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Phased Summary and Assessment Document of the Excavation at 172 – 176 The Highway, London Borough of Tower Hamlets E1

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HGA 02

PRE-CONSTRUCT ARCHAEOLOGY

Phased Summary and Assessment Document of the Excavation at 172 – 176 The Highway, London Borough of Tower Hamlets E1

Central National Grid Reference: TQ 34836 80702

Written and Researched by Alistair Douglas & Berni Sudds
Pre-Construct Archaeology, April 2004.

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Post-excavation manager: Frank Meddens

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1 ABSTRACT

1.1 An archaeological excavation was conducted by Pre-Construct Limited at 172 – 176 The Highway, London borough of Tower Hamlets, E1 (see fig. 1. The work was commissioned by CgMs Consulting Ltd. on behalf of George Wimpey Central London Ltd. It formed part of an agreed programme of archaeological work as part of the conditions for the granting of Planning Permission, The fieldwork was undertaken between August 2002 and February 2003.

1.2 The natural drift geology across the site was gravel and sand, which sloped from a high in the north at c. 6.90m OD to a low in the south at 1.54m OD.

1.3 The earliest evidence for human activity probably dates to the 2nd century AD and comprised of a few quarry pits located in the central part of the site. Close to the southern boundary what may have been a small area of Thames foreshore was exposed at 1.97m OD to 1.67m OD.

1.4 Intensive occupation of the site seems to have begun from the mid 3rd century. An E/W orientated ditch appears to be the northern boundary for a bathhouse complex, which included the baths themselves, a service yard immediately to the north, and a range of clay-and-timber buildings that partly enclosed the yard.

1.5 In its original form the baths appear to have been a double suit consisting of at least 12 rooms (the baths continued to the east and west). These included heated rooms that were probably the *tepidarium* (warm room), the *caldarium* (hot room) and a small apsidal room projecting to the north. A subsidiary furnace was built against the north wall while the entrance appears to have been from the south.

1.6 Three separate phases of major structural alteration were identified that included the extension of the bathhouse further to the south and beyond the edge of the excavation and two extra rooms added to northeast. The *caldarium* was sub-divided and the *tepidarium* extended. What had previously been an unheated central room became heated and the heated apsidal room became unheated. The final structural phase may have been precipitated by the apparent flooding of the hypocaust system.

1.7 The clay-and-timber buildings to the north of the baths were probably accommodation for clients of the baths and the whole complex may have been part of a *mansio* or inn.

1.8 Seven phases of clay-and-timber building(s) were identified spanning the period of the mid-3rd century until the mid 4th century. From these deposits the majority of the finds assemblage was retrieved, including a pottery group that enabled some of the phases to be dated to within 10

years. The Roman finds included many items of personnel adornment such as finger rings, hair pins, bracelets, a gold ear ring and part of a gold necklace.

1.9 The bathhouse complex may have gone out of use in around AD 375 and have been deliberately demolished by c. AD 400. Much of the building material and fixtures and fittings appear to have been robbed presumably to be recycled elsewhere.

1.10 Phase 9 in Area B (initially thought to be a separate phase of activity) was in the course of the post excavation analysis recognised as being part of Phase 11 and in the main part of the report was subsumed into that phase. However Phase 9 is still listed separately in the appendices. During further analysis for the publication the phasing will be re-numbered consecutively.

1.11 In the post Roman era, in the southern part of the site a marsh formed that blanketed the remains of the baths. To the north a horticultural type soil formed that was certainly being worked in the early post-Medieval period if not before.

1.12 The next intense use of the site was in the 17th century by which time both 'The Highway' and 'Wapping Lane' frontages had been developed for residential use. A notable feature was an 18th century brick-lined cesspit that contained a pottery and glass assemblage that may represent a group coming from a public house/tavern.

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Figure 1
Site Location
1:20,000

2 INTRODUCTION

2.1 An open area excavation was undertaken by Pre-Construct Archaeology Ltd. between the 30th September 2002 and 14th February 2003 at 172 – 176 The Highway, London Borough of Tower Hamlets E1. The site is situated on the east corner of the junction of The Highway and Wapping Lane (formerly Old Gravel Lane) (see fig. 2). The site was a rectangular area measuring 73m N-S by 30m E-W, and covering approximately 2190 m². Prior to demolition of existing structures it was occupied by Babe Ruth's Restaurant and an area of hard standing to the rear used as a car park. The central National Grid Reference is TQ 34836 80702.

2.2 The excavation was commissioned by Duncan Hawkins of CgMs Consulting Ltd., on behalf of George Wimpey Central London Ltd.

2.3 Mr A. Douglas supervised the archaeological work, the Project Manager was Mr P. Moore and the Post-excavation Manager was Dr F. Meddens. The fieldwork was inspected and monitored on behalf of the client by Mr D. Hawkins and by Mr N. Truckle of English Heritage (GLAAS). This report was written and researched by Mr A. Douglas and Ms B. Sudds.

2.4 The investigation was preceded by a desktop assessment prepared by Mr D. Hawkins and Mr R. Meager of CgMs Consulting Ltd. (2002) and by a archaeological evaluation undertaken by Pre-Construct Archaeology Ltd, between the 5th and 6th of August and the 9th and 27th of September 2002.

2.5 The evaluation (contexts [1] to [37]) in the car park area to the rear of Babe Ruth's Restaurant revealed Roman deposits including make-up layers, and possible *opus signinum* floor as well as stakeholes, a small pit, and a possible foundation trench. What was thought to be natural gravels were encountered at 3.85m OD, while the top of the Roman archaeological strata was at c. 4.40m OD. The Roman deposits were sealed by horticultural soils that dated to the 17th and 18th centuries. The garden soil was cut by a 19th century brick-lined well. These deposits will be integrated into the publication. Ground level in the car park was at c. 7.0m OD, while the ground level on The Highway to the north of the site was between 9.0m OD and 9.50m OD.

2.6 The completed archive comprising written, drawn and photographic records and artefacts will be deposited with the London Archaeological Archive and Research Centre (LAARC).

2.7 The archaeological investigation at 172 – 176 The Highway, Tower Hamlets, have a unique site code – HGA 02.

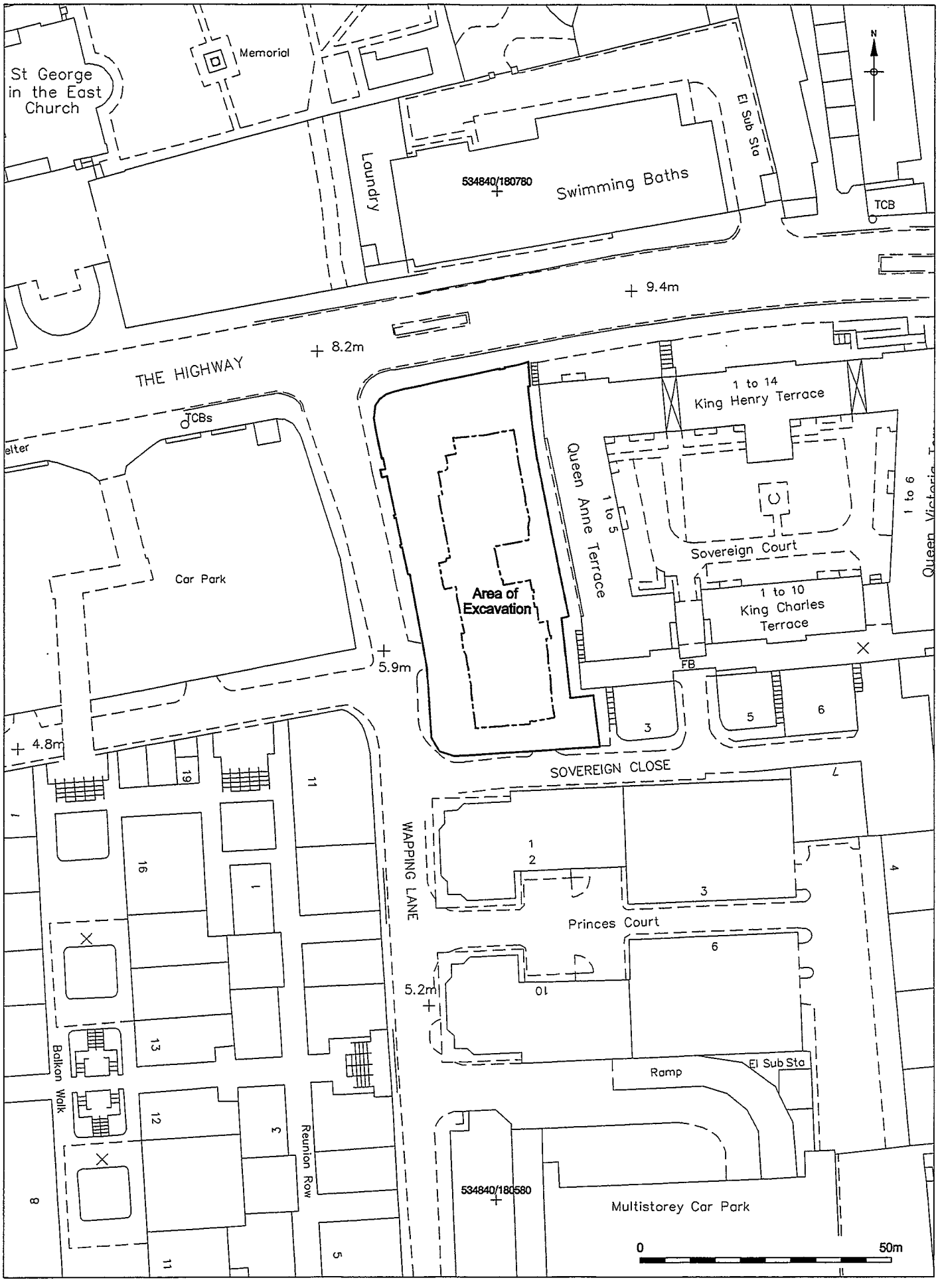

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Figure 2
Trench location
1:1,000

3 PLANNING BACKGROUND

3.1 The whole site lies within an Area of Archaeological Potential as defined in the Borough's Unitary Development Plan. Therefore in accordance with Local Authority and Government policy, as set out in PPG 16 "Archaeology and Planning", George Wimpey Central London commissioned CgMs Consulting Ltd. to establish the archaeological potential of the site and to provide guidance on ways to mitigate any impact of the proposed development on the archaeological resource.

3.2 Prior to demolition in 2002 a large restaurant complex built in 1995/96 occupied the site. The restaurant was built on 54 piled foundations, each of 600mm in diameter. These piles removed underlying archaeological deposits in the spaces they occupied, although this was mitigated at the time by a watching brief (Hammer, 1995).

3.3 Between c. 1957 and the late 1980's two buildings, one on the north side and one on the south occupied the site. The northern building had a semi basement up to 2.4m below existing ground level at its northern end and with a general base level of 5.80m OD. It was possible that Roman archaeological remains survived beneath it. These former post Second World War buildings and the 1990's restaurant with their deep foundations and extensive service runs were thought to have had a severe impact upon the archaeological resource (Hawkins & Meager, 2002).

3.4 The proposed redevelopment of the site included the demolition of the restaurant and the building of a residential complex with a semi basement car park approximately 2.50m deep (5.7m AOD) at the front (north) levelling back to ground level towards the rear (south) of the site. No details were provided at the time of excavation of the overall foundation design but it was understood that the new build was to be constructed on piled foundations. The proposed foundations would remove any underlying archaeological remains and the basement would impact on any surviving post-Medieval deposits. The development would also require new lift shafts and extensive service runs (ibid). In general it was thought that the proposed development would have a severe and widespread impact on any surviving archaeological deposits.

3.5 In consequence of the likely impact of the development George Wimpey Central London Ltd. commissioned CgMs Consulting Ltd. to write a desktop study and on their behalf CgMs commissioned Pre-Construct Archaeology to undertake an archaeological evaluation (Moore, 2002).

3.6 The evaluation clearly demonstrated that significant Roman archaeological remains did survive at a height of c. 4.40m and below. As a result discussions were held with the English Heritage Planning

Officer for Tower Hamlets and an agreed scheme of archaeological works was decided upon, to mitigate the impact of development.

3.7 The open area excavation revealed in the southern third of the site the unexpected survival of a Roman bathhouse complex. This archaeology is of national importance. According to London Borough of Tower Hamlets published archaeological policies (as stated in their Unitary Development Plan) "the permanent preservation in situ of nationally important remains will normally be required". To fulfil this requirement the pilling configuration for the new development was redesigned so as to ensure the bathhouse remains were left intact.

4 ARCHAEOLOGICAL AND HISTORICAL BACKGROUND

Prehistoric

4.1 The evidence for prehistoric activity in the vicinity of the site is scant. However an archaeological investigation to the west and on the north side of the Highway, at 77 – 101 in 1991 identified a pit containing fire cracked flint of possibly prehistoric date (SMR 082401).

4.2 Recent excavations at Tobacco Dock (Douglas, 1997 & 2004) on the opposite side of Wapping Lane revealed a dirty disturbed soil horizon between the earliest Roman deposits and the natural that contained scattered worked and burnt flint. Analysis of the technology employed in the production of the struck flint showed that at least some of the pieces were characteristic of the Bronze Age while others are thought to date to Mesolithic/Early Neolithic. From a possible prehistoric posthole a single sherd of flint tempered pot was recovered and three more similar pieces were recovered residually. The pottery probably dates to the Late Bronze Age/Early Iron Age.

4.3 The archaeological evidence suggests prehistoric activity in the area that was perhaps only occasional (perhaps seasonal) in nature but recurring over a long time.

Roman

4.4 The Highway is one of the traditional routes leading east out of *Londinium*. The route traverses the crest of a natural gravel terrace, land above an alluvial flood plain to the south and is an effective short cut across the top of the River Thames meander at Wapping and the Isle of Dogs. It may have connected other areas of Roman occupation.

4.5 Recent excavations have located a cemetery area to the east of *Londinium* and an east/west-orientated road (Barber and Bowsher, 2000). The road predates the first burials and extended beyond the cemetery area suggesting that its purpose was to connect with an area further to the east. An extrapolation of the known alignment of the road would meet the River Thames at Ratcliffe. It would not however follow the escarpment edge but pass c. 100m to the north of the site (Lakin, 2002). A 'settlement' at Ratcliffe has been suggested but as yet there is no archaeological evidence for such occupation.

4.6 A major Roman site was excavated in 1974 immediately to the east at Queen Anne Terrace and King Henry Terrace (LD74 and LD76). Here a square masonry structure has been interpreted as a watch-tower (Johnson, 1975, Merrifield 1983, p133). However the LD74 and LD76 sites have undergone a detailed reappraisal (Lakin, 2002), which casts doubt on the interpretation of the structure as a signal station and on the supposed military character of the site, suggesting that a mausoleum might be a more appropriate explanation. The

archaeological evidence assessed by Lakin does indicate a multi-phase and multi-functional development. The first period of activity occurs in the late 1st or early 2nd century and included a phase of quarrying followed by the use of the site for cremation burials with the 'tower' as a possible focus. The next activity occurred in later 3rd when fence lines later replaced by ditches and gullies demarcated land divisions. A shed or barn may have been built at this time and the animal bone assemblage suggests that butchery may have been practiced on site. This evidence may be an indication that the LD74 and LD76 sites lay near a drove way supplying *Londinium* or some other nearby settlement. During the middle of the 4th century, timber-lined tanks, drains and metalling suggested that the site had become 'industrial' in character. By the later 4th century the site appeared to revert to a cemetery.

4.7 A Roman site has also been investigated by the author at Tobacco Dock (TOC 02) immediately opposite (west of) 172 – 176 The Highway (Douglas, 2004). Here extensive Roman remains were discovered. These included terracing of the gravel edge. Between the terrace and the southern boundary there was a continual sequence of clay-and-timber buildings with earth–fast foundations which dated from the mid 3rd century until the end of the 4th century. These were identified by beam slots, postholes and beaten earth floors. Other associated features included a sequence of east/west boundary/drainage ditches, timber drains, and wells. The finds included a large pottery group that suggested specialised activities going on at the site during the late 3rd century. The Roman small finds assemblage was notable for a group of items of personal adornment that included bone hairpins, shale and copper alloy bracelets, a jet bead and bead spacer, and a copper alloy finger ring. Hobnail boots were found in situ, and further parts of leather shoes were also retrieved from Roman contexts. Among the objects related to personal hygiene was a pair of tweezers, and a scalpel. Household items included copper-alloy and bone needles, a large copper-alloy vessel, and a fragment of shale that may be part of a tabletop.

4.8 The watching brief (Hammer, 1995) found evidence of a burnt surface, and clay building material (daub) that were likely to represent Roman occupation. This material was observed at only two of the fifty-four pile positions examined and was recorded in the northwest of the site within 25m of the Highway frontage and 20m of the Wapping Lane frontage, at between 4.5m OD and 5.80m OD.

4.9 During the early Roman period of the 1st and 2nd centuries the Roman presence at Shadwell appears to have been quite spread out and low key. However by the middle of the 3rd century Roman activity dramatically intensified. By the 3rd century river levels had dropped dramatically. Between the end of the 1st and the middle of the 3rd century the figure may have fallen by as much as 1.5m (Milne, 1995, 79). Lower river levels meant that by the mid-3rd century the port of

Londinium was in decline. The construction of a defensive river wall (so that no goods could be unloaded) would signify its final demise. The failure of the port at *Londinium* may have benefited the settlement at Shadwell. The main harbour would have to have moved down stream and perhaps the Tobacco Dock/Babe Ruth area of Shadwell was part of the lost late Roman port.

4.10 With the site 'sandwiched' between known sites of Roman occupation to the east and west and with probable Roman remains recovered from the Babe Ruth site itself, the potential for extant Roman archaeological deposits was considered high.

Medieval

4.11 The excavations in the 1970's at LD 74 and LD 76 found a plough soil 0.20m to 0.40m thick between the Roman and post-Medieval layers, which was interpreted as being of possibly Medieval or Saxon origin.

4.12 A medieval bone needle was found in the locality (SMR 081042).

4.13 The site lies on the route of The Highway that led east out of the City of London connecting the known medieval settlements of East Smithfield, Bramley Shadwell, Wapping and Ratcliffe. Late medieval ribbon development might be expected along this route. However the excavations at Tobacco Dock produced only a few sherds of medieval pottery from a post-Roman agricultural type soil that blanketed the southern part of the site. The potential for medieval archaeological remains was therefore considered to be low.

Post-Medieval

4.14 The Desk Top Study (Hawkins & Meager, 2002) indicated that the site appeared to have been developed from at least the 17th century. Jacobe De La Feuille map of 1689/94 shows the Wapping Lane and the Highway frontages already built up with gardens to the rear. Any occupation prior to this was thought most likely along the Highway frontage. Stow writing in 1598 states that 'hath been of late, in place of elm trees, many small tenements raised towards Ratcliffe' and 'much building at Wapping, East Smithfield, Bramley, and Shadwell, all on the south side of the highway to Ratcliffe' (Stow, 375)

4.15 In the mid-17th century part of London's civil war defences were constructed at Shadwell, including a 'fort' and associated ditch and bank earthwork are supposed to be in close proximity to the site. The defensive system ran north from the Thames in the general area of Wapping Lane and cut The Highway. D. Sturdy (1975) asserts that this fort lay directly south of St George's Church and 100 – 100m to the east of the Roman signal station (neither of these structures is of course contemporary with the fort). No trace was found of these defences during the archaeological investigations at Tobacco Dock.

4.16 The excavations at Tobacco Dock did reveal that the site was probably occupied from 16th century onwards. Two 17th-century buildings were located along the southern boundary and the space between them used for cess and rubbish disposal. The finds assemblages from TOC were particularly rich and appeared to reflect and chronicle the changing fortunes of the locality. During the 17th century the Tobacco Dock site appeared to be inhabited by a relatively wealthy group of people. For the 18th century there is an apparent decline in socio-economic status, although there is evidence for the existence of an apothecary. In the early 19th century there may have been a coffee shop at Tobacco Dock or in very close proximity to it. The 19th century saw the development of the London Docks immediately to the south and the growth of a working class community that was predominantly dependant upon them for employment.

4.17 Rocque's map of 1746 shows the The Highway (then Ratcliff Highway) and the Wapping Lane (then Old Gravel Lane) frontages built up. Behind them lay Old Starch Yard, which led out onto Wapping Lane. During the 18th century the area was generally associated with sea faring and other maritime trades.

4.18 Horwoods map of 1819 shows that the site had changed little from 1746 but of course by then the nearby London Docks and Tobacco Dock served by a new 'tobacco warehouse' to the south of Pennington Street had been constructed. The docks would have attracted many labourers into the area seeking work. Indeed the population of the area trebled between 1801 and 1861 when it reached its peak of 17000 (Weinreb & Hibbert, 1994, 638). The well-to-do tradesmen, merchants and sea captains who had previously inhabited the area now moved to less overcrowded parts of London (Ibid).

4.19 The Ordnance Survey map of 1873 shows the site largely unchanged from 1819 and many of the buildings had probably been standing in 1819 and even in 1746. Of interest however is the presence on the site in 1873 of two public houses, one fronting The Highway and the other Wapping Lane.

4.20 The site remained largely unaltered until the early 20th century by which time the building in the northwest corner had been demolished (Ordnance Survey map 1921).

4.21 During the Second World War the site was subjected to heavy bombing and razed to the ground.

4.22 By 1957 the Ordnance Survey map shows that the southern half of the site had been rebuilt with the 'National dock Labour Board Office' and the northern half cleared of ruins. Cartographic evidence (O.S. Map 1968) shows that by 1968 the northern half had been rebuilt and was occupied by an L-shaped building that fronted both Wapping Lane and The Highway. Both these buildings remained until the late 1980's when

they were demolished and the site remained vacant until 1995/96 when the restaurant was built (Hawkins & Meager, 2002).

5 GEOLOGY AND TOPOGRAPHY

5.1 The site is on the north bank of the River Thames some 0.65km north of the present day waterfront and occupies a bluff that separates the floodplain from the terrace gravels.

5.2 The Geological Map TQ 38SW, 1: 10,000 shows the site to contain Alluvium overlying Terrace gravels, London Clay and the Woolwich and Reading Beds. The alluvium, Langley Silts a brickearth type deposit is shown running east-west along the northern boundary of the site.

5.3 The recent excavations at Tobacco Dock found a gravel terrace at a high of 6.42m OD extending down from the northern boundary but ending in a sharply defined terrace edge two thirds of the way down the slope. The lowest level on the gravel was at 2.95m OD. The investigations at TOC 02 demonstrated that in the northern part of this site there was undisturbed Quaternary terrace sediment, Taplow Gravel.

6 ARCHAEOLOGICAL METHODOLOGY

6.1 The evaluation strategy had been to excavate two trial trenches (Trenches 1 and 2) and a test pit in the car park behind the former restaurant so as to evaluate the nature and extent of the archaeological deposits.

6.2 The evaluation trenches were dug with a 180° mechanical excavator (JCB) under archaeological supervision, which broke out the hard standing and removed modern and post-Medieval deposits. For health and safety reasons the trenches were stepped. Trench 1 was located immediately behind the restaurant and measured 8.60m x 8.60m at the top and 5.60m d 3.50m at the base. A 1.50m x 1.50m sondage was excavated in the base of the trench so that the maximum depth of the trench was c. 3.80m and the lowest OD level was at 3.53m OD.

6.3 Trench 2 was in the south of the site and measured 16.70m x 5.60m at the top and 3.80m x 2.20m at the base and had a maximum depth of c. 3.60m. The lowest level in the trench was at 2.89m OD.

6.4 Between the two trial trenches a test pit was dug by 180° mechanical excavator under archaeological supervision. The test pit measured 2.60m x 2.60m and was 4.0m deep. The lowest level was at 2.44m OD

6.5 Roman archaeological deposits were only recognised in Trench 1. These included floor makeup layers, and a possible *opus signinum* floor as well as stakeholes, a small pit, and a possible foundation trench. What was thought to be natural gravels was encountered at 3.85m OD, while the top of the Roman deposits was at 4.40m OD. The Roman deposits were sealed by horticultural soils that dated to the 17th and 18th centuries.

6.6 As a consequence of these discoveries a post demolition open area excavation was decided upon. The plan was to have a rolling programme of machining the modern overburden and had excavation of the archaeological deposits. A 360° mechanical excavator under archaeological supervision was employed in removing the modern overburden and revealing the surviving Roman remains.

6.7 The open area excavation measured 58.50m N-S, 20.50m E-W and covered an area of c. 1199.25m^2. For supervisory and excavation control reasons four separate areas (Areas A, B, C and D) were designated and these areas have been summarised in this report but where possible are phased across the site (see fig. 3).

6.8 The Trench was cleaned by hand, recorded and photographed. Recording of the deposits and features was accomplished using the Single Context Recording Method on pro forma context and planning sheets. Contexts were numbered and are shown in this report within

squared brackets. Plans and sections were drawn at a scale of 1:10, 1:20, or 1:50 as appropriate.

6.9 Four Temporary Bench Marks were established within the Trench. The marks had been transferred from a bench mark on the southwest corner of the church St. George - the – East, the value of which is 10.85m OD.

TBM 1 = 5.48m OD

TBM 2 = 4.41m OD

TBM 3 = 5.47m OD

TBM 4 = 3.24m OD.

6.10 The archive consists of

Context sheets	1321
Plans 1:20	670
Sections 1:10	76
Black and white print film	9
Colour slide film	9

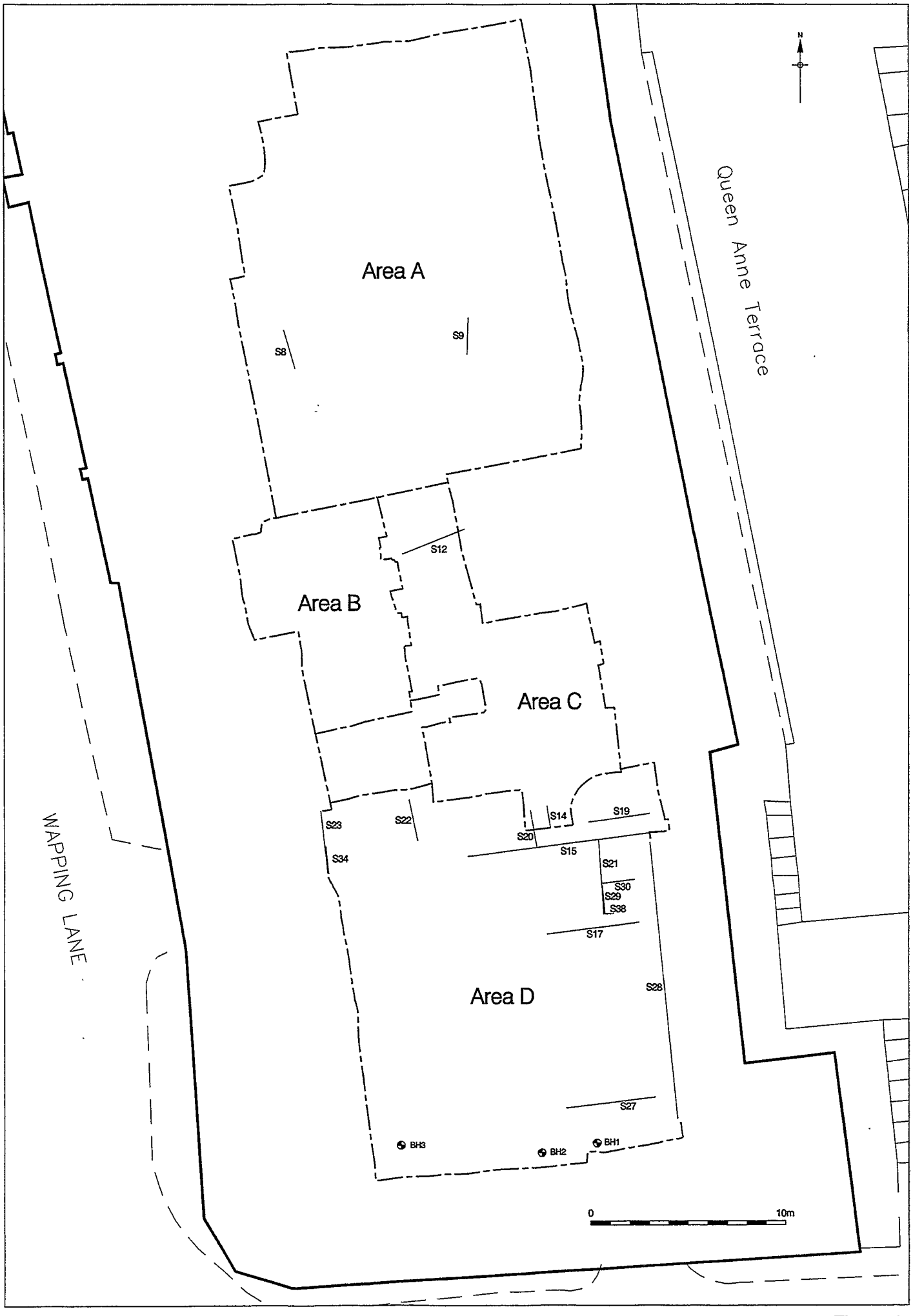

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Figure 3
Area and section location
1:250

THE ARCHAEOLOGICAL SEQUENCE

7. Phase 1 (not illustrated)

7.1 Phase 1 represents the earliest strata recorded during the excavation comprising the natural drift geology.

Area A

7.2 In the central part of Area A, a layer of silty sandy gravel [179] measuring 9.0m E-W, 2.0m N-S and 0.32m thick was encountered at between 6.65 and 6.34m OD. This band of dirty gravel overlay natural sands that extended across the whole of area A and B and was exposed in Areas C and D.

Area B

7.3 In Area B, natural orange yellow sand and gravel [898] was exposed across the whole of the area. The deposit sloped to the south from a high of 4.56m OD to a low of 3.62m OD.

7.4 It was observed, in the sides of cut [900] (see Phase 3) that the natural sand [898] overlay a stiff, mid orangey grey clay [911]. This deposit was at 3.27m OD.

7.5 Overlying [898], was a deposit of silty sand [901] which measured 3.20m N-S, 0.90m E-W but was truncated to the west by later intrusions and continued beyond the edge of the excavation to the east and south. The highest level was at 4.18m OD and the lowest was at 4.0m OD. It may be that this deposit was the result of colluvial action.

Area C

7.6 In the central part of Area C, a sondage measuring 3.50m x 0.75m was dug into the underlying natural deposits. A reddish brown sandy gravel [908] was encountered at between 3.57 and 3.47m OD. This deposit appeared to be truncated by E/W orientated palaeo-channel [906] (fill [863]), measuring 1.10m wide and 0.25m deep. The fill comprised a yellow grey sandy silt and gravel.

Area D

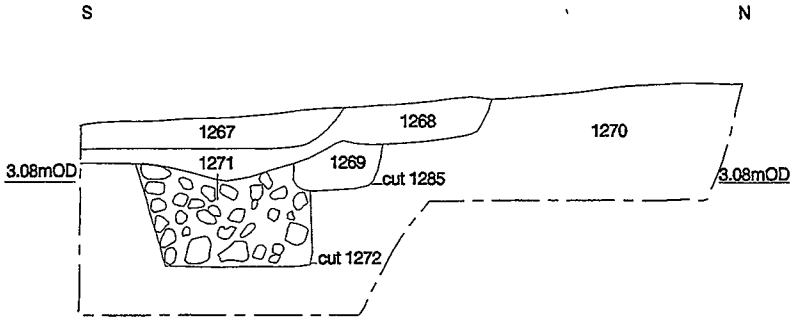
7.7 In the northwest of Area D a small area of what was probably natural sand and gravel [1301] was exposed. The extent of the deposit measured 2.10m E-W and 0.45m N-S and was at a level of 3.51m OD.

7.8 What may be redeposited natural sands and gravel [1277] and [1278] were also revealed circa 5.50m further to the south. Here, an area measuring 6.0m E-W by 2.0m N-S was laid bare. The level was between 2.93m and 2.58m OD.

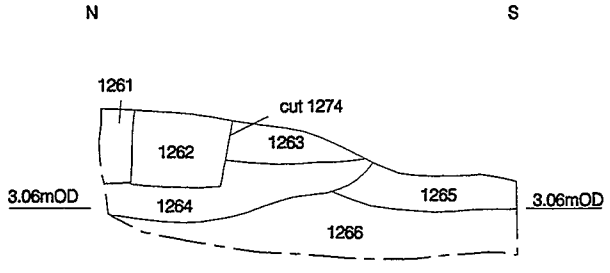
7.9 In the very south of the area, what was probably natural sand and gravel [1304] was recorded at the bottom of a hand dug sondage that measured 2.50m N-S by 1.10m E-W. The deposit had a distinct incline to the south and fell from 1.89m OD to 1.54m OD.

7.10 What may have been natural sands and gravel [1265] and [1266] was also recorded in the west facing section 22 in the northwest of the area. The level was between 3.33m and 3.16m OD. In the east facing section 23 natural sands and gravel [1270] were recorded at 3.30m OD. The east facing section 34 showed a sequence of natural deposits, silty clay [1386], underlain by a sandy silt [1387], which covered a sandy gravel [1388]. These deposits (see fig. 4) were between 3.20m OD and 2.80m OD.

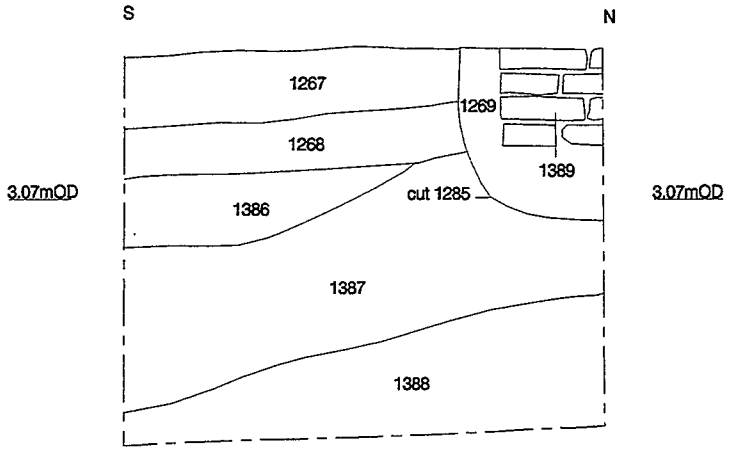
7.11 A natural clay [1307] was recorded in sections 29, 30 and 38 (see fig 18) in the northeast of the area underlying the foundations [1289] (see Phase 10.2, para 16.14). The level on the clay was at 2.51m OD.



Section 23
East facing showing wall foundation (1295) and natural deposit (1270)



Section 22
West facing showing robber cut [1272] and natural deposits (1265) and (1266)



Section 34
East facing showing natural deposits (1386), (1387) and (1388)

Figure 4
Sections 22, 23 & 34
1:40

8. Phase 2 – 2nd century AD (not illustrated)

8.1 Phase 2 represents the earliest human activity and occupation on the site. This phase was only encountered in Areas B and D. In Area B what may be Roman quarry pits were identified. Although these features could only be broadly dated to the Roman period, they do predate the 3rd century Roman occupation deposits and could therefore date to the 1st or 2nd century.

8.2 In south of Area D, identified in a hand-dug sondage, overlying natural sands and gravel was organic sandy silt, which may have been laid down by natural processes in the 2nd century. This sandy silt could represent the Thames foreshore and a piece of probable driftwood lying on top of it may be part of a ship timber.

Area B

8.3 Layer [901] (see Phase 1) was truncated by a large sub-circular pit [888] (fill [806]) measuring 2.50m N-S, at least 1.90m E-W and 0.31m deep. The cut was characterised by sloping sides falling to a slightly concave base. The highest level was at 4.30m OD. The fill was a silty sand with flecks of charcoal.

8.4 Two other pits truncated the natural sand [898]. First, cut [857] (fill [858]) sub-circular in shape and truncated to the north by later intrusion cut [816] (see Phase 4). The pit measured 1.30m E-W, 1.0m N-S and was 0.18m deep and had slightly sloping sides falling to a flat base. The highest level was at 3.87m OD. The fill was gravelly silty sand with flecks of charcoal. What was probably the same pit was recorded to the north as cut [848] (fill [847]). Cut [848] measured 2.06m E-W, 1.10m N-S and 0.36m deep. Fragments of cbm as well as charcoal flecks were noted within the fill. The highest level was at 4.16m OD. The overall dimensions of pit [857]/[848] were 2.40m N-S, 2.06m E-W and a maximum depth of 0.36m.

8.5 The second pit [877] (fill [876]) measured 2.34m N-S, 1.25m E-W and was 0.23m deep but was truncated to the east and continued south beyond the limits of the excavation. The cut had sloping sides falling to a flat base. The highest level was at 3.87m OD. The fill was a sandy gravel with flecks of charcoal.

8.6 The features described above probably represented Roman quarry pits originally dug to extract sand or gravel.

Area D

8.7 In the south of the area, covering the natural sands and gravel [1304] (see Phase 1, para 7.9) was an organic sandy silt layer [1300] 0.10m thick. The level was between 1.97m and 1.67m OD. This deposit could have been laid down by natural processes and may represent the

foreshore. From this deposit a single sherd of pot was recovered that dates to AD 150 – 200. Lying on top of the layer [1300] was a fragment of oak plank [1303]. The wood was very weathered and eroded and may have travelled some distance in water. It could be simply have been driftwood or it may have been used as a chock to rest other objects on top of the foreshore. The fragment, which measured 0.43m long by 185mm wide and 45mm thick, had once been part of a much larger plank. The origin of the plank is uncertain but it was pierced by two unusual round holes, which might indicate that it had been a ship timber (see Appendix 7).

9. Phase 3 c. AD 230 – 260 (Fig 5)

9.1 This phase dates to the middle of the 3rd century and is present in all parts of the site. In Area A an E/W aligned boundary ditch was recorded extending across the site.

9.2 In Area B a clay-and-timber building (S 1), which was defined by floor makeup deposits, the remnants of beaten earth floors, beam slots and postholes, appears to have been erected. A small pit that contained part of an amphora was found beneath the E/W beam slot and may have been a ritually placed deposit. A large rubbish pit dug within the footprint of the building probably represents the end of this phase of activity.

9.3 A probable beaten earth floor overlain by possible occupation deposits and possible hearths was found in the north of Area C. A series of stakeholes was identified that truncated the floor. These remains probably represented the continuation of the building (S 1) identified in Area B, east into area C.

9.4 In the south of Area C an open 'yard' surface seems to have been laid down. The 'yard' was immediately adjacent to and to the north of the bathhouse unearthed in Area D.

9.5 In Area D a large bathhouse was exposed and the primary phase of that structure is represented in Phase 3.

Area A

E/W boundary ditch

9.6 In the southern part of Area A, an E/W orientated linear feature which traversed the site, truncating natural sand and gravel, was identified. The feature was excavated in four separate slots which appeared to show a continuous ditch up to 2m wide and approximately one metre deep. The base of the ditch appeared to incline towards the west, sloping gently from circa 5.20m to 5.01m OD over a distance of c. 17m.

9.7 In the eastern most slot, cut [165] (fills [175], [174], [164]) measured 2.00m wide and 0.85m deep and had steeply sloping sides falling to a slightly rounded base. The highest level was at 6.03m OD and the lowest was at 5.18m OD. A sequence a sandy silts filled the ditch.

9.8 A second slot was excavated 1.5m to the west of [165]. Here the v-shaped ditch was assigned context [154] (fill [152]) and measured 2.0m wide and 0.90m deep (see fig. 6, section 9). The highest level was at 6.10m OD and the lowest was at 5.20m OD. From the silty sand fill pottery was recovered dating to AD 230 -260.

9.9 A third slot, was excavated a further 1.20m to the west and here the ditch cut [177] (fill [171]) measured 1.0m wide and 0.79m deep. The highest level was at 5.93m OD and the lowest at 5.14m OD. The fill produced pottery dating to AD 200 – 260.

9.10 On the west side of the Trench, a fourth slot was dug through the feature revealing it [141] (fills [178], [139]) to have measured 2.0m wide and 1.10m deep. The profile showed a convex steeply sloping north side and a south side that initially sloped at a 3:1 gradient but then steeply sloped circa 0.90m to a flat base (see fig. 6, section 8). The highest level was at 6.01m OD and the lowest was at 5.01m OD. The primary fill [178] was a brickearth type that probably represented slumping of the south side of the ditch. The slumped material was covered by a silty sand [139].

Area B/C

9.11 The clay-and-timber building (S 1) was located in Areas B and C and comprised of a series of elements outlined in detail below. The brickearth make-up slab defined the limits of the surviving elements of structure (S 1). It is possible these represent the base for both external and internal surfaces. Their make-up is quite different however to that of the confirmed external yard surfaces to the southeast. Despite the considerable thickness of the wall remnants encountered it is a balance of probabilities more likely that these remains reflect a single structure and that the wall elements constitute internal divisions within it.

Brickearth slab

9.12 In the north of area B, context [886] represented a layer of compacted silty sand, which measured 2.25m N-S, 1.55m E-W and was between 0.04 and 0.07m thick but was truncated to the north, east and south. The layer sloped to the south from 4.42m OD to 4.32m OD.

9.13 A similar deposit of silty sand [883], measuring 2.30m N-S by 2.28m E-W and 0.09m thick, was recorded 0.50m to the east. The highest level was at 4.45m OD and the lowest 4.34m OD. Two pot sherds of East Gaulish Samian ware dating to AD 230 – 260 came from this layer.

9.14 Overlying [883] was a layer of gravelly sand [823] which measured 3.50m N-S, 2.20m E-W and which was up to 0.10m thick. The level was at 4.68m OD sloping to the south to a low of 4.46m OD.

9.15 On the west side was a number of surface make-up layers [872] and [864]. Layer [872] was a silty sand that measured 1.40m N-S, 0.72m E-W and up to 0.18m deep. The highest level was at 4.31m OD and the lowest level was at 4.28m OD. The layer was truncated to the north, south and east but continued west beyond the edge of excavation. Just to the north of [872], a similar deposit [864] was located. Here the layer

measured 2.0m N-S, and 0.84m E-W with the level between 4.31m OD and 4.21m OD.

9.16 To the south of the deposits described above were two dumped deposits. The basal layer [873], which overlay the natural [876], was a firmly compacted silty sand, measuring 0.80m N-S, 0.50m E-W and 0.02m thick. The highest level was at 3.87m OD. Deposit [873] was overlain by a layer of crushed and broken cbm [784] measuring 2.5m N-S, 1.90m E-W and 0.05m thick. The level on this layer was between 4.01m OD and 3.90m OD.

9.17 Approximately 1.20m to the north of [784] a similar deposit of compacted silty sand with frequent crushed mortar, fragments of chalk and charcoal and moderate concentrations of gravel was recorded as [754]. It measured 0.95m E-W, 0.45m N-S and was 0.10m thick. The level was between 4.08m and 4.03m OD. Pottery from [754] dated to AD 230 – 260. Layers [784] and [754] were partially overlain by a silty sand [783] measuring 1.60m E-W, 1.10m N-S and 0.10m thick.

9.18 All the deposits described above may be the remnants of brickearth slab laid down to form make-up dumps of a level platform on which to build.

Floor

9.19 A number of fragmentary floor elements of building (S1) survived and are described in detail below.

9.20 In Area B layer [864] (see para 9.15) was partially overlain by a compacted brickearth [846], perhaps the remnants of a beaten earth floor. The deposit measured 1.86m N-S, 0.85m E-W and 0.16m thick and was truncated to the north, south and east but continued to the west beyond the edge of the Trench. The highest level was at 4.36m and the lowest 4.25m OD.

9.21 Approximately 3.0m to the south of [846] further possible floor deposits were identified. On top of [783] were patches of what were probably the remains of beaten earth surfaces [767], [749] and [753]. These were all at the same level at circa 4.05m OD. Layer [767] was a firmly compacted silty sandy gravel that measured 1.20m N-S and 0.70m E-W. Compacted silty sand with frequent crushed mortar, fragments of charcoal and gravel was represented by context [753]. The compacted silty sand [749] measured 1.75m by 1.60m. Layer [749] was scorched red by burning. This may indicate the position of a hearth. Roman pot came from [783] and [749], and pottery dating to AD 225 – 300+ was found in [767]

9.22 In the north of Area C, the remnants of what may have been a beaten earth floor, were identified. The surface was composed of firmly compacted silty sandy clay [684] that measured 4.80m N-S, 3.0m E-W

and was up to 0.16m thick. The level was between 4.71m and 4.45m OD. From [684] pottery was retrieved with a deposition date of AD 240 – 260.

Occupation Layer

9.23 The floor [684] (see fig. 7) was partially overlain by a sandy silt [683] with frequent fragments of burnt daub and charcoal. The layer measured 0.88m by 0.82m but was truncated to the east. This deposit was interpreted as a trample layer.

Hearths

9.24 Also overlying [684] was a possible hearth [682], composed of silty sand scorched red. Layer [682] measured 0.46m E-W, 0.30m N-S and was c. 0.10m thick but was truncated to the south. The level was at 4.66m OD.

9.25 Further to the south was a second possible hearth [923], represented by a deposit of sandy gravel that had been scorched red. This deposit measured 0.90m N-S, 0.20m E-W and was 0.10m thick. The level was at 4.27m OD.

Beam Slots

9.26 In Area B the layers [886], [883] and [823] were truncated by a possible beam slot [751] (fill [750]). The L-shaped cut measured 3.80m E-W, was about a 1.0m wide and 0.20m deep. The beam slot continued west beyond the edge of excavation but at its east end it returned to the south, where it was truncated by a later intrusion. The massive width of this section of the wall might be explained by it actually having been formed during a phase of robbing. The cut nevertheless defines the original wall alignment. The N/S axis was 2.80m long, 0.38m wide and was truncated to the south by a later intrusion. The cut was characterised by vertical sides falling to a flat base. The fill was silty sand with frequent fragments of daub, charcoal and occasional flecks of *opus signinum*. A quantity of iron nails <419>, <420>, <423>, <424>, <425>, <430> and pottery dating to AD 230 - 260 came from the fill.

9.27 To the south of beam slot [751] and on the same N/S alignment, was a linear cut [834] (fill [833]) that probably was a continuation of the same beam slot. Cut [834] measured 1.40m N-S, 0.50m wide and 0.30m deep and had vertical sides falling to a flat base. The fill was a silty sand with moderate amounts of chalk and charcoal fragments which produced two iron nails <429> and <457> and Roman pottery.

9.28 In the south of area B and on the same N/S alignment as [751] and [834] was another feature, cut [910] (fill [909]). It measured 0.66m N-S, 0.38m E-W and 0.58m deep and continued south beyond the edge of excavation. The fill was silty sand and produced pottery dating to AD

230 – 260. It may be that cut [910] was a continuation of the N/S beam slot represented by [751] and [834]. If so then the wall represented by beam slot elements [751] / [834] / [910] measured at least 8.50m.

Postholes

9.29 Features that were identified as possible postholes were recorded truncating the floor or floor makeup deposits. The postholes, particularly the ones located adjacent to the beam slot like [886], [871], [789], [894], [891], [803], [746] and [751] could represent temporary scaffolding used during construction. Alternatively they may have been used to give additional support to the ceiling. Or, they may represent foundations for a robbed sill beam over which an earth wall was built. If this was the case the beam slots also assigned to this phase may be a later rebuild. The other postholes may constitute internal partitions and define separate rooms within the building or alternatively represent internal fixtures of some kind.

9.30 Four of the postholes [891], [894], [866], [871] still held the tips of wooden piles, and these were lifted. The piles were grouped in pairs, [892] and [895] in the north and [868] and [869] circa 5.0m to the south. One of the pile tips [869] was hewn from a whole log and the others were radially cleft ¼ logs. The best-preserved, [869] measured c. 210mm x 180mm and is considered to be 'fairly large' for a timber framed building in Londinium (see Appendix 7).

9.31 The details of all the postholes are given in Table 1 below. The postholes were characterised by vertical or near vertical sides falling to concave or pointed bases and all had similar grey sandy clay or clayey sandy silt fills.

Table 1 postholes in Area B

Context No	Shape	Dimensions Longest axis first	Depth	Fill No	Timber
803	Circular	0.29 x 0.27m	0.30m	802	
805	Circular	0.30m in dia	0.67m	804	
891	Circular	0.13m in dia	0.74m	893	892
894	Circular	0.13m in dia	0.71m	896	895
746	Sub-circular	0.28 x 0.16m	0.16m	745	
748	Sub-circular	0.12 x 0.10m	0.17m	747	
789	Sub-rectangular	0.35 x 0.25m	0.58m	788	
827	Sub-rectangular	0.46 x 0.20m	0.15m	826	
831	Circular	0.34 x 0.32m	0.20m	830	
866	Sub-circular	0.25m in dia	0.88m	865	869
871	Sub-circular	0.20 x 0.15m	0.70m	870	868
875	Triangular	0.50 x 0.30m	0.08m	874	
741	Sub-circular	0.70 x 0.70m	0.28m	742	

Stakeholders

9.32 In Area B, a group of four stakeholes [772], [777], [774] and [791] truncated the earlier quarry pit [848]/[857]. The function of these stakeholes is unclear although they are grouped close to postholes [827], [741], [871] and [866] and could define an E/W internal partition. They all had steeply sloping sides falling to a pointed base and were filled with a similar dark grey black clayey sandy silt. Full details are given in Table 2 below.

Table 2 details of stakeholes in Area B

Context No	Shape	Dimensions Longest axis first	Depth	Fill No
772	Circular	0.08m in dia	0.17m	773
777	Circular	0.08m x 0.06m	0.13m	776
774	Circular	0.08m in dia	0.09m	775
791	Circular	0.05 x 0.04m	0.07m	790

9.33 In Area C, a group of eight stakeholes truncated the probable floor deposit [684] (see para 9.22). All were characterised by steeply sloping sides falling to a pointed base and were filled with a similar light grey orange, silty sand. The full details of the stakeholes are given in Table 3 below. The function of these stakeholes is uncertain but some form of internal fixture seems likely.

Table 3 details of stakeholes in Area C

Context No	Shape	Dimensions Longest axis first	Depth	Fill No
703	Circular	0.07m in dia	0.09m	702
689	Circular	0.09m in dia	0.09m	688
691	Circular	0.06m in dia	0.08m	690
693	Circular	0.05m in dia	0.07m	692
695	Circular	0.07m x 0.06m	0.09m	694
697	Circular	0.07m in dia	0.10m	696
699	Circular	0.09 x 0.08m	0.16m	698
701	Circular	0.07m in dia	0.08m	700

A Portico Entrance ?

9.34 The length of the beam slot represented by [910] (see para 9.28) was probably not in position for very long, as it was partially overlain by a compacted sandy silt [907]. Layer [907] measured 1.55m N-S and 0.45m E-W but was truncated to the east and west and continued south beyond the limits of the excavation.

9.35 A construction cut [900] for a substantial masonry foundation truncated layer [907]. The cut measured 2.82m N-S, 0.94m E-W and was 0.75m deep but continued south beyond the limits of the excavation. The

sides were vertical falling to a flat base. The cut held very compacted lumps of chalk [899], typically measuring 150mm x 150mm x 120mm and a backfill of silty sand [903]. A single sherd of Roman pottery came from the backfill.

9.36 It appears that building (S 1) represented by the beam slots, floors, and floor makeup layers underwent some alteration and the masonry foundation could have supported a portico entrance.

E/W wooden drain

9.37 On the west side of the Area B, context [880] represented the construction cut for an E/W orientated timber drain. The cut was 0.84m long, 0.44m wide and 0.16m deep but was truncated to the east by a later intrusion and continued to the west beyond the limits of the excavation. It had sloping sides falling to a rounded base. The construction cut was filled with a clay sand [835]. Fragments of a water-pipe junction collar (SF <458>) and the impression of what was probably a wooden pipe bound by iron hoops was all that remained of the drain. The void left by the rotted pipe was represented by context [636] and measured 0.17m wide by 0.14m deep.

Ritual Deposit

9.38 Underneath beam slot [751] (see para 9.26) was a feature which may have been a ritual foundation deposit represented by cut [779] (fill [778]). The cut was sub-circular and had vertical sides falling to a concave base. It measured 0.28m in diameter and was 0.30m deep. The pit contained part of an amphora dating to AD 200 – 400, which appeared to have been deliberately placed and covered by a silty sand with flecks of cbm, daub and charcoal. The placing of pots at the end of beam slots apparently as a votive offering has been recorded by the author before, on other Roman sites, for example at Lefevre Walk Estate at Old Ford (Douglas 1999).

Pit

9.39 To the west of beam slot [834] (see para 9.27) was a pit [829] (fill [828]) measuring 0.80m N-S, 0.69m E-W by 0.15m deep. The feature may have continued further to the north beyond a later intrusion, where it was recorded as pit [820] (fill [819]). Cut [820] measured 0.96m N-S, 0.60m E-W and was 0.20m deep. Both cuts were characterised by sloping sides falling to a flat base and had similar fills of dark brown / black sandy silt with frequent fragments of charcoal and burnt daub. The two cuts probably represented a single linear feature orientated N/S. From [819] pot dating to AD 200 – 400 was retrieved and from [828] pot dating to AD 250 – 370. Cut [829] truncated posthole [831] perhaps an indication that at least this part of the building was no longer habitable. It may that the pit was for refuse disposal and the feature may mark the end of this phase of activity.

Area C/ Yard Area

9.40 In the south of Area C context [862]/[924] represented an extensive layer of compacted sandy silt and gravel c. 0.15m thick that overlay the natural sand and gravels. The layer had been deliberately laid down to level and consolidate the ground prior to construction. The level was between 3.73m and 3.59m OD.

9.41 Layer [862] was truncated by an E/W orientated ditch [926] (fill [925]) which measured 4.50m in length, 0.75m in width and was 0.25m deep, and was butt-ended to the west but continued beyond the edge of the Trench to the east. It had sloping sides falling to a flat base that inclined to the east. The fill was a silty sand. The ditch, which produced no artefactual evidence, was probably open for only a short period and may have been for drainage. This feature was sealed by the surface makeup layer [752] (see para 9.45).

9.42 Overlying [862] was a sequence of construction spreads. Context [860] represented a layer of crushed and compacted chalk measuring 1.14m N-S, 0.70, E-W and up to 0.09m thick. Similar deposits were recorded as [859] measuring 7.50m E-W, 4.30m N-S and 0.06m thick, [807] measuring 1.03m by 1.02m and [861] measuring 0.50m E-W and 0.40m N-S.

9.43 Layers [860] and [859] were covered by a deposit of silty sand and gravel [825] with frequent fragments of chalk and occasional fragments of cbm and oyster shell. It measured 8.66m E-W and 3.12m N-S, and the finds comprised of Roman pottery.

9.44 Layer [825] was in turn overlain by a spread of compacted sandy mortar [812] with occasional lumps of chalk and flint pebbles. The layer measured 5.0m E-W, 1.80m N-S and was up to 0.10m thick.

9.45 Overlying [812], [807] and [861] was a compacted clayey silt [752] measuring 7.70m E-W, 7.10m N-S and 0.15m thick. Pottery from [752] dates to AD 240+. Partially overlying [752] was a deposit [643] of silty sand measuring 2.90m E-W, 1.08m N-S, and 0.19m thick. Pottery from this dates to AD 240 – 400. Layer [643] was overlain by a clayey silt [443] that measured 1.07m N-S, 0.70m E-W and 0.10m thick, and pottery from it was Roman in date.

9.46 The deposits described above appear to form the makeup layer for a cobbled surface [711] that survived in the east of the Trench. Layer [711] was formed from cobble sized chalk lumps and measured 2.90m N-S, 1.40m E-W and 0.15m thick but continued to the east beyond the limits of the excavation. The level was at 4.00m OD. A sherd of Roman pot came from its surface.

Area C/D – Bathhouse (Building1)

9.47 In the south of the site the extensive remains of a multi-roomed Roman masonry structure (Building 1) were revealed over the majority of Area D and are described in detail below (see para 9.50 – 9.90). This major discovery has been interpreted as a substantial bathhouse.

9.48 Immediately to the north of the bathhouse and also overlying [812] (see para 9.44) was a spread of sandy mortar [796] measuring 2.44m E-W and 1.42m N-S. Layer [796] was truncated by construction cut [736] for the original build of a fire-box (see para 9.83). The fire-box was set against the north wall of the bathhouse and would have provided some of the heating for that building (B 1).

9.49 Partially overlying [796] and abutting the apsidal end of the bathhouse was a deposit of silt sand [447] measuring 1.80m by 0.60m and 0.12m deep. Pottery dating to the 3rd century was retrieved from [447]. These make-up deposits may indicate that the cobbled surface (see para 9.46) would have respected the bathhouse (B 1) to the south.

Construction of Building 1

9.50 Phase 3 represents the initial construction and use of this building. The full extent of the original build continues beyond the limit of excavation to both the west and east but the remains revealed are of a substantial structure. The exposed extent of Building 1 in Area D measures 17.75m (east to west) by 16.95m (north to south) and comprises at least ten rooms, of which six or more were heated. The original structure may have been 'L' shaped in plan with a possible entrance to the south and at least one apse to the north. The internal layout of the structure follows a fairly regular grid pattern, particularly centred on the putative access point to the south.

9.51 The majority of Building 1 survives only to foundation level although towards the northeast of the structure better preservation is evident. The north wall and apse, adjacent to the eastern baulk, remain intact to a height of circa 1.75m. At this point the standing masonry is almost at floor level, some 3.96m OD. Despite episodic robbing following disuse the condition of the structural remains is very good.

9.52 The topography of the Roman ground surface on site slopes fairly significantly from the north, down towards the river beyond the southern limit of excavation. The change in height is as much as 5.36m, from c.6.90m OD in the north to 1.54m OD in the south. Building 1 was exposed in plan only and not excavated in detail. Consequently, the sub-floor was not fully exposed throughout the structure but where uncovered ranges in height from 2.40m and 2.60m OD. The natural slope must have been terraced to create a level platform in preparation for the construction of Building 1.

Foundations: [1115], [1194], [1256], [1305].

9.53 The foundations of Building 1 were investigated along the south E/W wall ([1044]). They cut through phase 2 sandy silt layer [1300], the latter dated from a single sherd of pottery to the mid to late 2nd century. They extend to a maximum depth of 1.48m OD, rising to 2.08m OD to the south of Building 1 and approximately 1.80m OD, rising to 2.70m OD, to the north. This gives a maximum depth for the foundations of 0.60m to the south and 0.90m to the north. The difference, equating to roughly one Roman foot (*pes*), may be related to topographical considerations. They are all deep enough, however, for their base to be resting on ground unaffected by freezing and thawing (Adam 2001, 125). The maximum recorded width of the foundations is 1.00m (in excess of 3 Roman feet) and remains roughly the same from base to top.

9.54 The construction of the foundations, recorded in most detail to the south of the building [1305], involved the excavation of a straight-sided, flat bottomed trench [1306] and preparation of the base of the cut with a flinty gravel deposit for drainage [1369] (see fig. 8, section 27). The foundation was then constructed from irregular chalk or Kentish Rag stone and mortar and the cut backfilled. There is no evident coursing with the stones randomly distributed within the mortar matrix.

Walls: [920], [921], [946], [947], [998], [1022], [1034], [1036], [1044], [1131], [1185], [1291], [1404].

9.55 The walls of the original build consist of a rubble core with *opus mixtum* stone facing, laced with courses of tile and brick, the latter for levelling and strengthening purposes. The bond alternates between stone and tile or brick varying between two and four courses for both but the height ratio is usually composed of two thirds stone and one third brick or tile. Where evident the rubble core comprised mortared flint, chalk and tile. The facing stone is commonly Kentish Rag although chalk, flint, Reigate stone and Septeria are also evident. All of the blocks are roughly hewn and measure between 50mm and 350mm.

9.56 The lacing courses include fragments of both brick and tile, almost entirely in the sandy London 2815 fabric group. Occasional examples of fabric 2454 are evident, thought to originate in Kent, but fabrics 2459a, 2459b, 2459c, 2452, 3004 and 3006 represent the most frequently occurring types.

9.57 The full size complement of Roman brick forms has been identified including, *bipedales*, *sesquipedales*, *lydion*, *pedales* and *bessales* although most are fragmented. Complete, or near complete *lydion*, *pedales*, *bessales*, *tubulus* (box-flue tile) and *tegulae* (roof tile) are occasionally evident but despite the width of the walls (0.60m = approximately 2 *pes*) matching the size of the largest roman brick, the

bipedalis, no complete examples of this type, or the next size down, the *sesquipedalis*, were identified. Indeed, the tile and brick fragments were generally restricted to facing the rubble core, although they occasionally form a complete horizontal bond linking both faces (wall [921]). Both techniques are a well-paralleled feature of *opus mixtum* (*Ibid*, 143).

9.58 A single triangular brick was recovered from the loose building material assemblage on site that, if not coincidental, may have been made by sawing a brick in half. This technique is common on the continent in the construction of brick facing but occurs far less frequently in Britain (*Ibid*, 145-8; Brodribb 1987, 49). At Shadwell the fragmented tile and brick from the lacing courses is entirely irregular. These fragments are likely to be the result of accidental breakage and are therefore probably re-used. The walls also have a 0.85m wide base course of tiles, set on top of the foundations. The function these rafts provide is unclear, although as with the lacing courses, they may serve as a method of levelling.

9.59 Two of the original walls demonstrate slight variations in their construction. Instead of a combination of brick and tile, the lacing courses in the apse wall [946] are built entirely of *tegulae* placed flange side up. Unlike the remainder of the original build the thickness of the wall does not match up with the size of a *bipedalis*, but more appropriately the average length of a *tegula*, *circa* 0.40m. The use of the *tegulae* flange side up is likely intentional and may have been to hold the mortar more effectively (K. Sabel pers comm). External wall [1044] also exhibits a slight difference in being faced with more regularly hewn stone blocks, all of which are of Kentish Rag. As this represents an external wall probably facing onto the river, on the proposed entrance side, this may be significant.

9.60 The bonding material used for all of the original walls is lime mortar. The colour and composition, in terms of the proportion of lime to aggregate, varies considerably as may be expected from batch production. Colours range from cream, yellow, beige and grey to green, orange and brown. Sand represents the most commonly occurring aggregate, although occasional to moderate tile, brick and siltstone and occasional flint, charcoal and even copper alloy grains were also incorporated. The ratio of lime to sand varies from one part lime to two parts sand up to one part lime to five parts sand. More commonly the ratio is one part lime to four or five parts sand. The sand is up to 3mm in size, although the majority is below 1mm.

Description of the rooms

Rooms 3, 4 and 5

9.61 Rooms 3, 4 and 5 represent the three southernmost of the original build and the narrowest from north to south. The eastern two (rooms 4 and 5), and probably the western one (room 3), are of roughly the same

dimension, measuring 2.20m N/S and 4.90-5.35m E/W. Only the foundations, or at most three courses of wall survive to a maximum height of 2.76m OD. They appear to have been originally unheated, having no brick pillars that are indicative of a *hypocaust* system. These may have been truncated as no trace of the original sub-floor survives but any evidence for flues, that would link them to heated rooms to the north, is also absent. Due to later modification and truncation little can be determined about their original function although the remains of a vent, probably representing a water drain, were recorded in Room 5, penetrating the south wall through to the exterior. The vent is incomplete but appears to be curving towards an apex and is likely to have had a semi-circular arch at the top.

9.62 To the south of Room 4 walls [1131] and [1034] continue beyond the external E/W arm of wall [1131]. Although truncated, the eastern of the two walls projects 1.30m from the external wall before returning to the east, providing a narrow addition to the south of the original build with an internal measurement of 0.75m N/S. Later renovation and truncation again prevent a clear interpretation but the size and location of this feature may suggest it formed part of the entranceway. This would be further corroborated by the position of the heated and non-heated rooms (see interpretation below).

Room 7

9.63 Directly to the north of Room 4 is a much larger room measuring up to 4.80m E/W by 5.60m N/S. Only the foundations remain to the west, north and south, but to the east the walls survive to a height of 2.79m OD (3 courses). To the north the wall has been partially robbed at a later date but the truncation of the south wall, although contemporary with the use of Building 1, is thought to relate to a later phase of re-modelling. Originally Rooms 4 and 7 are likely to have been divided. As with the rooms to the south later re-modelling obscures the original appearance but the absence of flues and evidently later addition of pilae stacks may suggest Room 7 was at first un-heated.

Rooms 6, 8 and 9

9.64 Rooms 6, 8 and 9 are located to the east and west of Room 7 and appear to be of approximately equal dimension. Only Room 8 has been fully revealed in plan, measuring 5.30m E/W by 5.55m N/S. Contrary to Room 7, however, 6, 8 and 9 contain the remains of a hypocaust system suggesting that they were originally heated.

The Hypocaust system

9.65 Literally translated hypocaust means 'a furnace that heats from below' (Yegül 1992, 356). Hypocaust systems are generally constructed of stacks of *bessales* bricks (c.0.20m = $^2/_3$ pes) built at the appropriate interval to enable *bipedales* bricks (c.0.59m = 2 pes) to be placed

above to bridge the stacks and create a base for a 0.20 – 0.40m thick suspended floor (*suspensura*). The under-floor space thus created would have been heated by a furnace (*praefurnium*) usually housed in a structure adjoining the main building, or in an internal room near the outside wall. This peripheral location results from the constant necessity of supplying fuel and maintaining the fire. The hot air, heated by the fire, flows under the floor and, in many cases, is drawn up through the walls by means of specially designed hollow rectangular flue tiles (*tubuli*) attached beneath the interior render and wall finish. The hot air passes from room to room at sub-floor level via flues penetrating the walls. When coupled with the maintenance of non-stop slow-burning fires these systems provided a very effective method of heating (Ibid 368).

9.66 From the original build the hypocausts of Rooms 8, 9, 11, 12/13 and 14 were all linked by the insertion of flues (see below). Together these form a suite of heated rooms, although above the floor the rooms probably remained divided. Room 6 is likely to have been connected to heated rooms to the west and possibly north in a similar fashion but these extend beyond the limit of excavation and, to the north, if present would have been truncated during the post-medieval period.

9.67 Where revealed in full the stacks of tiles in the heated rooms, known as *pilae*, are constructed on compacted sand and gravel sub-floors. Original sub-floors were identified in Rooms 6, 8, 11 and 13 recorded as [1092], [1195], [1287] and [1308]. The level of the sub-floors varies between rooms and from the north to south of the building by up to 0.35m, reaching a maximum of 2.87m OD in Room 11. Where excavated they range from 0.05m to 0.16m thick and butt up to the surrounding walls.

9.68 To the north of the building, although truncated, the base of the floor or *suspensura* is likely to have started at approximately 3.96m OD. By subtracting the minimum height of the associated sub-floor a maximum height for the *pilae* can be derived in this part of the building of 1.36m. Due to over-excavation of the sub-floor in this area (context [1308]) the value is perhaps likely to be nearer to 1.20m.

9.69 It is not possible to determine the original height of the floors throughout the heated rooms but they may have varied by up to 0.20 or 0.30m from north to south, reflecting the discrepancy in the sub-floor level. Alternatively, extra bricks may have been used in the *pilae* to the south of Building 1 where the sub-floor is lower, around 2.52 to 2.64m, to level the floor. If not levelled the height of the stacks, as estimated, would encompass any change in floor height if restricted to 0.30m, still enabling the hypocaust to function. If made level throughout the heated rooms, however, the *pilae* would need to have been up to 1.44m tall in Room 8. Commonly, *pilae* fall between 0.65 and 1.00m in height, although examples up to 1.70m have been recorded (Ibid 357).

9.70 The *pilae* in Room 6 ([1120], [1122] – [1130], [1133] – [1134], [1191], [1212] – [1228]) and Room 8 ([955] – [969], [972] – [973], [977] – [983], [986] – [992], [1001] – [1004]) are comprised entirely of *bessales* bricks. They are regularly spaced out in a grid squared to the walls. The interval between the stacks, taken from centre to the centre, measures 0.55 to 0.60m suggesting they are likely to have been bridged by *bipedales* bricks. This is verified where fragments of collapsed floor have been recovered. The individual *pilae* have been truncated, surviving to a maximum height of 0.56m or 11 courses (*pila* [962]). Comprised of *bessales* bricks, the stacks usually measure from 0.19m by 0.19m up to 0.21 by 0.21m in plan ($^2/_3$ pes) with each individual brick being from 0.30m to 43mm thick.

9.71 A number of the *pilae* were examined on site to determine the fabric composition of the bricks used. Of the eight stacks analysed ([958] – [965]), all from Room 8, the majority were in fabric 3006. The single brick remaining of *pila* [963] represents the only exception, identified as fabric 2459A. All, however, are of the early local sand based 2815 group, common to the London region. Interestingly, the bricks have been laid with their base, or sanded side, upwards. As all of the bricks have been used in this way it is likely to have been a deliberate measure although it is not clear why.

9.72 The bonding material varies between individual stacks but is predominantly recorded as a green, brown or black silt or sandy silt. This may represent the remains of a degraded mortar from which the lime content has subsequently been leached or alternatively a bedding layer to which lime was never added. Lime is generally unsuitable for use in areas that are continually exposed to high temperatures, including hypocaust systems (K. Sable pers comm.). In contrast, a smaller quantity of *pilae* has been bonded with a light brownish yellow or pinkish lime mortar, occasionally containing crushed tile. This variation in bonding may be the result of piecemeal construction, particularly the result of different sessions of work. Only three stacks ([999], [1000] and [1005]) from Room 9 fall within the limit of excavation, all demonstrating the same composition as those within Rooms 6 and 8.

Rooms 11, 12/13 and 14

9.73 Rooms 11, 12/13 and 14 are located immediately to the north of Rooms 7 and 8. They are smaller than Rooms 6 and 8 but are also heated. Room 11 measures 2.55m E/W by 3.80m N/S and Room 12/13, the latter originally undivided, measures approximately 6.50m E/W by 3.80m N/S. Room 14 represents the only apsidal space identified measuring a maximum of 3.00m E/W by 1.25m N/S. The latter is butted onto the north wall of Building 1 but is considered to be contemporary with the first build as the space is linked to Room 13 by an original flue built into wall [920]. The maximum surviving height of walls in this area is 3.96m OD.

9.74 The original *pilae* in Rooms 11, 12/13 and 14 consist primarily of *bessales* bricks but also include other forms of brick and tile and in some cases are fairly irregular in composition and spacing. *Pilae* [1178] and [1179] in Room 11 comprise entirely of *bessalis* bricks and *tubuli*, the latter used on end to form a hollow, vertical tube. The width of the *tubuli* used in *pila* [1179], measuring 0.19m, ties in almost exactly with the width of *bessalis* used directly beneath. *Pilae* [1172], [1173] and [1180], also in Room 11, include *pedalis* bricks measuring up to 0.30m. In *pila* [1173] a single *pedalis* forms the base for the smaller *bessales* bricks. The *pilae* in Rooms 12/13 and 14 similarly contain *pedales* and box-flue tiles in addition to *bessalis* bricks.

9.75 It is possible that the difference in the construction of the *pilae* in these rooms is chronological. Indeed, the use of *tubuli* in the formation of *pilae*, in addition to other forms of tile and brick, can be paralleled elsewhere (Brodribb 1987, 94). As noted above, however, the fragmented and re-used nature of much of the building material may suggest that the differences simply result from the changing availability of resources during construction.

9.76 To the east of Room 12/13, just within the eastern section at the limit of excavation, the remains of four substantial piers of brick and tile have been recorded aligned north to south ([1257], [1258], [1259] and [1260]), (see fig. 9, section 28). Their full dimension cannot be determined but they measure from between 0.50m to 0.82m N/S and are spaced at intervals of 0.42m to 0.48m. Up to eleven courses remain, surviving to a maximum height of 3.38m OD. The two northern piers, [1257] and [1258], are up to 0.82m wide at base, narrowing after three and five courses, to 0.60m (2 pes). The southern piers, [1259] and [1260], survive to a maximum of five courses but appear to be narrower (up to 0.50m wide). The piers have been constructed on a foundation of rough chalk blocks ([1256] – not investigated) and are comprised of mixed fragments of randomly coursed tile and brick.

9.77 As the piers were not excavated their function and original appearance remain uncertain although it is likely that they represent the truncated base of an arcaded sub-floor wall, flanking Room 12/13 to the east. If so the piers would have curved upwards to meet each other forming four consecutive sub-floor arches or flues and probably supported a wall above floor level. The number of arches, together providing unobstructed ventilation, and evidence of scorching and vitrification on the pier bases indicates that the main source of heat for the hypocaust system is likely to have been located immediately adjacent, or at a short distance to the east of Room 12/13. The sole use of brick and tile in the construction of the piers substantiates this suggestion as ceramic building material is commonly used to build structures, including *praefurniums*, that are expected to withstand high temperatures (Yegül 1992, 368-9). Given the arrangement of heated rooms and linking flues this heat source is likely to have served only the eastern suite of rooms.

Flues and *tubuli*: [1015], [1016], [1186/7/9], [1405], [1406], [1407], [1408], [1409].

9.78 The presence of flues, penetrating the sub-floor walls, enabled hot air to circulate around the hypocaust, heating all connected spaces. The majority of the flues recorded in Building 1 are truncated but there appear to be two separate types. The main group comprise a simple opening in the sub-floor wall near to the base of the hypocaust. Flues [1186/7], [1408] and [1409] (see fig 8, section 17) have vertical abutments framing openings that range in width from 0.32m to 0.40m in width. The abutments are usually faced with tile and brick, as evident in flues [1408] and [1409], although [1186/7] simply consists of a break in the normal stone and tile coursing. The use of tile and brick in the abutments is both to channel loads from above and to withstand high temperatures (as above). Depending on where the flues begin in the sub-floor wall the base is either comprised of a course of tile, or less frequently stone.

9.79 Only flue [1408], penetrating wall [920] (see fig. 10 section 15), remains completely intact and was recorded in any detail. The flue is built off a lacing course of brick and tile running through wall [920]. The lacing course comprises complete *lydion* bricks and fragments of other brick and *tegulae* all in fabric 2459a. The abutments are entirely of fragmented brick in fabrics 2452, 2459a and 2549b. The top of the flue is arched, consisting of two whole bricks placed on end and forming a triangular apex. The first brick is a complete *lydion* in fabric 2452 and the second a complete *sesquipedalis* in fabric 2459a. Both act by channelling the load of the wall down to the abutments. The wall directly above the flue is corbelled, formed of additional tile and brick butting up to the arch. The top of the flue penetrates the next lacing course in wall [920] having a maximum height of 0.82m.

9.80 Features [1015] and [1016] have been significantly truncated by later modification but consist of a layer of fragmented tile and brick set onto the sub-floor of Room 9 (unexcavated). As excavated in plan [1015] measures 0.54m E/W by 0.70m N/S and [1016] 0.32m E/W by 0.64m N/S. A *tegula*, placed flange up, projects out from the west of [1015], appearing to extend through wall [998]. It is probable that these features represent the base of two separate flues originally linking the sub-floor space of Rooms 8 and 9.

9.81 The second type of flue recorded is much smaller, formed of *tubuli* running through the walls located just beneath the *suspensura*. Given their location, at the top of the sub-floor wall, only three survive penetrating wall [920] (Flues [1405], [1406], [1407], (see fig. 11, section 19). It is not possible to determine how widespread their use may have been in Building 1. Formed of box-flue tiles in fabric 2459a and 3004 each flue measures from 0.10m to 0.12m in width, 0.18m to 0.19m in depth and up to 0.54m in length. The tiles not only penetrate wall [920], providing additional channels for the hot air, but also link with others

running horizontally around the inside of Room 14, directly heating the walls.

9.82 The middle flue, [1406], may have been inserted slightly after the outer two as it has been built into a section of wall above arched flue [1408] that is different from the main build of wall [920]. The space above flue [1408] has been blocked in with a combination of *opus signinum*, chalk, septeria and brick. The brick is almost entirely in fabric 2459b that has a slightly later date range than much of the 2815 group. The use of the *opus signinum*, however, may indicate that the construction of this section may simply have formed part of secondary element of the original build, during the process of fitting out and flooring (K. Sabel pers comm.). This section of *opus signinum* may therefore represent the base of the floor in this area.

Ancillary furnace (fig. 11, sections 14 & 20)

9.83 Immediately to the north of Building 1 (in Area C, see para 9.48) the remains of a couple of mortar spreads were recorded. Overlying mortar spread [812] was a secondary layer of sandy mortar [796] measuring 2.44m E/W and 1.42m N/S. This layer [796] was truncated by the construction cut [736] for the original build of a possible ancillary furnace. This feature, abutting the north wall [920], represents one of the few elements of Building 1 to be investigated in any detail. The cut [736] measures 2.36m E-W, 1.40m N-S and is 0.73m deep. It has steeply sloping sides falling to a flat base. Context [993] represents a bedding layer of silty sand 0.06m thick that lined the base of the cut. Overlying [993] was [811], the makeup /levelling deposit for the south wall [735].

9.84 Cut [995] (fill [994]) probably represents a lower part of construction cut [736], located at the east end of the possible furnace. The cut was only partially excavated, measuring 0.74m N-S, 0.12m E-W and 0.06m deep, but continued (unexcavated) to the west and underneath the furnace. Where excavated cut [995] had vertical sides, a flat base and had been backfilled with silty sand.

9.85 The south wall [735] of the furnace was built with fragmented tile and brick, bonded with a yellow brown sandy mortar. The wall measured 1.40m E-W, 0.30m N-S and was 0.40m in height. The north wall [734] was constructed with similar materials to those used in the build of [735] and was bonded with a similar mortar. Wall [734] measured 1.38m E-W, 0.38m N-S and was 0.45m in height. Silty sand deposits [732] and [810] backfill the construction cut for walls [734] and [735] respectively.

9.86 Abutting both [735] and [734] was a tile and brick base, [832], measuring 1.18m E-W, 0.38m N-S and 0.04m in depth. The individual fragments of brick and tile were laid flat having a maximum height of 3.29m OD. To the top of wall [734] four courses of tile and brick [733]

were recorded bonded with a hard sandy mortar that may represent the remains of a roof for the furnace, forming a flat arch. The latter measured 0.58m N-S, by 0.58m E-W and was up to 0.24m thick. The maximum surviving height of the furnace is 3.84m OD.

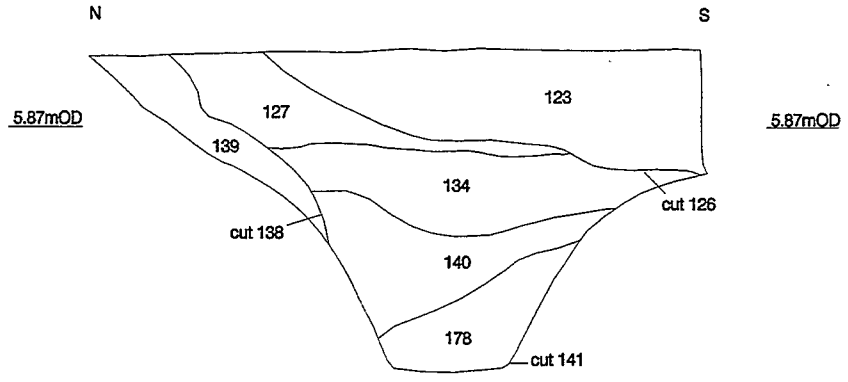
9.87 If this feature constitutes a furnace the masonry is likely to have originally taken the form of a small square or rectangular stoke hole running parallel to the north wall of Building 1. In order to effectively heat large structures one or more minor furnaces were often added to boost the supply of heat where the main furnace was not sufficient. These usually take the form of simple arch in an external wall (or internal wall serving the hypocaust) in which a fire could be built with a stoke hole built onto the outside (Yegül 1992, 368-9). Usually, however, the stoke holes are positioned at right angles to the wall, not parallel to as in Building 1. The function of this structure must therefore remain open to question but may well have been a furnace, potentially built to heat a water tank that may have been encased in the masonry above (Ibid. 369).

9.88 Covering the base of the furnace was a clayey silty sand deposit [809] with frequent fragments of charcoal and oyster shell (0.06m thick). From this primary fill pottery was recovered dating to AD 270 – 400.

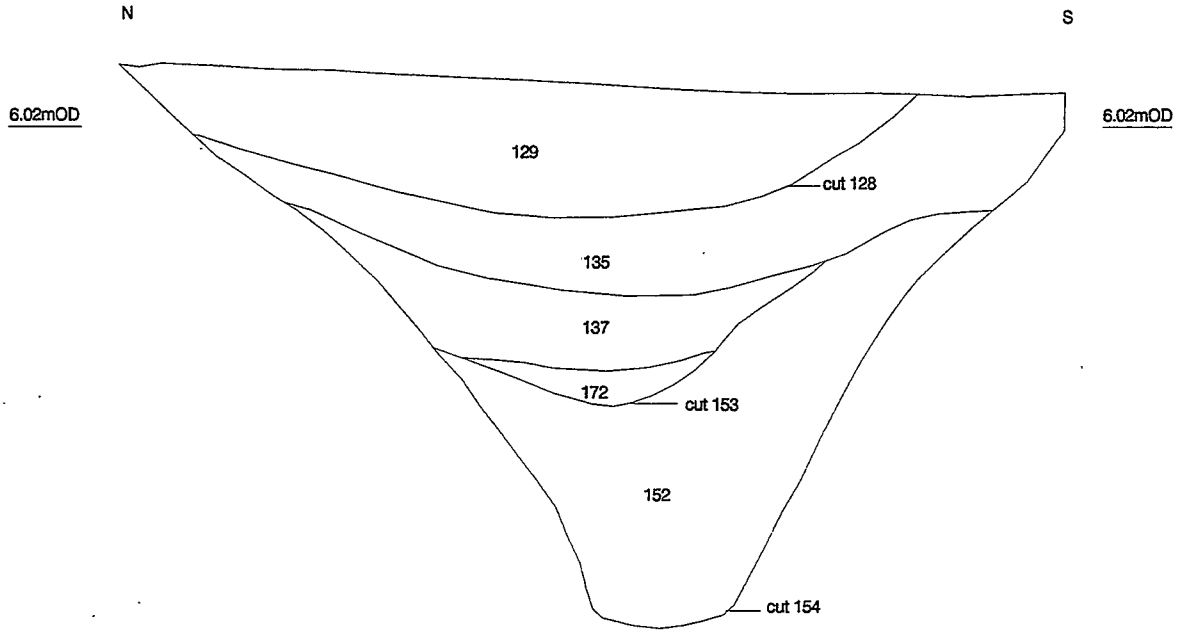
9.89 To the south of the bathhouse a compacted clay deposit [1082]/[1233] may represent a surface or floor makeup layer and define the entrance approach to the bathhouse. The level on this surface was at 2.28m OD.

9.90 The layer [1082]/[1233] partly covered a group of stakes [1384], [1383], [1382], [1381], [1364], [1363], [1362], [1292], [1280] and [1281]. The last two stakes were lifted for detailed examination. The lack of any obvious alignment of these stakes makes their function uncertain but whatever the structure was it was cheaply and roughly made and may have had a temporary purpose such as to support a platform (see Appendix 7). Perhaps such temporary structure was part of the enabling works carried out during the construction of the primary phase of the bathhouse. The two examples that were lifted [1280] and [1281] were both oak roundwood and were 102mm and 80mm in diameter. Both had similar three facet tips cut with the same axe blade. Suggesting that at least these two stakes had been fashioned by the same man at the same time.

Figure 5
Phase 3
1:100

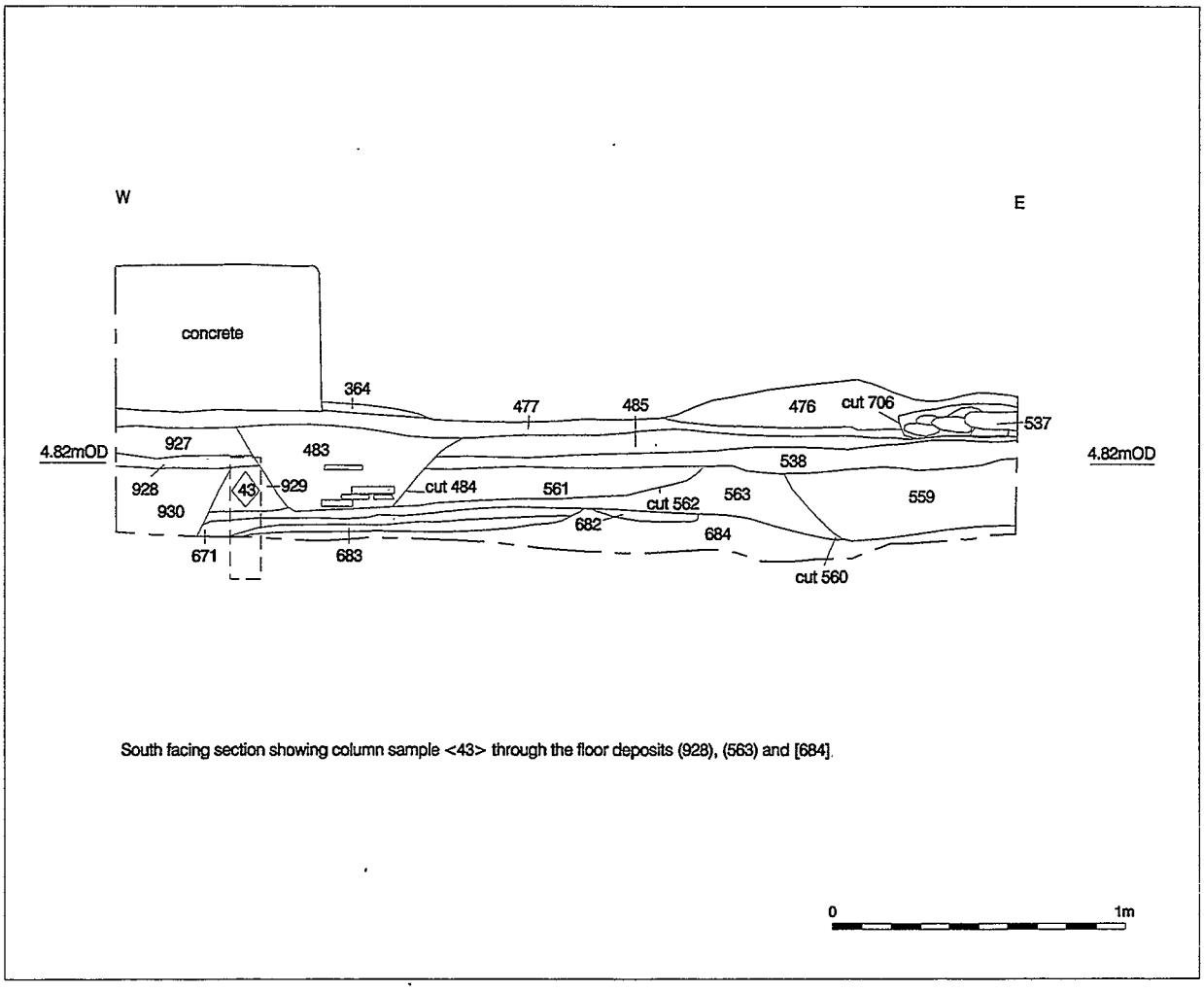


Section 8
West facing showing ditch [141] and re-cuts [138] and [126]



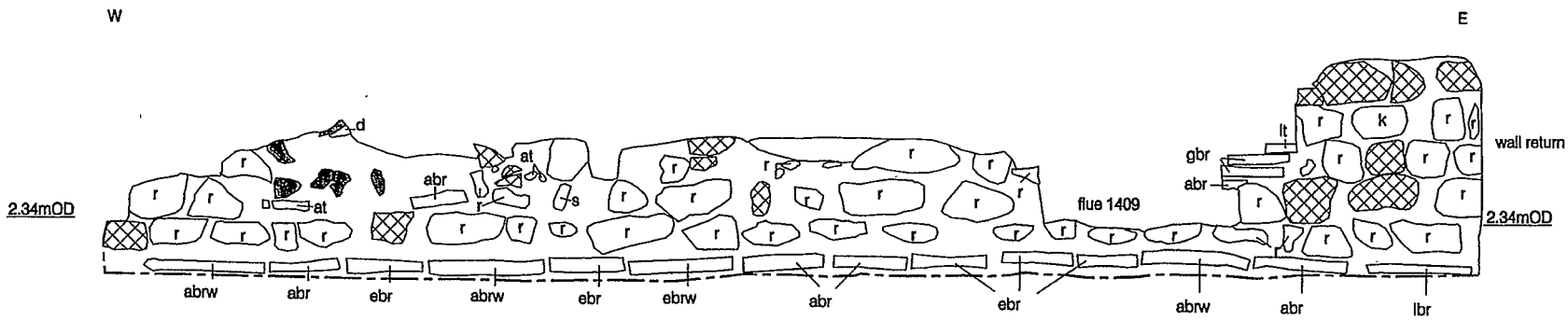
Section 9
West facing showing ditch [154] and re-cuts [153] and [128]

Figure 6
Sections 8 & 9
1:25



South facing section showing column sample <43> through the floor deposits (928), (563) and [684].

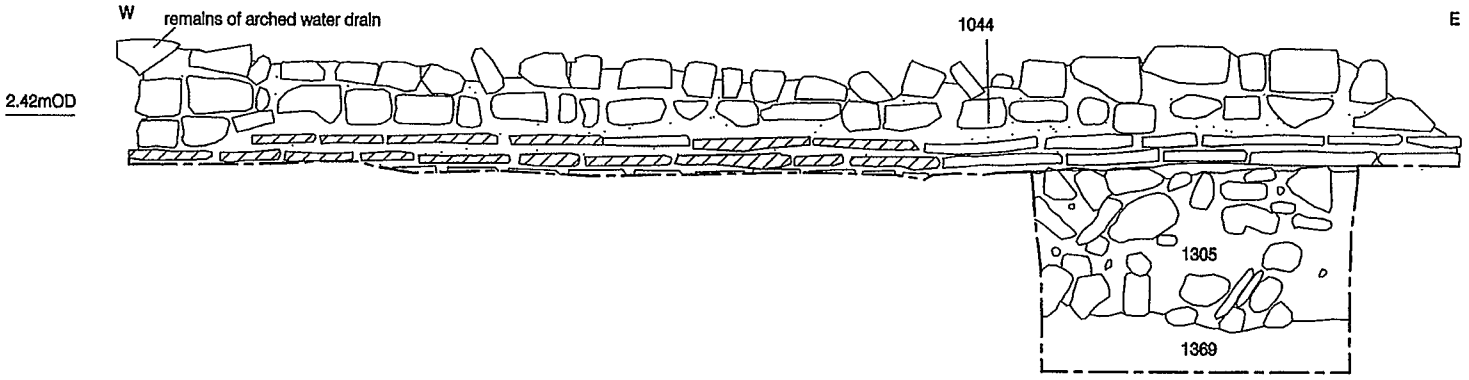
Figure 7
Section 12
1:25



Key

s	sandstone	br	brick
⊠	kentish ragstone	w	whole
■	chalk	a	2459a
		e	2459b
		i	3004

Section 17
South facing showing wall (921) and flue (1409) connecting rooms 8 and 13



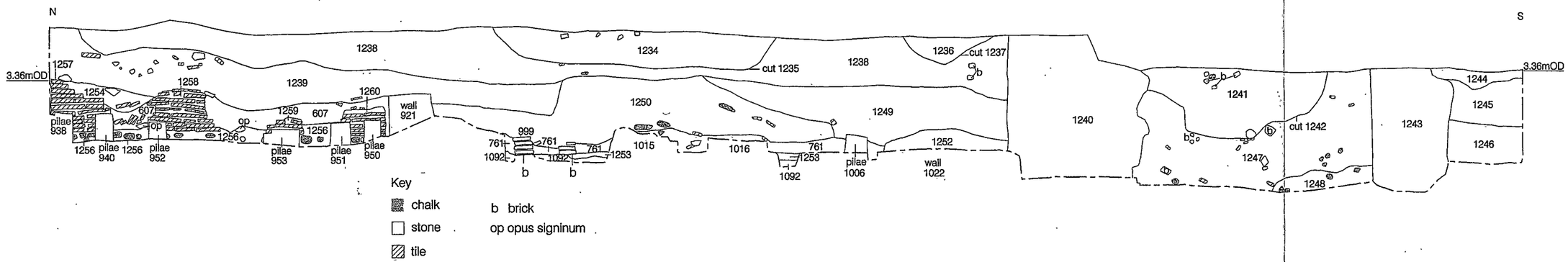
Key

▨ tile

Section 27
South facing showing wall (1044), foundation (1305) and the remains of an arched water drain

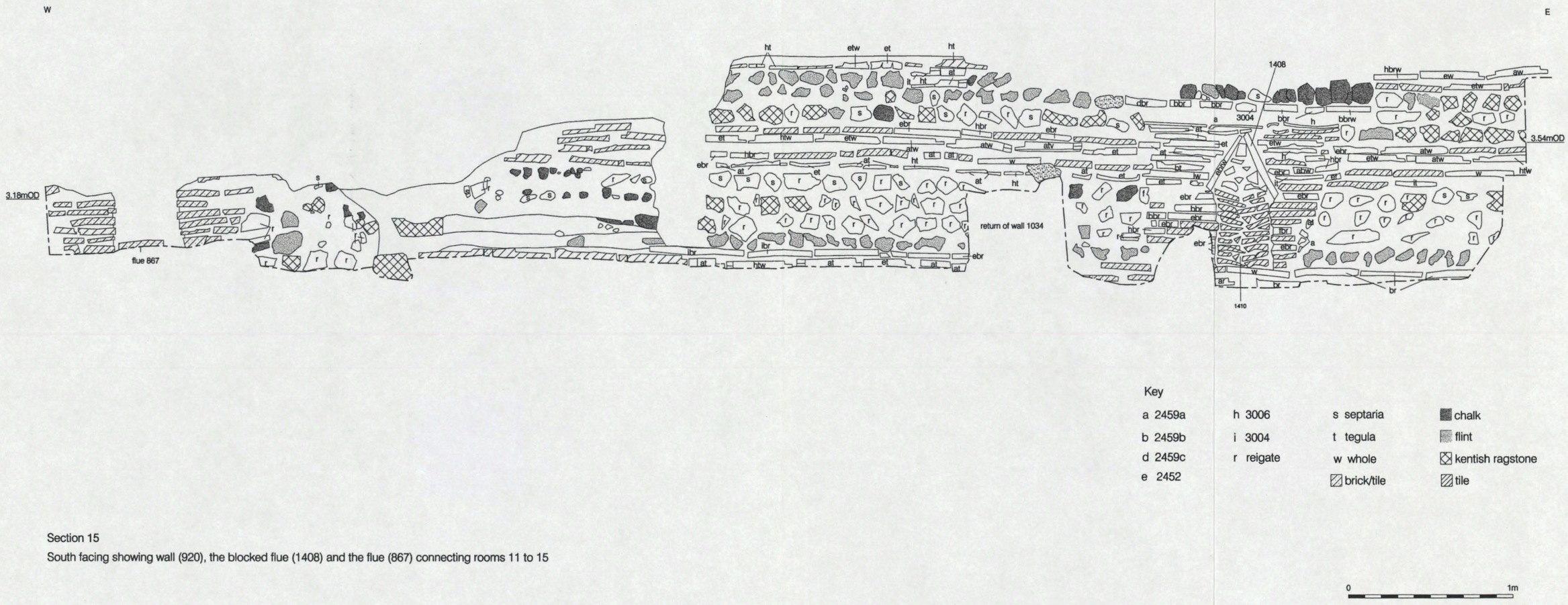
0 1m

Figure 8
Sections 17 & 27
1:25



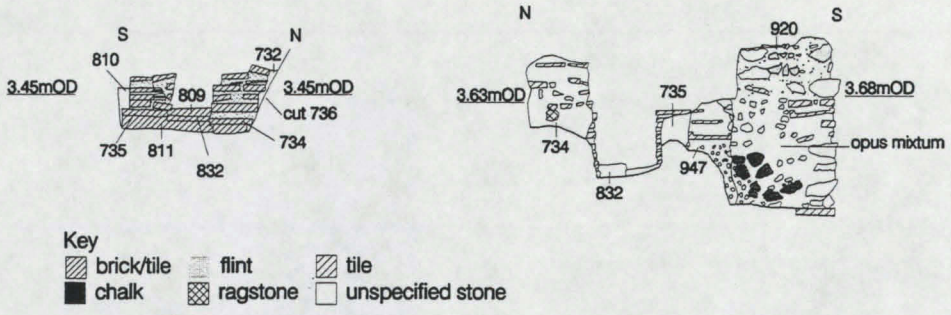
Section 28
West facing showing the piers (1257), (1258), (1259) and (1260)

Figure 9
Section 28
1:50



Section 15
South facing showing wall (920), the blocked flue (1408) and the flue (867) connecting rooms 11 to 15

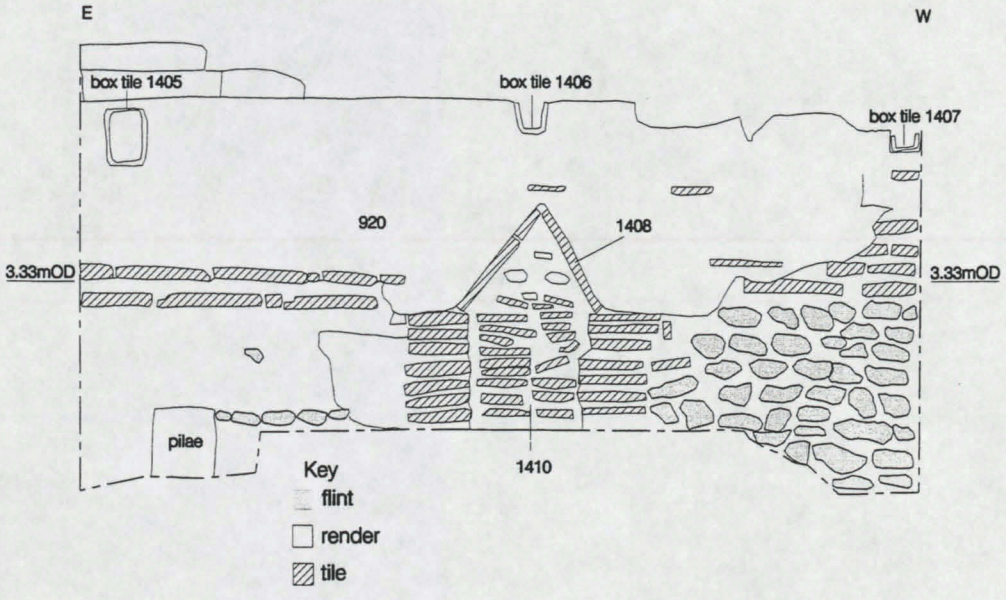
Figure 10
Section 15
1:25



Key
brick/tile flint tile
chalk ragstone unspecified stone

Section 14
East facing showing ancillary furnace

Section 20
West facing showing core of wall (920), external facing (942) of wall (920) and the ancillary furnace (734), (832) and (735)



Section 19
North facing showing box flue tiles (1405), (1406), (1407), the flue (1408) through the wall (920) and the blocking (1410)

0 2m

Figure 11
Sections 14,19 & 20
1:50

10. Phase 4 c. AD 260 – 270 (Fig 12)

10.1 This phase was only recognised in Area B and represents the rebuilding of the west wing of building S 1, identified in Phase 3.

10.2 The possible portico entrance must have been demolished as a possible robber cut truncated its foundations. Internally building S 1 also appears to have under gone some modification. The N/S wall line represented by beam slots [751]/[834], at least in part appears to have been removed, as a robber cut truncated the beam slot.

10.3 Dumped deposits that were probably laid down by colluvial and/or anthropogenic action covered parts of the footprint of the Phase 3 building. These deposits were largely assigned to this phase on their stratigraphic position.

10.4 In the south of the area a new internal E/W wall appears to have been constructed represented by a beam slot and postholes. The location of this E/W wall was close to the suggested E/W partition represented by postholes and stakeholes in Phase 3. A N/S internal wall perpendicular to and south of the internal E/W wall was represented by a beam slot that held the remains of a probable wooden sill beam. The north E/W wall appears to have been rebuilt on the same alignment and location as its predecessor. A possible beam slot and postholes represented the new north wall.

10.5 Compacted sandy clay and mortar spreads represented new floor layers and the position of probable hearths was indicated by compacted silty clay scorched red by the heat.

10.6 Pitting within the footprint of the building (S 1a) probably marks the end of this phase of activity.

Area B

Robber Trench

10.7 The masonry foundation [900] (see Phase 3, para 9.35) appeared to have been partially robbed out by a later cut [890] (fill [897], [889]), which measured 3.10m N-S, 1.60m E-W and 0.45m deep. The cut continued south beyond the edge of excavation but was truncated to the west. Sandy silts [897] and [889] filled the cut. Pottery dating to AD 200 - 270 was recovered from [889].

10.8 The robber trench described above was itself truncated by a large linear feature cut [879] (fill [878]), which measured 2.10m N-S, 0.80m E-W and was 0.30m deep. The cut was truncated to the west but continued south beyond the edge of excavation. The fill was sand silt, which produced pottery dating to AD 250 – 300. Both the robber trench and the pit [879] are thought to relate to the demolition of the earlier

structure and prior to the construction of a second phase of clay-and-timber building.

10.9 Context [793] (fill [792]) measured 1.70m N-S, 1.10m E-W and was 0.28m deep. It had vertical sides falling to a flat base. The fill was sandy silt in which pottery was found dating to AD 200 - 270. This possible robber trench truncated the beam slot [751] and [834] (see Phase 3, para 9.26 and 9.27).

10.10 The rebuilding of structure S 1 was represented by make-up dumps, floors and the remains of clay and timber walls and posts. The structural elements making up the remains of the rebuild (S 1a) are detailed below.

Dump Layers

10.11 A dark grey/black sand silt [737] sealed earlier stakeholes [772], [774], [777], and [791] as well as the posthole [741] and floor deposits [767] and [749] (see Phase 3). The layer measured 2.35m N-S, 2.0m E-W, and was 0.05m thick. Pottery from [737] dated to AD 200 – 300.

10.12 Layer [737] was in part covered by a layer of silty sand [824] with lenses of clay with frequent gravel and fragments of brick/tile. The deposit measured 1.18m N-S, 0.70m E-W and was 0.20m but was truncated to the north by the beam slot [816] and continued beyond the edge of the excavation to the west.

10.13 In the east a dumped deposit of chalk [884] measured 1.0m N-S, 0.35m E-W, and 0.07m but was truncated to the east. The level on the deposit was at 4.33m OD.

10.14 In the north of the area context [794] represented a possibly slumped deposit of sandy gravel which measured 5.0m E-W, 1.60m N-S and was up to 0.20m thick.

10.15 The deposits described above are likely to have been deliberately dumped to raise and level the ground and/or to have been the result of erosion or slumping down the slope.

Floor

10.16 In the north and east of the area a layer of sandy clay [687], which measured 3.80m N-S, 2.0m E-W and had a maximum thickness of 0.20m, was recorded. This deposit was interpreted as a possible beaten earth floor internal to the structure. The highest level was at 4.66m OD and the lowest at 4.47m OD. Pottery recovered from this deposit suggests a deposition date of AD 250 – 270. A patch of darker sandy clay [639] measuring 0.50m by 0.40m partially overlay [687] and may be a repair to that surface.

10.17 Overlying pit [879] (see para 10.8) was a sequence of deposits that probably formed the surface make-up and floor. Context [787] represented a hard cream mortar surface measuring 1.35m N-S, 0.70m E-W and 0.11m thick. This deposit was truncated to the north and west but continued beyond the edge of the Trench to the south. The level was at 4.08m OD. This surface probably continued further to the north where it was represented by context [797], which measured 0.60m E-W, 0.35m N-S and 0.05m thick. Here the level as at between 4.14m OD and 4.09m OD. Pottery dating to AD 160 – 270 was recovered from layer [797].

10.18 The mortar spread [797] was overlain by a pink mortar layer [764], which measured 2.90m N-S, 2.10m E-W and 0.07m thick. The level on this deposit was between 4.20m OD and 4.02m OD. Layer [764] probably represented the remains of an *opus signinum* floor.

Beam Slots

10.19 In the central part of the area, context [822] (fill [821]) represented a possible E/W aligned beam slot. The feature measured 0.80m long, 0.16m wide, 0.13m deep but was truncated to the west. It had vertical sides falling to flat base. The fill was sandy silty clay with occasional fragments of cbm, charcoal and patches of mortar.

10.20 Close to [822] a second E/W orientated beam slot was found, cut [816] (fill [815], [814]) which measured 2.70m long, 0.35m wide and 0.32m deep. The beam slot truncated the dumped deposit [824] (see para 10.12). It had vertical sides falling to a flat base. Silty sands with occasional fragments of mortar cbm and charcoal filled the cut. From [815] a single sherd of pot was retrieved that dated to AD 180 – 370.

10.21 The beam slot [816] probably continued a further 0.20m to the west, where it was represented by cut [722] (fill [723]). The cut [722] measured 0.30m E-W, 0.25m N-S and 0.19m deep and had vertical sides falling to a flat base. The fill was a sandy pinkish mortar.

10.22 In the south of Area B, a N/S orientated possible beam slot cut [510] (fill [845], [496]) was located. The construction cut measured 2.80m N-S, 0.80m E-W, was 0.35m deep and continued south beyond the limits of the Trench. It had steeply sloping sides falling to a slightly concave base. The cut held what may be a timber sill beam [845] and was backfilled with a clayey sandy silt [496]. Pottery from [496] dated to the early 3rd century.

10.23 The beam slot described above probably represent the alignments of internal walls but context [593] (fill [592]) may have represented the E/W aligned north wall of the building. The beam slot was located in the north of Area B and measured 1.20m E-W, 0.40m E-W, and 0.10m deep. The fill was a sandy silt with frequent fragments of charcoal. Pottery was recovered from the fill dating to AD 120 – 200.

Postholes

10.24 Postholes [840], [842], [844], and [838] truncated the beam slot [751] (see Phase 3). All had near vertical sides falling to a pointed or concave base and were filled with a similar coarse sand. These postholes may be a continuation of the wall line represented by beam slot [593] (see para 10.23).

10.25 Posthole [714] which truncated beam slot [593] and the posthole [756] which was set immediately to the south of [593], may be a partial rebuild of the E/W wall represented by [593] or have provided additional support to that wall. The postholes were characterised by steeply sloping sides falling to a concave base and were filled with a sandy silt.

10.26 A rebuild of the E/W orientated wall to the south represented by the beam slot [816] was suggested by the post pits [786] and [781], and the post holes [760] and [606].

10.27 Post pit [786] was characterised by near vertical sides falling to a flat base. The pit truncated beam slot [816] (and the beam slot [834] of Phase 3). The fill was sandy silt with pieces of tile, which represented the post packing. The post pipe was represented by cut [758] (fill [757]), which measured 0.33m by 0.22m and 0.29m deep. The fill of the post pipe was a silty clay.

10.28 Post pit [781] was set 0.50m to the east of [786] and had sloping sides falling to a slightly concave base. The feature probably represents a continuation of the wall element corresponding to cut [816]. Roman pot was recovered from the pit.

10.29 Truncating the post packing to post pit [786] but thought to be contemporary with it was posthole [760]. It had sloping sides to a concave base and was filled with a sandy clay.

10.30 Posthole [606], which truncated the beam slot [722] and [816] had near vertical sides falling to a flat base and was filled with a sandy silt. Pottery dating to AD 170 – 200 was found in the posthole.

10.31 Set 0.30m to the south of the wall line represented by the beam slots [722]/[816] were postholes [768] and [770]. Both were characterised by vertical sides falling to a rounded base and were filled with a similar sandy clayey silt. These could represent some internal fixture of the building.

10.32 The full dimensions of the post pits and postholes described above are given in Table 4 below.

Table 4 details of postholes and post pits in Area B

Context No	Shape	Dimensions Longest axis first	Depth	Fill No
840	Sub-circular	0.20 x 0.17m	0.42m	839
842	Sub-circular	0.20 x 0.18m	0.48m	841
844	Sub-circular	0.20 x 0.18	0.32m	843
838	Sub-circular	0.18 x 0.15m	0.53m	837
756	Sub-circular	0.43 x 0.37m	0.31m	755
714	Ovoid	0.60 x 0.35m	0.10m	713
786	Ovoid	0.83 x 0.64m	0.22m	785
781	Ovoid	0.68 x 0.55m	0.26	780
760	Sub-circular	0.28 x 0.20m	0.19m	759
606	Ovoid	0.37 x 0.34m	0.38m	605
768	Rectangular	0.20 x 0.10m	0.60m	769
770	Rectangular	0.16 x 0.13	0.23m	771

Occupation layer

10.33 Overlying the mortar floor [764] (see para 10.18) was a thin spread of silty sand and oyster shell [720], which probably represented trample upon the floor. The deposit measured 1.50m N-S, 1.28m E-W and was 0.06m thick.

Hearths

10.34 Also overlying the mortar floor [764] was a possible hearth [744], composed of sandy silt and tile that measured 1.08m E-W, 0.74m N-S and 0.10m thick. The level on the hearth was at 4.09m OD.

10.35 In the north of the area, a second possible hearth composed of black/reddish sandy clay [739] was identified. The deposit measured 0.60m by 0.20m and 0.12m thick. This hearth appears to have been a short lived affair for it was covered over by floor layer [687] (see para 10.16).

10.36 A third possible hearth [743] (fill [738]) was located about 1.0m to the west of hearth [739]. The sub-rectangular cut measured 1.15m N-S, 0.50m E-W and 0.33m deep and had sloping sides falling to a slightly

concave base. The fill, which appeared to have been scorched red, was a silty sand with frequent fragments of burnt daub, charcoal and cbm. Pottery dating to AD 200 – 270 was recovered from the hearth.

Pitting

10.37 Floor [687] was truncated by a shallow circular pit cut [650] (fill [649]) measuring 0.90m E-W, 0.80m N-S and 0.10m deep. The pit had steeply sloping sides falling to a slightly concave base. The fill comprised silty clayey sand with fragments of chalk and charcoal. Pottery recovered from the pit dates to AD 250 – 350.

10.38 Surface [687] was also truncated by an irregular shaped cut [655] (fill [654]), which measured 0.83m E-W, 0.72m N-S and had a maximum depth of 0.12m. The cut had sloping sides falling to undulating base. The fill was sandy clay with frequent fragments of cbm. Pottery dating to AD 200 – 276+ was recovered from the pit.

10.39 Both pits described above may relate to the use or disuse of this part of the building at the end of this phase of activity.

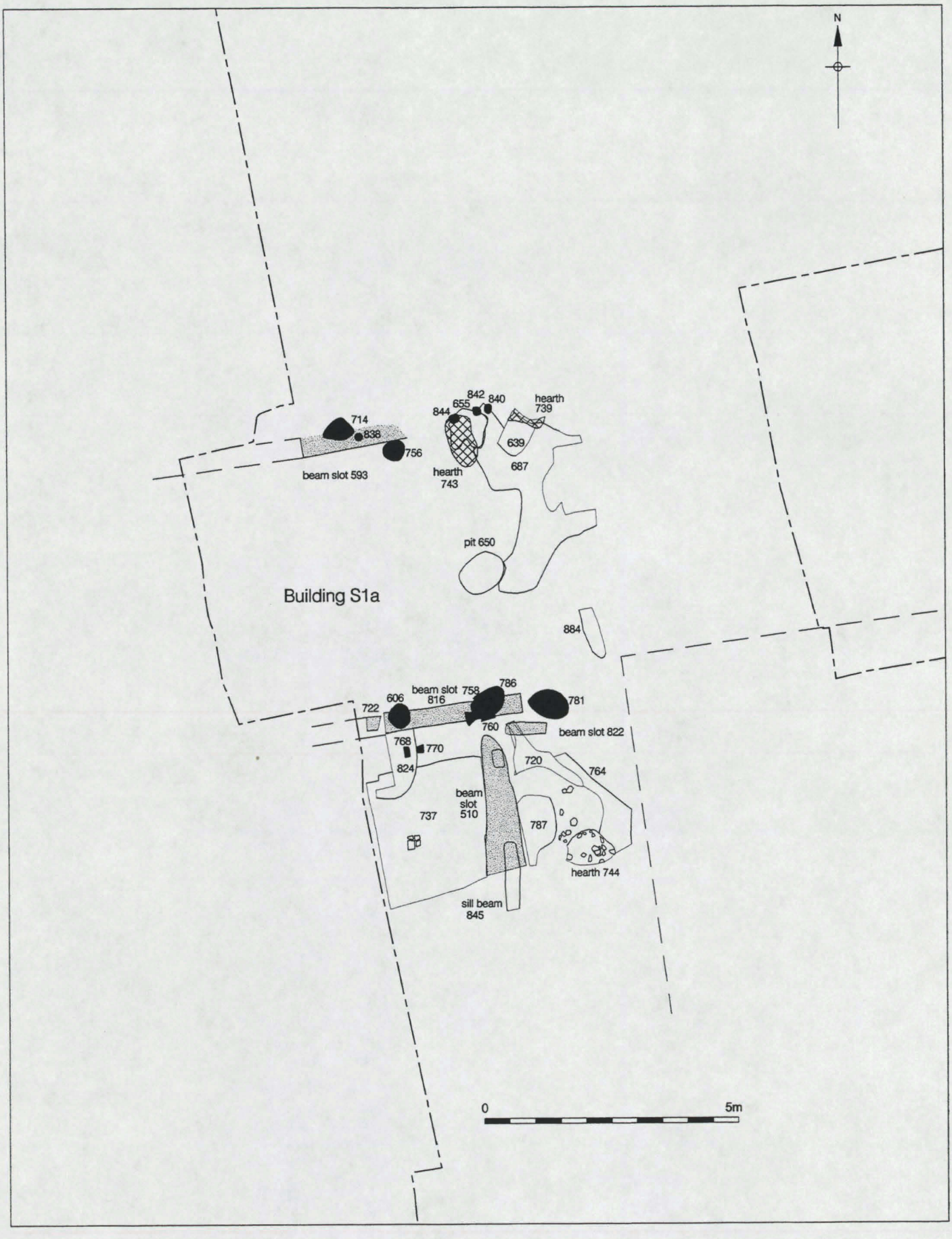


Figure 12
Phase 4
1:100

11. Phase 5 c. AD 270 – 280 (Fig 13)

11.1 This phase represents the period circa AD 270 – 280 and was identified in Areas B and C. In Area B the west wing of the clay-and-timber building (S 1) again appears to have been rebuilt. Parts of the Phase 4 building (S 1a) appear to have been demolished, with dumped deposits again being put down to level and raise the ground. Floor makeup layers and actual beaten earth and mortar floors were also recorded. These deposits appear to define the west wing of the building (S 1b) measuring at least 10.0m N-S and 6.0m E-W.

11.2 Internal walls to the west wing appear to be defined by a N/S beam slot and postholes. The pattern of distribution of the postholes suggests an internal 1.50m wide corridor orientated N/S.

11.3 Two postholes at the north end of the east corridor wall may indicate that the wall returned to an E/W alignment. A posthole set at right angles and west of the west corridor wall suggests that an E/W wall could have abutted it.

11.4 A posthole or post pit in the central part of the area suggests that the E/W wall thought to have been here during Phase 4 was rebuilt during this phase.

11.5 In the south of the area, an E/W wall foundation and a posthole, may indicate the location of a wall at least 3.0m in length and possibly an entrance to the building.

11.6 The building (S 1b) identified in Area B appeared to continue into Area C. These structural deposits probably formed the north wing of the building.

11.7 The yard surface (see Phase 3) which was entirely in Area C, to the north of the bathhouse and south of the clay-and-timber building (S 1b) appeared to have been extensively re-laid. However, drainage of surface water run-off may have been causing some concern and at least two drainage ditches appear to have been dug.

Area B/C

Dump Layers

11.8 In the central part of the area, context [766] represented a layer of sandy clay with frequent fragments of charcoal, plaster, mortar, and burnt daub. The deposit measured 3.0m N-S, 1.60m E-W and was 0.05m thick. The layer overlay post pit [793] (see Phase 4) and it may be that this deposit represents the demolition of structures from the earlier Phase 4. Pottery recovered from this deposit dates to AD 200 – 270.

11.9 Overlying [766] was a layer of silty coarse sand [721], which may have been laid down to level the ground prior to construction. The deposit measured 6.10m N-S, 5.10m E-W and was 0.15m thick. The layer sloped to the south from 4.72m OD to 4.23m OD. Pottery dating to AD 200 – 270 was retrieved from the deposit.

11.10 A layer of gravelly sandy silt [582] partially covered [721]. This layer measured 2.28m N-S, 0.68m E-W and was up to 0.20m thick. Silty sand [705] also partially covered layer [721]. This deposit measured 2.50m N-S, 0.85m E-W, by 0.20m thick and inclined to the south from 4.61m to 4.36m OD.

11.11 In the south central part of the Trench, context [549] represented a layer of dark grey brown sandy silt with frequent chalk lumps, fragments of cbm and occasional charcoal fragments. The deposit measured 2.0m N-S, 0.60m E-W and up to 0.20m thick. Roman pottery was recovered from this dump layer.

11.12 Overlying [549] was another dumped deposit of sandy silt [558], which measured 2.50m N-S, 1.19m E-W and 0.10m thick. The highest level was at 4.26m OD and the lowest was at 4.13m OD.

11.13 In the southwest corner of Area B, a layer of clayey silt [490] with occasional fragments of oyster shell, cbm and charcoal measured 2.28m N-S, 0.68m E-W and was 0.30m thick, was recorded. Pottery recovered from this deposit was thought to have a deposition date of the late 3rd century and a later 4th century piece of pot may be intrusive. The highest level on this dumped deposit was at 4.27m OD and the lowest was at 4.19m OD.

11.14 Context [490] was overlain by another dumped deposit of sandy silt [264]. The deposit measured 2.30m N-S and 2.90m E-W. Pottery dating to AD 270 – 300 was recovered from this layer. The layer sloped to the south from a high of 4.52m OD to a low of 4.19m OD.

11.15 The deposits described above, may have been part of the initial sequence of dumping, in order to level the ground.

Floor make-up layers

11.16 On the west side of the area, dumped deposits of sandy clay [712] and silty sand [922] were recorded. These may be floor make-up layers. Layer [712] measured 1.06m E-W by 0.94m and sloped to the south from a level of 4.54m OD to 4.44m OD. Layer [922] measured 2.30m N-S, 0.85m E-W and 0.16m thick was recorded. The highest level was at 4.53m OD and the lowest at 4.40m OD.

11.17 Just to the east of the deposits described above was a silty clay [681] measuring 0.30m E-W, 0.25m N-S and 0.08m thick but truncated to the north and west, was recorded. The straight eastern and southern edge

of the deposit suggests it may have defined a wall line. The level was at 4.44m OD.

Floor

11.18 Overlying [922] (see para 11.16) was layer [800] firmly compacted sandy silt with frequent fragments of charcoal, which measured 0.80m E-W, 0.70m N-S, and 0.10m thick. This deposit, which continued west beyond the edge of excavation, may have been actual beaten earth floor. The level was between 4.51m and 4.40m OD. Pottery dating to c. AD 230 – 260 came from the deposit [800].

11.19 The beaten earth floor continued to the south of [800] where it corresponded to a compacted silty sand [553]. The deposit which partially covered the dump layer [721] measured 1.20m by 0.85m. The highest level was at 4.53m OD and the lowest at 4.46m OD.

11.20 Overlying [721] (see para 11.9) context [685] a compacted silty clay which measured 0.90m N-S, 0.15m E-W and was 0.07m, which could represent remnants of floor. The highest level was at 4.44m OD and the lowest at 4.41m OD.

11.21 A mortar spread [619] also partially overlay [721]. The pale pink mortar measured 1.25m N-S, 1.25m E-W, was 0.05m thick but was truncated to the west by a later intrusion. This deposit was probably the remains of an *opus signinum* floor. The level was between 4.42m and 4.25m OD.

11.22 In the south-central part of Area B, a sequence of deposits covered the earlier surfaces of Phase 4. Context [622] was a sandy silt measuring 0.47m N-S, 0.35m E-W and 0.12m thick but it was truncated in all directions. This constituted a floor make-up layer and was overlain by a patch of pink and cream mortar floor [623]. The remnants measured 0.22m E-W, 0.20m N-S, and 0.06m thick. The level was at 4.34m OD.

11.23 Layer [710], in the southeast corner, was composed of a light pink mortar and measured 2.50m N-S, 1.73m E-W and was 0.08m thick but was truncated by later pitting to the west. The highest level was at 4.26m OD and the lowest at 4.15m OD. Pottery from the floor dated to AD 200 – 270.

11.24 A thin occupation deposit of sandy silt [724] with fragments of charcoal and oyster shell covered part of the floor [710]. The deposit measured 2.96m N-S, 0.83m E-W and 0.06m thick. Pottery dating to AD 230 – 260 was retrieved from the layer.

11.25 Context [709] represented crushed cbm and sandy silt measuring 2.50m N-S, 0.70m E-W and 0.09m thick that overlay the floor [710] and may have been a relaying of the surface. The level was between 4.27m OD and 4.19m OD.

11.26 A small patch of compacted sandy clay [620] measuring 0.60m N-S, 0.36m E-W and 0.04m thick overlay the surface [709]. Layer [620] was probably a repair to the floor [709], this time with beaten earth. The level was at 4.30m OD.

11.27 In the north of Area C, covering possible hearth [682] and occupation layer [683] (see Phase 3) was a possible brickearth floor [676] thought to be part of the rebuild (S 1b). Layer [676] comprised compacted silty clay with frequent fragments of charcoal and moderate amounts of burnt daub that measured 1.15m E-W, 0.40m N-S and was 0.04m thick. The level was at 4.71m OD. A layer of sandy silty clay [671] with very frequent fragments of charcoal, measuring 1.02m E-W, 0.74m N-S and 0.06m thick, may have been a trample layer upon the floor [676].

11.28 The occupation layer 671 (see above) was covered by a second possible beaten earth floor [563]. Layer [563], a compacted sand silty clay, measured 2.30m E-W, 1.80m N-S and up to 0.20m thick. Pottery dating to AD 250 – 350 was recovered from this deposit. The highest level was at 4.92m OD and the lowest at 4.63m OD.

E/W wall foundation

11.29 In the southeast corner of Area B, context [725] represented a deposit of broken tile, lumps of chalk, chunks of Ragstone within a sandy silt matrix. It measured 2.50m N-S, and 0.87m E-W. The highest level was at 4.04m OD. It may be that this deposit represented an E/W aligned wall foundation. This interpretation was also further suggested by the *opus signinum* floor [710] and the layer [724], both of which respected the northern edge of [725].

11.30 A layer of sandy silt with fragments of oyster shell, cbm and charcoal [704], situated to the south of [725] measured 1.50m E-W, 1.25m N-S and 0.08m thick. Layer [704] could represent occupation debris but whether this was an internal or external deposit is uncertain. The highest level was at 4.19m OD. Pottery dating to AD 250 – 300 came from the deposit.

Beam Slots

11.31 In the northwest of the Area B, a possible beam slot [282] (fill [281]) was recorded truncating dump layer [681] (see para 11.17). The cut measured 1.50m N-S, 0.45m E-W and was 0.20m deep but was truncated to the north and west. It had sloping sides falling to a flat base. The fill was a silty clay with occasional lumps of chalk. Pottery recovered from the feature dates to AD 250 – 270+. It may be that this beam slot represented the position of an internal N/S wall.

11.32 In Area C the layer [563] was truncated by an E/W orientated cut [562] (fill [561]/[929]) which measured 1,30m long was at least 0.42m wide and 0.15m deep. The feature had steeply sloping sides falling to a flat

base and was truncated to the west and south. The fill was compacted gravelly sandy silt. It may be that this feature represented the remains of a beamslot and an extension into Area C of an E/W wall, represented in Area B by postholes [675] and [661].

Postholes

11.33 Just to the south and west of the beam slot [282] (see para 11.31), three postholes [630], [628] and [599] were identified, which were aligned N/S and covered a distance of approximately 1. 30m.

11.34 Set 1.50m to the east and parallel with the postholes mentioned above was a second line of postholes [678], [686], [659] and [707] and covering 2.0m. These two N/S orientated lines could define an internal corridor. From posthole [678] came Roman pottery.

11.35 Postholes [661] and [675] may be part of an E/W return at the north end of the wall line represented by [678], [686], [659] and [707]. Pottery dating to AD 200 – 270 came from posthole [661].

11.36 Posthole [626] which was sited 0.50m to the west of [628] and may indicate that an E/W wall once abutted the N/S wall represented by [630], [628] and [599].

11.37 In the central part of the Area B posthole [610] was sited in the same location as a postulated E/W wall in Phase 4. This may be an indication that the wall in Phase 4 was rebuilt in Phase 5.

11.38 Posthole [763] was set approximately 1.0m to the west of the possible wall foundation [725] and could be an indication that the wall could have extended to at least as far as this posthole. Roman potsherds were found in [763].

11.39 The postholes were characterised by near vertical or steeply sloping sides falling to a concave base or pointed base and all were filled with a similar dark grey/brown sandy clay or sandy silt. The full dimensions of the postholes are given in Table 5 below.

Table 5 details of postholes in Area B

Context No	Shape	Dimensions Longest axis first	Depth	Fill No
626	Sub-circular	0.26 x 0.21m	0.62m	625
628	Sub-circular	0.27 x 0.14m	0.10m	627
630	Sub-circular	0.18 x 0.12m	0.12m	629
599	Circular	0.20m in dia	0.15m	598
678	Rectangular	0.36 x 0.26m	0.75m	679
675	Rectangular	0.46 x 0.30m	0.14m	674
661	Sub-circular	0.63 x 0.38m	0.27m	660
659	Circular	0.50 x 0.35m	0.20m	658

686	Ovoid	0.21 x 0.15m	0.82m	680
610	Rectangular	0.50 x 0.30m	0.15m	609
707	Circular	0.20m in dia	0.30m	708
763	Ovoid	0.50 x 0.32m	0.19m	762

Stakeholes

11.40 A group of stakeholes was identified to the north of the beamslot [562] and may represent internal fixtures to the building (S 1b). All of these were characterised by near vertical sides falling to a pointed or rounded base and were filled with a similar silty clay or sandy silt. Their dimensions are given in Table 6 below.

Table 6 details of stakeholes in Area C

Context No	Shape	Dimensions Longest axis first	Depth	Fill No
670	Circular	0.09 x 0.08m	0.10m	669
666	Ovoid	0.10 x 0.08m	0.12m	665
668	Circular	0.08m in dia	0.12m	667
565	Circular	0.10 x 0.08m	0.09m	564
567	Circular	0.07 x 0.06m	0.03m	566
569	Circular	0.10m in dia	0.07m	568
571	Circular	0.08 x 0.07m	0.04m	570

Pit

11.41 The east side of [563] (see para 11.28) was truncated by a sub-circular pit [560] (fill [559]). The cut measured 1.40m N-S, 0.92m E-W and 0.44m deep but was truncated to the east and south. It had sloping sides falling to a flat base. The fill was a sandy silt, which produced pottery dating to AD 270 – 400. The pit was probably for the disposal of rubbish and marks the end of the building's (S 1b) use in this phase.

Area C

Yard

11.42 In the south of Area C, partially covering the cobbled surface [711] and the makeup layer [752] (see Phase 3) was a layer of silty sand and gravel [644], measuring 7.0m N-S, 6.40m E-W and up to 0.20m thick. This deposit was truncated to the west and continued beyond the limits of excavation to the east. The level was between 4.36m and 3.90m OD. Pot from it dates to AD 200 – 300. North and west of [644] the same deposit was assigned the context [726]. Here it measured 3.40m E-W, 2.90m N-S and was 0.10m deep. The highest level was at 4.20m OD and the lowest was at 4.03m OD. Pottery from [726] dates to AD 230 – 260.

11.43 Part of the southern margins of [644] was overlain by a sandy silt [740] with frequent fragments of mortar, cbm, lumps of chalk, and shell. The deposit measured 2.40m E-W by 0.47m N-S. Pottery dating to AD 250+ was found in this deposit.

11.44 Layer [740] and [644] were in part covered by a levelling layer of silty sand [489] with frequent flint pebbles and fragments of cbm and chalk, which measured 8.08m E-W, and 3.70m N-S. Only Roman residual pottery was recovered. The level on [489] was between 4.22m and 4.0m OD. Layer [489] was in turn partly covered by a compacted silty sand [456], which measured 2.50m E-W, 0.75m N-S and was 0.14m thick.

11.45 The layers described above are thought to represent surface makeup layers for the resurfacing for the access yard.

Posthole

11.46 Truncating layer [489] was a possible posthole [421] (fill [420]) which measured 0.36m E-W, 0.30m N-S and 0.23m deep but which was truncated to the north by a later intrusion. It had vertical sides falling to a flat base. The fill was a sandy clay. The isolated nature of the feature makes further interpretation difficult.

12. Phase 6 c. AD 280 – 290 (Fig 14)

12.1 This phase represents the period AD 280 – 290 and was identified in Areas A, B and C. The E/W boundary ditch, identified in Area A, was re-cut and then allowed to silt up.

12.2 In Area B only minor modifications to building (S 1b) seem to have been undertaken. On the west side of the area, the remnant of a beaten earth floor was recorded. In the south, floor make-up deposits capped by an earth floor were identified. A corridor, recognised in Phase 5, and represented by postholes, appears to have been blocked by an E/W orientated beam slot. However this may have only been for a short while only as it in turn was truncated by a N/S aligned beam slot. Running parallel with this feature was a second set 1.50m to the east. The two N/S beam slots may represent a corridor located in almost the same place as that identified in Phase 5. A N/S alignment of postholes identified to the west of the corridor may have represented another internal partition.

12.3 In Area C the beaten earth floor of the north wing of the building appears to have been re-laid. But overlying this was a possible destruction layer, rich in fragments of charcoal and broken pieces of roof tile. It may be that part of the north wing had burnt down. A rubbish pit truncated the demolition debris and itself was sealed by another beaten earth floor.

12.4 The open yard in Area C seems to have been extensively re-laid with a compacted silty sand and gravel. This resurfacing sealed a possible posthole on the north side of the yard and a pit on the west.

12.5 The yard surface, in the north was truncated by an E/W orientated gully, dug perhaps as an aid to drainage. The surface was also truncated in the south by postholes, which appear to demarcate an area of rubbish pitting. A probable refuse pit was also identified immediately to the north of the gully.

Area A

12.6 The E/W ditch identified in Phase 3 appeared to have been re-cut at least once before being allowed to silt up in the 4th century.

12.7 In the most eastern slot across the ditch context, [163] (fill [155]) represents a re-cut of the ditch which truncated the fill [164] (see Phase 3). Cut [163] had sloping sides falling to a concave base and was 1.30m wide and 0.32m deep. The fill was dark brown, sandy silt from which residual pottery was recovered dating to AD 170 – 300.

12.8 The ditch [163] described above, appeared to also have been re-cut by [143] (fill [142]. This cut measured 0.57m wide and was 0.23m deep and was filled organic silt.

12.9 Recorded in a second slot to the west was the re-cut [153] (fills [137], [135], [172]). The cut had sloping sides falling to a concave base and measured 2.0m wide and was 0.48m deep. The basal fill [172] was a silty sand which produced pottery dating to AD 240 – 300. A second fill of silty sand [137] covered [172] and from this deposit, pottery dating to AD 250 – 300 was recovered. From the upper fill [135] of silty sand, the pottery dates to c. AD 250 – 300.

12.10 The base of the ditch [153] was truncated by two circular postholes [149] (fill [148]) and [151] (fill [150]). Cut [149] had vertical sides falling to a concave base and measured 0.12m in diameter by 0.10m deep. Posthole [151] was comparable in size and shape to [149] and both postholes were filled with a similar silty sand. It may be that these two postholes are an indication the sides of the re-cut ditch were at least in part, supported by a timber revetment. The postholes were covered by the secondary fill [137].

12.11 Further to the west, in the third slot excavated across the E/W ditch again a re-cut [168] (fill [167], [166]) to the ditch was identified. The cut had sloping sides falling to a concave base and measured 1.15m wide and 0.25m deep. The basal fill [167] was a sandy silt which was overlain by an upper fill of silty sand. Pottery from [166] dates to AD 270+

12.12 In the western most slot across the ditch, a re-cut [138] (fills [140], [134], [127]) was also recognised. Here it measured 1.50m wide and 0.65m deep and was filled with a sequence of silty sand, and sandy silts. From the basal fill pottery dating to AD 230 – 270+ was recovered while the upper fills produced pottery dating to AD 270 – 300.

Area B/C

12.13 A further remodelling of the building has been designated S 1c and the elements that comprise this are detailed below.

Layers

12.14 A small patch of either beaten earth floor or floor makeup [576] was recognised on the west side of Area B. This was a mottled orange brown clayey sand, measuring 0.44m N-S, 0.40m E-W and 0.03m thick. The layer overlay [553] (see Phase 5). The level was at 4.52m OD.

12.15 In the southeast corner of Area B, a dump layer, of light cream and pinkish mortar mixed with sandy silt [663] was present. The deposit measured 0.94m N-S, 0.76m E-W and was 0.06m thick, it overlay layer [704] (see Phase 5, para 11.30).

12.16 Overlying [663] was a sandy silt [662] with fragments of oyster shell, cbm and charcoal, which measured 0.70m E-W, 0.53m N-S and 0.09M thick. Pottery dating to AD 270 – 370 was recovered from [662].

12.17 A compacted silty clay [556], which may have been a surviving patch of beaten earth floor, overlay [662]. Layer [556] measured 0.50, E-W, 0.48m N-S and was 0.14m thick but was truncated by later intrusions on all sides. The level was at 4.39m OD

12.18 Deposits in the north of Area C suggest that the north wing of the building remained standing. A layer of compacted sandy silt [538]/[928] sealed postholes [565], [567], [569] and [571], beamslot [562] and pit [560] of Phase 5. The deposit, which was probably the remains of a beaten earth floor measured 2.60m E-W, 1.80m N-S and was 0.08m thick but was truncated on all sides by later intrusions. Pottery dating AD 250 – 370 was retrieved from the layer. The level was between 4.95m OD and 4.82m OD.

12.19 Overlying floor [538]/[928] was a black deposit of charcoal mixed with sandy silt [485]/[927] with frequent fragments of roof tile, 0.14m thick. The deposit may be a destruction layer and an indication that at least part of the building had burnt down.

12.20 If part of the north wing of the building had burnt down then it was quickly rebuilt (see below). Truncating the destruction layer [485] was cut [484] (fill [483]) which measured 0.60m E-W, 0.20m N-S and 0.13m deep, which was truncated to the west and south. It had near vertical sides falling to a flat base. The fill was a sandy silt with very frequent cbm, oyster shell, and occasional fragments of charcoal. The pit was probably for the disposal demolition/destruction debris as well as domestic refuse.

12.21 Pit [484], was sealed by another possible beaten earth floor, context [477], a compacted sandy silt measuring 2.0m E-W, 1.0m N-S and 0.12m thick. Pottery found in the deposit was probably residual and dates to the mid-3rd century. The level was at 4.97m OD.

Beam slots

12.22 A beam slot [597] (fill [596]) orientated E/W was identified in the central part of Area B. Context [597] measured 1.50m E-W, 0.20m N-S and 0.10m deep. However it may not have been in place very long for the west end was truncated by a N/S aligned beam slot [542] (fill [541]) which measured 2.95m in length, was 0.25m wide and c. 0.22m deep. The beamslot was truncated to the north and the south by later intrusions. Approximately 1.50m to the east of and running parallel with [542], was a third beam slot [632] (fill [631]). This [632] was 2.40m long, 0.20m wide and 0.10m deep.

12.23 All the beam slots were characterised by sloping sides falling to a slightly concave base and were filled with a similar compacted clayey sandy silt. Pottery dating to AD 240 – 300 was recovered from slot [542].

12.24 The two foundations [542] and [632] appeared to be defining a corridor in the same location as a postulated corridor defined by postholes in Phase 5.

Postholes

12.25 Set approximately 3.0m to the west of beam slot [542] was a N/S line of three postholes, [546], [544] and [532], a meter in length. A fourth [552] was offset to the east by 0.30m from posthole [546]. These features may represent an internal partition. They were all characterised by vertical sides falling to a round or pointed base and were all filled with a similar clayey sand fill. Roman pottery was retrieved from posthole [532] and pot dating to AD 270 – 400 came from posthole [544]. Their full dimensions are given in Table 7 below.

Table 7 details of postholes in Area B

Context No	Shape	Dimensions Longest axis first	Depth	Fill No
532	Sub-circular	0.26 x 0.22m	0.24m	531
544	Sub-circular	0.14 x 0.12m		543
552	Sub-circular	0.14 x 0.12m	0.10m	551
546	Sub-circular	0.44 x 0.40m	0.08m	545, 548

Area C

Yard

12.26 In the central part of Area C and within the supposed open yard area, a posthole [716] (fill [715]) was recorded. The circular cut measured 0.32m by 0.29m and was 0.09m deep. It had vertical sides falling to a flat base and was filled with a silty clay. Its isolated position makes further interpretation difficult and the feature seems to be extant for only a short period as it was sealed by a grey brown silty clay [719] layer. The layer measured 2.57m E-W and 0.53m N-S. Pottery from [719] dates to AD 230 – 370.

12.27 To the north of [719], was a sequence of deposits. Context [677] represented a silty clay with frequent chalk lumps and broken pieces of tile measuring 2.31m E/W by 1.20m N-S. The layer produced pottery dating to AD 240 – 300.

12.28 Overlying [677] was a silty clay [664] with occasional lumps of chalk and cbm fragments, that measured 0.97m N-S and 0.91m E-W. A similar deposit [813] was approximately 1.50m to the north. Pottery from [664] dates to AD 200 – 270.

12.29 A dark grey black sandy gravel [651], partially covered [664] and [813]. It measured 1.97m E-W and 1.85m N-S but was truncated to the west and continued beyond the limits of the excavation to the east.

12.30 Layer [651] was in turn overlain by a sandy silt [638] measuring 2.80m E-W, 2.50m N-S and 0.10m thick. Overlying [638] was a compacted silty sand and gravel [624] layer that measured 2.60m by 2.60m and was 0.10m thick. This deposit may have been an external surface and part of the 'yard' area. The highest level was at 4.43m OD and the lowest at 4.30m OD.

12.31 To the south of [624], a similar sand and gravel layer was recorded as [645]. Layer [645] measured 1.80m by 0.90m.

12.32 In the south and central section, the yard surface also appeared to have been re-laid. Context [445], a sandy silt with frequent lumps of chalk, limestone, fragments of mortar and occasional oyster shell and fragments of cbm was dumped against the apsidal end of the bathhouse. The layer measured 1.90m E-W, 1.0m N-S and was 0.20m thick. Pottery from [445] dates to the mid to late 3rd century. A length of fine copper alloy chain (SF <287>), which would have been worn for personal adornment, was also unearthed.

12.33 Covering [445], was an extensive layer of sandy silt [406] which measured 4.20m E-W and 3.12m N-S. Pottery from this deposit dates to AD 270 – 300. The highest level was at 4.30m OD and the lowest at 4.03m OD.

12.34 To the north of [406], was another extensive levelling layer of silty sand [465] with frequent fragments of cbm and mortar. The deposit measured 4.40m N-S, by 2.80m N-S. The layer was truncated to the north, west and south but continued to the east beyond the edge of excavation. Pottery from [465] dates to AD 270 – 300.

12.35 Overlying part of [465] was a small patch of compacted sandy silt [460] with frequent gravel. This measured 1.06m E-W, 0.40m N-S and was 0.09m thick but continued to the east beyond the limits of the Trench. It may be that it represented part of the yard surface. The level was at 4.37m OD.

12.36 On the west side, a possible pit was identified [436] (fill [409]) which measured 2.02m E-W, 1.04m N-S and was 0.17m deep, but it was truncated to the north, south and west. It had sloping sides falling to a flat base. The fill was a clayey silt with frequent fragments of cbm. Pottery from the pit dates to the mid to late 3rd century.

12.37 Pit [436] was sealed by a layer of clayey silt [417] with frequent fragments of cbm measuring 1.50m E-W, 1.04m N-S and 0.21m deep. The deposit may have been laid down to consolidate the soft ground after the pit [436] had been filled in. Pottery dating to AD 240 – 280 was recovered from the layer.

12.38 A deposit of pale yellow clayey silt and mortar [401] measuring 1.72m E-W, 1.08m N-S and 0.10m thick covered [417]. This was probably part of the 'yard' surface. Pottery retrieved from this deposit dates to the 3rd century. The level was at 4.33m OD.

Gully

12.39 Truncating [645] (see para 12.31) was a linear feature [653] (fill [652]) aligned E/W and measuring 1.06m long, 0.53m wide by 0.09m deep but it continued beyond the edge of the Trench to the east. It had sloping sides falling to a slightly concave base. This shallow gully was filled with a silty clay and contained pot dating to AD 270 – 370.

Postholes

12.40 Three postholes [419], [438] and [423] were identified in the central part of the area, forming an E/W line c. 3.0m long. A fourth, smaller posthole [440] was offset to the north but is considered part of the group. A fifth possible posthole [431] was identified c. 3.20m to the south of posthole [419]. The purpose of these postholes is uncertain but the northern group could denote a fence line. The postholes could also be demarcating an area perhaps used only temporarily for pitting (see below)

12.41 All the postholes were characterised by vertical or steeply sloping sides falling to a flat or concave base. Similar fills of sandy silt or sandy clay filled the features. The full dimensions are given in Table 8 below.

Table 8 dimensions of postholes in Area C

Context No	Shape	Dimensions Longest axis first	Depth	Fill No
440	Rectangular	0.19 x 0.16m	0.11m	439
423	Sub-circular	0.42 x 0.36m	0.18m	422
419	Circular	0.30m in dia	0.26m	418
438	Ovoid	0.56 x 0.45m	0.18m	437
431	Sub-circular	0.37 x 0.32m	0.13m	430

Pitting

12.42 Between postholes [431] and [419] was a large sub-rectangular pit [397] (fill [396]). The cut measured 2.20m N-S, 1.20m E-W and was 0.30m deep but was truncated to the west and south. It had steeply sloping sides falling to flat base. The fill was a sandy silt with

occasional fragments of cbm, oyster shell, mortar and lumps of chalk. Pottery from the pit dates to AD 280 – 300+.

12.43 The pit [397] was truncated to the south by a second large feature [391] (fill [390]). The cut [391] measured 1.84m E-W, 1.62m N-S and 0.30m deep but was truncated to the south by a later intrusion. It had steeply sloping sides falling to a base that inclined to the south. The fill was a sandy silt with frequent fragments of cbm, oyster shell, mortar and charcoal. Pottery from the feature dates to AD 280 – 300+.

12.44 On the north side of the yard, the gully [653] (see para 12.39) was truncated by pit [634] (fill [633]). The cut measured 2.10m E-W, 0.90m N-S and was 0.25m deep but was truncated to the east by a later feature. It had sloping sides falling to a flat base. The fill was clayey silt with very frequent oyster shell, and produced pottery dating to AD 230 – 300+. The pit was probably for disposal of rubbish.

12.45 The three pits described above were probably used for the disposal of rubbish and are likely to date the end of this phase of activity.

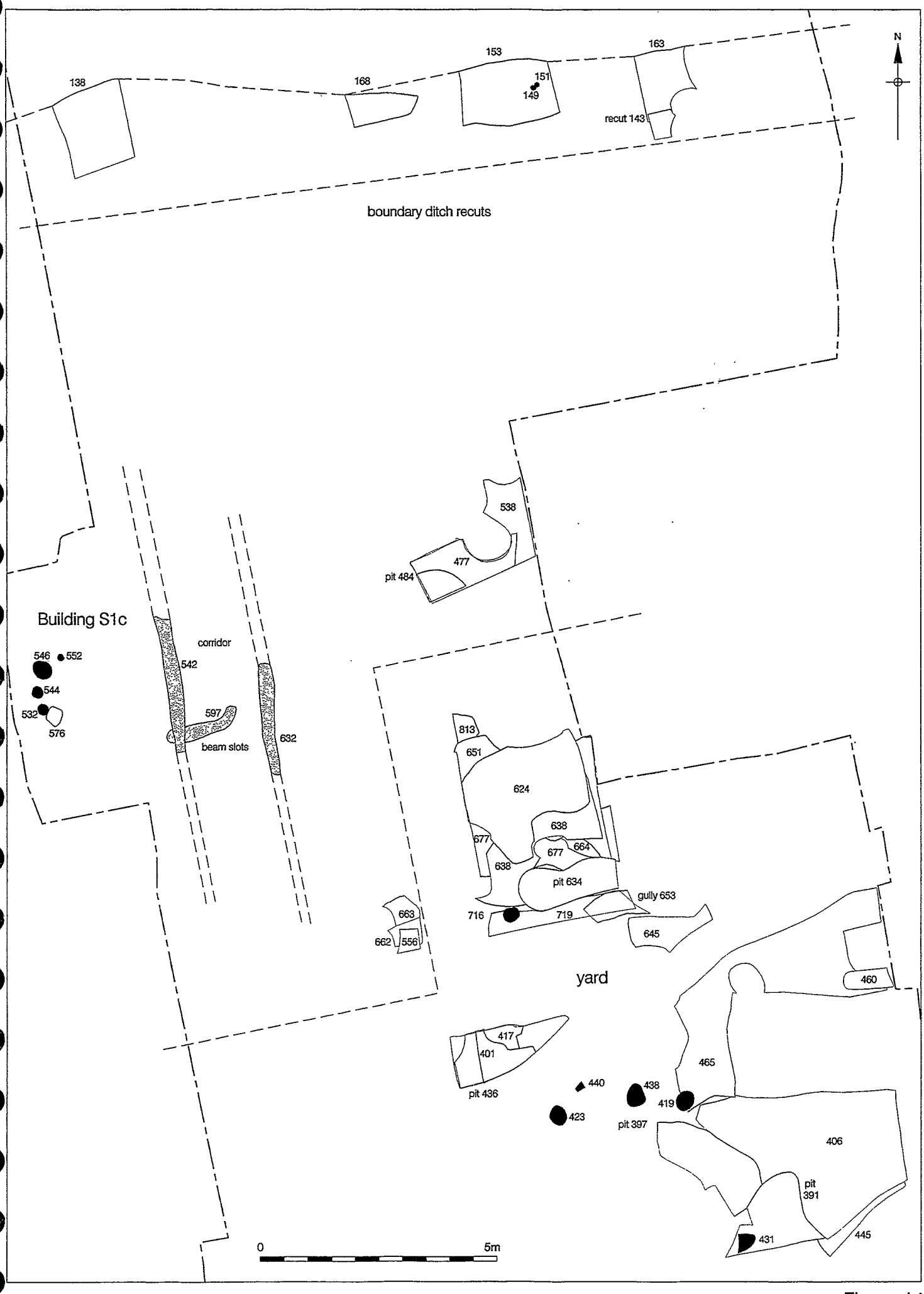


Figure 14
Phase 6
1:100

13. Phase 7 c. AD 290 – 300 (Fig 15)

13.1 This phase represents the period c. AD 290 – 300 and was only identified in Area B. Once again the west wing of the clay-and-timber building (S 1c) appeared to have undergone at least partial demolition and subsequent rebuilding. Dump layers of demolition material and silty sand that levelled and raised the ground were overlain by a sequence of floor makeup and floor including *opus signinum* surfaces. These deposits were spread across an area measuring 9.0m by 7.50m. Postholes probably define an internal E/W partition. At the east end of the wall line N/S aligned postholes may represent a return of the wall N/S or a possible entrance to a room to the west from a N/S orientated corridor. To the south of the possible doorway the corridor was represented by parallel beamslots set 1.20m apart.

13.2 The E/W wall represented by postholes appeared to have been replaced by a wall with a foundation trench filled with packed chalk lumps.

13.3 What may have been part of a hearth was identified to the east of the supposed corridor.

13.4 A dump of wall plaster and trample, which accumulated within the corridor and a pit that was dug to the north, could have taken place at the end of this phase of activity, when the building may have been in a dilapidated state.

Area B

13.5 the clay-and-timber building continued in use with further modifications (S 1d), which are described in detail below.

Dump Layers

13.6 In the central part of Area B, layer [528] was a dark grey brown silty clay with fragments of cbm, mortar, chalk and charcoal that measured 1.28m N-S, 1.10m E-W and was 0.04m thick. This small dumped deposit may represent the demolition/destruction of earlier structures as it overlay the postholes [532] and [544], and the layer [576] of Phase 6. Partially overlying [528] was a silty sandy clay [521] with frequent oyster shell, chalk lumps and fragments of charcoal, which measured 1.32m by 1.32m.

13.7 Context [648], in the southeast, was a dump of sandy silt, mortar and chalk with occasional fragments of charcoal and oyster shell. It measured 2.30m N-S, 1.10m E-W and was 0.06m thick and may also represent the demolition debris.

13.8 Other deposits were probably put down to raise and level the ground. A silty sand [608], measuring 3.05m N-S, 2.0m E-W and 0.08m thick, was

recorded on the east side of the area. In the north, a sandy silt [600] measuring 1.40m N-S, 1.25m E-W and 0.10m thick was recorded. Pottery recovered from [608] dates to AD 270 – 300 and from [600] the pottery dated to AD 250 – 370.

Postholes

13.9 In the central part of the Area, posthole [585] truncated the south end of beam slot [542] (see Phase 6, para 12.22). Set 2.0m to the north of [585] and truncating the north end of beam slot [542] was another posthole [480]. This [480] in turn had been truncated by posthole [482] which probably represented a replacement post. It may be that [583] and [480]/[483] represent a wall line in the same position as beam slot [542] of Phase 6. Alternatively the postholes could represent an internal doorway allowing access between a corridor (see para 13.15) and a room to the west. From posthole [585] came late 3rd century pot.

13.10 At right angles to, and west of postholes [482] and [480] was a line of 3, postholes [475], [469], and [462], placed at regular intervals 0.90m apart. These could represent an E/W wall at least 3.0m long that abutted the N/S wall described above.

13.11 Located 0.50m to the north of the putative E/W wall were two postholes [492] and [498] set 0.40m apart. The purpose of these postholes is uncertain. Roman pottery was found in posthole [498].

13.12 A group of three [530], [523] and [516] was identified c. 1.50m to the south of the posthole [469] and the E/W wall alignment. The function of these posts is uncertain but some form of internal fixture is probable.

13.13 All the postholes were characterised by steeply sloping or near vertical sides falling to a concave or pointed base. Except for posthole [480], which had a flat base. A similar dark grey silty clay filled all. The full details are given in Table 9 below.

Table 9 dimensions of postholes in Area B

Context No	Shape	Dimensions Longest axis first	Depth	Fill No
585	Circular	0.35 x 0.30m	0.09m	584
480	Circular	0.45 x 0.40m	0.08m	479
482	Circular	0.24 x 0.20m	0.15m	481
475	Circular	0.20m in dia	0.25m	474
469	Circular	0.20m in dia	0.12m	468
462	Circular	0.30 x 0.25m	0.10m	461
498	Circular	0.20m in dia	0.30m	497
492	Circular	0.20m in dia	0.25m	491
530	Circular	0.10m in dia	0.15m	529
516	Circular	0.10m in dia	0.20m	515

E/W Wall

13.14 Postholes [482], [462], [469] and [475] were all truncated by a possible construction cut [426] (fill [393], [435]). The cut [426] was orientated E/W and measured 3.20m in length, 0.35m wide and was 0.30m in depth but was truncated both to the east and the west. The primary fill [393] was packed with chalk lumps typically 250 x 200 x 200mm and some broken tile. The upper fill comprised a sandy clay [435]. This was probably the foundation for a brickearth wall that may have superseded the wall line represented by the postholes. Pottery from [435] dates to AD 140 – 260.

Beamslots

13.15 The dump layer [608] was truncated by a probable beamslot [587] (fill [586]). The N/S orientated cut measured 2.80m in length, was 0.35m wide and 0.12m deep. It was truncated both to the south and north. Roman pottery was found in the slot. Set 1.20m to the west of beamslot [587] and running parallel to it was a second beamslot cut [581] (fill [580]). It [581] measured 4.50m N-S, 0.20m E-W and up to 0.22m deep. Both linear features had vertical sides falling to a flat base and were filled with a sandy silt. From the beam slot [581] a copper alloy bracelet (SF <368>) was recovered. The beamslots appeared to define a N/S aligned corridor. Further to the north the west wall of this corridor was defined by the postholes [585] and [480]/[482].

13.16 Between beamslots [587] and [181] was a dump of plaster [557] which may fallen off the walls. The deposit measured 2.80m N-S, by 1.30m E-W. Pottery dates to AD 250 – 370. Layer [557] was partially overlain by a possible trample layer of silty sand [525], measuring 1.20m N-S by 0.90m, but it was truncated to the north by later intrusions. Pottery from this layer dates to AD 250 – 370.

Floor

13.17 The remnants of probable floor deposits were identified. On the west side, context [444] was compacted silty clay with fragments of charcoal, chalk and wall plaster. It measured 1.0m E-W, 0.90m N-S, and was 0.10m thick. The level was between 4.49m OD and 4.41m OD.

13.18 The dump layers [528] and [521] (see para 13.6), were covered by a possible beaten earth floor, composed of compacted sandy clay [427] with frequent pebbles, and fragments of chalk and charcoal. It measured 3.20m E-W, 0.60m N-S and 0.08m thick. The highest level was at 4.65m OD and the lowest at 4.58m OD.

13.19 Overlying [427] were further probable floor surfaces contexts [466] and [385]. Deposit [466] was a sandy silt clay with fragments of cbm, chalk, oyster shell and mortar, which measured 3.30m E-W, 1.70m N-S and was 0.05m thick. Pottery dating to AD 250 – 400 was recovered from it.

The level was between 4.65m and 4.59m OD. Layer [385] was a compacted sandy clay, measuring 1.70m E-W and 0.90m N-S. Pottery recovered from [385] dates to the late 3rd century. A miniature bronze foot (SF <302>) was found in [466].

13.20 To the west of beamslot [581], the remains of a pink mortar *opus signinum* floor [594], were found. The surface measured 1.70m N-S, 1.32m E-W and it was 0.08m thick. The level was between 4.37m and 4.32m OD.

13.21 A similar floor to [594] was present to the east of beamslot [587] where it was designated context [588]. This mortar surface measured 5.04m N-S, 2.59m E-W by 0.10m deep. Pottery recovered from it was probably residual and dated to AD 160 – 250. However painted wall plaster found lying on top of the surface was probably contemporary with the building. The level on the floor, which inclined to the south, was between 4.56m OD and 4.26m OD.

13.22 It would appear that the floor surfaces had to be continually maintained and the patching and resurfacing of floors was common probably as a result of subsidence.

13.23 An example, of what may be a patched repair to the mortar floor [588], was a layer of sandy silt [527] measuring 1.12m E-W, 1.02m N-S, and 0.10m thick.

13.24 Also overlying [588] was a layer of silty sand [524], with some pieces of broken tile laid flat on its surface. The deposit measured 0.90m N-S, by 0.60m E-W but it was truncated to the east. The level was at 4.55m OD. Pottery dating to c. AD 250 – 300 was recovered from it. Layer [524] may also have been a repair to the floor.

13.25 Context [577] was compacted silty sand, measuring 1.30m N-S, by 1.26m E-W, which partially overlay [588] and dump layer [648]. The deposit may have been part of the floor sequence.

13.26 Overlying [577] was a dump of silty clay [536] that measured 1.32m N-S, by 1.0m E-W which in turn was overlain by sandy silt [535] measuring 1.14m by 1.0m. A further dumped deposit of silty sand [534] measuring 1.27m N-S, 0.46m E-W, and 0.10m thick covered [535]. A deposit of compacted sandy clay [533] overlay [534] and this may have been the remnants of a beaten earth floor. The layer [533] measured 0.68m E-W, 0.56m N-S and was 0.08m thick. The highest level was at 4.47m OD.

13.27 Also overlying [577] was a compacted silty sand [520] that measured 1.80m N-S by 0.50m E-W and this too may have been part of the beaten earth floor. The level was at 4.44m OD.

Hearth

13.28 Upon [520] the remains of a possible hearth [519] were recorded. It was composed of firmly compacted silty clay on which broken pieces of tile had been laid flat. The clay base was scorched red. The level was at 4.44m OD.

Pitting

13.29 In the north of Area B, a shallow sub-circular pit [616] (fill [615]) was identified It measured 0.70m E-W, 0.65m N-S and 0.10m in depth but was truncated to the south. It had sloping sides falling to a flat base. The fill was a clayey sandy silt with frequent chalk lumps and fragments of charcoal. The feature may have been a refuse pit.

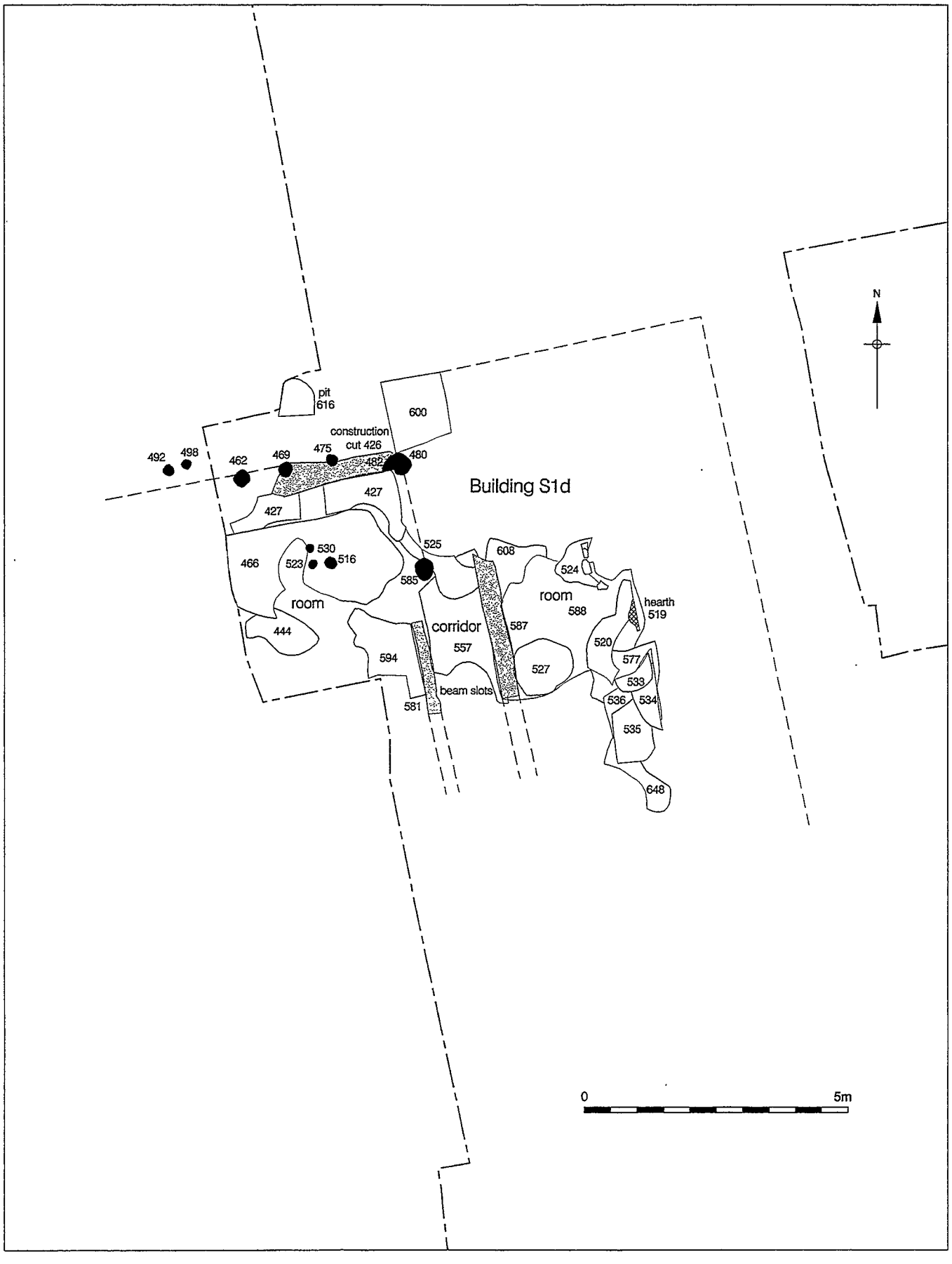


Figure 15
Phase 7
1:100

14. Phase 8 c. AD 300 – 325 (Fig. 16)

14.1 This phase represents the first quarter of the fourth century and was only present in Area B. It would seem that at least part of the west wing of building (S 1d) was demolished, as an E/W robber trench was identified in the south of the area. Three pits were also identified that may be associated with the demolition of the earlier building.

14.2 Overlying the earlier deposits were dump layers including demolition material that were probably laid down to raise and level the ground. Some of these layers were capped with the remnants of beaten earth floor of floor makeup. In at least one instance broken tile was used as flooring.

14.3 Postholes and stakeholes may indicate the location of an E/W wall with a return to the south. That the E/W wall may have been rebuilt is suggested by a beamslot, or alternatively the beamslot could represent an entrance through the wall. A further possible beam slot also suggests that the N/S return was rebuilt.

Area B

14.4 The remains uncovered in Area B and described in detail below are an indication of further re-building to the structure now designated S 1e.

Robber trench?

14.5 In the south of the area, context [578] (fill [579]) represented an E/W orientated linear feature. It measured 2.0m long, 1.05m wide and 0.32m deep but it was truncated to the west, and had steeply sloping sides falling to a flat base. The fill [579] was a sandy silt with fragments of mortar, charcoal, oyster shell and occasional chunks of ragstone. From the fill pottery dating to AD 270 – 300 AD was recovered. It may be that this feature was a robber trench and represents at least the partial demolition of the west wing of the building.

Pitting

14.6 Contexts [450] (fill [449] represented a pit, located in the southeast of the area. It measured 1.20m E-W, 0.30m N-S 0.35m deep but was truncated to the south. It had sloping sides falling to an irregular base. The fill was a silty sand, which produced 3rd century pottery.

14.7 In the north of the Trench, a second pit [501] (fill [500]) was recognised. It measured 1.18m E-W, 0.78m N-S and had a maximum depth of 0.11m. The cut was sub-circular in shape and had near vertical sides to the east and sloping sides to the west, falling to a flat base. It was filled with a silty sand and pottery from it dates to AD 270 – 370.

14.8 To the east of cut [501] a third pit [540] (fill [518]) was identified. The cut measured 1.20m E-W, 1.06m N-S and was 0.23m deep. It had steeply sloping sides falling to a flat base. The fill was a silty sand with frequent fragments of cbm, animal bone, pottery and oyster shell. The pottery dates to c. AD 270 – 300.

14.9 All three of the pits are at the bottom of the stratigraphic sequence assigned to Phase 8 and are therefore probably associated with the demolition of the building (S 1d) in the previous phase.

Dump Layers

14.10 On the west side of the area, a layer of sandy silt [452]/[453] with frequent fragments of *opus signinum* mortar, chalk and charcoal up was thought to be a dump of demolition material. It measured 1.50m by 0.70m and was up to 0.10m thick. Pottery with a deposition date of AD 250 – 270+ was recovered from [453].

14.11 The possible robber trench [578] (see para 14.5) was partially overlain by a layer of sandy silt [574] with occasional gravel, and fragments of charcoal, *opus signinum* mortar and oyster shell. The deposit measured 1.90m E-W, 1.24m N-S and 0.05m thick.

14.12 Approximately 2.0m to the north of [574], context [575] represented a dumped deposit that sealed the posthole [585] (see Phase 7). It was a clayey silt with inclusions of fragments of plaster and charcoal and measured 1.0m N-S and 0.98m E-W.

14.13 About 1.0m to the west of [575] was a sandy silt [448] with frequent fragments of cbm, mortar and charcoal, measuring 0.90m N-S, 0.66m E-W and 0.05m thick was recorded. Pot dating to AD 270 – 400 was recovered.

14.14 A more extensive layer of silty sand [550] with frequent of cbm and chalk was present 0.50m to the south of [448]. This measured 2.10m N-S, 1.60m E-W and was up to 0.20m thick. Pottery recovered from this deposit dates to AD 240 – 300.

14.15 Overlying floor layer [385] (see Phase 7) was a dump layer of clayey sandy silt [425] measuring 3.20m E-W and 0.20m N-S.

14.16 All the deposits described above were probably put down to raise and level the ground.

Postholes and stakeholes

14.17 Post and stakeholes [504], [381], [346], [356], [358], [360], [337], [362] and [487] appear to be aligned E/W and may represent a wall line at least 2.60m long (that is the distance between the western and eastern most posthole of the group). However stakeholes [403], [405], [414]

and [416] are on the same alignment further to the east and could represent a continuation of the wall in that direction. If this was so then the E/W wall represented by these features would have measured at least 6.50m.

14.18 Posthole [506] in the west of Area B, was offset c. 0.50m to the north of E/W post/stakehole alignment described above. The isolated position of posthole [506] makes further interpretation difficult. However posthole [673] to the south of the E/W alignment may be a return of the wall in that direction.

14.19 Two postholes [513] and [601] set c. 0.90m apart were identified in the west of the area, 2.0m to the south of the supposed E/W wall. The function of these is uncertain but they may have been for some internal fixture. Roman pottery from [513] dates to AD 200 – 276.

14.20 All the postholes assigned to this phase were characterised by near vertical sides falling to a pointed or concave base. The fills varied from a dark grey silty clay to a light brown grey silty sand. Their dimensions are given in Table 10 below.

14.21 All the stakeholes detailed below in Table 11, were also characterised by near vertical or steeply sloping sides falling to a pointed base and all were filled with a similar grey brown silty sand. Roman pottery came from stakehole [346] and 3rd century pot was found in [399].

Table 10 dimensions of postholes in Area B

Context No	Shape	Dimensions Longest axis first	Depth	Fill No
504	Circular	0.20m in dia	0.30m	503
487	Circular	0.15m in dia	0.30m	486
381	Sub-circular	0.30 x 0.20m	0.26m	382
673	Sub-circular	0.30m in dia	0.12m	672
506	Circular	0.15m in dia	0.30m	505
513	Circular	0.15m in dia	0.30m	512
601	Rectangular	0.49 x 0.14m	0.06m	602

Table 11 dimensions of stakeholes in Area B

Context No	Shape	Dimensions Longest axis first	Depth	Fill No
362	Sub-circular	0.12m in dia	0.12m	363
360	Sub-circular	0.15 x 0.14m	0.14m	361
358	Circular	0.10m in dia	0.19m	359
356	Circular	0.07m in dia	0.12m	357

337	Circular	0.10m in dia	0.18m	336
346	Circular	0.11m in dia	0.24m	347
403	Circular	0.09 x 0.08m	0.17m	402
405	Circular	0.10m in dia	0.19m	404
399	Circular	0.11m in dia	0.23m	398
414	Ovoid	0.15 x 0.13m	0.21m	413
416	Circular	0.11 x 0.09m	0.20m	415

Beam slots

14.22 In the north of the area, a possible beam slot [424] (fill [394]) was identified. The E/W orientated feature, measured 1.20m long, 0.35m wide and 0.25m deep. It had sloping sides falling to a slightly concave base. The fill, a sandy silt, produced pottery dating to AD 250 – 400. It may be that this feature represented a rebuild of the E/W wall represented by a group of postholes and stakeholes described in para 14.17. Or the beamslot could indicate the position for a doorway through the E/W wall.

14.23 Cut [493] (fill [499]) measured 0.80m N-S, 0.45m E-W and was 0.24m deep but was truncated to the north and south. It had steeply sloping sides falling to a flat base and was filled with a silty sandy clay. Roman pot came from the fill. This feature truncated posthole [673], which may have represented a N/S return to a supposed E/W wall. Beamslot [493] could represent a rebuild of that N/S wall.

Floor

14.24 Overlying dumped deposit [550], was a possible floor makeup layer [470]. The deposit, of sandy silt, measured 3.35m N-S, 2.0m E-W and was 0.15m thick. The layer sloped to the south from 4.68m OD to 4.37m OD. Pottery dating to AD 250 – 300 was found. A copper alloy finger ring (SF <335>) was also recovered.

14.25 Upon [470] was a spread of broken tile [457] laid flat with frequent fragments of chalk and *opus signinum* mortar, measuring 1.20m N-S, 1.0m E-W and 0.10m thick. The tile could have formed a rough floor. The level was at 4.60m OD.

14.26 Further possible floor deposits comprised layer [446], just to the north of [470], which may have been the remains of a beaten earth floor made of compacted silty sandy clay. It measured 0.62m N-S, 0.54m E-W and was 0.04m thick. The highest level was at 4.69m OD. Pottery from [446] dates to the 3rd century.

14.27 The more extensive remains, of what may be a beaten earth floor or floor makeup were identified approximately 2.0m to the east of [446]. Here a layer of silty sand [488] measuring 5.50m N-S, 4.35m E-W and

with a maximum thickness of 0.25m was located. The deposit sloped to the south from 4.70m OD to 4.47m OD. Pottery dating to AD 270 – 400 was retrieved.

14.28 A similar silty sand to [488] was also found [572]. The deposit [572] measured 0.40m N-S and 0.30m E-W.

14.29 Further which may have been the remnants of beaten earth floor were recorded to the north of [488]. Overlying the stakeholes [403], [405] and [414] was a silty sand [412] layer measuring 0.60, E-W, 0.40m N-S and 0.04m thick. Pottery recovered from it dates to the 3rd century. This deposit was in turn covered by a yellow brown silty clay [335], which measured 0.50m N-S, 0.45m E-W and 0.05m thick. Layer [335] may be the remnants of a beaten earth floor. The level was at 4.95m OD.

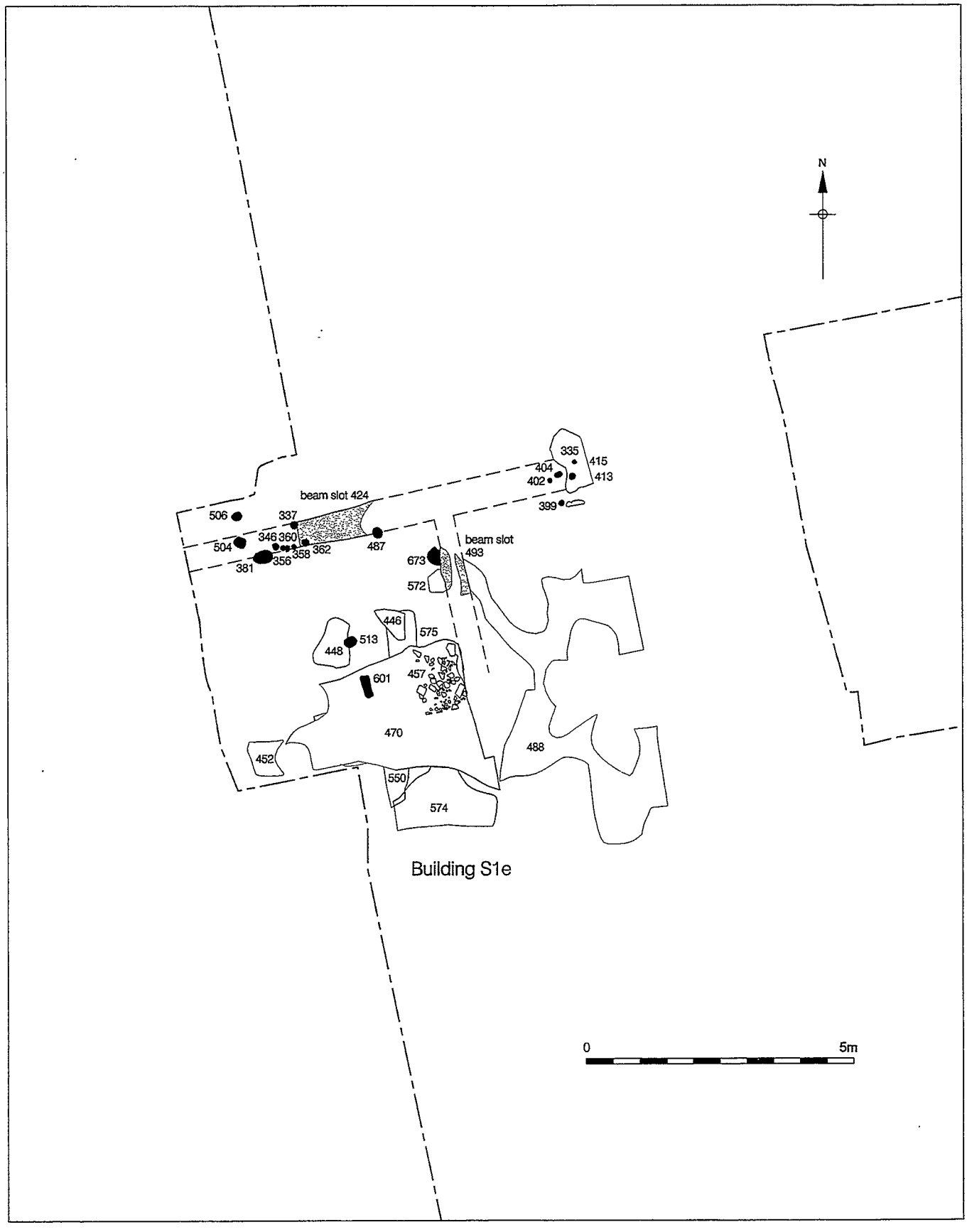


Figure 16
Phase 8
1:100

15. Phase 10

Re-modelling and flooding of Building 1

15.1 At some point following the original construction of Building 1 a process of re-modelling was initiated. Unfortunately, the absence of established relationships and dating evidence means it is not possible to attribute a timescale or clear order to each of these developments although some sequence can be determined. For instance, the firebox going out of use, the drainage ditches and the pit described in para 15.8 – 15.11 may all be contemporary with Phase 5.

Phase 10.1 (Fig. 13)

Extension, re-modelling and maintenance

15.2 Wall [1295], running E/W in line with wall [920] to the east, is thought to represent a later extension to the north-west of Building 1. The wall is 0.90m wide, 0.36m deep and survives to a length of 4.35m and a maximum height of 3.32m OD. Post-medieval truncation has isolated [1295] from the surrounding stratigraphy but the wall is evidently of a different construction to the original build. Although not excavated a modern intrusion reveals that [1295] is comprised of a shallow foundation and three courses of wall.

15.3 The foundation was constructed by excavating a shallow trench with sloping sides and a curved base that was then filled to the edges with a conglomerate of flint, Kentish Rag and mortar. The wall is formed of a rubble core faced with chalk blocks and it is interesting to note that no tile or brick was used in the construction of [1295]. The construction of the wall cannot be precisely tied into the sequence of Building 1 but it clearly post-dates the original build and is likely to pre-date the construction of wall [1251], the latter representing a later extension to the north.

15.4 The possibility has been considered that [1295] represents a later re-build of an earlier, perhaps original wall on the same axis. The likelihood of this is minimal, however, as no trace of truncated masonry was recorded that might be expected to have survived beneath the shallow foundations of [1295]. It is not possible to determine the original length of wall although it was observed continuing into the western baulk. Truncation also obscures an indication of the nature of the internal space created by the addition of wall [1295] (Room 10) although a layer of re-deposited natural sand and gravel has been recorded that has been interpreted as make-up for a possible surface. Furthermore, the absence of evidence for *pilae* may suggest that Room 10 was unheated.

15.5 At some point the wall [1131] dividing Rooms 4 and 7 was truncated for he insertion of an enlarged opening. This opening is not central but

located to the eastern side of the rooms and running through the gap, linking the two spaces, are the remains of a tiled surface. The surface is truncated but extends from Room 4 to Room 7 measuring 2.74m N/S and 3.55m E/W butting up to wall [1034] to the east. The surface is constructed of fragments of tile and brick set into a compacted silty sand bedding layer.

15.6 The bedding layer, numbered [1071], [1072], [1098] and [1209], ranges in colour from white through cream, pink and grey to brown and contains frequent mortar, moderate fragments of building material and occasional charcoal and flint. Tile and brick are set into this layer in a fairly regular grid orientated N/S / E/W to form a level surface. The surface is truncated but the discrete areas of tile and brick are numbered [1068], [1069], [1070], [1090] and [1288]. Although largely comprised of re-used, fragmented brick and tile whole *bessales* have been used. From the dimensions it is also possible to identify fragments of *tegulae* and even *bipedales*. Together the bedding layer and tile and brick are up to 0.08m thick and have a maximum height of 2.70m OD.

15.7 Consideration has been given to the possibility that this surface may represent the sub-floor of a *hypocaust* system but a later gravel sub-floor extends over the surface in order to raise and level the ground for the addition of a later *hypocaust* in Room 7. The tiled surface also appears to respect sub-floor wall [1091] to the west although the latter is thought to relate to a series of sub-floor structures, including [1114], that are evidently later. A square notch [1279], measuring 0.06m by 0.06m, has been recorded penetrating the surface. This may have been deliberately cut out, perhaps for the insertion of a timber upright supporting some type of internal structure or partition although the evidence is minimal and open to an alternative interpretation.

The firebox goes out of use

15.8 To the east of the firebox (see Area D, Phase 3) and covering the opening to that structure was a dumped deposit of sandy silt [640] with frequent fragments of charcoal, and cbm, and occasional chunks of hard mortar. The deposit measured 1.20m by 1.10m. Pottery recovered from [640] dates to AD 250 – 300. This deposit was probably laid down when the firebox had gone out of use and was in a partially collapsed state.

Drainage ditches

15.9 Following the build of the apse to the north of Building 1 a semi-circular ditch, truncating layer [640] (see para 15.8), was excavated around wall [946], measuring 0.82m N/S, 0.35m in depth with a maximum height of 3.98m OD. The ditch [618] has near vertical sides, a flat base and was backfilled with a chalk lumps up to 0.03m thick [613]. The sharpness of the cut and homogeneity of the fill suggest that it is likely to have been

backfilled deliberately following construction. From [613] pottery dating to AD 200 – 300 was recovered. Furthermore, the location of the ditch and nature of the fill suggest that it may have been excavated for drainage perhaps from the eaves, to divert water away from the apse wall.

15.10 Another probable drainage ditch [433] (fill [432]), truncated the layer [456] (see para 11.44). The feature measured 2.35m E-W, 0.80m N-S and was 0.30m deep but continued east beyond the edge of excavation. It had steeply sloping sides falling to a flat base. The fill was a sandy silt, which produced pottery dating to AD 250 – 280.

Pit

15.11 The west end of the ditch [618] (see para 15.9) was truncated by sub-rectangular cut [591] (fill [590]), which measured 1.60m E-W, 1.40m N-S and was 0.30m deep. It had sloping sides falling to a concave base. The fill was a sandy silt with frequent broken tile and occasional oyster shell. Pottery dating to AD 240 – 270 was retrieved from the pit. Its function was probably to dispose of broken building material and other waste. (Not illustrated).

16. Phase 10.2 (Fig. 17)

Major re-modelling; extension, extension of hypocaust, re-modelling of internal spaces

16.1 At some point following construction Building 1 underwent a major episode of extension and re-modelling, on far larger in scale than the developments of phase 10.1. The re-modelling primarily involved an increase in the number and size of heated rooms. Large openings were inserted through walls [1131] and [998]/ [1022] linking and enlarging Rooms 4/7 with 6 and Rooms 5, 8 and 9 respectively. The openings, where measurable, spanned 4.25m and were most likely bridged by semi-circular arches. As mostly truncated to sub-floor level, however, it is not possible even to be certain about the nature of the abutments.

16.2 In order to support the enlarged spaces created N/S wall [1034] was strengthened by the addition of 0.26m of masonry to the east face [1035]. This thickening extends for almost the full length of Room 8, measuring 4.92m N/S, and survives as one course constructed above sub-floor [1092]. The latter is made of Reigate stone blocks measuring up to 0.20m by 0.20m by 0.11m and reaches a maximum height of 2.68m OD. The abutment bases in walls [1034] and [1022], bordering the opening between Rooms 5 and 8, were also re-built and strengthened but remain the same width as the original build (c.0.60m).

16.3 The *hypocaust* was enlarged with *pilae* extending over the truncated walls and into originally unheated rooms. A gravel sub-floor has had to be added in places in order to raise and level the ground for the insertion of the *pilae*. This is most apparent between Rooms 8 and 9 where gravel layer [1253] overlies truncated wall [998]/ [1022]. The latter measures 4.20m N/S, 0.95m E/W and is up to 0.13m thick. The *pilae* were built from a more diverse range of material than used during the original build, although again they are primarily comprised of complete *bessales* with less frequent *pedalis* bricks ([1041], [1042], [1054] and [1210]) and *tubuli* ([1132]).

16.4 The insertion of a partition wall dividing Room 12/ 13 into two smaller spaces (discussed below) involved the reconstruction of a small number of the *pilae* to the north-east of Room 12. Unlike the original build these include *tegulae*, placed flange down in addition to *pedalis* and *bessalis* bricks. *Pilae* [931], [933], [934] and [935] each have a *pedalis* (0.30m x 0.30m) or *tegulae* (0.32m x 0.42m) at the base on which the smaller *bessalis* bricks are stacked. *Pilae* [932] and [936] are entirely constructed of *tegulae*, up to nine in the former stack. Where evident flanges are either type 1 or 2 and all examples are in fabric 2459a. Indeed, all of the brick and tile in these last stacks are in fabric 2459a in contrast to the principal use of fabric 3006 in the original build.

16.5 Room 5 also contains the remains of a possible flue ([1058], [1061] - [1064]) that may have been inserted through wall [1022] during this

phase of re-modelling. Due to truncation no trace could be detected in the wall itself but what may be the spur walls and base of a flue projecting into Room 5, orientated E/W remains. The base consists of a layer of fairly regularly laid Kentish Rag stone [1064] covered with a level surface of tile and brick [1062]. Together these measure 1.40m E/W by 1.40m N/S and have a maximum height of 2.51m OD.

16.6 On top of the base two parallel walls were constructed, both now truncated. The north wall [1058]/ [1061] measures 1.32m E/W and has a maximum height of 2.76m OD. The south wall [1063] measures 0.83m E/W and has a maximum height of 2.73m OD. Both walls are 0.58m wide, equating to two Roman feet as observed with the original build. Kentish Rag stone is evident in the build of the northern wall but fragmented brick and tile comprise the greater proportion of both. As recorded with the original flues from Building 1, the internal faces are entirely constructed of brick and tile.

16.7 The sub-floor opening to the north of Room 5 would have provided a source of heat for the newly extended hypocaust. Being located at some distance from the conjectured *praefurnium*, however, the addition of an extra flue may have helped with circulation of heated air. Alternatively, the flue may have provided Room 5 with heat from a closer, separate source located to the east.

16.8 The only remaining evidence for flooring and cavity wall heating in Building 1 was also recorded in Room 5. Both would have been added with the extension of the *hypocaust*. The remains of three hollow rectangular box-flue tiles [1043] have been recorded in-situ, attached to wall [1034] to the west of Room 5. Mortared vertically to the wall they measure 0.10m E/W, 0.75m N/S, 0.37m in depth and survive to a maximum height of 2.74m OD. The flue-tiles represent the bottom course, starting at base of floor and would have originally taken the heat from *hypocaust* up through the walls. Further *tubuli* would have continued up to the roof of Building 1 where the heat was most probably vented through chimneys (see interpretation below).

16.9 Where recorded in-situ in Building 1 the box-flue tiles are unvented on either adjacent plane. However, a large proportion of those recovered from the demolition rubble demonstrate rectangular vents that might indicate the wall cavity was laterally vented. This would have allowed hot air not only to move upwards but also horizontally through the walls in a more effective manner. The presence of both vented and unvented flue-tiles is not necessarily chronological but may be simply related to the proficiency of individual tile makers or production centres.

16.10 Butted up against the flue-tiles in Room 5 and resting on the *pilae* tacks are the remains of a floor [1045]. This is interpreted as a collapsed section of the *suspensura* sealing the *hypocaust*. The surface measures 3.30m E/W, 1.30m N/S, is up to 0.37m thick and has a maximum collapsed height of 2.89m OD. The floor is comprised of

bipedales at the base, the latter originally bridging the *pilae*, covered with a thick layer of crushed tile and lime mortar or *opus signinum*.

16.11 Within Room7 an arrangement of freestanding sub-floor masonry features is evident formed of wall [1091] and pillars [1165], [1203], [1204], [1205] and [1206]. It cannot be demonstrated if these are related but they appear to form an 'L' shape bordering a further square sub-floor feature on the north and west sides. Wall [1091] is orientated N/S and measures 0.64m E/W, 1.70m N/S, 0.28m in depth with a maximum height of 2.90m OD. The wall is built of re-used brick and tile, mortared into regular courses although a flue-tile with a more unusual triangular cut-out is evident in the core.

16.12 Pillars [1203] to [1206] are all constructed in a similar way with horizontally coursed re-used brick and tile formed into rectangular stacks. Complete *bessales* are evident in addition to fragments of larger brick and tile. The four pillars range from 0.26m to 0.50m E/W, 0.28m to 0.42m N/S and rise to a maximum height of 3.01m OD. The most complete [1204] has nine courses surviving with a depth of 0.48m. Pillar [1165] differs from the other sub-floor features by incorporating a re-used orangey-brown oolitic limestone column base, measuring 0.32m by 0.32m, placed on top of a single *bessalis*. Together these sub-floor structures measure 1.80m E/W and 2.82m N/S.

16.13 Pillar [1114] measures 0.80m E/W, 0.86m N/S and is 0.40m in height reaching 2.99m OD. The latter is also constructed of fragmented brick and tile, including a single complete *pedalis*. The 'L' shaped arrangement appears to respect the enlarged opening linking Rooms 4 and 7 and possibly represents the sub-floor support for an internal partition or screen. Similarly, [1114] may be the remains of a sub-floor base for another substantial fixture or fitting.

16.14 In contrast to the enlargement of rooms elsewhere, a N/S wall was inserted at some stage through Room 12/ 13, and butted onto walls [920] and [921]. The wall has a substantial foundation [1289], constructed differently from the original build (see fig 18, sections 29 & 28). Following the excavation of a construction cut ([1290]), a course of chalk blocks were placed in the base of the trench. This was then filled flush to the edge with a poured mixture of mortar, flint, tile and chalk. Similarly to the gravel layer in the base of the original build foundation trenches the chalk blocks were intended to ensure the drainage of water (Adams 2001, 125). The foundation measures approximately 3.80m N/S, 0.60m in width, 1.00m in depth and has a maximum height of 2.71m OD.

16.15 The wall ([1010] – [1014]) is of a similar construction to the arcaded wall ([1257] – [1260]) immediately to the east, although different materials have been used. Four piers ([1010] – [1013]) have been built on top of a single course of tile and brick [1014] that rests directly on

the foundations (see fig 18, section 21). The latter is comprised of fragments of *tegulae* and brick, forming a level bedding layer for the construction of the piers. This course of tile and brick runs for the full length and width of the foundation and is up to 0.05m thick.

16.16 The piers are constructed of stone with tile lacing courses. The stone is mostly Reigate although both flint and Kentish Rag have also been used. In contrast to the majority of the original build the lacing courses are primarily comprised of *tegulae* placed flange up, with the inclusion of some fragmented brick. The *tegulae* are almost entirely of fabric 3060 or 3006 near 3060 and have a distinctive notched flange profile (flange 40). The mortar used to bond the piers also differs from that used in walls [920] and [921] to the north and south being less sandy (1:3) and containing black iron ore (K. Sabel pers comm.).

16.17 As observed with the original build the piers are approximately 2 Roman feet in width (0.60m – 0.65m) but vary in length from 0.50m to 0.90m N/S. They survive to a maximum height of 0.65m, equating to five courses and reaching 3.25m OD. Truncation again prevents an understanding of the way in which the piers were bridged. They may have had semi-circular or flat arches but given their overall size they are likely to have supported an internal wall dividing Room 12/ 13 into two smaller spaces.

16.18 The ancillary furnace was re-built at some point, potentially during this phase of major re-modelling. Cut [730] (fill [728]) represented a re-build to the north wall of the furnace. The construction cut [730], measuring 0.64m E/W, 0.52m N/S and 0.24m deep, contained the masonry element [728] forming the re-build of the north wall. The wall was built of fragmented tile and brick bonded with a clayey sand and measured 0.56m E/W, 0.38m N/S and 0.10m in height. The backfill to the construction cut was a silty sand [727].

16.19 Evidence that the south wall had also been re-built or repaired was identified with cut [731] (fill [729]). The construction cut for the re-build of the south wall measured 0.76m E/W, 0.38m N/S, and was 0.15m in depth. The wall [729] measured 0.78m long, 0.38m wide, 0.26m in height and was also built with re-used tile and brick bonded with a clayey sand. Overlying the primary fill of the furnace (see Phase 3) was a second fill of silty clayey sand [782] with frequent fragments of brick, tile and charcoal c. 0.05m thick. Spanning walls [728] and [729] above were two fragmented bricks [641] laid horizontally to form the roof.

16.20 To the south of Building 1 Rooms 2 and 4 were opened out into one space and an extension was added onto the possible entranceway, projecting southwards. Walls [1073] and [1074] were built using the same technique and materials and consequently probably at the same time. It is possible that wall [1073] represents a re-build of [1131], bordering the south of Room 2 but the area remains unexcavated. Both walls have a chalk and mortar rubble core faced with Kentish Rag and

tile. Unlike earlier walls lacing courses are not evident, but a more random coursing of material and the tile used is all *tegulae* with flange profile 40. The latter potentially indicates a degree of contemporaneity with sub-floor wall [1010] – [1013]. Together walls [1073] and [1074] measure 5.25m E/W, 1.90m N/S and are 0.58-62m wide.

16.21 The dividing wall [1131] between Rooms 2 and 4 appears to have been completely truncated and sealed by a compacted mortar spread [1193]. Although now itself truncated the mortar spread is one of three (also [1192] and [1255]) that are of exactly the same composition and likely formed a single homogenous layer running throughout Room 2/ 4. All three are comprised of a light grey mortar containing fragments of tile and crushed chalk. Spread [1192] survives the most intact, measuring 3.05m E/W and 1.53m N/S. They are all up to 0.06m thick and reach a maximum height of 2.40m OD. It is probable that these compacted spreads represent a sub-floor, or even floor surface. Room 2/ 4 is likely to have remained as an internal, unheated space. Too little was investigated, however, to determine if area 1 was an internal addition or perhaps an external structure built in an attempt to consolidate the ground in front of entrance.

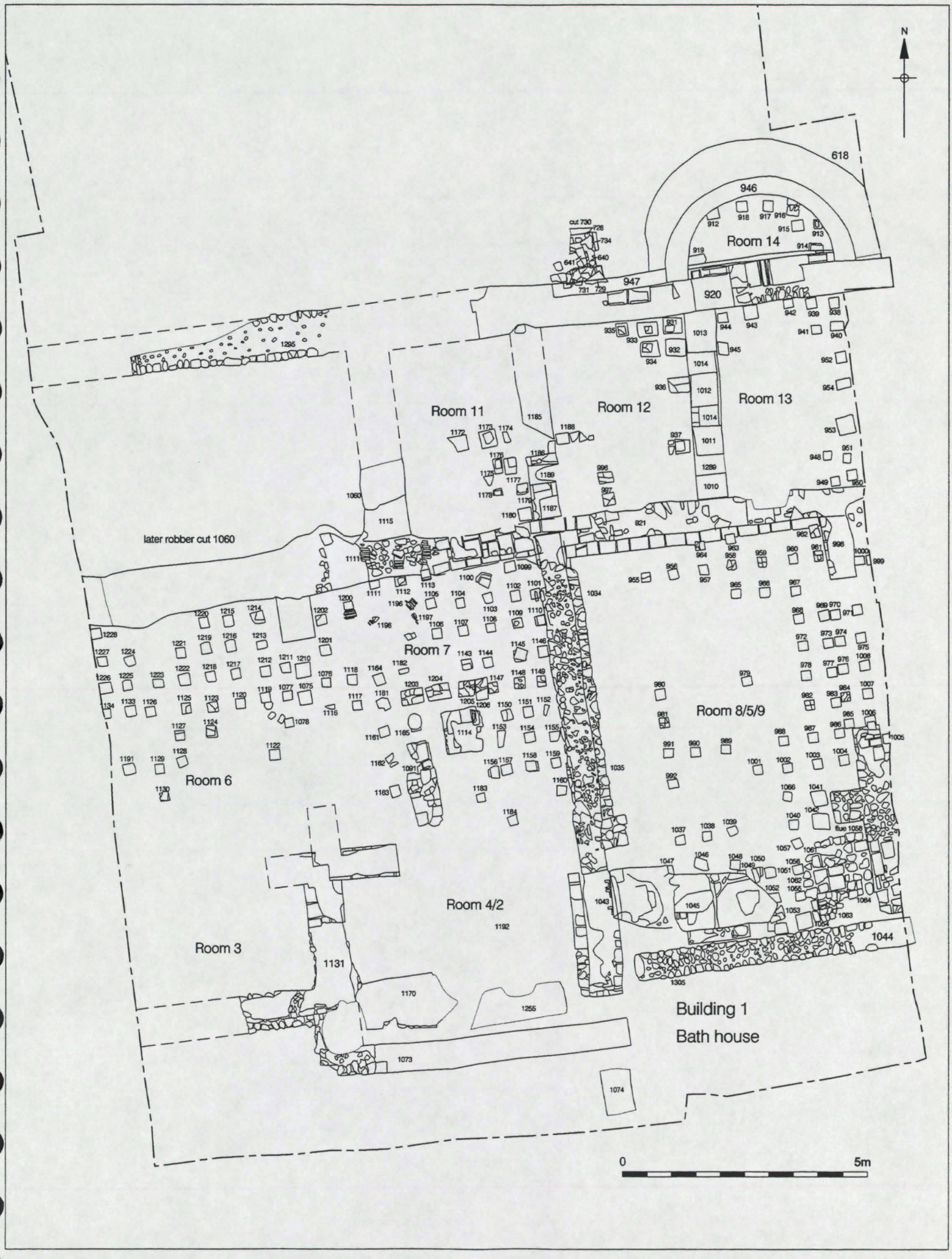
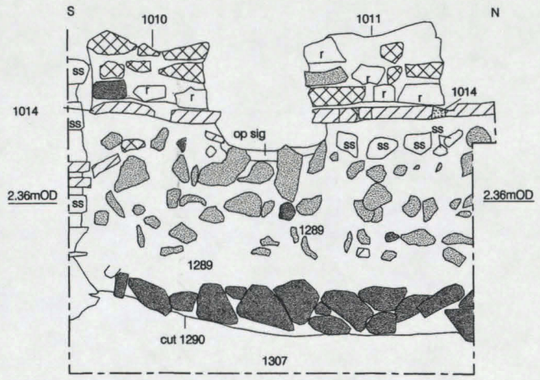
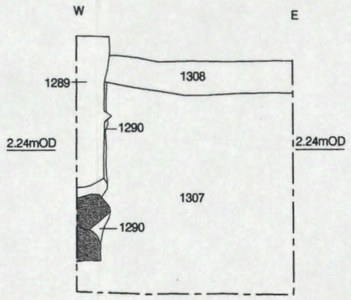


Figure 17
Phase 10.2
1:100



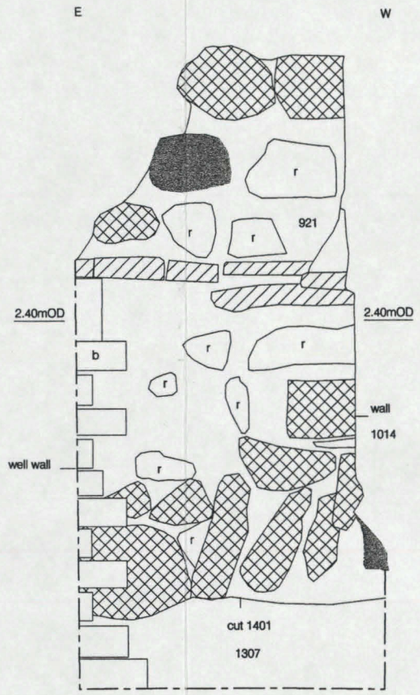
Section 29

East facing showing wall (1014), piers (1010), (1011) and foundation (1289)



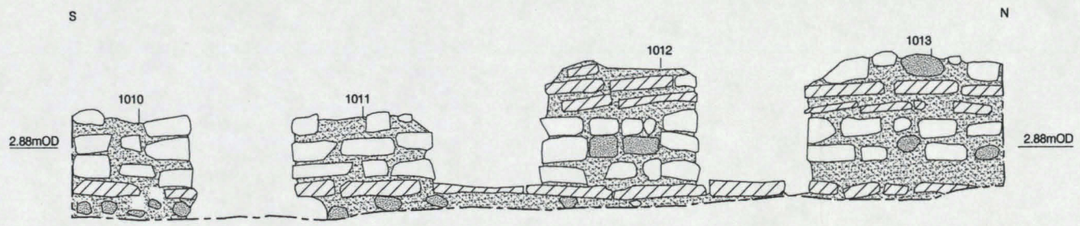
Section 30

South facing showing sub-floor (1308) and natural clay (1307)



Section 38

North facing showing wall (921) and foundation



Section 21

East facing showing piers (1010, (1011),(1012) and (1013)

Key

- chalk
- flint
- kentish ragstone
- mortar
- r reigate
- ss sandstone

Key

- flint
- mortar
- tile

Key

- b brick
- r reigate
- chalk
- kentish ragstone

0 1m

Figure 18
Sections 21, 29, 30 & 38
1:25

17. Phase 10.3 (Not illustrated)

Flooding of Building 1

17.1 This phase represents the deposition of a sludge like deposit that formed around the *pilae* stacks. The sludge may be evidence that ground water draining south down the natural slope was able to flood hypocaust system. Or alternatively a major over bank flooding episode of the river to the south took place.

17.2 Contexts [761], [765], [1019], [808], [1286] represented a dark brown black organic silt up to 0.20m thick, that was deposited around the *pilae* stacks and covered the sub-floor of the bathhouse. In the apsidal end of the bathhouse the sandy silt [573] was only 0.04m thick.

18. Phase 11 c. AD 325 – 375 (Fig. 19)

18.1 Phase 11 was present in Areas B, C and D and represents the period c. AD 325 – 375. Phase 9 in Area B once thought to be a separate phase of activity has been subsumed in Phase 11.

18.2 In Area B the structure identified in Phase 8 S 1e now appears to have been demolished and a new building (S 2) constructed. Pitting overlain by dumps of silty sand mixed with fragments of chalk, crushed mortar, broken tile and oyster shell probably relate to the destruction of the Phase 8, S 1e building. The dump layers which would have levelled and raised the ground. Post pits, postholes and a beam slot may define some of the internal layout of building that appeared to have an internal E/W corridor and a N/S partition wall. Only small patches of the beaten earth floor survived. Some rubbish pitting appears to have taken place, probably when the building was no longer in regular use.

18.3 The building in Area B probably continued into the northern part of Area C. Here a layer of compacted sandy silt seems to have been laid down over earlier structural deposits in order to provide a level platform for building. The layer was truncated by a N/S chalk rubble wall foundation.

18.4 To the south of the structural remains in Area C, was the open yard. The yard surface again appears to have been in part at least re-laid with compacted silty clay and silty sandy gravel.

18.5 Rubbish pitting may have encroached on the yard area on the east and west side.

Area B/C

Pitting

18.6 The features described below may be related to the demolition of the earlier structure (S 1e) identified in Phase 8 as they probably post date the building in Phase 8 but predate the new build (S 2) in Phase 11.

18.7 Context cut [274] (fill [275]) represented a sub-circular pit measuring 2.00m E-W, 1.40m N-S and 0.15m deep but it was truncated to the west, east and south. It had steeply sloping sides falling to a flat base. The fill was a sandy silt with fragments of mortar, chalk, cbm and charcoal. This pit was covered by demolition debris [255] (see below).

18.8 Also partially covered by the dumped deposits [253] and [386] was a large sub-circular pit [441] (fill 434]) that measured 2.50m E-W, 1.40m N-S and was 0.27m deep. It had sloping sides falling to a flat base. The fill was a silty sand that produced pottery dating to AD 250 – 370.

18.9 In the south of the area, pit [464] (fill [463]) was sub-circular in shape, with sloping sides falling to a flat base. It measured 1.43m N-S, 0.90m E-W and was 0.17m deep. The fill was a silty sand in which pot was found dating to AD 279 – 400. Layer [255] (see para 18.15) partially covered the pit.

18.10 A small pit cut [395] (fill [392]) was located in the north of the area. It measured 0.60m by 0.60m and was 0.11m deep and had sloping sides falling to a flat base. The fill was silty sand, which produced residual Roman pottery. This feature was sealed by dump [305].

Dump Layers

18.11 In the central part of the area, context [386] represented a silty sand with frequent fragments of *opus signinum* mortar, oyster shell, chalk, charcoal and cbm, which measured 3.70m N-S, 2.60m E-W and up to 0.40m thick.

18.12 A layer of demolition material was represented by [389] a light brown silt sand, which measured 1.30m E-W, 1.0m N-S and 0.13m thick but was truncated to the east. Pottery dating to AD 250 – 300 came from the deposit.

18.13 Overlying [389] was a sandy silt [305] with frequent fragments of daub, *opus signinum* mortar, chalk and charcoal. It measured 2.15m E-W, 1.30m N-S and up to 0.30m thick. Pottery dating to AD 270 – 370 was associated.

18.14 In the north of the area, a sand silt [400] measuring 3.50m E-W, 0.80m N-S and up to 0.30m thick was present. Pottery dating to the mid – late 3rd century was recovered. This layer was overlain by a dump of silty sand clay [328] mixed with chalk lumps, broken tile, and fragments of plaster. This measured 3.04m E-W, 2.0m N-S and 0.25m thick but continued west beyond the edge of excavation.

18.15 On the east side of the area, Contexts [253], [254], [255] and [295] represented a dumped deposit of silty sand with fragments of chalk, daub, oyster shell and charcoal. Pottery dating to AD 270 – 300 was retrieved from [253], pot dating to AD 270 – 400 came from [254] and [255] produced pottery dating to AD 300 – 370.

18.16 The deposits described above were probably laid down to raise and level the ground. They covered an area that measured 8.40m E-W by 6.20m N-S.

18.17 Firmly compacted sandy silt [517] with frequent fragments of cbm was recorded in the north of the Area C. Layer [517] measured 1.20m N-S, 0.60m E-W and was 0.06m thick but was truncated on all sides by later intrusions. The layer may have been laid down to level the ground after the demolition/destruction of earlier structures and prior to the

construction of a new building. Pottery from [517] dates to AD 270 – 400. The level was at 5.06m OD.

18.18 To the east of [517] and separated from it by a later intrusion was a compacted silty sand [364] with frequent fragments of cbm, moderate inclusions of lumps of chalk and occasional oyster shell. Layer [364] measured 1.0m E-W, 0.05m N-S and was 0.06m thick but was truncated on all sides by later intrusions. This deposit was probably a continuation to the west of the same layer as [517]. From [364] pottery dating to AD 250 – 275 was recovered but this is likely to be residual. The level was at 5.04m OD.

Post pits

18.19 In Area B post pits appear to define part of a new timber framed building (S 2). The post pit [233], the posthole [603] and the post pits [327] and [251] were aligned E/W, over a distance of 3.0m. Pit [233] was the western most, [327] was set 2.50m to the east and [251] was 0.50m further to the east.

18.20 Posthole [327] was notable for a lower fill [325] of chalk lumps c. 200mm x 150mm x 150mm in size, that had been used as post packing. The upper fill was a sandy silt with fragments of cbm, daub and charcoal.

18.21 In post pit [251], lumps of sandstone had been used as packing. The pit [251] truncated floor [312] (see para 18.29) and may therefore be a replacement for [327].

18.22 Posthole [603] which was just to the east of [232] was filled with a light orange grey silty sand.

18.23 Positioned 2.50m to the north of pit [327] was post pit [349]. Pit [349] was truncated both to the east and west by pits [338] and [315] that could have held replacement posts.

18.24 Two meters to the east of the closely grouped post pits [349], [338] and [315] was posthole [717] and a meter further to the east was posthole [408].

18.25 It may be that post pits [232], [327] and [251] defined part of an E/W wall and that the post pits [338], [349] and [315] and the postholes [717] and [408] represented part of an E/W wall, 2.50m to the north. The two parallel walls could define an internal E/W corridor. From post pit [251] came pottery dating to AD 250 – 370, while pit [338] produced only residual 2nd century pot.

18.26 Most of the features were filled with a clayey silt and had steeply sloping or near vertical sides falling to a concave base. The full

dimensions are given in Table 12 below. An exciting find from the fill of posthole [717] was a gold earring (SF <240>).

Table 12 dimensions of postholes and post pits in Area B

Context No	Shape	Dimensions Longest axis first	Depth	Fill No
232	Sub-circular	0.50 x 0.30m	0.20m	233
603	Rectangle	0.20 x 0.20m	0.10m	604
327	Rectangular	0.38 x 0.36m	0.20m	326, 325
251	Rectangular	0.37 x 0.37m	0.34m	252
349	Sub-circular	0.45 x 0.30m	0.23m	348
338	Sub-rectangular	0.60 x 0.55m	0.40m	339
315	Sub-circular	0.35 x 0.20m	0.34m	314
408	Circular	0.30 x 0.26m	0.36	407
717	Sub-circular	0.22m in dia	0.50m	383

Beamslot

18.27 In the south central part of area B, was a possible beam slot aligned N/S. It measured 0.80m in length, 0.45m wide and 0.19m deep but was truncated to the north and continued south beyond the edge of the excavation. The sides sloped to a concave base. The fill was a clayey silt. This beam slot may represent the remains of a wall, that abutted the proposed E/W wall (see para 18.25) to the north.

Wall foundation

18.28 Layer [517] (see para 18.17) was truncated to the east by what may have been the construction cut for a N/S orientated wall foundation [706] (fill [537]). The cut measured 1.04m N-S, 0.54m E-W and was 0.08m deep was truncated to the south and east. It had sloping sides falling to a flat base and was filled with sandy silt and chalk rubble. Pottery dating to AD 250 – 350 was recovered from the fill.

Floor

18.29 Overlying the dumped deposit [386], was a small patch of orange/grey silty sand [312] measuring 0.23m E-W, 0.12m N-S and 0.03m thick. The deposit, which was truncated on all sides, may have been the remains of a beaten earth floor. The level was at 4.84m OD.

18.30 Also overlying layer [386] was context [316], a patch of compacted light grey orange, silty sand that measured 0.70m N-S, 0.50m E-W, and 0.08m thick but was truncated on all sides. This too may have been the remnant of a floor surface. The level was at 4.81m OD. Pottery recovered from the layer dates to AD 270 – 370.

18.31 A light brown compacted sandy clay [313] partially covered dumped deposit [328]. Layer [313] measured 0.50m N-S and 0.35m E-W, was truncated to the north, east and south and continued beyond the limits of the excavation to the west. It may be that this deposit was the remnant of a beaten earth floor. The highest level was at 5.03m OD and the lowest at 4.97m OD.

Pitting

18.32 The pits described below were probably dug for rubbish disposal when the building was no longer in regular use.

18.33 A large pit cut [294] (fill [283]), truncated the dump layer [305] (see para 18.13). The feature measured 2.80m E-W, 2.10m N-S and was c. 0.30m deep, but was truncated to the west. The fill was a clayey silt from which pottery was recovered dating to AD 280 – 350. Part of finger ring (SF <204>) probably made out of silver was also found.

18.34 Approximately a meter to the south of pit [294] and truncating pit [441] (see para 18.8) was a sub-circular cut [378] (fill [377]). It measured 0.60m by 0.60m and was 0.28m deep but was truncated to the south. It had steeply sloping sides falling to a flat base. The fill was a loose clayey sand silt which produced pottery dating to AD 260 – 370.

18.35 Layer [517] (see para 18.17) was truncated to the west by cut [508] (fills [511], [507]) which was sub-circular in shape and measured 1.15m E-W, 0.70m N-S and 0.28m deep but was truncated to the north, south and west. It had steeply sloping sides falling to a flat base. Sandy silts filled the pit. From both the basal fill [511] and the upper fill [507] pottery dating to AD 250 – 370 was recovered.

Area C

Open yard

18.36 In the south of Area C, a sequence of dumped deposits covered the earlier gravel surface [624] and pit [634] (see Phase 6). The basal deposit was a silty clay [617] which measured 4.0m N-S, 3.70m E-W and 0.10m thick. Pottery from this dates to AD 170 – 250 and is likely to be residual. The highest level was at 4.48m OD and the lowest at 4.25m OD. A compacted silty sandy gravel [611], measuring 2.90m E-W, 1.40m N-S and up to 0.20m deep partially covered [617].

18.37 A firmly compacted silty clay [583] measuring 2.48m E-W, 1.02m N-S and 0.14m thick partially overlay [611]. On top off [583] was a silty sand mixed with broken tile [547] that measured 2.20m E-W and 1.12m N-S, which in turn was overlain by sandy silt [345] measuring 1.56m by 0.52m.

18.38 The uppermost deposit was a sandy silt [322] which measured 1.45m N-S, and 0.85m E-W but was truncated to the north and south. Pottery from [322] dates to AD 270 – 370. The level was between 4.57m OD and 4.53m OD.

18.39 The sequence of deposits described above was possibly a surface or surface makeup layers.

18.40 Further to the south, similar deposits were recorded. Layer [637] was a small patch of compacted silty clay measuring 0.60m by 0.28m but it was truncated on all sides. Overlying [637] was a silty sand [636] measuring 1.20m E-W, 0.80m N-S and c. 0.20m thick. The level was between 4.37m OD and 4.32m OD.

18.41 To the east of [636] was a compacted silty clay [621] measuring 2.78m E-W, 0.60m N-S and up to 0.35m thick but it was truncated to the north, south and west and continued beyond the limits of the excavation to the south. Pottery from this deposit dates to AD 300 – 370. The highest level was at 4.51m OD and the lowest was at 4.40m OD.

18.42 Layers [636], and [621] were truncated by a large but shallow feature cut [555] (fill [554]). It measured 5.22m N-S, 2.21m N-S and was 0.14m deep and had near vertical sides falling to a fairly flat base. The fill was a silty sand with frequent fragments of cbm from which pottery was recovered dating to AD 270 – 370.

18.43 The purpose for pit [555] is uncertain but it quickly appears to have been filled in and was covered by a layer of sandy silt [514] with frequent fragments of cbm and occasional oyster shell. This extensive spread measured 6.54m E-W and 3.90m N-S and the level was between 4.58m OD and 4.39m OD. Pottery from [514] dates to AD 270 – 400.

Postholes and stakeholes

18.44 A group of postholes [353] [321] and [334], post pits [353] and [351] and stakehole [332] were identified in the central part of Area C truncating the yard surface. Approximately 3.0m to the east of this group an isolated posthole [292] was recorded. These were all characterised by vertical or near vertical sides falling to a flat base. Apart from [292] which was filled with a silty clay all were filled with a similar silty sand or sandy silt. Posthole [353] was truncated by posthole [351] suggesting that perhaps [351] was a replacement for [353]. Set just to the north of posthole [334] was a stakehole also filled with a sandy silt. The nature of the structure represented by these features is unclear. The full details of the postholes and stakeholes are given in Table 13 below. Roman pottery came from postholes [321], [353] and [334], whole posthole [292] produced pottery dating to AD 270 – 400.

Table 13 dimensions of the postholes and stakehole in Area C

Context No	Shape	Dimensions Longest axis first	Depth	Fill No
321	Circular	0.32m in dia.	0.42m	320
353	Sub-rectangular	0.50 x 0.50m	0.34m	352
351	Sub-circular	0.66 x 0.64m	0.43m	350
355	Sub-circular	0.32 x 0.24m	0.19m	354
292	Ovoid	0.52 x 0.39m	0.29m	293
334	Sub-circular	0.30 x 0.26m	0.27m	333
332	Sub-circular	0.12 x 0.10m	0.12m	331

Rubbish Pit

18.45 Truncating the layer [583] was a sub-circular pit [388] (fill [387]) that measured 0.80m N-S, 0.48m E-W and 0.19m deep but it was truncated to the west by a modern intrusion. It had sloping sides falling to a base that inclined to the west. The fill was a sandy silt with frequent fragments of cbm and occasional oyster shell. The pit had probably been used for rubbish disposal.

18.46 A probable refuse pit [455] (fill [454]) was identified on the east side of the area. The rectangular pit measured 0.90m N-S, 0.78m E-W and was 0.26m deep. It had a sloping west side falling to a flat base while the other sides were near vertical. The fill was a sandy silt .

18.47 Pit [455] was truncated by linear feature [451] (fill [442]) which was orientated E/W, was truncated to the north, south and west and continued to the east beyond the edge of the Trench. It had gently sloping sides and a fairly irregular base. The cut measured 3.90m E-W, 2.0m N-S and had a maximum depth of 0.14m. The fill was a sandy silt. The feature may have been an eroded gully.

Area D

Final extension and re-modelling of Building 1

18.48 The addition of a further heated rectangular room to the north of Building 1 can be demonstrated to post-date the flooding evident in Phase 10.3. This extension represents the final major modification identified within the limit of excavation. Wall [1251] butts onto the north face of wall [920] and extends north for 2.10m before turning west and continuing for 1.84m. Although [1251] is truncated, the clay backfill [1261] associated with the wall appears to return south, probably indicating it originally ran south to meet wall [1295]. Measuring 0.70m in width the wall is the thickest identified in Building 1 but, as with the original build, has a facing of *opus mixtum*. In this case the latter is comprised of a single lacing course, two tiles thick, separating fairly randomly faced chalk rubble and mortar. The foundations of [1251] were not excavated.

18.49 Flue [867] was inserted through wall [920], probably at this time, to heat the new extension. Wall [920] was truncated and plugged with a stone and mortar rubble measuring 1.25m E/W and 0.63m wide. The stone used was commonly Reigate although flint and smaller fragments of Kentish Rag, chalk and septeria have also been identified. An opening of 0.35m E/W was left, framed by tile and brick abutments as noted with earlier flues. The top of the flue is truncated but the base is formed of a single *pedalis* measuring 0.30m by 0.30m with a maximum height of 2.93m OD.

18.50 The *hypocaust* is also likely to have been added at this time, comprised a gravel sub-floor [856] and *pilae* [849] to [855]. The sub-floor consisted of compacted clayey silt containing sand and gravel, measuring 2.02m E/W and 2.25m N/S with a maximum height of 2.91m OD. The *pilae* are constructed primarily from *bessales*, stacked on top of single *pedalis* bricks ([849] to [853]). Stacks [854] and [855] include two more unusual tiles in fabric 3060, measuring 0.34m by 0.26m. These are similar to half box-flue tiles with four flanges to each corner but the moulding sand appears on the opposite side from normal. Further research may reveal a parallel for these tiles although they may be the result of more isolated production.

18.51 Cut [905] represents the construction trench for wall [1251]. The cut measures 2.70m E/W, 0.40m N/S and has near vertical sides but the base was not excavated. The cut is deliberately backfilled with a silty clay [904] lining wall [1251] and has a maximum height of 3.47m OD. It is likely that the insertion of this clay was deliberate, perhaps in an attempt to prevent water from seeping through the wall. Cut [905] is truncated to the west but a similar linear clay deposit [1261] was recorded further west that is thought to represent a continuation of [904].

18.52 It may have been at this time that the flue serving the apse (Room 14) was deliberately blocked. Fragments of brick in fabrics 2459a and 3006 and occasional stone were mortared into the flue aperture, filling the opening with up to 13 courses. Room 14 probably remained in use as there is no evidence for demolition or robbing but a large part of the original heat supply would have been cut off.

18.53 In the south of the area and partly enclosed by the walls [1073] and [1074] was a mortar bedding layer [1273] overlain by broken tile [1081] laid flat. The tile measured 0.58m E-W by 0.38m N-S and was interpreted as the remnants of a floor. The level on the floor was at 2.33m OD.

18.54 Also to the south of the main build of the bathhouse were two timber drains orientated E/W. The earliest drain which truncated the wall [1074] was cut [1139] (fill [1137], [1136], [1138] [1142], [1135]). In the bottom of a c. 0.40m deep construction cut was a timber drain [1137] which appeared to have a separate timber lid [1136]. Context [1138]

represented clay packing in the backfill of the construction cut which was overlain by a silty clay [1142] backfill. The fill of the drain was a dark grey silt [1135]. This stretch was 4.0m long but the same drain was identified further to east and west. To the east it was represented by context [1284]/[1283]/[1094], the lid by context [1229] and the silty fill was [1093]. To the west it was assigned the context [1079] for the construction cut. In this stretch a timber base plate [1086] probably for levelling supported the drain itself [1085]. A clayey silt [1088]/[1083] backfilled the construction cut and the silting within it was context [1168]. The drain continued further to the west where it was assigned the context [1368]. Overall it was seen to extend over a distance of 10.90m and fall from 2.12m OD in the east to 2.01m OD in the west. Part of the drain was lifted for more detailed examination. After careful cleaning it was seen that timbers [1283] and [1284] were both separate sections of a bored oak pipe with an original bore diameter of c. 75mm. Rather than being a drain it may be that the pipe could have supplied clean water. In *Londinium* there are examples of such pipes being used to channel clean water (see Appendix 7).

18.55 The drain described above was truncated by a N/S orientated ditch [1231] (fill [1232]) which appeared to respect the wall [1073] to the north but continued south beyond the edge of excavation. The cut which was not excavated, was at least 1.60m long and 0.85m wide. The feature was filled with a silty sand.

18.56 The ditch [1231] was itself truncated by a timber drain of box-type construction cut [1080] (fill [1085], [1086], [1087], [1365]) (see Appendix 7). Context [1086] represented the base of the drain and [1085] and [1087] the timber plank sides set on edge. Roundwood stakes [1355], [1356], [1357], [1360], [1361], [1358] and [1359] appear to have pinned the planks in place. It probably originally had a lid. The fill of the drain was a silty sand [1365]. It measured 360mm deep and 270mm wide and was traced over a distance of 5.50m.

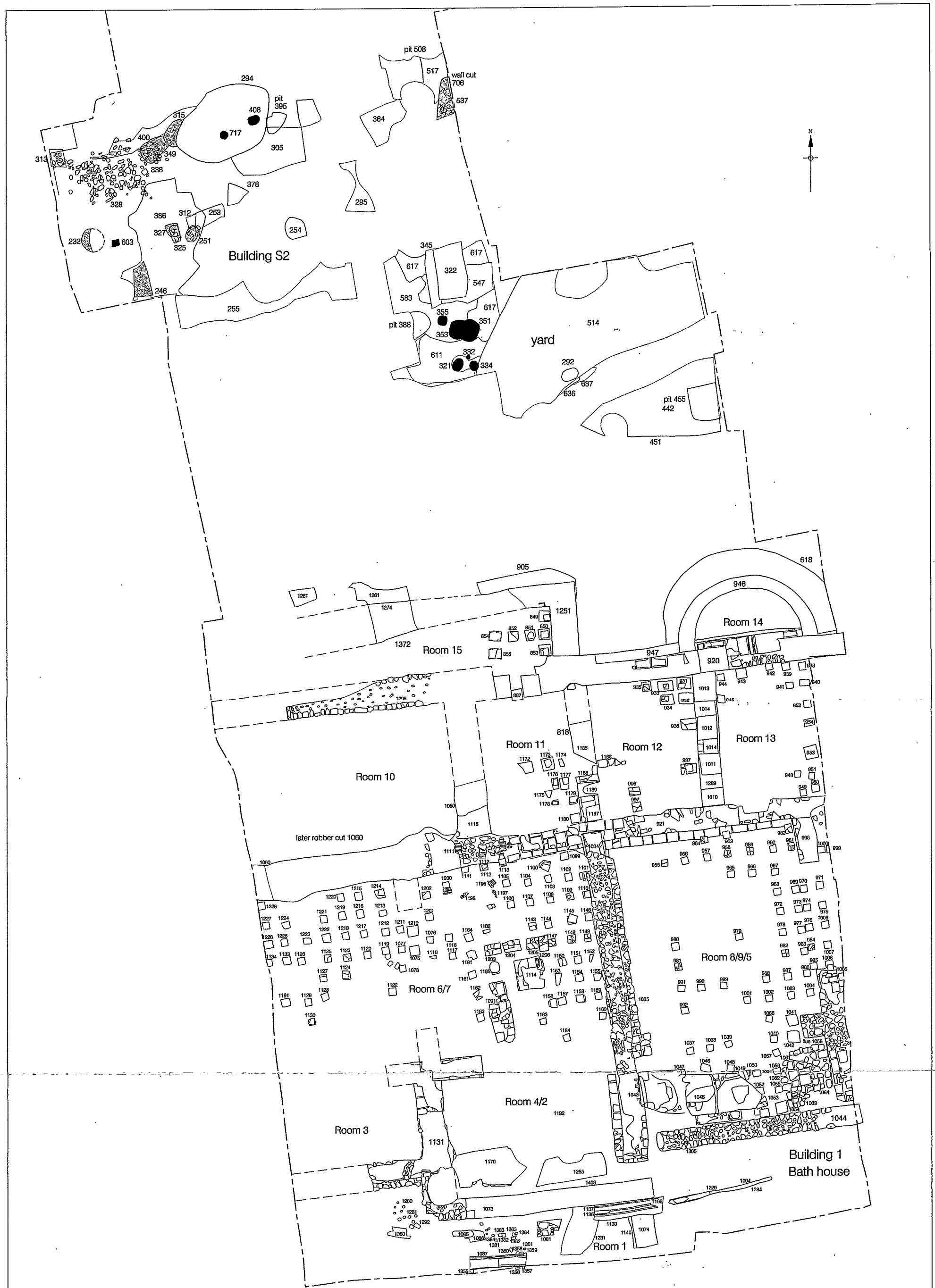


Figure 19
Phase 11
1:100

19. Phase 12 c. 375 – 400 (Fig. 20)

19.1 This phase was encountered in Areas B and C and represents the last quarter of the 4th century. In Area B, a trample layer of clayey silt, overlying features attributed to Phase 11 and a large rubbish pit that truncated it, suggest that building S 2 in Phase 11 was now no longer standing. In Area C the earlier wall foundation associated with building S2 was also overlain by a spread of demolition material suggesting that the destruction of building S 2 was entire throughout the excavated areas. A north/south orientated line of postholes 4.0m long and single posthole offset 2.50m to the west may represent some form of structure. A possible hearth located immediately to the west of the north/south post line may be an indication that the configuration of features was a building but this is far from certain. An east/west aligned ditch in the north of the area appears to demarcate a boundary. A haphazard pattern of rubbish pitting suggests that any structures in Area B were no longer in use after c. AD 400.

19.2 In Area C an accumulation of a clayey silt that overlay part of the yard was truncated by an east/west drainage ditch that traversed the yard. The flow of the ditch was to the west. A second possible drainage channel was orientated N/S and was located to the south of the east/west ditch.

Area B

19.3 In the north of Area B, context [250] represented a layer of clayey silt that overlay some of the deposits and features associated with Building S 2 in Phase 11. The clayey silt deposit measured 1.50m N-S and 4.0m E-W. The highest level was at 5.03m OD and the lowest was at 4.94m OD. From this layer pottery dating to AD 270 – 400 was recovered.

19.4 The southern margins of layer [250] were truncated by a large sub-rectangular pit [249] (fill [240]). It measured 2.60m E-W, 2.0m N-S and 0.24m deep but it was truncated to the east and west. It had sloping sides falling to a flat base. The fill was a mid brown grey, sandy silt with fragments of *opus signinum* mortar, daub, chalk, cbm and charcoal. Pottery from the pit dates to AD 270 – 370. The pit was probably for refuse disposal.

Postholes

19.5 That there might have been some kind of structure erected in Area B at this stage was suggested by the presence of several possible postholes (the full dimensions of which are given in Table 14 below).

19.6 Posthole [208], located on the west side was characterised by near vertical sides falling to a flat base and was filled grey brown, sandy silt.

19.7 Set 2.50m to the east of [208], was a cluster of three inter-cutting features [228], [226] and [218] which may have represented an original post [228] and then subsequent replacements [226] and [218]. These three features were all filled with a similar dark grey sandy silt or clayey silty sand and had steeply sloping sides falling to a concave base.

19.8 Located c. 1.70m to the south of the concentration of postholes described above, was a possible post pit [221]. With similar characteristics as the other postholes the fill of [221] was also noted for its frequent lumps of chalk and stone. Cut [221] also truncated the large pit feature [249].

19.9 Set 2.50m to the north of post group [228], [226] and [218] was another possible post pit [213]. The postholes [221], [228],/[226/ [218] and [213] form a N/S alignment 4.0m long. Pottery from posthole [218] dates to AD 270 – 400, from [221] it dates to AD 270 – 370 and from [213] to AD 270 - 330

Table 14 dimensions of postholes and post pits in Area B

Context No	Shape	Dimensions Longest axis first	Depth	Fill No
208	Circular	0.43 x 0.41m	0.15m	209
228	Ovoid	0.70 x 0.32m	0.23m	227
226	Sub-circular	0.64 x 0.54m	0.23m	225
218	Ovoid	0.56 x 0.54m	0.22m	217
221	Ovoid	0.73 x 0.66m	0.34m	216
213	Circular	0.86 x 0.76m	0.33m	212

Hearth

19.10 Truncating pit [249] and sited just to the west of the N/S line of postholes (see para 19.9) was cut [237] (fill [234]) a sub-circular pit that measured 0.75m E-W, 0.70m N-S and 0.07m deep. It had vertical sides falling to a flat base. The fill was a compacted sandy silt that appeared to have been scorched red. It may be that [237] was a hearth. The level was at 4.80m OD. Pottery dating to AD 250 – 300+ was recovered from the fill.

19.11 The postholes and the hearth described above are the only indications that there were structures in Area B, standing in the late 4th century. However whether these represented a building is far from certain.

Pitting

19.12 Adjacent to and west of the possible hearth [237] (see para 19.10) was a sequence of inter-cutting pits. The earliest was [243] (fill [244]), a sub-circular shaped pit, that measured 0.90m E-W, 0.80m N-S and 0.35m deep. It had sloping sides falling to a concave base. The fill was

a dark grey black clayey silt with fragments of plaster, chalk and charcoal. Pottery dating to AD 180 – 370 was recovered.

19.13 Pit [243] was truncated by another pit [231] (fill [224]) which was ovoid in shape and measured 1.85m N-S, 1.60m E-W and was 0.24m deep. It had sloping sides falling to a slightly concave base. The fill was a sandy silt with fragments of cbm, oyster shell, daub, charcoal and chalk. Pottery dating to AD 270 – 370 was found.

19.14 Pit [231] in turn was truncated by cut [220] (fill [219]) an ovoid feature which measured 0.91m N-S, 0.79m E-W and 0.29m deep. It had sloping sides falling to a flat base. The fill was a dark grey black, sandy silt with occasional fragments of chalk and oyster shell. Pottery found in [220] dates to AD 270 – 400. The purpose of these pits is uncertain but they could be structural and represent post pits and related to the structure defined by the postholes or they were small rubbish pits.

19.15 The posthole [228] was truncated by an ovoid shaped pit cut [211] (fill [210]) which measured 1.15m N-S, 1.00m E-W and was 0.29m deep. It had sloping sides falling to a flat base and was filled with a sandy silt with fragments of tile, *opus signinum* mortar, charcoal and oyster shell. Roman pottery found in the pit, and a single sherd of post-medieval pot in the assemblage was probably contamination. Cut [211] was probably a rubbish pit.

19.16 In the northwest of the area, cutting layer [250] was a heavily truncated feature [201] (fill [200]). The pit, which measured 0.70m by 0.70m and was 0.20m deep, was filled with a dark brown black clayey silt. Pottery associated with it dates to AD 250 – 350.

19.17 A meter to the east of [201] was a second pit [205] (fill [203]), which was also filled with a clayey silt. Sub-circular cut [205] measured 0.90 by 0.80m and was 0.28m deep. Only residual 3rd century Roman pottery was retrieved from the feature.

19.18 Pits [205] and [201] were truncated by sub-oval shaped cut [199] (fill [198]) measuring 1.10m by 1.10m and 0.30m deep. The cut, which continued beyond the limits of the excavation to the north and west, had sloping sides falling to a flat base. The fill, a clayey silt produced pottery that dated to AD 350 – 400. Included within this assemblage was a sherd of sub-Roman pot (see Appendix 2). These pits probably represented a concentration of rubbish pitting.

19.19 On the east side of the area, a cluster of large pits was identified. Cut [207] (fill [206]) represented a sub oval shaped feature that measured 1.50m E-W, 1.20m N-S and 0.17m deep but was truncated to the east. It had near vertical sides and a base that inclined to the east. The fill was a mid brown grey sandy silt, from which pottery was recovered that dates to AD 270 – 400.

19.20 The same feature as [207] may have been recorded further to the north and east, where it was represented by [193] (fill [194], [192]). Cut [193] was sub-circular and measured 1.40m N-S, 0.80m E-W and was 0.23m deep. It had near vertical sides falling to a concave base. The basal fill [194] was a sandy silt with fragments of charcoal, chalk, *opus signinum* mortar, burnt daub and cbm, 0.12m thick. The upper fill [192] was darker shade of sandy silt. From [194] pottery dating to AD 250 – 400 was recovered, while [192] produced pottery dating to AD 370 – 420.

19.21 Immediately to the north of feature [207/[193] was Cut [189] (fill [188]), sub-circular shaped pit, measuring 1.95m E-W, 1.90m N-S and 0.50m deep. It had steeply sloping sides falling to a concave base. The fill was a dark grey black, sandy silt with fragments of cbm, charcoal and oyster shell. Pottery dating to AD 250 – 400 was retrieved from the fill.

19.22 Pits [189], [207] and [249] were truncated by a sub-rectangular pit [197] (fill [196]) measuring 3.30m N-S, 1.60m E-W and was 0.38m deep. It had near vertical sides falling to a flat base. The fill was a sandy silt with fragments charcoal, cbm, oyster shell, and *opus signinum* mortar. Pottery from the pit dates to AD 270 – 370. A fragment of an ivory? armlet (SF <77>) was also found. This feature, was probably for rubbish or cess disposal.

19.23 In the south of the area, a heavily truncated probable refuse pit [236] (fill [235]) was identified. The cut measured 1.12m E-W, 1.0m N-S, and was 0.36m deep. It had near vertical sides falling to a base that inclined to the north. The fill was a sandy silt with fragments of tile, mortar, chalk, charcoal and animal bone. From the fill pottery dating to AD 270 – 400 was recovered.

Dump layer

19.24 A layer of sandy silt [202] measuring 3.20m E-W, 1.20m N-S and 0.15m thick covered pit [236]. The deposit which was truncated on all sides was probably the result of deliberate dumping or the result of erosion. The level on the deposit was between 4.87m OD and 4.48m OD. Pottery dating to AD 260 – 400 was retrieved from the layer.

E/W ditch

19.25 Context [319] (fill 296]) represented linear feature, orientated E/W, in the north of the area. The cut measured 2.14m E-W, 1.60m N-S and was up to 0.37m deep but was truncated to the east and west. The fill was a silty sand which produced pottery dating to AD 250 – 350. What may have been the butt-end of this ditch was recorded 3.0m to the west as [289] (fill [284]). Cut [289] measured 1.35m E-W, 0.73m N-S and 0.26m deep but was truncated to the south. It had sloping sides falling to a base that inclined to the east. The fill was an orangey grey, silty sand which produced pot dating to AD 250 – 300.

19.26 A possible posthole [223] (fill [222]) was recorded truncating fill [296]. The posthole measured 0.50m by 0.40m and was 0.25m deep, had steeply sloping sides falling to a concave base and was filled a brown black clayey silt. Pottery from [223] dates to AD 200 – 250. The posthole could represent part of a fence line immediately north of the ditch.

19.27 Context [230] (fill [229]) appeared to be a re-cut of the ditch [319]. It measured 1.45m E-W, 0.90m N-S and was 0.30m deep but was truncated to the east and west. The fill was a clayey silt. It may be that a terminus to ditch [230] was recorded to the west as [215] (fill [214]). This curvy-linear feature was butt-ended to the west and truncated to the east. The cut measured 1.70m E-W, 0.80m N-S and was 0.22m deep. It had sloping sides falling to a concave base. The fill was a clayey silt from which pottery was recovered that dates to AD 300 – 375. Cut [215] truncated the earlier ditch [289] and the pit [205].

19.28 It would appear that the E/W ditch [319]/[289] and its re-cut [230]/[215] represent a boundary south of which in the late 4th century the site was still occupied although the nature of that occupation was no longer the same as it had been in previous times.

19.29 Ditch [230]/[215] was truncated by a large sub-rectangular pit [204] (fill [195]) that measured 2.36m E-W, 1.70m N-S and 0.47m deep but was truncated to the north by a modern intrusion. The fill was a sandy clay with frequent fragments of cbm, oyster shell and charcoal, and occasional roughly squared blocks of greensand, Ragstone and chalk. Also recovered from the fill was a large block of weathered oolitic limestone. The source of the limestone was probably a Jurassic outcrop in the midlands of England that is known to have been quarried in Roman times (see Appendix 14). The limestone would probably have been used as building material. Pottery from the pit dates to AD 350 – 400. The pit seems to have been filled with demolition material that probably originated from the destruction of near by buildings. The feature marks the end of this phase of activity.

Area C

19.30 The wall foundation [706] (see Phase 11, 18.28) was covered by a layer of possible demolition material [476] suggesting that the earlier building S 2 had been levelled to its foundations. This deposit was composed of sandy silt and chalk lumps with frequent fragments of cbm and measured 1.10m by 0.60m and was 0.04m thick.

19.31 A dumped deposit of clayey silt [384] sealed the posthole [423] (see Phase 6) and was assigned to this phase because of stratigraphic reasons. The layer measured 2.50m E-W, 1.10m N-S and was 0.11m thick but it was truncated in all directions by later intrusions. Roman pottery was recovered from the deposit. The highest level was at 4.25m

OD. This deposit could have been water borne and laid down by natural erosion.

E/W ditch

19.32 Truncating layer [384] was an E/W orientated ditch [324] (fill [323]), which measured 3.40m long, 1.10m wide and 0.55m deep but it was truncated to the east and west by later intrusions. It had sloping sides falling to a concave base that inclined to the west. The fill was a sandy silt with frequent oyster shell and occasional, chalk nodules, and crushed mortar. Fragmentary pieces of iron water-pipe junction collar (SF <580>) were recovered from this section of the feature.

19.33 On the same alignment as the ditch [324] but 1.30m further to the east, was a continuation of the same ditch represented by cut [380] (fill [379]). The ditch [380] measured 5.10m E-W, 1.10m N-S and 0.58m deep and has sloping sides falling to a concave base that sloped to the west. The fill [379] was similar to [323].

19.34 Overall ditch [324]/[380] measured 9.90m in length was truncated to the west but continued to the east beyond the edge of the excavation. The base of the ditch sloped from 4.14m OD in the east to 3.79m OD in the west. Pottery dating to AD 300 – 400 came from the fill [323] and pottery dating to AD 370 – 400 from [379]. The ditch may have been for drainage, perhaps indicating that excess surface water was now a problem in the yard area.

N/S ditch

19.35 Approximately 1.70m to the south of the ditch [324]/[380] was a butt-ended linear feature cut [302] (fill [301], [310], [311]), orientated N/S. The cut measured 3.07m long, 0.92m wide and was 0.45m deep. It was truncated from above by later intrusions in two places along its length and was completely truncated at the southern end. It had sloping sides falling to a flat base. The base inclined to the south falling from 3.95m OD to 3.87m OD. The fill, was a clayey silt with occasional fragments of cbm which produced mostly residual Roman pottery although the latest dated fabric from [301] was AD 270 – 400 and from [310] the latest dated fabric was AD 250 – 370. The reason why this N/S ditch should be dug is uncertain but drainage is again a possibility.

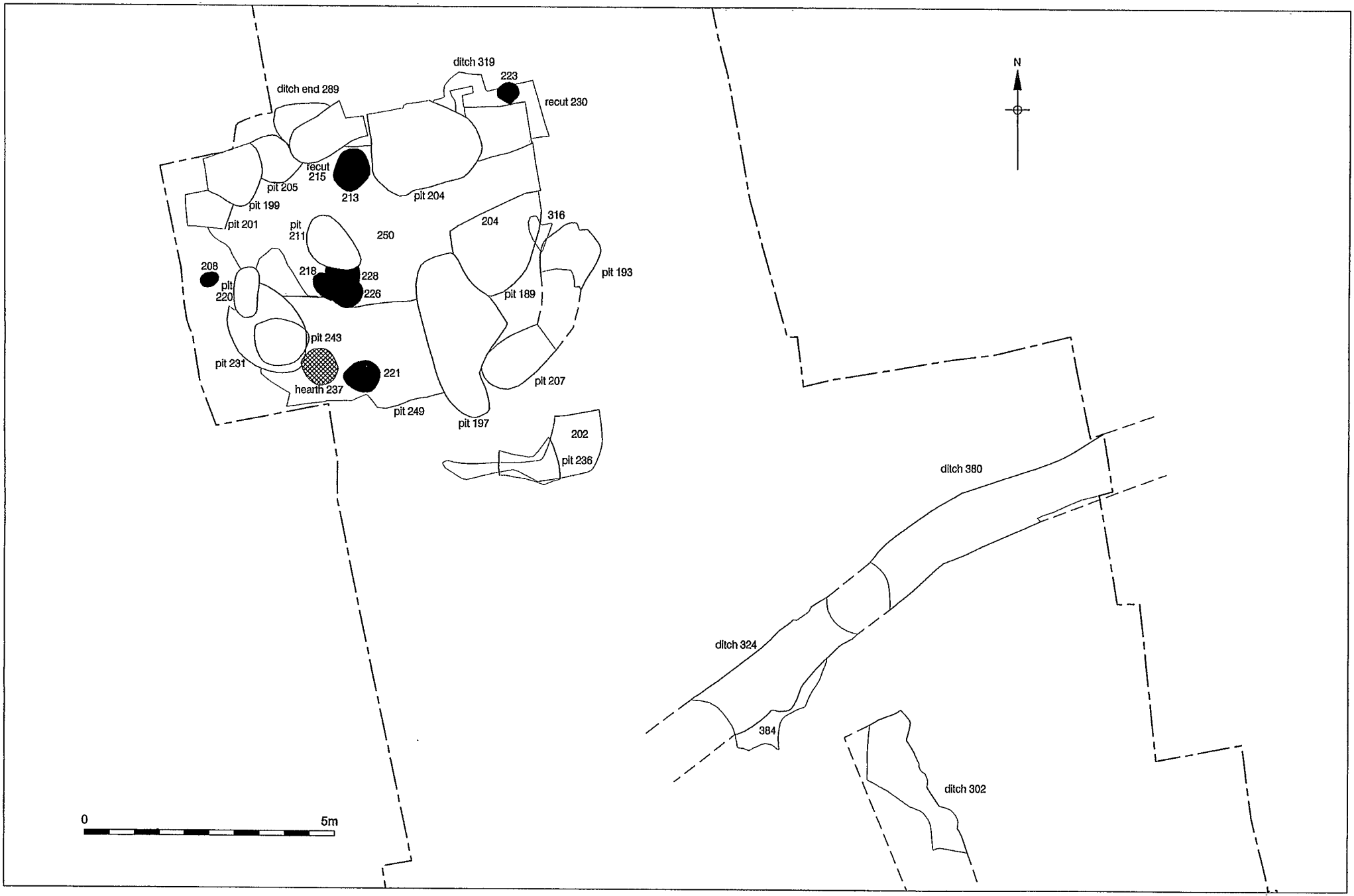


Figure 20
Phase 12
1:100

20. Phase 13 AD 400+ (Not illustrated)

20.1 This phase represents the end of the Roman era and the systematic demolition of the bathhouse. Much of the fixtures and fittings of the bathhouse such as the lead pipes, appear to have been removed along with most of the fabric of the bathhouse including stone, tiles and floor. Presumably this material was worth salvaging and would have been reused elsewhere.

Area C

Robber trench

20.2 Context [509] (fill [502]) represents a probable robber trench that was probably part of the demolition of the bathhouse. The cut which measured 1.60m N-S, 1.40m E-W and 0.30m deep, had near vertical sides falling to a flat base truncated the wall [1251]. The fill was a silt sand with frequent fragments of mortar.

The apsidal end

20.3 Context [467] represented a loose building rubble including broken tile, lumps of chalk, and *opus signinum* mortar mixed with a silty sand which filled the apsidal end of the bathhouse. Pottery recovered from [467] dates to the late 4th century.

Area D

Demolition and robbing

Demolition layers: [595], [607], [646], [647], [795], [801], [902], [1031], [1032], [1252], [1254], [1395].

Robber cuts: [1030], [1060], [1170], [1272], [1274], [1367].

20.4 The condition of the material from the demolition deposits and evidence of collapsed *pilae* in robber trenches indicates that Building 1 was deliberately demolished, no doubt for the salvage of building material. The sterility of the demolition deposits further indicates that the building was likely stripped and robbed of any plumbing, flooring, glass, fittings and any remaining bathing implements prior to demolition. The dating of the demolition is discussed below but appears to have occurred soon after disuse, probably within one or two decades, although robbing no doubt continued for a longer period.

20.5 The better survival of the *pilae* around the periphery of the rooms, close to the walls, indicates that the floors were probably broken through in order to salvage the bricks used to construct the hypocaust. The void under the floor is filled with demolition deposits. These generally consist of a loose to firm clayey or sandy silt measuring up to 0.65m in

depth and contain large quantities of ceramic building material, mortar, stone, gravel and occasional charcoal. The quantity of *tegula* and *imbrex* recovered suggests that these deposits were largely generated from roof collapse, although a substantial amount of brick and stone, likely from the walls, has also been identified.

20.6 A number of robber cuts have been recorded truncating the walls and foundations of Building 1. As these follow the masonry they are mostly linear in plan with vertical sides and flat bases. Sections of walls [921], [1131], [1251] and [1295], and in many cases the associated foundations, had been completely robbed. Unfortunately, no dating evidence was recovered from the fill of the robber cuts. Although not exhaustively robbed a sizable quantity of building material has been salvaged from Building 1. It is likely the material was salvaged for re-use in the building or consolidation of structures in close proximity. Given the late date and scale of the robbing it might be possible to speculate that it was carried out under the direction of a central authority and that the material may have been destined for use in a defensive structure.

21. Phase 14

21.1 This phase represents the formation of marsh deposits that covered the ruins of the Roman bathhouse. The marsh would not be drained and the land reclaimed until the post-medieval period. These deposits were recorded only in section in Area D

Area D

21.2 In west facing section 28 (see fig 9) was a sequence c. 1.30m thick of clayey silts, silty clays and sandy silts represented by contexts [1239], [1249], [1238], [1248], [1247], [1246], and [1245]. These deposits were probably laid down when marsh conditions prevailed over the southern part of the site.

22. Phase 15 (Fig. 21)

22.1 This phase represents the post-Medieval period. Deposits and features assigned to this phase were represented in all areas of the site. In Area A, horticultural soil, that was probably being worked in the 17th and 18th century was recorded, as well as rubbish pitting, a possible barrel well, a few probable planting holes and two postholes.

22.2 In Area B the Roman archaeological remains were covered by a horticultural type soil that appeared to have been cultivated in the during the 17th and 18th centuries. In the south of the area a group of probable late 17th and early 18th century rubbish pits truncated the horticultural soil.

22.3 In the north of Area C a E/W aligned gully was identified truncated by a line of postholes on the same orientation. The gully and the postholes probably represented a property boundary. To the south of the boundary a possible rubbish pit was truncated by a probable well. Further to the south an 18th century brick lined cess pit was recorded.

22.4 In the central part of Area C a 19th century brick lined well was located, initially observed in evaluation (Trench 1).

22.5 In the south of Area C a concentration of pitting, probably for refuse disposal was found.

Area A

22.6 In the central part of the area, context [113] a light grey/brown gravely silty sand layer, may have been the remnants of a horticultural soil that once blanketed the northern part of the site. The deposit measured 6.90m E-W and 2.50m N-S. The level was at 6.87m OD. A similar deposit [110] was recorded a little further to the north of [113]. Layer [110] measured 1.35m N-S, 0.74m E-W and c. 0.15m thick.

Rubbish Pitting

22.7 In the northeast part of the area there was a concentration of probable refuse pits. Cut [105] (fills [104], [103]) represented a large pit measuring 2.10m N-S, 1.60m E-W and 0.60m deep. It had sloping sides falling to a concave base, and was filled with sandy clayey silts.

22.8 Approximately 0.50m to the west of pit [105] and truncating the horticultural soil [113] was pit [117] (fill [116]). The rectangular cut measured 1.60m by 1.60m and at least 0.50m deep. It had near vertical sides but was not bottomed. The fill was a loose dark grey silty sand with occasional broken brick and tile, fragments of mortar, charcoal, and coal.

22.9 Approximately 4.0m south of [117] was a similar shaped cut, pit [136] (fill [156]) that measured 1.10m by 1.08m and was 0.38m deep. The fill was a sandy silt with occasional broken brick up to half-bat size, and occasional fragments of mortar. Pottery dating to the 18th century was recovered from this pit.

22.10 Just 0.50m to the south of [136] was pit [145] (fill [144]) measuring 1.70m E-W, 0.96m N-S and 0.51m deep but the feature was truncated to the north, and south and continued beyond the edge of the excavation to the east. The fill was a clayey silt with fragments of brick, charcoal, chalk and oyster shell. Pottery from the pit dates to AD 1580 – 1700.

22.11 Truncating pit [145] to the north, was circular pit [133] (fill [132]), it was 1.26m in diameter and had near vertical sides falling to a flattish base. The fill was a sandy silt with moderate concentrations of charcoal and occasional fragments of coal, cbm and chalk. Pottery dating to the 17th century came from the pit although the latest dated fabric from the assemblage is 18th century in date this sherd may be intrusive.

22.12 Pit [133] also truncated cut [147] (fill [146]) which had steeply sloping sides falling to a concave base, and was filled with a clayey silt. The cut measured 0.87m by 0.42m and 0.39m deep but continued east beyond the edge of excavation.

22.13 Immediately to the north of [133] was a concentration of inter-cutting pits. The earliest was pit [112] (fill [111]), which was rectangular and measured 0.95m by 0.80m, and 0.40m deep. A second pit [109] (fill [108]) measuring 1.40m N-S and 0.70m E-W and 0.40m deep truncated [112]. Pit [109] was in turn was truncated by a third pit [107] (fill [106]) that measured 1.60m E-W, 0.90m N-S and 0.56m deep. All these had steeply sloping sides falling to a flat base and were filled with a similar silty sand. From [109] pottery dating to AD 1620 – 1700 was recovered and from [107] the pottery dates to AD 1630 – 1680. The clay tobacco pipe from [107] dates to AD 1640 – 1660.

22.14 In the south of the area, another probable rubbish pit [102] (fill [101]) was identified. The rectangular cut measured 0.85m by 0.75m and was 0.27m deep. It had steeply sloping sides falling to a flat base and was filled with a silty sand. Pottery from the pit dates to AD 1580 – 1700.

22.15 On the west side of the area, rectangular pit [126] (fill [123]) was identified. The cut, which measured 1.32m by 1.30m and 0.41m deep, had near vertical sides falling to a flat base and was filled with silty sand.

22.16 The west end of layer [113], was truncated by a large pit [115] (fill [114]) which measured 4.0m N-S, 2.0m E-W and was at least 0.50m deep. It had near vertical sides and was filled with silty sand, broken

brick and tile, and fragments of charcoal and coal. Pottery dating to AD 1670 – 1690 was recovered.

Barrel well

22.17 Pit [145] (see para 22.10) was truncated to the south by a possible barrel well [131] (fill [130]). The circular construction cut was characterised by vertical sides falling to a flat base and measured 0.76m in diameter and 0.34m deep. The fill was an organic silt from which pottery dates to AD 1630 – 1680.

Planting holes

22.18 In the south-central part of the area, a cut [158] (fill [157]) measuring 0.50m in diameter and 0.20m deep was present. It had sloping sides falling to a flat base and was filled with a sandy silt. The base of [158] was truncated by two possible stakeholes [160] (fill [159]) and [162] (fill [161]. These, which were 0.10m and 0.14m in diameter and up to 0.10m deep, were filled with a similar sandy silt. It may be that [158] represented a planting bole and the stakeholes truncating its base could be contemporary and represent supporting uprights.

22.19 A meter to the northwest of [158], a similar feature was recorded [125] (fill [124]) measuring 0.81m in diameter and 0.43m deep.

22.20 Two meters to the east of [125] was cut [128] (fill [129]) which was 0.70m in diameter and 0.28m deep. It may be that pits [125] and [128] were also planting holes.

Postholes

22.21 A possible posthole [119] (fill [118]) was identified in the north central part of the area, truncating the horticultural soil [113]. The feature had sloping sides falling to a concave base. The fill was a sandy silt.

22.22 Posthole [119] was itself truncated by a possible post pit [122] (fills [121], [120]). The cut had vertical sides falling to a flat base and was filled with a compacted silty sand. A looser and darker material represented a probable post-pipe 0.35m in diameter. It may be that the post pit [122] represented a replacement for posthole [119]. Pottery from [119] dates to the mid 18th century while from the post pit [122] only residual pottery was found dating to AD 1580 – 1700. The isolated nature of these features makes further interpretation difficult.

22.23 Six and a half meters to the SE of post pit [122] another possible posthole [170] (fills [176], [169]) was identified. The cut was characterised by near vertical sides falling to a concave base. The lower fill was a gravely sand silt 0.36m thick which was overlain by a upper fill organic silt. The full dimensions of the postholes and post pit are given in Table 15 below.

Table 15 dimensions of postholes and post pit in Area A

Context No	Shape	Dimensions Longest axis first	Depth	Fill No
170	Sub-circular	0.50 x 0.20m	0.78m	176, 169
119	Ovoid	0.45 x 0.37m	0.10m	118
122	Sub-rectangular	0.74 x 0.55m	0.50m	121, 120

Area B

22.24 In Area B a layer of sandy silt [180] c. 0.20m thick blanketed all the Roman archaeological remains. The deposit, interpreted as a probable horticultural soil, produced a large pottery assemblage dating to the 17th and 18th centuries and indicated that the soil was cultivated over a long period of time.

Rubbish pitting

22.25 Although layer [180], sealed pit [239] (fill [238]) this feature may also be post-Medieval in date. It may be that cut [239] actually truncated the horticultural layer but this relationship was lost perhaps by the 'forking over' of the soil. The rectangular pit [239] measured 0.75m by 0.70m and was 0.20m deep but continued west beyond the edge of the excavation. It had near vertical sides falling to a flat base. The fill was a clayey silt from which a piece of residual Roman pottery was recovered.

22.26 In the south of the area, pits probably for the disposal of refuse were found. All were filled with a similar sandy silt. Pit [185] (fill [184]), measured 3.20m N-S, 2.30m E-W and was 0.63m deep, was ovoid in shape and had near vertical sides falling to a flat base. Adjacent to [185], was a second large pit [183], that measured 2.40m E-W, 2.20m N-S and 0.70m deep and had steeply sloping sides falling to a flat base. Truncating [183], was a sub-rectangular pit [181] (fill [182]) that measured 1.85m N-S, 1.0m E-W and 0.42m deep but was truncated by a modern intrusion to the east. Pottery from cuts [183] and [181] dates to the early 18th century.

22.27 To the south of [183] and [185], was cut [187] (fill [186]) sub-rectangular in shape and measuring 1.32m N-S, 1.24m E-W and 0.55m deep but continuing south beyond the edge of excavation. It had vertical sides falling to a flat base. Pottery found here dates to the late 17th and early 18th centuries.

22.28 To the north of the group described above, was pit [190 (fill [191]). The cut was rectangular in shape and measured 2.02m E-W, 1.07m N-S and 0.53m deep. It had steeply sloping sides falling to a flat base. The

sandy silt fill had occasional fragments of cbm, chalk, charcoal and animal bone. Pottery from the pit dates to AD 1690 – 1700.

Area C

22.29 In the north of the area, an E/W aligned gully [287] (fill [278]) was identified. It measured 1.80m long, 0.60m wide and 0.38m deep but was truncated both to the east and the west. It had near vertical sides falling to a flat base. The fill was a dark grey black silty sand.

22.30 Truncating the fill of gully [287], was a line of postholes that may have formed a fence line. All the postholes detailed in Table 16 below had a fill of a grey/orange brown, silty sand. Five [300], [307], [309], [366] and [374] still contained their wooden posts and these were either left in situ or not kept. The postholes which were bottomed [368], [370], [372], [376] and [495] were all characterised by vertical sides falling to a concave base. Posthole [495] was offset 0.50m to the south from the E/W line of posts but has been regarded as part of that group.

Table 16 dimensions of postholes in Area C

Context No	Shape	Dimensions Longest axis first	Depth	Fill No
300	Sub-circular	0.25 x 0.21m	> 0.20m	299
307	Rectangle	0.24 x 0.16m	> 0.19m	306
309	Sub-circular	0.42 x 0.36m	> 0.20m	308
366	Rectangle	0.22 x 0.14m	0.38m	365
368	Rectangle	0.12 x 0.06m	0.17m	367
370	Sub-circular	0.14 x 0.06m	0.28m	369
372	Ovoid	0.21 x 0.12m	0.15m	371
374	Circular	0.20 x 0.18m		373
376	Rectangle	0.14 x 0.05m	0.35m	375
495	Circular	0.20m in dia	0.25m	494

22.31 The fence line represented by the postholes described above appears to have superseded the gully and both features probably demarcated a land or property division.

22.32 To the south of the E/W post line, a possible rubbish pit [343] (fill [342]) was identified. The sub-circular cut measured 0.66m E-W, 0.53m N-S and was 0.35m deep but was truncated to the south. It had vertical sides falling to a flat base. The fill was a silty clay from which Roman residual pottery and pot dating to AD 1680 – 1750 was recovered. Pit [343] was truncated by a probable well [341] (fill [340]), which measured 1.10m by 0.95m and was 0.93m deep and had vertical sides falling to a flat base. The sandy silt fill produced pottery dating to AD 1690 – 1700.

22.33 Approximately 1.50m to the south of well [341], was a brick-lined cess pit [317] (fill [269], [257], [318]). The rectangular construction cut measured 2.50m N-S, 1.90m E-W and 0.69m deep and had vertical sides falling to a flat base. The pit, was lined with orange fabric, unfrogged bricks [269] measuring 230mm x 110mm x 60mm. The bricks were bonded with a lime mortar and laid in an English bond pattern. The backfill to the construction cut was a fine yellow sand [318]. The cesspit was in filled with silty sand [257] and frequent fragments of brick, timber and whole oyster shell. Pottery dating to AD 1750 – 1775 was associated. The cesspit also produced clay tobacco pipe bowls dated to AD 700 – 1740. A number of complete and almost complete wine bottles dating to the 18th century were also found.

22.34 A brick-lined well [6] (fills [5], [4], [3]) initially recorded in the evaluation was located south of cesspit [317], in the central part of the area. The construction cut for the well was 1.24m in diameter, and 0.81m deep. It had vertical sides falling to flat base. The brick lining was built with orange fabric, unfrogged brick, measuring 232 – 206mm x 103 – 97mm x 67 – 65mm, and laid on bed in stretcher fashion. The backfill to the construction cut was a silty clay. The well appeared to have been deliberately filled in with sandy silt. Pottery from this feature dates to c. AD 1800 – 1860.

Pitting

22.35 In the south of the area, a number of pit features were excavated, the full dimensions of which are given in Table 17 below. The pits were probably for the disposal of refuse but horticultural features could also be a possibility for some of the features.

22.36 The most northerly of these pits was cut [291], which was characterised by sloping sides falling to a slightly concave base and was filled with sandy silt. Feature [291] was truncated to the south by a large rectangular pit [286] that continued beyond the edge of the Trench to the east. The fill was a silty sand.

22.37 In the south central part of the area, there was a concentration of pitting. Cut [304] was characterised by steeply sloping sides falling to a flat base and the fill was a silty sand with frequent broken brick. The pit was probably for cess or rubbish disposal. Set approximately 3.0m to the southwest of [304] was a similar feature, pit [330]. This was truncated by [280], which in turn was truncated by pits [271], [268], and [277]. Both [330] and [280] were truncated by [241] a modern intrusion measuring 3.40m by 2.80m and was 0.22m deep. Pit [271] was truncated by a triangular shaped cut [260], which was filled with a dark greenish brown sandy silt. Pit [268] was truncated by [259] and [277] which in turn was truncated by pit [263]. Pits [330], [280], [271], [268], [277], [259] were all characterised by steeply sloping sides falling to a flat base and were filled with a similar dark grey clayey silt. The characteristics of pit [263] differed from the others only in that its fill was

described as a silty sand. Pottery dating to AD 1770 – 1800 was found in pit [304] and pot from [259] dated to AD 1700 – 1750.

22.38 A possible pit on the east side of Area C was represented by context [298]. The feature continued to the east beyond the edge of the excavation and for health and safety reasons remained unexcavated.

22.39 Approximately a meter to the south of the pitting described above was cut [273]. It had sloping sides falling to a flat base and was filled with a dark grey silty sand. The pit [273] was truncated by a cut [267]. The pit [267] had steeply sloping sides falling to a flat base and was filled with a clayey sandy silt.

22.40 Pit [473], located to the west of the features described above had steeply sloping sides falling to a flat base. The basal fill was a soft, black clayey silt 0.15m thick, while the upper fill was a clayey silt.

Table 17 details of pits in Area C

Context No	Shape	Dimensions Longest axis first	Depth	Fill No
298	Sub-circular	0.93 x 0.66m		297
291	Ovoid	0.62 x 0.59m	0.17m	290
286	Rectangular	4.14 x 2.23m	0.41m	285
304	Sub-rectangle	1.40 x 1.18m	0.46m	303
330	Sub-rectangle	0.82 x 0.42m	0.14m	329
280	Sub-rectangle	1.72 x 0.40m	0.60m	279
271	Sub-rectangle	0.81 x 0.70m	0.54m	270
268	Sub-rectangle	1.40 x 0.36m	0.48m	265
277	Sub-rectangle	0.72 x 0.43m	0.30m	276
260	Triangle	1.02 x 0.49m	0.31m	261
259	Sub-circular	0.64 x 0.33m	0.36m	258
263	Sub-rectangle	0.91 x 0.76m	0.21m	262
273	Sub-circular	1.20 x 0.76	0.27m	272
267	Sub-circular	0.84 x 0.70m	0.35m	266
473	Sub-rectangle	1.40 x 1.30	0.50	472 471

22.41 The pits [260], [259], [263], [267] and [473] were all truncated by a large sub-circular feature [248] (fill [247]). The cut measured 3.40m E-W, 3.06m N-S and was 0.72m deep but was truncated to the west and south by modern intrusions. The fill was a dark grey brown silty clay. Pottery from the fill dates to AD 1700 – 1740. The function for this feature is uncertain.

Area D

22.42 Contexts [459] (fill [458]) represented the northern edge of the construction cut for a post-medieval cesspit. The cut measured 2.23m E-W, 0.29m N-S and was 0.24m deep but most of the feature had been removed by modern machining. The fill was sandy clay, which included pottery sherds dating to AD 1630 – 1700. This cut truncated part of the north wall of the Roman bathhouse.

22.43 On the west side of the area a probable well [1028] (fill [1026] [1027], [1025]) was identified. The circular construction cut measured 0.77m in diameter and o.25m deep and was lined with wattle [1026]. The backfill to the construction cut was a dark grey silt [1027], while the silt fill of the well was represented by context [1025].

22.44 The well was slightly truncated to the east by a rectangular pit [1024] (fill [1023]) probably used for rubbish disposal. The cut had vertical sides falling to a flat base and measured 1.20m by 1.0m by 0.30m deep. The fill was a sandy silt with fragments of cbm.

22.45 In the north of the area, the location of two post-Medieval wells was planned but no further recording was undertaken.

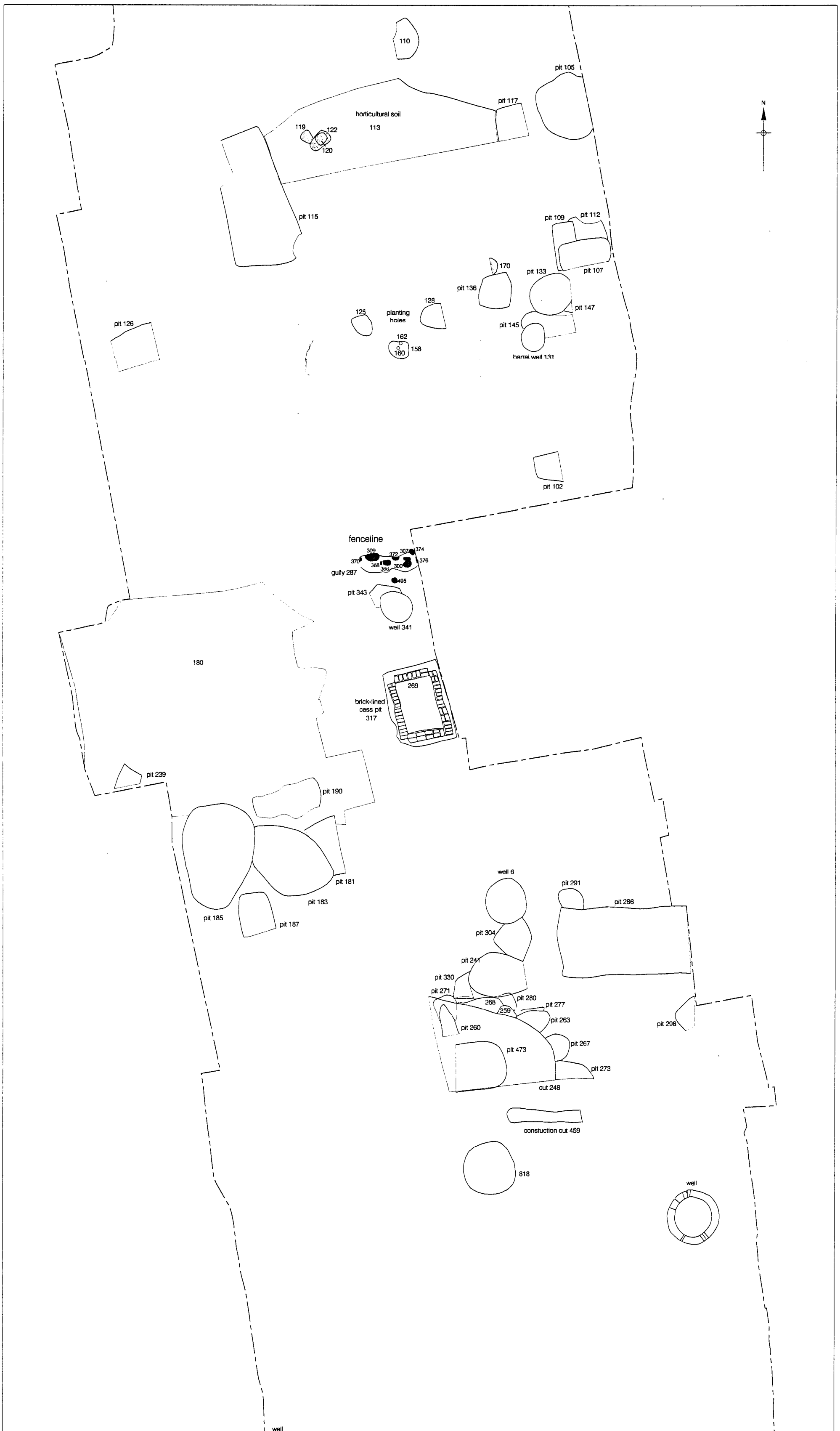


Figure 21
Phase 15
1:100

23. SUMMARY OF THE ARCHAEOLOGICAL PHASES

23.1 A schematic representation of the phasing is shown below.

HGA 02 Phasing

	Phasing			
Date	Area A	Area B	Area C	Area D
Post-Medieval	15	15	15	15
				14
Late 4th/early 5th			13	13
AD 375 - 400		12	12	
AD 325 - 400	11	11	11	11
AD 300 - 325		8		10.3
AD 290 - 300		7		10.2
AD 280 - 290		6	6	10.1
AD 270 - 280		5	5	
AD 260 - 270		4		
AD 230 - 260	3	3	3	3
2nd C		2		2
Natural	1	1	1	1

23.2 Phase 1 represented the natural drift geology across the site. The site lies on the edge of the Thames River Terrace close to an escarpment overlooking the River Thames 0.65km to the south. In the north of the site modern development had truncated any capping of brickearth to the natural sands and gravel. The level on the natural sands and gravel was at a high in the north of the site at c. 6.90m OD. In Area B the natural showed a distinct incline to the south from 4.56m to 3.62m OD. The lowest level on the natural was in the very south of the site in Area D at 1.54m OD.

23.3 In Area B it was observed that the natural sand was underlain by a stiff clay at 3.27m OD and clay was also recorded in Area D at 2.51m OD.

23.4 Phase 2 represented the earliest evidence for human activity on the site and probably dates to the 2nd century AD. This phase was represented in area B and D only. In area B three large pits were identified truncating the natural sand and gravel. These features may have been quarry pits for the extraction of sands and/or gravel. Exposed in the south of Area D was a sandy silt that may represent part of the Thames foreshore. Driftwood lying on top of the sandy silt could originally come from part of a ship or boat.

23.5 Phase 3 dates to middle of the third century AD when the site undergoes a major transformation comprising the development of a large bathhouse complex with associated accommodation.

23.6 Some 24.5m to the north of the bathhouse, in Area A, an E/W orientated boundary ditch was identified. The ditch was at least 17.0m long, up to 2m wide and 1.0m deep. The base of the ditch appeared to incline gently towards the west and fell from 5.20m OD to 5.01m OD. The primary fill of the ditch on the west side of the Trench was a slumped 'brickearth' type deposit which suggests that at least in the northern part of the site, the natural sand and gravel in the Roman era was capped with brickearth. Only a few sherds of pottery were recovered from the ditch but these included very late East Gaulish Samian, Moselkeramik, and Lower Nene Valley Colour-coat fabrics, which are consistent with a deposition date of 230 – 260 AD.

23.7 A clay-and-timber building (S 1) was defined by beaten earth floor and floor makeup layers, beam slots, and postholes appeared to have built to the north of the bathhouse. The building in Area B appeared to be laid out on a N/S axis and was at least 3.0m wide and 8.50m long, for it continued to the south and west, beyond the limits of the excavation.

23.8 The structural remains in Area B appeared to be part of the west wing of a building that returned in the north to an E/W alignment and continued into Area C. In Area C, possible beaten earth floor deposits, occupation layer, possible hearths and a group of stakeholes defined the building in this area. The E/W north wing of the building (S 1) was at least 9.0m long and 4.50m wide and would have continued further to the east beyond the edge of the Trench.

23.9 The building (S 1) partly enclosed an open yard area to the east and south. Compacted layers of silty sand gravel and crushed mortar and chalk formed this surface. A ditch which truncated some of these makeup deposits probably represented temporary enabling works allowing the ground to be drain while construction was in progress. The makeup layers would probably have been capped by a layer of cobble sized chalk lumps part of which survived in the east of the Trench. The yard area which was truncated to the west and continued beyond the edge of excavation to the east would have measured at least 11.0m N-S and 10.0m E-W. To the south the yard surface makeup deposits abutted the north wall of the bathhouse. This external surface may have been part of an exercise yard or *palaestra*, or acted as a service yard, or even the entrance way to the accommodation block represented by the clay-and-timber building.

23.10 Only a few sherds of pottery were recovered from the makeup layers to the yard but context [752] produced the most with 21 fragments. Although the assemblage was not particularly diagnostic the presence of an Oxfordshire White ware mortarium was considered significant and suggests that the layer had to be laid down post AD 240. It is very likely that the first phase of yard surface and makeup layers would have been contemporary with the primary phase of the bathhouse itself.

Interpretation and dating of the bathhouse

23.11 Although revealed extensively in plan the limited excavation of Building 1 dictates that the phasing and development, as portrayed in this report, remains open to discussion. Issues of dating and function also remain elusive or are complicated by the absence of associated finds. However, the number and size of heated rooms, and the potential presence of plunge baths is indicative of a public building, most likely a bathhouse. From the ground plan it is also possible to determine certain phases of rebuilding.

Suggested layout of Building 1 by phase

23.12 It is imprudent to assign functions to individual rooms with high levels of confidence without an understanding of the full ground plan of Building 1, particularly when the in-situ remains survive only to sub-floor level. For the same reasons it is also difficult to appreciate the nature and extent of later modifications. Nonetheless, Roman architecture can be fairly formulaic, particularly in the presence, sequence and relative dimension of bathhouse spaces. By comparison to other bathhouse structures it is possible to ascribe tentative functions to each of the rooms and consequently understand something of the way in which the building may have been used.

23.13 The organisation and layout of bathhouses can only be very broadly categorised into groups. Some of the more common layouts include single axis row-types, more complicated intermediary types where the bather follows a cyclical route, or double symmetrical or asymmetrical baths that can be organised into either two distinct single routes or as a cycle (Yegül 1992, 57-91). In all cases the order of use follows the principle of warm to hot and then back to cold, whether in cycle or retracing the route of a single row (Adam 2001, 272; Yegül 1992, 38). In this manner the bather would enter into a reception and/ or changing room (vestibule and *apodyterium*) and the move through the cold and tepid rooms (*frigidarium*, *tepidarium*) into the hot rooms (*caldarium*), eventually moving back to the cold rooms.

23.14 Of the varying, loosely categorised types Building 1 appears to have originally been a double, asymmetrical bath with two separate heated suites to the east and west, probably sharing the same entranceway, changing and cold room. The eastern suite has been most fully revealed but without the complete ground plan or any indication of original doorways it is not possible to determine if the route taken was retraceable or cyclical.

23.15 The evidence seems to indicate that original build had entranceway to south, leading into two unheated rooms (Rooms 4 and 7), likely including the *apodyterium* and *frigidarium*. The bather may then have moved east or west into either of two possible *tepidaria* (Rooms 6 or 8). It is possible that Rooms 3 and 5 to the south represent unheated

plunge baths at the end of the *tepidaria*, particularly given the presence of a possible water drain in Room 5, but may also have been changing rooms accessed from Room 4.

23.16 From the eastern *tepidarium* bathers may then have moved to the north, or east and then north into the hot rooms. The presence of a scorched arcaded tile wall flanking Room 13 to the east is likely to indicate the direction and perhaps proximity of the *praefurnium*. The addition of an ancillary furnace butted onto the north wall of Building 1 is likely to have boosted the supply of heat and potentially heated water for the hot baths. Furthermore, given the arrangement and relative dimension of the *caldaria*, and location of the ancillary furnace it may argued that Room 11 possibly contained a hot plunge bath. The apse, as noted in many Roman bathhouses, may once have held a raised washbasin known as a *labrum* (Yegül 1992, 376).

23.17 If bathhouse originally included two separate suites then the unexcavated western sequence of rooms may have been similarly provided although the layout is likely to be different.

23.18 Phase 10.1 represents the first major modification of the bathhouse and appears to involve the addition of another room (Room 10) to the north-west. It is not possible to determine if this room was heated or how it relates to the proposed sequence of original rooms. At some stage a large opening was inserted between Rooms 4 and 7 and a tiled surface and possible partition were added. These rooms appear to remain unheated.

23.19 At some stage (Phase 10.2) the bathhouse underwent fairly major re-modelling. To the south an increase in the size and number of heated rooms is noted. Rooms 3, 6 and 7 and Rooms 5, 8 and 9 were linked by enlarged openings and the hypocaust extended into Rooms 5 and 7. The wall dividing Rooms 2 and 4 was also removed and an extension added to the front of Building 1. It is not clear whether the latter was an internal or external space.

23.20 To the north of the bathhouse the addition of a north-south wall divides the larger of the hot rooms into two smaller rooms (Rooms 12 and 13). The arcaded nature of the wall and evident re-build of the ancillary furnace indicates that these rooms continued in use as *caldaria*. Without the complete ground plan it is not clear how the southern rooms were organised or relate to one another.

23.21 Phase 10.3 represents a major flooding episode, during which the entire *hypocaust* was filled with water. This episode may have been a catalyst for a final phase of modification (Phase 11). A new rectangular heated room was added onto the north wall of Building 1. The extension is long and narrow, similar in dimension to a plunge bath, but there is no evidence to confirm this suggestion (Adam 2001; Yegül 1992). Perhaps also following on from the flood the flue through wall

[920] was blocked up. It is likely that Room 14 remained in use but with a greatly diminished supply of heat.

Appearance

23.22 From the original build through to final phase of modification Building 1 must have been a substantial and impressive structure. The walls were built of stone with tile lacing courses. The southern wall, containing the proposed entrance, proves no exception although the stone used is of a single type and demonstrates more regular dimensions and coursing. It is possible that the external walls were rendered although no evidence to that effect is forthcoming. Room 2, protruding from the south of the building, may represent the remains of a portico, providing access to the bathhouse. Too little survives to determine the true function or appearance of the structure but examples identified in Roman architecture are often supported by columns or responds (Adam 2001).

23.23 From the demolition layers it has been possible to determine that the roof of Building 1 was tiled, as identified on most Roman buildings, with both *tegulae* (flat flanged tile) and *imbrices* (flange junction covers). Much of the roof tile is evidently re-used early orangey-red local material (fabric group 2815) although this is supplemented with the use of late Roman pink and buff coloured *tegula* and *imbrex* (fabrics 2453/ 3026). Both end *tegulae* and ridge tiles have been identified in the demolition deposits indicating the roof was probably pitched. Piercing the roof there are likely to have been a number of chimneys to vent the hot air from the *tubuli* and thus maintain the circulation of hot air through the system (Yegül 1992, 357). Chimneys were usually placed at the springing of the vaults and were often formed of round or square pipes, although no doubt other forms, including *imbrices* and *tubuli*, would have also been used (Ibid.).

23.24 Both plain and red painted plaster has been recovered from demolition layers on site but primarily from area B and is consequently likely to relate to contemporary structures in that part of site. The internal walls of the bathhouse would almost certainly have been plastered although this would not be expected at sub-floor level. The ceilings were probably high and barrel vaulted. A small number of tapered voussoir bricks, designed for use in arches and vaults, have been recovered, again from demolition deposits. The enlarged internal doorways and sub-floor flues are also likely to have been arched. The presence of so few tapered arch bricks may simply result from the re-used nature of the material and likelihood that these arches would have been constructed from ordinary brick.

23.25 Little flooring survives in-situ in Building 1, singularly represented by a section of collapsed *opus signinum* in Room 5. It is not clear whether this represents the floor surface itself or a bedding layer for another material. The surface is fairly smooth and appears finished, however,

and this type of floor is often found in structures associated with the use of water (P. Roberts pers comm.). *Opus spicatum* bricks, cut tile *tesserae*, and diamond shaped tiles have been found in demolition layers, but again they are spread across the site and occur infrequently. Those found on top of, or close to, the bathhouse include *opus spicatum* bricks and *tesserae* indicating that the structure may have had herringbone and some mosaic flooring in addition to *opus signinum*.

Dating and longevity of the bathhouse

23.26 The in-situ remains of Building 1 are constructed primarily from local 2815 tile and brick made from the mid 1st to 2nd century. The demolition rubble, however, also contains later Roman brick and roof tile (fabrics 2459b, 2453 and 3026) dated to the mid or late 2nd to 3rd century. The pottery dating further indicates that the original build of the bathhouse is likely to post-date the mid 3rd century (see below). The use of predominantly 1st and 2nd century building material in a late Roman structure is not unusual and does not cast doubt on the dating of Roman fabrics.

23.27 A considerable proportion of the building material used in Roman Britain was manufactured during the first two centuries. Late Roman structures were often largely built from tile and brick salvaged from earlier redundant structures. This would have been supplemented where necessary with late Roman fabrics, usually tile. The bricks were generally more durable than the tile and the roof represents one part of the building in which the re-use of fragmented material is not generally viable. It may be no coincidence, therefore, that late Roman fabrics appear only in demolition deposits related to the roof of Building 1.

23.28 In general the early material used in Building 1 had been salvaged quite carefully although much had evidently been re-used. Complete examples of brick are generally restricted to the smaller forms, namely *bessales* and *pedales*. Standardised Roman brick and tile forms lend themselves readily to re-use. Certain forms are designed with a specific function in mind, for example *tubuli*, yet the bricks can be used in a multitude of structures. In Building 1 fragments of roof tile have been used in the walls in addition to *tubuli*. The latter have also been used in the *pilae*. The builders clearly had a good source from which to salvage material but were also able to adapt the materials available for use as required.

23.29 The pottery dating provides closer and a more reliable age for the bathhouse. Layer [1300], predating the foundations is dated to the second half of the 2nd century AD but the assemblage from the earliest phase of the courtyard to the north of and associated with Building 1, is dated slightly later from c. AD 240 to 260. This provides an earliest date for construction around the middle of the 3rd century.

23.30 With the exception of the final phase, dating evidence for the majority of modifications carried out on Building 1 is not forthcoming. Pottery from the ditch transecting the courtyard between the bathhouse and contemporary accommodation to north, likely to have been dug only after the bath had fallen out of use, is dated from c. AD 350-375. This may indicate that the last re-modelling of the structure occurred sometime before or within this date range. Similarly, pottery from the demolition deposits indicates that Building 1 had been pulled down by c.400 AD.

23.31 Phase 4 dates to AD 260 – 270 and was recorded only in Area B, where the west wing of the building S1 appears to have been rebuilt. The earliest deposits assign to this phase were dump layers which had either been deliberately laid down to raise and level the ground and/or the result of erosion down the slope to the south. These deposits partially covered features and deposits that represented the first structural phase in Area B. The possible portico entrance identified in Phase 3 all so appears to have been demolished and part of its foundations robbed.

23.32 In the north of the area, the new build (S 1a) was represented by a beam slot and postholes aligned E/W that may be the remains of a wall at least 4.0m long. Further to the south a beam slot and postholes represented a second probably internal E/W wall. This second E/W wall was also traced for at least 4.0m of its length. At right angles to it was a N/S beam slot that still held the remains of a probable timber sill beam. A section of the sill beam, measuring 1.66m x 210mm x 100m, was lifted. The lack of mortice joints in its upper face suggests that it was the base for a pisé (rammed earth) or mud brick wall (see Appendix 7).

23.33 New mortar floors were probably laid down and the remains of three possible hearths were recorded. The floor deposits suggest that the west wing measured at least 9.50m N-S and 5.0m E-W, continuing to the west and south beyond the edge of the excavation. Interestingly from beaten earth floor [687], came a stone palette (SF <397>) probably used for mixing cosmetics.

23.34 Pitting within the footprint of the west wing were probably for rubbish disposal and would have probably been dug before a new phase of refurbishment to the building (see Phase 5).

23.35 The pottery (see Appendix 2) recovered from this phase differed little from that of the Phase 3 material except that BB2 type vessels appear for the first time.

23.36 Phase 5 represents the period c. AD 270 – 280 which was recorded in both areas B and C. In Area B the west wing of the clay-and-timber building appears to have been rebuilt (S 1b). Overlying the earlier floor deposits of Phase 4 were dumped deposits which were probably laid down to raise and level the ground. These dumped deposits were

capped by floor makeup or beaten earth or mortar floors. A beam slot and postholes in Area B seem to define internal room partitions and suggest that a N/S service corridor gave access to the rooms.

23.37 In the south of Area B broken tile appears to have been used as the base for E/W wall foundation. This wall foundation could also define the north side of an entrance to the building (S 1b).

23.38 The building (S 1b) probably continued into the north part of Area C. Here an E/W orientated beam slot may have been the continuation of an E/W wall return postulated in Area B. To the north of the beam slot more deposits of floor makeup and beaten earth floor were identified.

23.39 The clay-and-timber building (S 1b) present in Areas B and C appeared to partly enclose an open yard area to the south. This yard, which had originally been laid out during Phase 3, was extensively re-laid with compacted silty sand gravel, crushed mortar and broken cbm. Perhaps some time during this phase the original fire-box, to the north of the bathhouse, went out of use, as a dumped layer of sandy silt blocked the entrance.

23.40 In the southeast corner of Area C, excessive surface water run-off may have been proving problematic, as what appear to be drainage ditches were dug. One ditch respected the apsidal end of the bathhouse and may have been designed to take away run-off water from the roof. The other ditch truncated the surface layers and continued beyond the limits of the excavation to the east.

23.41 Phase 6 was recorded in Areas A, B and C. In Area A the E/W boundary ditch appears to have been re-cut on at least one occasion before being allowed to silt up. The pottery evidence suggests that the re-cutting of the ditch took place c. AD 270 – 280 and was allowed to silt up by the early years of the fourth century.

23.42 In Area B, the west wing clay-and-timber building seems to have undergone only minor alterations (S 1c). A N/S corridor represented by postholes in Phase 5 may have been temporally blocked by an E/W beam slot set at right angles to it. However this beam slot was truncated by a N/S beam slot that probably formed the west wall of a now reinstated corridor. The east wall of the corridor was also represented by a beam slot. There was some indication that the floors of the west wing were at least partially re-laid with beaten earth.

23.43 In Area C, the beaten earth floors of the north wing of the building (S 1c) were probably re-laid. However a probable destruction layer sealing the resurfaced floor may be an indication that this part of the building was destroyed by fire. This destruction debris did not mark the demise of the building as a second beaten earth floor sealed this deposit.

23.44 To the south, the open yard area appeared to have been resurfaced. Although this yard was kept generally open, both to the north, south and west cut features were recorded. In the west the pit appeared to have been quickly filled in. While in the north a gully may have been necessary to aid the drainage of excess surface water. Postholes which could have enclosed an area of pitting were recoded on the south side of the yard. A possible rubbish pit was also identified on the north side of the yard. The rubbish pitting could represent the end to this phase of activity.

23.45 The appearance within the pottery assemblage of flaring BB1 cooking-pot rim, and Oxfordshire Whiteware M17 mortaria and the almost absence of Alice Holt/Farnham ware suggested a date of deposition of c. AD 280 – 290 (see Appendix 2).

23.46 Phase 7 represents the period c. AD 290 – 300 and was recorded only in Area B. the west wing of the building appears to have undergone substantial rebuilding (S 1d). Dump layers of silt and sand, demolition debris overlain by a sequence of floor deposits covered the earlier features and deposits of Phases 5 and 6. A N/S orientated corridor represented by parallel beamslots probably serviced rooms on either side. An E/W line of postholes may have represented a return to the west of the western N/S wall of the corridor. This E/W wall appeared to have been rebuilt with a more substantial foundation of packed chalk.

23.47 The rooms in the west wing appear to have been reasonably well appointed. *Opus signinum* mortar floors were laid and although these were in a degraded state at the time of excavation they showed signs of repeated repair and partial resurfacing with beaten earth. The recovery of painted wall plaster was an indication that the walls were rendered and decorated. At least one of the rooms was provided with a hearth, presumably for heating or cooking.

23.48 Most of the pottery from this phase was probably residual and differed little from that associated with Phase 6. Jewellery in the form of a copper alloy bracelet (SF <368>) was also recovered from this phase. From the floor [466] a miniature copper alloy foot (SF <302>) was recovered. The foot was wearing a sandal of a type fashionable in the 3rd century. This foot may have formed part of a small stand or small piece of furniture (see Appendix 8).

23.49 Phase 8 represents the period c. AD 300 – 325 and was only deposits and features from Area B could be attributed to this phase. In Area B the west wing of the building seems to have been demolished and a new structure erected (S 1e). The floor makeup and floor makeup layers suggest that the new build measured at least 7.70m N-S and 7.50m E-W. Postholes and stakeholes may indicate internal E/W and N/S partitions. These walls may subsequently have been rebuilt evidenced by the partial remains of beam slots. The E/W beam slot

however may indicate the position of a doorway rather than a rebuild to the wall.

23.50 Pottery from a robber trench and a feature associated with the demolition of the Phase 7 building (S 1d) was probably contemporary with this phase. The assemblage which included Alice Holt/Farnham ware jar sherds, Oxfordshire Red Colour-coat fabric bowl and a greyware dish is thought unlikely to be earlier than AD 300. From a floor makeup layer [470] a copper alloy finger ring (SF <335>) was recovered.

23.51 Phase 9 in Area B was subsumed into Phase 11.

23.52 Phase 11 represents the period c. AD 325 – 375 and was identified in Areas B, C and D.

23.53 In Area B the building represented in Phase 8 appears to have been demolished and a new building (S 2) erected. The new build was represented by levelling layers that were truncated by two parallel rows of postholes on an E/W alignment and a N/S beam slot. The possible remnants of beaten earth floors were recorded at between 4.84m and 5.03m OD.

23.54 Several objects of personal adornment (see Appendix 8) were recovered from features attributed to this phase of activity. In Area B, from the fill [383] of one of the postholes [717] a complete gold earring (SF <240>) was recovered. The earring was a rectangular plate with filigree decoration and set with a green glass bead. Another posthole [327] in Area B produced a copper alloy brooch (SF <231>). Part of, a possibly silver finger ring (SF <204>) was found in a large pit, that was probably dug when the building in Area B had gone out of regular use.

23.55 The structure (S 2) identified in Area B probably continued to the east and into Area C. In the north of Area C a compacted sandy silt slab covered the floor deposits of Phase 6. The slab was truncated by chalk rubble wall foundation orientated N/S. the level on the slab was at 5.06m OD. To the south the open yard area appears to have been re-surfaced. The level on these silty clay and silty sandy gravel surfaces was between 4.57m and 4.40m OD

23.56 On the north side of the yard postholes, post pits and a stakehole truncated the surface but their function is uncertain. Rubbish pitting may have encroached into the yard area both on the north and east side.

23.57 In Area D Phase 11 represents the last major structural phase of the bathhouse (see para 23.21)

23.58 Phase 12 represents the period c. AD 375 – 400 and was represented in Areas B and C. In Area B the sequence of clay-and-timber buildings

appears to come to an end. A dump layer and a large rubbish pit within the footprint of the Phase 11 building suggests that this building was no longer standing. Postholes attributed to Phase 12 indicate some kind of post built structure and a possible hearth may suggest a building. However no floor surfaces appear to have survived and the interpretation that these features indicate a building is not definite. The postholes may represent fence lines and a reorganisation of the land. An E/W ditch may also have been part of a boundary to the activity recognised to the south. However presumably towards the end of this phase of activity the ditch had been allowed to silt up and it was truncated by rubbish pitting that was concentrated in the north of Area B. Interestingly there were no Roman pit features were discovered to the north of the E/W ditch. From one of the refuse pits in Area B came a fragment of what may be an ivory armlet (SF <77>). Such a find is very rare and indeed the piece may be unique in Britain (see Appendix 8).

23.59 In Area C intermittent flooding may have been an increasing problem. A clayey silt layer may be an indication of water inundation and two possible drainage ditches truncating the yard surface may have been attempts at channelling away excess surface water. The pottery assemblage from the E/W aligned ditch is of particular interest as it may date the abandonment of the bathhouse to c. AD 324/380. What may have been part of the fabric of the bathhouse in the form of fragments of iron water-pipe junction collars (SF <580>) were also found in the ditch. This ditch would have made access to the range of buildings located to the north and west of the yard difficult and in any case those buildings may no longer have been standing.

23.60 It would appear that the bathhouse complex may have gone out of use by c. AD 375 with the associated accommodation block no longer standing, the yard area dug up and the bathhouse no longer functioning.

23.61 Phase 13 represents the demolition of the bathhouse and the robbing of much of the fabric of the bathhouse such as the lead piping, a lot of the masonry including stone, tiles and floor. Pottery from the demolition debris dates this event to around AD 400 (see Appendix 2). Presumably this salvaged material would have been reused elsewhere. Malcolm Lyne points out that there was large scale construction being undertaken in the late 4th century, for instance the building of a second defensive riverside wall in the 390's, unearthed within the precinct of the Tower of London. An interesting find from the detritus of demolition was a *pedalis* tile (SF <470>) that dated to the 1st or 2nd century (see Photo 2). The tile had writing inscribed on one face (this would have been done when the tile was wet). The script is Latin but it does not make any sense in that language and it has been suggested that it is Gaulish and this possibility is being actively pursued.

23.62 Phase 14 was only seen in section in Area D and represents the formation of marsh deposits that covered the ruins of the Roman bathhouse. The marsh would not be drained and reclaimed until the post-Medieval period.

23.63 Phase 15 was recorded in all areas of the site and represents the 17th, 18th and 19th centuries. In Area A the remnants of a horticultural soil that was probably being worked in the 17th and 18th century was recorded. Rubbish pitting, planting holes, a barrel well and two intercutting postholes were also identified across the area and the majority of these where the evidence was available date to the 17th century.

23.64 In Area B post-Medieval horticultural soil covered the Roman archaeological remains. Late 17th/early 18th century rubbish pits were identified in the south of the area truncated the 'garden' soil.

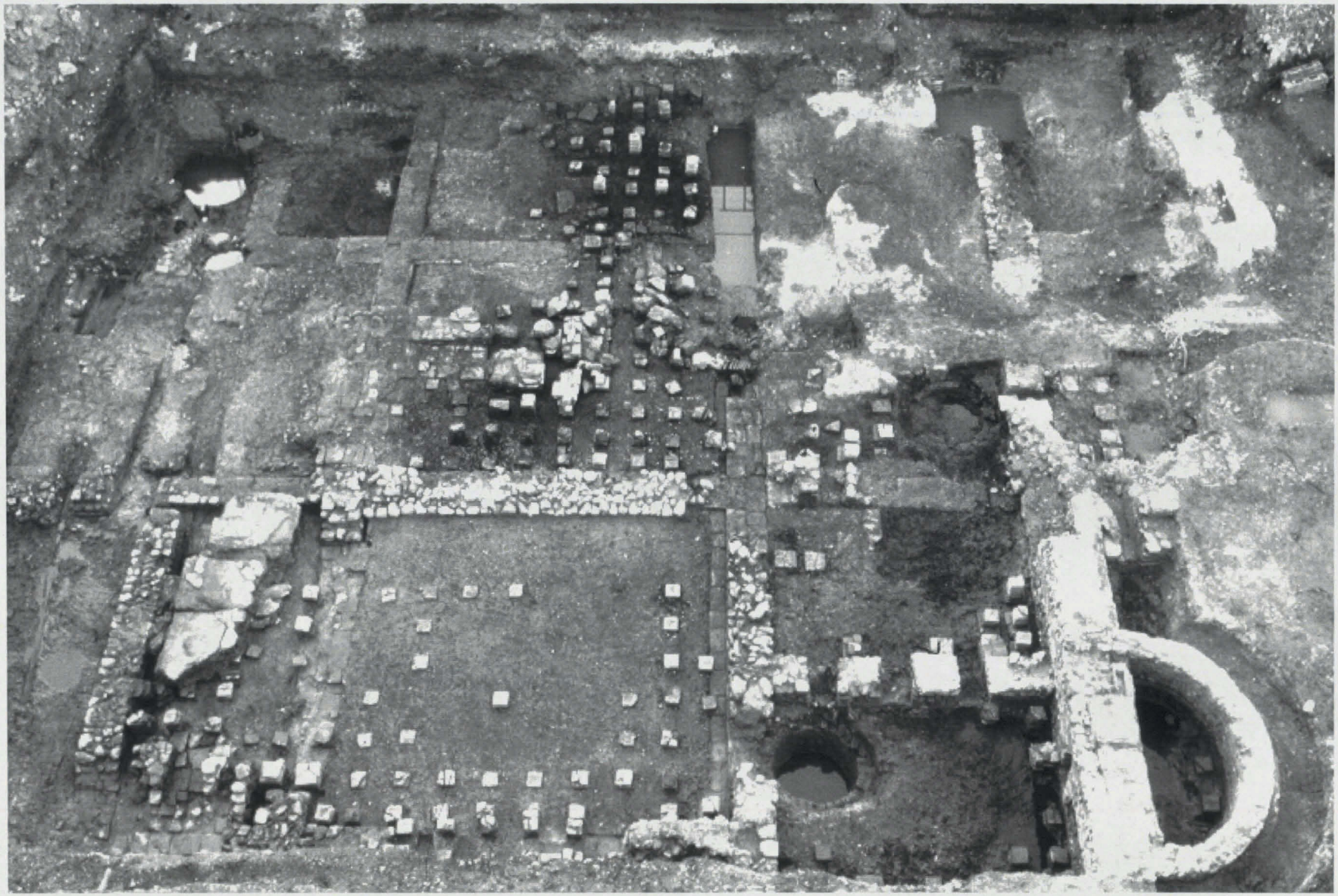
23.65 In the north of Area C, a probable property division was recognised, demarcated by an E/W orientated gully which was then superseded by a probable fence line. Immediately to the south of this boundary a rubbish pit truncated by a probable well were recorded. While further to the south a brick lined cesspit that had been filled in during the mid 18th century was unearthed.

23.66 In the south of Area C a concentration of rubbish pits that probably date to the 18th century were recorded. Just to the north of this area of pitting a 19th century brick lined well was recorded.

23.67 In Area D part of the construction cut was a cesspit was recorded. This cut truncated part of the north E/W wall to the Roman bathhouse. The location of two brick lined wells, a barrel well and a probable rubbish pit were also all recorded in Area D.

23.68 The post-Medieval features recorded across the site are typically sited to the rear of properties, in their back yards and gardens. The de la Feuille Survey of London 1689/94 shows that both the frontages to the Highway and Wapping Lane (formerly Old Gravel Lane) were already developed by the late 17th century. The area behind these properties appears to be given over to back yards and gardens. The Rocque map of 1746 shows the area to the rear of the street frontages by a Starch Yard.

23.69 Of particular interest was the pottery, clay tobacco pipe and glass assemblages from the cesspit in Area B. These finds may indicate the presence of a public house/tavern existing in the 18th century. The Ordnance Survey map of 1873 shows two public houses on the site, one fronting the Highway and the other Wapping Lane. The Area B cess pit, appears to be sited to the rear of the Wapping Lane public house and may therefore be an indication that the 19th century establishment may have had an 18th century predecessor.



Photograph 1: View of the Bathhouse facing west

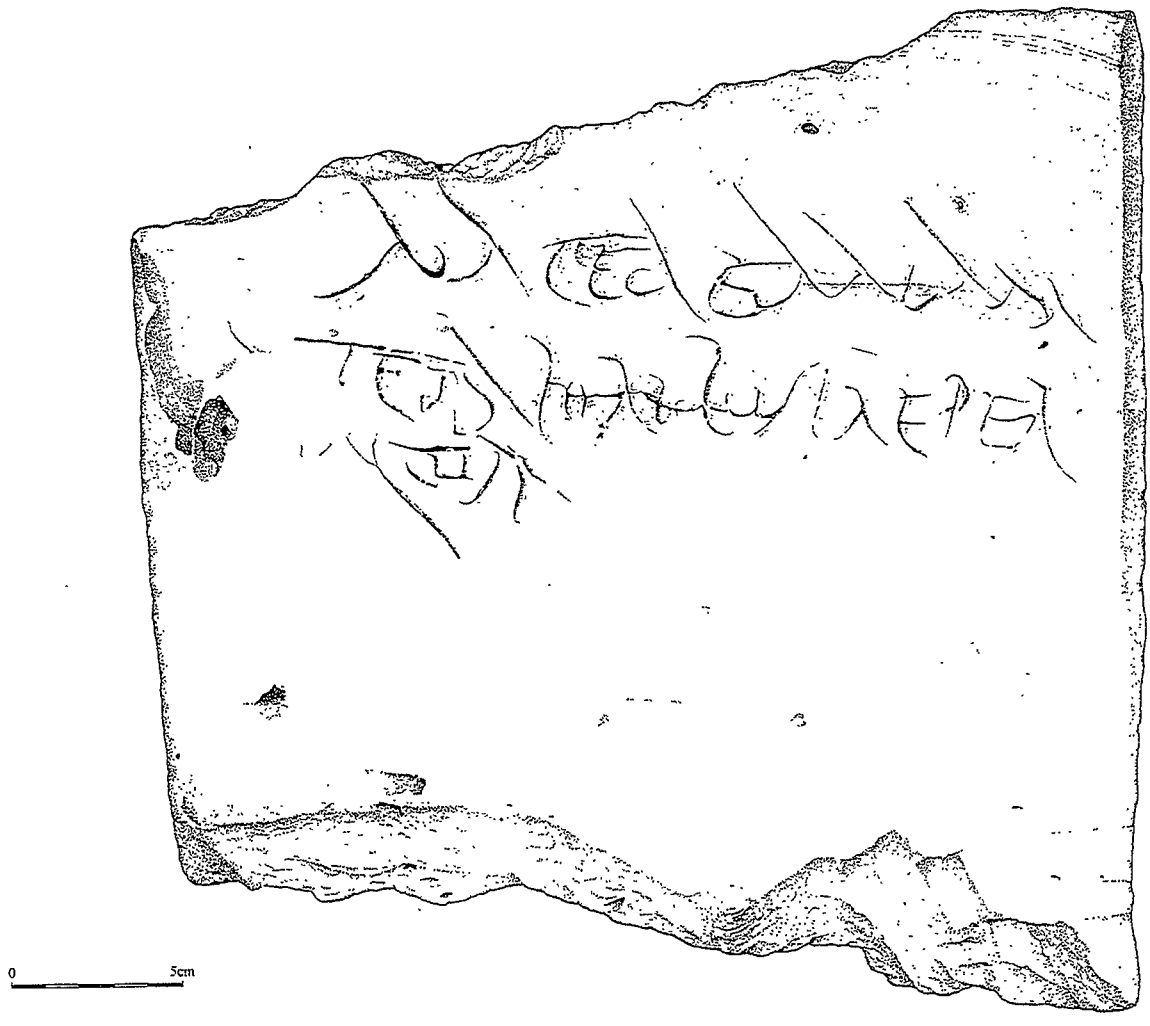


Illustration 1: Drawing of the 1st/2nd century *pedalis* with inscription

24. AIMS, OBJECTIVES AND THE RESEARCH DESIGN.

Original Research Objectives

24.1 The original research objectives for the archaeological investigation, were set out in 'Written Scheme of Investigation for an Archaeological Evaluation at 172 – 176 The Highway, London E1 (Moore 2002) and are listed below.

- To define the nature of the natural soils.
- To locate and define any prehistoric activity.
- To locate, define and quantify any Roman archaeology on the site.
- Specifically to see how the site fits in with the pattern of agricultural, industrial and funerary usage seen to the east and west.
- To locate and define any Medieval activity,
- To locate, define and quantify any post-Medieval deposits and buildings.
- Specifically to see if the pattern of domestic development, industrialisation and drop in social status found to the west continues into this site.

Topography

24.2 The excavation revealed that the site was located on sloping ground that inclined to the south. The slope is the bluff between the Taplow Terrace of the River Thames and the alluvium below. The surface of the Taplow Terrace immediately to the north of the site is capped by a brickearth type deposit of Langley Silt (The Geographical Survey 1:50,000 Sheet 256 north London 1994).

24.3 The floodplain alluvium was exposed close to the site during the construction of the London Docks and it was observed that about 2.0m of organic fine-grained alluvium overlay up to 6.0m of gravel. The natural surface of the alluvium was at c. 0.0m OD. The underlying solid geology in the area is the Lower Tertiary London Clay.

24.4 The slope had perhaps been modified by colluvial action and certainly by human action with the use of terracing to provide a suitable surface for building construction.

24.5 Borehole core samples (BH 1, BH 2 and BH 3) taken near the southern boundary of the site between 0.92 – 1.68m OD, 0.48 – 2.28m OD and 1.35m – 1.75m OD respectively, appears to have sampled wholly in situ sand and gravel. If these deposits are in situ they are most likely to

be part of the Kempton Park Gravel (see Appendix 13). Organic deposits within the Kempton Park Gravel have been dated in the Middle Thames valley to the Middle Devensian (c. 40 000 – 45 000 bp). However all the samples are less than 2m in depth and therefore might be of colluvial origin and consequently of indeterminate origin and age.

24.6 The geological information when combined with data from the west side of Wapping Lane (TOC 02) will certainly enhance our understanding of the topographic model. However, a wider area of study should be considered to answer the revised research questions:

- Where was the Roman waterfront?
- What is the gradient and profile of the incline towards the River Thames?
- How was the slope reworked by natural erosion and deposition?
- What environmental and/or climatic factors influenced the development of the floodplain in the post-Roman period?
- What evidence for rising and falling mean river levels is there for the roman period and how does this compare with the models further up stream in particular the City and Southwark?
- A study of modern borehole records in the Wapping area may inform some of the answers to these questions.

Prehistoric

24.7 No evidence was unearthed for prehistoric activity on the site.

Roman

24.8 The sites location 1.5 km to the east of *Londinium,* beyond the eastern cemetery, and close by a supposed Roman road is of particular significance. Merrifield (1983) suggested that the line of the modern road, The Highway, follows the course of putative Roman road. The Highway is first documented in the 15th century as a dry track (Barber & Bowsher 2000, 52).

24.9 An E/W road was discovered in the area of eastern cemetery that predated the earliest inhumations. This road was thought to have been built c. AD 70-80 and continued in use until the at least the late 3rd century (Lakin 2002, 2).

24.10 The alignment of the cemetery road can be projected on to Ratcliffe and would have passed c. 100m to the north of the site (Lakin 2002, 3). Although no trace of the road was unearthed at HGA, the Roman remains discovered here and to the west at Tobacco Dock, together

with those to the east on the LD 74 and 76 sites, suggest that such a thoroughfare did indeed exist in the immediate vicinity.

24.11 Some of the building material from HGA had the same signature marks as that recovered from Tobacco Dock. This may indicate that the Roman development of the two sites was closely linked. The phasing of the tower/mausoleum site (Lakin 2002) is also similar to both HGA and TOC suggesting that all the Shadwell sites are broadly contemporary and that they may form part of a settlement more significant and functionally integrated than hitherto realised.

2nd Century

24.12 The earliest Roman features at the Shadwell sites of TOC 02, LD 74 and 76 and at HGA 02 date to the 2nd century. At Tobacco Dock these included a timber-framed building and two large rubbish pits. At the LD sites quarry pits and a few cremations were found. Also at LD 74 were the foundations for a square tower/mausoleum. This structure, which was standing in the 3rd century, may have been built in the 2nd century. If the 'tower' was a mausoleum then these types of structures are more usually associated with the 1st or 2nd centuries (Francis Grew pers comm.). The pattern of settlement at Shadwell in the 2nd century appears to have been spread out and low key.

Mid – 3rd Century

24.13 A dramatic intensification of settlement appears in the archaeological record at all the Shadwell sites, during the middle of the 3rd century. At HGA 02 a large bathhouse was built with an associated accommodation block represented by a clay-and-timber building located to the north. Both the bathhouse and clay-and-timber building was bounded by a ditch to the north. To the west at Tobacco Dock the remnants of clay-and-timber building, drains, a timber revetted ditch and a well were found. While on the LD sites a fence line on the same alignment as the E/W boundary ditch was identified. The tower structure was to the north of the fence line. To its east a post-built structure and a gully were recognised.

24.14 The growth of the settlement at Shadwell may be intrinsically linked to the decline of the port in *Londinium*. *Londinium* was founded in about AD 50. The actual legal status of the town is still not clear but the settlement rapidly became the principal town of the new province and the main port and centre of the road network. It may be that the settlement originated as an economic and logistical base and was pivotal for the trans-shipment of goods, equipment and men to the frontier zone. If so, then *Londinium* could have been a *conventus civium Romanorum*, a community of Roman citizens, which accompanied the expansion of the empire in search of profits (Wilkes, 1996). The port facilities would be of crucial importance for *Londinium* in order for it to carry out this entrepôt role. A substantial timber quay

has been identified at Pudding Lane dated to the late 1st century (Brigham & Woodger 2001). However, the progressive fall in the river level during the 2nd century required the continual extension of the waterfront further into the stream, in order to maintain a workable depth of water for shipping. The waterfront continued to be extended until the second quarter of the 3rd century. The port, however, was already in decline and by the mid 3rd century when the river defensive wall was built sometime between AD 255 – 270 (Rowsome 1999), goods could no longer could be unloaded on to *Londinium's* waterfront quays. The landward town wall was built c. AD 200 (Williams 1993, 36)

24.15 As early as the third quarter of the 2nd century the population of *Londinium* was in decline (Merrifield 1983, 147). The removal of many of the large public buildings and the dumping of dark earth on cleared sites suggest a major change. This affected not just the appearance of the town, but fundamentally the way that it was governed and the space used by the inhabitants (Brigham & Woodger 2001, 48).

24.16 The large public bath complex at Huggin Hill also goes out of use around AD 150. The later Roman baths in Londinium tend to be small private facilities, although some may have had a commercial aspect (Rowsome 1999). The change in the provision of bathhouses, because of the association of bathing with private and public life, can also be seen as an indicator of social and economic change.

24.17 It appears then that by the middle of the 3rd century the trading function that *Londinium* fulfilled had ceased and the population had declined considerably. Space in the town had also been reorganised and utilised in different ways than during previous times. Nevertheless, a wealthy elite, probably members of a landowning class, remained in the town where they lived in imposing masonry houses some of which had their own private bath suites.

24.18 With the port at *Londinium* no longer usable by the late 3rd century, it seems reasonable to assume that a relocation down stream occurred. Ratcliffe has as long ago as the late 1970's been suggested as the site for a late Roman port (Black 1979), although until now, no substantive archaeological evidence has been found to support this theory.

24.19 A relocation of *Londinium's* port would necessitate a degree of planning, presumably the new port installations would have to be substantially in place before the final demise of the old and increasingly obsolete facilities.

24.20 Any port would require a infrastructure to service the needs of merchants, sea men, and travellers including quays, jetties, warehousing, the provision of fresh water, food supplies, ship building and repair yards, inns, shrines, burial grounds and bathing facilities. It is perhaps against this background that the archaeological remains and

finds assemblages from Shadwell, at least from the middle of the 3rd century, should be viewed.

24.21 The bathhouse complex at HGA 02 and the 3rd century building at TOC 02 had both been built on sloping land so that it was necessary to terrace the hillside so as to create a level and stable platform prior to construction.

24.22 The setting of the Shadwell bathhouse in particular has similarities with that of the Huggin Hill baths where the facilities were also on an artificial terrace, on a south facing slope overlooking the Thames. The natural geology at Huggin Hill was London clay overlain by Thames Terrace gravels with the hillside crest at c. 11.0m OD. An active spring line existed where the interface of the gravel and the impervious clay was exposed along the eroded south edge of the hill. The lower terrace of the bath's primary phase was at c. 4.0m OD below the spring line and above the tidal range of the river. The baths would then have the advantage of a constant supply of fresh spring water (Rowsome 1999). The bathhouse at Shadwell was built on the same contour as that at Huggin Hill, within a similar geological and topographical setting presumably for the same reasons.

24.23 Three later phases of structural alteration to the baths at Shadwell were identified.

Layout and use:

24.24 It is impossible to be certain but the original phase baths were probably double suited. The two suites would not have been entirely separate, as they appear to share the same entrance and *apodyterium*. This would rule out the possibility that the suites were provided for different genders, and perhaps indicate, as in many other bathhouses, that men and women were allotted different times to bathe (Yegül 1992, 33). It was usual for women to bathe in the morning and men in the afternoon. Mixed bathing was frowned upon and there were prohibitions against it, suggesting that it sometimes occurred (Ibid).

24.25 Double baths are not particularly common in Britain and parallels should be sought. It should also be maintained that the layout and organisation of the baths is open to re-interpretation. Further consideration should be given more generally to use and patronage as part of a broader discussion of the building within the immediate and regional context.

24.26 It is not immediately apparent why a bathhouse of this size is here in this location and at this date. It is possible that the area is more urbanised than previously thought and potentially more focal.

Regional context:

24.27 Building 1 will require comparison to other structures of a similar nature both in London and across Britain. Of the bathhouses in London Huggin Hill represents the closest to Shadwell in terms of size and choice of site although it is earlier in date. Obvious candidates on a national scale include Bath (*Aqua Sulis*), Chelmsford, Heybridge and St Albans (*Verulamium*), the latter being of the same date.

24.28 Comparisons in size and layout are restricted by the absence of the full ground plan at Shadwell although the dimensions of individual rooms and the number of heated rooms can be compared. In doing so it is possible to suggest that Shadwell is likely to have been of equal size to Huggin Hill, although evidently not of the same quality of construction.

24.29 The original layout of Huggin Hill is axial, seemingly in contrast to Shadwell, although a further hot room and a separate suite were added later (Rowsome 1999). Huggin Hill was also evidently built to a higher standard. The reasons for this need to be considered and could be related partly to location and patronage but are more likely down to the difference in date and late Roman tradition of re-using building materials. Indeed a direct comparison pf the building material used at both sites should be carried out.

The ritual of bathing

24.30 Bathing was central to the Roman way of life, not only for the purposes of washing but also as a focus of social discourse and interaction. A wealthy Roman was accompanied to the public baths by his slaves carrying his bathing paraphernalia: bathing garments, sandals, linen towels, and his toilet kit – the cista (a cylindrical metal box which contained anointing oils and perfume, several *strigils* (a curved metal blade for scraping of oil from the body). A poor person carried his own equipment (Yegül 1992, 34).

24.31 Although Roman society was hierarchical, the institution of the baths was an ideal opportunity to create the illusion of a classless society where the wealthy and the less well off, the powerful and the ordinary could all enjoy the benefits of Roman civilisation.

24.32 All bathhouses would have had an *apodyterium* where the bathers would undress. The order of bathing was usually a circuit from warm to hot, through a number of interconnecting rooms, from the *tepidarium* to the *caldarium.* The bathing would end with a cold plunge in the *frigidarium.* It was also usual to end the hot session with a massage of oils. However you bathed as you wished and deviation, repetition and omission were all possible (Yegül 1992, 39).

24.33 Roman baths may not have been as hygienic as one might suppose and the assessment of one emperor Marcus Aurelius was "what is bathing when you think of it – oil, sweat, filth, grease, everything revolting".

24.34 Nevertheless, bathing was also a sensual pleasure and was sometimes associated with an effete and wasteful lifestyle. Tacitus described this way of life, "the lounge, the bath, the banquet" as a form of vice brought by the conquering Romans to Britain, which seduced the native inhabitants of the island (Yegül 1992, 41). Drinking to excess, boorish behaviour and noise (hawkers shouting their wares, clients remonstrating with their attendants) were also associated with the bathhouse.

24.35 Prostitutes of both sexes were also associated with bathing (Ibid, 42) Ammianus Marcellus, a historian of the 4th century, looked back upon the moral greatness of Rome's republican past and deplored how the nobles of his day brazenly competed with each other to win the favours of a new prostitute who appeared in public baths.

Bath economics

24.36 The large expense of commissioning a public bath meant that funds were often partially provided by the state or prominent citizen and partly by private subscription (Ibid, 43).

24.37 Public funds could also pay for part or all of the running costs of bathing establishment with subsidies to pay for the general upkeep, as well as heating, water and oil (Ibid, 44).

24.38 Baths could also be a profitable enterprise. There were three sources of income from baths (excluding state or municipal subsidies), entrance fees, profits from the sales in the baths, and rental of shops or apartments, and other property owned by and often annexed to the baths. The entrance fee was not a major source of income because they were set very low so that even the poorest could afford to go. Although women were often charged double, Imperial freedmen, and slaves in the service of the procurator, minors and soldiers were often exempt charge (Ibid, 45).

24.39 Sales in the baths included food and drink as well as oil, cosmetics, and the renting of towels. Services also offered to the clients for a price included such things as washing, anointing, massage and depilation.

24.40 Some baths were associated with particular sections of society such as a professional group or interest faction. Indeed Malcolm Lyne suggests that the bathhouse at Shadwell could have been for the use by dock workers (pers comm.).

Administration

24.41 The person who was responsible for the daily operation of the baths was called the *balneator* or *conductor balinei*. He would be in charge of a large number of service personnel necessary to run the facility: including a group to supply the fuel (probably wood), slaves to stoke

the furnaces and boilers, cleaning staff, and laundry personnel. Then there were the attendants who cared for the clients, including masseurs, anointers, depilation experts, physical trainers, doctors, guards and porters. To this list we might add engineers or technicians to service the water supply and drainage system (Ibid, 46).

The clay-and-timber buildings

24.42 The bathhouse at Shadwell had an open yard area to the north which appeared to have provided access to clay-and-timber buildings. These were rebuilt completely or in part on a regular basis and probably provided accommodation for bath patrons.

24.43 Similar clay-and-timber buildings were discovered at TOC 02 and at LD 74 and 76. Clay-and-timber buildings are the most common form of building technique in Roman Britain. In the City of London the most common form of building preparation for these types of structures consisted of the laying down of a clay or brickearth slab to provide a building platform generally 0.15 – 0.30m thick (Perring et al 1991, 69). A similar technique appears to have been employed here. Such structures can be with or without dug wall foundations. Timber verticals can be held fast in postholes or pits or rested on beams at ground level. Some of the brickearth walls may have been constructed without any timber support a method also recorded elsewhere in London (Ibid).

24.44 Consideration should be given to the layout and spatial distribution of all of the known buildings at Shadwell. Parallels should be made with comparable sites within and without *Londinium*. A comparison of the distribution of the buildings, construction techniques used and building materials employed is likely to inform our understanding of the status, and function of these buildings. The artefactual evidence appears to be domestic in character but further analysis of the distribution of the evidence including the pottery, glass, small finds, and coins may provide additional information on how particular rooms within these buildings were used. For instance the overwhelming proportion of the glass recovered from the clay-and-timber buildings at HGA 02 was from tableware and may suggest that at least some of the rooms were for dinning.

A Mansio or Inn

24.45 The combination of a separate bathhouse, accommodation, associated service yard, all enclosed by a boundary ditch and sited beside a road, potentially close to a port, might be interpreted as a *mansio* or inn. The association of baths with a service yard has been noted at several *mansiones* (Black 1995, 67). Probable Roman *mansiones* have been discovered at Silchester, Caerwent, and Chelmsford, as well as elsewhere and they would have existed in most towns. These building complexes are best understood as hotels or inns, serving official messengers, officials and soldiers travelling on Government business.

The system was known as the *cursus publicus.* They are often sited close to the town wall, are similar in plan to courtyard villas and usually have substantial baths. At Silchester the bath building seems to have had twin suits and in this instance it was suggested that this was so that men and women could bathe at the same time.

Late 3rd Century

24.46 It was during the late 3rd century that the bathhouse at HGA 02 first underwent major alterations, with an additional room being added to the northwest. The wall dividing what may have been the *apodyterium* from a small reception room (vestibule) was knocked through and a tile floor laid. This was followed by a second phase of structural modification when the hypocaust system was enlarged and both the warm rooms were opened up and expanded. The hot room was sub-divided and the building was extended to the south.

24.47 Throughout this period the clay-and-timber buildings were maintained and appear to have been rebuilt wholly or in part on an almost regular 10-year basis.

24.48 The boundary ditch to the north appears to have been kept open.

24.49 To the east at LD 74/76 the fence line, on the same alignment as the ditch at HGA 02, was replaced by ditches and gullies. These ditches rather than representing a military double-ditch are probably the result of repeated re-cutting in order to maintain a boundary. The tower is thought to have remained standing during this period. To the east of the tower a timber building with earth-fast foundations was identified and interpreted as a possible shed or barn. The building yielded some fragments of animal bone of sheep and cattle size and a high proportion of animal bone recovered from the site was found in the boundary ditch associated with this phase of activity. It was suggested that stock rearing was probably carried on in the locality and that butchery was taking place on site (Lakin 2002). Such activities would fit in for the scenario of a port at Shadwell.

24.50 To the west at Tobacco Dock, clay-and-timber buildings were recorded to the south of a timber revetment. The revetment appears to have been a necessary structure built in order to stabilise the slope. To the north of this structure an E/W ditch on the same alignment as the ditch at HGA 02 was identified.

24.51 The ditches at Shadwell now appear to be demarcating boundaries dividing a roadside zone of activity from a residential bathhouse complex to the south.

Early 4th century

24.52 During the early 4th century the bathhouse underwent a final phase of structural alteration, when a small rectangular heated room was added on to the north wall of the building. The flue to the apsidal room was also probably blocked in during this phase. The accommodation block continued to function but the boundary ditch was allowed to silt up.

24.53 To the east the E/W ditches and gullies were allowed to silt up and the tower may have been demolished. The site of the tower however became the focus for inhumation burials.

24.54 The timber-lined tank and drains identified at LD 74 could represent a well or cistern that supplied water to the baths.

24.56 To the west, at TOC 02 timber-lined ditches, drains and a possible sluice to regulate the flow may also all have been part of a system that could have fed water to the baths. A clay-and-timber building constructed on the footprint to earlier structures testified of the continued occupation of the site.

Mid 4th Century

24.57 The baths and the associated accommodation appear to continue until the middle years of the 4th century. An E/W ditch dated to c. AD 375 that cut across the yard may represent the disuse of the baths. Although the site probably continued to be occupied post c. AD 375, evidenced by pitting, while the clay-and-timber building(s) had gone. The baths were probably demolished and much of the building material and fixtures and fittings salvaged presumably for use elsewhere in c. AD 400.

24.58 No trace of late 4th century activity was found to the east but to the west at Tobacco dock a substantial building partly constructed with masonry foundations was identified, along with ditches, drains and, near the south boundary, a crudely built timber-lined well was found. The ceramic evidence from the late Roman phase at TOC 02 suggest a decline in activity during the early 4th century but a revival during the late 4th century. The relatively large number of late 4th century pottery assemblages, some of which may date to the early 5th century, suggest that occupation during this time was intense.

The Military Interpretation

24.59 Any discussion of the bathhouse complex at Shadwell will have to consider the interpretation of the site as a military installation. The interpretation of the tower structure unearthed at LD 74 as a possible signal station or watchtower was first mooted by Tony Johnson in his 1975 article. The tower was seen as an integral part of the Saxon Shore defensive system, relaying messages perhaps from the forts and

controlling river traffic. This interpretation was reiterated by Merrifield who thought that, 'a signal station giving early warning of Saxon raiders in the lower Thames estuary' could be the only possible explanation (Merrifield 1983, 192). The traces of clay floors, sill beam foundations and burnt daub found at the LD 74 and 76 sites attest to timber buildings, in this model, they are seen as being in association with the tower. The double ditches are viewed as military and part of a defensive earthwork protecting the tower from an approach from the river (Pearson 2002, 62).

24.60 The results of the recent excavations at Tobacco Dock and at 172 – 176 The Highway could be interpreted as part of this military installation. In this model the bathhouse would be a military facility, perhaps external to a fort. The clay-and-timber buildings would then have been part of a *vicus*, the latter an extra-mural civilian settlement that often grew up around forts (H. Sheldon pers comm.).

24.61 David Lakin in his reappraisal of the LD sites cast serious doubt on what is a highly speculative military interpretation of the tower at Shadwell. As Lakin points out that while the 'tower' was 5m² internally, the foundations were only 0.45m deep and may have only supported a single storey structure. Masonry signal towers are known to have existed on the Yorkshire coast and they exhibit a common plan of a central tower surround by a curtain wall and ditch, not something that is replicated at Shadwell. Furthermore, a signal station would be part of a chain of such installations but in the thirty years since the 'tower' was discovered no other elements to this supposed system of communication have been found. The only artefact of military character recovered from the site was a single stud from a horse harness, hardly enough to make a *prima facie* case for a military presence in close proximity (Lakin 2002).

24.62 The military explanation also relies heavily on the interpretation put upon the presence of late East Gaulish ware. There is only one other comparable assemblage of pottery of this type in Britain and that comes from a Roman quay at St. Magnus House (Bird 1986). Apparently belonging to a single shipment of c. AD 235 – 45, the presence of this consignment was explained by the 'special' commercial nature of the site (Lakin 2002, 35).

24.63 The presence of similar East Gaulish pottery groups from military sites from *Germania Inferior* and *Germania Superior* (Ibid) and the perception of the Shadwell as being outside a major town suggested to Joanna Bird that there might be a military presence in the vicinity around the second quarter of the 3rd century.

24.64 The distinction of course between civilian and military sites is not always clear-cut. Military finds from Shore Forts have included weapons, including spearheads, sword and dagger fragments, arrow heads, ballista bolts, protective equipment such as fragments of

helmets, armour and shield bosses (Pearson 2002, 157). Horse fittings including pieces of harness, spurs and horseshoes have also been found. Items of military or official dress, notably strap and belt-end fittings, have been recovered. However, at Caister hairpins were the most common artefact in the small finds assemblage that also included items of personal jewellery including finger rings, brooches, beads and bracelets. The forts have also yielded evidence of industry including metal working, as might be expected, but perhaps less obvious spinning, weaving, bone working, butchery and food processing. Clearly therefore there was a mingling of soldier and civilian, male and female both within and beyond the fort wall.

24.65 Typically an extra-mural settlement or *vicus* would have included a bathhouse, *mansio*, temples, cemetery and a network of houses and streets.

24.66 The Saxon Shore Forts are 11 coastal forts that defended the south and southeast of Britain stretching from the Wash to the Solent. The name derives from the *Notitia Dignitatum*, a book compiled in the late 4th or early 5th century. In a clockwise direction they are Brancaster, Caister, Burgh Castle, Walton Castle, Bradwell, Reculver, Richborough, Dover, Lympne, Pevensey, and Porchester.

24.67 The construction of the forts dates to around AD 270 although Caister and Reculver (in the Thames estuary) could date earlier to around AD 220 and Pevensey could be as late as AD 340 (Scullard 1986). The 'tower' at Shadwell predates most of these fortifications although it could be contemporary with Reculver.

24.68 Rather than being a unitary defensive system it may be, as Scullard states, that they were built as the need compelled (Ibid). Indeed the reason(s) why the forts were built has been the subject of academic debate for sometime. The forts themselves with their massive ramparts enclosing large areas (the defences at Reculver enclosed 3.1ha) appear to be 'over engineered'. This would certainly be the case if they were built to protect against a sea borne barbarian threat in the 3rd century when small-scale piracy seems to have been the only menace. A threat from other Romans of course was a reality in the 3rd century and it has been suggested that at least some of these defences were commissioned by Cassius (and or his successors).

24.69 Other archaeologists have suggested that the forts may have had a more economic and logistical function than a strictly defensive structure would imply. Perhaps instead they should be seen as 'fortified ports'. Their location near to the mouth of navigable waterways not arising to protect the interior but rather to facilitate access for military and commercial shipping. The forts could have acted as logistical bases for goods and personnel en-route for inland garrisons. They may have also served as centres where agricultural and mineral products could be collected and shipped onwards, to the northern frontier or the Rhine

garrisons. Additionally they could have been used as holding camps for troops in transit.

24.70 The 3rd century financial crisis made the coinage increasingly unstable and valueless, and the institutionalisation of taxation 'in kind' became an increasingly important mechanism for the State to collect revenue (Pearson 2002, 137). The shore forts may have played a major role in this system as collection points for this tax.

24.71 Fourth century sources specifically mention towns, forts and the stations of the *cursus publicus* as places particularly involved in the taxation system (Cleary 1987, 9).

The Historical Context (Pearson 2002)

The 3rd Century

24.72 The Severian dynasty came to an end with the murder of the emperor Severus Alexander in AD 235. In the next five decades over 60 individuals lay claim to the imperial title. Political turmoil and internal dissention was also accompanied by external military pressure.

24.73 Between AD 244 – 260 in the eastern empire Persia made deep inroads sacking Antioch. The Persian advance was finally stopped by the forces of *Palmyria* which then assumed independent control of Syria and Mesopotamia. The separate Palmyrene Kingdom lasted from AD 259 – 271.

24.74 In the AD 250's and 260's Goths and Vandals made major incursions into the Balkans and their naval forces raided Greece, the Black Sea region, the west coast of Asia Minor, Cyprus and Crete. These invaders were eventually driven back but Goths continued to raid across the Danube well into the AD 270's.

24.75 In the western part of the empire, Germanic pressure intensified and culminated with the Rhine frontier being overrun in AD 260. However, by then Cassius Latinius Postumus had been proclaimed emperor (AD 258 – d. 269) and had the support of the armies of Germany, Gaul, Britain and Spain, a confederation known as the 'Gallic Empire'. Although separate from Rome the Gallic Empire was a completely Roman state and outlived Cassius, who was succeeded by the emperors Victorinus (AD 269 – 271) and Tetricus (AD 271 – 274).

24.76 These upheavals appear to have precipitated a financial crisis in the middle of the 3rd century and there was widespread debasement of the currency.

24.77 The territorial empire was re-established by the emperor Aurelion (AD 270 – 275) who gained the title '*restitutor orbis*' (Restorer of the World). The separatist Palmyrene Kingdom was destroyed in AD 271/272 and

the power of Gallic Empire was broken at the battle of Châlons in AD 274.

24.78 In AD 284 Diocletian became emperor bringing some much needed stability to the empire. Diocletian ruled with Maximian (emperor in the west) and both held the title of *Augustus* and were assisted by the *Caesars* Galerius and Constantius respectively. This ruling oligarchy is known as the Tetrarchy.

24.79 In AD 286/7 Carausius, a British naval commander, rebelled declaring himself emperor. Carausius controlled Britain and northern Gaul, including Boulogne and Calais, successfully defending his territory by destroying Maximian invasion fleet of c. AD 288/9. However, Carausius was assassinated by his finance minister Allectus in around AD 293.

24.80 The usurper Allectus remained in power until AD 296 when his armies, supposedly primarily composed of German mercenaries, was defeated by Constantius. The site of this battle is not known but it was presumably fought somewhere in southern England. Constantius, turning up just time, purportedly saved *Londinium* from being pillaged by the remnants of Allectus's army.

24.81 Although Britain in the 3rd century was for much of the time politically unstable, it was also relatively peaceful and seems to have been little troubled by the military upsets of that century (Cleary 1987, 5). Indeed, the disaster that was to befall Gaul in the 3rd and 4th centuries may have actually encouraged economic prosperity in southern Britain. It may be that lowland Britain became the breadbasket for the garrisons along the Rhine frontier now that the hinterland had been repeatedly ravaged.

The 4th century

24.82 The retirement of Diocletain and Maximian in AD 305 meant that Constantius was now *Augustus*. He died suddenly in York in AD 306 and his son Constantine was proclaimed emperor by the army. There now followed 17 years of civil war before Constantine emerged as sole ruler.

24.83 In the winter of AD 342/3 some crisis, perhaps a barbarian incursion or an internal revolt, brought the joint emperor Constans (AD 337 – 350) to Britain. Coins of that year show him on a warship steered by Victory suggesting that order had been successfully restored.

24.84 Constans was overthrown in AD 350 by Magnentius, an army officer from Britain. Magnentius was quickly defeated at Illyricium but his regime was not finally suppressed in Britain and Gaul by the emperor Constantius II until AD 353.

24.85 The Rhine frontier was once again overrun in AD 353 but the integrity of the frontier would be restored by the campaigns of Caesar Julian between AD 355 and 359. During AD 359 a large fleet was assembled to transport grain to the Rhine garrisons in advance of campaigns in the lower Rhine region.

24.86 The historian Ammianus Marcellinus hints at continuing troubles in Britain during the AD 360's. These culminated in the 'barbarian conspiracy' when the Picts, Scots and Attacotti are supposed to have attacked the north and west, and the Franks and Saxons assaulted the east and southern coasts.

24.87 The emperor Valentinian (AD 364 – 375) was reported to have despatched Theodosius to restore order in the beleaguered province. This was swiftly achieved by AD 368 or 369.

24.88 The province of Britain would twice more slip from central control under the rule of the usurpers Magnus Maximus (AD 383 – 388) and Eugenius (AD 392 – 394).

24.89 It seems certain that the barbarians continued to threaten Britain during the late 4th century but it was also true that the fabric of Roman society was still largely intact.

24.90 An abrupt end appears to befall Roman civilisation in Britain in the early 5th century. The urban way of life suddenly comes to an end, at least in the London region. *Londinium* and her satellite settlements appear to be abandoned.

24.91 Archaeological evidence dating to the 5th century remains elusive and generally consists of no more than a few sherds of sub-Roman pottery, a scatter of putative postholes and the odd ditch to suggest that life continued. The early 5th century, at least archaeologically remains a 'dark age'.

24.92 The scale and morphology of the settlement at Shadwell is becoming increasingly clearer with the excavations at Tobacco Dock and at 172 – 176 The Highway. This will undoubtedly continue as further sites in the area are investigated. It is also increasingly clear that other satellite settlements to *Londinium,* such as at Old Ford, are also expanding during the mid to late 3rd century. The study and comparison of these settlements will inform our knowledge of the role and status of *Londinium* itself during the late Roman period.

Medieval

24.93 There was no evidence for medieval occupation of the site.

Post-Medieval

24.94 No evidence was found for the presence for earthworks associated with the Civil War defences, which were supposed to have been in the vicinity of the site. No trace of the defences was discovered to the west on Tobacco Dock either. It may be that the earthworks, if they existed as shown on the Civil War Defences map of 1642, were located between HGA 02 and TOC 02 and any trace remaining surviving under Wapping Lane.

24.95 The excavation confirmed the cartographic evidence that the Wapping Lane and The Highway frontages were already built up by the 17th century.

24.96 Of particular interest was a brick-lined cesspit that contained a rich assemblage of finds that may be associated with a public house or inn of the 18th century.

25 ADDITIONAL RESEARCH QUESTIONS

25.1 The approach to the analysis and publication of the site at 172 – 176 The Highway should be an integrated one, incorporating the archive of the site opposite at TOC 02.

25.2 It the Shadwell sites are part of a Roman port, that had shifted downstream from its earlier location in the City, then there should be similarities between the finds assemblages from the City and the early port assemblages at Shadwell. The necessary comparisons between these assemblages should therefore be made. Of particular importance in this respect would be the pottery assemblage from St Magnus House, the site of a late Roman quay in the City.

25.3 The HGA 02, TOC 02 and the LD 74 and LD 76 sites will need to be reviewed jointly to obtain an overview of the Roman activity at Shadwell so as to reveal a complete a picture as possible.

25.4 In order to more fully appreciate the extent and significance of the settlement in the Shadwell/Ratcliffe area, a search of the SMR from the east of the Roman cemetery to Ratcliffe, 500m either side of The Highway should be carried out.

25.5 Further analysis of the building material fabrics used in the bathhouse should also be undertaken by structural phase to determine if there is any chronological development. The use of form types and mortars should similarly be analysed.

25.6 Does the reuse of material prevent an understanding of provenance or do the relative fabric proportions and signature marks suggest a more precise source for the salvaged material than the broader London region? In the same way can different sources be determined for the consecutive phase of remodelling?

25.7 Consideration will need to be given to the water supply and drainage of the bathhouse. Contemporary timber drains have been recorded to the north and south of the bathhouse. It will be important to establish if and how these relate to the structure. Particularly where the large supply of fresh water required may have come from and if the drains to south might have carried the outflow or effluent from the bathhouse into the river.

25.8 An attempt should be made to establish what fuel was used to heat the furnaces and where it was likely to have been obtained.

25.9 The sampled tile and brick stored with the loose assemblage will need to be tied into the structural phases as the majority demonstrate signature marks, stamps and inscriptions. As re-used, however, their presence is not necessarily going to be of any particular significance.

25.10 Photographs and illustrations of c. 15 individual tiles and bricks depicting unusual forms, inscriptions, stamps and signature marks will need to be undertaken.

25.11 A reconstruction drawing of the original phase of bathhouse (from south-east) is recommended for the publication.

25.12 In order to more precisely date the activity at this important late Roman site three tree-ring samples have been sent for dating. These dates, an updated summary of the worked wood and a couple of detailed drawings of the woodwork will need to be incorporated into the final publication.

25.13 Because of the fine dating sequence for the clay-and-timber buildings an attempt should be made to fit this sequence into what is known of the changing political landscape of the period. If the Shadwell sites were part of the harbour facilities for 'greater Londinium' during the late Roman period these would have been likely to be sensitive to influence od some of the major upheavals of the time.

25.14 The site produced an extremely important assemblage of late Roman pottery that needs to be written up in considerable detail. From Phase 3 an estimated 25 pot drawings should be done, while from Phase 4 to 9 a further 6 drawings are required. Pottery from Phase 11 needs another 20 pottery drawings. From the demolition debris and the robber trenches of Phase 13, a further 14 sherds are considered worth illustrating.

25.15 Further specialist study is considered necessary for some of the pottery. In particular, the Samian pottery assemblage should be sent to Joanna Bird and an estimated 40 to 50 sherds will need to be drawn.

25.16 The amphorae from the site included some exceptional pieces including a number of sherds of North African vessels and others of an unknown origin. David Williams should be sent a total of 25 sherds to report on.

25.17 Most of the mortaria from the site are Oxfordshire fabrics but six are early 3rd century Rhineland products and should be sent to Kay Hartley.

25.18 The small finds from the site provide an exceptional insight into the late Roman way of life. Many of the items of personal adornment such as the hairpins and jewellery are associated with women, indicating a significant female presence. A small finds report with descriptions and illustrations of selective objects will need to be included in the publication. Some of the jewellery is of a high standard and will require further research in order to find parallels and refine the dating. The miniature foot also requires further research. A list of objects that require further conservation and cleaning is included in Appendix 8.

Also included in the small finds report is a provisional list of those objects that are thought worthy of illustration, some 46 items in total.

25.19 The Roman glass from the site should be compared with the assemblages from Tobacco Dock and the LD sites, but also from elsewhere in Britain. Particularly those sites associated with bathhouses. Of particular importance is the glass from Area B and further work, including the distribution of the glass and a combined study of the glass and pottery forms, may inform our understanding of the use to which the clay-and-timber buildings were put. It may be possible to suggest how different rooms within the buildings functioned and/or to see if the use or status of the buildings changed over time.

25.20 The post-Medieval glass is not considered unusual but should be integrated into a publication of the assemblage of the material from TOC 02. Five vessels were considered worthy of illustration.

25.21 Food debris predominated in the animal bone assemblage and more detailed analysis will investigate any changes in the dietary habits and food production processes of the Roman and post-Roman periods. The bulk of the Roman diet appears to have been comprised of beef/veal, mutton/lamb and pork/sucking piglets. But hens were probably kept for egg production and the occasional wild fowl or hare may have added variety to the diet. A number of fish species indicates the exploitation of marine, estuarine and freshwater fisheries.

25.22 Of special zooarchaeological interest was the presence of the black rat, *Rattus rattus,* in a Roman context. This species was also found in Roman deposits at Tobacco Dock. The black rat, during the Roman period was supposed to be confined to ports and the larger urban centres and its presence here may be significant.

25.23 Also of particular interest and the subject of further study will be the small assemblage of animal remains associated with the flooded hypocaust system, which included the bones from a possible water shrew, the house mouse and the common frog.

25.24 Further study of the amount of bone assemblages from HGA 02 and TOC 02 should aid in defining local food consumption and procurement strategies.

25.25 Animal bone assemblages have also been helpful in distinguishing military from non-military sites and as this is a question that has been raised for the Shadwell sites the material should be reviewed with this in mind.

25.26 The environmental report recommends that further analysis be carried out on two samples of Roman deposits rich in Mollusca that would provide further information about diet, trade and possibly the local environment. A further 21 samples with well-preserved charcoal should

be studied in more detail to provided information on woodland exploitation.

25.27 A total of 223 Roman coins were recovered dating from the 2nd through to the late 4th or early 5th century. A list of all the coins by context, with identification and date (where possible) and condition is given in Appendix 9. Further cleaning, in order to aid in identification, is recommended where appropriate. The assemblage should be compared with others from the area in particular from Tobacco Dock and the LD 74 and 76 sites.

25.28 Two fragments of leather were recovered from a Roman context but the pieces are not diagnostic and no further work is required.

25.29 The post-Medieval clay tobacco pipe assemblage is considered to be of local importance. Not only are the clay tobacco pipes an important dating tool but especially when integrated with those from Tobacco Dock they will significantly add to our knowledge of the local industry. Provisionally six examples have been recommended for illustration.

25.30 A pipeclay hair curler was recovered from the site. These items are not a common find and are usually associated with sites of middle to high socio-economic status. The HGA 02 example should be illustrated and published in conjunction with two other examples recovered from Tobacco Dock.

25.31 The post-Medieval pottery assemblage was of a type usually associated with 17th and 18th century sites but a small number of uncommon imports are also present. In particular the presence of a Kutahya ware tea bowl is considered to be of national significance and is suitable for display in a museum. There are also a few large groups of pottery, which are recommended for further study, so as to allow comment on the social status of the site, and activities that were being carried out.

25.32 A publication report of the post-Medieval pottery would compare the significant assemblages with the material from TOC 02. This would provide a corpus of pottery that would inform our understanding of an area of London that was subject to rapid economic and social change. Seventeen vessels are recommended for drawing and the Kutahya ware tea bowl requires further cleaning and conservation.

26. ANALYSIS AND PUBLICATION

26.1 The archaeological investigations at Tobacco Dock (TOC 02) and at 172 – 176 The Highway (HGA 02) have clearly shown that the two sites are related and each adds to the understanding of the other. It would seem a logical and efficient use of resources if the two site archives, at present described and tabulated in separate assessment report documents, were integrated and published in a single work.

26.2 The size and importance of the HGA 02 and TOC 02 site archive will generate a sizeable publication and a PCA monograph is consequently proposed. Such a publication will require an academic input and Martin Millett, Laurence Professor of Classical Archaeology, Fitzwilliam, University of Cambridge has agreed to be external referee and academic advisor to this project.

26.3 Such a publication should address the following:

- The setting of the site in relation to Roman London, and the postulated road eastwards through the eastern cemetery, its topography (through analysis of borehole and other relevant data), relationship to the Thames and changes in climate and the River's regime, and archaeological evidence for use of the site from the prehistoric period until expansion of the area in the 3rd century.
- Phase by phase discussion of archaeological evidence, structural, artefactual and environmental data as outlined in research objectives above, with particular reference to the form and function of the bathhouse and associated ancillary buildings. Comparison of these facilities with other known examples.
- The nature of the settlement at Shadwell and the possibility of a nearby port facility and its relationship with Londinium, against the background of the late Roman contraction of the city. Consideration should be given to other potentially comparable settlements in Londinium's hinterland.

26.4 The proposed publication will thus address some of the research priorities outlined in Museum of London's 'A research framework for London archaeology 2002' chapter 4 (pages 31 – 43)

26.5 The important post-Medieval remains should form the basis for an article in a relevant peer review journal.

26.6 It is therefore recommended that both the assessment reports for Tobacco Dock and 172 – 176 The Highway are disseminated to all the relevant parties and a separate program for the joint analysis and publication produced.

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Maps referred to in this document

Civil War Defences map of 1642

Jacobe De La Feuille map of 1689/94

Rocque's map of 1746 shows

Horwoods map of 1819

O. S. Map 1873

O. S. Map 1921

O. S. Map 1957

O. S. Map 1968

Appendix 1 Context Index

Context No	Plan No	Sect / elev No	Grid Sq	Area	Phase	Type	Description	High. Level	Low. Level
179	179	11	110-115/235	A	1	Layer	Dirty gravel	6.65	6.34
139		8	105/230	A	3	Fill	Fill of [141]	5.65	
141	141	8	105/230	A	3	Cut	E/W ditch	6.01	5.01
152		9	110-115/230	A	3	Fill	Fill of [154]	6.11	5.59
154	154	9	110-115/230	A	3	Cut	E/W ditch	6.1	5.2
164		7	115/230	A	3	Fill	Fill of [165]	6.27	
165	165	7	115/230	A	3	Cut	E/W ditch	6.03	5.18
171		10	110/230	A	3	Fill	Fill of [177]		
174		7	115/230	A	3	Fill	Fill of [165]	5.97	
175		7	115/230	A	3	Fill	Primary fill of [165]	5.77	
177	177	10	110/230	A	3	Cut	E/W ditch	5.93	5.13
178		8	105/230	A	3	Fill	Slumping	5.33	
127		8	105/230	A	6	Fill	Top fill of [138]	6.03	
134		8	105/230	A	6	Fill	Secondary fill of [138]	5.76	
135		9	110-115/230	A	6	Fill	Top fill of [153]	6.1	
137		9	110-115/230	A	6	Fill	Secondary fill of [153]	5.91	5.83
138	138	8	105/230	A	6	Cut	Re-cut of E/W ditch	6.61	5.44
140		8	105/230	A	6	Fill	Primary fill of [138]	5.68	
142			115/230	A	6	Fill	Fill of [143]	6.17	
143	143		115/230	A	6	Cut	Linear, sloping sides, rounded base	6.17	5.96
148			115/230	A	6	Fill	Fill of 149]	5.68	
149	149		115/230	A	6	Cut	Poss. posthole	5.68	5.58
150			115/230	A	6	Fill	Fill of [151]	5.65	
151	149		115/230	A	6	Cut	Poss posthole	5.65	5.6
153	153	9	110-115/230	A	6	Cut	Re-cut of E/W ditch	6.11	5.59
155		7	115/230	A	6	Fill	Fill of [163]	6.17	
163	163	7	115/230	A	6	Cut	Re-cut of E/W ditch	6.17	5.83
166		10	110/230	A	6	Fill	Fill of [168]	5.95	
167		10	110/230	A	6	Fill	Primary fill of [168]	5.76	
168	168	10	110/230	A	6	Cut	Re-cut of E/W ditch	5.76	5.51
172		9	110-115/230	A	6	Fill	Primary fill of [153]	5.6	
101			115/225	A	15	Fill	Fill of cut [102]	5.56	
102	102		115/225	A	15	Cut	Pit, sub-rect, vertical sides, flat base	5.56	5.29
103			120/235	A	15	Fill	Fill of cut [105]	6.3	
104	104		120/235	A	15	Fill	Primary fill of cut [105]	6.32	
105	105		120/235	A	15	Cut	Pit, sub-oval, sloping sides, concave base	6.32	5.72
106			120/230	A	15	Fill	Fill of cut [107]	6.08	
107	107		120/230	A	15	Cut	Pit, sub-rect, concave sides, flat base	6.14	5.58
108			120/230	A	15	Fill	Fill of cut [109]	6.15	
109	109		120/230	A	15	Cut	Pit, sub-rect, nr vertical, flat base	6.16	5.76
110	110		115/240	A	15	Layer	Redep brickearth	6.56	

111			120/230	A	15	Fill	Fill of cut [112]	6.2	
112	112		120/230	A	15	Cut	Pit, sub-square, steeply sloping, flat base	6.22	5.82
113	113		110-115/235	A	15	Layer	Compacted, gravely silty sand	6.87	6.84
114	P. Ex		110/230-235	A	15	Fill	Fill of cut [115]	6.75	
115	P. Ex		110/230-235	A	15	Cut	Pit, sub-rect, nr vertical, not bottomed	6.75	
116	P.Ex		115/235	A	15	Fill	Fill of cut [117]	6.7	
117	P. Ex		115/235	A	15	Cut	Sub-rect, nr vertical, not bottomed	6.7	
118	120		110/235	A	15	Fill	Fill of cut [119]	6.62	
119	121		110/235	A	15	Cut	Poss posthole	6.59	6.5
120	120		110/235	A	15	Fill	Post pipe	6.67	
121	121		110/235	A	15	Fill	Fill of [122]	6.66	
122	122		110/235	A	15	Cut	Posthole	6.66	6.17
123		8	105/230	A	15	Fill	Fill of [126]	6.29	
124			110/230	A	15	Fill	Fill of [125]	5.89	
125	125		110/230	A	15	Cut	Posthole	5.89	5.46
126		8	105/230	A	15	Cut	Pit, sub-rect, nr vertical, flat base	6.15	5.74
128	128	9	115/230	A	15	Cut	Sub-circular vertical, concave	6.18	5.9
129		9	115/230	A	15	Fill	Fill of [128]	6.18	
130			120/230	A	15	Fill	Fill of [131]	6.25	
131	131		120/230	A	15	Cut	Circular, vertical, flat base	6.25	5.91
132			115-120/230	A	15	Fill	Fill of [133]	6.29	
133	133		115-120/230	A	15	Cut	Circular, vertical, flat base	6.29	5.93
136	136		115/230	A	15	Cut	Pit, sub-rect, vertical, flat	6.06	5.68
144			115-120/230	A	15	Fill	Fill of [145]	6.21	
145	145		115-120/230	A	15	Cut	Pit, sub-oval, sloping sides, flat base	6.21	5.7
146			115-120/230	A	15	Fill	Fill of [147]	5.87	
147	147		115-120/230	A	15	Cut	Poss posthole	5.87	5.48
156		10	115/230	A	15	Fill	Fill of [136]	6.06	
157			110/230	A	15	Fill	Fill of [158]	5.89	
158	158		110/230	A	15	Cut	Sub-circular, steeply sloping, concave base	5.89	5.65
159			110/230	A	15	Fill	Fill of [160]	5.65	
160	158		110/230	A	15	Cut	Stokehole	5.68	5.72
161			110/230	A	15	Fill	Fill of [162]	5.65	
162	158		110/230	A	15	Cut	Stakehole	5.65	5.55
169		7	115/230	A	15	Fill	Fill of [170]	6.24	
170	170	7	115/230	A	15	Cut	Circular, nr vertical, concave	6.24	5.39
176		7	115/230	A	15	Fill	Fill of [170]	5.72	
898	898		105/215-220 110/220	B	1	Layer	Natural sand & gravel	4.56	3.62
901	901		105/215	B	1	Layer	Sandy silt -	4.18	4

						colluvial?		
911	no plan	105/215	B	1	Layer	Natural clay	3.27	
806		105/215	B	2	Fill	Fill of [888]	4.28	
847		105/215	B	2	Fill	Fill of [848]	4.16	
848	857	105/215	B	2	Cut	Sub-circular, steeply sloping, flat base - pit	4.16	3.8
857	857	105/215	B	2	Cut	sub oval, sloping sides, flat base	3.87	3.82
858		105/215	B	2	Fill	Fill of [857]	3.99	3.94
876		105/215	B	2	Fill	Fill of [877]	3.87	
877	877	105/215	B	2	Cut	Sub-rect, sloping sides flat base	3.87	3.64
888	888	105/215	B	2	Cut	Sub-circular, sloping sides, concave base - pit	4.3	3.92
741	741	105/215	B	3	Cut	Posthole?	3.98	3.78
742		105/215	B	3	Fill	Fill of [741]	3.98	
745		105/220	B	3	Fill	Fill of [746]	4.61	
746	746	105/220	B	3	Cut	Posthole	4.52	4.38
747		105/220	B	3	Fill	Fill of [748]	4.55	
748	748	105/220	B	3	Cut	Stakehole	4.52	4.38
749	749	105/215	B	3	Layer	Firm, silty sand may have been scorched	5.05	4.98
750		105/220	B	3	Fill	Fill of [751]	4.56	4.39
751	751	105/220	B	3	Cut	Beam slot	4.6	3.98
753	753	105/215	B	3	Layer	Poss floor	4.05	4.01
754	754	105/215	B	3	Layer	Demolition?	4.08	4.03
767	767	105/215	B	3	Layer	Silty sand & gravel	4.05	3.99
772	777	105/215	B	3	Cut	Stakehole	3.95	3.78
773		105/215	B	3	Fill	Fill of [772]	3.95	
774	777	105/215	B	3	Cut	Stakehole	3.96	3.87
775		105/215	B	3	Fill	Fill of [774]	3.96	
776		105/215	B	3	Fill	Fill of [777]	3.94	
777	777	105/215	B	3	Cut	Stakehole	3.94	3.81
778		105/220	B	3	Fill	Fill of [779] - ritual deposit	4.53	
779	779	105/220	B	3	Cut	Circular, vertical, sides, concave base - pit	4.53	4.22
783	783	105/15	B	3	Layer	Silty sand - makeup?	3.98	3.94
784	784	105/215	B	3	Layer	Crushed cbm - floor?	4.01	3.9
788		105/215	B	3	Fill	Fill of [789]	4.16	
789	789	105/215	B	3	Cut	Posthole	4.16	3.61
790		105/215	B	3	Fill	Fill of [791]	3.97	
791	777	105/215	B	3	Cut	Stakehole	3.97	3.9
802		105/220	B	3	Fill	Fill of [803]	4.29	
803	803	105/220	B	3	Cut	Posthole	4.29	3.97
804		105/220	B	3	Fill	Posthole	4.29	
805	803	105/220	B	3	Cut	Posthole	4.29	3.52
819		105/215	B	3	Fill	Fill of [820]	4.18	

820	820	105/215	B	3	Cut	Linear N/S, steeply sloping sides, concave base	4 18	3.99
823	823	105-110/220	B	3	Layer	Redeposit sand & gravel	4.68	4.46
826		105/215	B	3	Fill	Fill of [827]	3.85	
827	827	105/215	B	3	Cut	Rect, nr vertical, flat base	3.85	3.72
828		105/215	B	3	Fill	Fill of [829]	3.98	
829	829	105/215	B	3	Cut	Ovoid, sloping sides, flat base	3.98	3.82
830		105/215	B	3	Fill	Fill of [831]	3.81	
831	831	105/215	B	3	Cut	Posthole	3.81	3.6
833		105/215	B	3	Fill	Fill of [834]	4.2	
834	834	105/215	B	3	Fill	Beam slot E/W	4.2	3.85
835		105/220	B	3	Fill	Fill of [836]		
836	836	105/220	B	3	Cut	Void created by gone out wood - pipe	4.31	4.15
846	846	105/220	B	3	Layer	Levelling?	4.36	4.25
864	864	105/220	B	3	Layer	Occupation?	4.31	4.21
865		105/215	B	3	Fill	Fill of [866]	3.86	
866	866	105/215	B	3	Cut	Posthole	3.85	2.98
868	865	105/215	B	3	Timber	Post	3.58	
869	865	105/215	B	3	Timber	Post	3.59	
870		105/215	B	3	Fill	Fill of [871]	3.84	
871	866	105/215	B	3	Cut	Post	3.84	3.15
872	872	105/215-220	B	3	Layer	Makeup	4.31	4.28
873	873	105/215	B	3	Layer	Silty sand - levelling?	3.87	3.84
874		105/215	B	3	Fill	Fill of [875]	3.82	
875	875	105/215	B	3	Cut	Posthole	3.82	3.74
880	880	105/220	B	3	Cut	Construction cut for pipe	4.27	4.13
883	883	105/220	B	3	Layer	Surface?	4.45	4.34
886	886	105/220	B	3	Layer	Surface?	4.42	4.32
891	891	105/220	B	3	Cut	Posthole	4.24	3 5
892		105/220	B	3	Timber	Post point	3.8	3 5
893		105/220	B	3	Fill	Fill of [891]	4 24	
894	891	105/220	B	3	Cut	Posthole	4.24	3.53
895		105/220	B	3	Timber	Post point	3.83	3 5
896		105/220	B	3	Fill	Fill of [894]	4.24	
899	899	105/215	B	3	Fill	Fill of [900]	3 7	
900	900	105/215	B	3	Cut	Linear N/S, vertical sides, flat base	3 7	2 94
903		105/215	B	3	Fill	Fill of [900]	3.82	3 71
907	907	105/215	B	3	Layer	Compacted sandy silt	3.8	3.7
909		105/215	B	3	Fill	Fill of [910]	3.65	
910	910	105/215	B	3	Cut	Posthole	3.65	3 07
496		100/215	B	4	Fill	Fill of [519]	4.04	3 97
510	510	105/215	B	4	Cut	Linear, N/S, sloping sides, concave base	4.04	3 76
592		100-105/220	B	4	Fill	Fill of [593]	4.73	

593	No plan	100-105/220	B	4	Cut	Linear E/W, steeply sloping concave base	4.79	4.56
605		105/215	B	4	Fill	Fill of [606]	4.24	
606	606	105/215	B	4	Cut	Posthole	4.24	3.89
639	639	105/220	B	4	Layer	Poss floor	4.84	4.72
649		105/220	B	4	Fill	Fill of [650]	4.44	
650	650	105/220	B	4	Cut	Circular, sloping sides, concave base - shallow pit	4.45	4.2
654		105/220	B	4	Fill	Fill of [655]	4.73	
655	655	105/220	B	4	Cut	Irregular, sloping sides, uneven base	4.65	4.52
687	687	105-110/220	B	4	Layer	Poss floor	4.66	4.47
713		105/220	B	4	Fill	Fill of [714]	4.73	
714	no plan	105/220	B	4	Cut	Ovoid, sloping sides, concave base	4.76	4.64
720	720	105/215	B	4	Layer	Occupation	4.22	4.15
722	722	105/215	B	4	Cut	E/W beam slot?	4.26	4.07
723		105/215	B	4	Fill	Fill of [722]	4.26	
737	737	105/215	B	4	Layer	Sandy silt	4.04	3.99
738		105/220	B	4	Fill	Fill of [743]	4.58	
739	739	105/220	B	4	Layer	Poss hearth	4.67	4.61
743	743	105/220	B	4	Cut	Sub-oval, sloping sides, concave base	4.54	4.35
744	744	105/215	B	4	Layer	Poss hearth	4.09	3.93
755		105/220	B	4	Fill	Fill of [756]	4.4	
756	756	105/220	B	4	Cut	Posthole	4.38	4.16
757		105/215	B	4	Fill	Fill of [758]	4.15	
758	758	105/215	B	4	Cut	Posthole	4.1	3.88
759		105/215	B	4	Fill	Fill of [760]	4.19	
760	760	105/215	B	4	Cut	Posthole	4.17	4.06
764	764	105/215	B	4	Layer	Mortar & op sig floor?	4.2	4.02
768	768	105/215	B	4	Cut	Posthole	4	3.61
769		105/215	B	4	Fill	Fill of [768]	4	
770	770	105/215	B	4	Cut	Posthole	3.96	3.73
771		105/215	B	4	Fill	Fill of [770]	3.96	
780		105/215	B	4	Fill	Fill of [781]	4.26	
781	781	105/215	B	4	Cut	Posthole	4.26	3.98
785		105/215	B	4	Fill	Fill of [786]	4.23	
786	786	105/215	B	4	Cut	Posthole	4.18	3.96
787	787	105/215	B	4	Layer	Mortar surface/floor	4.08	4.02
792		105/220	B	4	Fill	Fill of [793]	4.3	
793	793	105/220	B	4	Cut	Sub-rect, nr vertical, flat base	4.41	3.97
794	794	105-110/220	B	4	Layer	Redeposited sand & gravel	5.02	4.62
797	787	105/215	B	4	Layer	Mortar floor	4.14	4.09
814		105/215	B	4	Fill	Fill of [816]	4.05	
815		105/215	B	4	Fill	Fill of [816]	3.94	
816	816	105/215	B	4	Cut	Beam slot	4.14	3.82
821		105/215	B	4	Fill	Fill of [822]	4.03	

822	822	105/215	B	4	Cut	Linear, vertical sides, flat base	4.04	3.91
824	824	105/215	B	4	Layer	Silty sand - levelling?	4.02	3.95
837		105/220	B	4	Fill	Fill of [838]	4.49	
838	840	105/220	B	4	Cut	Posthole	4.49	3.96
839		105/220	B	4	Fill	Fill of [840]	4.52	
840	840	105/220	B	4	Cut	Posthole	4.52	4.1
841		105/220	B	4	Fill	Fill of [842]	4.41	
842	840	105/220	B	4	Cut	Posthole	4.41	3.93
843		105/220	B	4	Fill	Fill of [844]	4.52	
844	840	105/220	B	4	Cut	Posthole	4.52	3.84
845		105/210-215	B	4	Timber	Drain?	3.79	3.7
878		105/215	B	4	Fill	Fill of [879]	4.03	
879	879	105/215	B	4	Cut	Linear N/S, sloping sides, flat base	4	3.7
884	884	105/215	B	4	Layer	Decayed chalk	4.33	4.23
889		105/215	B	4	Fill	Fill of [890]	4.15	
890	890	105/215	B	4	Cut	Sub-rect, sloping sides, flat base	4.05	3.6
897		105/215	B	4	Fill	Fill of [890]	3.82	
264	264	105/215	B	5	Layer	Compacted, brown/black, sandy silt	4.52	4.19
281		105/220	B	5	Fill	Fill of [282]	4.67	
282	282?	105/220	B	5	Cut	Linear N/S, sloping sides	4.73	4.38
490	490	105/215	B	5	Layer	Soft, clayey silt	4.27	4.19
549	525	105/215	B	5	Layer	Cbm, flint and chalk lumps - building debris?	4.27	4.19
553	553	105/220	B	5	Layer	Poss beaten earth floor	4.53	4.46
558	558	105/215	B	5	Layer	Loose, sandy silt	4.26	4.13
582	582	100-105/220	B	5	Layer	Silty sand & gravel	5.03	4.8
598		105/220	B	5	Fill	Fill of [599]	4.34	
599	599	105/220	B	5	Cut	Posthole	4.34	4.21
609		105/215	B	5	Fill	Fill of [610]	4.23	
610	610	105/215	B	5	Cut	Rect, sloping sides & base	4.27	4.03
619	619	105/215-220	B	5	Layer	Plaster floor	4.42	4.25
620	629	105/215	B	5	Layer	Beaten earth floor?	4.3	
622	622	105/215	B	5	Layer	Makeup for [623]	4.32	4.21
623	623	105/215	B	5	Layer	Poss floor	4.34	
625		105/220	B	5	Fill	Fill of [626]	4.28	
626	626	105/220	B	5	Cut	Posthole	4.28	3.59
627		105/220	B	5	Fill	Fill of [628]	4.37	
628	628	105/220	B	5	Cut	Posthole	4.36	4.29
629		105/220	B	5	Fill	Fill of [630]	4.44	
630	630	105/220	B	5	Cut	Posthole	4.44	4
658		105/220	B	5	Fill	Fill of [659]	4.44	
659	659	105/220	B	5	Cut	Posthole	4.41	4.11
660		105/220	B	5	Fill	Fill of [661]	4.49	
661	661	105/220	B	5	Cut	Posthole	4.37	4.18
674		105/220	B	5	Fill	Fill of [675]	4.53	

675	675	105/220	B	5	Cut	Rect, vertical sides, flat base	4.53	4.38
678	678	105/220	B	5	Cut	Posthole	4.42	3.67
679		105/220	B	5	Fill	Fill of [678]	4.42	
680		105/220	B	5	Fill	Fill Of [686]	4.38	
681	681	105/220	B	5	Layer	Silty clay - wall line?	4.4	
685	685	105/220	B	5	Layer	Silty clay - wall line?	4.44	4.41
686	686	105/220	B	5	Cut	Posthole	4.38	3.56
704	704	105/215	B	5	Layer	Soft, sandy silt	4.16	4.09
705	705	105/220	B	5	Layer	Loose, silty sand - levelling?	4.61	4.36
707	707	105/220	B	5	Cut	Posthole	4.35	3.4
708		105/220	B	5	Fill	Fill of [707]	4.35	
709	709	105/215	B	5	Layer	Poss floor repair	4.27	4.19
710	710	105/215	B	5	Layer	Op sig floor	4.26	4.15
712	712	100-105/220	B	5	Layer	Soft, sandy clay - floor makeup?	4.54	4.44
721	721	105/215-220	B	5	Layer	Levelling?	4.72	4.23
724	724	105/215	B	5	Layer	Soft sandy silt	4.27	4.12
762		105/215	B	5	Fill	Fill of [763]	3.99	
763	763	105/215	B	5	Cut	Posthole	3.99	3.78
766	766	105/215-220	B	5	Layer	Sandy clay freq charcoal flecks & frags	4.35	4.13
800	800	105/220	B	5	Layer	Firm, silty sand freq charcoal	4.51	4.4
922	922	105/220	B	5	Layer	Redeposited silty sand - levelling?	4.53	4.4
531		100/220	B	6	Fill	Fill of [532]	4.49	
532	532	100/220	B	6	Cut	Posthole	4.46	4.24
541		105/220	B	6	Fill	Fill of [542]	4.49	
542	542	105/220	B	6	Cut	Linear N/S, sloping sides, concave base	4.52	4.28
543		100/220	B	6	Fill	Fill of [544]	4.49	
544	544	100/220	B	6	Cut	Posthole	4.47	?
545		100/220	B	6	Fill	Fill of [546]	4.45	
546	546	100/220	B	6	Cut	Posthole	4.42	4.33
548		100/220	B	6	Fill	Top fill of [546]	-	-
551		100/220	B	6	Fill	Fill of [552]	4.44	
552	552	100/220	B	6	Cut	Posthole	4.41	4.31
556	556	105/215	B	6	Layer	Poss floor	4.39	4.25
576	576	100/220	B	6	Layer	Clayey sand - makeup?	4.52	
596		105/220	B	6	Fill	Fill of [597]	5.43	5.35
597	597	105/220	B	6	Cut	Linear E/W, nr vertical, concave base	4.44	4.25
631		105/215-220	B	6	Fill	Fill of [632]	4.45	
632	632	105/215-220	B	6	Cut	Beam slot	4.44	4.22
662	662	105/215	B	6	Layer	Mod, sandy silt	4.32	4.26
663	663	105/215	B	6	Layer	Wall collapse?	4.25	4.22
385	385	100-105/220	B	7	Layer	Beaten earth floor?	4.8	4.68

393	393	13	100/220	B	7	Fill	Fill of [426] - chalk wall foundation	5.02	4.68
426	426	13	100-105/220	B	7	Cut	Linear E/W, sloping sides, concave base	4.78	4.44
427	427	13	100-105/220	B	7	Layer	Poss beaten earth floor	4.65	4.58
428		13		B	7		Missing		
429		13		B	7		Missing		
435		13	100-195/220	B	7	Fill	Fill of [426]	4.69	
444	444		100/220	B	7	Layer	Compacted silty clay	4.49	4.41
461			100/220	B	7	Fill	Fill of [462]	4.53	
462	462		100/220	B	7	Cut	Posthole	4.48	4.35
466	466		100-105/220	B	7	Layer	Poss floor	4.65	4.59
468			100/220	B	7	Fill	Fill of [469]	4.52	
469	469		100/220	B	7	Cut	Posthole	4.5	4.32
474			100/220	B	7	Fill	Fill of [475]	4.49	
475	475		100/220	B	7	Cut	Pothole	4.49	4.16
479			105/220	B	7	Fill	Fill of [480]	4.46	
480	480		105/220	B	7	Cut	Posthole	4.47	4.3
481			105/220	B	7	Fill	Fill of [482]	4.39	
482	482		105/220	B	7	Cut	Posthole	4.37	4.23
491			105/220	B	7	Fill	Fill of [492]	4.61	
492	492		100/220	B	7	Cut	Posthole	4.58	4.36
497			105/220	B	7	Fill	Fill of [498]	4.6	
498	498		105/220	B	7	Cut	Posthole	4.59	4.3
515			100/220	B	7	Fill	Fill of [516]	4.55	
516	516		100/220	B	7	Cut	Posthole	4.53	4.32
519	519		105/215	B	7	Layer	Poss hearth	4.43	4.38
520	520		105/215	B	7	Layer	Firm silty sand	4.59	4.51
521	521		100/220	B	7	Layer	Demolition?	4.63	
522			100/220	B	7	Fill	Fill of [523]	4.65	
523	523		100/220	B	7	Cut	Posthole	4.55	4.27
524	524		105/220	B	7	Layer	Firm, silty sand	4.55	
525	525		105/220	B	7	Layer	Firm, silty sand	4.59	4.51
527	527		105/215	B	7	Layer	Loose, sandy silt	4.48	4.37
528	528		100/220	B	7	Layer	Demolition?	4.55	
529			100/220	B	7	Fill	Fill of [530]	4.46	
530	530		100/220	B	7	Cut	Posthole	4.48	4.36
533	533		105-110/215	B	7	Layer	Firm, sandy clay - poss floor	4.47	4.42
534	534		105-110/215	B	7	Layer	Sandy silt	4.52	4.42
535	535		105-110/215	B	7	Layer	Sandy silt	4.44	4.42
536	536		105-110/215	B	7	Layer	Firm/friable, silty clay	4.38	4.22
557	557		105/215-220	B	7	Layer	Wall plaster	4.52	4.42
577	577		105/215	B	7	Layer	Firm, silty sand - makeup	4.33	4.18
580			105/215-220	B	7	Fill	Fill of [581]	4.38	4.28
581	581		105/215-220	B	7	Cut	Beam slot N/S	4.38	4.16
584			105/220	B	7	Fill	Fill of [585]	4.41	
585	585		105/220	B	7	Cut	Poss posthole	4.41	4.32
586			105/215-220	B	7	Fill	Fill of [587]	4.5	4.37

587	587		105/215-220	B	7	Cut	Beam slot N/S	4.5	
588	588		105/215-220	B	7	Layer	Op sig floor	4.56	4.29
594	594		100-105/215-220	B	7	Layer	Op sig floor	4.37	4.32
600	600		105/215	B	7	Layer	Floor makeup	4.37	4.31
608	608		105/215-220	B	7	Layer	Loose, silty sand - makeup?	4.49	4.3
615			100/215	B	7	Fill	Fill of [616]	4.45	
616	616		100/215	B	7	Cut	Sub-circular, sloping sides, flat base - pit	4.35	4.28
648	648		105/215	B	7	Layer	Poss demolition	4.31	4.27
335	335		105/220	B	8	Layer	Beaten earth floor?	4.95	4.9
336			100/220	B	8	Fill	Fill of [337]	5	
337	337		100/220	B	8	Cut	Posthole	5	4.82
346	337		100/220	B	8	Cut	Posthole	4.85	4.63
347			100/220	B	8	Fill	Fill of [346]	4.78	
356	337		100/220	B	8	Cut	Stakehole	4.85	4.63
357			100/220	B	8	Fill	Fill of [356]	4.85	
358	337		100/220	B	8	Cut	Stakehole	4.74	4.55
359			100/220	B	8	Fill	Fill of [358]	4.74	
360	337		100/220	B	8	Cut	Double stakehole	4.74	4.59
361			100/220	B	8	Fill	Fill of [360]	4.74	
362	337		100/220	B	8	Cut	Stakehole	4.74	4.62
363			100/220	B	8	Fill	Fill of [362]	4.74	
381	337		100/220	B	8	Cut	Posthole	4.71	4.44
382			100/220	B	8	Fill	Fill of [381]	4.71	
394		13	105/220	B	8	Fill	Fill of [424]	4.82	4.74
398			105/220	B	8	Fill	Fill of [399]	4.86	
399	412		105/220	B	8	Cut	Posthole	4.86	4.63
402			105/220	B	8	Fill	Fill of [403]	4.9	
403	412		105/220	B	8	Cut	Stakehole	4.9	4.73
404			105/220	B	8	Fill	Fill of [405]	4.83	
405	412		105/220	B	8	Cut	Posthole	4.83	4.64
412	412		105/220	B	8	Layer	Loose, Grey/black, silty sand	4.9	
413			105/220	B	8	Fill	Fill of [414]	4.87	
414	412		105/220	B	8	Cut	Posthole	4.87	4.66
415			110/220	B	8	Fill	Fill of [416]	4.89	
416	412		110/220	B	8	Cut	Posthole	4.89	4.69
424	424	13	100-105/220	B	8	Cut	Linear E/W, sloping sides, concave base	4.85	4.66
425		13	100-105/220	B	8	Layer	Firm, brown/Grey, clayey sandy silt - slumping?	4.66	
446	446		105/220	B	8	Layer	Poss floor	4.69	4.65
448	448		100-105/220	B	8	Layer	Demolition?	4.68	4.65
449			105/215	B	8	Fill	Fill of [450]	4.52	
450	450		105/215	B	8	Cut	Sub-circular, sloping sides, uneven base	4.52	4.17
452	452		100/215	B	8	Layer	Demolition?	4.45	
453	452		100/215	B	8	Layer	Demolition?	4.54	

457	457	105/220	B	8	Layer	Poss floor repair	4.6	4.56
470	470	100-105/215-220	B	8	Layer	Soft, sandy silt	4.68	4.37
486		105/220	B	8	Fill	Fill of [487]	4.47	
487	487	105/220	B	8	Cut	Posthole	4.55	4.19
488	488	105-110/215-220	B	8	Layer	Demolition/levelling ?	4.7	4.47
493	493	105/220	B	8	Cut	Linear, steeply sloping, flat base	4.71	4.47
499		105/220	B	8	Fill	Fill of [493]	4.71	
500		105/220	B	8	Fill	Fill of [501]	4.66	
501	501	105/220	B	8	Cut	Sub-circular, pit	4.69	4.58
503		105/220	B	8	Fill	Fill of [504]	4.6	
504	504	105/220	B	8	Cut	Posthole	4.54	4.3
505		105/220	B	8	Fill	Fill of [506]	4.79	
506	506	105/220	B	8	Cut	Posthole	4.76	4.6
512		105/220	B	8	Fill	Fill of [513]	4.53	
518		105-110/220	B	8	Fill	Fill of [540]	4.9	
540	540	105/220	B	8	Cut	Sub-circular, sloping sides, uneven base sloping to S	4.9	4.66
550	550	100-105/215-220	B	8	Layer	Soft silty sand, freq cbm, mod chalk lumps	4.48	4.41
572	572	105/220	B	8	Layer	Silty sand mod cbm & chalk frags	4.54	
574	574	105/215	B	8	Layer	Sandy silt	4.36	4.3
575	575	105/220	B	8	Layer	Firm silty clay	4.53	4.47
578	578	105/215	B	8	Cut	Linear E/W, steeply sloping, flat base	4.28	3.96
579		105/215	B	8	Fill	Fill of [578]	4.28	4.22
601	601	105/220	B	8	Cut	Linear N/S, vertical sides, flat base	4.4	4.34
602		105/220	B	8	Fill	Fill of [601]	4.4	
672		105/220	B	8	Fill	Fill of [673]	4.66	
673	673	105/220	B	8	Cut	Posthole	4.61	4.51
232		100/220	B	11	Fill	Fill of [233]	4.72	
233	233	100/220	B	11	Cut	Poss posthole	4.73	4.53
245		100/220	B	11	Fill	Fill of [246]	4.68	
246	246	100/220	B	11	Cut	Linear N/S, sloping sides, concave base	4.68	4.39
251	251	105/220	B	11	Cut	Posthole	4.79	4.45
252		105/220	B	11	Fill	Fill of [251]	4.79	
253	255	105/220	B	11	Layer	same as [255]	4.83	
254	255	105/220	B	11	Layer	same as [255]	4.76	
255	255	105-110/215	B	11	Layer	Compacted, mid grey, silty sand	4.76	4.64
274	274	105/215	B	11	Cut	Pit, sub-circular, steeply sloping, flat base	4.55	4.31
275		105/215	B	11	Fill	Fill of [274]	4.55	
283		105/220	B	11	Fill	Fill of [294]	4.94	4.74

294	294	105/220	B	11	Cut	Ovoid, sloping sides, flat base	4.91	4.58
295	295	110/220	B	11	Layer	Mid brown/Grey, silty sand = [253]/[254]/[255]	5.07	4.79
305	305	105/220	B	11	Layer	Mod-loose, orange/Grey, sandy silt - slumping?	4.91	4.72
312	312	105/220	B	11	Layer	Beaten earth floor?	4.84	
313	313	100/220	B	11	Layer	Beaten earth floor?	5.03	4.97
314		105/220	B	11	Fill	Fill of [315]	4.87	
315	315	105/220	B	11	Cut	Poss posthole	4.89	4.55
316	316	105/220	B	11	Layer	Beaten earth floor?	4.81	
325	326	105/220	B	11	Fill	Fill of [327] - post packing	4.7	
326	326	105/220	B	11	Fill	Post pipe	4.62	
327	327	105/220	B	11	Cut	Posthole	4.64	4.43
328	328	100-105/220	B	11	Layer	Firm, brown/black, silty sandy clay	5.03	4.77
338	338	105/220	B	11	Cut	Posthole	4.97	4.48
339		105/220	B	11	Fill	Fill of [338]	4.99	
348		105/220	B	11	Fill	Fill of [349]	4.92	
349	349	105/220	B	11	Cut	Poss posthole	4.91	4.5
377		105/220	B	11	Fill	Fill of [378]	4.69	
378	378	105/220	B	11	Cut	Pit/posthole, sub-circular, steeply sloping, flat base	4.69	4.41
383		105/220	B	11	Fill	Fill of [717]	4.49	
386	386	100-105/215-220	B	11	Layer	Demolition?	4.8	4.63
389	389	105/220	B	11	Layer	Demolition?	4.73	4.66
392	392	105/220	B	11	Fill	Fill of [395]	4.94	
395	395	105/220	B	11	Cut	Sub-circular, vertical, base slopes to S	4.9	4.79
400	400	100-105/220	B	11	Layer	Mod, orange/brown, sandy silt	4.96	4.74
407		105/220	B	11	Fill	Fill of [408]	4.64	
408	408	105/220	B	11	Cut	Poss posthole	4.72	4.39
434		105/220	B	11	Fill	Fill of [441]	4.7	
441	441	105/220	B	11	Cut	Pit, sub-circular, sloping sides, uneven base	4.7	4.43
463		105-110/215	B	11	Fill	Fill of [464]	4.48	
464	464	105-110/215	B	11	Cut	Sub-circular, sloping sides, flat base	4.48	4.31
603	603	100/220	B	11	Cut	Posthole	4.45	4.35
604		100/220	B	11	Fill	Fill of [603]	4.4	
717	717	105/220	B	11	Cut	Posthole	4.49	3.96
188		105/220	B	12	Fill	Fill of [189]	5.04	
189	189	105/220	B	12	Cut	Pit, sub-circular, steeply sloping, concave	5.04	4.57
192		105-110/220	B	12	Fill	Fill of [193]	4.83	
193	193	105-110/220	B	12	Cut	Pit, sub-circular, nr vertical, concave	4.82	4.59

194		105-110/220	B	12	Fill	Primary fill of [193]	4.71	
195		105/220	B	12	Fill	Fill of [204]	5.48	4.95
196		105/215-220	B	12	Fill	Fill of [197]	4.88	4.72
197	197	105/215-220	B	12	Cut	Pit, sub-rect, vertical, flat	4.92	4.5
198		100/220	B	12	Fill	Fill of [199]	5.05	
199	199	100/220	B	12	Cut	Pit, ovoid, sloping, flat	5.01	4.7
200		100/220	B	12	Fill	Fill of [201]	5	
201	201	100/220	B	12	Cut	Sub-circular, sloping, flat base	5	4.74
202	202	105/215	B	12	Layer	Dark brown/Grey, sandy silt	4.67	4.48
203		100-105/220	B	12	Fill	Fill of [205]	5.17	
204	204	105/220	B	12	Cut	Pit, circular, steeply sloping, concave	5.24	4.77
205	205	100-105/220	B	12	Cut	Pit, sub-circular, sloping sides, flat base	5.14	4.86
206		105/215	B	12	Fill	Fill of [207]	4.73	
207	207	105/215	B	12	Cut	Pit, ovoid, nr vertical, flat	4.73	4.5
208	220	100/220	B	12	Cut	Poss posthole	4.86	4.71
209		100/220	B	12	Fill	Fill of [208]	4.86	
210		105/220	B	12	Fill	Fill of [211]	4.99	
211	218	105/220	B	12	Cut	Poss posthole	4.99	4.7
212		105/220	B	12	Fill	Fill of [213]	5.04	
213	213	105/220	B	12	Cut	Pit/posthole, circular, steeply sloping, concave	5.04	4.71
214		105/220	B	12	Fill	Fill of [215]	5.12	
215	215	105/220	B	12	Cut	E/W Linear, sloping sides, rounded base	5.48	4.85
216		105/215	B	12	Fill	Fill of [221]	4.82	
217		105/220	B	12	Fill	Fill of [218]	4.85	
218	218	105/220	B	12	Cut	Poss posthole	4.85	4.63
219		100/220	B	12	Fill	Fill of [220]	4.84	
220	220	100/220	B	12	Cut	Pit/posthole, ovoid, sloping, flat	4.84	4.53
221	221	105/215	B	12	Cut	Posthole	4.82	4.5
222		105/220	B	12	Fill	Fill of [223]	5.27	
223	223	105/220	B	12	Cut	Pit/posthole, circular, steeply sloping, concave	5.16	5.04
224		100/220	B	12	Fill	Fill of [231]	4.74	
225		105/220	B	12	Fill	Fill of [226]	4.89	
226	226	105/220	B	12	Cut	Poss posthole	4.89	4.66
227		105/220	B	12	Fill	Fill of [228]	4.92	
228	228	105/220	B	12	Cut	Posthole	4.92	4.69
229		105/220	B	12	Fill	Fill of [230]	5.14	
230	230	105/220	B	12	Cut	E/W linear, sloping sides, flat base	5.14	4.84
231	231	100/220	B	12	Cut	Pit, sub-oval, sloping sides, concave base	4.75	4.53
234		100-105/215-220	B	12	Fill	Fill of [237] - poss heath	4.8	

235		105/215	B	12	Fill	Fill of [236]	4.53	
236	236	105/215	B	12	Cut	Pit, sub-oval, nr vertical, sloping base	4.53	4.21
237	237	100-105/215-220	B	12	Cut	Poss hearth	4.78	4.69
240		100-105/215-220	B	12	Fill	Fill of [249]	4.86	
243	243	100/220	B	12	Cut	Circular, sloping sides, concave base	4.72	4.37
244		100/220	B	12	Fill	Fill of [243]	4.66	4.5
249	249	100-105/215-220	B	12	Cut	Linear E/W, sloping sides, flat base	4.83	4.57
250	250	100-105/220	B	12	Layer	Compacted, Grey/black, silty clay - slumping?	5.03	4.94
284		105/220	B	12	Fill	Fill of [289]	4.85	
289	289	105/220	B	12	Cut	Elongated E/W, base sloping W to E	4.85	4.07
296		105/220	B	12	Fill	Fill of [319]	5.17	
319	?	105/220	B	12	Cut	Linear E/W	5.17	4.83
180	180	100-110/215-220	B	15	Layer	Dark Grey/brown, clayey sandy silt - horticultural soil?	5.27	5.12
181	181	105/215	B	15	Cut	Pit, sub-circular, sloping sides, flat base	4.74	4.31
182		105/215	B	15	Fill	Fill of [182]	4.74	
183	183	105/210-215	B	15	Cut	Pit, sub-circular, nr vertical, flat	4.76	4.07
184		105/210-215	B	15	Fill	Fill of [183] and [185]	4.76	4.39
185	185	105/210-215	B	15	Cut	Pit, sub-circular, nr vertical, flat	4.76	4.05
186		105/210	B	15	Fill	Fill of [187]	4.44	
187	187	105/210	B	15	Cut	Pit, sub-circular, nr vertical, flat	4.44	3.94
190	190	105/215	B	15	Cut	Pit, rect, steeply sloping, flat base	4.75	4.21
191		105/215	B	15	Fill	Fill of [190]	4.75	
238		100/215	B	15	Fill	Fill of [239]	4.7	
239	239	100/215	B	15	Cut	Sub-rect, sloping sides, flat base	4.7	4.5
513	513	105/220	B	8	Cut	Posthole	4.52	4.21
725	725	105-110/215	B/C	5	Layer	Poss E/W wall	4.04	3.98
863		110/210	C	1	Fill	Fill of [906]	3.54	
906	906	110/210	C	1	Cut	Linear, sloping sides, flat base	3.56	3.3
908	908	110/210	C	1	Layer	Redeposited gravel	3.57	3.31
443	443	110/210	C	3	Layer	Soft, dark Grey/brown, clayey silt	4.07	4.05
447	447	115/205	C	3	Layer	Firm, green/Grey, silt sand	3.92	3.89
642		115/205-210	C	3	Masonry	Same as [711]		
643	643	110/210	C	3	Layer	Levelling	4.01	3.86

682	682	12	110/220	C	3	Layer	Silty sand with freq burnt clay	4.66	4.65
683	683	12	110/220	C	3	Layer	Sandy silt with freq charcoal & burnt daub frags - occupation	4.63	
684	684	12	110/215-220	C	3	Layer	Beaten earth floor?	4.71	4.45
688			110/220	C	3	Fill	Fill of [689]	4.47	
689	689		110/220	C	3	Cut	Stakehole	4.47	4.38
690			110/220	C	3	Fill	Fill of [691]	4.47	
691	691		110/220	C	3	Cut	Stakehole	4.47	4.39
692			110/220	C	3	Fill	Fill of [693]	4.47	
693	689		110/220	C	3	Cut	Stakehole	4.47	4.4
694			110/220	C	3	Fill	Fill of [695]	4.47	
695	689		110/220	C	3	Cut	Stakehole	4.47	4.38
696			110/220	C	3	Fill	Fill of [697]	4.47	
697	689		110/220	C	3	Cut	Stakehole	4.47	4.37
698			110/220	C	3	Fill	Fill of [699]	4.47	
699	689		110/220	C	3	Cut	Stakehole	4.47	4.31
700			110/220	C	3	Fill	Fill of [701]	4.47	
701	689		110/220	C	3	Cut	Stakehole	4.47	4.39
702			110/220	C	3	Fill	Fill of [703]	4.45	
703	689		110/220	C	3	Cut	Stakehole	4.45	4.36
711	711		115/205-210	C	3	Masonry	Cobbled chalk surface	4	3.93
732		14	110-115/205	C	3	Fill	Backfill to [736]	3.62	
733	733		115/205	C	3	Masonry	Arch/roof? Of fire-box	3.84	
734	733	14, 20	110-115/205	C	3	Masonry	N wall of fire-box	3.62	3.33
735	733	14, 20	110-115/205	C	3	Masonry	S wall of fire-box	3.61	3.36
736	736	14	110-115/205	C	3	Masonry	Construction cut for fire-box	3.87	3.14
752	752		110-115/210-215	C	3	Layer	Firm, clayey silt - makeup	4.06	3.8
796	796		115/205	C	3	Layer	Mortar spread	3.87	3.8
807	807		115/210	C	3	Layer	Compacted crushed chalk	3.88	3.85
809	809	14	110-115/205	C	3	Fill	Fill of fire-box	3.34	3.32
810		14	110-115/205	C	3	Fill	Packing behind wall [735]	3.57	3.49
811		14	110-115/205	C	3	Layer	Makeup	3.31	3.27
812	812		110-115/205-210	C	3	Layer	Mortar spread	3.87	3.79
825	825		110-115/205-210	C	3	Layer	Compacted, silty sand with freq gravel & chalk lumps	3.8	3.71
832	832	14, 20	115/205	C	3	Masonry	Base of fire-box	3.29	3.13
859	859		110-115/205-210	C	3	Layer	Compacted crushed chalk	3.75	3.64
860	860		115/210	C	3	Layer	Compacted crushed chalk	3.76	
861	861		110/210	C	3	Layer	Compacted crushed chalk	3.89	
862	862		110/210	C	3	Layer	Firm, sandy silt & gravel	3.73	3.59

923	923		110/215	C	3	Layer	Sandy gravel	3.27	
924			110/210	C	3	Layer	Same as [862]		
925			115/210	C	3	Fill	Fill of [926]	4.84	4.7
926	926		115/210	C	3	Cut	Linear E/W, sloping sides, concave base - ditch	3.8	3.51
993	993	14	115/205	C	3	Fill	Levelling	3.2	
994		14	115/205	C	3	Fill	Fill of cut [995]	3.11	
995	995	14	115/205	C	3	Cut	Rect, nr vertical, flat base	3.11	3.05
420			115/210	C	5	Fill	Fill of [421]	4.12	
421	421		115/210	C	5	Cut	Posthole	4.12	3.86
432			115/205	C	5	Fill	Fill of [433]	4.13	
433	433		115/205	C	5	Cut	Linear E/W, sloping sides, slightly concave base - ditch/gully	4.13	3.82
456	456		115/205-210	C	5	Layer	Poss beaten earth floor	4.18	
489	489		110-115/210 115/205	C	5	Layer	Levelling	4.22	4
559		12	110/220	C	5	Fill	Fill of [560]	4.89	
560	560	12	110/220	C	5	Cut	Sub-circular, sloping sides, flat base	4.78	4.55
561		12	110/220	C	5	Fill	Fill of [562]	4.78	
562	562	12	110/220	C	5	Cut	Linear E/W, nr vertical, flat base - foundation cut?	4.78	4.63
563	563	12	110/220	C	5	Layer	Poss beaten earth floor	4.92	4.63
564			110/220	C	5	Fill	Fill of [565]	4.83	
565	565		110/220	C	5	Cut	Stakehole	4.83	4.74
566			110/220	C	5	Fill	Fill of [567]	4.82	
567	565		110/220	C	5	Cut	Stakehole	4.82	4.79
568			110/220	C	5	Fill	Fill of [569]	4.81	
569	565		110/220	C	5	Cut	Stakehole	4.81	4.74
570			110/220	C	5	Fill	Fill of [571]	4.8	
571	565		110/220	C	5	Cut	Stakehole	4.8	4.76
590			115/205	C	5	Fill	Fill of [591]	3.74	
591	591		115/205	C	5	Cut	Pit, sub-circular, concave base	3.74	3.44
612			120/205	C	5	Fill	Fill of [618]	3.86	
640	640		115/205	C	5	Layer	Dump/demolition	3.61	3.4
644	644		110-115/210 115/215	C	5	Layer	Silty sand & grave - makeup	4.36	3.9
665			110/220	C	5	Fill	Fill of [666]	4.72	
666	666		110/220	C	5	Cut	Stakehole	4.72	4.6
667			110/220	C	5	Fill	Fill of [668]	4.73	
668	666		110/220	C	5	Cut	Stakehole	4.73	4.61
669			110/220	C	5	Fill	Fill of [670]	4.71	
670	670		110/220	C	5	Cut	Stakehole	4.71	4.61
671	671	12	110/220	C	5	Layer	Sandy silty clay	4.69	4.64
676	676		110/220	C	5	Layer	Beaten earth floor?	4.71	4.66
726	726		110/215	C	5	Layer	firm, silty	4.2	4.03

							sand/gravel		
740	740		110-115	C	5	Layer	Dump/demolition	3.92	3.84
929		12	110/220	C	5	Layer	Same as [561]	4.8	
930		12	110/220	C	5	Layer	Sandy silt		
390			115/205	C	6	Fill	Fill of [391]	4.15	
391	391		115/205	C	6	Cut	Pit, irregular, steeply sloping, concave	4.15	3.77
396			110-115/205-210	C	6	Fill	Fill of [397]	4.22	
397	397		110-115/205	C	6	Cut	Pit, sub rect, steeply sloping, flat	4.22	3.29
401	401		110/210	C	6	Layer	Mortar	4.33	4.2
406	406		115/205-210	C	6	Layer	Levelling	4.3	4.03
409			110/210	C	6	Fill	Primary fill of [436]	4.07	
417	417		110/210	C	6	Layer	Loose, green/Grey, clayey silt	4.23	4.14
418			115-110/210	C	6	Fill	Fill of [419]	4.2	
419	419		115-110/210	C	6	Cut	Posthole	4.2	3.77
422			110/210	C	6	Fill	Fill of [423]	4.02	
423	423		110/210	C	6	Cut	Posthole	4.02	3.84
430			115/205	C	6	Fill	Fill of [431]	3.86	
431	431		115/205	C	6	Cut	Poss posthole	3.86	3.64
436	436		110/210	C	6	Cut	Pit, sloping sides, flat base	4.07	3.9
437			110/210	C	6	Fill	Fill of [438]	4.11	
438	438		110/210	C	6	Cut	Poss posthole	4.11	3.9
439			110/210	C	6	Fill	Fill of [440]	4	
440	440		110/210	C	6	Cut	Posthole	4	3.88
445	445		115/205	C	6	Layer	Poss demolition	3.96	3.85
460	460		115/210	C	6	Layer	Poss trample	4.37	4.35
465	465		?	C	6	Layer	Levelling?	4.37	4.27
477	477	12	110/220	C	6	Layer	Sandy silt with high charcoal content	4.97	4.91
483		12	110/220	C	6	Fill	Fill of [484]	4.83	
484	484	12	110/220	C	6	Cut	Sub-rect, nr vertical, flat base	4.83	4.67
485	485	12	110/220	C	6	Layer	Demolition?	5	4.86
538	538	12	110/220	C	6	Layer	Firm, light yellow/Grey, sandy silt - poss surface	4.95	4.82
624	624		110/2115	C	6	Layer	Gravel chalk surface	4.43	4.3
633			110/215	C	6	Fill	Fill of [634]	4.26	
634	634		110/215	C	6	Cut	Pit, sub-rect, sloping, flat base	4.26	4.01
638	638		110/215	C	6	Layer	soft, sandy silt with freq cbm frags - levelling?	4.3	4.21
645				C	6	Layer	Compacted gravel - context sheet missing		
651	651		110/215	C	6	Layer	Sandy gravel - floor makeup?	4.35	4.21
652			110/210-215	C	6	Fill	Fill of [653]	4.15	

653	653		110/210-215	C	6	Cut	Linear E/W, sloping sides, concave base	4.15	4.06
664	664		110/215	C	6	Layer	Silty clay - makeup?	4.36	
677	677		110/215	C	6	Layer	Silty clay - makeup?	4.25	4.17
715			110/215	C	6	Fill	Fill of [716]	4.03	
716	716		110/215	C	6	Cut	Posthole	4.03	3.92
813	813		110/215	C	6	Layer	Silty clay - same as [664]?	4.39	
927		12	110/220	C	6	Layer	Same as [485]	4.93	
928		12	110/220	C	6	Layer	Same as [538]	4.83	
292	292		115/210	C	11	Cut	Poss pit/posthole	4.38	4.11
293			115/210	C	11	Fill	Fill of [292]	4.38	
320			110/215	C	11	Fill	Fill of [321]	4.45	
321	321		110/215	C	11	Cut	Posthole	4.45	4.03
322	322		110/215	C	11	Layer	Loose, dark Grey/brown, sandy silt	4.57	4.53
331			110/215	C	11	Fill	Fill of [332]	4.33	
332	321		110/215	C	11	Cut	Posthole	4.33	4.21
333			110/215	C	11	Fill	Fill of [334]	4.33	
334	321		11/215	C	11	Cut	Posthole	4.33	4.06
345	345			C	11	Layer	Dark orange/brown, sandy silt	4.59	4.46
350			110/215	C	11	Fill	Fill of [351]]	4.51	
351	321		110/215	C	11	Cut	Posthole	4.51	4.08
352			110/215	C	11	Fill	Fill of [353]	4.47	
353	353		110/215	C	11	Cut	Posthole	4.47	4.13
354			110/215	C	11	Fill	Fill of [355]	4.48	
355	321		110/215	C	11	Cut	Posthole	4.48	4.29
364	364	12	110/220	C	11	Layer	Mod, dark green/Grey, sandy silt	5.04	5.02
387			110/215	C	11	Fill	Fill of [388]	4.45	
388	388		110/215	C	11	Cut	Poss posthole	4.45	4.26
442	442		115/210	C	11	Fill	Fill of [451]	4.44	
451	451		115/210	C	11	Cut	Linear E/W, sloping sides, flat base - foundation trench?	4.37	4.23
454			115/210	C	11	Fill	Fill of [455]	4.44	
455	455		115/210	C	11	Cut	Square, nr vertical, flat base	4.44	4.18
507			110/220	C	11	Fill	Fill of [508]	5.09	
508	508		110/220	C	11	Cut	Pit	5.06	4.78
511			110/220	C	11	Fill	Primary fill of [508]	4.96	
514	514		110-115/210-215	C	11	Layer	Levelling	4.58	4.28
517	517		110/220	C	11	Layer	Compacted, orange/yellow, sandy silt	5.06	
537	537	12	110/220	C	11	Layer	Firm, light yellow/Grey, sandy silt with chalk rubble	5.02	4.98
547	547		110/215	C	11	Layer	demolition?	4.55	4.48

554			110-115/210-215	C	11	Fill	Fill of [555]	4.6	
555	555		110-115/210-215	C	11	Cut	Pit, sub-rect, nr vertical, base sloping E-W	4.6	3.2
583	583		110/215	C	11	Layer	Poss beaten earth floor	4.52	4.38
611	611		110/215	C	11	Layer	Poss surface	4.47	4.35
617	617		110/215	C	11	Layer	Trample?	4.48	4.25
621	621		115/215	C	11	Layer	Compacted, silty clay with freq gravel	4.51	4.4
636	636		115/210	C	11	Layer	Demolition/building rubble	4.37	4.32
637	637		115/210	C	11	Layer	Compacted, silty clay with freq gravel - surface?	4.33	
706	706	12	110/220	C	11	Cut	Linear N/S, sloping sides, flat base - foundation trench	4.94	4.86
301			115/205	C	12	Fill	Fill of [302]	4.22	
302	302		110-115/205-210	C	12	Cut	Linear, steeply sloping, flat base - ditch	4.25	3.8
310			115/205	C	12	Fill	Fill of [302]	4.08	
311			115/205	C	12	Fill	Fill of [302]	4.08	
323			110/210	C	12	Fill	Fill of [324]	4.24	
324	324		110/210	C	12	Cut	Linear, steeply sloping, concave - ditch?	4.24	3.79
379			115/210-215	C	12	Fill	Fill of [380]	4.51	
380	380		115/210-215	C	12	Cut	Curvy-linear, concave	4.51	3.95
384	384		110/210	C	12	Layer	Loose, dark/grey, clayey silt	4.25	4.18
476	476	12	110/220	C	12	Layer	Demolition/slumping?	5.06	
467	467		115/205	C	13	Layer	Demolition?	3.88	3.72
502			110/205	C	13	Fill	Fill of [509]	3.46	
509	509		110/205	C	13	Cut	Curvy-linear, steeply sloping, flat base	3.58	3.26
241	241		110/210	C	15	Cut	Pit, sub-circular, sloping sides, flat base	4.31	3.09
242			110/210	C	15	Fill	Fill of [241]	4.31	
247			110/205-210 115/205	C	15	Fill	Fill of [248]	4.13	
248	248		110/205-210 115/205	C	15	Cut	Pit, sub-circular, steeply sloping, flat base	4.23	3.51
257			110/215-220	C	15	Fill	Fill of cess pit [317]	4.53	
258			110/205-210	C	15	Fill	Fill of [259]	4.16	
259	259		110/205-210	C	15	Cut	Sub-circular, sloping sides	4.16	3.8
260	260		110/205-210	C	15	Cut	Rect, sloping sides, flat base	3.83	3.52
261			110/205-210	C	15	Fill	Fill of [260]	3.83	
262			110-115/205	C	15	Fill	Fill of [263]	4.2	

263	263	110-115/205	C	15	Cut	Ovoid, sloping sides, flat base	4.2	3.92
265		110/210	C	15	Fill	Fill of [268]	4.25	
266		115/205	C	15	Fill	Fill of [267]	4.15	
267	267	115/205	C	15	Cut	Poss posthole	4.15	3.8
268	268	110/210	C	15	Cut	Pit, sub-circular, nr vertical, flat base	4.25	3.77
269	269	110/215-220	C	15	Masonry	Brick lining for cess pit [317]	4.4	4.1
270		110/210	C	15	Fill	Fill of [271]	4.19	
271	271	110/210	C	15	Cut	Sub-circular, steeply sloping sides, flat base	4.19	3.65
272		115/205	C	15	Fill	Fill of [273]	4.11	
273	273	115/205	C	15	Cut	Pit, sub-oval, sloping sides, flat base	4.11	3.84
276		110-115/205	C	15	Fill	Fill of [277]	4.15	
277	277	110-115/205	C	15	Cut	Sub-rect, nr vertical, flat base	4.15	3.85
278		110/220	C	15	Fill	Fill of [287]	5.2	
279		110/205-210	C	15	Fill	Fill of [280]	4.24	
280	280	110/205-210	C	15	Cut	Pit, sub-rect, steeply sloping, flat base	4.24	3.66
285		115/210	C	15	Fill	Fill of [286]	4.36	
286	286	115/210	C	15	Cut	Pit, rect, vertical, flat base	4.36	3.85
287	287	110/220	C	15	Cut	Linear E/W, nr vertical, flat base	5.2	4.82
290		115/210	C	15	Fill	Fill of [291]	4.4	
291	291	115/210	C	15	Cut	Poss pit/posthole	4.4	4.21
297	298	115/205	C	15	Fill	Fill of [298]	4.09	
298	298	115/205	C	15	Cut	Unexcavated	4.13	
299		110/220	C	15	Fill	Fill of [300]	4.98	
300	300	110/220	C	15	Cut	Posthole	4.98	
303		110-115/210	C	15	Fill	Fill of [304]	4.37	4.27
304	304	110-115/210	C	15	Cut	Rubbish pit - sub rect, nr vertical, flat base	4.37	3.91
306		110/220	C	15	Fill	Fill of [307]	4.99	
307	300	110/220	C	15	Cut	Posthole	4.99	4.8
308		110/220	C	15	Fill	Fill of [309]	5.01	
309	300	110/220	C	15	Cut	Posthole	5.01	4.81
317	317	110/215-220	C	15	Cut	Construction cut - cess pit	4.53	3.84
318		110/215-220	C	15	Fill	Backfill to [317]	4.53	
329		110/210	C	15	Fill	Fill of [330]	4.3	
330	330	110/210	C	15	Cut	Pit, sub-circular, steeply sloping, flat base	4.3	4.16
340		110/220	C	15	Fill	Fill of [341]	5.09	
341	341	110/220	C	15	Cut	Ovoid, vertical, flat base - well	5.08	4.18
342		110/220	C	15	Fill	Fill of [343]	5.08	

343	342		110/220	C	15	Cut	Sub-circular, vertical, flat base	5.08	4.38
365			110/220	C	15	Timber	Stake	4.99	
366	300		110/220	C	15	Cut	Cut for [365]	4.99	4.78
367			110/220	C	15	Fill	Fill of [368]	5.01	
368	300		110/220	C	15	Cut	Posthole	5.01	4.84
369			110/220	C	15	Fill	Fill of [370]	5.09	
370	300		110/220	C	15	Cut	Posthole	5.09	4.81
371			110/220	C	15	Fill	Fill of [372]	5.03	
372	300		110/220	C	15	Cut	Posthole	5.03	4.88
373			110/220	C	15	Fill	Fill of [374]	5.1	
374	300		110/220	C	15	Cut	Posthole	5.1	
375			110/220	C	15	Fill	Fill of [376]	5.1	
376	300		110/220	C	15	Cut	Posthole	5.1	4.75
471			110/205	C	15	Fill	Fill of [473]	3.49	
472			110/205	C	15	Fill	Fill of [473]	3.08	
473	473		110/205	C	15	Cut	Pit, sub-circular, steeply sloping, flat base	3.5	3
494			110/220	C	15	Fill	Fill of [495]	5.1	
495	495		110/220	C	15	Cut	Posthole	5.11	4.86
719	719		110/215	C	6	Layer	Silty clay	4.12	4.09
1265	1261	22	105/205	D	1	Layer	Redposited natural	3.33	3.16
1266		22	105/205	D	1	Layer	Natural?	3.16	2.8
1270		23	100/205	D	1	Layer	Natural sand & gravel?	3.3	
1276	1060		105/200	D	1	Layer	Redeposited natural	2.93	
1277	1060		100-105/100	D	1	Layer	Redeposited natural	2.58	2.57
1282	1131		105/190	D	1	Layer	Gravel - poss natural	1.96	1.91
1301	1261		105-11/205-210	D	1	Layer	Natural?	3.51	3.47
1304	1304	33	110-115/190	D	1	Layer	Natural sandy gravel	1.89	1.54
1307	1014	29. 30, 38	115/200	D	1	Layer	Natural clay	2.51	2.47
1386		34	100/205	D	1	Layer	Silty clay	3.17	
1387		34	100/205	D	1	Layer	Sandy silt	3.2	
1388		34	100/205	D	1	Layer	Sandy gravel - natural?	2.8	
1300	1300	33	110-115/190	D	2	Layer	Sandy silt	1.97	1.67
1303	1300		110-115/190	D	2	Timber	Timber plank	1.71	1.68
912	920		115/205	D	3	Masonry	Pilae stack	2.89	2.75
913	920		120/205	D	3	Masonry	Flue tile	2.98	2.79
914	920		115/210	D	3	Masonry	Pilae stack	2.98	2.88
915	920		115/210	D	3	Masonry	Pilae stack	2.86	2.8
916	920		115/205	D	3	Masonry	Pilae stack	2.84	2.79
917	920		115/205	D	3	Masonry	Pilae stack	2.92	2.79
918	920		115/205	D	3	Masonry	Pilae stack	2.93	2.75
919	920		115/205	D	3	Masonry	Flint nodules	2.95	2.71
920	849, 920	15, 19, 29, 20	110-120/205	D	3	Masonry	E/W north wall	4.06	3.3
921	920, 1060	16, 17, 38	115/200	D	3	Masonry	E/W wall - internal	3.48	2.43
938	920		120/205	D	3	Masonry	Pilae stack	3.01	2.64
939	920		120/205	D	3	Masonry	Pilae stack	2.88	2.67

940	920		120/200	D	3	Masonry Pilae stack	3.02	2.64
941	920		120/200	D	3	Masonry Pilae stack	2.8	2.67
942	920		115/205	D	3	Masonry Pilae stack	2.71	2.6
943	920		115/205	D	3	Masonry Pilae stack	2.97	2.6
944	920		115/205	D	3	Masonry Pilae stack	2.91	2.61
945	920		115/205	D	3	Masonry Pilae stack	2.87	2.61
946	920	18	115-120/205	D	3	Masonry Apsidal wall	3.83	2.75
947	920, 849	20	110-115/205	D	3	Masonry Refacing of wall [920] abuts [946]	3.62	3.14
948	920		115/200	D	3	Masonry Pilae stack	2.73	2.63
949	920		115/200	D	3	Masonry Pilae stack	2.83	2.63
950	920		120/200	D	3	Masonry Pilae stack	2.92	2.65
951	920		120/200	D	3	Masonry Pilae stack	2.88	2.62
952	920		120/200	D	3	Masonry Pilae stack	2.95	2.63
953	920		120/200	D	3	Masonry Pilae stack	2.89	2.64
954	920		120/200	D	3	Masonry Pilae stack	2.72	2.64
955	920		115/200	D	3	Masonry Pilae stack	2.6	2.5
956	920		115/200	D	3	Masonry Pilae stack	2.61	2.5
957	920		115/200	D	3	Masonry Pilae stack	2.63	2.51
958	920		115/200	D	3	Masonry Pilae stack	2.64	2.51
959	920		115/195	D	3	Masonry Pilae stack	2.67	2.51
960	920		115/195	D	3	Masonry Pilae stack	2.73	2.51
961	920		115/195	D	3	Masonry Pilae stack	2.84	2.48
962	920		115/200	D	3	Masonry Pilae stack	3.03	2.48
963	920		115/200	D	3	Masonry Pilae stack	2.58	2.51
964	920		115/195	D	3	Masonry Pilae stack		
965	920		115/195	D	3	Masonry Pilae stack	2.57	2.51
966	920		115/195	D	3	Masonry Pilae stack	2.56	2.52
967	920		115/195	D	3	Masonry Pilae stack	2.66	2.5
968	920		115/195	D	3	Masonry Pilae stack	2.66	2.5
969	920		115/195	D	3	Masonry Pilae stack	2.67	2.5
972	920		115/195	D	3	Masonry Pilae stack	2.53	2.51
973	920		115/195	D	3	Masonry Pilae stack	2.7	2.51
977	920		115/195	D	3	Masonry Pilae stack	2.67	2.5
978	920		115/195	D	3	Masonry Pilae stack	2.52	2.5
979	920		115/195	D	3	Masonry Pilae stack	2.58	2.5
980	920		115/195	D	3	Masonry Pilae stack	2.51	2.48
981	920		115/195	D	3	Masonry Pilae stack	2.56	2.48
982	920		115/195	D	3	Masonry Pilae stack	2.55	2.5
983	920		115/195	D	3	Masonry Pilae stack	2.61	2.5
986	920		115/195	D	3	Masonry Pilae stack	2.56	2.5
987	920		115/195	D	3	Masonry Pilae stack	2.49	2.4
988	920		115/195	D	3	Masonry Pilae stack	2.46	2.44
989	920		115/195	D	3	Masonry Pilae stack	2.47	2.43
990	920		115/195	D	3	Masonry Pilae stack	2.45	2.43
991	920		115/195	D	3	Masonry Pilae stack	2.47	2.42
992	920		115/195	D	3	Masonry Pilae stack	2.43	2.42
996	920		115/200	D	3	Masonry Pilae stack	2.72	2.67
997	920		115/200	D	3	Masonry Pilae stack	2.73	2.67
998	920	25, 26	115/200-205	D	3	Masonry N/S return to [921]	3.2	
999	920	28	120/200	D	3	Masonry Pilae stack	2.66	2.53

1000	920		120/200	D	3	Masonry	Pilae stack	2.66	2.53
1001	920		115/195	D	3	Masonry	Pilae stack	2.43	2.42
1002	920		115/195	D	3	Masonry	Pilae stack	2.4	2.39
1003	920		115/195	D	3	Masonry	Pilae stack	2.46	2.4
1004	920		115/195	D	3	Masonry	Pilae stack	2.52	2.37
1015	920		115-120/195	D	3	Masonry	Flue	2.76	2.65
1016	920		120/195	D	3	Masonry	Flue	2.72	2.48
1017		26	115/200-205	D	3	Masonry	Same as [998]		
1022	920	24	115/195	D	3	Masonry	N/S wall	2.84	2.31
1034	1034, 920, 1060		110/190-200	D	3	Masonry	N/S wall	2.75	2.4
1039	920		115/195	D	3	Masonry	Pilae stack	2.31	2.29
1044	1044	27	110-115/190	D	3	Masonry	E/W south wall	2.59	2.47
1082	920		110/190	D	3	Layer	Beaten earth surface	2.28	2.24
1092	920	28	110-120/190-195	D	3	Layer	Sub-floor	2.52	
1095	920		110-115/190	D	3	Layer	Silty clay	2.62	1.85
1115	1060		110/200	D	3	Masonry	N/S wall abutting [921]	2.57	2.31
1119	1131		105/195	D	3	Masonry	Pilae stack	2.67	2.58
1120	1131		105/195	D	3	Masonry	Pilae stack	2.92	2.59
1122	1131		105/195	D	3	Masonry	Pilae stack	2.59	2.56
1123	1131		105/195	D	3	Masonry	Pilae stack	2.67	2.58
1124	1131		105/195	D	3	Masonry	Pilae stack	2.7	2.57
1125	1131		105/195	D	3	Masonry	Pilae stack	2.85	2.58
1126	1131		105/195	D	3	Masonry	Pilae stack	2.71	2.58
1127	1131		105/195	D	3	Masonry	Pilae stack	2.77	2.56
1128	1131		105/195	D	3	Masonry	Pilae stack	2.63	2.56
1129	1131		105/195	D	3	Masonry	Pilae stack	2.61	2.55
1130	1131		105/195	D	3	Masonry	Pilae stack	2.64	2.54
1131	1131, 1134		105-100/195	D	3	Masonry	N/S wall with E/W returns	2.54	1.89
1133	1134		100/195	D	3	Masonry	Pilae stack	2.69	2.48
1134	1134		100/195	D	3	Masonry	Pilae stack	2.59	2.48
1172	1060		110/200	D	3	Masonry	Pilae stack	2.85	2.8
1173	1060		110/200	D	3	Masonry	Pilae stack	2.91	2.8
1174	1060		110/200	D	3	Masonry	Pilae stack	2.85	2.77
1175	1060		110/200	D	3	Masonry	Pilae stack	2.85	2.78
1176	1060		110/200	D	3	Masonry	Pilae stack	2.91	2.78
1177	1060		110/200	D	3	Masonry	Pilae stack	3.04	2.79
1178	1060		110/200	D	3	Masonry	Pilae stack	3	2.78
1179	1060		110/200	D	3	Masonry	Pilae stack	2.99	2.78
1180	1060		110/200	D	3	Masonry	Pilae stack	2.83	2.81
1185	1060		110/200	D	3	Masonry	N/S internal wall	2.71	2.7
1186	1060		110/200	D	3	Masonry	N wall of flue	2.98	2.83
1187	1060		110/200	D	3	Masonry	S wall of flue	3.05	2.88
1188	1060		110/200	D	3	Masonry	Tile floor	2.71	
1189	1060		110/200	D	3	Masonry	Mortar base of flue	2.82	2.72
1190	1134		100/195	D	3	Masonry	Floor tile	2.63	2.47
1191	1134		100/195	D	3	Masonry	Pilae stack	2.65	2.55

1194	1194		110/190	D	3	Masonry	Chalk raft or footings for [1034]	2.07	2.03
1195	1131	40	100-105/195-200	D	3	Layer	Sub-floor	2.64	2.55
1212	1060		105/200	D	3	Masonry	Pilae stack	2.75	2.57
1213	1060		105/200	D	3	Masonry	Pilae stack	2.68	2.59
1214	1060		105/200	D	3	Masonry	Pilae stack	2.79	2.6
1215	1060		105/200	D	3	Masonry	Pilae stack	2.82	2.63
1216	1060		105/200	D	3	Masonry	Pilae stack	2.9	2.61
1217	1060		105/200	D	3	Masonry	Pilae stack	2.76	2.62
1218	1060		105/200	D	3	Masonry	Pilae stack	2.7	2.61
1219	1060		105/200	D	3	Masonry	Pilae stack	2.74	2.58
1220	1060		105/200	D	3	Masonry	Pilae stack	3.02	2.64
1221	1060		105/200	D	3	Masonry	Pilae stack	2.83	2.53
1222	1060		105/200	D	3	Masonry	Pilae stack	3.01	2.6
1223	1060		105/200	D	3	Masonry	Pilae stack	2.75	2.59
1224	1060		100/200	D	3	Masonry	Pilae stack	2.96	2.6
1225	1060		100/200	D	3	Masonry	Pilae stack	2.87	2.5
1226	1060		100/200	D	3	Masonry	Pilae stack	2.9	2.6
1227	1060		100/200	D	3	Masonry	Pilae stack	2.98	2.6
1228	1060		100/200	D	3	Masonry	Pilae stack	2.83	2.62
1230		28	120/195	D	3	Masonry	Pilae stack	2.68	
1233	920		110/190	D	3	Layer	Beaten earth surface	2.28	2.24
1256		28	120/200-205	D	3	Masonry	Foundation for [1257], [1258], [1259], [1260]	2.7	
1257		28	120/205	D	3	Masonry	Floor support & flue	3.36	2.78
1258		28	120/205	D	3	Masonry	Floor support & flue	3.26	2.78
1259		28	120/200	D	3	Masonry	Floor support & flue	2.95	2.81
1260		28	120/200	D	3	Masonry	Floor support & flue	3.06	2.76
1280	1131		105/190	D	3	Timber	Post - excavated	2.1	1.22
1281	1131		105/190	D	3	Timber	Post - excavated	2.11	1.15
1287	1060		110/200-205	D	3	Layer	Sub-floor	2.87	2.76
1291	1291		110/195	D	3	Masonry	E/W wall foundation	2.36	2.32
1292	1131		105/190	D	3	Timber	Post/pile	2.13	
1297			110/195	D	3	Fill	Fill of [1298]	2.61	
1298	1298		110/195	D	3	Cut	Rectangular cut	2.61	2.28
1299	1299	32, 33	110-115/190	D	3	Layer	Silty sand	2.78	1.87
1305	1305	33, 35	110-115/190	D	3	Masonry	Foundation for [1044]	2.08	1.48
1306	1306	33	110-115/190	D	3	Cut	Construction cut for [1305]	1.99	1.15
1308	1014, 920	30	115/200	D	3	Layer	Sub-floor	2.67	2.59
1354	1060		100-110/200	D	3	Cut	Construction cut for [1131], [1115], [921]	2.64	2.03
1362	1087		105/190	D	3	Timber	Post	1.9	
1363	1087		105/190	D	3	Timber	Post	1.92	
1364	1087		105/190	D	3	Timber	Post	2.03	
1369		33	110-115/190	D	3	Fill	Backfill to cut [1306]	2.08	
1381	1087		105/190	D	3	Timber	Post	1.89	
1382	1087		105/190	D	3	Timber	Post	2.02	

1383	1087		105/190	D	3	Timber	Post	2.04	
1384	1087		105/190	D	3	Timber	Post	2.04	
1401		38	115/200	D	3	Cut	Construction cut for wall [921]	2.48	1.79
1404	920		115/195	D	3	Masonry	Foundation for [998] sealed by [1253]	2.74	
1405				D	3	Masonry	Flue - box flue tiles		
1406				D	3	Masonry	Flue - box flue tiles		
1407				D	3	Masonry	Flue - box flue tiles		
1408				D	3	Masonry	Main flue wall [920]		
1409				D	3	Masonry	Flue through wall [921]		
613			115-120/205	D	10.1	Fill	Fill of [618]	3.83	
618	618		115-120-/205	D	10.1	Cut	Curvy-linear, nr vertical, flat base - drainage	3.98	3.31
1068	1034		110/295	D	10.1	Masonry	Tile floor	2.68	2.63
1069	1034		110/195	D	10.1	Masonry	Tile floor	2.7	2.65
1070	1034, 1131		105-110/195	D	10.1	Masonry	Tile floor	2.63	2.61
1071	1034		110/195	D	10.1	Layer	Bedding layer for floor [1069]	2.68	2.59
1072	1034, 1131		105-110/195	D	10.1	Layer	Bedding layer for floor [1070]	2.6	2.58
1090	920		110/195	D	10.1	Masonry	Tile floor	2.7	2.66
1098	1034		110/195	D	10.1	Layer	Bedding layer for floor [1090]	2.7	2.64
1209	1034, 1131		105-110/195	D	10.1	Layer	Bedding layer	2.62	2.55
1279	1034		110/195	D	10.1	Cut	Post impression	2.68	2.64
1288	1034		110/195	D	10.1	Masonry	Tile floor	2.65	2.58
1295	1261	41	105-110/205	D	10.1	Masonry	E/W wall foundation	3.32	2.96
641	641		115/205	D	10.2	Masonry	Roof of fire-box	3.78	
727			115/205	D	10.2	Fill	Backfill to [730]	3.81	
728	641		115/205	D	10.2	Masonry	Rebuild of fire-box	3.67	
729	641		115/205	D	10.2	Masonry	Rebuild of fire-box	3.75	
730	730		115/205	D	10.2	Cut	Construction cut for rebuild of fire-box	3.81	3.57
731	731		115/205	D	10.2	Cut	Construction cut for rebuild of fire-box	3.63	3.58
782	782		115/205	D	10.2	Fill	Fill of [736]	3.35	3.31
931	920		115/205	D	10.2	Masonry	Pilae stack	3.06	2.67
932	920		115/205	D	10.2	Masonry	Pilae stack	3.02	2.64
933	920		115/205	D	10.2	Masonry	Pilae stack	3.05	2.67
934	920		115/205	D	10.2	Masonry	Pilae stack	2.87	2.64
935	920		115/205	D	10.2	Masonry	Pilae stack	3.08	2.64
936	920		115/200	D	10.2	Masonry	Pilae stack	2.86	2.59
937	920		115/200	D	10.2	Masonry	Pilae stack	2.79	2.61
970	920	26	115/195	D	10.2	Masonry	Pilae stack	2.76	2.53
971	920		115/195	D	10.2	Masonry	Pilae stack	2.83	2.53
974	920		115/195	D	10.2	Masonry	Pilae stack	2.73	2.56
975	920		115/195	D	10.2	Masonry	Pilae stack	2.7	2.56

976	920		115/195	D	10.2	Masonry	Pilae stack	2.72	2.48
984	920		115/195	D	10.2	Masonry	Pilae stack	2.81	2.5
985	920		115/195	D	10.2	Masonry	Pilae stack	2.65	2.5
1005	920		115/195	D	10.2	Masonry	Pilae stack	2.78	2.55
1006	920		115/195	D	10.2	Masonry	Pilae stack	2.79	2.57
1007	920		115/195	D	10.2	Masonry	Pilae stack	2.64	2.57
1008	920		115/195	D	10.2	Masonry	Pilae stack	2.69	2.57
1009	920		115/195	D	10.2	Masonry	Pilae stack	2.66	2.53
1010	920	21, 29	115/200	D	10.2	Masonry	Part of [1014]	2.99	2.61
1011	920	21, 29	115/200	D	10.2	Masonry	Part of [1014]	3.08	2.59
1012	920	21	115/200	D	10.2	Masonry	Part of [1014]	3.15	2.71
1013	920	21	115/200	D	10.2	Masonry	Part of [1014]	3.25	2.61
1014	920	21, 29	115/200	D	10.2	Masonry	N/S internal wall - tile lacing course	2.76	2.59
1035	1034		110/190-200	D	10.2	Masonry	Refacing of the E-face of [1034]	2.68	2.57
1036	1036		110-115/195	D	10.2	Masonry	Wall foundation floor [1034] & [1022]?	2.34	2.18
1037	920		115/195	D	10.2	Masonry	Pilae stack	2.47	2.28
1038	920		115/195	D	10.2	Masonry	Pilae stack	2.45	2.3
1040	920		115/195	D	10.2	Masonry	Pilae stack	2.38	2.28
1041	920		115/195	D	10.2	Masonry	Pilae stack	2.52	2.28
1042	920		115/195	D	10.2	Masonry	Pilae stack	2.59	2.3
1043	920		110/190	D	10.2	Masonry	Box flue tiles	2.74	2.35
1045	920		110-115/190	D	10.2	Masonry	Floor	2.89	2.62
1046	920		115/190	D	10.2	Masonry	Collapsed floor	2.58	2.52
1047	920		115/190	D	10.2	Masonry	Pilae stack	2.48	2.34
1048	920		115/190	D	10.2	Masonry	Pilae stack	2.41	2.36
1049	920		115/190	D	10.2	Masonry	Pilae stack	2.62	2.36
1050	920		115/190	D	10.2	Masonry	Fallen pilae tiles	2.52	2.37
1051	920		115/190	D	10.2	Masonry	Pilae stack	2.53	2.37
1052	920		115/190	D	10.2	Masonry	Pilae stack	2.41	2.37
1053	920		115/190	D	10.2	Masonry	Pilae stack	2.62	2.3
1054	920		115/190	D	10.2	Masonry	Pilae stack	2.66	2.35
1055	920		115/190	D	10.2	Masonry	Pilae stack - assoc with firebox?	2.73	2.38
1056	920		115/190	D	10.2	Masonry	Pilae stack - assoc with firebox?	2.51	2.36
1057	920		115/190	D	10.2	Masonry	Pilae stack	2.45	2.33
1058	920		115/190	D	10.2	Masonry	Wall - firebox/flue?	2.64	2.62
1061	1061		115/190	D	10.2	Masonry	Wall - firebox/flue?	2.76	2.66
1062	1061		115/190	D	10.2	Masonry	Base - firebox/flue?	2.51	2.5
1063	1061		115/190	D	10.2	Masonry	Wall - firebox/flue?	2.73	2.53
1064	1061		115/190	D	10.2	Masonry	Base - firebox/flue?	2.39	2.38
1066	920		115/195	D	10.2	Masonry	Pilae stack	2.37	
1073	920, 1131		105-110/190	D	10.2	Masonry	E/W wall	2.44	2.31
1074	920		110/190	D	10.2	Masonry	N/S return to [1073]	2.48	2.46
1075	1131		105/195	D	10.2	Masonry	Pilae stack	2.66	2.52
1076	1131		105/195	D	10.2	Masonry	Pilae stack	2.7	2.55
1077	1131		105/195	D	10.2	Masonry	Pilae stack	2.71	2.56
1078	1131		105/195	D	10.2	Masonry	Pilae stack	2.58	2.53

1091	1034	110/190	D	10.2	Masonry	N/S wall - internal	2.9	2.74
1099	1060	110/200	D	10.2	Masonry	Pilae stack	2.83	2.6
1100	1060	110/200	D	10.2	Masonry	Pilae stack	2.8	2.62
1101	1060	110/200	D	10.2	Masonry	Pilae stack	2.78	2.62
1102	1060	110/200	D	10.2	Masonry	Pilae stack	2.71	2.63
1103	1060	110/200	D	10.2	Masonry	Pilae stack	2.74	2.63
1104	1060	110/200	D	10.2	Masonry	Pilae stack	2.71	2.59
1105	1060	110/200	D	10.2	Masonry	Pilae stack	2.86	2.59
1106	1060	110/200	D	10.2	Masonry	Pilae stack	2.73	2.64
1107	1060	110/200	D	10.2	Masonry	Pilae stack	2.72	2.64
1108	1060	110/200	D	10.2	Masonry	Pilae stack	2.75	2.63
1109	1060	110/200	D	10.2	Masonry	Pilae stack	2.82	2.64
1110	1060	110/200	D	10.2	Masonry	Pilae stack	2.78	2.62
1111	1060	110/200	D	10.2	Masonry	Pilae stack	2.63	2.51
1112	1060	110/200	D	10.2	Masonry	Pilae stack	2.7	2.48
1113	1060	110/200	D	10.2	Masonry	Pilae stack	2.7	2.48
1114	1034	110/195	D	10.2	Masonry	Foundation pad?	2.99	2.59
1116	1131	105/195	D	10.2	Masonry	Pilae stack	2.6	2.54
1117	1131	105/195	D	10.2	Masonry	Pilae stack	2.71	2.59
1118	1131	105/195	D	10.2	Masonry	Pilae stack	2.7	2.57
1132	1131	105/195	D	10.2	Masonry	Flue tile		
1143	1034	110/195	D	10.2	Masonry	Pilae stack	2.83	2.62
1144	1034	110/195	D	10.2	Masonry	Pilae stack	2.79	2.62
1145	1034	110/195	D	10.2	Masonry	Pilae stack	2.79	2.62
1146	1034	110/195	D	10.2	Masonry	Pilae stack	2.8	2.58
1147	1034	110/195	D	10.2	Masonry	Pilae stack	2.96	2.61
1148	1034	110/195	D	10.2	Masonry	Pilae stack	2.85	2.59
1149	1034	110/195	D	10.2	Masonry	Pilae stack	2.75	2.55
1150	1034	110/195	D	10.2	Masonry	Pilae stack	2.93	2.6
1151	1034	110/195	D	10.2	Masonry	Pilae stack	2.75	2.59
1152	1034	110/195	D	10.2	Masonry	Pilae stack	2.76	2.59
1153	1034	110/195	D	10.2	Masonry	Pilae stack	2.77	2.59
1154	1034	110/195	D	10.2	Masonry	Pilae stack	2.85	2.56
1155	1034	110/195	D	10.2	Masonry	Pilae stack	2.61	2.56
1156	1034	110/195	D	10.2	Masonry	Pilae stack	2.64	2.58
1157	1034	110/195	D	10.2	Masonry	Pilae stack	2.62	2.58
1158	1034	110/195	D	10.2	Masonry	Pilae stack	2.95	2.53
1159	1034	110/195	D	10.2	Masonry	Pilae stack	2.59	2.53
1160	1034	110/195	D	10.2	Masonry	Pilae stack	2.63	2.51
1161	1034	110/195	D	10.2	Masonry	Pilae stack	2.77	2.59
1162	1034	110/195	D	10.2	Masonry	Pilae stack	2.68	2.59
1163	1034	110/195	D	10.2	Masonry	Pilae stack	2.62	2.59
1164	1034	110/195	D	10.2	Masonry	Pilae stack	3	2.6
1165	1034	110/195	D	10.2	Masonry	Stone pillar base - reused as a stack	2.85	2.59
1181	1034	110/195	D	10.2	Masonry	Pilae stack	2.75	2.61
1182	1034	110/195	D	10.2	Masonry	Pilae stack	2.73	2.61
1183	1034	110/195	D	10.2	Masonry	Pilae stack	2.62	2.57
1184	1034	110/195	D	10.2	Masonry	Pilae stack	2.65	2.58
1192	920	110/190	D	10.2	Layer	Mortar spread	2.32	2.26
1193	1131, 920	105-110/190	D	10.2	Layer	Mortar/chalk spread	2.4	2.3

1196	1060		110/200	D	10.2	Masonry	Pilae stack	2.65	2.42
1197	1060		110/200	D	10.2	Masonry	Pilae stack	2.75	2.5
1198	1060		110/200	D	10.2	Masonry	Pilae stack	2.63	2.42
1200	1060		105/200	D	10.2	Masonry	Pilae stack	2.85	2.59
1201	1060		105/200	D	10.2	Masonry	Pilae stack	2.75	2.54
1202	1060		105/200	D	10.2	Masonry	Pilae stack	2.66	2.55
1203	1034		110/195	D	10.2	Masonry	Pilae stack	3.01	2.61
1204	1034		110/195	D	10.2	Masonry	Pilae stack	2.99	2.58
1205	1034		110/195	D	10.2	Masonry	Pilae stack	2.83	2.58
1206	1034		110/195	D	10.2	Masonry	Pilae stack and floor tile	2.95	2.61
1210	1060		105/200	D	10.2	Masonry	Pilae stack	2.77	2.54
1211	1060		105/200	D	10.2	Masonry	Pilae stack	2.76	2.57
1253	920	28	120/195	D	10.2	Layer	Sub-floor	2.57	2.48
1255	920		110/190	D	10.2	Layer	Mortar spread	2.31	2.29
1278	1034, 1131		105-110/195	D	10.2	Layer	Sub-floor	2.62	2.51
1289		29, 30	115/200	D	10.2	Masonry	Foundation for [1014]	2.71	
1290		29, 30, 38	115/200	D	10.2	Cut	Construction cut for wall [1014]	2.51	1.79
573	Sketch		115/205	D	10.3	Layer	Black, sandy silt	3.64	
761		28	110/195 115/195-200	D	10.3	Layer	Clayey silt		
765				D	10.3		Same as [761]		
808	Sketch		100-110/195-200	D	10.3	Layer	Silt washed in to hypocaust system		
1019	Sketch		110/190	D	10.3	Layer	Same as [808]	2.77	2.66
1286			110/200	D	10.3	Layer	Same as [808]		
849	849		110/205	D	11	Masonry	Pilae stack	3.02	2.86
850	849		110/205	D	11	Masonry	Pilae stack	2.99	2.83
851	849		110/205	D	11	Masonry	Pilae stack	2.95	2.81
852	849		110/205	D	11	Masonry	Pilae stack	2.89	2.86
853	849		110/205	D	11	Masonry	Pilae stack	3.05	2.86
854	849		110/205	D	11	Masonry	Pilae stack	2.96	2.91
855	849		110/205	D	11	Masonry	Pilae stack	2.96	2.88
856	849		110/205	D	11	Layer	Sub-floor	2.91	2.81
867	849	15	110/205	D	11	Masonry	Base of flue	2.93	
904	849	39	110/205	D	11	Fill	Backfill to [905]	3.47	3.45
905	849	39	110/205	D	11	Cut	Construction cut for [1251]	3.47	2.81
1079	1131, 1085	33	105/190	D	11	Cut	Construction cut for drain [1085]	2.04	1.95
1080	920, 1087, 1131		110/190	D	11	Cut	Construction cut for drain [1087]	2.24	1.82
1081	920		110/190	D	11	Masonry	Tile floor	2.33	
1083			110/190	D	11	Fill	Backfill to [1079]		
1084	920		110/190	D	11	Fill	Backfill to [1080]	2.27	2.25
1085	1131, 1085		105/190	D	11	Timber	Drain		
1086	1131		105/190	D	11	Timber	Base for drain	2.09	2.03

	1085								
1087	1087		105/190	D	11	Timber	Timber drain	2.01	1.64
1088			105/190	D	11	Fill	Backfill to cut [1079]	2.2	
1089	1087		105/190	D	11	Fill	Backfill to cut [1080]	2.27	
1093			110-115/190	D	11	Fill	Fill of drain [1094]	2.09	2.07
1094	920	32, 33	110-115/190	D	11	Timber	Drain	2.12	2.03
1135			110/190	D	11	Fill	Silting of drain [1137]		
1136	920		110/190	D	11	Timber	Drain cover to [1137]		
1137	920		110/190	D	11	Timber	Drain	2.08	
1138			110/190	D	11	Fill	Packing around drain [1136]	2.08	
1139	920		110/190	D	11	Cut	Construction cut for drain [1137]	2.48	
1140	920		110/190	D	11	Cut	Construction cut for [1074]	2.28	
1141	920		110/190	D	11	Fill	Backfill to cut [1140]	2.28	
1142			110/190	D	11	Fill	Backfill to [1137]		
1166	920		110/190	D	11	Cut	Construction cut for [1073]	2.28	
1167			110/190	D	11	Fill	Backfill to cut [1166]	2.28	
1168			105/190	D	11	Fill	Silting of drain [1085]		
1229	920		110-115/190	D	11	Timber	Drain cover		
1231	920		110/190	D	11	Cut	N/S ditch	2.28	
1232	920		110/190	D	11	Fill	Fill of [1231]	2.28	
1251	849	39	110/205	D	11	Masonry	Wall abuts [920] to the S	3.51	2.81
1261	1261	22	105/205-210	D	11	Fill	Clay lining same as [904]	3.57	3.55
1263	1263	22	105/205	D	11	Layer	Dump	3.43	3.33
1264		22	105/205	D	11	Layer/fill	Fill of [1372]	3.29	
1273			110/190	D	11	Layer	Mortar bedding layer for [1081]		
1283	920		110/190	D	11	Timber	Drain - part of [1094]	2.03	
1284	920		115/190	D	11	Timber	Drain - part of [1094]	2.12	
1355	1087		105/190	D	11	Timber	Post	2.08	
1356	1087		105/190	D	11	Timber	Post	2.09	
1357	1087		105/190	D	11	Timber	Post	2.01	
1358	1087		105/190	D	11	Timber	Post - no context sheet	1.98	
1359	1087		105/190	D	11	Timber	Post - no context sheet	1.98	
1360	1087		105/190	D	11	Timber	Post	1.84	
1361	1087		105/190	D	11	Timber	Post	1.94	
1365	1087		105/190	D	11	Fill	Fill of drain [1087]	2.01	
1368	1368		105/190	D	11	Timber	Poss drain	2.01	1.95
1372	1372	22	105/205	D	11	Cut	Construction cut for [1261]	3.25	2.95
1385	1087		105/190	D	11	Timber	Box drain	2.01	1.64
1402			110/190	D	11	Fill	Fill of [1403]	2.31	

1403	920		110/190	D	11	Cut	Same as [1166]	2.31	2.08
1410		19, 15		D	11	Masonry	Blocking of flue [1408]		
595	Sketch		115-120/200-205	D	13	Layer	Demolition debris	3.77	3.74
607	607	28	110/200 115-120/200-205	D	13	Layer	Demolition debris	3.29	3.06
646				D	13		Same as [607]		
647				D	13		Same as [607]		
795	Sketch		110/205	D	13	Fill/layer	Demolition debris	3.56	3.28
801	Sketch		110/200-205	D	13	Layer	Demolition debris	3.12	3.05
902	Sketch		110/205	D	13	Fill/layer	Demolition debris	3.12	3.07
1018	sketch		110/190	D	13	Layer	Same as [765]	2.99	2.78
1020	sketch		115/190	D	13	Layer	Loose, silty clay	2.73	2.7
1021	sketch		115/190	D	13	Layer	Black, silty clay	2.46	2.36
1029			110/190	D	13	Fill	Silty clay fill of [1030]	2.52	2.43
1030	920		110/190	D	13	Cut	Sub-rectangular - poss robbing	2.32	2.24
1031	1031		105/190-195	D	13	Layer	Demolition	2.58	2.47
1032	1031		105/190	D	13	Layer	Demolition	2.63	
1033	1033		100-110/190-195	D	13	Layer	Dump layer of gravelly sandy silt	2.67	2.52
1059			100-110/200	D	13	Fill	Fill of [1060]	2.78	
1060	1060		100-110/200	D	13	Cut	Robber trench	2.78	2.03
1065	1065		115/190	D	13	Layer	Sandy silt with chalk lumps & cbm frags	2.57	2.36
1067	1067		110/190	D	13	Layer	Mortar spread	2.36	2.3
1096	920		115/190	D	13	Fill	Fill of [1097]	2.15	
1097	920		115/190	D	13	Cut	Unex. Pit	2.15	
1121	1131		105/195	D	13	Masonry	Floor tile	2.66	2.56
1169			110/190	D	13	Fill	Fill of [1170]	2.32	
1170	1131, 920		105-110/190	D	13	Cut	Robber cut?	2.32	2.11
1171	1060		110/200	D	13	Masonry	Floor - collapsed	3.1	3.06
1199	1060		110/200	D	13	Masonry	Collapsed floor	2.98	2.9
1207	1034		110/195	D	13	Masonry	Collapsed floor	2.98	2.59
1208	1034		105-110/195	D	13	Masonry	Collapsed floor	2.79	2.59
1250		28	120/195	D	13	Layer	Sandy silt	3.44	
1252		28	115/195	D	13	Layer	Roman demolition	2.85	
1254		28	120/200-205	D	13	Layer	Demolition	3.36	3.18
1262		22	105/205	D	13	Fill	Backfill to [1274]	3.55	3.43
1271		23	105/205	D	13	Fill	Fill of [1272]	3.18	
1272		23	105/205	D	13	Cut	Robber trench robbing wall [1295]	3.18	2.63
1274	1261, 1274	22	105/205	D	13	Cut	Robber trench robbing wall [1251]	3.55	2.97
1275	1034		110/195	D	13	Masonry	Collapsed floor	2.88	2.58
1366			100-105/190-195	D	13	Fill	Fill of [1367]	2.56	2.4

1367	1131		100-105/190-195	D	13	Cut	Robber trench	2.71	2.24
1371			105/205	D	13	Fill	Primary fill of [1274]		
1390		37	105/190	D	13	Layer	Silty sand = [1033]	2.52	2.22
1391		37	105/190	D	13	Layer	Silty sand = [1033]	2.34	2.03
1392		37	105/190	D	13	Layer	Sandy silty clay	2.23	1.9
1393		37	105/190	D	13	Layer	Silty sand	2.11	1.9
1394		37	105/190	D	13	Layer	Sandy silty clay	2.1	1.96
1395		37	105/190	D	13	Layer	Demolition	2.29	2.14
1396		37	105/190	D	13	Layer	Silty clay	2.16	1.97
1397		37	105/190	D	13	Layer	Silty sand	1.99	
1238		28	120/195-200	D	14	Layer	Sandy silt	4.03	3.86
1239		28	120/195-200	D	14	Layer	Clayey silt	3.96	3.36
1245		28	115/185	D	14	Layer	Sandy silt	3.44	
1246		28	115/185	D	14	Layer	Sandy silt	2.96	
1247		28	120/190	D	14	Layer	Silty clay - PM marsh?	3.51	
1248		28	115/190	D	14	Layer	Demolition	2.43	
1249		28	115/190-195	D	14	Layer	Sandy silt	3.43	3.17
458			110/205	D	15	Fill	Fill of [459]	3.74	
459	459		110/205	D	15	Cut	Rect, vertical, flat base	3.74	3.42
817			110/200-205	D	15	Fill	Fill of [818]		
818	818		110/200-205	D	15	Cut	Well cut		
1023			100-105/195	D	15	Fill	Fill of [1024]	2.55	
1024	1024		100-105/195	D	15	Cut	Rectangular pit	2.55	2.24
1025			100/195	D	15	Fill	Fill of [1028]	2.54	
1026	1026		100/195	D	15	Timber	Wattle lining to [1028]	2.54	2.34
1027			100/195	D	15	Fill	Backfill to [1028]	2.57	
1028	1028		100/195	D	15	Cut	Probable well	2.57	2.35
1234		28	120/195-200	D	15	Fill	Fill of [1235]	3.96	
1235		28	120/195-200	D	15	Cut	Poss pit	3.96	3.51
1236		28	120/195	D	15	Fill	Fill of [1237]	3.88	
1237		28	120/195	D	15	Cut	Poss pit	3.88	3.57
1240		28	120/190	D	15	Masonry	Concrete intrusion	3.56	
1241		28	115/190	D	15	Fill	Fill of [1242]	3.51	
1242		28	115/190	D	15	Cut	Poss pit	3.51	2.75
1243		28	120/190	D	15	Masonry	Post-med wall	3.56	2.15
1244		28	115/185	D	15	Layer	Sand with chalk lumps and broken brick	3.56	
1267		23, 34	100/205	D	15	Layer	Dump	3.48	3.25
1268		23, 34	100/205	D	15	Layer	Dump	3.53	3.08
1269		23, 34	100/205	D	15	Fill	Fill of [1285]	3.3	
1285		23, 34	100/105	D	15	Cut	Construction cut for [1389]	3.29	3.01
1296	1261		105/205-210	D	15	Fill	Fill of [1302] - unex	3.48	
1302	1261		105/205-210	D	15	Cut	Sub-circular	3.48	
1309		31	115/185	D	15	Layer	Silty sand	3.63	
1310		31	110-115/185	D	15	Layer	Silty sandy gravel	3.38	
1311		31	115/185	D	15	Fill	Fill of [1312]	2.92	
1312		31	115/185	D	15	Cut	Poss pit	2.92	2.51
1313		31	110-115/185	D	15	Layer	Silty sand	3.16	

1314	31	105-115/185	D	15	Layer	Silty sandy clay	3.14	
1315	31	115/185	D	15	Layer	Silty sand	3.62	
1316	31	115/185	D	15	Layer	Silty sand with crushed mortar	3.64	
1317	31	115/185	D	15	Layer	Silty sand with freq cbm, mortar	3.59	
1318	31	110-115/185	D	15	Fill	Fill of [1373]	3.61	
1319	31	110/185	D	15	Layer	Silty sand	3.58	
1320	31	110/185	D	15	Layer	Silty sand with freq chalk, mortar frags	2.79	
1321	31	110/185	D	15	Layer	Silty sand	2.44	
1322	31	110/185	D	15	Layer	Silty sand	2.3	
1323	31	110/185	D	15	Fill	Fill of [1376]	2.51	
1324	31	110-115/185	D	15	Fill	Fill of [1375]	3.69	
1325	31	110/185	D	15	Layer	Silty sandy gravel	3.12	
1326	31	105-110/185	D	15	Layer	Clay	2.79	
1327	31	110/185	D	15	Layer	Silty clay	2.6	
1328	31	105/185	D	15	Layer	Silty sand	3.04	
1329	31	105/185	D	15	Cut	Poss pit	3.04	2.53
1330	31	105/185	D	15	Layer	Sandy clay	3.14	
1331	31	105-110/185	D	15	Layer	Silty clay	2.9	
1332	31	105/185	D	15	Layer	Clay		
1333	31	105/185	D	15	Layer	Silty clay with chalk lumps	2.59	
1334	31	105/185	D	15	Layer	Clay silt	2.26	
1335	31	105/185	D	15	Layer	Sandy clay	2.11	
1336	31	105/185	D	15	Layer	Silt clay with freq charcoal	2.13	
1337	31	105/185	D	15	Layer	Silty sandy gravel	2.17	
1338	31	105/185	D	15	Layer	Silty clay	3.22	
1339	31	105/185	D	15	Fill	Backfill to [1377]	3.26	
1340	31	100-105/285	D	15	Masonry	Cess pit/ice house?	3.27	2.56
1341	31	105/185	D	15	Fill	Fill of cess pit [1340]	3.26	
1342	31	105/185	D	15	Fill	Fill of cess pit [1340]	3.28	
1343	31	105/185	D	15	Fill	Fill of cess pit [1340]	3.32	
1344	31	105/185	D	15	Fill	Fill of [1378]	3.68	
1345	31	105/185	D	15	Fill	Fill of cess pit [1340]	3.1	
1346	31	105/185	D	15	Fill	Fill of cess pit [1340]	2.86	
1347	31	105/185	D	15	Fill	Fill of cess pit [1340]	3.66	
1348	31		D	15	Fill	Fill of [1374] context sheet missing		
1349	31	100/185	D	15	Fill	Fill of construction cut [1379]	3.68	
1350	31	100/185	D	15	Fill	Fill of [1380]	3.71	
1351	31	100/185	D	15	Layer	Silty sand	3.71	
1352	31	100/185	D	15	Layer	Sandy clay	3.51	
1353	31	100/185	D	15	Layer	Clay	2.82	
1370	31	110/185	D	15	Fill	Fill of [1373]	3.18	
1373	31	110-115/185	D	15	Cut	Poss pit	3.61	3

1374		31		D	15	Cut	Context sheet missing		
1375		31	105-110/185	D	15	Cut	Ditch?	3.69	2.99
1376		31	110/185	D	15	Cut		2.51	2.18
1377		31	105/185	D	15	Cut	Construction cut for [1340]	3.26	2.56
1378		31	100/185	D	15	Cut	Poss pit	3.68	3.03
1379		31	100/185	D	15	Cut	Construction cut for [1340]	3.68	2.56
1380		31	100/185	D	15	Cut	Unknown purpose	3.71	3.31
1389		34	100/205	D	15	Masonry	Brick structure	3.47	3.22
1398		37	105/190	D	15	Fill	Upper fill of [1400]	2.55	
1399		37	105/190	D	15	Fill	Lower fill of [1400]	2.23	
1400		37	105/190	D	15	Cut	Construction cut for well?	2.55	1.77
1	1			Eval		Layer	Garden soil	4.69	
2	2	1		Eval		Layer	Orangey brown sandy silt	4.35	
3				Eval		Fill	Fill of well	4.55	
4				Eval		Fill	Backfill to construction cut [6]	4.61	
5	5			Eval		Masonry	Well lining	4.61	
6	6			Eval		Cut	Construction cut for well	4.61	3.76
7	7			Eval		Layer	Green grey silty clay	4.38	
8	7			Eval		Layer	Dark grey silty clay	4.43	
9	7			Eval		Layer	Compacted gravel	4.38	
10	7			Eval		Layer	Yellow clay	4.44	
11	7			Eval		Fill	Fill of [17]	4.26	4.2
12	7			Eval		Fill	Fill of [13]	4.38	
13	7			Eval		Cut	Pit? - unex	4.38	
14	7			Eval		Layer	Brown green clayey silt	4.12	
15	7			Eval		Layer	Opus signinum - floor?	4.35	4.3
16	16	1		Eval		Layer	Compacted silty sand - floor?	4.19	4.07
17	7			Eval		Cut	Pit	4.26	4.16
18		3		Eval		Layer	Levelling for concrete	5.77	
19		3		Eval		Fill	Fill of [20]	5.57	
20		3		Eval		Cut	Pit?	5.57	5
21		3		Eval		Fill	Fill of [22]	5.7	
22		3		Eval		Cut	Pit?	5.7	4.77
23		3		Eval		Layer	Silty sand - levelling?	5.8	
24		3		Eval		Layer	Silty sand - levelling?	5.66	
25		3		Eval		Masonry	Wall foundation - 19th c	5.56	
26		3		Eval		Cut	Construction cut for [25]	5.56	5.37
27		3		Eval		Masonry	Wall foundation - 19th c	5.37	
28		3		Eval		Cut	Construction cut for [27]	5.13	5.08
29		3		Eval		Masonry	Wall foundation	5.09	
30		3		Eval		Cut	Construction cut for [29]	5.02	4.76

31	2	Eval	Layer	Clayey sand	4.28
32	1	Eval	Layer	Sandy silt - colluvial?	3.92
33	2	Eval	Layer	Sandy silt - colluvial?	3.94
34	2	Eval	Layer	Clayey sand - colluvial?	3.98
35	4	Eval	Layer	Wood - floor?	5.33
36	4	Eval	Masonry	Wall foundation	5.18
37	4	Eval	Masonry	Wall foundation - 19th c	5.28

Appendix 2 An assessment of the Roman pottery

By Malcolm Lyne

1. Introduction

1.1 The site yielded 2373 sherds (60011 gm.) of pottery from 231 contexts: nearly all of this pottery was of mid-third to late fourth century date and came from 13 phases of occupation associated with the Late Roman bathhouse.

2. Methodology

2.1 All of the assemblages were quantified by numbers of sherds and their weights per fabric. These fabrics were identified using an x8 magnification lens with inbuilt metric graticule for determining the natures, forms, sizes and frequencies of added inclusions. Finer fabrics were additionally examined using an x30 magnification pocket microscope with artificial illumination source. Fabrics were classified using the codings formulated by the Museum of London Archaeological Service (Anon 2000).

2.2 None of the assemblages are large enough for further quantification by Estimated Vessel Equivalents (EVEs) based on rim sherds (Orton 1975).

3. The Assemblages

3.1 Phase 3. c.AD.230-260
There are 25 pottery assemblages which can be attributed to this phase. Amounts of pottery are generally small (230 sherds, 6448 gm.) but there is one larger 92 sherd assemblage from the fill of Beamslot 751 in Area B.

3.2 The four slots across the boundary ditch in Area A yielded a mere 12 sherds (140 gm.) of pottery, including three fresh sherds from a very late East Gaulish Samian Dr.37 bowl, a neck sherd from a closed form in similar fabric and fragments from Moselkeramik and Lower Nene Valley Colour-coat beakers.

3.3 The various small assemblages associated with the clay and timber buildings in Area B include fragments from Lower Nene Valley, Moselkeramik and Oxfordshire Red Colour-coat beakers and BB1 cooking-pots, bowls and dishes. The somewhat larger assemblage from Beamslot 751 includes large fresh sherds from another very late East Gaulish Samian Dr.37 bowl and a very deep Dr.31 platter variant. The ritual pit 779 beneath this feature contained four very large fresh sherds from a Tripolitanian amphora and more of this repaired and riveted vessel is in the beamslot assemblage. Other wares include five

fresh sherds from a vase tronconique in North Gaulish Grey ware, the base from a Central Gaulish Black Colour-coat beaker, sherds from a BB1 cooking-pot of c.AD.240-270 date and a Moselkeramik beaker.

3.4 The brickearth 924/862 dumped in Area C as a platform for the bathhouse was completely lacking in pottery and the surface make-up layer 752 above yielded a mere 21 fragments. None of these sherds are particularly diagnostic but the presence of a sherd from an Oxfordshire Whiteware mortarium suggests that the bathhouse was constructed after AD.240. There is no pottery from the fabric of the Phase 3 bathhouse itself in Area D.

3.5 Phase 4. c.AD.260-270
The ephemeral structures of this phase in Area B yielded 116 sherds (2764 gm.) of pottery from 12 contexts. This pottery differs little from the Phase 3 material except that BB2 vessels appear for the first time and fresh sherds of late East Gaulish Samian are less in evidence. The 11 sherds from the fill of Pit 743 include fresh sherds from a bol carenee in North Gaulish Greyware and an Eifelkeramik jar.

3.6 Phase 5. c.AD.270-280
The clay and timber structures in Areas B and C yielded a total of 253 sherds (6226 gm.) of pottery from 24 contexts. This material is generally rather broken up but includes North African amphora, Moselkeramik and Lower Nene Valley Colour-coat beaker sherds: the other wares include both BB1 and Essex BB2 developed beaded-and-flanged bowl sherds for the first time and there are more sherds in Mucking sandy greyware than previously. Demolition layer 640 at the base of the sequence in Area C yielded a mere four sherds of pottery but these include a large fresh fragment from an Alice Holt/Farnham greyware cooking-pot with black slip on its shoulder. Such vessels only get into London after c.AD.270: its presence indicates that the Phase 5 structures are later than AD.270 but probably not much later.

3.7 Phase 6. c.AD.280-290
The 273 sherds (4872 gm.) of pottery from the four sections across the recut boundary ditch in Area A include nothing which need be later than AD.300. There is very little Alice Holt/Farnham ware (10 sherds), which coupled with significant quantities of late third century BB1 (70 sherds) and particularly in the primary silts, suggest that the recut took place c.AD.270-80 and was largely silted up by the early years of the fourth century.

3.8 The clay and timber structures of this phase in Areas B and C produced 211 sherds (4590 gm.) of pottery from 21 contexts. Nearly all of the pottery comes from the Area C sequence and includes more BB1 and Essex BB2 developed-beaded-and-flanged bowls. Alice Holt/Farnham ware is still rare and represented by a fresh everted-rim cooking-pot sherd with self-slipped decoration from Pit 397. Flaring BB1 cooking-pot rim sherds from post AD.280 cooking pots appear for

the first time: their presence, coupled with that of two Oxfordshire Whiteware M17 mortaria (c.AD.240-300) and the extreme rarity of Alice Holt/Farnham ware, suggests that this phase can be dated c.AD.280-290.

3.9 Phase 7. c.AD.290-300
The 33 sherds (634 gm.) of pottery from the nine Area B contexts attributed to this phase differ little from those associated with the Phase 6 features; indeed their condition suggests that they may all be residual in their contexts.

3.10 Phase 8. c.AD.300-325
Further ephemeral structures in Area B yielded 93 fragments (3052 gm.) of pottery from 19 contexts, with much of the weight being due to 1712 gm. rim sherd from a very large residual Sollar mortarium in the assemblage from Context 394. Most of the rest of this pottery may also be residual but a 26 sherd (436 gm.) assemblage from the fill of east-west linear feature 578 is probably contemporary. This assemblage includes six jar sherds in Alice Holt/Farnham ware, a Young type C48 bowl in Oxfordshire Red Colour-coat fabric (c.AD.270-400) and a straight-sided greyware dish which is unlikely to be earlier than AD.300.

3.11 Phase 9. c.AD.325-350
The 85 sherds (1816 gm.) of pottery from the various features in Area B differ little from those associated with the previous two phases and may all be residual.

3.12 Phase 11. c.AD.350-375
Ephemeral features in Area B yielded 265 sherds (6325 gm.) from 27 contexts of which only 19 sherds are in Alice Holt/Farnham ware. The even smaller numbers of sherds in BB1 and BB2 fabrics (15 and 18 respectively) suggest that the bulk of the pottery belongs to the first quarter of the fourth century but the presence of dish and horizontally-rilled jar sherds in Overwey/Portchester D fabric, white painted Oxfordshire Red Colour-coat bowl sherds and other late material indicate that Pits 193,199 and 204 at least are later and belong to the period c.AD 350-375+.

3.13 The 147 sherds (5638 gm.) of pottery from the pitting and patching layers within the Area C courtyard are mostly residual third century in date but Pit 555 yielded a more contemporary 40 sherd assemblage with 12 fresh fragments from at least five bowls and dishes in Alice Holt/Farnham greyware and a large heavily-burnt fragment from a Type M22 mortarium in Oxfordshire Whiteware (c.AD.300-400). Compacted silty clay layer 621 at the base of the Phase 11 sequence in this area gives a further indication that most of the pottery from the features in this area is residual in that the nine sherds of pottery from it include a fragment from a Mayen ware dish of Gose type 469 dated later than c.AD.350.

3.14 The 11 sherds from features associated with the enlarged bathhouse in Area D include a single large fresh sherd of a horizontally-rilled jar in grey-buff Overwey/Portchester D fabric (c.AD.330-420) from the fill of Drain 1094 and three sherds of a similar jar from Drain 1137.

3.15 Phase 12. AD.375-400+
The fills of the NE/SW running Ditch 324/380 cut through the courtyard in Area C (Contexts 323 and 379) produced 121 sherds (2988 gm.) of late-fourth century pottery. The 25 sherds of Alice Holt/Farnham greyware include fragments from two type 6C.2 dishes of post-AD.370 and possibly post-AD.390 date and a convex-sided dish of type 6A.9 (c.AD.330-400+). Other sherds include fragments from two Mayen ware cooking-pots (c.AD.370-400+) and a type C84 bowl in Oxfordshire Red Colour-coat fabric (c.AD.350-400+).

3.16 Phase 13. AD.400+
The 30 sherds from the demolition debris over the baths in Area D include 17 fragments from at least eight different vessels in Alice Holt/Farnham greyware. These include another two type 6C.2 dishes (the last significant new type to be introduced by the industry), a flagon, a white-slipped storage-jar with combed scrolling and a poorly made beaded-and-flanged bowl. Other sherds include three fresh fragments from a jar in bricky orange fabric and a large fresh fragment from a beaded-and-flanged bowl in pimply sand, grog and flint tempered ware. The 12 sherds from wall robbing trench contexts 1029 and 1262 comprise five large fresh fragments from a type WC6 mortarium in Oxfordshire White-slipped ware (c.AD.350-400+), two large fresh sherds from two horizontally-rilled jars in Overwey/Portchester D fabric (c.AD.330-420), four sherds from a coarse, poorly-finished Alice Holt/Farnham greyware cooking-pot and beaded-and-flanged bowl and one from a BIV amphora of probable fifth century date.

4. Recommendations

4.1 This is a site of key importance in the study for the study of mid-third century pottery in the London area. Because of this, the assemblages from the various Phase 3 contexts should be written up in considerable detail with an estimated 25 pot drawings. The pottery from Phases 4 to 9 includes significant amounts of residual material and work should concentrate on the more contemporary assemblages from Contexts 738, 640 and 579 with about six pot-drawings.

4.2 The Phase 11 pottery assemblages from features in Areas B and C also have a very high residual content and work here should concentrate on the assemblages from Pits 193, 199, 204 and 555 with a further 17 pottery drawings. The small assemblages from the drains in Area D should also be written up with a further three illustrations

4.3 The somewhat more substantial pottery assemblage from the Phase 12 Ditch 324/380 cutting across the courtyard in Area C is important in that it probably dates to after the abandonment of the bathhouse. This assemblage should be covered in considerable detail with 20 pot illustrations. The pottery from the Phase 13 bathhouse demolition debris and wall robbing trenches is also important, particularly if one were to associate this activity with the construction of the riverside wall within the precincts of the Tower of London during the 390s (Parnell 1985). Fourteen sherds from these destruction deposits are worth illustrating.

4.4 All of the Samian pottery should be sent to Joanna Bird to be reported on: the East Gaulish Samian from the earlier excavations on the site is of outstanding importance in including some of the latest from Britain and a number of exceptional pieces (Bird 2002). The Samian sherds from the Babe Ruth excavation also include significant quantities of similarly dated mid-third century material and are, therefore, equally important. An estimated 40 to 50 sherds will need to be drawn.

4.5 The amphorae from the site also include exceptional pieces. Apart from Dressel 20s and Gauloise 4 amphorae, there are significant numbers of sherds from North African vessels and others of unknown origin. David Williams should be sent sherds from six Phase 3 amphorae and 19 from later phases.

4.6 Most of the mortaria from the site are in Oxfordshire fabrics but there are six early-third-century Rhineland products which should be sent to Kay Hartley to report on.

5. Bibliography

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Catalogue

Context	Fabric	Vessel Form	Earliest Date	Latest Date	No.of Sherds	Weight in gm.	Comments
HGA 02 Area C +							
	BB1	B+fl.bowl	240	300	3	268	
	AHFA	Jar base	270	400	1	42	
	LNVCC	Beaker			1	2	
	OXRC	Bowl	240	400	1	18	
	SAND	Jar			2	20	
	Total				8	350	gm.
HGA 02 +							
	Prehistoric				1	28	abraded
	BB1	Open form			2	202	
	FINE	Closed			1	4	
	NKFW				2	12	
	SAMCG	Dr.33	120	200	1	26	
	SAMEG	Bowl base	200	260	1	34	
	SAND	Jar base			1	136	
	MISC				15	254	
	Total				21	354	gm.
HGA 02 20-22/1/03 +							
	SAND	Closed			1	18	gm.
HGA 02 + 105/215							
	BB2	Open form			2	14	
	LNVCC	Beakers			5	14	
	MAYEN	Closed	370	400	1	6	
	OXID	Basal			1	20	
	OXRC	C51 Bowl	240	400	1	6	
	Total				10	60	gm.
HGA 02 1							
	AHFA	5B-8 bowl	270	400			
		5B-4 bowl	270	330			
		Misc 5B bowl					
		6A-12 dish	270	400+			
		6C-1 dish	330	400+			
		Cl.3C jars	300	400	24	818	large,freshish
	BB1	Ev.rim	280	350	2	66	
	BB2	Beaded+fl bowls	270	400	4	84	
	BBS	Dog-dish	270	370	1	26	
	FINE	?Pinch-neck					
		Flagon			1	4	
	HADG	B+fl bowl	270	400	1	30	
	HARSH	Jar	360	400+	1	26	
	LNVCC	Flagon	160	270			CAM 171/358
		Pentice beaker	250	370	3	24	
	MISC				2	24	
	NAFR	Amphora			1	52	
	NGGW	Pentice beaker	200	270	1	8	
	OXMO	M22 mort	300	400	4	162	
	OXRC	C84 bowl	350	400	1	8	
	PORD	Rilled jar	330	420	1	34	
	SAND				2	18	
	Total				49	1384	gm.
HGA 02 2							
	AHFA	IA-14 store					
		-jar	270	350	1	54	
		5B.8 Bowl	270	400			Fresh
		Misc Cl 5B	270	400	2	176	Fresh
	BB1	Cavetto-rim	220	270	2	44	
	LNVCC	Beaker	250	370	1	18	
	OXMO	M22 Mortarium	300	400	1	252	
	SAND	Dev b+fl bowl	270	400	3	218	large,fresh
		Jars	300	400	4	106	
		Closed			1	16	
	Total				15	884	gm.

HGA 02 103. Fill of Pit 105. Post-Med

BB1	Str.sided dish	220	300	2	34	
GAUL	Amphora	60	250	1	20	
LNVCC	Cornice rim					
	Bag-beaker	160	250	5	44	Fresh
OXRC	C51 bowl	240	400	1	8	abraded
SAMEG	Dr.33	230	260	7	234	one pot most Of
SAND	Closed			1	6	
Total				17	346	gm.

HGA 02 104. Primary fill of Pit 105. Post-Med

OXID	Dr.38 copy			2	10	gm.polished

HGA 02 113. Layer of gravely silty sand. Post Med

AHFA	Ev.rim	270	400	3	30	
	5B.10 Bowl	270	400	1	34	heavily abr
AMPH				1	10	
BB1	Dog-dish					
	Incip b+fl bowl	210	280/90	4	86	x2
FINE	Roul bowl	200	300	1	12	Northern Gaul
HOO	Closed			2	18	abraded
LNVCC	Beakers			2	12	abraded
MOSL	Beaker	200	270	2	6	
NKWS	Flagon	140	250	1	10	
OXID				7	78	Abraded
OXMO	M22 mortarium	300	400	1	40	abraded
SAND				6	128	
Total				31	474	gm.

HGA 02 123. Fill of Pit 126. Post-Med

AHFA	5B.4 bowl	270	330	2	14	
BB1	Open form			1	22	
BB2	Ev.rim jar	120	250	5	48	
CCW2	Beaker	250	300	1	6	
FINE	Indented bkr			1	4	
GAUL	Amphora			1	22	
HADOX	Beaker			1	6	
LNVCC	Beaker			3	8	
MISC				1	6	
OXRC	Beaker	240	400	2	16	
SAND	Closed			6	78	
	Beaker			1	4	
Total				25	234	gm.abraded

HGA 02 124. Fill of PH 125. Post Med

BB2	CAM406 Beaker	150	250	3	18	
FINE	Indented bkr			3	18	
LNVCC	Indented bkr			1	2	
SAND	Closed			1	4	
Earthenware		Post-Med		1	8	
Total				9	50	gm.
Tile		Roman		6	54	gm.abraded

HGA 02 127 Top fill of recut 138 of E/W ditch. Phase 11 Area A

AHFA	Beaker	270	400	3	58	
BB1				8	158	Large
BB2	Ev.rim	170	270	1	34	
COLWW	Mortarium	200	270	1	90	
GAUL	Amphora			10	230	cream
HADOX	Closed	250	400	1	4	
LNVCC	Beaker			9	86	
MICA	Closed			1	8	pink
OXMO	Mortaria	240	400	1	136	
SAMLZ	Closed			2	18	neck sherd
SAND	Closed			9	192	closed
VRW	Closed			1	8	
Total				47	1022	gm.

Date. c.AD.270-300

HGA 02 129 Fill of Pit 128. Post-Med

BAET	DR20	170	300	1	318	
GROGSA				1	30	abraded
OXRC	Beaker	240	400	1	28	abraded
SAND	Closed			4	82	abraded
Total				7	458	gm.

HGA 02 134 Secondary fill of recut 138 of E/W ditch Phase 11.Area A

AHFA	Closed	270	400	2	4	
BB1	Everted rims	220	280			x2
	B+fl.bowl	240	300+			
	Dog dish	200	370	12	328	
BB2	Jar			2	24	
GAUL	Amphora			4	114	
HADOX	Closed	250	400	3	24	
LNVCC	Beakers			9	58	
MISC	Bowl			1	36	burnt sandy white. Symonds +Wade 1999,Fig 6.32,111
				10	118	
OXRC	Roul beaker	240	400	1	6	
SAMEG	Dr.37					
	Form 53	230	260	3	46	
SAMLZ	Dr.31	150	200	4	36	
SAND	Closed			14	210	
Total				65	1004	gm.encrusted

Date. c.AD.270-300

HGA 02 135. Top fill of recut 153 of E/W ditch Phase 11 Area A

BB1	Bowl			1	30	
BB2	5C4 Bowl	170	250	1	52	fresh
CCW2	Beaker	250	300	1	6	
FINE	Flagon			1	6	
LNVCC	Beaker	230	300+	7	36	
SAMLZ	Dr.37			4	26	
SAND	Jar			6	62	
Total				21	218	gm.

Date c.AD.250-300

HGA 02 137. Secondary fill of recut 153 of E/W ditch Phase 11 Area A

BB1	Dev b+fl bowl	240	300+			X2
	Dog-dish	220	270			
	Dog-dish	220	300+	5	192	
BB2	Store-jar	280	370			Inworth,Fig.41 22
	Beaker	150	230	9	104	
LNVCC	Hunt cup	160	270			
	FN Beaker	160	300	9	74	
MISC				4	8	
SAND				2	14	
Total				29	392	gm.
	Tile			2	44	gm.

Date c.AD.250-300

HGA 02 140. Primary fill of re-cut 138 of E/W ditch. Phase 11 Area A

BB1	Cooking-pots	220	280			
	Incip b+fl bowl	210	280/90	25	392	
	Dev.b+fl bowls	240	300+	17	398	
FINE	Flagon handle			1	10	
GAUL	Amphora			3	18	micaceous
LNVCC	Inc hunt cup	160	250	16	160	
MISC	Hole mouthed					sandy burnt
	Vessel			2	20	white
MOSL	Indent beaker	200	270	2	6	
OXID	Closed			1	4	
OXMO	M18 Mort	240	300	1	50	
OXRC	Beaker	240	400	1	2	
SAMEG	Dr.31	200	260	1	48	
	Form 53	230	260			fresh
	Dr.37	230	260	3	156	fresh
SAND	Closed			1	2	
	CAM 268 jar	270	400	3	72	
	Beaker			5	186	
VRW	Closed	50	250	1	12	
Total				83	1536	gm.

Date c.AD.230-270+

HGA 02 152. Fill of E/W Ditch 154. Phase 3

AMPH				1	52	
LNVCC	Beaker	230	370	3	8	abraded
MICA	Closed			1	8	
OXRC	Beaker	240	400	1	2	abraded
SAMEG	Dr.37	230	260	3	48	fresh
Total				9	118	gm.

Date. c.AD.230-260

HGA 02 155. Fill of recut 163 of E/W ditch. Phase 11. Area A

BAET	Dr.20	170	300	4	226	
OXID				2	4	
TRIP	Amphora	150	300	1	8	
Total				7	238	gm.
Tile				3	36	gm.

Date c.AD.170-300

HGA 02 166. Fill of recut 168 of E/W ditch. Phase 11. Area A

AHFA	Closed	270	400	4	48	
AMPH				3	106	
BB1	Closed			1	28	fresh
GAUL	Amphora			1	46	micaceous
SAND	Ev rim jars			4	30	abraded
	Beaker base			1	36	
VRW	Closed			1	6	
Total				15	300	gm.

Date c.AD.270+

HGA 02 171. Fill of E/W Ditch cut 177. Phase 3 Area A

LNVCC	Indent beaker			1	10	
MOSL	Beaker	200	270	1	6	
SAMEG	Closed form	200	260	1	6	
Total				3	22	gm.

Date. c.AD.200-260

HGA 02 172. Primary fill of recut 153 of E/W ditch. Phase 11. Area A

BB1	Dev b+fl bowl	240	300+	1	78	fresh
LNVCC	Beaker			4	40	
MISC	Closed			1	14	sandy white
Total				6	132	gm.

Date c.AD.240-300

HGA 02 173

BB1	Dog-dish	200	270	1	14	
FLINT	Bead-rim	L.I.A.	50	1	12	
GROG		L.I.A.	50	1	20	
POST-MED		1600	1700	1	38	
Total				4	84	gm.
Tile	imbrex			1	74	gm.

HGA 02 180. Horticultural soil. PM Area B

AHFA	Ev.rim jars	270	400			x2
	B+fl bowl	270	400	20	382	
	5B.8 Bowl	270	400	2	42	
	Ev.rim	270	400			
	6A.13 dish	270	400	2	58	fresh
	Ev.rim			1	10	refired
	6A.4 Dish			1	40	Farnham 6Bells
AMPH	Amphora			1	34	
BAET	DR20 Amph	170	300	1	70	
BB1	B+FL bowl	240	400	5	88	
BB2	Jar			2	36	
CHALK	Amphora	250	400	1	14	
COLCC	Beaker			1	4	
GAUL	Amphora			1	136	micaceous
HADOX	Jar	250	400	2	30	
LNVCC	Box lid	160	300	1	20	
	Closed			1	14	
MOSL	Pentice beaker	270	350	1	4	
	Indent beaker	200	270	1	4	

OXMO	M18 mortarium	240	300	3	278	x2
OXRC	C51 bowl	240	400			
	Beaker	240	400	4	102	
PKGTW	Small jar	250	400	1	20	
SAMLZ				1	34	
SAND	B+fl bowl	270	400			
	Jars			9	214	
	Jars			7	276	fresh
	Necked jar			3	22	
TRIP	Trip II amph					
	Handle	100	250	2	154	
VRW	Jar			1	4	
POST-MED		1600	1700	1	50	
Total				76	2140	gm.
Tile				6	208	gm.

HGA 02 184. Fill of Pit 183. Phase 15. Area B

AHFA	Cl.1C Store jar	330	400			abraded
	Jar	270	400	4	116	
BAET	DR20	170	300	1	120	
BAET				2	54	
GAUL	Amphora			2	32	
MAYEN	Gose 542 jar	370	400	1	62	
OXID	Jar base			1	92	
OXMO	Mortarium	240	400	1	108	
OXRC	Bowl	240	400	1	108	abraded
SAND				2	90	
POST MED	Rod handle	1500	1600	1	62	
Total				16	844	gm.

HGA 02 186. Fill of Pit 187. PM. Area B

BB2	Conv-sided dish	300	400	1	60	fresh
HADOX	Beaker base	250	400	1	30	
OXRC	Bowl	240	400	1	76	fresh
Total				3	166	gm.

HGA 02 188. Fill of Pit 189. Phase 11. Area B

BB1	Cooking-pot	220	300+	2	24	Fresh
BB2	Closed			5	66	
FINE	Pentice bkr			1	6	
HADOX	Closed	250	400	1	4	
LNVCC	Bead-rim bkr	160	270			
	Indent beaker					
	Painted bkr	250	370	10	62	
OXRC	Bowl	240	400	1	4	
TSK	Jar	180	370	1	28	
Total				21	194	gm.

Date c.AD.250-400

HGA 02 192. Fill of Pit 193. Phase 11. Area B

LRMA	Large closed			1	42	fresh
PORD	Convex dish	370	420	1	18	
Total				2	60	gm.

Date c.AD.370+

HGA 02 194. Primary fill of Pit 193. Phase 11. Area B

HADOX	Beaker	250	400	1	4	gm.

HGA 02 195. Fill of Pit 204. Phase 11. Area B

AHFA	5B-8 Bowl	270	400	1	34	
BB1	Dog dish	200	350	1	84	
BB2	B + fl bowl	270	400			x2
	Cavetto rim			3	74	
GROG	Jar			1	10	
HADG	Necked bowl					
	Beaker			4	90	
HARSH	Jar	250	300	2	50	H/M
LNVCC	Beakers	300	400	9	282	three bases
OXRC	C52 Bowl	350	400			
	Beaker	270	400	3	38	
SAMEG	Dr.38	140	260	1	40	
SAND	Jar			2	26	Essex
	Lid-seated jar	150	300	1	8	
MISC				1	26	

	Total			29	762	gm.

Date c.AD.350-400

HGA 02 196. Fill of Pit 197. Phase 11. Area B

AHFA	5B-8 bowl	270	400			
	Ev.rim	270	400	2	66	
BB2	Open form			2	26	
LNVCC	Pentice beaker	250	370	1	12	
SAND	CAM306 Bowl	200	400	2	40	
TRIP	Amphora	200	400	1	28	
Total				8	172	gm.
Tile				2	60	gm.

Date c.AD.270-370

HGA 02 198. Fill of Pit 199. Phase 11. Area B

AHFA	5B Bowl	270	400			
	1C Store jar	350	400	3	210	
GROG	Closed	?Sub Roman		1	6	HM. Grog, chalk, sand
PORD	Rilled jar	330	420	1	32	
SAND	Jar			1	18	
Total				6	266	gm.
Tile	Inc box-flue			2	48	gm.burnt

Date c.AD.350-400

HGA 02 200. Fill of Pit 201. Phase 11. Area B

BB1	Dog dish	220	300	1	42	fresh
LNVCC	Pentice beaker	250	350	9	64	
MOSL	Beaker	200	276	1	16	fresh
Total				11	122	gm.
Tile				3	26	gm.

Date. c.AD.250-350

HGA 02 202. Layer of sandy-silt. Phase 11. Area B

AHFA	Closed			2	28	
GAUL	Amphora			1	18	
NFCC	Beaker	260	400	1	12	
Total				4	58	gm.
Tile				1	4	gm.

HGA 02 203. Fill of Pit 205. Phase 11. Area B

COLCC	Beaker	130	250	1	2	
SAMEG	Dr.46 Mort	170	260	2	304	fresh
SAND	Closed			1	8	
Total				4	314	gm.
Tile				2	64	gm.

Date. c.AD.200-250 but residual

HGA 02 206. Fill of Pit 207. Phase 11. Area B

AHFA	5B-6 bowl	270	400	1	40	abraded
BB2				1	16	
Total				2	56	gm.
Tile				2	204	gm.

HGA 02 208. Poss PH. Phase 11 Area B

AHFA	Jar base	270	400	1	58	
GAUL	Amphora			1	20	
HADBS	Closed			1	10	
Total				3	88	gm.

HGA 02 210. Fill of PH 211. Phase 11 Area B

BAET	DR20			1	326	Abraded
BB1	Cooking-pot			1	18	
LNVCC	inc ?Flagon			3	72	
OXMO	M17 mortarium	240	300	1	36	
POST MED		1600	1700	1	2	

SAND	Necked jar			2	36	
Total				9	490	gm.

Date. Post-Med

HGA 02 212. Fill of Pit/PH 213. Phase 11. Area B

AHFA	5B-4	270	330	1	46	Abraded
LNVCC	Beaker			1	6	
SAND	Necked jar			3	48	
Total				5	100	gm.

HGA 02 214. Fill of E/W Linear 215. Phase 11. Area B

HADOX	Closed	250	400	2	46	
RETT	Hook-rim jar	270	370	1	82	large fresh w/p.Kiln P (Webster 1999, Fig.5)
LNVCC	Bead-rim beaker	300	325			
	Beaker	300	370	4	76	fresh
SAMLZ	Dr.37			1	16	
Total				8	220	gm.
	Tile			4	64	gm.

Date c.AD.300-370

HGA 02 216. Fill of PH 221. Phase 11. Area B

AHFA	Closed	270	400	2	20	
LNVCC	Beaker			1	4	
	Beaker	250	370	1	8	w/p
Total				4	32	gm.
	Tile			2	20	gm.

Date c.AD.270-370

HGA 02 217. Fill of PH218. Phase 11. Area B

AHFA		270	400	2	8	
OXMO	Mortarium	240	400	1	114	abraded
Total				3	122	gm.

Date c.AD.270-400

HGA 02 220. Pit/PH. Phase 11. Area B

BBS	Dog-dish	250	400	1	20	
GAUL	Amphora			1	22	
MOSL	Beaker	200	270	1	2	
OXRC	Roul bowl	270	400			
	Beaker base	240	400	2	14	
Total				5	58	gm.
	Tile			8	162	gm.

Date c.AD.270-400

HGA 02 222. Fill of Pit/PH 223. Phase 11. Area B

BB1	C'pot	180	220	1	22	90 lattice
COLCC	CAM392 Bkr	150	250	1	10	
MOSL	Beaker	200	276	1	2	
Total				3	34	gm.

Date. c.AD.200-250 But prob residual

HGA 02 224. Fill of Pit 231. Phase 11. Area B

BBS	Dog-dish	270	370	1	16	6 Bells
SAMEG	Dr.31	200	260	1	52	v.large
SAND	Closed			5	214	fresh c.be PM
Total				7	282	gm.
	Tile			1	18	gm.

Date c.AD.270-370

HGA 02 234. Fill of 237 hearth. Phase 11. Area B

CCW2	Beaker	250	300+	1	12	
MOSL	Beaker	200	270	1	2	
Total				2	14	gm.

HGA 02 235. Fill of Pit236. Phase 11. Area B

	AHFA	Closed	270	400	1	4 abraded
	OXRC	Bowls	240	400	2	24x2 abraded
	Total				3	28 gm.
	Tile				6	76 gm.abraded

Date c.AD.270-400

HGA 02 238. Fill of Pit 239. Pmed Area B

	SAND	Store-jar	200	400	1	176 gm.abraded

HGA 02 240. Fill of E/W Linear 249. Phase 11. Area B

	AHFA	6A.4 Dish	270	400	2	64
	BAET	DR20			1	148 Abraded
	BB2				2	22
	GAUL	Amphora			1	168
	LNVCC	Beaker	250	370	1	12
	NGGW	Closed	200	270	1	6
	OXRC	Beaker	240	400	1	6
	SAMEG	Curle 21	150	200	2	180 worn.residues
	SAND	Jars			6	72
	Total				17	678 gm.

Date c.AD.270-370

HGA 02 243. Pit. Phase 11. Area B

	FINE	Closed			1	6
	MOSL	Beaker	200	270	1	4
	TSK	Jar base	180	370	1	36 fresh
	Total				3	46 gm.

HGA 02 250. Slumping layer. Phase 11. Area B

	AHFA	Store-jar	270	400	1	102 abraded
	BIV	Amphora			1	8
	BB1	B+fl bowls	240	330	6	155
	BB2	B+fl bowl	270	370	3	98
		Closed			2	16
	FINE	Beaker	230	370	1	16
	LNVCC	Beakers			5	124
		Beaker	250	400	1	6
	MAYEN	Gose 488 bowl	370	400	1	64 fresh
	MOSL	Indent beaker	200	270	1	10
	OXRC	Bowl	240	400	1	10
	SAMEG	Dr,37				
		Dr.45	170	260	4	112
	SAND	Narrow-necked				
		Jar	300	400	11	194 Chelmsford G35.1
		Closed			2	18
		Store-jar	300	400	1	74
		Jar			1	6
	TRIP	Amphora	200	400	1	20
	Total				43	1033 gm.
	Tile				2	22 gm.

Date c.AD.270-400

HGA 02 252. Fill of PH 251. Phase 9 Area B

	FINE	Closed			2	6 streak-bnshd
		Beaker			1	4
	LNVCC	Pentice beaker	250	370	1	2
	Total				4	12 gm.

HGA 02 253. Layer = 255. Phase 9 Area B

	BB1	B+fl bowl	270	300	3	44
	BB2	Ev.rim jar	150	250	1	8
	SAND	Jar	270	370	1	14
	Total				5	66 gm.

Date c.AD.270-300

HGA 02 254. Layer = 255. Phase 9.Area B

	AHFA	Closed	270	400	2	34
	OXID				1	10

SAND	Closed			1	6	
	Jar			1	130	lower half
TRIP	Amphora	100	250	1	28	
Total				6	208	gm.
Tile				3	52	gm.

HGA 02 255. Layer of silty-sand. Phase 9. Area B

BBS	Dog-dish	270	370	2	42	
LNVCC	B+fl bowl	270	400	1	24	
MICA	Closed			1	6	cream
OXID				1	8	
OXMO	Mortarium	240	400	1	38	
PKGTW	Store jar	250	400	1	216	
SAND	Dog-dish	300	400	2	92	
	Ev.rim	270	400	2	52	
Total				11	478	gm.
Tile				1	44	gm.

Date c.AD.300-370

HGA 02 257. Fill of PM cess pit 317

BB1	Dog-dishes	200	300+	14	290	
BB2	Store-jar	280	400	3	28	Chelmsford G42
COLCC	Beaker			1	10	
GAUL	Amphora			1	4	abraded
HADOX	Closed			1	18	
LNVCC	Hunt cups	160	250	19	188	x2 fresh
MOSL	Beaker	200	270	1	4	
OXID	Closed			4	22	
SAMEG				1	6	
SAMLZ	Closed			1	6	
SAND	Closed			11	126	
Total				57	702	gm.

HGA 02 261. Fill of PM pit 260

AHFA	5B-8 Bowl	270	400	5	274	
BB1	Cooking-pot	220	280	2	46	fresh
COLCC	Closed	130	250	1	2	
POST MED	Open	1700	1900	1	8	
Total				9	330	gm.

HGA 02 262. Fill of PM Pit 263

BB1	Dev b+fl bowl	240	300	2	68	fresh
LNVCC	Beakers			2	22	fresh
Total				4	90	gm.
Tile				1	2	gm.

HGA 02 264. Compact sandy-silt layer. Phase 5. Area B

BB1	Jar			1	6	
GROG		270	400	1	18	
HARSH	Jar base	360	400	1	120	
MAYEN	Jug	370	420	1	12	
OXMO	M17 Mortarium	240	300	3	166	burnt
OXRC	Bowl	240	400	2	12	
SAND	Jar	250	370	3	48	Essex
Total				12	382	gm.

Date c.AD.270-300

HGA 02 266. Fill of PM PH267

BB2	B+fl bowl	270	400	4	116	fresh
MICA	Closed			1	6	buff
Total				5	122	gm.
Tile				2	28	gm.

HGA 02 272. Fill of PM Pit 273

BB1	Open form			2	18	
LNVCC	Closed	270	400	2	10	w/p
	Beaker			1	2	
SAND	CAM218	70	150	6	138	fresh
Total				11	168	gm.

HGA 02 276. Fill of PM Pit 277

BB2	Dog-dish			3	56	
LNVCC	Box	160	250			
	Beaker	250	370	8	78	w.p.fresh
Total				11	134	gm.
	Tile			1	16	gm.

HGA 02 278. Fill of PM Pit 287

BB1	Cooking-pot			1	10	abraded
	Dev b+fl bowls	240	300	5	116	
BB2	Open form			1	12	abraded
FINE	Beaker			1	8	
	Beaker			3	22	pol grey fired Black
OXMO	Mortarium	240	400	1	12	grey
SAND	B+fl bowl	270	330			fresh
	Pinch neck Flagon	150	300	11	250	fresh
Total				23	430	gm.
	Tile			1	20	gm.

HGA 02 279. Fill of PM Pit 280

BB1	Cooking pot	250	280	2	62	fresh
GAUL	Amphora			1	52	
LNVCC	Beaker			1	6	
POST MED		1500	1600	1	28	
Total				5	148	gm.

HGA 02 281. Fill of N/S Linear. Phase 5. Area B

BB1	Open form			1	22	fresh
BB2	B+fl bowl	270	370	1	50	fresh
	Ev.rim	170	270	1	30	
COLCC	Beakers	150	270	1	8	fresh
				1	6	
SAMEG		140	260	1	4	
SAND	CAM 306	200	350	1	24	
	Closed			2	18	
Total				9	162	gm.

Date. c.AD.250-270+

HGA 02 283 Fill of Pit 294. Phase 9. Area B

BB2	B+fl bowl	270	370	2	60	
CAMP1	Amphora			1	28	
COLCC	Beaker	250	350	4	74	
MOSL	Beaker	200	276	2	6	
NKFW	Pentice beaker	280	350	1	6	
OXMO	Mortarium	240	400	1	22	
OXRC	Beaker	270	400	2	8	
SAND	Ev.rim			1	26	fresh,warped
SAND	Closed			4	72	
Total				18	302	gm.

Date. c.AD.280-350

HGA 02 284, Fill of Pit 289.Phase 11. Area B

CCW2	Indent beaker	250	300	1	38	fresh
LNVCC	Beaker			1	2	
SAMEG	Dr.37			1	8	
Total				3	48	gm.

HGA 02 290. Fill of PM PH.291

BB2	Open form			1	14	
LNVCC	Beaker			1	4	
SAND	Closed			2	38	
Total				4	56	gm.

HGA 02 292. Poss Pit/PH. Phase 11. Area C

AHFA	Open form	270	400	2	130	freah,joining
BB2	Closed			1	14	
SAND	Closed			1	6	
Total				4	150	gm.
	Tile			1	14	gm.

HGA 02 296. Fill of E/W Linear 319. Phase 11. Area B

FINE	Closed			1	6	deep pink w.p
LNVCC	Pentice bkr	250	350	8	52	fresh 1 pot
SAMEG	Dr.37	230	260	3	166	fresh
SAND	Jar	180	370	1	8	
VRW	Lagena hdle			1	52	
Total				14	284	gm.

Date. c.AD.250-350

HGA 02 301. Fill of Ditch 302. Phase 12. Area C

BB1	Cooking-pot	220	400			
	Open form			4	66	refired
BB2				1	26	Fresh
GAUL	Amphora			1	104	
HADOX	Closed	250	400	1	18	
LNVCC	Closed			4	14	
NGGW	Jar	200	270	1	40	fresh
SAMEG	Dr.37	200	260	1	12	
SAND	Dev b+fl bowl	270	400	4	54	
TSK	Jar	180	370	1	8	
Total				18	342	gm.

Date residual in this context

HGA 02 305. Layer. Phase 9. Area B

BB1	Dog-dish	200	270	1	20	abraded
BB2	Dev b+fl bowl	270	370	2	50	
COLCC	Beaker			1	2	
HADOX	Closed	250	400	1	8	
LNVCC	Beaker			3	50	
MOSL	Beaker	200	270	1	2	
OXRC	Beaker	270	400	3	10	wh.barbotine
SAMEG	Dr.37			1	12	
SAND	Jar			3	28	
Total				16	182	gm.
Tile				1	2	mortared

Date c.AD.270-370

HGA 02 310. Fill of Ditch 302. Phase 12. Area C

AHFA	5B.4 bowl	270	330	1	52	coarse
LNVCC	Pentice beaker	250	370	1	8	fresh
Total				2	60	gm.

HGA 02 311. Fill of Ditch 302. Phase 12. Area C

BB1	Cooking pot			1	22	gm.

HGA 02 316. Beaten earth floor. Phase 11. Area B

AHFA	Everted rim	200	300	1	36	s.s
BB1	Dev b+fl bowl	240	300+			
	Dog-dish	200	350	3	88	
COLWW	Mortarium			1	130	v.large
LNVCC	Cornice-rim					
	Beaker	160	250			
	Beaker	230	370	5	22	
MOSL	2 Beakers	200	270	4	18	
NKFW	Beaker base	50	270	2	8	
OXMO	Mortarium	240	400	1	246	base
OXRC	C51 Bowl	240	400	1	8	
	C23.1 Beaker	270	400	23	82	1 pot fresh
SAND	Closed			4	22	
Total				45	660	gm.
Tile				2	50	gm.

Date c.AD.270-370

HGA 02 320. Fill of PH 321. Phase 11. Area C

COLCC	Beaker			2	16	sq.tooth roul
GAUL	Amphora			1	10	
SAND	Closed			2	54	
Total				5	80	gm.

HGA 02 322. Layer of loose silt. Phase 11. Area C

BBS	Dog-dish			1	48	

GROG	Closed	270	400	1	18	
LNVCC	Beaker	250	370	1	2	w.paint
SAND	Closed			1	4	
Total				4	72	gm.

Date c.AD.270-370

HGA 02 323. Fill of Ditch 324. Phase 12. Area C

AHFA	B+FL bowls	270	330			x2
	6C-2 dishes	370	400+			X2
	misc			14	374	
BAET	DR20			1	292	
BB1	Dog-dish	300	330			
	Dev b+fl bowl	240	300	3	100	
FINE	Beaker			1	4	
LNVCC	Beaker	230	370	7	48	
	Beakers			4	30	
	Pentice beaker	250	370	1	10	fresh
MICA				1	24	
NFGW	20.6 Flagon	260	350	1	94	complete top
OXMO	M22 mortarium	300	400	3	304	fresh yellow
OXWW	P35 Bowl	300	400	1	22	fresh
OXRC	Beaker base	240	400	1	10	
SAND	Hook-rim jar					
	Etc			16	258	
	Dog-dish	270	370	1	28	coarse
Total				55	1598	gm.

Note many AHFA sherds may be NFGW

Date. c.AD.300-400+

HGA 02 333. Fill of PH 334. Phase 11. Area C

OXID	Closed			1	14	gm.

HGA 02 339 Fill of PH 338. Phase 9. Area B

SAMLZ	Dr.33	120	200	1	16	
OXID	Closed	50	150	2	52	quartz,shell, grog
Total				3	68	gm.

Date. 2nd c. but all residual

HGA 02 340. Fill of PM Well 341

AHFA		270	400	2	26	
BB1	Dog-dish	200	300	2	76	
BB2	Beaded+fl bowl	270	400	1	70	fresh
LNVCC	Beaker base			1	20	
OXID				1	4	
SAMEG	Dr.33	230	260	1	42	
POST-MED	Open form	1500	1700	1	4	
Total				9	242	gm.

HGA 02 342. Fill of PM Pit 343

AHFA	Ev.rim	270	400	1	16	abraded
HADOX	Closed			1	10	
NARS	Open form			1	10	
TIN GLAZE		1680	1750	1	22	
Total				4	58	gm.

HGA 02 345. Layer of sandy silt. Phase 11. Area C

GAUL	Amphora			7	38	gm.

HGA 02 347. Fill of PH 346. Phase 8. Area B

BB1	Open form			1	6	gm.refired

HGA 02 352. Fill of PH 353. Phase 11. Area C

GAUL	Amphora			1	18	micaceous
SAND	Closed			2	14	
Total				3	32	gm.
Tile				1	10	gm.

HGA 02 364. Layer of sandy silt. Phase 11. Area C

AHFA	Cl.3B jar	190	270	1	8	fresh s/s
COLCC	Beaker			1	6	
GROG		260	400	1	6	

HADG	Beaker	250	400	2	96	lower part
LNVCC	Beaker	250	370	1	6	
MOSL	Beaker	200	276	5	26	fresh
OXMO	M22 Mortarium	240	400	1	38	V.small
SAMEG		140	260	1	2	abraded
SHEL	HM Jar	200	300	2	178	fresh one pot
Total				15	366	gm.

Date. c.AD.250-275 but residual

HGA 02 377. Fill of Pit/PH 378. Phase 9. Area B

BB2	Closed+open			4	30	
LNVCC	Beaker	230	370	1	2	
NFCC	Beaker base	260	400	1	18	
SAND	Closed			3	12	
Total				9	62	gm.
	Tile			1	6	gm.

Date c.AD.260-370

HGA 02 379. Fill of curvilinear 380. Phase 12. Area C

AHFA	Cooking-pot	270	400			
	5B-8 bowl	270	400			
	6A-9 dish	330	400	11	282	
BB1	Dog-dishes	270	400	3	34	striated
HADOX	Closed	250	400	1	8	
LNVCC	Beakers	230	300+	9	54	
MAYEN	C'pots	370	400	2	88	x2
MISC				4	26	
OXMO	Mortarium	240	400	1	30	
	Mortarium	240	400	2	82	v.distorted grey
OXRC	Beaker	240	400	2	16	
	Dr.38	240	400	2	148	burnt fresh
	C84 bowl	350	400	1	10	burnt
SAND	Dev b+fl bowl	250	370			
	CAM 406 Beaker	150	250	11	104	
	Closed			16	506	
VRW	Closed			1	2	
Total				66	1390	gm.

Date.c.AD.370-400+

HGA 02 384. Layer of loose clayey silt. Phase 12. Area C

SAND	Jar			3	114	gm.
	Tile			1	10	

HGA 02 385. Beaten earth floor. Phase 7. Area B

BB1	Dog-dish	270	350	1	36	
GAUL	Amphora			1	6	
HADG	Dog-dish	250	400	1	36	
LNVCC	Beaker	250	370	2	24	fresh white
OXID	Closed			1	4	
SAMEG	Dr.37	200	260	2	40	
SAND	Bead-rim bkr			4	132	
Total				12	278	gm.
	Tile			2	206	gm.

Date. Late 3rd c

HGA 02 389. Demolition layer. Phase 9. Area B

BB1	Open form			1	32	
LNVCC	Beaker			1	14	orange
Total				2	46	gm.

Date. c.AD.250-300

HGA 02 390. Fill of Pit 391. Phase 6. Area C

BB1	Cooking pot	280	350	3	46	
BB2	B+FL bowl	270	400	6	248	fresh
HADBS	Jar base			1	32	
LNVCC	Beakers	270	370	12	166	fresh inc

						pentice bkr
NFCC	Beaker	260	400	1	36	base
OXRC	Beakers	270	400	6	174	
SAND				5	50	
Total				34	752	gm.
Tile				1	8	gm.

Date. c.AD.280-300+

HGA 02 392. Fill of Pit 395. Phase 9. Area B

BB1				1	8	
HADG	Beaker	250	370	1	8	roul pentice
LNVCC	Beaker			2	40	
SAMEG	Dr.37	140	260	1	16	
Total				5	72	gm.

Date. mid-late 3rd c. but residual

HGA 02 394. Fill of E/W linear 424. Phase 8. Area B

HADOX	Dr.38	250	400	1	16	Burnt
SOLL	Mortarium	150	250	1	1712	
Total				2	1728	gm.

HGA 02 396. Fill of Pit 397. Phase 6. Area C

AHFA	Ev.rim jar	270	400	1	58	large,fresh
BB1	B+fl bowl	270	300+			
	Cooking-pot	280	350	3	48	
COLCC	Beaker	250	370	2	30	
FINE	Closed			1	28	
HADG	Pedestal base	200	250	1	30	
LNVCC	Beakers	250	370	6	90	bead-rim x2
OXRC	Beaker	270	400	3	12	
SAMEG		140	260	2	120	Fresh
SAND				3	76	
Total				22	492	gm.
Tile				1	8	gm.

Date.c.AD.280-300+

HGA 02 398. Fill of PH.399. Phase 8. Area B

FINE	Beaker			1	10	
MOSL	Beaker	200	276	1	2	
SAND				1	8	
Total				3	20	gm.

Date. 3rd c.

HGA 02 400. Layer of sandy silt. Phase 9. Area B

BB1	Open form			1	38	
HADG	Beaker			1	22	
SAMEG	Dr.38	140	260	1	230	half vessel
Total				3	290	gm.

Date. Mid-late 3rd c.

HGA 02 401. Mortar layer. Phase 6. Area C

BB2	Ev.rim			1	12	
COLCC	Closed			1	4	
FINE	Closed			1	48	EF Whiteware base
Total				3	64	gm.
Tile				2	154	gm.

Date. 3rd c.

HGA 02 402. Fill of Stakehole 403. Phase 8 Area B

SAMEG	Base	200	260	1	108	gm. PIFVIIRIA...IVSF

HGA 02 406. Levelling layer. Phase 6. Area C

BB1	Open form					
	Cooking-pot	220+		3	210	
BB2	Jar					
	CAM305B bowl	270	400	7	196	fresh

FINE	Unguentarium			1	14	deep pink
GAUL	Amphora			1	4	micaceous
LNVCC	Beaker			7	110	
	Beakers	250	370	6	54	
HADOX	Closed	250	400	1	18	
OXWW	Closed			1	20	
SAMLZ	Dr.36	120	200			
	Dr.37			2	30	
SAND	Necked jar			6	288	
Total				35	946	gm.
	Tile			3	24	gm.

Date. c.AD.270-300

HGA 02 409. Primary fill of Pit 436. Phase 6. Area C

BB1	Cooking-pot			1	22	
LNVCC	Beaker			3	68	
Total				4	90	gm.
	Tile			3	106	gm.

Date. mid-late 3rd c.

HGA 02 412. Loose silty sand layer. Phase 8. Area B

LNVCC	Beakers			2	14	
SAMEG	Dr.37			1	6	abraded
TSK	Closed			1	6	
Total				4	26	gm.

Date. 3rd c.

HGA 02 413. Fill of PH.414. Phase 8. Area A

LNVCC	Beaker			1	8	gm.

Date. 3rd c.

HGA 02 417. Loose clayey-silt layer. Phase 6. Area C

BB1	Open form					
	Cooking pot	200	280	2	24	
LNVCC	Indent bkr			2	28	fresh
OXID				1	22	
OXRC	C97 mort	240	400	1	30	
SAND	roll-over rim					
	Jar			2	50	
Total				8	154	gm.
	Tile			1	54	gm.abraded

Date. c.AD.240-280

HGA 02 432. Fill of E/W gully 433. Phase 5. Area C

BB1	B+fl.bowl	240	300	3	126	
	B+fl.bowl	240	300			
	Obt.latticed					
	Cooking pot	225	280	2	96	
BB2	Closed			1	2	abraded
COLCC	Beaker			1	16	
GAUL	Amphora			3	216	
HADBS	Dog-dish	250	370	1	22	
LNVCC	Beaker	250	370			
	Beaker	225	300	2	26	
	Beaker			10	60	
	Beaker			2	8	
OXID	Closed			2	20	w.s.*
SAMLZ	Dr.45 mort	170	200	1	52	
SAND				3	44	
	Closed			4	56	wh.slipped
Total				35	744	gm. grey
	Tile			2	96	gm.

Date. c.AD.250-280

HGA 02 434. Fill of Pit 441. Phase 9. Area B

LNVCC	Beaker	250	370	1	8	gm. Wh.paint Fresh

HGA 02 435. Fill of E/W linear 426. Phase 7. Area B

SAMEG	Dr.37	140	260	1	10	gm.

HGA 02 443. Layer of clayey-silt. Phase 3. Area C

LNVCC	Indent beaker			2	20	gm. fresh

HGA 02 445. Poss demolition layer. Phase 6. Area C

BB1	Open forms			4	166	
COLCC	Beaker base			1	78	
FINE	Closed			1	8	EF Whiteware
SAMEG	Dr.33	140	260	1	40	
SAND	Closed			2	24	
	Closed			1	6	
Total				10	322	gm.
	Imbrex			1	58	gm.

Date. mid-late 3rd c.

HGA 02 446. Poss floor layer. Phase 8. Area B

COLCC	Closed			1	6	
SAND	Closed			1	6	
Total				2	12	gm.

Date. 3rd c.

HGA 02 447. Layer of silty sand. Phase 3. Area C

BB1	Jar			4	68	
COLCC	Closed			1	20	
SAND	Jar			3	58	
Total				8	146	gm.

Date. 3rd c.

HGA 02 448. Demolition layer. Phase 8. Area B.

AHFA	Ev.rim	270	400	1	14	gm.

HGA 02 449. Fill of Pit 450. Phase 8. Area B

COLCC	Beaker			1	4	gm.

Date. 3rd c.

HGA 02 452. Demolition layer. Phase 8. Area B

FINE	Closed			1	4	gm.

HGA 02 453. Demolition layer. Phase 8. Area B

BB1				1	4	
GAUL	Amphora			1	100	
HADG	Dog-dish	250	400	1	16	
HOO	Flagon	43	250	1	28	
LNVCC	Beaker	250	370	3	8	
SAMLZ		120	200	1	4	
SAND	Jar	270	370	2	22	fresh pendant rim
Total				10	182	gm.
	Tile			1	8	gm.

Date. c.AD.250-275+

HGA 02 463. Fill of Pit 464. Phase 9. Area B

AHFA	Cl.3B Jar	270	400	2	22	gm. W/s
	Tile			1	66	gm.

HGA 02 465. Levelling layer. Phase 6. Area C

BB1	B+Fl bowl	270	300			
	Cooking-pot	280	350	2	66	
LNVCC	Flagon	270	400	5	178	fresh***
MOSL	Beaker	200	276	1	2	
OXMO	M17 Mortarium	240	300	1	82	
SAND	Jar			1	54	
Total				10	382	gm.

Date. c.AD.270-300

HGA 02 466. Poss floor layer. Phase 7. Area B

EIFL	Closed	200	270	1	24	fresh
FINE	Beaker base			1	20	VF pink
SAND	Dev b+fl bowl	250	400	3	44	fresh
Total				5	88	gm.
Tile				1	62	gm,grey

HGA 02 467. Demolition layer. Phase 13. Area C

AMPH	Corrugated Amphora	200	400	3	110	fresh. Magnus House 1.19
BB2	Ev.rim Dev b+fl bowl	270	400	2	152	
SAND	Closed			1	34	
OXRC	C46 platter	340	400	1	34	fresh
Total				7	330	gm.

Date Late 4th c.

HGA 02 470. Layer of soft sandy silt. Phase 8. Area B

CCW2	Beaker	250	300	1	2	fresh
LNVCC	Closed			2	10	
SAND	Jar			2	40	
Total				5	52	gm.

HGA 02 472

LNVCC	Beaker			1	12	gm.

HGA 02 477. Layer of sandy-silt. Phase 6. Area C

BB1	Open form			3	64	v.coarse
COLCC	Beaker			1	14	
LNVCC	Beakers	250	370	4	28	x2 bead-rims
SAMEG		140	260	1	4	
SAND				2	10	
Total				11	120	gm.

Date. mid-third c.

HGA 02 485. Demolition layer. Phase 6. Area C

BB1	Jar			15	250	fresh
GAUL	Amphora			3	60	
HADOX	Beaker	250	400	2	6	
LNVCC	Slit indent bkr Hunt cup	160	250	13	72	
NGGW	Closed	200	270	1	8	fresh
SAMEG	Dr.33			1	10	
Total				35	406	gm.

c.AD.250-270

HGA 02 488. Demolition levelling. Phase 8. Area B

AHFA	Closed	270	400	1	2	
BB1	Open form			1	34	abraded
BB2	Jar	120	270	1	6	
LNVCC	Closed			1	6	
MOSL	Beaker			1	4	
SAMEG	Dr.37			1	12	abraded
SAND	Open form			2	6	
	Ev.rim			1	8	
TSK	Closed			1	6	
Total				10	84	gm.

HGA 02 489. Levelling layer. Phase 5. Area C

BAET	DR20			1	244	
FINE	Closed			2	46	
SAMLZ	Dr.38	140	200	3	26	
SAND	Closed			3	44	
Total				9	360	gm.

HGA 02 490. Layer of soft clayey-silt. Phase 5. Area B

AHFA	Closed	270	400	1	2	
	Store-jar	330	400	1	46	
Total				2	48	gm.

Date. should be late 3rd c. Is Store-jar intrusive?

HGA 02 491.Fill of PH492

LNVCC	Indent beaker			1	12	gm. fresh

HGA 02 496. Fill of 519. Phase 4. Area B

BB1	Open form			1	16	
BB2	Closed			1	2	
GAUL	Amphora			2	50	
LNVCC	Hunt cup	160	250	2	10	
SAMLZ	Dr.38 bowl	140	200			
	Dr.37 bowl	120	200	4	54	
	Dr.45 mort	170	200	1	6	
Total				11	138	gm.

Date Early 3rd c.

HGA 02 499. Fill of linear 493. Phase 8. Area B

SAND	Closed			2	6	gm.

HGA 02 500. Fill of Pit 501. Phase 8. Area B

BB2	Dog dish	270	370	1	20	gm.

HGA 02 507. Fill of feature 508. Phase 11. Area C

BIV	Amphora			1	4	abraded
BB2	Dev.b+fl bowl	270	400	2	68	fresh
SOLL	Mortarium	150	250	3	694	
SAND	Jar	180	370	4	66	
Total				10	832	gm.

Date c.AD.270-370

HGA 02 511. Primary fill of feature 508. Phase 11. Area C

LNVCC	Beaker	250	370	1	4	w.p.
	Beaker	230	400	1	2	
SOLL	Mortarium	150	250	1	134	
OXMO	M18 mortarium	240	300	1	72	
Total				4	212	gm.

Date c.AD.250-370

HGA 02 512. Fill of 513. Phase 8. Area B

MOSL	Gp 34 beaker	200	276	3	22	gm.fresh

HGA 02 514. Levelling layer. Phase 11. Area C

AHFA	Open forms	270	400	2	112	
BB1	Dev b+fl bowl	240	300+	1	42	Abraded
LNVCC	Beakers			2		fresh
	B+fl bowl	270	400	1	82	fresh
MOSL	Beaker	200	276	1	6	fresh
OXID	Closed			1	14	
OXMO	Mortarium	240	400	1	66	grey
SAND	Jars			10	190	
	Dishes	270	400	2	66	
POST-MED		1500	1700	2	48	
Total				23	626	gm.

Date c.AD.270-400

HGA 02 517. Firm silty layer. Phase 11. Area C

AHFA	Closed	270	400	1	8	
BB1	Cooking-pot	220	280	4	60	
COLCC	Closed			1	4	
FINE	Beaker	230	300+	1	8	Grey fired Pol black
GAUL	Amphora			1	36	
LNVCC	Beaker			1	6	
OXMO	Mortarium	240	400	1	98	grey
SOLL	Mortarium	150	250	2	700	
SAMEG	Dr.45 mort	170	260	1	244	burnt
SAMLZ	Dr.44	150	200	1	8	
Total				14	1172	gm.

Date c.AD.270-400

HGA 02 518. Fill of Pit 540. Phase 8 Area B

BB1	Incip b+fl bowl	210	280/90	4	64	
BB2	Open form	170	270	2	24	N.Kent

GAUL	Amphora			1	50	
LNVCC	Beaker			2	16	
MOSL	Beaker	200	276+	1	2	
SAM	Dr.37			1	6	abraded
SAND	Dev b+fl bowl	270	400			
	Ev.rim			4	50	
	Closed			1	4	
Total				16	216	gm.

Date c.AD.270-300

HGA 02 521. Demolition layer. Phase 7. Area B

GAUL	Amphora			2	146	gm. fresh

HGA 02 524. Silty sand layer. Phase 7. Area B

BAET	DR20	170	300	1	140	
BB1	Open form			1	6	
LNVCC	Beaker			1	4	
NARS	Hayes 50 dish	250	350/400	1	4	
SAND	Closed			2	20	
Total				6	174	gm.

Date. c.AD.250-300

HGA 02 525. Silty sand layer. Phase 7. Area B

LNVCC	Beaker	250	370	1	4	gm.w.p

HGA 02 531. Fill of PH 532. Phase 6. Area B

BB1	C'pot			1	20	gm.fresh

HGA 02 537. Sandy silt with chalk rubble. Phase 11. Area C

LNVCC	Beaker	250	350	3	62	gm.fresh. Perrin 173

HGA 02 538. Firm silty layer. Poss surface. Phase 6. Area C

GAUL	Amphora			1	18	abraded
LNVCC	Indent beaker	250	370	1	2	
SAND	Closed			2	16	
Total				4	36	gm.

HGA 02 541. Fill of N/S Linear 542. Phase 6. Area B

LNVCC	Beaker			1	8	gm.

HGA 02 543. Fill of PH 544. Phase 6. Area B

AHFA	Dog-dish	270	400	1	30	fresh
GROG	Fl.dish	370	400+	1	42	fresh
OXID	Closed			1	40	
SAND	Narrow-necked Jar	150	400	6	236	fresh
Total				9	348	gm.

HGA 02 549. Layer of building debris. Phase 5 Area B

AMPH	Amphora			1	64	gm.

HGA 02 550. Layer. Phase 8. Area B

CCW2	Closed			1	6	
OXMO	M17 mortarium	240	300	1	92	fresh
SAND	Jar	180	370	1	6	
Total				3	104	gm.

Date. c.AD.240-300

HGA 02 554. Fill of Pit 555. Phase 11. Area C

AHFA	6A-5 Dish	270	300			
	6A-13 Dish	270	400	5	160	
	5B-8 bowls	270	400	7	396	fresh
BB1	Dog-dish	270	370			
	Ev.rim	220	280	7	122	
	Dog dish	270	400	1	16	
COLCC	Beaker			1	6	
FINE	Beaker	250+		3	102	EF cream-grey
	Closed			1	12	
	Beaker	250	400	2	58	Fresh.CAM 395
HADOX	Closed	200	400	1	4	
LNVCC	Beaker	250	370	3	6	bead rim indented

	Beaker			1	18	
OXMO	M17 Mortarium	240	300	2	472	burnt
SAND	Flagon hdle			1	48	Wattisfield
SAND	Jar	270	400	2	66	fresh
SAND	Closed			3	48	
Total				40	1534	gm.
	Tile			5	342	gm.

Date. c.AD.270-370

HGA 02 557. Layer of wall plaster. Phase 7. Area B

LNVCC	Beaker	250	370	3	8	w.p
	Closed			2	6	
Total				5	14	gm.

HGA 02 559. Fill of Pit 560. Phase 5. Area C

SAND	B+fl bowl	270	400	3	172	gm.

HGA 02 563. Poss beaten earth floor. Phase 5. Area C

GAUL	Amphora			1	70	
NARS	Hayes 50A	250	350	1	28	fresh
Total				2	98	gm.

HGA 02 579. Fill of E/W linear 578. Phase 8. Area B

AHFA	Jars	270	400	6	84	
BB1	Cooking pot			1	12	
COLCC	Beaker			1	4	
LNVCC	Beaker	250	370	2	22	
OXMO	Mortarium	240	400	1	26	
OXRC	C48 Bowl	270	400	1	52	fresh
OXWW	Closed			2	24	
SAND	Jar	250	300+	2	36	
				2	46	
	str.sided dish			1	28	fresh coarse
	Dog-dish	300	400	1	18	
	Jar	270	370			
	Rolled over rim			5	70	
TSK	Jar	180	370	1	14	
Total				26	436	gm.

Date c.AD.270-300

HGA 02 582. Layer of silty-sand and gravel. Phase 5. Area B

BB2	Open form			1	40	
SAMLZ	Dr.31	170	200	4	100	fresh
Total				5	140	gm.

HGA 02 583. Poss beaten earth floor. Phase 11. Area C

Tile				4	116	gm.

HGA 02 584

BB1				2	18	gm.fresh

Date. ?Late 3rd c.

HGA 02 586. Fill of N/S Beamslot 587. Phase 7. Area B

LNVCC	Beaker			1	6	abraded
VRW	Bowl			1	34	
Total				2	40	gm.

HGA 02 588. Op sig floor. Phase 7. Area B

BB1	Open form			1	8	
LNVCC	Hunt cup	160	250	1	12	
OXID	Closed			1	12	abraded
Total				3	32	gm.

HGA 02 590. Fill of Pit 591. Phase 5. Area C

BB1	Cooking-pot	240	280	3	66	
GAUL	Amphora			3	326	micaceous corrugated
LNVCC	Beaker	230	370	3	8	
	Misc beakers	230	300	10		
SAND	Flat rimmed jar					
		200	270	24	1198	coarse,fresh one pot

VRW	Necked jar	200	250	1	50	
Total				44	1648	gm.
	Tile			2	14	gm.

Date c.AD.240-270

HGA 02 592. Fill of E/W linear.Phase 4. Area B

SAMLZ	Dr.37	120	200	1	24	
SAND	Closed			1	6	
VRW	Flagon	50	250	1	12	fresh
Total				3	42	gm.

HGA 02 595. Demolition debris. Phase 13. Area D

AHFA	Cl.1C Store					
	Jar	270	400			
	Cl.3B Jar	270	400			
	Cl.5B bowl	270	400	5	120	fresh
BB1				1	2	Abraded
MARBL	Bowl			1	12	
SAMLZ	Dr.31	150	200	1	4	
?POST-MED		1500	1700	3	174	Fresh
Total				11	312	gm.
	Tile			2	24	gm.

HGA 02 600.Floor make-up. Phase 7. Area B

LNVCC	Beaker	250	370	2	14	
TSK	Jar	180	370	2	40	
Total				4	54	gm.

Date c.AD.250-370

HGA 02 605. Fill of PH 606. Phase 4. Area B

BB2	Open form	170	270	1	4	gm.

HGA 02 607. Demolition debris. Phase 13. Area D

AHFA	6C2 Dishes	370	400+	4	148	fresh
	6C2 Dish	400+		1	30	fresh h.m.
	5C.3 Strainer	270	400	5	150	fresh
	6A.5 Dish			3	108	fresh
OXMO	M17 Mortarium	240	300	1	220	fresh,burnt
OXRC	C100 Mortarium	300	400	1	72	fresh
SAND	Dev b+fl bowl	300	400	1	114	fresh
Total				16	842	gm.
	Tile			1	94	gm.encaustic used

date. c.AD.400+

HGA 02 608. Loose make-up layer. Phase 7. Area B

AHFA	Cl.3B	270	400	1	28	
BB1	Dog-dish	200	300+	3	54	
LNVCC	Beaker			2	16	
SAM				1	6	
SAND				1	22	Fresh
Total				8	126	gm.

Date c.AD.270-300

HGA 02 613. Fill of curvi-linear feature 618. Phase 5. Area C

BB1	Open form	200	300	1	18	
GAUL	Amphora			3	22	micaceous
OXID	Closed			1	2	
Total				5	42	gm.

HGA 02 617. Trample layer. Phase 11. Area C

FINE	Bowl			1	28	
BB1	Dog-dish			2	36	abraded
BB2	Ev.rim	170	250	2	60	
Total				5	124	gm.
	Tile			1	10	gm.

HGA 02 621. Compacted silty clay layer. Phase 11. Area C

AHFA	Beaded-and-fl					

	Bowls	270	400			
	Ev.rim	270	400	3	76	
BB1	Dog-dish	270	370	1	30	
MAYEN	Gose 469 dish	370	400	1	46	
OXMO	M22 mortarium	300	400	2	122	
SAND	Jar			2	50	
Total				9	324	gm.

Date. c.AD.300-370

HGA 02 633. Fill of Pit 634. Phase 6. Area C

LNVCC	Beaker	230	300+	2	50	gm.fresh

HGA 02 640. Demolition dump. Phase 5. Area C

AHFA	Cooking-pot	270	400	1	64	fresh
LNVCC	Beaker	250	370	1	6	
SAND				1	8	
?GAZA	Amphora			1	8	rilled
Total				4	86	gm.

Date. c.AD.250-300

HGA 02 643. Levelling layer Phase 3. Area C

BB1	Open form			2	250	fresh
OXRC	Bowl	240	400	1	68	
SAMEG				1	18	
SAND				1	8	
Total				5	344	gm.

HGA 02 644. Make-up layer. Phase 5. Area C

BB1	Cooking-pot					
	Dog-dish	200	300	3	34	
GAUL	Amphora			1	36	mic.ribbed
LNVCC	Indent bkr			3	22	
SAM	Dr.37			2	20	
SAND	Jar			2	32	
Total				11	144	gm.

HGA 02 645. Compacted gravel. Phase 6. Area C

SAND	Jar base			1	130	gm.

HGA 02 649. Fill of Pit 650. Phase 4. Area B

AMPH	Amphora			1	162	neck ground down, perf body
NARS	Hayes 50 dish	250	350	1	12	fresh
SAMLZ		120	200	1	4	Abraded
SAND	Jar			3	46	coarse
Total				6	224	gm

HGA 02 652. Fill of E/W linear 653. Phase 6. Area C

SAND	Dog-dish	270	370	1	48	Rettenden
	Closed			1	12	micaceous ?Wattisfield
Total				2	60	gm.

HGA 02 654. Fill of Pit 655. Phase 4. Area B

MOSL	Beaker	200	276+	1	6	gm.

HGA 02 660. Fill of PH661. Phase 5. Area B

LNVCC	Beakers			2	8	
NAFR	Amphora	200	400	3	134	
MOSL	Beaker	200	276+	1	2	
Total				6	144	gm.

Date c.AD.200-270

HGA 02 662. Layer of sandy silt. Phase 6. Area B

BB2	Dog-dish	270	370	2	28	fresh
LNVCC	Beaker			2	2	fresh
Total				4	30	gm.

HGA 02 664. Layer of silty-clay make-up. Phase 6. Area C

BB1	Dog-dish	200	270	1	18	
LNVCC	Beakers			2	26	
Total				3	44	gm.

HGA 02 677. Layer of silty-clay make-up. Phase 6. Area C

BB2	Ev.rim	120	270	6	16	
OXMO	Mortarium	240	300	1	18	grey
SAMLZ	Dr 46 mort	170	200	1	10	
SAMLZ	Curle 23	120	200	1	26	fresh
Total				9	70	gm.

Date c.AD.240-300

HGA 02 679. Fill of PH678. Phase 5. Area B

SAND	Closed			2	8	gm.

HGA 02 684. Beaten earth floor. Area C. Phase 3

BB1	Open form			1	22	abraded
GAUL	Amphora			14	126	abraded
LNVCC	Cornice beaker	160	250	10	76	fresh
OXPA	P24 Bowl	240	400	4	46	
Total				21	270	gm.

Date. c.AD.240-260

HGA 02 687. Poss floor layer. Phase 4. Area B

BB1	Jar			1	6	
	Dog-dish			4	98	
EIFL	Jar	200	270	6	56	fresh
FINE	Closed			7	22	orange fir buff
GAUL	Amphora			8	194	
HADOX	Closed	250	400	1	6	
LNVCC	Box lid			3	12	
MOSL	Beaker	200	276+	4	12	
OXRC	Beaker	240	400	3	28	
SAMEG	Dr.37			4	62	
SAND	Store jar			1	220	abraded *
SAND	Pentice beaker	250	370	5	34	
Total				47	1054	gm.broken up
	Briquetage			1	27	gm.

Date. c.AD.250-270

HGA 02 704. Layer of soft sandy-silt. Phase 5. Area B

BB1	Dog-dishes	200	300+	2	44	
BB2	CAM40A Dish	120	270	11	198	fresh one dish
LNVCC	Pentice beaker	250	370			
	Beaker			10	72	
SAND	Dog-dish			1	6	
	Store-jar			1	58	abraded
Total				25	378	gm.

Date. c.AD.250-300

HGA 02 705. Levelling silty-sand layer. Phase 5. Area B

BB1	Open form			4	46	gm.fresh

HGA 02 710. Op.sig floor. Phase 5. Area B

BB2	Ev.rim	170	270	1	8	fresh
NAFR	Amphora	200	400	1	18	
Total				2	26	gm.

HGA 02 711. Cobbled chalk surface. Phase 3. Area C

MICA	Closed			1	8	gm. buff

HGA 02 719. Layer of silty clay. Phase 6. Area C

BB2	Beaker base			1	38	fresh
LNVCC	Beaker	230	370	1	4	
SAND				1	4	Abraded
Total				3	46	gm.

HGA 02 721. Levelling layer. Phase 5. Area B

BB1	Open form			1	30	fresh
BB2	Open form	170	270	2	38	
EIFL	Jar	200	270	1	52	
FINE	Closed			1	18	whiteware
GAUL	Amphora			5	150	mic.ribbed
AMPH	Amphora			1	72	
SAMEG	Dr.37s	200	260	2	84	fresh

SAMLZ	Dr.45 mortarium	170	200	5	96	
SAND	Jars			10	244	
Total				28	784	gm.
Tile				2	44	gm.

Date. c.AD.200-270

HGA 02 724. Layer of soft sandy silt. Phase 5. Area B

OXID	Closed			1	4	gm.abraded

HGA 02 725. Poss E/W wall. Phase 5. Area B/C

BB1	Dev b+fl bowl	240	300	1	50	
LNVCC	Beaker			2	22	
Total				3	72	gm.

HGA 02 726. Layer of firm silty-sand and gravel. Phase 5. Area C

GAUL	Amphora			1	8	
SAMEG	Dr.37	230	260			
	Dr.31	150	260	4	64	fresh
Total				5	72	gm.
Tile				1	4	gm.

Date c.AD.230-260

HGA 02 737. Layer of sandy silt. Phase 4. Area B

BB1	Dog-dish	200	300	1	66	fresh
GAUL	Amphora			7	168	abraded
SAMLZ	Dr.37			4	44	fresh
SAND	Store-jar			1	154	
Total				13	432	gm.
Tile	Imbrex			1	124	gm.

HGA 02 738. Fill of Pit 743. Phase 4. Area B

CGBL	Beaker	150	200+	4	18	fresh
EIFL	Jar	200	270	1	18	fresh
GAUL	Amphora			2	120	fresh
NGGW	'Bol carenee'	200	270	2	30	fresh
NGWH	Closed			1	12	
NAFR	Amphora	200	400	1	20	ribbed
Total				11	218	gm.

Date. c.AD.200-270

HGA 02 740. Demolition dump. Phase 5. Area C

BB1	Open form			2	98	fresh
GAUL	Amphora			2	266	fresh
LNVCC	Beaker			1	10	fresh
NARS	Hayes 50 dish	250	350	1	32	fresh
SAND	Indent beaker	170	250	3	148	
Total				9	554	gm.
Tile	imbrex			1	12	gm.

Date c.AD.250+

HGA 02 749. Firm silty sand layer. Phase 3. Area B

BAET	DR20			2	250	
GAUL	Amphora			2	94	
Total				4	344	gm.

HGA 02 750. Fill of beam-slot 751. Phase 3. Area B

AMPH	Amphora			1	128	
BB1	Cooking-pot	225	250	4	162	fresh
	Open form			1	44	
BB2	Ev.rim	120	190	1	12	
CGBL	Beaker	150	200+	5	62	
FINE	Closed			1	10	
GAUL	Amphora			11	286	mic,ribbed
LNVCC	FNBeaker	160	270	1	6	
	Indent beaker			1	14	
MOSL	Indent beaker	200	276+	2	10	fresh
NAFR	Amphora			1	50	
NGGW	Vase tronconique					
		200	270	7	56	fresh

NGWH	Closed			1	4	
PRW	Platter			2	106	fresh
SAMEG	Dr.37	230	260	8	242	fresh
	Dr.37			1	36	fresh
	Dr.31	200	260	6	84	fresh
SAMLZ	Dr.31	150	200	1	18	
TRIP2	Amphora	200	400	31	1398	fresh,riveted Stamped on neck
VRW	Closed			6	56	fresh
Total				92	2784	gm.
Tile				2	40	gm.

Date. c.AD.230-260

HGA 02 752. Firm clayey-silt make-up. Phase 3. Area C

BAET	DR20			1	30	
BB1	Dog dish			2	48	
GAUL	Amphora			7	208	
OXMO	Mortarium	240	400	1	68	grey
SAMEG	Dr.38	140	230	3	8	
SAMLZ	Curle 21	150	200	6	32	
SAND	Closed			1	8	
Total				21	402	gm.
Tile				1	10	gm.

Date. c.AD.240+

HGA 02 753. Poss floor layer. Phase 3. Area B

GAUL	Amphora			2	248	burnt
LNVCC	Corniced bkr	160	250	2	20	fresh
Total				4	268	gm.

HGA 02 754. demolition layer. Phase 3. Area B

SAMEG	Dr.37	230	260	1	22	gm.

HGA 02 762. Fill of PH 763. Phase 5. Area B

LNVCC	Beaker			1	4	fresh
OXID	Open form			1	6	abraded
Total				2	10	gm.

HGA 02 766. Layer of sandy clay. Phase 5. Area B

BB2	5C4.3 Bowl	170	250			
	5C1 Bowl	150	250			
	5F3 Dish	130	270	11	140	fresh
NAFR	Amphora	200	400	1	70	
SAND	Ev.rim	170	270	7	128	fresh
Total				19	338	gm.

Date c.AD.200-270

HGA 02 767. Layer of silty sand and gravel. Phase 3. Area B

BB1	Cooking-pot	225	300+			fresh
	Dog dish	200	300+	6	162	gm.fresh

HGA 02 778. Fill of ritual pit 779. Phase 3. Area B

TRIP2	Amphora	200	400	4	686	gm.fresh

HGA 02 780. Fill of PH 781. Phase 4. Area B

SAMLZ	Dr.37			2	18	gm.

HGA 02 783. Silty sand make-up. Phase 3. Area B

SAND	Jar			2	28	gm. fresh

HGA 02 785. Fill of PH786. Phase 4. Area B

Tile	Imbrex			1	158	gm. painted ?cinnabar

HGA 02 792. Fill of Pit 793. Phase 4. Area B

BB1	Open form			1	14	
GAUL	Amphora			1	102	
MOSL	Beaker	200	276+	1	4	
NAFR	Amphora	200	400	3	146	
VRW	Amphora			3	116	
Total				9	382	gm.

Date c.AD.200-270

HGA 02 795. Demolition debris. Phase 13. Area D

BB1	Dev b+fl bowl	240	300	2	70	gm.fresh

HGA 02 797. Mortar floor. Phase 4. Area B

LNVCC	Corniced beaker	160	270	1	4	
NKWS	Closed	50	270	1	2	
Total				2	6	gm.

HGA 02 800. Silty sand layer. Phase 5. Area B

SAMEG	Dr.37	230	260			
	Dr.33	200	260	3	64	gm.

Date. c.AD.230-260

HGA 02 801. Demolition debris. Phase 13. Area D

HADOX	Flagon	250	400	1	26	gm.

HGA 02 804. Fill of PH 805. Phase 3. Area B

LNVCC	Beaker	200	300	1	8	gm.fresh

HGA 02 809. Fill of fire-box. Phase 3. Area C

AHFA	Cl.3B jar	270	400+	5	216	1 pot fresh
LNVCC	Indent beaker			1	8	fresh
Total				6	224	gm.

HGA 02 815

TSK	Ev.rim jar	180	370	1	14	gm. fresh, scorched

HGA 02 819. Fill of N/S Linear 820. Phase 3. Area B

SAND	Jar	200	400	8	100	gm.fresh

HGA 02 825. Compacted silty sand with gravel and chalk. Phase 3. Area C

LNVCC	Beaker			2	18	gm.

HGA 02 828. Fill of Pit 829. Phase 3. Area B

LNVCC	Beaker	250	370	3	42	fresh
OXRC	C23.1 beaker	270	400	2	18	fresh
SAND	Jar			2	24	fresh
Total				7	84	gm.

HGA 02 833. Fill of Beam-slot 834. Phase 3. Area B

BB1	Open form					
	Everted rim			3	24	
FINE	Beaker			1	4	
GAUL	Amphora			1	32	
LNVCC	Beaker			2	6	
NAFR	Amphora			2	148	
Total				9	214	gm.

HGA 02 878. Fill of N/S Linear 879. Phase 4. Area B

BB1	Open form			1	32	
BB2	5E2.1 Dish	150	300	1	84	fresh
COLCC	Beaker			1	12	
LNVCC	Pentice beaker	250	370	1	4	
SAMLZ				1	12	
SAND	Closed			1	10	
Total				6	154	gm.

Date. c.AD.250-300

HGA 02 883. Surface. Phase 3. Area B

SAMEG	Dr.37	230	260	2	30	gm.burnt,fresh

HGA 02 889. Fill of Pit 890. Phase 4. Area B

BB1	Open form			2	58	fresh
LNVCC	Pl.rim beaker	160	250	1	12	
NGGW	Closed	200	270	1	6	
SAND	Closed			1	16	scorched
Total				5	92	gm.

Date. c.AD.200-270

HGA 02 903. Fill of N/S linear 900. Phase 3. Area B

	BB1	Str.sided dish			1	30 gm.abraded

HGA 02 909. Fill of PH 910. Phase 3. Area B

HADOX	Open form	250	400	1	16
LNVCC	Indent beaker			1	2
SAMEG	Dr.37	230	260	3	14
Total				5	32 gm.

Date c.AD.230-260

HGA 02 1018. Same as 765. Phase 13. Area D

Tile				1	22 gm.

HGA 02 1020. Layer of loose silty clay. Phase 13. Area D

OXWS	Mortarium	350	400	2	as 1029

HGA 02 1029. Silty clay fill of robber trench. Phase 13. Area D

OXWS	WC6 Mort	350	400	5	458 fresh
PORD	Rilled jar	330	420	2	52 fresh
Total				7	510 gm.
Tile				1	22 gm.

Date c.AD.350-420

HGA 02 1033. Dump of gravely sandy silt. Phase 13. Area D

AHFA	Rilled jar	330	400	1	16
	Closed	270	400	1	2
MISC	Closed			2	16
OXMO	M22 Mort	300	400	1	34 grey
OXRC	C82 bowl	325	400	1	8
PORD	Rilled jar	330	420	2	58 fresh
SAND				2	22
Total				10	156 gm.

Date c.AD.330-420

HGA 02 1093. Fill of Drain 1094. Phase 11. Area D

PORD	Rilled-jar	330	420	1	74 gm.fresh

HGA 02 1142. Backfill to Drain 1137. Phase 11. Area D

BB1	Cooking-pot			3	80 fresh
LNVCC	Beaker			3	26 fresh,burnt
PORD	Rilled jar	330	420	3	58 fresh
Total				9	164 gm.

HGA 02 1262. Backfill of Wall 1251 robber trench 1274. Phase 13. Area D

AHFA	Ev.rim	270	400	1	34 fresh coarse
	Cl.5B bowl	270	400	3	116
BIV	Amphora			1	4
Total				5	154 gm.

HGA 02 1263. Dump layer. Phase 11. Area D

LNVCC	Closed			1	8 gm.

HGA 02 1300

VRW	Mortarium	150	200	1	138 gm.fresh

Appendix 3 An assessment of the post-Medieval pottery

By Chris Jarrett

Introduction

A small sized assemblage of pottery was recovered from the site (12 boxes). Most sherds are in a good condition, but a small number are abraded, while the size of the sherds range from small to large, but a number of complete vessels are also present. This indicates that while some sherds may be from secondary or tertiary deposition conditions (e.g. derived from garden soils), others were discarded complete or soon after breakage into features. Most individual contexts produced small groups of pottery (under 30 sherds), but there are five medium sized groups (31-100 sherds) and a single large group; [1] (over 101 sherds). All the pottery encountered was either residual Roman wares or dating from the 17th to 19th centuries.

All the pottery (656 sherds and 22 are unstratified) was examined macroscopically and microscopically using a binocular microscope (x20), and recorded in an ACCESS 2000 database, by fabric, form, decoration, sherd count and estimated number of vessels, using standard Museum of London Archaeological Specialist Service fabric codes and dating. The pottery is discussed by its types and its distribution.

Roman

There are 44 sherds of Roman pottery, much of it residual, but where it is recorded on its own then it has been passed on to the relevant specialist.

Post-medieval fabrics and forms

There are a total of 612 sherds of post-medieval pottery, mostly dating to between the mid 17th and late 18th century.

Delftware

Tin-glazed earthenwares (delftware) accounts for 221 sherds of pottery and was all probably made at London pothouses. Tin-glazed earthenware (TGW) was first manufactured in London at Aldgate by Dutch potters in 1570 and continued to be made in the capital until 1846, but was notably in decline by 1800 (Britton 1987). The closest delftware kiln to the site was the Hermitage pothouse, some 700m to the southwest, and was in operation between c.1665-1773. On the site a biscuit ware (BISC) saggar and a single waster sherd in the form of a mid to late 17th-century charger is probably derived from this pothouse. It is not unusual in London to find Biscuit ware and delftware wasters some distance from the nearest pothouse.

Much of the delftware on the site can be sub-divided according to Orton (1988) and other MoLSS codes. These types and the forms they occur in are as follows:

Wanli borders (TGW A), 1612-50: charger.
Purple (manganese) surface (TGW B), 1630-1680: rounded mug.
Plain blue (TGW BLUE), 1630-1680: bowl; small rounded, chamber pot, apothecaries drug jar, straight-sided mug, ointment pots, plates, porringer (type B).
Plain white (TGW C), 1630-1680: chamber pots, pharmaceutical straight-sided jar, ointment pots and posset pot.
Mid-17th century geometrical and polychrome (TGW D) 1630-1680: albarellos, small rounded bowls and chargers.
Chinamen in grasses decoration (TGW F): plates (types I and J).
Lambeth polychrome (TGW G), 1701-11: tea bowls.
Dark blue decoration on light blue background (TGW H) 1690-1710: medium rounded bowls, dishes; fluted dishes (cracknels), plates; (types I, J and octagonal), saucer and tea bowls.
Sponge decorated (TGW SPNG): plates.

There are other decoration types present that do not fall into these categories and are simply coded TGW, but include blue on white designs and other 18th century polychrome wares. The forms are: fluted and medium rounded bowls, cracknels, dishes, late 17th- early 18th-century chargers, a jug and plates (type J).

Surrey-Hampshire Border ware

Pottery from the Surrey-Hampshire borders accounts for 153 sherds and is present as two types, both made together when they were contemporary (Pearce 1992, 1999). First, a whiteware known as Border ware (BORD) dated 1550-1700, was the culmination of a medieval Surrey whiteware potting tradition. This whiteware can be glazed green (BORDG), olive (BORDO) or yellow (BORDY) while a brown-glaze (BORDB) version was in production between 1620-1700. Green-glazed type 2 chamber pots (BORDG CHP2) with broad flat-topped rims are also present and date to between 1650-1700. The forms are as follows:
BORDB: chamber pot (type 2), rounded mugs.
BORDG: bowl or dish, chamber pots (type 1), dishes; medium rounded.
BORDG CHP2: type 2 chamber pots
BORDO: bowl or dish, chamber pot, pipkin.
BORDY: bowls: flared, medium rounded, chamber pot (type 2), dish, pipkins.

The second Border ware pottery type is a redware (RBOR) present in London between 1580-1800, but it does occur in 19th-century dated contexts. It is also present on the site as brown (RBORB) and green-glazed (RBORG) but there is also a higher incidence of 18th-century slip-decorated wares (RBORSL) on this site compared to others. The forms are:
RBOR: two-handled rounded bowl, medium rounded bowl, chamber pots (types 1 and 2), dishes; flared, rounded, jars; handled and rounded, small rounded, a paint pot and a large pipkin.
RBORB: chamber pot, porringer.
RBORG: small carinated dish, porringer.

RBORSL: rounded dishes.

Local coarse red earthenware

From c.1580 the local 16th-century redwares (PMRE) had developed into a higher fired, liberally glazed product (PMR). Production sites for this coarse sandy redware are mostly known from archaeological excavations and documentary evidence in south-east London, such as at Woolwich, Greenwich and Deptford, but also at Lambeth and many of these locations continued production into the 19th and 20th centuries (Nenk 1999). The 95 sherds of this pottery on the site occur in a wide range of forms.
PMR: bowls; two-handled carinated, flared bowls; small, medium and two handled, and rounded, a chimney pot, chamber pots (types 1 and 2), flower pots, jars; small, medium and tall rounded (handled), shouldered, paint pots, pipkins and sugar-cone moulds.

Industrial finewares

The term industrial finewares refer to pottery types made from the mid 18th century onwards at a factory scale of production and although often associated with Staffordshire, they were also made elsewhere in the country. They are present as 53 sherds on the site and are as a number of different types.

Creamware (CREA) was made between 1740-1880 and is present as thirteen sherds.
CREA: bowl, dinner plates and a jar or tankard base.

Pearl ware (PEAR) is a development of Creamware and was in circulation between 1770-1860. There are a number of decorative styles present in this ware and include blue and white wares (PEAR BW), dated 1770-1820 and polychrome painted wares (PEAR PNTD) dated 1770-1860. The forms are:

PEAR: dinner plates, decorated with brown bands on the rim.
PEAR BW: small rounded bowl, oval plate (with a shell-edge rim) and saucer.
PEAR PNTD: teacup (London or carinated shape).

Refined whiteware (REFW) refers to Ironstone, Semi-porcelain and China pottery types and date from 1800 but are still used today. The two sherds of pottery present on the site includes a cylindrical jar used as a container for bought foodstuffs, perhaps even salt. This ware can also be transfer-printed (TPW) and is only recorded here as a single sherd from a saucer with a brown floral print (TPW3) and dates from 1810, but the pattern appears to be mid 19th-century or later in date.

The final industrial fineware present is a single base sherd from a vessel in Yellow ware (YELL), dated 1800-1900. The forms mostly made in Yellow ware were utilitarian and often for the kitchen.

Stonewares

Stonewares are present as 43 sherds on the site and are of a number of different types. The most common is London stoneware (LONS) as 32 sherds and was made between c.1670-1900.
LONS: bottles (19th century ale and blacking types), mug (late 17th-early 18th century), shouldered (shop) jars (mid to late 18th century).

Staffordshire-type white salt-glazed stoneware (SWSG), dated 1720-80 occurs as nine sherds and is in the form of:
SWSG: small and medium rounded bowls, a capuchine and tankards.

There are two sherds from a tankard in Staffordshire brown-stoneware (STBRS), dated 1690-1730 and has at the base of the handle an AR ale mark, denoting Queen Anne's reign 1702-14.

Imports

The imported pottery numbers 25 sherds and while some are mundane, others are fairly exceptional. The most common imported pottery as nine sherds each are from China (as porcelain) and Germany (as Stoneware). All the Chinese porcelain is as blue and white wares (CHPO BW) and all of an 18th-century date in the form of dishes (rounded or small), a plate, saucer and tea bowls.

The German wares are mostly represented as Frechen stonewares (FREC) dated 1550-1700 and all in the form of jugs, but two bartmans are also present with face masks and includes a larger than normal sized vessel. There is also a sherd of Cologne stoneware (KOLS) with a circular medallion depicting the bust of a male and dates to the mid 16th-century. Three sherds are from Spain and include an internally glazed sherd from an olive jar (OLIV), dated 1550-1750 and two sherds are from a coarse gritted ware with an internal olive-glaze (SPOW), probably from an amphora. A single sherd of a dish is in Portuguese faience, indicated by its quality tin-glaze and painting in shades of blue on white. Internally the decoration consists of a Chinese style landscape featuring trees, while on the exterior there are groups of lines reminiscent of petals. Portuguese faience is fairly rare in London, but its find spots are mostly concentrated in this area of the East London waterfronts and large quantities were recovered from a site at 43-53 Narrow Street, Limehouse (site code NHU 99) (Killock and Meddens forthcoming).

There are two sherds of pottery from Italy, both as sherds of North Italian Marbled slipware (NIMS), dated 1500-1750 and are in the shape of open forms, but are not diagnostic to be confident of their actual shape. NIMS is a not an uncommon find in London, but is more likely to be found on East London waterfront sites.

The most unusual and spectacular ceramic find from the site is an Ottoman Kutayha ware (KUTA) tea bowl dating to the early 18th century. It is decorated in blue on white with a simple floral border around the external rim and on the

internal base a composite flower design. On the underside of the base is a 'makers mark' star with eight spokes. Kutayha ware, like all Ottoman and Persian wares, are rare in London, but at least two tea bowls were also present in mid 18th-century dated deposits at 43-53 Narrow Street, Limehouse.

Essex Fine red earthenwares

Three types of fine red earthenware pottery were made at a number of places in Essex, Harlow being the better known of these production centres (Nenk 1999). On the site there are eleven sherds of these fine red earthenwares, firstly as PMFR, traded to London between 1480-1700, as three sherds from a 17th-century jug and a brown-glazed (PMFRB) handle. Secondly there are five sherds of Post-medieval blackware (PMBL), dated 1580-1700 in the form of tygs (a tall, conical multi-handled drinking vessel). Thirdly there is a single sherd of a Metropolitan slipware (METS) dish with part of a spiral design in white slip and it dates to between 1630-1700.

Non-local wares

The category of Non-local wares includes those types of pottery mostly made outside London and its surrounding counties. There are only nine sherds of pottery in this class and the most frequent are as six sherds of Sunderland-type coarseware from a medium sized rounded bowl with an internal white-slip and brown mottled clear-glaze dating to the last quarter of the 18th century. There are two sherds of Combed slipware (COSL), formerly Staffordshire slipware, and dated 1660-1870. It is present in the form of an open shape, but its exact form is uncertain and a large fragment of a small rounded dish. The final non-local pottery type is a Verwood ware (VERW) small rounded jar made in Hampshire.

Porcelain

Hard-paste English porcelain is solely present as a single sherd of a toy plate and is dated 1780-1900.

DISTRIBUTION

The occurrence in contexts of post-medieval pottery is shown in Table 1, where the size of the group is indicated, the date range of the pottery, the latest pottery types date and a suggested deposition date for the group.

There are a small number of intrusive sherds present in Roman dated features.

Phase 1

Area B

Layer [901] produced an intrusive sherd of London stonewares (LONS), dated 1670-1900.

Phase 11

Area A

Fill [127], the latest fill of pit [138] produced a single sherd of Creamware (CREA), dated 1740-1880. A complete Post-medieval redware (PMR) one handled, flared bowl, probably of an 18th century date, was recovered from a secondary fill [137] of the recut ditch [153].

Area B

Fill [240] of the linear cut [249] contained a largely complete plain blue delftware (TGW BLUE) ointment pot of a late 18th-century date.

Context	Size	Date range of pottery types	Latest pottery type date range	Deposition Date
1	L	1550-1900	1800-1900	1690-1720
3	M	1550-1900	1800-1900	1800-1860
101	S	1550-1800	1580-1800	1580-1700
106	S	1550-1800	1630-1680	1630-1680
108	S	1550-1900	1780-1900	1780-1900
114	S	1550-1900	1670-1690	1670-1690
118	S	1580-1900	1690-1800	1730-1780
121	S	1580-1700	1580-1700	1580-1700
127	S	1740-1880	1740-1880	1740-1780
130	S	1550-1900	1630-1680	1630-1680
132	S	1550-1900	1690-1800	1630-1680
137	S	1580-1900	1580-1900	1700-1800
144	S	1550-1900	1580-1900	1580-1700
156	S	1570-1900	1630-1800	1700-1800

180	S	1810-1900	1810-1900	1810-1900
182	M	1550-1900	1701-1711	1701-1711
184	M	1550-1900	1701-1711	1701-1711
186	S	1570-1800	1570-1800	1680-1720
190	S	1550-1900	1690-1800	1690-1720
240	S	1630-1800	1630-1800	1750-1800
247	S	1550-1900	1700-1740	1700-1740
257	M	1570-1900	1770-1820	1750-1775
258	S	1570-1800	1570-1800	1700-1750
303	M	1550-1900	1775-1800	1770-1800
340	S	1480-1900	1690-1800	1690-1700
458	S	1550-1800	1630-1800	1630-1700
901	S	1670-1900	1670-1900	1680-1900

Table 1., distribution of pottery showing the size of the group, the date range of the pottery and the latest pottery-type in the context and the deposition date. S: small (1-30 sherds), M: medium (31-100 sherds), L: large (over 101 sherds).

Phase 15

Area A

Fill [108] of pit [109] has a deposition date of 1780-1900 by the presence of a toy plate in English Hard-paste porcelain (ENPO HP), but it is probably intrusive as the rest of the pottery in this fill is more characteristic of a c.1620-1700 dated group. This is indicated by the presence of Border wares, including the rim of a pipkin (BORDO) but particularly a rounded mug base (BORDB).

Pit [102] produced only two sherds of pottery in its fill as the base of a Red Border ware (RBOR) vessel and part of a Frechen stoneware (FREC) jug, indicating a deposition date of 1580-1700.

Truncating pit [109], cut [107] produced in its fill [106] an assemblage dated 1630-80 by the presence of four vessels in TGW D as two small rounded bowls (probably porringers) and two chargers, one with a possible central landscape design and may be of a Dutch origin. Other contemporary pottery recorded in fill [106] is a BORDG bowl or dish rim, but two other vessels are likely to date to the early or mid 17th century by there corrugated surfaces and are a Red Border ware vessel and Post-medieval black-glazed ware (PMBL) tyg.

Pit [145] produced in its fill [144] a pottery group with a deposition date of 1580-1700 by the presence of Border wares (BORDG and BORDO) as bowls or dishes and Post-medieval redware as a flared bowl with an accidental bichrome glaze and a pipkin handle. Two features truncate pit [145], first the

circular cut [131] has a pottery group dated 1630-1680 containing Border ware, Frechen stoneware, PMR, North Italian marbled slipware and a delftware (TGW D) charger with a blue tulip design. The second feature, cut [13] produced pottery mostly characteristic of the 17th century as Border ware, Frechen stoneware, the base of a Post-medieval black-glazed ware tyg, part of a Post-medieval fine redware jug and a TGW D charger. Of note is part of a Cologne stoneware (KOLS) jug with a medallion featuring a male head and dates to the mid to late 16th-century. It represents one of the earliest sherds of Post-medieval pottery on the site. However, the latest ceramic in the group is a mid 18th-century TGW H plate with a floral design.

Pit [115] produced a collection of pottery in its fill [114] dated to c.1670-90 by the presence of two delftware plates decorated with 'Chinamen in grasses' (TGW F) designs. Other tin-glazed earthenware includes parts of a blue on white fluted dish and a fragment of a mug with an external purple-manganese powdered ground (TGW B). Other pottery types of a 17th-century date include Border wares (BORDG and BORDY) as bowls or dishes, Red Border ware, which includes a porringer and Post-medieval redware as bowls and a jar. Less common wares include a closed form in Combed slipware (COSL) and the lid-seated rim of a Midlands purple ware butter pot.

Pit [136] produced in its fill [156] mostly Tin-glazed earthenware and includes a small sherd from a closed form decorated in blue on white and possibly features a crown. There is also the neck of a TGW BLUE chamber pot and a Biscuit ware saggar, probably from the Hermitage pothouse. The saggar indicates a deposition date of c.1665-1773, but an 18th-century date is more likely.

The possible post-hole [119] contained in its fill pottery of a mid 18th century date, as a Chinese porcelain blue and white plate, and TGW H as a plate and a saucer. There is also a plain blue delftware small rounded bowl and Post-medieval redware as a flared dish with a lid-seated rim and an abraded jar rim. Truncating the latter, post-hole [122] produced only a single sherd of residual 1580-1700 dated Post-medieval fine redware as a handle.

AREA B

The garden-soil [1/180] produced a large assemblage of pottery ranging in date from the 17th to 19th centuries and indicates the soil was cultivated over a long period of time. However, the pottery is not very characteristic of what would be expected to be derived from horticultural soils as there are several vessels with complete profiles; 18th-century tin-glazed bowls and chamber pots and none of the sherds are abraded. The latest pottery is a sherd of 19th century Yellow ware (YELL) and a brown transfer-printed ware (TPW 3) saucer dating from c.1810.

Truncating the garden soil were a number of features containing pottery. Two pits [183] and [185] are inter-cutting and their fills were difficult to distinguish between. The earliest fill [184] and latest fill [182] both produced the latest pottery with deposition dates of c.1701-11 by the presence of delftware with

Lambeth polychrome designs (TGW G) and were in the form of three tea bowls.

The medium sized assemblage from fill [182] produced 93 sherds of pottery representing some 47 vessels. Delftware was the most common pottery type in this feature as 50 sherds (26 ENV's[1]) and the generic wares (TGW) consist of medium-sized rounded bowls, one with an external Chinese-style lobed panel with a grid and dot design. The chargers have simple blue on white debased floral designs, one of which has the characteristics of being a waster, while a late 17th early 18th-century shape (Britton's type E) has the wide foot ring characteristic of the Hermitage pot-house. There is also a fluted dish with a turquoise glaze decorated with blue floral designs, while the plates include the late 17th-early 18th-century type (Britton's type J) and one of these is decorated in style H but with the addition of purple to the floral design. Plain whitewares (TGW C) include chamber pots, four ointment pots, three of which are complete and a posset pot. There are two albarellos in type D, a rounded dish and in the Chinamen in grasses style (TGW F) is a plate (Britton's type J) as well as a dish in style H.

The second most common pottery type in this fill is Border ware as 26 sherds representing nine vessels. These include chamber pots of type 1 (BORDG) and type 2 (BORDG CHP2 and RBOR), bowls (BORDY), dishes (BORDY and RBOR). Post-medieval redware is present as eleven sherds (6 ENV's) and include a type 2 chamber pot, a rounded and shouldered jar, a pipkin, but interestingly there is a small cauldron. The imported wares, as five sherds (five ENV's), produced in this fill some of the most interesting vessels of this type on the site, as the Ottoman Kutahya ware (KUTA) tea bowl and the Portuguese faience (POTG) dish, but also present is a fragment of a Spanish olive jar and two Frechen stoneware Bartman jugs, one being of a larger size than normal. There is also one sherd present from a Metropolitan slipware dish.

Fill [184] produced 45 sherds representing 30 ENV's with delftwares again the most important pottery type as 23 sherds representing thirteen ENV's. Plain-whiteware is present as a chamber pot, style D as three albarellos and a charger. Style H is as the medium rounded bowl also recorded in fill [182], a dish decorated with possible Chinese auspicious symbols and a small sherd from a plate. There is also a blue and white (TGW) floral decorated fluted dish. Border wares as eleven sherds (seven ENV's) is the second most common pottery type in the fill and includes a rounded bowl (RBOR), a dish (BORDG), a flared dish (BORDY) and a type 2 chamber pot (BORDY). There are three sherds of Post-medieval redware from unidentified forms and a single imported sherd as a Chinese porcelain blue and white tea bowl. Confirming the deposition date of the fill is a Staffordshire brown stoneware tankard (as two sherds) with the Queen Anne ale mark, dated 1702-14.

[1] Estimated number of vessels

Pit [187] contained in its fill a single pottery sherd in the form of a late 17th-early 18th century tin-glazed earthenware charger with a blue on white geometrical design, the exterior also having a white tin-glaze rather than a lead-glaze associated with the 17th-century dated forms. Pit [190] is dated c.1690-1700 by the pottery types present, mostly in a very fragmentary state. Delftwares as six sherds (5 ENV's) are fragmentary but do include a style H plate and tea bowl. The five sherds of Post-medieval redware include parts of a bowl or dish and a jar, while the Border wares consist of a BORDG bowl or dish and the complete profile of a medium sized flared yellow-glazed dish. There is also a single sherd of Post-medieval black-glazed ware.

AREA C

The circular masonry structure [6] produced a medium sized pottery group (83 sherds, 26 ENV's) with several intact vessels and dates to between c.1800-60. Industrial finewares as 42 sherds or eleven ENV's are the most common type as Creamwares, Pearlware and Refined whiteware. Pearl wares as 32 sherds (six ENV's) occur as four dinner plates from the same service with brown bands on the rim. A blue and white decorated ware (PEAR BW) is as a saucer with a Chinese style landscape and a polychrome painted ware (PEAR PNTD) small teacup of a London shape has external pink flower decoration. The Creamwares as eight sherds (three vessels) are in the form of a bowl, dinner plate and a jar or tankard base. The refined whitewares, as two sherds, includes the rim of a straight-sided jar for food storage.

Stonewares are the second most common ware in this feature and all as London stoneware that includes two complete bottles, one for ale and dates to the early 19th century and one for blacking (with the rims of two other blacking bottles also present). There are also eleven sherds from a large shouldered jug. Post-medieval redware accounts for ten sherds and five ENV's and includes fragments of a two-handled flared bowl, a chimney pot with a horizontal line of notched rouletting, a complete paint pot with paint residues, but it is also externally sooted. There are also two sherds of PMR sugar-cone moulds from different vessels, but the low concentration of sugar-refining vessels on the site indicates that this industry was in the vicinity but not necessarily on the area of excavation. The Border wares account for fourteen sherds (four vessels) and includes a residual sherd of a BORDY medium rounded bowl, but the Red Border wares include a contemporary two-handled medium-sized rounded bowl with a complete profile, a small rounded bowl of a mid 18th century type and the rim of a small rounded jar.

Pit [341] produced a small group of six sherds representing five vessels. Post-medieval redware as two sherds includes the battered, collared, internally lid-seated rim of a small rounded jar. There is a body sherd of a style H delftware plate, while imports consist of a sherd of a Frechen stoneware jug and part of a handled vessel, possibly an amphora in a miscellaneous Spanish coarse gritted ware (SPOA). A deposition date of c.1690-1700 is suggested for the fill.

The rectangular masonry feature [269] produced a medium sized assemblage of 52 sherds representing 36 ENV's. Many of the vessels present have complete profiles. Delftware is the main pottery type as eighteen sherds (twelve ENV's) and includes a fluted, small rounded bowl with polychrome floral decoration, plain blue wares as a chamber pot, ointment pots, a plate, a type b (convex profile) porringer and large fragments of what may be an apothecary drug jar. Style H delftware occurs as the foot ring from a medium sized rounded bowl, plates, two with a simple profile (Briton's type I) and designs dating to the mid or third quarter of the 18th century. There is also a plate with sponged tree decoration (TGW SPNG), but this example dates to c.1740-50. Red border ware accounts for 13 sherds and eight vessels and is in the form of the base of a chamber pot, a flared dish and a handled rounded jar with a collared rim, its top being lid-seated. There is also a mid 18th-century green-glazed (RBORG) small carinated dish. Unusually well represented in 18th-century features is the slip-decorated Red Border ware (RBOR SL) as four dishes with rounded profiles and all have either zigzag or curvilinear borders on the rim, while two vessels have central curvilinear designs.

The stonewares as nine sherds (six ENV's) are all represented by Staffordshire-type white salt-glazed stoneware (SWSG) in the form of a small and a medium sized rounded bowls, a capuchine and two tankards. Another vessel whose form is uncertain has a splayed base and straight-sided body decorated with fluting using a tool. The same tool was used at a sharp angle to create discrete vertical bands with a diamond pattern. The imported pottery consists of four Chinese porcelain blue and white vessels as a small dish and saucer with landscape designs and two tea bowls, both larger than usual. On one tea bowl the surviving external design consists of rocks and clouds, while internally there is a central rock and flower design, whilst the base has a conch mark. The second vessel has an external floral and fungi design, with an internal central grass design and a debased artemesia leaf mark on the underside of the base. Post-medieval redware is present as five sherds from four vessels and includes two flowerpots; one with a complete profile, but also a flared bowl and a handled, rounded-shaped bowl is recorded. Non-local wares consist of a large fragment of a Combed slipware small dish, but in this ware it may be classified as a large saucer-type vessel. The majority of the pottery in this feature indicates a deposition date of 1750-1775, but here is a Pearl ware oval dish with a shell-edge rim and its even scallop indicates a c.1800-40 dish and therefore this vessel appears to be an intrusive item.

The rectangular rubbish pit [304] produced in its fill a pottery group of 54 sherds representing some thirteen vessels. Red Border ware is the main pottery type as 27 sherds representing some seven vessels. This ware is in the form of two chamber pots with complete profiles, but two other vessels also have a chamber pot shape as a small rounded jar and a paint-pot. There is also an over-sized pipkin with a collared rim and an angled rod handle. Industrial finewares are also present as a Creamware dinner plate and a Pearl ware blue and white saucer dates to the end of the 18th-century by its Chinese landscape design. There are two non-local wares as a Sunderland-type ware medium rounded bowl with an internal white-slip and brown mottled clear-glaze in addition to a Verwood ware small rounded jar. In London stoneware

there is a large shouldered (shop) jar and a plain white pharmaceutical small straight-sided jar. The pottery group would appear to date to between 1770-1800.

Cut [259] produced in its fill a single sherd of a delftware blue and white bowl decorated with a floral and fruit design and dates to the early 18th century. Truncating cut [259] was a sub-circular pit [248] and its fill produced a pottery group of 23 sherds representing twenty vessels. The delftware occurs as eight sherds with an ENV of seven vessels. This ware is present as a complete plain white (TGW C) ointment pot, style H small and medium rounded bowls, a fluted dish and a plate. There are also two sponged decorated plates. Post-medieval redware as seven sherds represents three vessels in the form of a medium sized rounded bowl, a rounded jar and an unidentified vessel. Imported pottery is restricted to blue and white Chinese porcelain, as the rim of a dish with a probable landscape design and a tea bowl with a 'jumping boy' design. There is also a rim sherd of a yellow-glazed Border ware pipkin. The pottery suggests a deposition date of c.1700-40, but it is in a fragmentary state and its stratigraphic relationship to earlier features containing later pottery suggests that the ceramics in this feature are largely residual.

AREA D

The rectangular cut [459] only produced three fragmentary sherds of pottery in its fill [458]. The pottery consists of sherds of olive and yellow-glazed Border ware and plain white delftware and indicate a c.1630-1700 deposition date.

Potential

The pottery has the potential to date the contexts in which they were found and provide a sequence for them. Much of the pottery is of types usually found in 17th and 18th-century ceramic assemblages, but a small number of uncommon imports are also present. There are also large groups of pottery that allow social comment and activities on the site.

SIGNIFICANCE OF THE COLLECTION

The pottery is moderately significant on a local level but the presence of a Kutahya ware tea bowl is a vessel of national significance as a find spot. It is also suitable for exhibiting in a museum.

Research Aims

- Do the larger assemblages show specific activities on the site?
- How does the HGA 02 pottery groups compare to those from the adjacent Tobacco Dock (TOC 02) site?
- What is the significance of the imports on the site?
- How do the pottery groups relate to documentary evidence for the site?

Recommendations for further work

It is recommended that further analysis is carried out on fills [3] of masonry structure [6], fills [182] and [184] of pits [183] and [184], fill [257] of masonry structure [269] and fill [303] of pit [304]. A publication report should be compiled from the analysis of these features and compared to the pit groups from the TOC 02 site (Sudds 2004). A number of vessels should be illustrated for the publication and are shown in Table 2. The Kutahya ware tea bowl also requires some conservation to remove iron staining that obscures part of the design on the vessel.

Context	Fabric	Form
137	PMR	Bowl, one handled, flared
182	KUTA	Tea bowl
182	POTG	Dish, rounded
182	TGW	Plate
190	BORDY	Bowl, medium flared
257	CHPO BW	**Tea bowl**
257	CHPO BW	Tea bowl
257	PMR	Flower pot
257	PMR	Jar, handled, rounded
257	RBOR	Dish, flared
257	RBOR	Jar handled, rounded
257	RBORG	Dish, small, carinated
257	RBORSL	Dish rounded
257	RBORSL	Dish rounded
257	RBORSL	Dish rounded
257	RBORSL	Dish rounded
257	SWSG	Tank

Table 2. Pottery recommended for illustration

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Appendix 4 Assessment of the clay tobacco pipe

By Chris Jarrett

Introduction

A small sized assemblage of clay tobacco pipes was recovered from the site (2 boxes). The assemblage is in a good condition with very few abraded examples, indicating that the pipes were discarded into rubbish pits soon after they were broken or finished with. In fact a number of pipes also survived with near complete stem lengths. There are unusually on this site more pipe bowls (91 examples) compared to stems and nibs (82 examples) and this may reflect the on site collection policy of this material. Except for three examples, all the bowls could be confidently classified to a type. Most contexts produced small groups of tobacco pipes (under 30 fragments), but one deposit, [1] produced a medium sized group (31-100 fragments)

All the clay tobacco pipes (181 fragments, including nine unstratified examples) were recorded in an ACCESS 2000 database and classified by Atkinson and Oswald's (1969) typology (AO), but 18th-century examples are further defined according to Oswald's (1975) typology (OS). The pipes are further coded by decoration and quantified by fragment count and the bowls are represented by 'Minimum numbers', i.e. if an individual bowl consisted of two fragments, it was counted as one bowl. The bowls are discussed by their type and their distribution.

THE CLAY TOBACCO PIPE TYPES

Context	Size	Date range of tobacco pipes	Date range of the latest tobacco bowl type	Comments
1	M	1660-1710	1680-1710	
3	S	1660-1680	1660-1680	
106	S	1640-1660	1640-1660	
108	S			Only stems (1580-1910)
114	S			Only stems (1580-1910)
132	S	1640-1660	1640-1660	
182	S	1660-1710	1680-1710	
184	S	1640-1740	1700-1740	
186	S	1660-1680	1660-1680	
190	6	1660-1710	1680-1710	
247	S	1640-1740	1700-1740	
257	S	1660-1740	1700-1740	
261	S	1700-1740	1700-1740	
265	S	1700-1740	1700-1740	
340	S	1700-1740	1700-1740	

Context	Size	Date range of tobacco pipes	Date range of the latest tobacco bowl type	Comments
458	S	1660-1710	1680-1710	

Table 1. HGA 02, contexts containing datable fragments, size: (S) small, (M) medium.

17th-century bowls

1640-1600

There are seven AO 10 heeled bowls of this date, and there quality of finish is fair by their burnishing and the majority have complete milling on the rim. A number of variants could be recognised, one with a more bulbous profile and another with a 'heart-shaped' heel.

1660-1680

Three bowl types are present on the site dating to this period and they are the AO 13, AO 15 and AO 18 shapes.

The heeled AO 13 bowls are present as two examples, one of which has more of a barrel shape. There quality is best described as fair while the milling is poor, but the rim of one bowl is damaged. There are seven examples of the spurred AO 15 bowls with a few variants noted. Firstly as a more waisted at the base of the bowl example and another variant whose size falls between the AO 9 and AO 15 types, but it also does not have any milling around its rim. Otherwise the quality of the bowls is fair and most examples have either full or three quarters milling of the rim.

The cylindrical, heeled AO 18 bowls are present on the site as nine examples. There are three variants, either with a straight-sided profile or with a barrel-shape, the third variant is a single occurrence with a longer, more angled bowl and has no milling. The quality of burnishing and finishing of the AO 18 bowls are either poor (four examples), fair (four examples) and with one bowl of a fair to good quality.

From other excavations in this area of East London, AO 18 bowls appear to be the more common type at this time, as AO 15 bowls are more prevalent in areas such as Southwark. However, this site shows that the heeled AO 18 bowl is only marginally more common than the spurred AO 15 bowl.

1680-1710

Two bowl types (AO 20 and AO 22) are of this date and present on the site. Additionally there is also a non-local example that stylistically belongs to this date. Only a single rounded and heeled AO 20 bowl is present with no milling and poor finishing.

There are 43 examples of the cylindrical shaped AO 22 bowls and five variants could be recognised. Variant 1 (20 examples) is defined as having a narrower heel in plan. One of these bowls is notable for having a good finish and also a circular, incuse stamp on the back of the bowl and unusually three letters 'H T A', which do not correspond to the P F initials on the heel. This bowl has been previously recorded at Queenhithe (Atkinson and Oswald 1969, 188) and also at Aldgate (Grew and Orton 1984, Fig. 42.9, 80-81) but has not been ascribed to a maker. Variant 2 (three examples) has a more convex profile at the base of the bowl. Variant three (11 examples) are defined as more barrel-shaped and with a larger heel. Variant four (two examples) is defined as being a sharper angled bowl and the underside is straight with no break in the profile. A fifth variant is present as a single example with a more conical shaped bowl, but the heel is initialled but both letters are illegible.

Generally the quality of the AO 22 bowls is fair, but a small number have a poor finish and only are of a good quality. AO 22 bowls are the most common type for this date, but they developed from the earlier AO 18 bowls and further support the evidence for a preferred cylindrical, heeled bowl in this part of London by the pipe makers and the consumer.

The non-local type bowl is defined as being angled and the same size of the local 1680-1710 bowls, but its main characteristic is its heel, which is narrow and the base angled downwards. The bowl is also straight at the back and rounded at the front. It needs further analysis to determine its origin.

1690-1710

Only the spurred AO 19 bowls date to this period and it is present only as a single example and survives mostly as a heel.

18th century bowls

1700-1740

Twenty-five OS 10 bowls are present and the majority are plain but of a fair or good quality. There are a number of initialled OS 10 bowls and those with crowns above the letters include one where the letters are illegible, but ?, ?I, ? ?W, ?T ?I and W I also exist. William Jackson 1720 and William Jones may refer to the W I example. Plain initialled bowls occur with I G, I W, R H, R M (four examples) and T W. The possible makers for these initials are shown Table 2, but the R M initials almost certainly refer to the Manby family, who are local pipe makers found on other sites in the area, for example Aldgate (Grew and Orton 1984, 82-83). However, it has to be said that these 1700-1740 dated OS 10 bowls occur in features with late 18th-century pottery assemblages (see Jarrett this assessment document). Therefore their dating may need to be reassessed or this type of bowl continues longer in East London.

Initials	No. of Bowls	Possible makers 1700-1740
I G	1	John Giles, 1711, John Greyson/Jonas Gearson 1732, but John Guy 1712, St Dunstans, Stepney is local.
R H	1	Several pipe makers known in 1696 who could have been making pipes into the 18th century (see Oswald 1975, 138), including Richard Huisman senior, Wapping, but no pipe makers with these initials are currently listed in the 18th century.
R M	4	Probably either Richard Manby, 1701-23, or Richard Manby 1729-63, Hermitage bridge, 1746 and Old Montague Street, Whitechapel.
T W	1	Possibly Thomas Wood, 1706-40 Clerkenwell, Thomas Warner, 1715, Thomas Wall, 1732, Thomas Wright, 1732.
I W	1	Several makers are known for this period with the I W initials; James Webb, 1696-1721, Jermiah Wetherby, 1727, Cripplegate, John Waddington, 1730, but John Watts, 1731, Whitechapel is local.

Table 2. HGA 02, list of possible tobacco pipe makers for initialled bowls.

Undated bowls

There are three bowl fragments that were difficult to date as they consist mostly of heel parts, but one heel may be broadly dated to the mid 17th to 18th century.

DISTRIBUTION

All the clay tobacco pipes are recorded in Phase 15 and Areas A to C.

Area A

Fill [114] of pit [115] only produced two pipe stems to give a broad date range of 1580-1910. Similarly, pit [109] produced in its fill [108] only five pipe stems that can be broadly dated 1580-1910. However, truncating fill [108], pit [107] produced in its fill [106] a pipe group dated 1640-60 by the presence of three AO 10 bowls and nine stems. The circular pit [133] has a deposition date of 1640-60 as a single AO 10 bowl and three stems were recorded in its fill [132].

Area B

The garden soil [1/180] produced the largest group of tobacco pipes on the site as 34 fragments, of which there are eighteen bowls as single examples of AO 18 and AO 20 types as well as the non-local example. The rest of the bowls are AO 22 types dated 1680-1710 and includes the example with the incuse stamp 'H T A' on the back of the bowl and the initials P F on the heel. Although the latest tobacco pipes are dated 1680-1710, this is not in keeping with the pottery group from this deposit, which indicates that the garden soil continued in use until the 19th-century.

Truncating the garden soil are a number of pits. Cut [187] produced in its fill [186] a single AO 13 bowl, dated 1660-1680 and pit [191] has recorded in its fill [190] only AO 22 bowls dated 1680-1710 as six examples. The inter-cutting pits [185] and [183] with their poorly differentiated fills [182] and [184] also produced tobacco pipes. Fill [184] produced a total of fourteen bowls in the form of two AO 10, three AO 15, a single AO 19 and five AO 22 bowls. However the latest bowls are three 1700-40 OS 10 bowls, all with crowned initials, one illegible, another with a possible W family name and the other being clearly maker marked I W. Fill [182] produced only bowls as thirteen examples and except for two AO 18 bowls the rest are 1680-1720 OS 22 examples.

The circular masonry feature [6] produced in its fill [3] a single AO 13 bowl dated 1660-1680 but there is also an unclassified heel that appears to be of a mid 17th to 18th century date.

Area C

Cut [459] produced three bowls and 24 stems. The earliest bowl is an AO 15 shorter variant, but there is also a single AO 22 bowl, dated 1680-1710 in addition to an undated heel.

The well [341] has recorded in its fill [340] six bowls all of the 1700-40 dated OS 10 bowls. One bowl has the legible family name P and another has crowned initials, but only the family name ? W was readable.

From the rectangular masonry structure [269], fill [257] yielded a group of 11 bowls and four stems. Apart from two residual AO 15 bowls the other nine bowls are all OS 10 examples and six are initialled. These include single I G, I W and T W examples, while three examples are marked R M. These 1700-40 OS 10 bowls appear to be too early a date for the pottery group dated to the third quarter of the 18th-century it is associated with. Therefore, the OS 10 tobacco pipes may have been manufactured for a much longer time. The R M marked bowls were almost certainly made by two members of the same family; Richard Manby, and the latest of these is documented 1729-63 and working at Hermitage Bridge in 1746. Therefore the R M pipes in fill [257] may refer to his pipes manufactured towards the latter part of his working life.

A stratified sequence of pipes is also present in Area C. Pit [268] contained in its fill [265] two OS 10 bowls, both marked on the heel, one has ? ?I, while the other has possible flowers in relief above the initials ?T ?I. Another example of an R M marked OS 10 bowl was solely present in fill [261] of pit [260]. Truncating the latter and the latest feature in the sequence, pit [248] contained in its fill [247] ten bowls with a wide date range of 1640-1740. The earliest bowl is an AO 10 1640-60 bowl, but as a variant with a heart-shaped heel. There are three examples each of other bowl types; 1660-1680 AO 18 bowls, 1680-1710 AO 22 bowls and the latest 1700-40 OS 1O type. None of these bowls are maker marked.

POTENTIAL

The clay tobacco pipes are an important dating tool for stratigraphy of the post-medieval site. It also throws light on the local tobacco pipe industry.

SIGNIFICANCE OF THE COLLECTION

The significance of the clay tobacco pipes is only of local importance. They could be displayed in an exhibition of the site archaeology, but are not an overly spectacular assemblage.

Research aims

- What do the clay tobacco pipes tell us of the local industry?
- How do the clay tobacco pipes from this site compare to other assemblages, particularly the Tobacco Dock (TOC 02) excavation?

RECOMMENDATIONS FOR FURTHER WORK

The clay tobacco pipes justify a publication report detailing the types, their possible makers and how they relate to the local industry. A small number of illustrations are required to illustrate the publication text and should include the variant AO 15, AO 18 and AO 22 pipes, while the non-local bowl should also be illustrated.

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Appendix 5 Hair curler assessment

By Chris Jarrett

Methodology: The pipe clay hair curler was classified according to Le Cheminant (1978).

Condition: A single complete hair curler was recovered from the site and was in a good condition.

General comments: The single hair-curler was recovered from context [240], S.F. <710> and is of a le Cheminant type 15 (dumbbell) hair curler with a length of 73mm and dated c.1800. It is marked at each end with the crowned initials W B and while these letters are presumed to be associated with a tobacco pipe maker, his or her identity is still unknown.

Potential and Recommendations: Pipe clay hair curlers are an uncommon find usually associated with medium and high socio-economic groups owing to their relatively high cost.

Slightly earlier hair curlers were also recovered as four examples from the adjacent TOC 02 excavation and if the two sites are published together, then a report on all the hair curlers should be compiled. The HGA 02 example should be illustrated for the publication to compliment those from the TOC 02 site.

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Appendix 6 Assessment of the loose and sampled building materials

By Berni Sudds

Estimated total weight: 1,400kg.

Methodology

The building materials were examined using the London system of classification. A fabric number is allocated to each object, specifying its composition, form, method of manufacture and approximate date range. Examples of the fabrics can be found in the archives of PCA and/or the Museum of London. The material was examined under magnification (x20) and quantified by number, measured and weighed. This data is currently recorded on pro-forma sheets but will be entered into a Microsoft Access 2000 database.

Quantity and condition

A very large assemblage of building material was recovered from the site, primarily of Roman date although a small quantity of post-medieval date was also sampled. Following entry onto a database the group can be fully quantified, but until then an estimate of the total weight has been generated and is noted above.

Building material was retrieved from all areas across site although the majority was derived from Area D, the latter containing the remains of a 3rd to 4th century bathhouse building. Much was recovered from the demolition layers sealing this structure although samples were taken from the in-situ remains where stamps, signature marks or inscriptions were identified. The material from Area D is in excellent condition with many complete or near complete forms being recovered. The remaining areas of site produced a few significant groups, although most are generally small and more fragmentary.

Fabrics

The most common fabric group represented in the assemblage is the local London 2815 sandy group. Within this group 2452, 2459a and 3006 occur most frequently although 3004, and the later dated 2459b have been identified. The remainder of the group is largely comprised of late Roman 2453 and 3026 roof tile, the provenance of which remains in question, although other fabrics are evident in small quantity. Infrequent examples from Kent, 2454 and 3022, and Hertfordshire, primarily 3060, are evident in the assemblage in addition to a small number of calcareous and silty fabrics that require further analysis.

Forms

Much of the building material recovered has been re-used but the majority is diagnostic of form. The full size complement of Roman bricks is evident in the

assemblage, although the smaller examples occur most frequently and survive in a better condition. Few *bipedalis* or *sesquipedalis* were recorded but *lydion*, *pedalis* and *bessalis* bricks were numerically well represented. Occasional tapered or voussoir bricks were also recovered.

The roof tile assemblage is equally as large as the brick, formed predominantly of *tegulae* and *imbrices*. Ridge tiles and pierced end *tegula* occur less frequently, as to be expected, and together indicate the building in Area D is likely to have had a pitched tile roof.

Substantial quantities of box-flue tile or tubuli were also recorded. The majority are keyed with crossed vertical, horizontal and diagonal or curvilinear combing. No roller-stamped or knife-scored examples were recovered. Where two adjacent sides remain most can be seen to have side vents, intended to allow the lateral movement of hot air where used in the walls. Two more unusual tiles, resembling half-box flue tiles were sampled but they demonstrate moulding sand on the outside, not the inside as usual ([854], [855]). Both were re-used in pilae stacks within a final phase of extension of the bathhouse. One has a signature mark, formed of a three overlapping semi-circles to one end of the tile and a wavy design down the centre also formed of three lines. The tile also has a small area of possible finger tip graffiti overlapping the signature mark.

Little plaster was retrieved from site, the majority appearing to be concentrated in Area B. Both plain and red painted fragments have been noted during a scan of the small group but more detailed analysis is required. It is unlikely that any of the fragments can be reconstructed.

Fragments of opus signinum flooring have been recovered from both Area B and D. Both areas also produced a small quantity of *opus spicatum* bricks and *tesserae* that might suggest the structures in these areas had herringbone or mosaic floors. So few were recovered, however, that they may simply have been re-used more randomly in less impressive surfaces or structures. A single cut diamond floor tile also recovered from Area B but again may not necessarily have originated from a floor surface.

Tile and brick markings

A substantial number of tiles and bricks are marked, although proportionally they probably account for less than one quarter of the entire assemblage. The majority are deliberately marked or stamped although animal prints, including cat, dog, fox and a cloven hoof from either a deer or goat have been identified on a number of fragments that are likely to be accidental. Fern leaf and raindrop impressions have also been identified, these may reveal information about the process of manufacture but as they occur so infrequently little can be concluded.

Deliberate marks recorded include signatures, tally marks and graffiti. The purpose of signature marks remains ambiguous but the fairly diverse number of types has led to the suggestion that they may be personnel tile maker

marks (Betts 2002, 76). At least twelve different examples have been identified, some more common than others. Single or concentric semi-circular designs occur most frequently, a feature noted throughout London (ibid).

No procuratorial stamps were identified in the assemblage but one brick fragment has a 'V' stamped into the surface that may represent a civilian example (ibid). Tally marks, mostly representing the knife-cut marks on the edges of tile and brick although sometimes cut into the top of tegulae flanges, were rarely identified. Graffiti has been identified on three fragments of brick and tile. Two have been made with the fingertip although they do not appear to form any easily recognisable characters or words. The third piece of graffiti, by far the most detailed and the only example scored into the brick with a pointed tool or stick, is a near complete *pedalis* (292x292x46mm) recovered from demolition layer [646] (SF: 470). The brick has three lines of graffiti and although not translated the script, or at least characters may be cursive Latin, or perhaps more likely Gaulish.

Dating and provenance

The majority of the building material recovered from the bathhouse and across the site in general is dated from the mid 1st to 2nd century but a number of factors indicate that much is actually re-used and consequently later in date. A discussion of the dating of the building material is included under the 'Dating and longevity' section of the discussion for building 1. Within the bathhouse the use of later early/ mid 2nd to 3rd century 2459b material in the fitting out of the original build and presence of a fair quantity of late 2nd to 3rd century roof tile in demolition layers point to a late Roman structure. It is possible that these later fabrics are simply the result of subsequent renovation but evidence for the re-use of the early material and associated pottery dating further suggest a 3rd century date. The building material related to other structures identified remains to be dated and tied into the archaeological sequence.

As much of the building material is re-used the presence of materials from the London area, Kent, Hertfordshire and other sources further a field is not necessarily significant although the composition of the fabric assemblage does indicate that the material is likely to have been salvaged from the London area. It may be useful to make use of the incidence and ratio of signature marks, to help pinpoint a more precise source.

Potential and recommendations

Roman

The Roman building material assemblage from Shadwell demonstrates great potential, both on a regional and national scale. Being of a large size, in excellent condition and importantly associated to structures of known date and function means that the group is ideal for analysis and quantification. The assemblage includes sampled material from the in-situ structural remains and loose fragments from the demolition of bathhouse and other contemporary structures on site. The two sets of material should be integrated, analysed and

discussed together. An outline of the work recommended for publication is listed below.

Part 1

Fabrics

- Table depicting a breakdown of the assemblage by fabric group (in fabric date order).
- Table depicting a breakdown of the fabrics by phase.
- Although re-used provenances to be identified as the relative proportion of different fabrics (generated in the above table) may help to pinpoint the source of salvage (see below).
- Any unusual or unparalleled fabrics to be listed and described.
- The fragments of plaster recovered require further analysis and if possible reconstruction to determine if any designs are represented.
- The small assemblage of sampled stone also requires further analysis, particularly where architectural fragments are evident.

Forms

- Table depicting a breakdown of the diagnostic assemblage by form type.
- Table depicting the relative percentage of form types by fabric group. It was noticed during recording that certain form types appeared to occur predominantly in one fabric group. Is this broadly significant and if so why?
- Discussion of the form range and, given the number of measurable examples, level of standardisation evident in production.
- Analysis and discussion of any unusual form types encountered.

Tile and brick markings

- Quantification of marked tile and brick to include a breakdown by type (signature marks, stamps, tally marks and graffiti).
- Are particular signature marks unique to particular fabric groups and thus production centres?

- Are the signature marks related to individual tile makers or could they represent batch or order marks or have some other significance?

- Are there enough marks to see if different tile makers (*tegularii*) were restricted to making certain types of brick?

- The graffiti will require translation where possible.

Part 2

Dating and distribution

- Tables depicting a breakdown of fabric and form by phase and/ or structure (to include plaster, mortar and stone).

- The above should help to establish the nature and dating of individual structures and any chronological development.

- A discussion of the way in which the salvaged building material has been used will also be important.

Provenance and regional context

The relative composition of the fabric assemblage suggests that much of the building material at Shadwell was salvaged from a structure in the London area but by comparing the composition of the fabric, form and signature mark assemblage with other 1st and 2nd century structures in the region it may be possible to pinpoint a potential source.

Comparison of the assemblage with other large groups of a similar nature in the immediate and regional area will be essential. At the outset parallels need to be made with the assemblage from Tobacco Dock immediately adjacent to HGA. Direct comparison with the building material assemblage from the Huggin Hill baths (Rowsome 1999) and other public buildings in London will also be important.

Illustrations and photographs

To illustrate the publication text approximately fifteen photographs and fifteen illustrations of individual fragments will be required. These will include unusual form types or examples with signature marks, stamps or graffiti.

Post-medieval material

The small post-medieval assemblage from HGA requires little further analysis but should be summarised in the publication and compared with the larger sample of material collected from Tobacco Dock to the west.

Reference

Betts, I. 2002. 'The ceramic and stone building material' in E. Howe 'Roman defences and medieval industry: Excavations at Baltic House, City of London'. *MoLAS Monograph* **7**.

Rowsome, P., 1999. 'The Huggin Hill baths and bathing in London: barometer of the town's changing circumstances?', *Journal of Roman Archaeology*.

Appendix 7 Assessment of the worked wood

By D. M. Goodburn

1. Background

1.1 Readers must consult the main site assessment report for details of the stratigraphy and general information on the excavations carried out by Pre-Construct Archaeology on this site. A Douglas of PCA has kindly provided a provisional outline summary of the stratigraphy and its initial pottery based dating and phasing, together with a multiphase 1:100 plan of key features encountered. Those documents and some aide memoir notes made during two brief site visits by this writer have been used as a provisional frame work for this summary. Thus, it may well be that some revisions may be necessary during the analysis phase. Whilst the general location and corpus of local archaeological information is dealt with in the main assessment report a few comments related to the survival of early woodwork on the site are relevant. It is already clear that the sample of lifted woodwork with which this report is mainly concentrated is nearly all of Roman date and that will be the key focus here.

The site and regional Roman riverine archaeology

1.2 Well known archaeological investigations on the waterfront of the City of London and in some locations along the frontages of the historic islands of N Southwark, have revealed many timber structures preserved by water logging which date to the Roman period. The results of systematic archaeological work since the 1970's have been built upon and refined during the last decade and a clearer picture of the Thames and its upper estuary during Roman times has been increasingly filled in. Of particular relevance here is the largely tree-ring dated evidence for considerable changes in the level of the Thames from the early to late Roman period. Although at lower levels than today the river was still tidal in the London area. It appears that a working assumption that in the vast majority of cases quay, river wall and adjacent working surfaces were set at just above the level of the overwhelming majority of high spring tides, is a useful one. Only very occasional flooding was tolerated. The evidence shows that the level and nature of timber riverside structures, and adjacent surfaces changed greatly during the Roman period from a level generally dry at c. 1.5 to 2.0m OD at the most, in the later 1st century AD to close to 0 OD during the late 3rd and 4th centuries AD. The quays were built increasingly far out into the river into the 3rd century in Londinium but eventually the port moved down stream to find deeper water for access by seagoing craft. By c. the late Saxon period levels are well known to have risen up to or a little over the early Roman levels in the City area. New tree-ring dated excavated evidence just downstream of London at Ebbsfleet, is now showing that the 'normally dry' level was already

much higher at around 1.6m OD by c. 700 AD which correlates with the siting of the port of Lundenwic above Londinium on the river.

1.3 Evidence of Roman riverside activity a mile and a half down stream east of the City had been found at Shadwell where the site of a signal tower was suggested. However, the recent excavations by PCA (HGA 02, and at Tobacco Dock just to the W) close to that site have shown that a much more extensive settlement existed. This included a large masonry bathhouse on this site, earth and timber buildings, metalled yards, burials, wells, ditches and timber drains and foundations. The area is now the most likely site for the late Roman port of London. This means that the OD levels, survival and nature of the woodwork and its dating assumes a greater than usual importance. It is perhaps likely that the life of the settlement as London's later Roman port site would have been relatively short lived at around 100 years?

The general character of the woodwork found

1.4 It would appear that relatively recent de-watering of the area had caused the decay of some of the material, which was therefore often much truncated and sometimes internally decayed. The surviving worked wood can be broken into the following categories; foundation timbers- piles and a sill beam for buildings (mainly from area A), drainage woodwork (from the S side of area D), a miscellaneous stake group from the SW corner of the excavation and a loose plank abandoned on a possible foreshore. Unfortunately any nearby quay frontages would have lain at a lower level to the S and possibly W. The slope of the ditches found indicates that the land must have fallen to the west and then presumably also towards the south and the main channel (see site 1:100 plans and levels). However, at least one of the drains found indicates a fall to the E.

2. Methodology and the character of the specialist record

2.1 Following the site visits by this writer during which the rather decayed nature of much of the woodwork was noted and as a result of finding the large well preserved bathhouse and ensuing preservation in situ considerations, it was decided that only a small representative sample of the woodwork would be lifted for detailed recording and sampling. A total of 13 items were lifted which included either the complete timbers found or sections of them. Others were briefly examined in situ by this writer and planned and photographed in situ by site staff.

2.2 Timber sheets were partially filled out on-site after partially cleaning the often fragile items. These were than held double labelled and double wrapped prior to washing and recording in detail off-site by this writer. All the items were provided with detailed annotated scale drawings on 3 gridded permatrace sheets and copies of the draft timber sheets were corrected and up dated. Due to the decayed condition of the material

none was considered worthy of retention but three tree-ring samples were taken off-site and one species Id sample.

3 Discussion by phase

Phase 2 – 2nd century AD

3.1 The lifted woodwork from this phase constitutes an abandoned oak plank fragment [1303] found laid (or possibly naturally deposited?) on what appears to have been a possible sandy foreshore layer at the extreme south end of the site. This fragment was very weathered and eroded and may have been moved some distance by water. It survived 0.43m long by 185mm wide and 45mm thick it had clearly once been part of a much larger plank. It had two relatively unusual round holes at one end c. 15mm in diameter with a slight nail or bolt head impression around them. The origin of the plank is quite uncertain but 'Romano-Celtic' style boats such as the Blackfriars 1 ship of c. 140 AD were pierced by such large round shank nails whereas smaller square shank nails are typically found in Roman land woodwork. The fragment was tangentially faced, probably originally sawn out from a moderately fast grown tree.

3.2 It may well have simply been driftwood or may have been a chock used to rest other objects on the top of the foreshore?

Phase 3- 3rd century AD

3.3 The woodwork of this phase included a small group of round oak stakes or small piles in the SW corner of the site. The lack of a coherent alignment makes their functional interpretation uncertain. The two lifted examples [1280] and [1281] were both of fairly slow grown slightly crooked oak roundwood and were 102mm and 80mm diameter respectively. Both had similar three facet tips cut with exactly the same badly chipped axe blade over 85mm wide, which left a bold signature ridge 4mm wide. Whatever the structure(s) was it was cheaply and roughly made by Roman standards and may have been for temporary purposes such as to support a building platform?

3.4 In the northern part of the site the remains of earth and timber buildings were found together with foundation timbers of two types, decayed pile tips and a decayed sill beam.

3.5 At the N and south ends of a decayed pile foundation line two closely set pile tips were found to have survived and were lifted, [892] and [895] at the N end and [868] and [869] at the S end. Despite being very decay truncated it could be seen that they were all of oak and hewn with neat four facet square section tips of typically Roman appearance. Pile [869] was hewn from a whole log the others from radially cleft ¼ logs as is often found in timber building foundations at this period

where the ground is relatively soft. If all the piles were originally as large as the best preserved [869] at c. 210mm x 180mm then they would have been fairly large by the standards of Londinium timber framed buildings. Perhaps they were used to support a robbed sill beam over which some form of heavy earthen wall was built (see below). The use of a pair of piles at the corners may have been to provide extra support at key points to prevent the joining walls from moving in relation to each other?

3.6 Timber [845] proved to have been a very decayed oak sill beam from a N-S wall almost in line with the above pile line. The lack of evidence for mortice joints in its upper face suggests that it derived from a largely or completely, pise or mud brick wall rather than one with an extensive timber frame. Such earthen Roman walls are well known from the City such as in the later Regis House quayside warehouses, and timber sill beams have been found used in damp locations underneath them. The beam's lifted dimensions were 1.66mx 210mm x 100mm thick, with a decayed out heart.

Phase 11

3.7 An unusual type of drain was found running E-W at the S end of the excavation Str. [1094] which was rather decayed and compressed but survived moderately intact in places. After careful cleaning it could be seen that timbers [1283] and [1284] where both sections of bored oak pipe with an original bore of around 75mm diameter. They were made from two different sections of radially and tangentially cleft oak log taken from the inner and outer sections of a cleft $1/8^{th}$ section of log. The rough cleft sections were rather decayed but some axe cut marks from very rough trimming were found on [1284]. A number of rather better preserved cleft log pipes have been found in Londinium where they were seen to have been used as clean water pipes rather than drains and to have been joined with sharp iron collars driven into the end grain of each section. Pipe section [1283] was rather longer than has been found in the City at least 1.45m. Pipe section [1284] was found to have c. 70+ surviving tree-rings and sapwood. Two samples were taken from this pipe from each end and it is possible they will provide a relatively close date, as the Roman London sequences are so extensive.

3.8 This drain may actually have been a water supply pipe of some type rather than a drain the relative OD levels are crucial to its interpretation. It appears to have had a fall to the E.

3.9 A simpler type of roughly built plank lined box drain was found just to the S and W and partially excavated Str. [1087]. In which oak plank sides were at least partially supported by oak roundwood stakes and must originally have had some kind of cross bracing and / or lid plank. The bottom of the drain was also plank lined and a very eroded

fragment of one plank was lifted, but not found to have had enough tree-rings for dating.

3.10 Additionally softwood plank off cut labelled [1095] was passed to this writer and was recorded and sampled for species ID but it would appear to be of recent date and is not considered further here.

4. Further work

4.1 It is clear that although a very small sample the importance of the site for understanding late Roman London does warrant sending the three tree-ring samples for dating. A small updated summary contribution to an analysis/publication report could be produced in a maximum of one day including text and a draft interpretative figure or two, after the tree-ring and other work is completed.

5. Acknowledgements

5.1 Thanks are due to A Douglas for showing this writer around the excavations and providing initial stratigraphic information.

Appendix 8 Assessment of the Small Finds

By H. Major

1. Introduction

1.1 The small finds were catalogued as fully as possible at the assessment stage. The finds were mainly Roman, with a few post-medieval examples present. The date of some of the objects is uncertain, as further phasing and context information will need to be reviewed for this purpose.

2. The nature of the Roman assemblage

2.1 The assemblage was dominated by items of personal adornment, and, in particular, by hairpins. There were 82 bone, one copper alloy, and three jet hairpins. This is a large amount compared to the number of other objects present, and a potentially important group. Most of the hairpins have swollen shafts. Greep (1995, 1117) suggests that the production of hairpins with swollen shafts began in the middle of the second century, becoming common in the third century. The majority of the examples present were not very well finished, with either sub-globular heads, or inverted conical heads with a slightly domed top, often crudely facetted. A few types have more complex heads, and are better finished. They include one with a facetted band round the head (323, SF223) and a ring-headed pin (278, SF202). Some of the bone shaft and point fragments could be from needles, but are probably from hairpins. The copper alloy hairpin is a standard type, with a simple knob head, while the two jet hairpins with a surviving head have facetted cuboid heads, the most common form in this material during the 3rd-4th century.

2.2 The group includes two pieces of gold jewellery, an earring (383, SF240) and part of a delicate gold link and bead necklace, both of which must have been prestige items. The earring is complete, retaining its central bead, which has been lost on most examples of this type. The remaining jewellery comprises parts of three copper alloy finger-rings, a possible silver finger-ring (283, SF204), a fine copper alloy chain, an early Roman brooch, a fragment of a copper alloy bracelet, and a possible ivory armlet fragment. The latter piece (196, SF77) is part of a carved cable armlet similar to Roman examples in jet. If from a sealed Roman context, it would be extremely unusual, if not unique in Britain, since bone and ivory bracelets are normally made from bent strips.

2.3 The other personal items represented in this collection are shoes. Groups of iron hobnails came from six contexts, most still in the shoe sole when buried.

2.4 There were no toilet implements recovered, but there was a complete stone palette, probably used for mixing cosmetics (687, SF397). The few items of household equipment present comprise the foot from a small piece of furniture or a stand, in the form of a human foot wearing a sandal, a copper alloy vessel fragment (possibly post-medieval), and a possible iron bucket handle. Two needles, one made from bone, and a possible copper type, were also present.

2.5 The fabric of the bathhouse is represented by two fragmentary iron water-pipe junction collars (contexts 323 and 835). The remainder of the ironwork comprises a small number of tools, fittings and nails. The majority of the lead consisted of offcuts and other waste. Most of this was unstratified, and could be post-medieval. The four small lead weights found could also be post-medieval. The only piece of lead of interest was a possible pendular weight from context 765.

3. Post-medieval finds

3.1 There were a small number of identifiably post-medieval finds, though much of the lead, and some of the unstratified finds may also be post-medieval. Several of the finds were typologically 17th-18th century, including a copper alloy buckle, and a pipe-clay dog figurine.

4. Recommendations for further conservation work

4.1 Some objects will require further conservation work, either complete or partial cleaning, further X-rays, or identification of the material. Table 1 lists the items requiring further conservation work.

5. Illustration requirements

5.1 The number of metal objects for illustration is approximate. Some pieces are not definitely Roman, or may not be deemed to be worth illustrating following cleaning. The detailed provisional list of objects selected for drawing can be found in Table 2. Thirty-eight hairpins have heads surviving, and are potentially worth illustrating, but many of them are almost identical, and only representative examples need be drawn.

Gold – 2 objects
Copper alloy – 10 objects
Lead – 2 objects
Iron – 8 objects
Bone hairpins – 14 examples
Other bone – 3 objects
Jet and shale – 5 objects
Stone – 2 objects

Total – 46 illustrations

6. *Recommendations for further work*

6.1 The archive catalogue will need to be revised following conservation, and the phasing added.

6.2 The assemblage is dominated by items of personal adornment, some of which are of high quality, and it is mainly these that will require further research on parallels and dating. The furniture foot will also require further research.

6.3 The distribution of the hairpins and jewellery will need to be examined. Are they, for example, mostly from drains? The distribution may need to be looked at in conjunction with other classes of objects, such as coins. It would probably be easiest for the staff working on the site report to look at the distributions, as they will be more familiar with the site.

6.4 Preparation of small finds publication report with descriptions of selected objects, and overall discussion of the assemblage.

Reference

Greep, S, 1995, 'Objects of Bone, Antler and Ivory from C.A.T. sites' 1112-1152 in Blockley *et al. Excavations in the Marlowe Car Park and surrounding areas* The Archaeol. of Canterbury Vol. V

Table 1 Objects for further conservation work

Copper Alloy

Context	SF No	
166	18	Finger-ring. This is not worth cleaning because there is little surface left. However, it would be of interest to find out what the bright green substance in the bezel is.
180	39	Finger-ring. The ring is in poor condition, and not worth cleaning, apart from checking to see if there is anything in the bezel.
283	204	Ring. Possibly silver?
326	231	One-piece brooch, foot missing. To be cleaned.
445	287	Chain, probably part of jewellery. To be cleaned.
466	302	Miniature human foot, broken at the ankle. To be cleaned.
496	402	Sheet strip, decorated. To be cleaned.
580	368	Strip bracelet with edge decoration. To be cleaned.
725	415	Probably a stud or rivet with a circular head, possibly dished. To be cleaned.

Iron

Context	SF No	
266	578	Curved bar in two pieces, of variable thickness. This is possibly part of a bucket handle, with the thicker area visible on the X-ray being the grip. *Clean section through thicker part of the rod to check the profile of the section.*
488	356	Rectangular plate, which appears to have a narrow projection spring from one corner. *Part clean to show section and clarify shape (if the context is Roman).*
518	344	***Concreted block. Only part of the object is clearly visible on the X-rays, a ring forming the terminal of the object. It is possibly an L-shaped lift key. A ?nail shaft is also present, overlying the ring, and probably not directly connected with it.*** **Re-X-ray/clean?**
646	426	Socketed chisel. The socket is faceted, giving a hexagonal section. There is mineralised wood surviving in the socket. *A section round the handle should be cleaned to aid the illustrator.*
649	389	***Roughly rectangular block. The side view has a transverse line, dividing the object into a dense half and a less dense half. This suggests that the section may be L-shaped.*** **Clean section**

Bone Objects

Context	SF No	
196	77	Armlet fragment? Is this ivory?

Table 2. Provisional illustration list

Gold

Context	SF No	Description
383	240	Earring.
180	33	Part of a delicate gold and bead necklace.

Copper Alloy

Context	SF No	Description
166	18	Finger-ring
180	39	Finger-ring fragment
326	228	Hairpin.
326	231	One-piece brooch
445	287	Chain, probably part of jewellery.
466	302	Miniature human foot
466	553	Strip, possibly a leg from a small brazier.
496	402	Sheet strip.
580	368	Bracelet
725	415	Probably a stud or rivet with a circular head, possibly dished.

Lead

Context	SF No	Description
339	233	Thick sheet in the shape of a parallelogram
765	418	**Pendular weight?**

Iron

Context	SF No	Description
386	272	Small leatherworker's awl
448	290	Punch.
646	426	Socketed chisel
470	564	**Vessel foot? Draw if Roman**
488	356	Rectangular plate. Draw if Roman?
518	344	**Key? Draw?**
649	389	**Roughly rectangular block. Draw if cleaning reveals anything of interest.**
809	454	L-shaped hinge pivot

Bone Objects

Hairpins

Context	SF No	Description
0	21	Hairpin Disc head
0	22	Hairpin Irregular facetted head, slightly domed on top, above two collars
0	434	Hairpin Biconical head above a single collar
278	202	Hairpin, ring head in the same plane as the shaft.
323	223	Hairpin, sub-globular head with a distinct facetted band round the middle
452	298	Hairpin. Spherical head
549	362	Hairpin. Head with three reels
600	379	Hairpin Flat-topped cylindrical head with facetted sides
554	361	Hairpin, disc head.
256	185	Hairpin. Elongated ovoid head
		Hairpin with inverted conical head (2 examples to be chosen)
		Hairpin with sub-globular head (2 examples to be chosen)

Other

257	194	Antler? One-piece handle in the shape of a truncated cone with the hole at the narrower end There is a very slight groove round the butt, 7mm in from the end L. 70mm, diam 13-24mm, hole diam. 7mm.
521	349	Plaque fragment
196	77	Ivory. Armlet fragment?

Jet and Shale

Context	SF No	Description
140	17	Jet. Segmented armlet bead
396	396	Shale bangle, decorated
434	279	Jet hairpin, small facetted cuboid head
600	380	Shale bangle fragment Decorated.
617	109	Shale bangle, decorated

Worked Stone

Context	SF No	Description
250	170	Whetstone.
687	397	Mixing palette

Table 3 Revised SF list

SF nr with more than one type of object are entered more than once

MATERIAL	CONTEXT	SF NO	OBJECT NAME	PERIOD	Quantity	BOXID
bone		021	hairpin	Roman	1	6
bone		022	hairpin	Roman	1	6
bone		0434	hairpin	Roman	1	6
bone		0506	hairpin	Roman	1	6
bone		094	hairpin	Roman	1	6
bone		095	hairpin	Roman	1	6
copper		0110	Disc		1	3
copper		0134	Collar		1	3
copper		0139	Ring		1	3
copper		0141	Unidentified	Post-med?	1	3
copper		0317	Mount	C17+	1	3
copper		0512	Buckle	Late C17-18	1	3
copper		0547	Vessel rim		1	3
copper		0bulk	Screw-thread cap	Modern	1	3
iron		0bulk	Nail	Post-med	1	4
iron		0569	Rod		1	119
lead		0131	Seal?		1	3
lead		0132	Ball		1	3
lead		0133	Weight		1	3
pewter?		0140	Sheet		1	3
lead		0459	Puddle		1	3
lead		0511	Weight		2	3
iron		0bulk	Sheet		1	3
lead		0bulk	Scrap		24	3
iron		1bulk	Binding strip	Modern	13	4
iron		1558	Nail	Post-med	1	75
iron		1 bulk	Nail		3	4
shale		2465	bracelet	roman	1	107
shale		2466	bracelet	roman	1	107
iron		3.0	Binding strip	Modern	13	4
iron		3.0	Nail		2	4
iron		1042	Nail		1	75
iron		1044	Nail		1	75
iron		1045	Nail	C19-20	1	4
iron		106 bulk	Nail		1	4
iron		108 bulk	Nail		2	4
iron		111 bulk	Nail		2	4
bone		1236	hairpin	Roman	1	6
bone		1247	hairpin	Roman	1	6
jet		1277	Hairpin	roman	1	107
bone		12910	hairpin	Roman	1	6
iron		12911	Nail		1	4
iron		135570	Hipposandal?		1	119
iron		135571	Nail		1	119
iron		13715	Bar		1	4
iron		13716	Nail		1	4

iron	137 15	Punch?		1	4
bone	140 19	hairpin	Roman	1	6
iron	140 548	Lump		1	75
iron	140 548	Nail		5	75
iron	140 549	Nail		1	75
Concretion	140 572	Not iron			119
iron	140 548	Ring		1	75
jet	140 12	Hairpin	roman	1	107
jet	140 17	Segmented armlet bead	roman	1	107
iron	155 14	Nail		1	75
copper	166 18	Finger-ring	C2-3	1	3
bone	180 35	hairpin	Roman	1	6
bone	180 41	hairpin	Roman	1	6
copper	180 39	Finger-ring	Roman	1	3
copper	180 40	Finger-ring	Roman	1	3
copper	180 42	Rod		1	3
copper	180 49	Tack		1	3
gold	180 33	necklace	roman	1	5
iron	180 28	Nail		2	4
ivory	182 23	comb	C17+	1	6
iron	182 24	Nail		1	4
bone	184 101	hairpin	Roman	1	6
copper	184 552	Spoon?	C17?	1	3
iron	184 559	Nail		3	75
iron	184 560	Nail	Post-med	1	75
iron	186 550	Nail		1	75
ceramic	190 50	dog figurine	C17/18	1	20
iron	190 51	Hinge plate	Post-med	1	75
iron	190 52	Nail		4	4
iron	190 53	Nail	Post-med	1	75
iron	190 555	Sheet	Post-med	1	75
iron	190 573	Strip		1	119
bone	192 198	hairpin	Roman	1	6
iron	194 574	Nail		1	119
bone	195 62	hairpin	Roman	1	6
bone	195 63	hairpin	Roman	1	6
iron	195 73	Nail		5	75
ivory?	196 77	Armlet	Roman	1	6
bone	196 102	hairpin	Roman	1	6
bone	196 64	hairpin	Roman	1	6
copper	196 60	Strip		1	3
iron	196 71	Nail		1	75
bone	198 61	hairpin	Roman	1	6
bone	200 72	hairpin	Roman	1	6
iron	202 74	Nail		1	4
iron	203 76	Nail		6	75
iron	208 561	Nail		1	75
iron	214 79	Nail		3	75
iron	216 575	Nail		1	119
copper	227 89	Needle?		1	3
bone	229 211	hairpin	Roman	1	6

bone	229 90	hairpin	Roman	1	6
iron	232 92	Nail		2	4
bone	234 97/98	hairpin	Roman	1	6
copper	240 158	Strip		1	3
glass	240 159	bead	roman	1	20
iron	240 160	Nail		4	75
iron	240 160	Sheet mount	Post-med	1	75
iron	243 576	Nail		3	119
bone	247 161	hairpin	Roman	1	6
iron	247 166	Nail		1	4
bone	250 162	hairpin	Roman	1	6
stone	250 170	Whetstone	roman	1	20
iron	250 577	Nail		1	119
iron	253 174	Nail		1	75
iron	254 173	Nail		2	75
bone	255 180	hairpin	Roman	1	6
iron	255 179	Nail		1	4
bone	256 103	hairpin	Roman	1	6
bone	256 175	hairpin	Roman	1	6
bone	256 181	hairpin	Roman	1	6
bone	256 185	hairpin	Roman	1	6
antler?	257 194	handle	Roman	1	6
pewter?	257 196	Spoon	C18/19	1	3
bone	262 183	hairpin	Roman	1	6
bone	262 184	hairpin	Roman	1	6
bone	264 186	hairpin	Roman	1	6
copper	264 191	Strip		1	3
iron	265 551	Nail		1	75
iron	266 578	Bucket handle?		1	119
horn?	278 202	hairpin	Roman	1	6
iron	281 203	Nail		5	75
silver?	283 204	Ring		1	3
iron	283 208	Nail		1	4
iron	283 209	Nail		1	75
iron	283 562	Nail		1	75
iron	292 212	Nail		1	4
iron	296 222	Nail		1	119
bone	301 221	hairpin	Roman	1	6
iron	301 579	Nail		2	119
iron	305 213	Vessel handle?	Post-med	1	75
iron	320 235	Nail		2	75
bone	323 223	hairpin	Roman	1	6
bone	323 224	hairpin	Roman	1	6
bone	323 225	hairpin	Roman	1	6
bone	323 226	hairpin	Roman	1	6
bone	323 227	hairpin	Roman	1	6
iron	323 580	Water-pipe junction collar	Roman	1	119
copper	326 228	Hairpin	roman	1	3
copper	326 231	Brooch	C1	1	3
iron	326 230	Nail		1	4
iron	339 234	Nail		2	75

lead	339 233	Sheet		1	3
iron	340 581	Nail		3	119
iron	347 236	Nail		1	75
iron	348 237	Nail		1	75
iron	350 238	Nail		1	4
iron	352 239	Nail		1	4
iron	357 358	Nail		2	75
iron	359 239	Nail		1	75
iron	364 582	Nail		2	119
iron	377 241	Nail		1	4
gold	383 240	earring	roman	1	5
iron	383 399	Nail		2	4
bone	386 271	hairpin	Roman	1	6
bone	386 269	unworked			6
iron	386 272	Awl		1	75
iron	386 267	Nail		5	75
iron	389 261	Hobnail		7	75
iron	389 261	Nail		2	75
iron	389 261	Strip		1	75
bone	390 168	hairpin	Roman	1	6
bone	390 250	hairpin	Roman	1	6
bone	390 69	hairpin	Roman	1	6
iron	390 583	Nail		1	119
iron	392 242	Strip		1	75
iron	394 273	Nail		1	75
bone	396 395	hairpin	Roman	1	6
bone	396 392	hairpin	Roman	1	6
bone	396 393	hairpin	Roman	1	6
bone	396 394	hairpin	Roman	1	6
iron	396 bulk	Nail		1	4
shale	396 396	bracelet	roman	1	107
shale	396 397	bracelet	roman	1	107
iron	398 243	Nail		1	75
bone	400 258	hairpin	Roman	1	6
bone	406 262	hairpin	Roman	1	6
bone	406 263	hairpin	Roman	1	6
bone	406 264	hairpin	Roman	1	6
bone	406 265	hairpin	Roman	1	6
bone	406 266	hairpin	Roman	1	6
iron	406 584	Nail		4	119
iron	417 585	Bar		1	119
Oyster shell	417 460				3
iron	425 274	Hobnail		6	75
bone	432 277	hairpin	Roman	1	6
bone	432 278	hairpin	Roman	1	6
iron	432 586	Nail		2	119
bone	434 284	hairpin	Roman	1	6
jet	434 279	hairpin	roman	1	107
iron	435 301	Nail		1	4
bone	442 286	hairpin	Roman	1	6
bone	443 285	hairpin	Roman	1	6

copper	445 287	Chain		1	3
iron	448 290	Punch		1	75
bone	452 298	hairpin	Roman	1	6
iron	452 299	Nail		2	75
bone	453 297	hairpin	Roman	1	6
iron	457 587	Nail		1	119
iron	463 588	Nail		1	119
bone	465 319	hairpin	Roman	1	107
bone	465 320	hairpin	Roman	1	6
iron	465 589	Nail		1	119
bone	466 300	hairpin	Roman	1	6
copper	466 302	Foot	roman	1	3
copper	466 314	Rod		1	3
copper	466 553	Strip		1	3
iron	466 313	Nail		2	75
bone	470 338	hairpin	Roman	1	6
bone	470 507	hairpin	Roman	1	6
bone	470 508	hairpin	Roman	1	6
bone	470 509	hairpin	Roman	1	6
copper	470 335	Ring		1	3
iron	470 336	Hobnail		6	75
iron	470 328	Nail		1	75
iron	470 329	Nail		6	4
iron	470 336	Nail		1	75
iron	470 337	Nail		4	4
iron	470 563	Nail		1	75
iron	470 bulk	Nail		2	4
iron	470 564	Unidentified		1	75
shale	470 316	bracelet	roman	1	107
bone	488 354	point	Roman	1	6
iron	488 355	Nail		1	75
iron	488 590	Nail		1	119
iron	488 356	Unidentified		1	75
bone	489 341	hairpin	Roman	1	6
iron	489 591	Nail		1	119
copper	496 402	Strip		1	3
iron	496 431	Angle bracket		1	119
iron	496 0	Nail		1	4
iron	496 403	Nail		1	75
iron	496 432	Nail		1	4
lead	496 461	Scrap		1	3
iron	512 340	Nail		1	76
bone	514 353	hairpin	Roman	1	6
bone	518 346	hairpin	Roman	1	6
bone	518 347	unworked			6
iron	518 344	Key?		1	76
iron	518 345	Nail		3	76
iron	518 556	Nail		5	76
iron	518 557	Nail		2	76
iron	518 bulk	Nail		1	4
iron	518 344	Nail?		1	76

iron	518 556	Plate		1	76
bone	521 349	plaque		1	6
iron	522 342	Nail		1	76
iron	524 348	Nail		1	76
iron	531 592	Nail		1	119
iron	541 352	Nail		1	76
bone	549 362	hairpin	Roman	1	6
iron	549 364	Nail		1	76
iron	551 357	Nail		1	4
bone	554 359	hairpin	Roman	1	6
bone	554 360	hairpin	Roman	1	6
bone	554 361	hairpin	Roman	1	107
bone	579 387	hairpin	Roman	1	6
iron	579 0	Nail		3	4
iron	579 367	Nail		1	76
copper	580 368	Bracelet	Roman	1	3
iron	580 375	Nail		1	4
iron	586 370	Lump		1	76
iron	586 510	Nail		2	76
bone	590 383	hairpin	Roman	1	6
iron	590 374	Nail		1	76
iron	592 404	Nail		1	76
bone	600 379	hairpin	Roman	1	6
iron	600 378	Nail		5	76
shale	600 380	bracelet	roman	1	107
iron	605 593	Nail		1	119
iron	609 382	Nail		1	4
shale	615 384	bracelet	roman	1	107
shale	617 109	bracelet	roman	1	107
bone	644 410	hairpin	Roman	1	6
bone	644 411	hairpin	Roman	1	6
iron	646 426	Chisel		1	119
iron	648 594	Nail		1	119
iron	649 389	Block		1	76
iron	658 391	Lump		1	76
iron	660 595	Nail		8	119
iron	662 596	Nail		2	119
iron	665 393	Nail		1	76
iron	671 394	Nail		1	76
iron	679 395	Nail		1	76
stone	687 397	Palette	Roman	1	20
iron	687 0	Nail		1	4
iron	687 597	Nail		1	119
iron	704 599	Hobnail		6	119
iron	704 598	Nail		8	119
iron	705 398	Nail		2	76
slag	705 398				76
iron	709 444	Nail		1	119
iron	709 445	Nail		1	119
iron	710 0	Nail		1	4
iron	710 446	Nail		2	119

iron	721 413	Nail		1	76
iron	724 447	Hobnail		9	119
iron	724 448	Hobnail		6	119
copper	725 415	Stud		1	3
iron	738 414	Nail		1	76
iron	750 419	Nail		14	4
iron	750 420	Nail		1	76
iron	750 423	Nail		1	119
iron	750 424	Nail		1	119
iron	750 425	Nail		2	119
iron	750 430	Nail		1	119
iron	757 416	Nail		1	76
iron	761 417	Bar		1	76
iron	764 449	Nail		1	119
lead	765 418	Unidentified		1	3
iron	780 450	Nail		2	119
Stone	785 452	Ironstone			119
iron	785 451	Lump		1	119
iron	792 421	Nail		1	119
bone	801 422	hairpin	Roman	1	6
iron	808 436	T-staple		1	119
iron	808 437	T-staple		1	119
iron	809 453	Angle bracket?		1	119
iron	809 454	Hinge pivot		1	119
lead	809 462	Puddle		3	3
iron	815 427	Nail		5	4
iron	815 455	Nail		1	119
iron	815 455	Stud head?		1	119
iron	821 456	Nail		4	119
iron	821 456	Rod		1	119
iron	833 429	Nail		1	119
iron	833 457	Nail		1	119
iron	835 458	Water-pipe junction collar	Roman	1	119
iron	889 433	Nail		1	119
iron	1020 438	Wire		5	4
bone	1095 440	needle	Roman	1	107
lead	1142 463	Puddle		2	3
bone	1262 441	hairpin	Roman	1	107

540

Appendix 9) - Roman coins: Spot-dating list *(* - worth a photograph in report) (¤ = on x-ray sheet 6, not present)*
(Condition: A=unworn, B=slightly worn, C=moderate wear, D=quite heavy wear, E=very heavy wear)

Context	*SF*	*Identification*	*Date*	*Condition*
+	112	Sestertius, ?Trajan	?96-117	Corroded
+	127	Sestertius, Flavian-Trajanic	c.80-120	E, Corr.
+	113	Sestertius, ?Antoninus Pius	?c.140-180	E, Corr.
+	520	As/Dup., illegible	c.40-120	?E
+	546			Corroded
+	531	Septimius Severus, AR den. (or AR plated copy on AE core?),]ERVS PI[, cut in half in antiquity	c.195-210	Corroded
+	532	poss. AR plated copy of den., c.200-250, or Gallic empire, ***needs further cleaning***	c.200-250 or c.260-285	Corroded
+	118	Gallienus, Ant., DIANAE CONS AVG, Deer L, /XII	259-268	A
+	537			?B
+	542	, PROVID AVG, Providentia with globe & scales		B
+	541	Claudius II, Ant./AE17mm, GENIO AVG, poss. irregular	c.268-285	C
+	124	Probus, Ant., rev. unc.	276-282	C
+	519	Gallienus, 259-268, apparently part-overstruck by ?Gallic Empire: ***needs further cleaning***	c.270-285?	
+	528	Tetricus I, AE3/18mm, poss. irregular ***needs further cleaning***	c.270-285	Corroded
+	530	Two ants.,, one Tetricus I, overlapping & fused together, ***needs further cleaning***	?270-273 ?	
+	524	Gallic Empire, Ant. ***needs further cleaning***	259-273	A
+	535	Postumus, AE 19x15mm, prob. irregular	c.270-285	B*
+	533	Gallic Empire, poss. irreg., Ant./17mm	c.260-285	B
+	116	Irreg. Claudius II, rev. CONSECRATIO, rev. Altar		B*
+	122	Irreg. Tetricus I, AE 17mm		B*
+	536	Irreg. Gallic Empire, AE 19 x 16mm, broken		Corroded
+	136	, AE 18mm		Corroded
+	117	, AE 17mm		Corroded
+	120	, AE 17mm		Corroded
+	129	,		Corroded
+	123	, AE 16.5mm		Corroded
+	125	,		Corroded
+	538	, AE 15.5mm		?B
+	566	, AE 15.5 x 13mm		Corroded
+	20	, AE 13mm		B*
+	523	,		A
+	539	Irreg. AE 16mm, prob. Gallic Empire	?c.270-285	Corroded
+	543			Corroded
+	435	15mm,		Corroded
+	526	Carausius, Ant.	287-293	Corroded
+	525	poss. Carausius, Ant., ***needs further cleaning***	?287-293	Corroded
+	545	Illeg. ant.	c.260-295?D	
+	567	Unc. follis	c.310-320	Corroded
+	126	Irregular AE 18mm, prob. cast copy	c.270-285 or 340-365	Corroded

+	114	Irregular AE 15mm			Corroded
+	544	Constantinopolis, AE3/17mm, poss. irregular, ***needs further cleaning***		c.330-350	B*
+	119	Irregular Urbs Roma, AE 17mm, TRS.		c.340-350	B*
+	115	, AE 15.5mm		c.340-350?	B
+	534	Irregular Constantius II, Fallen Horseman, Ae 12.5mm, well made ***clean better***		c.355-365	A*
+	527	Valens,	AE3	364-378	Corroded
+	121	Gratian, AE3, poss. cast copy, SECVRITAS REIPVBLICAE, K A-F/ASISCP		367-375	A*
+	529	Valentinianic, AE17mm, GLORIA ROMANORVM, prob. cast copy		c.365-375?	C
+	521	Gratian, AE4, VOT XV MVLT XX		378-383	B
+	522	Gratian, AE3, VICTORIA AVGGG, Emperor I with wreath & palm			?
+	111	Illeg. AE 25mm		?	Corroded
+	128	Uncertain if a coin; x-ray suggests hole in centre		?	?
+	207	Illegible, AE 17mm		c.260-295	Corroded
+	540	Irregularly-shaped piece of AE - is it a coin?		?	-
+TFEWD	137	Irregular Constantinopolis, Ae 16 x 14.5mm		c.340-350	C
+TFEWD	138	Irregular Constantinian, Two Standards		c.340-350	C*
+AreaB	144	Gallienus, Ant., SALVS		259-268	A
+AreaB	143	Claudius II, Ant., rev. FELICITAS		268-270	A
+AreaB	515	Claudius II, Ant., AEQVITAS AVG		268-270	B
+AreaB	505	***Needs further cleaning***: AE Ant, Gallic Empire. X-ray clear, but name illegible. Portrait closely resembles Laelianus (268) - rare and important coin if so - therefore clean further		268?	?A
+AreaB	145	Tetricus I, Ant./AE 17mm, poss. irreg.		c.270-285?	B
+AreaB	149	Irreg. Tetricus II, AE 15mm, PIETAS AVGG			Corroded
+AreaB	146	Gallic Empire,. Ant./AE 16x14mm, poss. irregular			A
+AreaB	142	Irreg. Gallic Empire, AE17mm, crude		c.270-285A*	
+AreaB	147	, AE 16mm			B
+AreaB	148	, AE 15.5 x 14mm			Corroded
+AreaB	501	, AE 15mm			Corroded
+AreaB	513	, AE 14.5mm			Corroded
+AreaB	502	Licinius I, follis, IOVI CONSERVATORI, ( ) III /]ARL		c.315-320A	
+AreaB	514	Constantinian, AE3/15mm, Two Victories, poss. irregular	c.348-350B		
+AreaB	503	Irregular, AE 18mm	c.270-285 or c.340-365		Corroded
+AreaB	504	AE 18mm			"
+AreaB	554	AE 13mm, broken		"	Corroded
+AreaB	500	13mm			Corroded
+AreaB	516	Valentinianic, Cast copy, AE 17mm, GLORIA ROMANORVM, ( )/)CONST		c.365-375	A*
+AreaB	517	AE 18.5mm, illegible		c.270-275	Corroded
+AreaB	518				Corroded
1	464	Illegible, AE 23mm		?	Corroded
2	468	Irregular Gallic Empire, AE 15mm		c.270-285	Corroded
2	467	Illeg. AE 13mm, irregular	c.270-285 or c.340-365		Corroded
7	469	Illegible fragments		?	?
101	3	Illegible AE 18mm		?	Corroded
180	45	Claudius II, Ant., rev. CONSECRATIO, Eagle		270	Corroded
180	55	, , , altar			B

180	43	Tetricus II, Ant.	260-273	B
180	47	Illeg. AE Ant./17.5mm, poss. irreg.	c.260-285	Corroded
180	59	Crispus, AE3, VOT X / CAESARVM NOSTRORVM, RIC (Trier) 440	323-324	B
180	44	Illeg. irregular AE 15.5mm	c.270-285 or c.340-365	Corroded
180	48	13.5 x 11 mm		Corroded
180	46	Illeg. AE 16mm	c.260-295 or c.330-365	Corroded
180	26	Valentinianic, GLORIA ROMANORVM, AE 16.5mm, poss. cast copy	c.365-380	?B
180	27	Illegible, AE 18.5mm	c.320-375	Corroded
182	106	As./Dup.	c.40-140	Corroded
182	25	Illeg., AE 29 mm	Post-medieval?	Corroded
182	25	27 mm		Corroded
184	100	Irregular AE 16mm	c.340-365	Corroded
184	34	Illeg. AE 19 x 16mm	c.270-275	Corroded
184	104	Irreg. AE 11 mm	c.270-285 or c.340-365	Corroded
184	130	Illeg. AE 18mm	c.260-295 or c.330-375	Corroded
186	36	Irregular Constantine II, AE 16mm, rev. unc.	c.340-350?	B
190	58	Irreg. Gallic Empire, AE 15.5mm, v. crude	c.270-285	B*
190	54	AE 16mm, prob. irreg.	c.270-285 or c.340-365	Corroded
190	56	Valentinian I, AE3/18mm, SECVRITAS REIPVBLICAE, OF - II / LVGP, poss; cast copy	c.364-78	A*
190	57	Illeg. AE 15mm, prob. irregular	c.270-285 or c.340-365	Corroded
192	37	Valentinianic, AE 16.5mm, GLORIA ROMANORVM, cast copy	c.365-375	B*
194	108	Gallienus, Ant.	259-268	A
194	107	Irreg. Gallic Empire, AE 15.5mm	c.270-285	Corroded
194	38	, AE 15mm		Corroded
194	78	Tacitus, Ant., AEQVITAS AVG ***(clean further)***	275-276	A
196	67	AE Ant., poss. Valerian I (x-ray detail) ***(clean further)***	?253-260	Corroded
196	70	Gallic Empire, AE Ant./18 x 15mm, poss. irreg.	c.260-285	Corroded
196	69	Irreg. Gallic Empire, AE 15.5mm	c.270-285	Corroded
196	68	AE 17mm, prob. Ant., badly broken	c.260-295?	
196	66	Irregular AE 10.5mm,	c.270-285 or c.340-365	Corroded
196	65	Valentinianic, AE 15.5mm, SECVRITAS REIPVBLICAE, thin cast copy	c.365-380?	C*
202	75	Illeg. AE 13mm, irregular	c.270-285 or c.340-365	Corroded
210	150	Illeg. Ant./AE 17.5mm	c.260-275	Corroded
210	81	Cast copy, Gallic empire, AE 22 x 17mm	c.270-285	Corroded
210	80	Diocletian or Maximian, follis, VOT/XX/S, Ticinum, unusual British site find	299	B?
216	83	Carausius or Allectus, frag. of Ant., broken in antiquity,)ML)	287-296	A
216	82	Illeg. irregular, AE 15mm	c.270-285 or 340-365	Corroded
222	85	Valentinianic, AE3/AE16mm, GLORIA ROMANORVM OF-II/LVGP, prob. cast copy	c.365-375	A*
224	87	Irregular Gallic empire, AE 17mm	c.270-285	Corroded
224	86	Irregular Constantinian, Two Standards, TRS	c.340-350 A*	
227	88	Irreg. Gallic Empire, AE 16.5mm	c.270-285	Corroded
232	91	Tetricus II, Ant., SPES AVGG	270-273	A
234	96	Irregular Tetricus II, AE 16.5mm	c.270-285?	B
235	93	Illeg. AE 17x15 mm,	c.270-285 or c.340-365	Corroded
240	99	Claudius II, Ant.	268-270	C

240	154	AE Ant./18mm, illeg.		c.260-285	Corroded
240	152	AE Ant./17mm, illeg.			Corroded
240	155	Irreg. Gallic Empire, AE 16mm		c.270-285	Corroded
240	151	Irregular Constantinian, AE 14.5mm, One standard		c.340-350	B*
240	157	AE fragment, coin?		?	?
243	153	Irreg. Gallic Empire, AE 16.5mm		c.270-285	Corroded
247	171	Illeg. irregular, AE 15mm,		c.270-285 or c.340-365	Corroded
250	165	Irregular Tetricus II, AE 18mm		c.270-285	Corroded
250	156	Carausius, Ant., trace of silver wash?		287-293	?B, corr.
250	164	Irregular Constantinian, AE 15mm, One Standard,)LG		c.340-350	A*
250	163	Illeg. AE 18mm		c.260-285 or c.330-365	(Clean up)
252	201	Gallienus, Ant.		259-268	Corroded
252	200	Constantinian, AE4, VICTORIA AVGVSTORVM, LRB1.254-5, v/. unusual British find	3	41	?C*
254	172	Constantinian, poss. irreg., AE 16mm		c.330-365	Corroded
256	176	prob. Ant.		c.260-280	Corroded
256	182	Illeg. AE15 mm, prob. irreg		c.270-285 or c.340-365	Corroded
256	177	Illeg. AE, prob. Ant. *(n.b. x-ray calls it s.f. 77]*		?c.260-280	Corroded
256	178	*[n.b. x-ray calls it s.f. 78)*			Corroded
264	187	prob. Ant.		c.260-285	Corroded
264	189	Irreg. Gallic empire, AE 17.5mm		c.270-285	Corroded
264	190	Irregular Constantinian, Two Standards, AE 10 mm		c.340-350	?B, corr.
264	188	Illeg. irregular, AE 12.5mm		c.270-285 or c.340-365	Corroded
266	199	Illeg. AE 18mm, prob. Ant.		c.260-285	Corroded
283	206	Tacitus, Ant.		275-276	Corroded
305	214	Irregular Urbs Roma, AE 12.5mm		c.340-350	?C, corr.
314	220	Irregular Constantine II, Two Standards, TRP, AE 17mm		B	
326	229	Irregular Gallic Empire, AE 15mm		c.270-285	Corroded
339	232	Urbs Roma, AE3/17.5mm, poss. irregular,)SIS(		330-350	B*
386	270	Illeg. AE 17mm		c.270-285 or 330-365	Corroded
386	232	3 ant. corroded together, stacked sli. off-centre: **CLEAN AND SEPARATE**			Corroded*
390	246	Sestertius, Illeg.		c.140-190	Corroded
390	244	AE 16mm, illeg.		c.260-285	Corroded
390	248	Ant., illegible		c.260-285	Corroded
390	249	AE 16mm illegible, prob. Gallic Empire			Corroded
390	245	Illeg. AE 15mm		c.270-285 or c.340-365	Corroded
390	247	AE stud		-	-
400	259	Illegible AE fragment, uncertain if a coin. If a coin, prob.		c.340-375?	
432	275	Illegible AE fragment, unlikely a coin		-	-
435	282	Postumus, Ant., broken		259-268	A
435	281	AE 13x15 mm. Prob. irregular		prob. c.270-285	?
445	288	Cast copy, Constantinian, AE 17mm		c.340-350	Corroded
445	289	Irregular, AE 18x15 mm		c.270-285 or c.340-365	Corroded
453	293	Postumus, Ant., VIRTVS AVG		259-268	A
453	295	Irregular Gallic Empire, poss. Tetricus II rev. Pietas, AE 17mm		c.270-285	B
453	292	Carausius, Ant.		287-293	?B

453	291	Irregular ÒFallen HorsemanÓ, AE 15mm, cast flan	c.355-365	B
453	294	prob. ?		Corroded
465	318	Uncertain AE 20 mm. Poss. Constantinian AE3, c.330-340, but could possibly be a plated AE copy of a denarius of a Severan empress, 1st half 3rd C.	?	A, corr.
46	311	Tetricus II, Ant.	270-273	A/B
466	307	Irregular Claudius II, AE 13.5 mm, rev. animal	c.270-275	B*
466	309	Irregular Tetricus II, AE 13mm		?A
466	308	Irregular Gallic Empire, AE 18x15 mm, v. crude design and flan		Corroded
466	312	, AE 15mm		?B
466	305	, AE 13mm, crude, rev. fig. w/spear & cornucopiae?		A*
466	306	, AE 12 mm, v. crude		A*
466	303	Claudius II, AE18 mm, prob. irregular	prob. c.270-285	A
466	304	Illeg. AE 20 mm, some lettering on x-ray	prob. c.260-285	Corroded
466	310	Illeg. AE 13mm+, broken	c.260-285 or c.340-365	Corroded
470	331	Probus, Ant., RIC 752, rev. SALVS AVG	276-279	B
470	322	Irregular Tetricus I, AE 18.5mm	c.270-285	A*
470	334	Irregular Gallic Empire, AE 15mm		Corroded
470	323	, AE12+mm, broken		A
470	330	, AE 11 mm		B*
470	135	Illeg. AE 17mm, prob. irregular Gallic Empire	?c.270-285	Corroded
470	324	Illeg. Ant., possibly Allectus	?c.293-296	Corroded
470	326	Illeg. AE 17mm, irregular	c.270-285 or c.340-365	Corroded
470	327			Corroded
470	325	16mm,		Corroded
470	332			Corroded
470	321	13mm,		Corroded
470	333	AE frags., prob. not a coin	?	-
496	400	Irregular Constantinian, AE 17mm	c.340-365	C, corr.
496	401	Illeg. irregular, AE 14 x 12 mm	c.270-285 or c.340-365	Corroded
500	339	Irregular Gallic Empire, AE 10.5mm	c.270-285B*	
541	351	Illegible Ant.	c.260-275	Corroded
549	363	Illegible, irregular, AE 12 mm	c.270-285 or c.340-365	Corroded
575	365	Irregular Gallic Empire, AE 14mm	c.270-285	Corroded
579	366	Constantine I, Follis, MARTI CONSERVATORI	313-316	B
580	369	AE 17mm, prob. Ant.	prob. 260-275	Corroded
586	373	Claudius II, Ant., DIANAE CONS AVG, Deer r	268-270	A
586	372	Irregular Claudius II, AE 16mm, rev. CONSECRATIO, Eagle	c.270-285	B*
586	371	Irreg. Gallic Empire, AE 15x13 mm	c.270-285	Corroded
588	381	Claudius II, Ant., Sol stg. l.	268-270	A
595	376	Constantine I, follis, rev. BEATA TRANQVILLITAS, AE 18mm, probably an irregular copy - unusual - poor flan, slightly too small for die, altar large	c.340-350	B?
595	377	AE 15mm, illeg. X-ray suggests prob. irregular Constantinian	c.340-365	Corroded
648	388	Irregular Gallic Empire, AE 15mm	c.270-285	C*
658	390	Sestertius, poss. Antonine (Faustina II?)	c.140-180	Corroded
679	396	Irregular AE 14 mm	c.270-285 or c.340-365	V.corroded

704	407	Gallienus, Ant., VBERITAS AVG	259-268	B
704	406	Irregular Gallic Empire, AE 18x16 mm, rev. VIRTVS, v.crude	c.270-285	C*
704	408	, AE 13mm+, struck off flan, broken		B
721	412	Sestertius, Hadrian or Antoninus Pius	c.120-160	Corroded
862	568	Claudius II, Ant.	268-270	A

Summary of Roman coin spot-dating

Trajan? (98-117)	1
Flavian-Trajanic (c.80-120)	1
Uncertain c.40-120	3
Hadrianic-Antonine, c.120-180	1
Antonine (two possible) c.140-190	3
Severan (c.200-220)	1
?Valerian 1 (253-60)	1
Gallienus (259-268)	8
Claudius II (268-270)	10
Laelian? (268)	1
Postumus (259-268)	2
Tetricus I (270-273)	3
Tetricus II (270-273)	3
Illegible antoniniani, probably regular, c.260-285	19
Irregular c.270-285: Central Empire types	4
.Gallic Empire types	51
.Uncertain types 9	64
Tacitus (275-6)	2
Probus (276-282)	2
Carausius (287-293) (1 probable)	5
poss. Allectus (293-296)	1
Tetrarchy (299)	1
Antonininiani or folles, 260-75 or 310-30, stuck together	3
Constantinian, 310-320	3
Constantinian, 320-330	1
Constantinian, 330-340	2
Constantinian, 340-350	1
Irregular Constantinian, 340s	14
Irregular ÒFallen horseman (c.355-365) (1 probable)	3
Irregular c.340-365, unc. type	4
Irregular c.270-285 or c.340-365	35
Valentinianic, 364-378 (1 official, 5 poss. cast, 3 cast copies)	9
Valentinianic, 378-383	1
Post-medieval?	2
Illegible	7
Not coins	6

Appendix 10 Glass assessment

By Sarah Carter.

Number of boxes: 3
Number of fragments: 306
Number of contexts: 64

1. Introduction

1.1 Of the 306 fragments of glass found on this site 144 (47 %) are Roman whilst 162 (53%) date to the Post-Medieval period. The Roman glass includes 98 fragments (68%) of identifiable vessel glass, 29 fragments (20%) of indeterminate vessel glass, 1 miscellaneous fragment and 16 fragments (11%) of window glass. The Post-Medieval and later glass includes 134 fragments (83%) of identifiable vessel glass, 3 fragments (2%) of indeterminate vessel glass, 2 fragments (1%) of miscellaneous glass and 23 fragments (14%) of window glass. The condition of the glass is reasonable although the Roman glass is very fragmentary.

2. Discussion of the identifiable Roman Glass

2.1 The Roman glass ranges in date from the late 1st century to the 4th century. Of the 98 fragments of identifiable Roman vessel glass 9 fragments (9%) are from utilitarian vessels such as bottles, flagons and jars whilst 89 fragments (91%) are from tablewares such as beakers, cups, bowls and flasks. These statistics change slightly when counted as a maximum number of vessels, indicating 4 utilitarian vessels and 20 tableware vessels. This is unusual as generally the majority of glass recovered is from utilitarian vessels. Even when considering the indeterminate vessel fragments there are more than twice as many colourless glass fragments (20) which were used for tablewares, than naturally coloured glass fragments (9) which was generally used for the utilitarian wares. There are at least two possible reasons for the disproportionate number of fine wares. One could be that the area of Roman occupation where comestibles were stored or prepared was not within the limits of the excavation and that we are therefore looking at the glass from the areas of the building where people were eating and drinking. The second could be due to the decline in trade in utilitarian storage vessels in the Late 2nd and early 3rd century as glass importers seem at that time to have been more concerned with the tablewares (G Milne 1985). The glass assemblage from the Roman tower site in Shadwell, which is alongside and contemporary with this site, has interesting parallels including fragments from a 2nd century Airlie cup, fragments from cups with wheel-cut decoration and also a globular flask in colourless glass with a green tint and wheel-cut decoration (Shepherd 2002).

2.2 Of the 16 fragments of window glass found in (probable) Roman contexts only 9 can be definitely identified as Roman with 6 fragments being of the matt-glossy variety, commonly used from the 1st-3rd century, and 3 fragments of the double glossy type, which became widely used in the 4th century.

3. Distribution

3.1.1 Phase 3 represents the 3rd century occupation of the site. Glass fragments recovered from contexts attributed to this phase include Late 1st-2nd century colourless glass cups, a square-sectioned jar/bottle fragment also dating to the 1st-2nd century and one fragment of 1st-3rd century window glass all from the ditch fill (context 140) in area A.

3.2 In area B, where the clay and timber buildings were located, fragments from two Airlie cups dating to c.180-240 and a fragment of a bowl or dish from 2nd-4th century were all recovered from a beam slot (context 750). Only one fragment, from a colourless glass cup or beaker dating from c.140-180 AD, was recovered from the fire box (context 809) in area C.

3.3 Phases 4-8 represent the continued occupation and rebuilding of the clay and timber buildings in the 3rd century. In area B contexts 553, 654 and 658 contained fragments from one wheel-cut colourless glass cup or beaker dating to the 2nd-3rd century and 2 fragments of 1st-3rd century window glass. In area C there were fewer fragments, one fragment of 1st-3rd century window glass (context 640) and one fragment of a handle from a bottle datable to 1st-4th century (context 517).

3.4 Phases 11 and 12 are attributed to the 4th century. Area B yielded wheel-cut colourless glass cups (contexts 339 and 407) dateable to the 2nd-3rd century, a fragment from a 4th century cup or beaker (context 283) and a fragment of 4th century window glass (context 234). In area C five 1st-3rd century bottle fragments and one fragment of 4th century window glass were recovered (contexts 485 and 379 respectively).

3.5 Phase 13, which is attributed to the late 4th-5th century, is represented by only two fragments of glass (context 502), which are from a colourless glass flask with pinched claw decoration on the handle. It is dateable to the Late 1st- Early 2nd century and is probably an import from the Rhine.

3.6 One more glass fragment merits discussion. A small fragment from a face flask, only the second such find in London (Shepherd. Pers comm.) was recovered from context 453, a possible demolition layer within area B. These face flasks are mostly dated to the late 1st century although they were manufactured during the 2nd and 3rd centuries these later examples are rarely found in Britain.

3.7 Other fragments of fine tablewares such as 2nd century wheel-cut cups and including the one found in context 467 with cut oval facets and wheel- cut lines are listed in the catalogue but are in contexts not currently phased.

4. Discussion of the Post-Medieval Glass.

4.1 The majority of the Post-Medieval glass assemblage was recovered from pits (contexts 182,184,257 and 303) and wells (contexts 3 and 341). Of the 134 identifiable fragments of vessel glass most are from utilitarian vessels; 102 fragments (76%) are from wine bottles, 12 fragments (9%) are from other bottles including a carboy and some case bottles. 11 fragments (8%) are from phials and there are two almost complete moulded and embossed medicinal bottles. Other utilitarian forms include jars from which 4 fragments (3%) remain. Tablewares are less well represented (3% of the identifiable vessel fragments)with only 2 fragments of wine glasses, 1 fragment from a beaker and 1 fragment from a flask or decanter.

4.2 The Post-Medieval glass ranges in date from c. the 15th to the 18th-19th century and includes forms, which are all well documented for these periods.

5 Potential and Recommendations

5.1 It is recommended that the Roman glass from this site is further studied and compared to other similarly dated Roman sites in London especially those nearby such as the Roman tower at Shadwell and Tobacco Dock, but also elsewhere in Britain, particularly those associated with bathhouses. The preponderance of fine tablewares and shortage of utilitarian forms merits further study. More work could also be conducted on the distribution of the glass in area B to better understand the functions of the various rooms within the complex. A combined study of the Roman glass and pottery assemblages from area B would throw more light on the function of the clay and timber buildings. Eight of the Roman vessels should be illustrated for the purposes of publication (see list below).

5.2 The Post-Medieval glass is not unusual and does not warrant further study apart from the unusual flask (context 3) and the fragment of decorated wine glass (context 1033). Five Post-Medieval vessels are recommended for illustration for the purposes of publication (listed below).

5.3 Glass for Illustration;

Roman

Context 103: Globular flask
Context 140: 6 fragments from a wheel-cut cup

Context 453: Face flask
Context 467: Fragment from a cup with wheel-cut decoration
Context 502: Colourless glass flask
Context 517: Ribbon handle
Context 750: 2 Airlie cups
Post-Medieval
Context 3: Flask
Context 182: Beaker
Context 247: wine glass fragment
Context 303: Complete medicinal bottle
Context 1033: Decorated wine glass fragment

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CATALOGUE

Roman

Colourless Glass

Context 140: 2 body fragments of colourless glass with a green tint from a cup, beaker or small bowl. One fragment has a band of horizontal wheel-cut lines. 2nd century.

Context 140: 6 fragments from the rim and body of a cup or beaker in thin colourless glass with a slightly out-turned rim, cracked off and ground. Evidence of horizontal wheel-cut lines below the rim and just above the change in angle on the profile. Late 1st-Mid 2nd century. Illustrate.

Context 247: 3 body fragments of very thin colourless glass with iridescent surface patina from a cup or beaker. One fragment has evidence of wheel-cut horizontal lines. c.140-180. SF167.

Context 272: 2 adjoining fragments of very thin colourless glass from the rim and body of a cup with a cracked off and ground rim which is slightly out-turned. Decorated with horizontal wheel-cut lines. 2nd-3rd century.

Context 339: 1 fragment of very thin colourless glass from a cup or beaker with faint wheel-cut horizontal lines. 2nd-3rd century.

Context 406: 2 adjoining fragments of thin colourless glass with iridescent surface patina from the body of a cup or beaker. 2nd-3rd century.

Context 407: 3 fragments of thin colourless glass probably from the same cup or beaker. Two fragments have faint wheel-cut horizontal lines. 2nd-3rd century.

Context 467: 1 fragment of very thin colourless glass with flaky iridescent surface patina from a cup with wheel-cut decoration of oval facets and wheel-cut lines. Mid-Late 2nd century. Illustrate.

Context 502: 2 fragments of colourless glass from the neck of a flagon with a flattened form. Has an applied handle in the same metal, which is very thin and extends into a pinched claw decoration down the body of the vessel. Probably an import from the Rhineland. Late 1st or Early 2nd century. Illustrate.

Context 553: 1 fragment of thin colourless glass from the body of a cup decorated with faint wheel-cut horizontal lines. 2nd-3rd century.

Context 726: 3 adjoining fragments from the rim of an Airlie cup in colourless glass with a green tint. Has a fire rounded rim. c.180-240.

Context 726: 2 adjoining fragments of colourless glass from a cup or beaker with horizontal wheel-cut decoration. Late 1st-4th century.

Context 750: Base and 8 body fragments of colourless glass from an Airlie cup with a pushed in outer ring and an applied inner ring on the base. (Isings 85b). c.180-240. Illustrate.

Context 750: Base of an Airlie cup in thin colourless glass with a green tint. Has a pushed in outer ring and a wide applied inner ring on the base and a visible pontil scar. (Isings 85b) c.180-240. Illustrate.

Context 809: 1 fragment of very thin colourless glass from a cup or beaker with iridescent surface weathering. c.140-180.

Natural Coloured Glass

Context 103: 46 fragments of natural pale green, bubbled glass from a globular flask with a cylindrical neck with a vertical, cracked-off rim and a slightly concave base. (Isings 103). SF1. Mid-Late 3rd century. Illustrate.

Context 113: 1 fragment of natural blue-green glass from the handle of a jug or bottle. 2nd-3rd century.

Context 140: 1 fragment of natural pale blue, slightly bubbled glass from a square sectioned jar or bottle. Mid 1st-2nd century.

Context 190: 1 fragment of natural pale green, slightly bubbled glass from a cylindrical flask or unguent bottle with a slightly concave base. Possibly 1st half of 4th century.

Context 283: 1 fragment of natural pale green, slightly bubbled glass from a cup or beaker. 4th century.

Context 305: 1 fragment of natural yellow-green glass from the body of a beaker, cup or bowl with shallow horizontal wheel-cut decoration. 4th century.

Context 453: 1 fragment showing the nose, lips and chin of a mould-blown face flask in natural green glass. (Isings 78) Late 1st-3rd century. SF296. Illustrate.

Context 485: 5 fragments of natural, slightly bubbled, blue glass from one or more square-sectioned bottles. One fragment shows evidence of a handle. Mid 1st-End 2nd century.

Context 517: 1 fragment from a combed angular ribbon handle of a bottle in natural pale blue glass. 1st-4th century. SF343. Illustrate.

Context 750: 1 fragment from the rim of a bowl or dish in natural green glass with an everted and tubular rim. 2nd-4th century.

Indeterminate Vessels

Context 127: 1 fragment of natural blue-green glass from an indeterminate vessel.

Context 135: 1 fragment of slightly bubbled, colourless glass with a slight green tint from an indeterminate vessel.

Context 198: 1 fragment of slightly bubbled, natural green glass with a fire rounded edge from an indeterminate vessel.

Context 283: 2 fragments of thin natural pale blue glass from indeterminate vessels.

Context 292: 1 fragment of very thin colourless glass with iridescent surface patina from an indeterminate vessel.

Context 323: 1 fragment of slightly bubbled, colourless glass with a green tint from an indeterminate vessel.

Context 339: 1 fragment of colourless glass from an indeterminate vessel.

Context 377: 5 fragments of colourless glass from indeterminate vessels.

Context 379: 1 fragment of thick, natural pale blue glass from an indeterminate vessel.

Context 406: 1 fragment of very thick colourless glass from an indeterminate vessel.

Context 412: 2 fragments of slightly bubbled, natural pale blue glass from indeterminate vessels.

Context 432: 1 fragment of natural blue-green glass from the base of an indeterminate vessel.

Context 467: 1 fragment of very thin natural green glass from an indeterminate vessel.

Context 488: 1 fragment of thin colourless glass from an indeterminate vessel.

Context 496: 2 fragments of slightly bubbled, colourless glass with a green tint from indeterminate vessels.

Context 541: 1 fragment of very thin colourless glass from an indeterminate vessel.

Context 543: 1 fragment of slightly bubbled, colourless glass with a green tint from an indeterminate vessel.

Context 579: 1 fragment of slightly bubbled, colourless glass with a green tint.

Context 631: 1 fragment of bubbled, colourless glass with a green tint from an indeterminate vessel.

Context 631: 1 fragment of natural pale blue glass from an indeterminate vessel.

Context 640: 1 fragment of natural pale green glass with some surface patina, with fire rounded edge. Possibly the rim of an open formed vessel.

Context 809: 1 fragment of very thin colourless glass with an iridescent surface patina from an indeterminate vessel.

Miscellaneous

Context +: Part of a fuel ash slag droplet.

Window Glass

Context 140: 1 fragment of natural pale green matt-glossy window glass. 1st-3rd century.

Context 155: 1 fragment of badly weathered natural pale green window glass.

Context 157: 1 fragment of very thin natural pale green window glass. Evidence of grozing along one edge.

Context 234: 1 fragment of slightly bubbled, natural pale green double-glossy window glass. 4th century.

Context 266: 1 fragment of natural pale green window glass with surface weathering.

Context 272: 1 fragment of natural pale green glass, which is probably a fragment of matt-glossy window glass. 1st-3rd century.

Context 379: 1 fragment of natural pale green double-glossy window glass. 4th century.

Context 417: 1 fragment of natural pale green window glass.

Context 432: 1 fragment of colourless window glass with an iridescent surface patina.

Context 470: 1 fragment of slightly bubbled, colourless window glass with a green tint.

Context 554: 1 fragment of natural pale green double-glossy window glass. 4th century.

Context 590: 1 fragment of natural pale green matt-glossy window glass with thumb edge. 1st-3rd century.

Context 640: 1 fragment of natural pale green matt-glossy window glass. 1st-3rd century.

Context 644: 1 fragment of natural pale green window glass with a slight surface patina.

Context 654: 1 fragment of natural pale green matt-glossy window glass with thumb edge. Badly weathered on both sides. 1st-3rd century.

Context 658: 1 fragment of natural pale green matt-glossy window glass with thumb edge and visible tool marks. 1st-3rd century.

Post-Medieval

Bottles

Context 1: 1 fragment of natural green glass from the body of a wine bottle. 17th-19th century.

Context 3: 2 fragments of thick natural olive green glass from the base of a large bottle or carboy (demijohn) with a shallow kick. Slightly weathered. 17th-19th century.

Context 3: 5 adjoining fragments from the base and sides of a case bottle in natural pale green glass with a slight kick base. Late 16th-17th century.

Context 3: 3 adjoining fragments from the rim, neck and shoulder of a straight-sided wine bottle in natural olive green, slightly bubbled glass with an applied double string rim. Mid 18th-Early 19th century.

Context 3: 3 adjoining fragments from the rim, neck and shoulder of a straight-sided wine bottle in natural olive green glass with an applied string rim. Some surface weathering. Late 18th century.

Context 3:5 bases of natural dark green glass from straight-sided wine bottles with a high kick. Late 18th century.

Context 3: 3 necks of natural green glass from wine bottles with double applied string rims. Late 18th-Early 19th century.

Context 3: Rim of a wine bottle in natural dark green glass with a double string rim. Late 18th century.

Context 3: 1 fragment from the rim of a wine bottle in natural dark green glass. 18th century.

Context 3: 10 body fragments of natural olive green, slightly bubbled glass from straight-sided wine bottles. Late 18th-19th century.

Context 3: 28 body fragments in natural dark green glass from straight-sided wine bottles. Mid-Late 18th century.

Context 3: 4 fragments of natural dark green glass from the bodies of wine bottles. 17th-19th century.

Context 106: 1 fragment of natural dark green glass from a wine bottle with surface patina. 17th-19th century.

Context 108: 1 fragment of natural green glass from the body of a wine bottle. 17th-19th century.

Context 116: 2 adjoining fragments of natural green glass from the body of a wine bottle. 17th-19th century.

Context 132: 1 fragment from the neck of a wine bottle in natural green glass with surface weathering. 17th-19th century.

Context 182: Neck and rim of a wine bottle in natural green glass with a short conical neck and an applied string rim. Some surface weathering. Late 17th century.

Context 182: Neck and rim of a wine bottle in natural green glass with an applied string rim. Mid 17th century.

Context 182: 1 fragment from the base of a globular wine bottle in natural green glass with a kick and a visible pontil scar. Some surface weathering. 17th-18th century.

Context 182: 2 body fragments of natural green glass from wine bottles. 18th-19th century.

Context 184: 3 body fragments of natural green glass from wine bottles. 17th-19th century.

Context 184: 2 body fragments of badly weathered natural green glass from globular wine bottles. Mid 17th-Mid 18th century.

Context 184: 1 fragment of natural dark green glass from the neck and shoulder of a wine bottle. 17th-19th century.

Context 257: Complete globular wine bottle in natural green glass with a shallow kick and a visible pontil scar. Has an applied triangular string rim. Early 18th century. SF193.

Context 257: Complete globular wine bottle in natural green glass with a kick and a visible pontil scar and an applied triangular string rim. Early-Mid 18th century.SF192.

Context 257: 3 adjoining fragments, which form the base and sides of a mould-blown case bottle in natural dark green glass. Has a slight kick and a visible pontil scar. 18th century.

Context 257: Rim, neck and shoulder of a globular wine bottle in natural green glass with a short conical neck and an applied string rim. Late 17th century.

Context 257: Rim, neck and shoulder of a wine bottle in natural green glass with a long conical neck and an applied string rim. Mid 17th century.

Context 257: 3 fragments from the base and sides of a globular wine bottle in natural green glass with a high kick and a visible pontil scar. Some surface weathering. Late 17th century.

Context 257: Base of a wine bottle in natural green glass with a very high kick and a visible pontil scar. Some surface weathering. Mid 18th century.

Context 257: Rim, neck and shoulder of a wine bottle in natural green glass with a conical neck and an applied triangular string rim. Early 18th century.

Context 257: Almost complete globular wine bottle in natural dark green glass with a high kick and a visible pontil scar. Has a short conical neck and an applied string rim. Early 18th century.

Context 257: Almost complete globular wine bottle in natural dark, slightly bubbled glass with a high kick, visible pontil scar, conical neck and an applied triangular string rim. Mid 18th century.

Context 257: 1 fragment from the base and side of a globular wine bottle in natural dark green glass with a kick and a visible pontil scar. Early-Mid 18th century.

Context 257: Complete moulded ink bottle in colourless glass with vertical ribs from the base to the shoulder. Rim is cracked off and ground. The base has a kick. Some surface weathering. 18th-19th century. SF197.

Context 303: 2 adjoining fragments which form the rim, neck and shoulder of a wine bottle in natural green, slightly bubbled glass with a double applied string rim. Has severe surface weathering. Late 18th century.

Context 303: 1 fragment from the rim, neck and shoulder of a wine bottle in natural green glass with a double applied string rim. Slight surface weathering. Late 18th century.

Context 303: Base of a straight-sided wine bottle in natural dark green glass with a high kick and a visible pontil scar. Some surface weathering. Late 18th century.

Context 303: Base of a straight-sided wine bottle in natural dark green, slightly bubbled glass with a high kick and a visible pontil scar. Some surface weathering. Mid 18th century.

Context 303: 2 adjoining fragments which form the base and sides of a straight-sided wine bottle in natural green glass with a kick and some surface weathering. Early 19th century.

Context 303: 2 adjoining fragments which form the base and sides of a straight-sided wine bottle in natural green glass with a high kick and a visible pontil scar. Severe surface weathering. Mid-Late 18th century.

Context 303: 6 fragments of natural green glass from the bodies of wine bottles. 17th-19th century.

Context 340: 1 fragment of badly weathered natural green glass from a wine bottle. 17th-19th century.

Context 543: 1 fragment of thick, natural pale green glass from a moulded bottle. 19th-20th century.

Phials and other medicinal bottles

Context 182: Base of a large phial in natural pale green glass with a high kick. Late 17th-Early 18th century.

Context 182: 1 fragment from the neck, rim and shoulder of a phial in natural pale green glass. Has a short neck and a flat everted rim. Mid 17th-18th century.

Context 182: Neck and rim of a phial in natural pale green glass. 18th century.

Context 257: 1 fragment from the rim, neck and shoulder of a phial in natural pale green glass with as everted rim. Mid-Late 18th century.

Context 303: Complete medicinal bottle in colourless glass, square-sectioned with a short neck and an uneven everted rim with a visible pontil scar on the base. Embossed with FRIERS DROPS BY THE KINGS PATENT GRANTED TO R. GRUBB. Late 18th century. Illustrate.

Context 303: Almost complete medicinal bottle in colourless glass, square-sectioned with a short neck and an uneven everted rim and a visible pontil scar on the base. Embossed with FRIERS DROPS BY THE KINGS PATENT TO R. GRUBB. Late 18th century.

Context 340: Complete phial in natural pale green glass with a kick and a visible pontil scar. Has an everted and flattened rim. Mid-Late 18th century.

Context 340: 2 adjoining fragments of natural green glass from a phial with a high kick. 18th century.

Context 340: 4 fragments of natural green glass from a phial with a high kick and a visible pontil scar. 18th century.

Flasks

Context 3: 1 fragment from the neck and rim of a globular flask or decanter in badly weathered, natural pale green glass with a conical neck and a fire rounded rim. 15th-18th century. Illustrate.

Jars

Context 182: 1 fragment from the neck and rim of a jar in natural pale green glass with a very short neck and a flat everted rim. Mid 16th- mid 17th century.

Context 458: 1 fragment of natural pale green glass from the rim of a jar with a short neck and a flattened everted rim. Mid 16th-17th century.

Context 458: 2 fragments of natural pale green glass, which may be the body fragments of the above rim, from a square-sectioned jar. Mid 16th-Mid 17th century.

Wine Glasses and beakers

Context 182: 1 fragment of purple glass from the base of a beaker with a pushed in base and visible pontil scar. Mould-blown with vertical spiralling ribs and flattened indents. 16th-17th century. Illustrate.

Context 247: 1 fragment which forms the stem and part of the foot of a wine glass in colourless glass with a grey tint. Has a hollow-blown round-knop stem with a merise beneath adjoining the foot. 16th-17th century. Illustrate

Context 1033: 1 fragment of colourless glass with a grey tint from the rim of a drinking vessel with a tulip-shaped bowl. Decorated with a single engraved horizontal line below which is an interlinking wavy line design below which is another single horizontal line. The fragment is too small to be sure of the form. 16th-18th century. Illustrate.

Indeterminate vessels

Context 124: 1 fragment of natural pale green, slightly bubbled glass from an indeterminate vessel.

Context 180: 1 fragment of badly burned glass too damaged to identify.

Context 182: 1 fragment of colourless glass with a green tint from an indeterminate vessel.

Miscellaneous

Context +: Part of a fuel ash slag droplet.

Context 111: Droplet of melted natural green glass.

Window Glass

Context 3: 14 fragments of thin, natural pale green window glass.

Context 303: 3 fragments of colourless window glass with a green tint.

Context 514: 3 fragments of natural pale blue-green bubbled window glass.

Context 809: 3 fragments of natural pale blue-green bubbled window glass.

Appendix 11 Leather assessment

By Q. Mould

Methodology:

The assessment has been made following a rapid scan of the material on 3rd February 2004 at the premises of PCA at Brockley. The material was washed and wet when examined and in good condition. Contextual information and provisional phasing were supplied.

Assemblage

Two fragments of leather trimming resulting from the cutting-out of pattern pieces during the manufacture or refurbishment of leather goods were recovered from the fill [**396**] of a sub-rectangular, steeply-sided pit [**397**] in Area C. The context is allocated to phase 6 at present. The leather has no diagnostic features by which it may be independently dated and cannot contribute to the dating of the context.

No conservation or further work is required.

Appendix 12 The Mammal, Bird, Fish and Amphibian bone assessment

By Philip L. Armitage

1. Method

1.1 For the purposes of the assessment, all of the hand-collected animal bone and approximately 60% of the faunal skeletal elements from the residues of the sieved environmental samples were examined. Identifications of the species present and skeletal elements (anatomies) represented were made employing standard zoo archaeological methodological procedures, and using modern comparative osteological specimens in the author's collections. Sexing the domestic fowl tarsometatarsi followed the criteria of West (1982 and 1985). Species identification in the rat jawbone from context 809<46> was made based on shape of the diastema after the method of Armitage (in Armitage et al 1984:378).

2. Results

Numbers of bone elements/fragments and species represented.

2.1 A total of 1,318 animal bone elements/fragments were examined, of these, 1,135 (86.1% of the total) were identified to species and anatomy, and 183 (13.9%) remain as unidentified fragments.

2.2 Of the identified portion of bone elements/fragments, 953 (84% of the total) are recognised as mammalian, 95 (8.4%) as birds, 7 (0.6%) as fish, and 80 (7%) as amphibian. Overall, the combined Roman and Post-medieval bone assemblages yielded evidence for the presence of 27 species: 14 mammals, 7 birds, 5 fish and a single amphibian species. Summary counts (provisional) of the identified bone elements by species/taxon and site phase are given in Table 1 (mammal bones), Table 2 (bird bones), Table 3 (fish bones), and Table 4 (frog bones). The species represented are listed as follows:

Mammals:

horse ***Equus caballus*** (domestic)
cattle ***Bos*** (domestic)
sheep ***Ovis*** (domestic)
pig ***Sus*** (domestic)
dog ***Canis*** (domestic)
cat ***Felis*** (domestic)
brown hare ***Lepus* cf. *capensis***
fox ***Vulpes vulpes***
black rat ***Rattus rattus***
brown rat ***Rattus norvegicus***
house mouse ***Mus musculus***
wood mouse ***Apodemus sylvaticus***

common shrew ***Sorex araneus***
shrew cf. water shrew ***Neomys fodiens***

Birds:

domestic fowl ***Gallus gallus*** (domestic)
grey-lag/domestic goose ***Anser anser***/domestic
mallard/domestic duck ***Anas platyrhynchos***/domestic
tufted duck ***Aythya fuligula***
rock dove/domestic pigeon ***Columba livia***/domestic
raven ***Corvus corax***
starling ***Sturnus vulgaris***

Fishes:

mackerel ***Scomber scombrus***
herring ***Clupea harengus***
thin-lipped grey mullet ***Liza ramada***
black sea-bream ***Spondyliosoma cantharus***
freshwater eel ***Anguilla anguilla***

Amphibian:

common frog ***Rana temporaria***

3. Preservation

3.1 Overall, the state of preservation of the HGA02 animal bone is good. There is a low incidence of weathered/or biological degraded bone and only a few bones showing evidence of dog gnawing – all of which suggests rapid burial of the bone after disposal/deposition. The low level of burning suggests food debris was not burnt as a hygiene measure prior to waste disposal – the isolated burnt specimens probably indicate casual burning of food scraps in domestic/kitchen fires.

4. Nature of the animal bone assemblage

4.1 Food debris predominates intermixed with skeletal remains of pet/feral dogs and cats, together with bones from scavengers (raven & fox), commensal rodents (rats & mice) as well as wild faunal species (wild birds, shrews & common frog). Significant specimens of special zoological/historical interest include the black rat jawbone (Phase 3), which provides further evidence for the spread of this vermin species beyond the urban centres in the Roman period, and the black bream vertebrae (Phases 5 & 11), which add further insight into the Roman south coast fisheries. In considering aspects of the diet of the Roman inhabitants, the predominance of tarsometarsal bones of female domestic fowl suggests the keeping of hens as egg producers. Apart from the isolated hare and wildfowl, the bulk of the Roman diet

appears to have been somewhat basic (lacking extravagance or any great variety) comprising beef/veal, mutton/lamb and pork/sucking piglets. There is however evidence of variety in the fish consumed that included both marine/estuarine and freshwater species.

5. Recommendation For Further Work

5.1 The food debris merits further more detailed analyses in order to establish any changes in the dietary habits and food production/procurement systems in the Roman and post-medieval periods. Dietary composition and preferences may provide clues as to the socio-economic status of the Roman and post-medieval inhabitants. Of special interest also will be the small fauna associated with the abandoned Roman hypocaust system. The skeletal remains of these creatures merit further analyses and interpretation.

6. References

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Assessment 13 The environmental assessment

By N.P. Branch, C.P. Green, R.A. Kemp, G.E. Swindle and A. Vaughan-Williams

Department of Geography, Royal Holloway University of London

INTRODUCTION

This report summarises the findings arising out of the environmental archaeological investigations undertaken by *ArchaeoScape* in connection with the proposed development at 172 – 176 The Highway, formally known as Babe Ruth's Restaurant, Shadwell, London (site code: HGA02; National Grid Reference: TQ 34836 80702). The detailed archaeological excavation, conducted by Pre-Construct Archaeology Ltd, uncovered four separate areas (A, B, C and D), which included the remains of a Roman Bath House, along with series of natural and archaeological contexts, which were subsequently divided into fifteen phases:

Phase 1: Natural
Phase 2: 2nd Century AD
Phase 3-10: 3rd Century AD
Phase 11-12: 4th Century AD
Phase 13: Late 4th/early 5th Century AD
Phase 14-15: Post Medieval

An examination of the local sediment successions was permitted by the excavation providing an opportunity to establish their environmental archaeological significance. The aim of the current exercise, therefore, was to establish whether the excavations revealed any sediment successions that provide potential for improving our understanding of changes in the local depositional environment, and the diet and economy of the local inhabitants. The exercise consisted of: (1) Systematic field-based sampling of selected archaeological contexts to obtain column samples (100x15cm plastic trays), borehole core samples (100x5cm, using an Eijkelkamp gouge set), Kubiena samples (10x7cm) and bulk samples; (2) Recording the lithostratigraphy (sedimentary sequence) captured within each column and borehole core

sample; (3) Determining the organic matter content of the lithostratigraphy; (4) Determining the particle size of the lithostratigraphy; (5) Soil micromorphology of the Kubiena samples; (6) Assessment of the sub-fossil biological remains, notably plant remains (charred and waterlogged seeds, fruits and wood) and Mollusca.

Two short column samples (samples <43> and <27>) were taken by *ArchaeoScape* through what are believed to be 3rd century AD occupation floors. Three borehole core samples (BH1, BH2 and BH3) were also taken at the southern end of the site to establish the maximum depth of the sedimentary sequence. A third column sample (sample <A>) was taken above borehole 1 in order to recover the complete sedimentary sequence in this part of the site. Forty-three bulk samples were also taken from layers, fills, hearths and a possible cremation.

GEOLOGICAL CONTEXT

The site, on the east corner of the junction of The Highway and Wapping Lane, is in the valley of the estuarine Lower Thames. The whole of the site is on ground sloping uniformly down towards the south. This slope is the bluff between the Taplow Terrace of the River Thames above and the Alluvium below. The Geological Survey (1:50,0000 Sheet 256 North London 1994) shows, in addition, a narrow outcrop of the Kempton Park Gravel extending from Wapping Lane almost due east, south of, and parallel with, The Highway for a distance of c. 0.5km to the vicinity of Glamis Road. Northward, the level surface of the Taplow Terrace is present just to the north of The Highway. Southward, along Wapping Lane, the ground slopes down from the site a further 200m to meet the almost level surface of the floodplain between Raine Street and Chandler Street.

The Taplow Terrace is underlain by the Mucking Gravel, but no exposures are recorded in the immediate vicinity of the site. Elsewhere the Mucking Gravel is a typical cold climate sand and gravel deposit, displaying mainly horizontal bedding. Gibbard (1994) indicates that between 5m and 8m of Mucking Gravel may be present in the Shadwell area forming a surface at c. 10-12m OD and having a base at c. 4-5m OD. The surface of the Taplow Terrace

immediately to the north of the site is occupied by the Langley Silt (the name now given to deposits formerly described as 'brickearth').

The Kempton Park Gravel is a deposit similar to the Mucking Gravel but intermediate in age between the Mucking Gravel and the Alluvium. It is correlated by Gibbard (1994) with the East Tilbury Marshes Gravel of the lower estuarine reaches of the Thames. In the Shadwell area, Gibbard (1994, Figure 20) shows the East Tilbury Marshes Gravel at a level between c. 0.0m and 5m OD

The floodplain alluvium was exposed close to the site during the excavation of docks in the 19th century at TQ 345 805 and TQ 852 806. About 2m of fine-grained and organic alluvial deposits were seen to overlie up to 6m of gravel. The natural surface of the alluvium here is at c. 0.0m OD. The underlying solid geology throughout the area is the Lower Tertiary London Clay.

LITHOSTRATIGRAPHIC (GEOARCHAEOLOGICAL) ASSESSMENT

The lithostratigraphy was described using standard procedures for recording unconsolidated sediment and peat, noting the physical properties (colour), composition (gravel, sand, clay, silt and organic matter), context (unit) boundaries and inclusions (e.g. artefacts). The results are presented in Tables 1, 2, 3, 4 and 5. The organic matter content of thirty four sub-samples extracted from the column and borehole core samples was determined by the loss-on-ignition method (Bengtsson and Enell, 1990). This involved drying the sub-sample at 110^{0}C for 12 hours and thermal oxidation at 550^{0}C for 2 hours. The results are presented in Figures 2, 4, 5 and 6. Particle size analysis was carried out on column and borehole samples using a SEDIGRAPH auto-analyser to confirm and quantify the 'finger-texturing' particle size determinations conducted during the field and laboratory investigations. The results are presented in Figures 1 and 3. Soil micromorphology was carried out to determine the composition of the 3rd century AD occupation floors (contexts 563, 929 and 928). The samples were prepared using the following procedures (Lee and Kemp, 1995): (1) Collection of samples using Kubiena tins; (2) Drying of the sample using acetone; (3) Impregnation of the sample

using crystic resin; (4) Cutting of the sample to 10mm thickness; (5) Polishing of the sample and affixing to glass slide; (6) Polishing of the sample to 30 µm, and (7) Affixing a cover slip. Four thin sections were obtained from 4.87 to 4.82m OD and 4.75 to 4.68m OD (section 12, near column sample <27>) and 4.64 to 4.59m OD and 4.80 to 4.74m OD (section 12, near column sample <43>).

The presence of sand and gravel in areas C and D at levels between 1.68m and 4.62m OD can be explained either as a result of colluvial processes transporting Taplow Gravel downslope to this level, or by referring the deposits to the Kempton Park Gravel. It is unlikely that, at these levels, these gravely deposits form part of the Alluvium. Column samples <27>, <43> and <A> appear to include colluvial material at the base, between 4.53-4.62m OD, 4.44-4.56m OD and 1.68-2.48m OD respectively. The origin of the colluvial deposits is thought to be related to human induced land-surface modification, probably to create artificial sand and gravel terrace surfaces suitable for building construction (Figures 1 to 6).

There are no obvious colluvial surface deposits in the borehole core samples (BH1, BH2 and BH3), between 0.92-1.68m OD, 0.48-2.28m OD and 1.35-1.75m OD respectively, and they may therefore be wholly *in situ* sand and gravel, with a very low organic mater content (Figures 5 and 6). If these sands and gravels are in fact *in situ*, they are most likely to be part of the Kempton Park Gravel. However it must be noted that all the sample sequences are less than 2m in depth and might therefore be wholly of colluvial origin. The black organic sandy silt in borehole 1 (1.52-1.68m OD; Figure 5) may belong in the colluvial layer and therefore be of indeterminate origin and age; or alternatively it may be an organic horizon within the Kempton Park Gravel. Organic deposits in this stratigraphic position are known from several sites in the Middle Thames valley (e.g. Gibbard et al., 1982) and have been dated to the Middle Devensian (c. 40,000-44,000 years before present).

Column samples <27> and <43>, and the soil micromorphology samples, also provided evidence for possible occupation floors (between 4.68-4.76m OD

and 4.56-4.82m OD respectively), overlain by colluvial deposits (between 4.76-4.92m OD and 4.82-4.92m OD respectively). The floors are 3rd century AD in age and characterised by slightly higher amounts of clay and silt, and organic matter, forming a 'compacted' horizontal surface (Tables 1 and 2, contexts 563, 929, 928; Figures 1 to 4). Overlying and incorporated within the floors is abundant fine charcoal. It is unlikely that the charcoal represents a 'catastrophic' fire, which resulted in the destruction of the building, but rather localised burning, such as hearth, with the charcoal becoming incorporated into the floor layers through trampling. The origin of the overlying colluvial deposits (characterised by higher gravel content) is unclear from the findings, but they may represent deliberate attempts by the local occupants to 'level' the ground surface prior to a new phase of building construction (contexts 477 and 927).

Finally, a black deposit (10YR 2/1) was recorded across the southern part of the site and underlying the Roman hypocaust. The deposit was composed of fine charcoal and had an organic matter content of 67%. There are two possible explanations for the deposit: (1) modern contamination; or (2) waste materials from the furnace accumulating in the under floor chamber around the columns of tiles supporting the floor of the room above.

POLLEN ASSESSMENT

One pollen sample was extracted from the organic unit in borehole 1 (1.52-1.68m OD; Figure 5, c. 1% organic matter). The pollen was extracted as follows:

1. Sampling a standard volume of sediment (5ml)
2. Deflocculation of the sample in 1% Sodium pyrophosphate
3. Sieving of the sample to remove coarse mineral and organic fractions (>125µ)
4. Removal of finer minerogenic fraction using Sodium polytungstate (specific gravity of 2.0g/cm^3)
5. Mounting of the sample in glycerol jelly

Each stage of the procedure is preceded and followed by thorough sample cleaning in filtered distilled water. Quality control is maintained by periodic checking of residues, and assembling sample batches from various depths to test for systematic laboratory effects. Pollen grains and spores were identified using the Royal Holloway (University of London) pollen type collection and the following sources of keys and photographs: Moore *et al* (1991); Reille (1992). Plant nomenclature follows the Flora Europaea as summarised in Stace (1997). The assessment procedure consisted of scanning the prepared slides at 2mm intervals along the whole length of the coverslip and recording the concentration and state of preservation of pollen grains and spores, and principal pollen taxa. The results are summarised in Table 6. The sample unfortunately contained no pollen.

BIOARCHAEOLOGICAL ASSESSMENT

Forty three bulk samples were processed by flotation using 1mm and 500µm mesh sizes. The residues were sorted 'by eye' to retrieve archaeological artefacts and un-floated environmental archaeological materials. The flots were scanned using a low power zoom-stereo microscope. Recommendations for further analysis are based on the density (concentration), diversity and quality (preservation) of bioarchaeological materials in combination with the importance of the contexts to the overall project aims. The results are summarised in Table 7.

Phase 1: Natural

No samples were assessed from this Phase

Phase 2: 2nd Century AD

No samples were assessed from this Phase

Phase 3: 3rd Century AD

The plant assemblage from sample <22> (context 683) contained only a few seeds of goosefoot (Chenopodiaceae) and pigweed (*Amaranthus* sp.), and frequent charcoal. Samples <41> (context 784) and <46> (context 809) contained occasional Mollusca. Modern seeds were present in samples <31>

(context 754) and <32> (context 749). Samples <21> (context 682), <25> (context 684), <37> (context 819), <38> (context 778), <39> (context 782) and <42> (context 796) contained no environmental archaeological evidence.

Phase 4: 3rd Century AD

Sample <26> (context 720) contained abundant Mollusca in the form of mussels, land snail shells and oyster. Samples <28> (context 764) and <35> (context 605) contained occasional Mollusca. Modern seeds were present in sample <45> (context 815). The remaining samples, <24> (context 592), <30> (context 738) and <40> (context 764), contained little of environmental archaeological significance apart from charcoal.

Phase 5: 3rd Century AD

Sample <29> (context 640) both contained abundant Mollusca in the form of mussels, land snail shells and oyster. Modern seeds were present in sample <36> (context 766). The remaining samples <16> (context 620), <17> (context 619), <18> (context 709), <19> (context 671) <20> (context 676) and <23> (context 710) contained little of environmental archaeological significance apart from charcoal.

Phase 6: 3rd Century AD

Sample <9> (context 477) contained occasional grains in the residue, along with creeping buttercup (*Ranunculus repens*), elder (*Sambucus nigra*) and goosefoot (*Chenopodium* sp.). These are weed seeds, typical of arable fields and rough ground. Preservation was poor to moderate, and there were less than 10 grains and seeds in total. Charcoal was abundant. Sample <11> (context 485) contained little of environmental archaeological significance apart from charcoal.

Phase 7: 3rd Century AD

Sample <14> (context 588) contained no environmental archaeological evidence. Sample <10> (context 519) contained little of environmental archaeological significance apart from charcoal.

Phase 8: 3rd Century AD

Samples <6> (context 335) and <8> (context 446) contained little of environmental archaeological significance apart from charcoal.

Phase 9: 3rd Century AD

Samples <4> (context 312) and <7> (context 389) contained little of environmental archaeological significance apart from charcoal.

Phase 10: 3rd Century AD

Sample <44> (context 808) contained no environmental archaeological evidence.

Phases 11-12: 4th Century AD

Sample <1> (context 140) contained occasional seeds. Unfortunately, these were unidentifiable due to the extreme heating they had undergone. Samples <3> (context 234) and <54> (context 904) contained occasional Mollusca. Sample <2> (context 172), which was taken from a possible cremation, only contained charcoal. Modern seeds were present in sample <5> (context 316). Sample <55> (context 2161) contained no environmental archaeological evidence.

Phase 13: Late 4th/early 5th Century AD

The only sample from Phase 13, sample <49> (context 1021) contained little of environmental archaeological significance apart from charcoal.

Phases 14-15: Post medieval

Modern seeds were present in sample <51> (context 1026).

RECOMMENDATIONS

No further investigation of the lithostratigraphic sequence is required. Unfortunately, the scarcity of plant macrofossils means that none of the samples can be recommended for further analysis. The abundance of well-preserved Mollusca in samples <26> (context 720) and <29> (context 640) will provide useful information about diet, trade and possibly the local environment. These samples are recommended for analysis. Finally, well-preserved charcoal was found in samples <22> (context 683), <25> (context 684), <31> (context 754), <32> (context 749), <37> (context 819), <46> (context 809), <24> (context 592), <28> (context 764), <30> (context 738), <35> (context 605), <45> (context 815), <19> (context 671), <20> (context 676), <29> (context 640), <9> (context 477), <11> (context 485), <8> (context 446), <7> (context 389), <1> (context 140), <2> (context 172), <5> (context 316). These samples are also recommended for analysis and will provide useful information on woodland exploitation.

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Appendix 14 An environmental archaeological assessment of oolithic limestone from sample 195, context [195]

C.P. Green and N.P. Branch

Introduction

The principal component of this material can best be described as oolitic, i.e. it consists of small calcareous particles of irregular form around which has been precipitated calcium carbonate in such a way that all the particles tend towards a spherical form (mainly <1mm in diameter), apart from those that originally have strongly asymmetric forms. Mixed with these oolitic particles are fairly common calcitic internal casts of several species of small gastropods, very infrequent valves of small bivalves, fragments' of larger Molluscan shells, pieces of echinoid spine, two juvenile (?) starfish, and pieces of indeterminate calcitic faunal material. All this material is encrusted with calcium carbonate precipitated with a layered structure, and the whole is weakly cemented by calcium carbonate, with which is mixed a very small amount of orange-brown insoluble residue. As a whole the block is very porous.

The presence of echinoid spines and starfish (?) confirms that this is probably a marine deposit. In addition, ooliths are generally thought of as forming in warm shallow marine environments where calcitic particles on the sea floor are kept in fairly constant motion, and where evaporation rates are sufficiently high for the water to become saturated with calcium carbonate. Ooliths are forming at the present time in tropical and sub-tropical near-shore marine environments.

It is difficult to envisage any suitable natural environment for the formation of ooliths in or around Britain. The deposit may be a piece of profoundly weathered oolitic limestone from the Jurassic outcrop of Midland England. These deposits were quarried during the Roman period.

APPENDIX 15: SMR Archaeological report form

1. TYPE OF RECORDING

~~Evaluation~~ Excavation ~~Watching brief~~

~~Other (please specify)~~

2. LOCATION

Borough: Tower Hamlets

Site address: 172 – 176 The Highway, London borough of Tower Hamlets, E1.

Site name: 172 – 176 The Highway Site code: HGA 02

Nat. Grid Refs: TQ 34836 80702 Centre of site: TQ 34836 80702

Limits of site: a) The Highway to the north b) Wapping Lane to the west

c) Sovereign Close to the south c) Queen Anne Terrace to the east

3. ORGANISATION

Name of archaeological ~~unit~~/ company/ ~~society~~:

Pre-Construct Archaeology Ltd
Unit 54
Brockley Cross Business Centre
96 Endwell Road
Brockley
London SE4 2PD

Site director/ supervisor: A. Douglas Project manager: P. Moore

Funded by: George Wimpey Central London Ltd.

4. DURATION

Date fieldwork started: 5th August 2002 Date finished: 14th February 2003

Field work previously notified? ~~YES~~ / NO

Fieldwork will continue? ~~YES~~/ NO/ ~~NOT KNOWN~~

5. PERIODS REPRESENTED

~~Palaeolithic~~ Roman

Mesolithic	~~Saxon (pre-AD 1066)~~
~~Neolithic~~	~~Medieval (AD 1066–1485)~~
~~Bronze Age~~	Post-Medieval
~~Iron Age~~	~~Unknown~~

6. PERIOD SUMMARIES.

Roman

The earliest evidence for human activity probably dates to the 2nd century and comprised of a series of quarry pits. In the south of the site a small area of what may in the 2nd century have been the Thames foreshore was exposed between 1.97 and 1.67m OD.

Intensive occupation of the site seems to have begun from the mid 3rd century. An E/W orientated ditch appears to be the northern boundary for a bathhouse complex which included the baths themselves, a service yard immediately to the north, and a range of clay-and-timber buildings that partly enclosed the yard.

In its original form the baths appear to be a double suit consisting of at least 12 rooms (the baths continued to the east and west) that included heated rooms that were probably the *tepidarium* (warm room), the *caldarium* (hot room) and a small apsidal room projecting to the north. A subsidiary furnace was built against the north wall while the entrance appears to be from the south.

Three separate phases of major structural alteration were identified that included the extension of the bathhouse further to the south and beyond the edge of the excavation to the south, two extra rooms added to northeast, the *caldarium* was sub-divided and the *tepidarium* extended. What had previously been an unheated central room would become heated and the heated apsidal room became unheated.

Seven phases of clay-and-timber building(s) were identified spanning the period of the mid-3rd century until the mid 4th century. The clay-and-timber buildings to the

north of the baths were probably accommodation for clients of the baths and the whole complex may have been part of a *mansio* or inn.

The Roman finds included many items of personnel adornment such as finger rings, hair pins, bracelets, a gold ear ring and part of a gold necklace.

The bathhouse complex may have gone out of use in around AD 375 and have been deliberately demolished in c. AD 400.

Post-Medieval

In the post Roman era, in the southern part of the site a marsh forms that blankets the remains of the baths. To the north a horticultural type soil was formed that was certainly being worked in the early post-Medieval period if not before.

The next intense use of the site was from the 17th century onwards. By the 17th century both The Highway and Wapping Lane frontages had been developed for residential use. A notable feature was an 18th century brick-lined cess pit that contained a pottery and glass assemblage that may represent a group coming from a public house/tavern.

7. NATURAL.

Type: natural sands and gravel

Height above Ordnance Datum: highest and lowest levels: 6.90m OD – 1.54m OD

8. LOCATION OF ARCHIVES.

a) Please indicate those categories still in your possession:

Notes ✓	Plans ✓	Photos ✓	Negatives ✓
Slides ✓	Correspondence ✓	Manuscripts (unpub. reports etc.) ✓	

b) All/~~some~~ records ~~have been~~/ will be deposited in the following museum/ ~~records office~~ etc.: LAARC

c) Approximate year of transfer: 2006

d) Location of any copies: PCA Ltd

e) Has a security copy of the archive been made? ~~YES~~/ NO

If not, do you wish RCHME to consider microfilming? ~~YES~~/ NO

9. LOCATION OF FINDS.

a) In your possession? Yes

b) All/ ~~some~~ finds ~~have been~~/ will be deposited with an appropriate museum/ ~~other body:~~

c) Approximate year of transfer; 2006

10. BIBLIOGRAPHY.

SIGNED: **DATE:**

NAME (Block capitals): A DOUGLAS

Please return completed form to The Greater London Sites and Monuments Record, English Heritage London region, 30 Warwick St. London W1R 5RD. Tel. 0171 973 3731/3779 (direct dial).

P C A

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