strengthen the town defences and, in this case, cut off Duncan's Gate. (For a further discussion, *see CAR* 3, 17-18.) The town ditch was not excavated in 1978 but its position was clearly indicated in 1976 by the type and distribution of the wild plants which sprung up after the existing vegetation had been stripped off by the Colchester Borough Council Park's Department.

The most important finds from the area were two groups of early Anglo-Saxon grave-goods located with the aid of a metal detector in 1971. These include two cruciform brooches dated by Mrs S C Hawkes to the first half of the 5th century *(CAR* 2, 10-12). Various Roman graves have been found during quarrying; Hull lists eight in his inventory of Roman graves in Colchester (MS in CM; Hull 1958, 257). Also, when the bowling green to the west of the site was being laid out in 1935, earth-moving (which presumably involved levelling part of the rampart) revealed a mass of disturbed human bone in which the most that was articulated in any one spot was half a skeleton (Hull *ibid; CMR* 1937-44, 16). The soil contained much Roman material but the bones themselves could not be dated. Hull speculated that they could be as late as Anglo-Saxon (Hull *ibid)* but lacked any hard evidence.

In 1978, two trenches were dug. The first was initially a long north-south trench laid out to locate the southern boundary of the quarry pit. This achieved, the trench was then extended eas;rwards to examine the undisturbed ground. A second trench was opened further to the east but this proved barren.

The Roman features in the first trench consisted of a north-south ditch (F4), two pits (F6 & F7), and a shallow scoop (F2) containing a dense scatter of crushed, badly decayed animal bone. Evidence was also recovered of disturbed Roman graves but no Anglo-Saxon material was found. The ditch contained pottery of the 3rd to 4th centuries and cut the pit F6. Its upper fill consisted of flints and sandy clay loam and gave the impression of having been deliberately backfilled. Perhaps the ditch was levelled when the rampart was built? The two pits were similar in shape and size to one another (Fig 13.98, Sx AB) and dated to *c* 150-250. The lowest fill of pit F6 (F6c) contained three pots (Colchester Type BA SG 57; Colchester Type GX 35A *(CAR* **10**, no 122); Colchester Type GB 43 *(CAR* **10**, 97) and fragments of a human skull. The central fill of pit F7 (F7b) yielded a fourth pot and part of another skull (same as that from F6?), presumably from a disturbed grave. Presumably the bone in F2 was household refuse although the absence in it of oyster shells in any significant quantity is curious. Animal bone distributed and crushed in this mariner is without a clear parallel in the excavations in Colchester. Since this material lay not far frorn the site of the mass of disturbed bone at the bowling green, the now unanswerable question must be raised, 'Could the bone described by Hull have in reality have been animal too?'

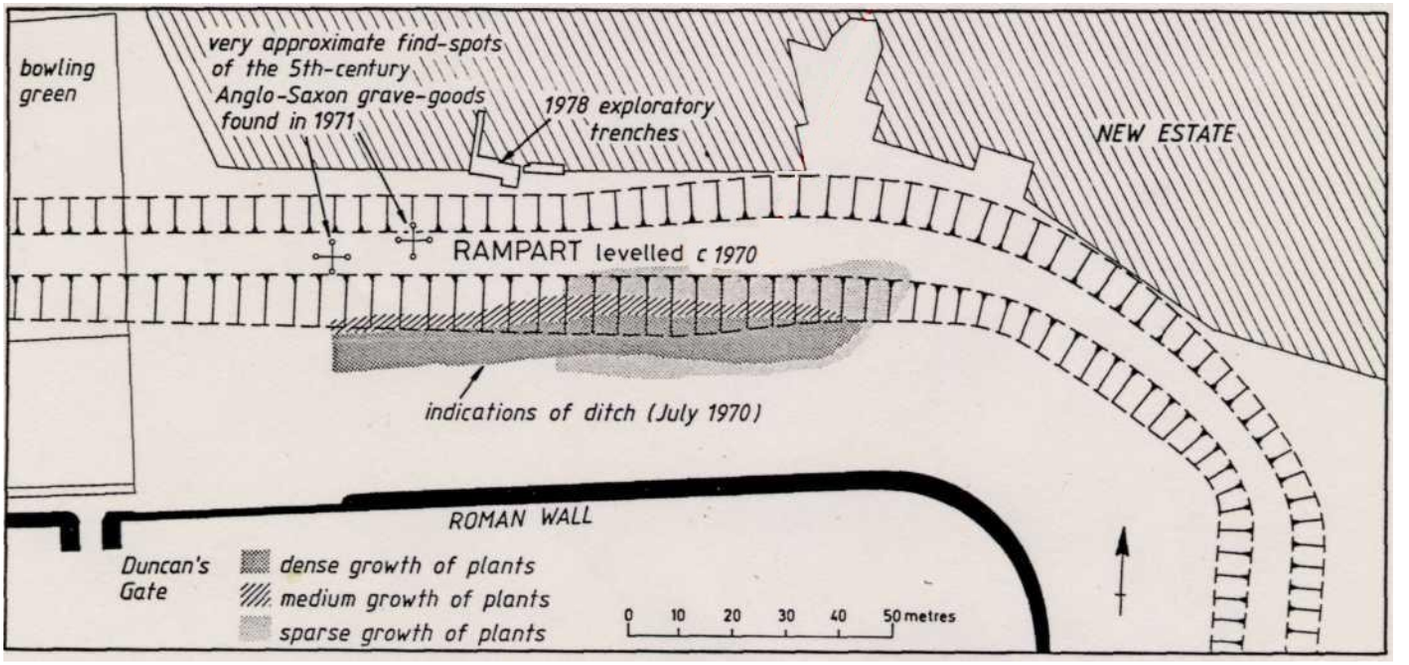


Fig 13.97. Castie Gardens (CGC 78) (north-east of Duncan's Gate): location plan.

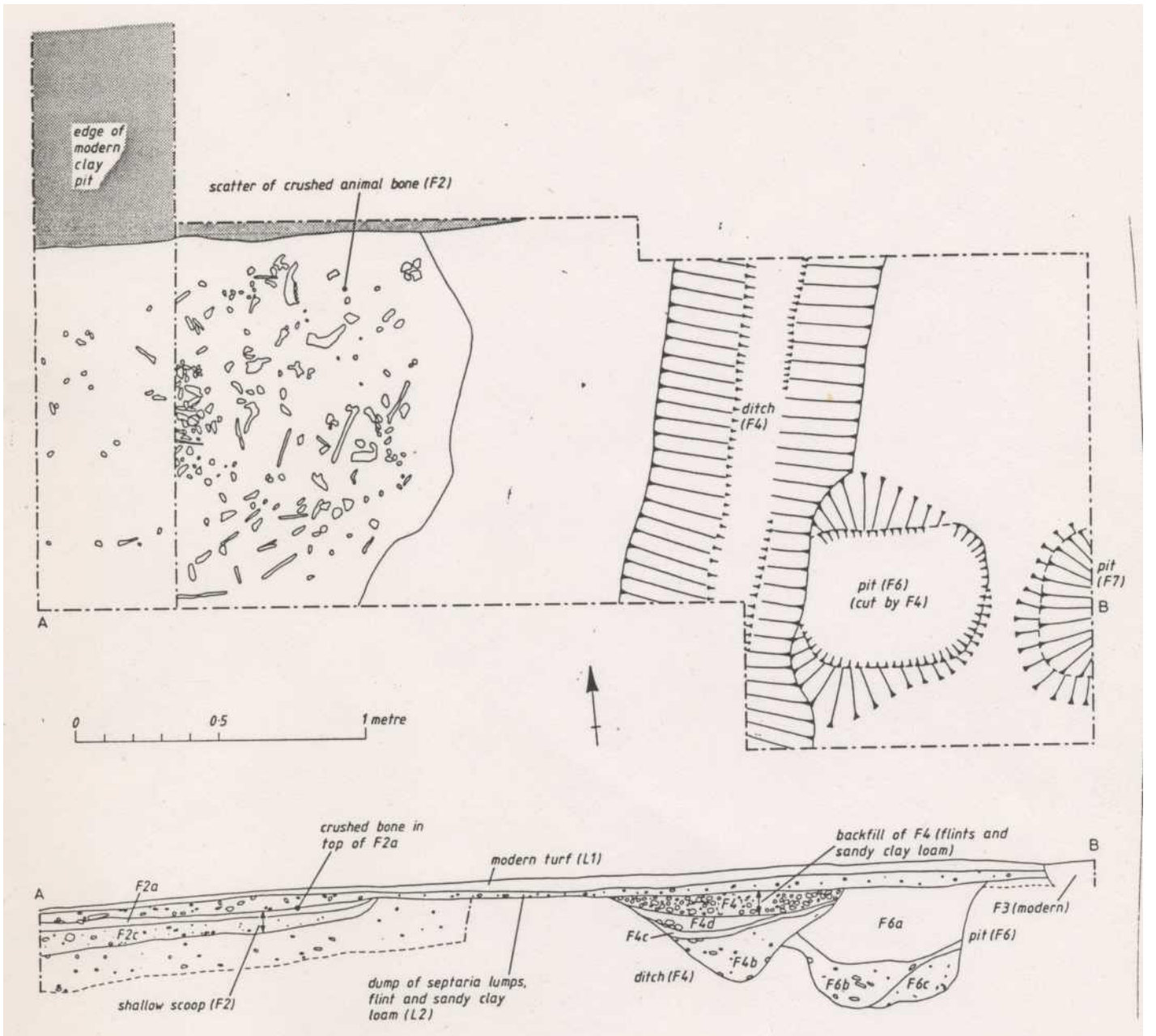


Fig 13.98. Castle Gardens (CGC 78) (north-east of Duncan's Gate): site plan and Section AB.

0/78

The Strood, West Mersea

Summer 1978

Reason: Anglian Water laid a new water-main across the Strood

Published in Crummy, Hillam, and Crossan 1982.

1/78a

Victoria Place/Eld Lane

Fig 13.99

January/February 1978

Reason: redevelopment

Record/report: CC

The site lies at the west side of the junction of Victoria Place and Eld Lane. Trenching revealed three east-west wall foundations of a Roman building fronting the south side of Insula 37.

Foundation A. Approximately 11 m north of the north face of the town wall. Foundation, approximately 0.45 m wide, of small septaria fragments and pale brown mortar.

Foundation B. 5.35 m north of Foundation 'A'. Width and construction similar to Foundation 'A'.

Foundation C. 8 m to the east and 2.5 m north of the projected course of Foundation B. An uncoursed foundation, 0.6 m wide, of large lumps of septaria in mortar. All three foundations were cut by later pits. The general sequence of stratigraphy was as follows:

1. Floor of Labour Hall on bed of hardcore (0.4-0.6 m).
2. Very dark greyish brown sandy loam with small stones and scattering of oyster flecks (about 0.8 m). Post-Roman.
3. Pale yellowish brown clay loam with occasional small mortar fragments (about 0.7 m and continuing beyond bottoms of trenches). Make-up for Roman building(s). Foundation C clearly cut into this material.

No Roman floor levels were evident in the undisturbed sections of the trenches.

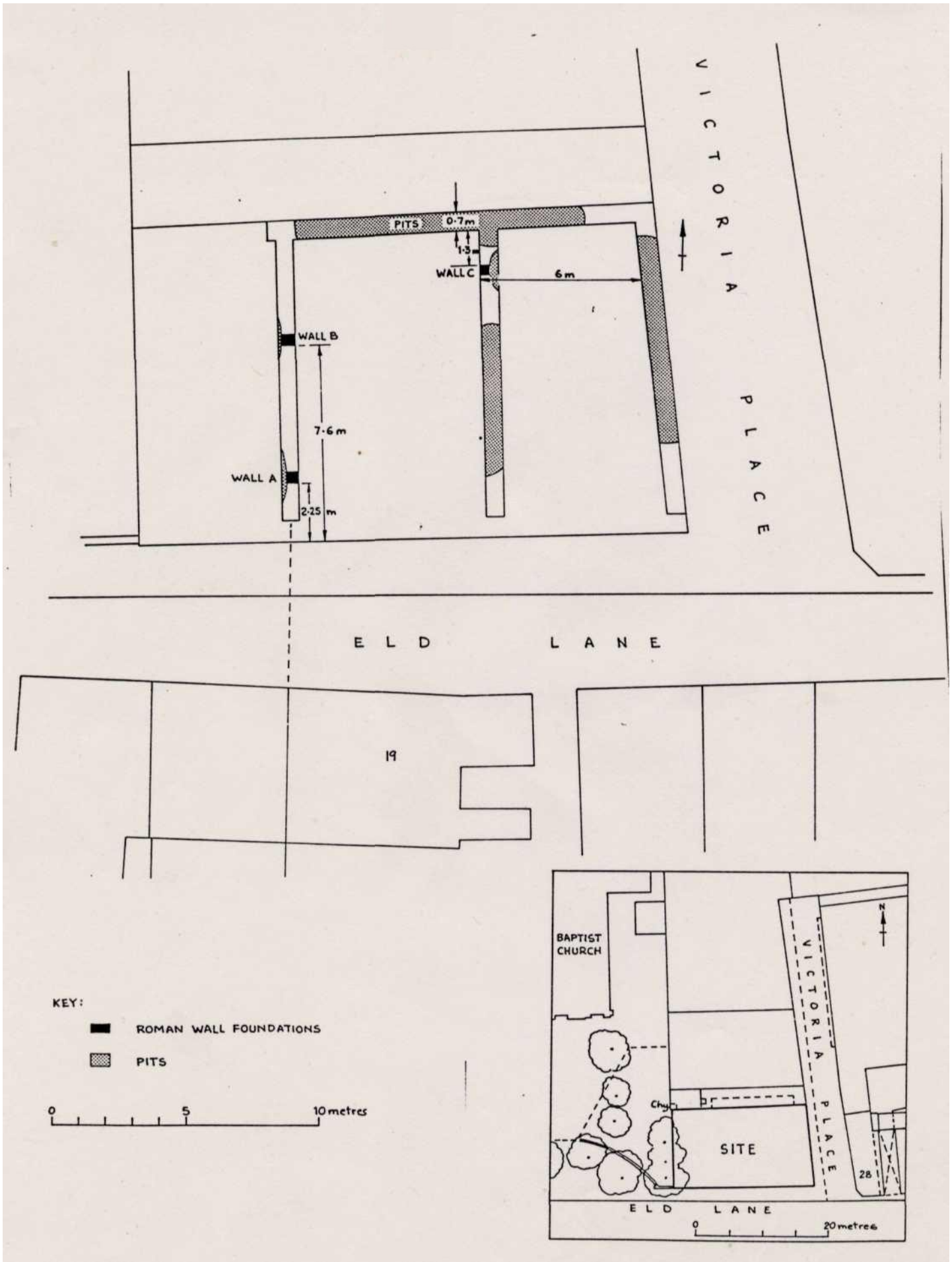


Fig 13.99. Eld Lane/Victoria Place (1/78a).

1/78b

1 Straight Road, 82-84 London Road, 2-10 Nelson Road (Sainsbury's)

January 1978

Reason: construction of supermarket

Record/report: CC

No significant features. The initial cutting of drain trenches was observed and the stratigraphy noted. This sequence of layers was repeated in the stanchion holes and shallower ground-beam trenches excavated later in the year.

3/78a

Balkerne Gardens (Phase 2)

See 3/77a

3/78b

Poplarhall Farm, Colchester

Figs 13.100-101

March 1978

Reason: demolition of timber-framed building

Record/report: NS/NS & PC

Photographs: Misc Series 2, 58-83

A detailed series of measured drawings of plan, elevations, and other structural details was made by N A Smith. These have been used to produce a complete drawing showing the main elements of the original building.

The structural phases are as follows:

Phase 1: the original 17th-century house of three sections

Phase 2: may in fact be part of Phase 1

Phase 3: addition of bay at south end, blocking window in Phase 1 gable

Phase 4: introduction of brick (19th century)

Phase 5: the reconstruction in the 20th century of the exterior including cladding of the walls and new doors, windows, and stairs.

Finds: X170-1 (sample bricks from the original building and the south bay resp) & X172 (peg from Phase 1 stud).

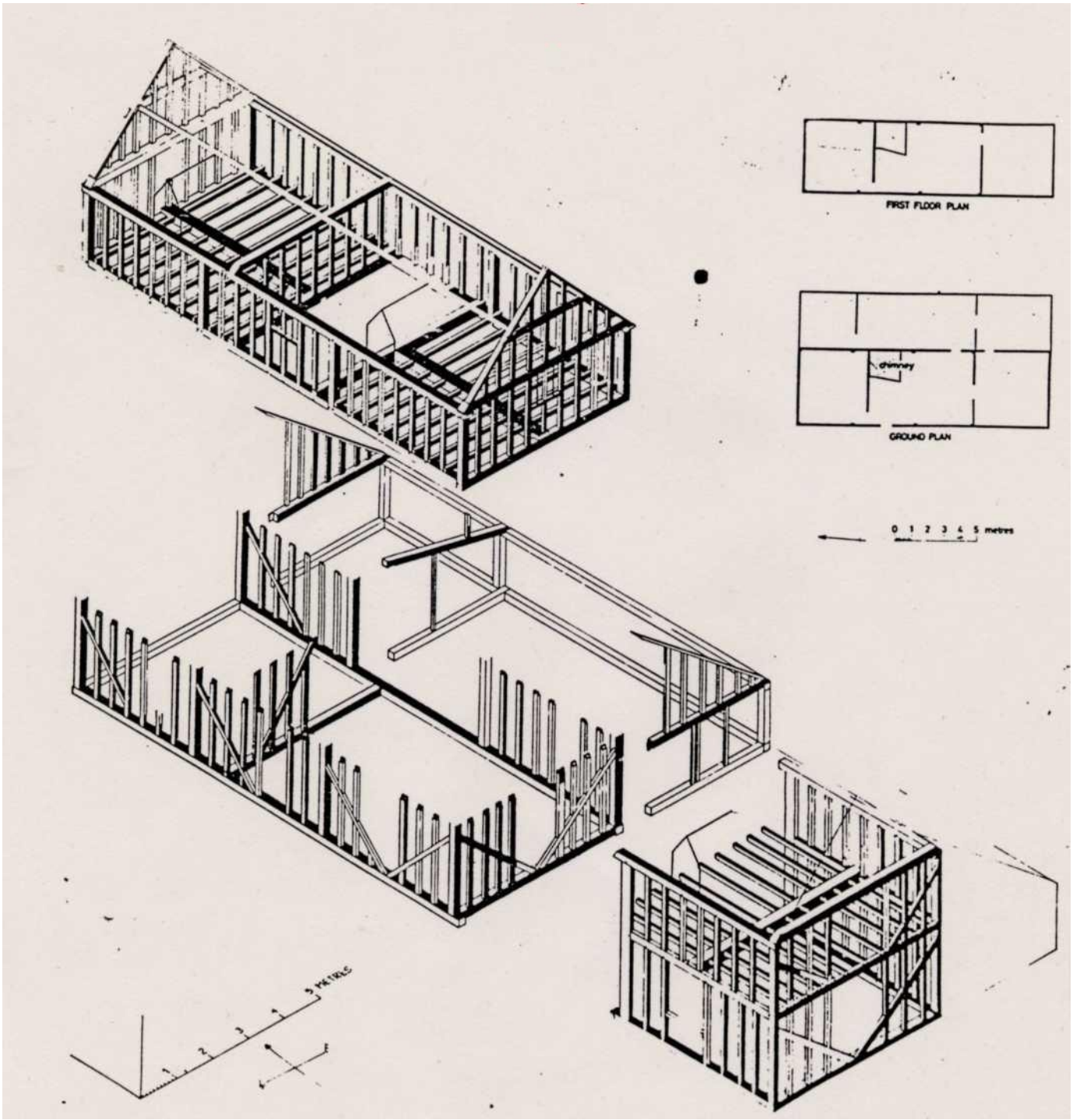


Fig 13.100. Poplarhall Farm (3/78b): isometric reconstruction.

PHASES OF CONSTRUCTION

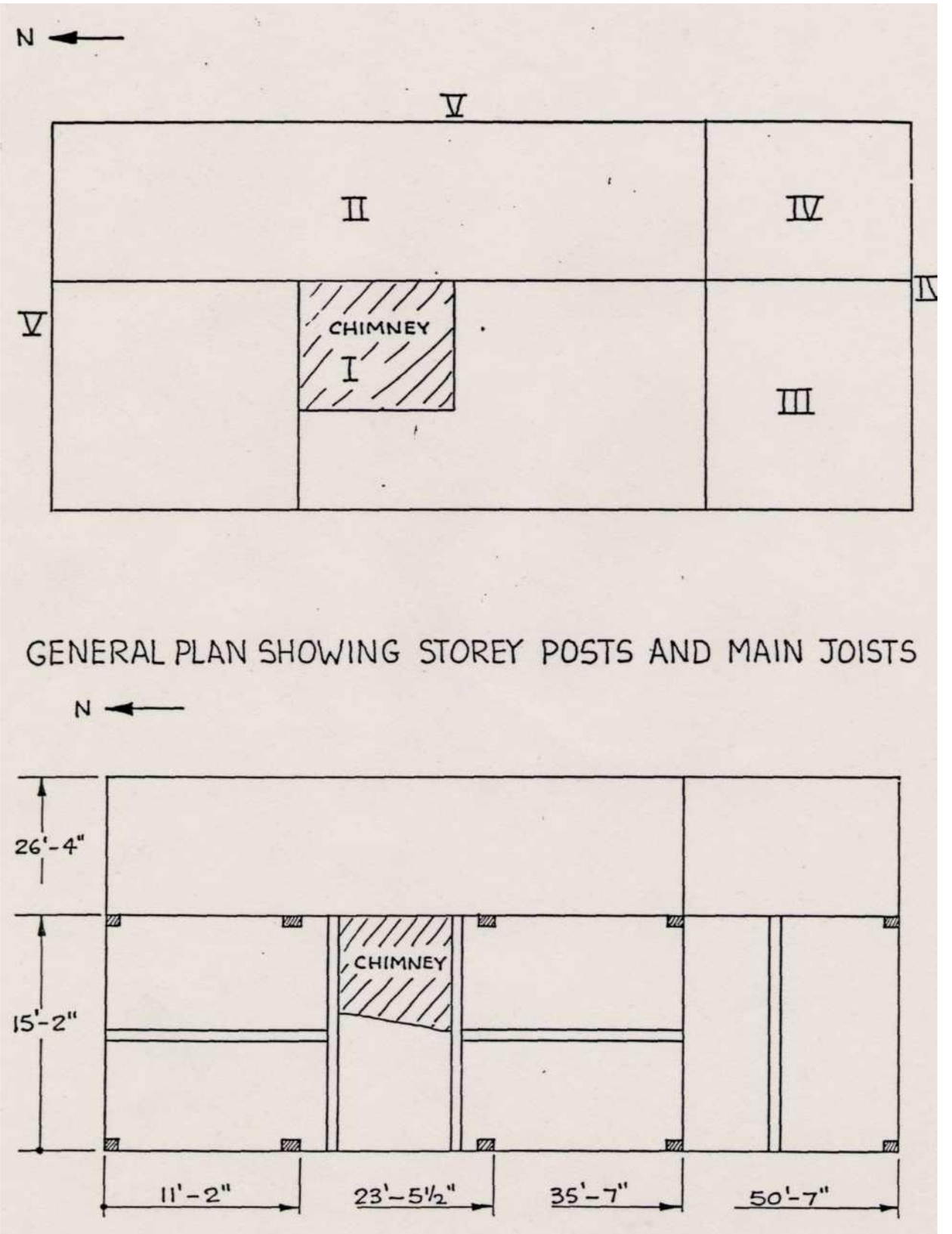


Fig 13.101. Poplarhall Farm (3/78b): plan and phases.

4/78b

Former Butt Road site

April 1978

Reason: erection of advertising hoarding

Record/report: CC/PC

Some trial holes were dug prior to the erection of hoarding on the former Site H. Nothing of significance was found (X173-5: early 2nd- to 3rd-century pottery, animal bone, and iron nails).

5/78

Kidman's Dyke (near James Carter Road)

Fig 13.102

Reason: new housing estate

Record/report: NS/PC

The ditch of this part of Kidman's Dyke was visible as a shallow earthwork. Planning consent was conditional on the site of the ditch being left as public open space. Unfortunately the contractors dumped large quantities of soil over the ditch and obscured it. Accordingly a machine trench was dug into the top of the ditch fill under the supervision of NS to establish its position.

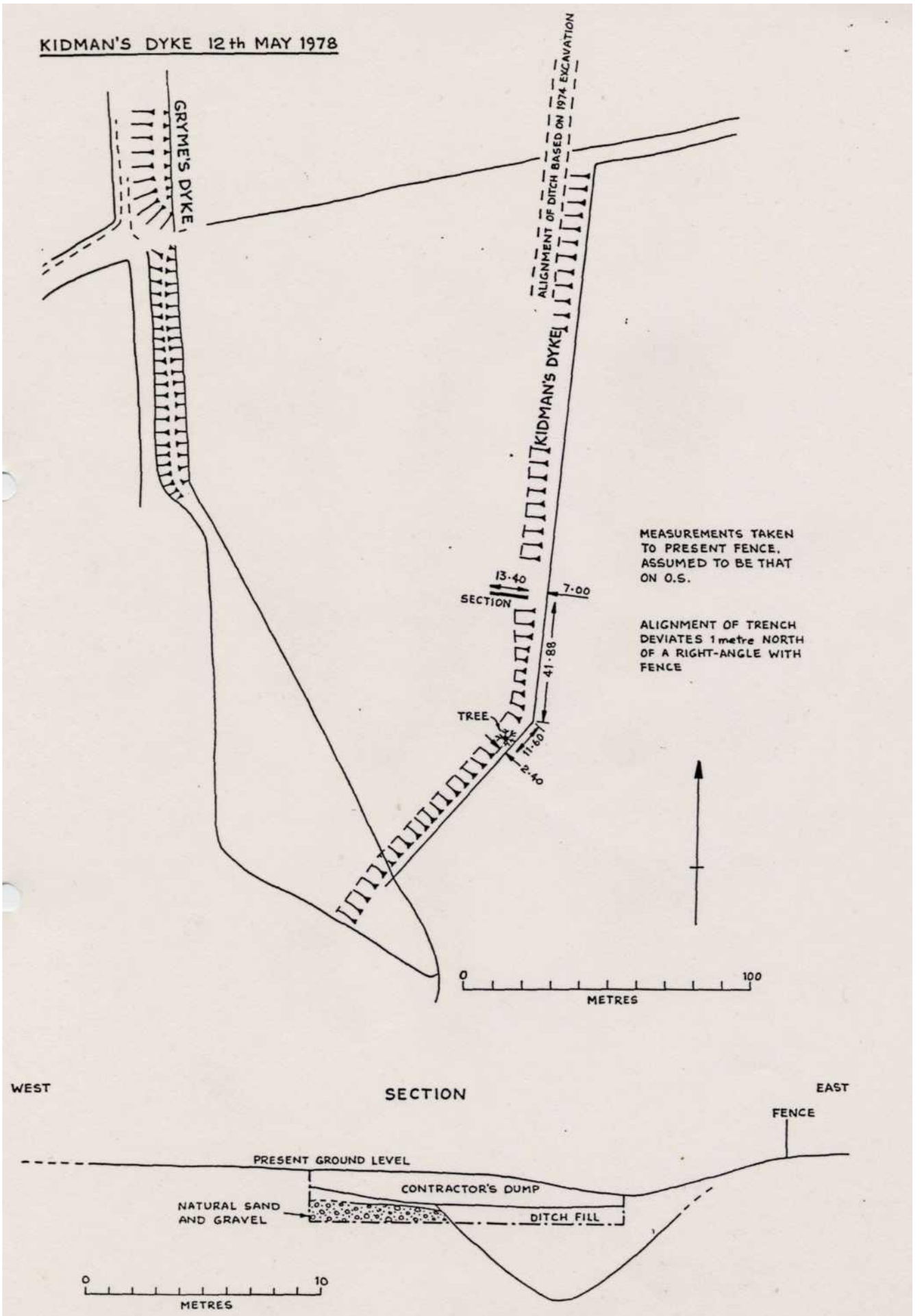


Fig 13.102. Kidman's Dyke (5/78).

9/78a

1 & 1A Eld Lane

Fig 13.103

September 1978 and May 1979

Reason: two single storey extensions on line of town wall

Record/report: G Scobie & CC/CC

Photographs: Misc Sites 2, 118

Proposals to site two single-storey extensions in adjacent rear yards on the line of the Roman town wall prompted the Trust to excavate a trial trench to establish whether the new foundations would pose a threat to the fabric of the underlying wall.

The trench, in the yard of 1A Eld Lane, extended to a depth of 0.8 m. No *in situ* wall masonry was found. Five auger holes, up to 1.2 m deep, were then bored into the bottom of the trench. None made contact with a solid feature. The east face of the trench was drawn. This contained a series of dark post-Roman deposits cut by post-medieval features including the construction trench for the existing brick revetment which forms the south side of the yard.

Foundation trenches were subsequently cut to a depth of 1.0 and 0.8 m respectively in the yards of Nos 1 and 1A Eld Lane. Again, no evidence of the town wall was encountered.

Layers and features in sketch section (Fig 13.103):

L1. Black soil (10YR 2/2) with brick & mortar. Make-up of the concrete yard.

L2. Black soil (10YR 2/2) with some mortar flecking but other wise clean.

L3. Black soil (10YR 2/2). Very clean with some bluey-purple staining (cess material?).

L4. Greyish brown soil (10yr 4/2) with roof tiles & crushed mortar.

F1. Modern pipe trench, dug from the surface. Fill of brick & mortar.

F2. Construction trench for brick revetment wall. Black soil fill (10YR 2/2). Similar to L2 progressively getting thinner but with more mortar.

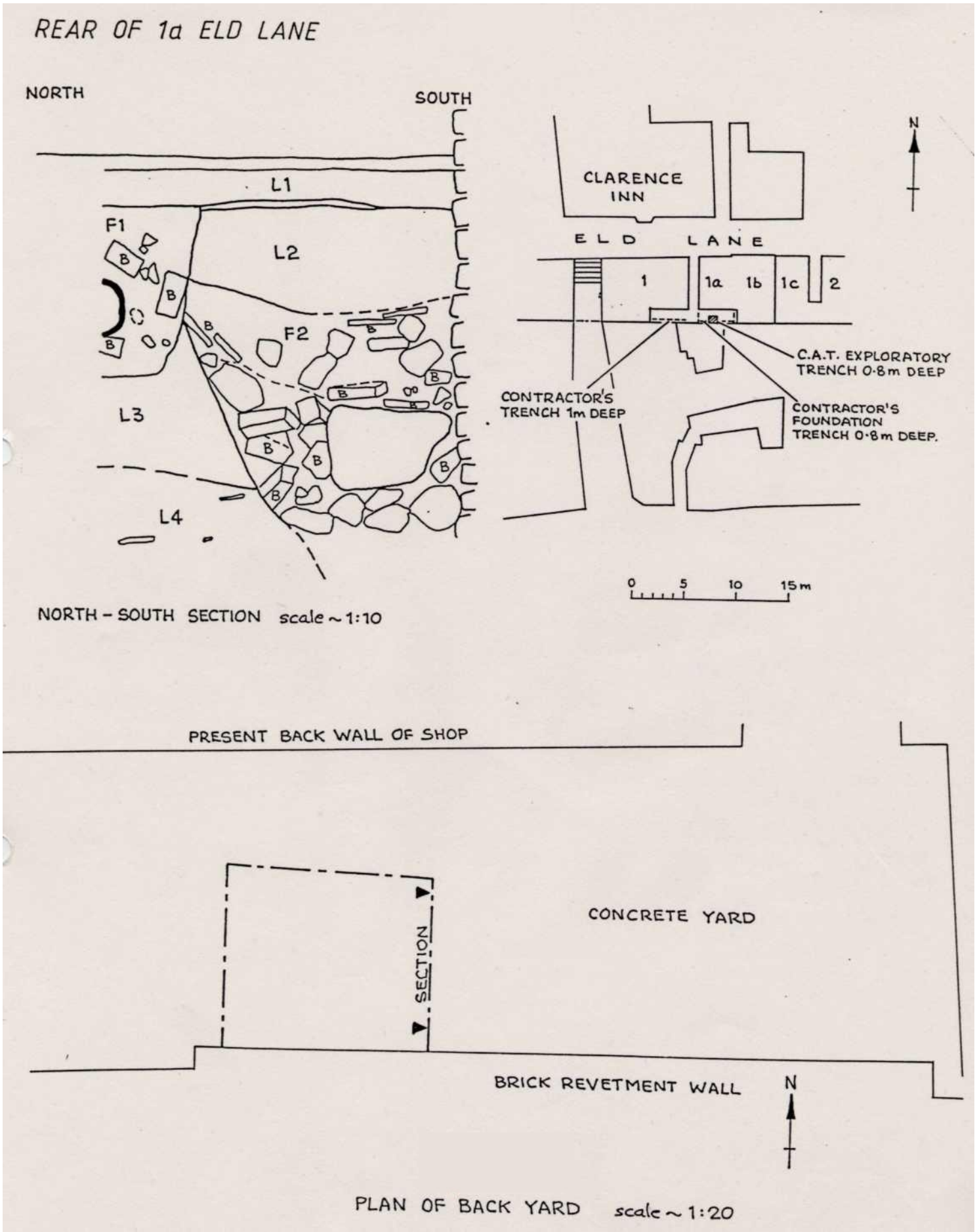


Fig 13.103. 1 and 1A Eld Lane (9/78a).

10/78a

Rawstorn Road

Fig 13.104 [See 35 mm microfiche]

Reason: laying of new gas-main along street

Record/report: CC/CC & PC

Photographs: Misc Sites 2, 119-22

A trench for a north-south gas main along Rawstorn Road, cut through the Roman road leading south-eastwards from the Balkerne Gate. The metalling was up to a metre deep and consisted of layers of compact sand and gravel. It was present opposite Nos 20, 22, 24, and 26.

10/78b

Vineyard Street

Reason: construction of pedestrian footbridge

Photographs: Misc Sites 2, 84-7

The town wall was damaged during the building of new steps from Vineyard Street to Eld Lane. The damage was photographed.

11/78a

Southway, site between the cinema and the dual carriageway

7th November 1978-1st December 1978

Reason: construction of large office block

Record/report: BW& JH/PC

Pile holes and trenches indicated topsoil for a depth of 1.4 m with clay at 2.5 m. A large trench, 4.5 x 12.0 m and 3.0 m deep, was dug near the western end of the site. The hole was cut into dark topsoil apart from the western end which cut through some sand. The latter appeared to be redeposited. All finds seemed to be 19th or 20th century. The underlying sand was sterile.

11/78d

Gryme's Dyke (Stanway Green)

30.10.1978

Reason: laying of electricity cable

Record/report: CC

A north-south trench was dug on the east side of the bank of the dyke. When visited, the trench has already been partly backfilled to a depth of about 0.4 m. The visible section indicated that the top 0.2 m was turf and the rest was slightly stoney light brown gravel.

12/78a

2 Papillon Road

December 1978

Figs 13.105-6

Reason: rear extension

Record/report: CC

A Roman wall foundation of mortared septaria was noted in the north and south sections of a trench at the rear of No 2 Papillon Road.

The exposed section of wall lies some 15 to 20 m south of the Roman road leading to the Balkerne Gate and is set at an approximately right angles to the road.

Adjoining the eastern side of the foundation was a clayey deposit (Layer 4 in sketch section: Fig 13.106) possibly make-up for a floor. To the west, a stoney layer (Layer 3 in sketch section: Fig 13.106) suggests the presence of an alley or yard.

Layers in section (Fig 13.106):

L1. very dark greyish brown sandy loam (topsoil)

L2. trench containing foundation of mortared septaria on bed of small stones (Roman wall foundation)

L3. dark brown loamy sand with large number of small stones (?yard)

L4. mainly brown silty clay loam with occasional small patches of dark brown sandy loam (make-up for floor?)

Layers 2, 3, and 4 extended down to the bottom of the trench where dirty sand was exposed.

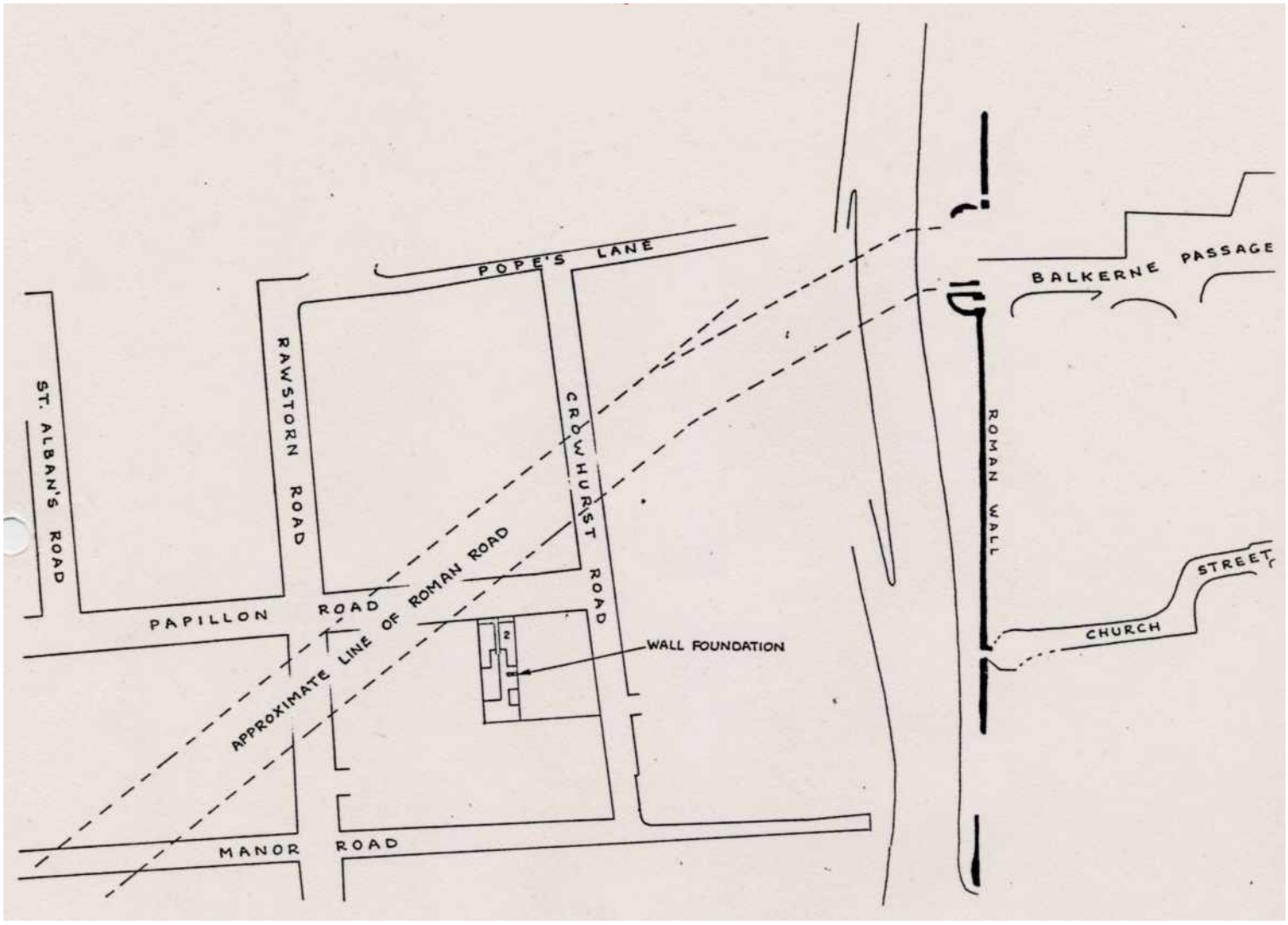


Fig 13.105. 2 Papillon Road (12/78a): location plan.

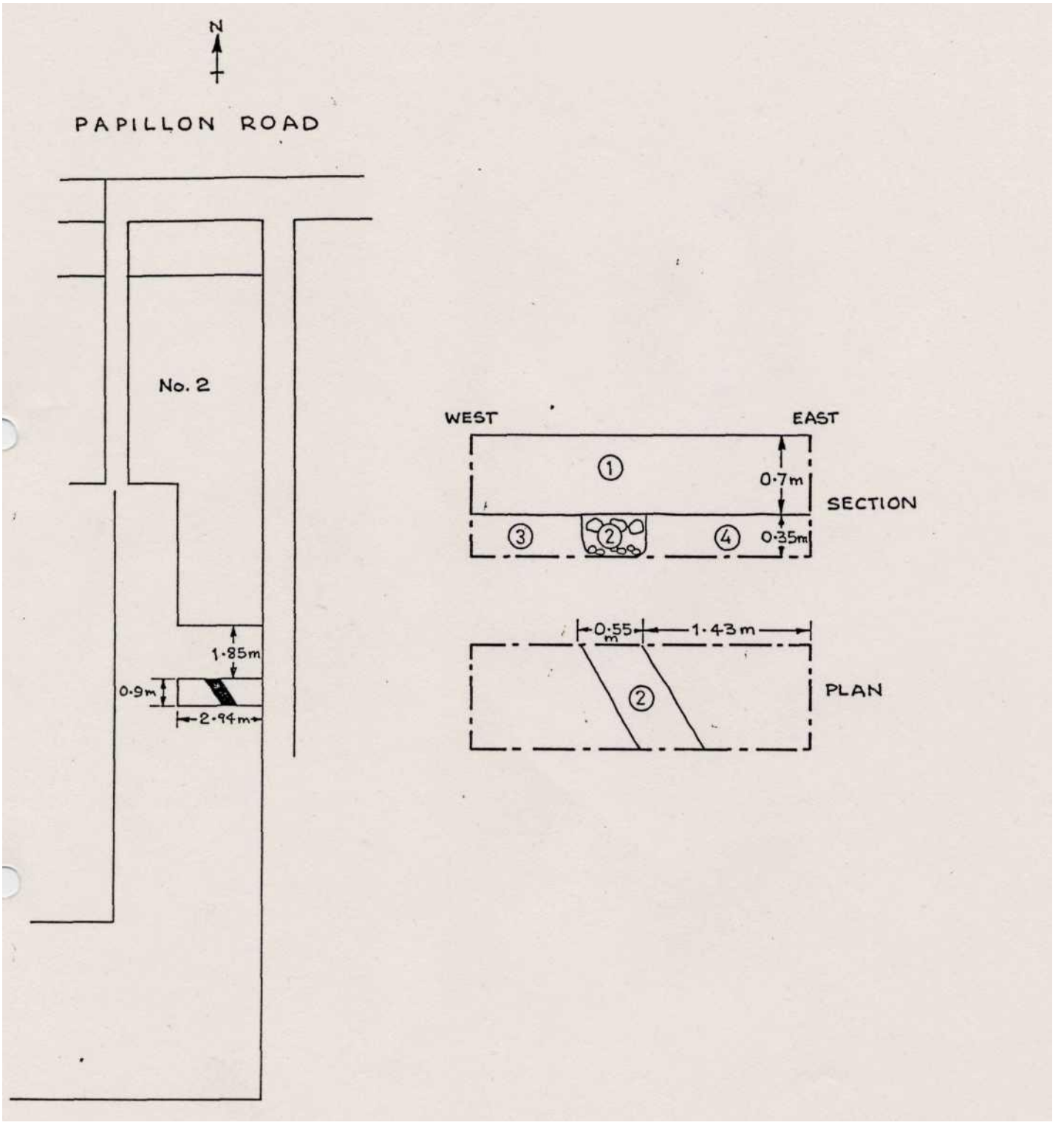


Fig 13.106. 2 Papillon Road (12/78a): plan.

12/78b

Tesco's, Southway/St John's Street

Fig 13.107[See 35 mm microfiche]

13th December 1978-8th August 1979

Reason: construction of large multi-storey carpark and shop on former surface carpark, shops, and houses

Record/report: HB, BW, & NS/PC

Photographs: Misc Sites 2, 123-32

The new building was constructed on piles so that there was very little opportunity to observe sections. A preliminary survey carried out by trial borings in 1974 indicated that there was likely to be at least 2 m of dark soil above natural. Many of the pile holes were observed during construction work and any objects or observations are indicated on the site plan. Roman and later finds were recovered from all parts of the site. No clear indications were noted of burials or buildings apart from a layer of gravel which seems to be at a depth of 3.5 to 4.0 m near the centre of the northern frontage. Noticeable was a concentration of Roman material from the western part of the site. Post-Roman remains consisted of a brick culvert and three wells (the position of only one of these was recorded). There were many indications of substantial quantities of underground water.

The usual range of finds were recovered from the site (X176-88 & X196-200), including a little painted plaster. Details of provenances are given in the X-Series Book.

2/79

Middleborough

February 1979 to September 1979

*Reason: construction of new buildings following the Middleborough excavations (CAR **3,** 155-209)*

Record/report: HB/PC

The results of the watching brief were largely covered in *CAR **3*** (pp 182-4 & 207). The new building on Sites A, B, C, E, and G was constructed on piles with minimal disturbance to surviving archaeological layers. A large basement dug out on the western side of the site led to the discovery of a Roman kiln and three wells. These are described in *CAR **3*** (pp 182-4). A workman said that six or seven wooden stakes were uncovered during excavations for the basement. The position of these seemed to coincide roughly with the southern side of the Roman street. These seem to have been about 80 mm across, at least 300 mm in length, and had sharpened ends. They were presumably piles like those found at the foot of Balkerne Hill *(CAR* **3,** 146).

A trench was dug around the western perimeter of the site for a water-main. It was 1.0 m wide and 2.4 m deep. The sections revealed about a metre of make-up and foundations for the Cattle Market and then a substantial depth of heavy clay loam for about the full depth of the trench. The soil was noted for almost the entire length of the trench and resembled river flood silt. (This conforms to the deduction made from the excavation trial trenches *(CAR **3,*** 155).)

The watching brief on Site D (north of the main site) is described in *CAR* **3,** 209. To this should be added the discovery fairly near the modern surface of a wooden drain or water-pipe and a series of wooden stakes. The wooden drain or pipe was built of a series of tree trunks and reused railway sleepers each of which had a hole bored along the centre of the upper surface. The ?reused sleepers were about 0.19 x 0.25 m in section, the hole being 60 to 90 mm in diameter. They may have been joined by some sort of iron fastening. The stakes made no clear pattern. Although all undetectable, the stakes and the pipe all seemed fairly modern.

To the north of the site of the New Market Tavern, in some contractor's spoil, Denis Gamble of the Colchester Borough Engineer's Department, found a fragment of Roman stamped brick or tile. On this subject, Mark Hassall writes:

Fragment of stamped brick or tile, 50 by 55 mm, 25 mm thick, found in *c* 1979 unstratified in loose spoil during contractors' work subsequent to the archaeological excavation of the site. The impression consists of a raised border, 435 mm (originally longer) by 25 mm, enclosing three letters in relief. There are possible stops between the letters, not included in the transcript, which reads: LVA[...

Cf stamps of Legion V Alaudae which regularly begin with the letters L V for *l(egio) V* (the title Alaudae is not included), followed by the initials of the junior officers responsible. *(CIL* 13, pt 6, 14-15). For arguments against identifying the series of tiles from Lincoln stamped LVL followed by the letters A D E and F, with the products of legion V, *see Britannia,* **8**(1977), 275-8.

3/79

St Peter's Church

Fig 13.117

3rd March 1979

Reason: trenches against south wall of church to reduce problems caused by damp

Record/report: BW/PC

Photographs: Misc Sites 1, 88-9

Five short trenches, 0.6 m wide and about 1 m deep, were dug between the buttresses along the south side of the church. The north sides of the trenches were lined with polythene and then backfilled with gravel. Four of the trenches revealed no significant remains. The fifth and most easterly trench (Trench 5) revealed the base of an earlier wall and buttress of roughly squared stones and a few Roman tiles. The squared stones were up to 0.5 m wide and the uppermost part of the wall (or foundation) was 1.0 m below the bevelled line of modern cement there. The early buttress underlay the brick buttress where it rose to within 0.62 m of the bevelled line of the modern cement.

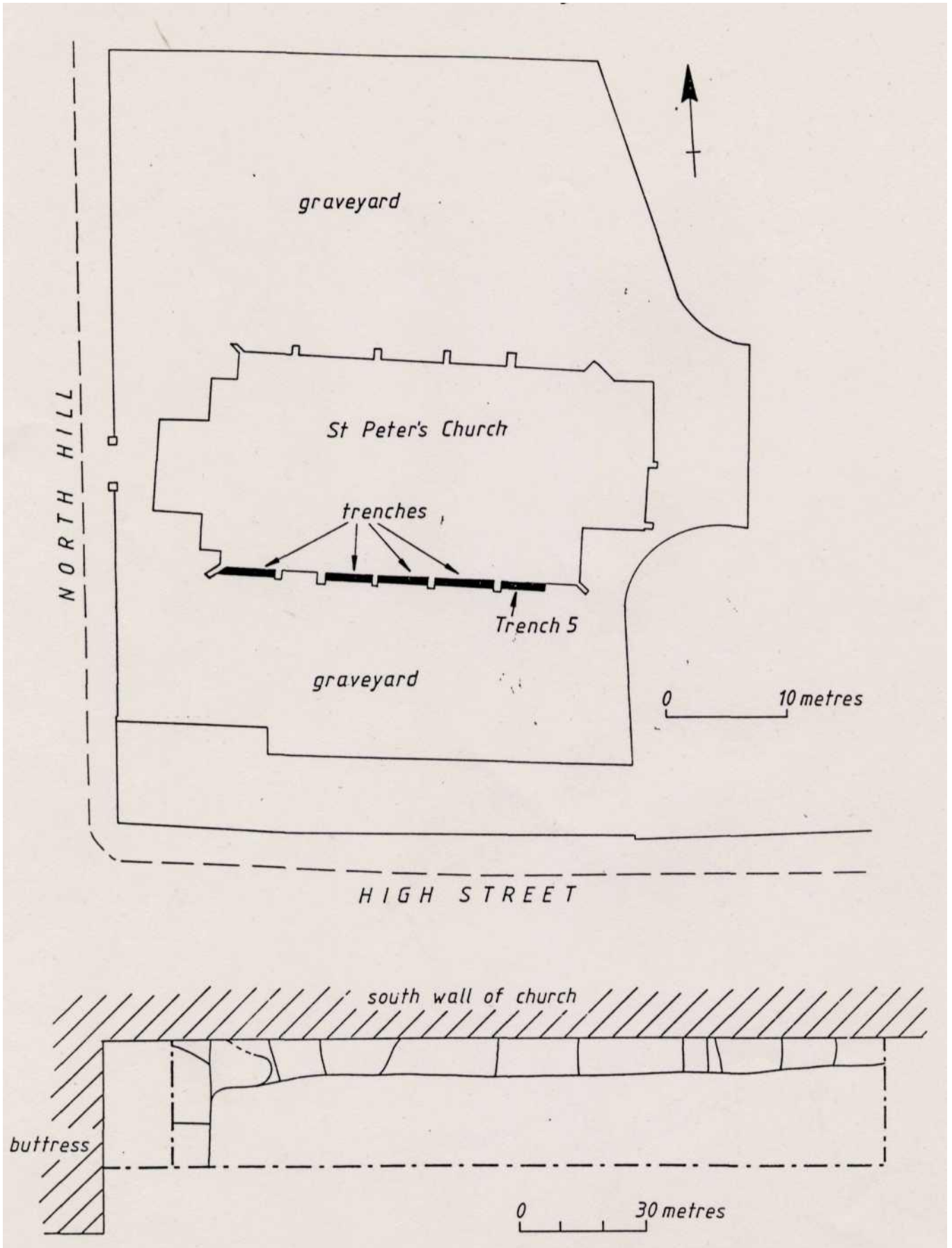


Fig 13.117. St Peter's Church, North Hill (3/79).

4/79

9 East Stockwell Street

Fig 13.118

April 1979

Reason: erection of extension

Record/report: CC/PC

The trench for the foundations was mainly 0.7 m wide and 1.5 m deep. Nothing but dark sandy loam was visible in the sides. A capped well was partly exposed in the south-eastern angle of the trench. Only the top four courses were exposed; these were of brick. It was impossible to establish its date.

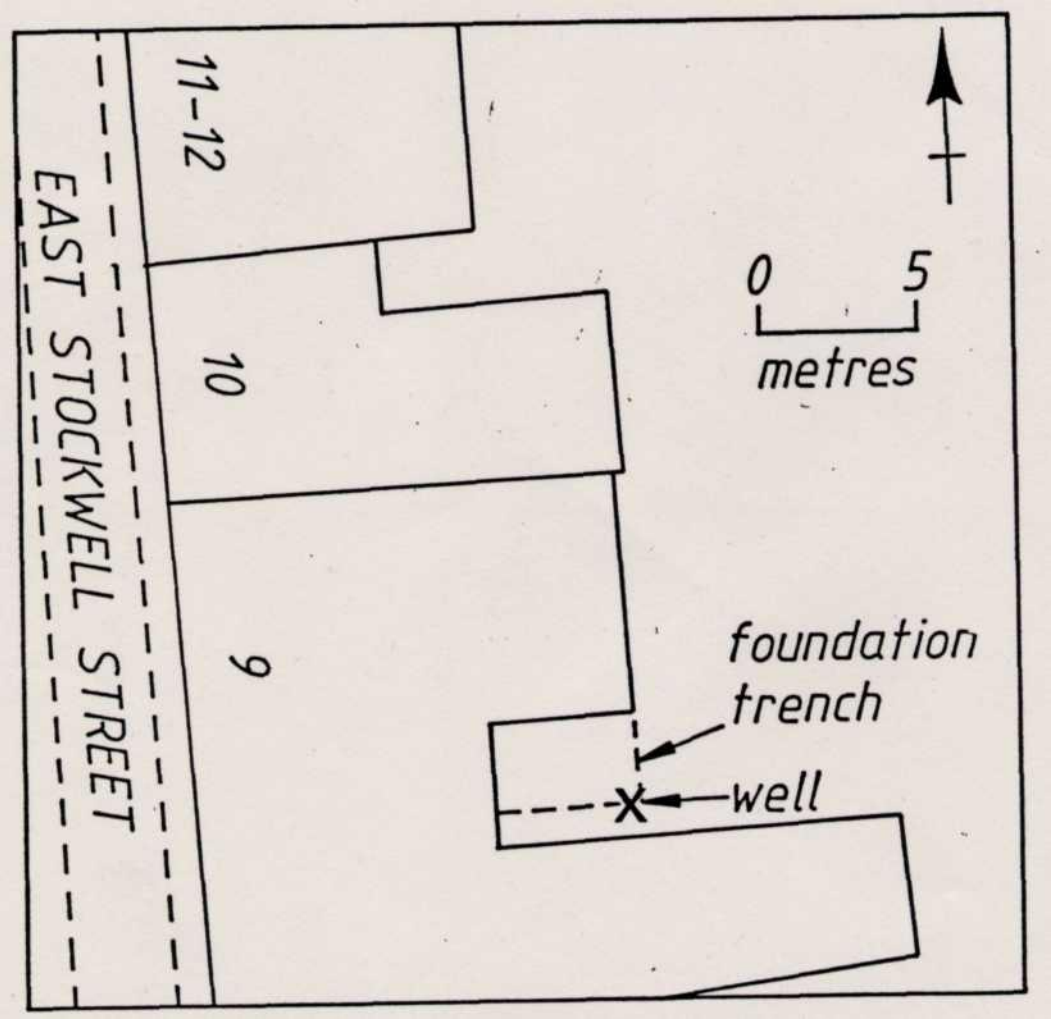


Fig 13.118. 9 East Stockwell Street (4/79).

5/79a

GPO Sorting Office, Clarendon Way

Fig 13.119

May 1979 to August 1979

Reason: construction of Post Office sorting office on vacant land

Record/report: NS & CC/PC

Finds: X201 (probably Roman from patch of crushed tile — see Fig 13.119)

Two trial trenches were dug by machine on the west side of the site where the developers proposed to reduce the existing ground level by the greatest amount. The western trench was 1.5 m deep and the eastern one 1.0 m. The architects placed depth limits on these trenches which reflected the likely levels by which the site was to be lowered. No features of archaeological interest were observed in theni. Typically the uppermost 0.2 m was brown topsoil which overlay 0.3 m of reddish brown silty clay loam. The underlying material is mainly grey and reddish brown clay with patches of sandy gravel.

Before constructing the new building, the builders levelled the site. On the western side, which was the highest part, the site was stripped close to the underlying clay and gravel subsoil which in places showed through in the new surface. To the east the stripping did not penetrate the topsoil to reach the subsoil. After removal of topsoil on the western side, a patch of crushed Roman tile was revealed. The machine driver reported a similar patch to the north-west. Part of a field boundary was located near the centre of the site.

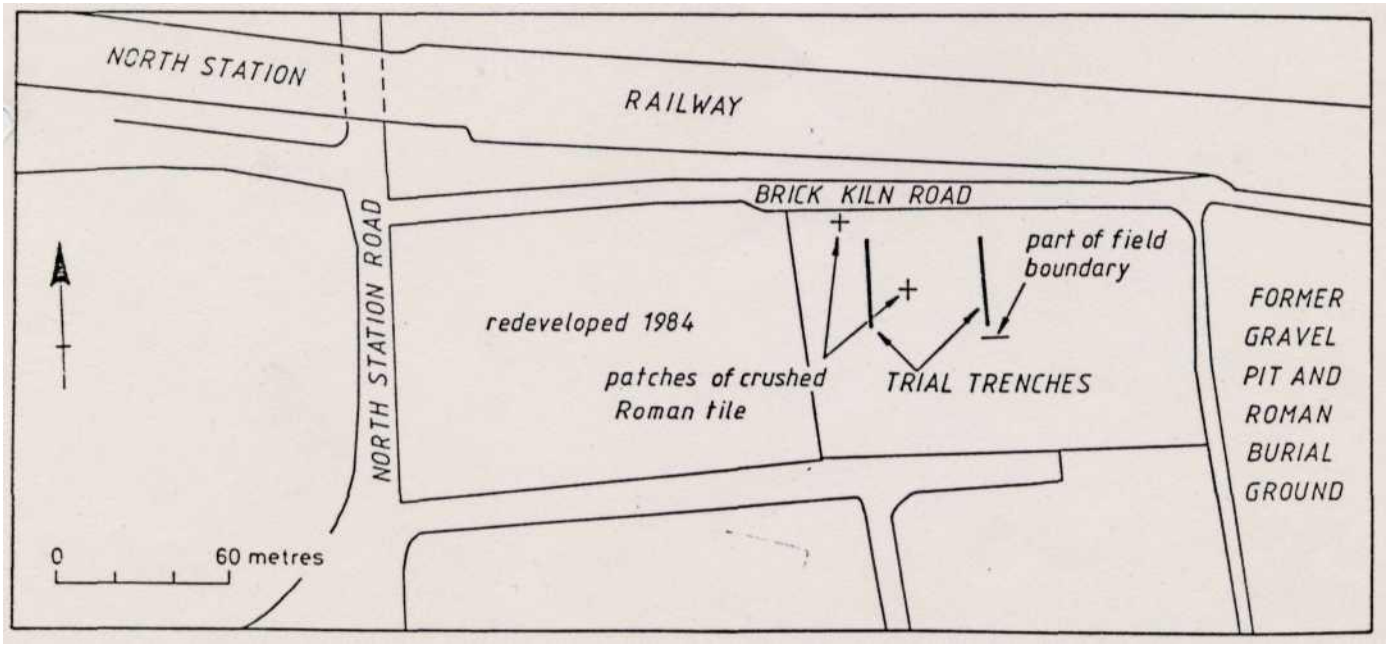


Fig 13.119. GPO Sorting Offices, Clarendon Way (5/79a).

5/79b

93 High Street

Figs 13.120-6

17.5.1979

Reason: restoration and alteration of timber-framed building

Record/report: NS/PC

Photographs: Misc Sites 1, 93-4

A series of photographs was taken during the alteration work. N A Smith made some measured sketches of the main structural features.

This timber-framed house has a shallow cellar at the frontage and an early brick chimney stack in the middle of it. The cellar walls are of orange-red brick measuring 210 x 100 x 50 mm. The bond is not distinguishable. The floor of the ground floor over the cellar has a bridging joist 270 x 220 mm deep. Its edges are waney and it has a plain chamfer on the lower edges which seem unstopped. Also it has mortises for diminished haunch tenons, pegged at 480 mm centres. The common joists are 80 x 120 mm deep of which the tenon occupies 40 mm.

The chimney stack is of English bond brickwork with closers in header courses at the north corner. At the south corner, the bricks were laid so as to fit best, ie few closers, some headers, some stretchers, some three-quarters. The bricks measure 210 x 100 x 50/55 mm. Their fabric is dark orange-red in colour with yellower involutions of darker red/black grog. The clay seems stone free. The west face of the stack is very battered and there has been some repair work with larger bricks. The stack may originally have extended as far as the west wall of the building.

The roof over the southern half of the building has a ridge running east-west and is of 15 couples with a collar nailed to the east face of each (except the easternmost which has it nailed to the west) and a ridge-board. It has no purlin and is of mansard type.

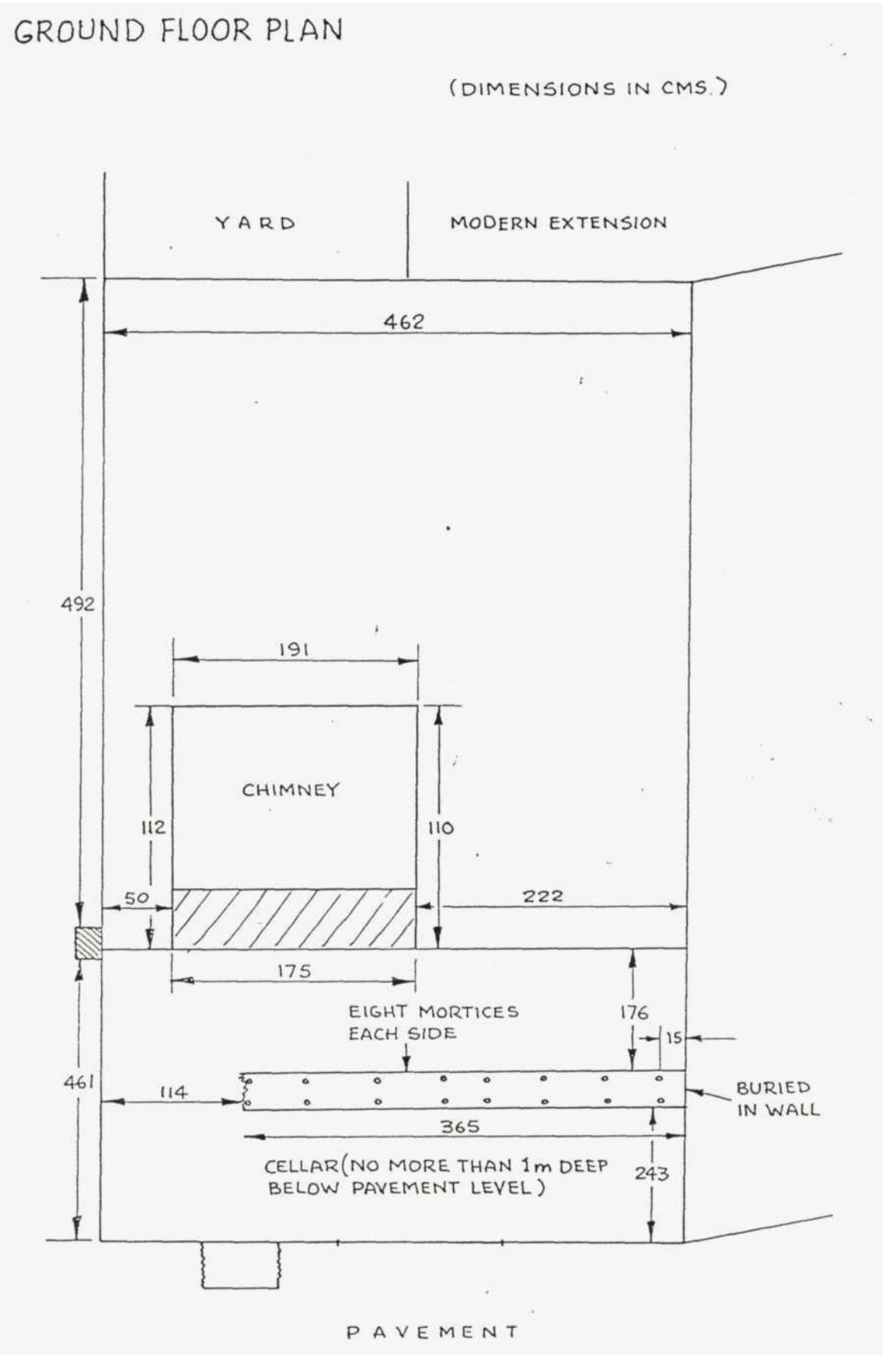


Fig 13.120. 93 High Street (5/79b): survey.

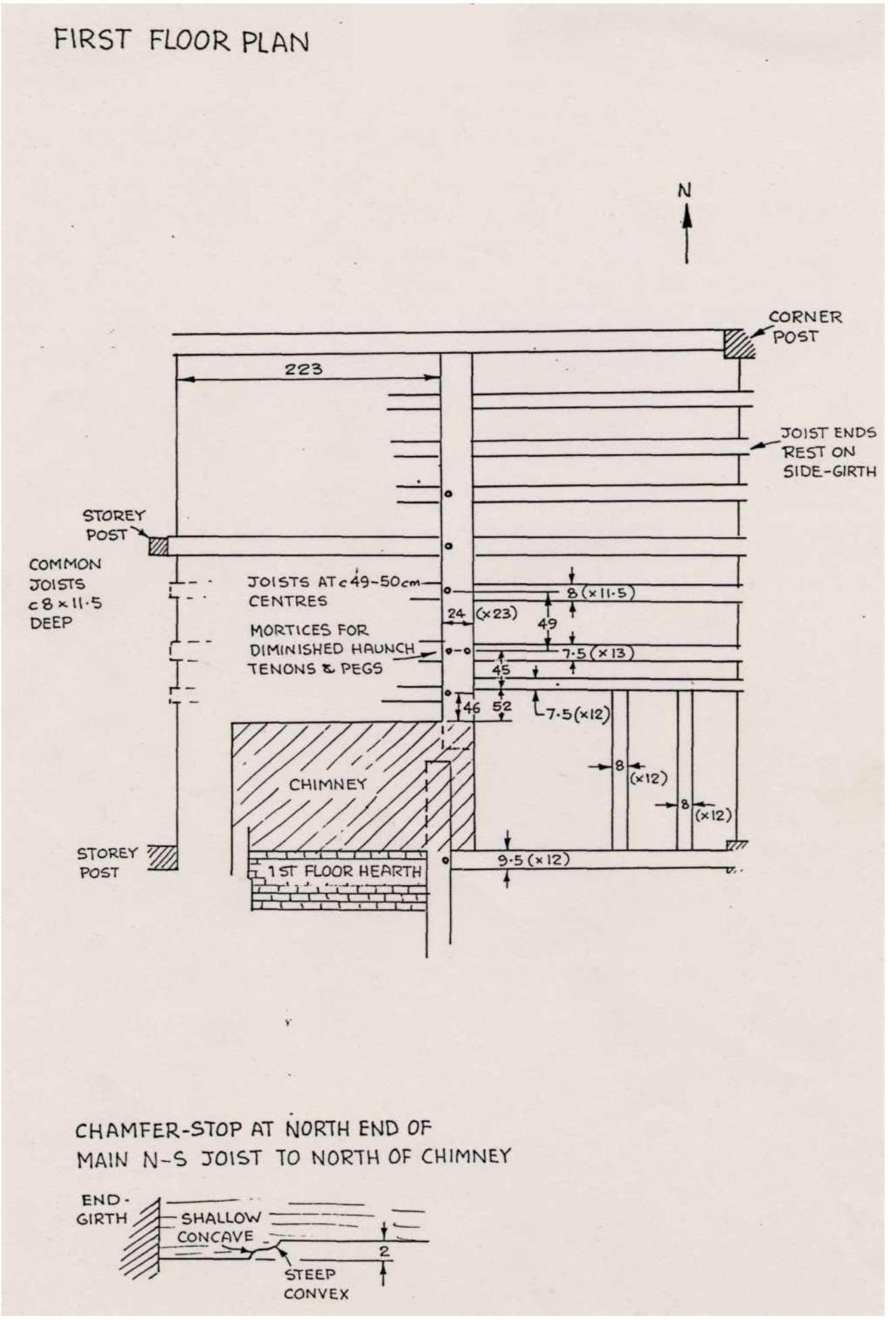


Fig 13.121. 93 High Street (5/79b): survey.

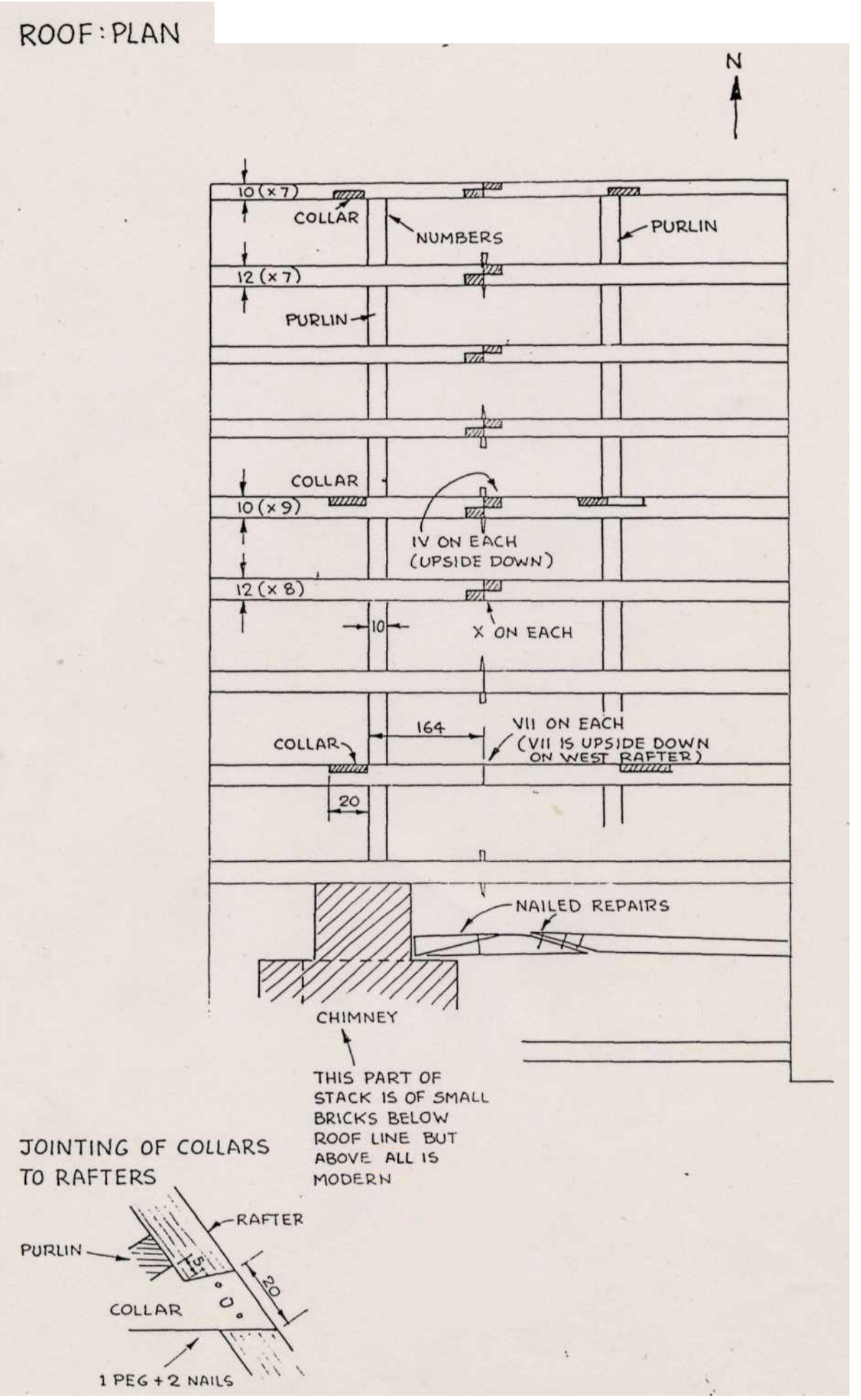


Fig 13.122. 93 High Street (5/79b): survey.

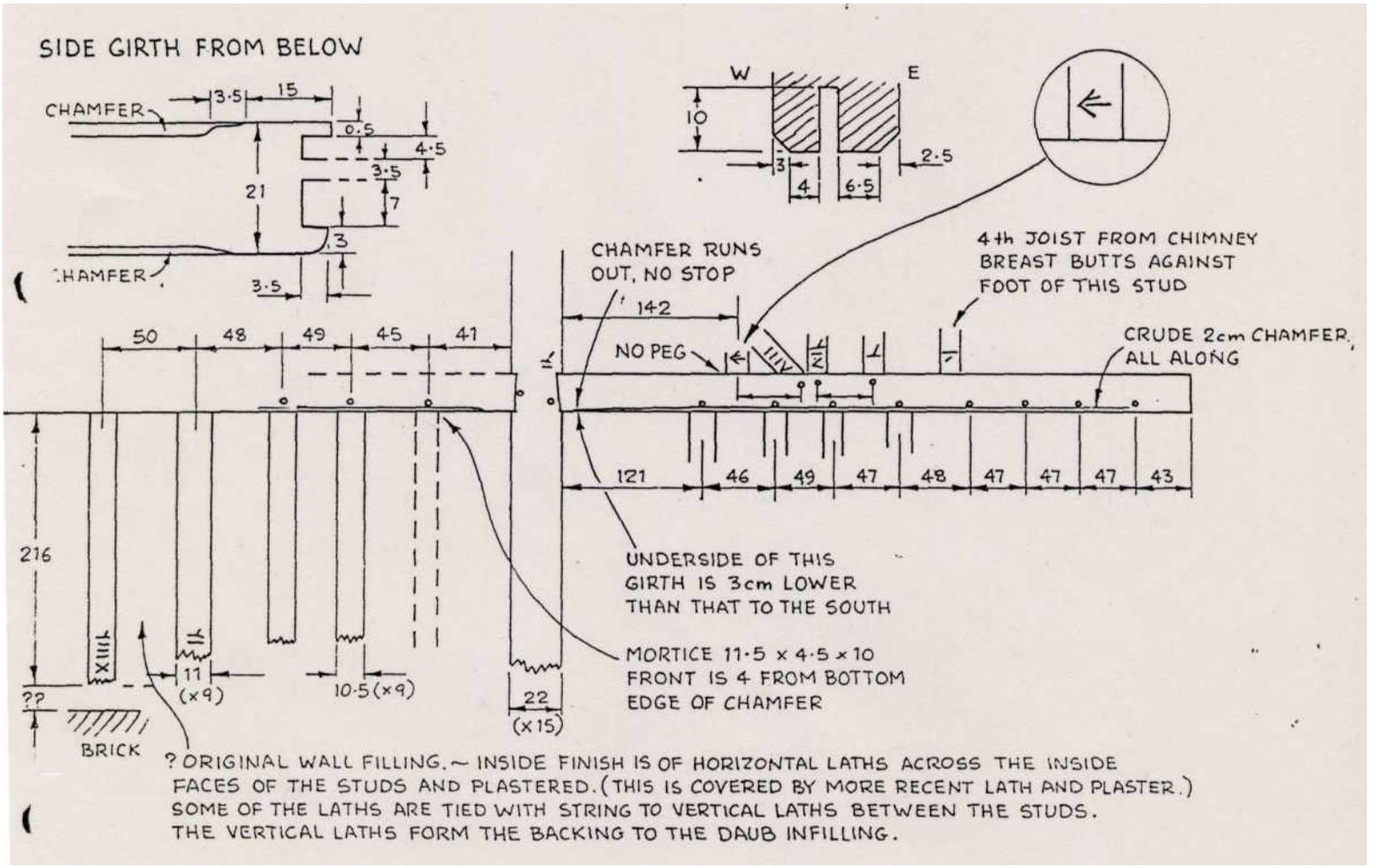


Fig 13.123. 93 High Street (5/79b): survey.

GROUND FLOOR : CHIMNEY STACK, EAST FACE

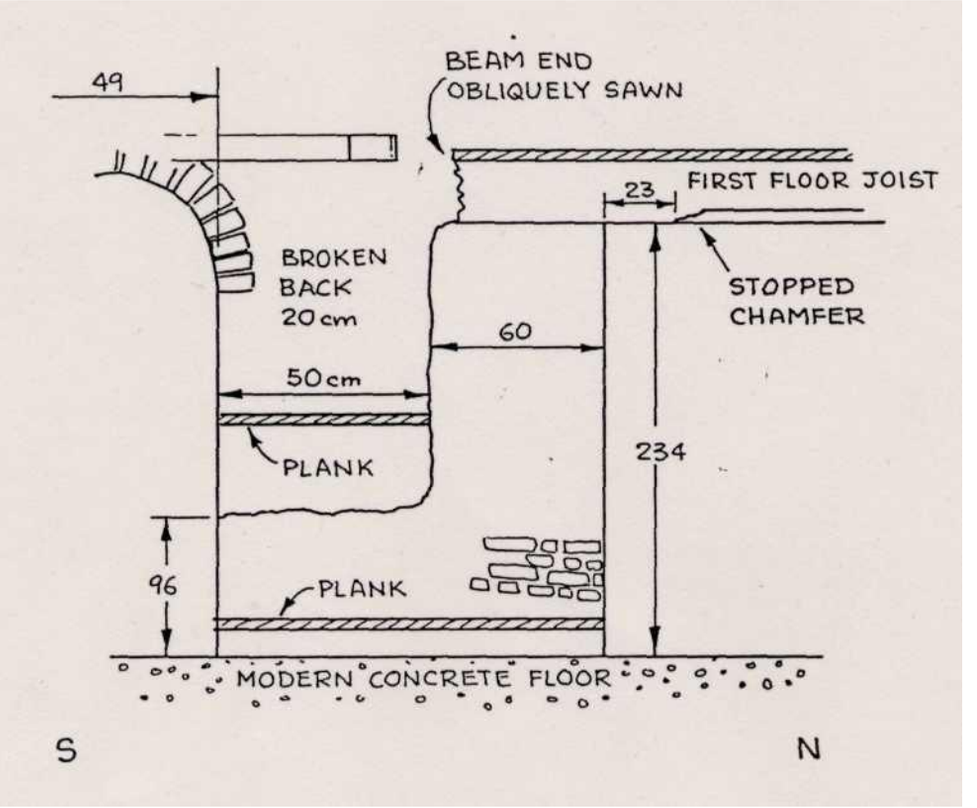


Fig 13.124. 93 High Street (5/79b): survey.

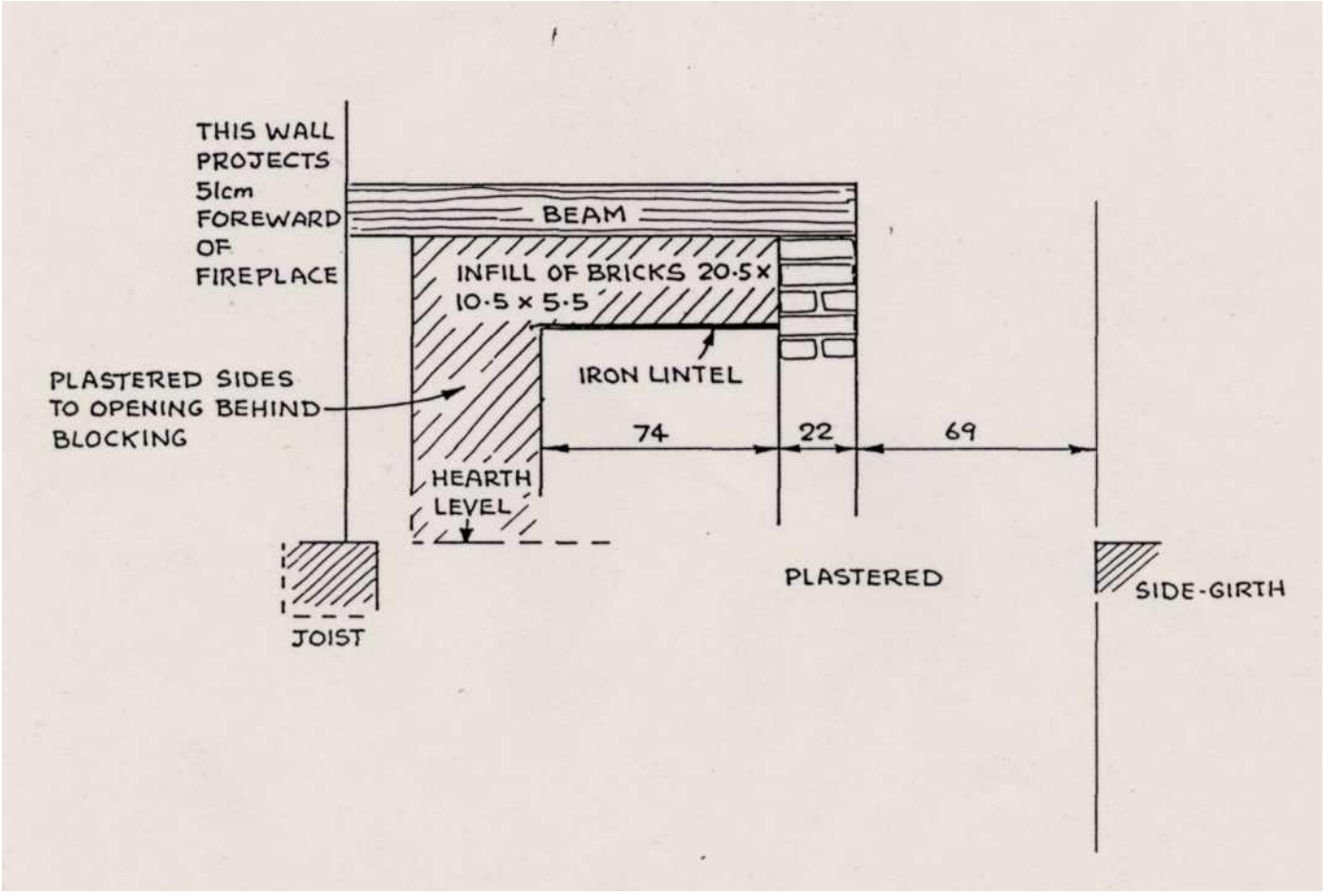


Fig 13.125. 93 High Street (5/79b): survey.

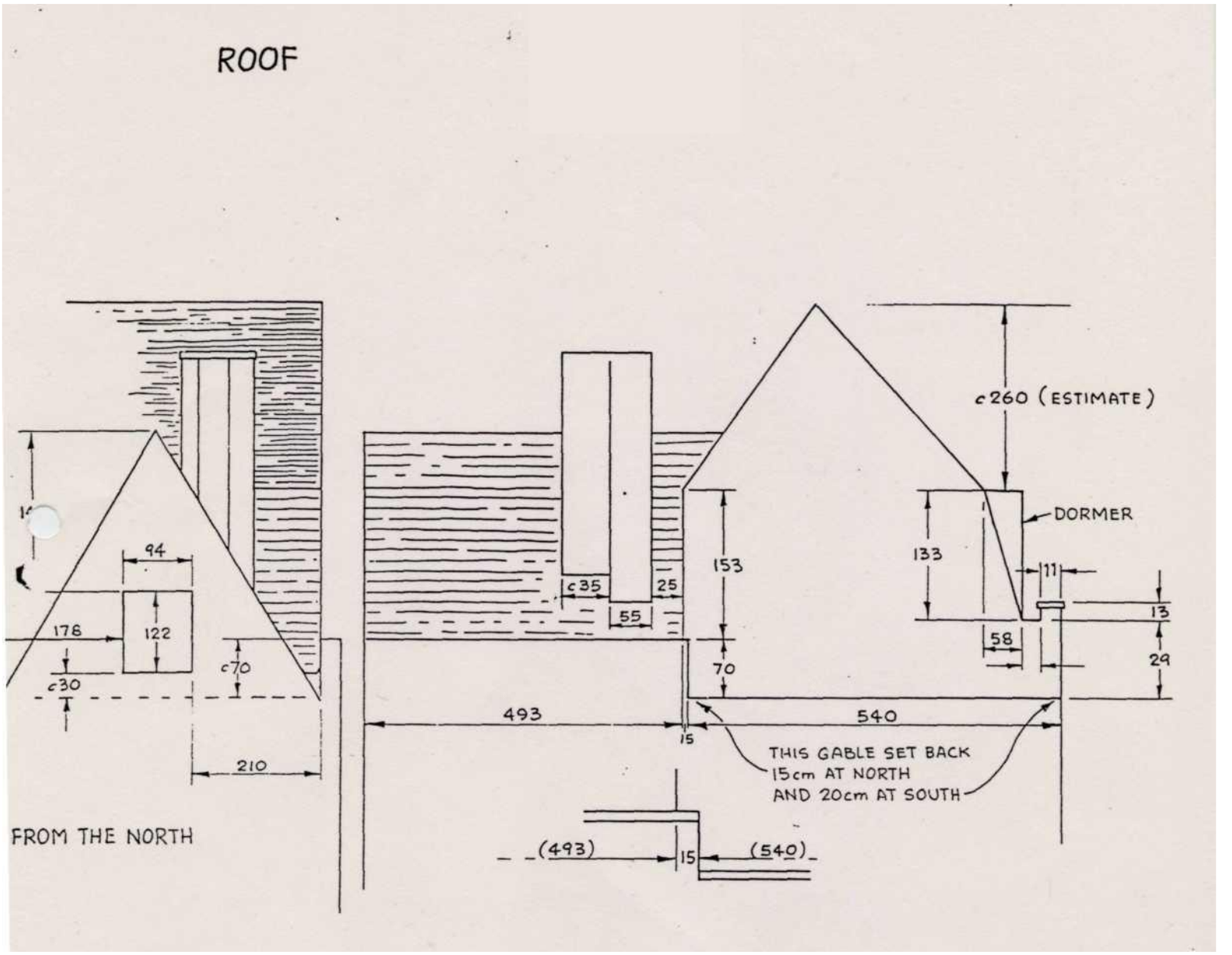


Fig 13.126. 93 High Street (5/79b): survey.

5/79c

Maldon Road

Fig 13.127

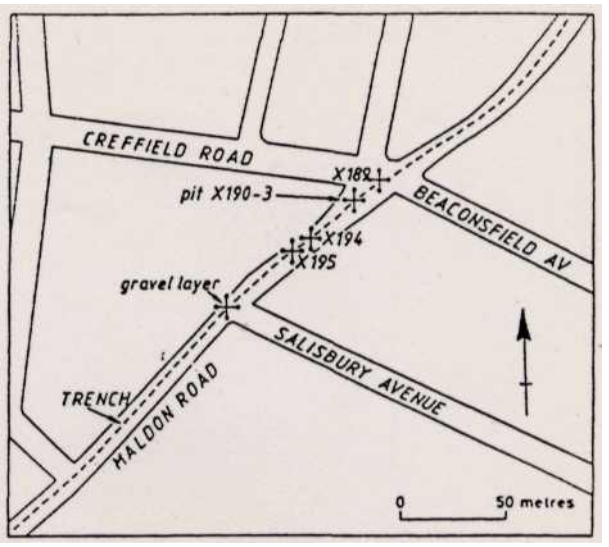
14.5.1979 to 24.7.1979

Reason: a pipe trench was being laid along Maldon Road

Record/report: NS & HB & BW/PC

Photographs: Misc Sites 1,90-1

Various Roman finds (X189-95) were recovered from the trench. Nothing was of significance apart from a human tibia (X192) found near the junction of Maldon Road with Beaconsfield Avenue. The bone presumably derived from an inhumation. It was found within a few metres of a small pit or ditch, apparently of Roman date. The other feature of possible archaeological value was a layer of gravel opposite Salisbury Avenue. It Was about 0.3 m thick and its surface lay 1.3 m below the modern ground level. The gravel appeared to be a little too fine for Roman street metalling.



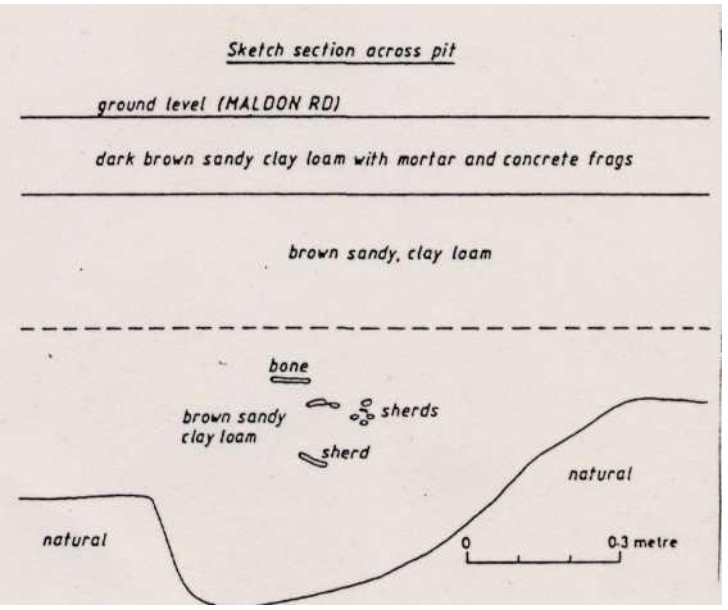


Fig 13.127. Maldon Road (5/79c).

5/79d

Essex County Hospital, Lexden Road

Fig 13.128

May 1979

Reason: enlargement of the car parking area next to the north-east corner of the north-west wing

Record/report: JH/PC & CC

Photographs: Misc Sites 1, 92

A section through some thin Roman deposits was noted. The section was roughly 1.0 m higher than the adjacent pavement. The sequence was as follows:

1. Modem featureless post-Roman overburden (1.4 m thick)
2. Very thin layer of compact gravel (a yard?) sealed by rubble and building debris (all Roman)
3. Very clean reddish brown loam (natural or make-up for gravel)

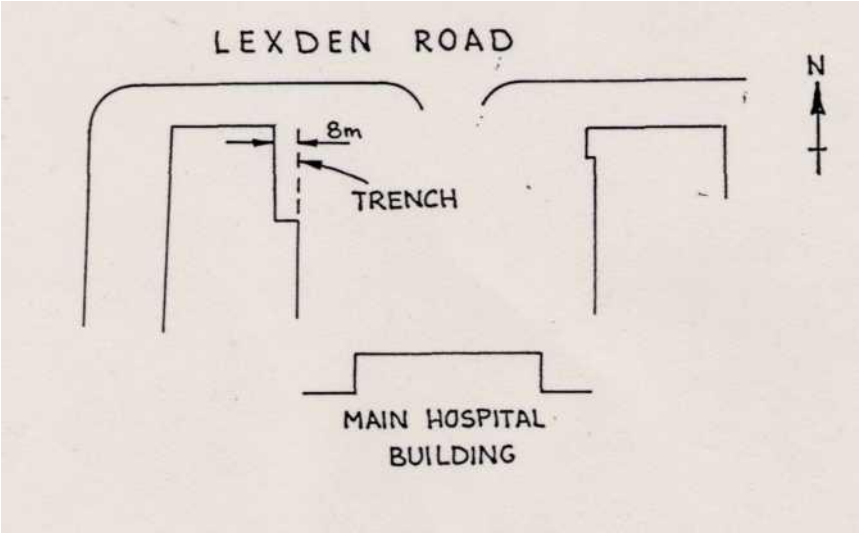


Fig 13.128. Essex County Hospital (5/79d).

6/79a

2& 3 St Nicholas Passage
Fig 13.129
7.6.1979 to 3.7.1979
Reason: erection of new shops
Record/report: HB & NS/PC

A strip trench for a foundation was dug around all four sides of the site. The rest of the site was lowered by about 0.5 m. The trench was about 2.5 m deep and was cut through dark soil (fill of many pits?). Two holes were dujg in the centre of the site to a depth of 6 to 7 feet. Nothing of significance was observed in any of the contractor's excavations apart from a possible pre-Boudican daub wall, burnt in AD 60/1, a burnt surface of a ?pit nearby, and a foundation of flint — all at a depth of about 2 m.

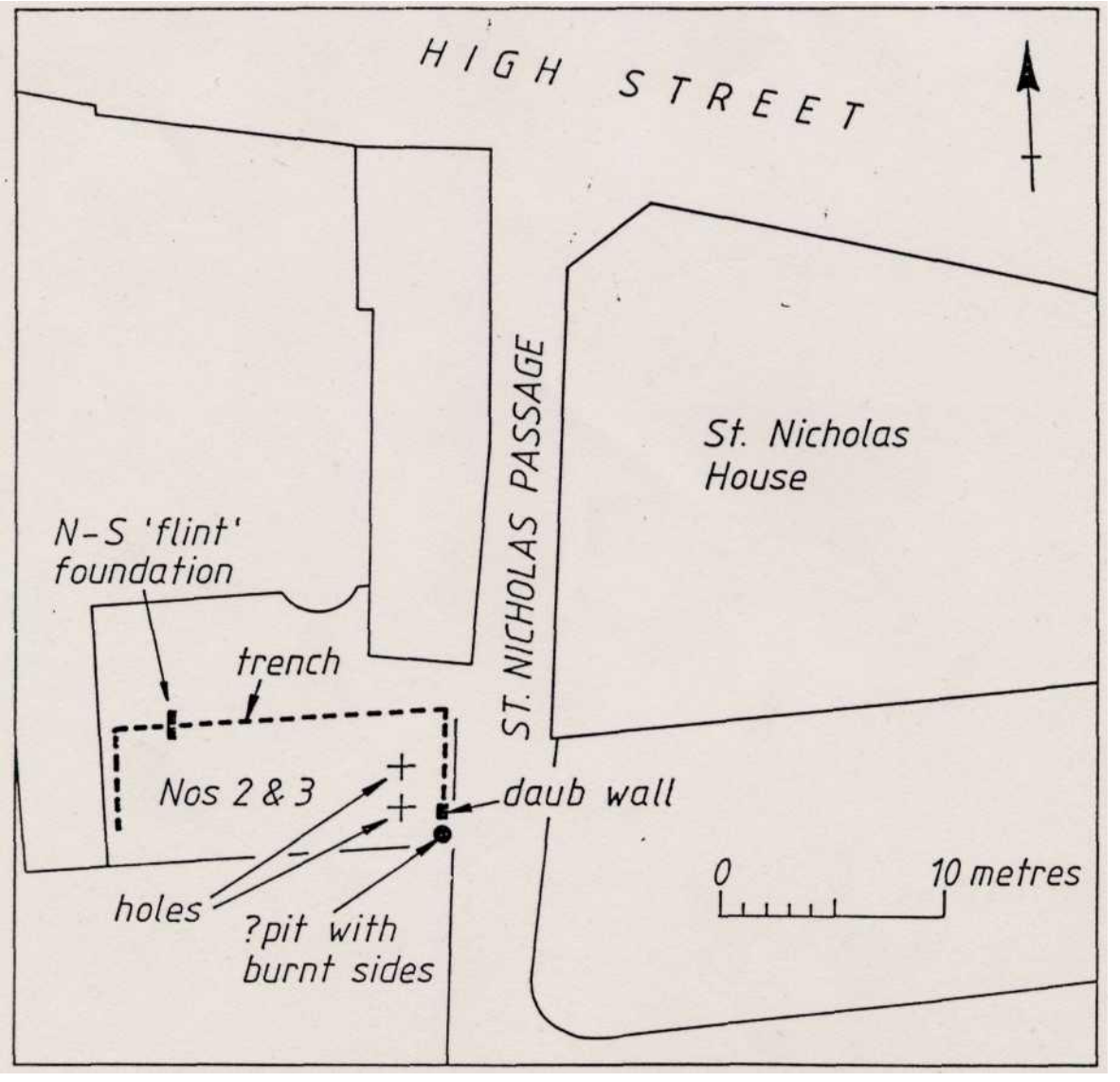


Fig 13.129. 2-3 St Nicholas Passage (6/79a).

6/79b

River Colne/Cowdray Avenue/Essex Hall Road

Fig 13.130 (p 366)

14.6.1979 to 25.4.1980

Reason: construction of northern extension of inner relief road from Middleborough roundabout to North Station Road

Record/report: HB & NS/PC

Photographs: Misc Sites 2, 183-91

The new road extends from the Middleborough roundabout to North Station Road. Its construction was observed at various points along its route, easily the most important being the part of the work linked to the diversion of the river Colne under the new road. Each section is described separately below. The part dealing with the diversion of the river is to be found in the printed element of this publication (pp 366-7)

Link road between the Middleborough and Cowdray Avenue roundabouts

The road was built on an artificial mound made partly from material stockpiled some years earlier from contractor's excavations at the Balkerne Lane site. This material contained many Roman objects and, when spread out along the course of the new road, was a favourite spot for metal detector enthusiasts.

Although built over part of the scheduled area including Temple 2 under the Institute of Higher Education, none of the contractor's trenches penetrated the original gravel surface so that the *in situ* remains were left undisturbed.

The excavation of the old river channel

The old channel was dug out by machine and backfilled with gravel. Nothing was observed in it and nothing was seen in the spoil.

Area south of Essex Hall Road

The area south of Essex Hall Road, where the new road is to link up with North Station Road, was lowered by machine over an area 50 x 25 metres. The lowest point reached is 1.3 m below modern ground level. No archaeological features were revealed.

House on corner of Essex Hall Road and North Station Road

The site was inspected after demolition of house. No useful trenches open. Negative.

6/79C

6 & 6b Sir Isaac's Walk

Figs 13.131-158

June 1979

Reason: restoration and alteration to existing building

Record/report: NS/PC

Photographs: Misc Sites 2, 133-79

The building consists of five blocks ranged alongside Sir Isaac's Walk. The eastern block has no ground floor because it was build over Sheregate Steps. The Roman wall lies along the rear of all the blocks. Only one block has an attic (above Room G) and one a cellar (below Room B).

Structurally the building is of complex form and development. NS made an extensive series of sketch plans and elevations of the timbers exposed during the works. The information thus gained is probably sufficient to produce a series of comprehensive plans showing the complete phase history.

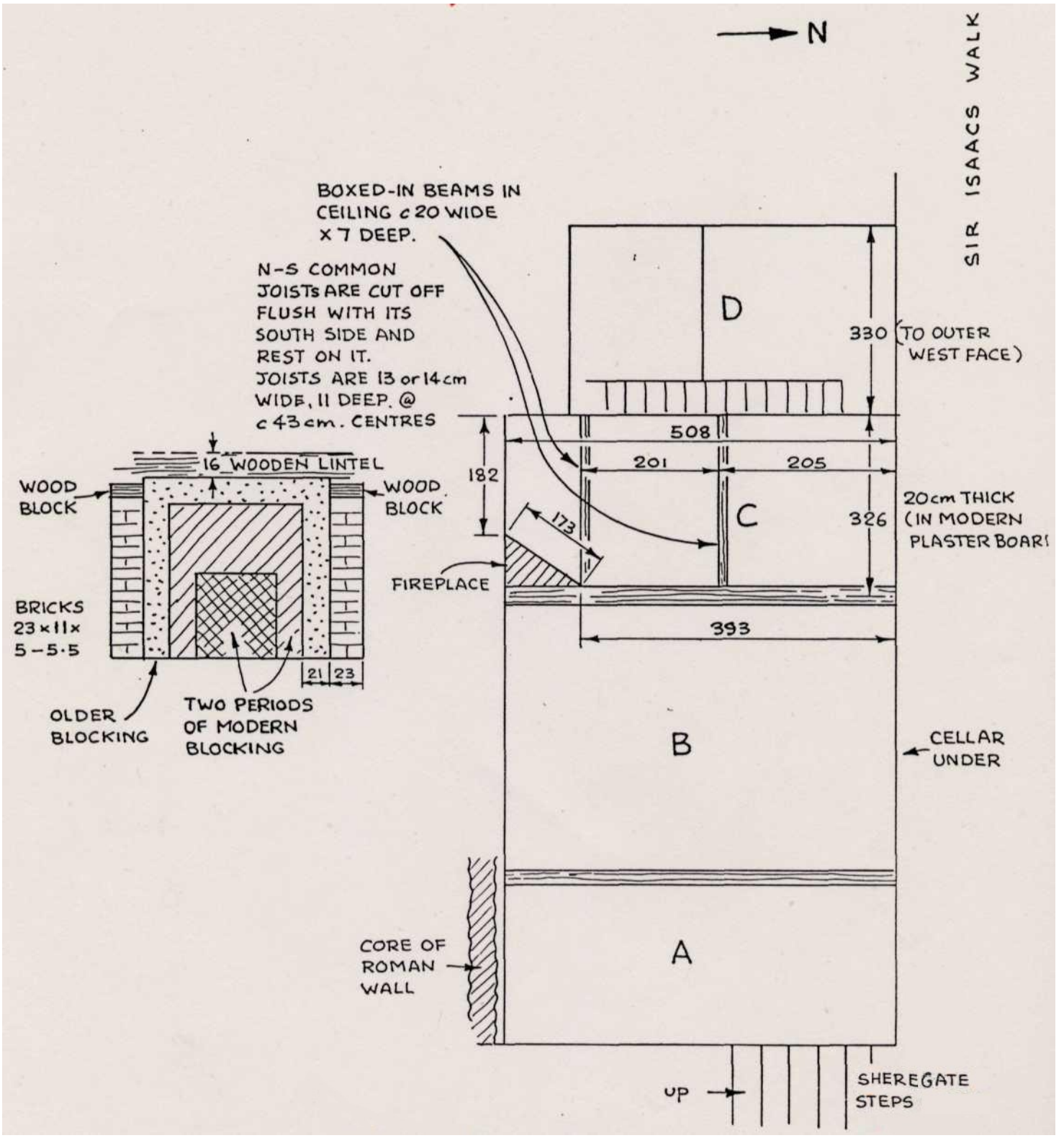


Fig 13.131. 6A and 6B Sir Isaac's Walk (6/79c): survey.

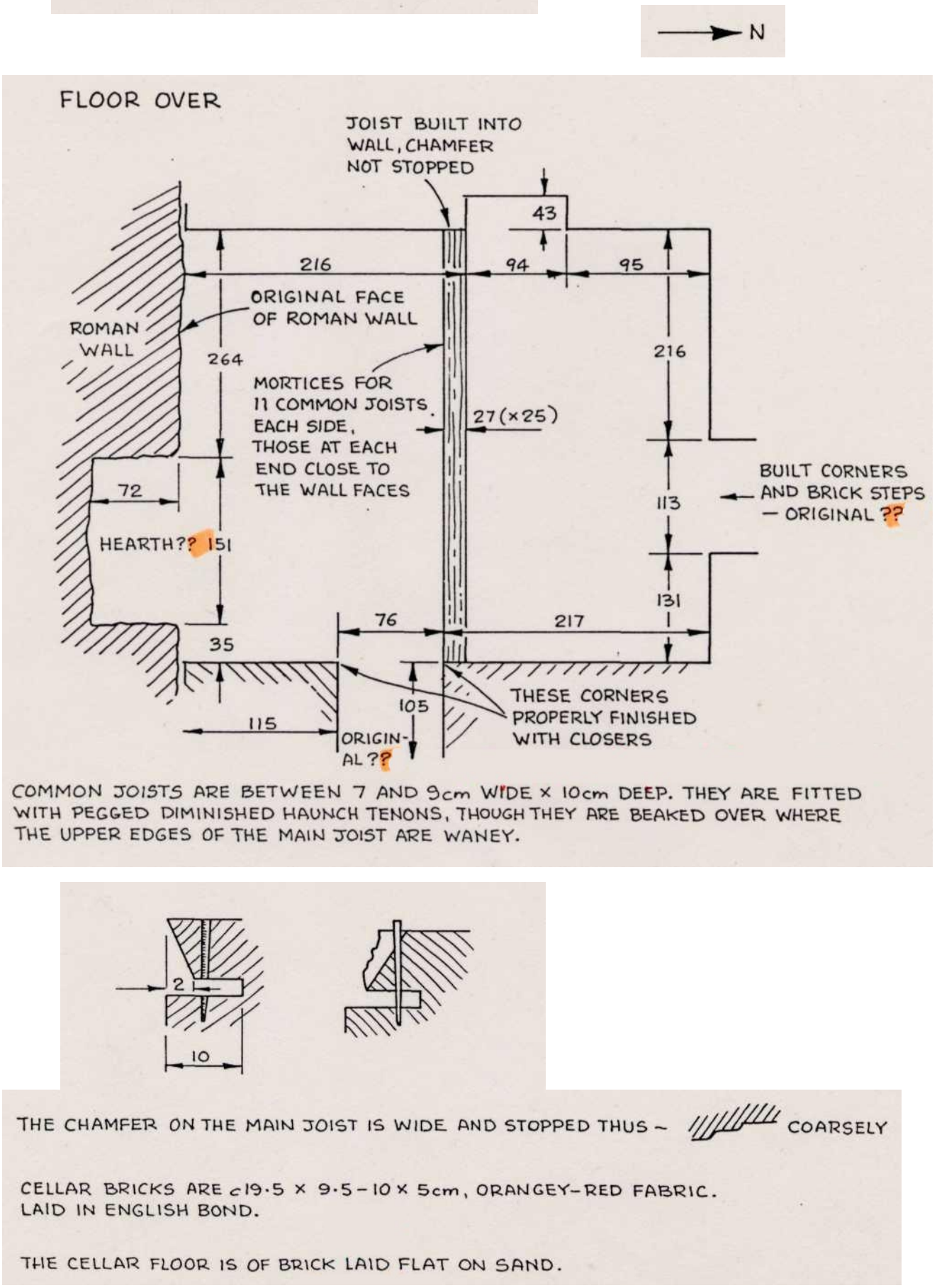


Fig 13.132. 6A and 6B Sir Isaac's Walk (6/79c): survey.

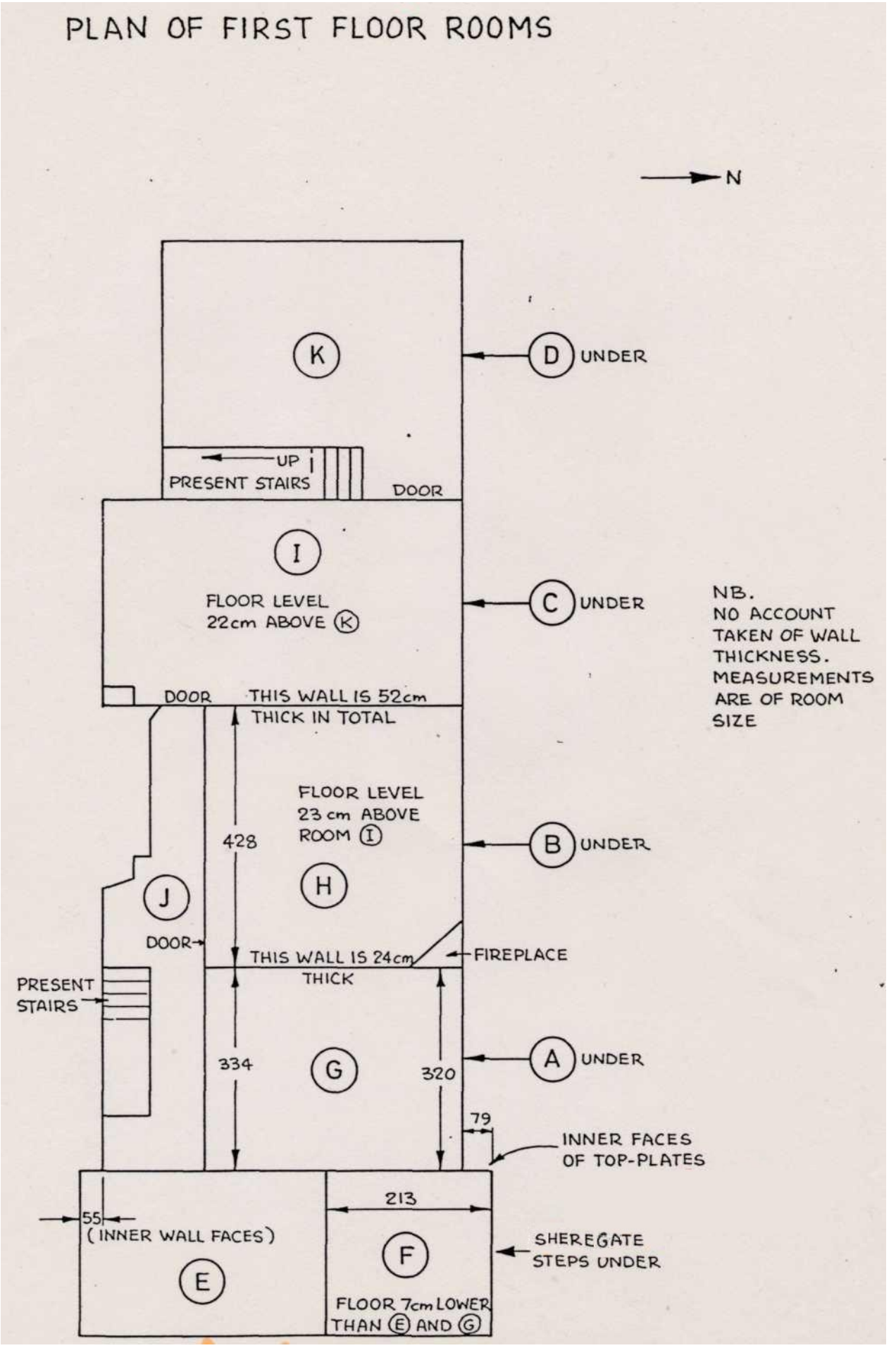


Fig 13.133. 6A and 6B Sir Isaac's Walk (6/79c): survey.

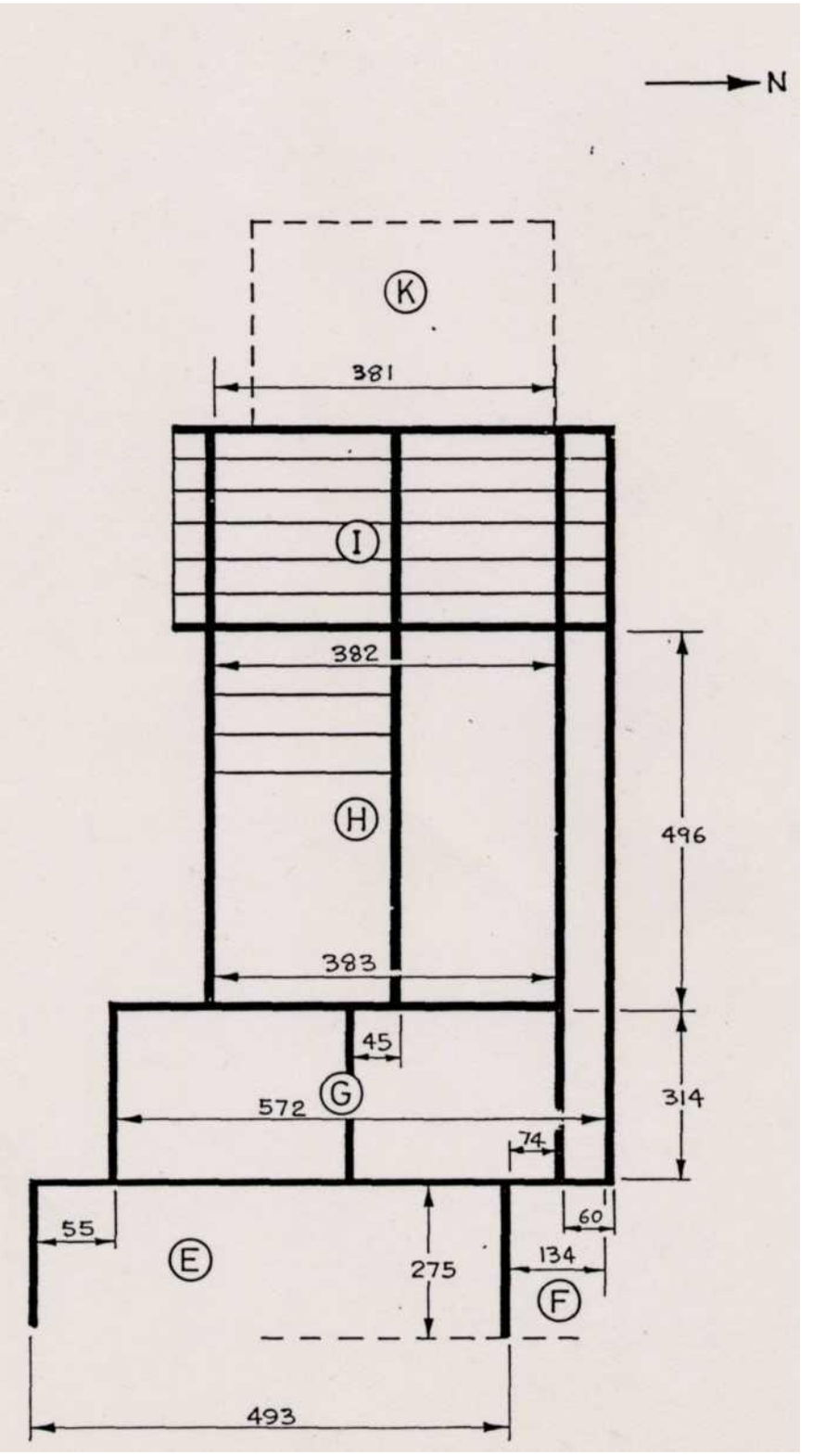


Fig 13.134. 6A and 6B Sir Isaac's Walk (6/79c): survey.

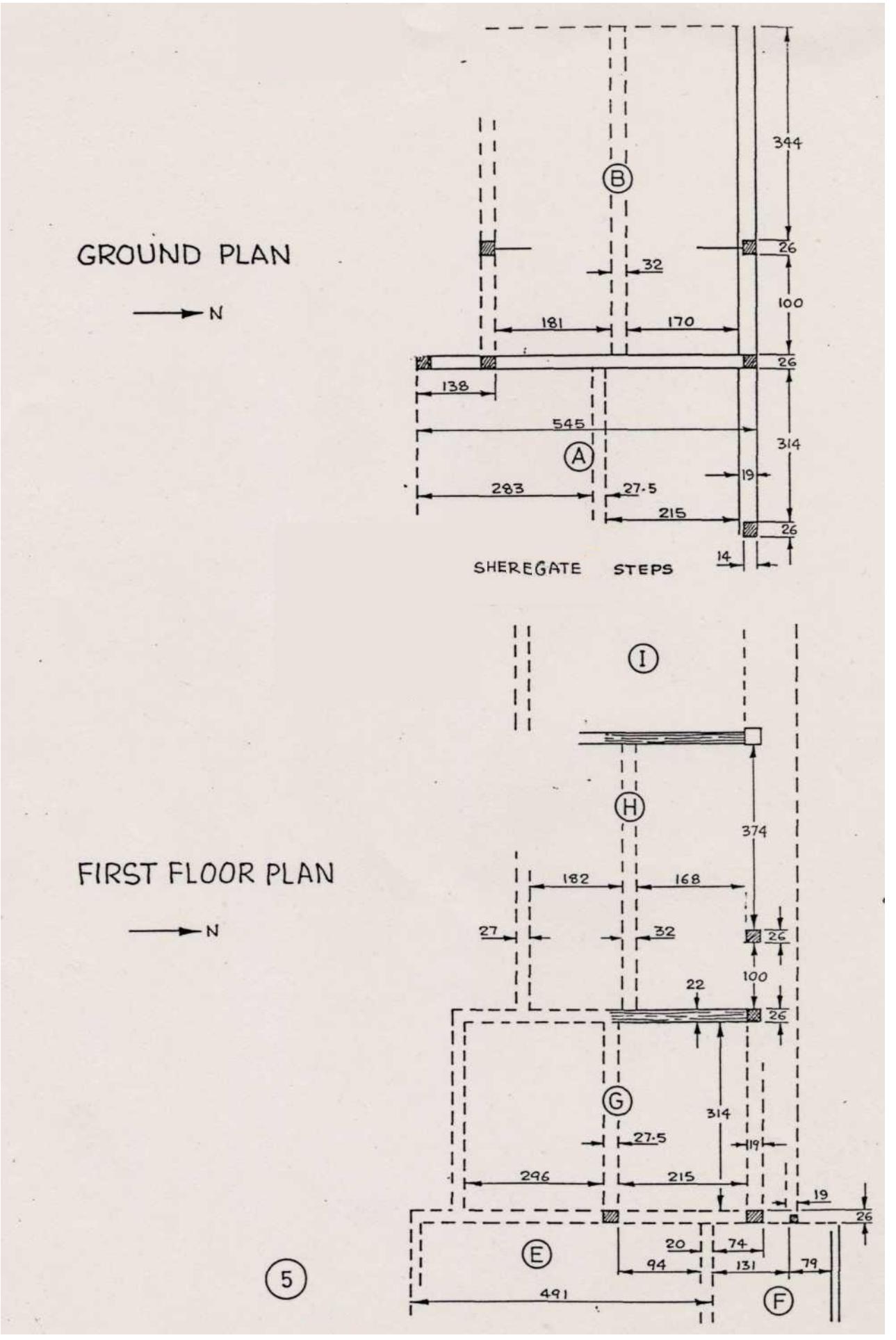
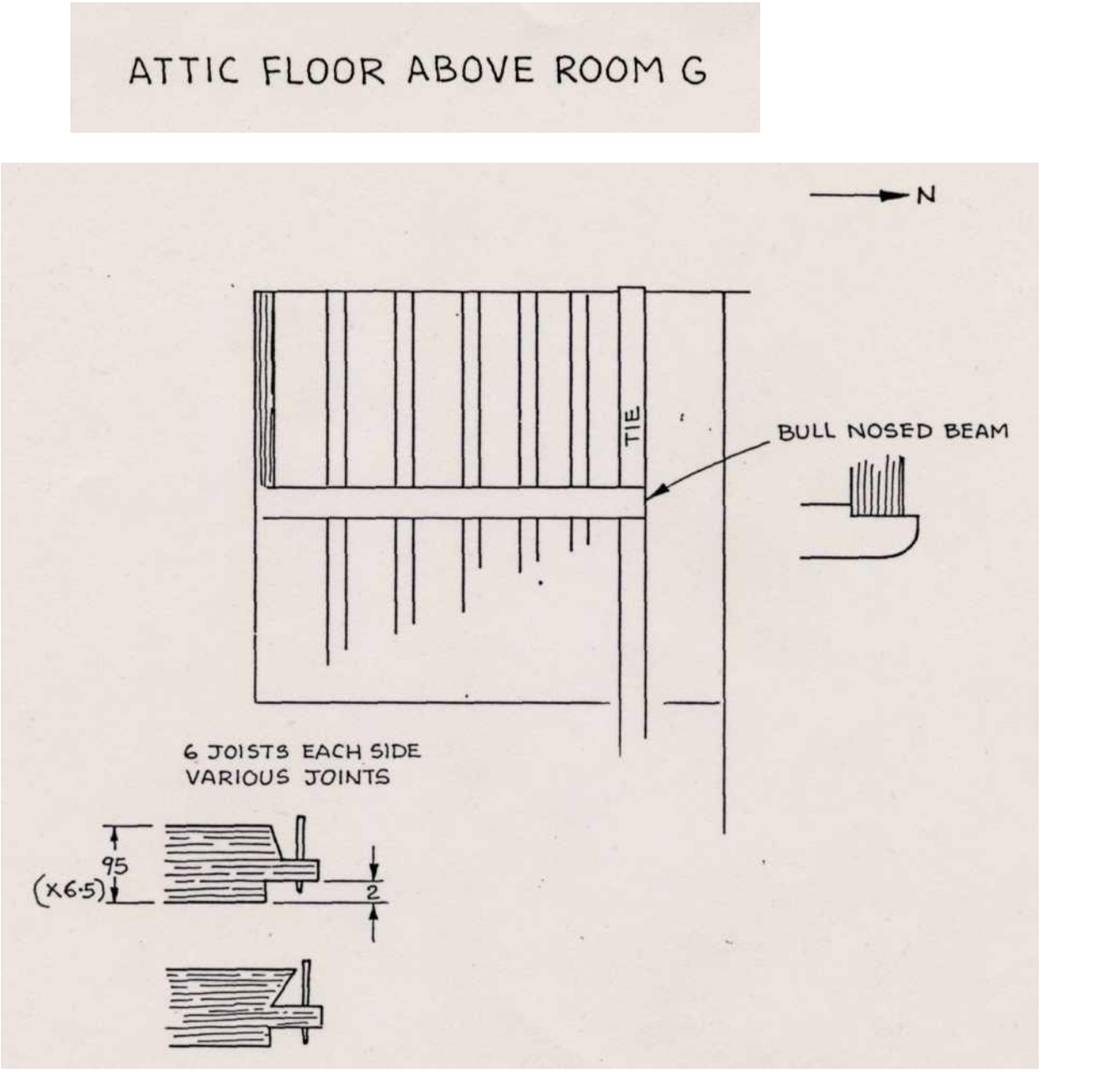


Fig 13.135. 6A and 6B Sir Isaac's Walk (6/79c): survey.



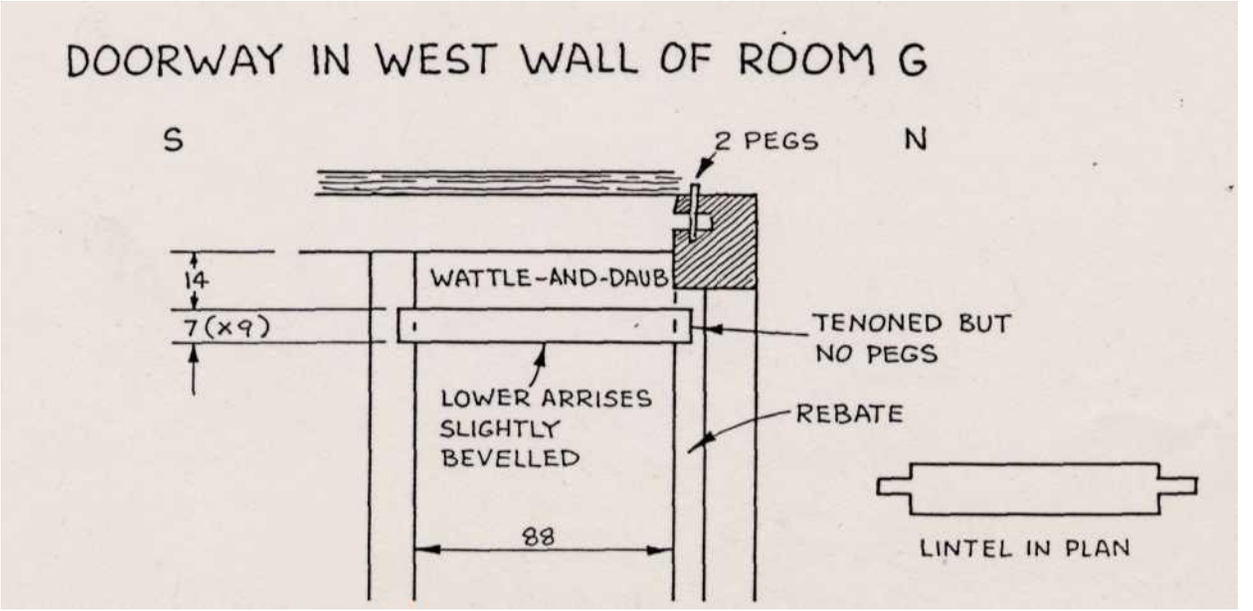


Fig 13.136. 6A and 6B Sir Isaac's Walk (6/79c): survey.

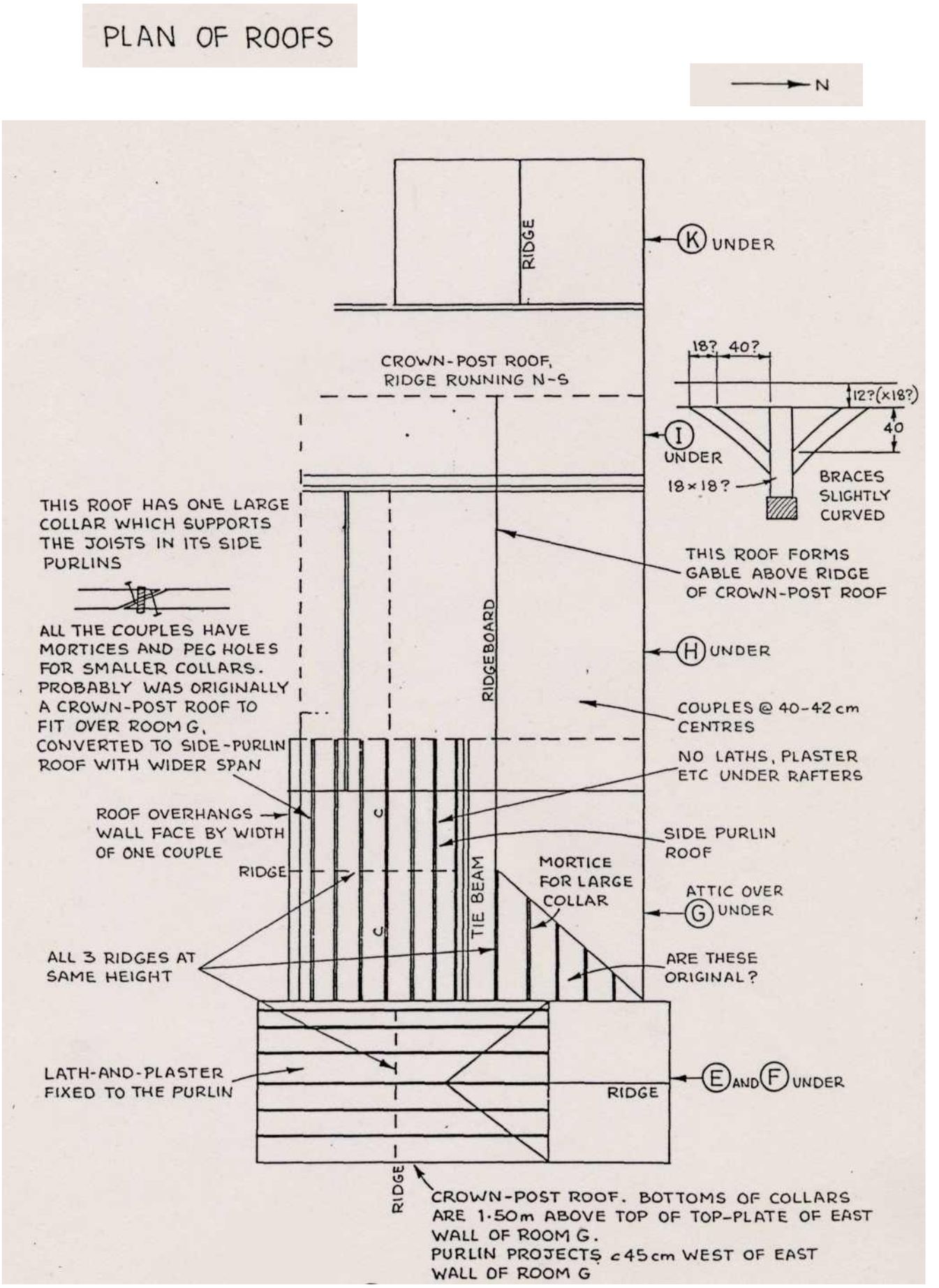


Fig 13.137. 6A and 6B Sir Isaac's Walk (6/79c): survey.

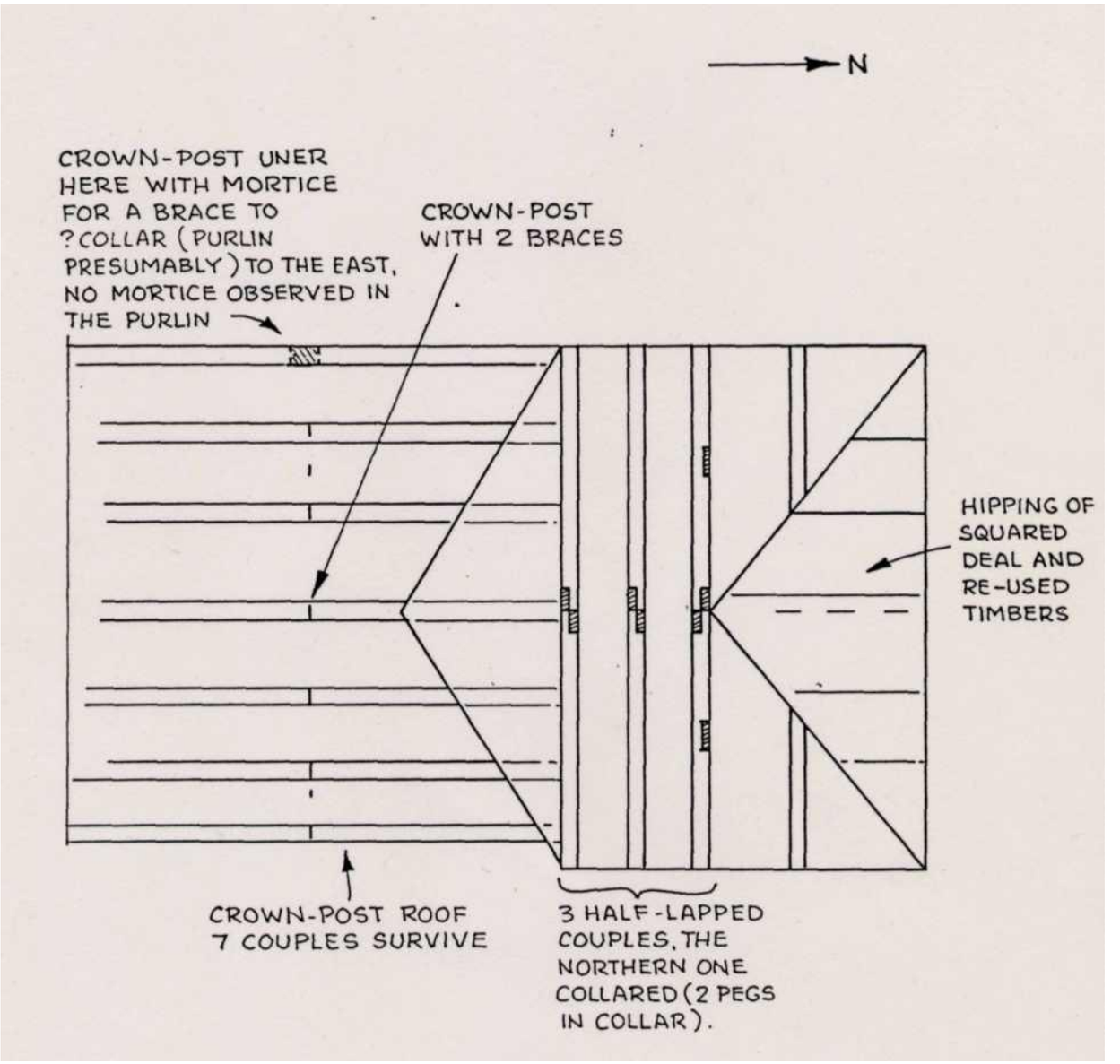


Fig 13.138. 6A and 6B Sir Isaac's Walk (6/79c): survey.

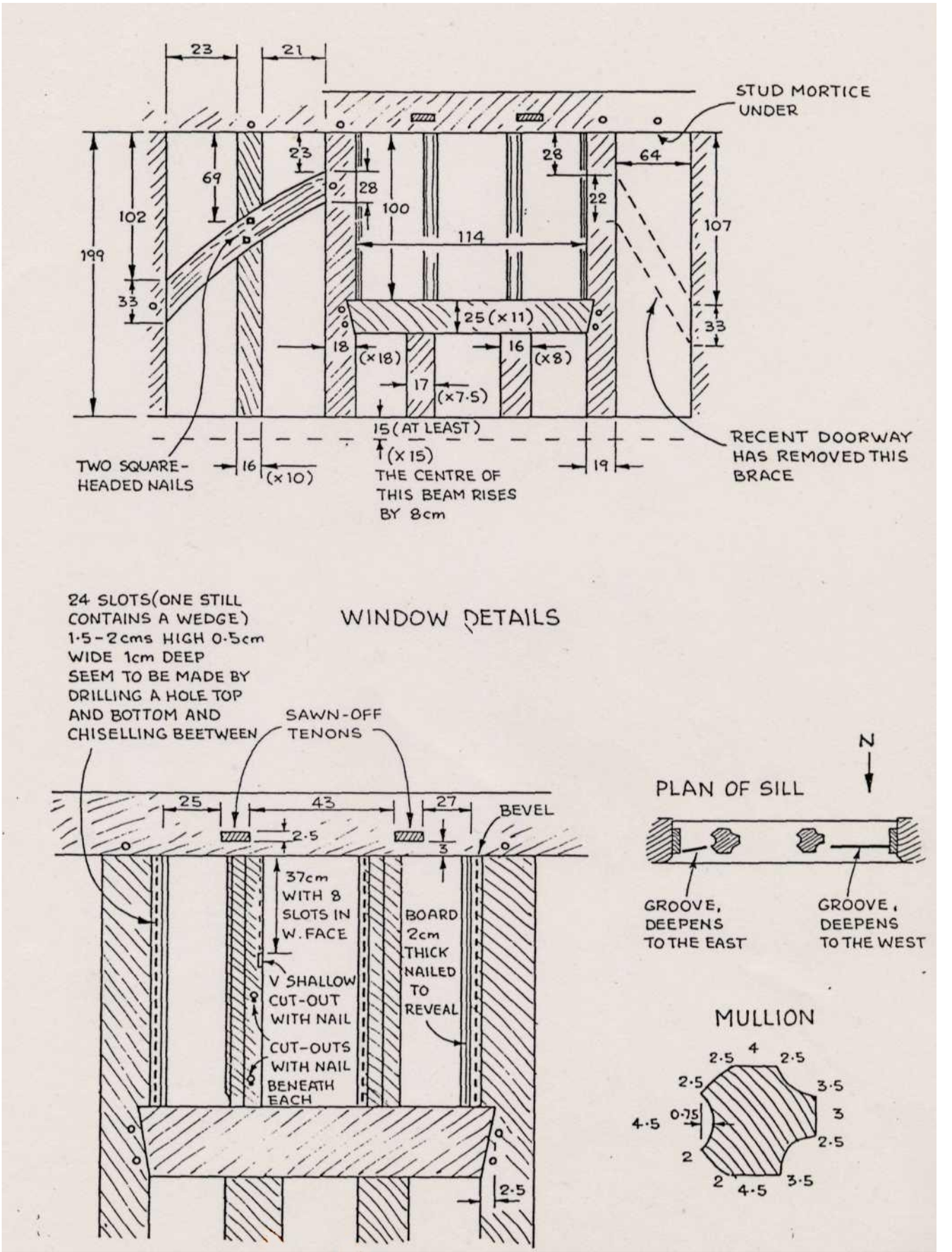


Fig 13.139. 6A and 6B Sir Isaac's Walk (6/79c): survey.

GROUND FLOOR : WEST WALL IN ROOM (A)
FROM THE EAST

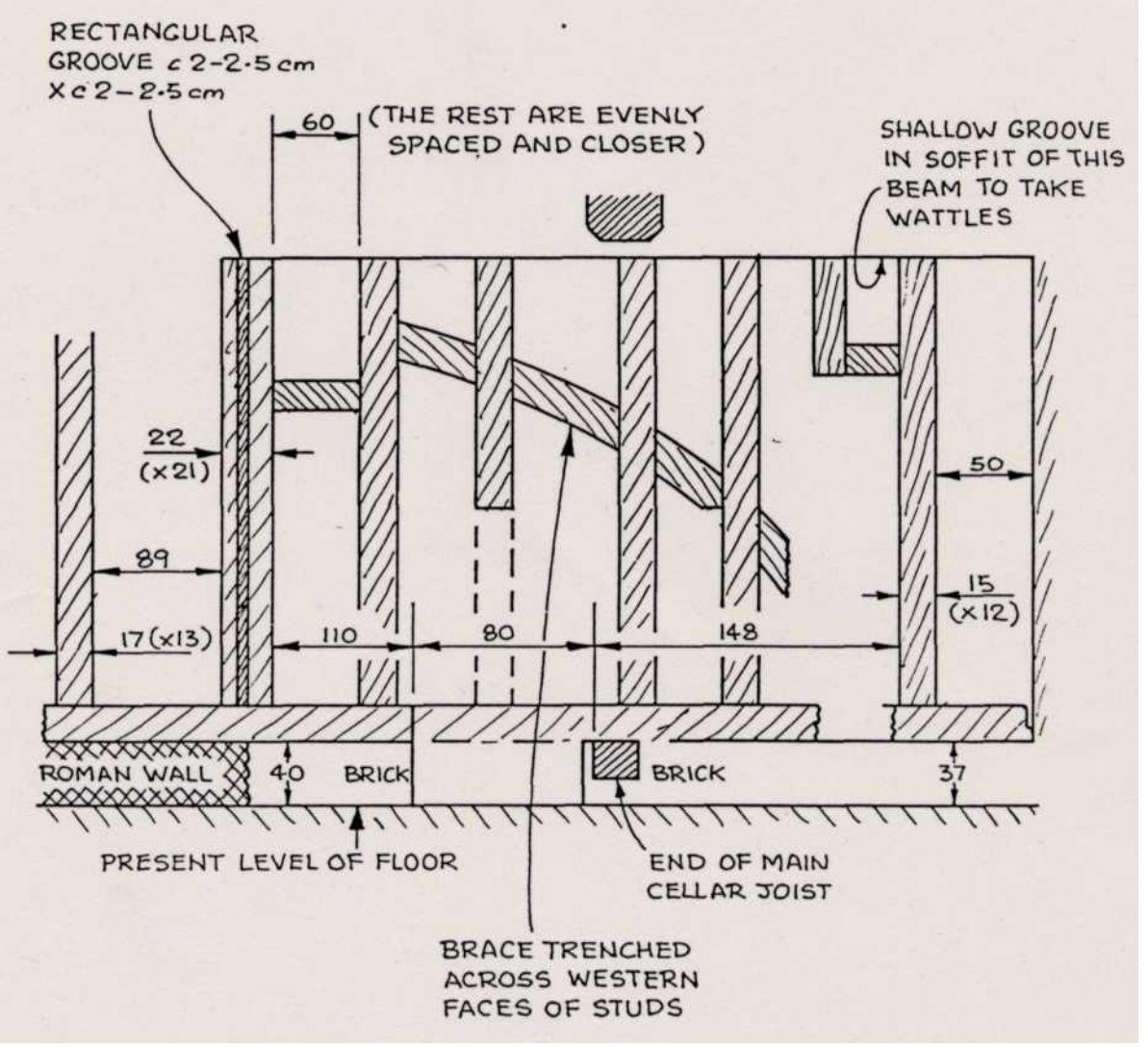


Fig 13.140. 6A and 6B Sir Isaac's Walk (6/79c):"survey.

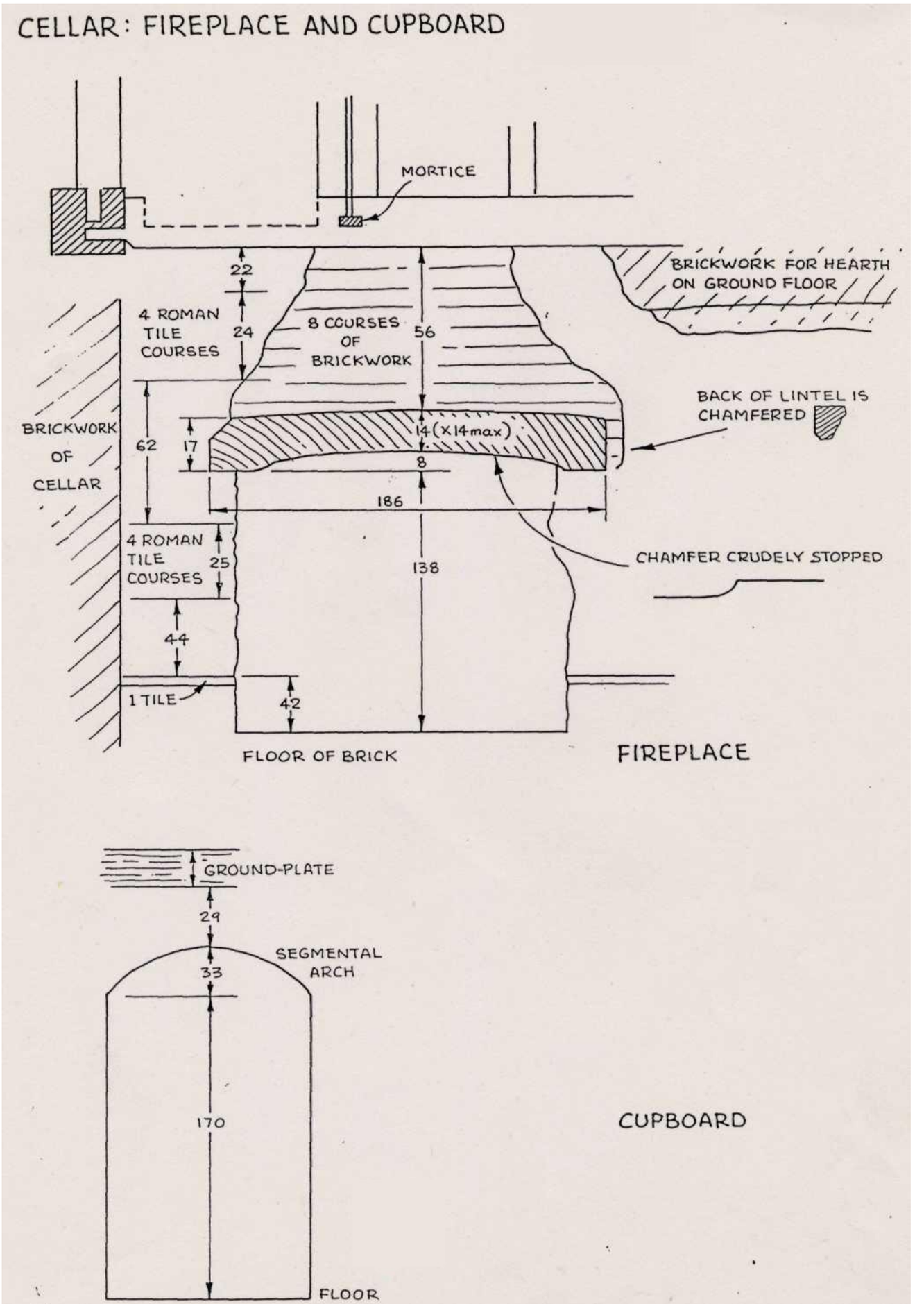


Fig 13.141. 6A and 6B Sir Isaac's Walk (6/79c): survey.

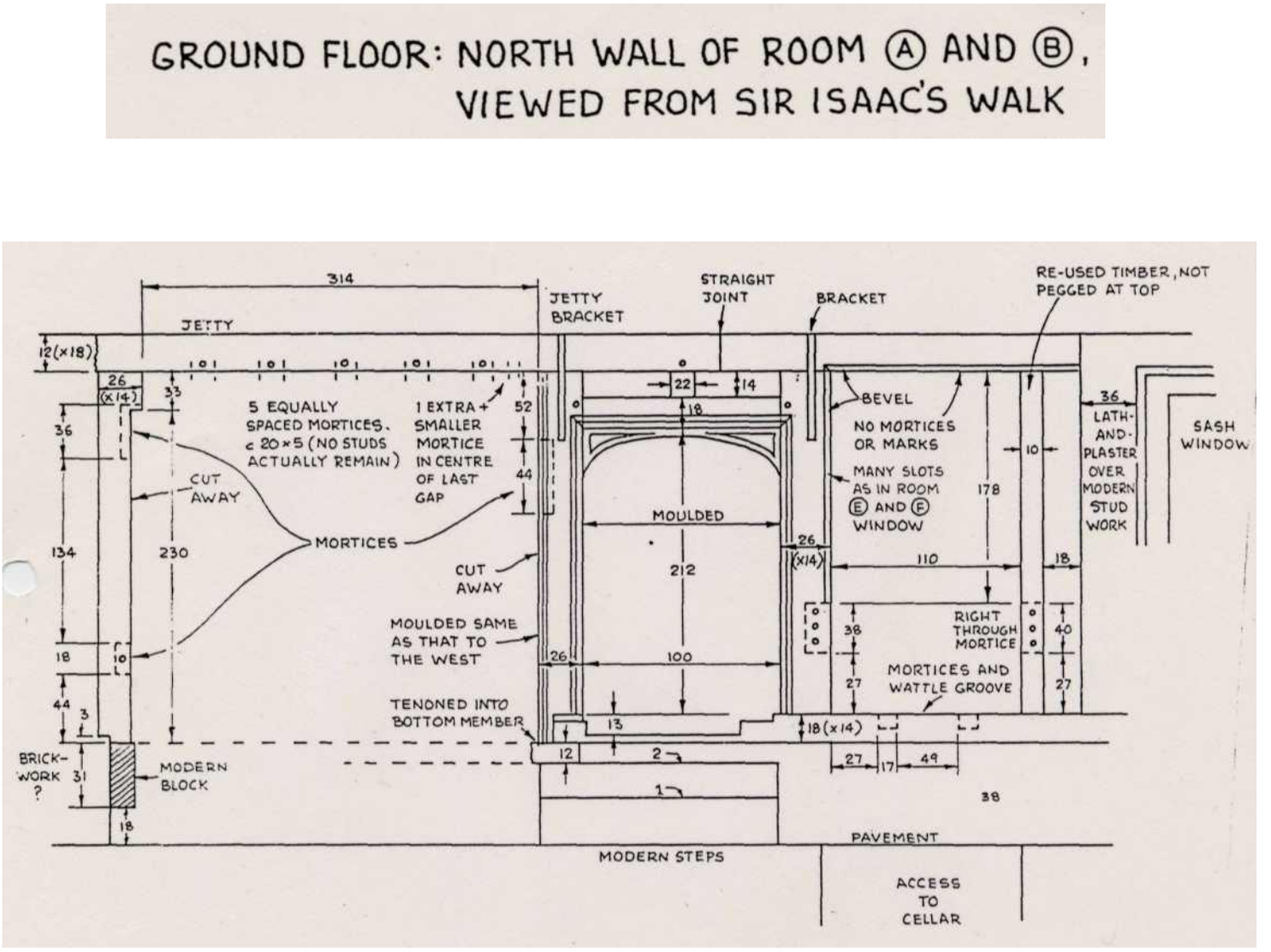


Fig 13.142. 6A and 6B Sir Isaac's Walk (6/79c): survey.

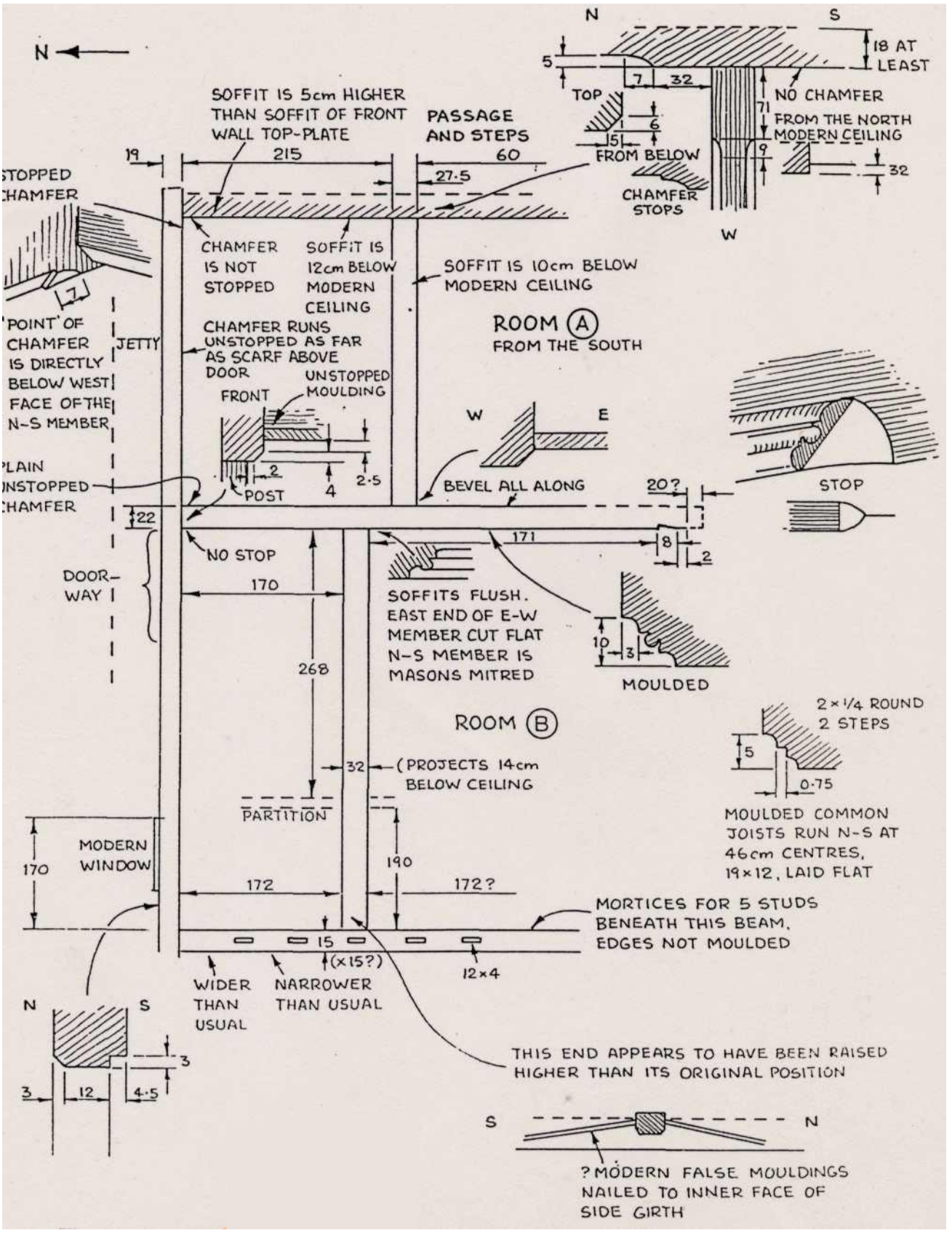


Fig 13.143. 6A and 6B Sir Isaac's Walk (6/79c): survey.

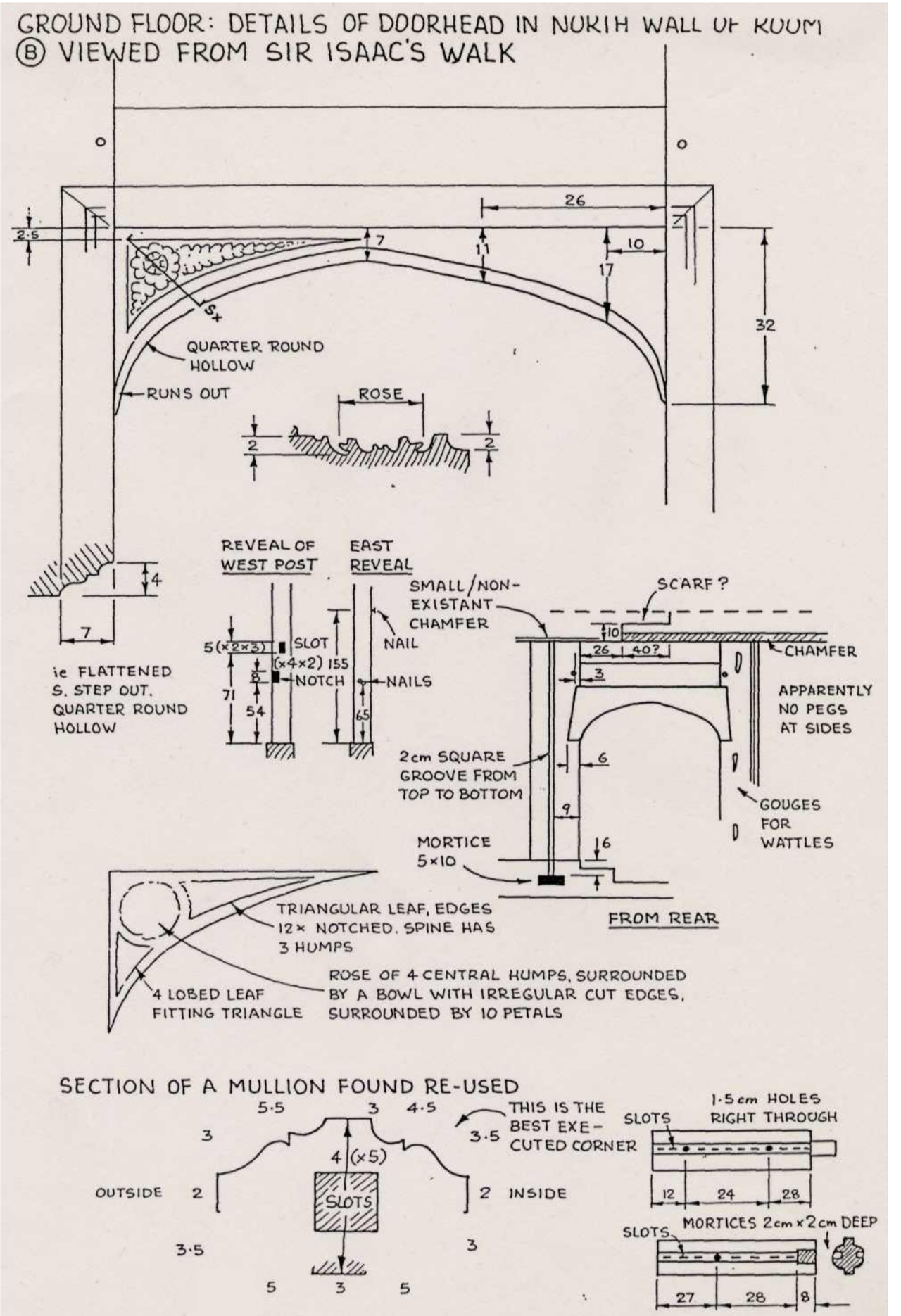


Fig 13.144. 6A and 6B Sir Isaac's Walk (6/79c): survey.

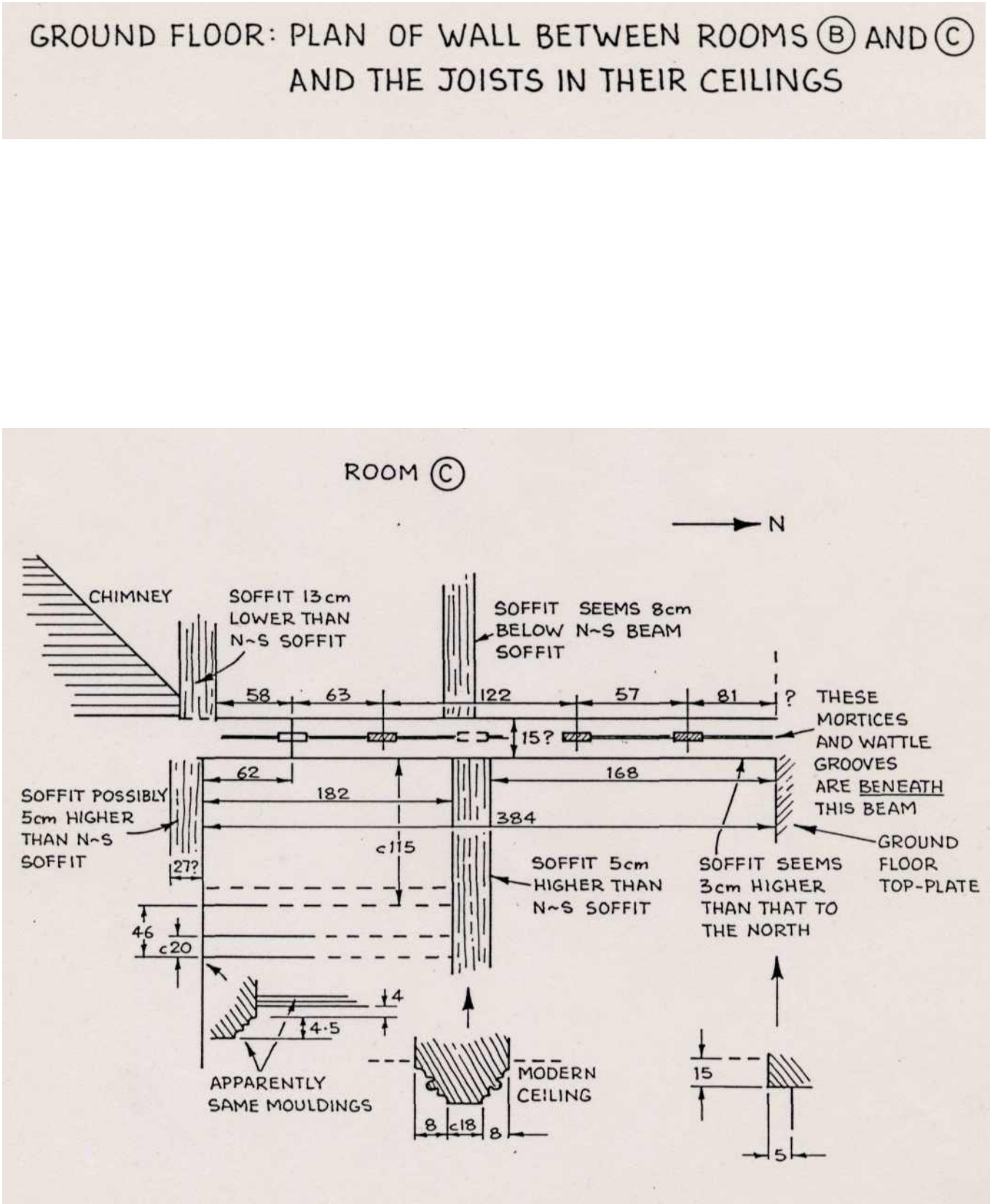


Fig 13.145. 6A and 6B Sir Isaac's Walk (6/79c): survey.

GROUND FLOOR: NORTH WALL OF ROOM © FROM SIR ISAAC'S WALK

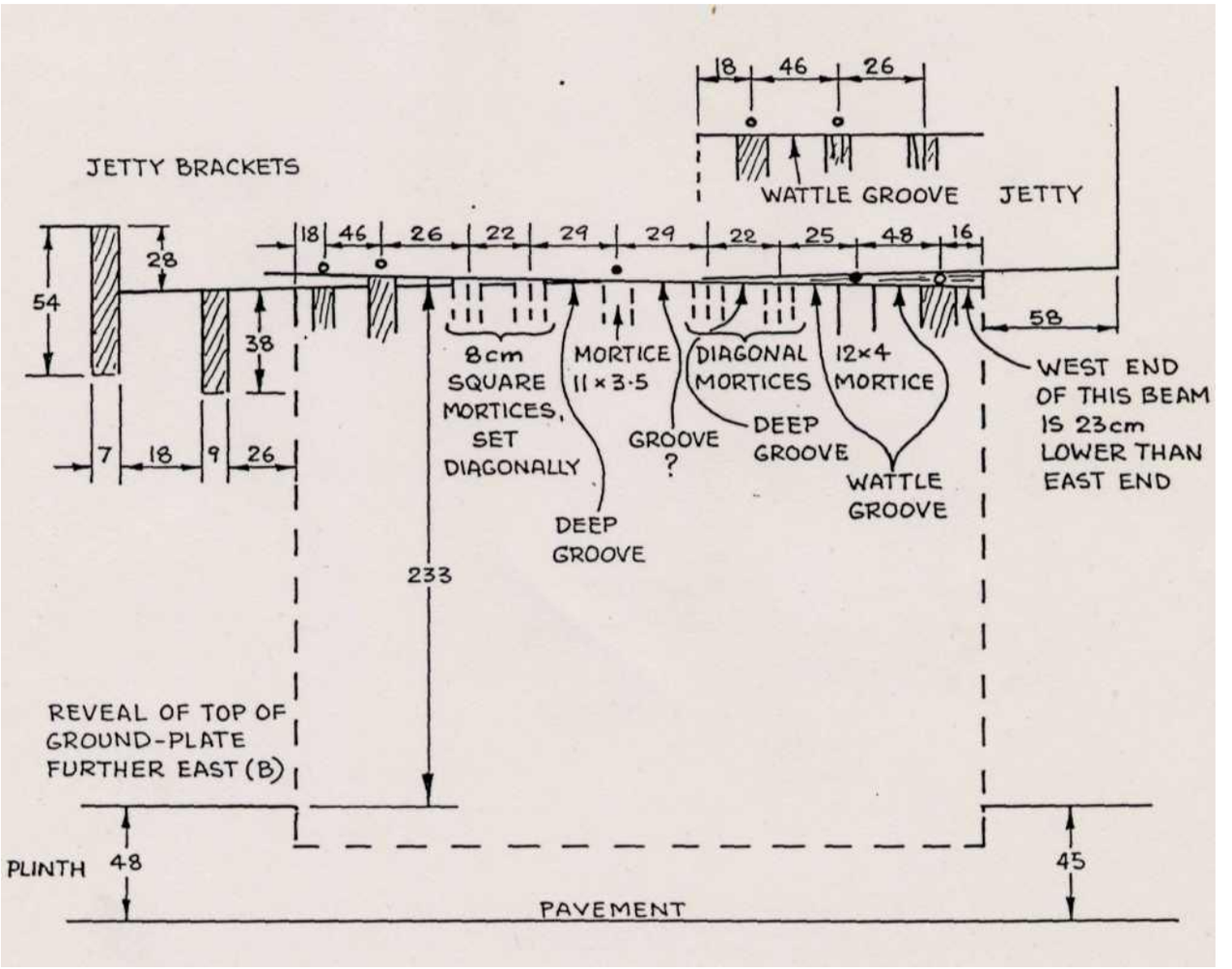


Fig 13.146. 6A and 6B Sir Isaac's Walk (6/79c): survey.

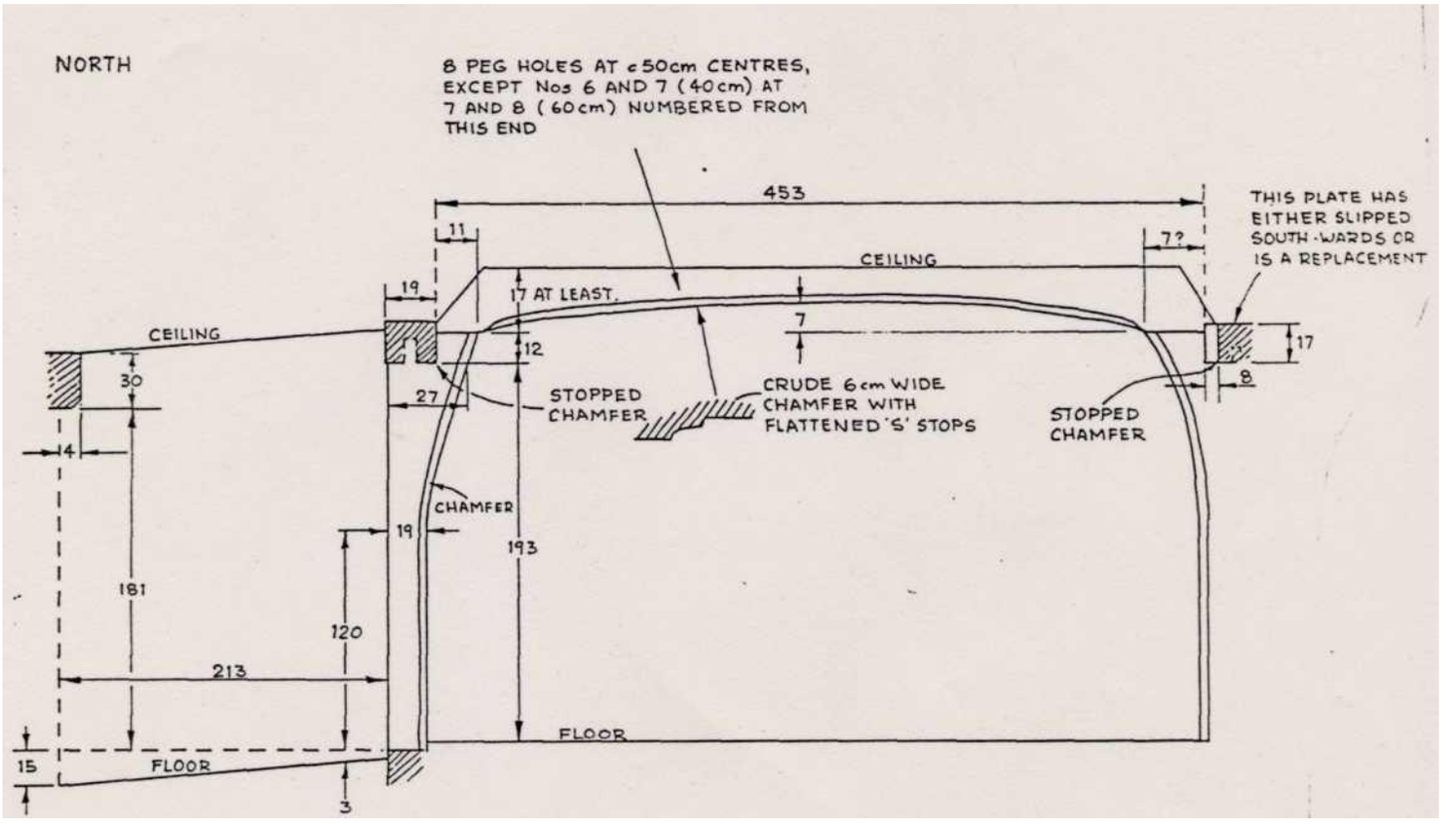


Fig 13.147. 6A and 6B Sir Isaac's Walk (6/79c): survey.

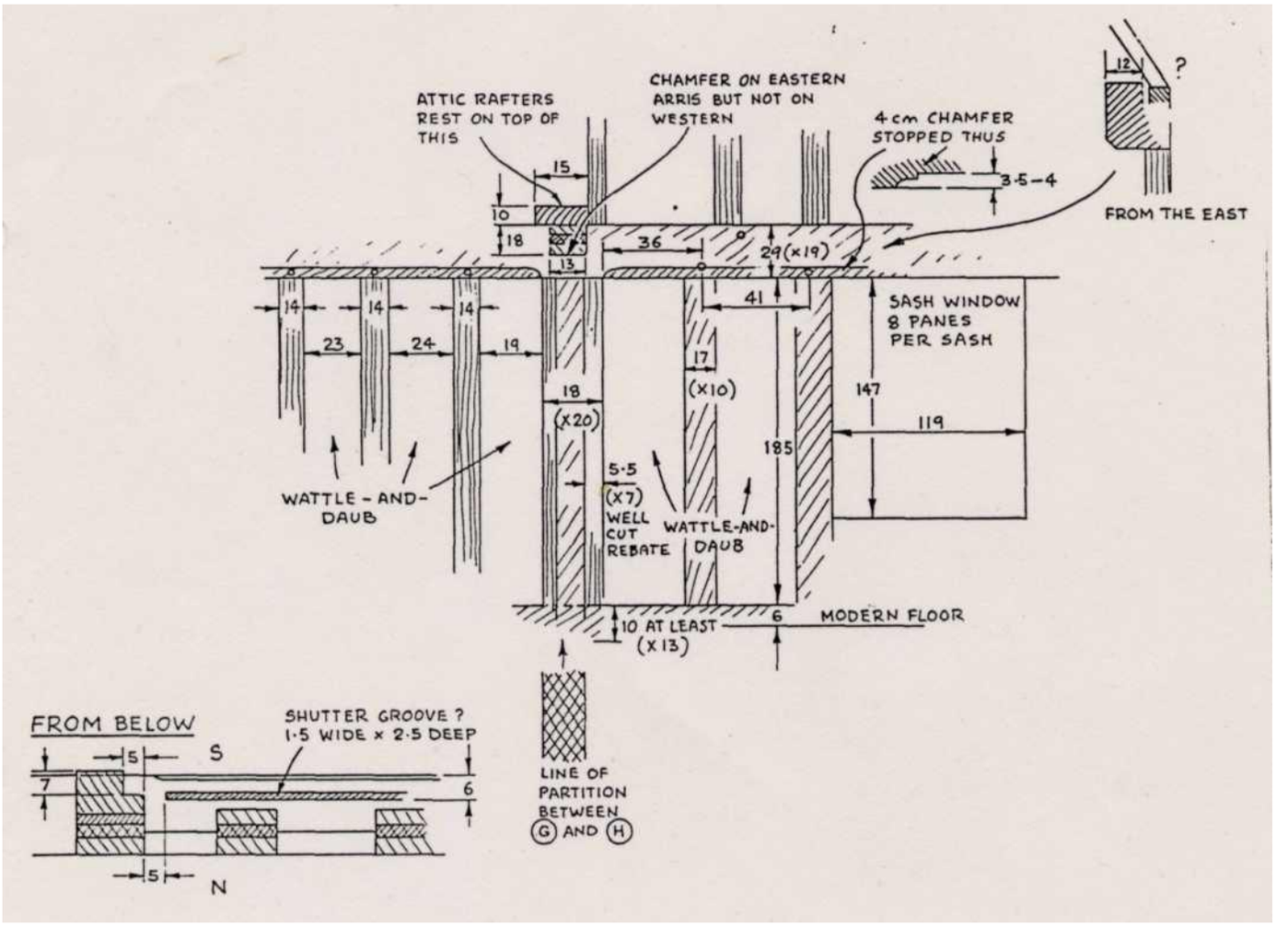


Fig 13.148. 6A and 6B Sir Isaac's Walk (6/79c): survey.

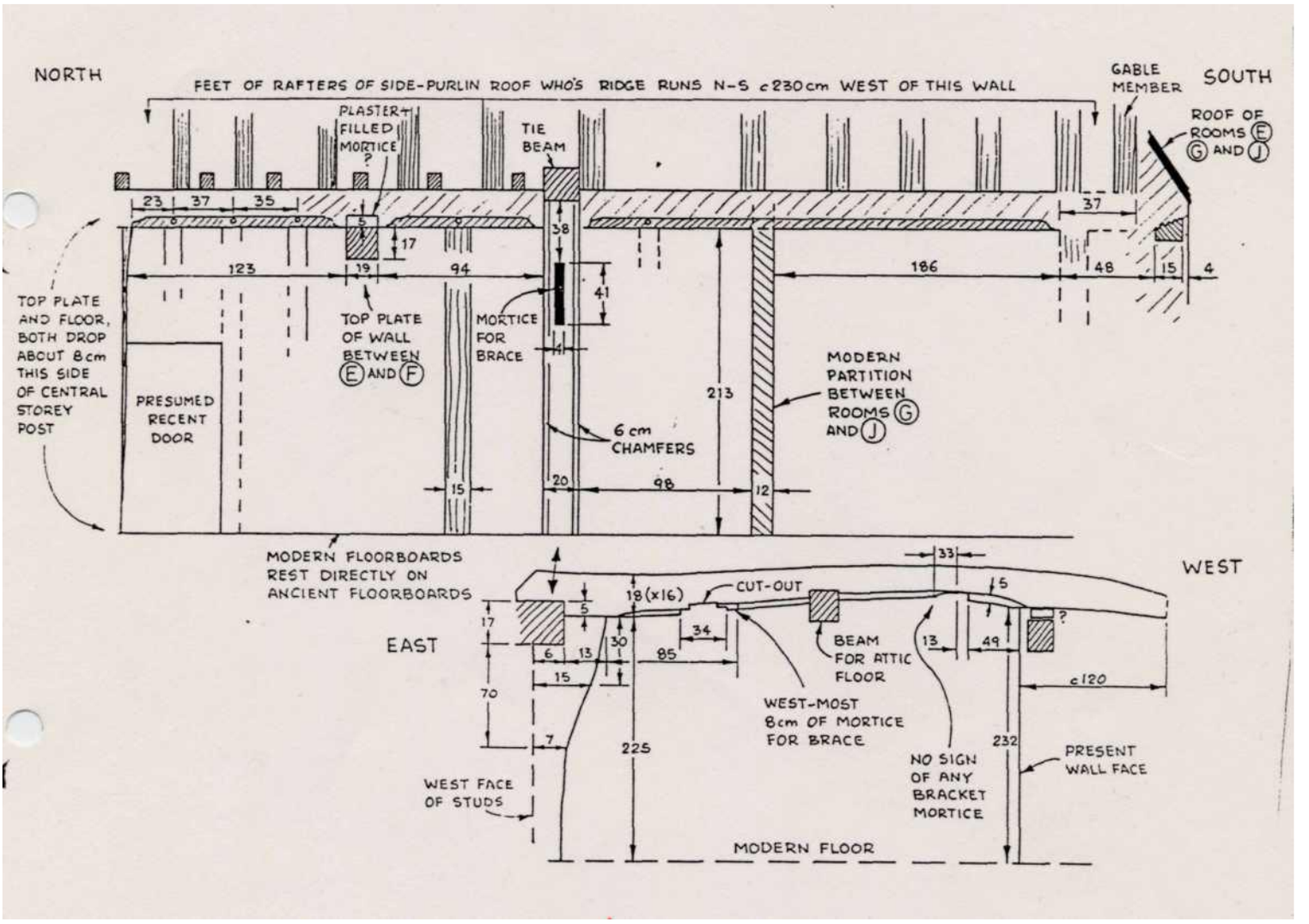


Fig 13.149. 6A and 6B Sir Isaac's Walk (6/79c): survey.

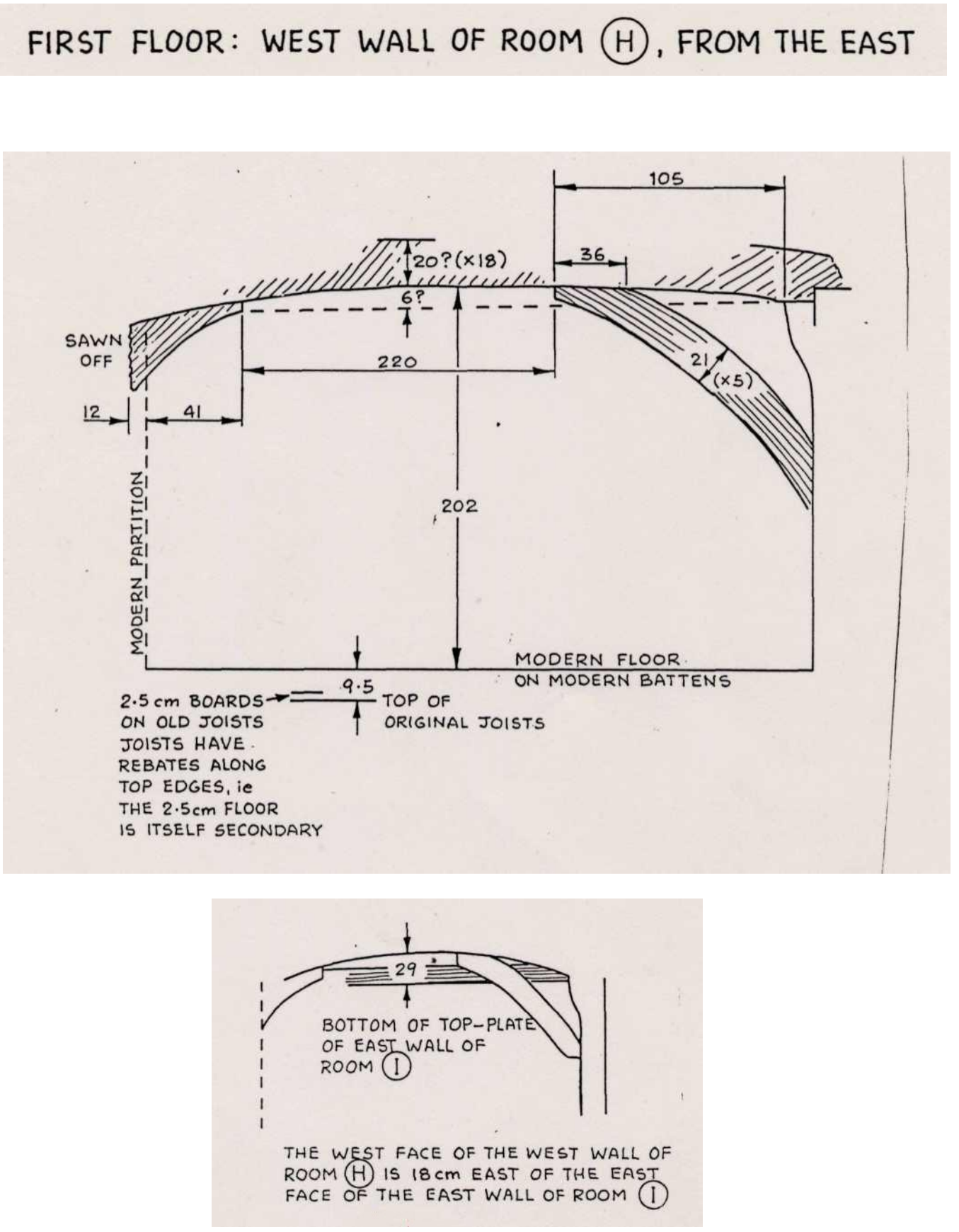


Fig 13.150. 6A and 6B Sir Isaac's Walk (6/79c): survey.

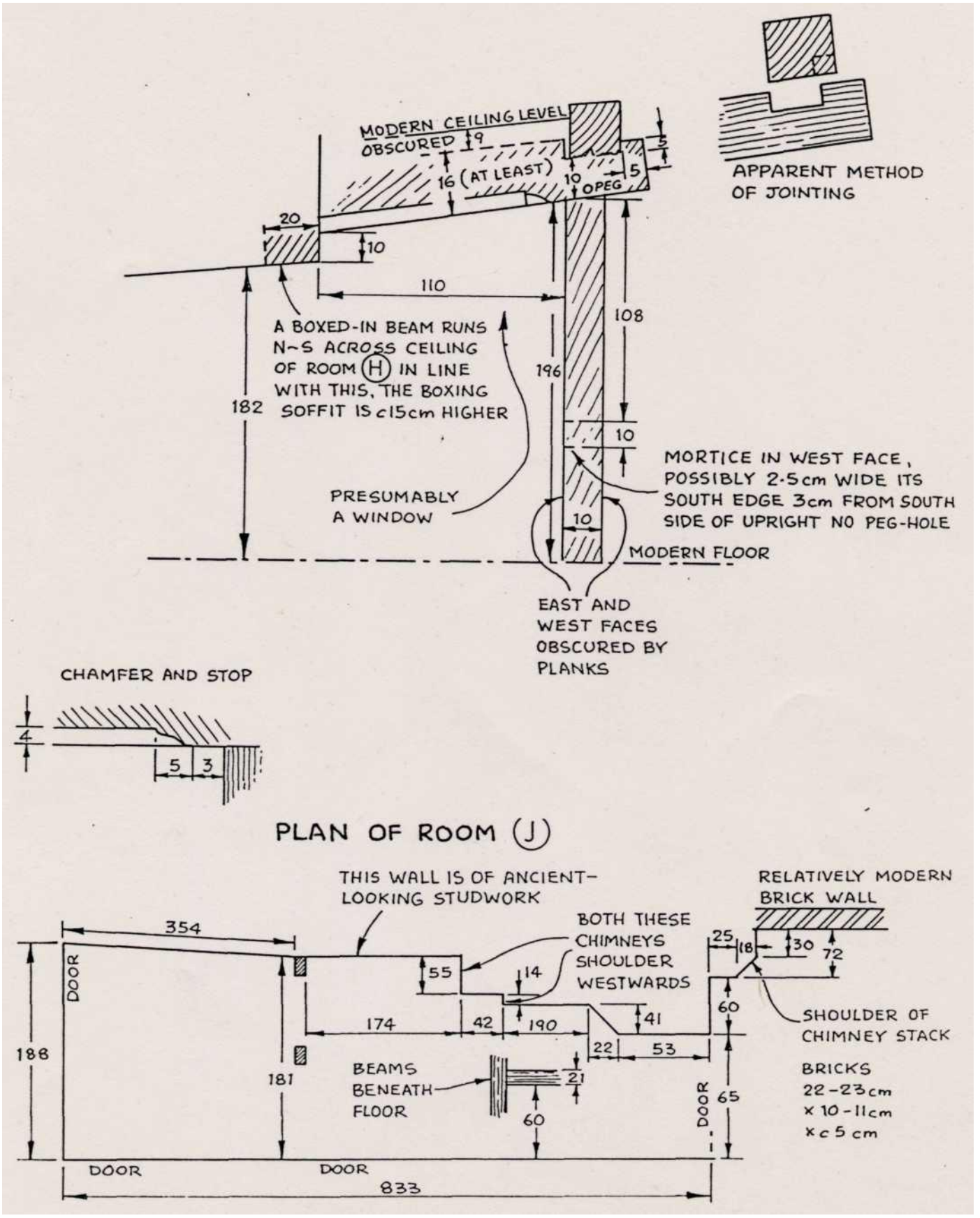


Fig 13.151. 6A and 6B Sir Isaac's Walk (6/79c): survey.

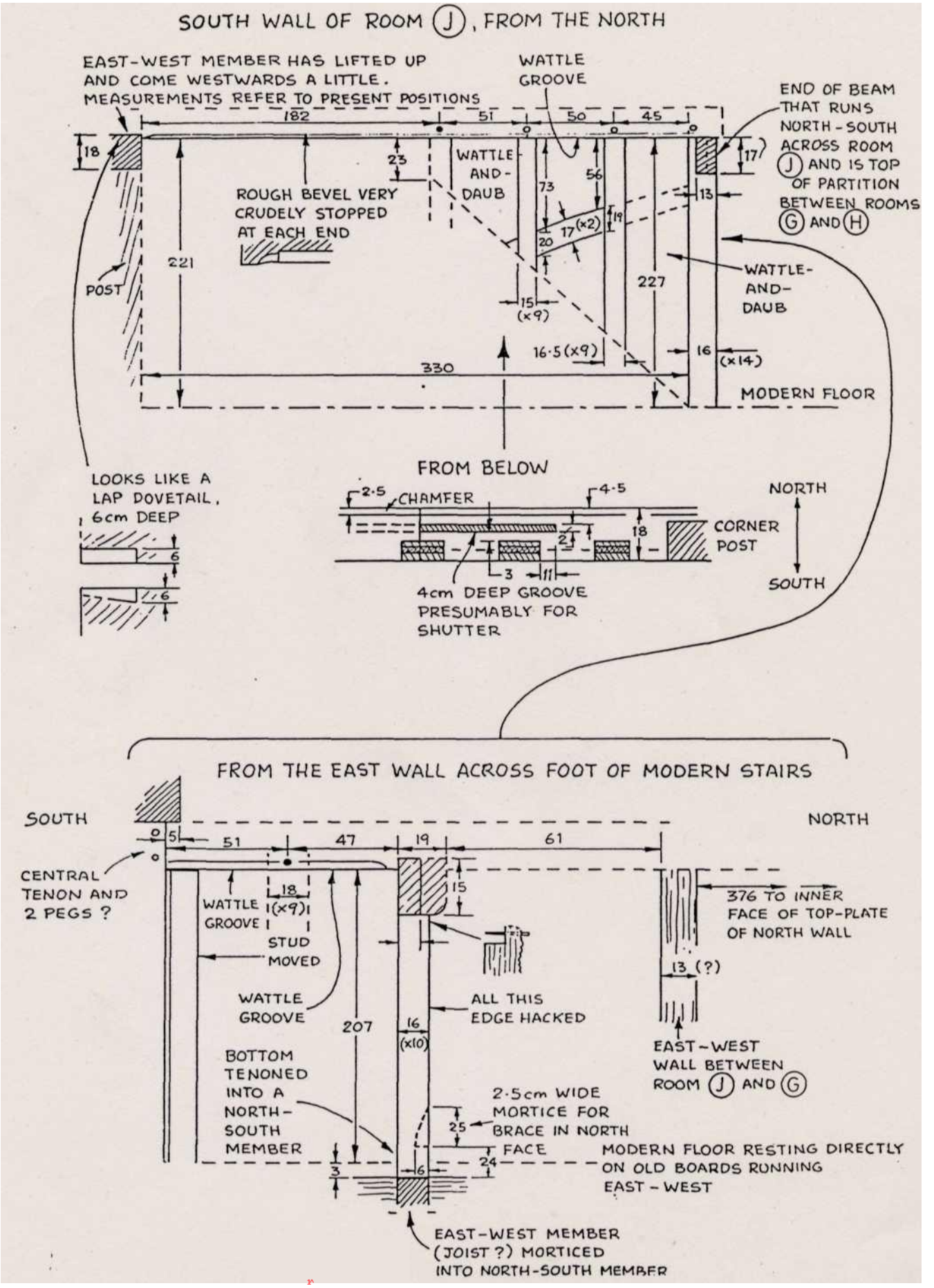


Fig 13.152. 6A and 6B Sir Isaac's Walk (6/79c): survey.

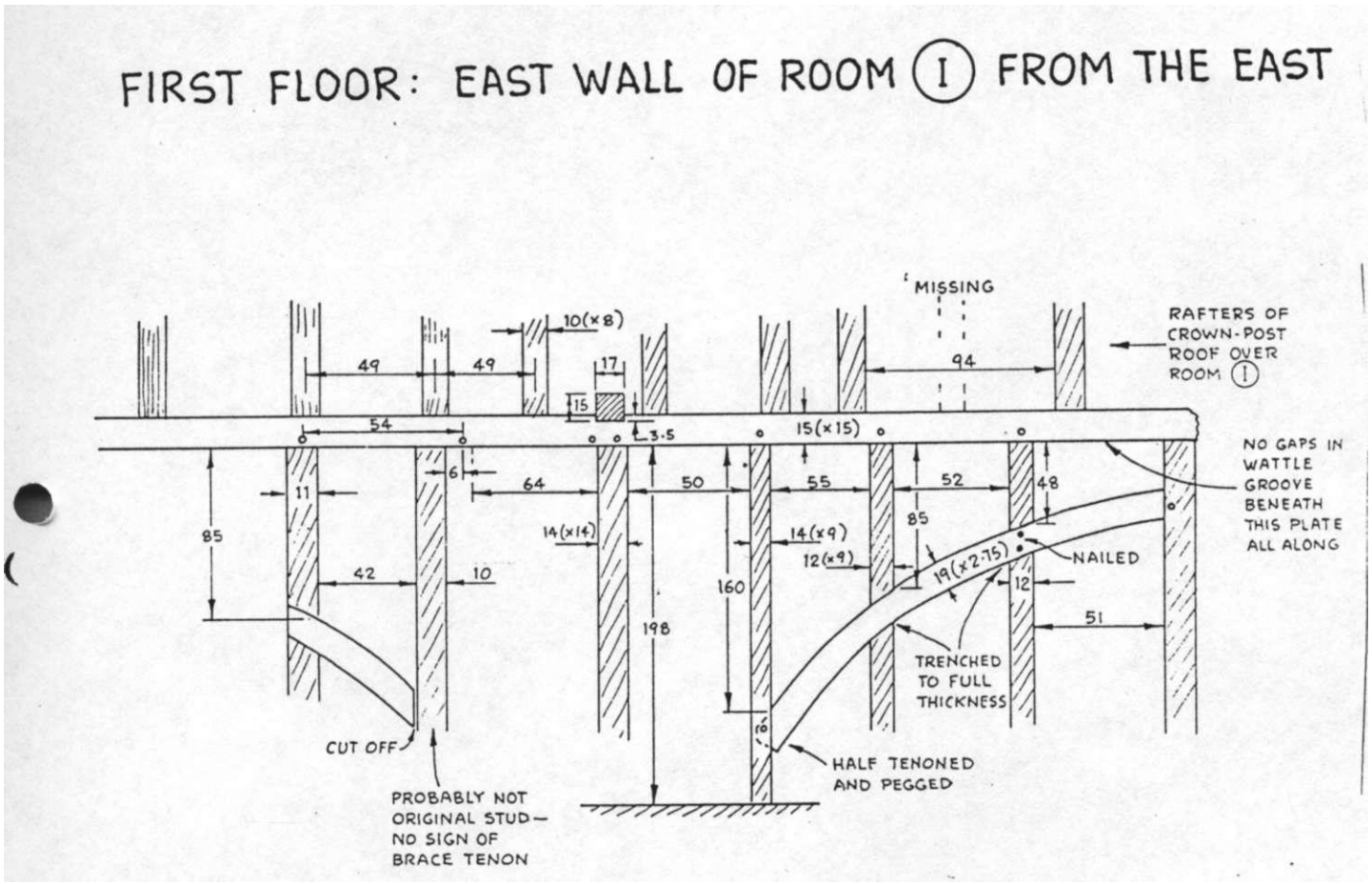


Fig 13.153. 6A and 6B Sir Isaac's Walk (6/79c): survey.

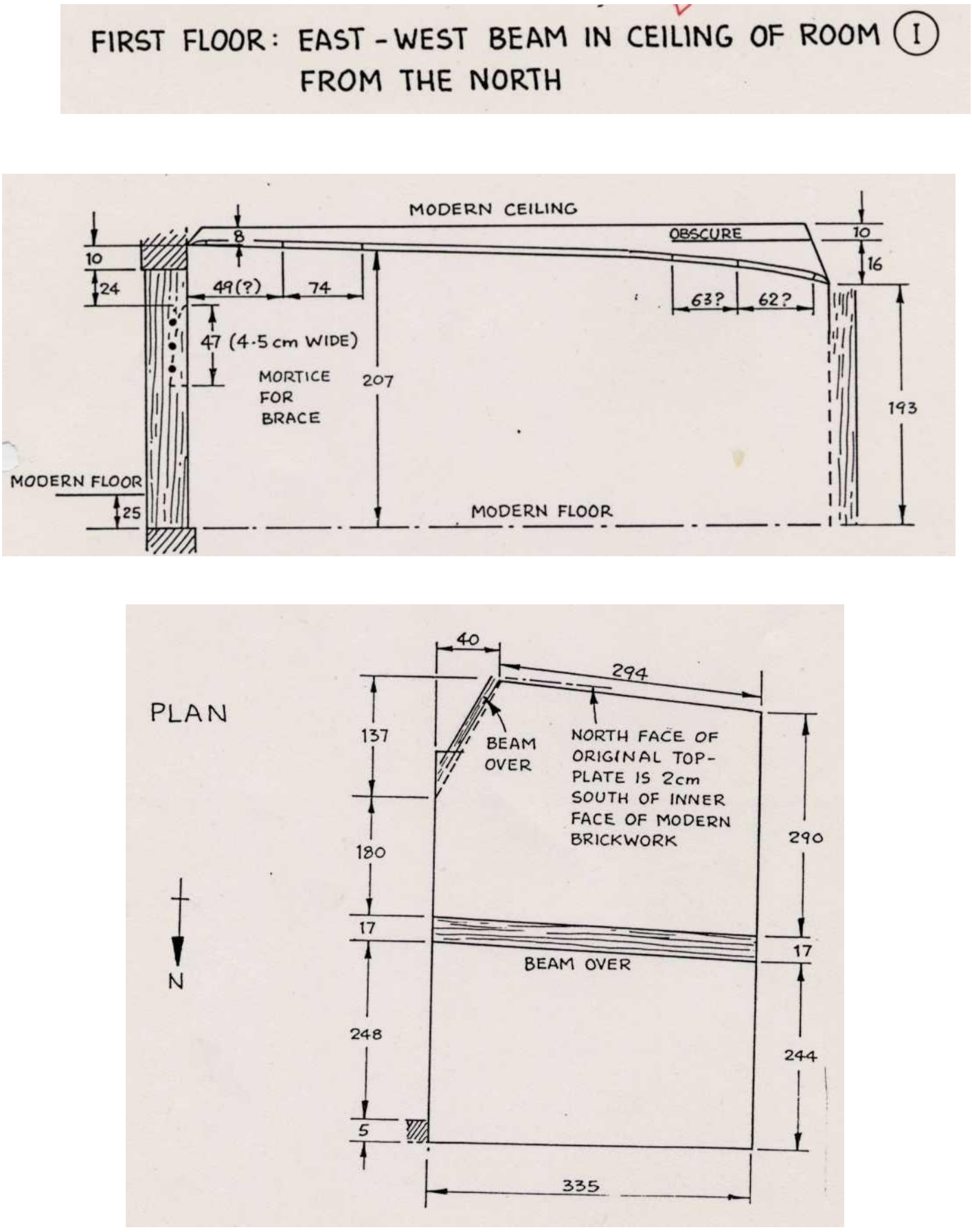


Fig 13.154. 6A and 6B Sir Isaac's Walk (6/79c): survey.

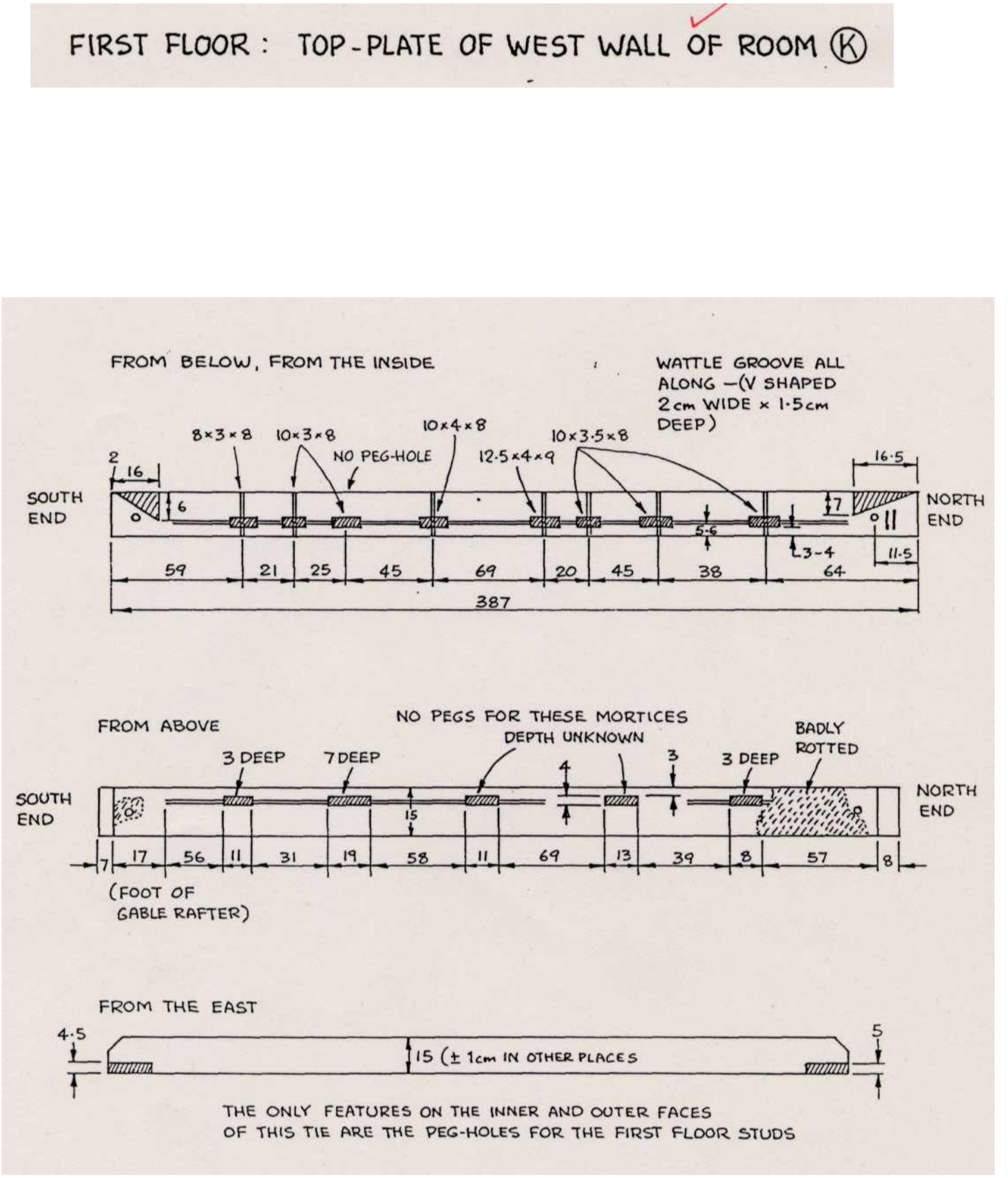


Fig 13.155. 6A and 6B Sir Isaac's Walk (6/79c): survey.

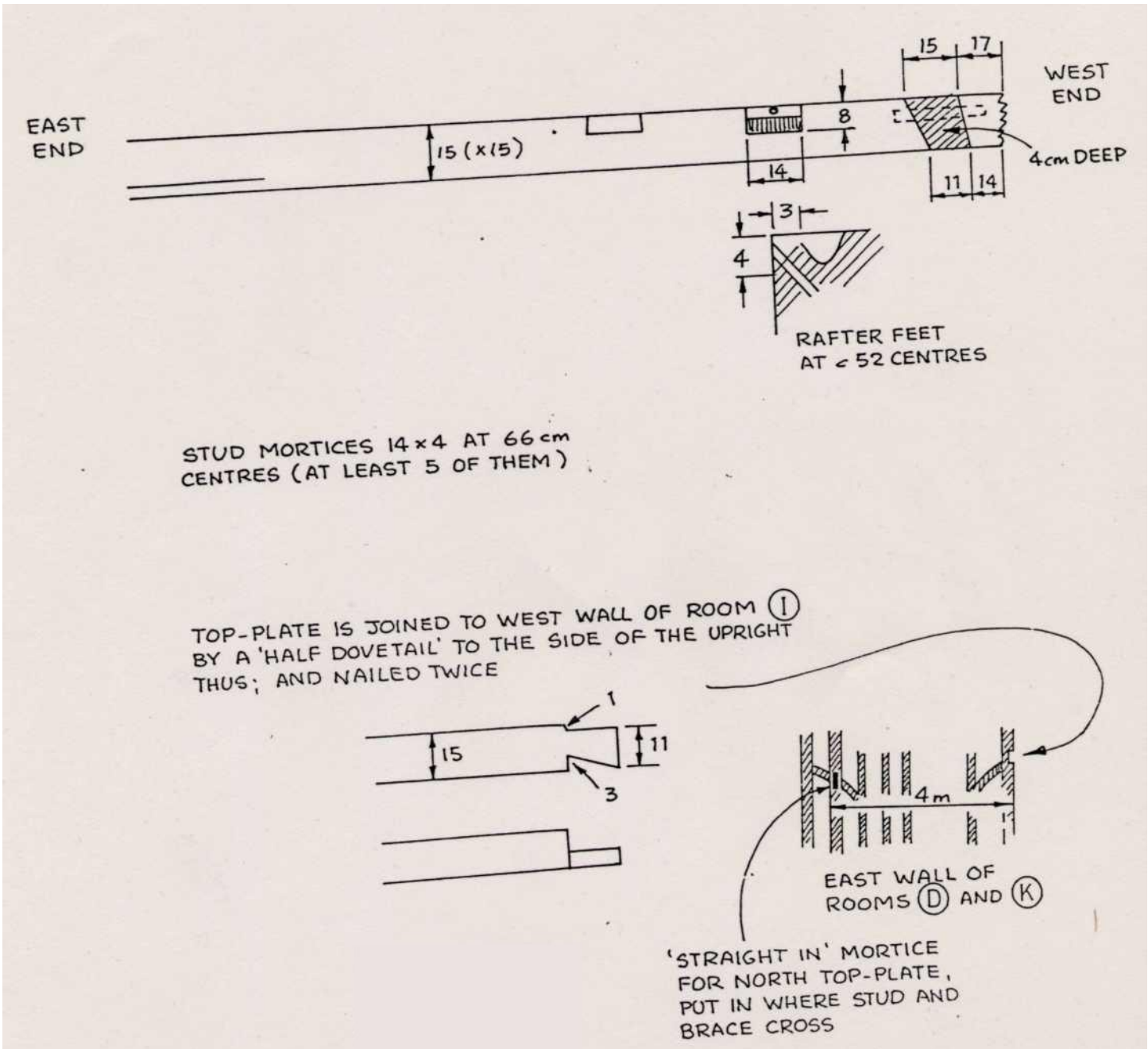


Fig 13.156. 6A and 6B Sir Isaac's Walk (6/79c): survey.

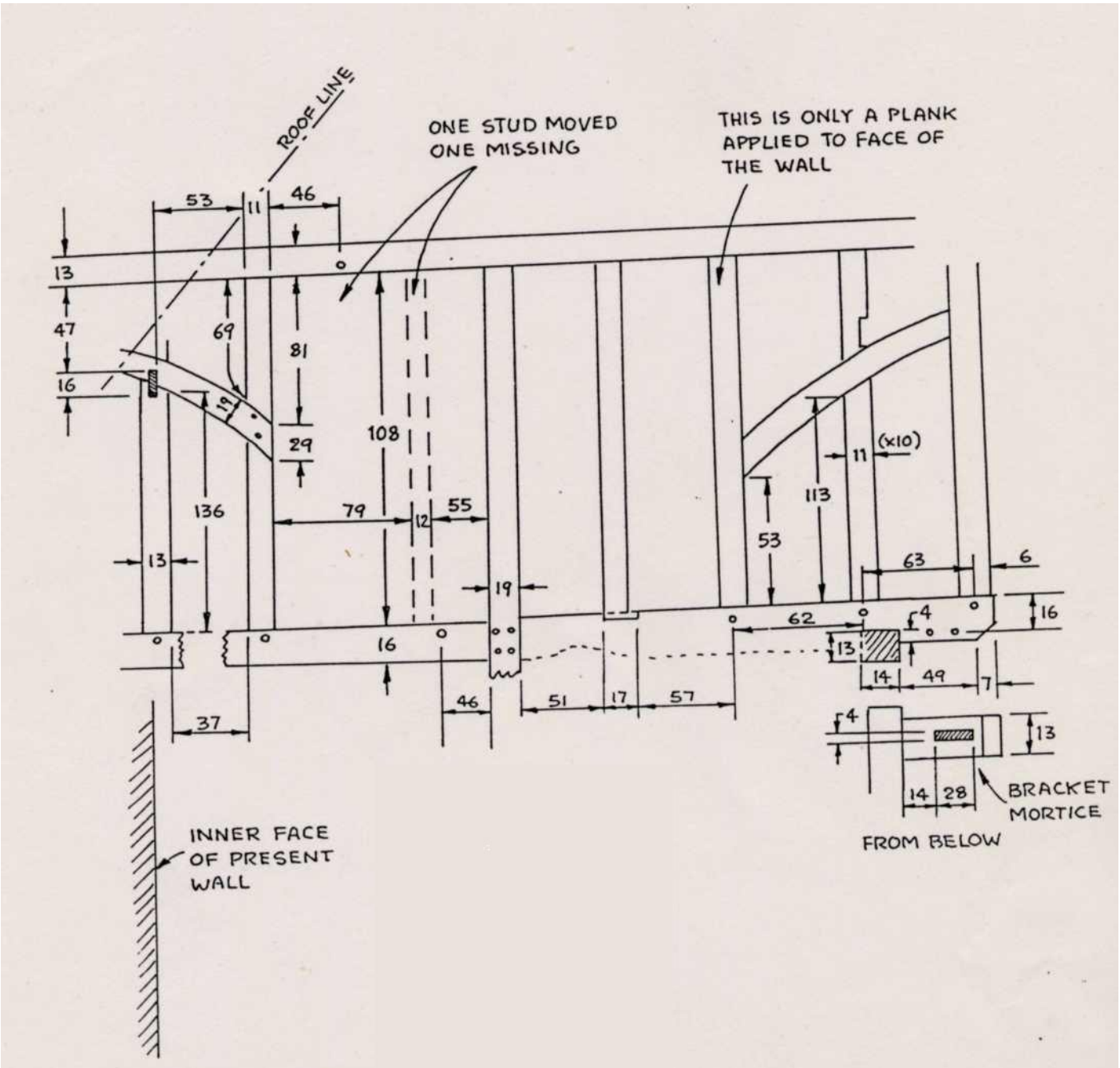


Fig 13.157. 6A and 6B Sir Isaac's Walk (6/79c): survey.

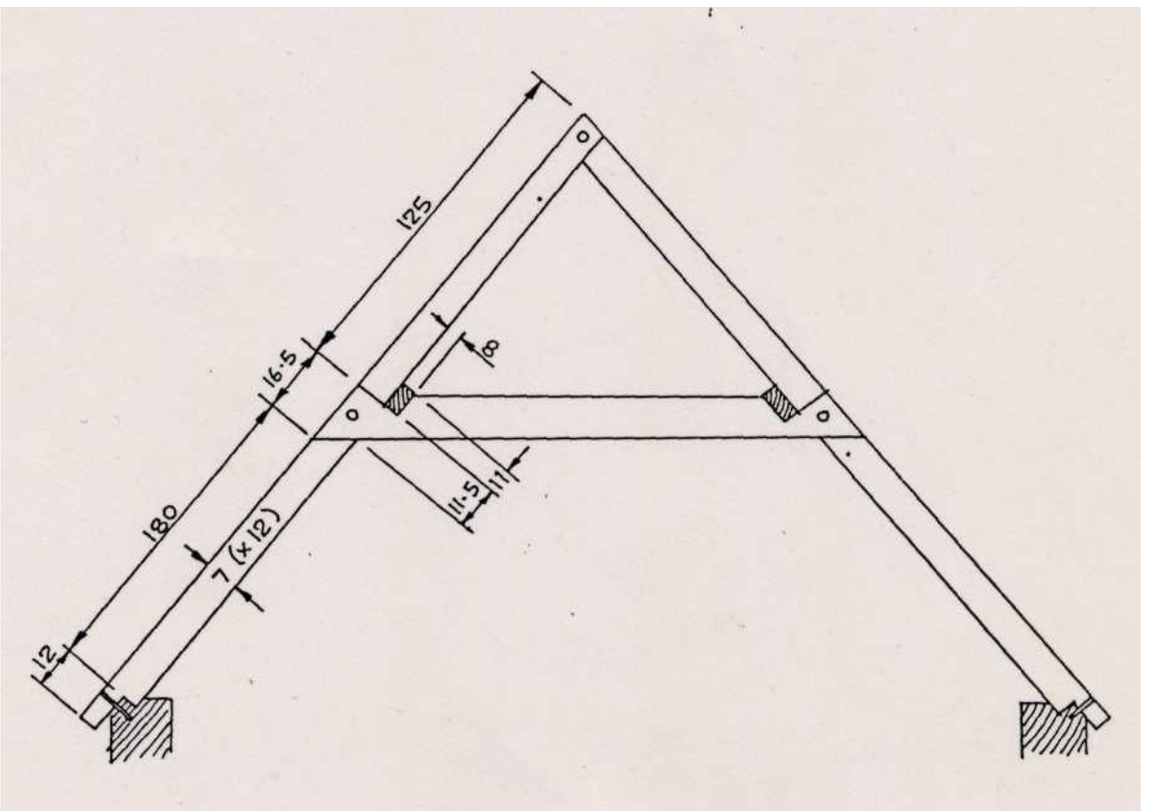
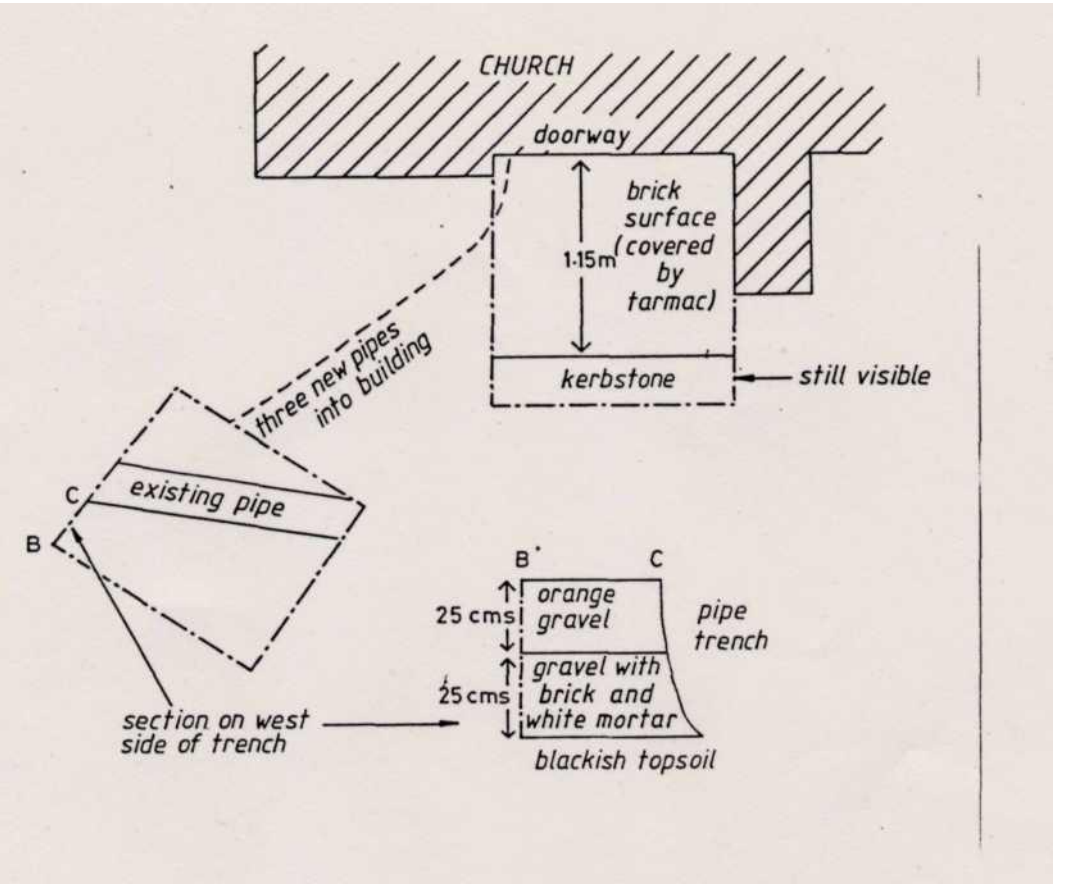


Fig 13.158. 6A and 6B Sir Isaac's Walk (6/79c): survey.



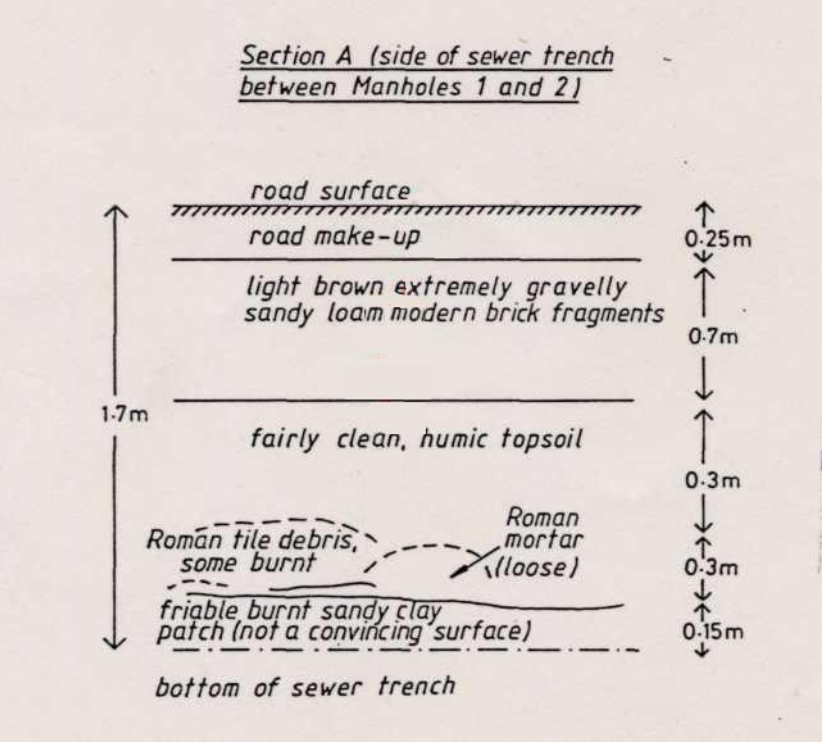


Fig 13.160. Church Street and St Mary's Church (7/79b).

6/79d

62-3 Stanwell Street

28.6.1979

Reason: renovation of existing building and construction of two-storey extension

Record/report: NS/PC

Negative. According to the builders, a fire-place at first-floor level had been lined with blue-and-white 'Dutch' tiles (now removed).

7/79a

Marriage's Mill and the Old Siege House, East Street

19.7.1979 to 28.2.1980

Reason: renovation of mill and adjacent 'Siege House' for reuse as a hotel and restaurant

Record/report: HB, CC & NAS/PC

Light buildings behind the mill were demolished and various fittings removed from within it. The front elevation was cleaned. No holes or service trenches observed anywhere. (Site of medieval East Mill?)

7/79c

Sir Isaac's Walk

Fig 13.161

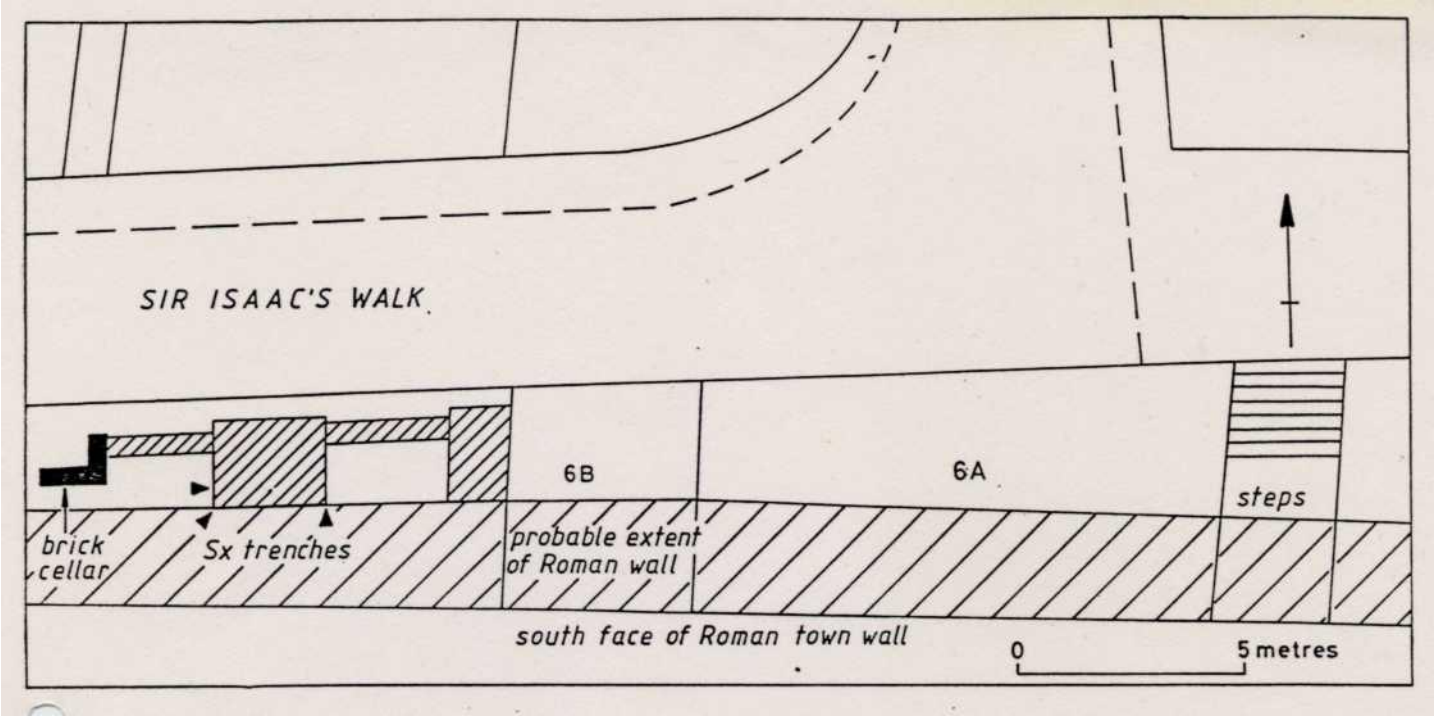
17.7.1979 to 10.8.1979

Reason: redevelopment of site for small shop units

Record/report: HB/PC

Two stanchion holes and a trench for foundations were inspected. The largest stanchion hole provided a valuable section across the Roman rampart behind the town wall. The trench was dug by machine. It did not reach natural and the section could only be sketched. The south side of the trench coincides with the likely position of the north face of the Roman wall as projected from the Lion Walk section *(CAR* **3**, 70-3, Sheet 6c, Sx 54). Some tiles set in mortar revealed at the base of the trench were probably part of the lowest courses of the wall which, according to the St Mary's Rectory section (where the wall was well preserved), projected beyond the face of the wall by 50 mm (Dunnett 1971, 68, fig 43). The rampart section proved to be very similar in many respects to the Lion Walk section, ie the rampart was multi-phase, embodied at least one temporary street, and was predated by a substantial metalled street. The temporary street was equivalent to Lion Walk Streets 3 or 4 *(CAR* **3***,* Sx 54), whilst the early street was the same as Lion Walk Streets 1 or 2. It is not possible to be more specific. A layer of oyster in the east section may have been part of the fill of a trench or pit cut into the temporary street.

The only find was a part of the base of a large unstratified red-ware pot of 14th- to 16th-century date.



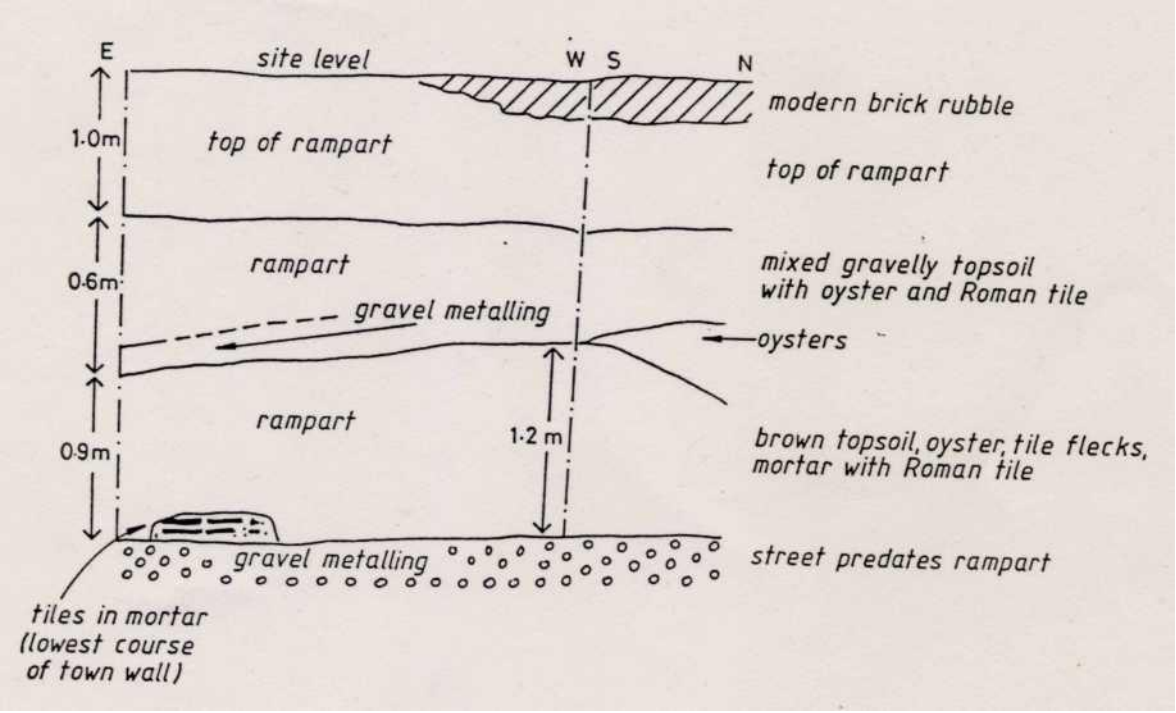


Fig 13.161. Sir Isaac's Walk (7/79c).

7/79d

Southern Outfall Sewer scheme, Lexden/Shrub End area

Figs 13.162-70

July 1979 to early 1980

Reason: construction of major sewer system

Record/report: NS/NS & PC

As far as possible, the trenches were carefully monitored especially at points where they were to cross the lines of known ditches. The trenches were usually shored as soon as they were dug so that sometimes parts of the trenches could not be properly examined. However the watching brief provided firm fixes — in Parr Drive, Oaklands Avenue, and Straight Road — on ditches previously known only from oblique aerial photographs. Of special note was the

and it was clear that Shrub End Dyke does not exist in this area. This raises the question did Shrub End extend further south than its junction with the Heath Farm Dyke? The trench at Oaklands Avenue contained no evidence that the NW-SE Roman road, known west of Gryme's Dyke as a cropmark extended east of the dyke. And, of the small ditches, two (F8 and F9) may belong to the 'camp' referred to by Morant and others *(CAR* **11**).

Street by street, the observations are as follows:

Straight Road

Work was carried out in several sections. For the 100 m south of the junction with Oaklands Avenue, no features occurred in the parts of the trench observed. Three features (F1, F2, & F3; Fig 13.170) were revealed in the 100 m stretch of trench north of the junction of Straight Road with Dugard Avenue. South of Dugard Avenue, the whole of the trench was observed as far as Kidman's Dyke (F5; Fig 13.169). The latter was sectioned for the pipe trench and one other possible ditch (F4; Fig 13.169) was noted. The next 200 m stretch of trench south of Kidman's revealed three small ditches. One of these (F8; Fig 13.168) was aligned ENE-WSW and was about 0.4 m deep. The trench cut what may have been a similar ditch (F9) 95 m further south but this was only seen when the trench had been largely filled in. The third ditch (F10) appeared from the stratigraphy to have been modern. Nothing was observed at the very southern end of Straight Road where this joined another new pipe along Shrub End Road.

Oaklands Avenue

A ditch (F2, Oaklands Avenue) ran squarely across the trench at the northwest dyke of Oaklands Avenue (Fig 13.166). It was aligned to pass under the northern half of No 7 and the garage of No 43. It was probably the same ditch as found in Straight Road (F2) and the same as the ditch known as a cropmark on some early aerial photographs of the area.

Parr Drive

A north-south ditch (F2, Parr Drive) was cut by the trench in the SE angle of Parr Drive (Fig 13.163). Although its alignment was hard to judge, its location seems to indicate that it was the same ditch (F2) as found at Oaklands Avenue and Straight Road.

Also a north-south ditch (F6), about 5 m wide and at least 2.25 m deep, was cut in two places at Parr Drive and once at the junction of Parr Drive and Dugard Avenue (Fig 13.164).

Shrub End Road

West of its junction with Straight Road, only a stretch of about 150 m was observed continuously. Further west only the manholes were examined and the odd stretch of trench. No archaeological features were observed. Typically the modern road make-up was 0.6 m thick and overlay 0.2 to 0.3 m of cover loam.

Northwards from Well House (from TL962226 to TL963231).

The pipe was laid in a wide trench to the immediate west of the supposed western edge of Kidman's Dyke. Only part of the trench was observed but no features were noted in it or reported by the contractors.

Southwards of Well House (from TL962226 to TL962224).

Nothing of archaeological importance was noted (PC)

Baden Powell Drive/Sutton Park Avenue

Only the manholes in this area were observed. No archaeological features were detected. The contractor's men reported that there was a greater depth of make-up/topsoil at one point near the junction with Straight Road. This may have been Shrub End Dyke although, to judge by the likely position of the dyke, it was possibly too close to Straight Road.

Heath Road

A single major dyke (F7; Fig 13.167) was sectioned near the western end of Heath Road. It was 6.1 m wide and 3.2 m deep. Its size and alignment indicate that this feature was the Shrub End Dyke. It appears to align with the eastern dyke of the Triple Dyke as if it was a continuation of that part of dyke. The full length of the trench at the west end of Heath Road was carefully examined and there is no doubt that the Triple Dyke did not extend this far south.

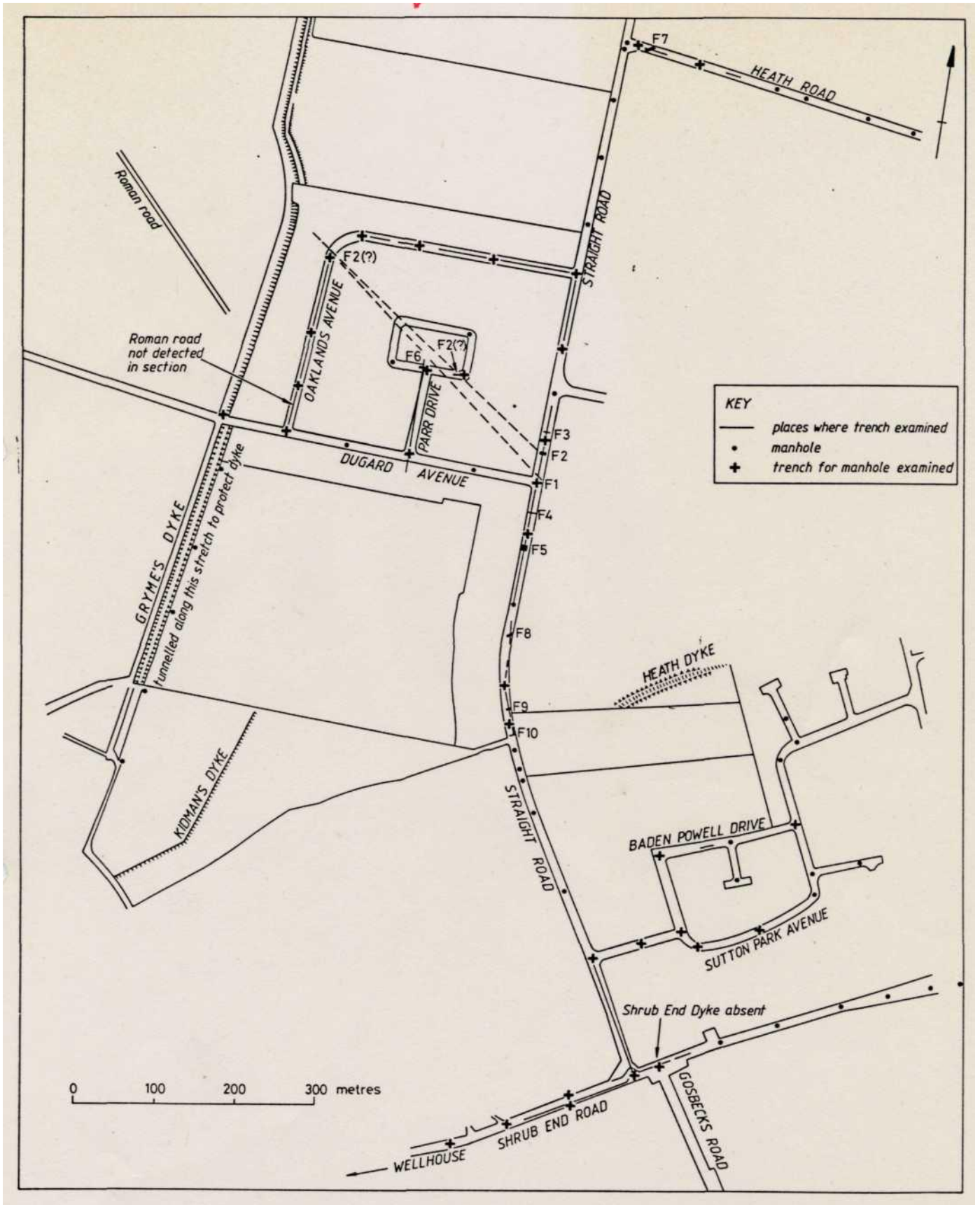


Fig 13.162. Southern Outfall Sewer scheme: Lexden and Shrub End area (7/79d).

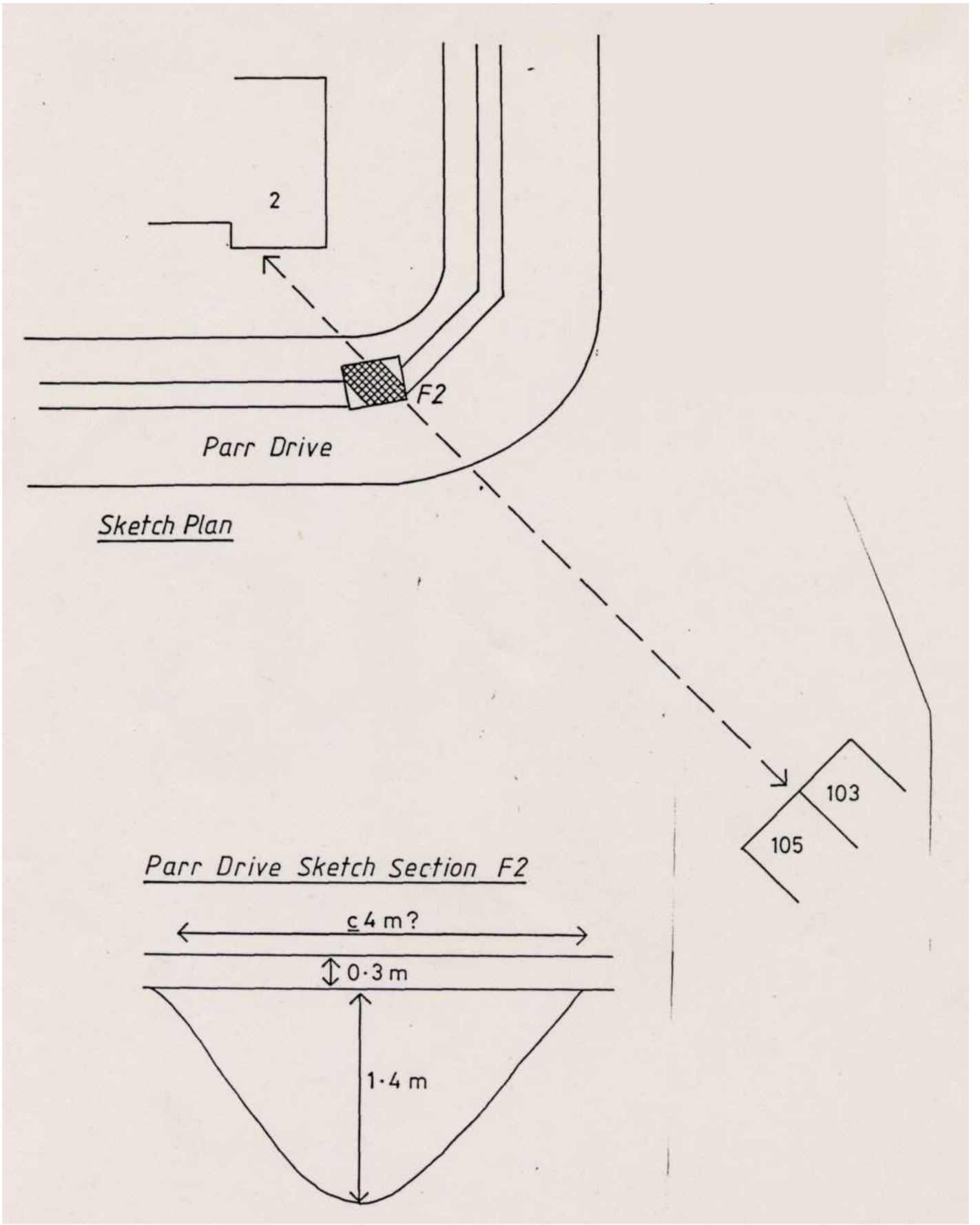


Fig 13.163. Southern Outfall Sewer scheme: Lexden and Shrub End area (7/79d).

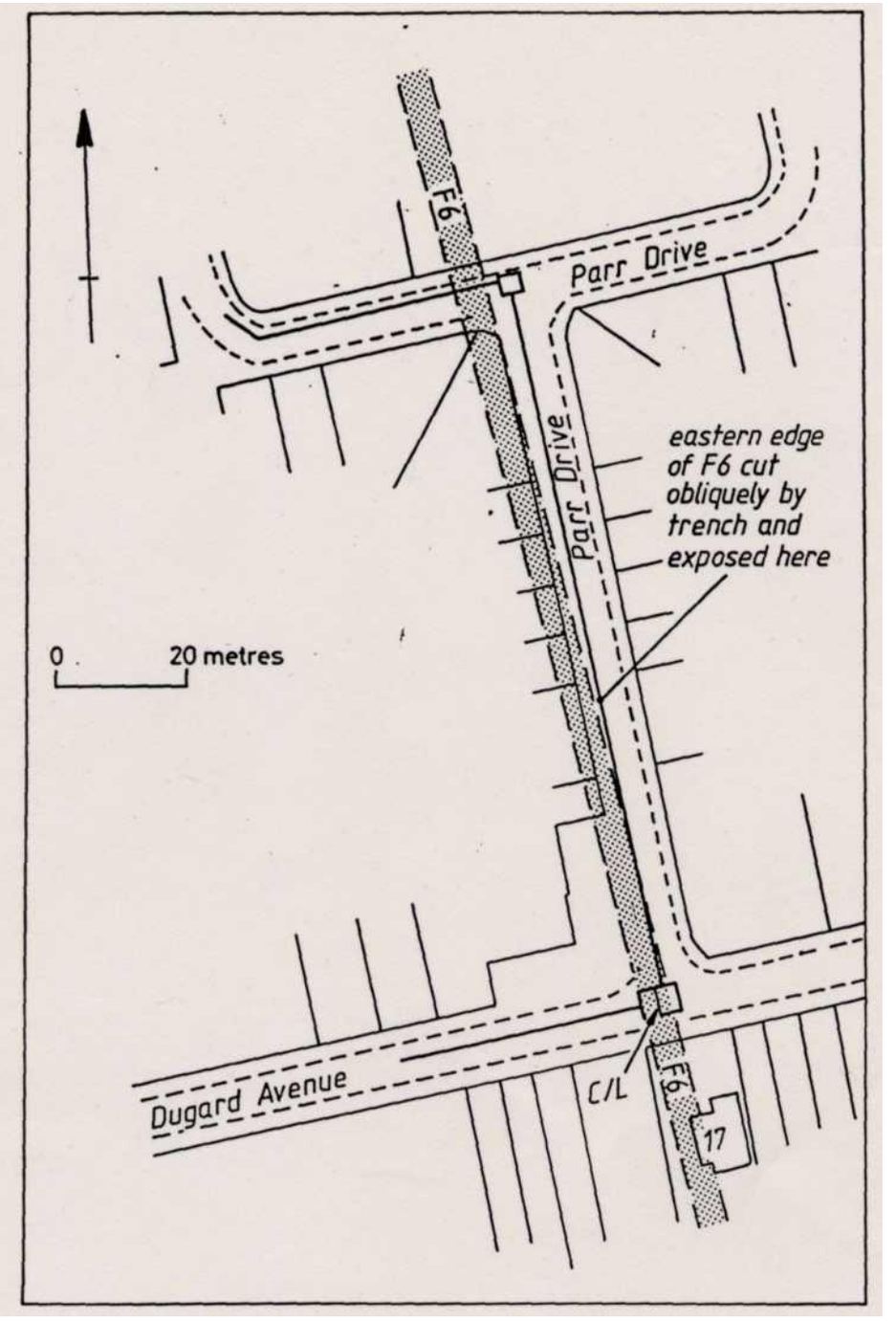
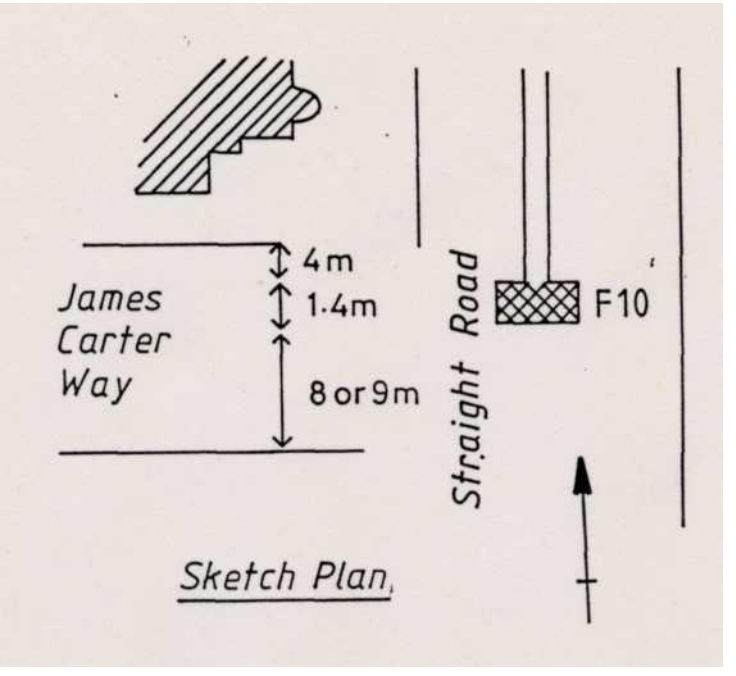


Fig 13.164. Southern Outfall Sewer scheme: Lexden and Shrub End area (7/79d).



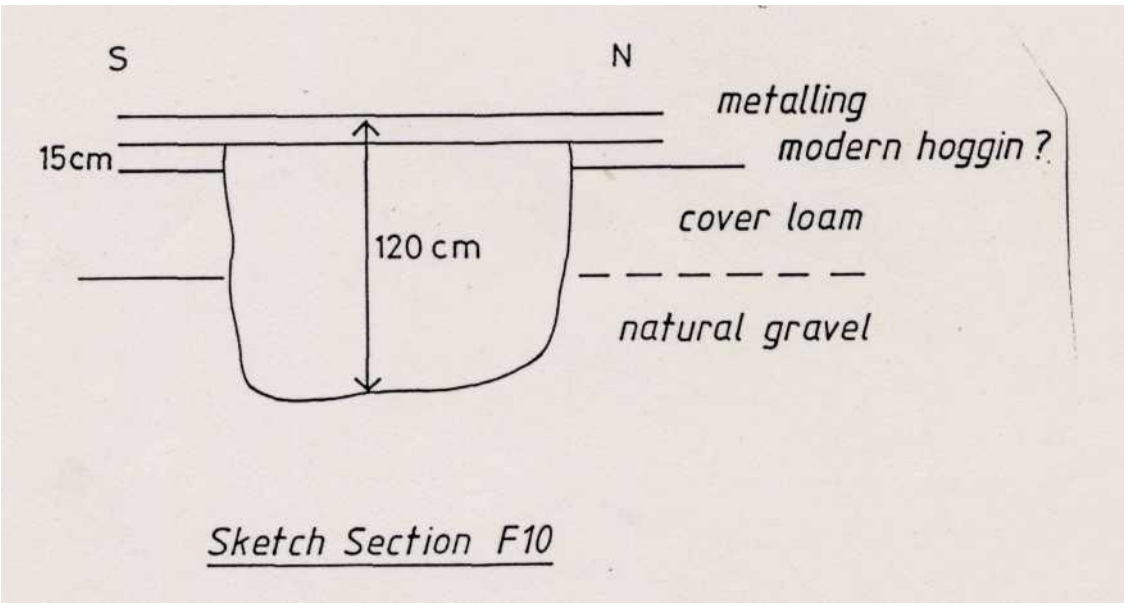
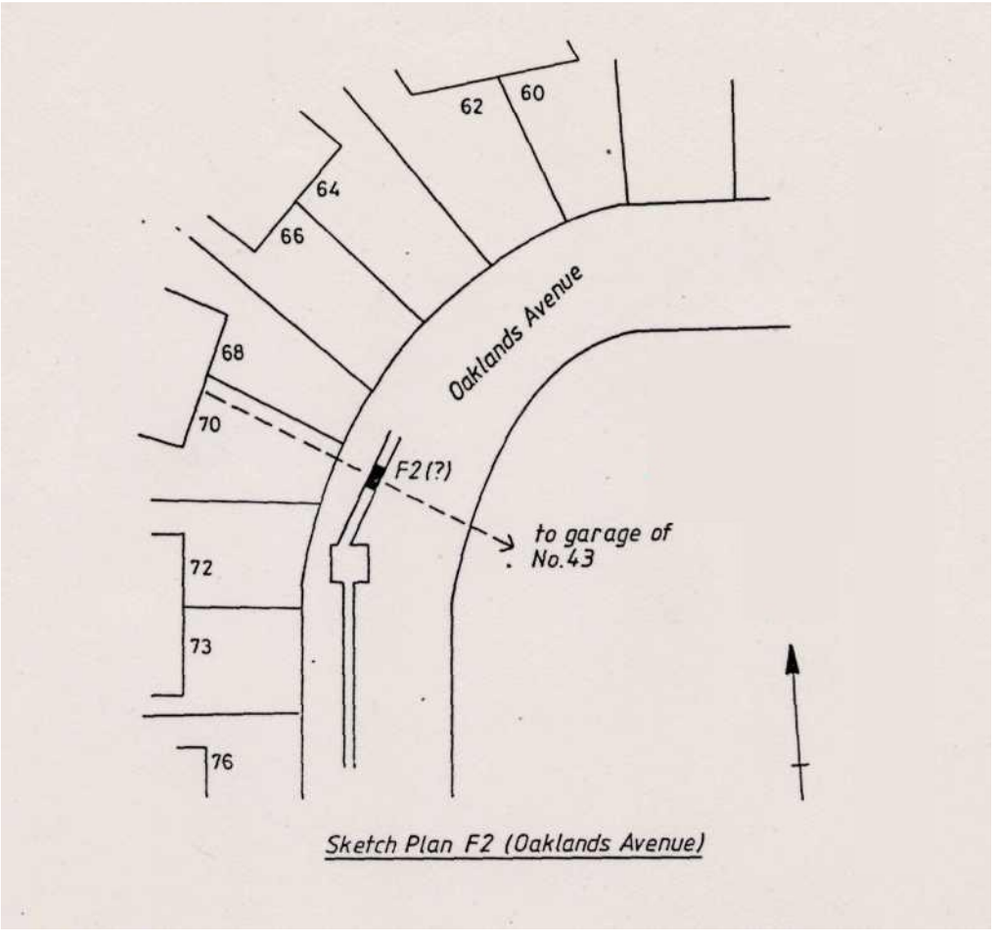


Fig 13.165. Southern Outfall Sewer scheme: Lexden and Shrub End area (7/79d).



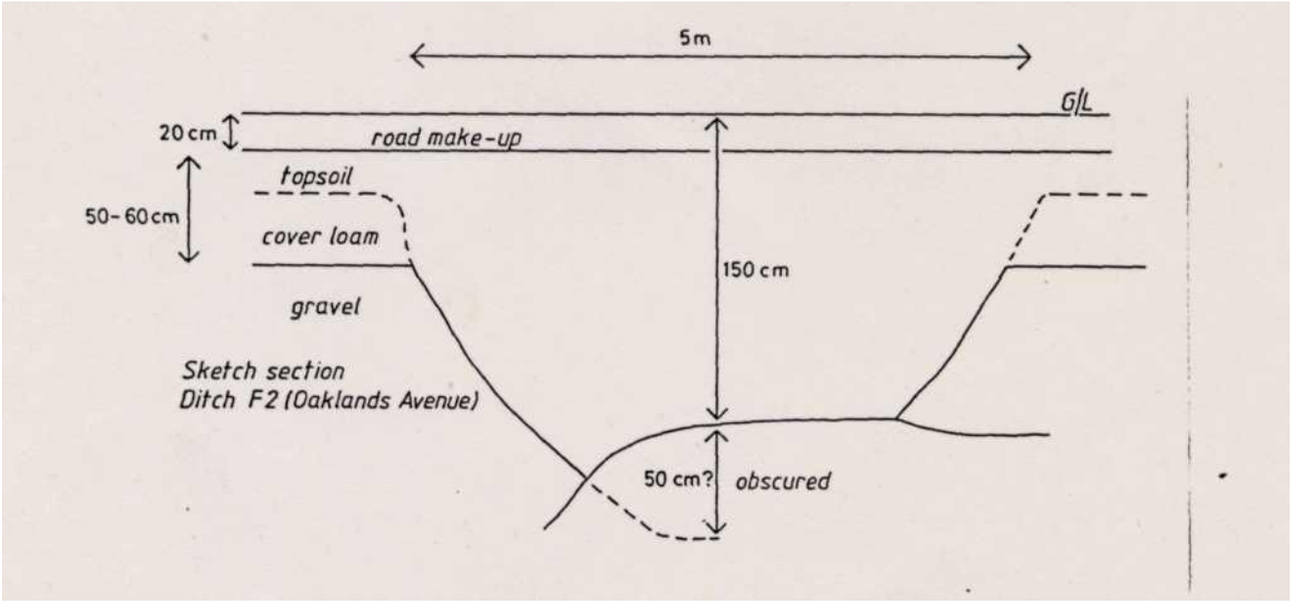
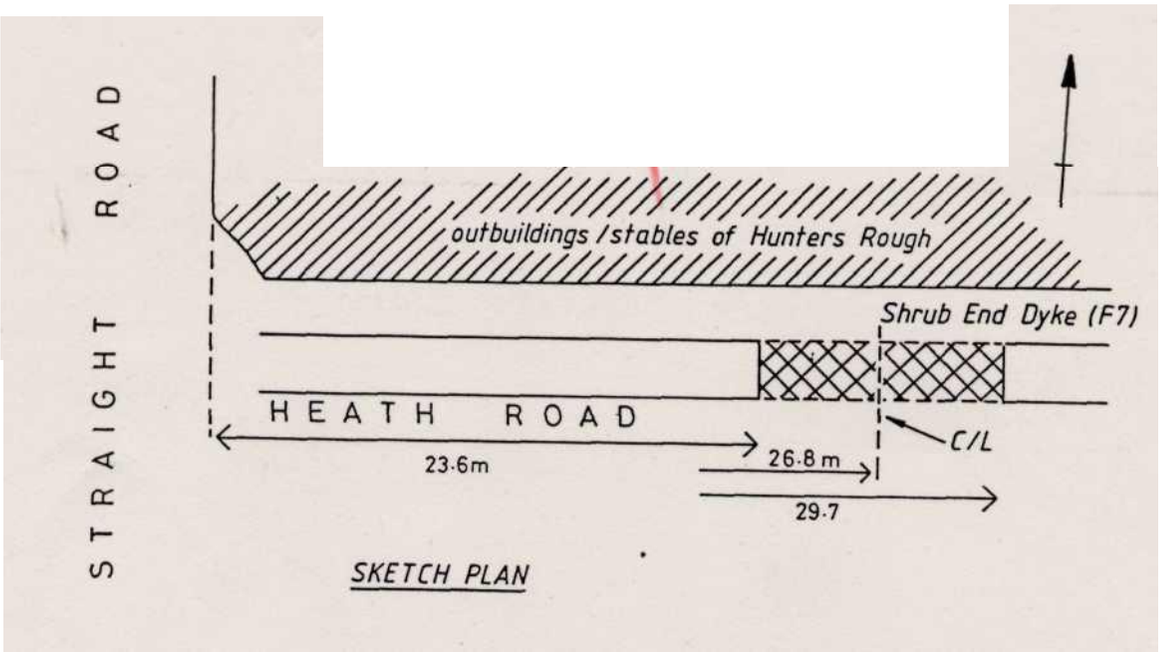


Fig 13.166. Southern Outfall Sewer scheme: Lexden and Shrub End area (7/79d).



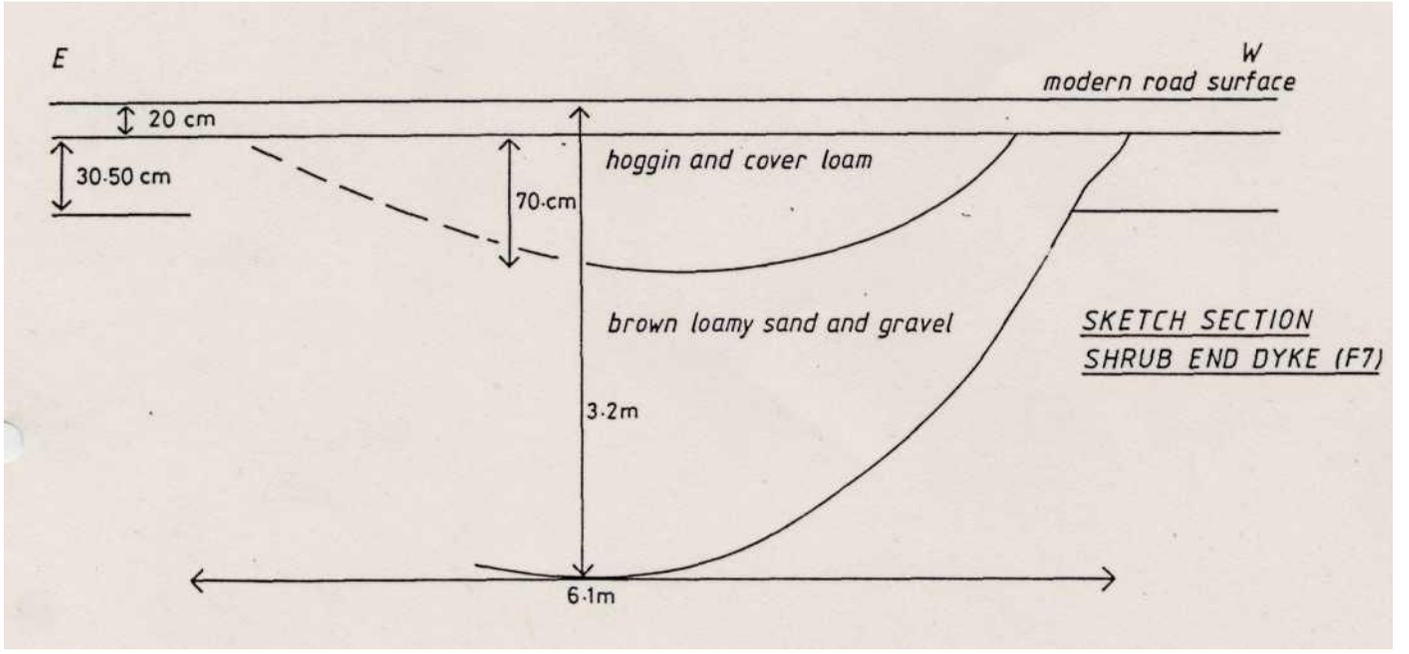
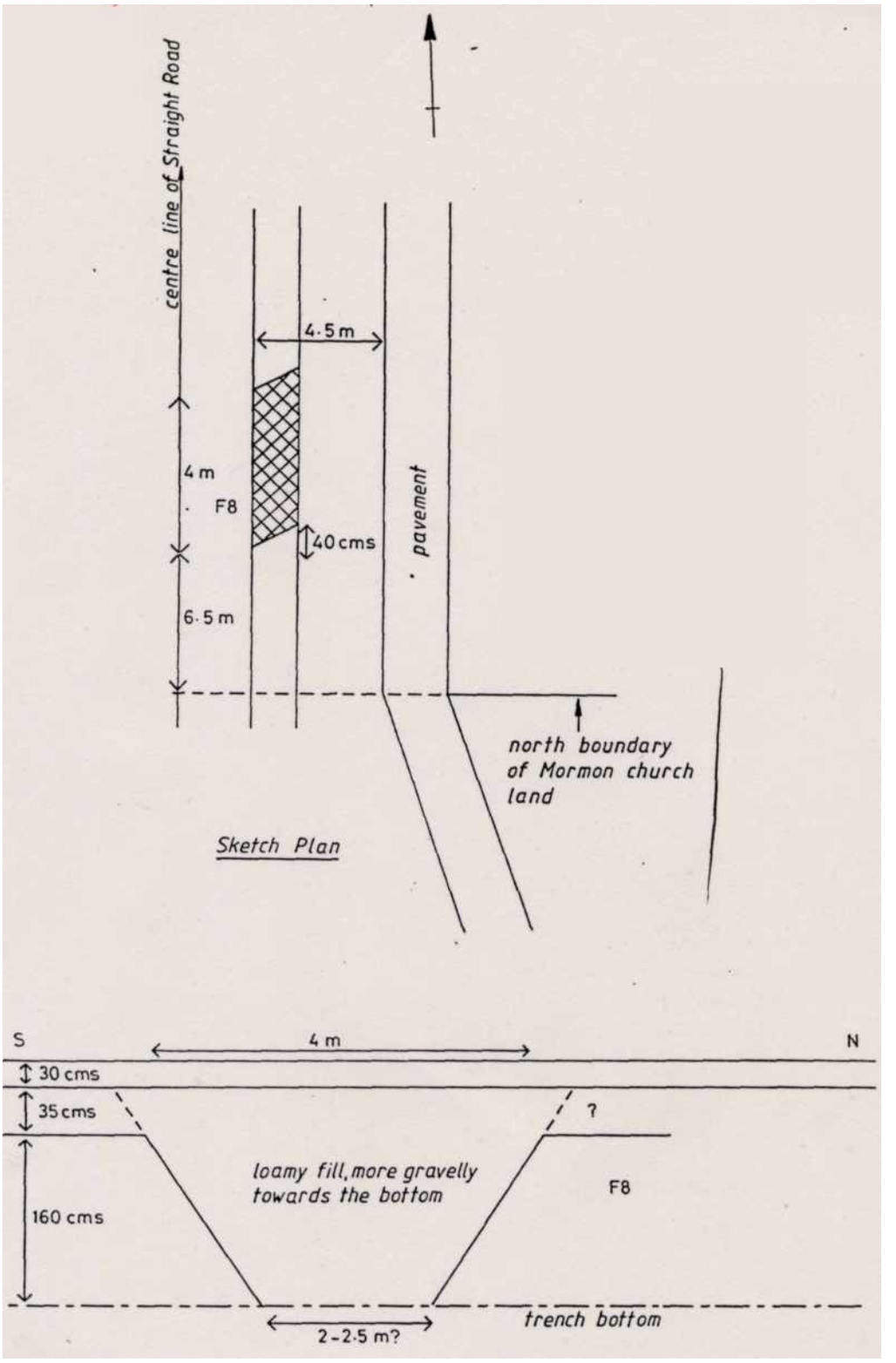
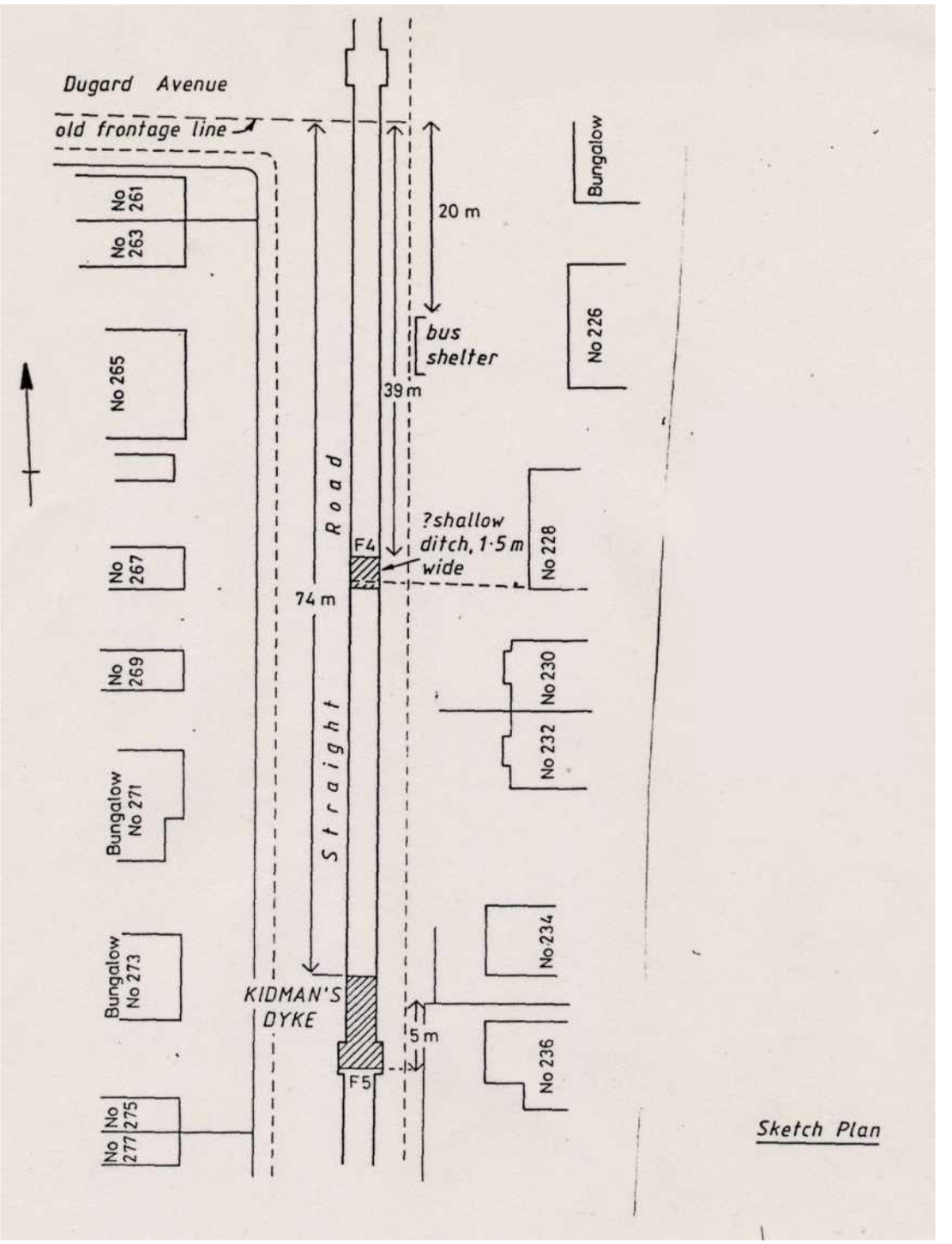


Fig 13.167. Southern Outfall Sewer scheme: Lexden and Shrub End area (7/79d).



Sketch *Section*

Fig 13.168. Southern Outfall Sewer scheme: Lexden and Shrub End area (7/79d).



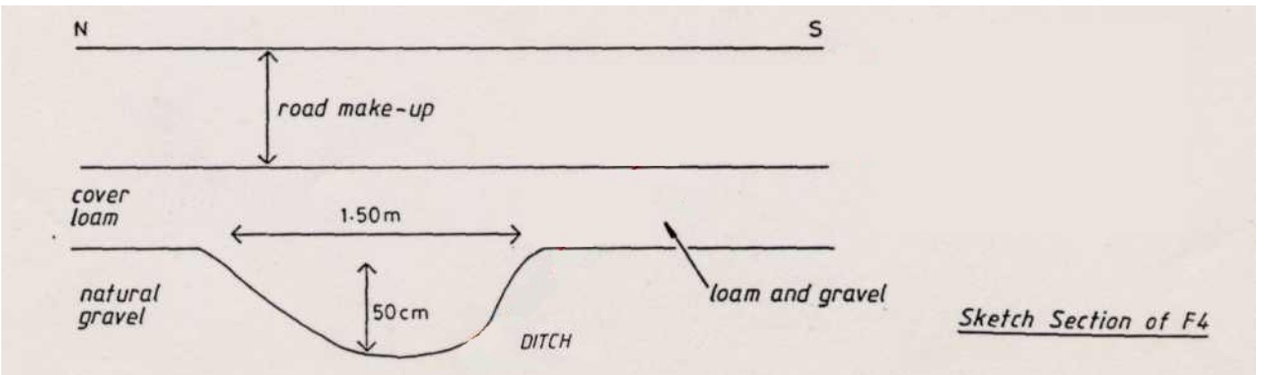
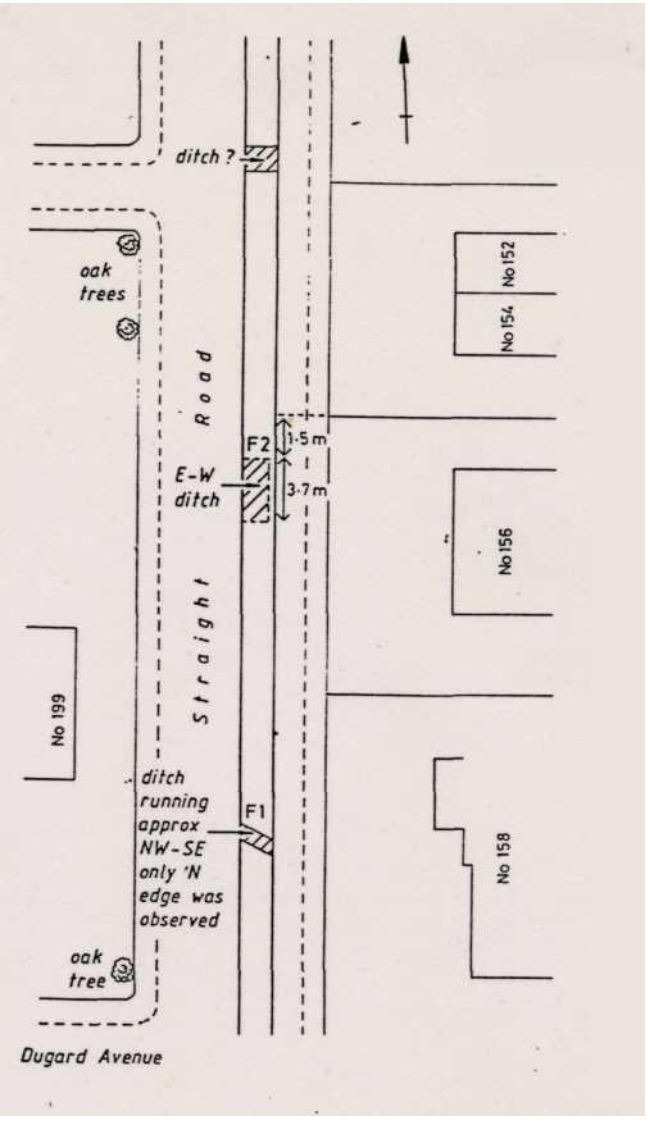


Fig 13.169. Southern Outfall Sewer scheme: Lexden and Shrub End area (7/79d).



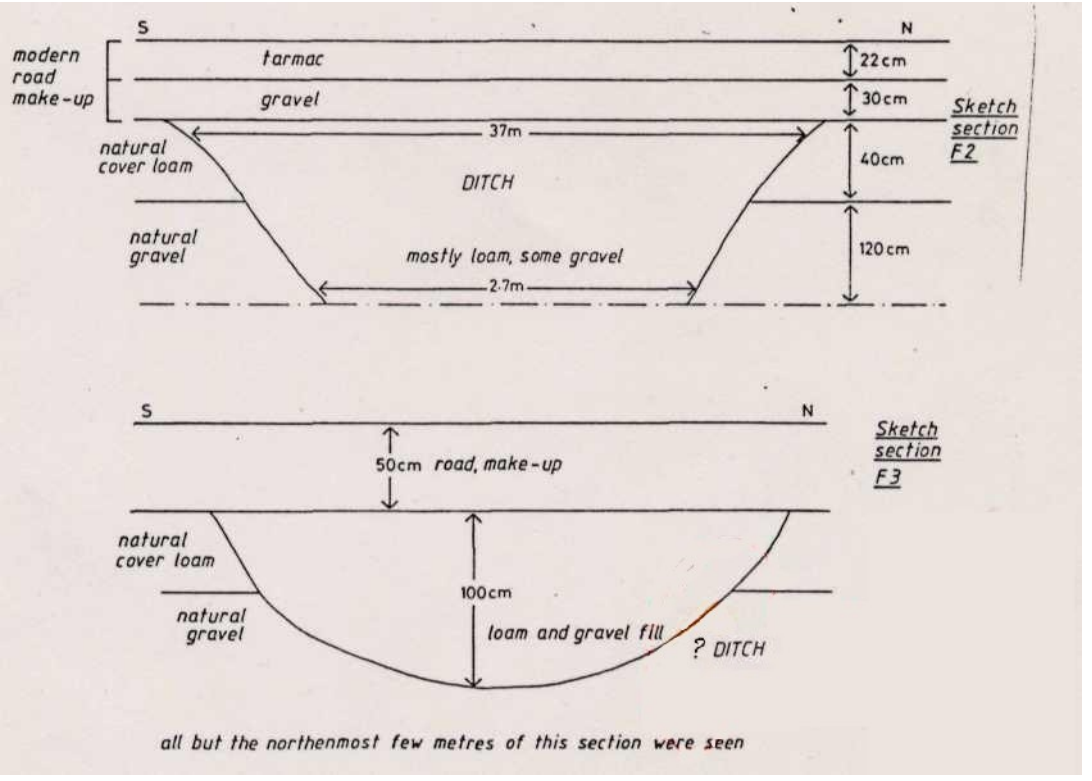


Fig 13.170. Southern Outfall Sewer scheme: Lexden and Shrub End area (7/79d).

7/79e

Balkerne Passage

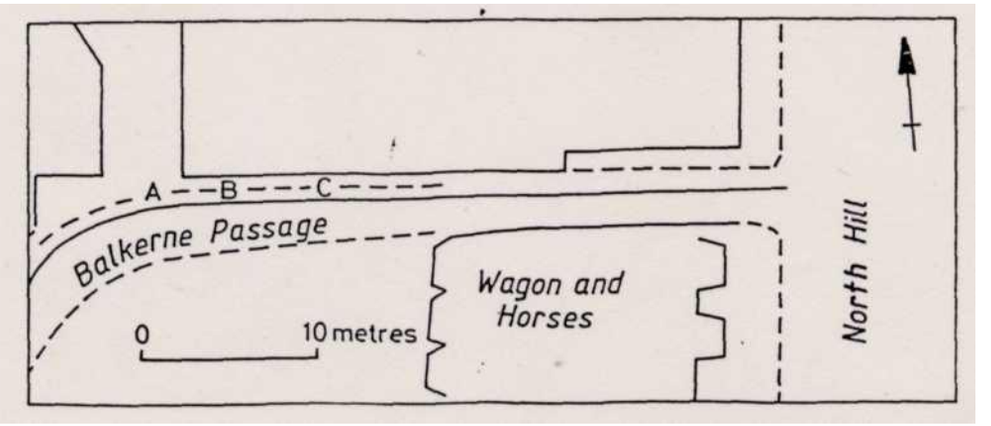
Fig 13.171

23.7.1979

Reason: sewer trench along Balkerne Passage (part of same scheme as sewer in Church Street)

Record/report: HB/PC

Sketch sections were made at three points along the side of the trench. Roman deposits lie within 0.35 m of the modern surface. Section C indicates floors within a Roman building of some kind.



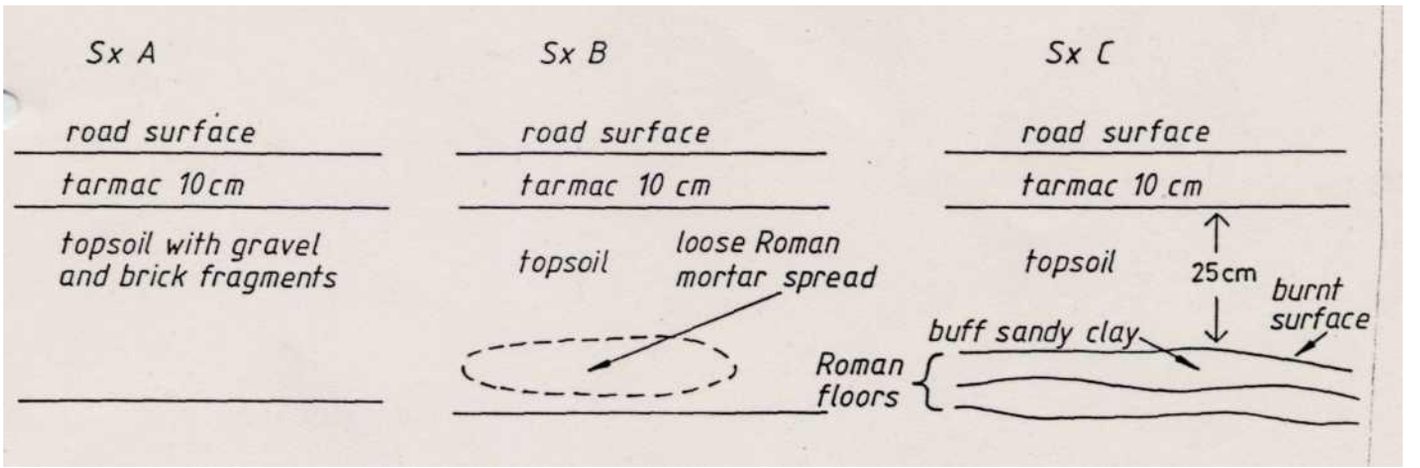


Fig 13.171. Balkerne Passage (7/79e).

7/79f

Southway House

2.7.1979 to 24.8.1979

Reason: constnjction of office block

Record/report: HB/PC

The site was visited 16 times. All negative. The building was built on piles with some strip foundations. All that was observed was black topsoil visible to the full depth of all the trenches. The maximum depth was 2.5 m. Clearly the building is on the line of the silted valley which runs east-west along the south side of the southern stretch of the town wall.

8/79

Boys High School, Wellesley Road

Fig 13.172

22.8.1979

Reason: extension to school

Record/report: CC/PC

A small foundation trench 0.95 m deep was dug in the west side of the school. The upper 0.15 m was playground surface. This overlay 0.8 m of dark brown sandy loam containing a scatter of bone fragments. Five of these were examined. These proved too small to establish whether they were human or not. The site lies within one of the Roman cemetery areas.

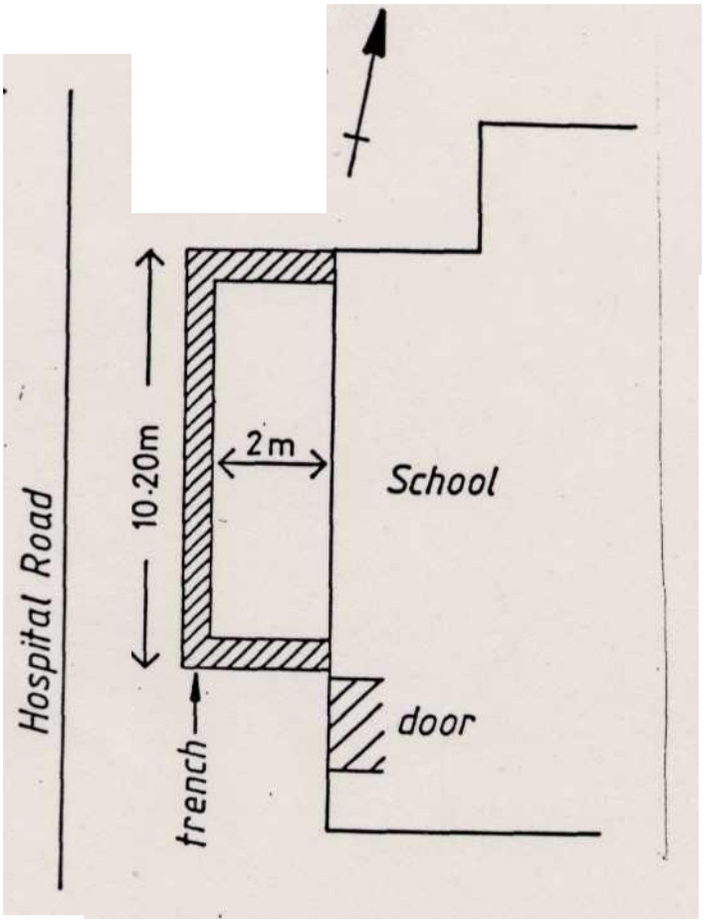


Fig 13.172. Boys High School, Hospital Road (8/79).

9/79a

Victoria Chase/North Station Road (west end of Victoria Chase)

15.9.1979 to 10.4.1980

Reason: initial site clearance, test bore holes, and trial holes on redevelopment site

Record/report: HB/PC

The bore holes produced no useful archaeological information. Part of the adjacent riverbank was removed (at SW corner of site). The bank material was fairly sterile with a few tip lines visible. Patches of modern brick and glass and tile fragments could be seen in the surface of the exposed ground. There may be a substantial accumulation of soil as on Middleborough Site D. The redevelopment project was left abandoned.

11/79a

Former mortuary at Rye Gate Street

8.11.1980 to April 1980

Reason: demolition of mortuary building and erection of a house

Record/report: HB & NAS/PC

The former mortuary was demolished in October 1979. Its foundations proved to have been very shallow and built on topsoil, the depth of which must have been in excess of 1 m. The building was probably late 19th or early 20th century. In one place a Roman layer was uncovered. It consisted of brown and yellow sandy clay with a few mortar and oyster flecks. It may have been a demolition layer of some kind although the site lies just to the north of the town wall.

11/79b

Essex County Hospital, Graduate Medical Centre

Fig 13.173

28.11.1979 to 6.12.1979

Reason: extension built on north side of existing Medical Centre

Record/report: CC/PC & CC

Seven column pockets were dug. These contained no significant features apart from a Roman pit in Pockets A & B. The pit seems to have been over 4 m wide and at least 1 m deep. It was only clipped in section.

Various finds (X205) were recovered from L2. This was a Roman deposit about 80 mm thick which probably sealed the pit. The remaining finds (X204) were unstratified.

The finds are as follows:

X204. A needle, slightly damaged near eye. Small quantity of Hadrianic-Antonine pots.

X205. Type 2 bone pin.

X205. Samian counter, stripped.

The soil descriptions for Section A:

1. 10YR 3/2 very dark brown sandy loam. Light scattering of stones. Post-Roman.
2. Dark brown loamy sand, slightly stoney. Roman
3. As 2 above but with scattering of oyster flecks. Pit fill.
4. Reddish brown sand. Natural.

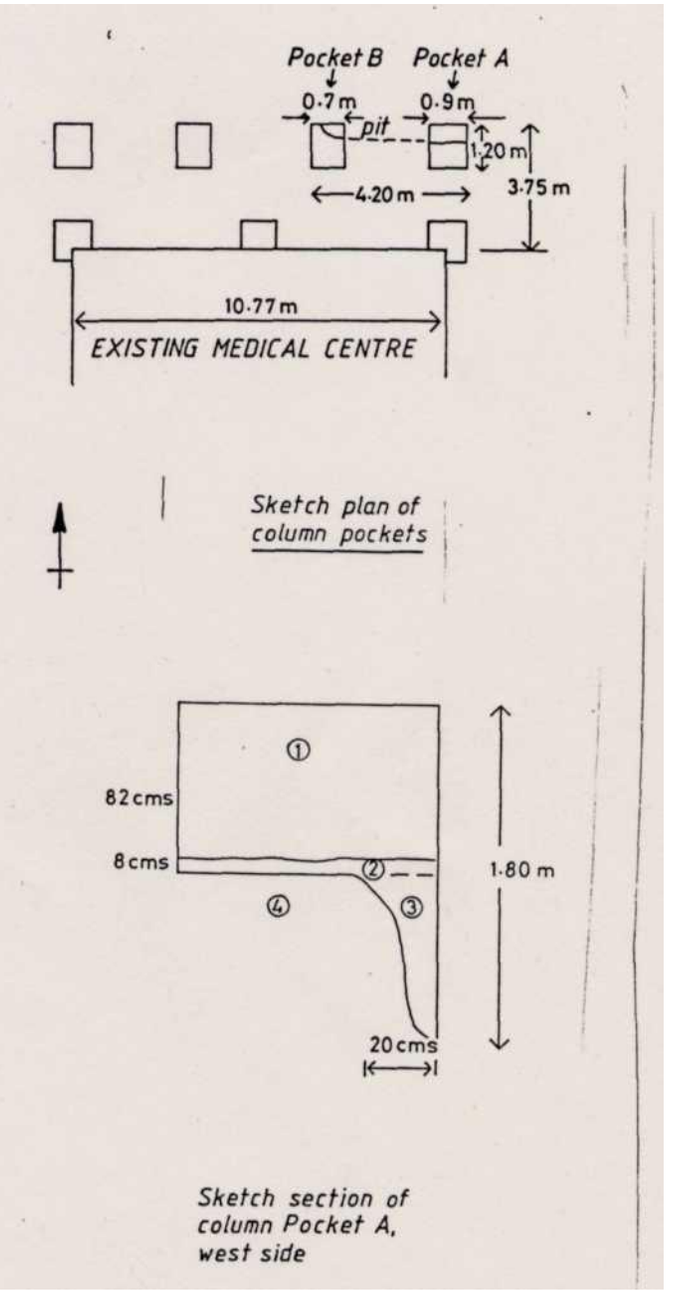


Fig 13.173. Essex County Hospital, Lexden Road (11/79b).

12/79

40 North Hill

4th to 5th December 1979

Reason: construction of rear extension

Record/report: HB/HB & PC

The extension was built at the rear of 39-41 North Hill. Trenches for foundations were dug down to a depth of 1 m. They revealed many post-medieval pits cutting through what appeared to be dumped sandy clay (Roman) containing a few lumps of white mortar, oyster shells, and one redeposited lump of *opus signinum* floor. The sandy clay varied from being quite clean on the north side to being rather mixed and disturbed on the south side. A layer of topsoil 0.25 m thick overlay the clay. The fragment of floor and the sandy clay, presumably from daub walls, indicate the likely presence of the remains of a Roman building on this site. The site ground level slopes gently from east to west.

1/80a

86 Lexden Road

January (?) 1980

Reason: the digging of a small pond in the garden, close to the rear of the house

Report: PC

A small quantity of pottery datable to AD 50-60 (X206) and two brooches were found by the owner Mrs J Berry whilst digging a small hole for a pond in her garden. The material is of Claudio-Neronian date. One of the brooches (X206) is published in *CAR* **2,** 12-13. The other is a two-piece Colchester B brooch, Type 92 (Hull forthcoming). Most of the pottery was discarded. The pottery includes *CAR* 10, no 425 and Stamp no 36.

1/80b

North Station Road (opposite No 167 (Tweeds, the bakers))

9th January 1980

Reason: hole dug in pavement on corner of Essex Hall Road and North Station Road

Record/report: HB/PC

The hole measured approximately 1.5 x 3.0 m and was about 2 m deep. The area has been badly damaged by modern services but on the SW side, the original stratigraphy was intact. The sequence is:

0—0.15/0.20 m	make-up for pavement
0.15/0.20—1.15/1.20 m	reddish brown sandy loam, overlying reddish brown gravel (natural).

Negative.

2/80a

9 Middleborough

Fig 13.174

Probably 1979 or 1980

Reason: exposed timbers in shop

Record/report: HB/PC

Photographs: Misc Sites 2, 193-7

One of the walls in the shop has an unusual arrangement of timbers which includes an odd, short, cylindrical upright with a swollen centre. It is questionable if this is its original position.

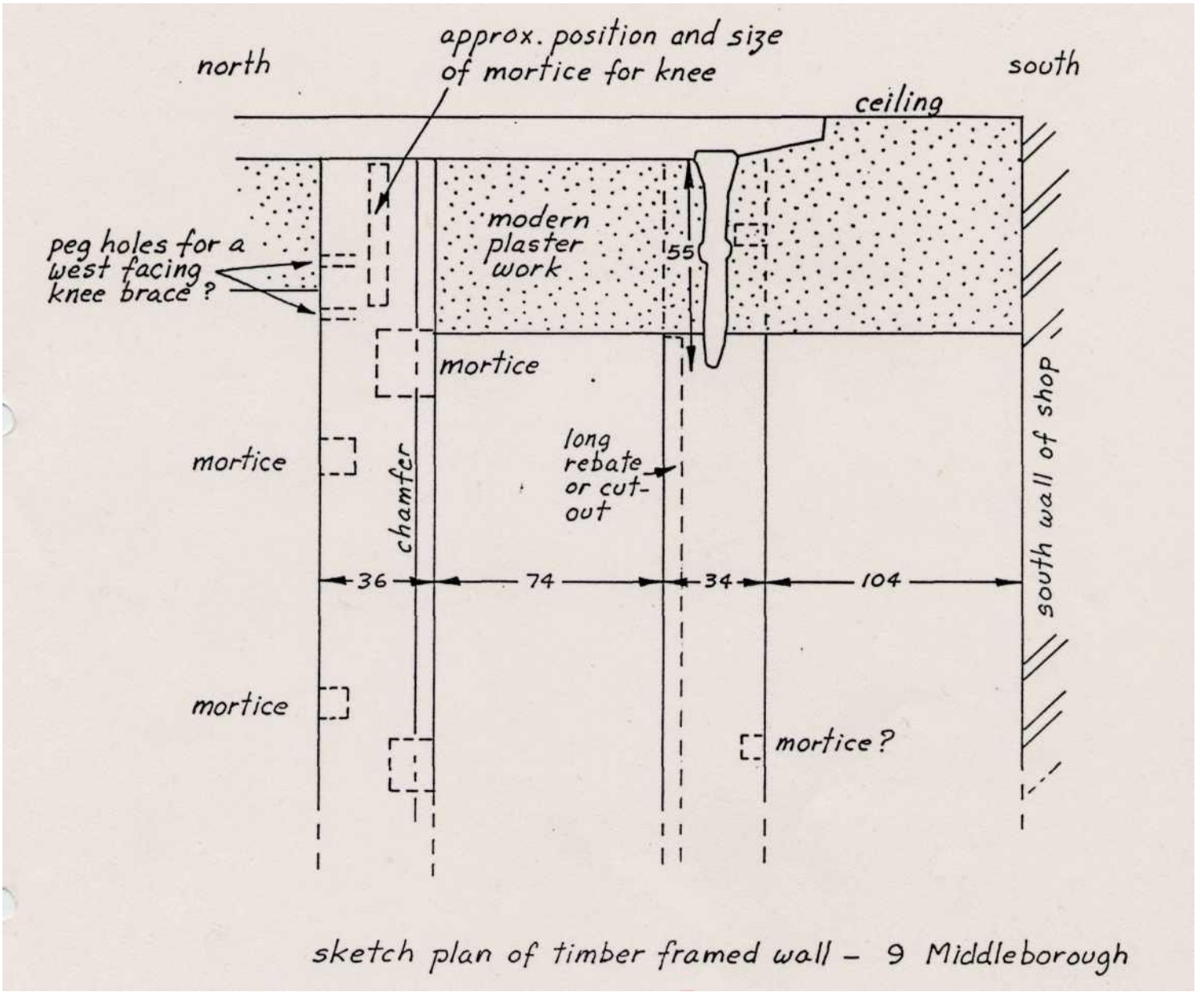


Fig 13.174. 9 Middleborough (2/80a).

2/80b

22 Lexden Road

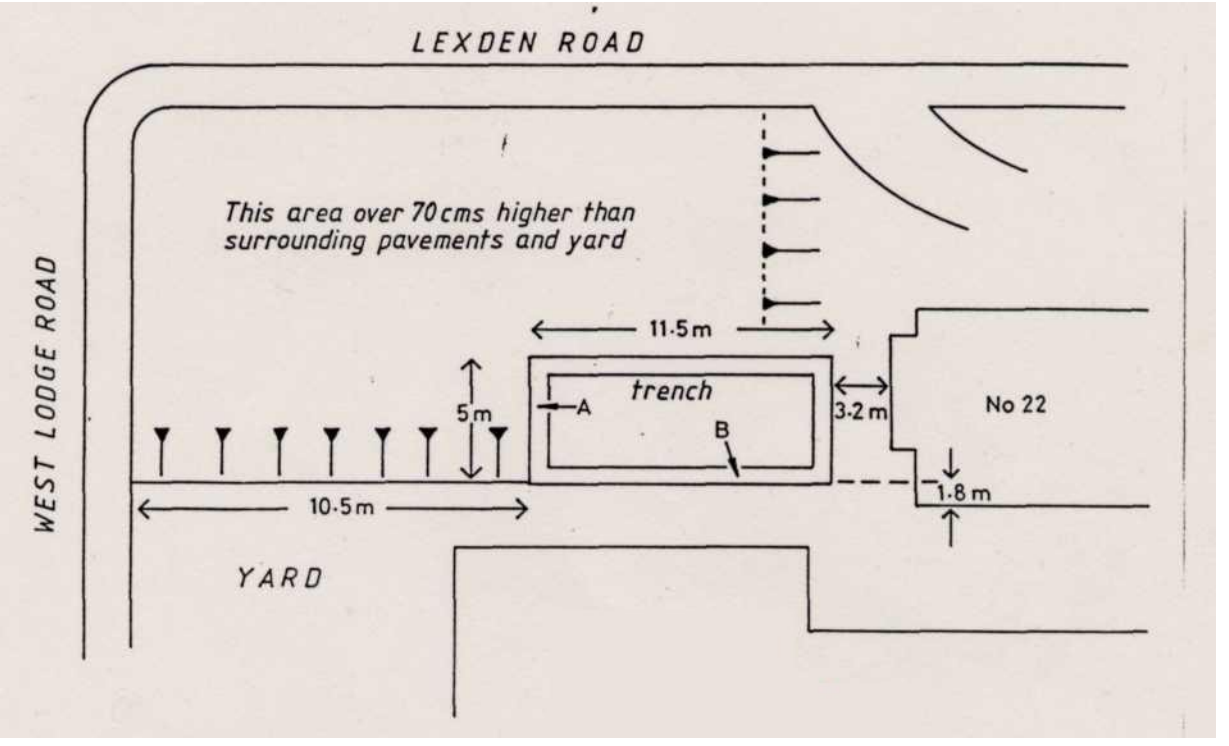
Fig 13.175

7.2.1980 to 19.2.1980

Reason: erection of single-storey building in the garden of 22 Lexden Road

Record/report: CC/PC

The site lies at the corner of West Lodge Road and Lexden Road on, or very close to, the sides of Hull Graves 624 and 625 (*CAR* **9**)**.** Negative.



Fill.- A *Natural sand*

B *Brown loamy sand above natural, apparently due to gradual downward inclination in level of natural towards SE corner of site*

Fig 13.175. 22 Lexden Road (2/80b).

3/80

North Station Road, near Clarendon House

10th March 1980 and 10th April 1980

Record/report: HB/PC

A trench was dug SW-NE across lawn on corner of Clarendon Way and North Station Road. The top 0.2 m consists of make-up for the pavement (excluding the lawn). Below this is 0.2 m of orange gravel, also modern. Below the latter is 0.6 m of sandy topsoil with no features visible in it. The trench was later extended by 2 m into the road. No indications were noted of a metalled road (a Roman one) or of any other archaeological features.

4/80a

Cowdray Crescent

Fig 13.176

April 1980

Reason: service trenches dug across the south-east part of the crescent

Record/report: HB & PC/PC

Photographs: Misc Sites 2, 198-200

Four trenches were dug. A right-angled corner of a Roman wall was uncovered in Trench 3. It had tile on top with ?septaria below. The top of the wall was 0.5 m below the modern surface. The south face was robbed. Its depth could not be established. Roman road gravel belonging to a north-south street was exposed in Trench 2 0.4 m below the modern ground level. Trenches 1 and 4 seemed to be cut through material mainly if not entirely of modern date and were thus not helpful in establishing the exact position of the road.

Trench 1 was 1.25 m deep. Modern or post-medieval bricks occurred for the full depth of the trench. It is just possible that Roman levels were encountered at the very base. The lower half of Trench 2 cut through 0.2 m of street gravelling. The full depth of the latter could not be established.

Trench 3 was in two parts, the northern one of which cut into the Roman wall. Elsewhere was a damaged Roman floor of *opus signinum* over ?make-up or sandy clay. There were lots of lenses of bare gravel in section but no clear metalling was observed in the trench, although there was very hard material at 1.6 m depth which may have been part of an early road.

Trench 4 was not helpful.

The west edge of the street must lie somewhere between the foundation and the metalling found in Trench 2.

Significant were various finds of marble in Trenches 3 and 4 (X208) which add to the already substantial collection from the temple precinct *(CAR* **2**, 28-9).

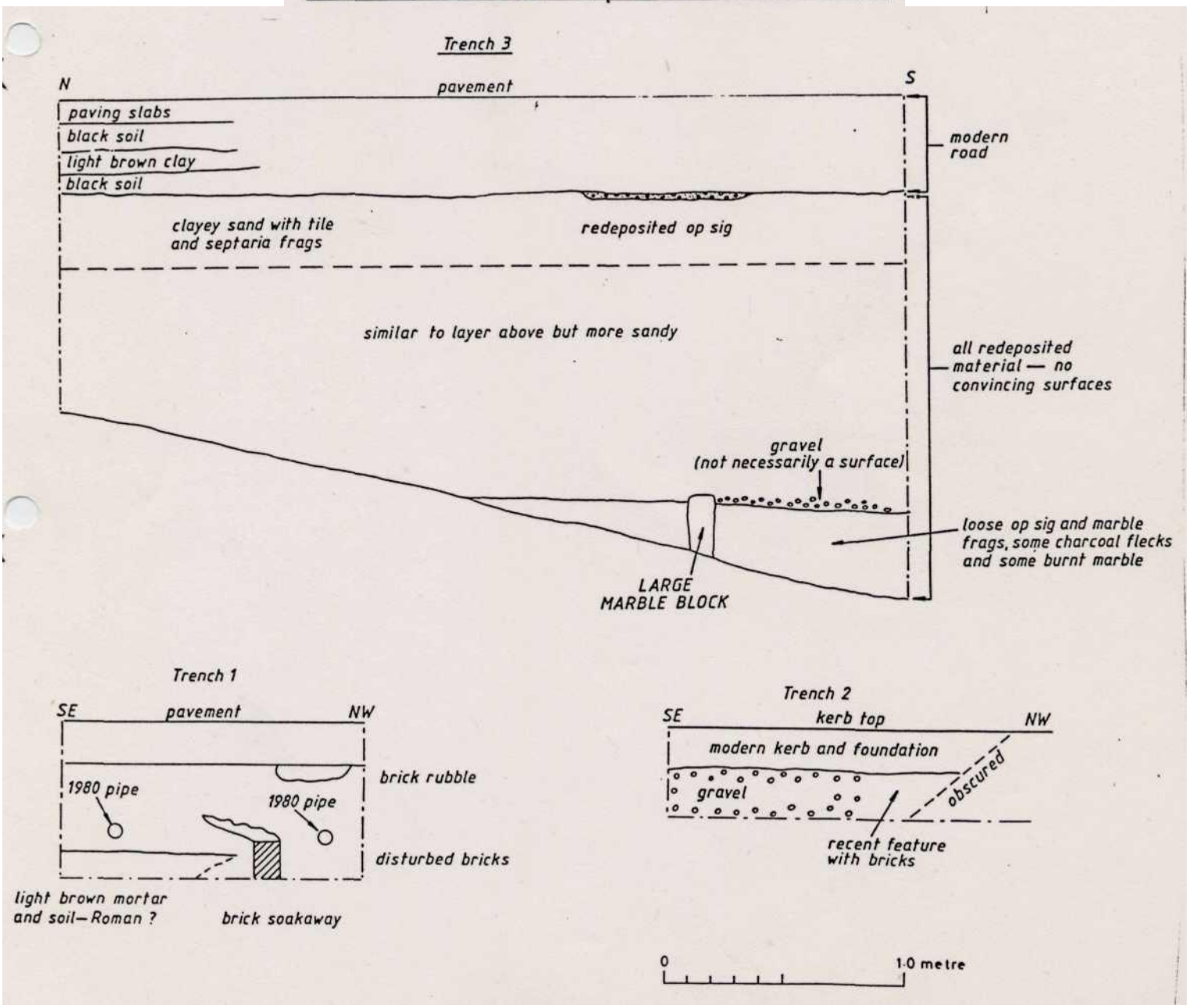


Fig 13.176. Cowdray crescent (4/80a).

4/80b

St Mary's Convent School, Priory Street

29.4.1980

Reason: construction of small building near south end of Fennings Chase

Record/report: NS/PC

The foundation trenches were about 1.25 m deep. They cut only black topsoil. Negative.

5/80a

Siege House, 75 East Hill

Figs 13.177-8

June 1980

Reason: conversion of Old Siege House into a restaurant and offices

Record/report: NS/PC

The conversion was carried out in such a way that no original timbers were removed.

Two sketches were made showing broad details about the roof structures and the timbers exposed on the ground floor.

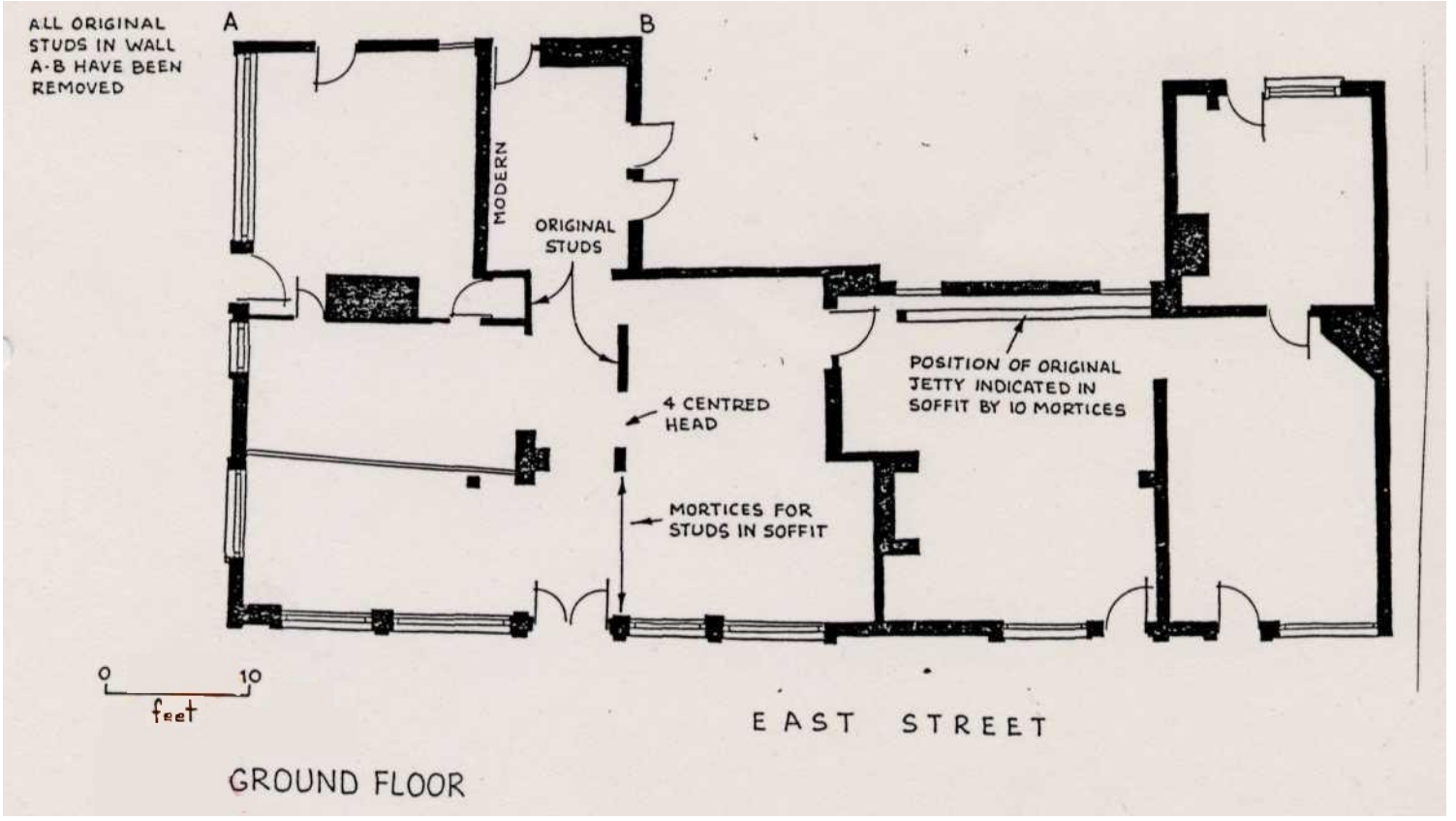


Fig 13.177. Siege House (5/80a): ground plan.

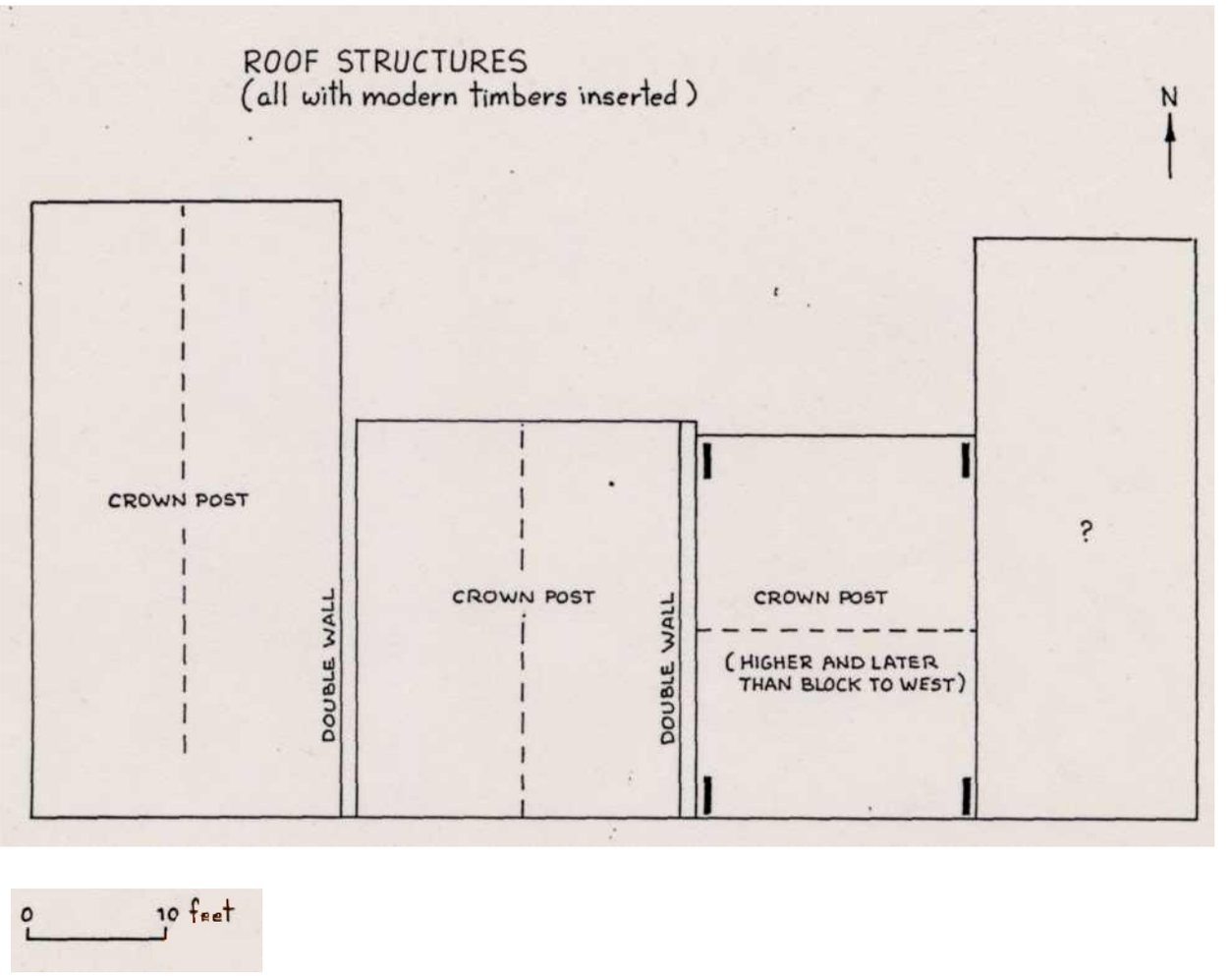


Fig 13.178. Siege House (5/80a): roof plan.

5/80b

East Stockwell Street (south end)

1st & 2nd May 1980

Reason: replacing the eastern side of the street with a new surface of panel bricks

Record/report: HB/PC

Only the eastern side of the operation was seen although the whole southern end of the street was replaced (and 'pedestrianised'). The existing surface was removed to a depth of about 0.35 m. The area observed stretched down west side of 125 High Street as far as 1 East Stockwell Street (then Cullingfords' print works and subsequently Vineyard Press). Negative.

6/80a

70-4 Northgate Street

Figs 13.179-199

June 1980 to August 1980

Reason: demolition of two houses and redevelopment of site for a two storey office block

Record/report: NS/PC

Photographs: Misc Sites 1, 96-121

The houses contained cellars which extended to the frontage on Northgate Street. Projecting through both of the cellar walls adjacent to the street is a length of the Roman town wall. This appeared as a strip, typically 0.6 m high and 0.5 m deep, between the floor and the base of each cellar wall. The top of the projecting masonry is approximately 1 m below the level of Northgate Street. Only the cellars in Nos 72 and 74 could be inspected although a similar cellar was believed to exist in No 70.

After demolition of the houses, the top of the wall was exposed in two trial holes, where the most northerly part of it was found to be 3 m from the north edge of the pavement of Northgate Street indicating that the position of the south face of the wall must coincide roughly with the northern edge of the pavement on Northgate Street. The trial trenches cut through two to three metres of dark topsoil with some yellow gravelly patches.

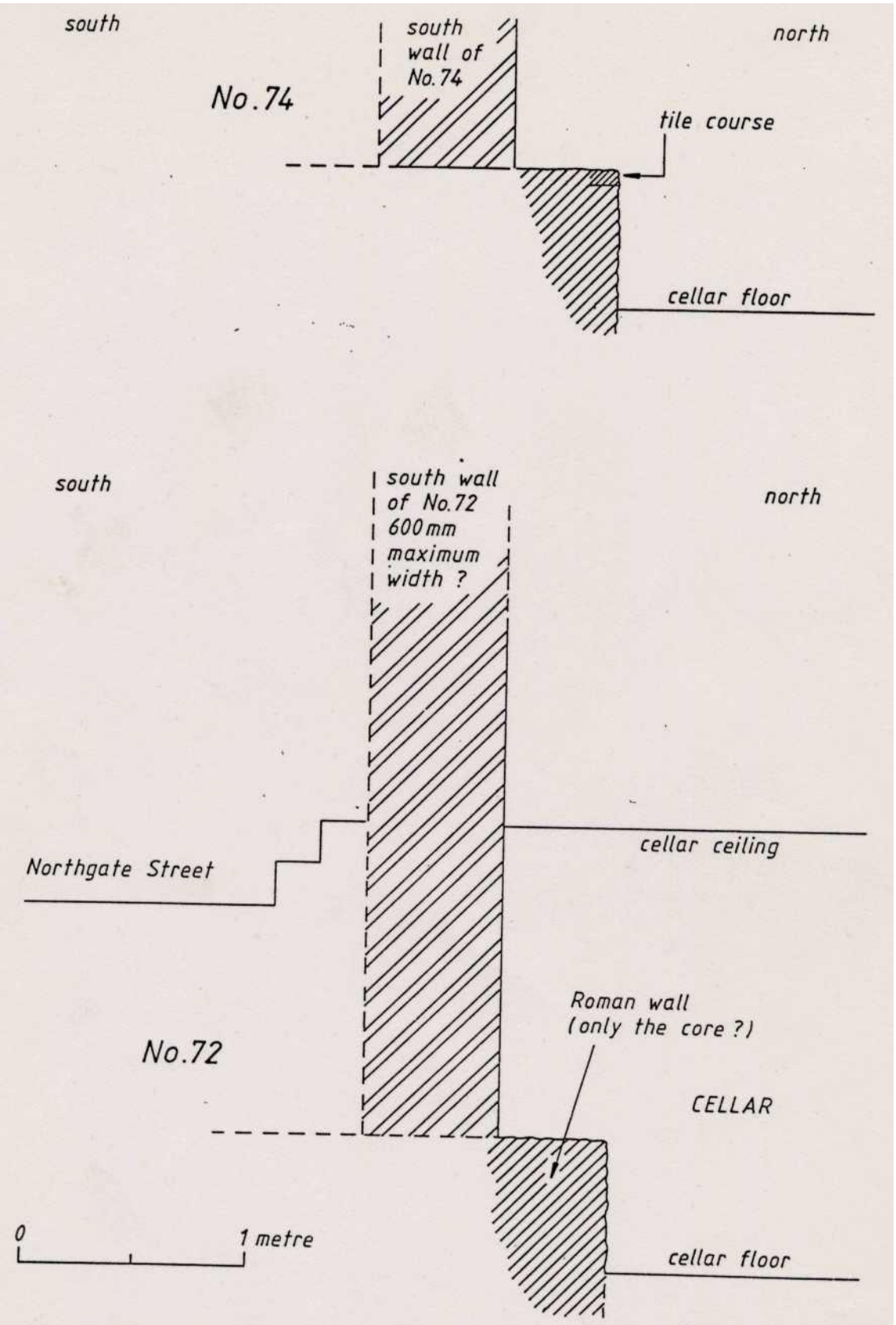


Fig 13.179. 70-4 Northgate Street (6/80a): Roman town wall.

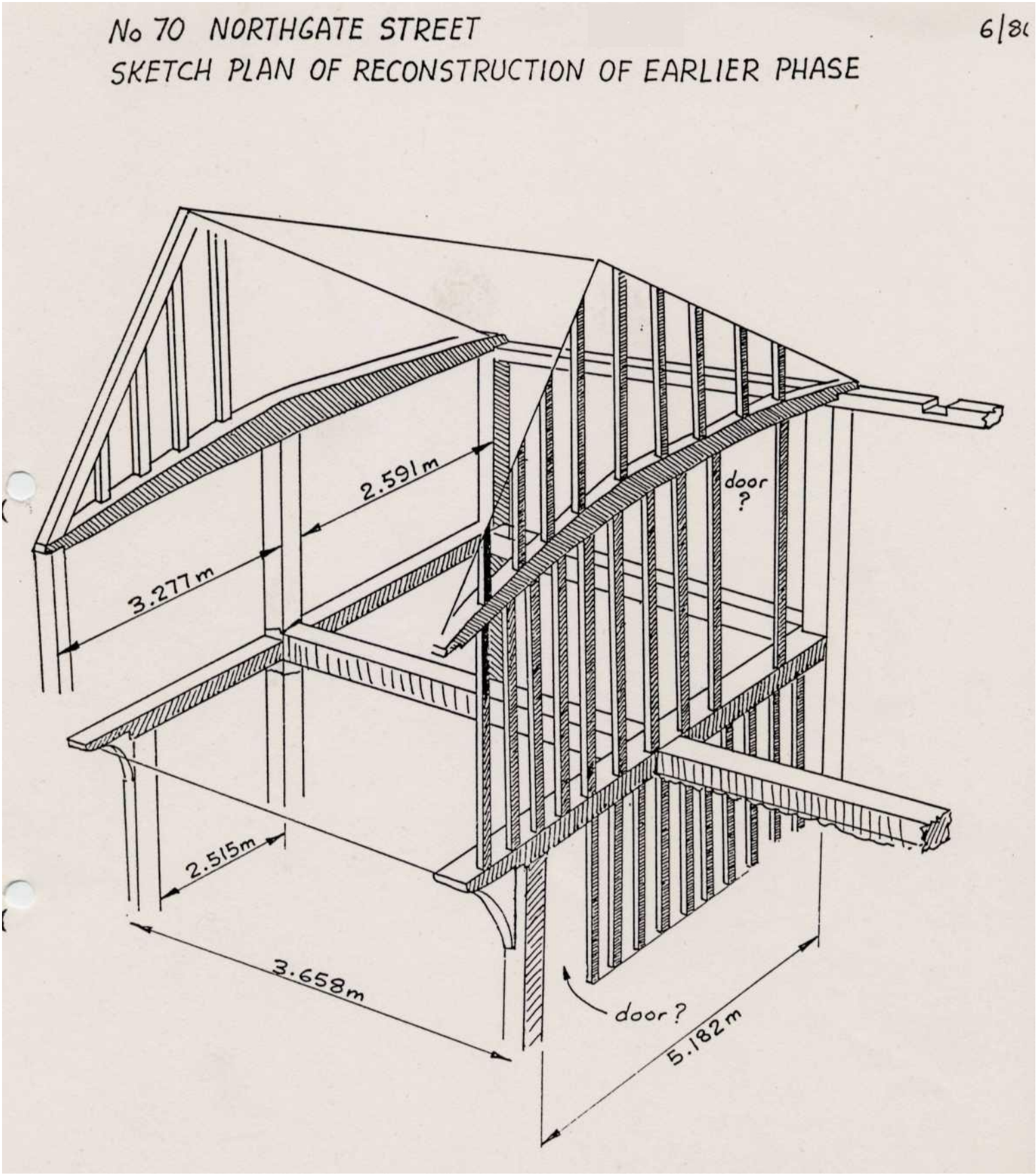


Fig 13.180. 70-4 Northgate Street (6/80a): survey.

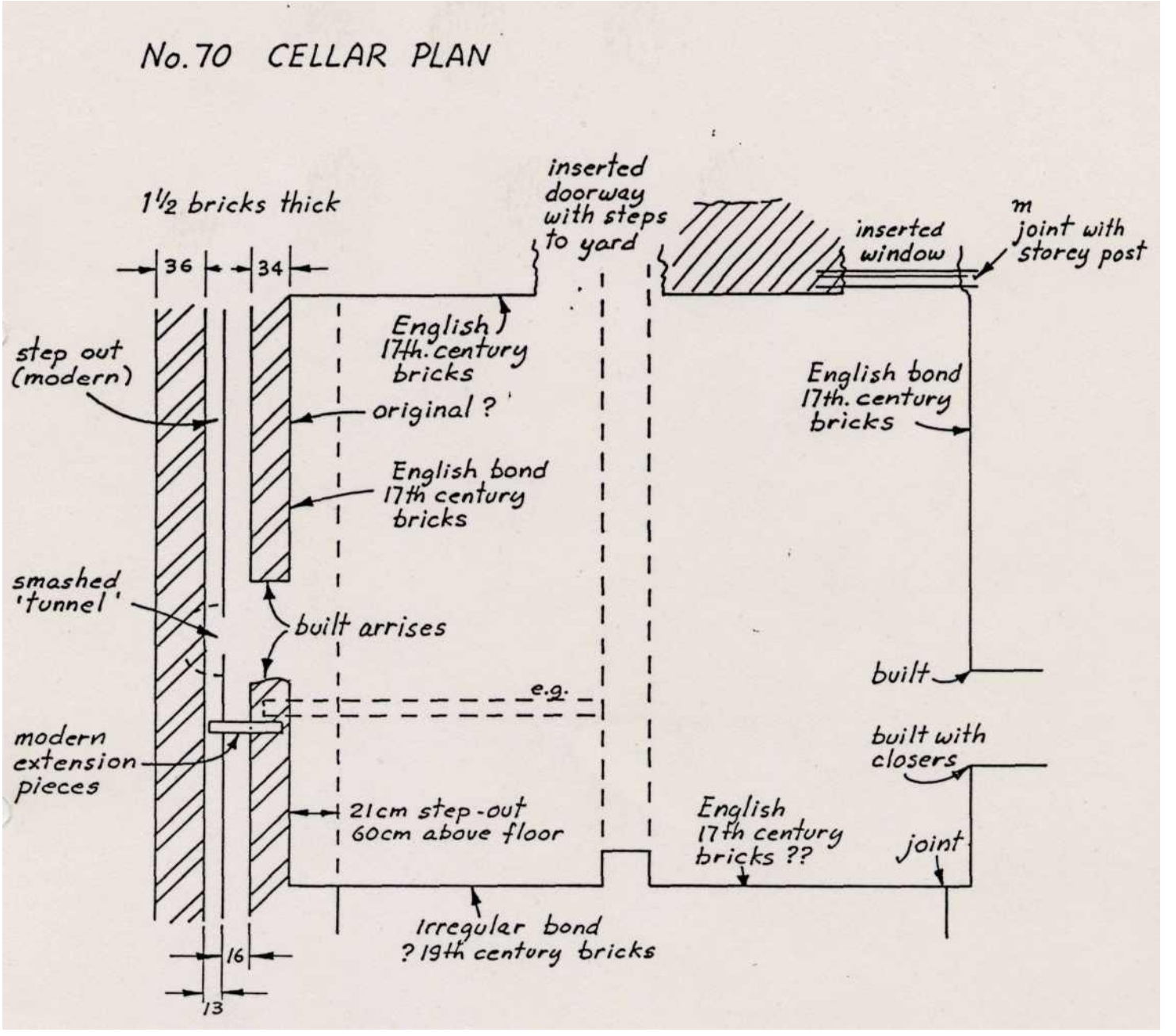


Fig 13.181. 70-4 Northgate Street (6/80a): survey.

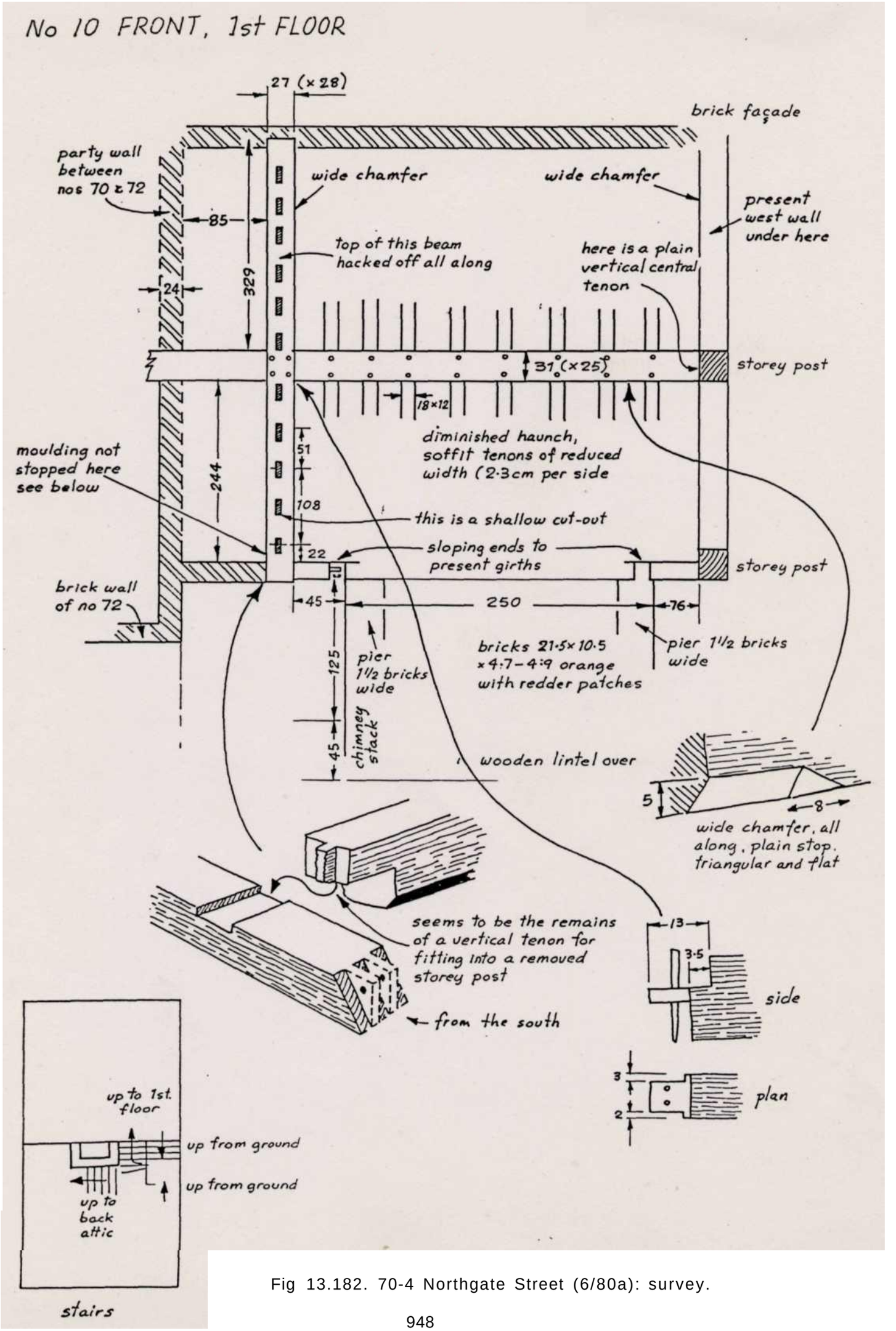


Fig 13.182. 70-4 Northgate Street (6/80a): survey.

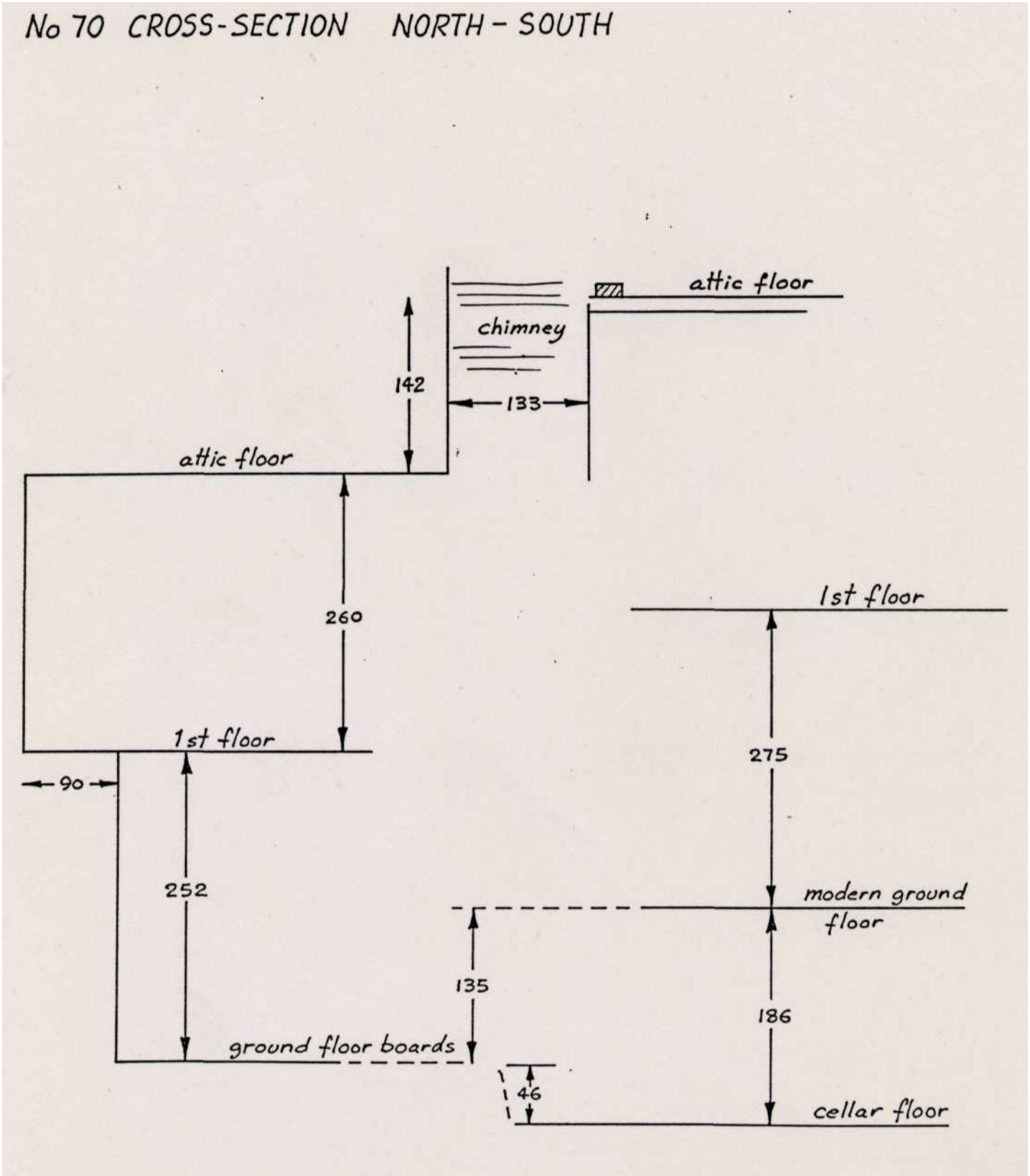


Fig 13.183. 70-4 Northgate Street (6/80a): survey.

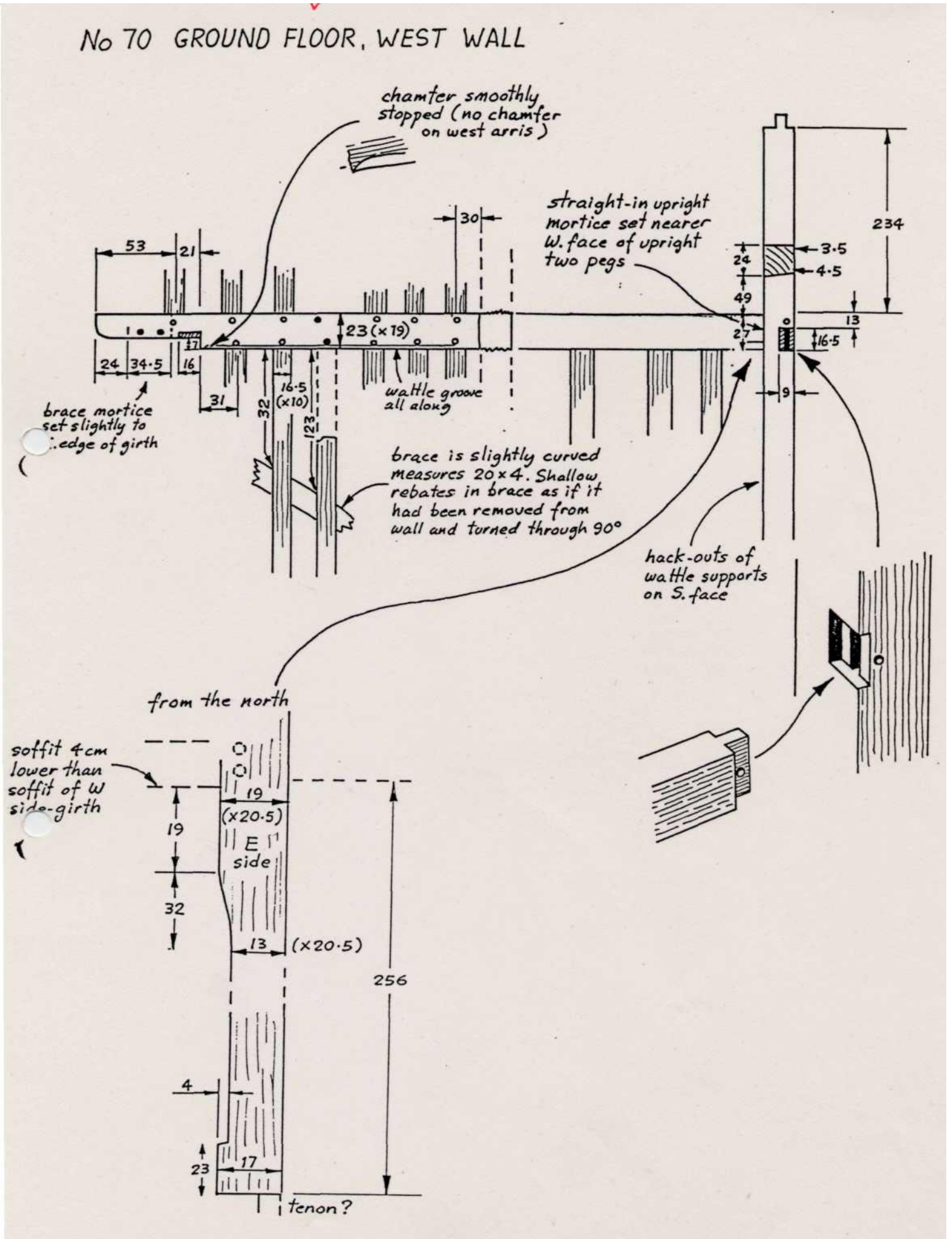
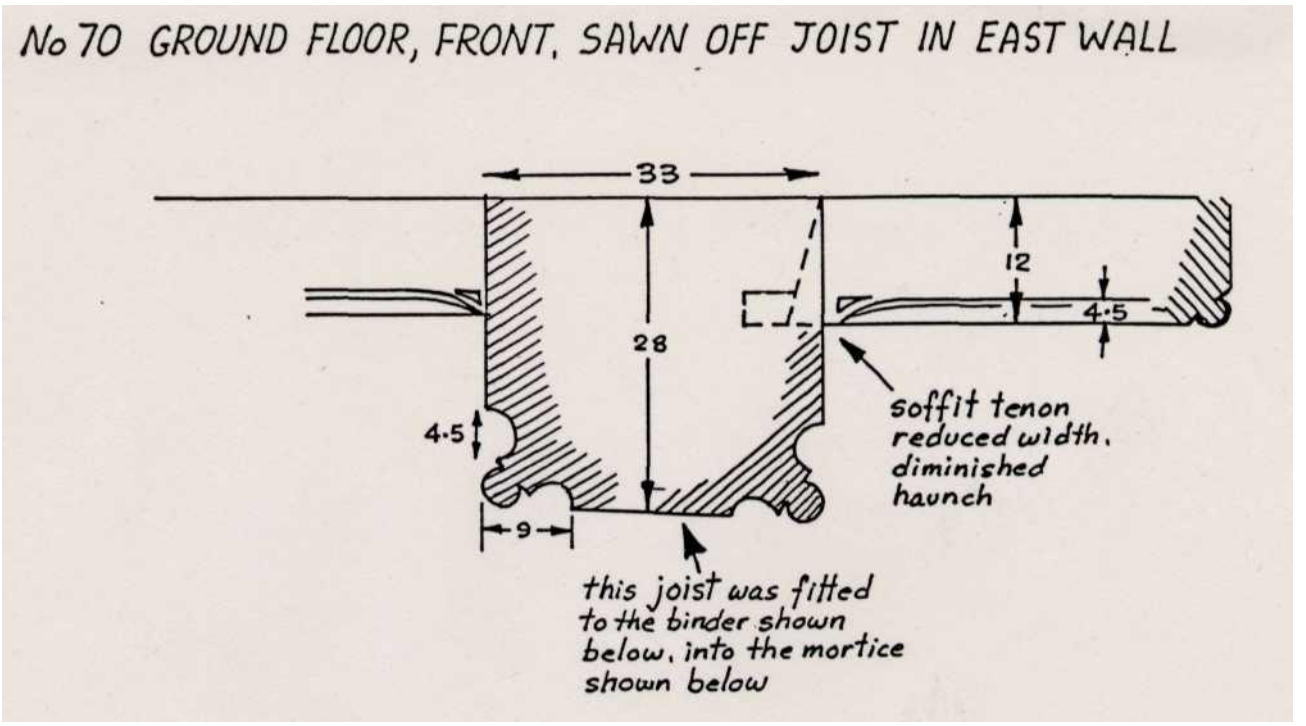


Fig 13.184. 70-4 Northgate Street (6/80a): survey.



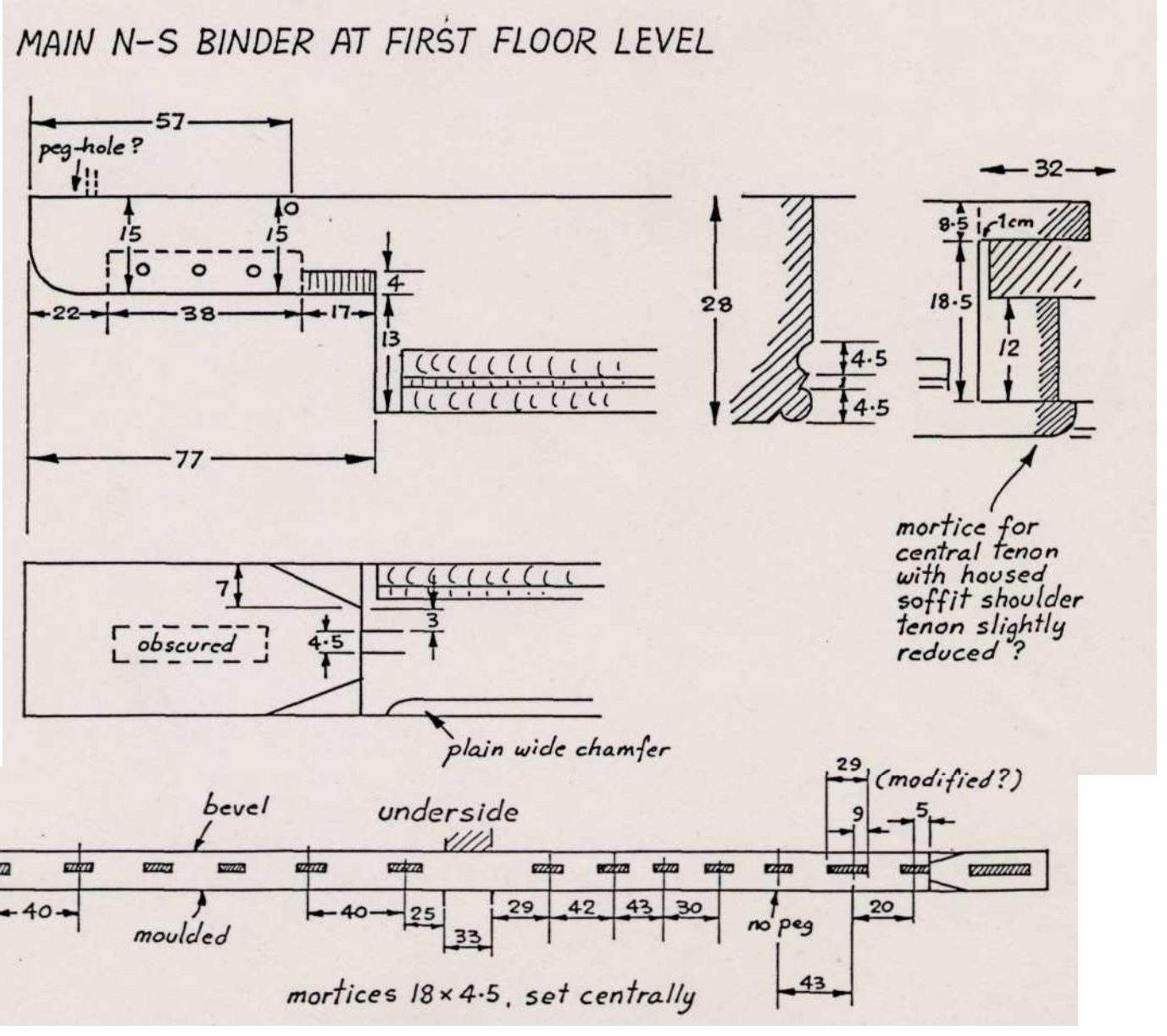


Fig 13.185. 70-4 Northgate Street (6/80a): survey.

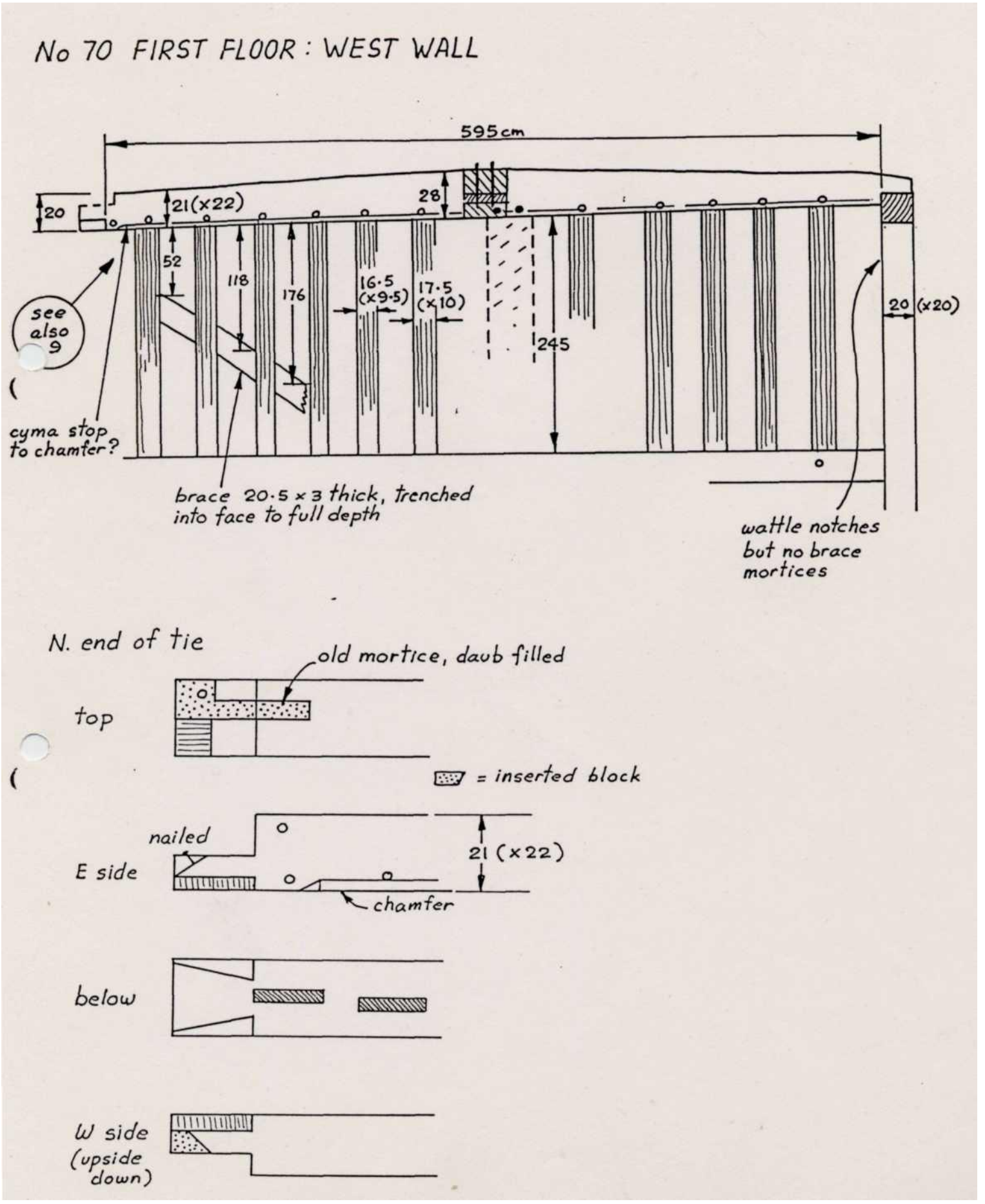


Fig 13.186. 70-4 Northgate Street (6/80a): survey.

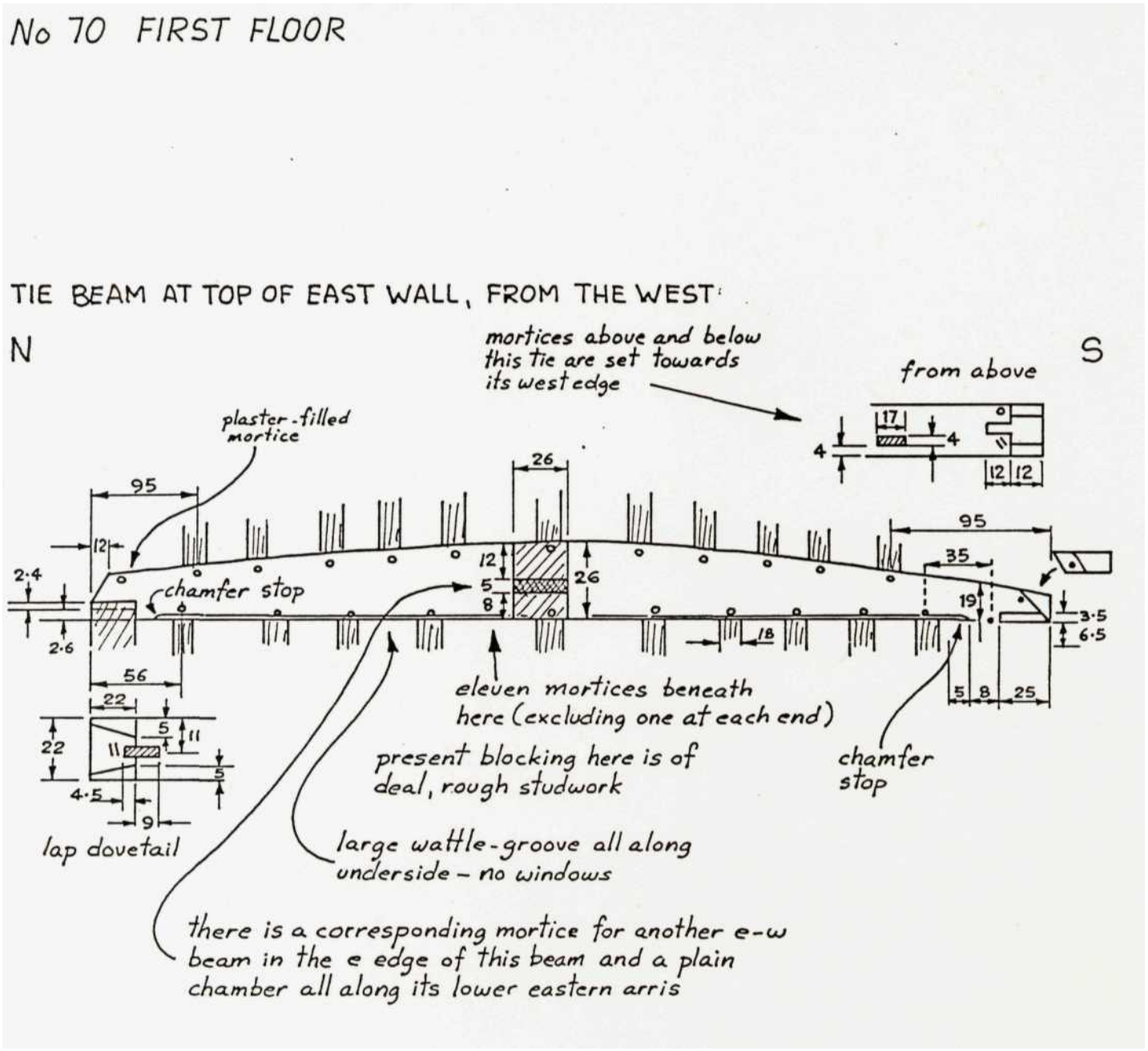


Fig 13.187. 70-4 Northgate Street (6/80a): survey.

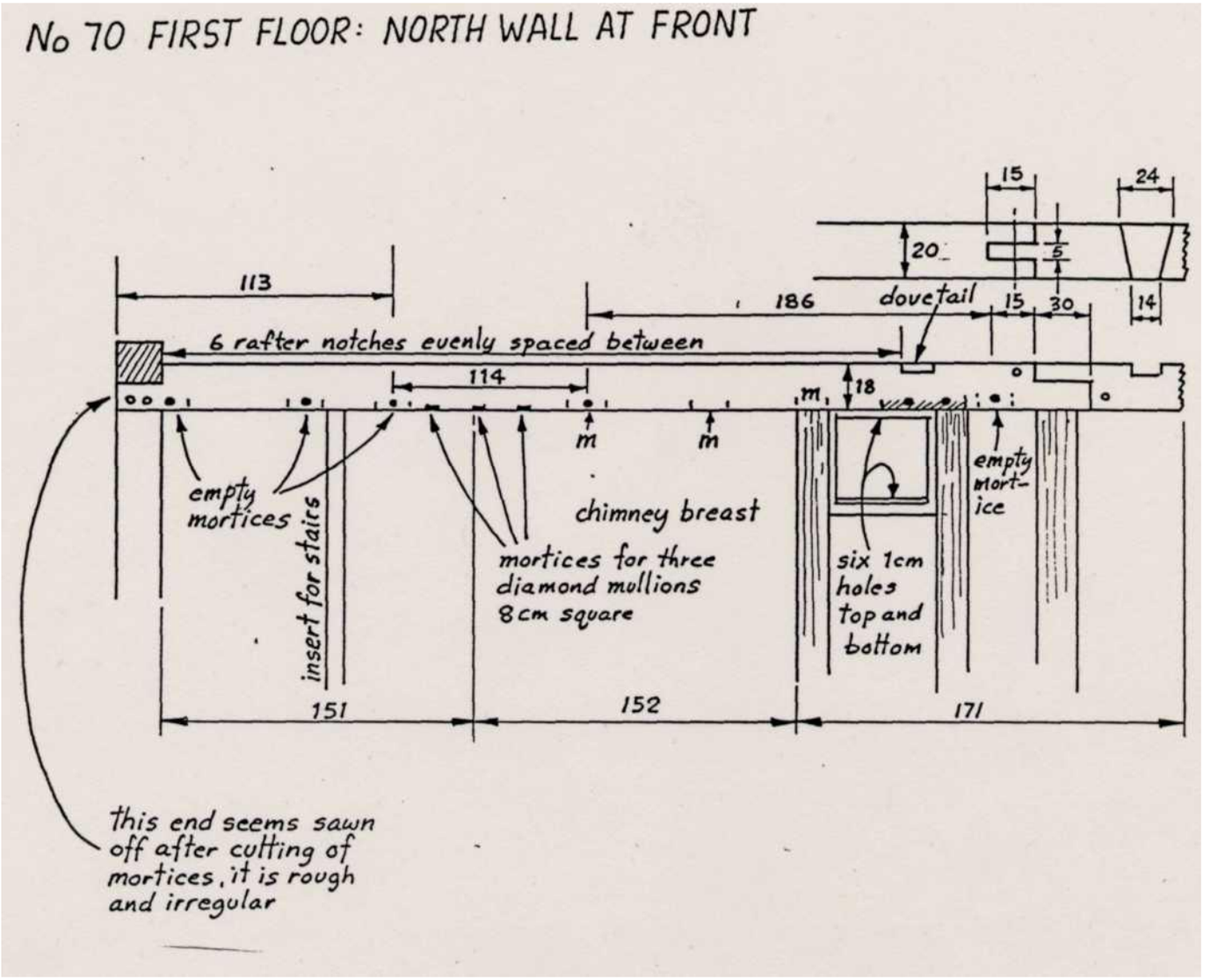


Fig 13.188. 70-4 Northgate Street (6/80a): survey.

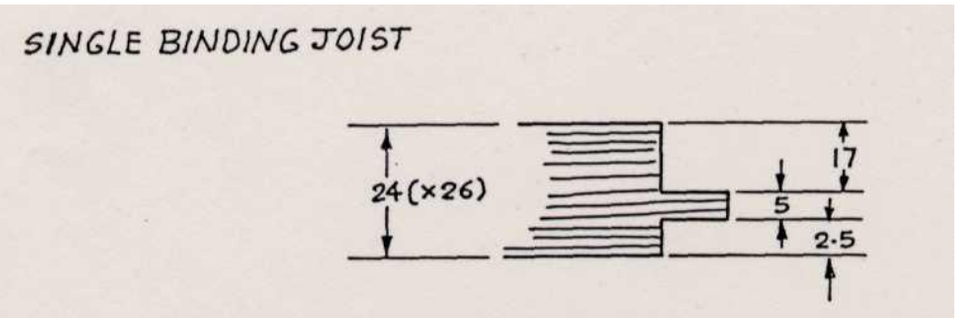


Fig 13.189. 70-4 Northgate Street (6/80a): survey.

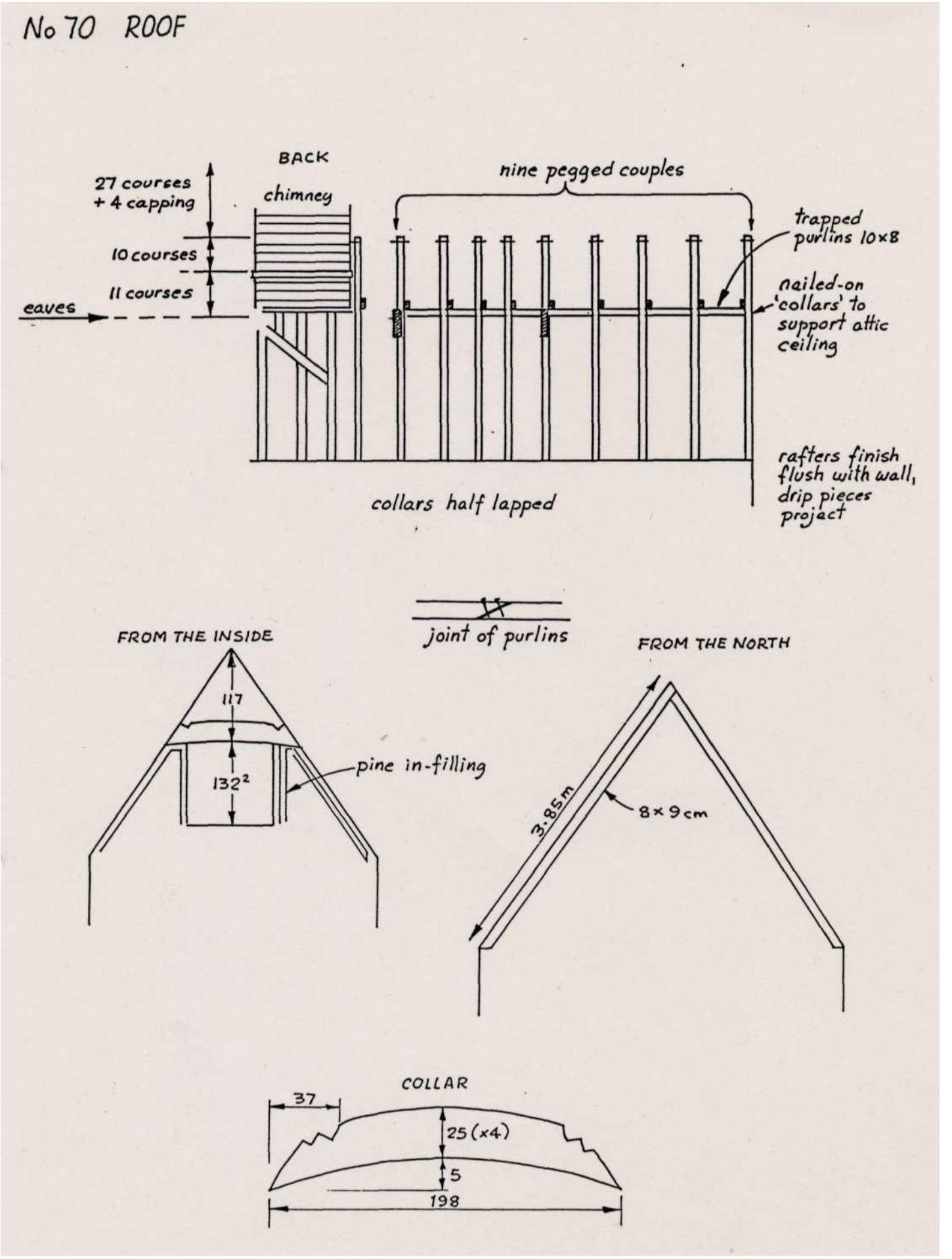


Fig 13.190. 70-4 Northgate Street (6/80a): survey.

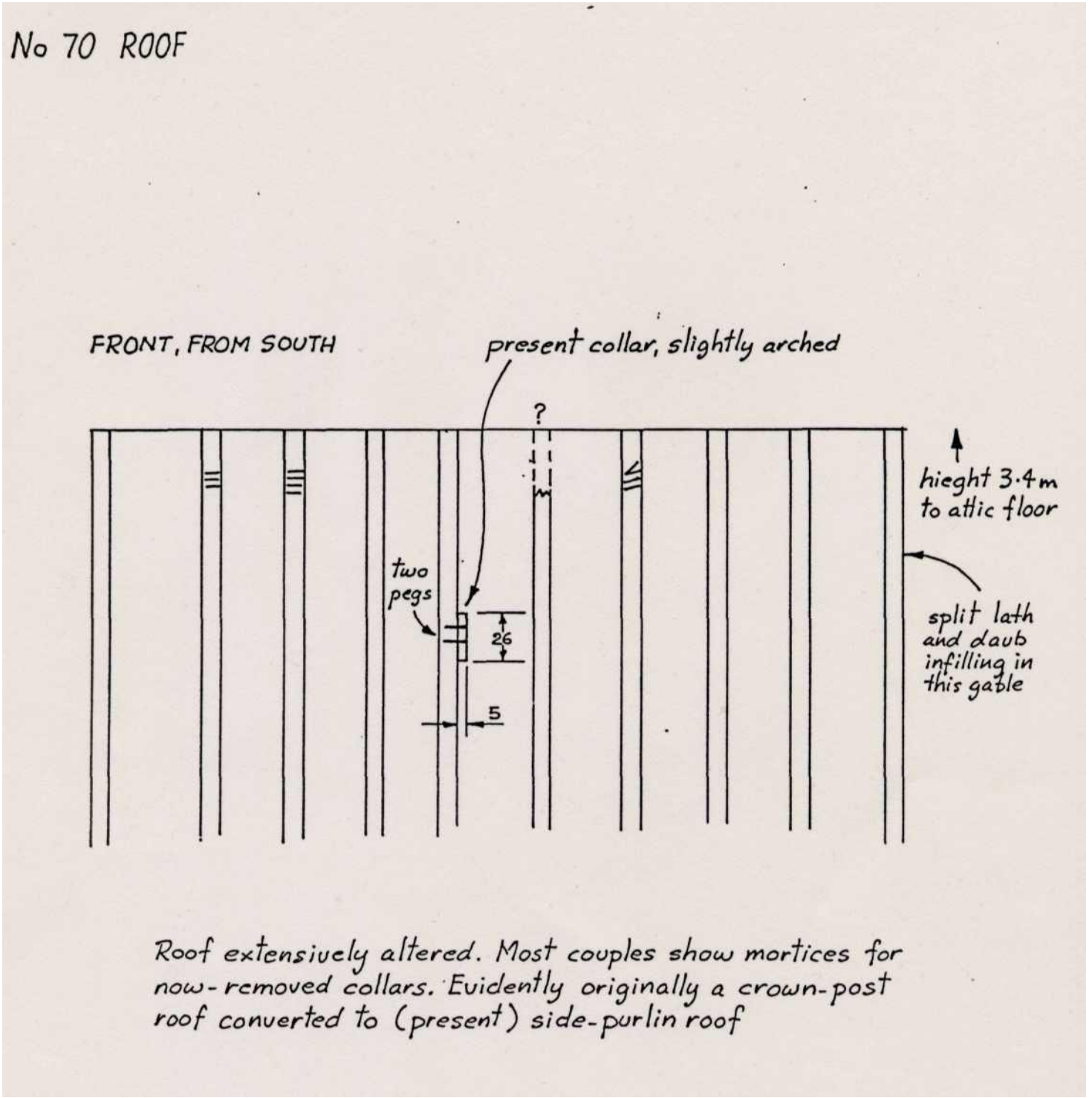


Fig 13.191. 70-4 Northgate Street (6/80a): survey.

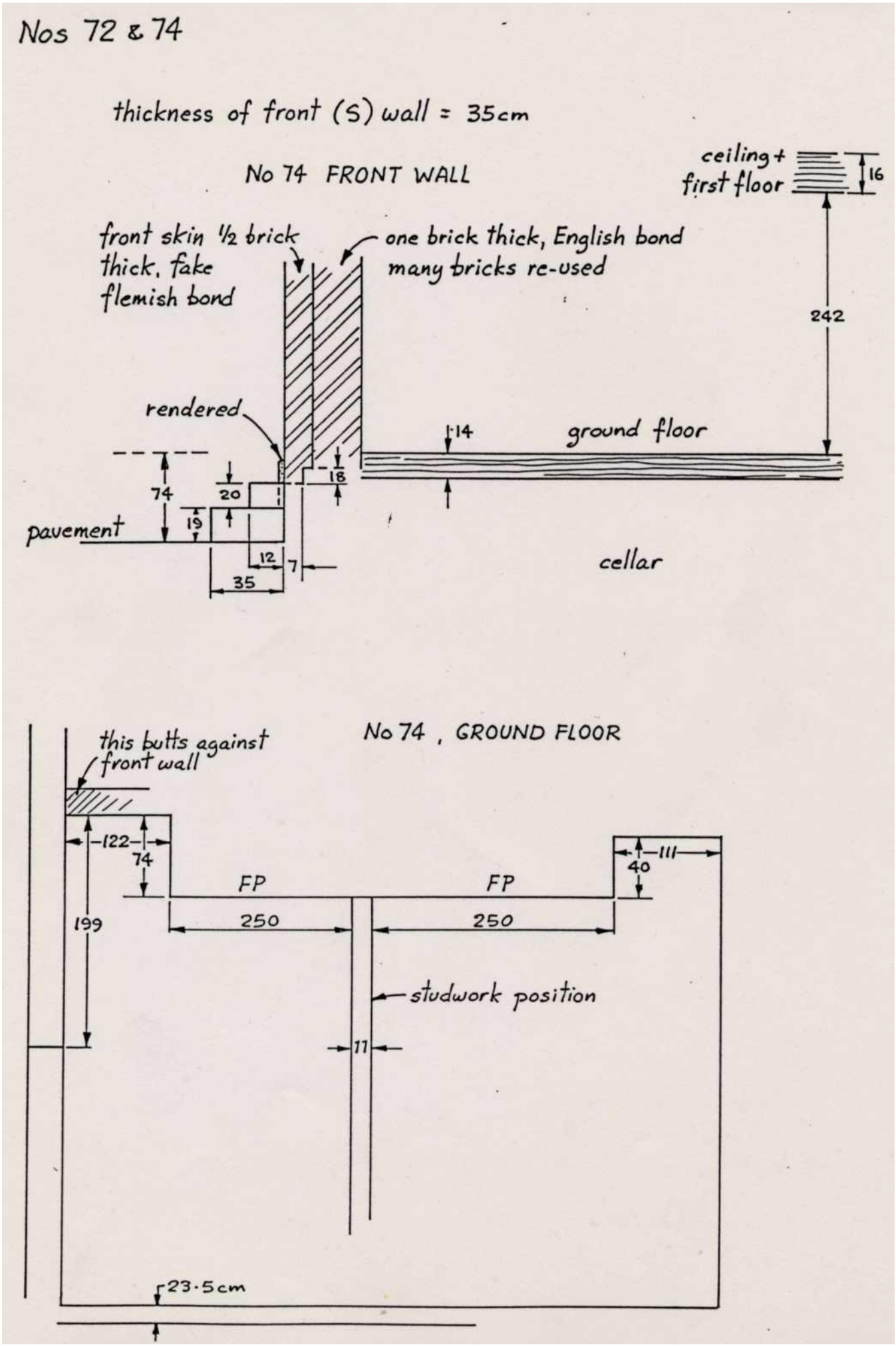


Fig 13.192. 70-4 Northgate Street (6/80a): survey.

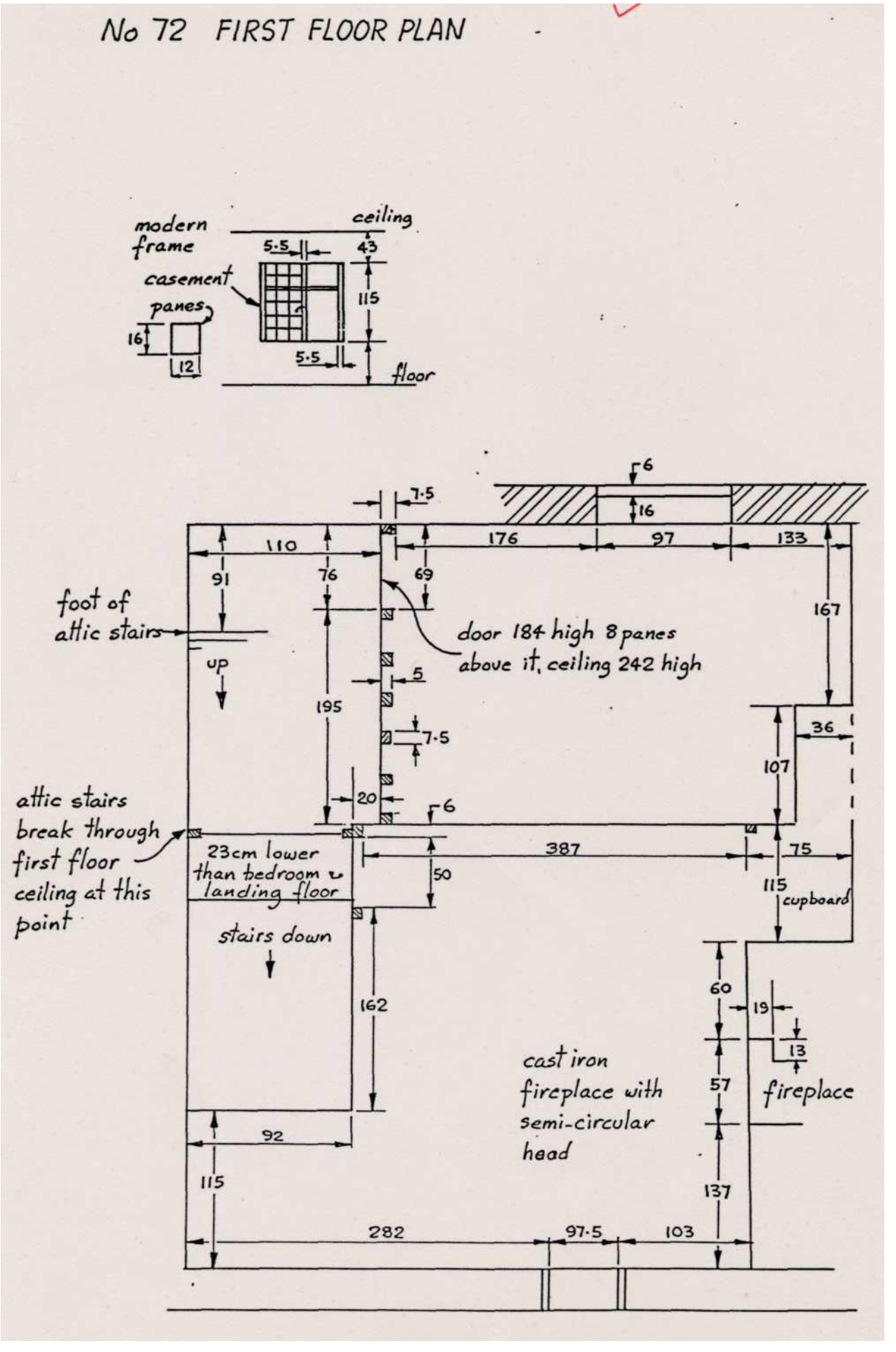
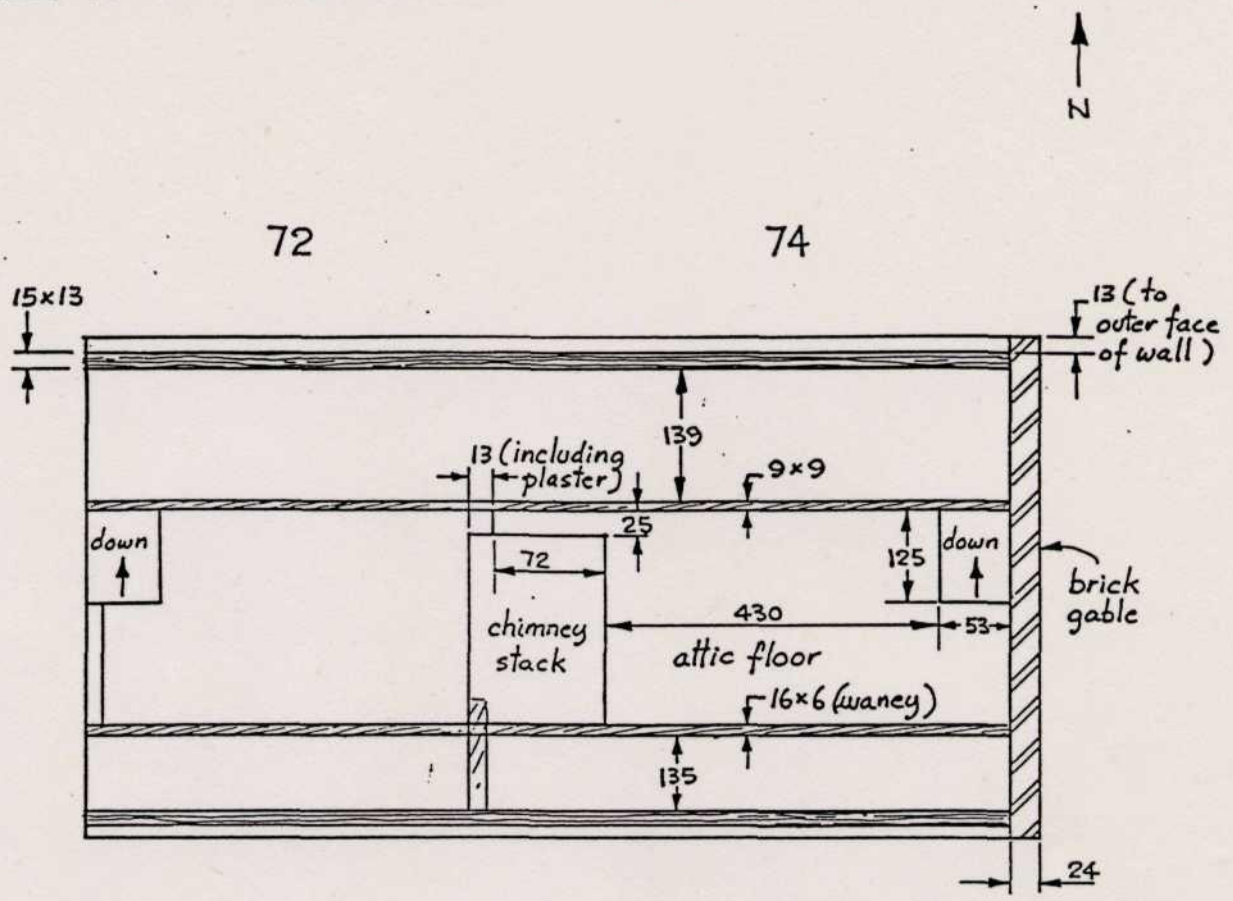


Fig 13.193. 70-4 Northgate Street (6/80a): survey.

Nos 72 & 74 ATTIC FLOOR: PLAN



Attic joists are 5×15, on edge, at 30·31cm centres
some are up to twice as wide

Bricks are 22·7 – 23 × 11·4 × 6·3 – 6·5, orange, frogless
clean-looking fabric neatly made

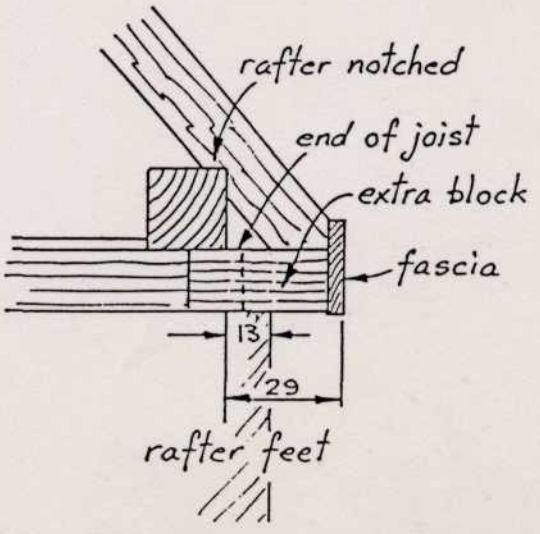


Fig 13.194. 70-4 Northgate Street (6/80a): survey.

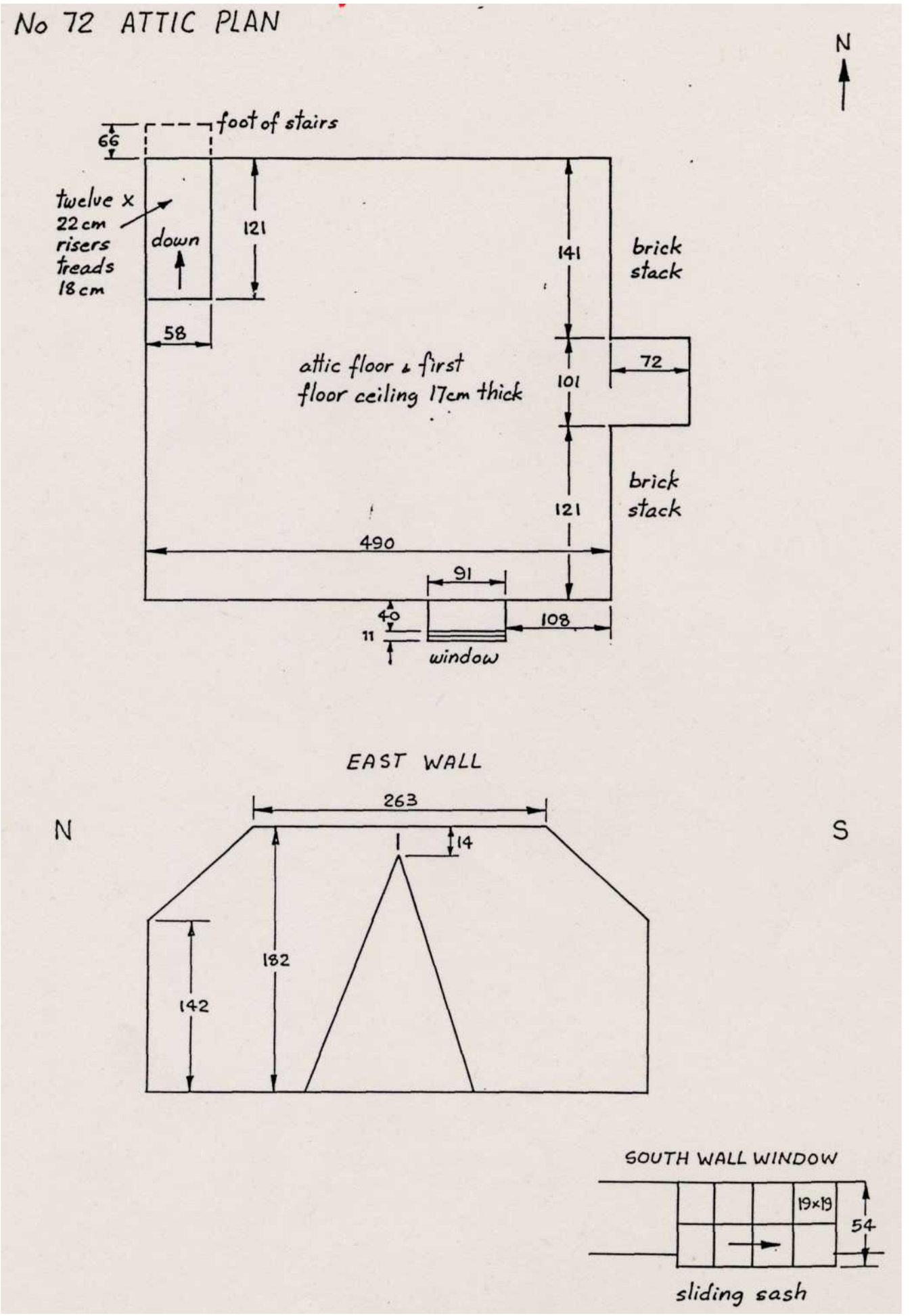


Fig 13.195. 70-4 Northgate Street (6/80a): survey.

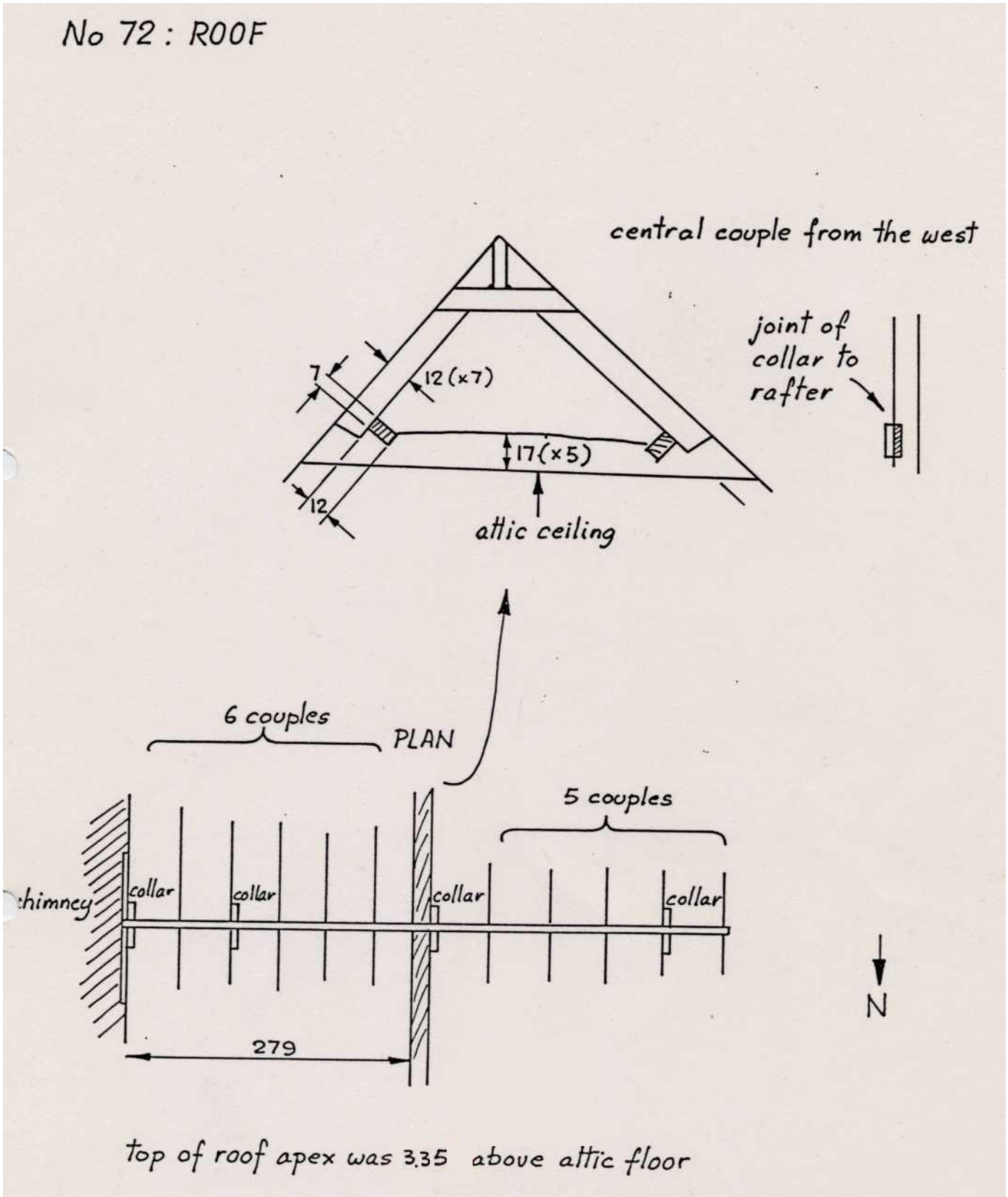
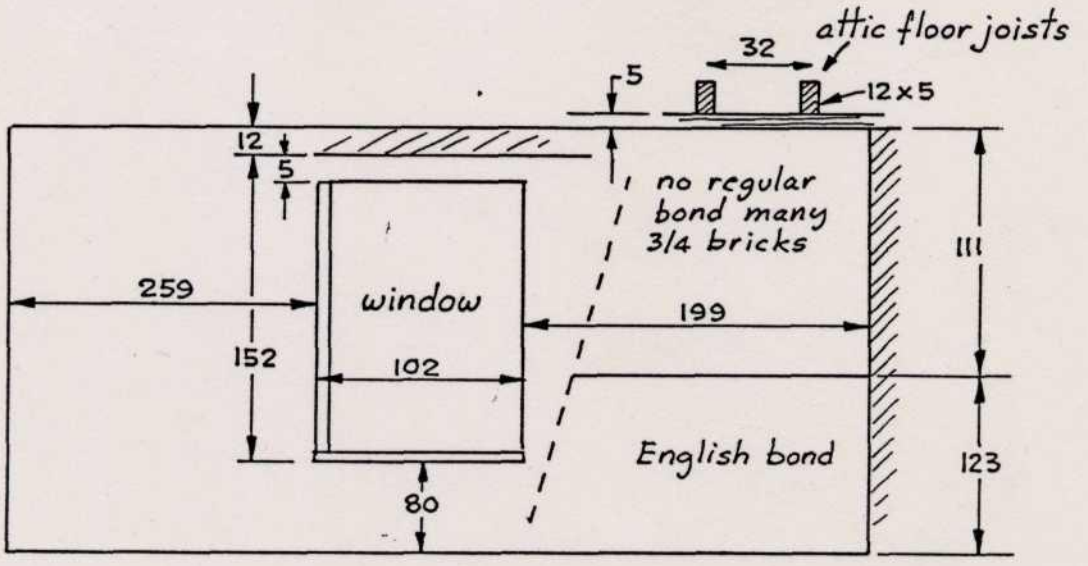


Fig 13.196. 70-4 Northgate Street (6/80a): survey.

No 72 & 74

At 1st floor level dividing wall between nos 72 & 74 is not bonded to front wall at all

SOUTH WALL OF FIRST-FLOOR FRONT ROOM OF No 74



Fire-place in this room has very plain wooden surround

LOCK ON BEDROOM DOOR OF No 72

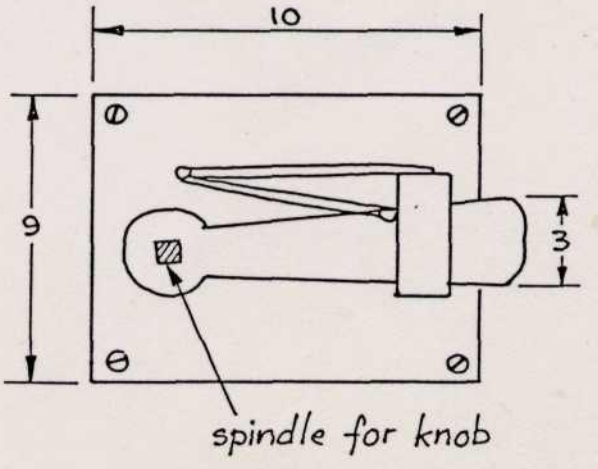


Fig 13.197. 70-4 Northgate Street (6/80a): survey.

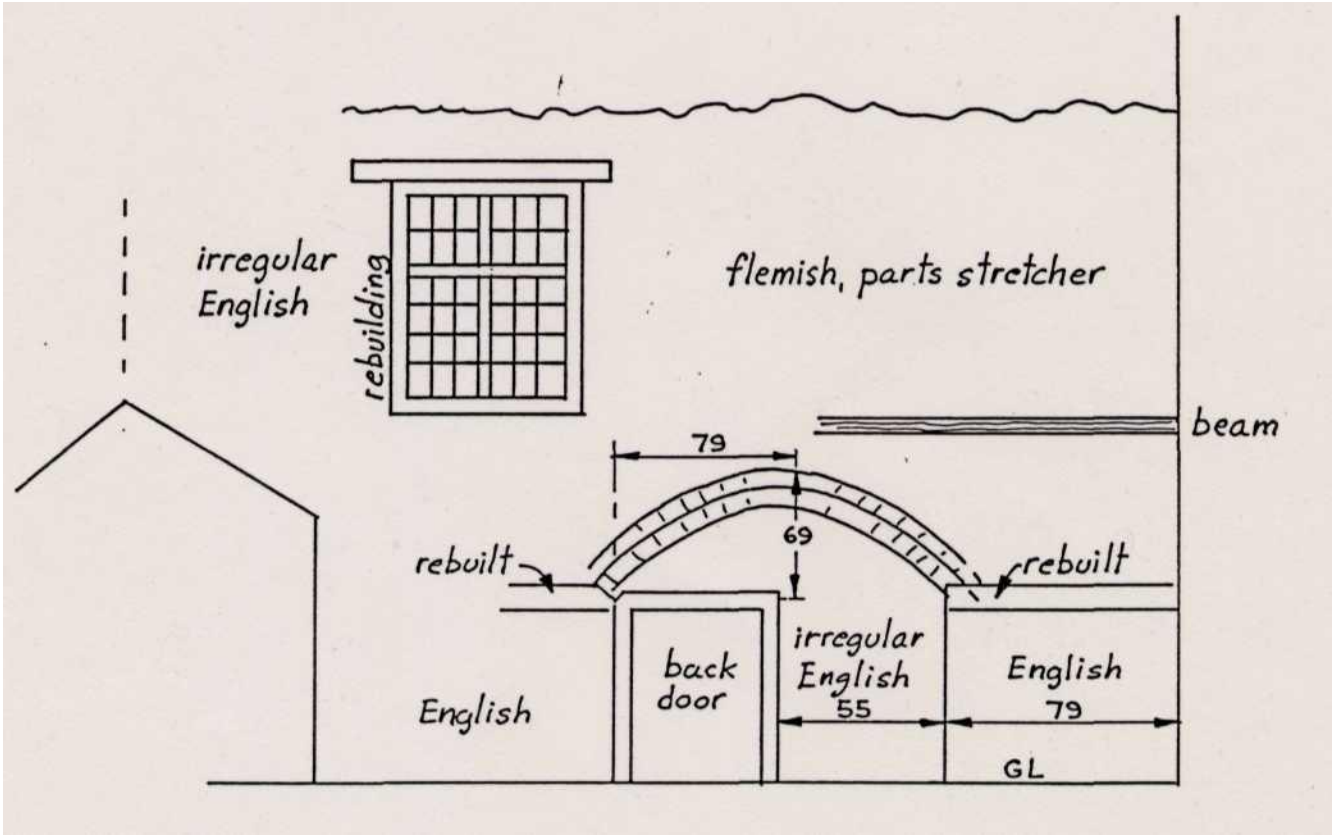
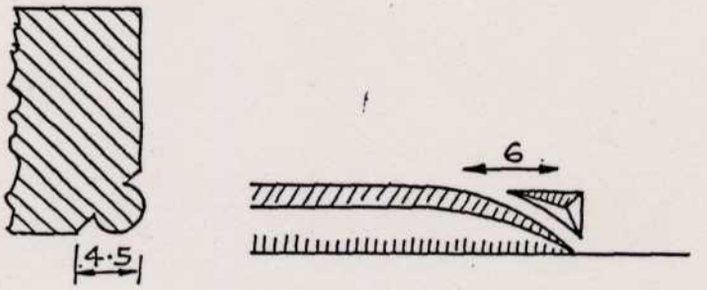


Fig 13.198. 70-4 Northgate Street (6/80a): survey.

Nos 72 & 74

RE-USED TIMBERS – SEE SAWN OFF EAST SIDE OF No 70. FIRST FLOOR



No 70

BACK – quality of studwork etc is rubbishy many studs half-round or very waney, like blocking at gable level between Nos 70 and 72

Fig 13.199. 70-4 Northgate Street (6/80a): survey.

6/80b

6 George Street

30.6.1980

Reason: extensions and alterations to 6 George Street

Record/report: NS/PC

According to the workmen, the site was visited by a member of staff from the museum during the digging of the foundations. This person (unknown) apparently agreed with the builders that nothing of archaeological interest was uncovered.

6/80C

Community Centre, High Street, West Mersea

June 1980 and January 1979

Reason: redevelopment of former bus station for a community centre

Record/report: NS/PC

Inspection of foundation trenches and the results of four bore holes indicated that the stratigraphy over the site consisted of 0.2 m of topsoil overlying 0.6 m lighter brown sandy loam which in turn overlay natural sand. One small pit was noted (June 1980). The site was visited twice. On both occasions, nothing was observed which need necessarily predate the 20th century.

Typically the uppermost 0.2 m was brown topsoil which overlay 0.3 m of reddish brown silty clay loam. The underlying material is mainly grey and reddish brown clay with patches of sandy gravel.

Before constructing the new building, the builders levelled the site. On the western side, which was the highest part, the site was stripped close to the underlying clay and gravel subsoil which in places showed through in the new surface. To the east the stripping did not reach down to the subsoil. After the removal of topsoil on the western side, a patch of crushed Roman tile was revealed. The machine driver reported a similar patch to the west. Part of a recent field boundary was located near the centre of the site.

8/80a

7 Walters Yard

Reason: erection of three flats by the Colchester Borough Council

Record/report:NS/PC

A Roman mortar floor was uncovered near the western boundary of the site at a depth of five feet. To the east lay a cellar probably of 19th-century date. The workmen reported a north-south wall or foundation of flint in the southwest corner of the plot belonging to No 5. A pit apparently 'filled' with oysters lay at its north end.

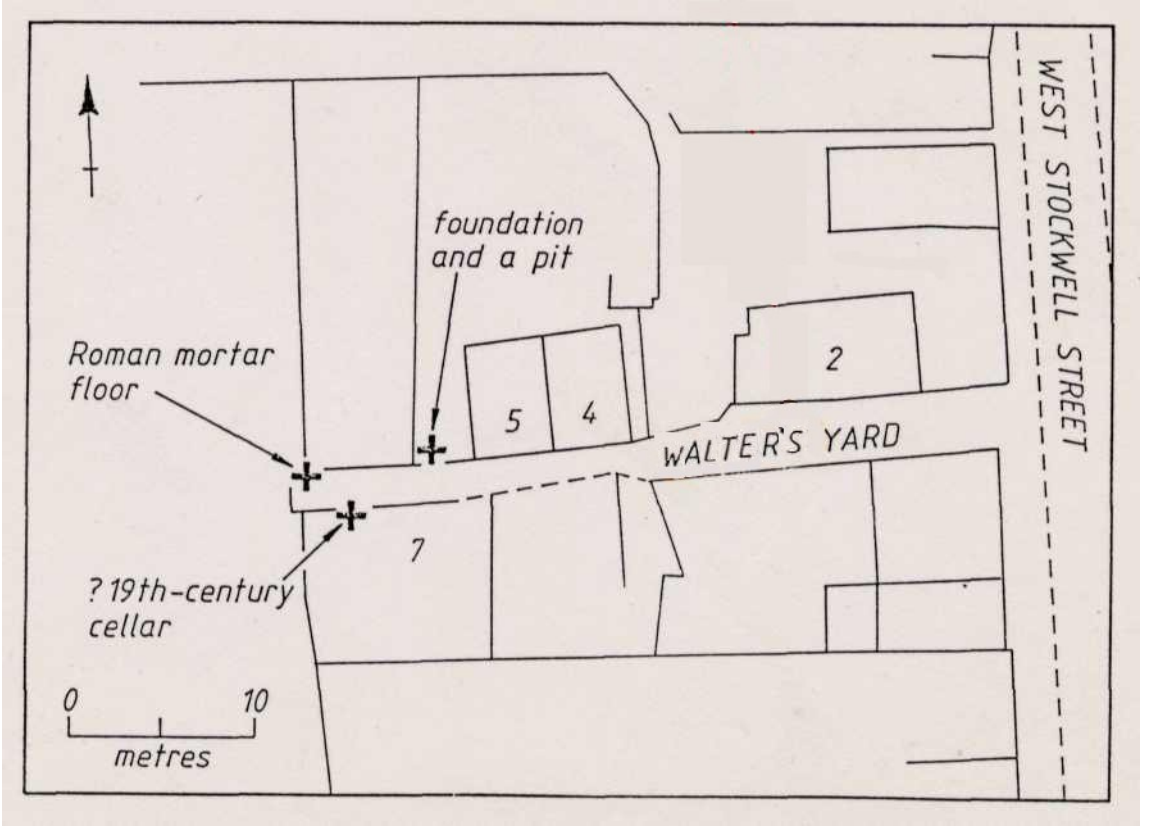


Fig 13.200. 7 Walters Yard (8/80a).

8/80b

80 London Road

Fig 13.201

August 1980

Reason: single-storey extension on the line of the Triple Dyke

Record/report: NS/PC

The foundation trenches were 1 m deep. Approximately 0.3 to 0.4 m of modern make-up overlies about 0.3 m of cover loam which graded into natural gravel. There was no sign of a ditch of the Triple Dyke. The extension measured 8.8 x 4.3 m.

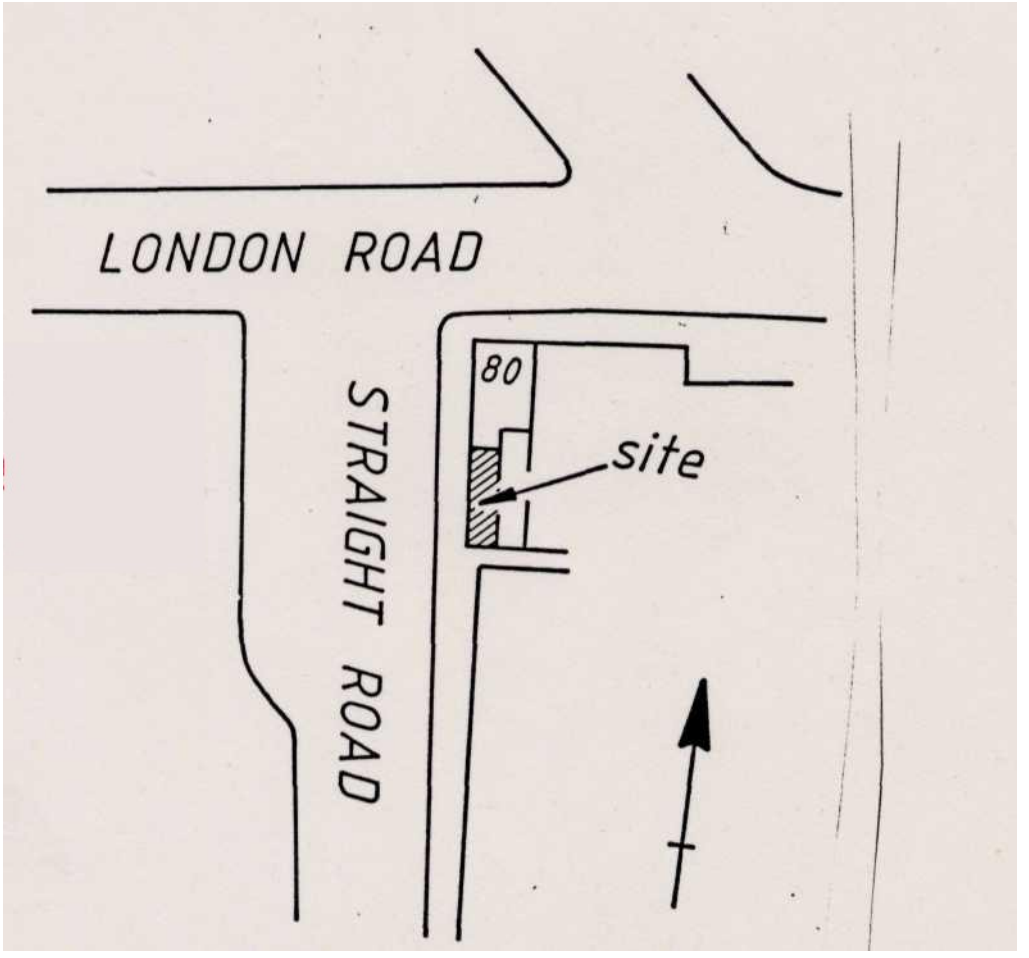


Fig 13.201. 80 London Road (8/80b).

9/80a

St Mary's multi-storey carpark, Balkerne Lane

September 1980

Reason: construction of multi-storey car park

Record/report: PC

Negative. All that was discovered were finds from the contractor's spoil. These include X101 and X155 and objects recorded directly by the museum.

9/80b

252 Straight Road

Fig 13.202

September 1980

Reason: rear extension to a house on the line of the Shrub End Dyke

Record/report: NS/PC

Trenches 1 m deep and 0.75 m wide were dug on the east side of the existing house over an area 4 m (east-west) and 8 m (north-south). No features were uncovered and clearly the ditch of the Shrub End Dyke does not pass across this point.

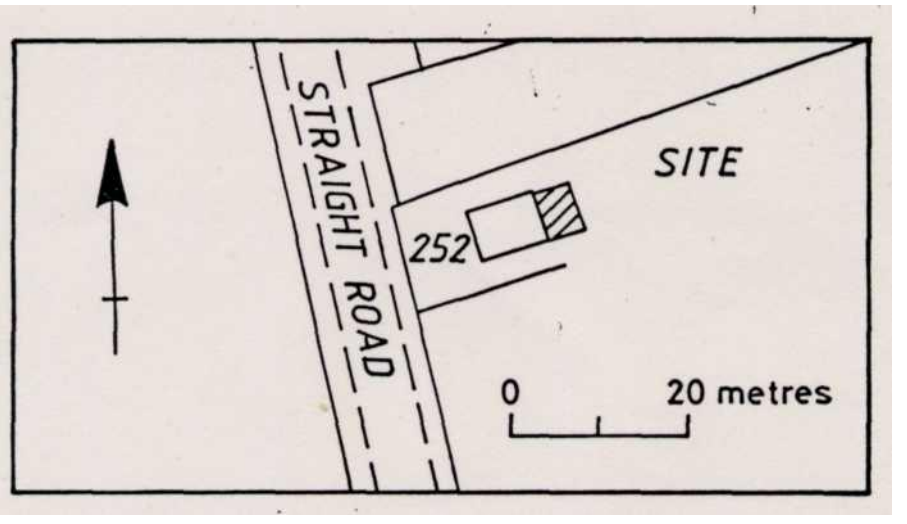


Fig 13.202. 252 Straight Road (9/80b).

11/80

National Westminster Bank, 25 High Street

Fig 13.203

November 1980 until first part of 1981

Reason: extension to back, built over rear garden

Record/report: HB/PC

Finds: X222 (unstrat: Roman & PR pot)

Five test pits (Trenches 1 to 5) were dug on behalf of the architects and one bore hole. Nothing of any archaeological significance was observed in any of them. The bore hole indicated 2.5 m of dark topsoil (?pit(s)) and then natural sand.

Trench 1 was dug to a maximum depth of 1.4 m and cut only dark topsoil with much modern brick, metal fragments, some peg-tile and one piece of Purbeck marble. No pottery was found and no obvious Roman levels were noted.

Trench 2 was only 0.3 m deep. Penetrated only recent topsoil.

Trench 3 was 1.0 m deep and cut through redeposited topsoil.

Trench 4 was 0.6 m deep and was dug to examine the nature of the foundation of the wall on the east boundary. The latter contained fragments of 16th/17th-century bricks and two pieces of septaria with ?Roman mortar still adhering.

Trench 5 cut only disturbed topsoil. Only peg-tile and brick were noted.

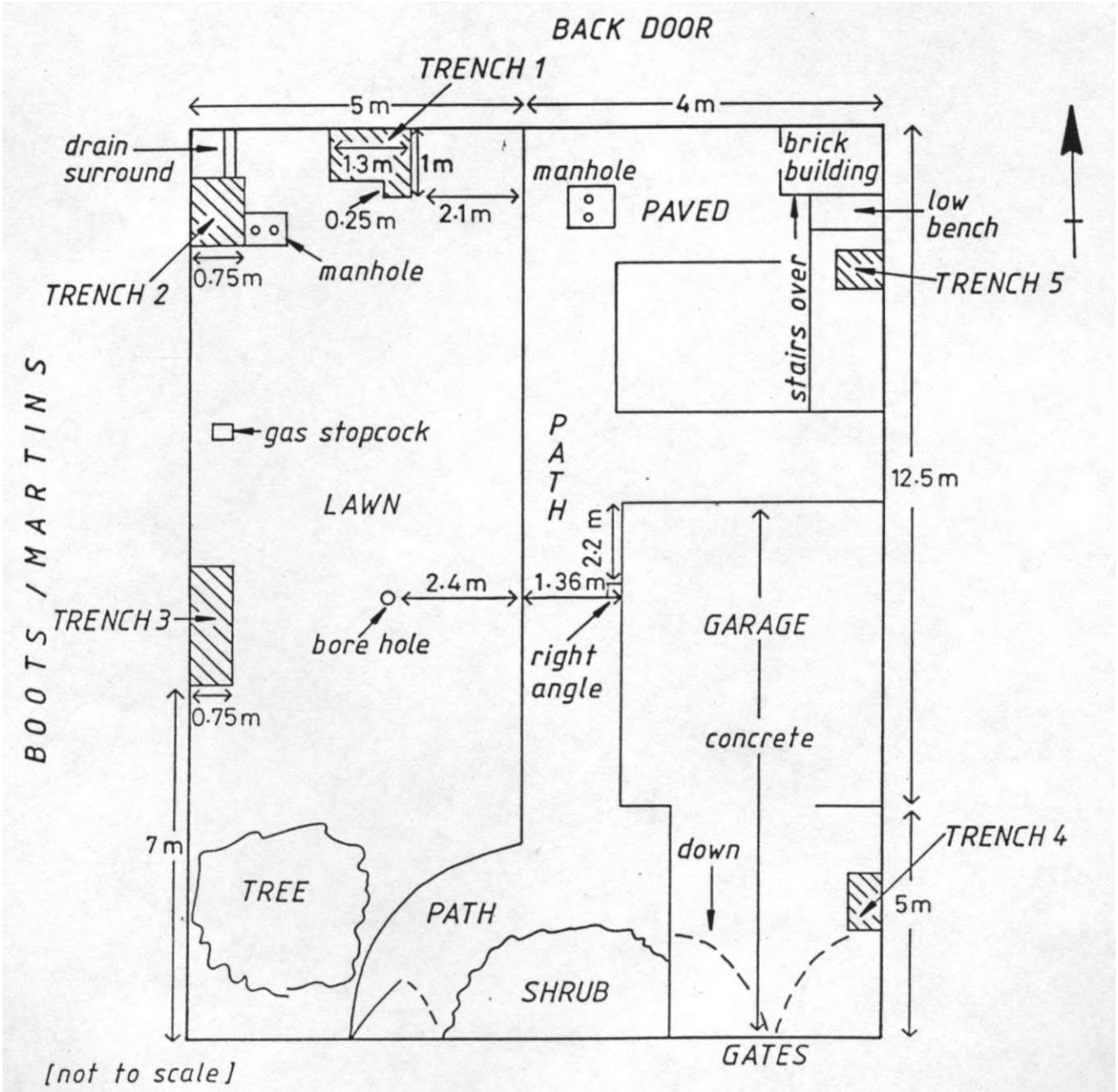


Fig 13.203. National Westminster Bank, 25 High Street (11/80).

0/81a

Albert Hall, High Street

Fig 13.204

1981/82

Reason: refurbishment of existing building for use as Co-operative Bank

Record/report: NS/PC

The work involved the excavation of a deep trench in the centre of the hall. All the excavated soil contained much topsoil and was possibly dumped during the construction of the Albert Hall.

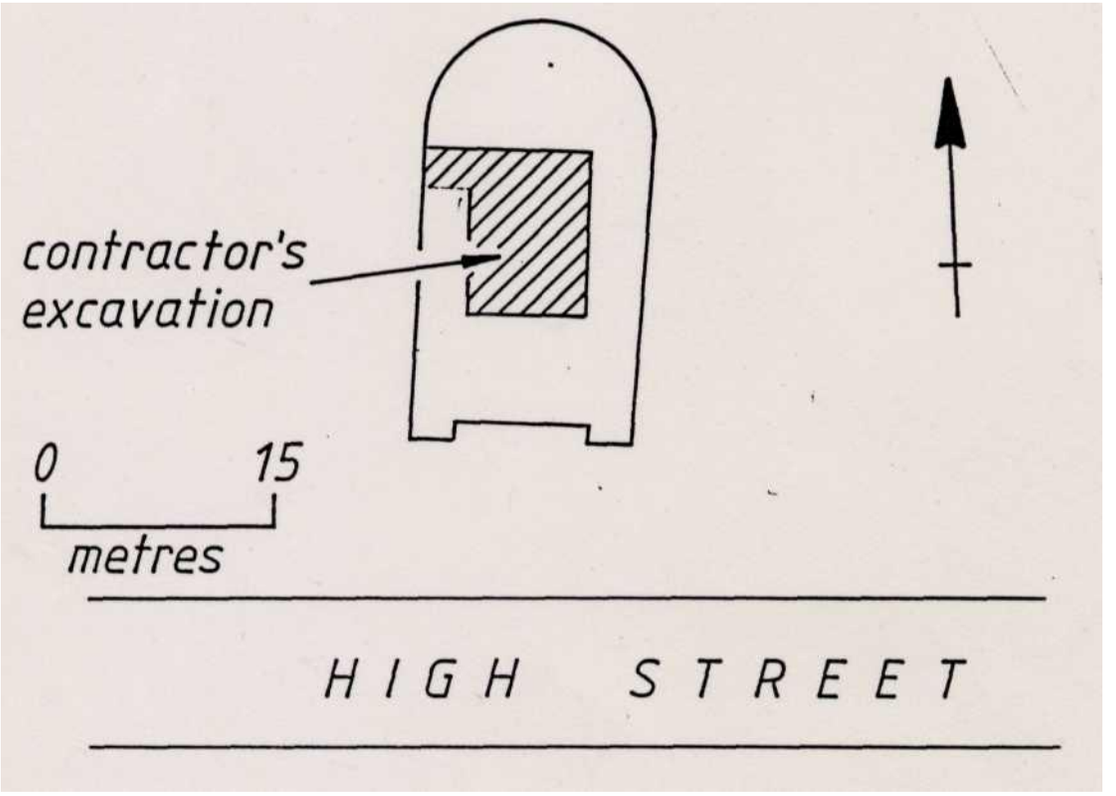


Fig 13.204. Albert Hall, High Street (0/81 a).

0/81b

39-40 St John's Street

Fig 13.205

Early to mid 1981

Reason: extension to existing buildings in St John's Street with new first floor shops fronting on to Eld Lane

Record/report: NS/PC

Finds: X234 (unstratified: Roman and PR pot, glass frags)

The Roman wall in both plots is in a very poor state of repair. The face has been removed and there was an indication of the offset at the foot of the face. The wall has been partly repaired/refaced in brick.

The area had formerly been back gardens and, as a result, had been very much cut about during pit digging. The contractor's trenches revealed a well, a possible wall, and a spread of lime. Otherwise the trenches showed only dark soil, the fills of pits (?nearly all post-medieval or modern) and patches of what may have been natural sand. The base of the Roman wall was uncovered and it proved to be only 0.6 m below modern ground level and resting on natural sand. The well was built of septaria and included some peg-tile. Bricks had been used but only in the repairs. The well was 5.5 m deep when found but already had been partly backfilled with rubble so that its original depth could not be established. The possible wall took the form of some mortar at a depth of 0.6 m. It may have been part of a medieval or post-medieval latrine.

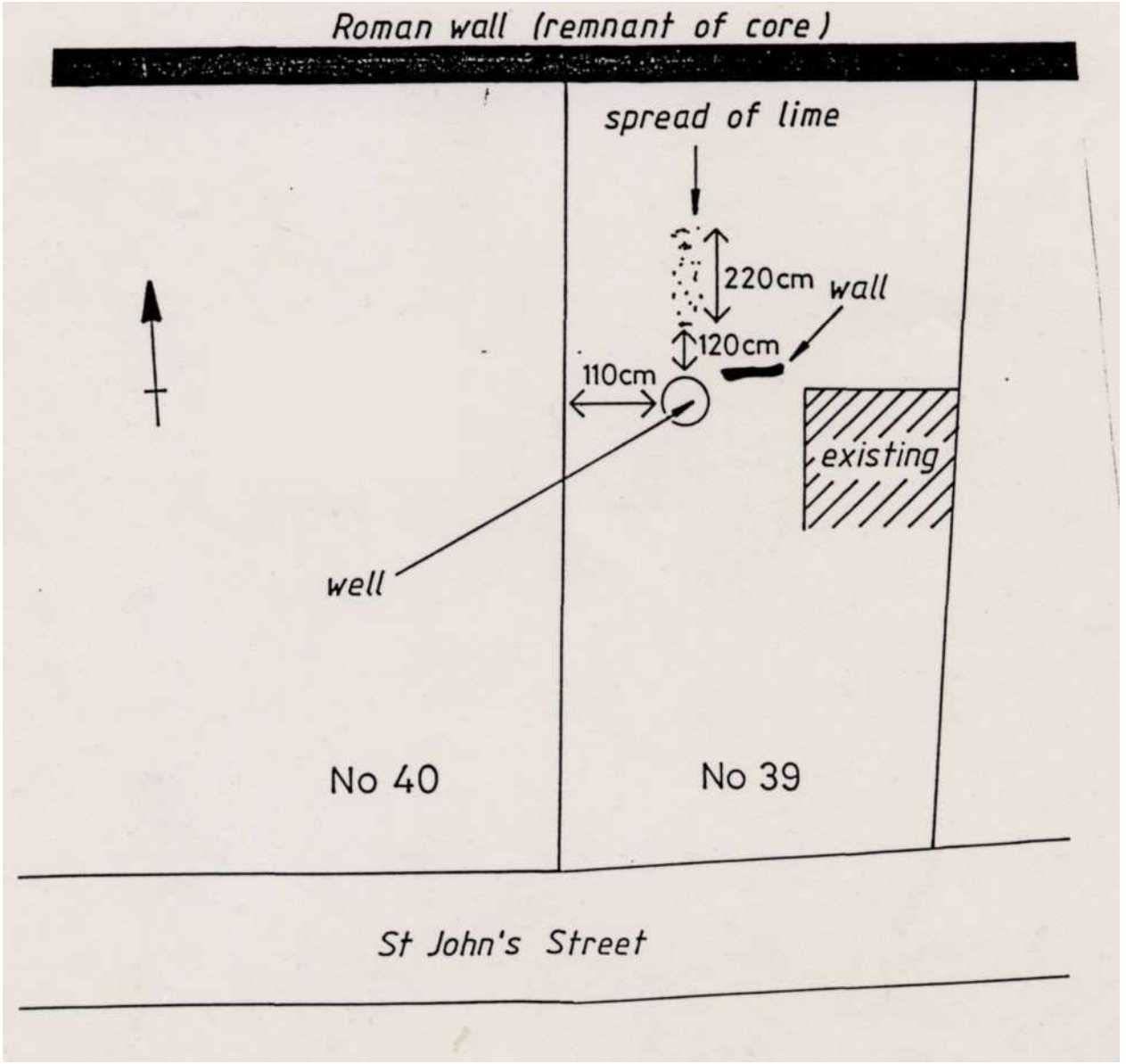


Fig 13.205. 39-40 St John's Street (0/81b).

0/81 c

The Old Forge, London Road, Copford

Figs 13.206-8

Summer 1981

Reason: demolition of timber-framed house

Record/report: NS/PC

Photographs: Buildings and Churches, 92-7

The building was a two-storeyed, two-cell structure. It had been considerably altered so that some parts of the timber-frame had been destroyed or were obscured. The building was of the 16th or 17th century.

The roof was of the side-purlin type. The east wall was jettied. The central chimney stack was of orange-red bricks measuring 204 x 106 x 50 mm. The inner walls of the house had been clad with Victorian bricks which had narrow frogs and measured 422 x 120 x 72 mm.

Significant structural features include two edge-halved scarf-joints and lap joints at the top of the storey posts. The floor of the first-floor west of the stack had eight common joists to either side of the main joist. Their edges were slightly bevelled (roughly so) and they were pegged into the main joint by bare-faced soffit tenons with diminished haunches. They were on edge but fairly wide set. The main joist lay east-west and rested or lapped over the girth of the west end wall. It was not clear if the floors at first floor level and the chimney were original.

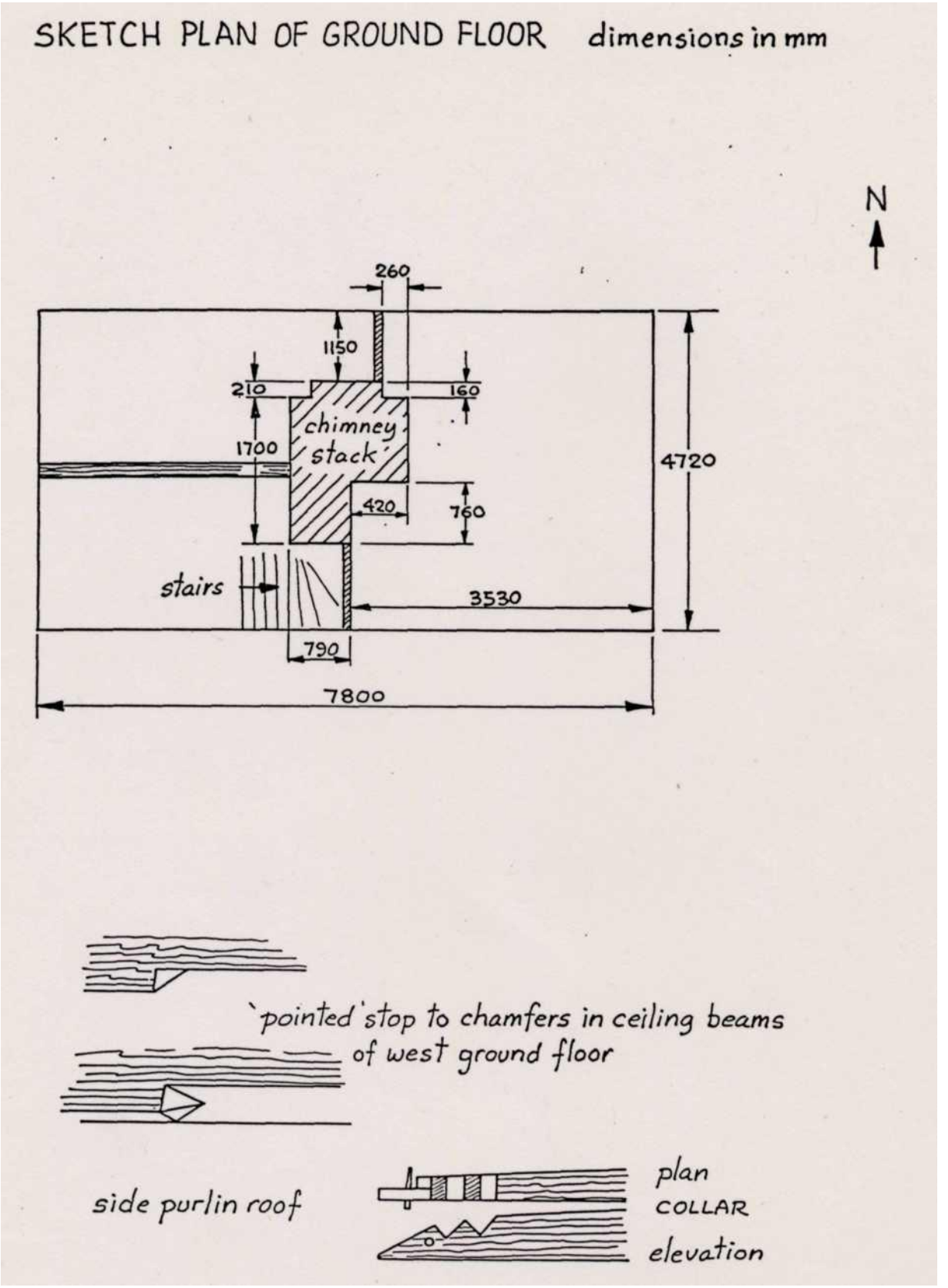


Fig 13.206. The Old Forge, London Road, Copford (0/81c).

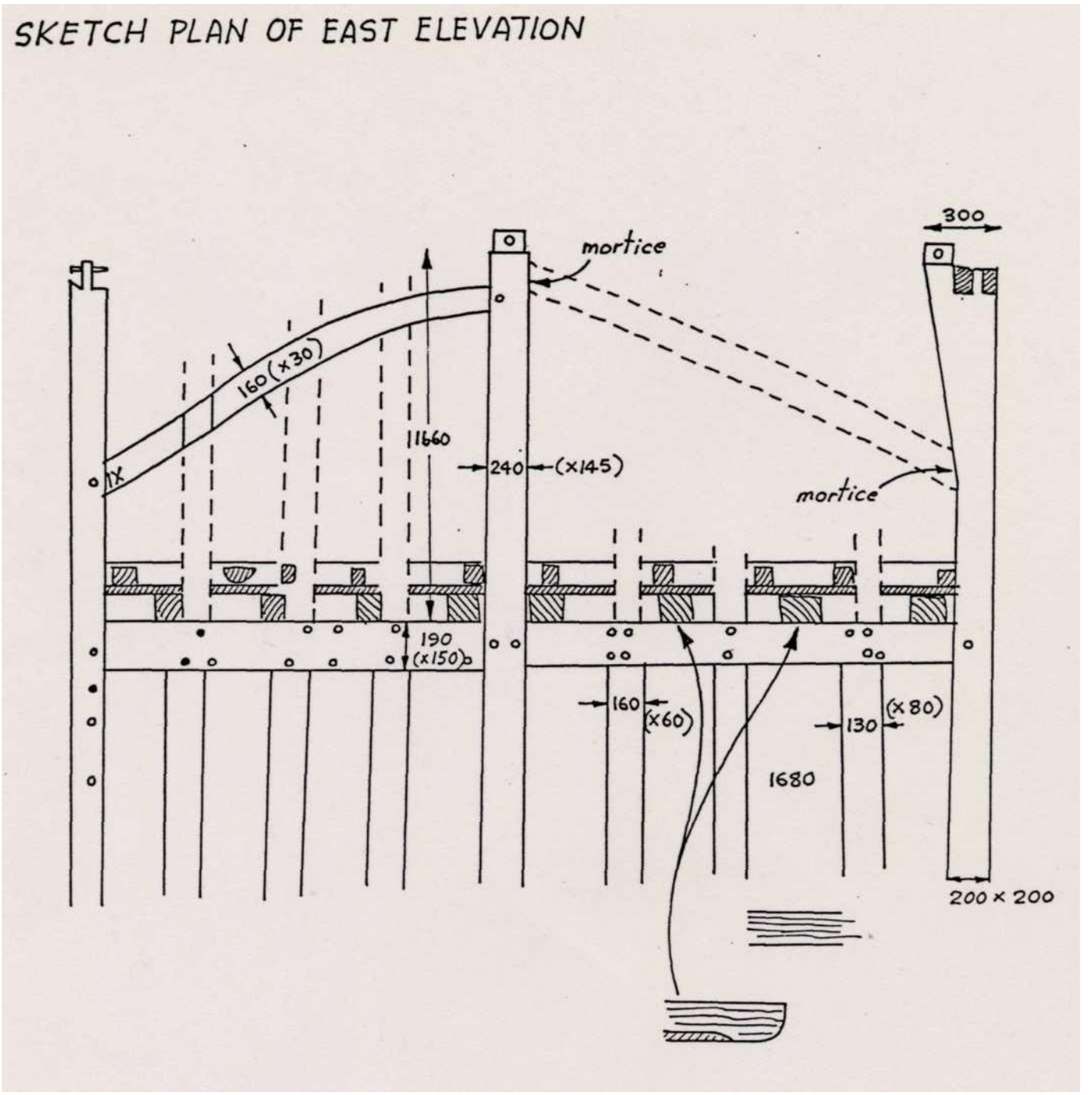


Fig 13.207. The Old Forge, London Road, Copford (0/81 c).

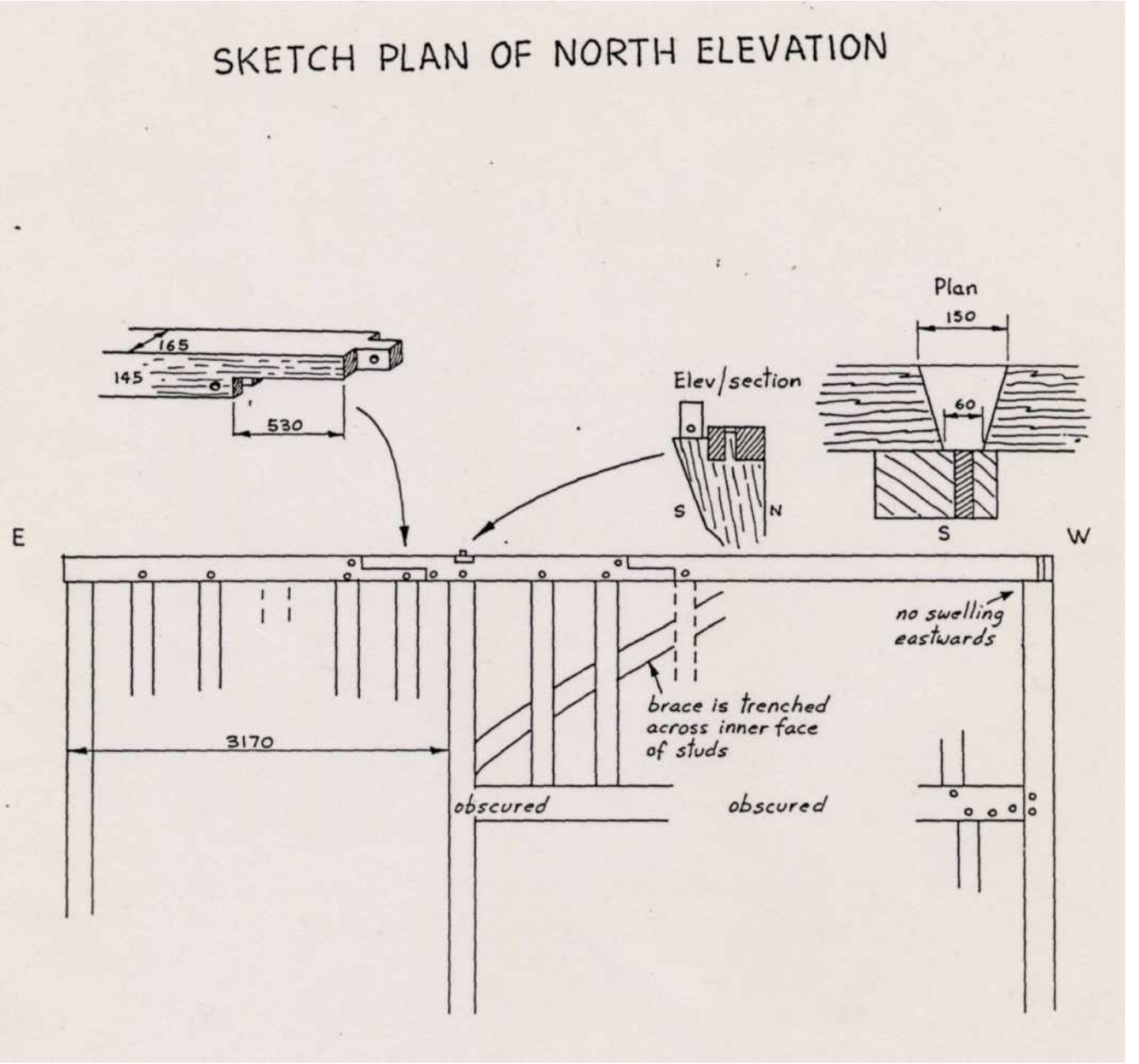


Fig 13.208. The Old Forge, London Road, Copford (0/81c).

3/81

32 Crouch Street

Fig 13.209

March 1981

Reason: construction of office block

Record/report: HB/PC

The building was erected on the former car park of Bejams. The site is at the extreme eastern end of the southern frontage of the present Crouch Street West. It lies northwest of the Maldon Road roundabout and is on, orclosejo, the site of the Crouched Friars.

Various human bones were recovered at various points cross the site. Bones from Stanchion B almost certainly represent a disturbed inhumation. This is probably true of bones from Stanchion A. The excavation of the Maldon Road site in 1971, not far to the southwest, lead to the discovery there of eighteen inhumations, all of which appeared to have been Roman. Thus, despite the proximity of the site of the Crouched Friars, the human remains from the Bejams site may possibly be Roman in date. (Note the burials under 4/77b above (42-4 Crouch Street).)

The ground at Bejams had been much disturbed during the construction of the brick building which had previously occupied the site. Brick walls were found down to 3 m below site level. Below the latter was some grey sand or sandy topsoil forming a layer up to 2 m thick of redeposited material showing no features. The top of the natural (sand and gravel) was generally encountered 4.0 to 4.8 m below site ground level, but this was quite clearly not the undisturbed natural horizon because the slope ran contrary to the real slope of the ground (ie southwards towards Southway) and because natural was noted very close to the surface on the southwest of the site.

Finds

X210. Animal bones, possibly human. Roman and post-med pottery, glass, sawn antler from the topsoil and the ?sand layer, mostly picked up by the contractors and generally unstratified.

X211. Human skull and bones. Definitely one group, and from the same spot (Hole B) out of the disturbed sand (?natural). Must be part of a disturbed grave.

X212. Human bones. Hole C. Probably a second disturbed grave. From soil (?natural).

X213. Quern stone. Hole A.

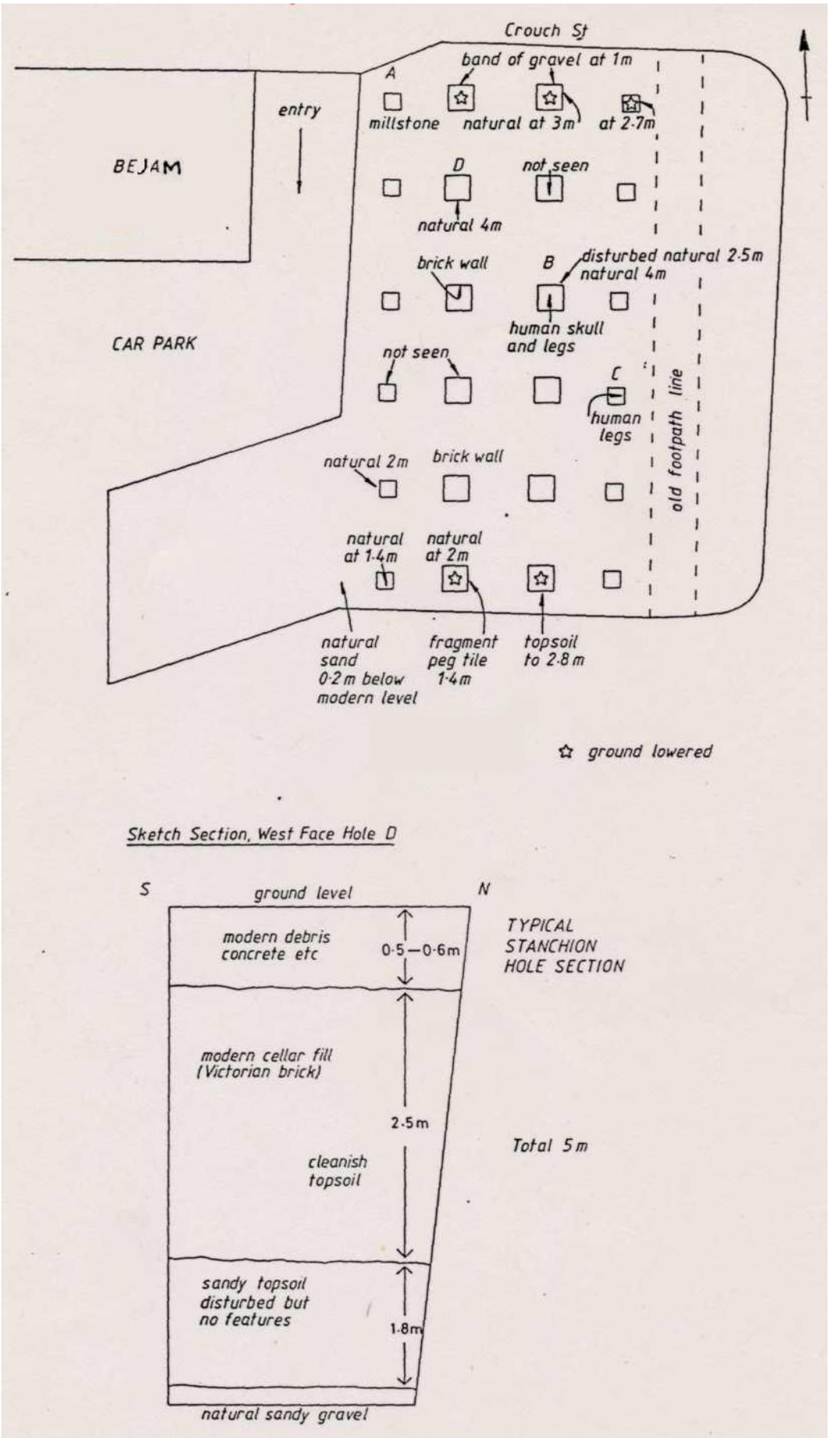


Fig 13.209. 32 Crouch Street (3/81).

5/81

King Coel's Kitchen, King Coel Road

11.5.1981

Reason: erection of house

Record/report: NS/PC

The foundation work was completed early in April 1981. No written notification was received about the work (planning consent was subject to an archaeological condition). However the owner telephoned to say work had started and that there was a horizontal band of burning at a depth of five feet over the whole site. Unfortunately this was not seen by the Trust.

0/82a

Rovers Tye Farmhouse, Ipswich Road

1982-3

Reason: conversion of existing building into a public house with large extensions to the north

Record/report: NS/PC

The existing timber-frame was retained intact in the new building. Negative.

0/82b

Culver Chambers, Culver Street West

Fig 13.210

Early 1982

Reason: the demolition of existing building and the construction of three-storey offices and shops

Record/report: NS/PC

The building was constructed on a raft and thus involved the removal of only about 1 m of soil over the whole area of the site. All that was observed was dark topsoil and part of a modern cellar.

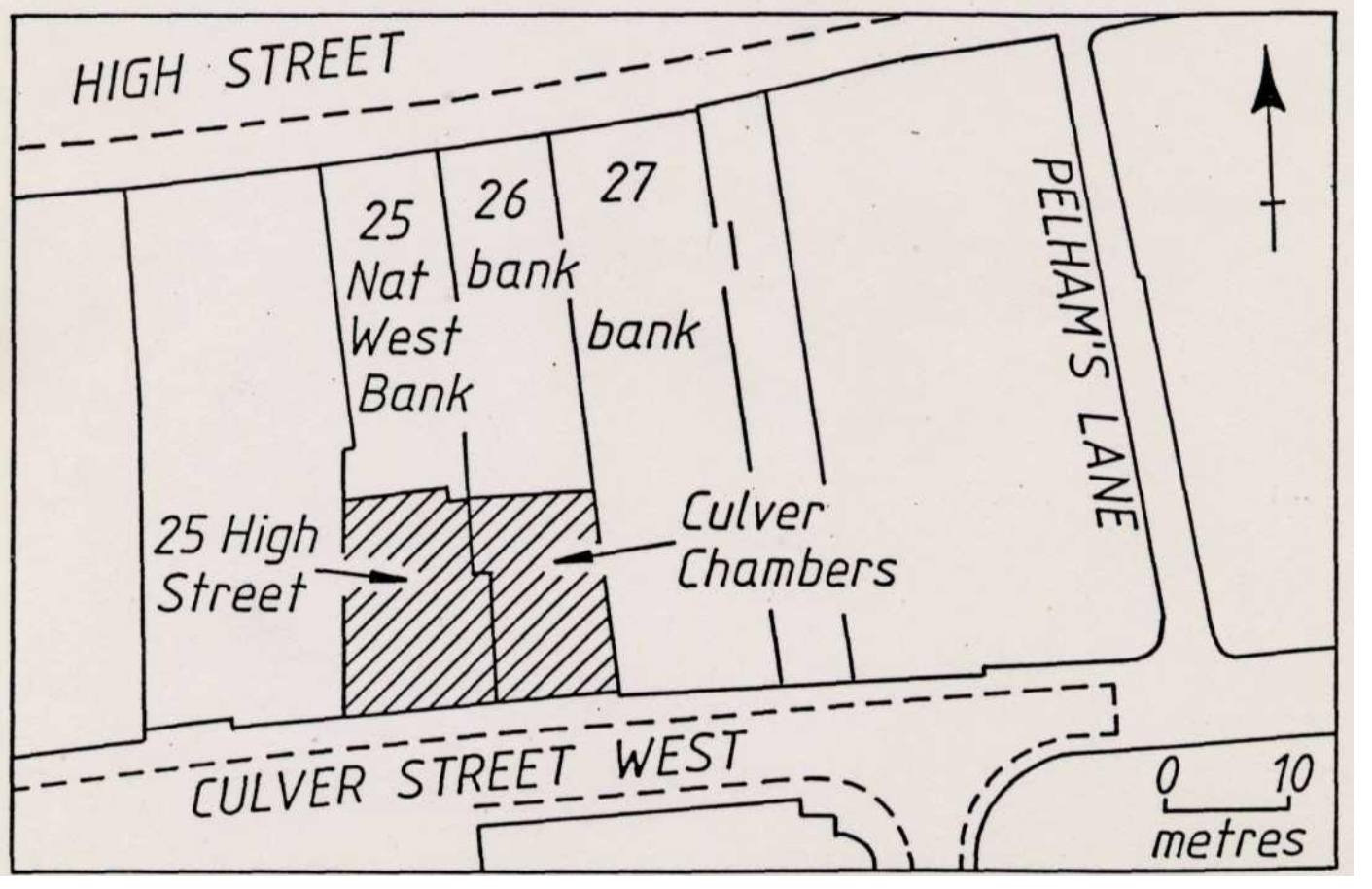


Fig 13.210. Culver Chambers, Culver Street West (0/82b).

0/82c

William's and Glynn's Bank, Head Street

Summer 1982

Report: PC

A large quantity of broken post-medieval pottery and glass was found by workmen in a brisk-lined pit behind the bank. Included was a complete goblet and two vessels, one a money-box of *c* 16th-century date.

See note in *Catalogue* **11**,9.

0/82d

St Clare Road

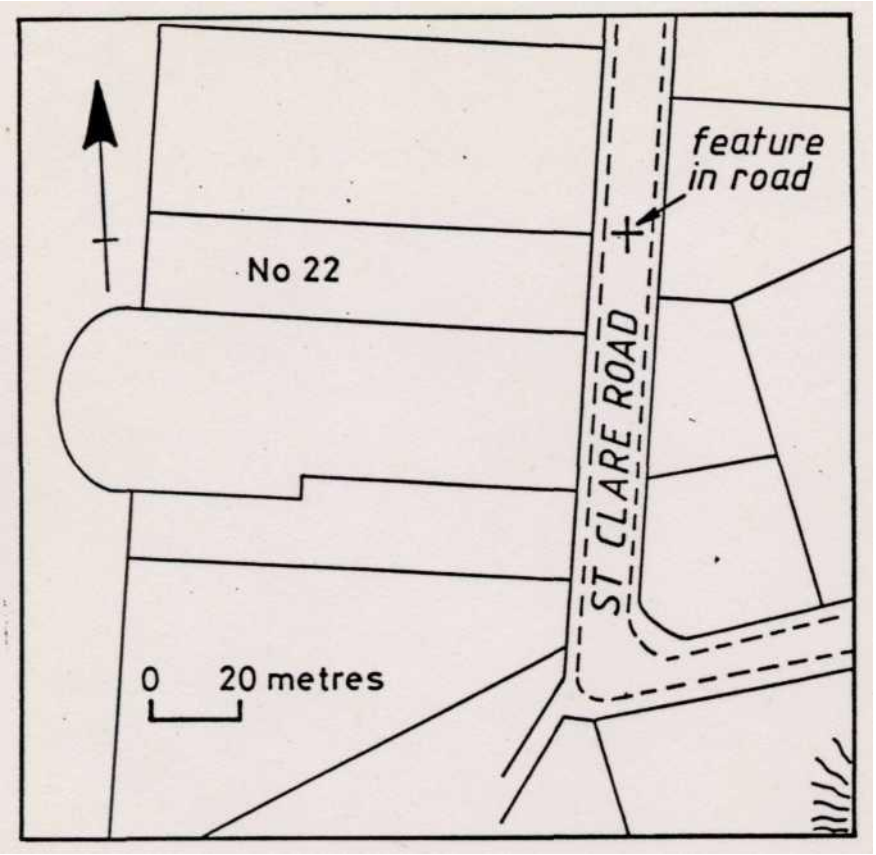
Fig 13.211

1982?

Reason: a new system of sewers was laid throughout much of Lexden (The Lexden Sewer Separation Scheme')

Record/report: NS/PC

Observation of the trenches were negative apart from one small pit or ditch seen in section opposite the drive of No 22 St Clare Road. Although no finds were recovered from it, the fill had the appearance of that of a prehistoric or (less likely) a Roman feature.



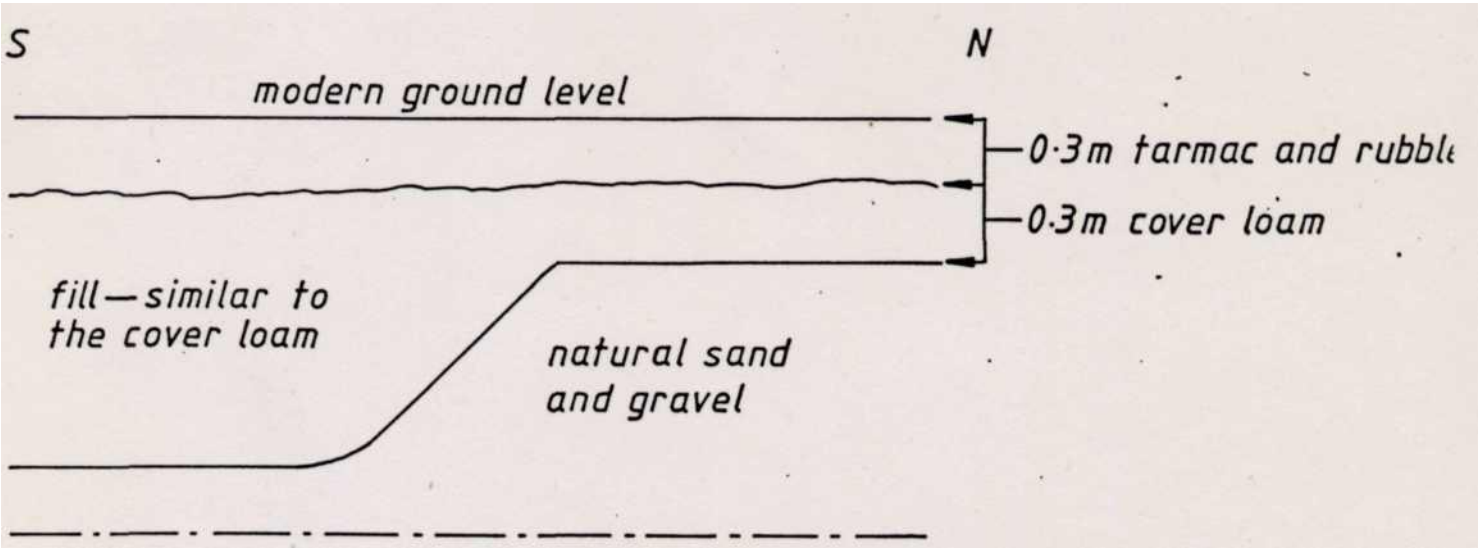


Fig 13.211. St Clare Road (0/82d).

2/8 **2**

St Mary's Cottage, Church Walk

Figs 13.212-14

February to March 1982

Reason: construction of houses in the garden of St Mary's Cottage

Record/report: NS/PC

Photographs: Misc Sites 1, 124-32

Finds: X222-6 (2nd/3rd pot and later pottery, human and animal bone, plaster, glass, and others)

The site lies in Insula 33a and is adjacent to the south side of the grave-yard of St Mary's Church. The foundation trenches were up to 1.5 m deep. The western half of the site was occupied mainly by topsoil and redeposited Roman material and clearly had been much interfered with by pit digging. Of note, however, was a scatter of human bone, mainly in the western half of the site, and two tile-lined graves partly exposed at the base of one of the trenches. The graves had been lined with Roman tile or brick set on edge. The tiles around the head of one had been placed close to the body to form a little niche. They belong to the same group of rubble-lined graves found by Mr B Blake in 1962-3 whilst excavating in the garden of St Mary's Cottage and on the adjacent site of the Embassy Suite (unpublished). They are also identical in character to the graves found in the grounds of St John's Abbey in 1972 *(CAR* **9** & *CAR* **1,** fig 37). These were 12th century. Although both the graves at St Mary's were aligned east-west, one had its head to the east. Presumably these belong to an early phase of the cemetery of St Mary's Church.

Near the centre of the site lay a small pit with burnt sides. It may have been a medieval lime kiln of the type found at Lion Walk and elsewhere *(CAR* **3,** 30), except that it was not quite circular and smaller than normal.

Two sherds of grass-tempered pottery (X224 & X227) indicated Anglo-Saxon activity on the site. The find spot clone (from topsoil) is shown on Fig 13.213; the other was unstratified. The former lay in an area of topsoil which it was felt at the time may have been the fill of a sunken hut. But no indication to support this hypothesis-emerged during the course of the work.

Some foundations (robbed out), a tessellated pavement, a mortar pavement and a Roman tile drain with some mosaic cubes in the surrounding demolition debris pointed to a Roman house. The fill of the drain was demolition debris; it contained some Hadrianic-Antonine pottery (X225-6).

A well-preserved military plinth lay on the eastern side of the site. Its course across the site could not be followed because the early layers at the key points in its likely position had been destroyed during post-Roman activities. The wall had burnt floors to either side sealed by Boudican debris. This indicates that it had probably been the spine wall of a barrack which had been re-used in the colony (because it survived until AD 60/1).

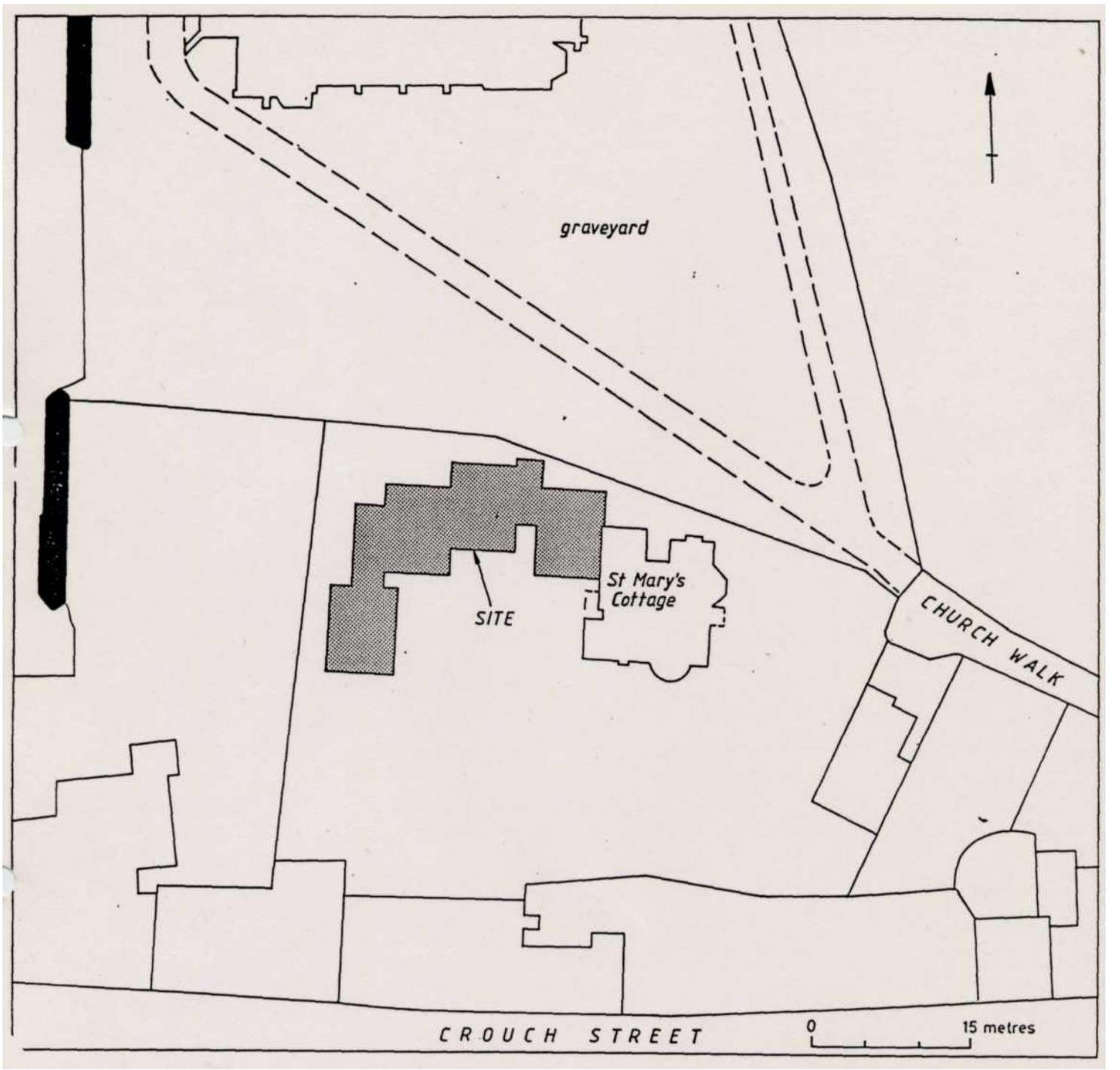


Fig 13.212. St Mary's Cottage, Church Walk (2/82): location plan.

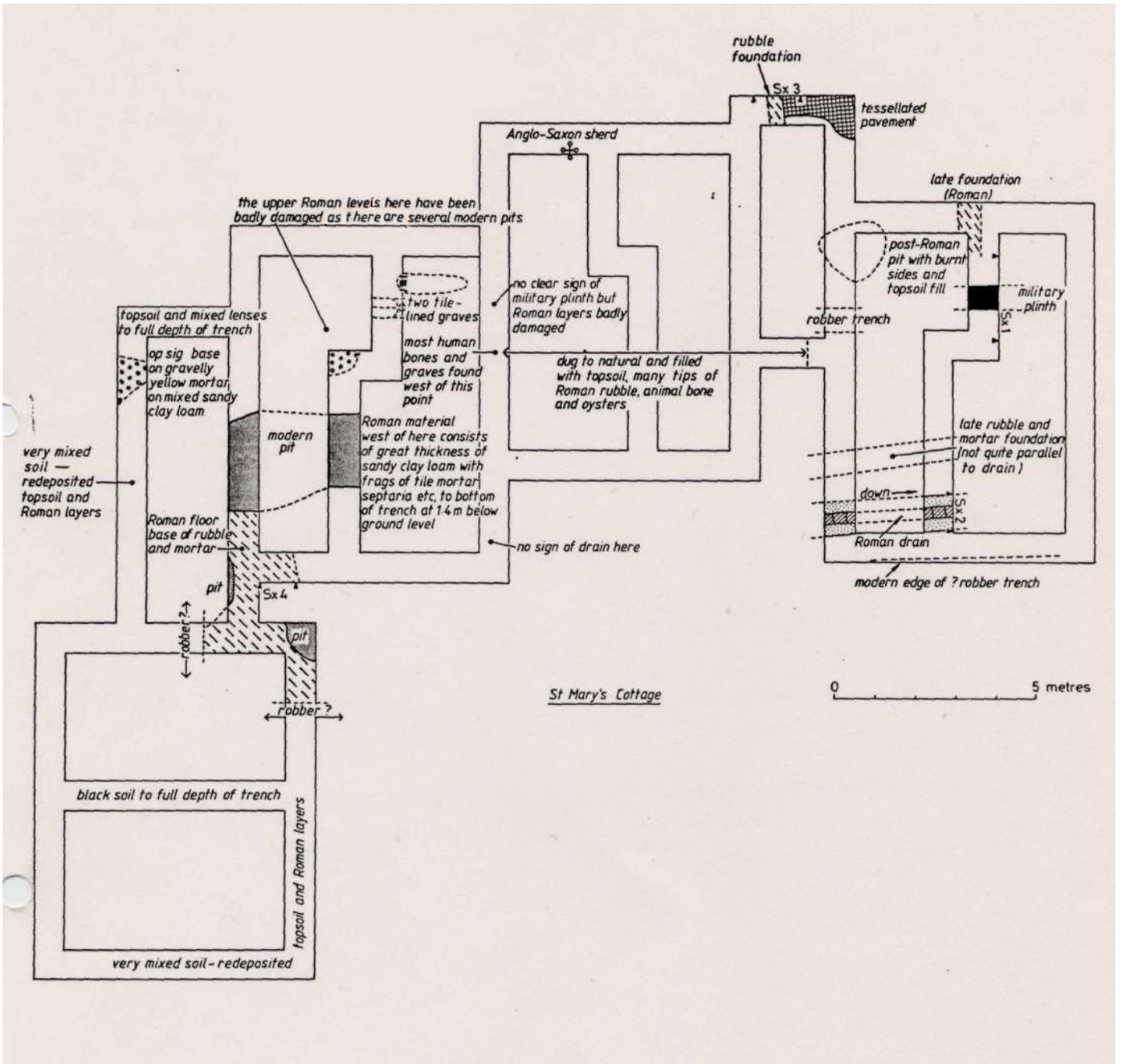


Fig 13.213. St Mary's Cottage, Church Walk (2/82): plan.

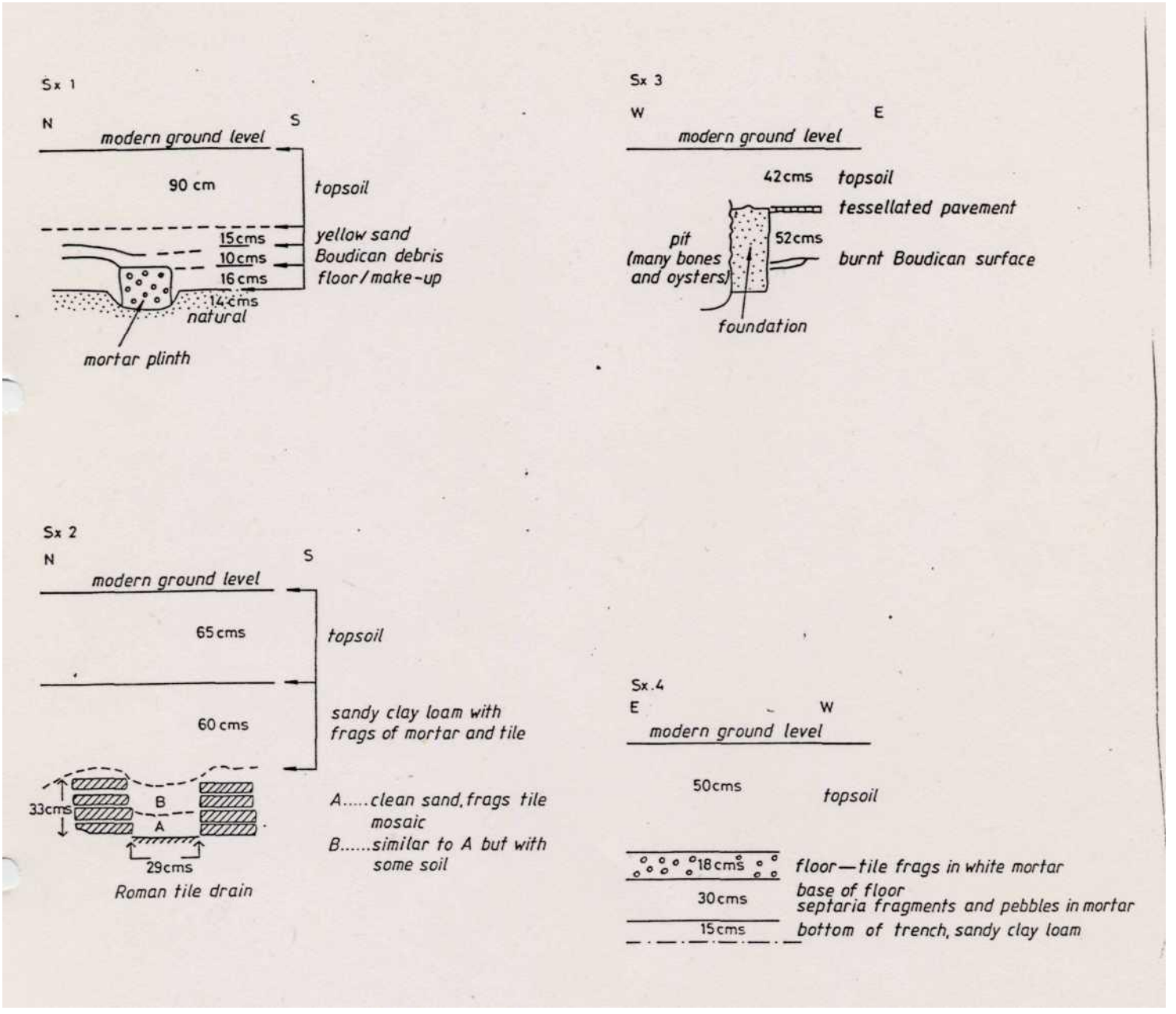


Fig 13.214. St Mary's Cottage, Church Walk (2/82): section.

3/82

40/1 Eld Lane (adjacent to Clarence Pub)

March to May 1982

Reason: construction of new building

Record/report: NS/PC

A pair of brick cottages was demolished. They appeared to be of Victorian date; there was no evidence of any older building. A capped brick soakaway (or well?), already backfilled, lay at the back of the plot and was probably of the same date.

The construction work involved the removal of 0.6-1.0 m of soil over almost all of the site (ie down to about 0.6 m below the level of the present pavement). The material removed was probably topsoil. A concentration of 17th-century sherds came from the north-west corner of the site implying that the soil included the tops of the pits. No pits, layers or other features (Roman or medieval) were visible and it appeared that the Roman deposits were left undisturbed.

4/82

Hunter's Rough, Straight Road/Heath Road

April to May 1982

Reason: demolition of existing house and outbuildings and the construction of new houses

Record/report: NS/PC

The house lay in its own plot in the northern angle formed by the junction of Heath Road wlth Straight Road. The house appeared to be Victorian from the outside and had stables and other outbuildings presumably of 19th or early 20th century date. The site was not visited during demolition works but NS was told that a large amount of timber-framing had been taken from the house suggesting that it had been older than supposed.

The site overlies the Shrub End Dyke. (Watching Brief 10/84 later showed that it lies under the eastern half of the site. *See* Fig 13.278 below.) The foundation trenches for the new houses were about 0.6 m deep but these proved not to be deep enough to enable the dyke to be located.

5/82a

Cameo Cinema, St John's Street

Fig 13.215

May to June 1982

Reason: redevelopment of the former Cameo Cinema site

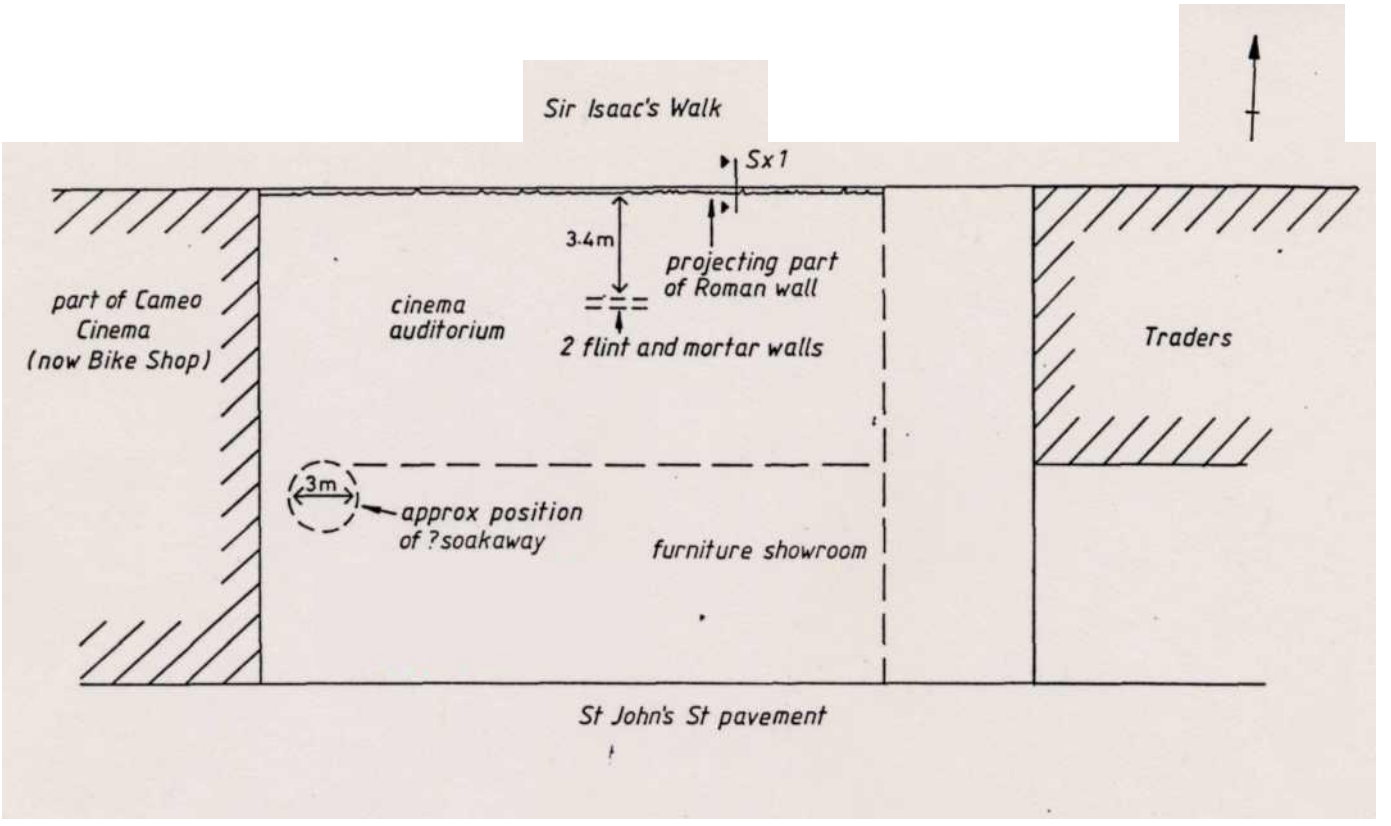
Record/report: NS/PC

Finds: X228 (unstratified: PR pot, clay pipe and glass)

The shell of the redundant cinema was retained and substantial alterations were carried out internally to convert it into shops fronting on to St John's Street at a low level and Sir Isaac's Walk at a high level.

The north wall of the cinema had been built on top of and down the face of the Roman wall. The cinema wall was buried and it was left intact. The new development involved the digging of many trenches and holes for underpinning stanchions, and services. Although NS saw very few of these open, the workmen reported that the fill was nearly always modern brickwork and cellars or black topsoil overlying clean sand (?natural) to a depth of about 0.25 m. At one spot were found two 'flint and mortar' walls, about one foot thick. These were probably parts of medieval and post-medieval cess-pits. The pottery for the site seemed mostly to range in date from late medieval to modern.

A large brick soakaway, measuring 3 m in diameter internally and apparently Victorian or early 20th-century in date, lay towards the front of the site.



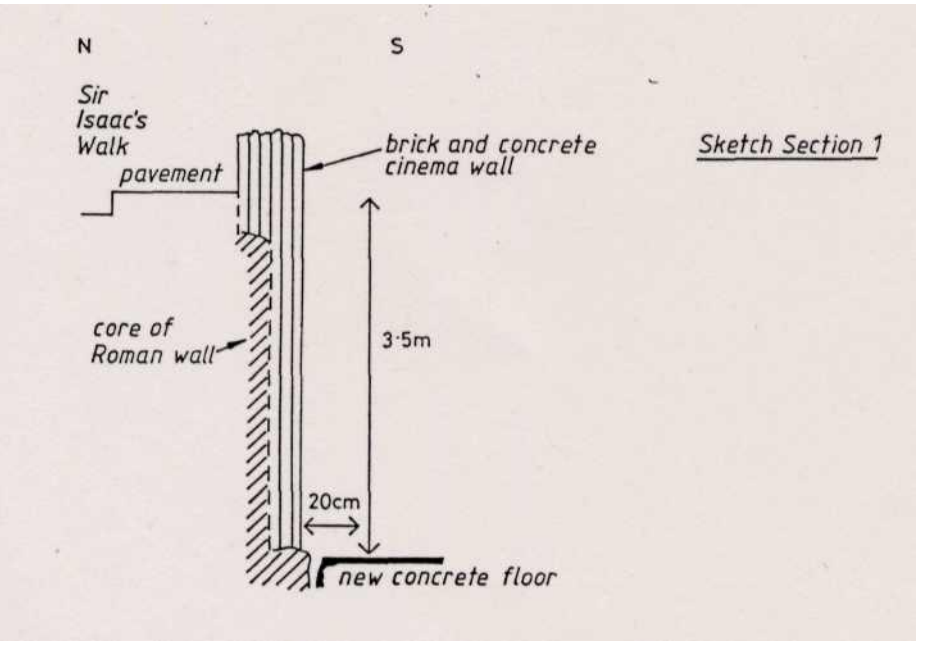


Fig 13.215. Cameo Cinema, St John's Street (5/82a).

5/82b

Lexden Road, junction with Tapwoods

Fig 13.216

24th May 1982

Reason: sewer trench along northeast of Lexden Road

Record/report: DS/PC

A sketch section of the side of trench was made at the junction of Tapwoods at Lexden Road. This is at the spot where the Lexden Dyke crosses the Lexden Road and where the road was sloping to the east. There was an accumulation of layers to a depth of at least 1.06 m. Although the lower layers contained much gravel and sand, there were no clear road surfaces.

The present surface of this part of Lexden Road has been lowered in the past so that it is now several metres below its original level. This is made clear from the position of the adjacent part of the Lexden Dyke *(see* Watching Brief 0/71 a). Thus, unless the reduction of the slope took place in Roman times, none of the deposits is likely to be of any age. To judge by other roads in Colchester (especially East Hill), the alterations to the slope probably happened within the last 100 years or so and was intended to help coaches in icy weather.

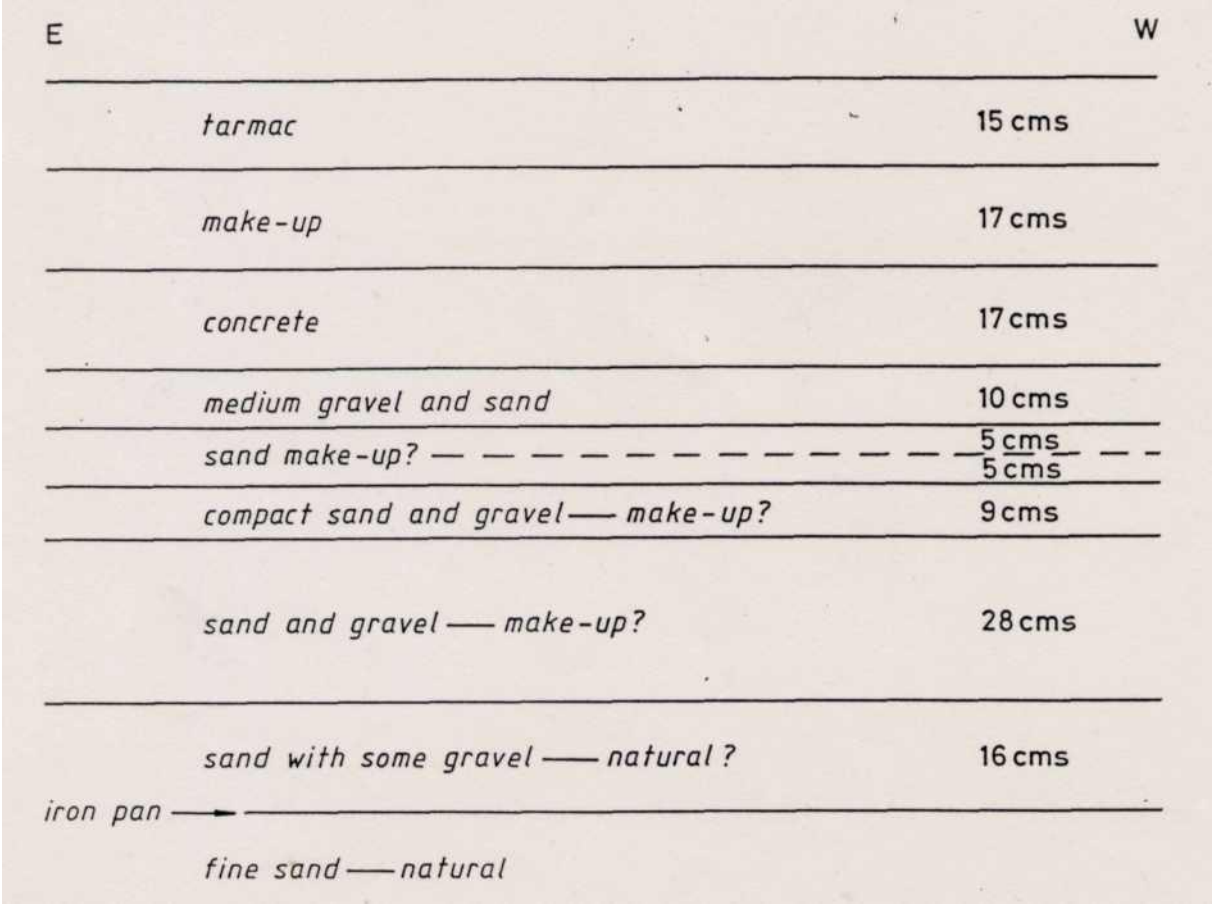


Fig 13.216. Lexden Road/Tapwoods (5/82b).

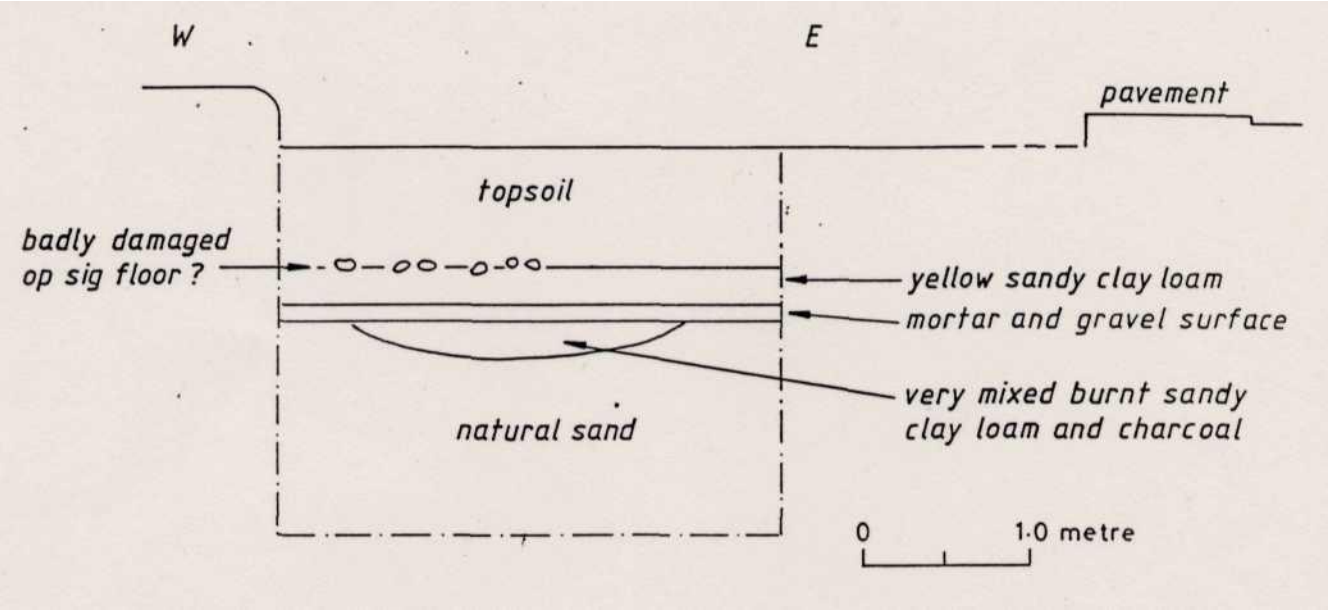


Fig 13.218. Maidenburgh Street/William's Walk (5/82d): section.

6/82a

East Hill (by All Saints House)

Fig 13.219

June 1982

Reason: pipe trench along north gutter of street

Record/report: NS/PC

The trench was about 0.8 to 1.0 m deep and was placed along the north gutter of East Hill and the east end of the High Street. Opposite AH Saints House the trench was cut into modern tarmac over a bed of reinforced concrete which in turn overlay layers of stone and gravel in a sandy matrix. Under the last was orange ?natural sand and gravel. Just east of the latter, the modern tarmac directly overlies the orange ?natural sand and gravel. Here it is lower than the ground to the north and south, perhaps indicating that the earlier metalling (from this point eastwards) had been removed to improve the gradient. (On the latter point, *see* also the Lexden Road/Tapwoods Watching Brief (5/82b).)

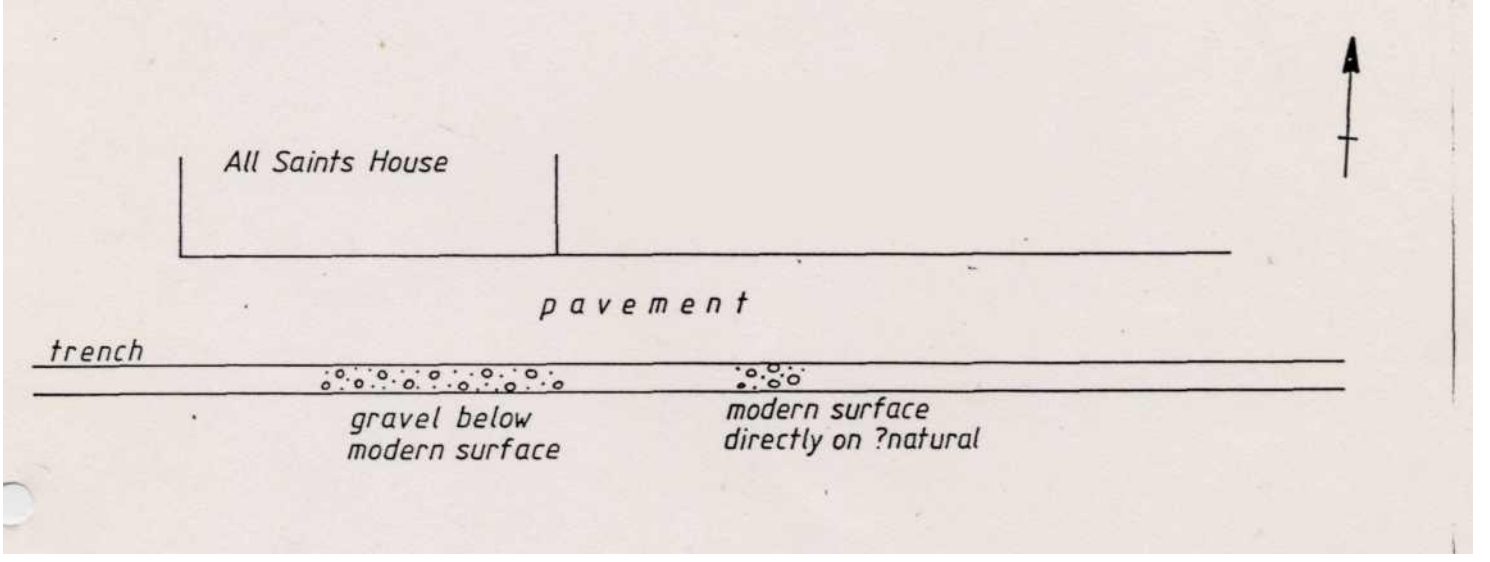


Fig 13.219. East Hill (6/82a).

6/82b

11 Queen Street

June and July 1982

Reason: single-storey extension to existing offices

Record/report: NS/PC

The foundation trenches, all at least 2 m deep, cut dark topsoil which was presumably a combination of an accumulation of topsoil and ?post-medieval pits. The only feature noted was a post-medieval (probably Victorian) soakaway or cellar at the east end of the site.

6/82c

3-6 West Stockwell Street

Fig 13.220

17th to 21 st June 1982

Reason: erection of small building

Record/report: NS/PC

All ground cut by the foundation French is apparently backfilled cellar which consisted of soil, much white mortar, and fragments of brick (including frogged brick). The cellar wall was of brick (not noticeably thin). The sand cutting the cellar wall was very clean and therefore seemed natural but was close to the present surface.

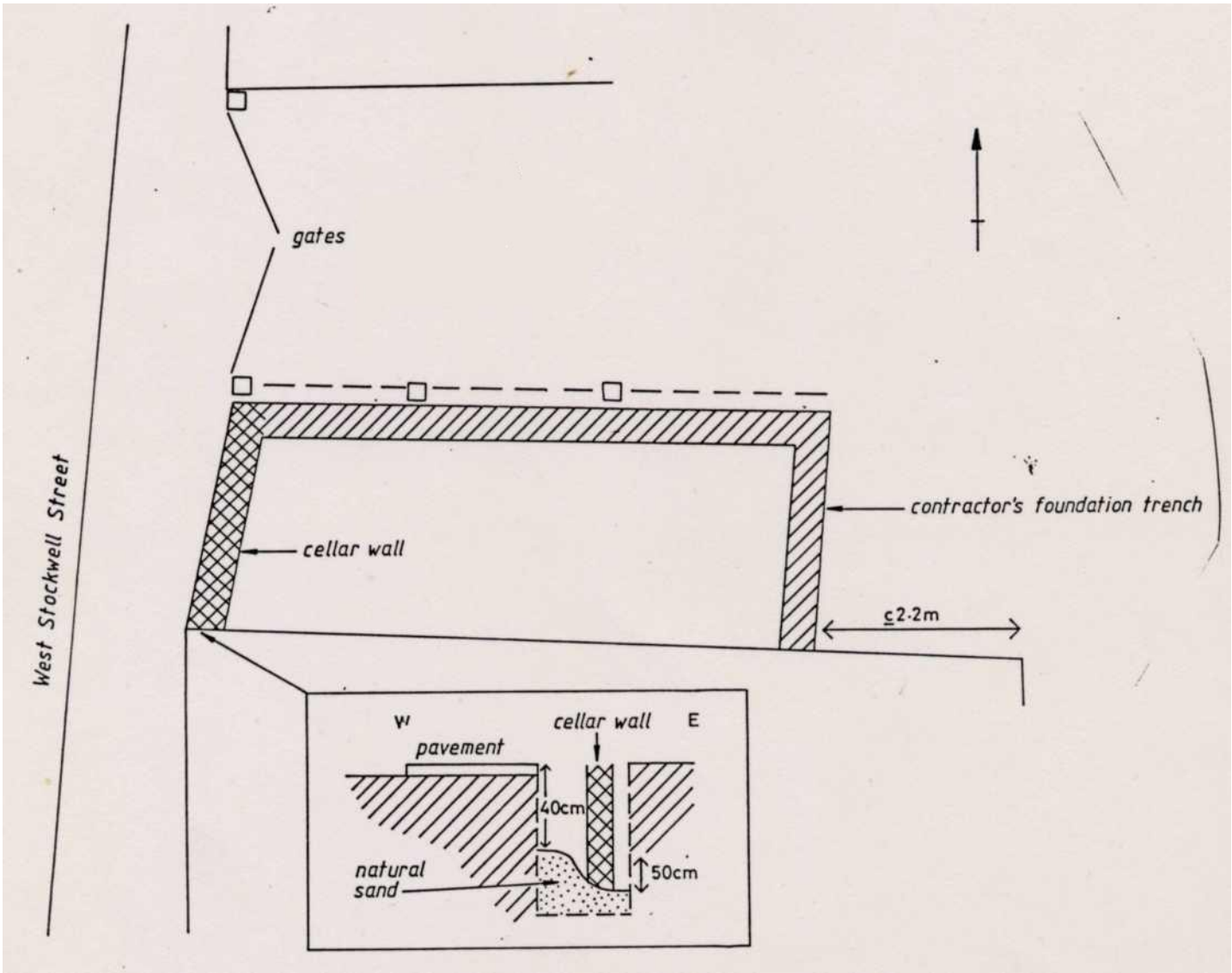


Fig 13.220. 3-6 West Stockwell Street (6/82c).

8/82a

West end of Cowdray Centre, Cowdray Avenue

Fig 13.221

August 1982

Reason: new factory units

Record/report: NS/PC

The area concerned was the site ot the 'Northern Cemetery' (Hull 1958, 257; *CAR* 9). A mound in the north-west corner of the site, up to 3 m high, was removed to level the area. The mound was upcast from the brick-making quarry and consisted of thin topsoil over about 2 m of dump (gravel, clay, and brick frags). The site was trenched for new drains, foundations etc. Towards the centre of the site there is a layer of gravel and sand containing brick fragments, mortar and other debris over a layer of topsoil mixed with clay. This all probably derived from the brickworks or the quarry. Most recently this site was a field. There were no clear indications of the gravel quarry nor of any Roman burials.

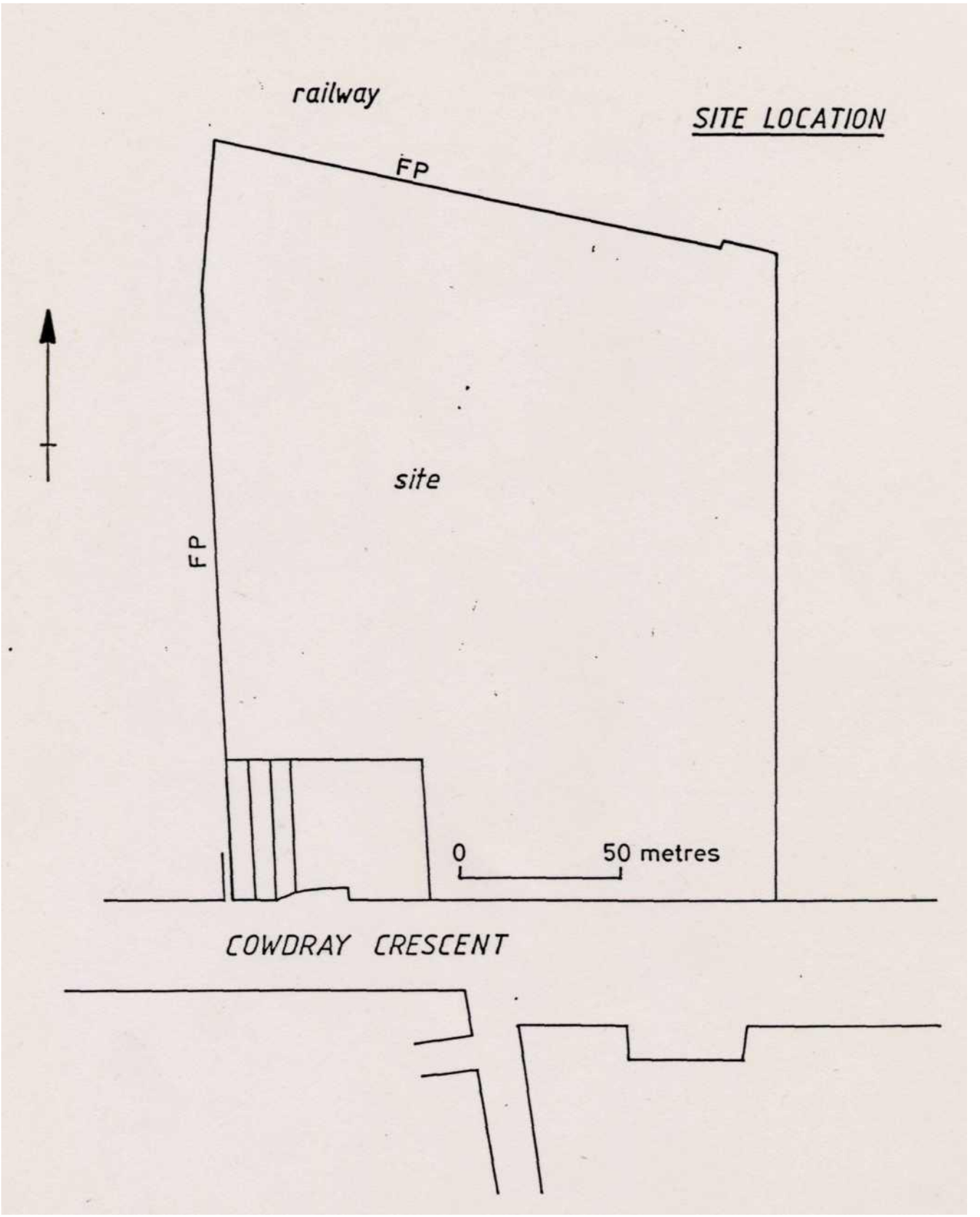


Fig 13.221. Cowdray Centre, Cowdray Avenue (8/82a).

9/82

Bakery Cottage (North), Halstead Road, Eight Ash Green

Fig 13.222

29.9.1982

Reason: substantial renovation and repair work to a c 18th-century brick building

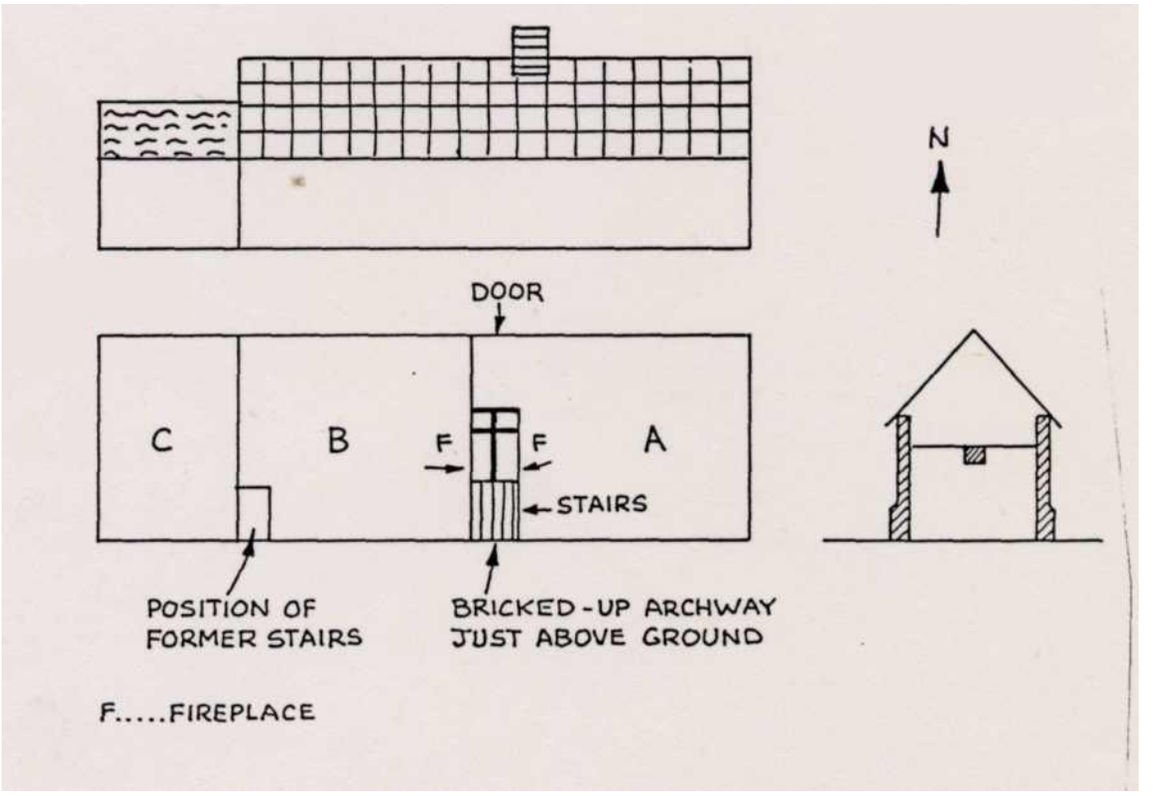
Record/report: NS/PC & NS

The building is three celled (A, B, & C) and ot three storeys. The oldest part of the building is Cell A. Its walls are of brick laid in Flemish bond with black headers. The walls are wide at the base, being stepped out externally at a height of about 0.5 m. The walls are only as high as the eaves, "the gable above this level being weather-boarded. The chimney stack has a wide base which incorporates a wide fireplace divided into four by an ?original east-west spur wall from the back of the fireplace. The roof has two side purlins per side and a ridge-board. It appears to have been completely rebuilt above the level of the lower purlins where the original rafters have been sawn off. The first floor is supported by a substantial main joist with relatively flimsy joists on edge.

Cell B, also of brick, was butted against the west side of Cell A and was not tied in. The walls are of Flemish bond without the black headers of Cell A. The roof is possibly original and well preserved. It has couples, no ridge-board, no collars, and one purlin per side. The cross-pieces which existed are only supports for the ceiling. This was probably an outshot which was removed for Cell A.

Cell C is the latest addition and includes the remains of a bread oven with channels in the walls of its fireplace open to the air to a height above the floor of about 0.6 feet and opening into a flue at a height of about 2 m. A brick in the oven appears to be inscribed "AP 1903'.

The bricks of Cell A are late 17th century at the very earliest but the structure itself appears to be late 18th or early 19th century in date. Cell B is probably of a similar date (but Shortly later). Cell C is probably early 20th century.



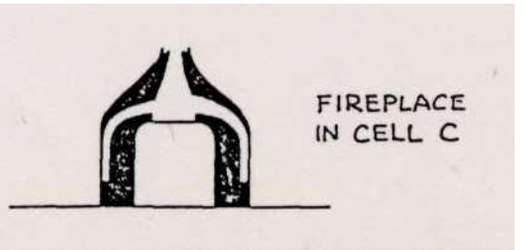


Fig 13.222. Bakery Cottage, Halstead Road, Eight Ash Green (9/82).

11/82

35-7 High Street (west of Marks & Spencer)

Fig 13.223

November 1982

Reason: demolition of existing building, erection of new building, and structural' improvements to existing cellars

Record/report: NS/PC

The rebuilding work provided access to the cellars so that records could be made of the existing medieval structures there. Much of the medieval cellar walls was obscured by later work. Bricks had been used to form a corner. These measured 213 x 105/115 x 35/40 mm and were in a gritty sandy fabric. They were mostly red but some were fired black with a black core. A sample has been kept. The absence of peg-tile suggests that the cellar may be early medieval.

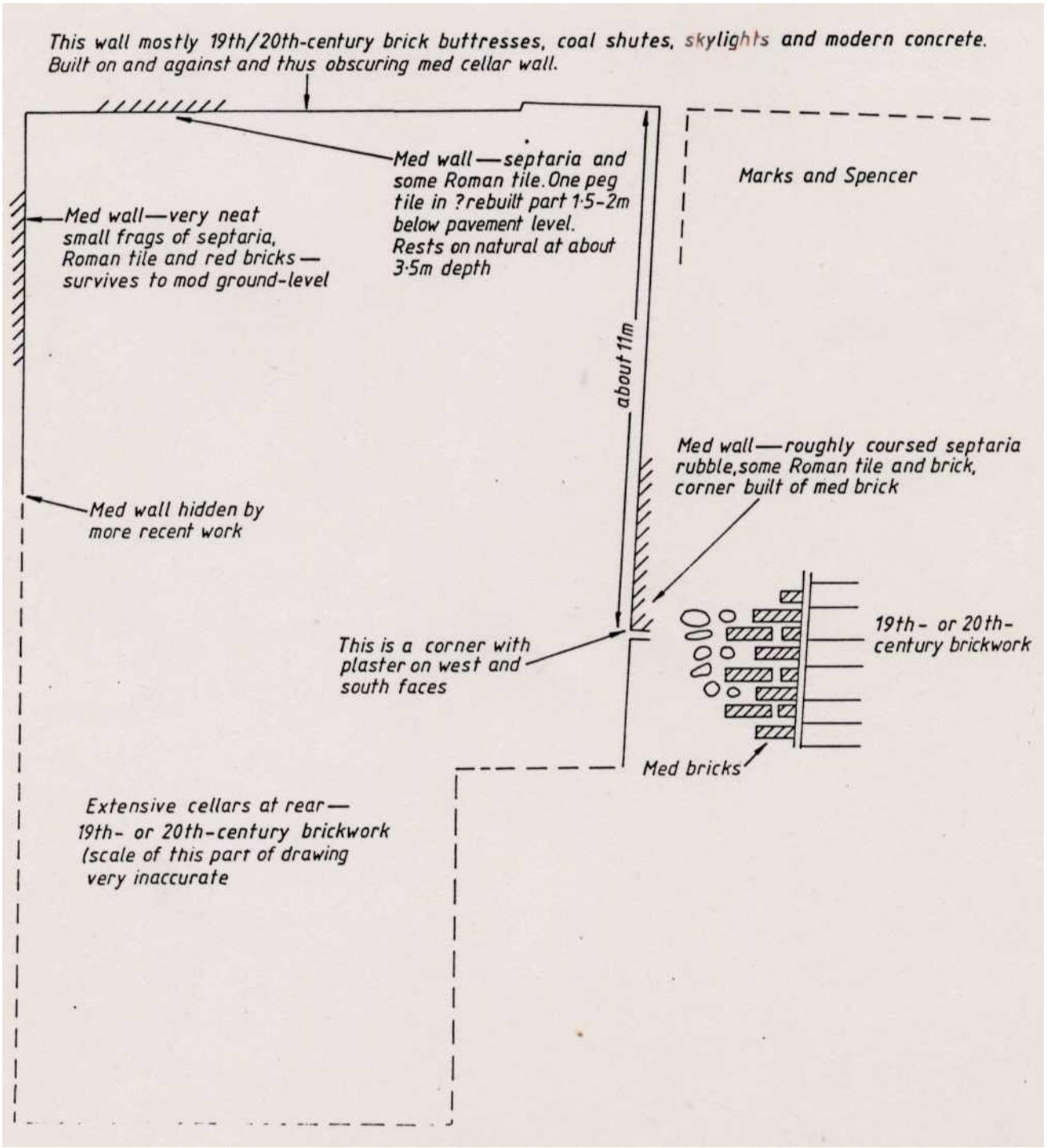


Fig 13.223. 35-7 High Street (11/82).

12/82

King Coel's Kitchen, 24 King Coel Road

Fig 13.224

15th December 1982

Reason: levelling area on northern lip for building house

Record/report: NS/PC

The northern part of the pit was levelled to form a plot for a new house. No finds were made and no features spotted. A sketch section shows the stratigraphy to be normal for an open, non-urban site.

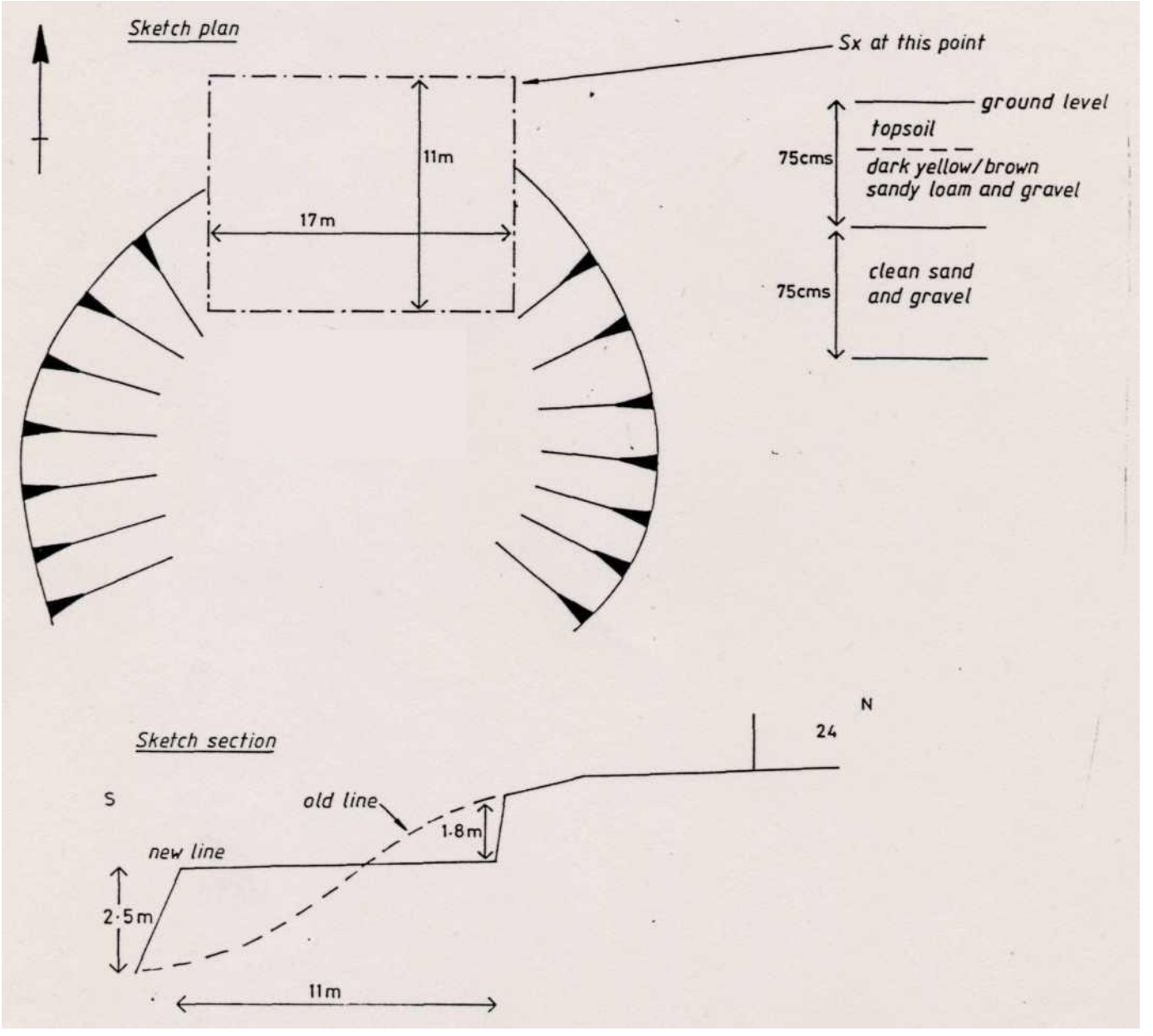


Fig 13.224. King Coel's Kitchen, 24 King Coel Road (12/82).

Castle Park (CAP 1983)

For text and plans, *see* pp 366-71. For sections, *see* Fig 13.228 on 35 mm microfiche.

361-2 High Street ('Spendrite') (SPT 1983)

1983

Figs 13.229-30 [For Fig 13.229, *see 35 mm microfiche]*

Reason: redevelopment of shop

Record/report: CC/CC & SG

The site lies south of the Temple of Claudius, within an area of Insula 30 thought to contain at least one public building, possibly a basilica. Discoveries in this *insula* in the past include a group of foundations belonging to a post-Boudican structure (Dunnett 1971, 98-100), and plaster mouldings apparently from columns of a building destroyed in AD 60/1 (Hull 1960).

In August 1983, a limited investigation took place prior to redevelopment. The work was restricted to the advance excavation of seven stanchion holes spaced at 6 m intervals across the central area of the site, followed by observations of the contractor's groundwork.

Little evidence could be noted of the medieval building which presumably fronted the High Street because the relevant levels seemed to have been destroyed earlier this century. Clearance by the contractors of the existing early 20th century floors left the level of the site reduced by up to 0.7 m to reveal only dark post-Roman topsoil. Where fully excavated, this material contained no trace of early post-Roman occupation. Part of a latrine (F4) found near the north-east corner of the site was backfilled with material dating to 1500-25. This was constructed from reused Roman material and had been repaired with 16th-century bricks.

In two places, the topsoil was cut by a substantial east-west robber trench (F22/32) for a foundation which had been at least 0.6 m wide and 8.0 m long. To the south of the robber trench and possibly associated with the robbed foundations were Roman floors of *opus signinum* overlying make-up and rubbish deposits. The contractor's trench to the east of the robber trench was cut through what appeared to have been a plinth of some sort, the remains of which consisted of the lowest few centimetres of a surface-built structure of tile set in mortar. Since no make-up on floors was discernible elsewhere in this trench, it is possible that the plinth stood in the open air. Elsewhere on the site were two other robber trenches, one north-south (F24) and the other east-west (F31), which together with F22/32, are presumably associated with the same Roman building.

Part of a slab of *opus signinum* was found unstratified in the north-east corner of the site. It was about 300 mm thick and may have been part of a substantial suspended floor belonging to a hypocaust system. During the subsequent watching brief, part of a floor of *opus signinum* and tile with a cavity below was noted under the central part of the adjacent building to the east (Fig 13.229). This appeared during the early stages of the building works but had to be covered over to ensure the stability of the adjacent building. The site contractor reported another cavity in a stanchion hole 3.5 mm to the south (Fig 13.229). Could the cavities and floors been parts of a hypocaust belonging to a public bath-house?

The earliest levels on the site contained mixed sand and daub deposits which strongly resembled material found elsewhere in association with the demolished rampart of the annex td/the legionary fortress.

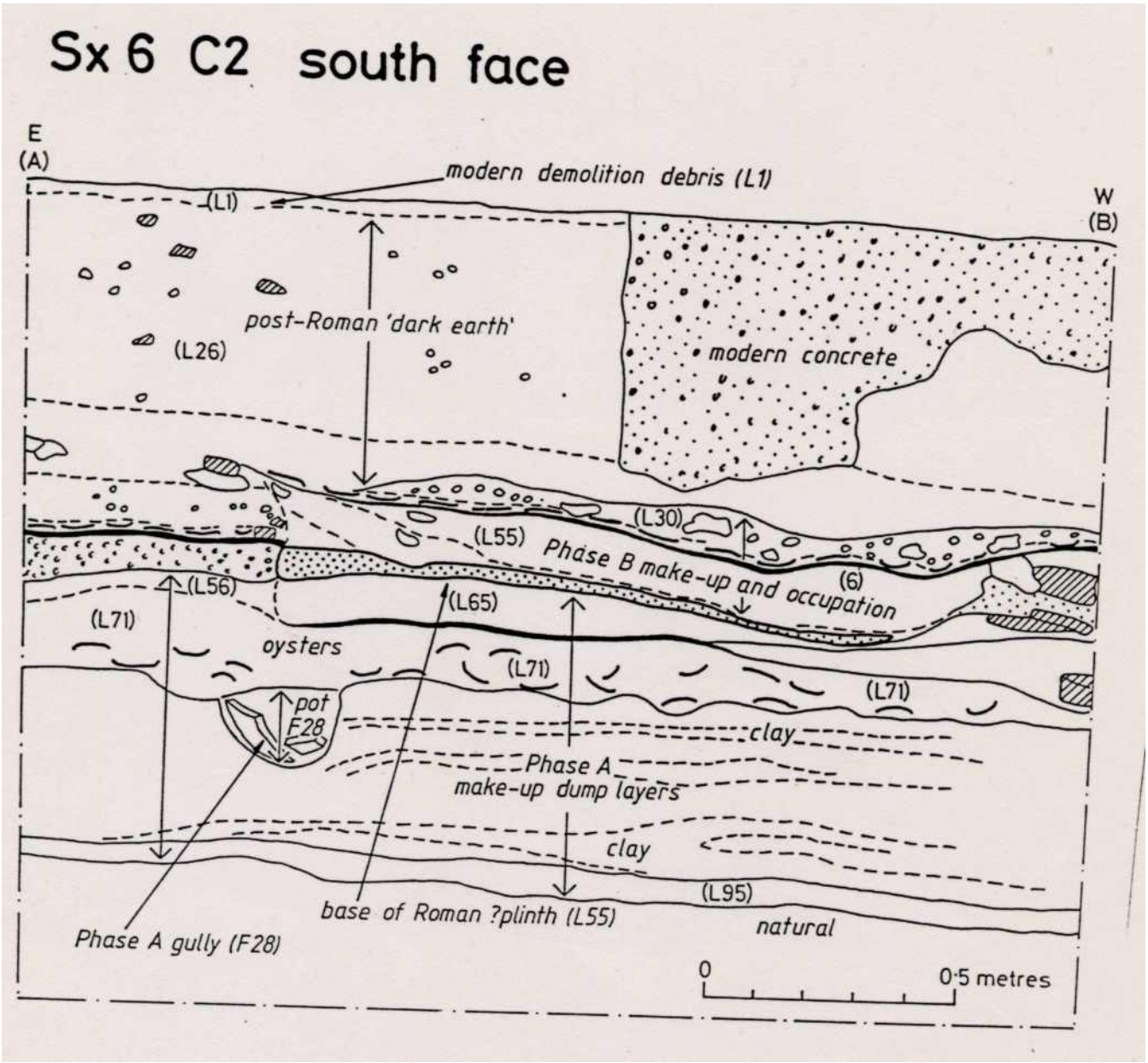


Fig 13.230. 61-2 High Street (SPT 83): section.

0/83a

Flory's Yard, East Stockwell Street

Fig 13.231

Mid 1983 to mid 1984

Reason: construction of two-storey houses for the Colchester Borough Council

Record/report: NS & DS/PC

In general the foundations for the new houses were shallow and in many cases did not reach Roman levels. The massive dump at the west end, which proved to be recent in origin *(see below),* was largely dug away to make a terrace for the new development. The trench for the new foundation on the site of the dump penetrated only dark soil.

At Point A (Fig 13.231), the trenches just punctured Roman levels where was revealed much broken *opus signinum.* This was not *in situ* but may have been a badly damaged floor. The trenches revealed mainly dark soil with areas of smashed Roman mortar and some sandy clay loam. Any robber trenches that exist in this area could not be detected because the bases of the trenches were not clear or regular enough.

At Point B, the existing ground level (which rose sharply to the south) was cut away to make a level site for the new houses. This operation resulted in the exposure of some Roman levels (sandy clay loam) and an early medieval robber trench.

At Point C, a contractor's test-pit indicated that the natural lay at about 1.5 m of the ground level at that time and that the water table was only about a further 0.5 m below the top of the natural.

At Point D were other remains of cellars and brick foundations, probably of 19th-century date. The base of the topsoil in this area was not reached.

At Point E was a substantial accumulation of soil. Although the modern surface in this area of the site appeared to be well established and of longstanding, the underlying soil had apparently accumulated against the western and northern boundary walls implying that it was of comparatively recent origin. To confirm its date, a trench was dug through the mound on 23rd January 1983 before redevelopment work began. The trench, excavated using a mechanical digger, revealed that the 'mound' in this part of the site was made-up of builders' rubble, laid down within the last 100 years, to a depth of 3.8 m below the present ground level. A layer of topsoil, 0.75 m thick, lay under the rubble and sealed a probable Roman layer at a depth of 4.5 m. Investigation of the Roman deposits was not possible because it was impractical to excavate the trench any deeper. No finds of any significance were recovered from the trench. The mound was subsequently removed during the redevelopment works.

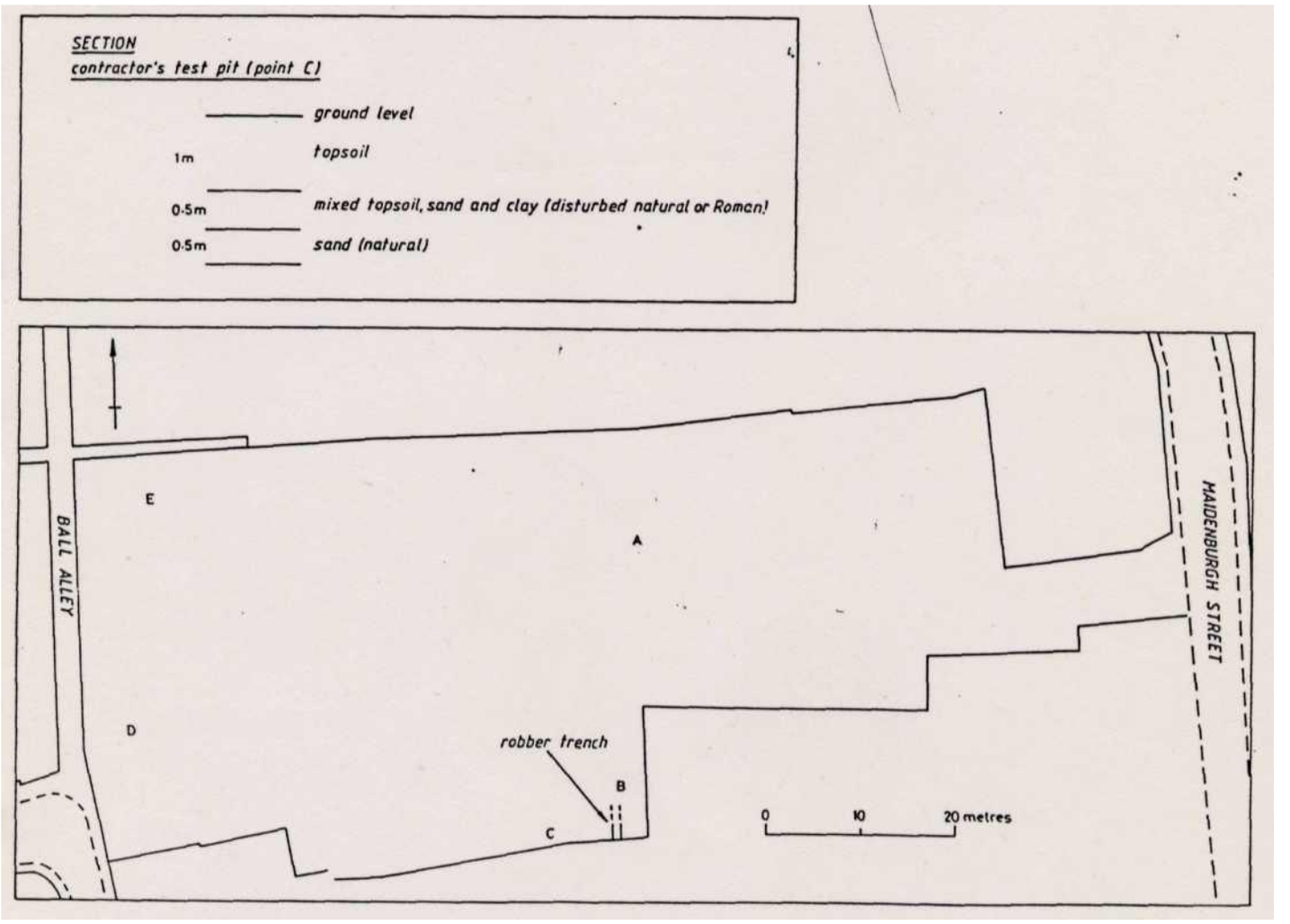


Fig 13.231. Flory's Yard, 19 East Stockwell Street (0/83a).

0/83b

Maidenburgh Street (Dutch Quarter Phase 2)

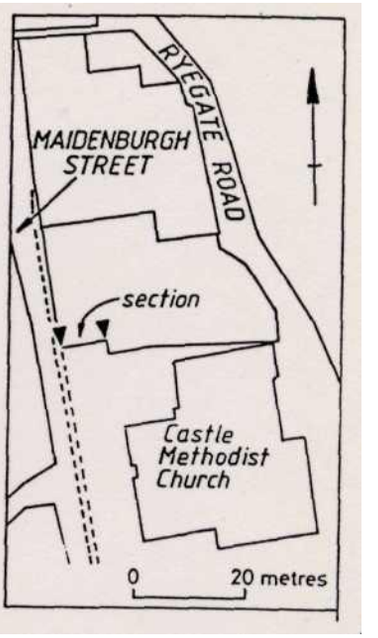
Fig 13.232

Early 1983

Reason: redevelopment of car park for council houses

Record/report: NS/PC

A trench in the south-west corner of the site was sufficiently deep to penetrate the underlying remains of the north-south Roman street. The metalling uncovered appeared to be consistent with the edge of a street or a footway along the side of a street rather than metalling of a proper street. A feature at the west end was either a pit or, less likely, part of a large robber trench for a substantial north-south wall. At the east end, the street had been destroyed either by the bailey ditch of the castle or a large post-Roman pit.



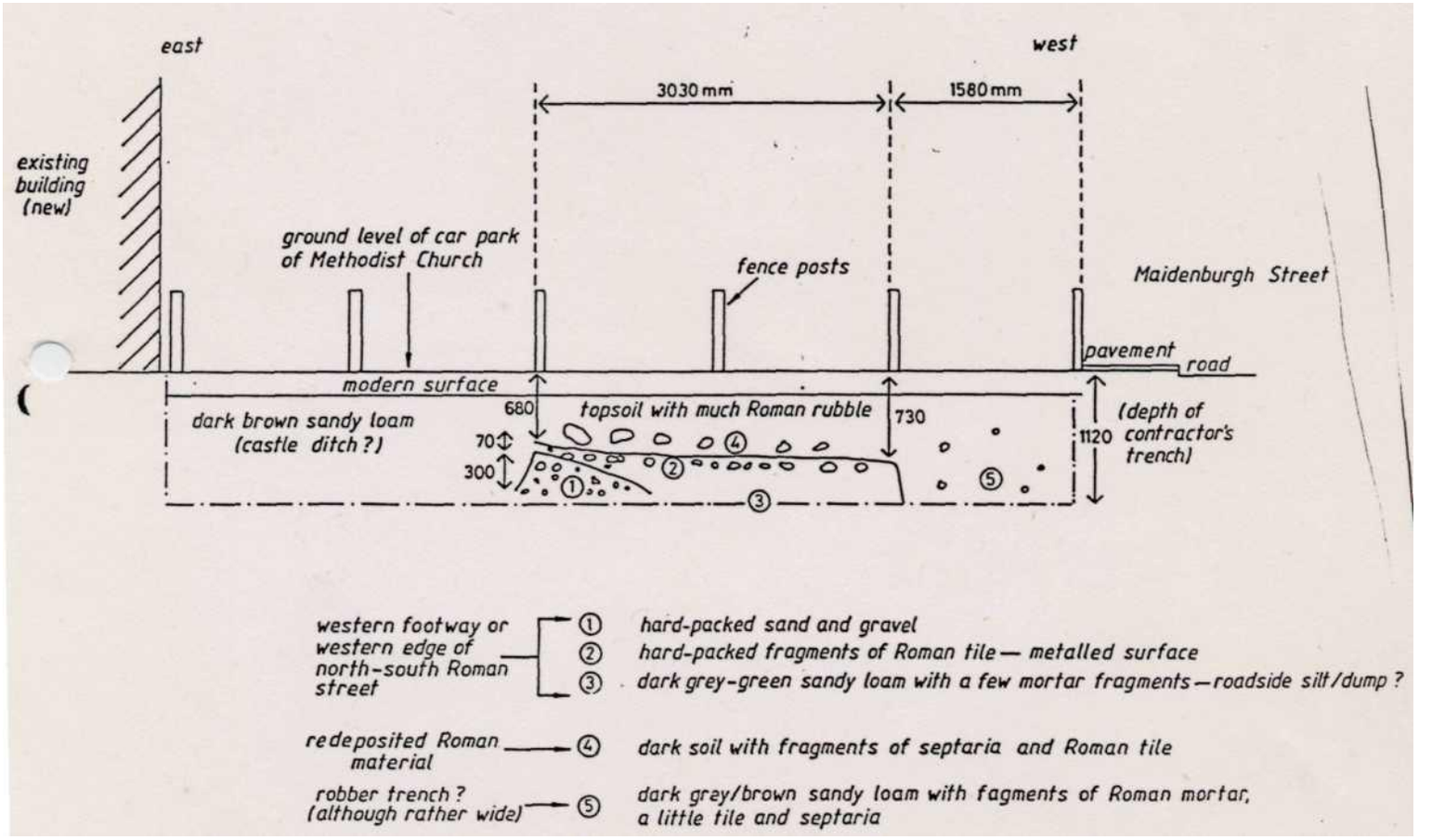


Fig 13.232. Maidenburgh Street (former carpark) (0/83b).

0/83c

Ryegate/Northgate Street

Figs 13.233-4

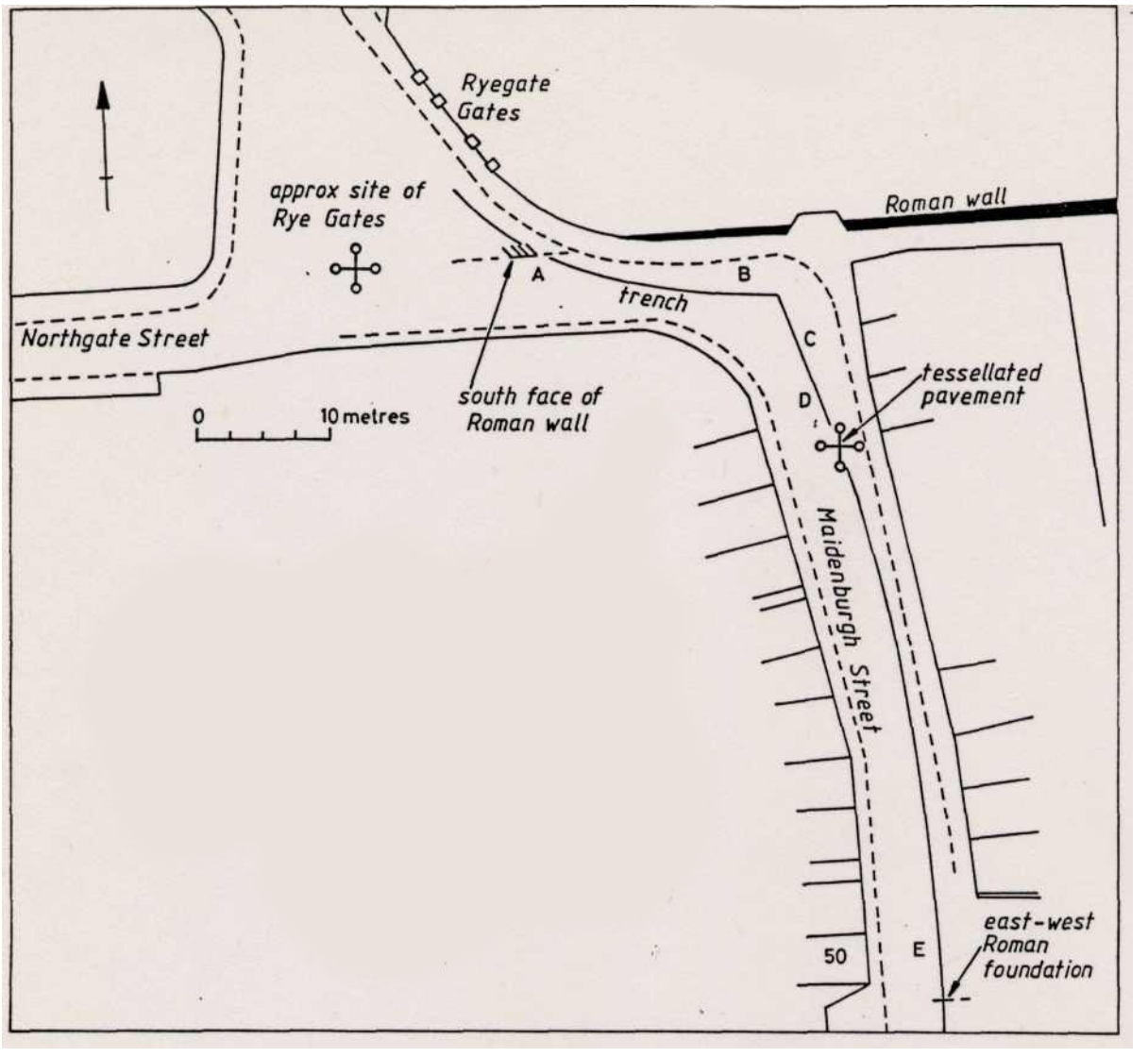
Early 1983

Reason: pipe trench along street

Record/report: NS/PC

The trench was dug through the stump of Roman wall under the modern street (Point A, Fig 13.233). Only the southern face of the wall was detected. Part of the rampart appeared to be *in situ* to the south of it. Elsewhere the rampart was not apparent (eg Point B), presumably because it had been destroyed by later trenches and other features.

Further down the street was a tessellated pavement at a depth of 1.45 m (seen only by the digger driver) and a Roman foundation of brick and yellow mortar. The latter was at a depth of 2.8 m.



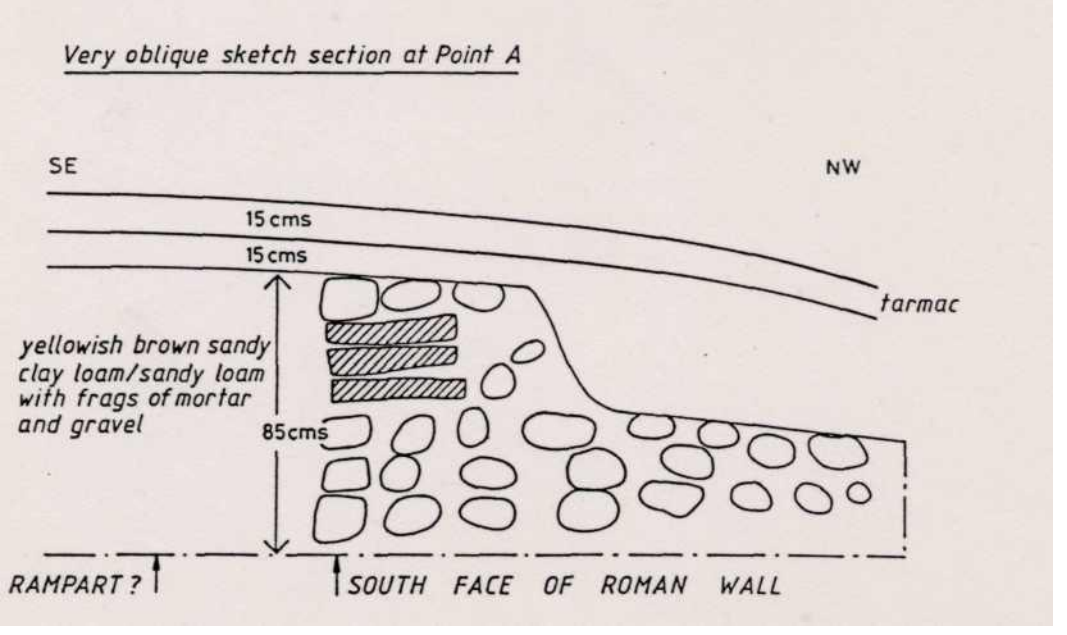
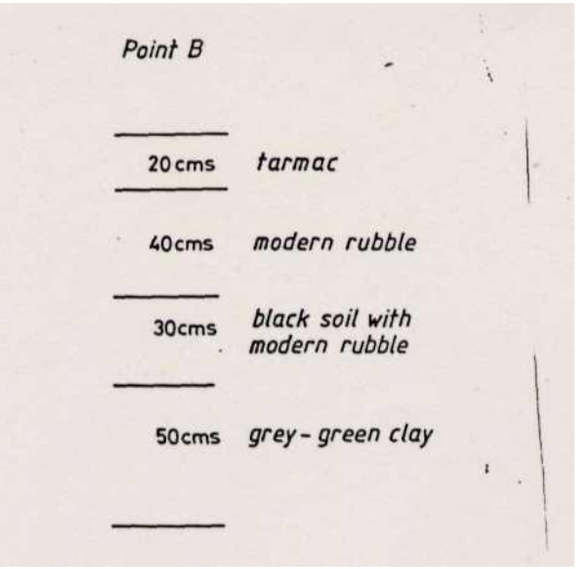


Fig 13.233. Ryegate/Northgate Street (0/83c): plan and section.



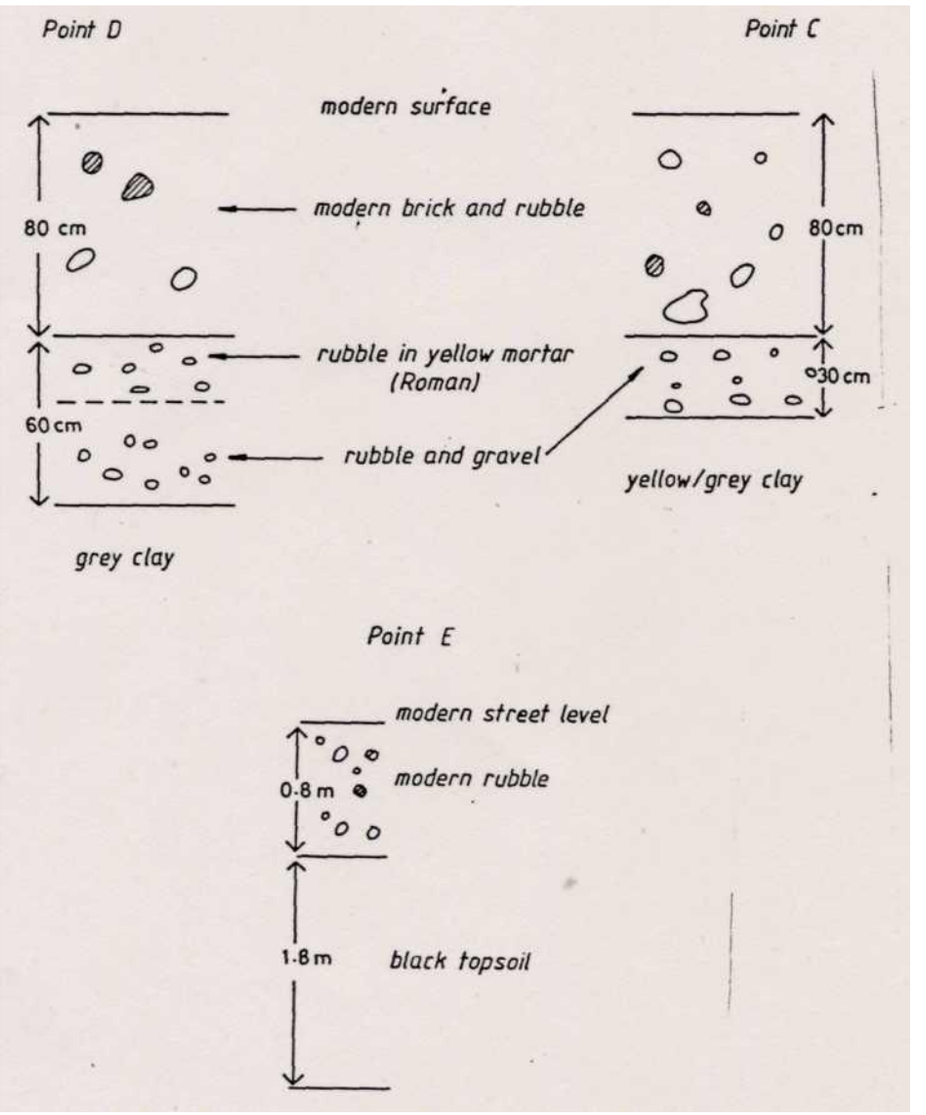


Fig 13.234. Ryegate/Northgate Street (0/83c): sections.

0/83d

54 Barrack Street

Early 1983

Reason: visit to inspect a well discovered in a house

Record/report: NS/PC

A well was found under the floor of the kitchen at the back of the house. It is built of brick and looks to be 19th century. It is at least 10 feet deep. The bottom is filled with rubble. It is either Victorian (like the existing house) or it is earlier and was built over (more likely).

0/83e

Winstree Road (land adjacent on east side — 'New Farm'

Fig 13.235

1983-4

Reason: construction of houses on former scrub/farm land

Record/report: NS/PC

The redevelopment area was divided up into plots and was built upon in a very piecemeal fashion, often by people building their own houses. Occasional visits during the digging of trenches for foundations and services revealed nothing of archaeological interest. The stratigraphy consists of ploughsoil over cover loam over sand and gravel.

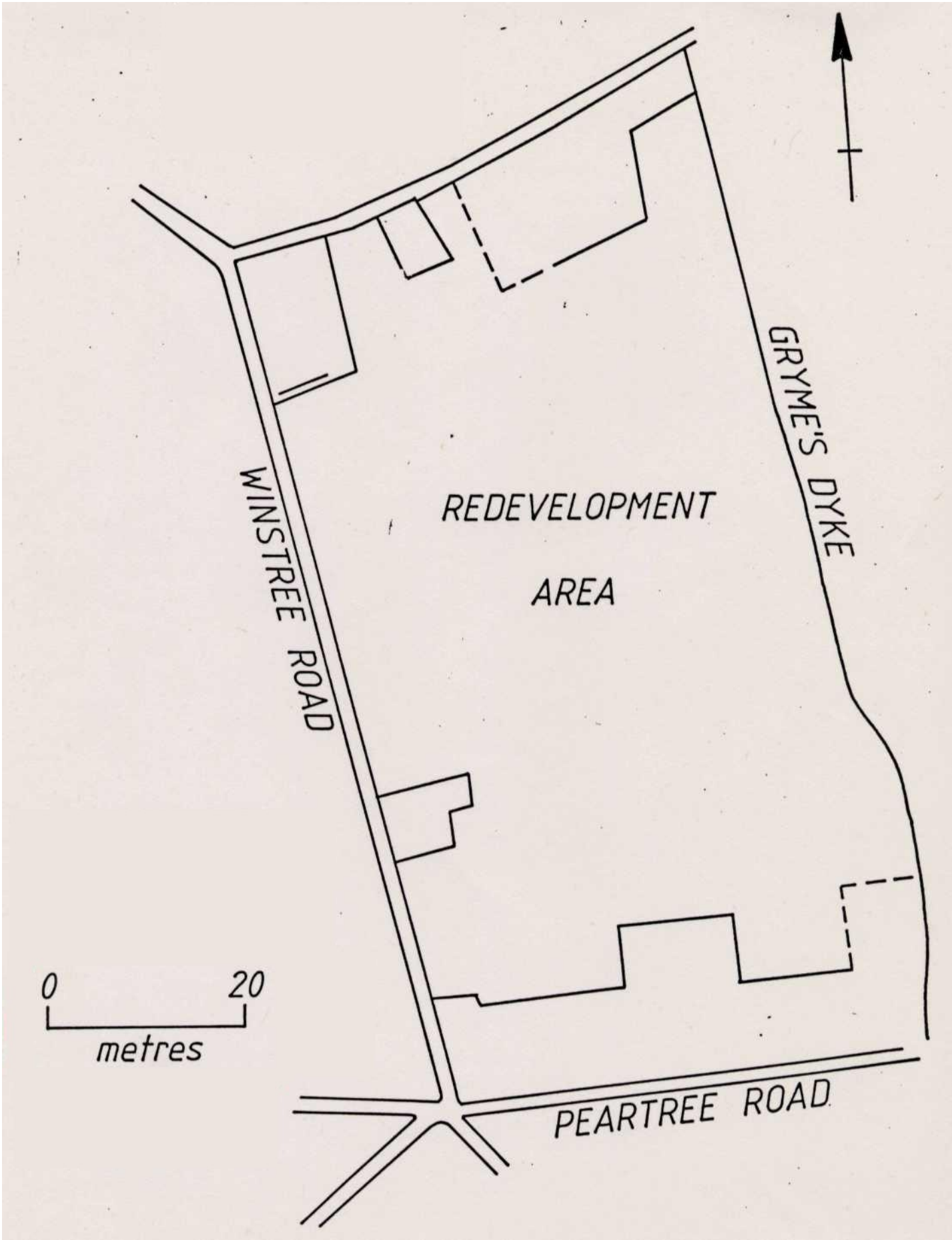


Fig 13.235. Winstree Road (0/83e).

3/83

Graveyard of the former St Giles's Church

March-June 1983

Reason: alterations in cemetery

Record/report: NS/PC

Finds: X214 (unstratified: late 3rd/4th pot) & X221 (brick and tile from original tower - the wooden pan: appears to be a rebuild)

Negative.

4/83

Williams & Griffins, High Street

Fig 13.236

April to May 1983

Reason: excavation in existing basement

Record/report: NS/PC

Finds: X220 (unstratified: cat's skull)

An existing basement was enlarged. The work did not require planning consent and therefore there was no advance warning. The area proved to have been badly affected by post-Roman pits although there was some surviving Roman material, notably some foundations (consistent in size with houses) and some early floors.

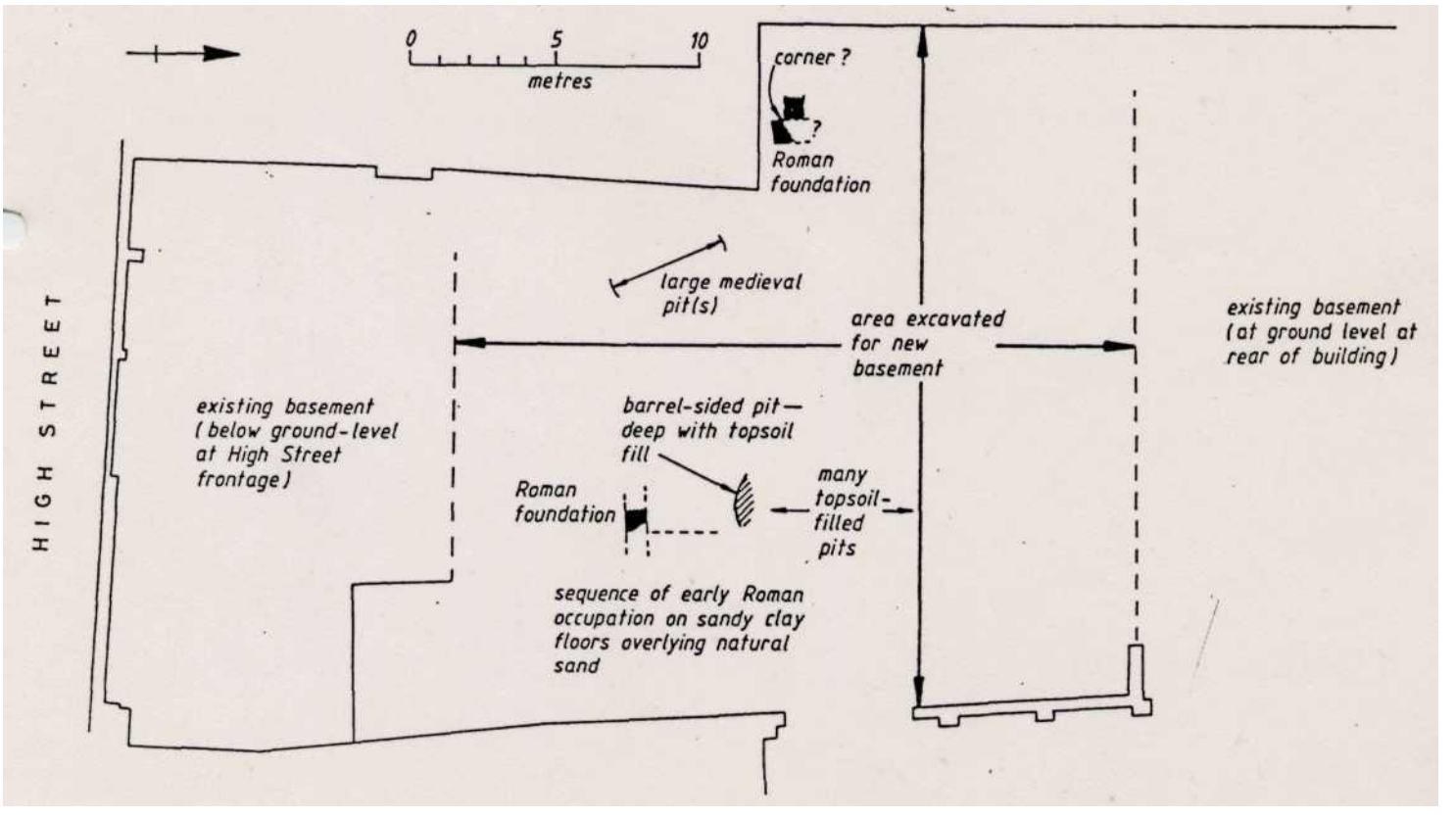


Fig 13.236. Williams and Griffins, High Street (4/83).

6/83a

29 East Street

Figs 13.237-9

6.6.1983

Reason: renovation of timber-framed building

Record/report: NS/NS & PC

The building is a two-celled structure.

The front block by the street is of three storeys including an attic with a dormer window. The roof lies east-west and is of the side-purlin type; it may not be original.

The rear block is not all of one build; the ridge, top-plates and first floor are all at a slightly lower level than the equivalent features in the front block. Although the feel and style of timbering of both blocks is very similar, it seems as if the rear block is the earlier of the two. The roof at the rear lies north-south. All the couples were pegged and collared but there is no sign of collar purlin or crown posts. The rear block does not contain an attic, only secondary timbers inserted to support a later ceiling.

The valley board in the roof at the junction of the two blocks is a ?reused fascia board carved with foliage and fruit.

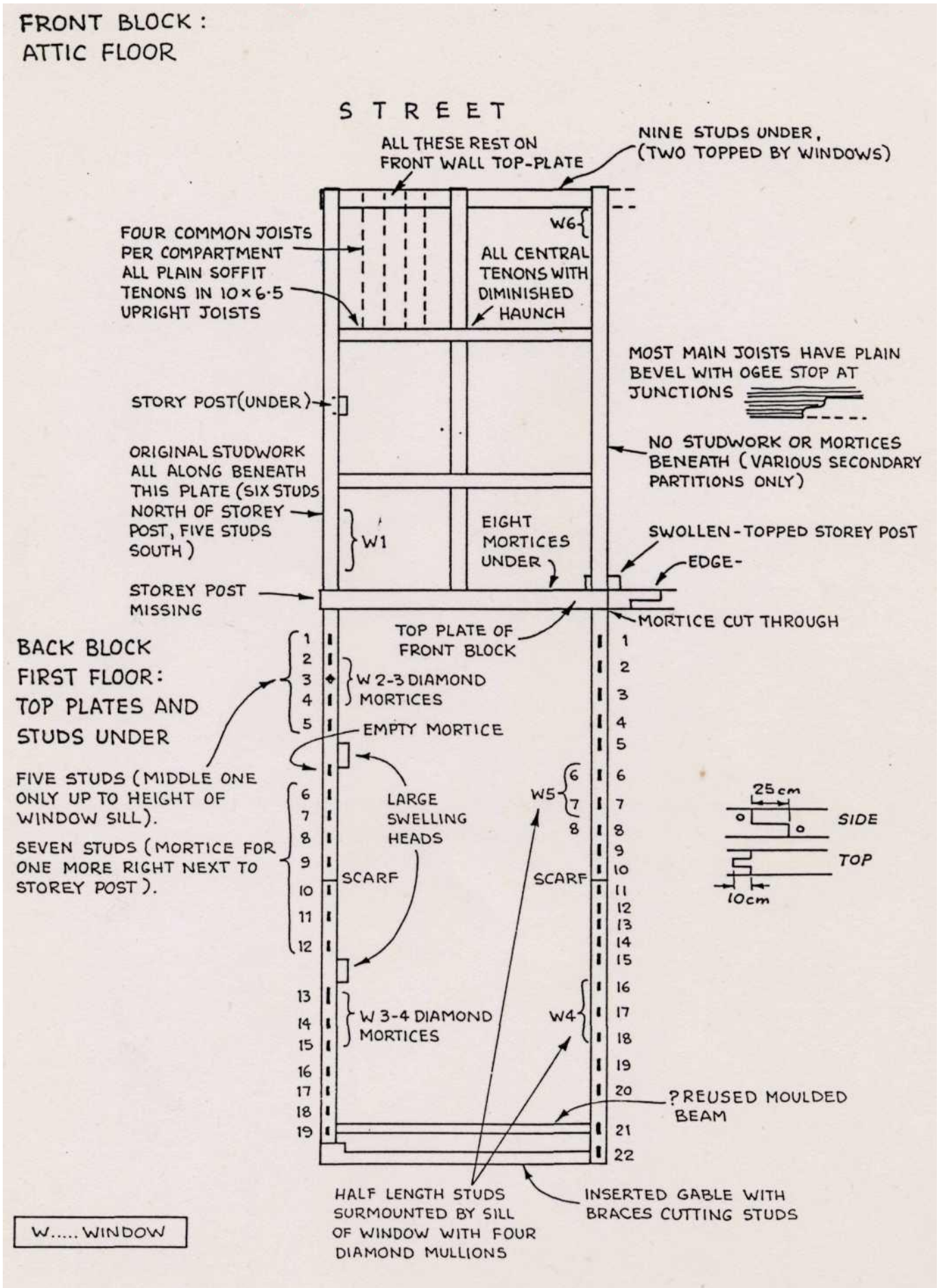


Fig 13.237. 29 East Street (6/83a): survey.

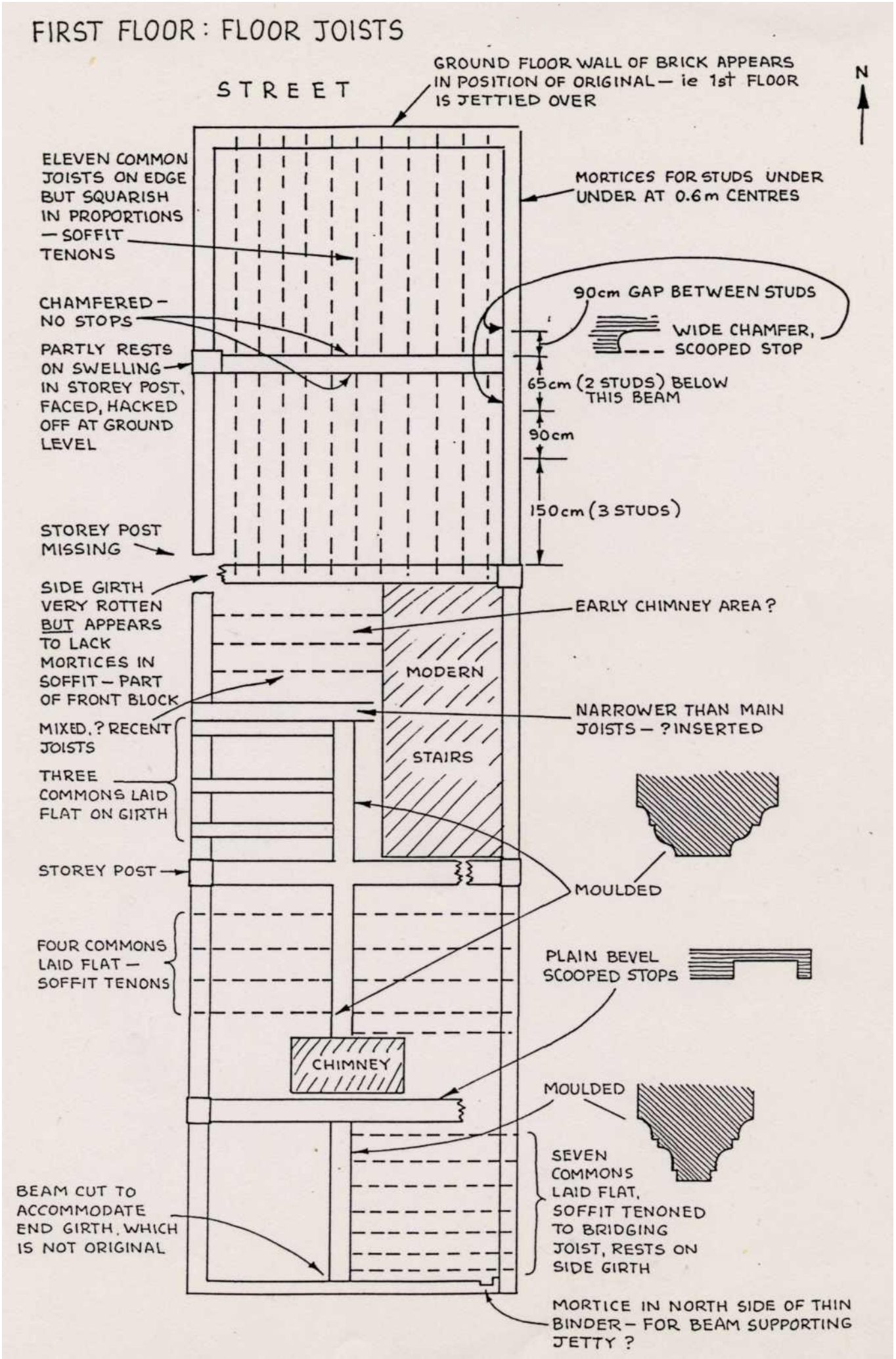


Fig 13.238. 29 East Street (6/83a): survey.

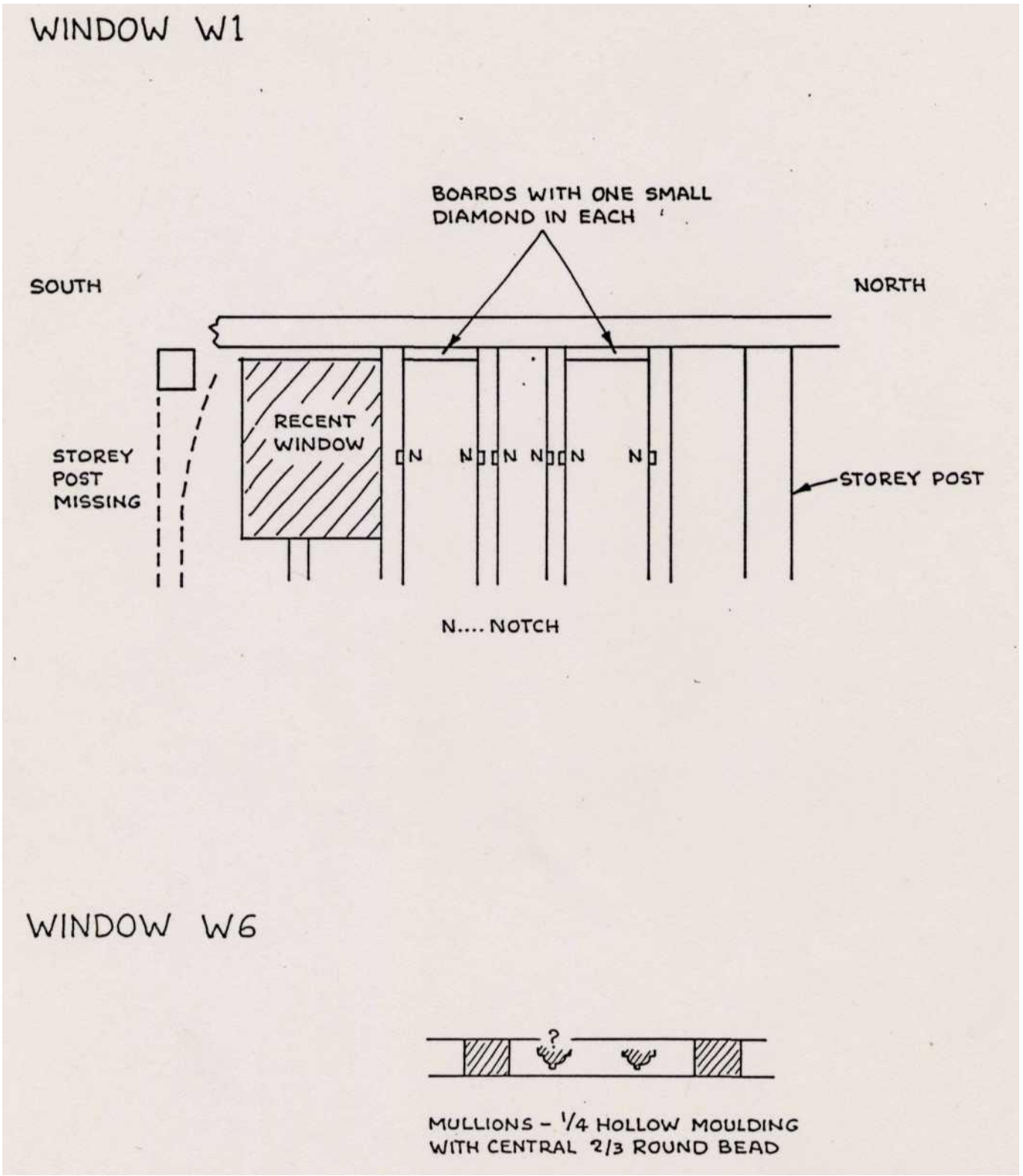


Fig 13.239. 29 East Street (6/83a): survey.

6/83b

North Hill (no number)

June 1983

Reason: renovation of timber-framed building

Record/report: NS/PC

All features were retained unless the timberwork was severely rotted. The Essex County Council building people have apparently visited the site so the Trust made no thorough survey.

The building is of two storeys plus an attic but the floor levels of the front are different to those of the back. The front block has been modified but nothing apparently is much older than the 17th century.

The back block is jettied with massive hanging knees to the north and is weather-boarded. The timbers are of heavy construction. The main joists have chamfered lower arrises and flattened s/ogee stops. All appear to be of 17th-century date.

7/83a

St Albans Road (north end)

Fig 13.240

July 1983

Reason: new housing development

Record/report: NS/PC

A substantial part of the site was lowered because of the natural slope. The new buildings were erected on piles. The topsoil was up to 4 m deep and appeared to contain recent material (slate and frogged brick) all through it, especially in the upper 2 m. The piling indicated 3 to 4 m of topsoil overlying 1.0 to 1.5 m of sandy loam over clean sand. The sandy layers are presumably natural.

The sequence from all the piles watched was the same as described above except for a group of four near the southern boundary of the site. Here, beneath about 3 m of topsoil, was 1 m thick layer of Roman dumped material *in situ.* It consisted of sandy loam containing fragments of charcoal, tile, oyster shell and pottery of 2nd- to 3rd-century date.

The Roman dump appears to be a pocket of material left *in situ* in an otherwise very eroded slope. The topsoil may have been dumped here when the Essex County Hospital or St Albans Road was built.

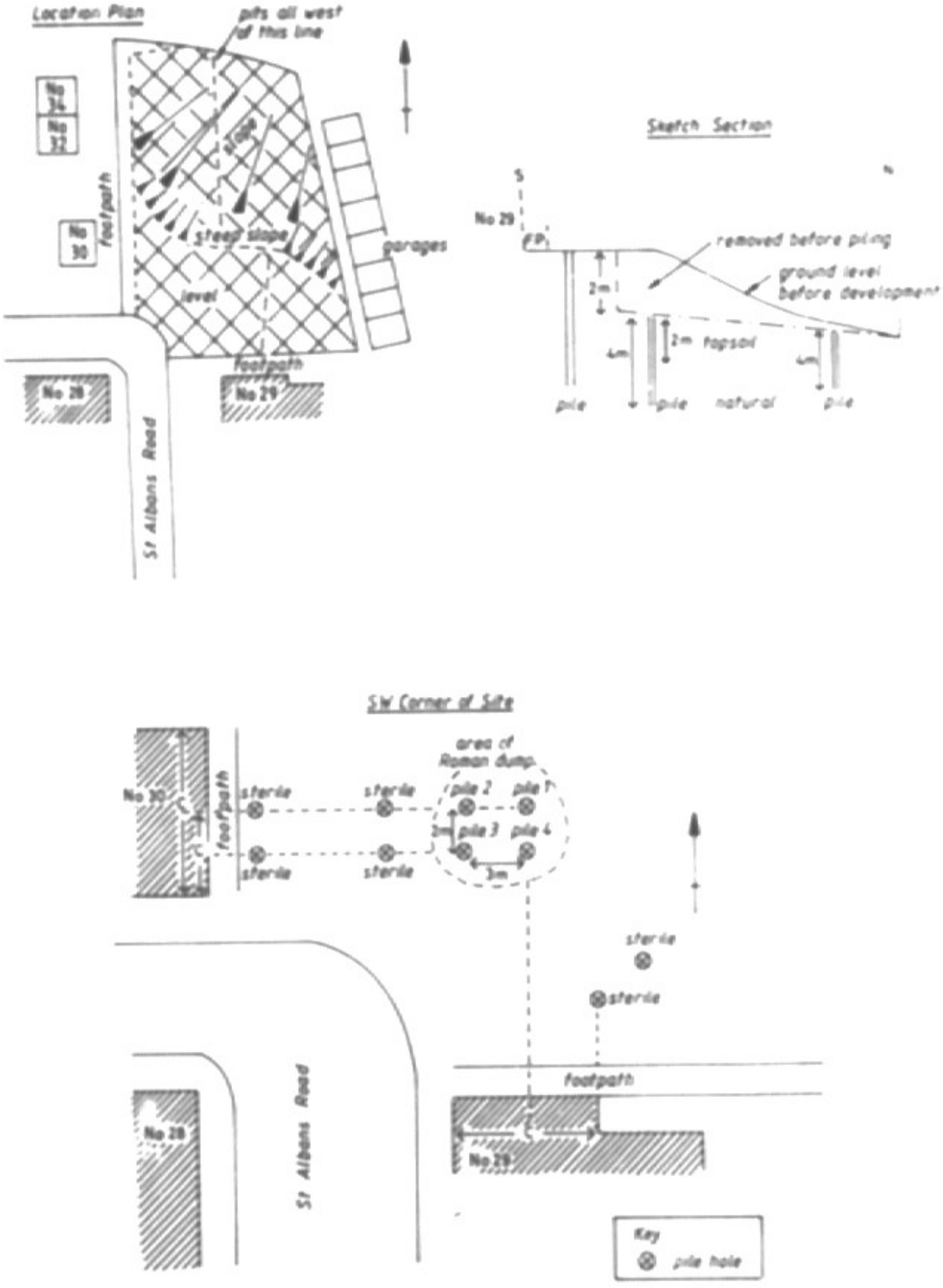


Fig 13.240. St Albans Road (7/83a).

7/83b

Berechurch Road

Figs 13.241-5

20.7.1984

Reason: demolition of ?16th-century timber-framed cottage

Record/report: NS/PC

Photographs: Misc Sites I, 134-46

A small, thatched, timber-framed cottage of ?16th-century date near the south end of Berechurch Road was demolished in July 1983. It appears originally to have been a single-storey hall-house which subsequently had a floor and brick chimney stack inserted. A timber-framed rear-outshot was added later. The roof was of the side-purlin type. Significant structural details included two ?16th century doorways and scarf-joints. NS made sketch plans of the layout at ground- and first-floor levels. Also he made several sketches of three of the external elevations. A series of photographs was taken at an early stage in the demolition.

SKETCH GROUND PLAN (dimensions in mm)

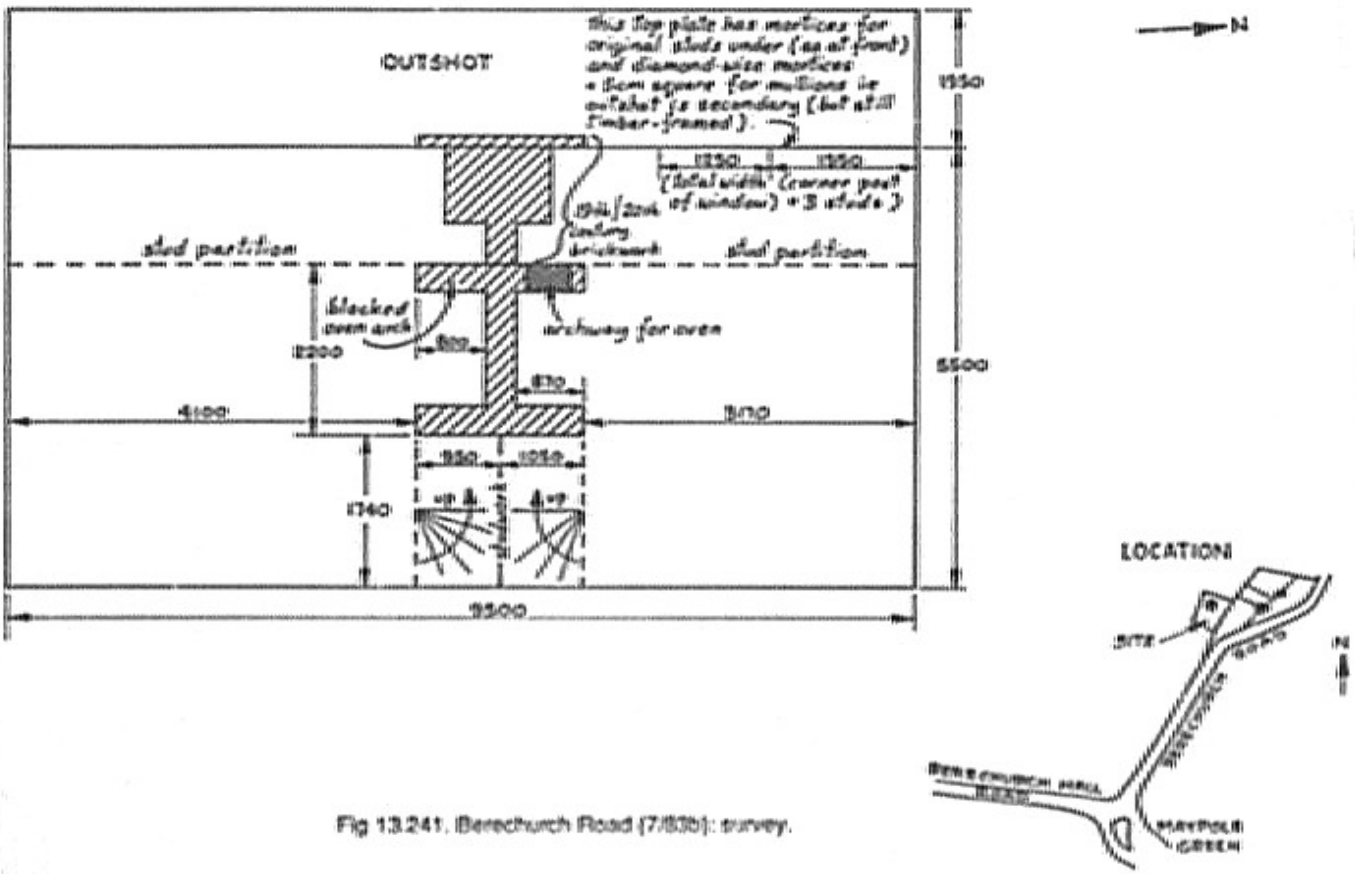
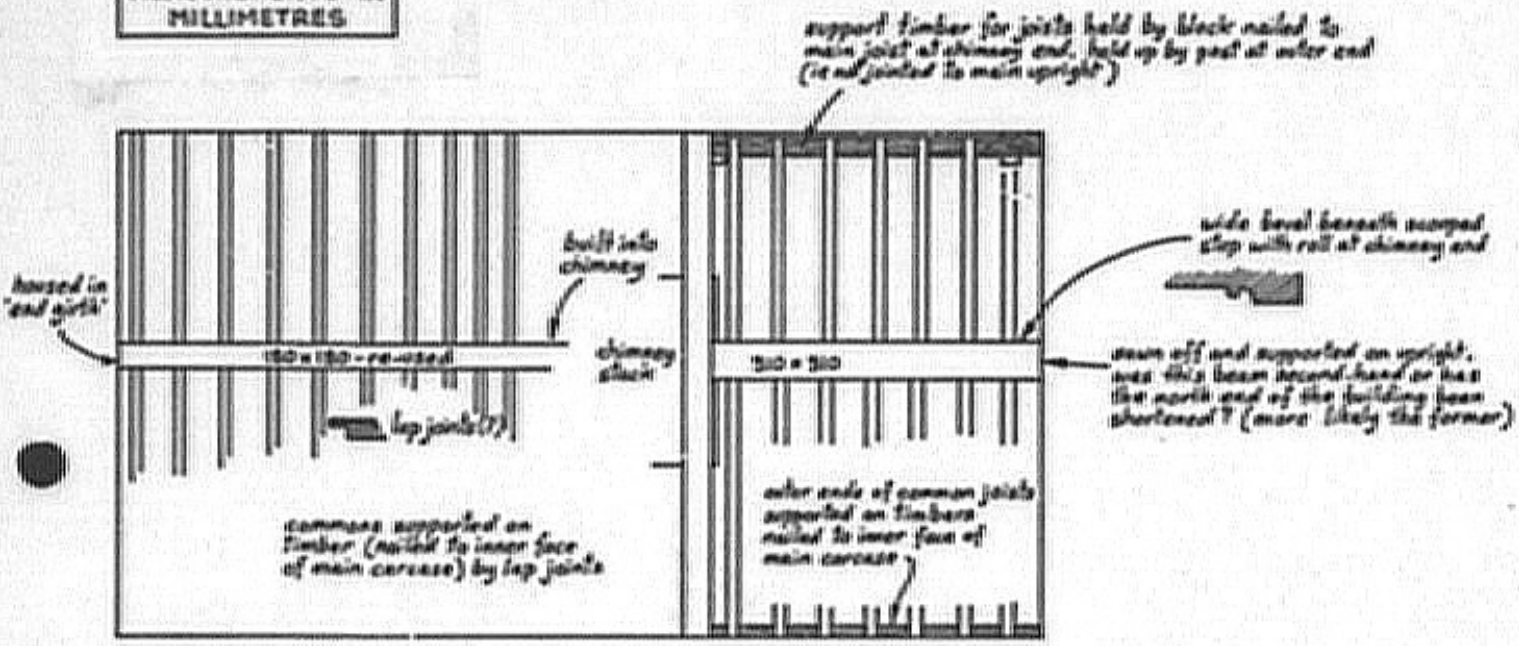


Fig 13.241. Berechurch Road (7/83b): survey.

SKETCH PLAN OF 1st FLOOR

MEASUREMENTS IN MILLIMETRES



1st floor has been inserted. (Principal joists mainly supported on posts inserted into original frame, common joists outer ends are supported on timbers nailed to inner faces of original studs. It also cuts across head of archway in E façade.)

1st floors and chimney presumably contemporary

Fig 13.242. Beechurch Road (7/83b): survey.

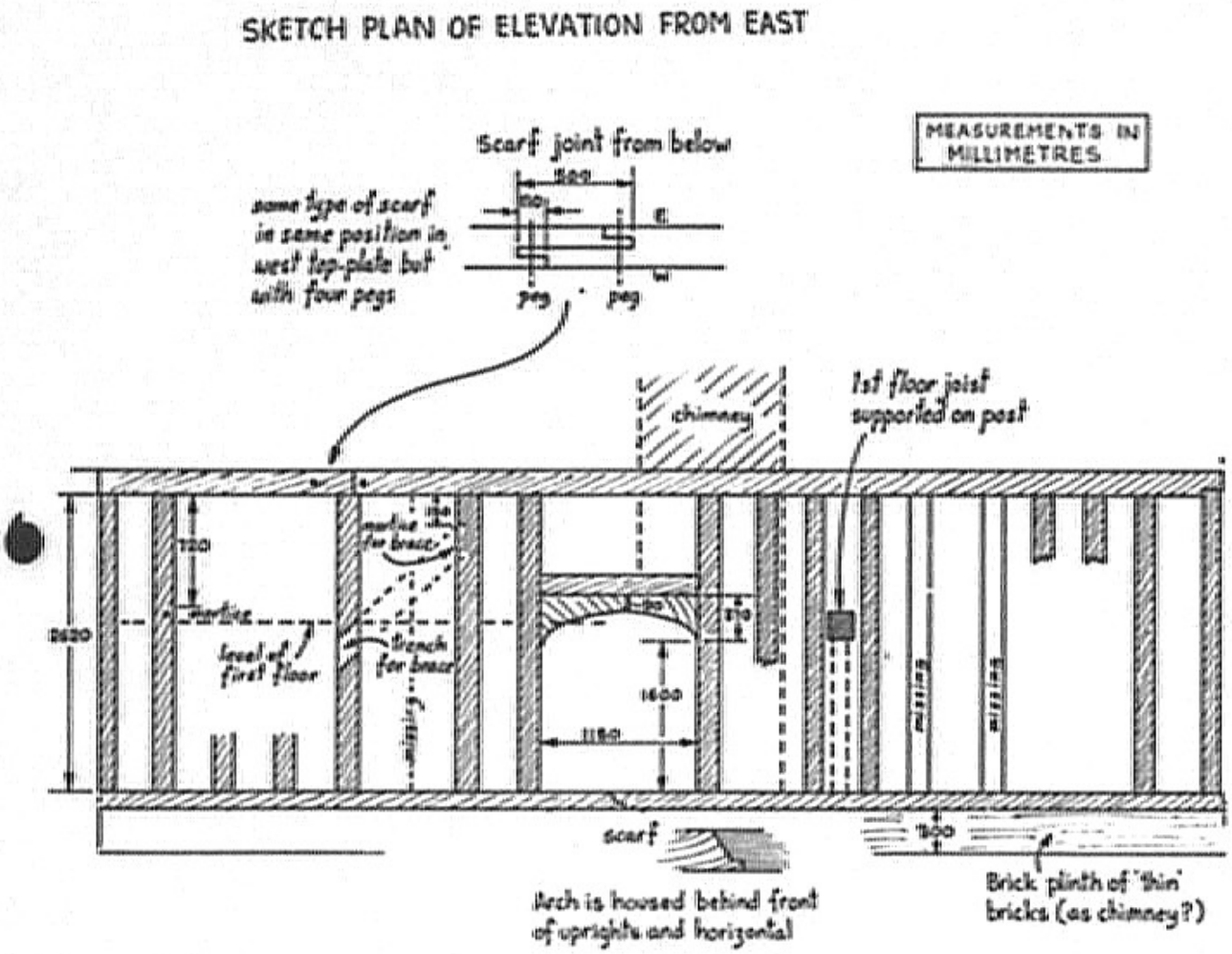


Fig 13.243. Berechurch Road (7/83b): survey.

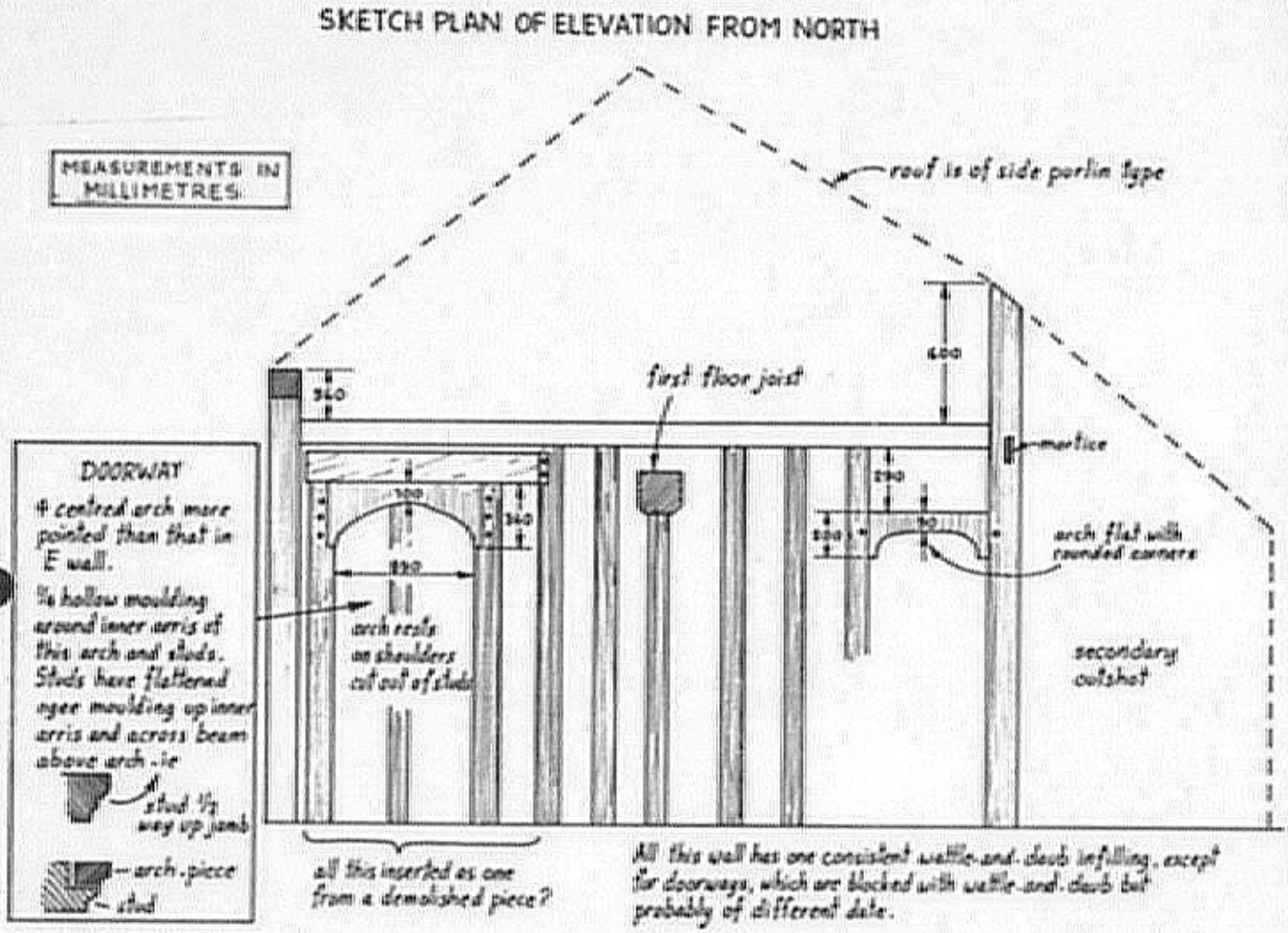


Fig 13.244. Berechurch Road (7/83b): survey.

SKETCH PLAN OF ELEVATION FROM THE SOUTH

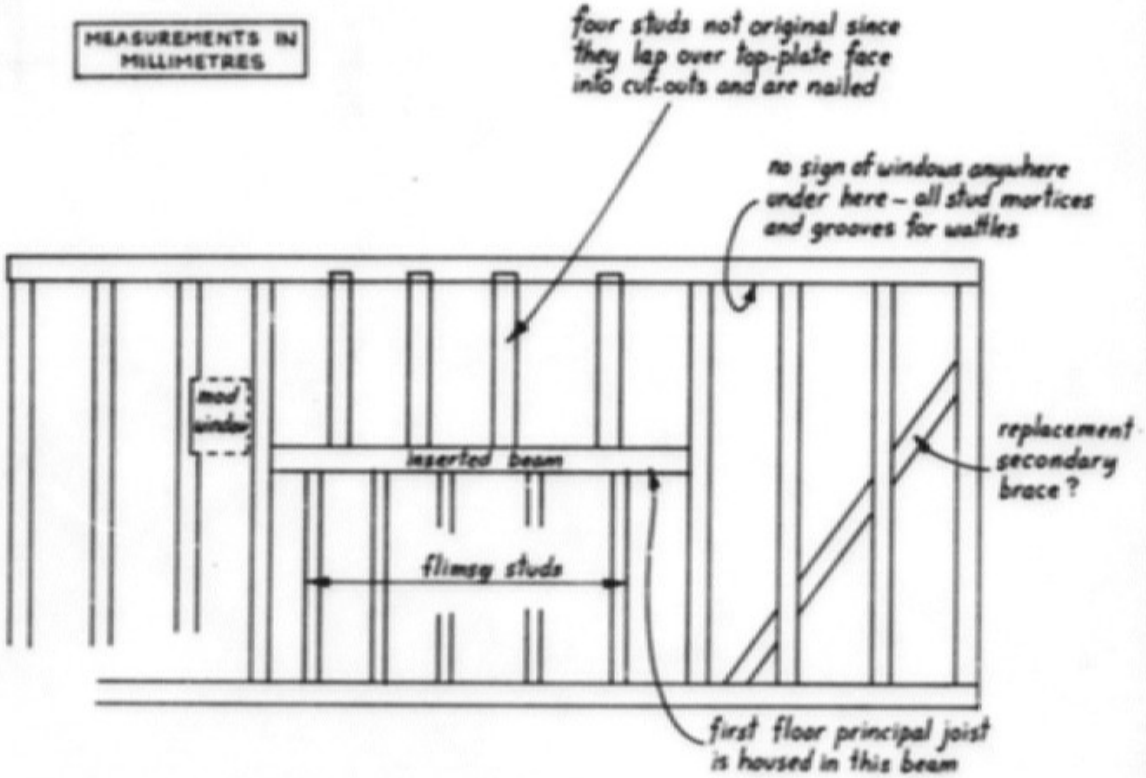


Fig 13.245. Berechurch Road (7/83b): survey.

7/83c
Plum Hall, Berechurch Road (SW angle of junction of Berechurch Road and Mersea Road)
18.7.1983

Reason: to inspect test-pits
Record report: NS/PC
All test holes (six of them) were negative. Nothing older than the 19th or 20th century was observed.

8/83a
2-3 Stanwell Street (adjacent to Sheregate Hotel)
Figs 13.248-7
August 1983
Reason: erection of new building
Record report: NS/PC
Photographs: Misc Sites 3, 148-54

See next page for site plan and sections.

See pp 373-4 and Fig 13.247 (printed book) for text and discussion of carved stone.
See Appendix 18 for the catalogue of the carved stone.

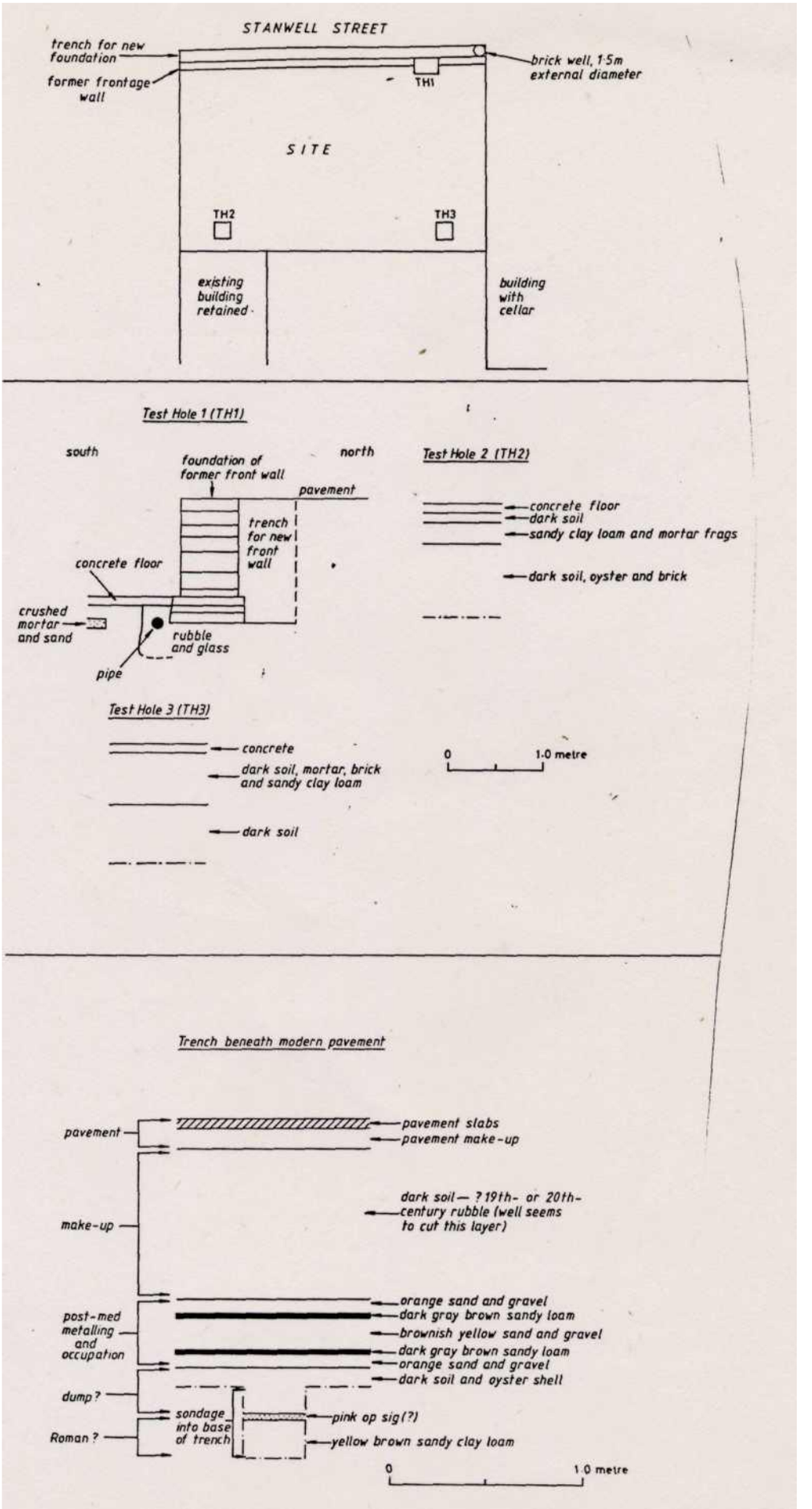


Fig 13.246. 2-3 Stanwell Street (8/83a): plan and sections.

8/83b

24 South Street

Fig 13.248

August to September 1983

Reason: demolition of existing office block,(used as a temporary hostel for excavations at Culver Street) and erection of flats

Record/report: NS/PC

The new building is of two storeys and contains flats. It is supported on strip foundations 0.8 m wide and 1.5 m deep. Beneath the modern tarmac and concrete floors was a layer of brick rubble about 0.3 m thick (presumably derived from the demolished late Victorian terraced houses bombed during World War II). This overlay topsoil varying in thickness of 0.3 m or more. Several topsoil-filled features may have been graves although none were positively identified as such and no human remains were discovered. Several pits, foundations and trenches were 19th- or 20th-century in date.

A well was uncovered in the western half of the site. It was of loosely mortared curved bricks (sample X235) and was about 1 m across. It had been backfilled.

Some animal bones and 3rd-/4th-century pot (X236) were found at the two places indicated on Figure 13.248 by crosses. Another group of finds (X238: 3rd-/4th-century pottery and Roman glass and a tile) probably came from a pit or ?grave. These lay near the eastern part of the site.

Underlying the topsoil was natural sand and gravel. No other archaeological layers were observed.

Find X235 is a curved brick from the well.

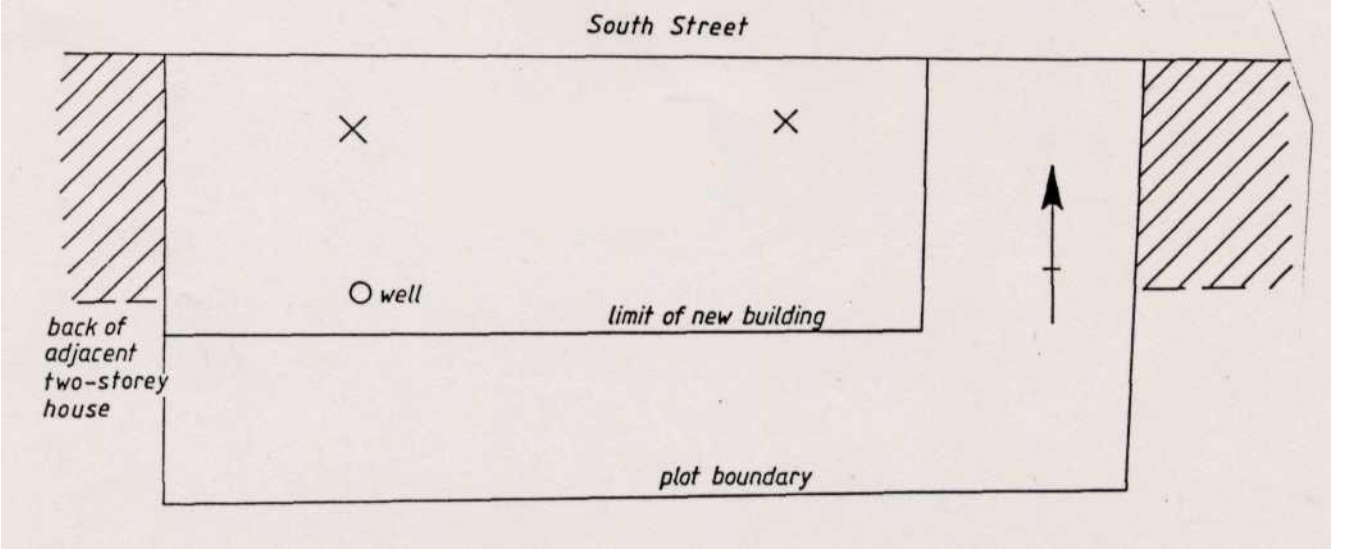


Fig 13.248. 24 South Street (8/83b).

8/83c

Stanwell Street (at west angle of Stanwell Street and South way)

17th August 1983 to January 1984

Reason: new office block for Essex County Council

Record/report: NS/PC

The new building was constructed on piles. However the contractor's excavations show only a massive thickness (4 m) of undifferentiated dark earth below which is grey clay. The upper metre appeared to be all of 19th- or 20th-centurv date and included demolition debris which derived from the construction of Southway in the early 1970s. Near the east side of the site was a brick culvert lying east-west. It is 0.45 m high, 0.3 m wide, and is built with orangey-red unfrogged brick. It looked to be 19th century. Small quantities of Roman and later pottery and a ?pilgrim's badge (X230 & X231) were unstratified.

8/83d

Nursing Home, Oaks Drive

Fig 13.249

August 1983

Reason: soil stripping and terracing for construction of extension to west of existing building

Record/report: NS/PC

Substantial quantities of earth were removed during the erection of terraces for the extension. No archaeological features were observed apart from a small path of burnt sandy clay loam between the topsoil and the underlying natural sand. The latter may have been Roman. Under the foundation of the frontage wall were some glass stoppers (X281) of ?19th- or 20th-century date.

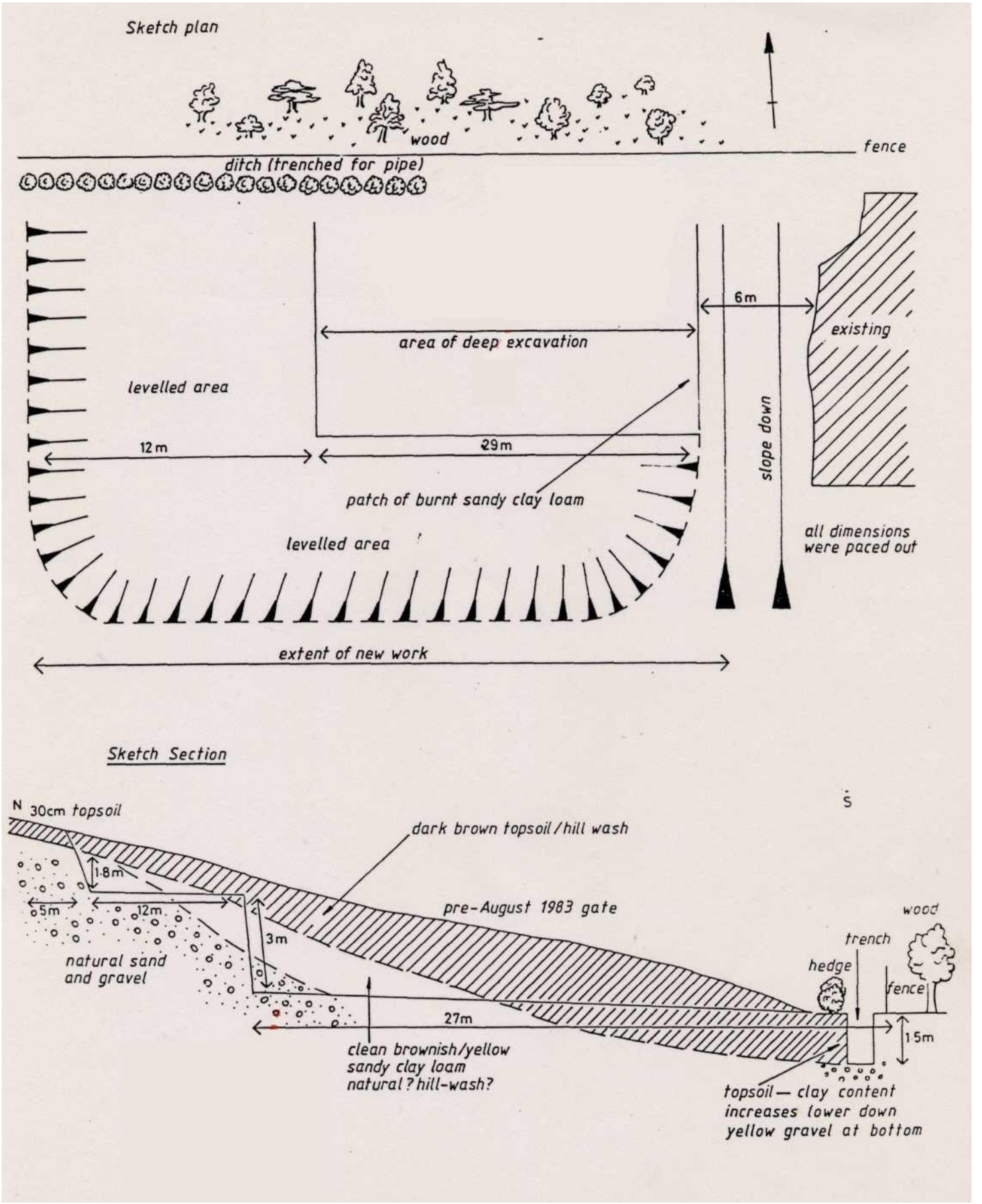


Fig 13.249. Nursing Home, Oaks Drive (8/83d).

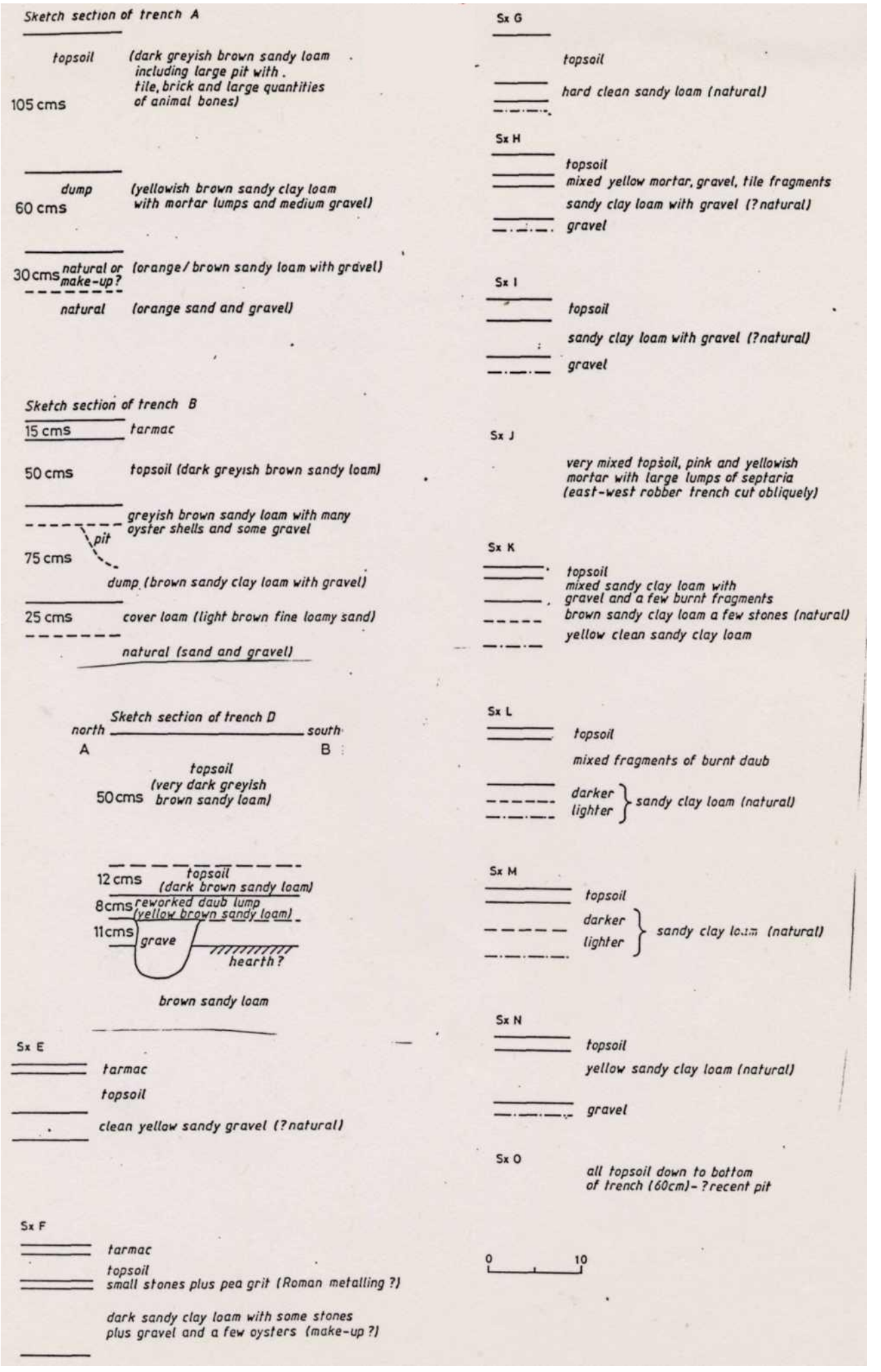


Fig 13.253. East Hill House, East Hill (8/83e): sketch sections.

9/83a

11 St John's Street

Fig 13.254

September 1983

Reason: rear extension to Coral Bookmakers
Record/report:NS/PC

A single trench, 1.1m wide *and*1.2 m deep, was dug for a strip foundation. The upper part of the material through which it cut was all dark soil which, lower down, contained yellowish and brownish patches. The base of the western leg of the trench cut brown sandy loam. The dark soil did not appear to be the fill of pits but rather a dump or an accumulation of topsoil. It included 2nd-/3rd-century and post-medieval pottery (X237).

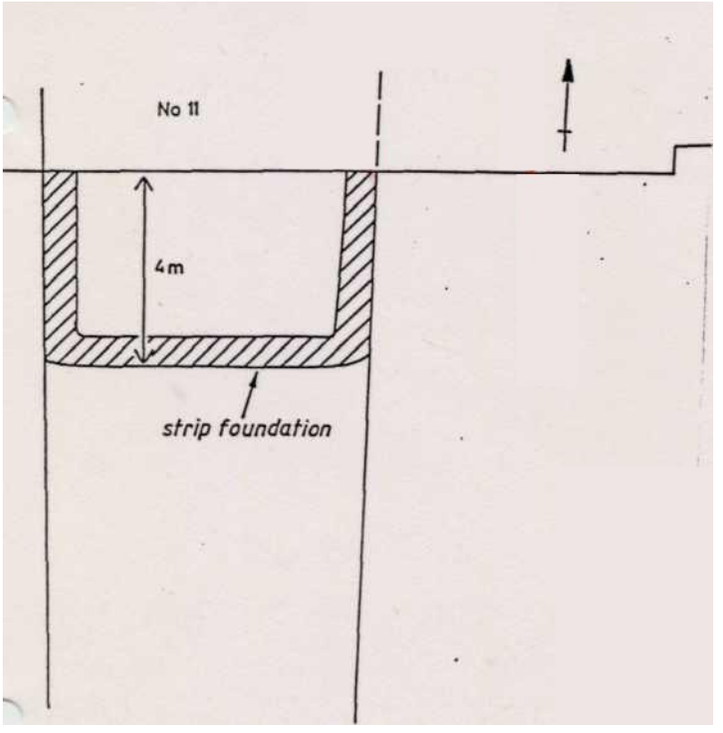


Fig 13.254. 11 St John's Street (9/83a).

9/83b ,

16-17 Trinity Street

Fig 13.255

September to October 1983

Reason: construction of two-storey extension to the rear of 16-17 Trinity Street

Record/report: NS/PC

The surface was lowered for new floors and as a result a 'white' brick floor of a former outbuilding was uncovered. At the north-weit/and south-west corners of the plot were deep, rectangular, brick-lined cess-pits, the upper parts being in 19th-century unfrogged brick and the lower in narrower 16th- or 17th-century brick.

Dark soil occurred to a depth of al least 2 m and was presumably the fill of many intercutting pits. No medieval structure or Roman stratigraphy was encountered. Unstratified from the contractor's trench were some Roman and later pottery and clay pipes (X254 & X282).

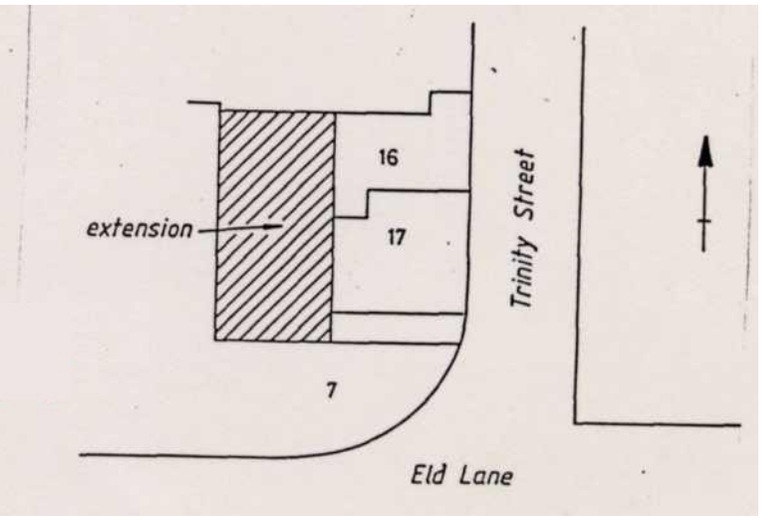


Fig 13.255. 16-17 Trinity Street (9/83b).

10/83a

Anglian Water Authority, Balkerne Hill

Fig 13.256

14.10.1983 to 21.10.1983

Reason: construction of new offices for the Waterworks at the foot of Balkerne Hill

Record/report: DS/PC

Finds: Roman & PR pot from modem contexts (X284-7)

Finds: X284-6. Unstratified from section clearing and initial trenches (A & B). X287. Unstratified from Trial Trench C.

Trial trenches were carried out to establish the existence and extent of any archaeological deposits which, to judge by discoveries made on the site in the 19th century (Hull 1958; 242-3) and nearby in 1976 (*CAR* **3,** 146-7), promised to include one or more Roman buildings associated with preserved timbers in water-logged conditions.

Initially the west and north sides of the large pit resulting from the partial demolition of the disused reservoir was checked. The sections provided by the trench were cut back slightly and cleaned. These revealed a black, mixed, silty dump layer which was very thick and deep.

To establish the extent of the layer on the north side where it was thought to be the backfill of a construction trench, two trenches (A & B) were dug, one on the line of a modern access trench and another by the north-east corner of the reservoir. In both cases, it did not prove possible to reach the base of the dark dump/backfill layer. However the likely proximity of Roman deposits was indicated by finds of Roman pot and coins and by lumps of redeposited Roman layers.

Subsequently, a narrow trench (Trench C; 2.5 x 1 m) was excavated, again in the north-east corner, but near the level of the floor of the reservoir and about 1.5 m north of the reservoir wall. Below disturbed topsoil (found everywhere on the site) was a layer, 0.7 m thick, of pale greyish brown soil with oyster shells. Below this was an- unusual ?dump layer of yellowish brown loam mixed with topsoil, probably of Roman date. This sealed a thick layer of sticky grey clay, flecked with charcoal, again probably of Roman origin because it contained a piece of Roman tile near the bottom of the layer. The layer sealed a brown organic layer of sandy loam, apparently in its turn sealing water-logged gravel.

Thus the position of the Roman levels was established and found to be below the base of the reservoir. The top of the Roman levels lies at about 7 m, OS Datum, ie in excess of 3 m below modern ground around the reservoir. No direct evidence was noted of Roman buildings in the vicinity.

The new building was built on piles and caused relatively little disturbance to the underlying Roman levels. Visits to the site during construction work proved negative.

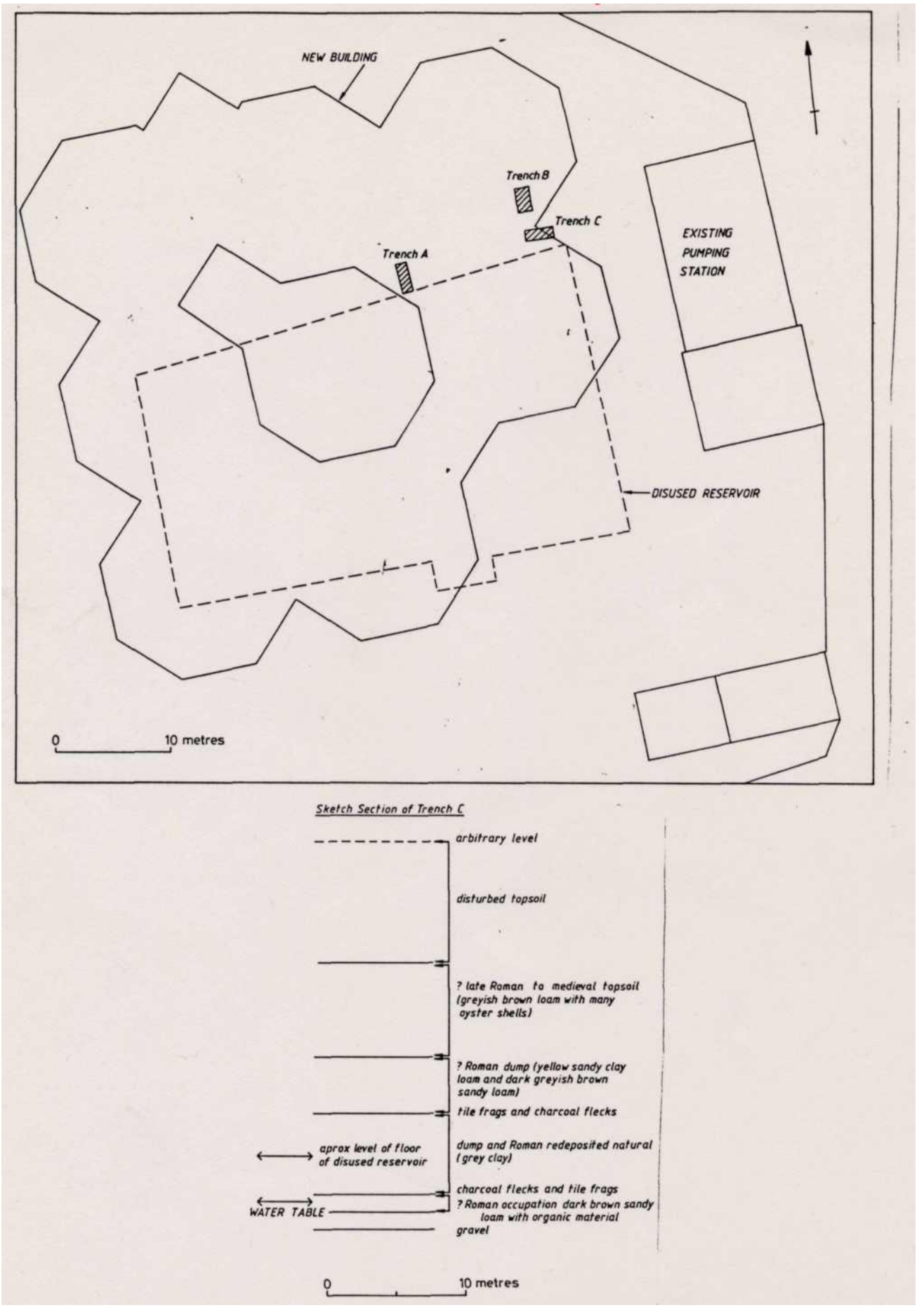


Fig 13.256. Anglian water Authority, Balkerne Hill (10783a).

10/83b

Culver Street West

October 1983

Reason: redevelopment

Record/report: NS/PC

Unstratified finds were given to the Trust by some workmen working on the site immediately to the west of Marks and Spencers. These consisted of some PR pot and glass (X288).

12/83

Hythe Quay, Harbour Master's Office

Fig 13.257

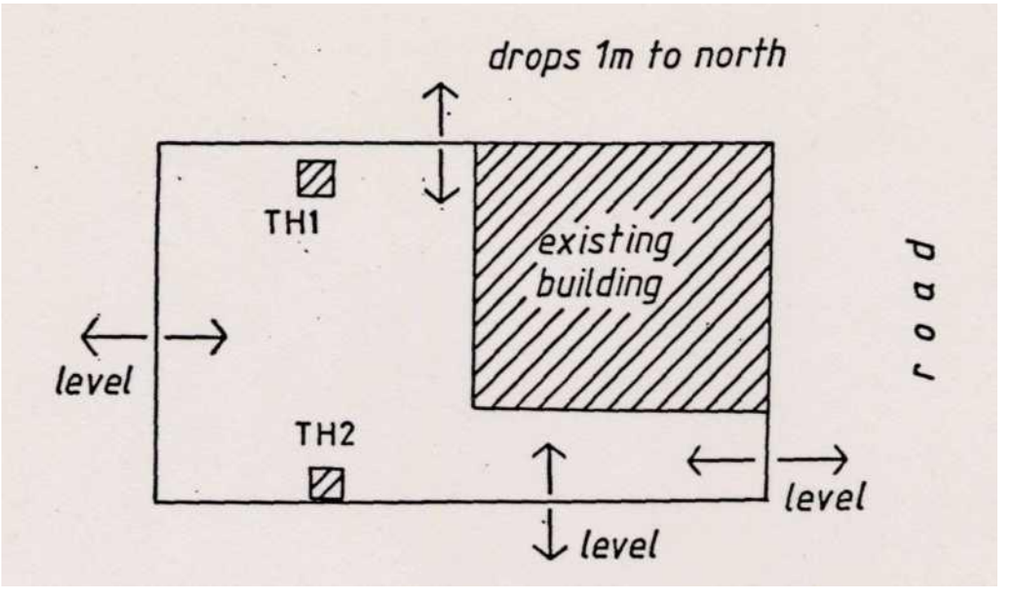
December 1983

Reason: extension to existing Harbour Master's Office

Record/report: NS/PC

Two test holes were observed. The upper metre of Test Hole 1 (TH1) was dark grey sandy loam, modern concrete and iron. Below was at least 0.5 m of very dark brown material containing much clinker. Test Hole 2 (TH2) was 1 m deep and penetrated only modern concrete and brick fragments. Perhaps all the modern material derived from the demolition of the earlier gasworks?

No archaeological features were observed and no archaeological levels (if they exist) seemed likely to have been affected by the development.



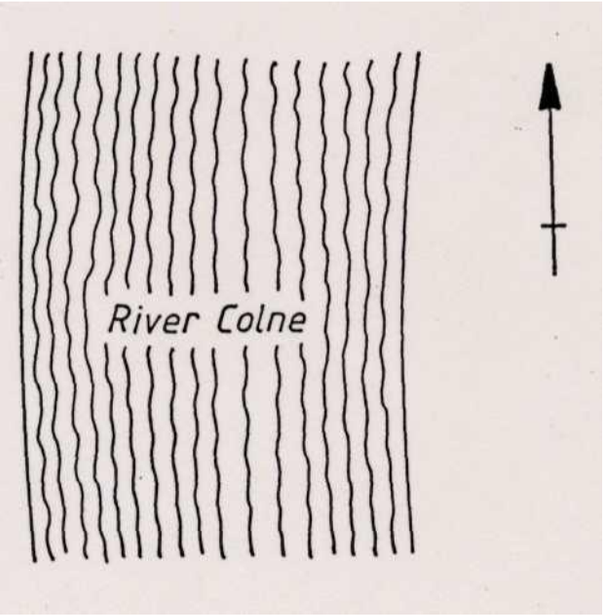


Fig 13.257. Harbour Master's Office, Hythe Quay (12/83).

0/84

Crouched Friars, Crouch Street

Published by F D Lockwood and D P Tripp (1985).

1/84a

Post Office, Head Street

Fig 13.264 [See 35 mm microfiche]

January 1984

Reason: construction of building for accounts branch

Record/report: NS/PC

The trenches dug by the contractor revealed a north-south military plinth of standard type, areas of tessellated pavement, three robber trenches (including one for the plinth), a foundation sealed by part of a tessellated pavement, and an early Roman pit.

1/84b

126 Hythe Hill

Fig 13.265

10.1.1984 to 26.1.1984

Reason: renovation of existing c 17th-century timber-framed building and the construction of an extension at the rear (ie to the north)

Record/report: NS/PC

The building is of three blocks. The primary block has an east-west side purlin roof and an attic floor with floorboards about 0.3 m wide. A fireplace in the 1st-floor room has a wooden lintel with a chamfered edge and ogee stops. A ?Victorian firebasket had been inserted into it. The existence of an apparently original window in the west wall of the attic shows that the timber-framed building to the west of No 121 must be later because it blocks it. The roof of the primary block has rafters which rest on a 'foot-plate' which in turn run across the side of the attic joists which in their turn rest on the top-plate of the original north wall. This is a 17th-century feature which occurred at the New Market Tavern (*CAR **3,*** 207)

The roof of the secondary block to the north (renewed in 1984) had a ridge-board. The east wall of this block was of brick and has had to be completely rebuilt.

A piece of cladding from the interior of the 20th century block (on the east side of the primary one) has written on it in pencil:

Signed by L. J. Oxbow

Doneby

W Watts

H Lamb June 11th 1908

The place has been a pub, known as The Dolphin. The timber-framing is false and presumably dates to 1908. The rafters in the primary block have been lengthened to provide enough overhang to cover the facade.

The floors in the eastern, 20th-century block were uncovered to reveal early 20th-century cross-walls to support ground floorboards. Also uncovered were many small oysters in the underlying soil.

The trench dug for the foundation of the new extension uncovered a well.

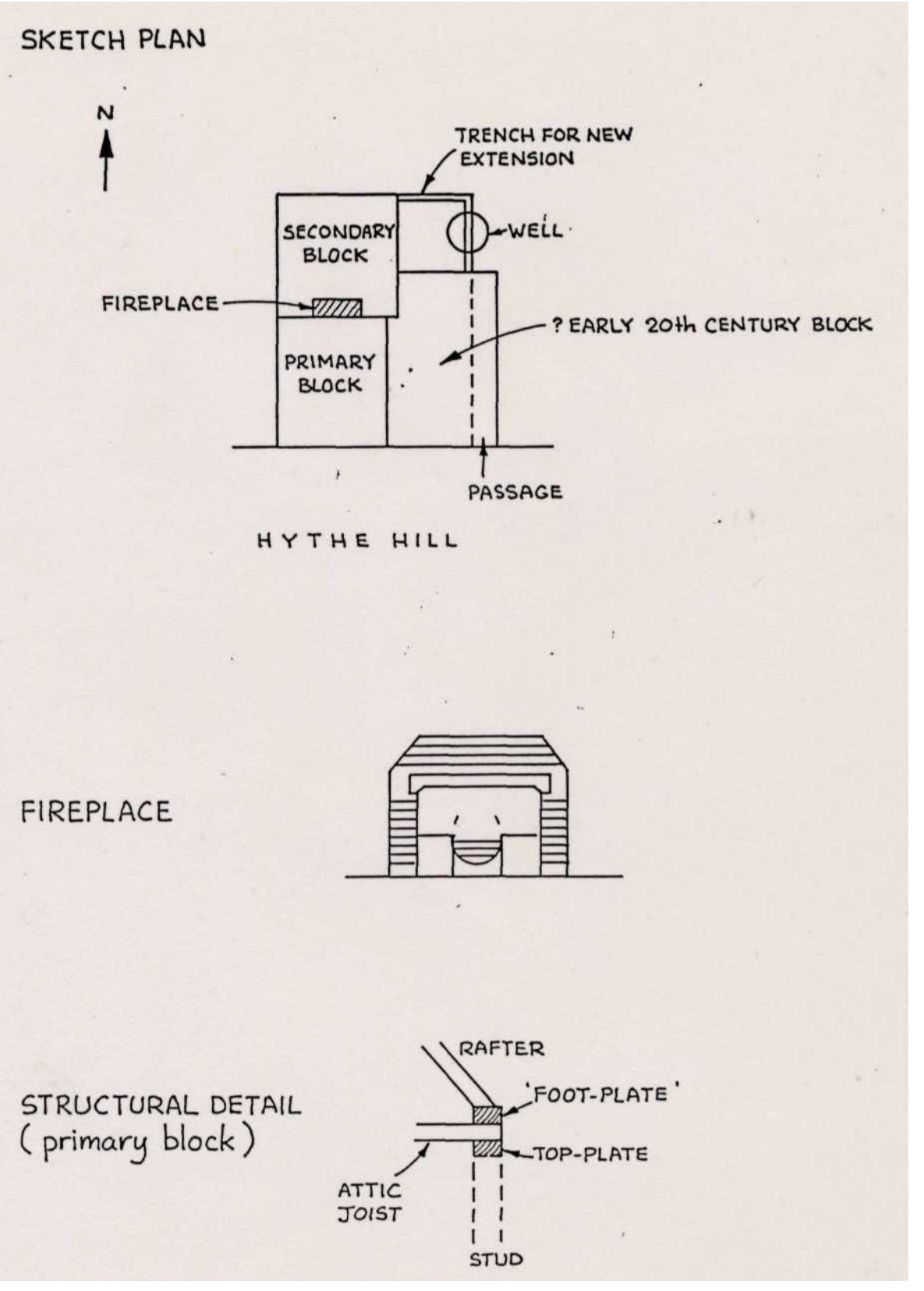


Fig 13.265. 126 Hythe Hill (1/84b).

1/84C

Yew Tree House, Coast Road, West Mersea

Fig 13.266

January to June 1984

Reason: extension to outbuilding

Record/report: NS/PC

Foundation trenches for an extension to the brewhouse (?17th century) and a new garage, both north of the main house, revealed only topsoil and undisturbed natural. South of the house, at Point A on Figure 13.266, a strip of tessellated pavement a few feet below modern ground level is permanently exposed.

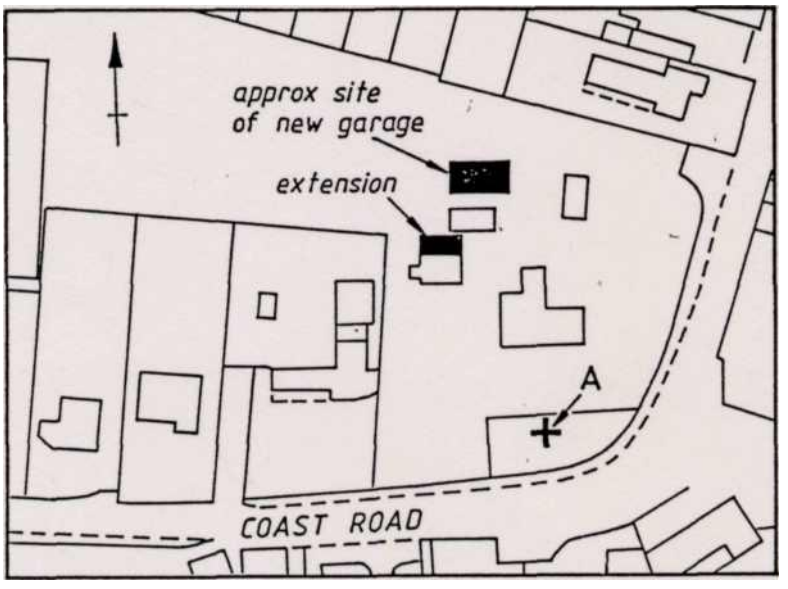


Fig 13.266 Yew Tree House, Coast Road, West Mersea (1/84c)

2/84b

Victoria House, Lexden (opposite the Crown)

22.2.1984

Record/report: NS/PC

Some pottery and clay pipe (marked SC on the spur) was found behind the house.

3/84a

Roman River at Rowhedge/East Donyland

Figs 13.268-9

19th March 1984

Reason: timbers of old quay exposed in river bank

Record/report: NS/PC

Photographs: 'Roman River'

The remains of a timber wharf lie on the north bank of the Roman River, near where it flows into the River Colne. Part of a narrow gauge railway projects out from the bank. The wharf and railway originally served the sand and gravel quarry (now disused) to the north-west and was where sand and gravel brought from the quay, was loaded on to barges in the ?19th and 20th centuries. The river is tidal at this point.

The principal timbers are horizontal. These are unsquared tree-timbers about one foot in diameter. At the outer end, each has a square horizontal mortise and a vertical peg-hole presumably from a horizontal rail which tied the ends of all the timbers. The length of these timbers is unknown but a loose one in the river bed was 6 m long. They were regularly spaced at 3.6 to 3.7 m (presumably intended to be 12 feet).

Immediately below the horizontal timbers and mainly in line with the outer ends of them are stakes. These were presumably originally vertical but the scouring effect of the tide on one side and the outward thrust of the mud behind has left them almost horizontal.

The horizontals would have been boarded over to form a platform. No traces of this survived. Above and on the north side, the bank was revetted by posts 90 mm square and planks 230 m wide and 25 to 40 mm thick. Only small parts of the revetment survive.

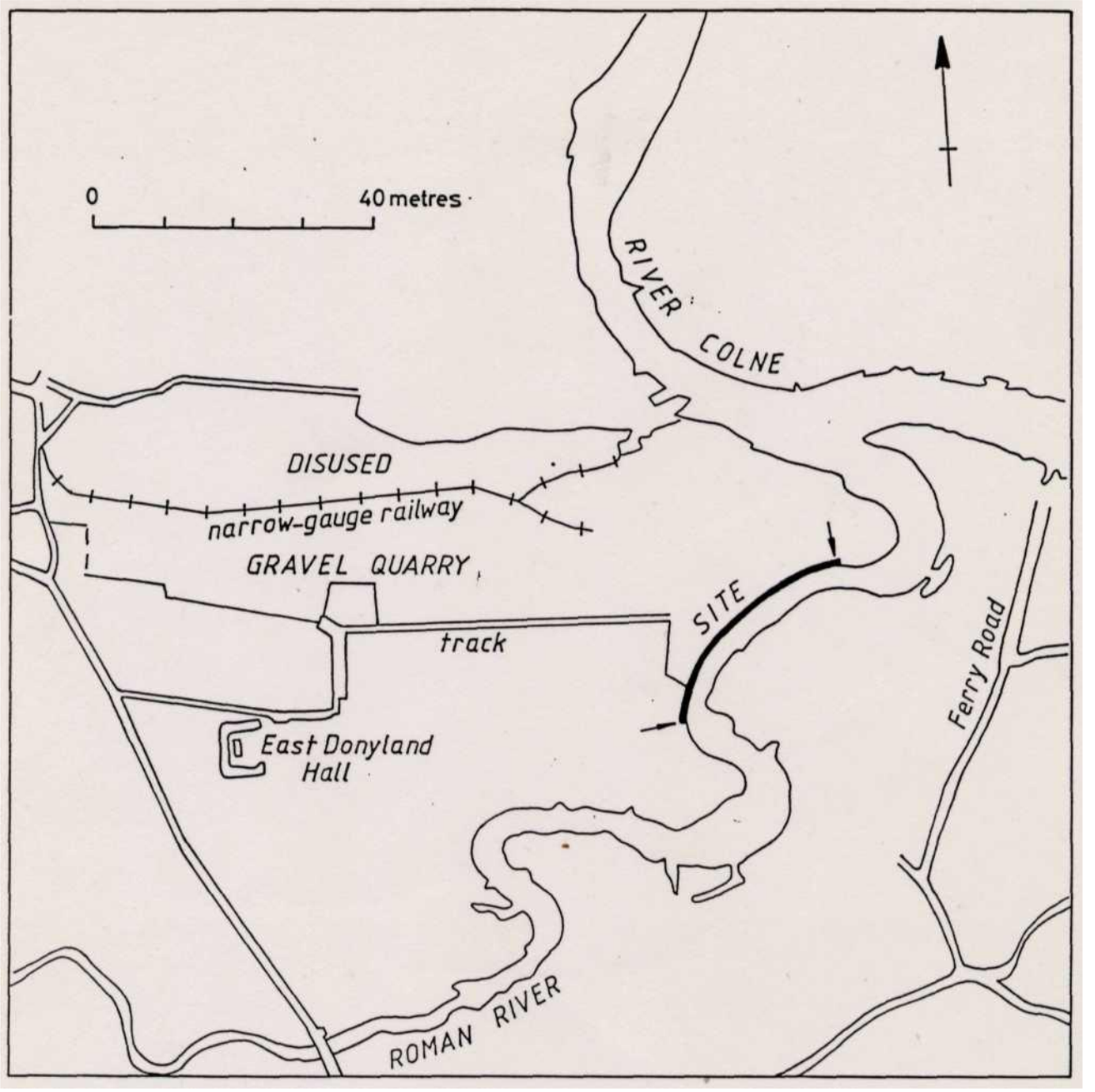


Fig 13.268. Roman River at Rowhedge/East Donyland (3/84a): location plan.

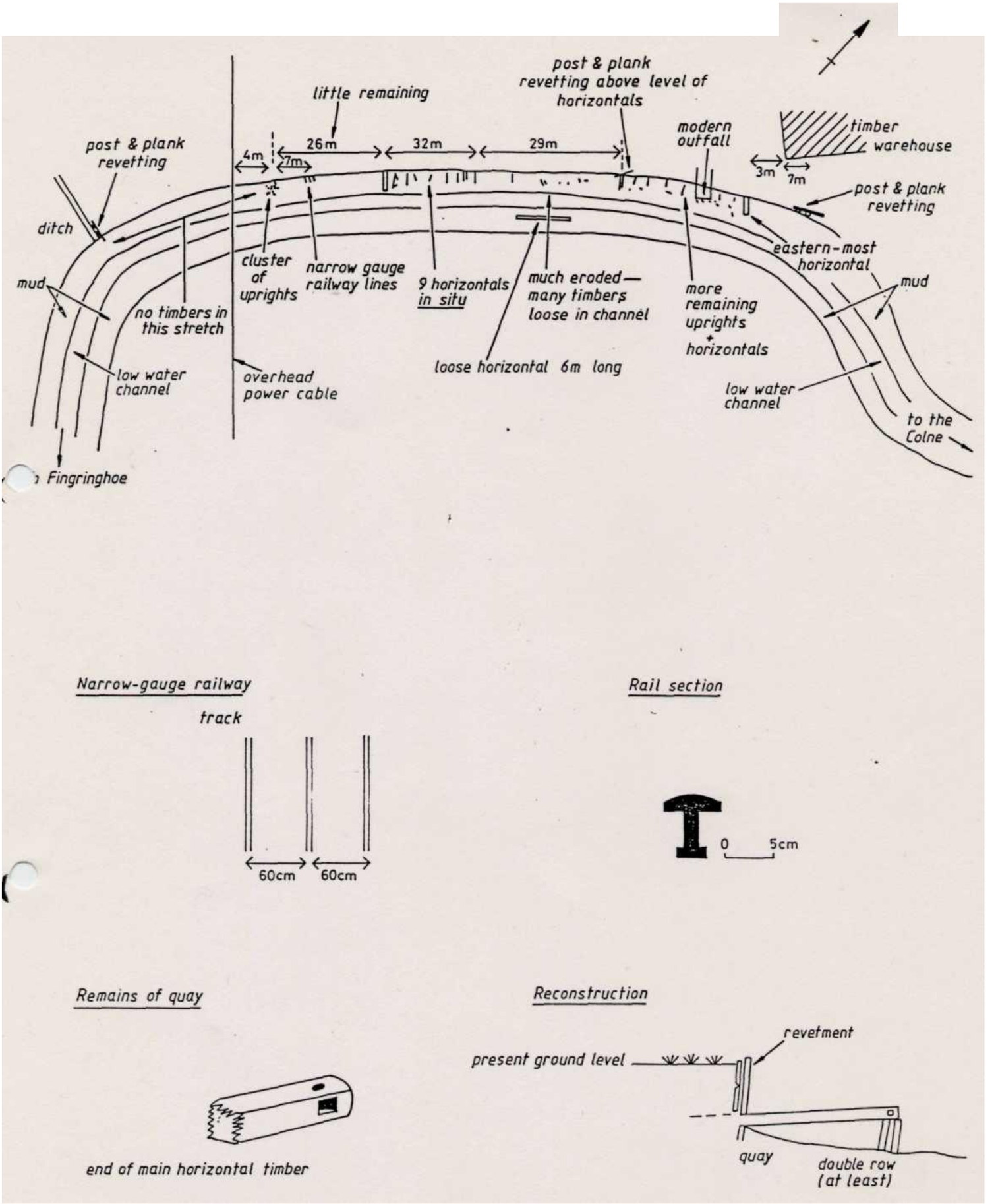


Fig 13.269. Roman River at Rowhedge/East Donyland (3/84a): plan.

5/84a

43 East Stockwell Street

Fig 13.270

May/June 1984

Reason: extension

Record/report: NS/PC

A small extension was built at the rear of the building, north of the existing door. A strip foundation was dug for foundations. It was about 1 m deep and revealed only dark soil.

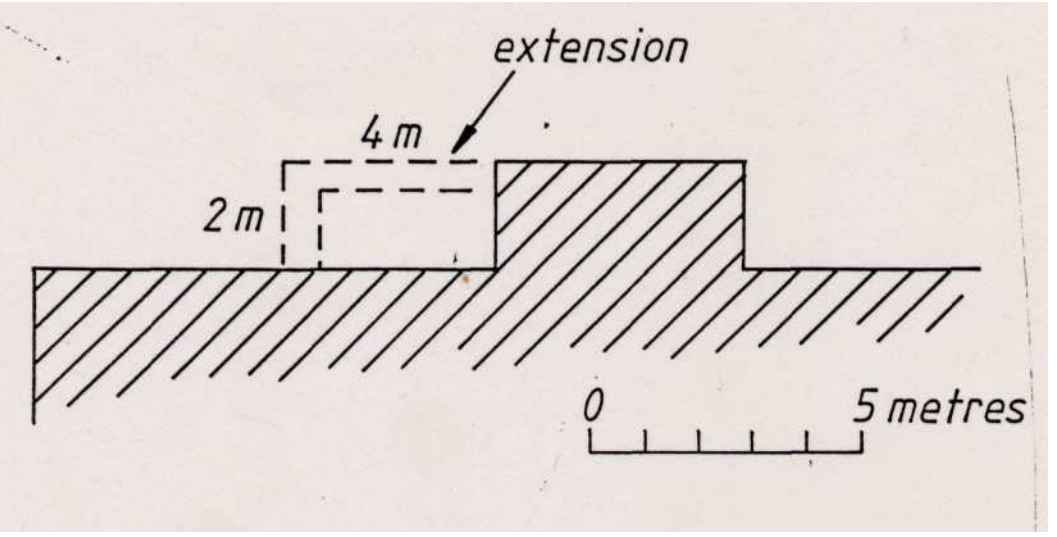


Fig 13.270. 43 East Stockwell Street (5/84a).

5/84b

56 Manor Road

Fig 13.271

May 1984

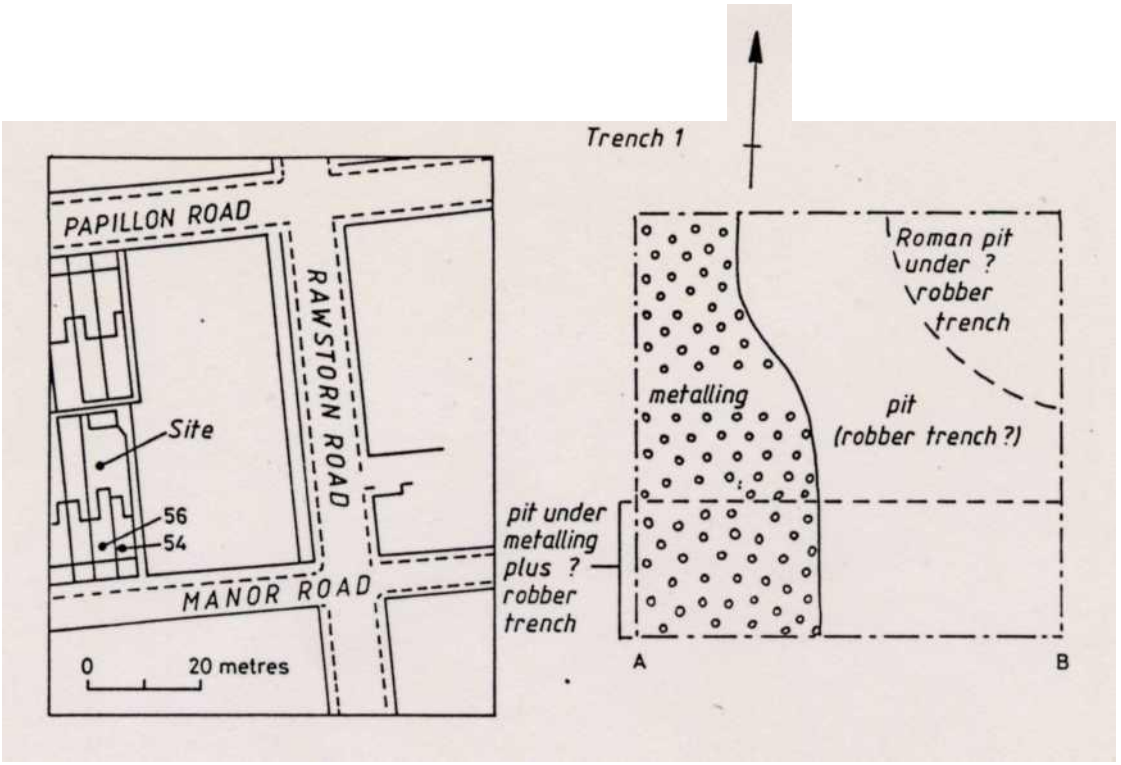
Reason: archaeological excavation by the occupier in his back garden

Record/report: NS/PC

Two trenches were dug in the back garden. The first (Trench 1) revealed metalling along the northern edge of the main Colchester-London Roman road. The metalled surfaces (of which there were two, possibly three) contained substantial quantities of sand and resembled footways rather than road metalling proper. The eastern half of the trench was occupied by a pit or trench filled with dark soil mortar and tile. It resembled a robber trench although it was very irregular in outline. This pit and the metalling sealed an early Roman pit filled with greenish, loamy sand with some bone and Oyster.

A second trench, dug a little to the north, revealed part of a greensand foundation aligned north-east to south-west. The top of the foundation was 0.7 m below modern ground level. The foundation presumably indicated the position of the frontage along the northern side of the street.

The owner loaned to the Trust a colour-coated beaker (Colchester type **CZ 6Z -** *see CAR* **10** for description of type) which was about two-thirds complete (X296). This was returned.



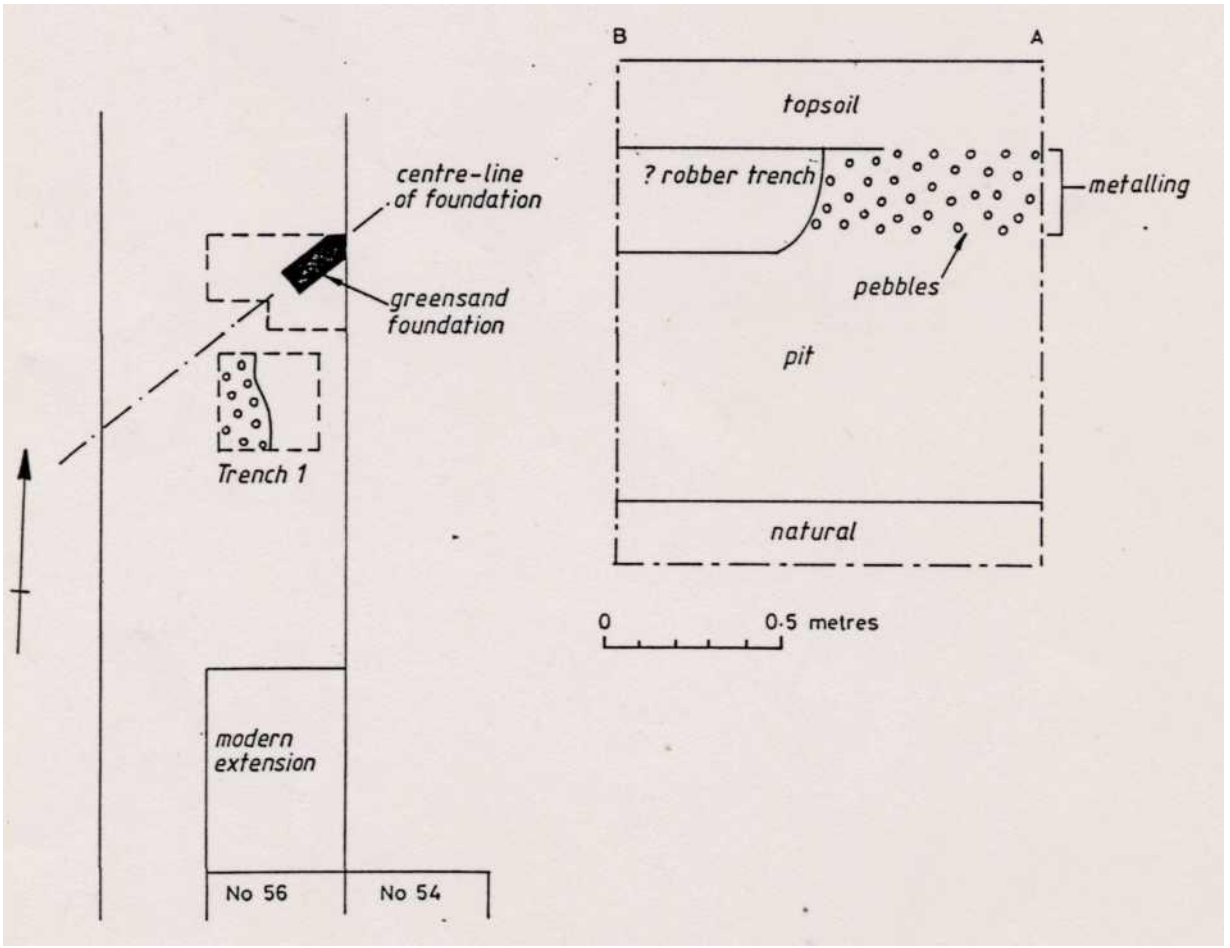


Fig 13.271. 56 Manor Road (5/84b).

6/84a

St Helen's Chapel

Fig 13.272

14th June 1984

Reason: exploratory work following Watching Brief 4/84

Record/report: DS/DS & PC

A small trench (Trial Trench 1) was dug at the north-west corner of St Helen's Chapel in an attempt to clarify the alignment of the Roman wall at the base of the north wall of the medieval chapel. Tile courses, probably representing the lowest part of the Roman wall, were located at modern ground level protruding 0.24 m from the face of the chapel. Below this, protruding about 0.4 m, was a rough stone and mortar foundation, presumably of Roman origin.

As far as could be established therefore, the alignment of the Roman wall is similar to that of the chapel wall. If there is any divergence between the two, it must be very slight.

A second trench was dug by the south-west corner of the chapel (Trial Trench 2). It was placed adjacent to the west face of the south-west corner. The wall of the chapel extended downwards below ground level and apparently below foundation level of the chapel. No traces were found of any of these foundations, despite probing. A third trench (Trial Trench 3) was dug about 1 m to the west where, at a depth of 0.4 m, was encountered mortar rubble, possibly of Roman date, and a ?floor of sandy clay loam. Again, however, the trench as well as further probing failed to produce any signs of Roman foundations/Thus it is not certain if, like the north and east walls, the south and west walls of the chapel are built on Roman foundations or walls. The only evidence to this effect stems from observations made by Hull in 1957 which led him to state that the eastern end of the southern wall of the chapel was on Roman work *(Roman Colchester,* MS in the Colchester and Essex Museum).

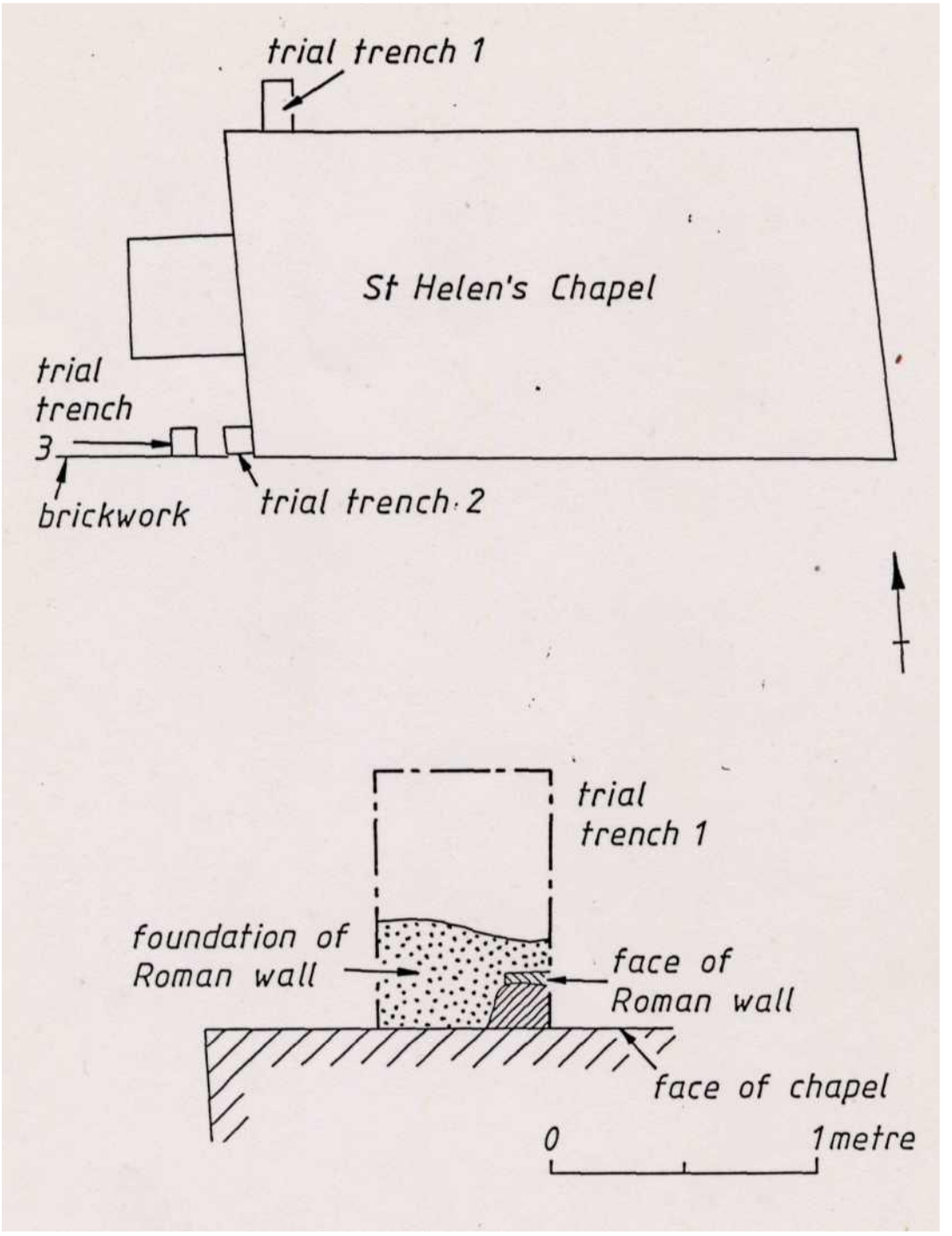


Fig 13.272. St Helen's Chapel (6/84a: DTC 84).

6/84b

9-10 Vint Crescent

Figs 13.273-7

1984

Reason: underpinning of modern houses

Record/report: PC/PC with a contribution by R P Symonds

During underpinning works along the northern and eastern walls of nos 9 and 10 Vint Crescent, workmen, who were digging trenches by hand, discovered a number of Roman vessels forming part of a Roman cremation cemetery. The work took place in July 1984. The contractor's trenches showed that there was an exceptionally deep layer of greyish brown sandy loam overlying the natural. The soil, indistinguishable from topsoil, was about 2.0 m deep and its presence no doubt accounts for the settlement problems experienced in the houses. Most of the pots are represented only by fragments. This fact, plus the substantial depth of soil, gives the impression that the ground has been extensively disturbed in the past. However several of the pots were upright and clearly in situ indicating either an unusually deep accumulation of topsoil in the area or (less likely) that the cremations had been dug into an earlier, soil-filled feature such as a sand or gravel pit.

The vessels were found in three separate trenches (Fig 13.273; A, B, & C). Four pots came from Trench A (nos 4, 9, 10, & 11) and one pot was discovered in Trench B (no 6 or 8). The remaining vessels are from Trench C. Three pots (nos 5, 6, & 7) contained human remains. Because of the circumstances of the discoveries, it is not possible to determine which pots, if any, formed grave groups. However nos 3 and 5 were found close together and thus may represent a discrete group as did nos 4, 9, 10, and 11. Pots 1 and 2 lay close to one another although, because of their substantially different dates, they are unlikely to have been buried together.

All the pots were given to the Colchester and Essex Museum by the owners, Mrs C Skinner (10 Vint Crescent) and Mr E G J W Kent (9 Vint Crescent). Three of the pots (nos 9-11) are with Rockcrete of Clacton (the contractors) on long-term loan from the museum.

From the collection of sherds and whole or nearly whole pots, it is possible to identify at least eleven vessels which had been buried complete. Probably more are represented by the remaining sherds. The eleven vessels have been described by R P Symonds as follows:

Vessel 1. Small-sized grey-ware jar with upturned everted rim, with a groove on the inside rim and another just below the very short neck. Plain, slightly restricted base. A band of diagonal comb-decoration encircling the mid-body, embraced by two grooves. Made in Colchester. First or second century.

Vessel 2. Small-sized grey-ware jar with plain everted rim and a short, narrow neck with horizontal bands of - burnishing. Made in Colchester. Mid third to fourth century.

Vessel 3. Base of plain grey-ware jar with short, sharply defined disk-base. Very gritty fabric, full of quartz inclusions. Made in Colchester. Second century or later.

Vessel 4. Part of large jar with short everted rim. Burnishing on inside of rim and on neck of shoulder and on base. Plain, flat base; central part unburnished with broad lattice of scribed lines. Hand-made. BB1, made in the Wareham-Poole region of Dorset. Second to early third century.

Vessel 5. Base of plain grey-ware jar with slightly restricted base. Gritty fabric. Made in Colchester. Second century or later.

Vessel 6. Base of body of large grey-ware jar with slightly restricted base. Horizontal panel of decoration consisting of three broad wavy bands across mid-body, embraced by two deep grooves. Burnished bands on lower body. Made in Colchester. Probably first to second century.

Vessel 7. Top and bottom of large grey-ware storage jar with thickened, everted rim and slightly restricted base. Burnishing on top of rim and on neck. Oval/tear-drop shaped indentations at top of shoulder. Knife-trimming on lower part of body. Made in Colchester. First to second century.

Vessel 8. Top of large bulbous jar with thick, everted rim. Very coarse fabric. Made in Colchester. Second century or later.

Vessel 9. Jar with broadly everted rim, short neck and plain, flat base. Narrow unburnished band on mid-body with scribed decoration; otherwise burnished exterior and burnished on inside rim. Probably BB1; probably fourth century.

Vessel 10. Base and body of flagon with narrow neck and the stump of one handle. Slightly restricted disk-base. Made in Colchester. Second century or later (probably).

Vessel 11. Large grey-ware storage jar with thickened, slightly hooked rim. Burnished on inside of rim and on outside rim and neck. Oval/tear-shaped indentations at top of shoulder. Knife-trimming on lower body. Made in Colchester. Second century or later.

The cremated bone has been kept but not analysed.

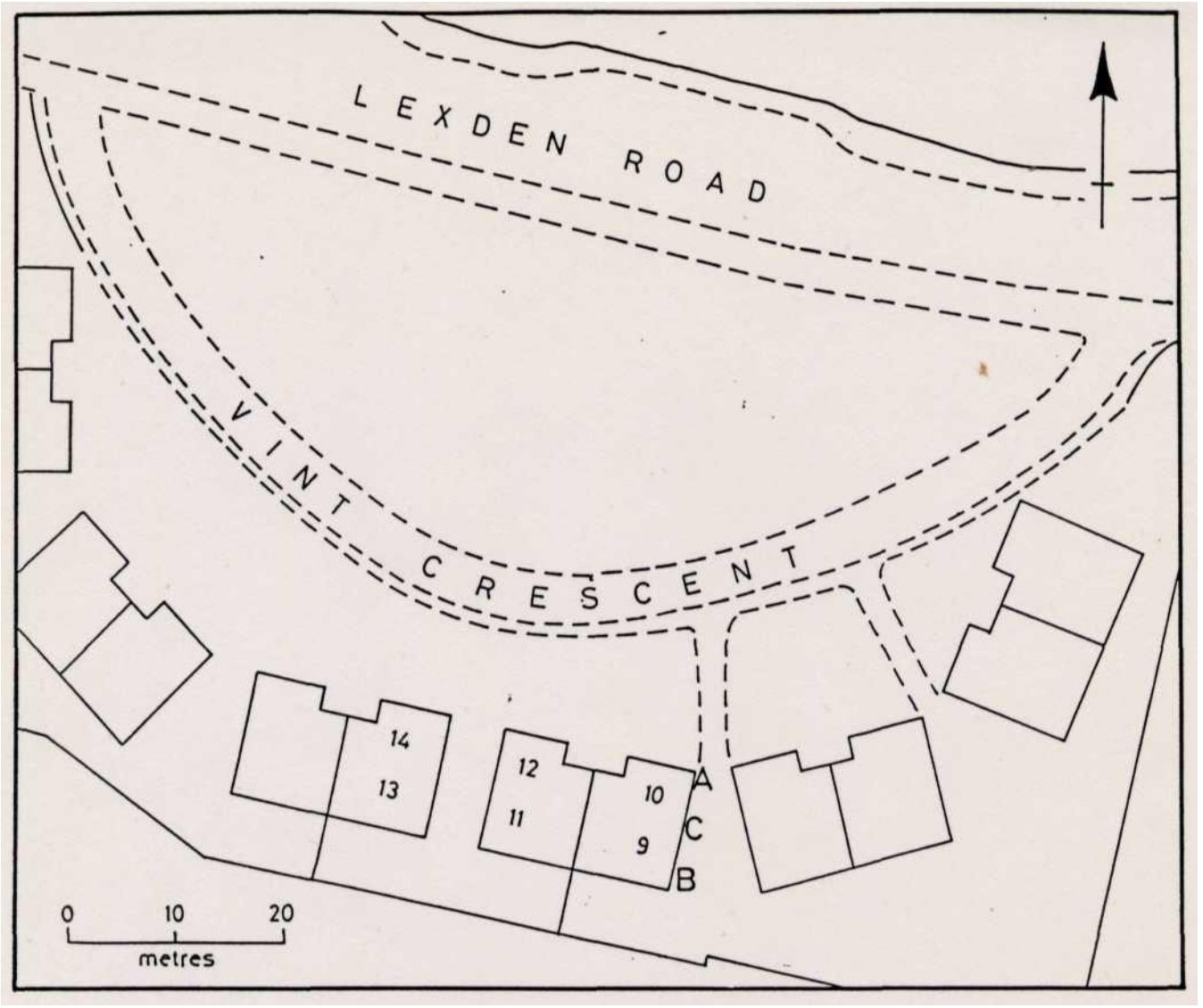


Fig 13.273 10 Vint Crescent (6/84b): plan.

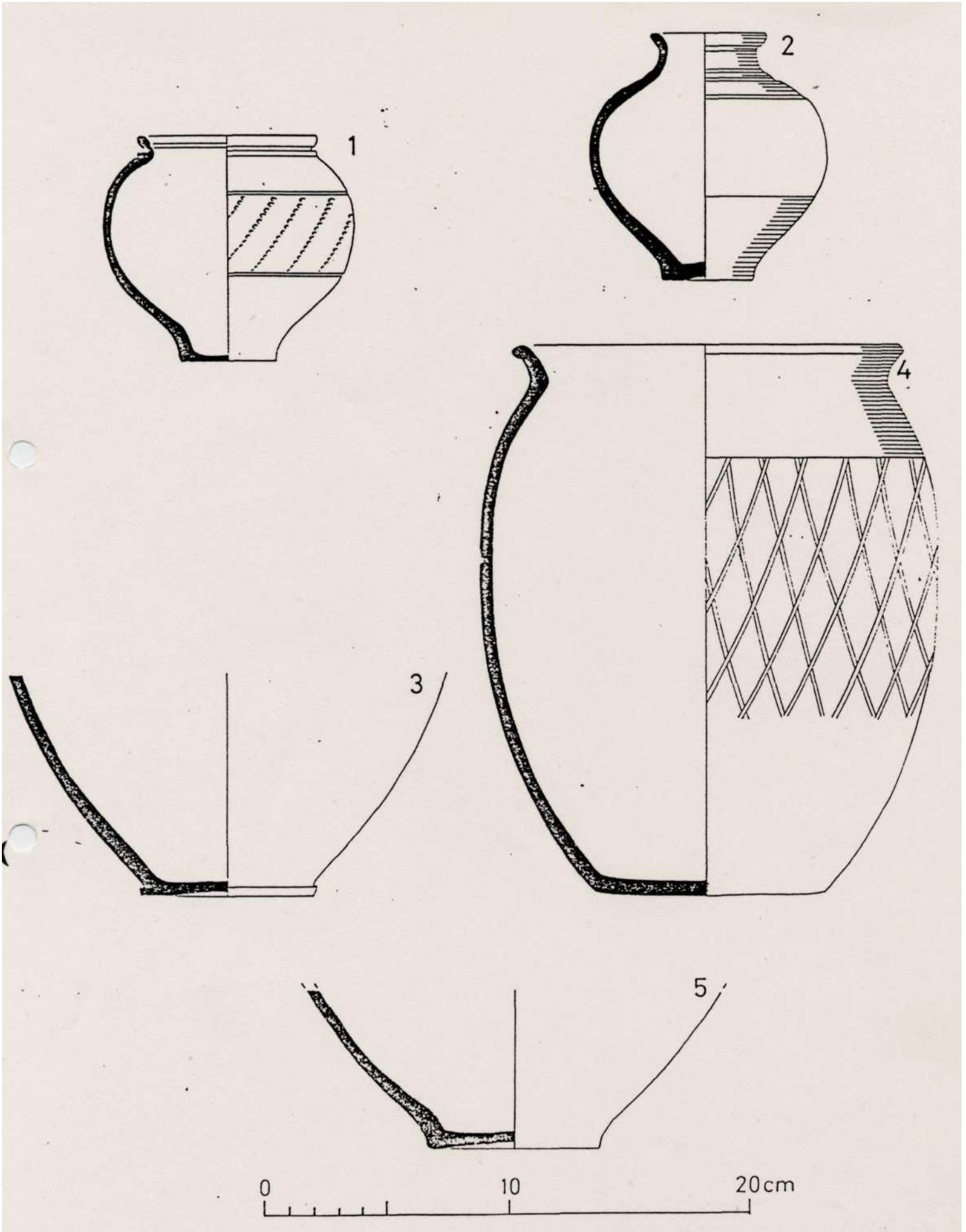


Fig 13.274 10 Vint Crescent (6/84b): cremation pots.

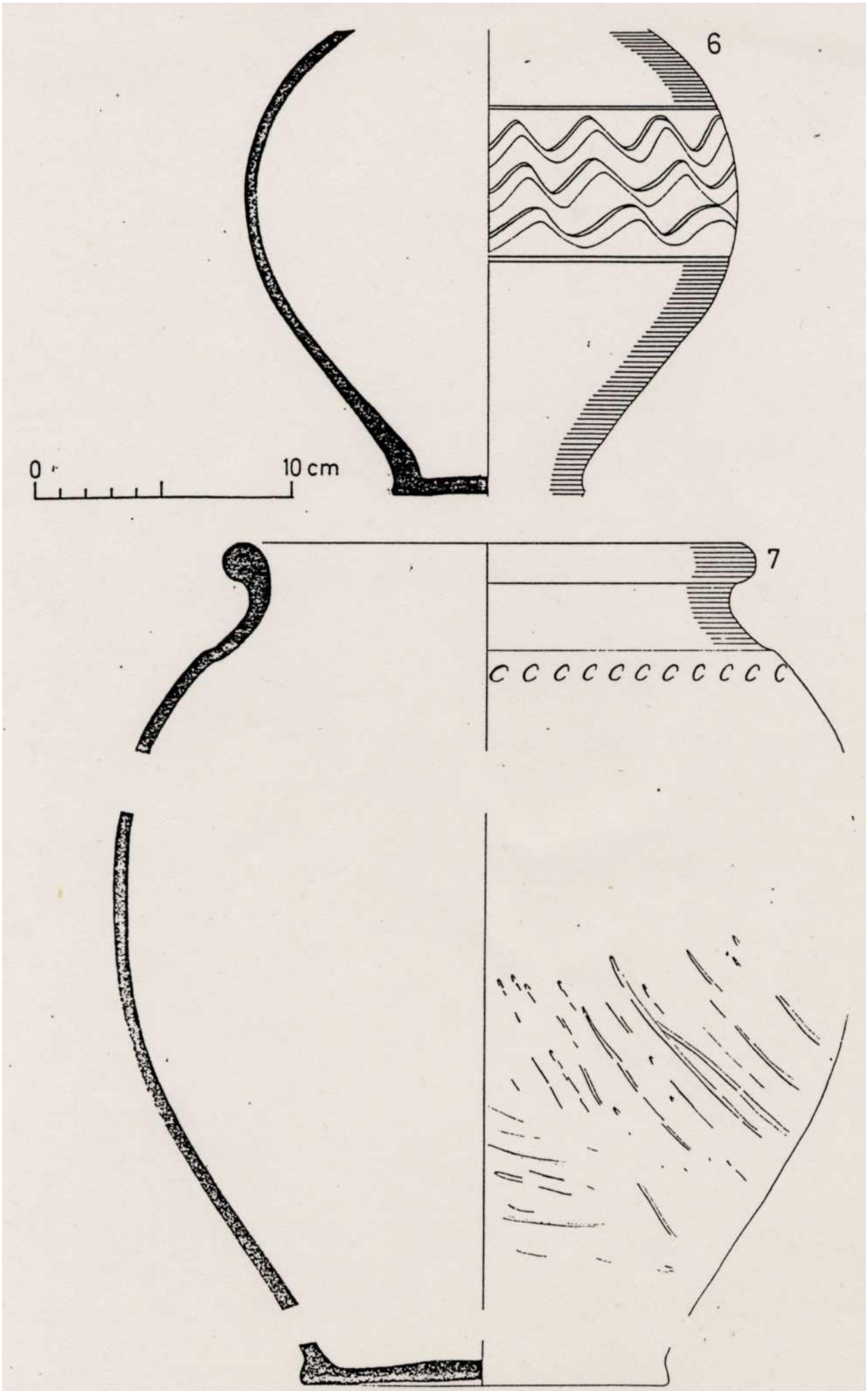


Fig 13.275 10 Vint Crescent (6/84b): cremation pots.

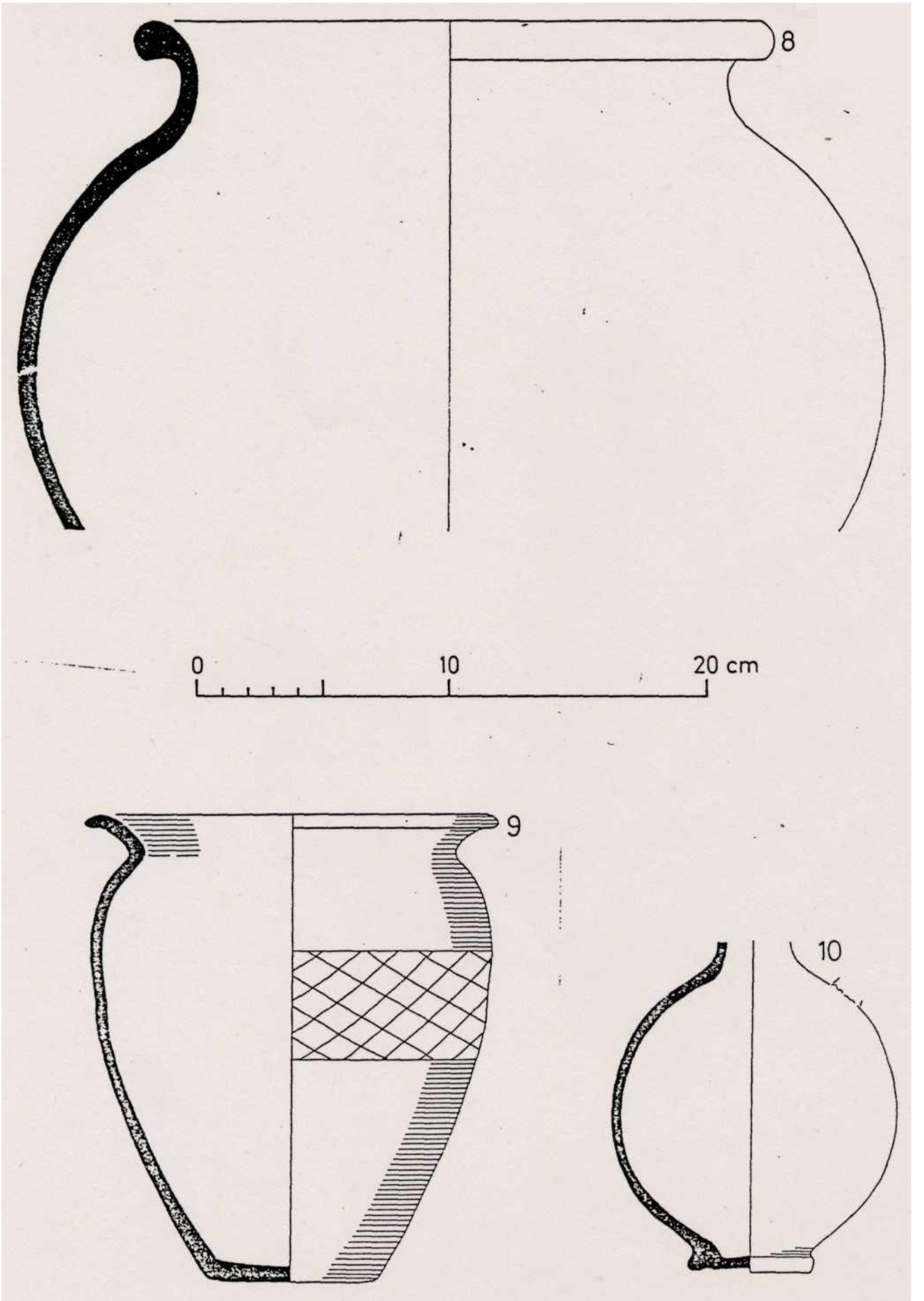


Fig 13.276 10 Vint Crescent (6/84b): cremation pots.

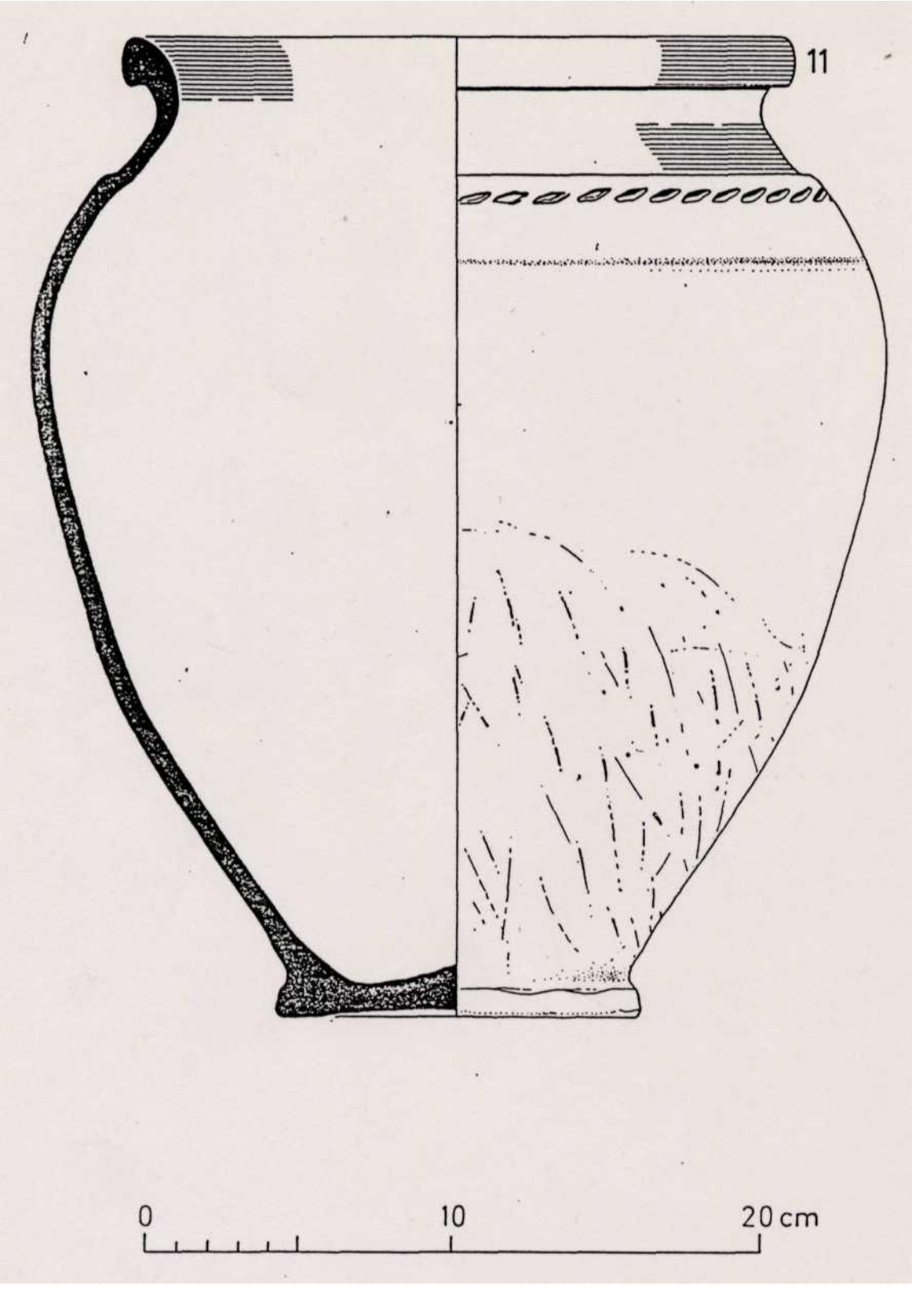


Fig 13.277 10 Vint Crescent (6/84b): cremation pot.

8/84a

37-8 St John's Street

August 1984

Reason: construction of two-storey building at rear of existing building

Record/report: DS/PC

The northern frontage of the new building was built over the remains of the Roman wall. The latter was damaged during construction work when it was partly undermined by a trench dug too near it. The exposed section of the wall appeared to be only core (on the south side). It was photographed. Otherwise negative.

8/84b

Posf *Office site, Clarendon Way*

August 1984

Reason: construction of office block for Post Office

Record/report: PC

Most of the redevelopment site was stripped of its topsoil and part of the underlying subsoil. Nothing could be seen in the sections open at the time of the visit and nothing of archaeological significance was found in the spoil heaps. According to the clerk of works and the workmen, nothing was found.

10/84

Former Royal Eastern Counties Hospital, Lexden Straight Road

Fig 13.278

10.10.1984

Reason: construction of buildings to the rear

Record/report: PC

The new buildings have been constructed to the rear of the plot. The foundation trenches were inspected and revealed no archaeological features. However two service trenches were cut across the Shrub End Dyke, one 3 m deep on 8th April, almost to its full depth and another, on 10th October, to a depth of about 1 m. The most accurate fix was obtained on the second occasion when the western edge of the ditch was found to be 21.5 m from the western boundary wall of the site and the ditch itself was found to be 6 m across.

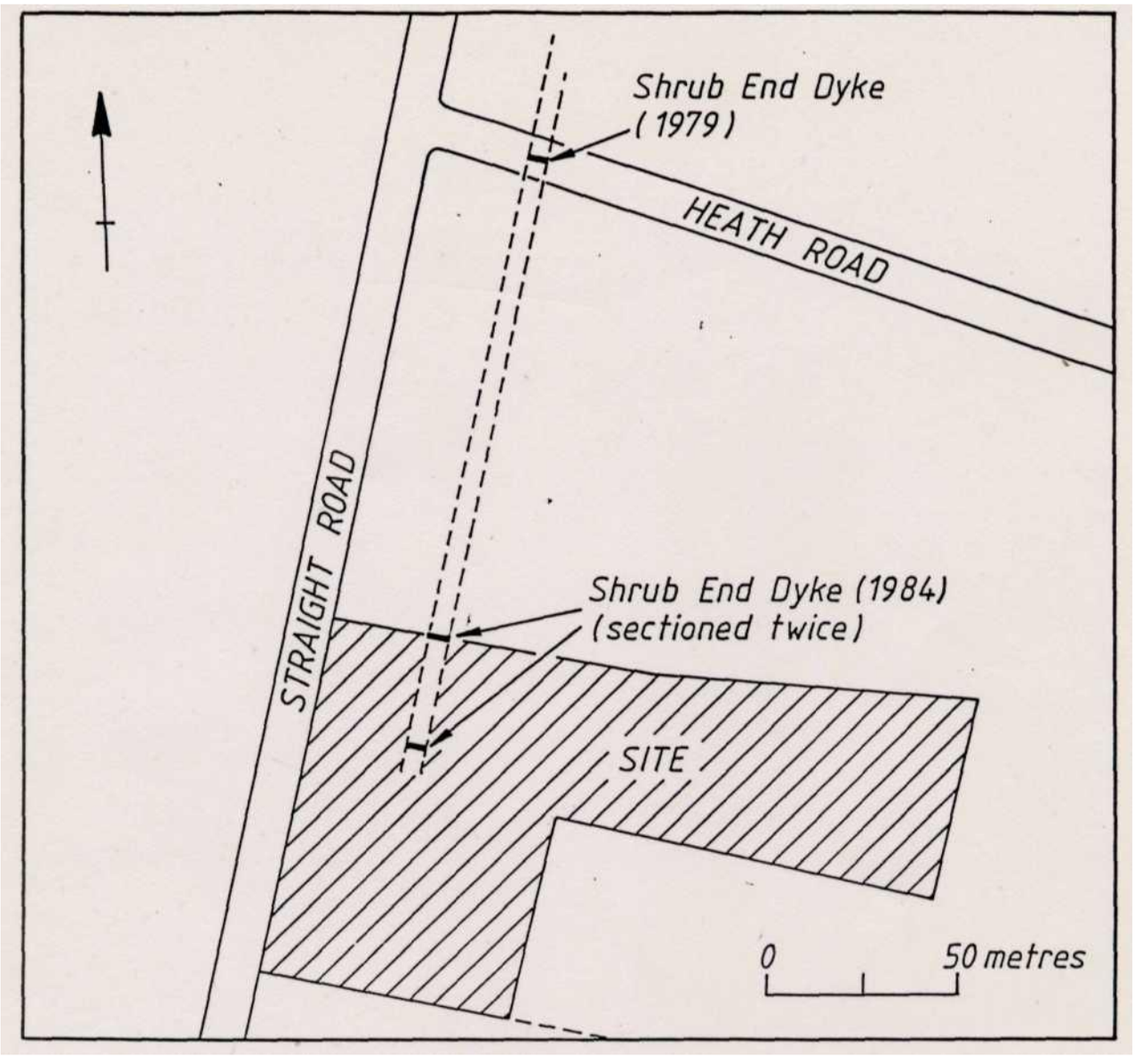


Fig 13.278 Former Royal Eastern Counties Hospital, Lexden Straight Road (10/84).

11/84b

42 St John's Street

November 1984

Fig 13.279

Reason: rear extension

Record/report: DS

Building work in the back yard revealed a sizeable section of the town wall, and excavation of trenches by the town wall and immediately outside the brick pier led to the discovery of a quantity of pottery, most of which was medieval and post-medieval.

The wall was photographed. Part of its core survived as an unrobbed section projecting to the south by about 1.0 m. Trenches dug during the course of the building works produced a large quantity of pottery, mostly medieval/post-medieval in date from Trench 1. Trench 2 sited by the back door, was dug to a depth of 2.0 m below ground level, revealing black topsoil which was presumably the north edge of the town ditch. A lens of burnt 'clay' or daub was noted at a depth of 1.2 m.

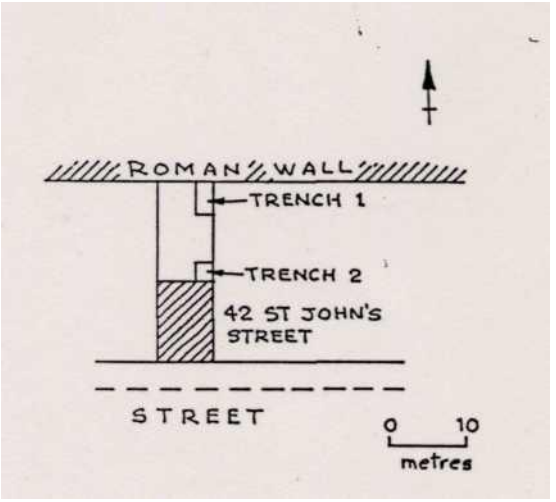


Fig 13.279 42 St John's Street (11/84b).

11/84c

Lloyds of London Building

Sheepen Place

November 1984 to April 1985

Reason: construction of office block

Record/report: DS

The site was covered by a thick layer of black topsoil. During the initial work, areas of gravel were noted 'a couple of feet' below the surface by the JCB driver, in the centre and the north-west corner of the site. This may have been Roman street metalling.

The site was visited on a regular basis. No archaeological deposits were encountered during these visits. Deposits noted included black topsoil, London clay, and sand and gravel but all apparently of natural derivation.

12/84

St Giles's Masonic Centre

December 1984

Reason: construction of carpark

Record/report: DS

The yard at the south side of St Giles's Masonic Centre is on the site of the graveyard of the former St Giles's Church. The surfaces of the yard and its adjacent access road were covered over with tarmacadam and paving slabs. This involved some disturbance of the underlying deposits but only to a depth of about 0.25 m. During the work, the site was visited regularly; however no archaeological features of note were recorded. A few human bones were found.

1/85

Sir Isaac's Walk

January to February 1985

Fig 13.280

Reason: new building

Record/report: G J Tann

Photographs: Misc Sites 2, 214-8 & 222-8

Small trenches were dug to the north and south of the town wall, on a site opposite 11 Sir Isaac's Walk. Those to the north of the wall were cut down beside the inner face whereas those south of the wall (and thus were at a much lower level) were placed well away form the wall.

X377. Finds from Trenches A, B, and C, (all to the north of the wall). These reached a depth of about 3.5 m before natural sand was exposed. A thin layer of charcoal, burnt organic matter and burnt small stones lay immediately above the sand. Above this layer were numerous ill-defined deposits of sandy clays of pale yellowish brown colour belonging to the rampart behind the wall. These produced exclusively Roman material. The deposits did not seem to include occupation layers; oyster shells indicated some midden material but there was little rubbish such as bone or pot. Above the Roman material was a substantial layer of post-medieval and later topsoil. The inner face of the Roman wall was fairly well preserved except from the section exposed in Trench C. Here the condition of the wall was very good, with clear coursing of tile and septaria. The lowest 0.5 m or so extended slightly further out with more mortar visible.

X378. Finds from Trenches D and E. These were close to the existing wall of the new building to the east of the site, and they were to the south of the Roman town wall. None of the finds are earlier than post-medieval in date. Natural sand occurred at 1.6 m.

X379. Trenches F and J. These included a post-medieval brick well, constructed with wedge-shaped bricks and backfilled. Some medieval pottery came from the lower deposits of the rest of the trench. Natural sand dropped away slightly towards the south to a depth of 2.4 m.

X380. Trenches G, H, and K. To the east of X378. These contained much post-medieval pottery with some medieval pot. Trench G was at 1.20 m on the north side, sloping to 1.6 m on the south where the natural sand was reached. Trench H had post-medieval pits extending to a depth of 2.8 m.

X381. Trench L and M. The trench cut down through post-medieval deposits and a dump of brick rubble with peg-tile piled up beside a brick repair to the south side of the Roman wall.

X 382. Trench N. This trench was cut beside the south face of the Roman wall at the intersection of a concreted service area close to an electricity substation and an open area beside Trench M. This had an upstanding brick boundary wall which was removed. Below this wall lay a series of septaria blocks set in a whitish-yellow mortar which seemed to form a rough wall about 0.6 m wide but becoming fragmentary towards the south side of the trench. On cleaning and investigation (for which time was very limited), the mortared septaria was found to be bonded to the Roman wall in a disturbed but roughly semicircular bulge about 0.9 m from the wall at its furthest point. The fragmentary wall was probably contemporary with the bulge and may have been an earlier boundary. No dating evidence was found; post-medieval and Roman sherds came from the trench but nothing reliable in the context of the mortared septaria. The base of the septaria was at 21.45 m OD, on sand. Photographs were taken of the wall.

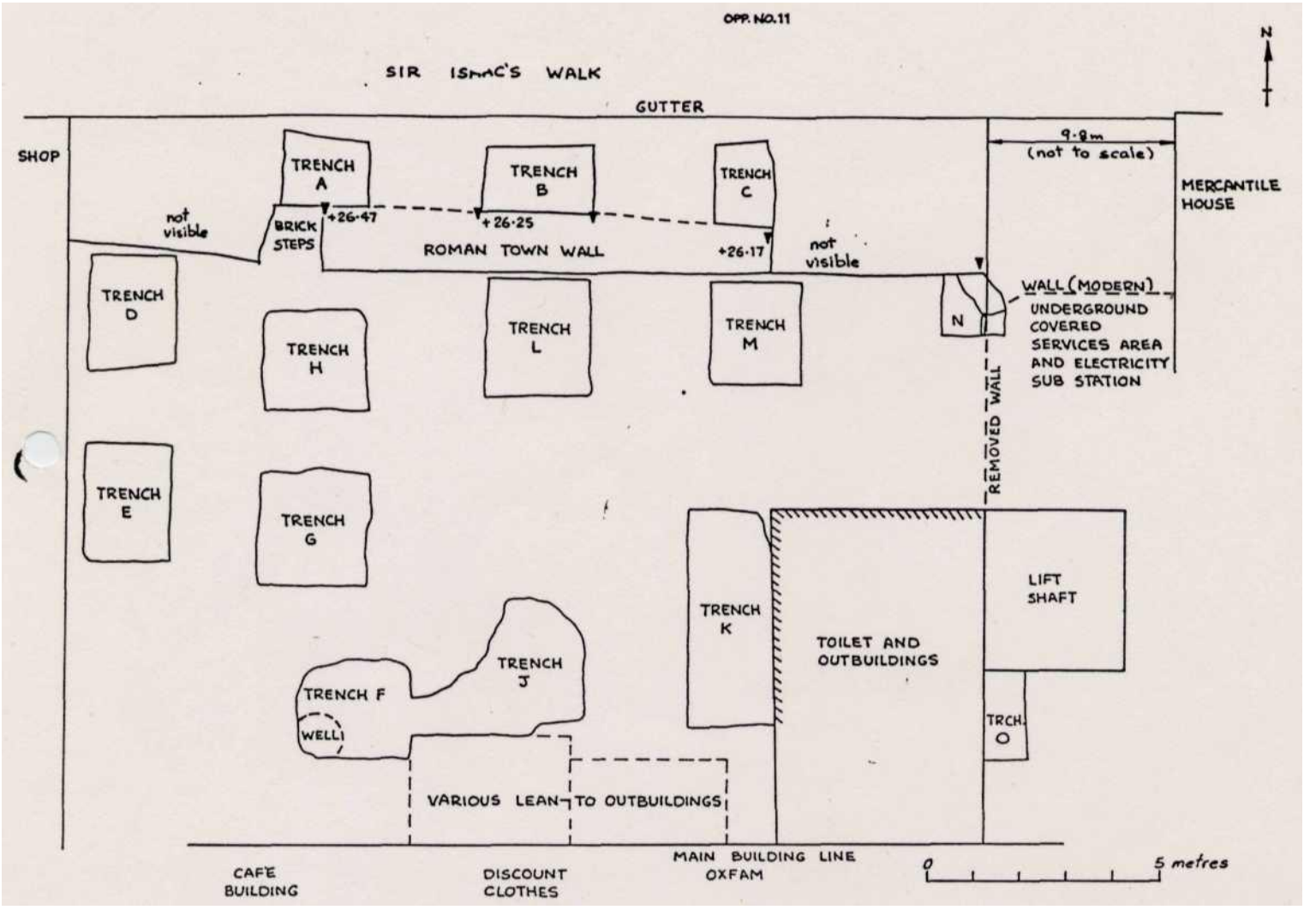


Fig 13.280 Sir Isaac's Walk (1/85).

6/85

44-8 Head Street (Headgate House)

Figs 1.2 & 13.281

1985

Reason: demolition of house

Record/report: GC/PC

Headgate House was a Grade 2 listed building. It was intended to retain the building but plans changed gradually during the course of the construction phase of the Culver Precinct development with the effect that the house was demolished in stages. The facade and the roof were rebuilt using (in theory) the original materials but otherwise the present Headgate House is completely new.

Headgate House was a brick building with a peg-tile roof and internal walls of lathe and plaster (Photographic Archive: Head Street 1985 (1.81), 5, 178-207). The ground floor had been completely stripped out to provide spacious shop accommodation. The first floor had been less badly damaged whilst the second (ie the top) was still more or less intact. The latter was recorded (Fig 13.281).

The original house was bought by the Osborne family in 1763 who rebuilt it in a fairly grand manner over the following three years. Inspection of the house as it stood in 1985 made it clear that the Osbornes rebuilt the front half of the original house in red brick but encased the existing rear part with an outer wall which matched the facade of the rebuilt front. The difference in the floor levels between the front three rooms and the rear part of the house indicates the two builds of the structure (Fig 13.281). The building was completely re-roofed but parts of the original roof at the rear were left incorporated in the new arrangement.

Around the turn of the century, the front ground-floor windows were removed to allow the insertion of two shop fronts and the central doorway was replaced with a new one a few yards to the north. In 1934 two of the ornately-plastered walls of the dining room were destroyed when one of the shops was extended. In 1965, alterations for Tescos led not only to the demise of the dining room but also the loss of the fine central staircase. Fortunately the finest fireplace in the dining room was rescued by the builders and is now in the Colchester and Essex Museum.

A short description of the building is contained in *The list of Buildings of Special Architectural or Historic interest: Borough of Colchester, Essex,* p 52 (Department of the Environment 1971) (where No 58-62 is wrongly called Headgate House). Some further details about the original fittings and the history of the building are to be found in *Catalogue,* **18**(1985/6), pp 6-11.

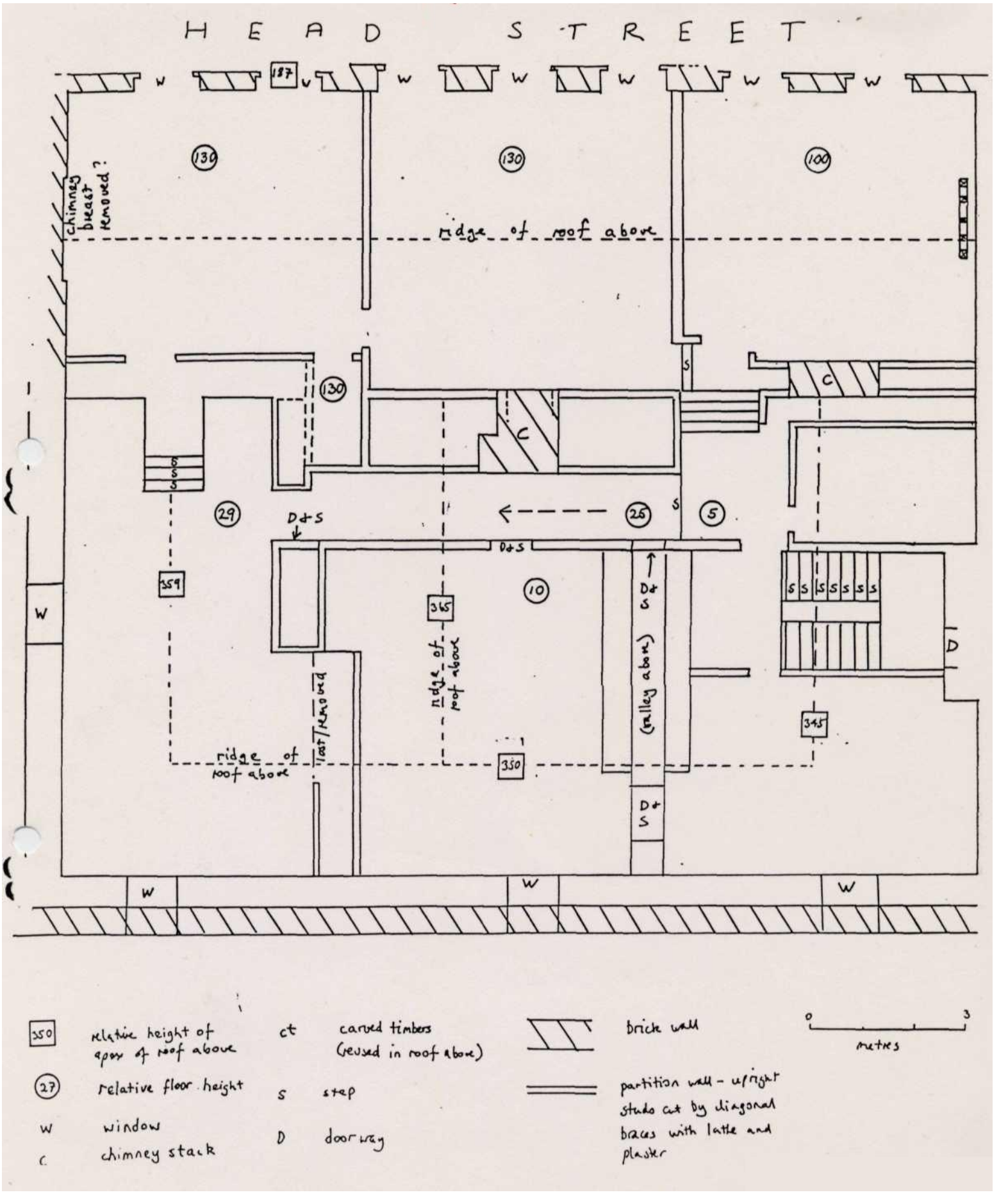


Fig 13.281 Headgate House, 44 Head Gate Street (6/85): plan of second floor and roof.

7/85a

Old booking office, Queen Street

Fig 13.282

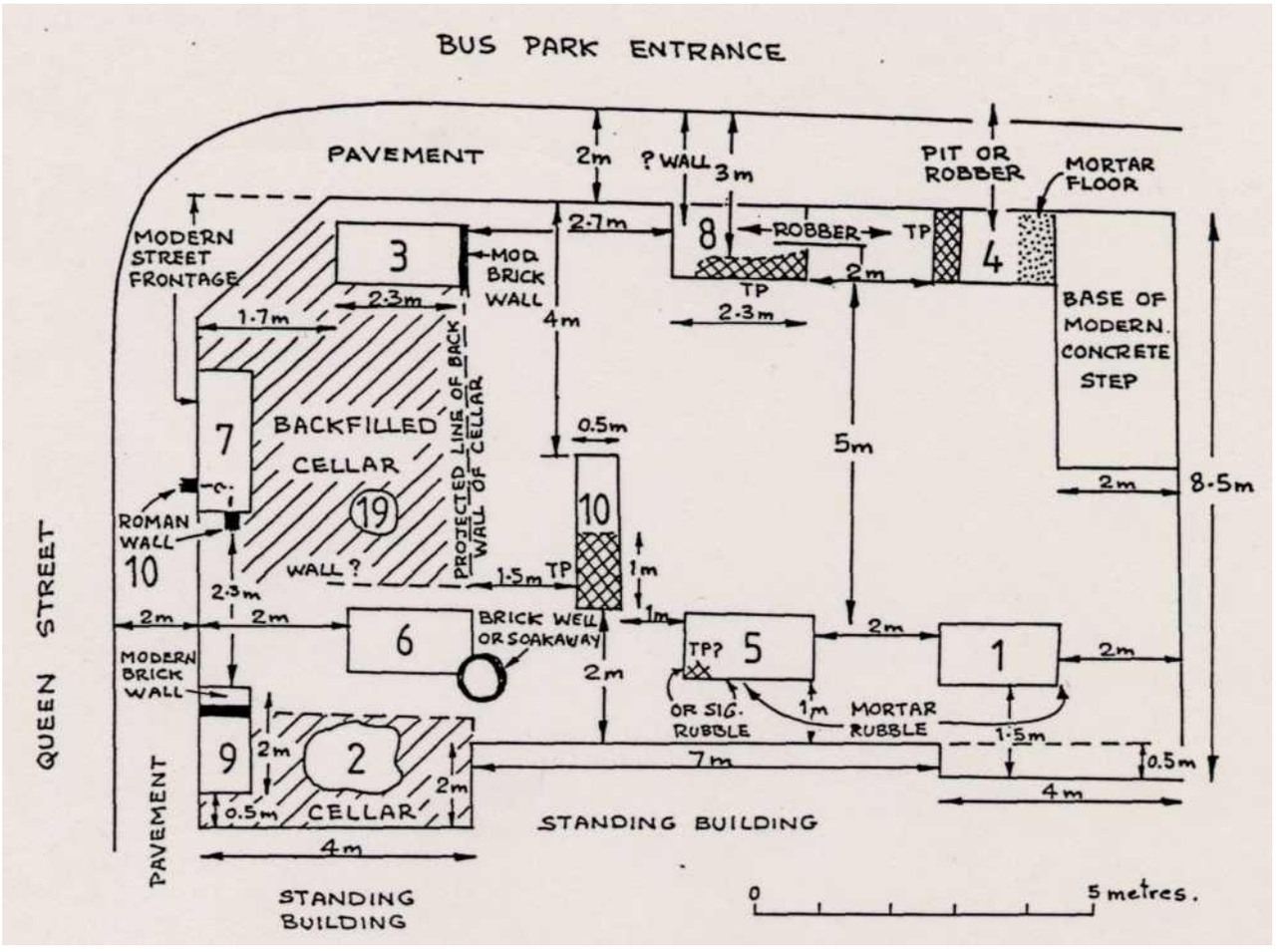
July 1985

Reason: construction of new building
Record/report: HB/PC
Photographs: Misc Sites 1, 169-71

Construction of the new building involved the digging of ten holes in which were observed tessellated and other floors, and robbed and unrobbed foundations of Roman date. The highest surviving Roman deposits (the tessellated floors) occurred at a depth of about 1.0 m and the natural at about 1.4-1.6 m.

Hole 1.	Redeposited Roman mortar.
Hole 2.	Backfilled 19th-century cellar.
Hole 4.	Tessellated pavement on west side, pit or robber trench in the centre, and a ?mortar floor to the east.
Hole 5.	Loose mortar (as Hole 1) on east side and broken up *opus signinum* on east side.
Hole 7.	Good stratification. Foundation(s) cutting into west and south faces. Associated with at least two floors with occupation.
Hole 8.	Strip of tessellated pavement along south edge. Possible foundation in north-west corner. East-west robber across width of trench.
Hole 9.	19th-century cellar wall. Possibly some redeposited *opus signinum* on north side.
Hole 10.	Tessellated pavement on south side.

OLD BOOKING OFFICE, QUEEN STREET



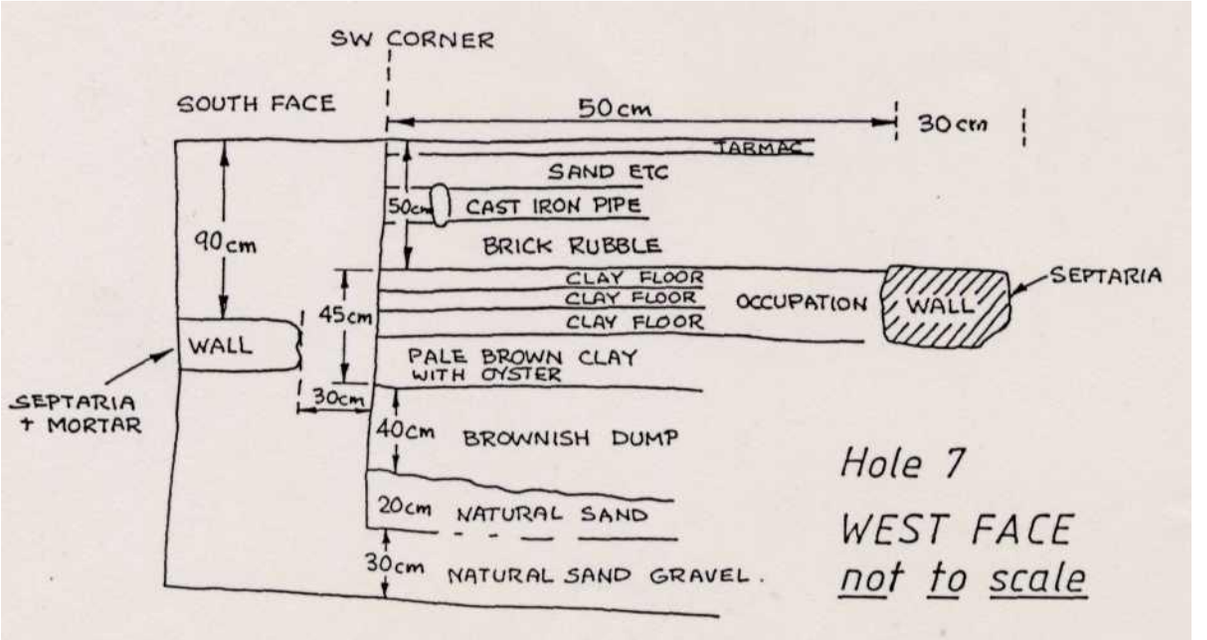


Fig 13.282 Old Booking Office, Queen Street (7/85a).

7/85b

34 Head Street (Shoe Fayre)

Figs 1.2 & 13.283-6

1985

Reason: demolition of house

Record/report: Richard Shackle (with RM)/PC

No 34 Head Street was a poorly-preserved three-storey timber-framed building of probable 18th-century date which was demolished to make way for the Culver Precinct development (Photographic Archive: Head Street 1985 (1.81), 2, 69-102). Much of the original ground floor had been removed in recent years when the premises were used as a shop. Richara Shackle recorded the first floor and most of the main surviving timbers elements of the building.

The original building consisted of a red brick facade with a timber frame. In plan, the building consisted of a block on the street frontage with a block slightly offset behind. The upper floor comprised only of one room open to the roof; the room led on to a modern flat roof over the first floor of the rear block. The roof was of side-purlin type. An unusual wooden box-drain lined with lead crossed the room at ceiling height to allow the waste water collected in the front eaves gutter to be disposed of at the rear of the building.

Some early wallpaper was found on the walls of the first-floor room at the front of the building (Photographic Archive, 96-8 & 102).

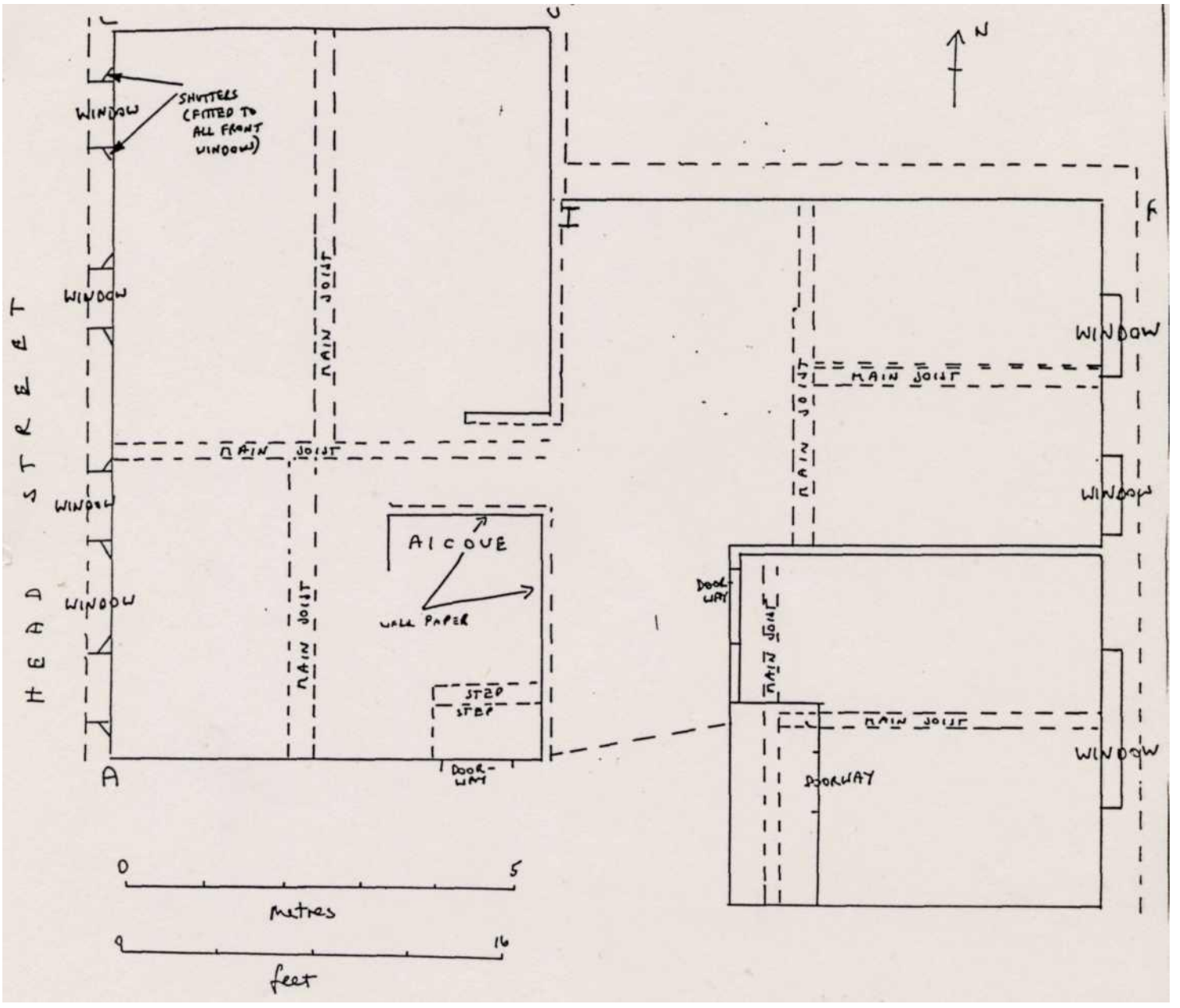
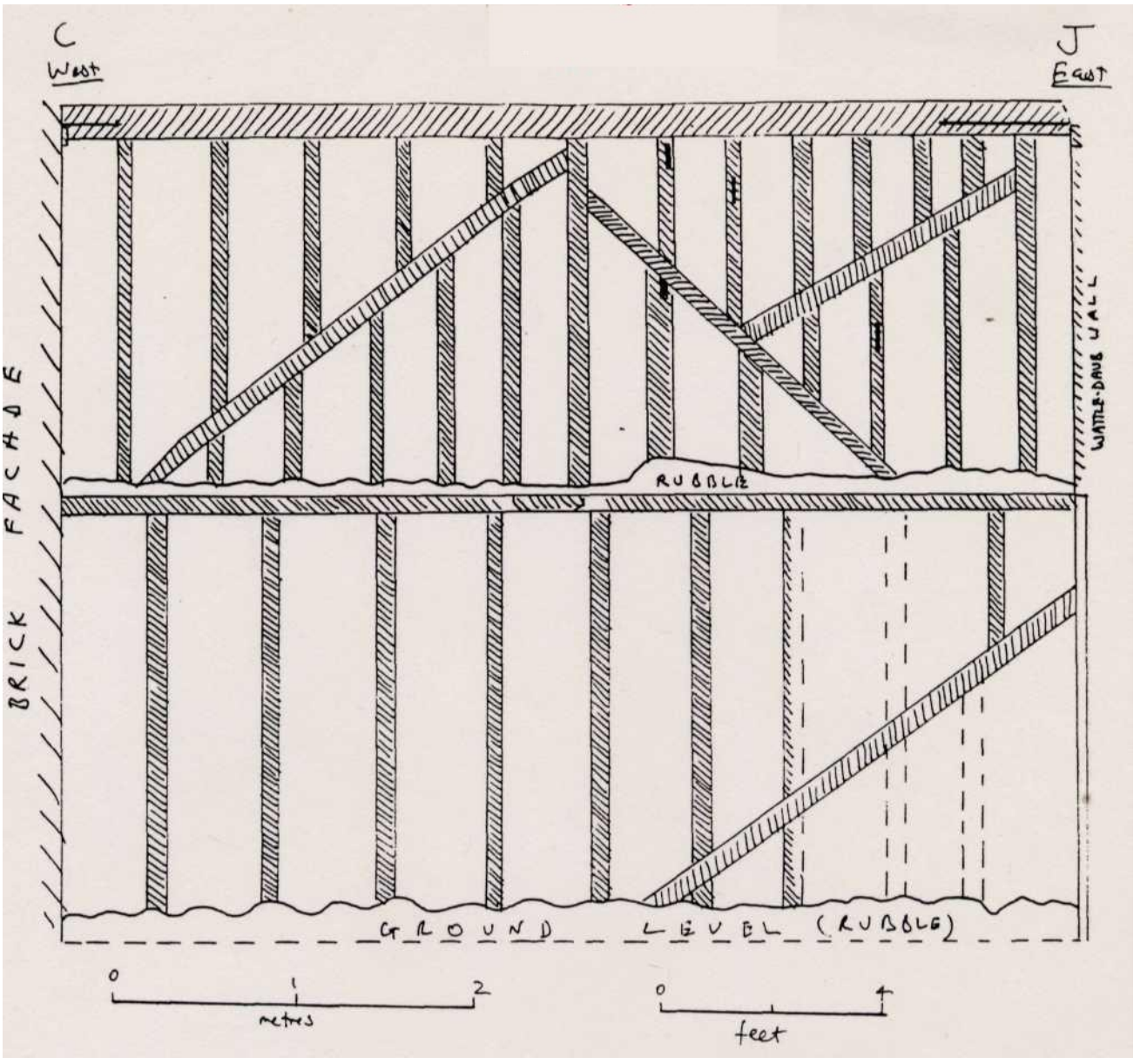


Fig 13.283 34 Head Street (Shoefayre) (7/85b).



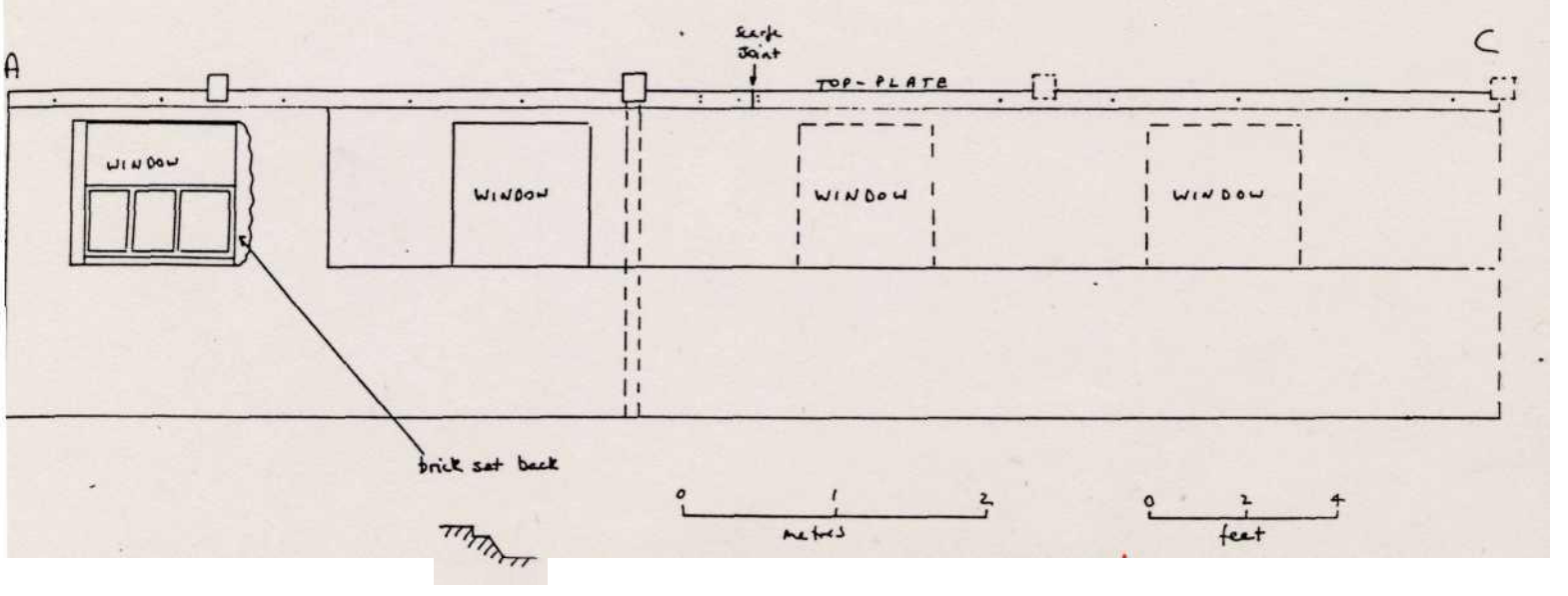
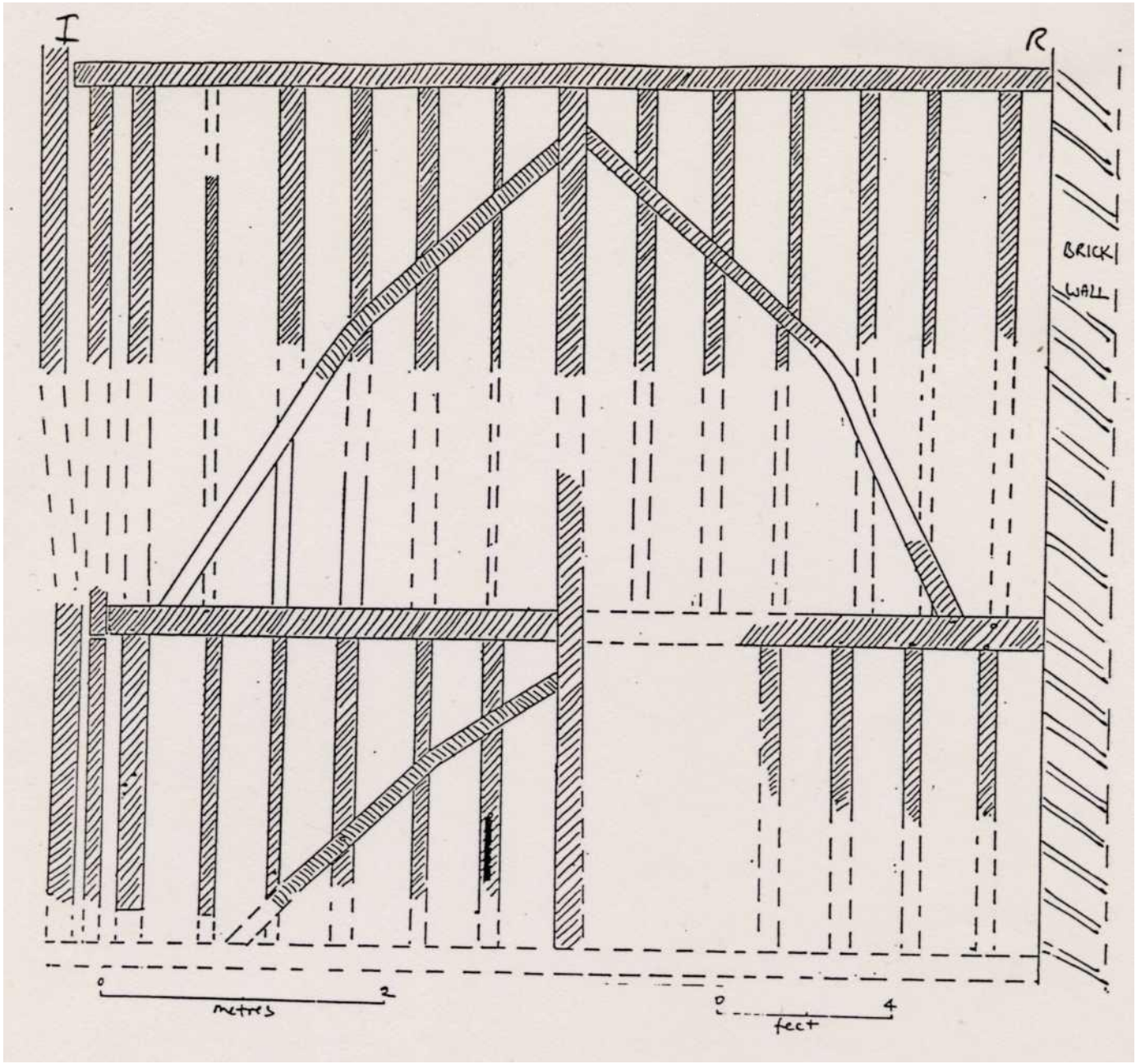


Fig 13.284 34 Head Street (Shoefayre) (7/85b).



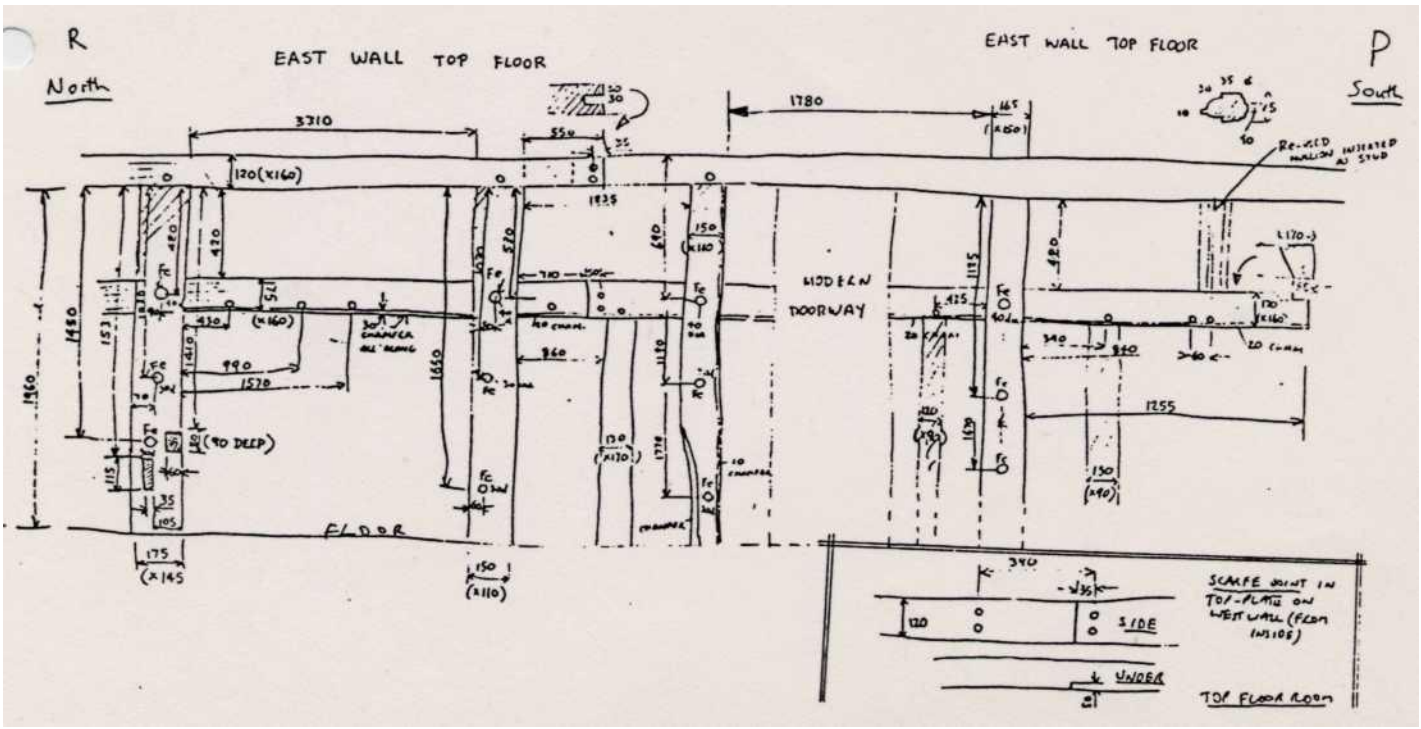
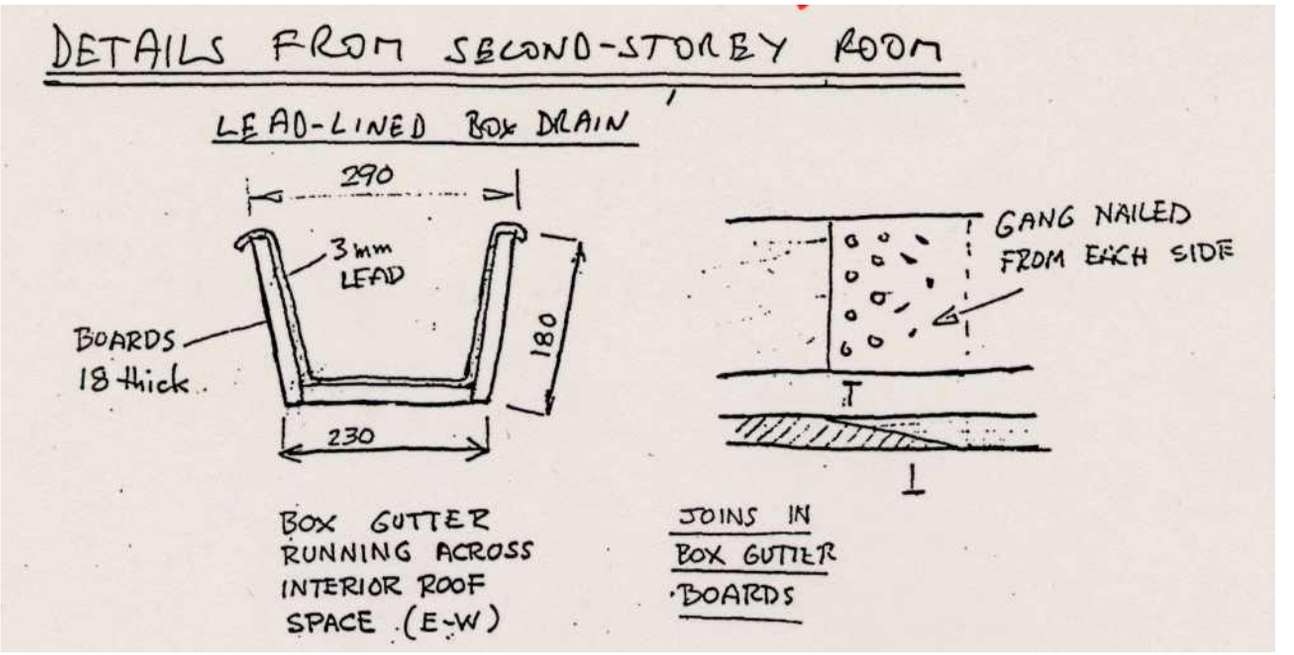
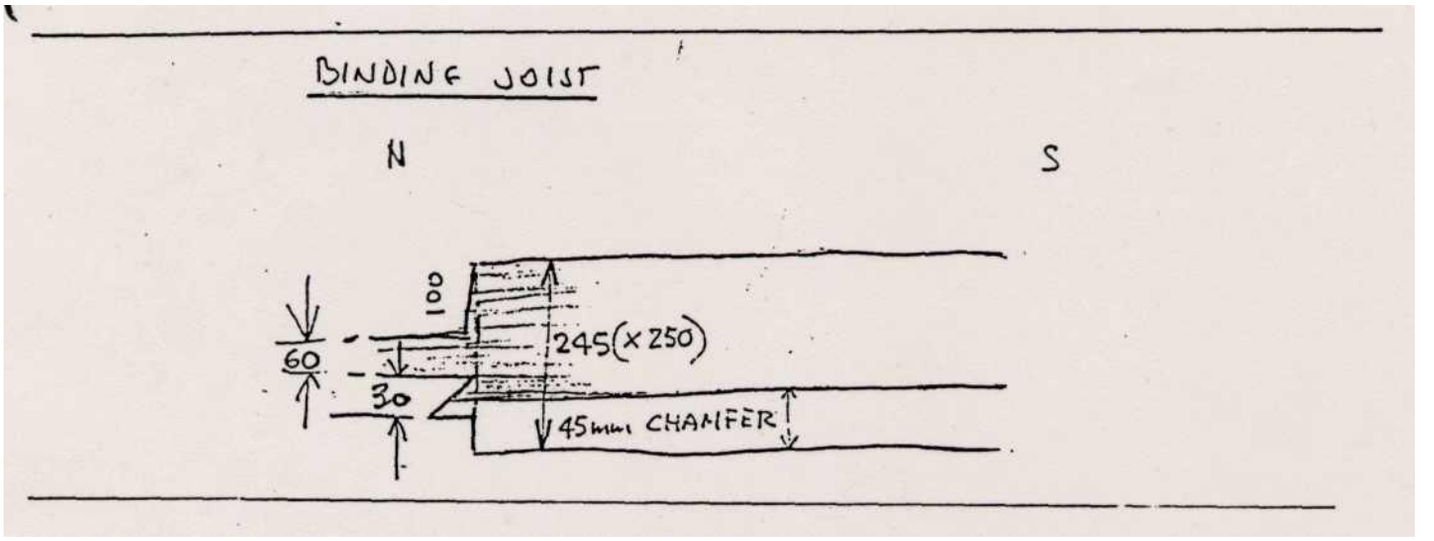


Fig 13.285 34 Head Street (Shoefayre) (7/85b).





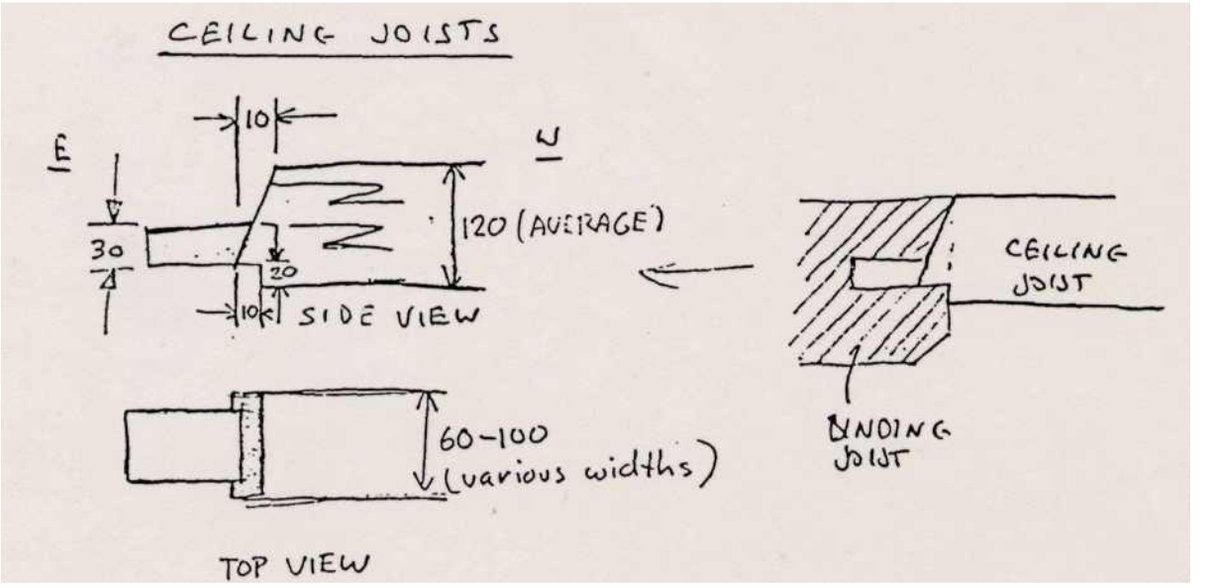


Fig 13.286 34 Head Street (Shoefayre) (7/85b).

8/85a

40 Head Street (Sketchley's)

Figs 1.2 & 13.287-300

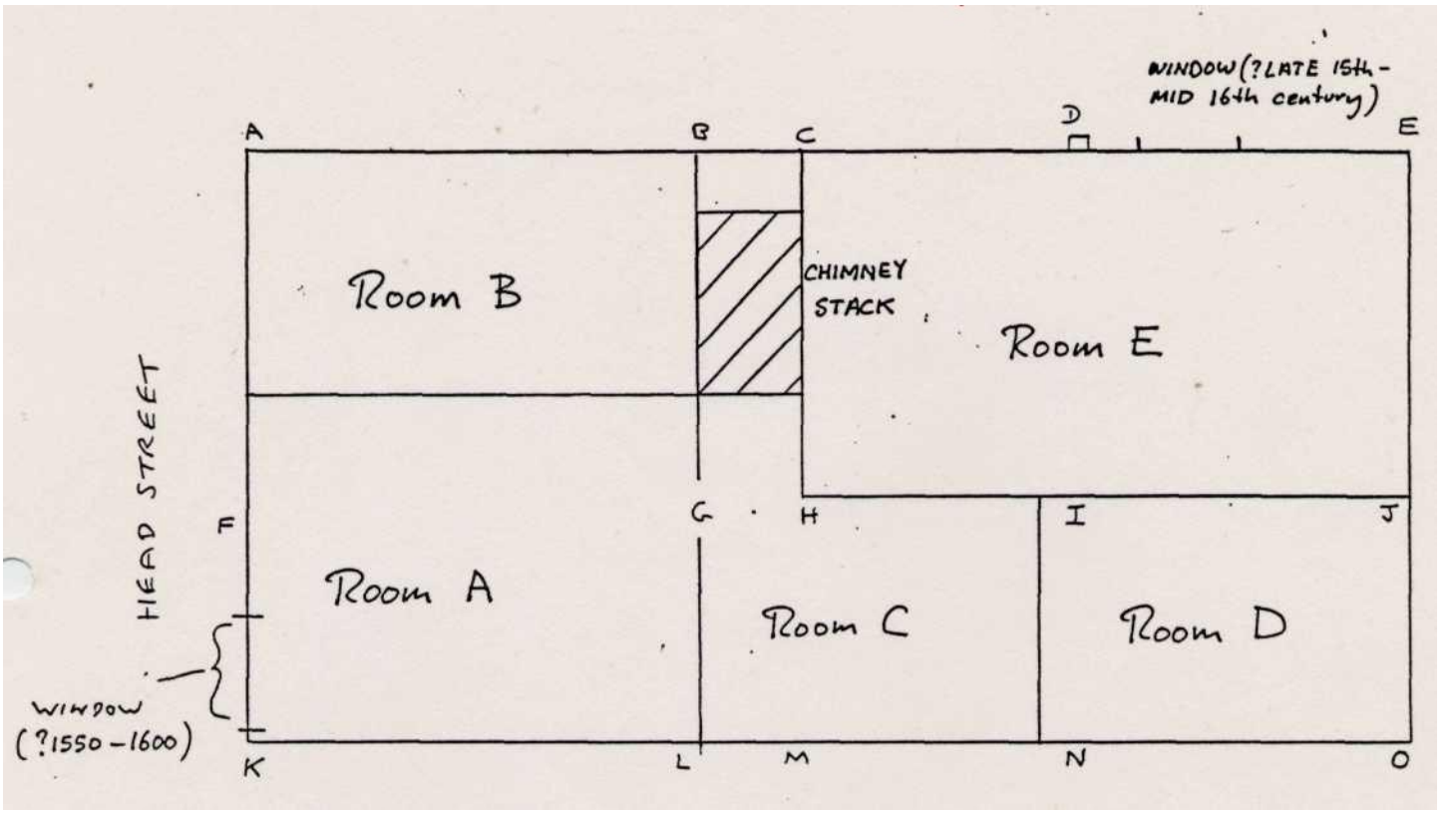
1985

Reason: demolition of house

Record/report: Richard Shackle with RM/PC

No 40 Head Street was a small timber-framed house which was demolished during the course of the Culver Precinct development (Photographic Archive: Head Street 1985 (1.81), 4, 8-67). The building was of two storeys, with a one-room attic formed out of the roof space on the centre of the south side. The ground floor, where the timber-frame had decay badly, had been extensively altered over the years but the first floor was well-enough preserved for a sketch plan to be made of the rooms (Fig 13.287). The building consisted broadly of a two-storey block lying north-south on the street, the frontage (corresponding to Rooms A+B on the first floor), behind which were two east-west blocks standing side by side (corresponding to Rooms E and C+D). The block containing Room E was of late 15th to mid 16th century date and was the earliest part of the building. The north wall of this block had been jettied and, on the first floor, incorporated a window with diamond-shaped mullions (Fig 13.289). Its roof, part of which survived, seemed to have been of the crown-post type. The southern block may have been a rebuild of an earlier block in the same position or, more likely, was new work which infilled what had been a small vacant yard east of the frontage block and south of the jettied rear wing. The addition of the new block involved removing part of the ?crown-post roof of the rear wing to create a curious hipped tripartite roof. These changes are likely to be of 16th- or 17th-century date. The one-room attic was over Room C; it was designed to function as servants' quarters. The room was reached by steep narrow stairs next to the chimney stack between Rooms B and E and was entered via a boarded door which is now in the Colchester and Essex Museum. In one corner of the room was a small wooden box bed nailed in place (Photographic Archive, 25-7). It was large enough for one person. The front block of the house must have been a replacement for an older structure since it was not the oldest part of the building. A window in the west wall contained ovolo-moulded mullions (Figs 13.295-6) suggesting that this part of the building was no earlier than the mid 16th century or so. An unusual feature in the building was part of a elaborately-carved stone lintel which had been incorporated in the ground-floor part of the chimney stack between Rooms B and E (Fig 13.298). It is now in the Colchester and Essex Museum.

The building had a Georgian brick facade added on the Head Street frontage.



SKETCHLEY, HEAD STREET, COLCHESTER, ESSEX

SKETCH PLAN OF FIRST FLOOR

SCALE: NOT TO SCALE . R. SHACKLE . 1985.

Fig 13.287 40 Head Street (Sketchley's) (8/85a).

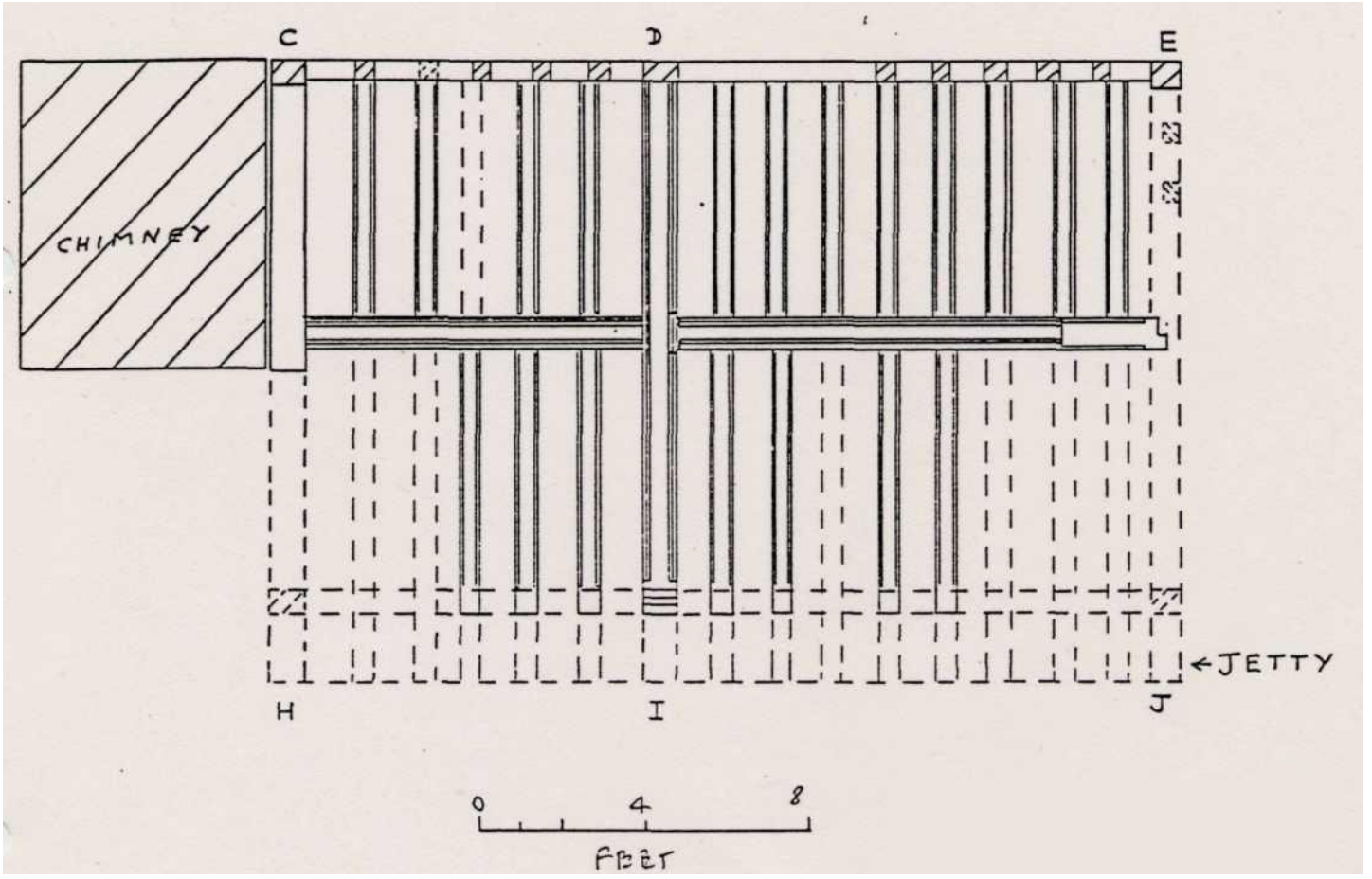


Fig 13.288 40 Head Street (Sketchley's) (8/85a).

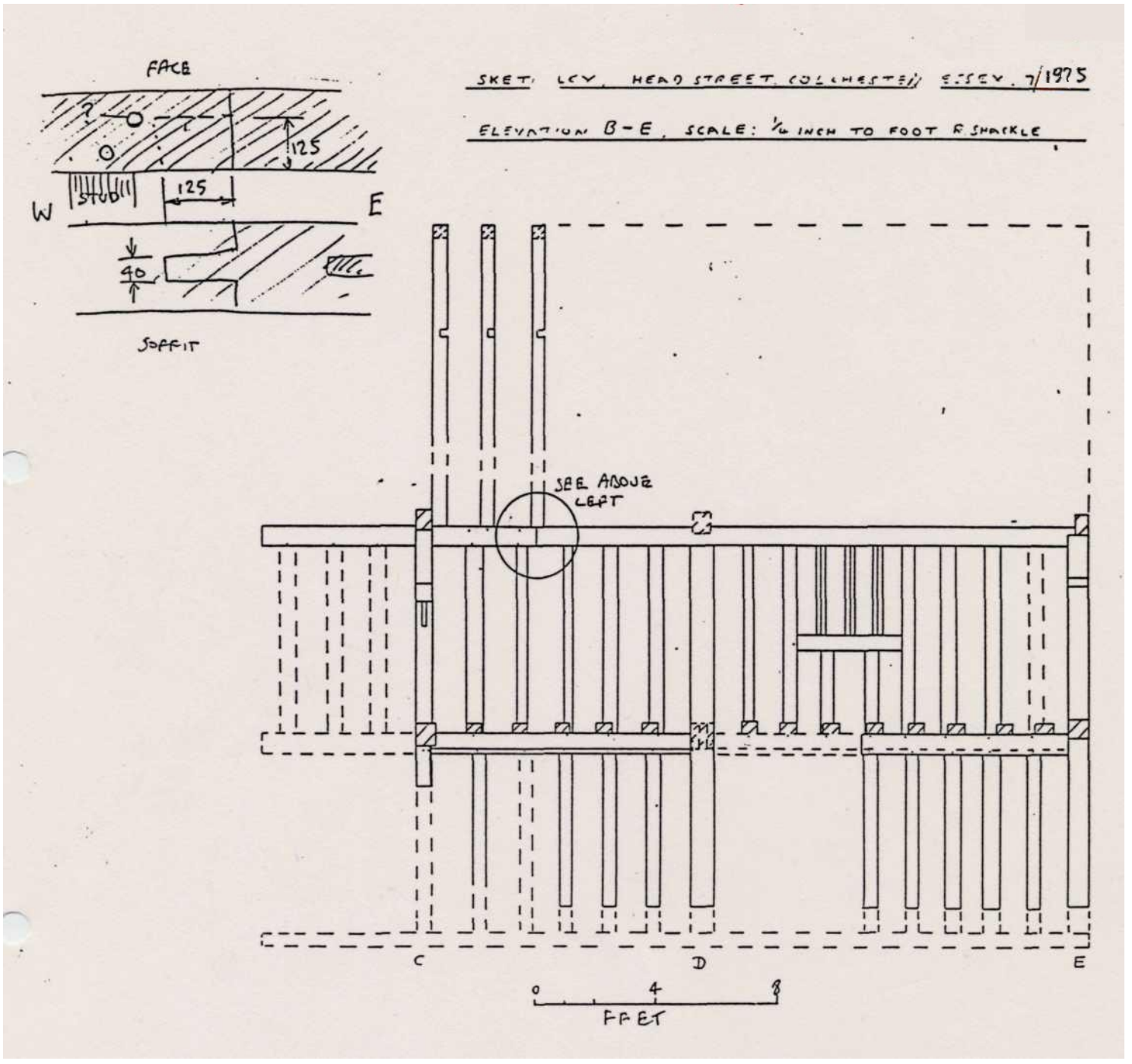


Fig 13.289 40 Head Street (Sketchley's) (8/85a).

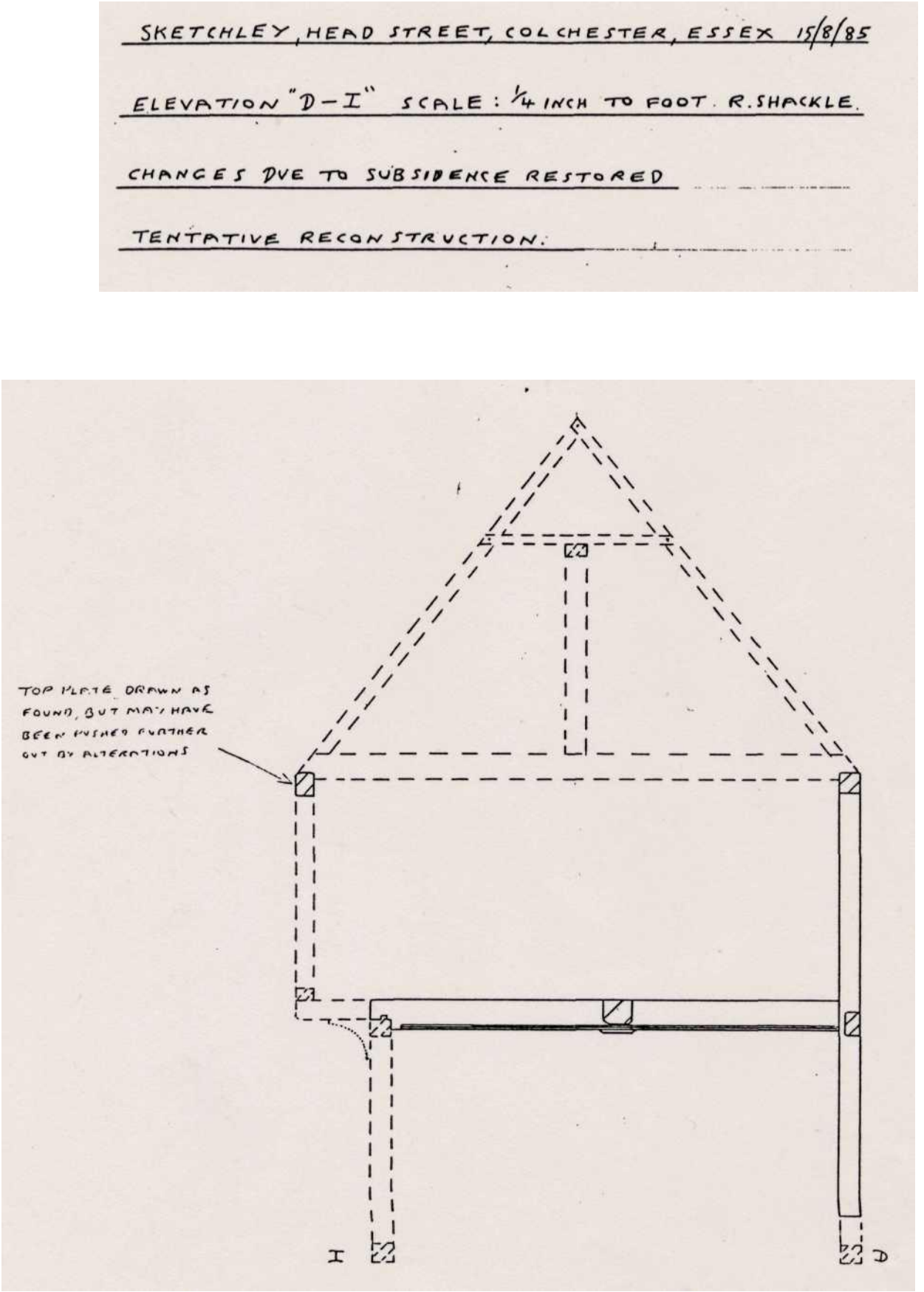


Fig 13.290 40 Head Street (Sketchley's) (8/85a).

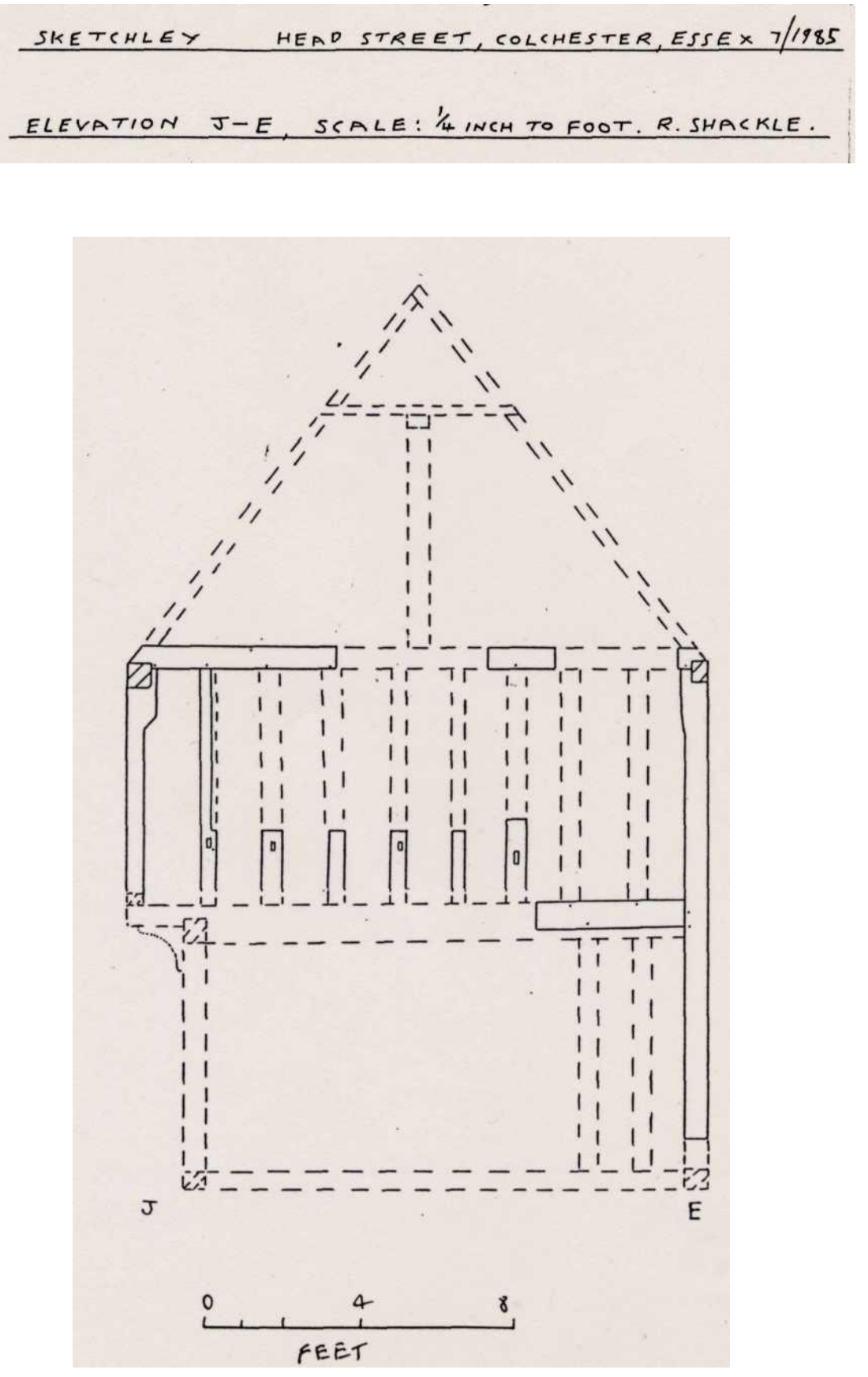


Fig 13.291 40 Head Street (Sketchley's) (8/85a).

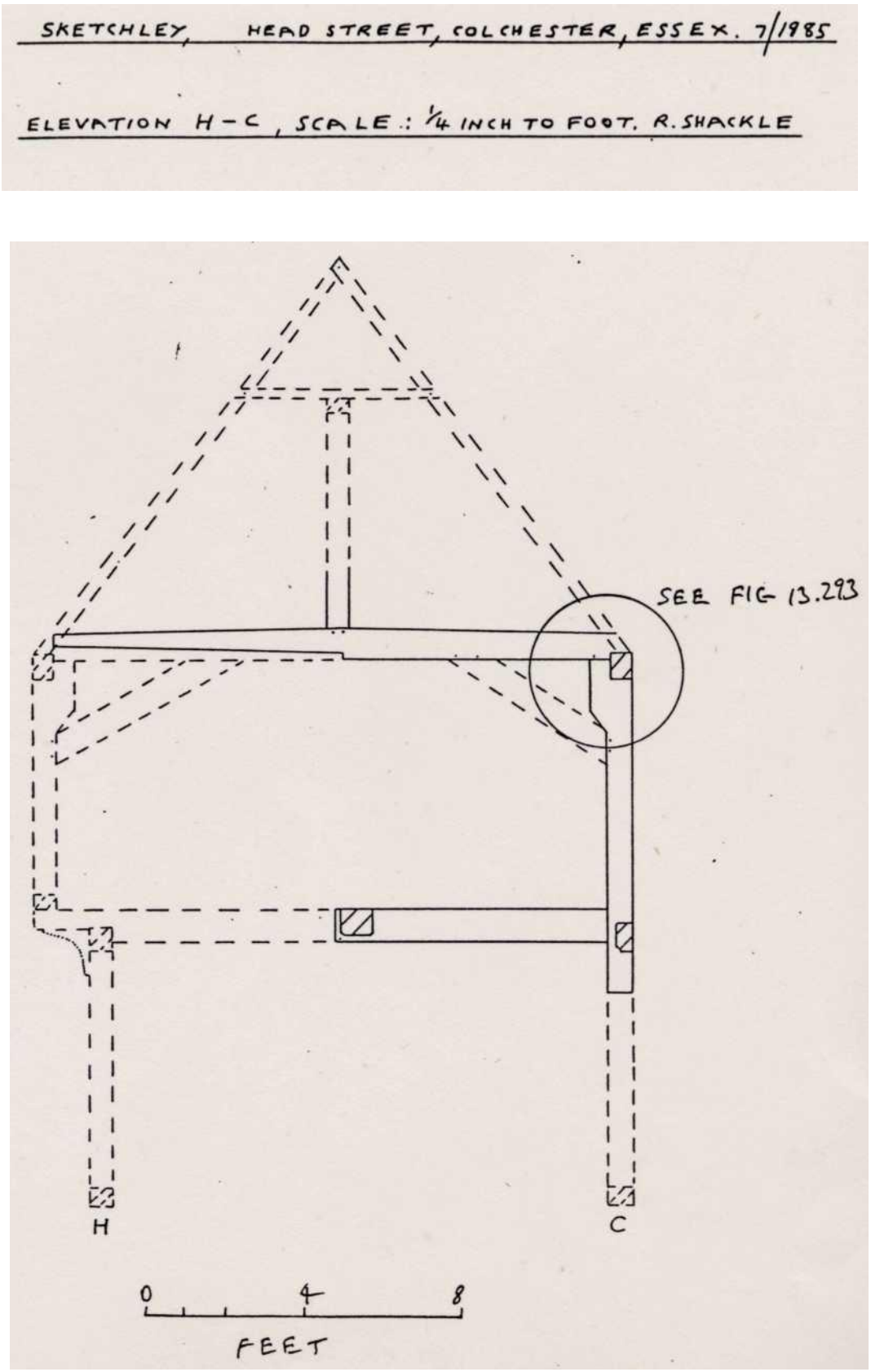


Fig 13.292 40 Head Street (Sketchley's) (8/85a).

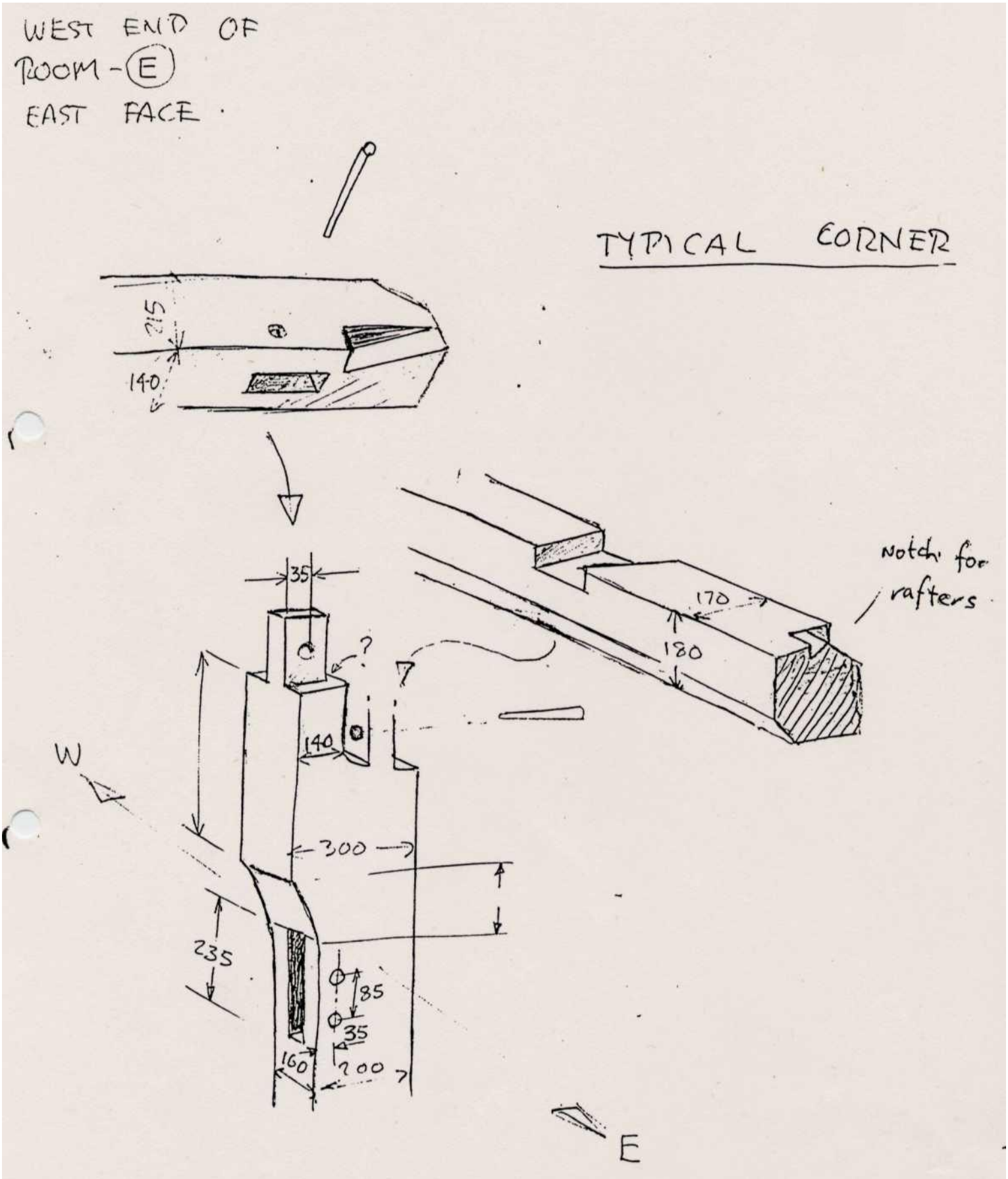


Fig 13.293 40 Head Street (Sketchley's) (8/85a).

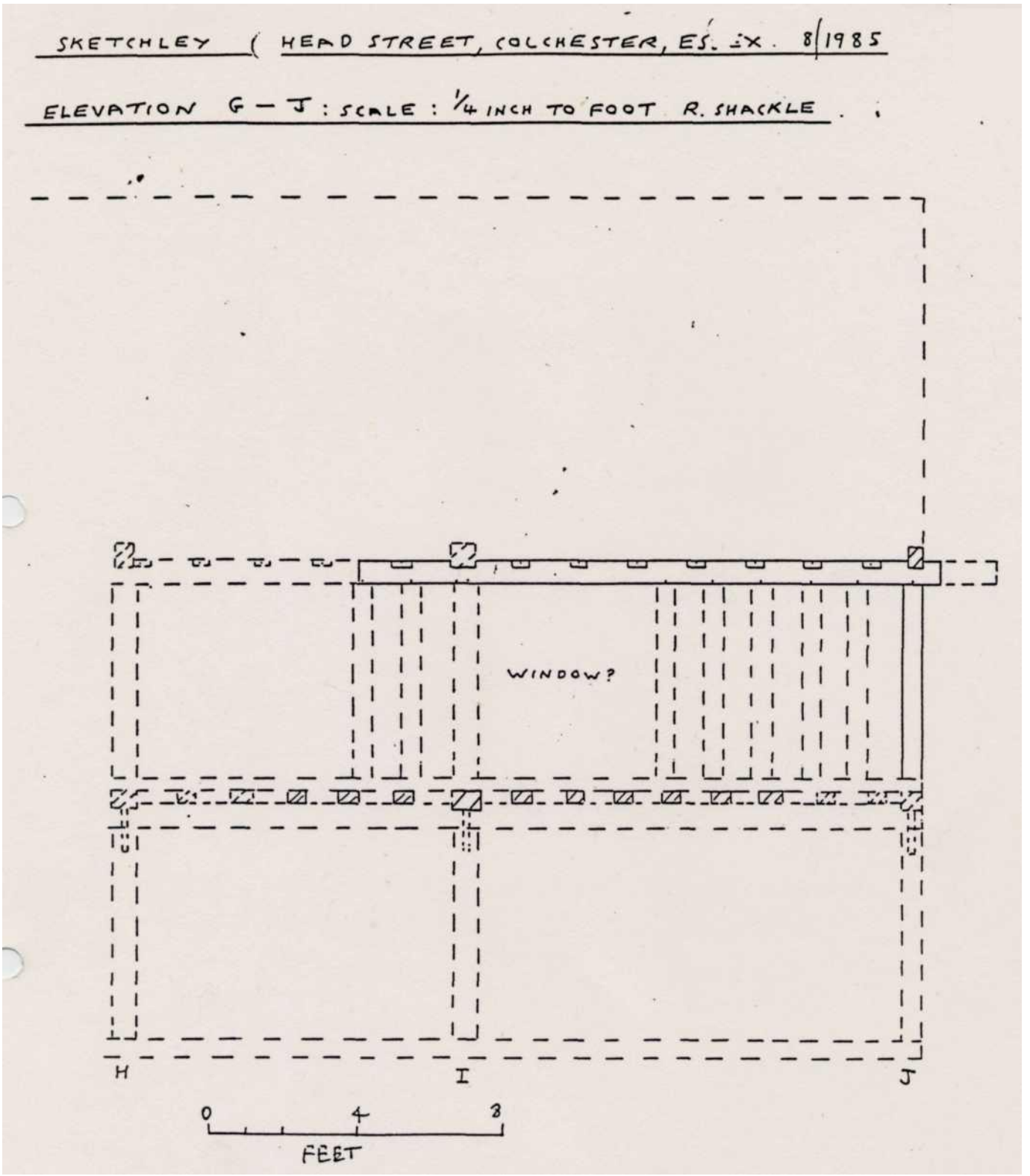


Fig 13.294 40 Head Street (Sketchley's) (8/85a).

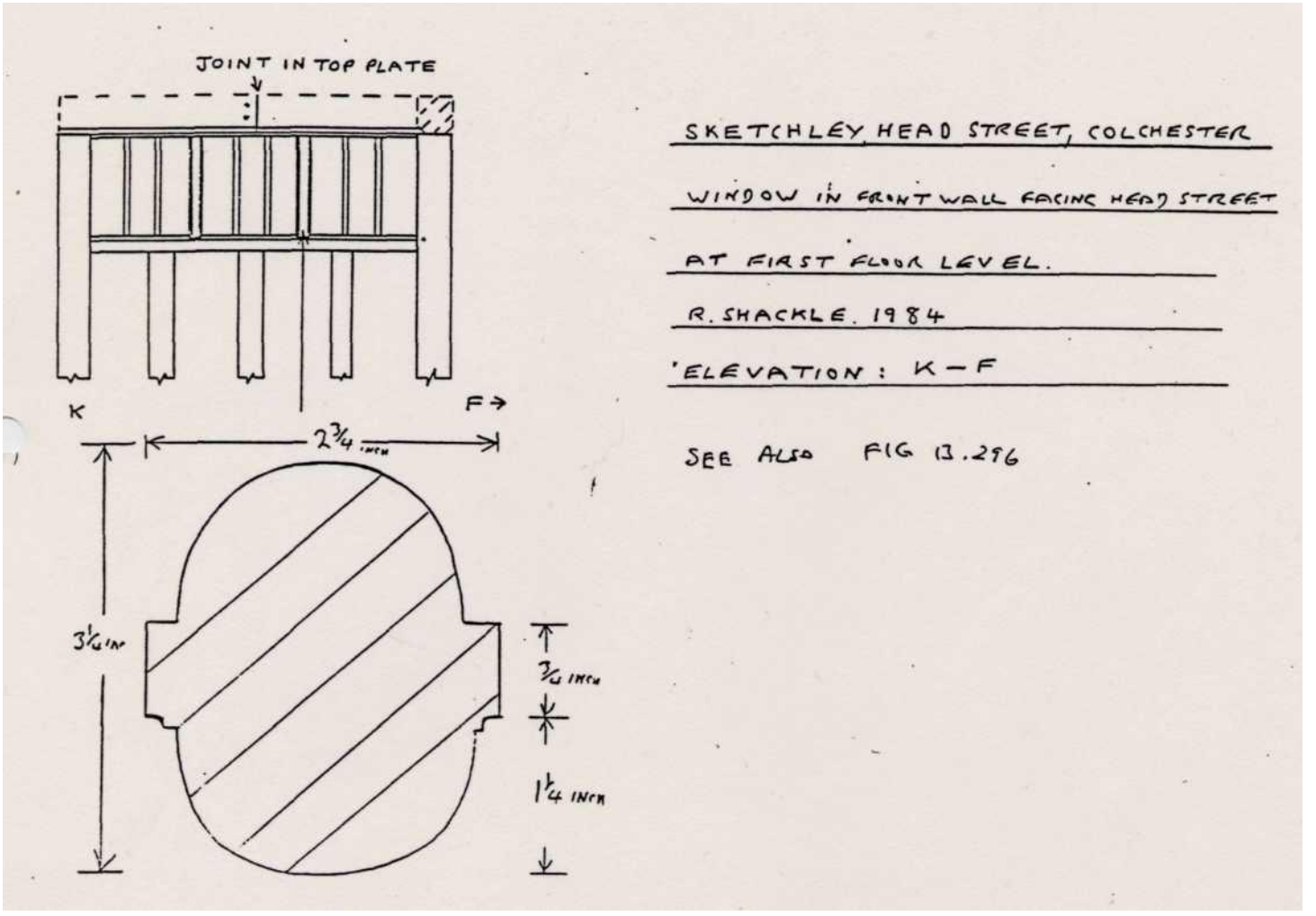


Fig 13.295 40 Head Street (Sketchley's) (8/85a).

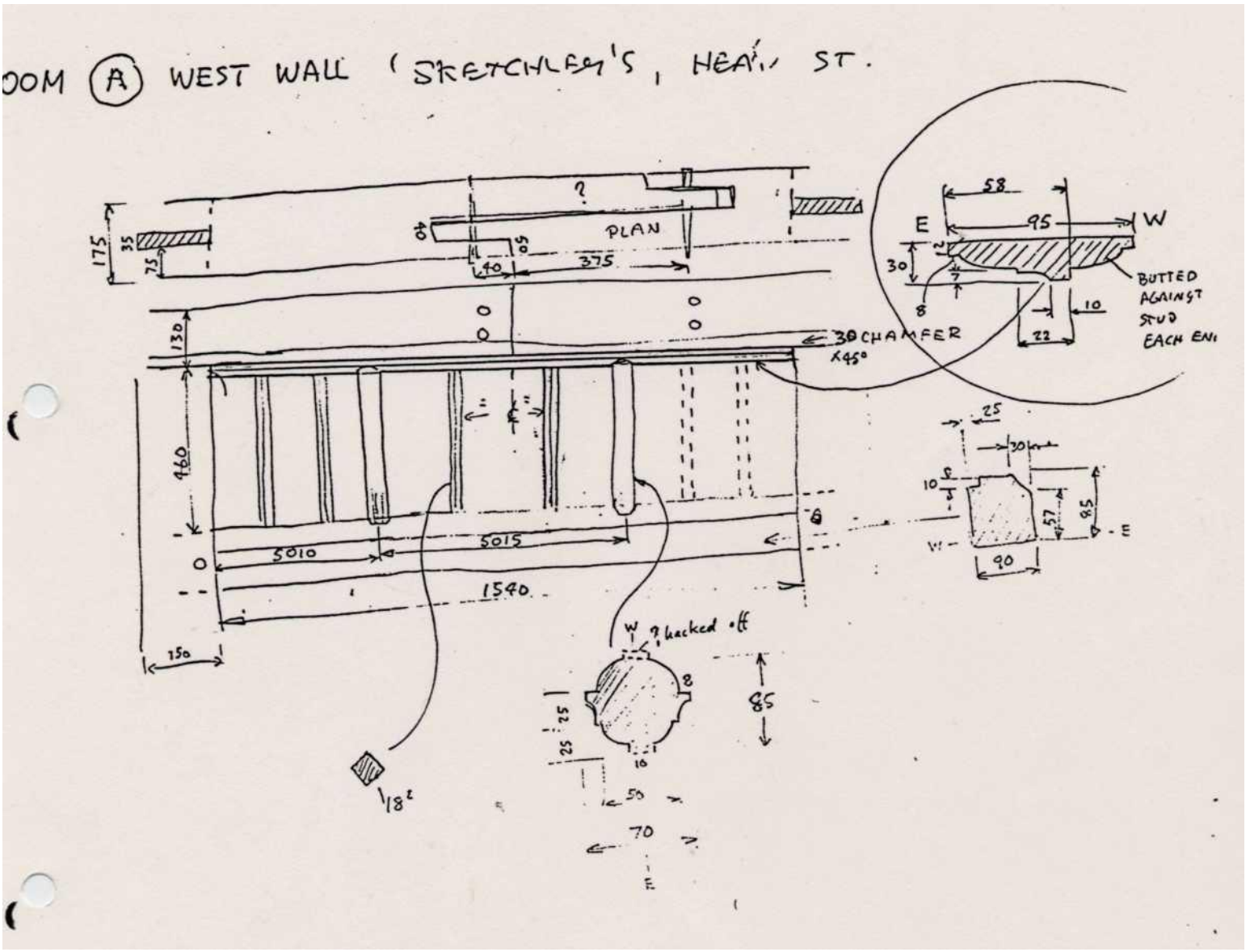


Fig 13.296 40 Head Street (Sketchley's) (8/85a).

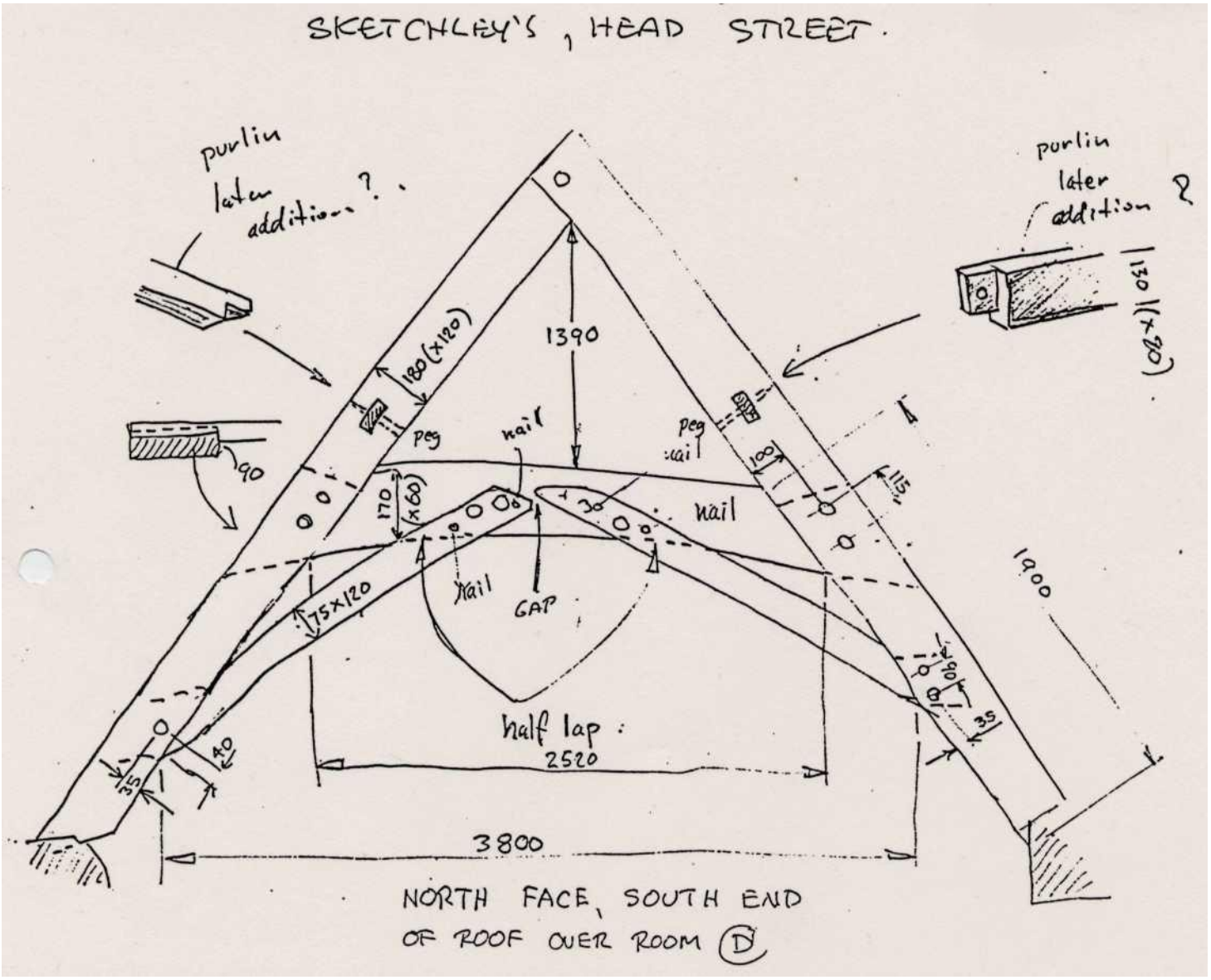


Fig 13.297 40 Head Street (Sketchley's) (8/85a).

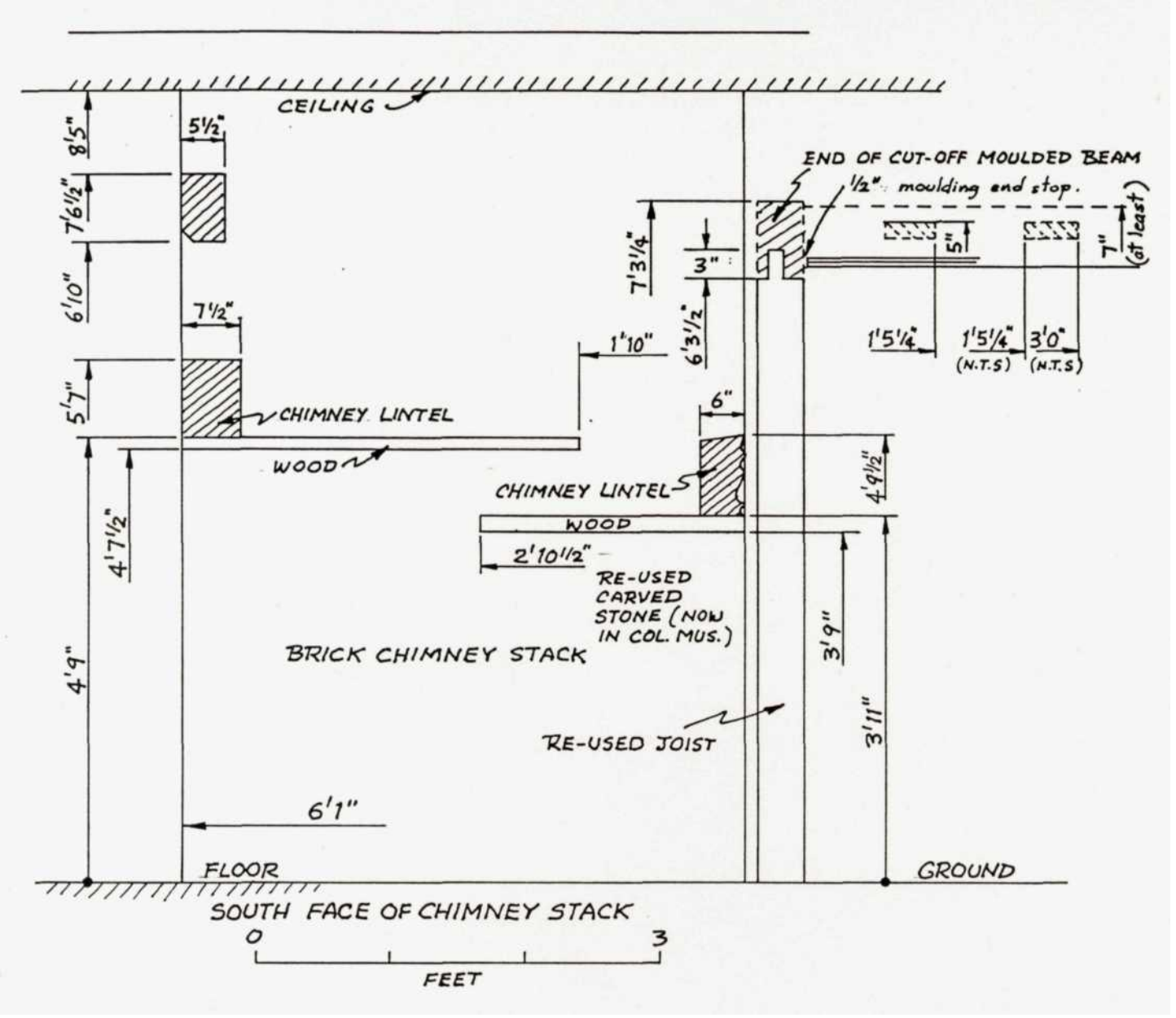


Fig 13.298 40 Head Street (Sketchley's) (8/85a).

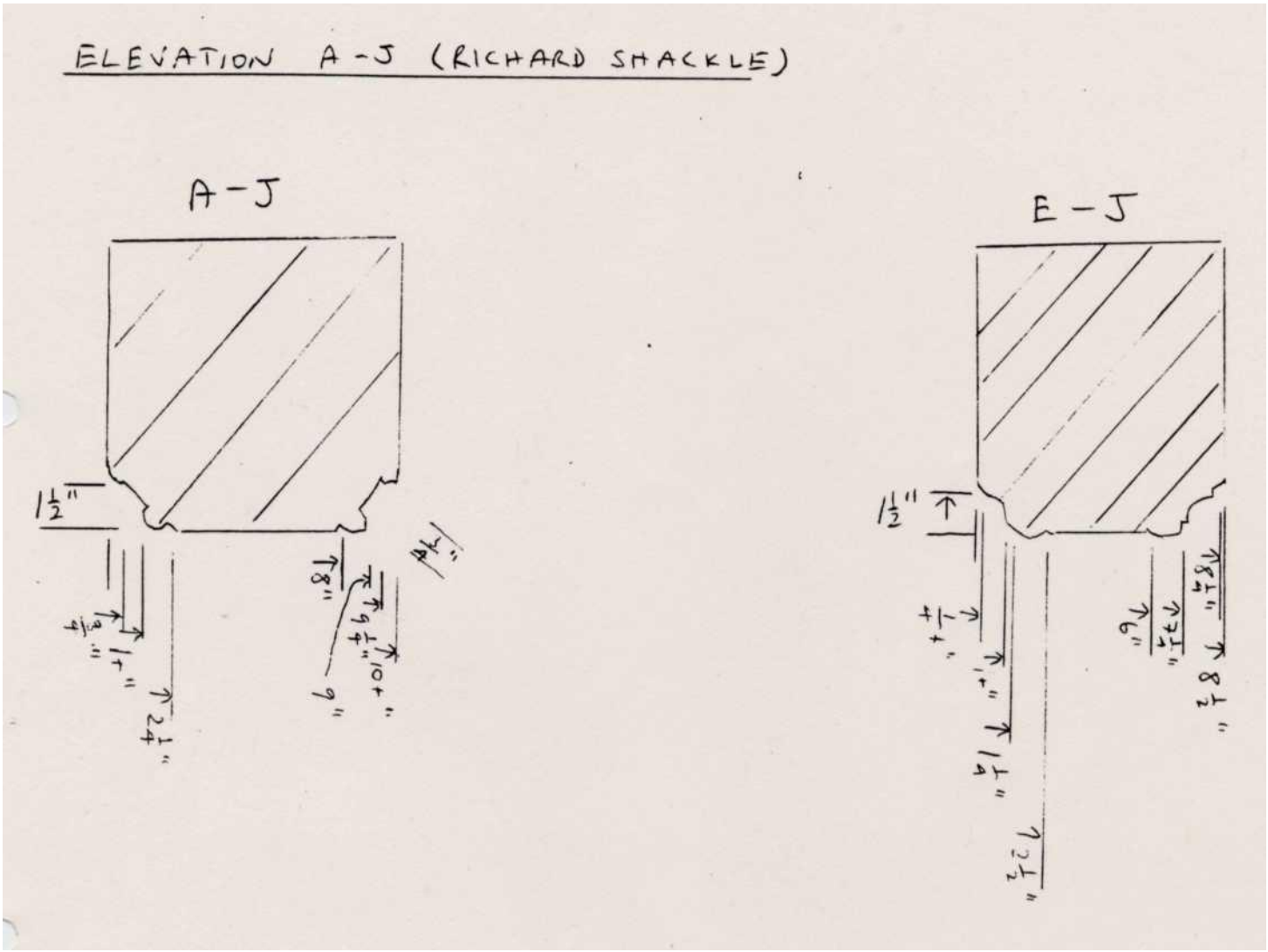


Fig 13.299 40 Head Street (Sketchley's) (8/85a).

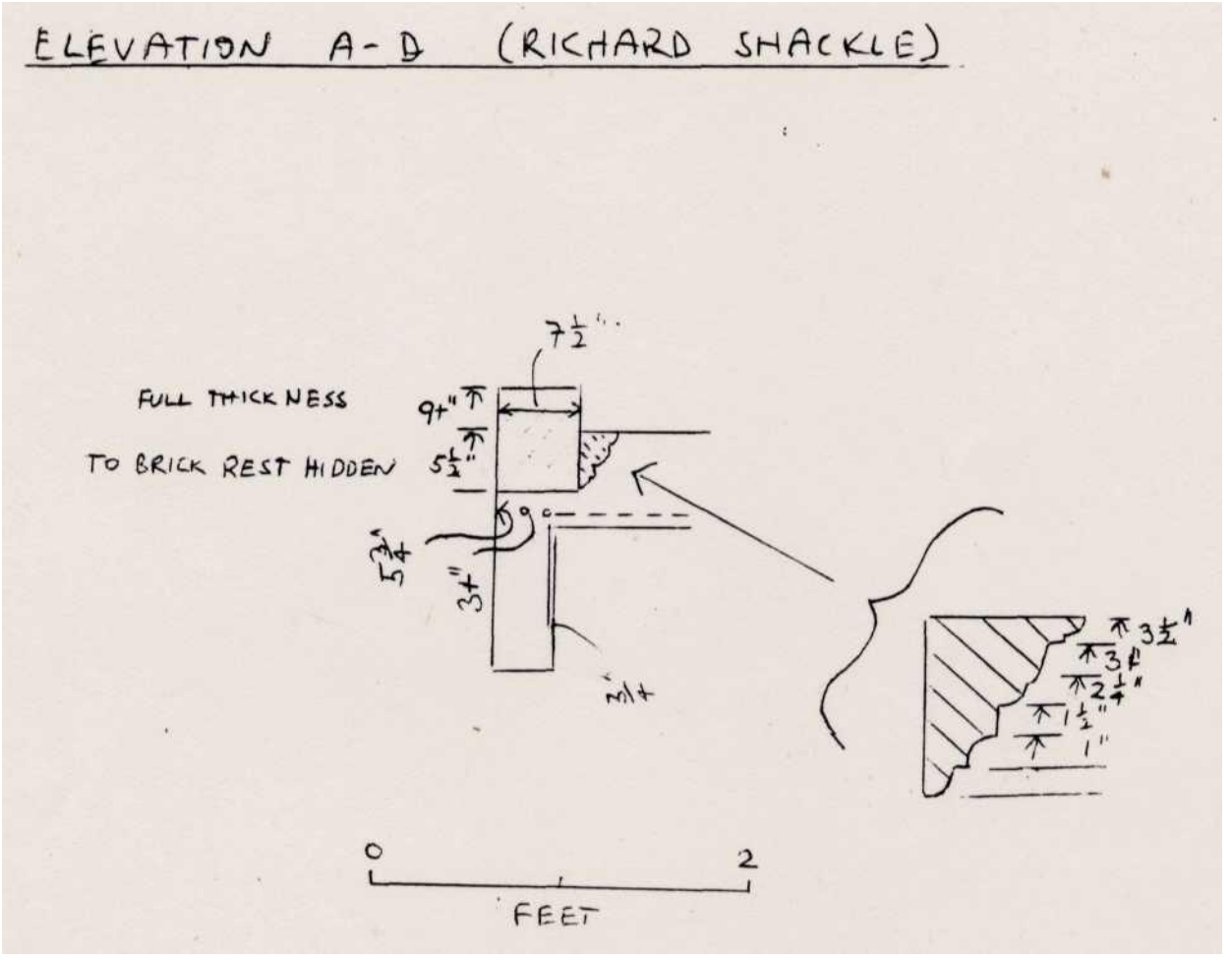


Fig 13.300 40 Head Street (Sketchley's) (8/85a).

8 85b

48 St John's Street (Rice Bowl)

Figs 1.2 & 13.301

1985

Reason: demolition of house

Record/report: M A Neal

No 48 St John's Street was an early 19th century brick house which, during the years leading up to its demolition, was used as a Chinese restaurant known as the 'Rice Bowl'. The building was demolished to form the entrance road into the service basement of the Culver Street precinct (Photographic Archive: Head Street 1985 (1.81), 137-141).

The house, which was of three storeys, stood on the north side of St John's Street. It had projecting brick quoins on the north and south edges of the west wall. In recent years, the exteriors of the walls had been painted light blue and the quoins deep red. There was no recognisable bond in the brickwork. The joints were thin (6-9 mm). There was a chamfered plinth along the base of the south wall, approximately 1 m above the pavement. The east and north walls were weather-boarded.

The building faced west. The central part of the west side was set forward slightly. It contained eight windows in three ranges. The third-floor windows were all sash. On the second-floor, the right-hand window was flat but the surrounding brickwork was bowed, the central window was sash, and the left-hand window was sash with bowed brickwork. The ground floor had a bay window to the left which was apparently original. The window to the right and the central doorway were both modern. The south face of the building contained three windows, each situated to the right of the face. Just off centre was an iron-barred cellar window with an arched head of brick.

The roof was hipped and clad with slates and tiles. The building contained three brick chimneys stacks. To the north of the building was a 19th-century two-storey wing, the north wall of which was weather-boarded.

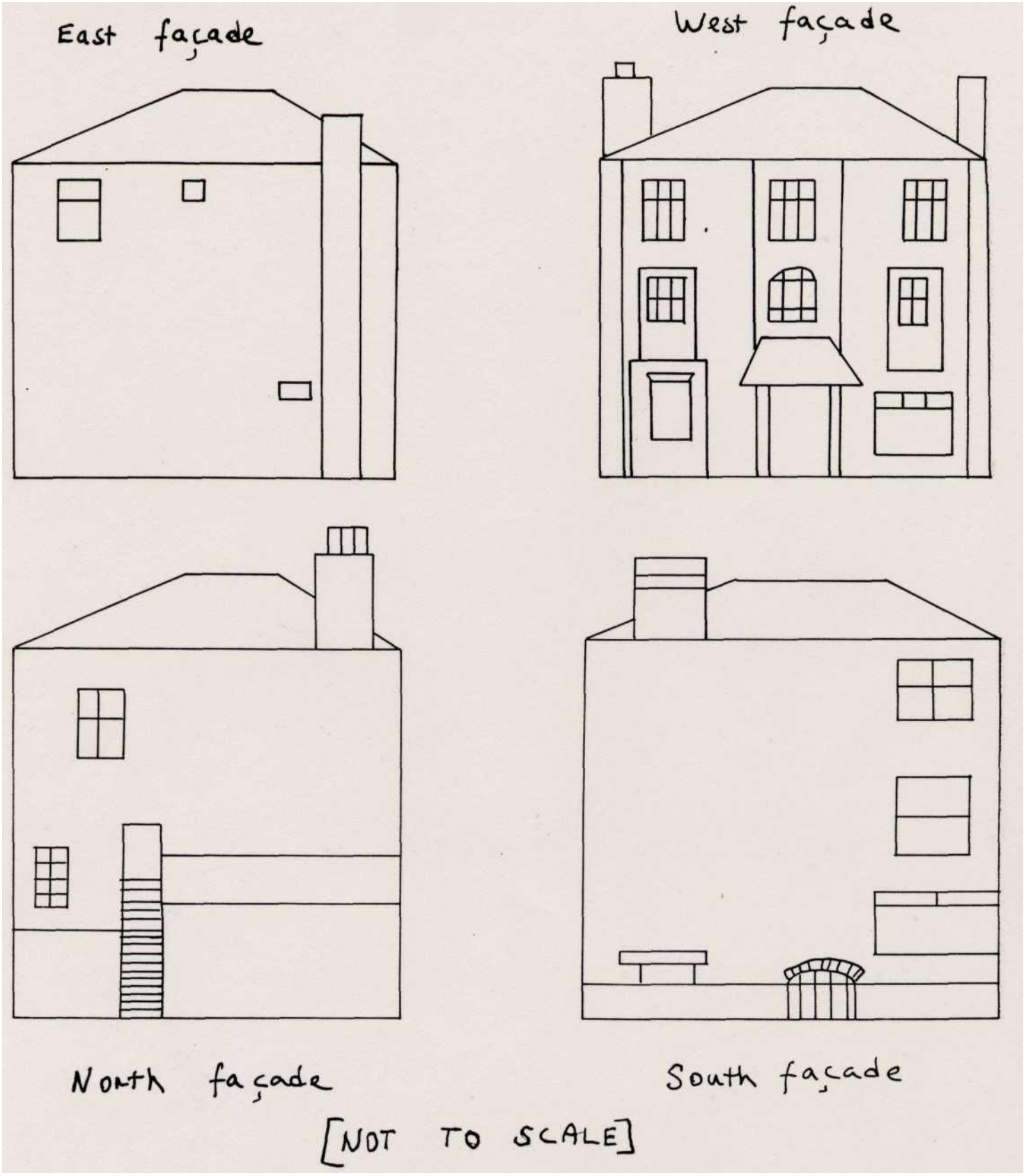


Fig 13.301 48 St John's Street (Rice Bowl) (8/85b).

8/85C

Rear of 38 Head Street (former Essex- Standard Printing Works)

Fig 1.2

1985

Reason: demolition of building

Record/report: AC/PC

The shell of the building was of brick and corrugated iron. The archive record consists of 29 photographs covering the interior and exterior of the building (Photographic Archive: Head Street 1985 (1.81), 106-136). The building contained a few original features including a lift (Archive Photos 126, 128, & 136) and a series of cast-iron pillars (Archive Photos 127, 129, & 131).

9/85

St Martin's Churchyard, West Stockwell Street

9.9.1985

Reason: digging of pipe trench for new toilet block

Record/report: HB/PC

The trench was not deep enough to show much. Noted were a post-medieval pit containing 19th- to 20th-century material and a small group of unarticulated human bones from one or more disturbed burials. The pit and bones were found in the extreme north-east corner of the grave yard. For the exact spot, *see* plan in archive.

APPENDIX 17 (Chapter 13):

Samples of charred cereals and flax from the Cups Hotel site (Building 152; CPS 1973-4)

by Peter Murphy

		'Cups' Hotel 950	957
Triticum dicoccum	ca	648	-
Triticum aestivum s.l.	ca		
Hordeum vulgare	ca	17	-
Cereal fragments		c.2000(a)	-
Vicia/Pisum s.p.	co	1	-
Linum usitatissimum	s	-	20,600(a)
Camelina sativa	s	-	18
Thlaspi arvense	s	-	1
Brassica/Sinapis sp.	s	-	6
Agrostemma githago	s	21	-
Caryophyllaceae indet.	s	2	1
Bromus mollis/secalinus	ca	15	-
Avena sp.	ca	1	-
Gramineae indet.	ca	3	-
Indet.		-	2

Table 13.1 Fruits, seeds etc identified in samples from the Cups Hotel site.
Abbreviations: ca....caryopses, f....fruit, co....cotyledon, s....seed.
Note: (a) indicates number estimated on a weight basis.

APPENDIX 18 (Chapter 13):

Catalogue of the carved stones from Stanwell Street (8/83a)

by Andrew Harris

Seventeen carved stones were received for examination. They are illustrated on Figure 13.247 (p 374) and discussed on pages 373-4. In addition, there is one block of unworked hard, dense, black speckled grey/drab granite type stone measuring 270 x 150 x 120 mm (not illustrated, Cat no 5). The stone may not have derived from the same original structure as the carved pieces. It is not considered further here.

All the carved stones have been illustrated (though only one of the two identical stones (Fig 13.247,12) is included here). The extent of any damage is not shown in detail unless it is so severe as to affect the reconstruction of the mould. Damaged moulds are reconstructed only if there is sufficient evidence remaining elsewhere on the stone for the form. Though tooling marks are recorded, no attempt has been made to illustrate them; rubbings of the better preserved are included in the archive.

The catalogue has been arranged so that stones of a similar design are illustrated together. Listed individually within the archive is a full description of the stones and their condition. The tooling marks are described in detail and where possible rubbings included. The archive catalogue number (cat no) follows the published description. All the stones have been photographed. The stones are held with the archive in the Colchester and Essex Museum.

Catalogue

Group 1 (Fig 13.247,1-6): waterleaf capitals with fleshy leaves

1. Mostly complete. The form of the collar lost. Two fleshy leaves with a series of concentric grooves at the rising of the stem. The pointed stem rises to full height with a hawthorn-type terminal. Diameter of shaft 140 mm. Possibly secondary tooling on unmoulded face. Cat no 6.

2. Half complete. The unillustrated face entirely removed with secondary tooling. Pronounced angle volute with multi-lobed stalk rising to full height from the rolled and bevelled collar. Diameter of shaft 0.14 m. The rear of the unmoulded face is chamfered. Cat no 7.

3. Complete with slight damage and worn. Two fleshy leaves with incised decoration at springing of stem. Simple stem rises to half height. Cross-hatched decoration on surface between the leaves. The bell of the capital is quirked. Rolled and quirked collar. Diameter of shaft 0.14 m. Cat no 14.

4. Damaged and worn. Two angular fleshy leaves with concentric decoration at springing of stem. The lobed stem rises to quarter height. The bell of the capital is quirked with saw-tooth decoration. The form of the collar is lost. Diameter of shaft approx 0.14 m. The upper surface of the capital is chamfered. Cat no 16.

5. Largely incomplete. Both rear and forward faces removed. Form of collar lost. The two sides of the capital are individually carved. Incised fleshy leaves with angular stem between. On one face these rise from the collar whilst upon the other the leaves terminate above the collar. The leaf to the rear of the stone terminates in worn, damaged disc motifs. Diameter of shaft approx 0.13 m. Cat no 11.

6. Largely incomplete. Simple fleshy leaves with simple stem rising to full height. Roll moulded collar. Diameter of shaft lost. Cat no 8.

Group 2 (Fig 13.247,7-11): fluted capitals

7. Complete. Fluted bell with scalloped type decorated terminals. Roll moulded collar has a slight fillet. Diameter of shaft 0.155 m. Cat no 12.

8. Slightly damaged and worn. Angular fluted bell with small fillets between main flutes. Simple roll moulded collar, diameter of shaft approx 0.14 m. Cat no 13.

9. Less than half complete. Heavily fluted bell with raised saw-tooth at angle of capital. Rolled and bevelled collar. Diameter of shaft 0.135 m. Cat no 10.

10. Damaged. The form of the collar lost. Heavily fluted. The flutes have rounded terminals and do not reach full height; they rest upon a plinth of upright labels. Diameter of shaft 0.16 m. Cat no 19.

11. Heavily damaged. Bell-shaped faceted capital. The coarse tooled moulded surfaces may indicate that the fluting was never completed. Diameter of shaft 0.17 m. Cat no 4.

Group 3 (Fig 13.247,12-15): individually moulded capitals

12. Complete. Scallop type form with bevelled and rolled collar. Diameter of shaft 0.148 m. A second unillustrated example is identical in form but slightly damaged. Cat no 3.

13. Complete. Complex form comprising hanging pendant and disc with upturned labels below. Rolled collar with fillet. Diameter of shaft 0.14 m. Cat no 15.

14. Partially damaged with some of the decoration

obscured by a hard white mortar with grit and sand inclusions. This most certainly derives from the period of reuse. The form shows a well-developed fleshy leaf upon a collar with a hollow mould. The bell is banded and develops below a pronounced projection to the abacus. Cat no 17.

15. Complete. Well-developed fleshy leaves with incised decoration. The bell is quirked with a link at the angle to the leaf. The leaf to the rear of the stone terminates in a coil. The collar is roll moulded. Diameter of shaft 0.15 m. Cat no 18.

Group 4 (Fig 13.247,16-18): non-capitals

16. Mostly complete. Projecting square in plan. Rolled and quirked abacus **or** string with a hollow chamfer below. Cat no 2.

17. Complete base. Circular setting upon a squared plinth. Diameter of shaft 0.125 m. Fleshy leaves project to the angles of the plinth. Cat no 9.

18. Complete, moulded arch voussoir. Roll with pointed frontal fillet. Both ends remain with axe dressing partially finished with claw tooling with 10-12 teeth to the inch. The date of the mould is early 13th century up to c 1240. Cat no 1.

Appendix 19 (Chapter 13):
United Reform Church, Lion Walk (234.84): the horse remains in the backfill of the legionary ditch

by Rosemary Luff

The remains consisted of the head (approximately 75 skull fragments including the lower mandible) and the upper part of the spinal column and rib cage (six unfused cervical vertebrae, one fused cervical vertebra, nine unfused thoracic vertabrae, four sternal fragments, and 30 large rib fragments). The nature of the deposit was highly fragmentary and there was much recent breakage. The enamel pattern on the teeth indicated that the beast was a horse, the age at death being between three to four years. Two extraneous bones were associated with the deposit, a sheep/goat metapodial shaft fragment and a cattle-beast pelvic bone *(pubis)* which had been butchered.

Appendix 20 (Chapter 13):
United Reform Church, Lion Walk (234.84): a painted inscription on a fragment of a London '555' amphora
by Paul Sealey

Both lines of the inscription are horizontal and lie on the neck of the vessel (Fig 13, 263). Each character was executed with some care in black paint (now faded in parts to grey). The inscription reads BV/CLP or T. One is struck by the uncanny resemblance of the first character to the Greek beta and there are in fact amphora inscriptions in which the Latin and Greek languages and scripts are used together. But the use of Greek on a Spanish amphora is not otherwise attested (to the best of my knowledge) and so one is driven to propose it as an eccentric version of a Roman b. Following this letter is a v. To the right and below, runs an oblique stroke that need be nothing more than a gratuitous flick of the brush. Line 2 begins with a capital c and is followed by a cursive l and a p or t, although it would be pedantic to suppose that a clear distinction can always be drawn between capitals and cursive on an amphora inscription.

As with so many painted inscriptions on amphoras, the sense now completely eludes us: non expedivi. If the first letter were a d, one could propose d(efrutum) v(etvs) because documentary sources such as Columella (De Re Rustica 12.20.1; 12.21.1) show that defrutum (a syrup made by boiling down grape juice) could be left to mature with age (and there is evidence to show that the syrup was bottled in London 555 amphoras). The second line is just as exasperating. We cannot resolve it as CL P(ondo) (= 150 Roman pounds in weight) because London 555 amphoras are too small to weigh that much, even with their contents. It is possible that the three letters are the initials of the tria nomina of the shipper involved in the export of the jar from Spain.

Enough of the vessel survives to leave no doubt about its identification as London 555. Research has shown that these jars were exported from the Spanish province of Baetica from Claudius to Hadrian, bottled with preserved olives and grape syrups. (Sealey & Tyers 1989, where pl.5 and fig.4 no.9 illustrate the subject of this appendix).

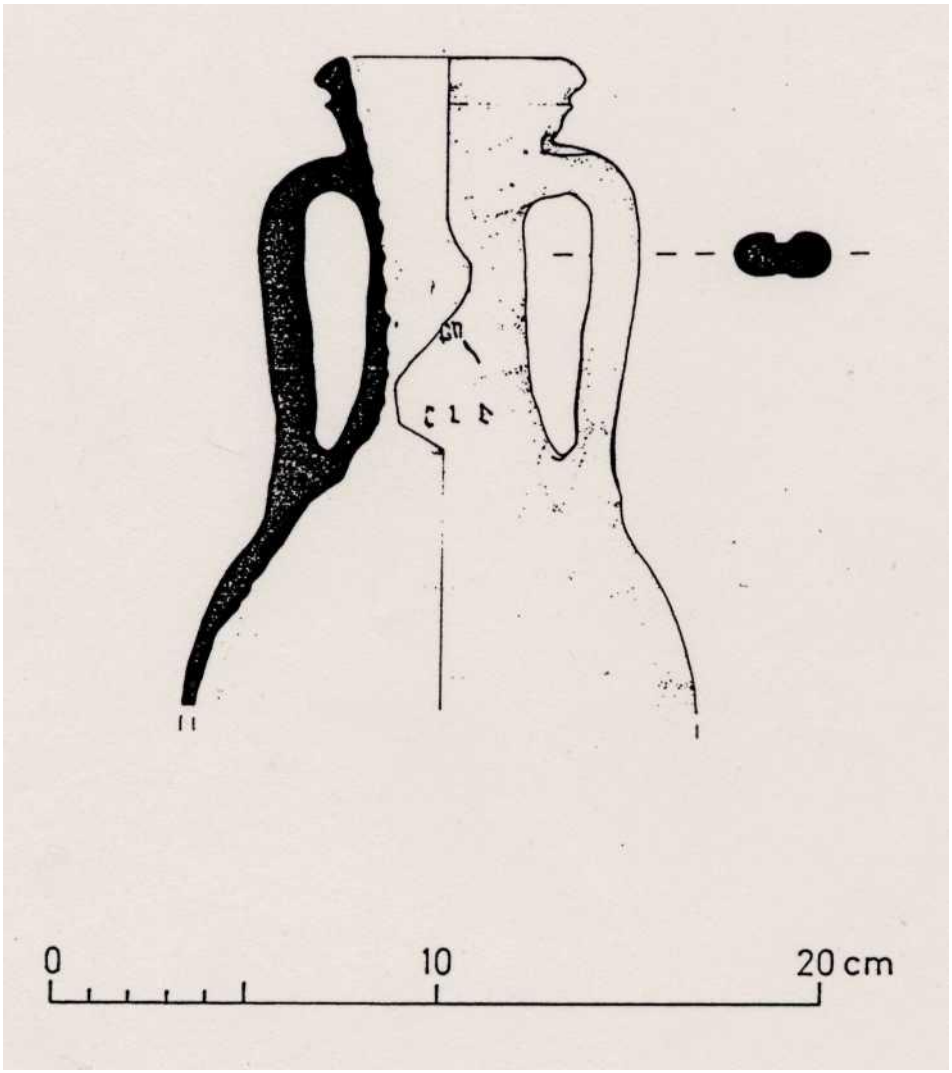


Fig 13.263. Lion Walk United Reformed Church (234.84). Fragment of a London 555 amphora ' ana its painted inscription. Unstratified (found during building works after the end of the excavation).

Appendi **x 21** (Chapter 13):
United Reform Church, Lion Walk (234.84): list of inhumations

Vault	No	Name	Date of death	Age at death
'Tabor'	1	* ?, Robert	17 February 1737	
	2	* Tabor, Susanna	1776	71 yrs
	3	* Tabor, Johnathan	13 April 1778	
	4	* Tabor, John Collins	1826	65 yrs
	5	* Tabor, Sarah	16 December 1827	81 yrs
	6	* Tabor, Susannah	12 January 1794	51 yrs
	7	* Tabor, Robert	27 September 1794	
	8	* Tabor, Susannah	1878	
	9	* Tabor, Robert	6 February 1818	56 yrs
	10	* Leak.1, Sarah	25 October 1825	
	11	* Tabor, Robert	27 September 1795	
	12	* Tabor, Sarah	26 December 1849	79 yrs
	13-15	* 3 unnamed children '		
	16	* 1 unnamed adult	o	
1	17	Barber, Mary	1 May 1863	72 yrs
	18	Barber, Robert	1 September 1849	58 yrs
	19	Unnamed adult	O	
2	20	Purkys. Harriet Ellis	29 October 1852	39 yrs
3		(Empty: there has been a fire in this vault)		
a	21	Ward, John	24 September 1835	
	22	Ward, Lanna Mable	26 May 1836	
	23	Unnamed child	?	
5	24	Payne, Martha Ann	5 January 1841	26 yrs
	25	Eisdell. Eliza	1 August 1841	22 yrs
	26	Payne, Richard	16 January 1840	11 mths
	27	Eisdell, Agnes	18 June 1839	7 yrs 11 months
6	28	Unnamed adult		
7	29	Philbrick. Samuel	September 1841	65 yrs
	30	Tabor. Susannah Philbrick	10 May 1835	23 yrs
	31	Unnamed adult	?	
8	32	Unnamed adult	?	
9	33	Moore, Elizabeth	31 August 1846	25 yrs
	34	Moore. William	21 July 1840	9 yrs
	35	Moore. Elizabeth	23 September 1824	26 yrs
	36	Moore, Charlotte	15 June 1833	3 yrs 7 months
	37	Moore, Charles Garfield	28 October 1844	2 months - •
	38	Moore, William	18 February 1825	
	39	Moore, Annie	14 July 1840	3 yrs 9 months
	40	Moore, Mary Ann	27 June 1829	1 yr 7 months
	41	Moore. Charles Griffin	28 October 1844	18 months
10	42	Unnamed infant	?	
11	43	Yates. Robert	19 September 1818	78 yrs
	44	Yates. William	23 May 1809	25 yrs
	45	Yates. Elizabeth	31 May 1825	82 yrs
	46	Yates. Elizabeth	12 January 1850	76 yrs
	47	Yates, Rob	n April 1824	44 yrs

	18	Unnamed infant	?			
12	19	Harvey, Matthew	29 March	1850	72 yrs	
13	50	Sh?. Gilberd Everett	2 January	?		
14	51	Unnamed adult	?			
15	52	Unnamed adult	?			
16	53	Unnamed adult	?			
17	54	Chignell, Mary Ann	15 January	1848	71 yrs	
18	55	Unnamed adult	?			
	56	Bloorafield, Emma	9 April	1854	30 yrs	
20	58	Eisdell, Joseph Carter	1 April	1854	67 yrs	
	59	Eisdell, Caroline	4 December	1849	58 yrs	
21	60	Fenton, Sarah	27 November	1849	77 yrs	
	61	Fenton, Francis	27 March	1847	74 yrs	
	62	Unnamed infant	?			
	63	Fenton, Mary Ann	28 September	1844	39 yrs	
	64	Fenton, Hephzilah	?	1847	33 yrs	
22	65	Unnamed adult	?			
23	66-69	1 Unnamed adults	?			
24	70	Bridges, Francis	22 February	1855	72 yrs	
	71	Bridges. Mary	2 August	1852	70 yrs	
	72	Bridges. John	21 August	1845	67 yrs	
25	73	Davids, Louisa	18 November	1853	37 yrs	
		Unnamed infant	?			
26	74	Bloomfield, Ann	12' January	1850	74 yrs	
	75	Bloomfield. Robert	24 April	1850	71 yrs	
	76	Bloomfield. Beza	24 January	1839	64 yrs	
27	77	Tabor. Robert	29 February	1848	60 yrs	
28	78	Unnamed adult	?			
29	79	Unnamed adult	?			
30	80-85	6 unnamed adults	?			
31	86	Unnamed adult	?			
32	87	Brown, Martha Simons	30 October	1830	27 yrs	
	88 *	Brown, Sarah	3 December	1863	90 yrs	
	89 *	Brown, Bartholomew	13 November	1839	66 yrs	
	90	Brown, William Simons	28 June	1839	18 yrs	11 months
	91	Brown, Sarah	14 December	1828	28 yrs	11 months
33	92	Bennel, Jas .	Not exhumed			
	93	Unnamed adult I	Not exhumed			
34	94	Goose. Napthall	3 August	1820	23 yrs	
	95	Walford. Timothy	11 October	1834		
35	96-97	2 Unnamed adults	?			
36	98-99	2 Unnamed adults	?			
37	100-107	7 Unnamed adults	?			
38	108-109	2 Unnamed adults	?			
39	110-114	1 Unnamed adults	Not exhumed			
40	115-117	Chaplin. Sarah	10 June	1852	32 yrs	
		2 unnamed adults	?			
41	118-123	Gilson. Sarah	18 June	1848	88 yrs	
		5 unnamed adults	?			
42	124	Unnamed adult	Not exhumed			
43	125	Unnamed adult				
44	126	Unnamed adult				

* Lead-lined coffins

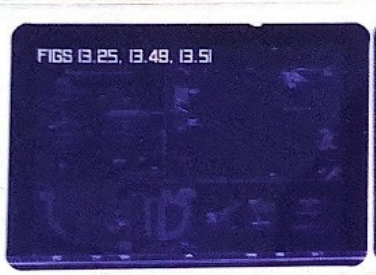
The remains of numbers 1 to 86 were taken to Colchester Cemetery. Mersea Road, Colchester on 12th December, 1981, for reinterment. The remains of numbers 87 to 109 were taken to Colchester Cemetery. Mersea Road, Colchester on 8th February, 1985 for reinterment. .(Numbers 92. 93 and 110-111 excepted).

35 mm microfiche

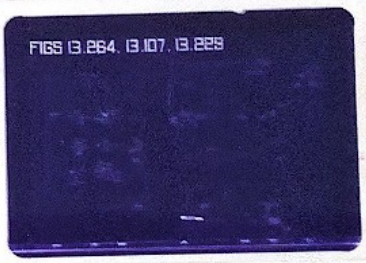
Figures 13.25, 13.49, 13.51-2, 13.104, 13.107,
13.228-9, 13.264
Sections:
Culver Street (Sxs 3.1-3.5, 3.7-3.29,
3.31-3.34, 3.36-3.42),
Gilberd School (Sxs 4.3-4.7),
Cups Hotel (13.1-13.6),
and Long Wyre Street
(13.7-13.10)

COLCHESTER ARCHAEOLOGICAL REPORT 6:
Excavations at Culver Street The Gilberd School
& other sites in Colchester 1971-85

8 of 10
Figures &
Sections





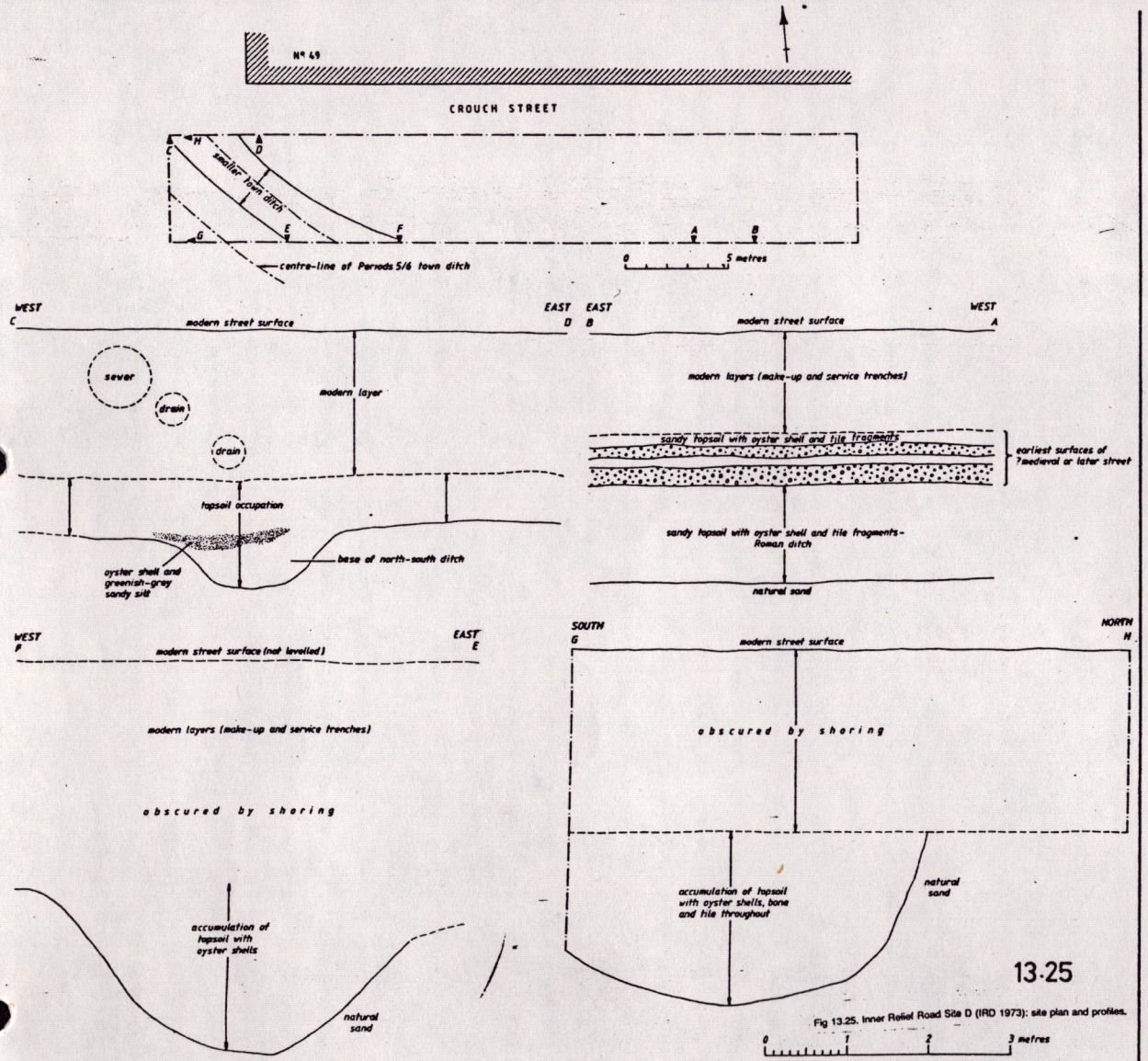






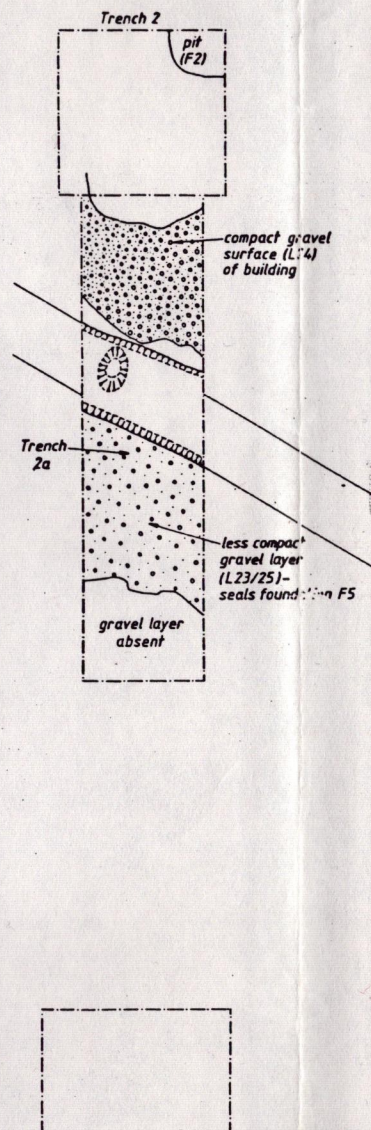


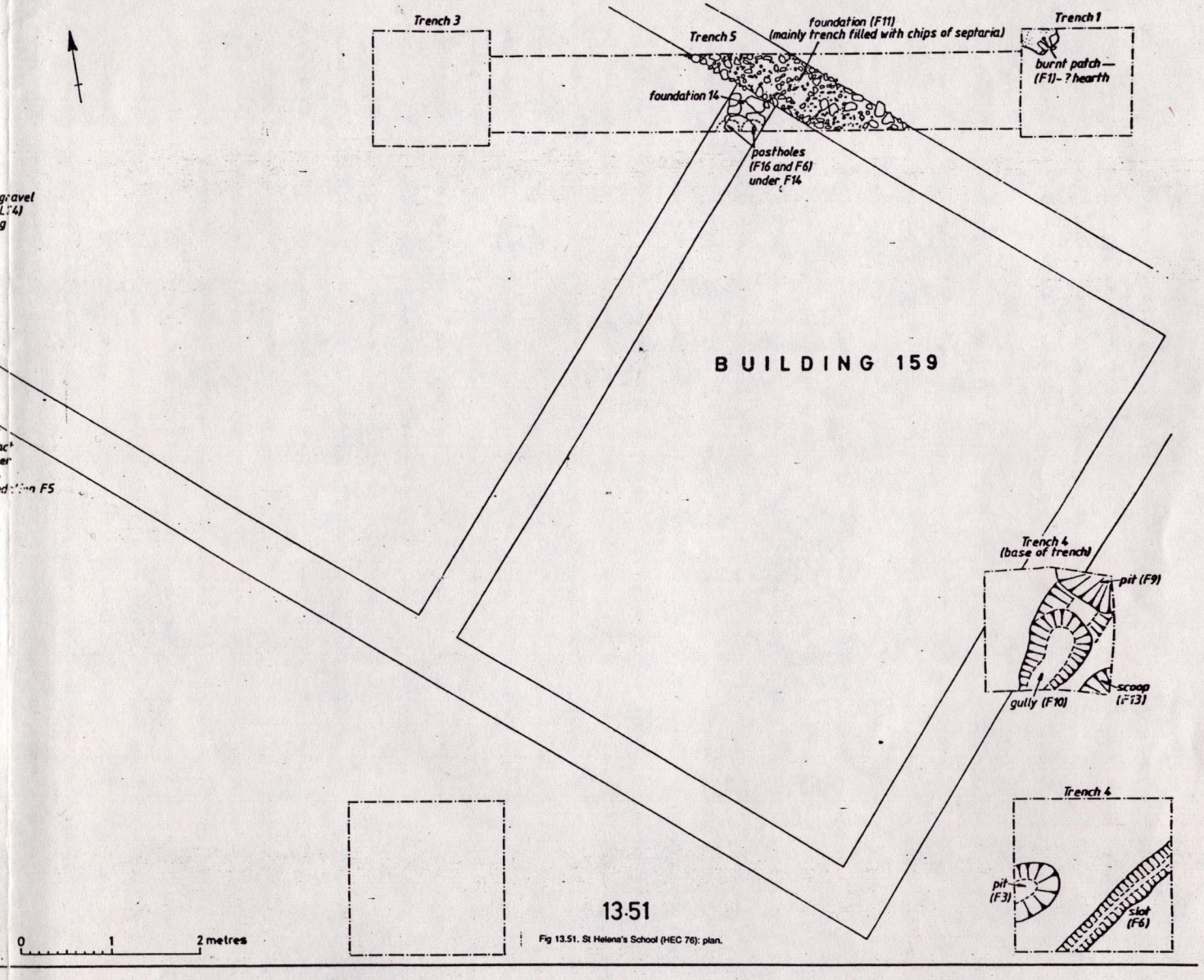
FIGS 13.25, 13.49, 13.51



13·25

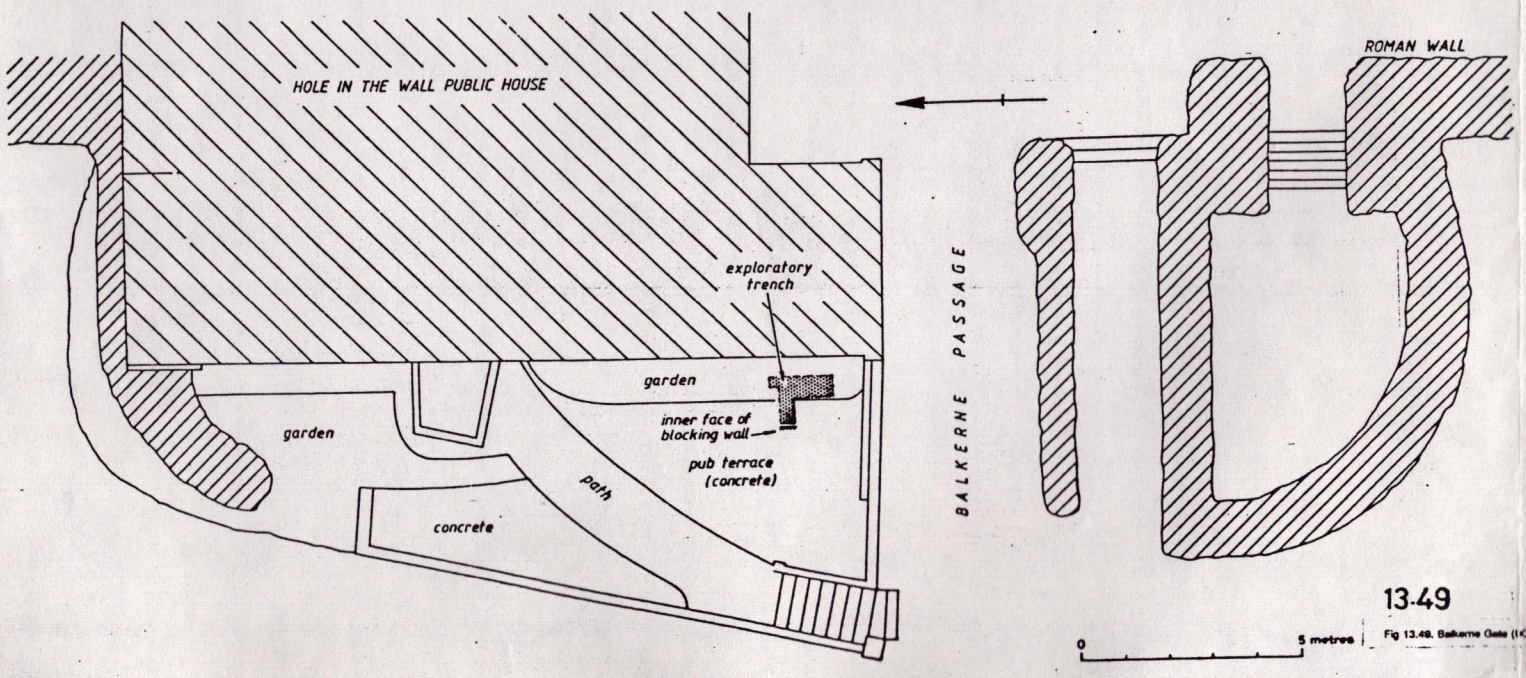
Fig 13.25. Inner Relief Road Site D (IRD 1973): site plan and profiles.





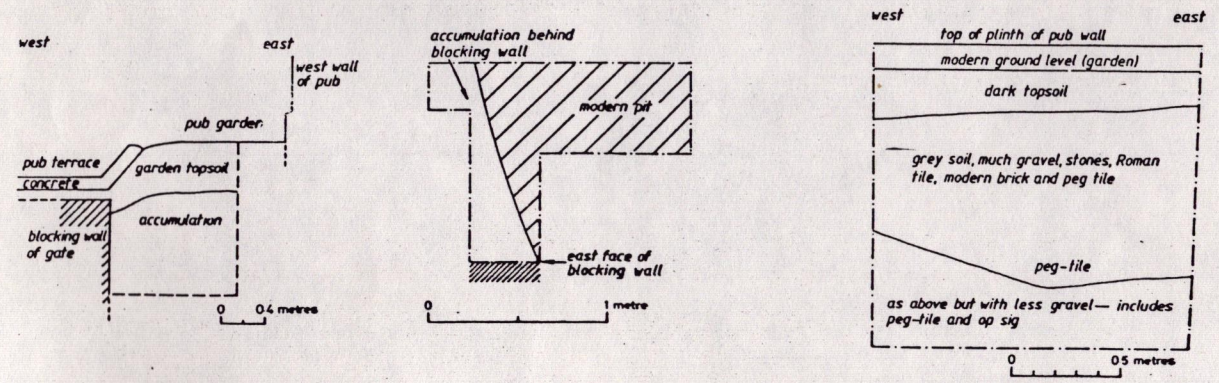
13·51

Fig 13.51. St Helena's School (HEC 76): plan.

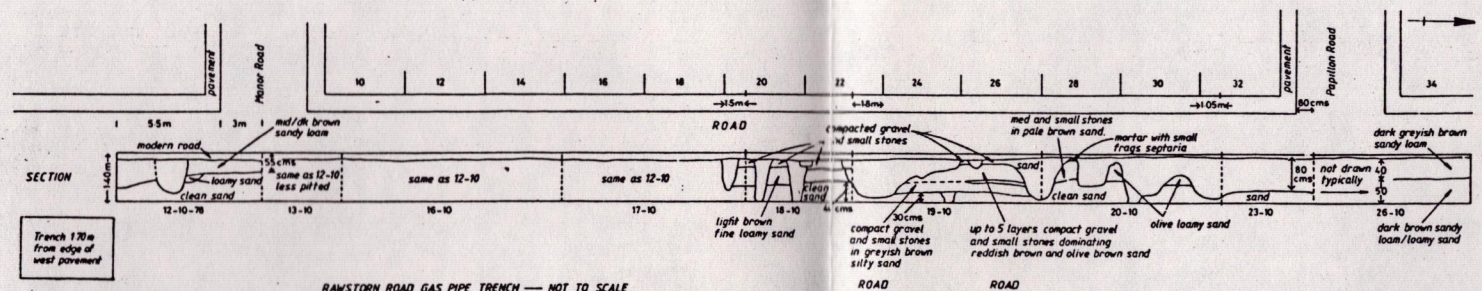


13·49

Fig 13.49. Balkerne Gate (IOC 75; 11/75a).



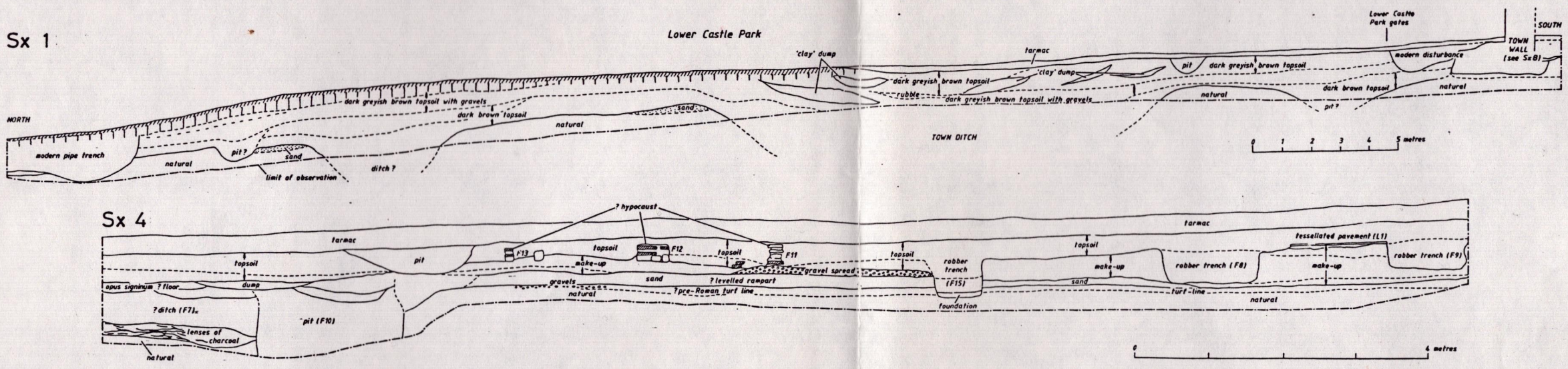
FIGS 13.52, 13.104, 13.228



RAWSTORN ROAD GAS PIPE TRENCH — NOT TO SCALE

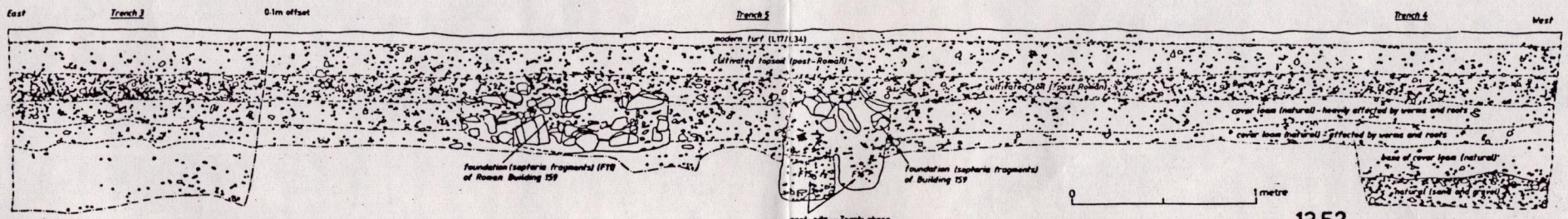
13·104

Fig 13.104. Rawstorn Road (10/78a).



13·228

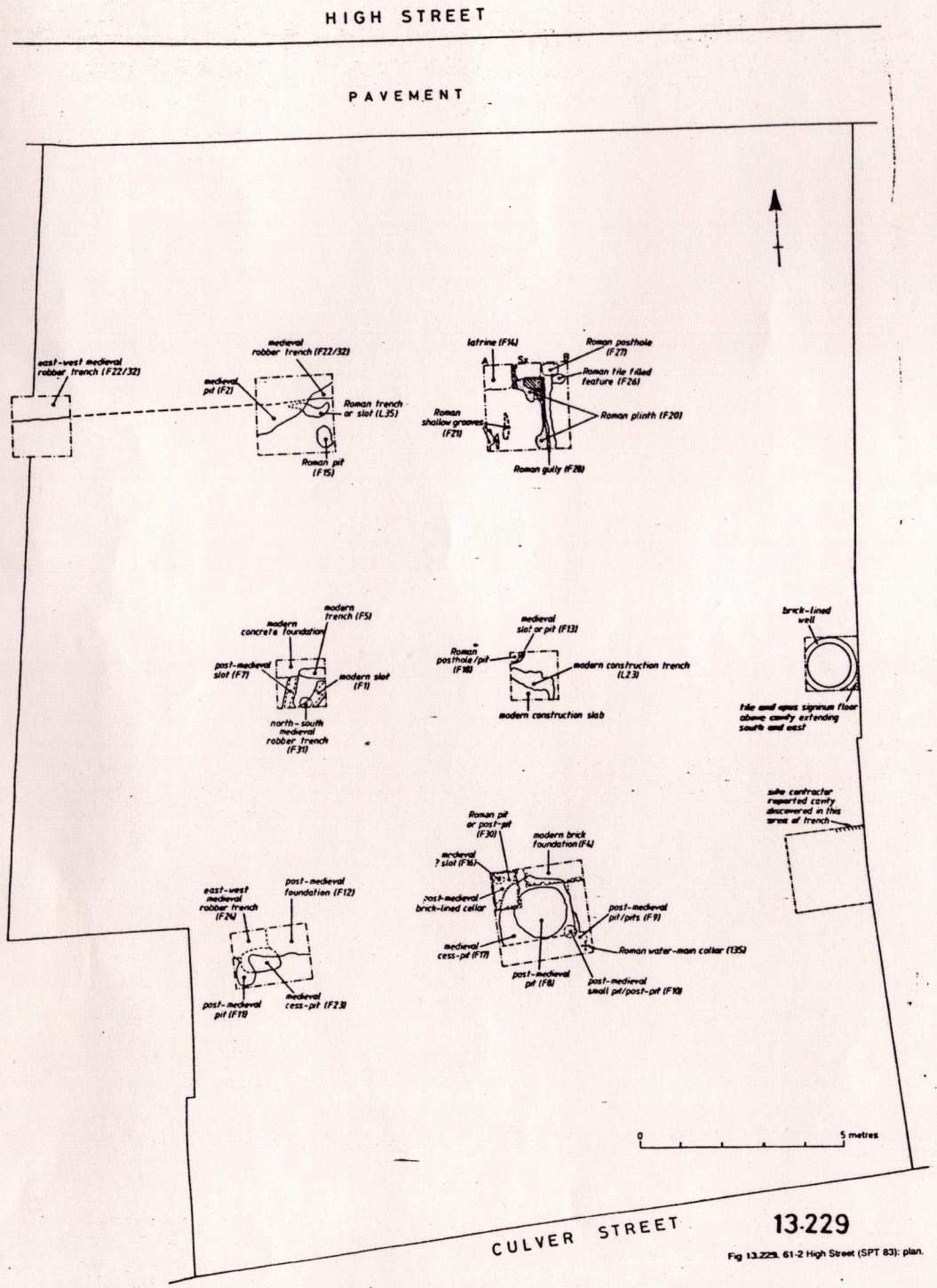
Fig 13.228. Castle Park (CAP 83-4): sections.



13·52

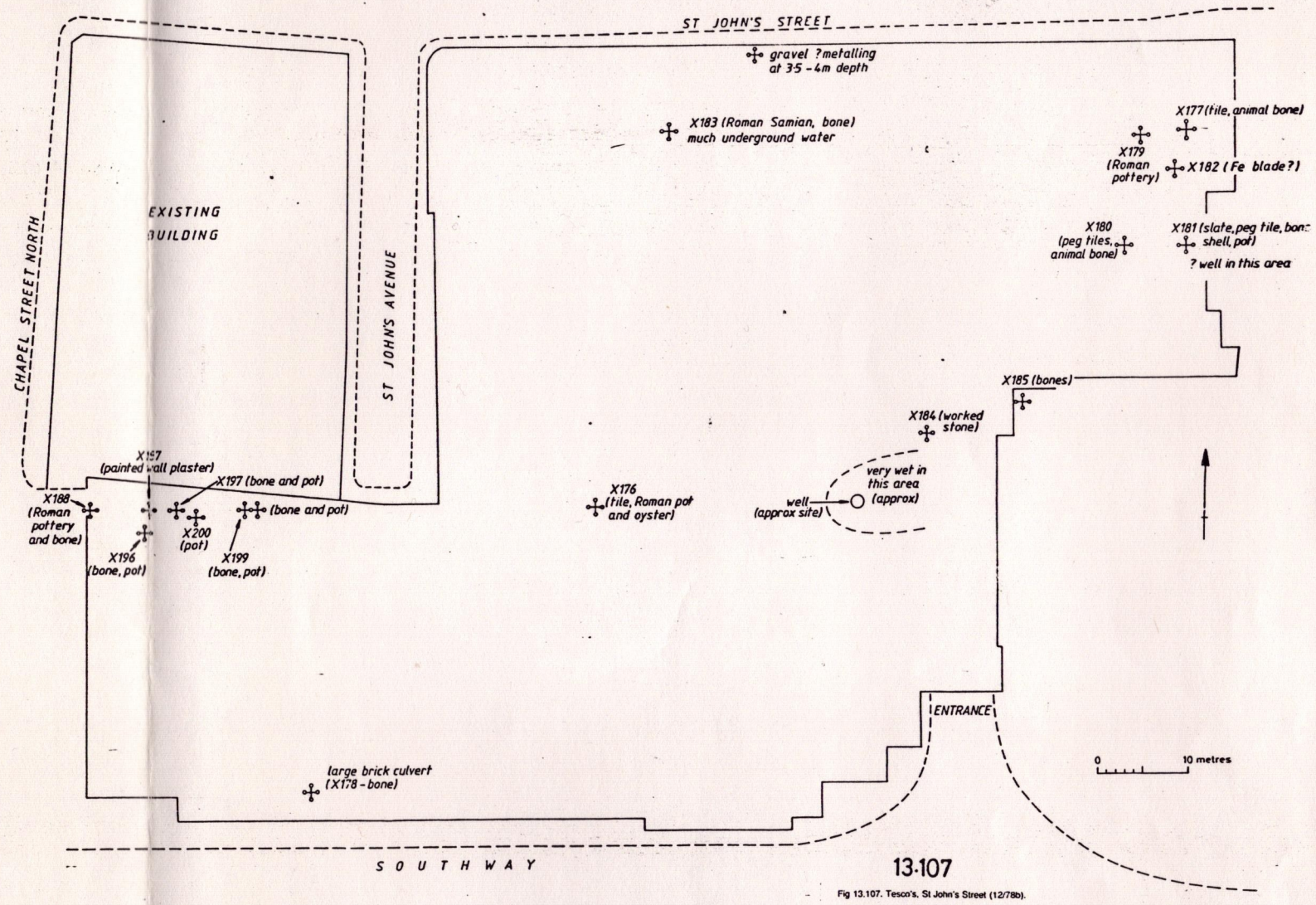
Fig 13.52. St Helena's School (HEC 78): section.

FIGS 13.264, 13.107, 13.229



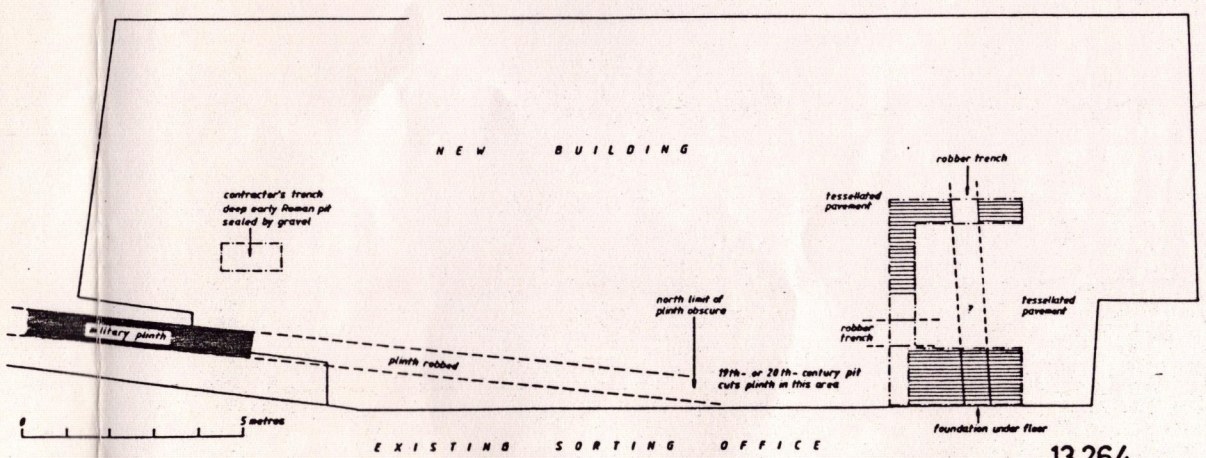
13·229

Fig 13.229. 61-2 High Street (SPT 83): plan.



13·107

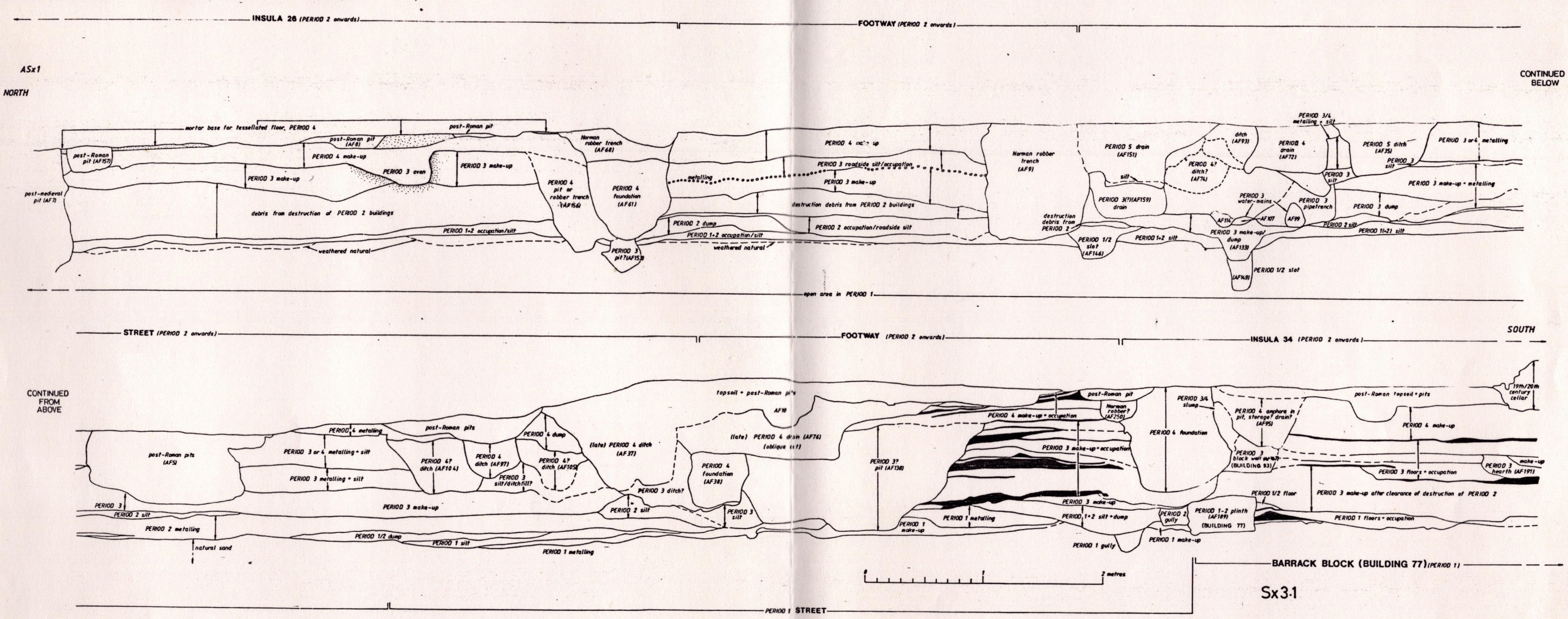
Fig 13.107. Tesco's, St John's Street (12/78b).

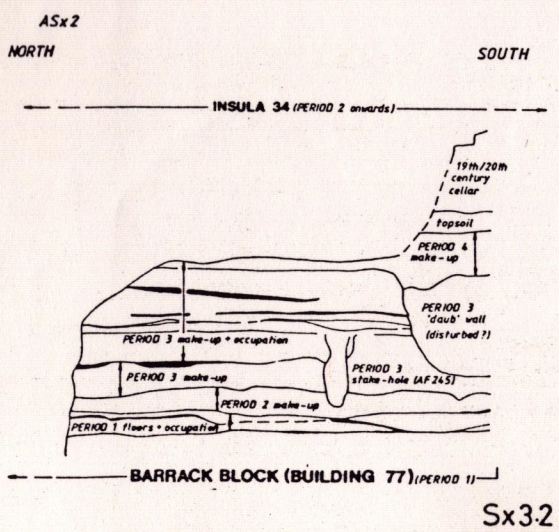


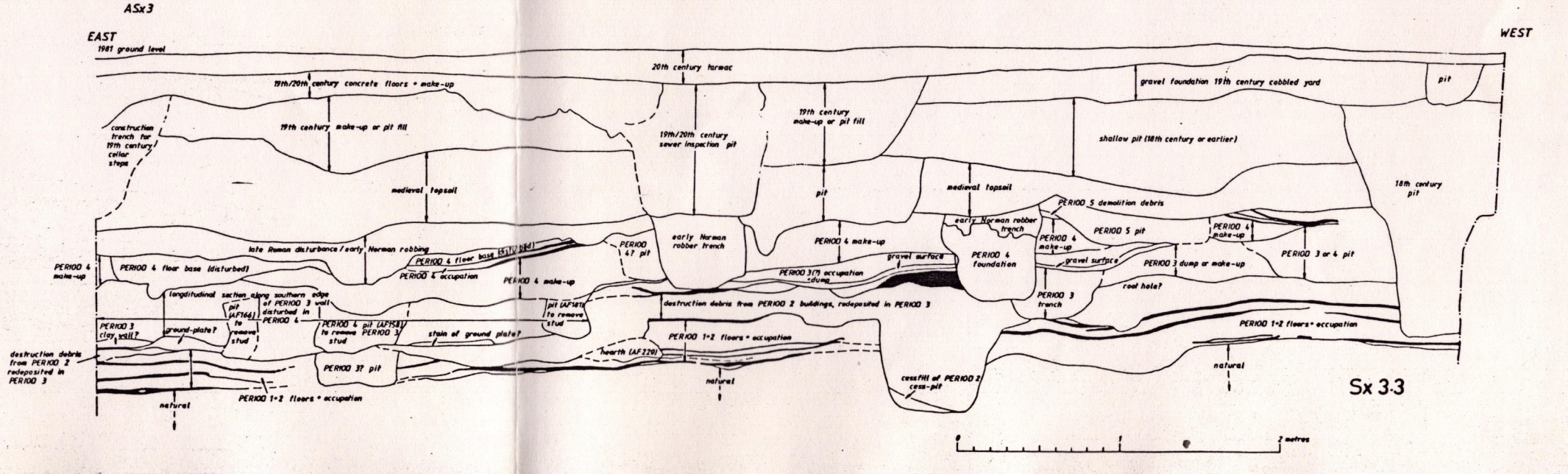
13·264

Fig 13.264. Post Office, Head Street (1/84a).

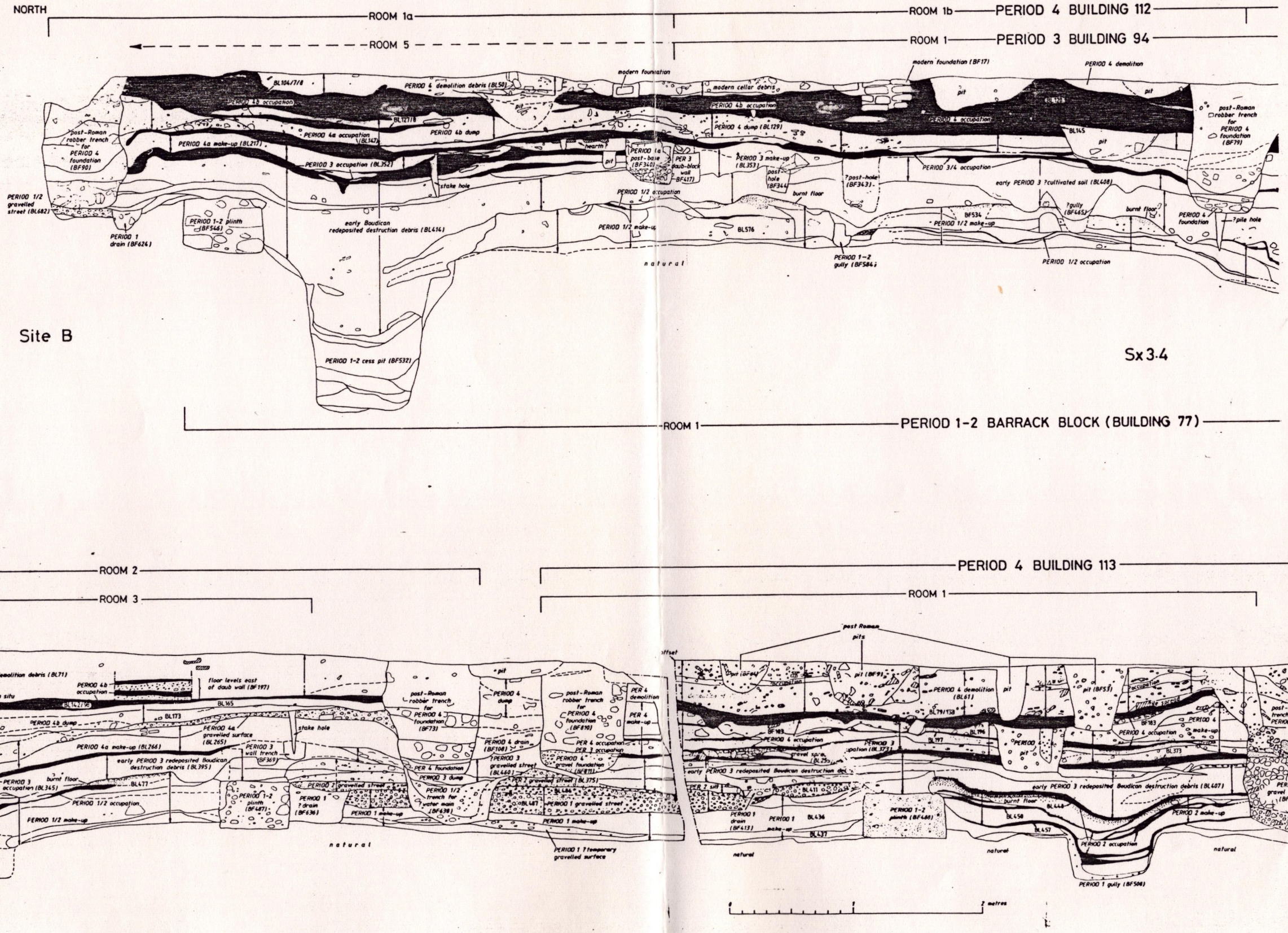
Sxs 3.1-3


INSULA 26 (PERIOD 2 onwards)
FOOTWAY (PERIOD 2 onwards)
ASx1
NORTH
CONTINUED BELOW
mortar base for tessellated floor, PERIOD 4
post-Roman pit
post-Roman pit (AF8)
post-Roman pit (AF57)
PERIOD 4 make-up
PERIOD 3 make-up
PERIOD 3 oven
PERIOD 3 make-up
Norman robber trench (AF68)
PERIOD 4 pit or robber trench (AF154)
PERIOD 4 foundation (AF61)
post-medieval pit (AF7)
debris from destruction of PERIOD 2 buildings
PERIOD 1+2 occupation/silt
weathered natural
PERIOD 3 pit? (AF153)
PERIOD 2 dump
PERIOD 1+2 occupation/silt
weathered natural
PERIOD 4 make up
metalling
PERIOD 3 roadside silt/occupation
PERIOD 3 make-up
destruction debris from PERIOD 2 buildings
PERIOD 2 occupation/roadside silt
Norman robber trench (AF9)
destruction debris from PERIOD 2
PERIOD 1/2 slot? (AF146)
PERIOD 5 drain (AF151)
silt
PERIOD 3(?) (AF159) drain
PERIOD 4? ditch? (AF76)
ditch (AF93)
PERIOD 4 drain (AF72)
PERIOD 3/4 metalling + silt
PERIOD 3 silt
PERIOD 5 ditch (AF35)
PERIOD 3 or 4 metalling
PERIOD 3 make-up + metalling
PERIOD 3 water-mains
PERIOD 3 pipetrench
PERIOD 3 dump
AF116
AF107
AF99
PERIOD 2 silt
PERIOD 1(+2) silt
PERIOD 3 make-up/ dump (AF133)
PERIOD 1+2 silt
PERIOD 1/2 slot
(AF149)
open area in PERIOD 1
STREET (PERIOD 2 onwards)
FOOTWAY (PERIOD 2 onwards)
INSULA 34 (PERIOD 2 onwards)
SOUTH
CONTINUED FROM ABOVE
post-Roman pits (AF5)
PERIOD 4 metalling
PERIOD 3 or 4 metalling + silt
PERIOD 3 metalling + silt
PERIOD 4? ditch (AF104)
post-Roman pits
PERIOD 4 dump
PERIOD 4 ditch (AF97)
PERIOD 4? ditch (AF105)
PERIOD 3 silt/ditch fill?
topsoil + post-Roman pits
AF18
(late) PERIOD 4 ditch (AF37)
(late) PERIOD 4 drain (AF76) (oblique cut)
PERIOD 3 ditch?
PERIOD 4 foundation (AF38)
PERIOD 3 silt
PERIOD 3
PERIOD 2 silt
PERIOD 2 metalling
natural sand
PERIOD 3 make-up
PERIOD 1/2 dump
PERIOD 1 silt
PERIOD 1 metalling
PERIOD 2 silt
PERIOD 3 make-up
PERIOD 3? pit (AF134)
post-Roman pit
Norman robber? (AF250)
PERIOD 4 make-up + occupation
PERIOD 3 make-up + occupation
PERIOD 4 foundation
PERIOD 3/4 slump
PERIOD 4 amphora in pit, storage? drain? (AF99)
post-Roman topsoil + pits
19th/20th century cellar
PERIOD 4 make-up
PERIOD 3 black wall earth (BUILDING 93)
PERIOD 3 floors + occupation
PERIOD 3 hearth (AF191)
PERIOD 1/2 floor
PERIOD 3 make-up after clearance of destruction of PERIOD 2
PERIOD 3 make-up
PERIOD 1 make-up
PERIOD 1+2 silt + dump
PERIOD 2 gully
PERIOD 1-2 plinth (AF189) (BUILDING 77)
PERIOD 1 floors + occupation
PERIOD 1 gully
PERIOD 1 make-up
2 metres
BARRACK BLOCK (BUILDING 77) (PERIOD 1)
Sx 3.1
PERIOD 1 STREET


ASx2
NORTH
SOUTH
INSULA 34 (PERIOD 2 onwards)
19th/20th century cellar
topsoil
PERIOD 4 make-up
PERIOD 3 make-up + occupation
PERIOD 3 'daub' wall (disturbed?)
PERIOD 3 make-up
PERIOD 3 stake-hole (AF245)
PERIOD 2 make-up
PERIOD 1 floors + occupation
BARRACK BLOCK (BUILDING 77) (PERIOD 1)
1 metre
Sx 3.2

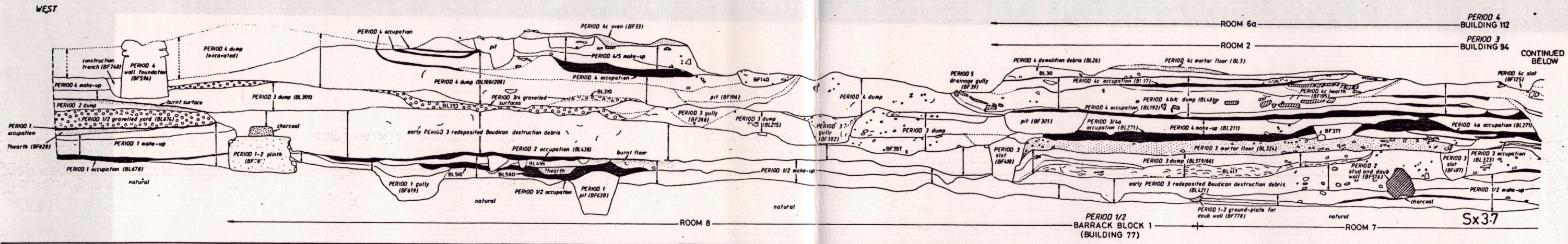

ASx3
EAST
WEST
1981 ground level
19th/20th century concrete floors + make-up
19th century make-up or pit fill
construction trench for 19th century cellar steps
medieval topsoil
late Roman disturbance / early Norman robbing
PERIOD 4 floor base (disturbed)
PERIOD 4 floor base (AF176) (AF177) (AF178)
PERIOD 4 occupation
PERIOD 4 make-up
PERIOD 4 make-up
PERIOD 4 floor base (disturbed)
(longitudinal section along southern edge of PERIOD 3 wall disturbed in PERIOD 4)
pit (AF144) to remove stud
PERIOD 3 clay wall?
ground-plate?
PERIOD 4 pit (AF158) to remove PERIOD 3 stud
stain of ground plate?
PERIOD 3? pit
destruction debris from PERIOD 2 redeposited in PERIOD 3
natural
PERIOD 1+2 floors + occupation
PERIOD 4? pit
early Norman robber trench
pit (AF161) to remove stud
destruction debris from PERIOD 2 buildings, redeposited in PERIOD 3
PERIOD 1+2 floors + occupation
hearth (AF229)
natural
20th century tarmac
19th century make-up or pit fill
19th/20th century sewer inspection pit
pit
PERIOD 4 make-up
PERIOD 3(?) occupation + dump
gravel surface
gravel foundation 19th century cobbled yard
pit
shallow pit (18th century or earlier)
medieval topsoil
PERIOD 5 demolition debris
early Norman robber trench
PERIOD 5 pit
PERIOD 4 make-up
PERIOD 4 foundation
gravel surface
PERIOD 3 trench
PERIOD 3 dump or make-up
root hole?
18th century pit
PERIOD 3 or 4 pit
PERIOD 1+2 floors + occupation
natural
cesspit of PERIOD 2 cess-pit
2 metres
Sx 3.3

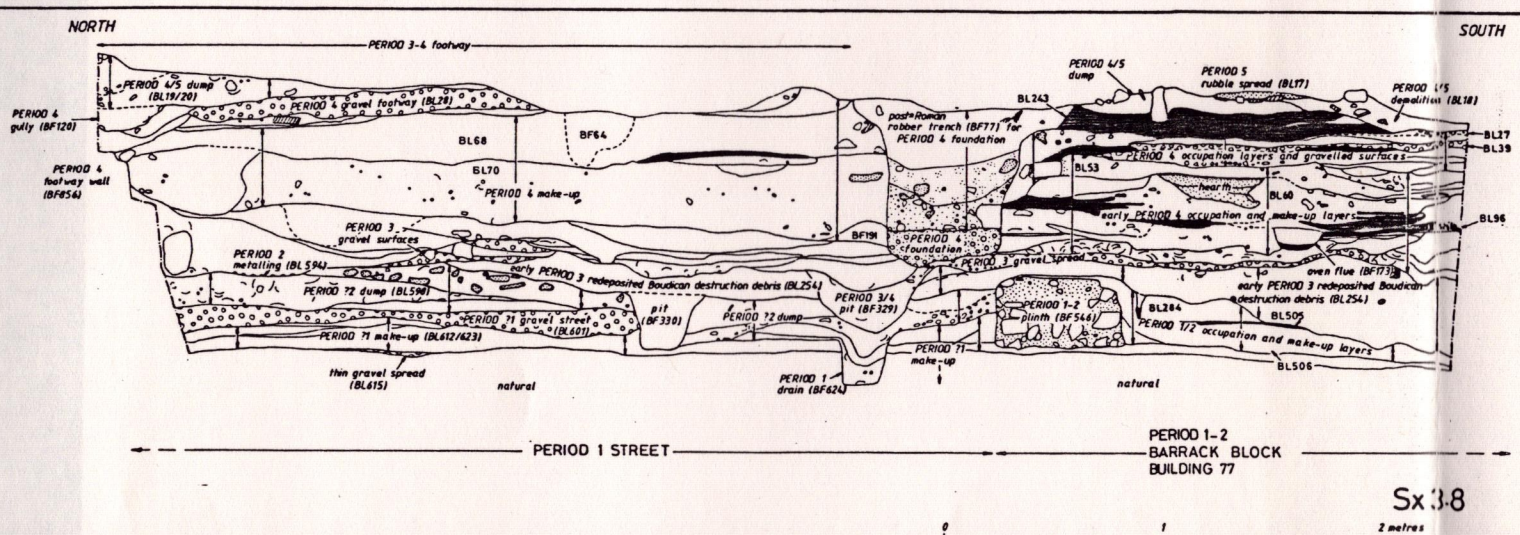
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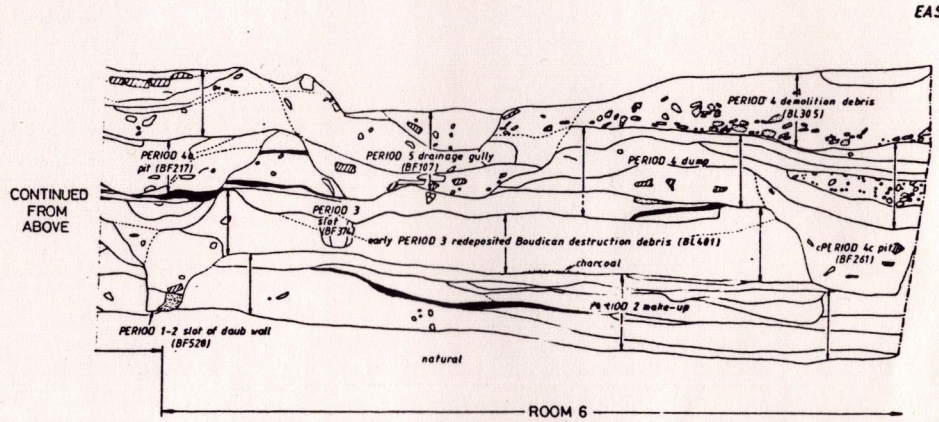

NORTH
ROOM 1a
ROOM 1b
PERIOD 4 BUILDING 112
ROOM 5
ROOM 1
PERIOD 3 BUILDING 94
modern foundation (BF17)
PERIOD 4 demolition
modern foundation
modern cellar debris
BL104/7/8
PERIOD 4 demolition debris (BL50)
PERIOD 4b occupation
PERIOD 4b dump (BL129)
PERIOD 4a occupation (BL147)
PERIOD 4a make-up (BL217)
PERIOD 3 occupation (BL352)
post-Roman robber trench for PERIOD 4 foundation (BF90)
post-Roman robber trench for PERIOD 4 foundation (BF79)
BL145
pit
hearth?
PERIOD 1a post-hole (BF340)
PER 3 daub-block wall (BF417)
PERIOD 3 make-up (BL353)
post-hole (BF344)
?post-hole (BF343)
PERIOD 3/4 occupation
early PERIOD 3 ?cultivated soil (BL408)
stake hole
burnt floor
?gully (BF465)
BF534
PERIOD 1/2 make-up
PERIOD 4 foundation
?pile hole
PERIOD 1/2 occupation
PERIOD 1/2 gravelled street (BL682)
PERIOD 1 drain (BF624)
PERIOD 1-2 plinth (BF546)
early Boudican redeposited destruction debris (BL414)
PERIOD 1/2 make-up
BL576
natural
PERIOD 1-2 gully (BF584)
PERIOD 1-2 cess pit (BF532)
CONTINUED BELOW
Site B
Sx 3.4
ROOM 1
PERIOD 1-2 BARRACK BLOCK (BUILDING 77)

SOUTH
ROOM 2
ROOM 3
PERIOD 4 BUILDING 113
ROOM 1
CONTINUED FROM ABOVE
PERIOD 4 demolition debris (BL71)
PERIOD 4b occupation
floor levels east of daub wall (BF197)
remnants of daub wall (BF197) in situ
BL165
BL173
PERIOD 4b dump
PERIOD 4a gravelled surface (BL265)
PERIOD 4a make-up (BL266)
stake hole
PERIOD 3 wall trench (BF369)
early PERIOD 3 redeposited Boudican destruction debris (BL395)
post-Roman robber trench for PERIOD 4 foundation (BF73)
PERIOD 4 dump
PERIOD 4 drain (BF106)
PERIOD 3 gravelled street (BL440)
PERIOD 3 dump
PERIOD 1/2 trench for water main (BF638)
PERIOD 1 gravelled street
PERIOD 1 make-up
PERIOD 1 ?temporary gravelled surface
post-Roman robber trench for PERIOD 4 foundation (BF810)
PER 4 demolition
PER 4 make-up
PER 4 occupation
PER 2 occupation
PER 4 foundation
PERIOD 4 gravel foundation (BF811)
PERIOD 3 gravelled street (BL375)
PERIOD 3 occupation (BL345)
PERIOD 1/2 occupation
PERIOD 1/2 make-up
PERIOD 1-2 plinth (BF487)
PERIOD 1 ?drain (BF636)
PERIOD 3 ?wall trench (BF647)
eastern edge of PERIOD 1-2 latrine pit (BF282)
natural
post Roman pits
pit (BF89)
pit (BF91)
pit (BF55)
PERIOD 4 demolition (BL61)
BL179/180
BL196
BL197
BL373
PERIOD 4 occupation
PERIOD 4 make-up
PERIOD 4 foundation
post-Roman robber trench (BF3) for PERIOD 4 foundation
PERIOD 4 ?demolition
PERIOD 4 make-up
PERIOD 4 occupation
PERIOD 3 occupation
early PERIOD 3 redeposited Boudican destruction debris
charcoal
PERIOD 2 occupation
PERIOD 1/2 make-up
early PERIOD 3 redeposited Boudican destruction debris (BL407)
BL448
BL450
BL457
PERIOD 2 make-up
PERIOD 2 occupation
PERIOD 1 gully (BF504)
PERIOD 1 drain (BF413)
PERIOD 1 make-up
BL436
BL437
PERIOD 1-2 plinth (BF488)
2 metres
Sx 3.4
ROOM 5
PERIOD 1-2 STREET
ROOM 1
PERIOD 1-2 BARRACK BLOCK (BUILDING 78)

Sxs 3.7-10

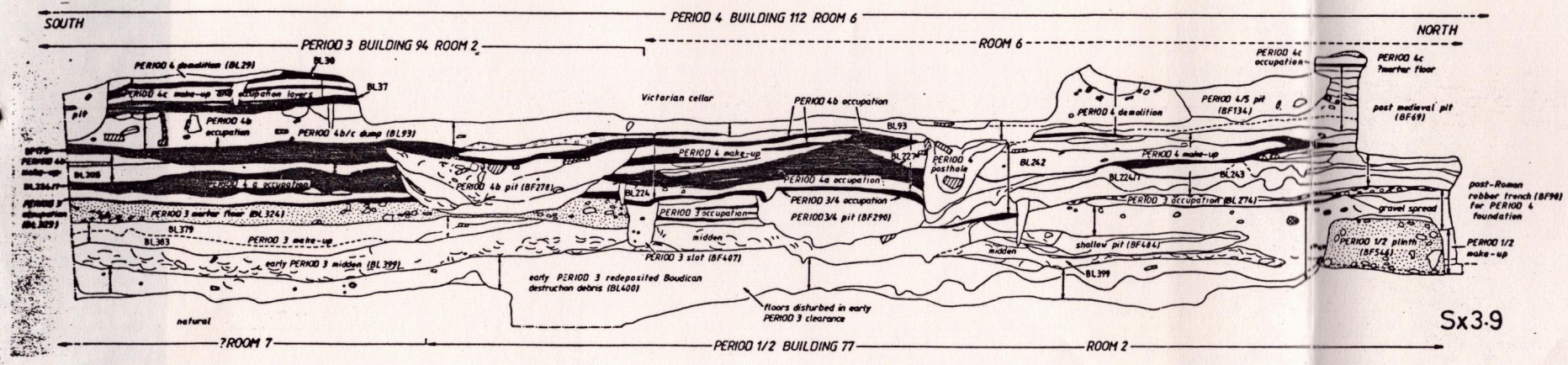




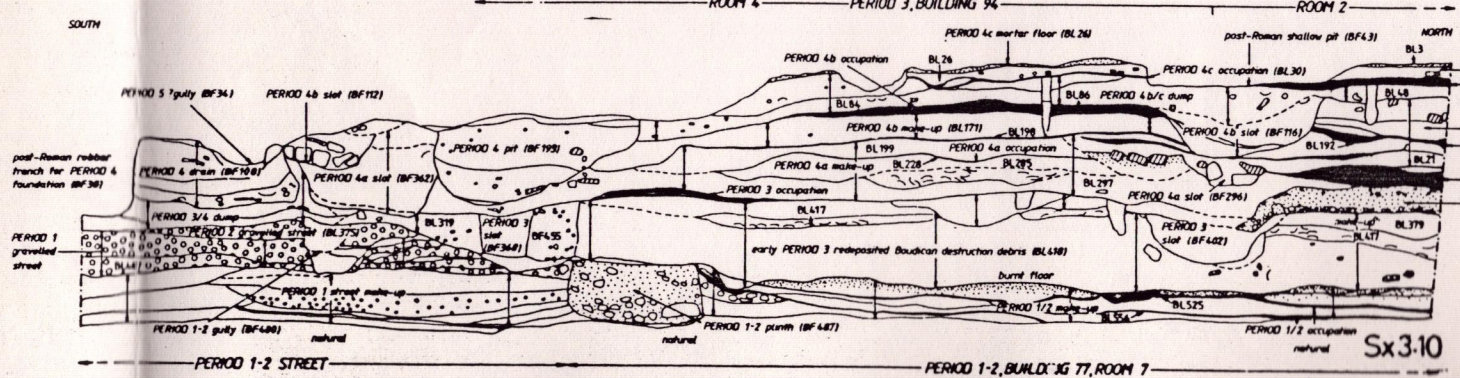


Sx3.7

Sx3.8



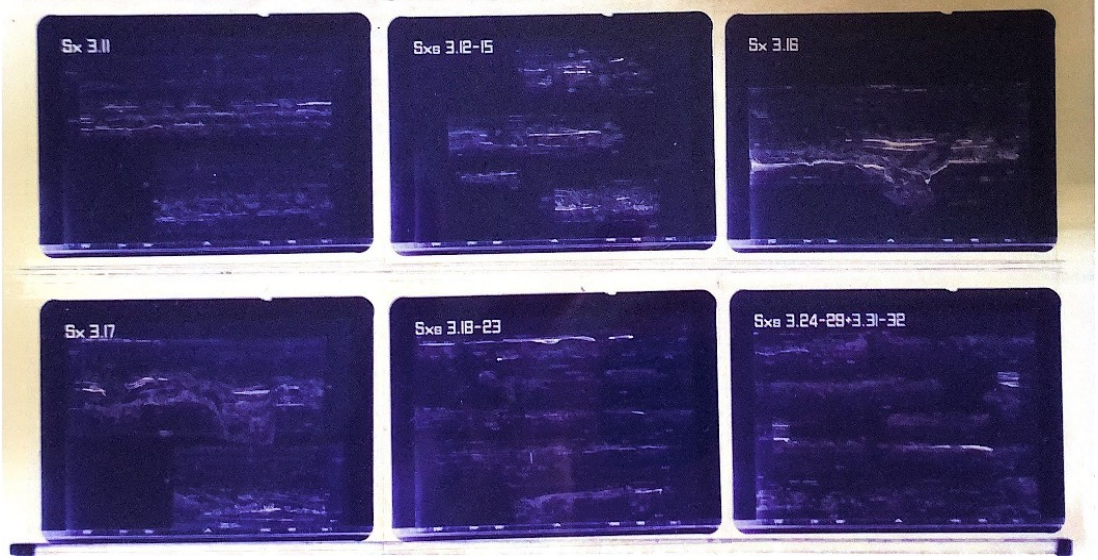
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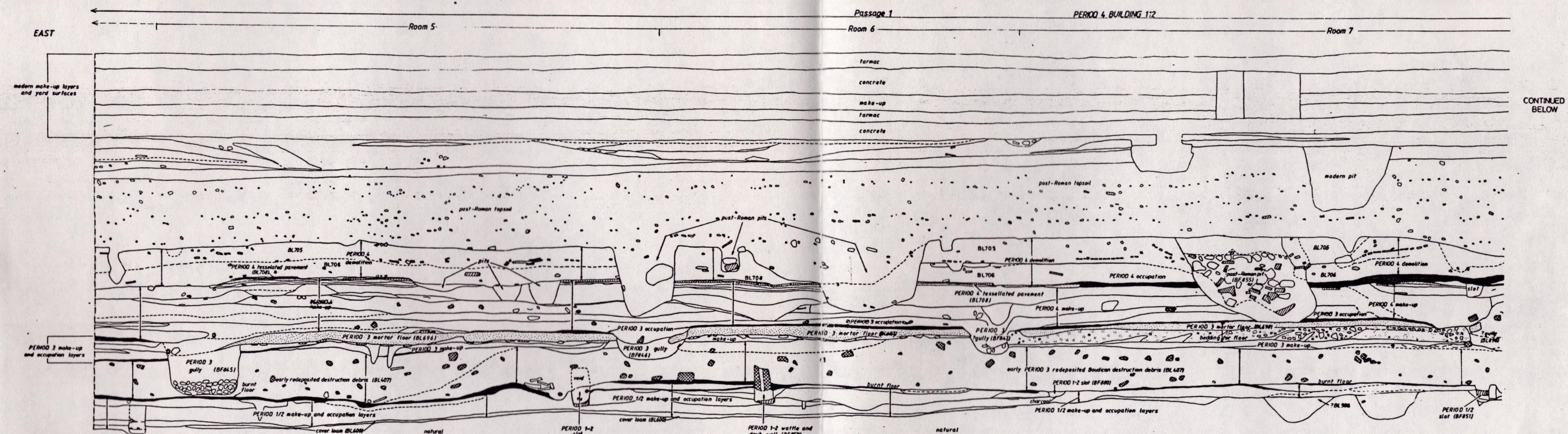
Sx3.10

COLCHESTER ARCHAEOLOGICAL REPORT 6:
Excavations at Culver Street The Gilberd School
& other sites in Colchester 1971-85

9 of 10
Sections

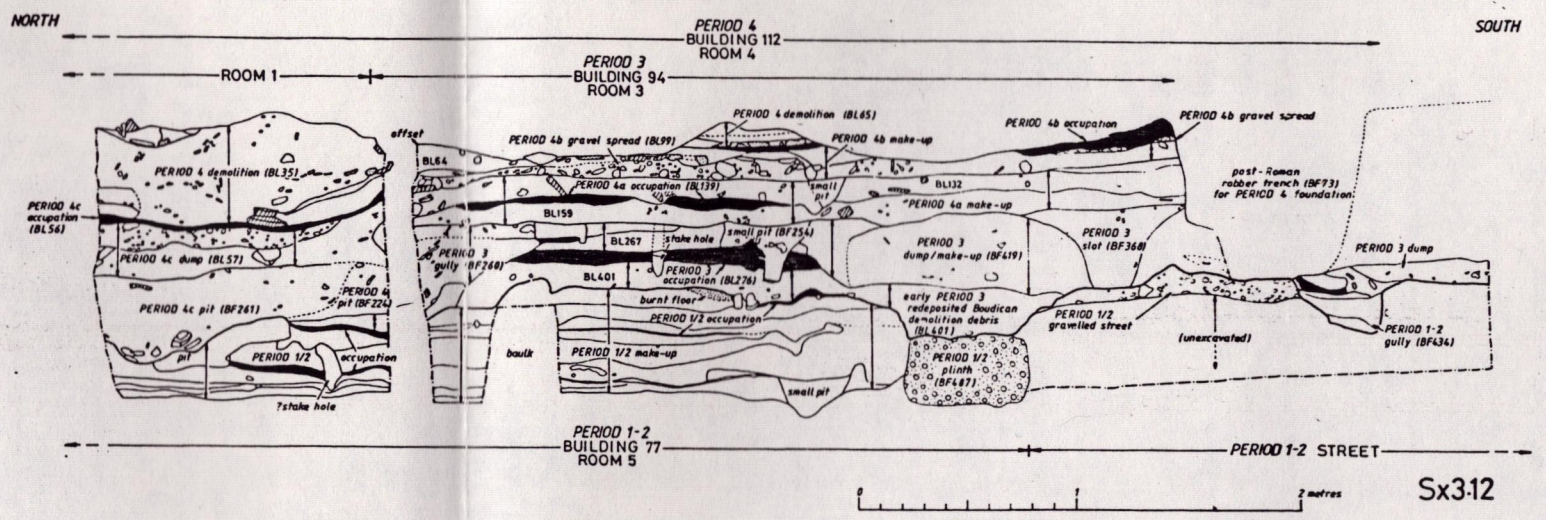


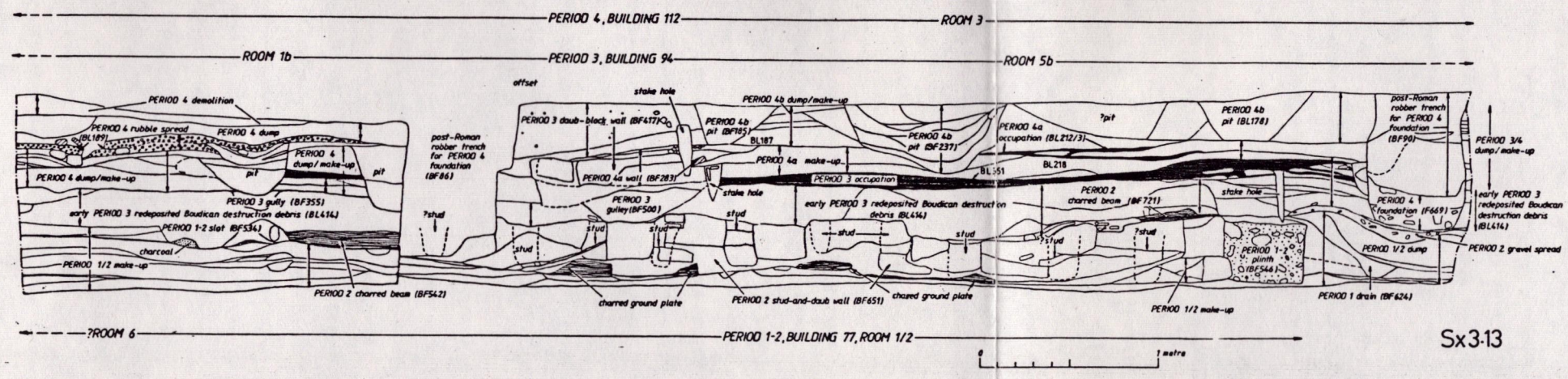
Sx 3.11

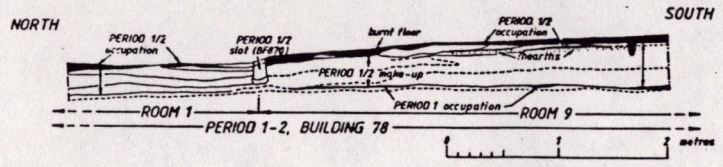

EAST
Room 5
Passage 1
Room 6
Room 7
PERIOD 4 BUILDING 1:2
CONTINUED BELOW
modern make-up layers and yard surfaces
tarmac
concrete
make-up
tarmac
concrete
post-Roman topsoil
modern pit
post-Roman pits
pit
BL705
BL706
BL708
PERIOD 4 demolition
PERIOD 4 tessellated pavement (BL708)
PERIOD 4 make-up
PERIOD 4 occupation
PERIOD 3 occupation
PERIOD 3 mortar floor (BL696)
PERIOD 3 make-up
PERIOD 3 gully (BF464)
PERIOD 3 gully (BF465)
PERIOD 3 make-up and occupation layers
early redeposited destruction debris (BL407)
burnt floor
PERIOD 1/2 make-up and occupation layers
cover loam (BL409)
natural
PERIOD 1-2 slot
PERIOD 1-2 wattle and daub wall (BF858)
cover loam (BL698)
PERIOD 3 mortar floor (BL697)
PERIOD 3 gully (BF463)
PERIOD 3 mortar floor (BL498)
bedding for floor
charcoal
PERIOD 1-2 slot (BF690)
?BL506
PERIOD 1/2 slot (BF651)
Room 1
Room 2
Room 3
PERIOD 1-2 BUILDING 77
Room 4

Room 5
Room 6
WEST
CONTINUED FROM ABOVE
modern make-up layers and yard surfaces
tarmac
concrete
make-up
tarmac
concrete
modern pit
post-Roman topsoil
? pit
? pitpipe
BL705
BL706
demolition of PERIOD 4
quarter round moulding
PERIOD 4 opus signinum floor (BL116)
PERIOD 4 make-up
post-Roman robber trench for PERIOD 4 foundation (BL857)
post-Roman robber trench (BF11) for PERIOD 4 foundation
PERIOD 4 foundation (BF282)
early PERIOD 3 redeposited Boudican destruction debris (BL487)
burnt floor
PERIOD 1/2 make-up and occupation layers
PERIOD 1-2 slot (BL953)
natural
stake-hole
BL149
PERIOD 4 ?make-up
PERIOD 4 ?ploughed-out mortar floor (BL117)
BL147
PERIOD 4 occupation (BL362)
PERIOD 4 make-up (BL252/3)
PERIOD 4 wall foundation (BF245)
burnt surface
? heaths
PERIOD 1-2 make-up
PERIOD 1-2 plinth (BF648)
Room 5
Room 6
0
2 metres

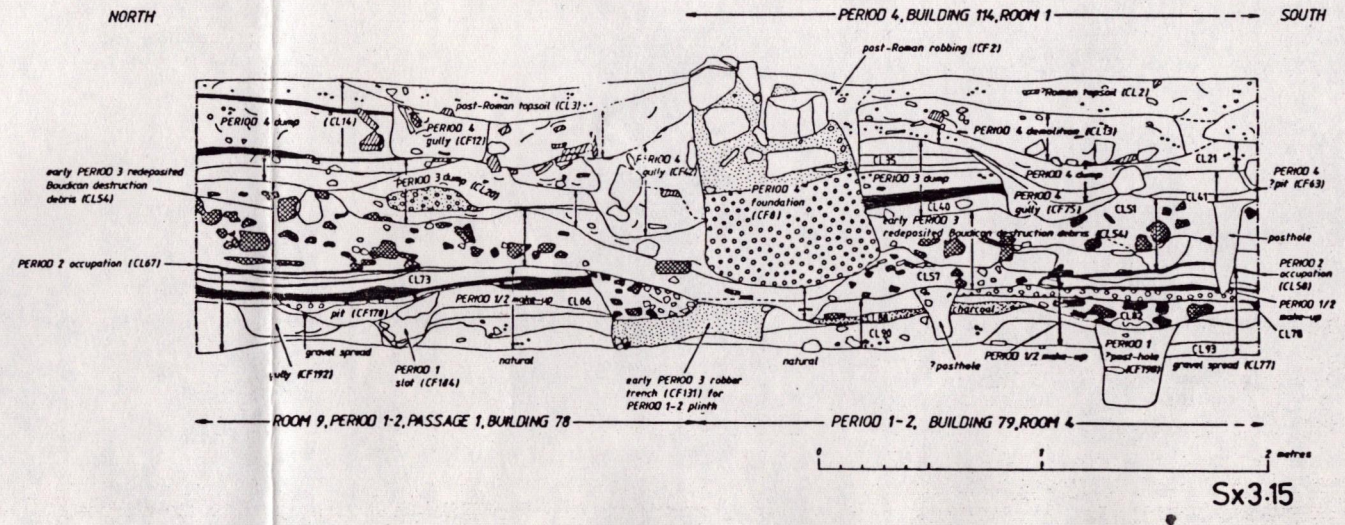
Sxs 3.12-15





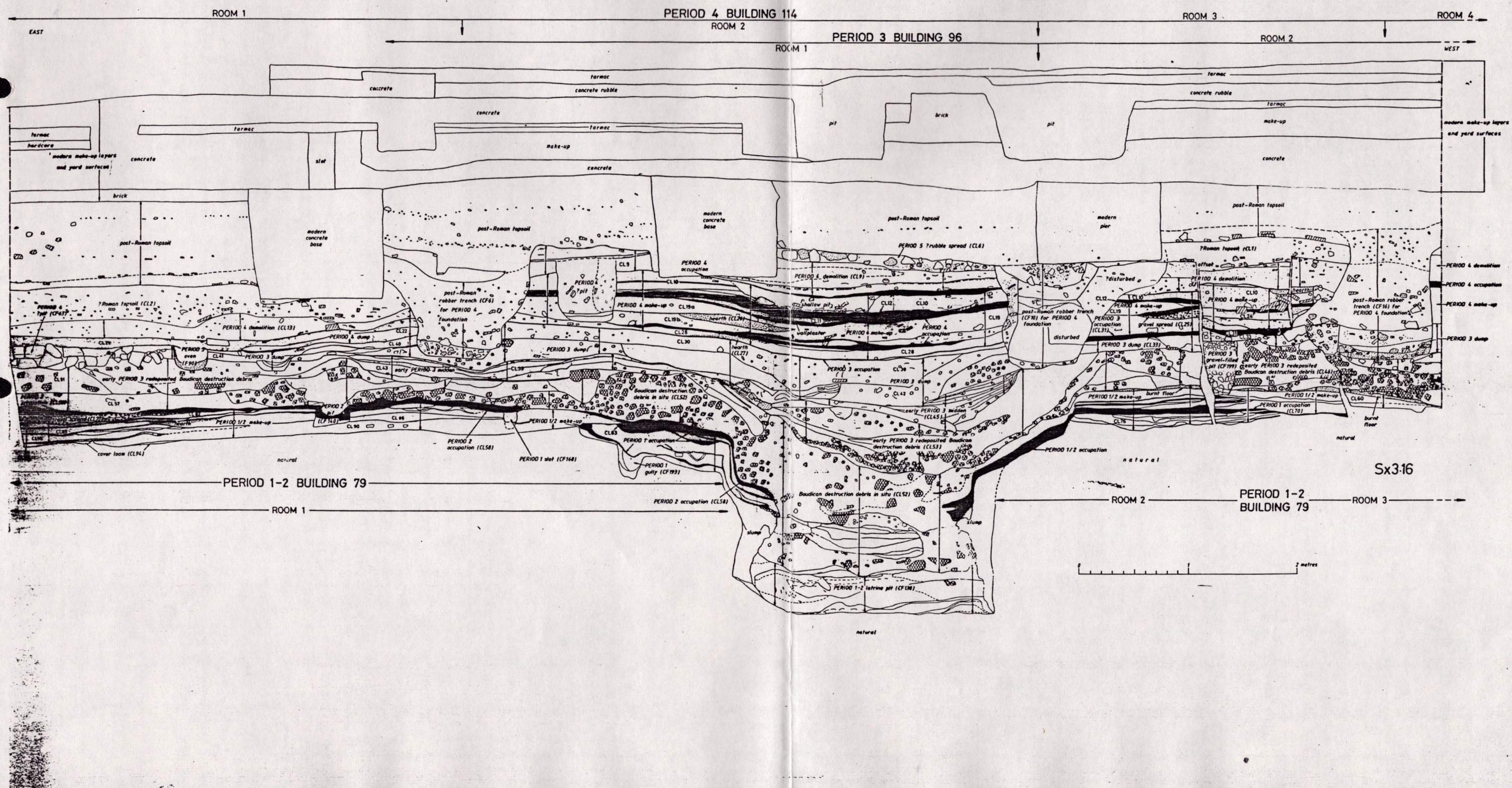


Sx3.14



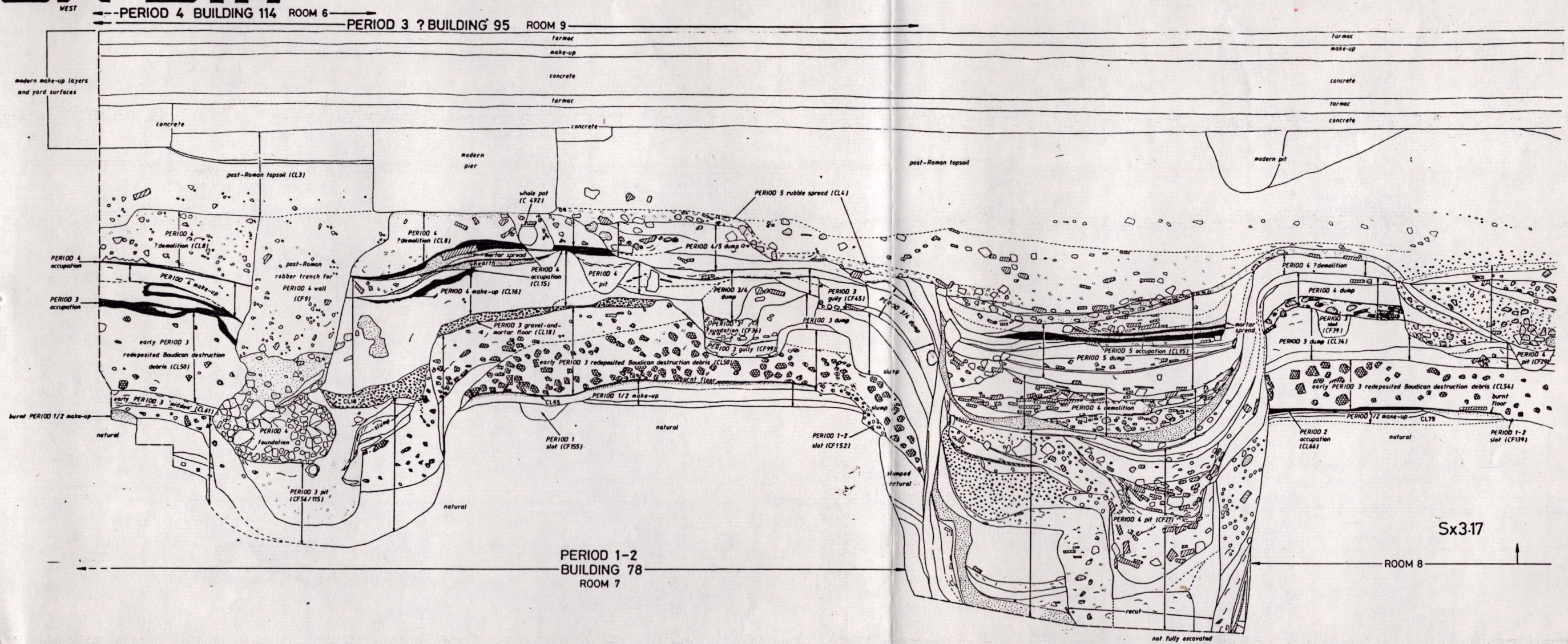
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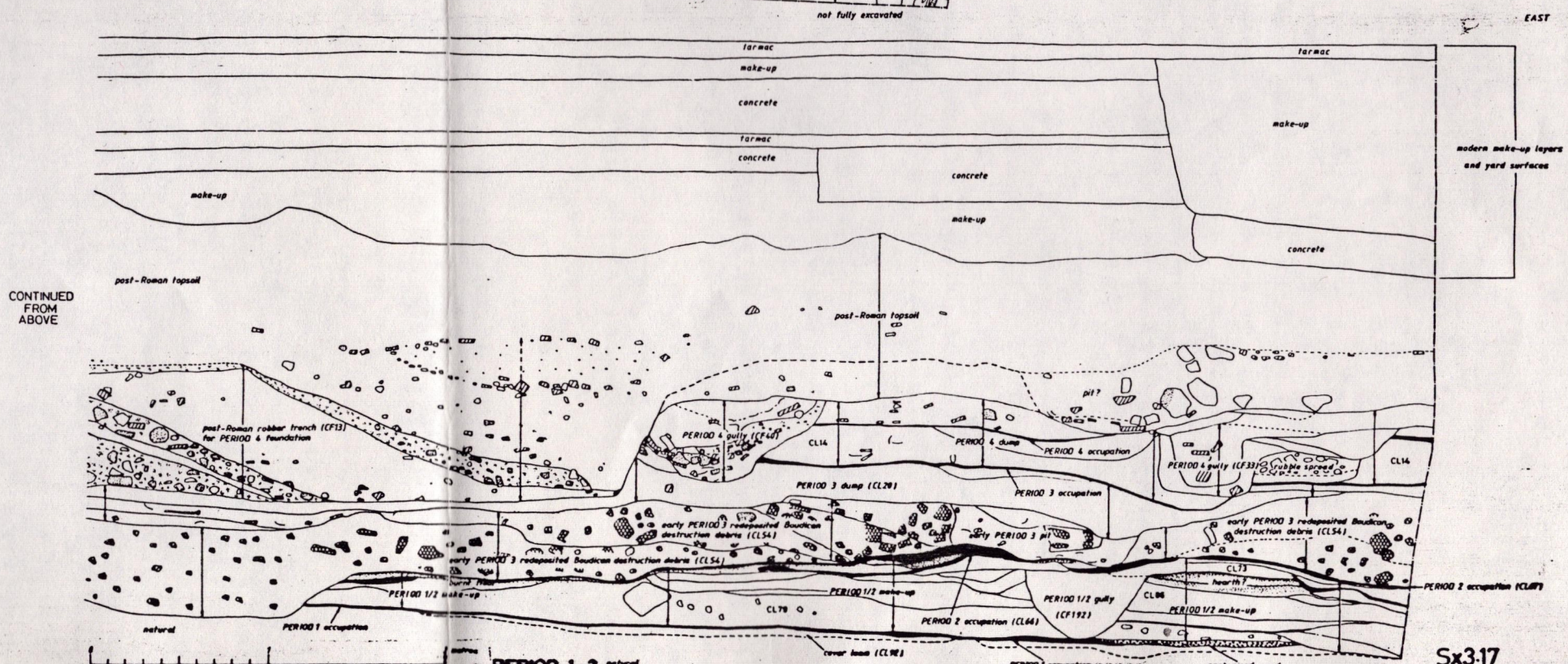
Sx 3.16


ROOM 1
PERIOD 4 BUILDING 114
ROOM 2
ROOM 3
ROOM 4
EAST
PERIOD 3 BUILDING 96
ROOM 1
ROOM 2
WEST
tarmac
concrete
concrete rubble
make-up
pit
brick
modern make-up layers and yard surfaces
hardcore
slot
post-Roman topsoil
modern concrete base
modern pier
?Roman topsoil (CL1)
?Roman topsoil (CL2)
PERIOD 4 demolition (CL9)
PERIOD 4 demolition (CL13)
PERIOD 4 occupation
PERIOD 4 make-up
PERIOD 4 dump
PERIOD 3 dump
PERIOD 3 occupation
PERIOD 5 ?rubble spread (CL6)
?disturbed
offset
post-Roman robber trench (CF6) for PERIOD 4 foundation
post-Roman robber trench (CF16) for PERIOD 4 foundation
post-Roman robber trench (CF18) for PERIOD 4 foundation
PERIOD 4 pit (CF43)
PERIOD 4 ?pit
PERIOD 5 oven (F90)
PERIOD 3 gravel-filled pit (CF199)
shallow pit
hearth (CL26)
hearth (CL27)
wallplaster
gravel spread (CL25)
early PERIOD 3 redeposited Boudican destruction debris
Boudican destruction debris in situ (CL52)
early PERIOD 3 redeposited Boudican destruction debris (CL53)
early PERIOD 3 redeposited Boudican destruction debris (CL44)
early PERIOD 3 midden (CL45)
PERIOD 1/2 make-up
PERIOD 1/2 occupation
PERIOD 1/2 occupation (CL70)
burnt floor
PERIOD 2 pit (CF140)
PERIOD 2 occupation (CL58)
PERIOD 1 slot (CF168)
PERIOD 1 gully (CF193)
PERIOD 1 occupation
PERIOD 1-2 latrine pit (CF138)
cover loam (CL94)
natural
stump
PERIOD 1-2 BUILDING 79
ROOM 1
ROOM 2
ROOM 3
0
2 metres

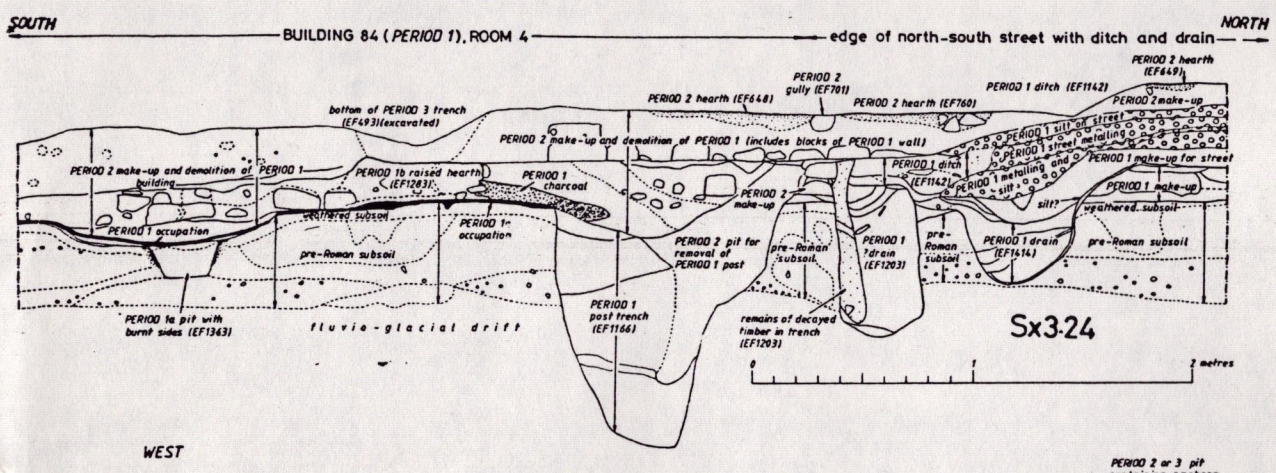
Sx3.16

Sx 3.17

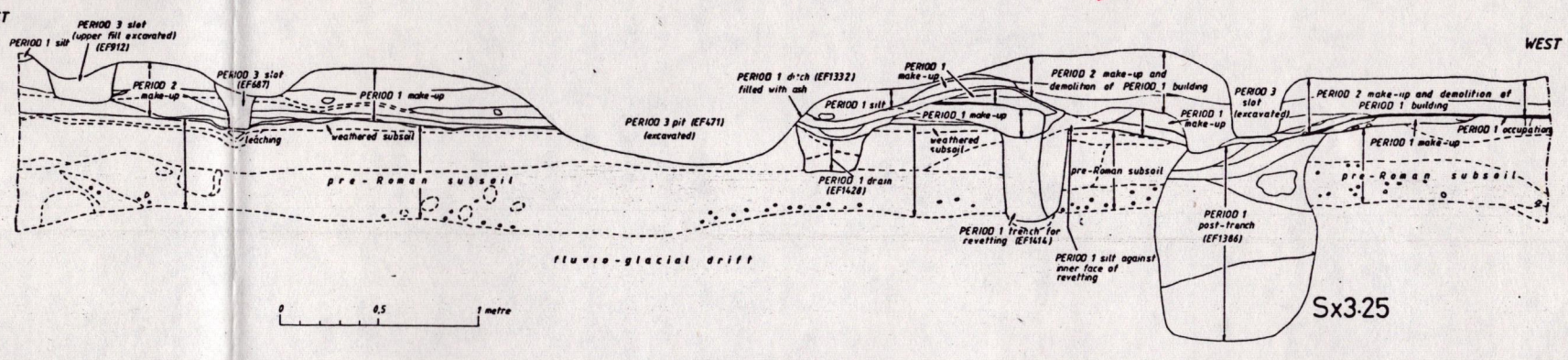

WEST
PERIOD 4 BUILDING 114 ROOM 6
PERIOD 3 ? BUILDING 95 ROOM 9
modern make-up layers and yard surfaces
tarmac
make-up
concrete
tarmac
concrete
concrete
post-Roman topsoil (CL3)
modern pier
whole pot (C 492)
PERIOD 5 rubble spread (CL4)
PERIOD 4 ?demolition (CL8)
PERIOD 4 occupation
PERIOD 3 occupation
PERIOD 4 make-up
post-Roman robber trench for PERIOD 4 wall (CF9)
mortar spread
hearth
PERIOD 4 occupation (CL15)
PERIOD 4 pit
PERIOD 4/5 dump
PERIOD 4 make-up (CL16)
PERIOD 3/4 dump
PERIOD 3 gully (CF45)
PERIOD 3 dump
PERIOD 3 gravel-and-mortar floor (CL18)
PERIOD 3 ? foundation (CF36)
PERIOD 3 gully (CF99)
early PERIOD 3 redeposited Boudican destruction debris (CL50)
early PERIOD 3 redeposited Boudican destruction debris (CL58)
burnt floor
CL65
PERIOD 1/2 make-up
early PERIOD 3 subsoil (CL41)
burnt PERIOD 1/2 make-up
natural
PERIOD 1 foundation
slump
PERIOD 1 slot (CF155)
PERIOD 1-2 slot (CF152)
PERIOD 3 pit (CF54/115)
slumped natural
recut
not fully excavated
modern pit
post-Roman topsoil
PERIOD 5 occupation (CL95)
PERIOD 5 dump
PERIOD 4 demolition
PERIOD 4 pit (CF27)
PERIOD 4 ?demolition
PERIOD 4 dump
PERIOD 3 slot (CF39)
PERIOD 3 dump (CL36)
PERIOD 4 pit (CF29)
early PERIOD 3 redeposited Boudican destruction debris (CL54)
burnt floor
PERIOD 1/2 make-up
CL79
PERIOD 2 occupation (CL66)
PERIOD 1-2 slot (CF139)
CONTINUED BELOW
Sx3.17
PERIOD 1-2
BUILDING 78
ROOM 7
ROOM 8


EAST
CONTINUED FROM ABOVE
tarmac
make-up
concrete
tarmac
concrete
make-up
concrete
make-up
concrete
modern make-up layers and yard surfaces
post-Roman topsoil
post-Roman topsoil
post-Roman robber trench (CF13) for PERIOD 4 foundation
PERIOD 4 gully (CF49)
CL14
PERIOD 4 dump
PERIOD 4 occupation
pit?
PERIOD 4 gully (CF33)
crinkle spread
CL14
PERIOD 3 dump (CL29)
PERIOD 3 occupation
early PERIOD 3 redeposited Boudican destruction debris (CL54)
early PERIOD 3 redeposited Boudican destruction debris (CL54)
early PERIOD 3 redeposited Boudican destruction debris (CL54)
early PERIOD 3 pit
CL73
hearth
PERIOD 2 occupation (CL69)
PERIOD 1/2 make-up
CL79
PERIOD 1/2 make-up
PERIOD 1/2 gully (CF192)
CL86
PERIOD 1/2 make-up
PERIOD 2 occupation (CL66)
natural
PERIOD 1 occupation
clear loam (CL98)
PERIOD 1 occupation
carbonised wood
natural
PERIOD 1-2 natural
BUILDING 78 ROOM 9
Sx3.17

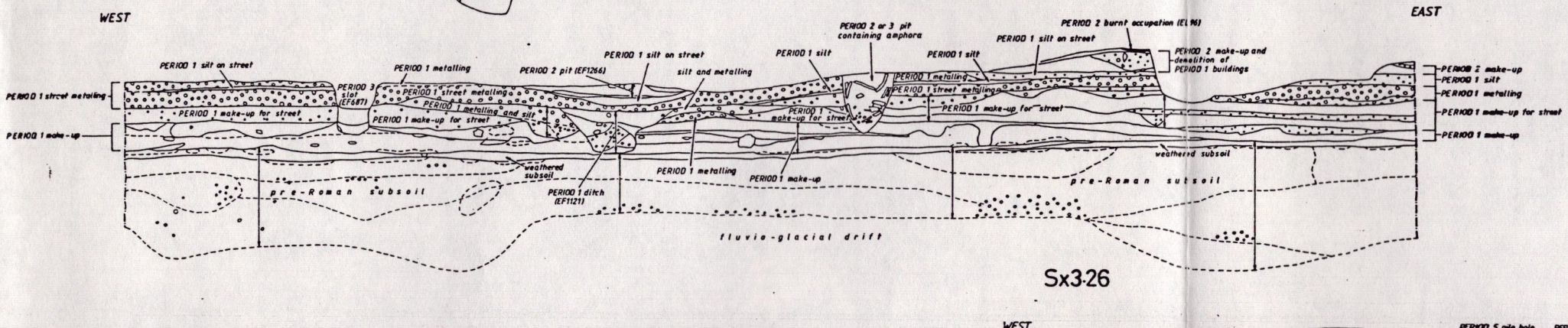
Sxs 3.24-29+3.31-32



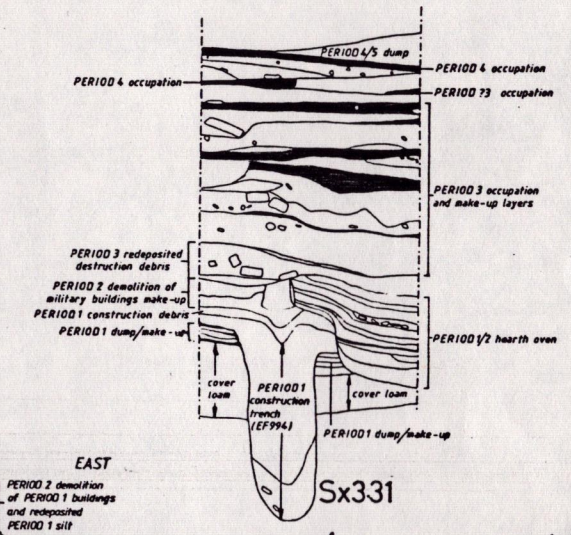
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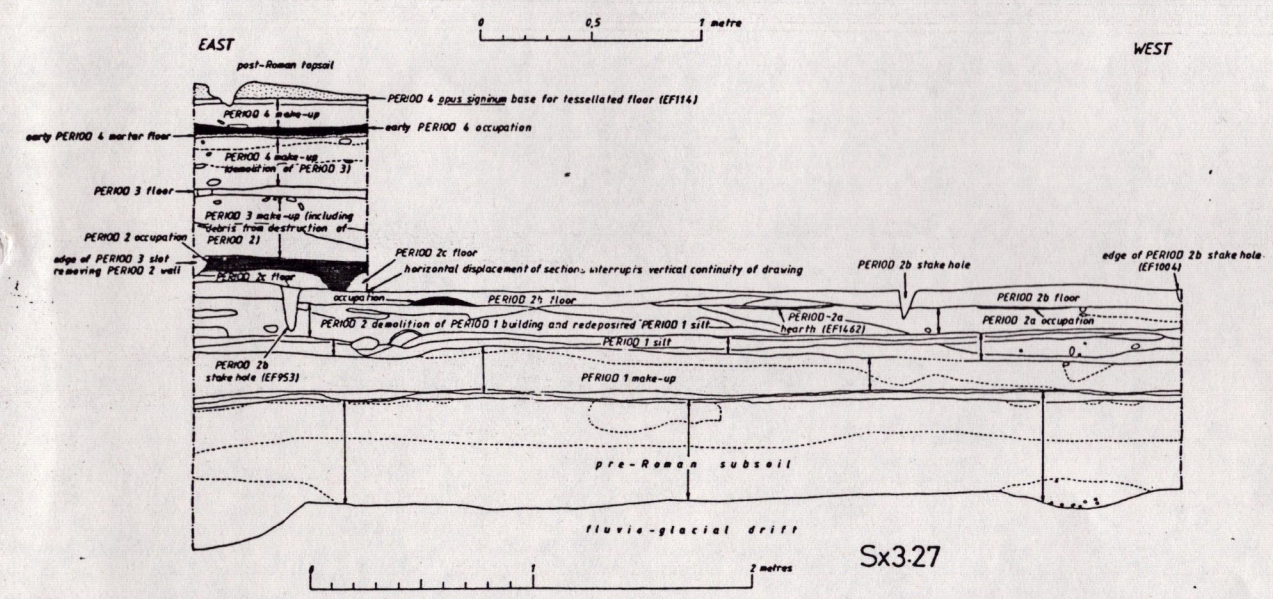
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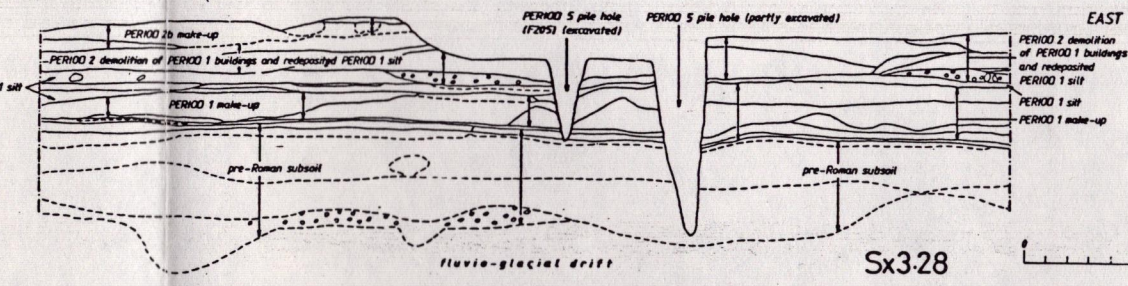
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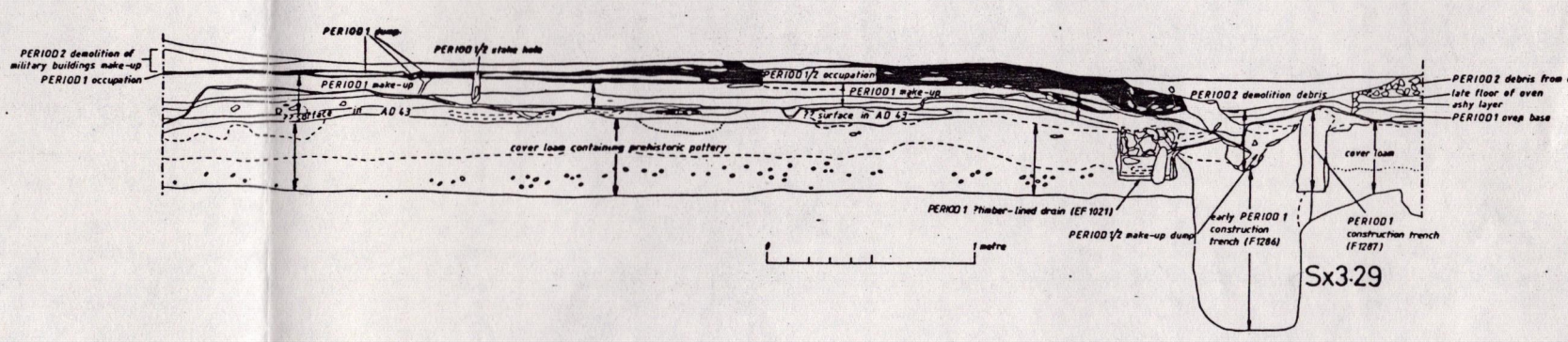
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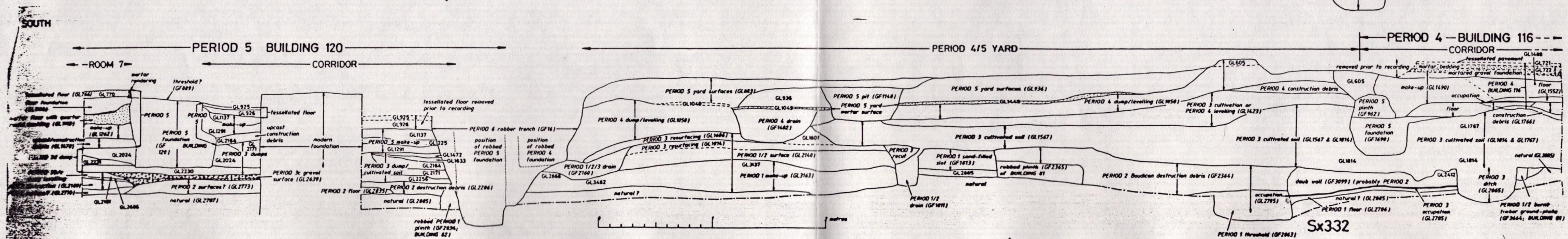
Sx3·27



Sx3·28

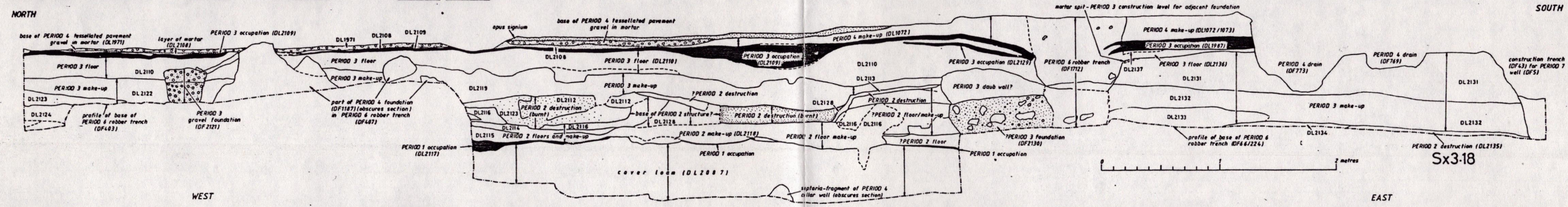


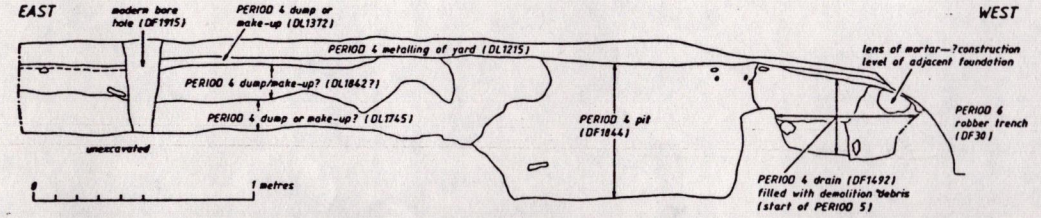
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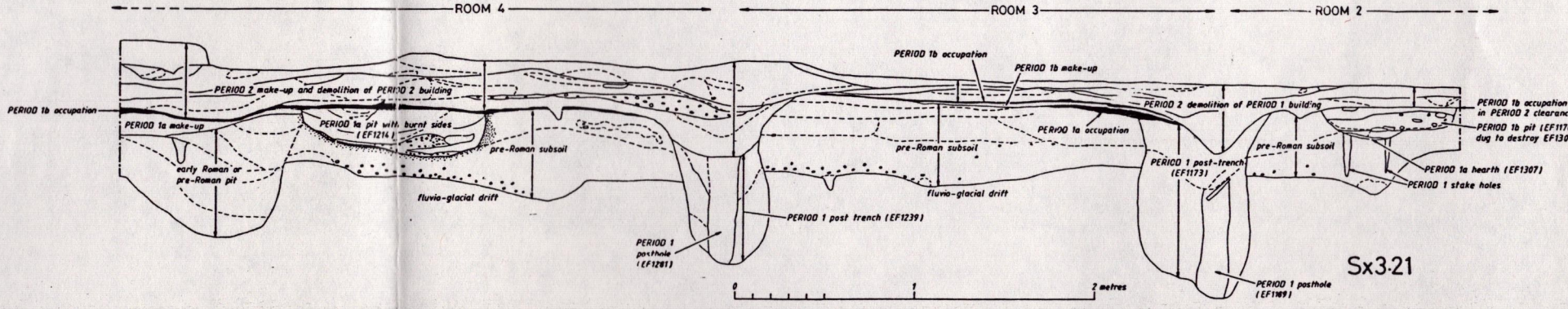


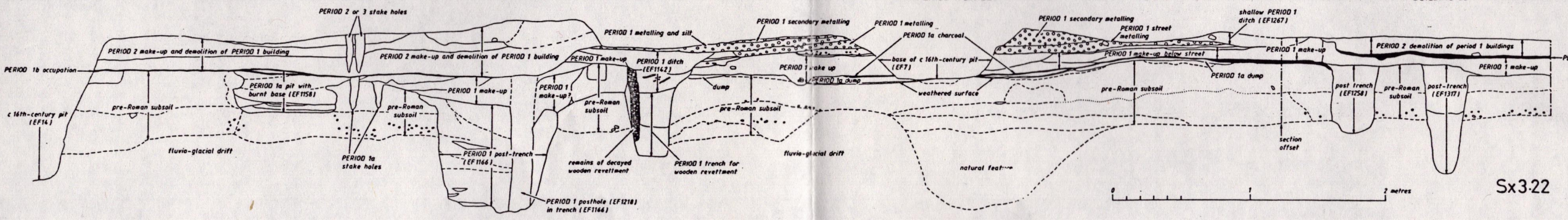
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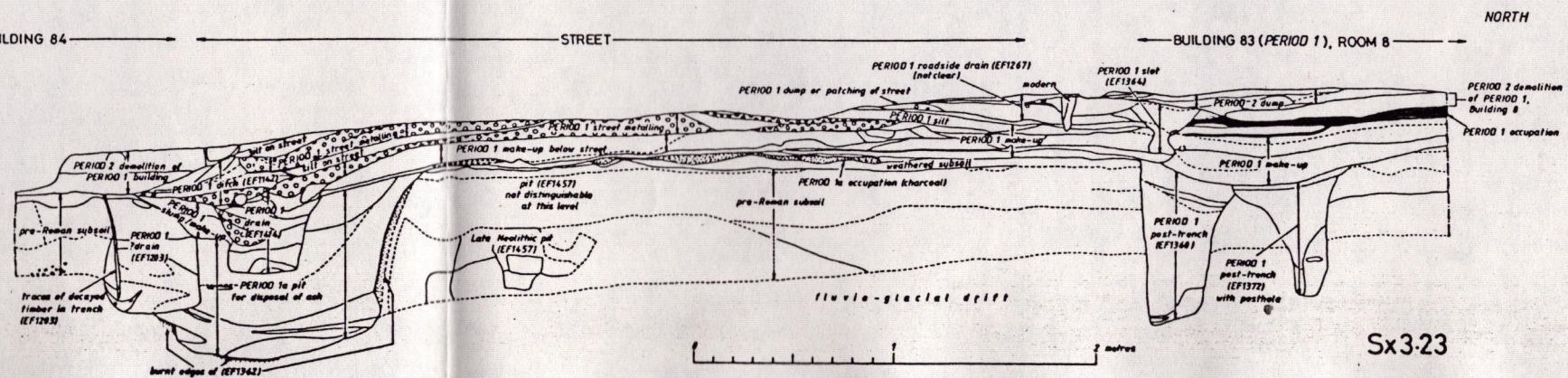
Sxs 3.18-23


NORTH
SOUTH
base of PERIOD 4 tessellated pavement gravel in mortar (DL1971)
layer of mortar (DL2108)
PERIOD 3 occupation (DL2109)
DL1971
DL2108
DL2109
opus signinum
base of PERIOD 4 tessellated pavement gravel in mortar
PERIOD 4 make-up (DL1072)
mortar spit - PERIOD 3 construction level for adjacent foundation
PERIOD 4 make-up (DL1072/1073)
PERIOD 3 occupation (DL1987)
PERIOD 3 floor
PERIOD 3 make-up
DL2110
DL2122
DL2123
DL2124
profile of base of PERIOD 6 robber trench (DF403)
PERIOD 3 gravel foundation (DF2121)
PERIOD 3 floor
PERIOD 3 make-up
part of PERIOD 4 foundation (DF1187) (obscures section) in PERIOD 6 robber trench (DF487)
DL2119
PERIOD 3 floor (DL2118)
PERIOD 3 make-up
PERIOD 2 destruction (burnt)
DL2112
DL2123
DL2116
DL2114
DL2115
PERIOD 2 floors and make-up
PERIOD 1 occupation (DL2117)
?PERIOD 2 destruction
base of PERIOD 2 structure?
DL2128
PERIOD 2 make-up (DL2118)
PERIOD 1 occupation
cover loam (DL2087)
PERIOD 3 occupation (DL2109)
PERIOD 3 occupation (DL2129)
DL2110
DL2113
PERIOD 3 daub wall?
PERIOD 2 destruction
PERIOD 2 floor/make-up
PERIOD 2 destruction (burnt)
DL2128
DL2116
DL2116
PERIOD 2 floor make-up
?PERIOD 2 floor
?PERIOD 3 foundation (DF2130)
PERIOD 1 occupation
septaria-fragment of PERIOD 4 cellar wall (obscures section)
PERIOD 6 rabber trench (DF1712)
DL2137
PERIOD 3 floor (DL2136)
DL2131
DL2132
DL2133
DL2134
PERIOD 4 drain (DF773)
PERIOD 4 drain (DF769)
PERIOD 3 make-up
profile of base of PERIOD 6 robber trench (DF66/224)
construction trench (DF43) for PERIOD 7 well (DF5)
DL2131
DL2132
PERIOD 2 destruction (DL2135)
0
1
2 metres
Sx3.18
WEST
EAST
base of PERIOD 4 hypocaust (DF85/92)
base of PERIOD 4 hypocaust
PERIOD 3 floor/make-up
DL1160
DL1159
drain (DF156) of PERIOD 4 hypocaust
unexcavated/not visible in section
PERIOD 6 robber trench (DF27/28)
PERIOD 6 robber debris in fill of drain
PERIOD 6 robber debris (DF64) of PERIOD 4 hypocaust (DF85/92)
PERIOD 3 make-up or floor
PERIOD 6 robber trench (DF403)
tessellated pavement
mortar base for tessellated pavement
PERIOD 4 make-up for tessellated pavement
DL328
PERIOD 3 make-up or floor
PERIOD 6 robber trench (DF30)
lens of mortar (construction level for adjacent PERIOD 4 foundation)
0
1
2 metres
Sx3.19
BUILDING 84
ROOM 4
ROOM 3
ROOM 2


EAST
WEST
modern bore hole (DF1915)
PERIOD 4 dump or make-up (DL1372)
PERIOD 4 metalling of yard (DL1215)
PERIOD 4 dump/make-up? (DL1842?)
PERIOD 4 dump or make-up? (DL1745)
unexcavated
PERIOD 4 pit (DF1844)
lens of mortar - ?construction level of adjacent foundation
PERIOD 6 robber trench (DF30)
PERIOD 4 drain (DF1492) filled with demolition debris (start of PERIOD 5)
0
1 metres
Sx3.20

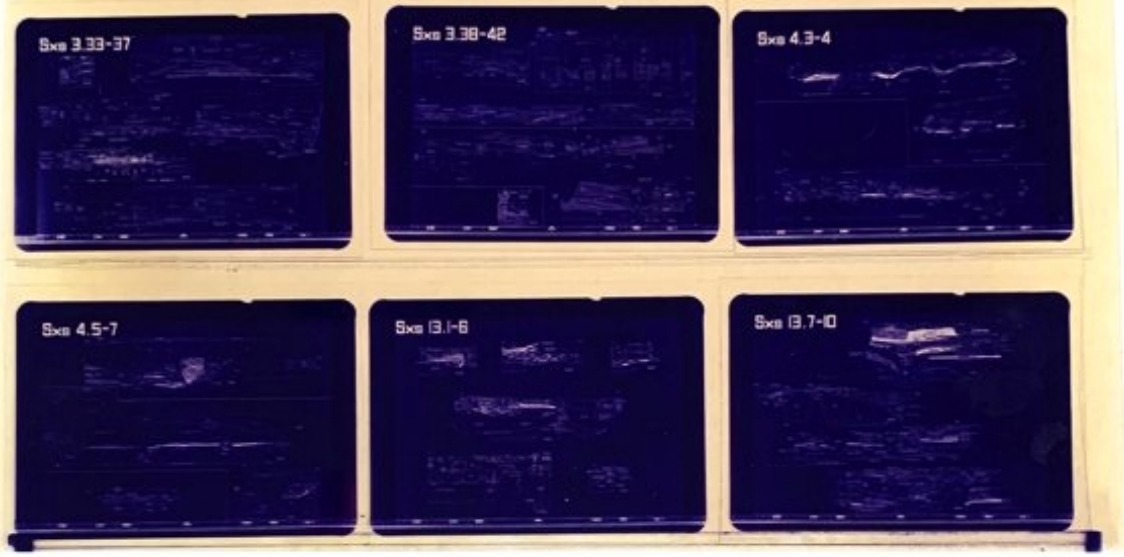

PERIOD 1b occupation
PERIOD 1b make-up
PERIOD 2 make-up and demolition of PERIOD 2 building
PERIOD 1a make-up
PERIOD 1a pit with burnt sides (EF1214)
early Roman or pre-Roman pit
pre-Roman subsoil
fluvio-glacial drift
PERIOD 1 post trench (EF1239)
PERIOD 1 posthole (EF1281)
PERIOD 1a occupation
PERIOD 2 demolition of PERIOD 1 building
PERIOD 1 post-trench (EF1173)
PERIOD 1b occupation removed in PERIOD 2 clearance
PERIOD 1b pit (EF1170) dug to destroy EF1307
PERIOD 1a hearth (EF1307)
PERIOD 1 stake holes
PERIOD 1 posthole (EF1189)
0
1
2 metres
Sx3.21


BUILDING 84 ROOM 2
PERIOD 1 STREET
BUILDING 83
PERIOD 2 or 3 stake holes
PERIOD 2 make-up and demolition of PERIOD 1 building
PERIOD 1b occupation
c 16th-century pit (EF14)
pre-Roman subsoil
fluvio-glacial drift
PERIOD 1a pit with burnt base (EF1158)
PERIOD 1a stake holes
PERIOD 1 post-trench (EF1166)
PERIOD 1 posthole (EF1218) in trench (EF1166)
PERIOD 2 make-up and demolition of PERIOD 1 building
PERIOD 1 make-up
PERIOD 1 make-up
PERIOD 1 metalling and silt
PERIOD 1 ditch (EF1162)
pre-Roman subsoil
remains of decayed wooden revetment
PERIOD 1 trench for wooden revetment
PERIOD 1 secondary metalling
PERIOD 1 metalling
PERIOD 1a charcoal
base of c 16th-century pit (EF1)
PERIOD 1 make up
PERIOD 1a dump
dump
pre-Roman subsoil
fluvio-glacial drift
weathered surface
natural feature
PERIOD 1 secondary metalling
PERIOD 1 street metalling
shallow PERIOD 1 ditch (EF1267)
PERIOD 1 make-up below street
PERIOD 1 make-up
PERIOD 1a dump
pre-Roman subsoil
section offset
PERIOD 2 demolition of period 1 buildings
PERIOD 1 make-up
PERIOD 1 occupation
post trench (EF1258)
pre-Roman subsoil
post-trench (EF1317)
0
1
2 metres
Sx3.22

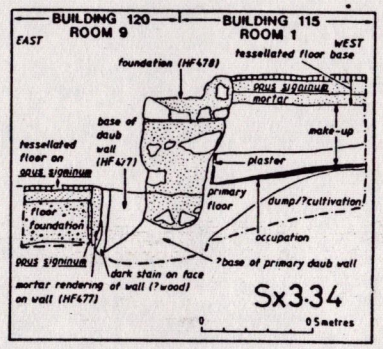

SOUTH
NORTH
BUILDING 84
STREET
BUILDING 83 (PERIOD 1), ROOM 8
PERIOD 2 demolition of PERIOD 1 Building
pit (EF1162)
PERIOD 1 ditch (EF1147)
PERIOD 1 drain (EF1213)
pre-Roman subsoil
traces of decayed timber in trench (EF1203)
burnt edges of (EF1362)
PERIOD 1 metalling
PERIOD 1 make-up below street
pit (EF1457) not distinguishable at this level
Late Neolithic pit (EF1457)
PERIOD 1a occupation (charcoal)
pre-Roman subsoil
fluvio-glacial drift
PERIOD 1 roadside drain (EF1267) (not clear)
PERIOD 1 dump or patching of street
modern
PERIOD 1 slot (EF1344)
PERIOD 2 dump
PERIOD 1 silt
PERIOD 1 make-up
PERIOD 1 make-up
weathered subsoil
PERIOD 1 post-trench (EF1340)
PERIOD 1 post-trench (EF1372) with posthole
PERIOD 2 demolition of PERIOD 1, Building 8
PERIOD 1 occupation
0
1
2 metres
Sx3.23

COLCHESTER ARCHAEOLOGICAL REPORT 6:
Excavations at Culver Street The Gilberd School
& other sites in Colchester 1971-85

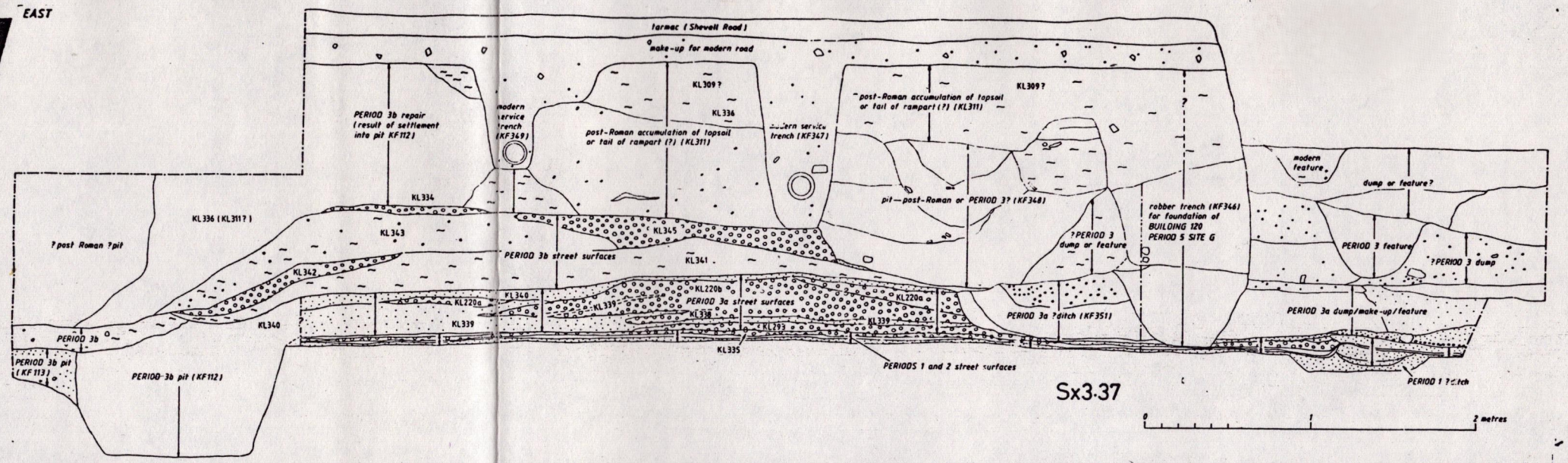
10 of 10
Sections



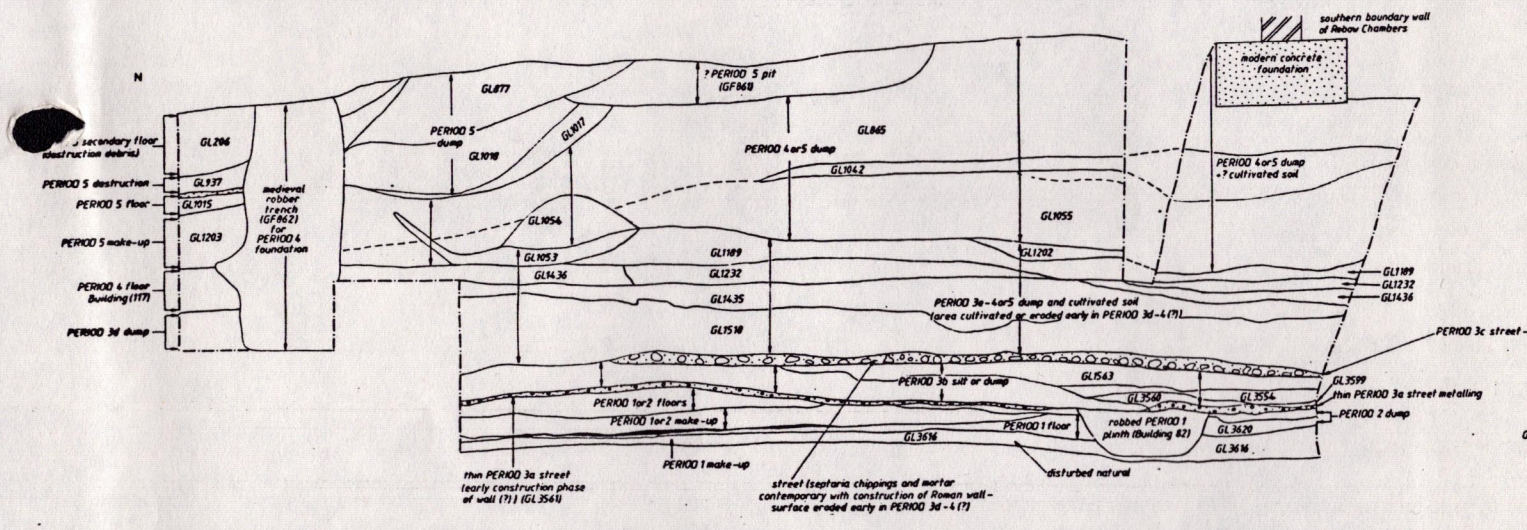
Sxs 3.33-37

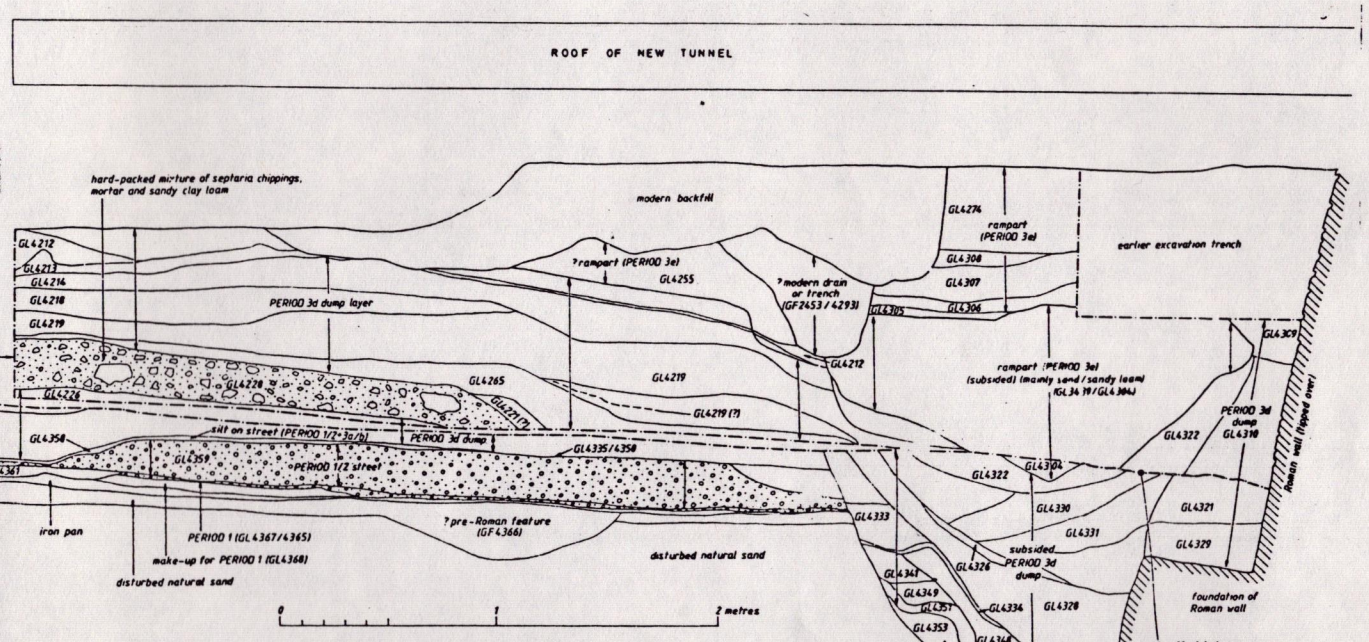


EAST

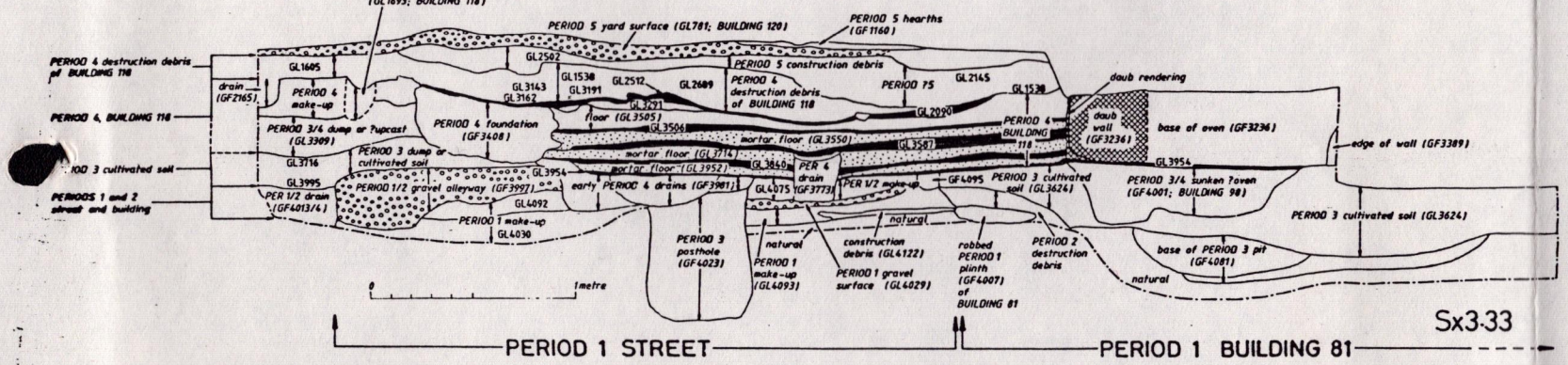


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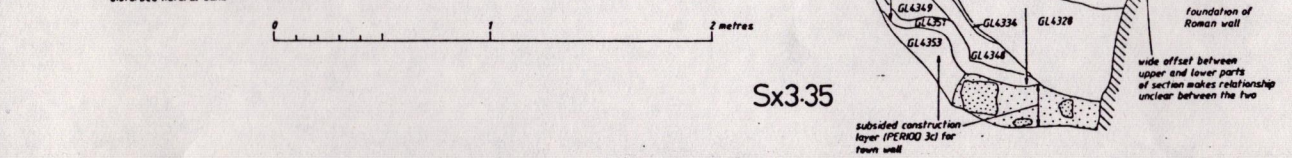




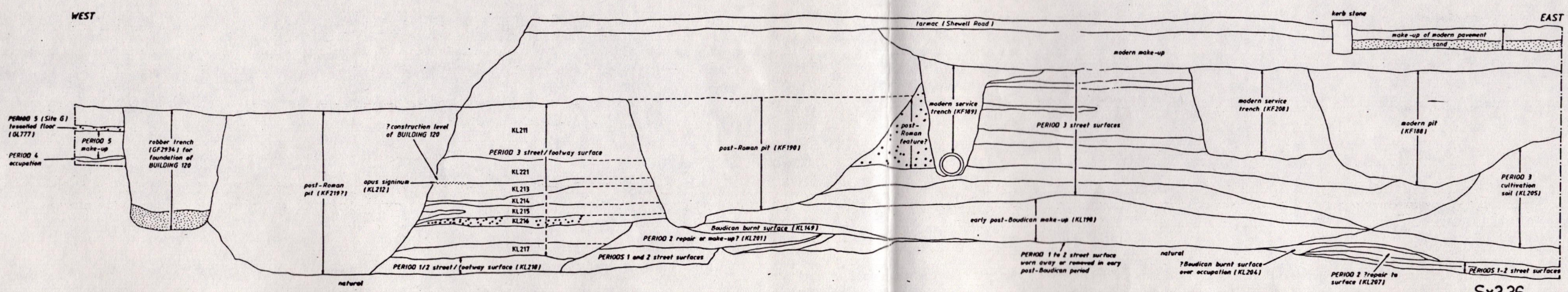
SOUTH



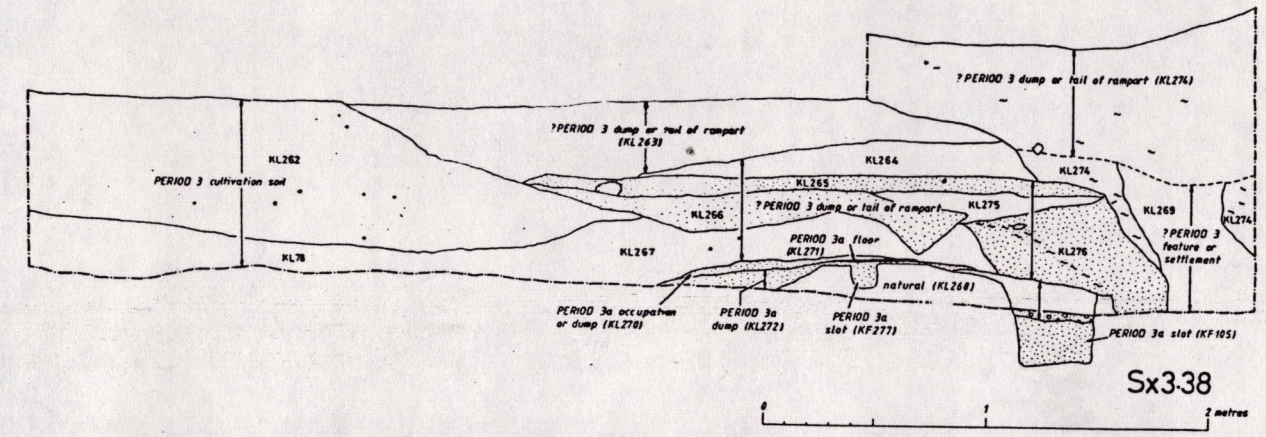
NORTH



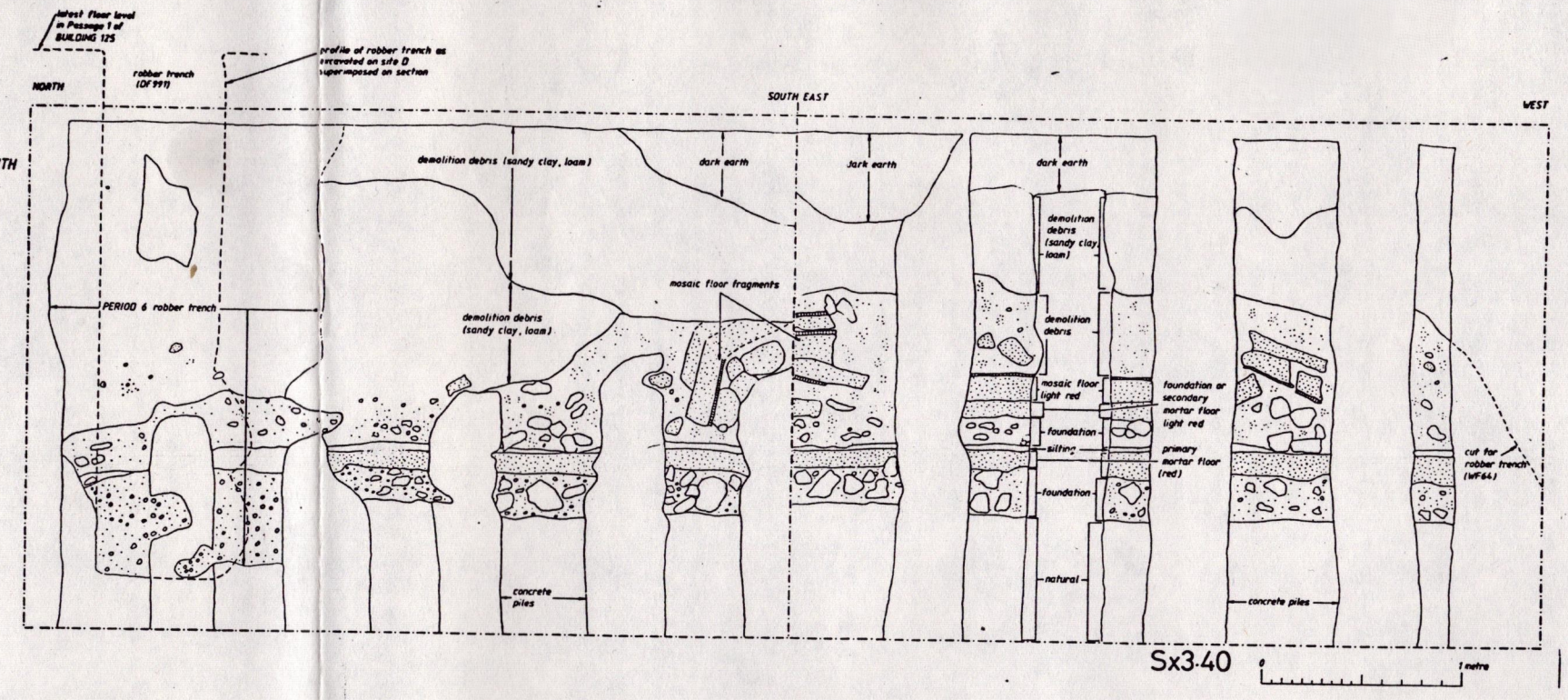
WEST



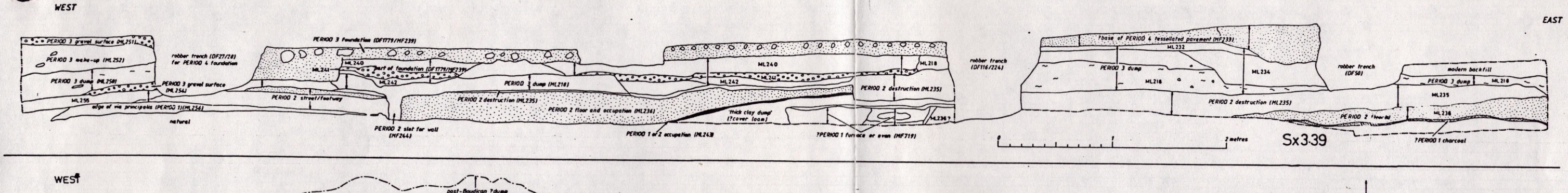
Sxs 3.38-42



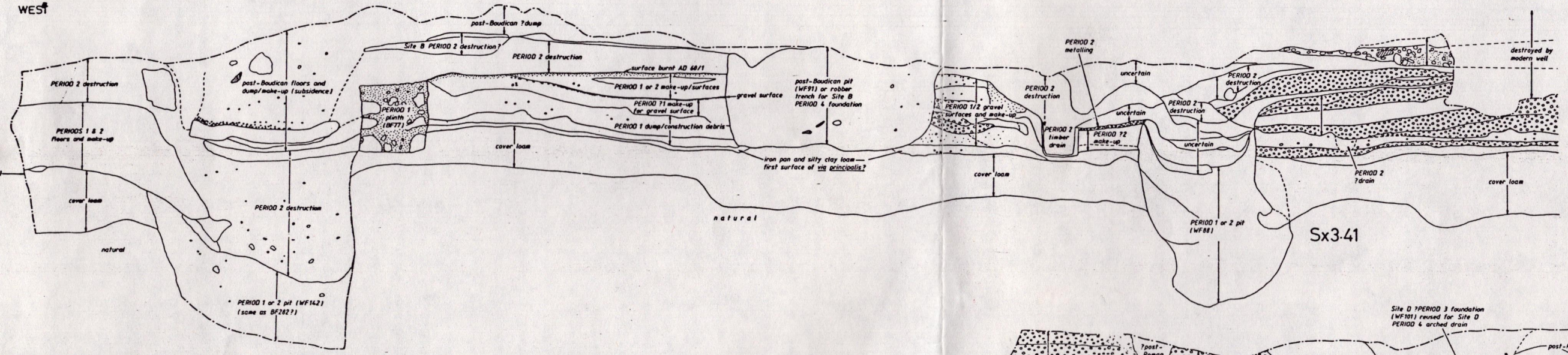
Sx3.38



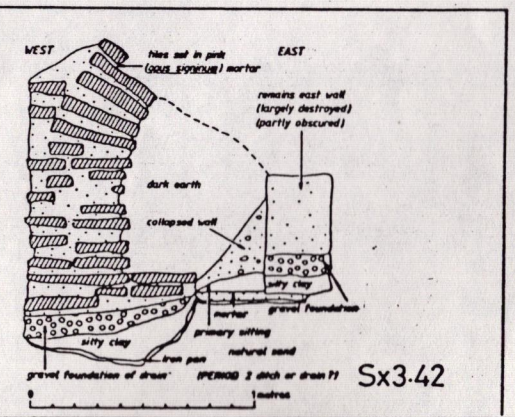
Sx3.40



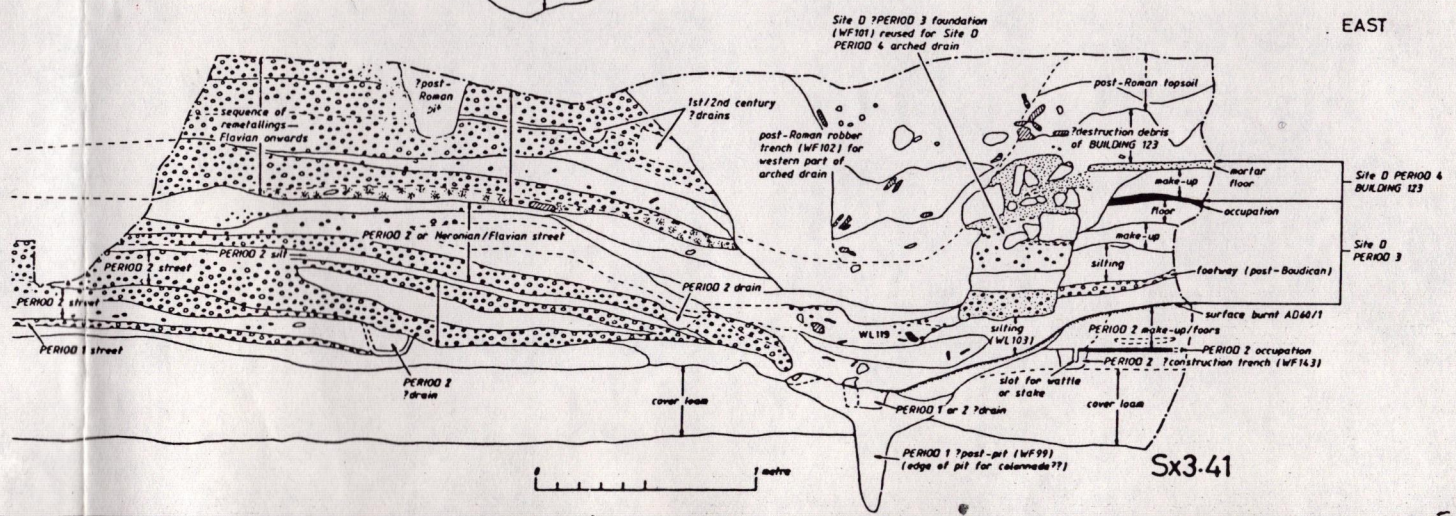
Sx3.39



Sx3.41

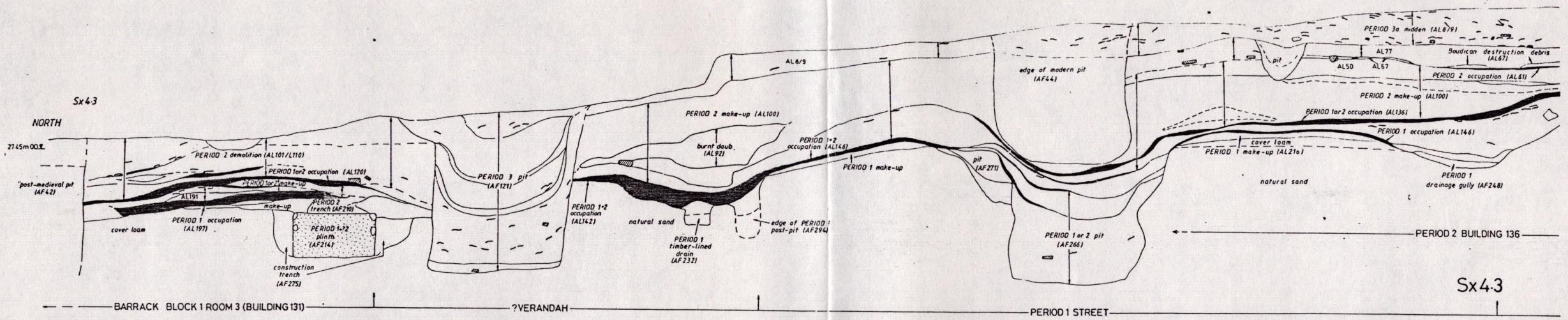


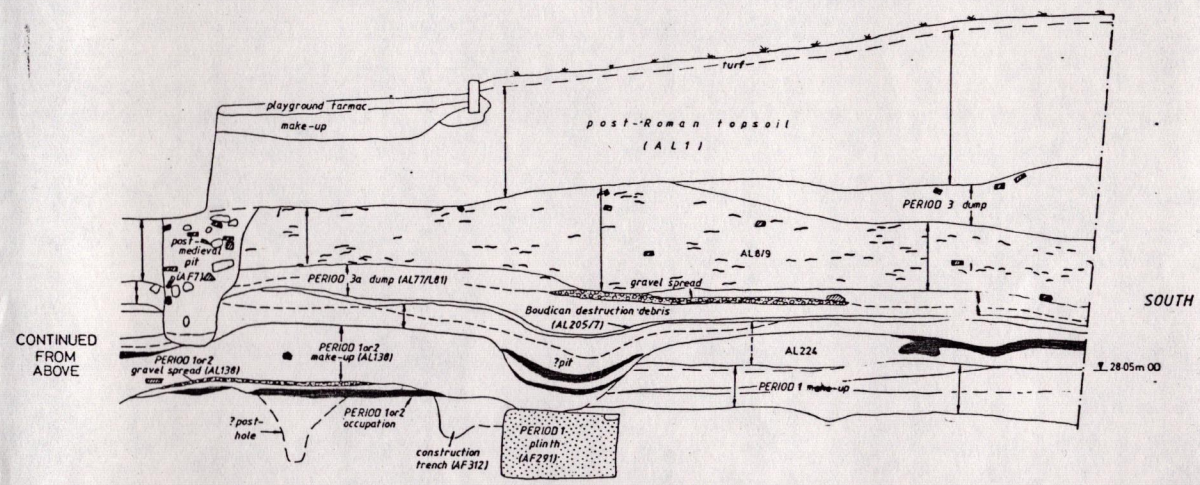
Sx3.42

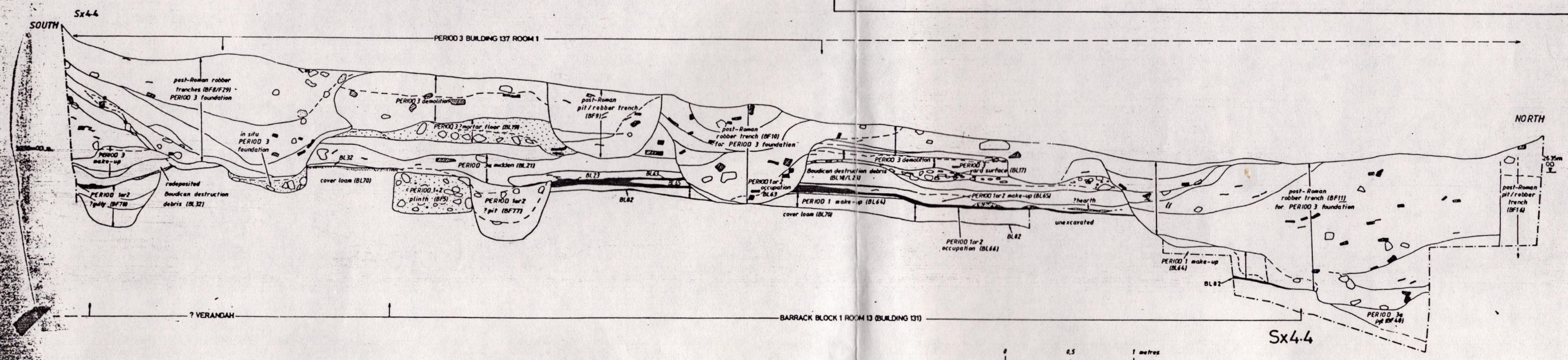


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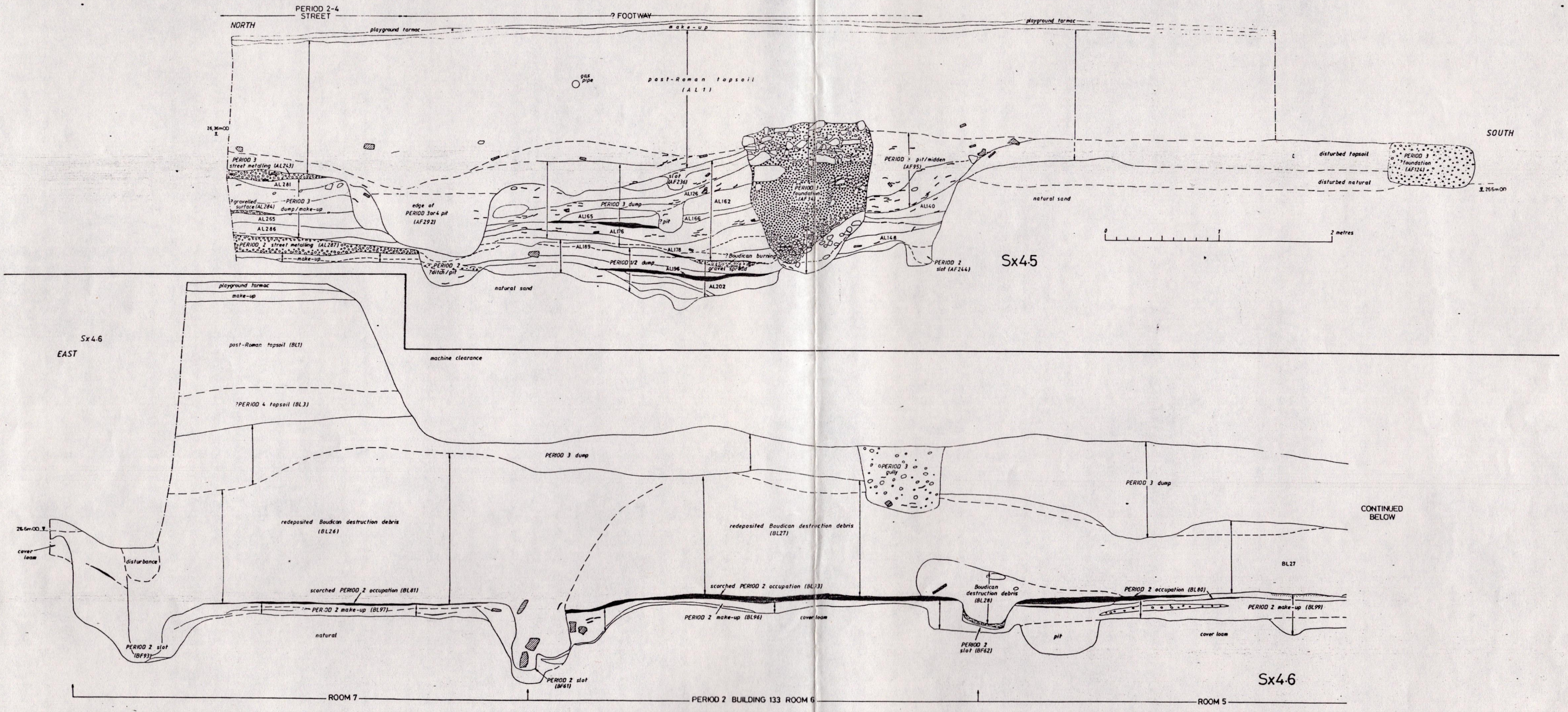
Sxs 4.3-4


Sx4·3
NORTH
27·45m OD
PERIOD 2 demolition (AL101/L110)
PERIOD 1or2 occupation (AL126)
PERIOD 1or2 make-up
AL191
PERIOD 1 occupation (AL197)
cover loam
make-up
'post-medieval pit (AF42)
PERIOD 2 (trench (AF216)
PERIOD 1·2 plinth (AF214)
construction trench (AF275)
PERIOD 3 pit (AF121)
PERIOD 2 make-up (AL100)
burnt daub (AL92)
PERIOD 1·2 occupation (AL146)
PERIOD 1·2 occupation (AL142)
natural sand
PERIOD 1 timber-lined drain (AF232)
edge of PERIOD 1 post-pit (AF294)
PERIOD 1 make-up
AL8/9
edge of modern pit (AF44)
pit (AF271)
PERIOD 1 or 2 pit (AF266)
PERIOD 3a midden (AL8/9)
pit
AL77
AL50
AL67
Boudican destruction debris (AL67)
PERIOD 2 occupation (AL61)
PERIOD 2 make-up (AL100)
PERIOD 1or2 occupation (AL136)
PERIOD 1 occupation (AL146)
cover loam
PERIOD 1 make-up (AL216)
natural sand
PERIOD 1 drainage gully (AF248)
CONTINUED BELOW
BARRACK BLOCK 1 ROOM 3 (BUILDING 131)
?VERANDAH
PERIOD 2 BUILDING 136
PERIOD 1 STREET
Sx4·3

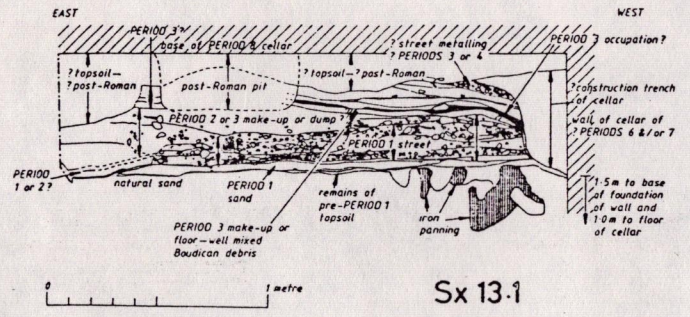

CONTINUED FROM ABOVE
playground tarmac make-up
turf
post-Roman topsoil (AL1)
PERIOD 3 dump
post-medieval pit (AF7)
AL8/9
PERIOD 3a dump (AL77/L81)
gravel spread
Boudican destruction debris (AL205/7)
SOUTH
PERIOD 1or2 gravel spread (AL138)
PERIOD 1or2 make-up (AL138)
?pit
AL224
PERIOD 1 make-up
28·05m OD
?post-hole
PERIOD 1or2 occupation
construction trench (AF312)
PERIOD 1 plinth (AF291)
0
1
2 metres
Sx4·3
?VERANDAH
BARRACK BLOCK 2 (BUILDING 132)


Sx4·4
SOUTH
NORTH
PERIOD 3 BUILDING 137 ROOM 1
post-Roman robber trenches (BF8/F29) PERIOD 3 foundation
PERIOD 3 make-up
PERIOD 1or2 gully (BF78)
redeposited Boudican destruction debris (BL32)
in situ PERIOD 3 foundation
PERIOD 3 demolition rubble
PERIOD 3 mortar floor (BL79)
BL32
cover loam (BL70)
PERIOD 1·2 plinth (BF5)
PERIOD 3a midden (BL21)
PERIOD 1or2 ?pit (BF77)
post-Roman pit/robber trench (BF9)
BL33
BL45
BL46
BL82
post-Roman robber trench (BF10) for PERIOD 3 foundation
PERIOD 1or2 occupation BL43
PERIOD 1 make-up (BL64)
cover loam (BL78)
PERIOD 3 demolition
Boudican destruction debris (BL18/L21)
PERIOD 1 yard surface (BL17)
PERIOD 1or2 make-up (BL65)
hearth
unexcavated
PERIOD 1or2 occupation (BL66)
BL82
PERIOD 1 make-up (BL64)
post-Roman robber trench (BF11) for PERIOD 3 foundation
post-Roman pit/robber trench (BF14)
PERIOD 3a pit (BF48)
35·35m OD
0
0·5
1 metres
? VERANDAH
BARRACK BLOCK 1 ROOM 13 (BUILDING 131)

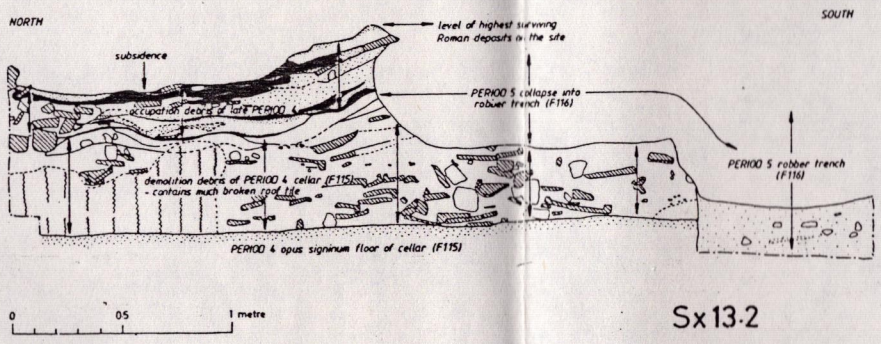
Sxs 4.5-7


PERIOD 2-4 STREET
? FOOTWAY
NORTH
SOUTH
playground tarmac
make-up
gas pipe
post-Roman topsoil (AL1)
26.35m OD
PERIOD 3 street metalling (AL243)
AL281
?gravelled surface (AL284)
PERIOD 3 dump/make-up
AL265
AL286
?PERIOD 2 street metalling (AL287)
make-up
edge of PERIOD 3 or 4 pit (AF292)
?PERIOD 2 ?ditch/pit
natural sand
AL189
PERIOD 3 dump
AL165
AL176
AL178
AL196
AL202
slot (AF234)
AL126
AL162
pit
AL166
?Boudican burning
gravel spread
PERIOD 3 foundation (AF34)
PERIOD 2 slot (AF244)
PERIOD 2 pit/midden (AF93)
AL140
AL148
natural sand
disturbed topsoil
disturbed natural
PERIOD 3 ?foundation (AF124)
26.55m OD
0
1
2 metres
Sx4.5
Sx4.6
EAST
playground tarmac
make-up
post-Roman topsoil (BL1)
?PERIOD 4 topsoil (BL3)
PERIOD 3 dump
machine clearance
26.6m OD
cover loam
disturbance
redeposited Boudican destruction debris (BL26)
redeposited Boudican destruction debris (BL27)
?PERIOD 3 gully
PERIOD 3 dump
CONTINUED BELOW
scorched PERIOD 2 occupation (BL81)
PERIOD 2 make-up (BL97)
natural
PERIOD 2 slot (BF93)
PERIOD 2 slot (BF61)
scorched PERIOD 2 occupation (BL13)
PERIOD 2 make-up (BL96)
cover loam
Boudican destruction debris (BL28)
PERIOD 2 slot (BF62)
pit
PERIOD 2 occupation (BL80)
BL27
PERIOD 2 make-up (BL99)
cover loam
ROOM 7
PERIOD 2 BUILDING 133 ROOM 6
ROOM 5
Sx4.6
WEST
EAST
PERIOD 4 BUILDING 138 Room 2
27.47m OD
PERIOD 4 tile spread (AL6)
PERIOD 3 make-up (AL13)
Boudican destruction debris (AL45)
scorched PERIOD 2 sand floor (AL47)
PERIOD 3A demolition debris (AL5)
PERIOD 3 shallow gully (AF86)
natural sand
PERIOD 4 foundation (AF41)
PERIOD 4 timber-lined drain (AF73)
dump
PERIOD 4 ?foundation (AF97)
natural sand
27.47 OD
PERIOD 2 BUILDING 134
1 metre
Sx4.7
WEST
CONTINUED FROM ABOVE
26.6m OD
BL40
PERIOD V2 make-up
BL13/L14 gravel spread
BL14
BL15
BL28
cover loam
PERIOD 1 pit (BF24)
PERIOD 2 drainage gully (BF72)
natural sand
2 metres
Sx4.6

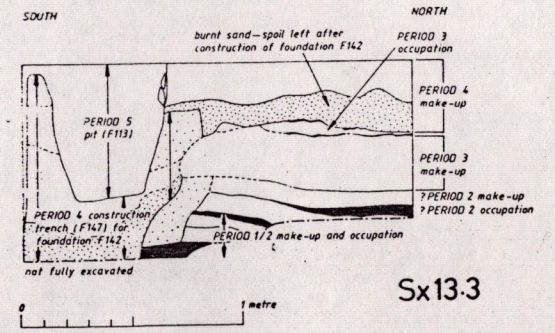
Sxs 13.1-6



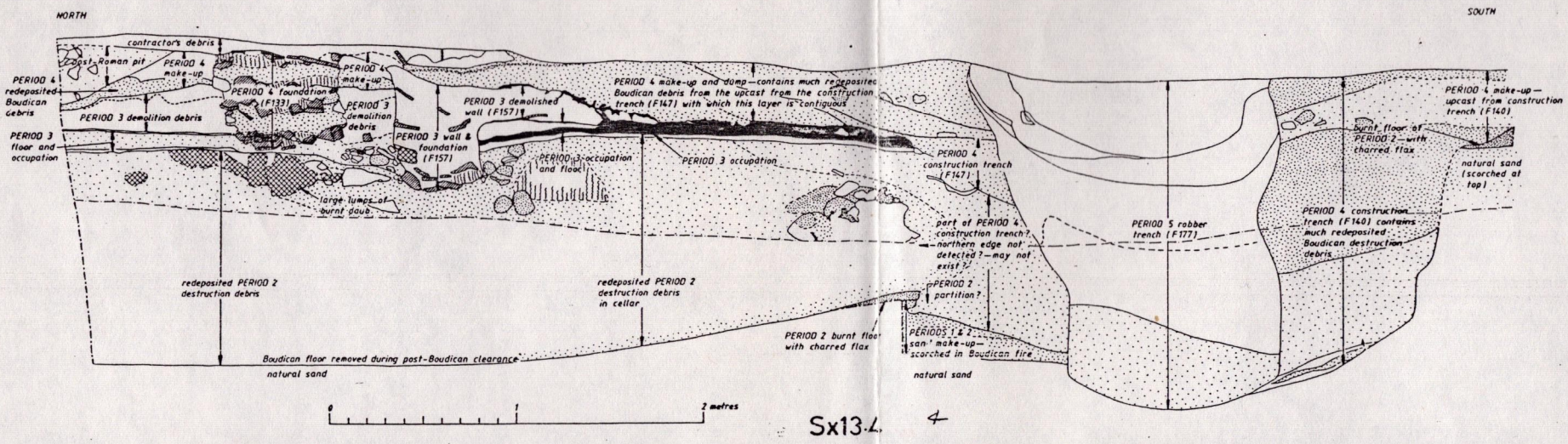
Sx 13·1



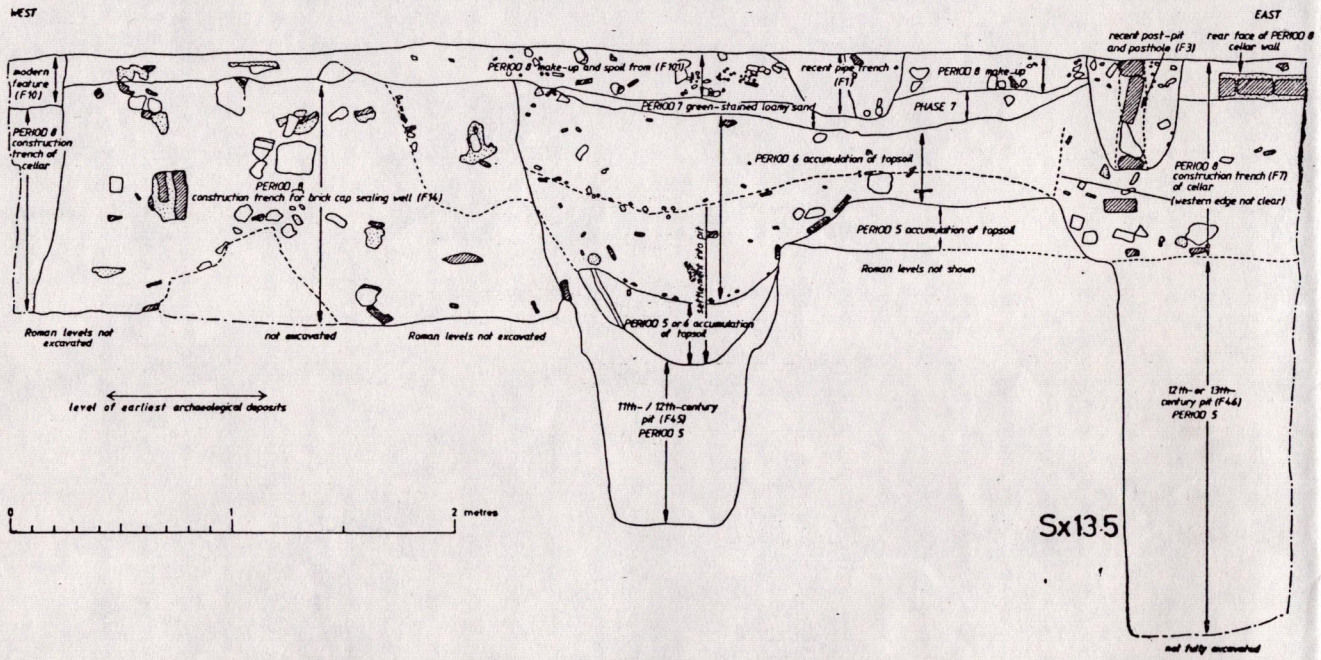
Sx 13·2



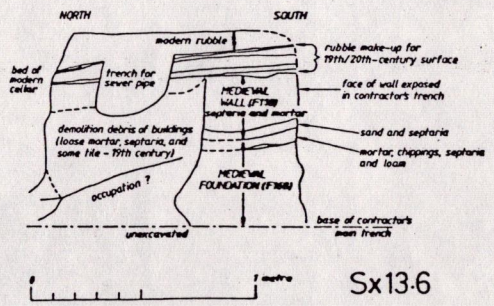
Sx 13·3



Sx13·4

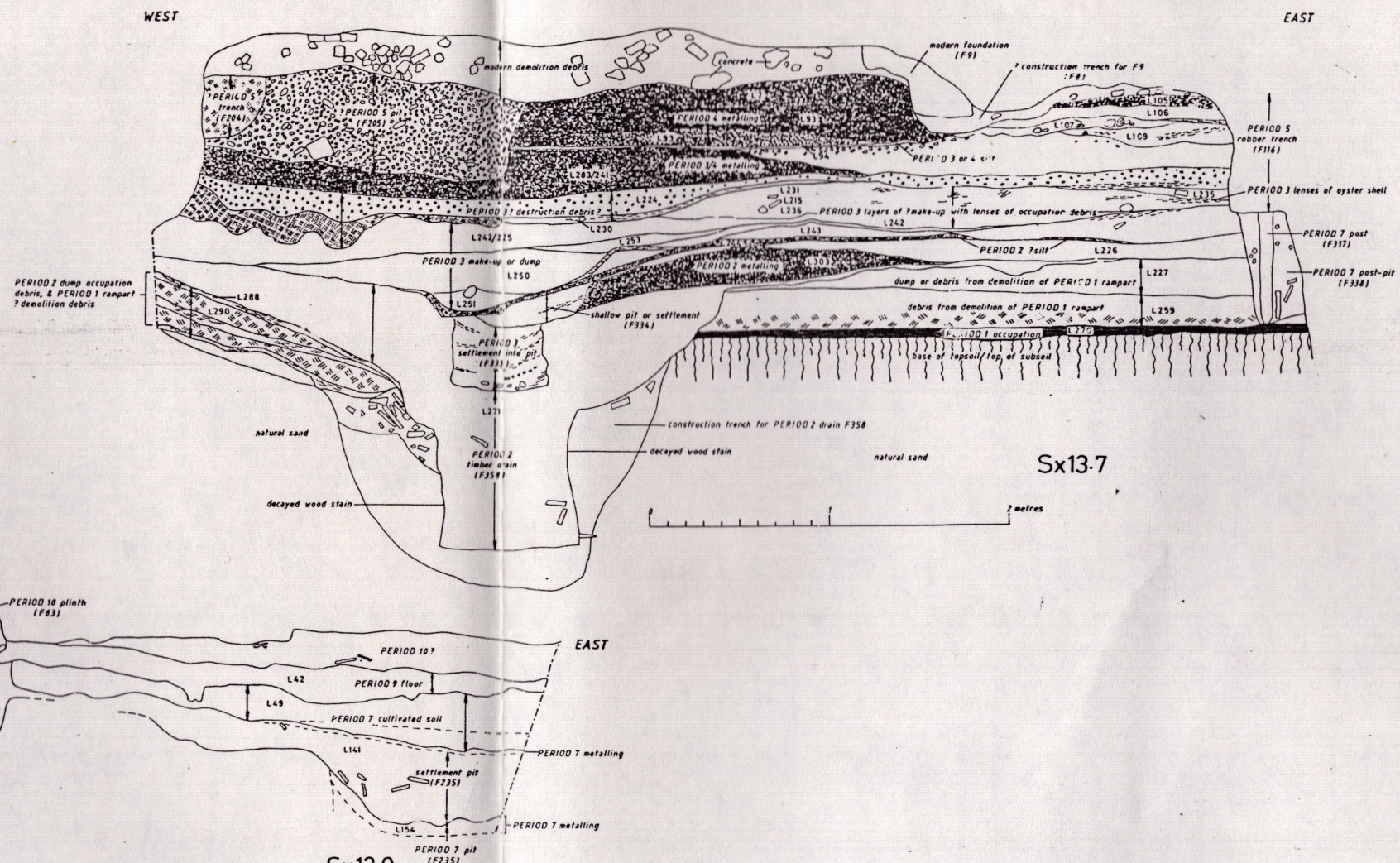


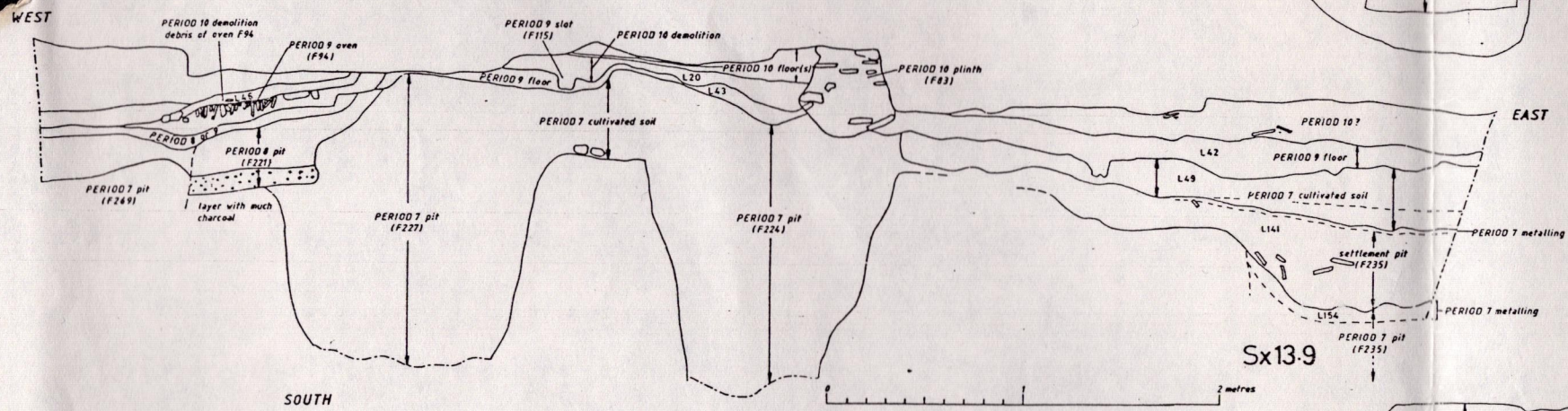
Sx13·5

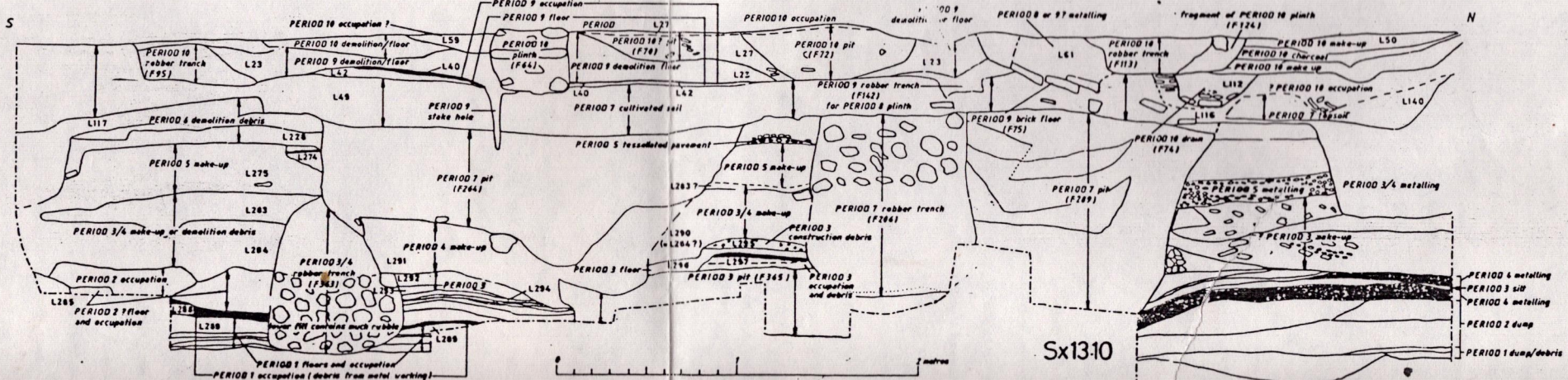


Sx13·6

Sxs 13.7-10


WEST
EAST
modern demolition debris
concrete
modern foundation (F91)
? construction trench for F9 (F81)
PERIOD 5 trench (F204)
PERIOD 5 pit (F205)
PERIOD 4 metalling
PERIOD 3 or 4 silt
PERIOD 3/4 metalling
PERIOD 5 robber trench (F116)
PERIOD 3 lenses of oyster shell
PERIOD 7 post (F317)
PERIOD 7 post-pit (F338)
PERIOD 7 destruction debris ?
PERIOD 3 layers of ?make-up with lenses of occupation debris
PERIOD 3 make-up or dump
PERIOD 2 ?silt
PERIOD 1 metalling
PERIOD 2 dump occupation debris, & PERIOD 1 rampart ? demolition debris
dump or debris from demolition of PERIOD 1 rampart
shallow pit or settlement (F334)
PERIOD 1 settlement into pit (F333)
PERIOD 1 occupation
Base of topsoil/top of subsoil
natural sand
construction trench for PERIOD 2 drain F358
decayed wood stain
PERIOD 2 timber drain (F359)
Sx13.7
2 metres


WEST
EAST
PERIOD 10 demolition debris of oven F94
PERIOD 9 oven (F94)
PERIOD 9 slot (F115)
PERIOD 10 demolition
PERIOD 9 floor
PERIOD 10 floor(s)
PERIOD 10 plinth (F83)
PERIOD 7 cultivated soil
PERIOD 8 pit (F221)
PERIOD 7 pit (F269)
layer with much charcoal
PERIOD 7 pit (F227)
PERIOD 7 pit (F224)
PERIOD 10 ?
PERIOD 9 floor
PERIOD 7 cultivated soil
PERIOD 7 metalling
settlement pit (F235)
PERIOD 7 pit (F235)
Sx13.9
2 metres
SOUTH
NORTH
PERIOD 4 mortar floor
PERIOD 7 robber trench (F159)
PERIOD 4 make-up or demolition
PERIOD 3 occupation
PERIOD 3 make-up floor
PERIOD 2/3 make-up
PERIOD 3 pit (F332)
PERIOD 2/3 make-up
PERIOD 3 occupation
PERIOD 7 robber trench (F11)
SAND BODY OF PERIOD 1 RAMPART
PERIOD 5 demolition of PERIOD 4 building
PERIOD 4 floor
PERIOD 4 make-up
PERIOD 4 occupation
PERIOD 5 foundation (F12) (excavated)
PERIOD 3 occupation
PERIOD 3 floor
PERIOD 2 make-up?
SANDY CLAY REVETMENT OF PERIOD 1 RAMPART
debris from destruction of rampart in PERIOD 2
northern face of PERIOD 1 rampart
PERIOD 1 ?occupation below rampart (greyish brown loamy sand with a few fragments of charcoal)
2 metres
PERIOD 1 demolition of PERIOD 4 building
PERIOD 4 floor
PERIOD 4 make-up
PERIOD 3 metalling and occupation
PERIOD 5 robber trench (F117)
PERIOD 3 occupation
PERIOD 2 occupation
charcoal filled feature (? pre-PERIOD 1 rampart)
PERIOD 2 posthole (F374)
Sx13.8
PERIOD 5 demolition of PERIOD 4 building
PERIOD 4 metalling
PERIOD 4 make-up
PERIOD 3 metalling and occupation
PERIOD 3 occupation
PERIOD 3 floor
PERIOD 3 occupation
PERIOD 3 make-up
PERIOD 3 occupation
PERIOD 3 make-up/floor
PERIOD 2/3 make up


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PERIOD 10 occupation ?
PERIOD 9 occupation
PERIOD 9 floor
PERIOD 10 demolition/floor
PERIOD 9 demolition/floor
PERIOD 10 plinth (F64)
PERIOD 10 pit (F76)
PERIOD 10 occupation
PERIOD 10 pit (F72)
PERIOD 8 or 9? metalling
fragment of PERIOD 10 plinth (F124)
PERIOD 10 robber trench (F95)
PERIOD 9 stake hole
PERIOD 7 cultivated soil
PERIOD 9 robber trench (F142) for PERIOD 8 plinth
PERIOD 10 robber trench (F113)
PERIOD 10 make-up
PERIOD 10 (charcoal)
PERIOD 10 make-up
? PERIOD 10 occupation
? PERIOD 7 topsoil
PERIOD 9 brick floor (F75)
PERIOD 10 drain (F74)
PERIOD 6 demolition debris
PERIOD 5 tessellated pavement
PERIOD 5 make-up
PERIOD 7 pit (F264)
PERIOD 7 pit (F269)
PERIOD 5 metalling
PERIOD 3/4 metalling
PERIOD 3/4 make-up or demolition debris
PERIOD 3/4 make-up
PERIOD 7 robber trench (F266)
PERIOD 3 construction debris
PERIOD 3 make-up
PERIOD 6 make-up
PERIOD 3/4 robber trench (F363)
PERIOD 3 floor
PERIOD 3 pit (F365)
PERIOD 3 occupation and debris
PERIOD 2 occupation
PERIOD 2 ? floor and occupation
PERIOD 1 floors and occupation
PERIOD 1 occupation (debris from metal working)
PERIOD 6 metalling
PERIOD 3 silt
PERIOD 6 metalling
PERIOD 2 dump
PERIOD 1 dump/debris
natural sand
Sx13.10
metres