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**Phased Summary and Assessment Document of the Excavations at
Artillery Lane, London Borough of Tower Hamlets.**

Central National Grid Reference: 3352 8171

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1 ABSTRACT

- 1.1 This report details the results and working methods of an archaeological investigation undertaken by Pre-Construct Archaeology Ltd, at Providence Row, Crispin Street, Spitalfields, London Borough of Tower Hamlets. Elements of the northern Roman cemetery along Ermine Street outside the Roman city defences were identified, as were remains of the outer precinct of a medieval hospital. Features linked to the 16th century Artillery Ground, which was located in the area following the dissolution including parts of the boundary wall, were found. The latter appeared to be on a similar alignment and parallel to the early medieval precinct boundary ditch. Evidence of a sequence of 17th century, 18 and 19th residential developments and craft activities was also uncovered.



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Figure 1
Site Location
1:20,000

2 INTRODUCTION

- 2.1 An archaeological excavation was carried out by Pre-Construct Archaeology Ltd between the 2nd October and 21st December 2001 at Providence Row, Crispin Street, Spitalfields, London Borough of Tower Hamlets. This was followed by a second phase of archaeological excavation between the 15th October and 10th October 2003. From December 2004 to February 2005 a watching brief was maintained on the final phase of ground reduction in the northeast, northwest and southeast corners of the site. The site had previously been subject to a desk top study¹ and a watching brief undertaken by PCA between 22nd May and 4th June 2001².
- 2.2 The site lies to the northeast of the City of London and is bounded to the north by housing on Brushfield Street, Crispin Street to the east, Artillery Lane to the south and Gun Street to the west. The site central National grid reference is TQ 3355 8170.
- 2.3 The archaeological works were commissioned by Manhattan Loft Corporation Ltd in advance of the redevelopment of the site.
- 2.4 The watching brief in 2001 was conducted by Ms R. Duckworth, the excavations in 2001 were supervised by Mr K. Wooldridge and in 2003 excavations by Mr J. Taylor. The watching brief carried out during December 2004 and January/February 2005 was undertaken by Mr M. Bazley The project manager was Mr P. Moore and the post-excavation manager first was Ms L. Darton followed by Dr F. Meddens. Mr N. Truckle of Greater London Archaeological Advisory Service (English Heritage) monitored the archaeological works as archaeological planning advisor to the London Borough of Tower Hamlets. This report was written and researched by Mr A. Douglas.
- 2.5 The archaeological desktop assessment³ demonstrated that the site had both, areas of deep truncation with little archaeological potential and areas with no truncation with a high archaeological potential. The report suggests that archaeological deposits including part of the Roman cemetery, the outer precinct of a medieval hospital, the 16th century Artillery Ground and 17th century residential development could survive and if so were likely to be affected by the proposed development.
- 2.6 An archaeological watching brief⁴ on geotechnical test pits and to examine the Artillery Ground wall, confirmed that areas of low potential identified in the desk top had been truncated mostly down to the top of the underlying gravel. It also showed several builds and much truncation along the line of the Artillery Ground boundary wall.
- 2.7 It was agreed on site. between English Heritage, the clients (represented by Jonathan Walker, Osbourne Group) and Pre-Construct Archaeology Limited, that

¹ Holder 1997

² Duckworth 2001

³ Holder 1997

⁴ Duckworth 2001

archaeology survived to varying degrees in all areas where large scale ground reduction was proposed. The archaeology while important in furthering our understanding of the Spitalfields Roman, medieval and post-medieval landscapes, was considered not sufficiently important to warrant preservation in situ. As the proposed construction formation levels were below the base of all horizontal stratigraphy and below the base of all but the deepest cut features, it was agreed that the mitigation strategy on the site would be by preservation by record, that is by the excavation of the threatened archaeological deposits and features. The nature of the surviving deposits varied from large dumped deposits, to individual features and an excavation strategy combining both targeted machine excavation and hand excavation was decided upon.

- 2.8 An archaeological excavation was undertaken on the Lower Basement Area as set out in the first excavation Method Statement⁵ and approved by Mr N Truckle. A large ditch on a north-north-west alignment was located and defined by this work and was sample excavated.
- 2.9 A second Method Statement⁶ set out the detailed excavation methodology on all Non-Lower Basement Areas with deposits due for ground reduction and the excavation was undertaken between October and December 2001.
- 2.10 A revised Method Statement⁷ set out the methodology for the excavations conducted in 2003.
- 2.11 This report sets out to detail an integrated phased summary of the results of all the archaeological investigations so far carried out on the site.
- 2.12 The completed archive comprising written, drawn and photographic records and artefacts will be deposited with the London Archaeological Archive and Research Centre.
- 2.13 The archaeological investigations at Providence Row, Crispin Street, Spitalfields in the London Borough of Tower Hamlets, have a unique site code – CPN 01.

⁵ Moore 2001b

⁶ Moore 2001c

⁷ Moore 2003



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Figure 2
Trench Location Location
1:500

3 PLANNING BACKGROUND

- 3.1 The development area covers about 2500m² in total but it is intended to retain and refurbish the extant Providence Row building, so that the new development with groundworks is about 1750m². The majority of the new build is to have a single basement or low yard whose slab level is to be 2.4m below current ground level (c.13.30m OD), i.e. at around 10.90m OD ⁸. Changes to the original development plan resulted in an increased impact on the archaeological resource on the north side of the site and in the southeast corner, (where it was previously anticipated that there would only be limited groundworks) these areas, as a result, had to be covered by an archaeological watching brief.
- 3.2 In compliance Planning Policy Guidance on Archaeology and Planning (PPG 16) and the London Borough of Tower Hamlets Unitary Development Plan an archaeological desktop study was undertaken to identify the potential of the archaeological resource. This was followed by an archaeological watching brief and excavation, to ensure that the impact of the development was mitigated by preservation in situ where possible and by preservation by record where necessary.
- 3.3 The Desk Top Study⁹ had demonstrated that the site was of archaeological significance and it had identified areas of high, moderate and low archaeological potential. Areas of high potential could include a complete stratigraphic sequence from Roman (particularly burials and quarrying) to 18th century deposits and structural remains. Areas of moderate potential could have Roman features and areas of low potential would only have deep cut features truncating the underlying gravel surviving.
- 3.4 The archaeological watching brief¹⁰, on nine geotechnical test pits in the spring of 2001, confirmed the areas of low potential identified in the desktop and that indeed these had been truncated mostly through the brickearth to the top of the gravel.
- 3.5 It was proposed¹¹ that an archaeological watching brief was undertaken on the areas of low potential, i.e. on basemented areas where the only potential would be deeply cut pits and features. It was further proposed that an archaeological evaluation would be undertaken on the other parts of the site where the development would impact upon the levels of potential archaeology, so as to establish the presence, nature, date and importance of any of the archaeological deposits.
- 3.6 The watching brief was undertaken when the demolition of floors and sub-strata was effected. The evaluation (Trenches 1 – 3) commenced once the demolition was completed. Regular meetings were held between Mr Nick Truckle (GLAAS), the client, and PCA to develop and define an agreed mitigation strategy appropriate to the archaeological resource and the proposed development.

⁸ Holder 1997

⁹ Ibid

¹⁰ Duckworth 2001

¹¹ Moore 2001a

- 3.7 In evaluation Trenches 1 –3 archaeology was found at all levels, with post-medieval buildings surviving in the south-west over medieval deposits associated with the Priory of St Mary Spital. To the east undifferentiated post-medieval dumps lay over medieval dump deposits. To the north more post-medieval buildings and structures were found on either side of the Artillery Ground wall. In the lowest areas of the site, where former basements had truncated all previous levels down to the brickearth, several features dating to the Roman period were identified. These included a pit containing some disarticulated human bone and a large quarry pit. As a consequence of these discoveries an agreed programme of excavation was decided upon to mitigate the impact of the development in the lower basement areas of the site¹².
- 3.8 A separate method statement was written detailing the excavation strategy for all the non-lower basement levels¹³. The results of the evaluation enabled the site to be divided into nine distinct areas (Fig 2). Areas 1 – 6 were excavated in 2001.
- 3.9 After the completion of the archaeological works in 2001 there was a hiatus in the archaeological programme. A proposed watching brief on intrusive groundworks i.e. floor lowering and lift pit was not initiated when changes in the end use of the development made the groundworks unnecessary. A proposed archaeological excavation beneath an electricity sub-station did not take place as a result of the same design changes.
- 3.10 Subsequently a new end-use for the development as student accommodation was agreed and in 2003 demolition works on the sub-station were carried out. The demolition of the sub-station was followed by the excavation of Area 7.
- 3.11 Between December 2004 and February 2005 a watching brief was completed in the northeast and northwest corners of the site (Area 8), and in the southeast corner (Area 9).

¹² Moore 2001b

¹³ Moore 2001c

4 ARCHAEOLOGICAL AND HISTORICAL BACKGROUND

Prehistoric

- 4.1 Little prehistoric evidence has been recovered from immediate area surrounding the site. However, a few prehistoric lithics although residual, have been recovered from excavations at 250 Bishopsgate¹⁴.

Roman

- 4.2 The site lies to the east Ermine Street, a major Roman road that connected the southern suburb of Southwark across London Bridge to Londinium and through Bishopsgate to the north.
- 4.3 Roman law forbade the burial of dead within the City walls and cemetery areas have been discovered adjacent to the main roads leading east, west, north, northeast and south from the City. The northern cemetery lay on either side of Ermine Street where over the years at least 150 burials and cremations have been uncovered¹⁵ and probably more than 200. Although many of these finds were discovered during the construction of the railways in the 19th and early 20th centuries. Various published and unpublished Museum of London excavations exist¹⁶. Roman burials have been found at 5-13 Spital Square (in 1935), at Spital Square, Lamb St (SQU94), at 35 Spital Square (SSA01), at 12-14 Folgate Street (FLG 82), at 31-37 Northon Folgate (BGB98), Stothard Place (STO 86), 282-294 Bishopsgate (BOS 87), at 250 Bishopsgate (STE 95), at 192-200 Bishopsgate (BHS 87), at 280 Bishopsgate (SRP98) and at 201 Bishopsgate (BGB98). Several additional excavations, though lacking graves, demonstrated the presence of ditches and brickearth quarries of Roman date as well as funerary ceramics, such as at the Central Foundation Girl's School, Spital Square (SPT 85), and 6-13 Spital Square (SPI91).

Medieval

- 4.4 In c. AD 1197 a group of London merchants founded the Priory and Hospital of St. Mary-without-Bishopsgate on land purchased from the Bishop of London. The initial precinct was a small area centred around Spital Square but this was substantially increased in 1235 when the establishment was re-founded. A new church and infirmary were built and the precincts stretched from west to east from the modern-day streets of Bishopsgate to Nantes Passage and from south to north from Artillery Passage to Fleur-de-lis Street¹⁷.
- 4.5 The site considered in this assessment lies in the outer precinct, which was to the south of the inner precinct around modern Spital Square. Documentary evidence shows that the Priory was acquiring farming crofts and strips south of the inner precinct in the 13th century and these acquisitions became the area of the outer precinct by about AD 1270. Preliminary results of the excavations at

¹⁴ Holder 1997, 8

¹⁵ Barber & Bowsher 1992, 3; Swift 2003, 8

¹⁶ Hall 1996, 73

¹⁷ Ibid, 11

250 Bishopsgate (STE 94) suggest that ditches subdivided areas into separate plots. Some of the plots were used for pit digging and rubbish disposal, some for growing crops, others contained timber structures and others stone buildings. The distribution and layout of these areas also seems to have changed over time. Parts of the cemetery of the Priory and Hospital of St Mary Spital have also been identified at Spital Square (SPT82, SPT85, SPI91, and SPM96). The large quantity of animal bone recovered and the substantial evidence of primary butchery waste indicates that these animals were being slaughtered in the vicinity during the 12th and early 13th centuries or that butchers based in the city dumped their waste in this area¹⁸.

- 4.6 Few other monastic outer precincts have been archaeologically investigated but of those that have at Thornholme Priory, Waltham Abbey, and Fountains Abbey evidence has been provided for mills, barns, cattle byres, dovecotes, houses for stewards, granaries, smithies, malshouses, brewhouses and woolhouses¹⁹.
- 4.7 The site lies within and outside the southeast corner of the outer precinct. Evidence for the precinct boundary in the form of a earthen bank was found in the recent Spitalfield Residential (SQU 94) excavation just to the north²⁰.

16th century

- 4.8 In AD 1538 Henry VIII dissolved the monastic houses of England and Wales and their communities were turned out, the lands sold off and the religious buildings destroyed. After the Dissolution the former inner precinct of the Priory and Hospital eventually came under the ownership of Stephen Vaughan²¹.
- 4.9 The outer precinct, with what are described as “new brick walls” was almost immediately leased to the Honourable Artillery Company in AD 1538 and also used by ‘Gunners of the Tower’. Houses including the Master Gunner’s House lay along the north side of the Artillery Ground with other buildings including the Armoury at the south end. The evidence from excavations at 250 Bishopsgate (STE 95) suggests that the area was used for growing plants, but also for artillery practice with the recovery of numerous musket balls and pieces of shot²². A firing range lay on the east side of the Artillery Ground with a butt to the north and a gun platform to the south²³.

17th century

- 4.10 The outer precinct was still used by the Honourable Artillery Company until AD 1658 when they moved to Bunhill Fields. The Artillery Ground was closed in AD 1682 when the area was sold off for housing development. Because the Artillery Ground still had a distinct administrative status (as a Liberty of the Tower of London), the boundaries were marked out on the new houses by iron arrows

¹⁸ Thomas et al 1997, 128

¹⁹ Coppack 1990, 109-120

²⁰ Holder 1997, 11

²¹ Ibid, 13

²² Ibid

²³ Thomas et al 1997, Survey of London 1957

attached to the walls. One of the arrows survives at the south of the site on the wall of 1 Gun Street/ 43 Artillery Lane where it abuts the main Providence Row building²⁴.

- 4.11 Houses fronting onto the newly laid out Crispin Street backed onto the Artillery Ground wall to the west. The houses at the junction of Crispin Street and Artillery Lane, included a Town Hall for the increasingly populated area of Spitalfields, a row of Almshouses for the poor and several private houses²⁵.

Modern

- 4.12 By the 18th century many of the modern streets had been laid out and new houses constructed. The new Spitalfields suburb became home for a rapidly expanding population, which included large numbers of Huguenot refugees who fled France after the revocation of the Edict of Nantes in 1682. The market at Spitalfields, founded in 1682, grew into one of London's major produce markets²⁶.
- 4.13 In 1868 the Convent of Mercy and Night Refuge moved into their present imposing building in Crispin Street from their original location at Providence Row in Finsbury Square²⁷.

²⁴ Holder 1997, 15

²⁵ Survey of London 1957, 137

²⁶ Holder 1997, 18

²⁷ Ibid

5 ARCHAEOLOGICAL METHODOLOGY

- 5.1 The methodology for a watching brief and the excavation of 3 evaluation trenches (Trenches 1 – 3) were set out in the method statement²⁸(Moore, 2001a) and are summarised below.

Watching Brief

- 5.2 The areas of proposed groundworks, for replacing and in places reducing basement floors, were broken out and modern fill removed by contractors under archaeological supervision down to formation level. Excavation stopped at particular locations when and where archaeological remains or features were encountered. The attendant archaeologist recorded and excavated the archaeology before ground reduction in any particular location continued.
- 5.3 The northernmost warehouse in the complex, 47-49 Crispin Street, has been designated as an area of high archaeological potential but this was not going to have a significant level of ground reduction. Works in this building basement were associated with a new floor. In addition three small lift pits were proposed here and the work was covered by the watching brief.

Evaluation Trenches 1 - 3

- 5.4 Trench 1 was located across the boundary of Purssell House and 43 Artillery Lane so as to examine the top of the archaeological sequence in 43 Artillery Lane and to examine the deeper stratigraphical deposits exposed by deeper truncation in Purssell House. The trench measured 3.4m x 6.4m.
- 5.5 Trench 2 was located across the boundary of the northernmost building along Gun Street, the line of the Old Artillery Ground Wall and the present yard. This enabled the examination the top of the archaeological sequence in the yard and on both sides of the Wall and the examination of the thicker stratigraphical deposits exposed by deeper truncation in the Gun Street building. The trench measured 3.4m x 8.4m.
- 5.6 Trench 3 was an interrupted in the centre of the site by an area of basements. It was located partly on the central island (2m x 3m in size) formed by surrounding basements, and partly on the present courtyard to the north (3m x 4m in size). These basements allowed the examination of the lower deposits in section.
- 5.7 The surface concrete over the three trenches was broken out by a mechanical excavator. All breaking out and subsequent mechanical excavation was undertaken under archaeological supervision.
- 5.8 The modern fill and rubble was removed using a toothed bucket but when undifferentiated archaeological horizons were encountered a toothless ditching bucket was used.

²⁸ Moore 2001a

- 5.9 Following fill clearance, all faces of the exposed area that required examination or recording were cleaned using appropriate hand tools. All investigation of archaeological levels was by hand, with cleaning, examination and recording both in plan and in section. Full excavation was undertaken on those features, which were not large quarry pits or ditches. The aim of the work was to allow the recovery of dating, artefactual and environmental evidence.

Excavation of the Lower Basement Area

- 5.10 As a result of the discoveries made in the evaluation Trenches 1 –3 a mitigation strategy of preservation by record, was decided upon in the areas of the proposed ground works²⁹.
- 5.11 Little artefactual evidence had been found within features such as large quarry pits and ditches; a strategy of partial hand excavation and partial machine excavation was adopted therefore. Hand excavation of a small portion of each pit, sufficient to safely reach basal deposits, allowed individual deposits to be identified and characterised and a detailed artefact search to be made. A mechanical excavator was used to dig sections across such features to allow a profile and history of the infilling to be recorded.

Excavation of the higher basement area

- 5.12 The areas of the proposed groundworks had already been broken out and modern fill removed by contractors under archaeological supervision.
- 5.13 Undifferentiated post-Medieval made ground was machine excavated using a ditching bucket under archaeological supervision after its surface was cleaned and hand excavated.
- 5.14 During the evaluation a ditch on a north-north-west alignment was identified. It lay across areas 1 and 4. Both of these spots were sampled to provide a cross section across them so as to assess the original excavation, and subsequent re-cutting, and to recover artefactual and environmental samples. A strategy of partial hand excavation and partial machine excavation was adopted along its length.

Excavation in 2003

- 5.15 There were two sectors of proposed groundworks³⁰, one in the area of the electricity sub-station and the other in the northeast corner of the site beyond the limits of the 2001 excavations. However in the latter plot the groundworks did not go ahead and consequently there was no archaeological intervention here.
- 5.16 The sub-station (Area 7) was demolished, the hard standing broken out and the modern fill removed under archaeological supervision. The surviving archaeological deposits were hand excavated.

²⁹ Moore 2001b

³⁰ Moore 2003

- 5.17 An archaeological watching brief undertaken between December 2004 and February 2005 covered the areas in the northwest, northeast and southeast corners of the site (Areas 8 East and West and Area 9).
- 5.18 Following clearance by mechanical excavator all the trenches were 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. Where relevant contexts were photographed using 35mm slide and B&W or large format film.
- 5.19 A series of Temporary Bench Marks was established across the site
- 5.20 The Archive

The archive consists of:

Context sheets	- 418
Plans 1:20	- 158
Sections 1:10	- 14
Black and white print film	- 21
Colour slide film	- 21
Pottery	44 boxes
CBM	7 boxes
Glass	8 boxes
Clay tobacco pipe	6 boxes
Stone	2 boxes
Animal bone	37 boxes
Human bone	37 boxes
Lithics	3 boxes
Small finds	5 boxes
Environmental samples res.	2 boxes

6 GEOLOGY AND TOPOGRAPHY

- 6.1 The site lies in an area of Langley Silt (brickearth) a deposit laid down by wind and possible river action towards the end of the last Ice Age about 26, 000 to 13,000 BC. The untruncated level of brickearth is around 10.50 to 11.00m OD. This overlies a gravel deposit of the Thames known as the Taplow terrace. This was cut and deposited by the river between about 120,000 and 26,000 BC.
- 6.2 The level of Taplow gravels is about 10.02 to 10.76m OD. The area is fairly flat, though there is a slight slope to the south, towards the Thames³¹. The site is located 1280m to the north of the River Thames.

³¹ Holder 1997, 8

ARCHAEOLOGICAL SEQUENCE

7 Phase 1 Natural Deposits (Not illustrated)

- 7.1 This phase represents the earliest deposits recorded in the excavations, comprising the natural drift geology.
- 7.2 The natural terrace gravels [92], [95], [523], [610] and [611] were exposed, from a high in the north at 10.76m OD to a low in the south at 10.02m OD.
- 7.3 The terrace gravel was capped by a layer light orange brickearth [67], [91], [207], [336] and [508]. This survived to a height of c. 12.0m OD in the north of the site with a maximum thickness of 1.24m, but elsewhere was truncated by various later building activities to c.11.70m.

8 Phase 2 Roman (Fig 3)

Sub-phase 2a

- 8.1 This phase represents the earliest evidence of human activity and included a NE/SW aligned feature, possibly a ditch, in the northwest. Its fill contained no dateable material and was truncated by a pit. An isolated pit was present on the west side of the site and this may have been dug for brickearth and gravel extraction. These features are probably Roman but for stratigraphic and spatial reasons predate the cemetery. Also included in this phase were 35 inhumation burials probably from the third century.

Ditch

- 8.2 In the northwest corner of the site a possible NE/SW oriented ditch [522] (fill [521]) was identified. The cut was characterised by sloping concave sides falling to a slightly concave base. It measured 6.0m long, at least 2.50m wide and c. 1.0m deep within the trench but continued to the east, west and north beyond the limits of the excavation. The fill was a silty clay that produced a sherd of Roman pottery dated to AD 60-160, and is therefore considered Roman in date.

Quarry Pitting

- 8.3 In the west central part of the site pit cut [154] (fill [163]) was found, which measured 1.25m east/west (truncated to the west by a later Medieval ditch), 1.20m north/south and 0.21m deep. It cut into the natural brickearth and was characterised by steeply sloping sides falling to a flat base. The fill was redposited brickearth that produced a small amount of ceramic building material dated AD 55/70 to AD 140/200 and three small sherds of abraded pottery that included Hoo ware (HOO) and Verulamium Region White (VRW) wares.
- 8.4 In the northwest corner of the site a pit [601] (fill [600]), extended to the north beyond the limits of excavation. The feature measured 1.50m east/west, at least 0.82m north/south and 0.14m deep. The fill, a silty clay contained a few sherds of pot including Miscellaneous Oxidised wares (OXID) and Verulamium region white ware (VRW), the latter dating to AD 130 – 250.
- 8.5 The relative lack of cultural material within these pits may be an indication that the area of the site was not used for occupation or the disposal of waste and the pits may have been dug simply to extract the brickearth and gravel.

Sub-phase 2b

- 8.6 Evidence for the presence of a cemetery of Roman date including inhumations and cremations was uncovered. Following numerous earlier excavations in the area this is known to have been part of Londinium's northern cemetery situated outside the Roman city wall alongside Ermine Street.

Cemetery Soil

- 8.7 The burials were cut into the natural brickearth and the graves were filled in with a 'dirty' silty brickearth. This re-deposited material (contexts [90], [97], [127], [165], [208], [216], [227], [507], [606]) also covered the grave cuts and formed the 'cemetery soil'. The highest level on top of this soil was context [127] in northwest of the site at 12.10m OD. The cemetery soil probably derived from up-cast produced by grave digging but may also have been partially modified by later horticultural activity after the cemetery had gone out of use. Indeed such disturbance is supported by some intrusive finds including a 15th century jetton of French origin, (sf <20>) from context [208], a fragment of decoratively stamped copper (sf <24>) from context [208], and a further French jetton (sf <84>) of 14th century date from context [97].

Grave Depth

- 8.8 The re-deposited nature of the brickearth means that it was not possible to determine precisely from what level the graves were actually cut. The bases of the graves lay between 9.85m OD (B33) and 11.16m OD (B 22) with an average base level at 10.37m OD. Grave B12 was overlain by cemetery soil [127], which would mean a depth of at least 1.47m OD. If one takes the surface level across the site on the brickearth at c.12.0m OD, although this can only be taken as a very rough guide figure as it does not take account of local variations in topography, and the average basal level of the graves was at 10.37m OD, then the average depth would have been at least 1.63m. With the lowest level on the base of a grave cut at 9.85m OD then the maximum grave depth would be 2.15m. The maximum recorded grave depth excavated in the eastern cemetery of Roman London was 1.80m (Barber & Bowsher, 2000, 83). Allowing for subsequent horizontal truncation of the brickearth, some of the graves are likely have been relatively shallow, for instance B 22 with a base level of 11.16m OD would have been only 0.84m below the postulated ground surface at c. 12.00m OD.

Grave shape and size

- 8.9 The grave shape and size varied, roughly in accordance with the size of body and/or coffin. In general the grave cuts were rectangular with vertical sides falling to a flat base.

Sex and Age distribution

- 8.10 Of the 35 burials 12 (34%) were identified as male, 7 (20%) as female and 12 (46%) were indeterminable (see Table 1). Of these 32 could be categorised according to age groups, which are as follows:

Juvenile	5-11 years
Sub-adult	12–18 years
Young adult	19-25 years
Middle adult	26-44 years
Mature adult	45 years

However because of the fragmentary nature of the material there were overlaps and broad categories such as adult (see Appendix 3).

- 8.11 The youngest members of the group were two juveniles (5.7%). Nine (25.7%) of the burials were categorised as young adult and of these four were female, two male and three were of unknown sex. Three (8.6%) of the burials could only be classified as adult and only one, a male could be sexed. Seven (20%) were thought to be mid-adult and of these five were identified as male and one a female. Eight (23%) fell into the category of mid/mature and of these four were identified as male, and one a female. A single one (2.9%) was thought to be a mature female.

Table 1 Age and Sex Distribution

Age group	Male	Female	Unknown
Juvenile			2
Older sub-adult	0	0	2
Young adult	2	4	3
Mid-adult	5	1	1
Mid/mature adult	4	1	3
Mature adult	0	1	0
Adult	1	0	2
Indeterminate	0	0	3

- 8.12 The most common age of death in the Artillery Lane sample was that of young adult representing 26% of the sample. If we group young adult and adult categories together they comprise 34% of the burials. Those aged mid adult or older make up 46% of the sample.

Alignment and Head Location

- 8.13 There were two distinct grave alignments (see Table 2, below) represented, namely north/south and east/west. Eighteen of the burials were laid out east/west. Of these 13 had a head located to the west, in 4 examples the head was located to the east, and in one case the head was displaced. Fifteen burials were on a north-south alignment, with 13 examples with the head to the north and 2 examples with the head to the south. In two cases the orientation was unclear due to the fragmentary nature of the remains.
- 8.14 It has been possible to ascribe gender to seven of the individuals that were buried east/west, 4 were identified as female and 3 were thought to be male. Of these, only one, a female had a head located to the east.
- 8.15 There was one anomalous particularly interesting inhumation, B11, of a young adult male. Although the body had been laid out east/west with the upper part of his body to the west his head had been decapitated and placed under his left elbow.
- 8.15 Of the fifteen north/south aligned burials seven were identified as male and three as female.

Table 2 Alignment and Head Location

	Male	Female	Unknown	Total No
Aligned E-W head to W	3	3	7	13
Aligned E-W head to E	0	1	3	4
Aligned E-W head displaced	1	0	0	1
Aligned N-S head to N	6	3	4	13
Aligned N-S head to S	1	0	1	2
Unknown	1	0	1	2

8.17 The two most popular alignments were east/west with the head to the west and north/south with the head to the north. Both orientations were equally common and total 26 individuals (74%).

8.18 Excluding the burial with the displaced head, the least common alignment, with two individuals (6% of the sample) was north/south with the head to the south.

Arrangement of the Corpse

8.19 Of the 35 burials the vast majority were supine but one had been laid out in a crouched position (B11) while another was prone, or face down (B 3). The crouched burial a young adult male had been placed on its right side, and the head had been deliberately removed and placed under the left elbow. That this was a 'true' decapitation is demonstrated by the osteological evidence, which indicates that the head had been removed by two or three blows, struck from the front with a sharp, bladed instrument (see Appendix 3). These two inhumations can be viewed as being in the same category of comparatively uncommon forms of Roman burial, which include bodies which are dismembered, mutilated, bound, buried face down, decapitated, with signs of violence other than warfare, or with evidence for defleshing and exposure. This appears to represent aspects of ritual disposal,³² which continues a tradition known from the Iron Age and Bronze Age.

8.20 The prone burial was interred without a coffin and placed in a north/south grave with the head to the north.

Evidence for Coffins

8.21 Evidence that at least ten of the inhumations (B6, B13, B14, B17, B20, B22, B24, B28, B31 and B32) had been placed in coffins was provided by the collection of nails from within the grave cuts and arranged around the body. Three of these burials were identified as female and two male. Five of the coffin burials were aligned east/west with the head to the west. Two females (B14 and B24) had been interred in a north/south grave with their head to the north. A male (B28) was also aligned north/south with the head to the north. Of course the absence of nails does not mean that there was no coffin. It may be that in some of the graves the evidence for nails had completely corroded away. Or that the coffin had no metal fixings. In two examples (B25 and B18) red/brown silty clay was recorded overlying the skeleton, this may be timber staining and if so suggests that these two examples may also have been contained within a coffin. However

³² Taylor 2003

one of the inhumations that certainly was not confined in a coffin was B11 with the displaced head and where the crouched position indicated that a coffin would not have been present.

Chalk Burials

- 8.22 Two of the burials B22 and B26 were notable for the presence of a white substance possibly chalk, lime or plaster around the body. Skeleton B22 had been placed in a coffin and interred in an east/west grave with the head to the west. A chalk layer (sample 11) up to 0.10m thick appears to have been deliberately packed within the coffin and around and over the body. This individual was an adult male whose skeletal remains showed no signs of disease.
- 8.23 Burial B26 produced no evidence for a coffin, and had been laid in a north/south grave cut with the head to the north. A thin layer of chalky like material (sample 7) appears to have been spread over the front of the face with patches covering right upper arm and left hand. This individual was identified as a young adult female. Pathological evidence showed that there was a fracture to her right clavicle. Fractures to the clavicle usually occur during a fall and on this individual the break had healed and had been apparently satisfactorily reset. From the backfill to the grave, burnt bone (sf <30>), a ferrous metal object, possibly a brooch, (sf <31>), and a single *tessera* (sf <32>), were recovered. These finds may be residual although if the identification of the metal object as a brooch is confirmed then it may represent a grave good. If the burnt bone is human it may be the disturbed remains of an earlier cremation.

Grave Goods

- 8.24 Ten of the burials (B4, B5, B6, B9, B10, B14, B15, B20, B21 and B29) had grave goods (i.e. deliberately deposited objects) (see Table 3). Six of these inhumations (B6, B9, B10, B15, B20, B21) had ceramic vessels or lids accompanying the body. Of these, four (B6, B15, B20 and B21) were buried east/west all with the head to the west and two (B9 and B10) were interred north/south with the head to the north. Two had multiple vessels. One, B6, a middle/mature adult placed within a coffin had two or possibly three vessels present including two Miscellaneous sand-tempered ware (SAND) jars one dated AD 120-200 and the other probably late 3rd century. One of the SAND ware pots was a miniature; vessels of this type predominantly derive from ritual contexts. A third vessel, most of which was present, may also have been a grave offering and comprised a Black-Burnished 1 ware (BB1) dated AD 140-300. A second burial, B9, a middle adult male, aligned north/south was accompanied by two vessels placed at his feet, including a Black-Burnished 2 ware (BB2) pie-dish dated AD 150-270 and a COLOX unguent pot dated AD 100-250.
- 8.25 The remaining burials which had ceramic grave goods included a middle/mature male B10 buried north/south with head to north accompanied with a Black-Burnished 2 ware (BB2) pie-dish dated AD 150-270. A coin (sf <22>) comprising a silvered bronze nummus dating to AD 330-335, was recovered from the grave fill and may also represent a funerary offering. A middle/mature female B15 who had been placed in an east/west aligned grave, with the head to the west had a

ceramic lid of a Local Oxidised ware (LOXI) placed by her left foot. Inhumation B20, a middle aged adult, placed in a coffin, on an east/west orientation with the head to the west also had a Miscellaneous sand-tempered ware (SAND) flagon dated AD 150-250 in accompaniment. Burial B21, that of an older sub-adult, had been aligned east/west with the head to the west and had a Highgate 'C' Sand-tempered ware (HWC) jar dated AD 60-150 placed between the legs.

- 8.26 The dating of the pottery that accompanied the burials suggests that they are all likely to have been interred in the 3rd century. The Highgate Wood 'C' sand tempered ware (HWC) vessel, with B21 may be anomalous in date but this could be explained as an heirloom (unlikely given the ordinary nature of the vessel) or the pot had been buried at least once before. It has been suggested that pots disturbed by gravediggers were made available to later mourners (Crummy et al 1993, 49).
- 8.27 Three of the burials were interred with a non-ceramic category of grave goods. A middle/mature adult, B4, had been placed in an east/west grave with a worked flint (sf<18>) had been placed on the upper part of the torso. A second burial, that of a middle/mature adult B6, also had a worked flint (sf <19>) placed on the upper body. Burial B14 had a fragment of quern stone (sf <28>) placed on the chest. The remains were identified as those of a young female adult placed in a coffin.
- 8.28 A single burial, B29 that of a juvenile of unknown gender was interred with a shale bracelet (sf <500>) and a single hobnail shoe (sf <501>).

Table 3 Distribution of Grave Goods

	Male	Female	Unknown	Total No.
Burials with no grave goods	8	5	12	25
Burials with multiple vessels	1	0	1	2
Burial with vessel and coin	1	0	0	1
Burial with single vessel or lid	0	1	2	3
Burial with bracelet and shoe			1	1
Burial with worked flint	1	0	1	2
Burial with quern stone	0	1	0	1

Grouping and Density of The Graves

- 8.29 The majority of the burials were concentrated in the south of the site and these can be divided into groups, one to the west (B1, B2, B3, B4, B5, B9, B17, B24) and one to the east (B6, B7, B8, B10, B13, B14, B15, B16, B18, B19, B20, B26). There was another concentration of burials in the northeast corner of the site B27, B28, B29, B30 and B31. The other burials were more scattered, B22 was an isolated inhumation in the north of the trench, B12 and B11 in the northwest of the site, B21 in the central part, B23, B25 in the south, and B32, B33, B34 and B35 in the southeast corner.
- 8.30 If the characteristics of the two larger clusters of burials are compared one sees that in both groups males and females are present, graves were aligned north-

south and east-west, some were contained in coffins and some had associated grave goods. However both burials (B4 and B5) that contained flint artefacts. were adjacent, although one was aligned east/west and the other north/south. Assigned to eastern group was one of the chalk burials B26, which was some 24m to the south of the other chalk-accompanied inhumation (B22).

- 8.31 Burials in clusters are often thought of as being family groups or that they have some other association i.e. religious belief, ethnic or cultural affinity, or shared occupation. However the plan of the excavated burials in this case probably does not give a true reflection of the actual density and distribution of the cemetery because it constitutes but one sector of a much larger burial ground and the variations observed across the excavated area may not be reflected across the rest of the cemetery. In addition later, particularly Medieval and post-Medieval truncation may have altered the observable pattern significantly.
- 8.32 On the west side of the site a possible grave cut was identified [62] (fill [61]). The cut was sub-rounded with near vertical sides falling to a flat base. It measured 0.94m N-S, 0.42m E-W and was 0.35m deep and continued beyond the edge of excavation to the west. The fill was a silty sand that contained pottery dating AD 120 – 150, burnt flint and human bone pertaining to an adult individual.
- 8.33 In the north of the site truncating the fill of the possible ditch [522] (see 8.2) was a circular pit [516] (fill [515]) c. 1.20m in diameter. It had sloping sides falling to a flat base. The fill comprised a clayey silt that produced Roman pot and fragments of human bone. The purpose of the pit is uncertain.

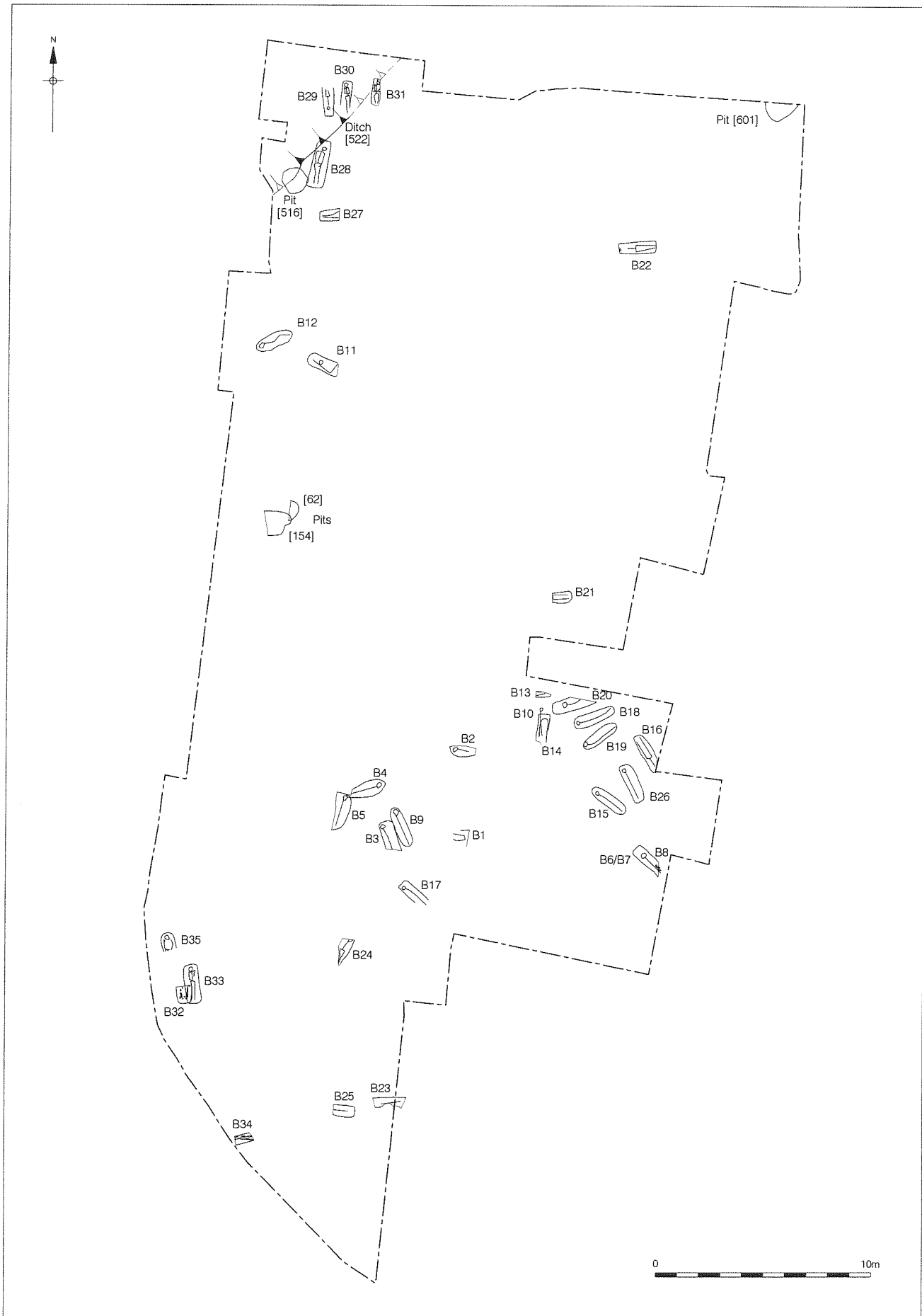


Figure 3
Phase 2
Roman Cemetery
1:250

9 Phase 3 Medieval (Fig 4)

Summary

- 9.1 This phase was represented by a major north/south boundary ditch that extended across the entire site. The ditch was probably originally dug in the 13th century and certainly re-cut in the 15th century before being completely infilled in the 16th century (see Phase 4). It is part of the boundary of the Priory and Hospital of St Mary Spital following its AD 1235 re-founding. Although it is not exactly on the same alignment and slightly west of the projected position of the later Artillery Ground boundary wall. To the east of this feature a further east/west ditch, probably a field boundary that may have originated in the 15th century was identified. Also to the east was a substantial pit, which, although of uncertain date has been assigned to this phase on stratigraphic and spatial grounds. A further pit was only seen in section on the northeast side of the site.
- 9.2 On the west side of the site, the north/south ditch ran over a distance of c. 53m and continued beyond the limits of the excavation to the north and south. For the most part the ditch was designated the contexts cut [66]/[171] (fill [170], [169], [81], [63]), but in the north of the site, it was assigned the contexts [506] (fill [505], [504], [503]). This same ditch was recorded in section S<106> where it was designated the contexts cut [115] (fill [125], [105], [104]) and in section S<112> (see fig 15) it was assigned the contexts: cut [387] (fill [386]), and cut [397] (fill [396]). The feature was at least 3.5m wide and was recorded in section with a depth of 1.35m but was probably cut from much higher in the sequence. The lowest level on the base of the ditch was at 9.69m OD and assuming a ground level of c.12.10m OD then a maximum depth of 2.40m may be inferred. The ditch was characterised by steeply sloping sides falling to a concave base. The fills were deposits of mid-brown to a grey brown silty clays, with occasional to moderate charcoal flecks, and very occasional oyster shell and ceramic building material (cbm) fragments. It truncated the Roman cemetery soil, some of the backfills to the graves and the quarry pit [154] (see Phase 2).
- 9.3 From fill [386] a Coarse Border ware (CBW) bowl, dating to AD 1270-1500 was recovered and from fill [104] single sherds of London-type ware (LOND), and Kingston ware (KING) dating to AD 1230-1400, as well as Coarse Border ware were retrieved. From the basal fill [170] a single sherd of London-type ware was recovered that dated to AD 1080-1350. From fill [505] pot dating to AD 1270 – 1500 was recovered. Taken together the ceramic evidence suggests a deposition date of c. 1270-1350 (see Appendix 5).
- 9.4 The north/south ditch was clearly a substantial feature and probably demarcated a property boundary. Frequent re-cutting suggests that this boundary was maintained over a prolonged period. Cut [390], the first discernible re-cut, (fills [389], [388], [395]) produced pottery that included Coarse Border ware, Tudor Green ware (TUDG) dating to AD 1380-1500 and Late London ware (LLOND) dating AD 1400-1500.
- 9.5 A column sample (<13>) taken of the fills [388] and [389] (see section S<112>) produced very good pollen results which indicate that the local environment was dominated by *Salix* (Willow) and Poaceae (Grass), with open mixed deciduous

woodland (*Quercus*, *Ulmus*, *Alnus*) herb-rich grassland (*Helianthemum*, *Galium* type, *Thalictrum*) and areas of open water (see Appendix 12). Context [389] also produced a leather shoe (sf <59>) of a style popular from the 13th to the later 15th century (see Appendix 9).

- 9.6 Truncating the base of the re-cut [390] was a circular posthole [392] (fill [391]). It measured c. 0.22m in diameter and was 0.15m deep and had steeply sloping sides falling to a concave base. The fill was a sandy silty clay. This single posthole is difficult to interpret but it may have been part of a revetment to the ditch, part of a palisade type structure or even part of a footbridge.
- 9.7 Subsequent re-cutting of the ditch cut [100] (fill [102]) recorded in section S<105> produced no finds, but [394] (fill [393]) which was followed by cut [375] (fill [348]) did produce ceramics. From [393] sherds of Coarse Border ware dating to AD 1340-1400, as well as Late London type ware were retrieved. The fill [348] produced sherds of Kingston ware, Coarse Border ware, and Cheam ware (CHEA) dating to AD 1350-1500. This fill also produced an iron buckle sf <48> tentatively identified as part of a horse harness.
- 9.8 The depositional sequence was also recorded in section <108> where the re-cut was assigned the context cut [87] (fills [168], [167], [166], [162], [86], [85], [84], [83], [82], [65], [161])
- 9.9 The ceramic evidence suggests that this north/south boundary ditch could have been first dug in the 13th century c. AD 1270 and was maintained by frequent re-cutting until at least the 15th century.
- 9.10 Some 14m to the east of the north/south ditch a probable drainage channel [57] was recorded. The feature, cut [57] (fill [56]), measured 1.10m wide, 1.06m long and 0.14m deep but was truncated to the east and west. The cut was characterised by sloping sides falling to a slightly concave base. The fill mid grey silt with inclusions of frequent coarse grit, and occasional charcoal flecks, produced pottery that included sherds of Coarse Border ware, and Late London slip ware (LLSL) dating to AD 1350-1500. The gully may have been excavated to improve the drainage of land, that may now been brought into productive agricultural use.
- 9.11 In the northeast part of the site, a layer of mottled yellow/brown clayey sandy silt [89] measuring 2.60m by 1.20m and between 0.10m to 0.15m thick was found overlying the cemetery soil. This had been disturbed by bioturbation and was interpreted as an agricultural soil. Although no dating evidence was retrieved, for stratigraphic reasons the layer was assigned to the medieval period.

Quarry Pits

- 9.12 In the northwest corner of the site approximately 3m to the east of the north/south boundary ditch, a large pit was identified. Cut [235] (fill [233], [234]) was sub-rectangular in shape and measured 2.40m north/south, 2.20m east/west, and was 1.08m deep but was truncated to the north. The primary fill [233] was a patch of charcoal and burnt clay that measured 0.60m x 0.40m and 0.01m thick. Covering the burnt material was a backfill of silty clayey sand [234]. The feature

bottomed out on the underlying gravel and is thought to have been a brickearth quarry pit. For stratigraphic reasons the pit is thought to be of medieval origin.

- 9.13 A second large pit [609] (fills [608], [607]) measuring c. 3.0m across and 0.78m deep was recorded in Area 8 (East) (Fig. 2) but only in the north facing section S<113>. From the basal fill [607] pottery dating to AD 1300-1500 was recovered. This feature was also thought to have been dug for brickearth extraction.

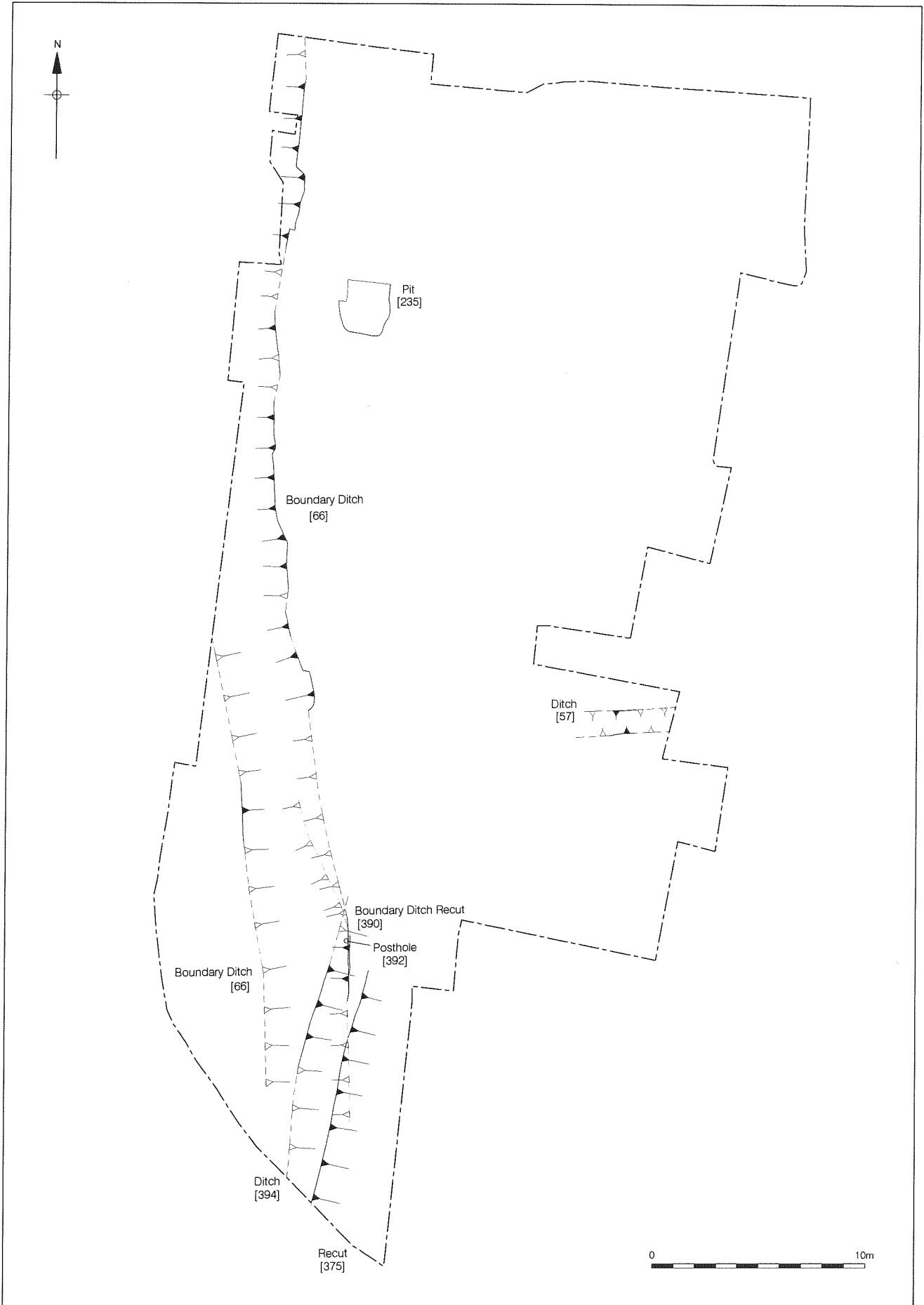


Figure 4
Phase 3
Showing the outer-precinct boundary ditch
1:250

10 Phase 4 16th Century (Fig 5)

- 10.1 This phase represents the 16th century when the outer-precinct boundary ditch appears to have been deliberately infilled. However the property division marked by the boundary ditch was maintained with the construction of a brick wall immediately to the east. Further to the east a rubbish pit and a possible drainage ditch were identified.
- 10.2 The deliberate infilling of the precinct boundary ditch was indicated by the upper ditch deposits [101] and [96]. Context [101] was dark green-grey-black, silty clay with frequent fragments of oyster shell, charcoal, cbm and animal bone, 0.18m thick. It produced a copper needle (sf <8>) and another copper object (sf <9>). Fill [101] was overlain by uppermost ditch fill [96] a green-grey silty clay frequent charcoal and oyster shell fragments, and moderate inclusions of crushed mortar, cbm, and bone fragments, 0.42m thick. From [96] a mid to late 16th century jetton (sf <5>) probably from Neurenberg and a horse-shoe (sf <10>) were recovered. It would seem that the precinct boundary ditch was being used as a dumping ground for general domestic refuse. The green hue to the deposits also suggests that there was probably a high cess content to this waste. Pottery from these deposits included Early post-medieval redware (PMRE), dated AD 1480-1600 as well as Green-glazed Border ware (BORDG), dated AD 1550-1700. This suggests a depositional date of the late 16th century.
- 10.3 On the south side of the area the west facing elevation of a north/south-aligned wall (section 110) was recorded. The wall [247] was built with a local red fabric (3033) hand made bricks, in an irregular English Garden Wall bonding (see Appendix 7). Such a construction would be consistent with it being built in the Tudor period. The wall stretched for 10.40m and stood in parts up to c. 1.90m high. The highest level on the wall was at c. 13.24m OD. It had been built within a foundation trench cut [365] (backfill [364]) 0.40m deep. The lowest level on the base of the construction cut was at 11.04m OD. The backfill [364] to this cut produced only residual sherds of medieval pottery.
- 10.4 Wall [247] was also recorded on the north side of the site where a 1.76m stretch survived. Here the construction cut was assigned context [123]. Clay packing [122] surrounding post-pipes [121], [120] (voids caused by decomposed wood) within the cut and sealed by the backfill [114] suggested that scaffolding may have been used in the original construction of the wall.
- 10.5 Wall [247] appears therefore to have once extended north-south right across the site over a distance 53m and to have continued to the north and south beyond the site limits.
- 10.6 A pit cut [300] (fill [299]) was identified to the northeast, c.6m to the east of [247]. It was sub-circular, with steeply sloping sides falling to a concave base and measured 1.53m E-W, 1.26m N-S, 0.88m deep, and truncated to the east and south by modern buildings. The fill was a soft silty clay with frequent fragments of charcoal and chalk, moderate cbm and occasional oyster shell fragments. It produced sherds of Coarse Border ware and Early post-medieval redware and a sherd from a crucible that contained residue produced by smelting of a copper alloy. The pit seems to have been used for the disposal of general domestic

rubbish but the crucible suggests that there was also an industrial component, probably emanating from metal working activity conducted in close proximity.

- 10.7 Also sited to the east of the boundary wall in the northeast corner a possible drainage ditch [377] (fill [376]) was identified. The feature measured at least 2.0m in length, c. 2.60m wide and 0.45m deep but it was truncated to the south and continued beyond the limits of the excavation to the north and east. It had sloping sides falling to a concave base and was filled with a clayey silt with occasional charcoal, shell and cbm. Pottery from the ditch dates to AD 1580 – 1600. The highest level was at 11.15m OD. Probably the same feature was recorded in section S<113> and assigned the context [605] (fill [604])

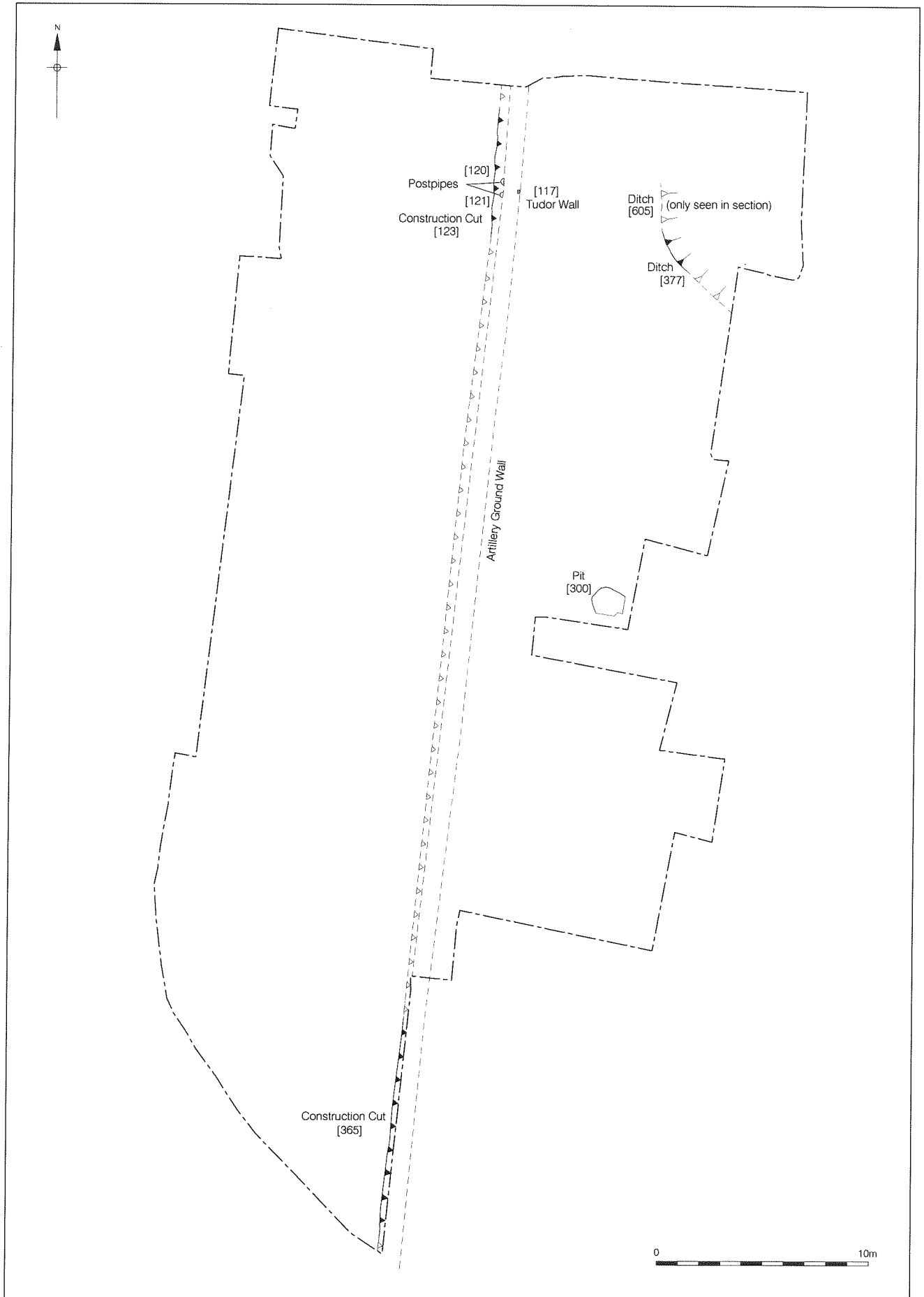


Figure 5
Phase 4
Artillery Ground Wall
1:250

11 Phase 5 Late 17th Century (Fig 6)

- 11.1 This Phase represents the late 17th century when building (S1) with at least two cellared rooms appears to have been constructed. The building was notable for the alignment of the southern external wall (although this was rebuilt in the 18th century, see Phase 6), which was on a northwest/southeast axis corresponding with the alignment of the road (Artillery Lane).
- 11.2 The alignment of the Tudor boundary wall (see Phase 4) appears to demarcate property boundaries throughout the post-Medieval period. During this phase, to the east of the precinct wall, 'garden soil' rapidly accumulated, and what may be part of a hedge line was laid out and planting holes dug. This area was also used for the deposition of domestic waste into pits. One of these cut [295] was notable for a basal fill of horn cores that may be an indication that horn manufacture was being carried out in the near vicinity. The 'garden' to the east of the precinct wall probably represents the rear of properties that fronted onto Crispin Street.

Building S1

- 11.3 In the south of the site, context [132] represented an east/west wall that abutted the former Tudor precinct wall [247] (see Phase 4, para 10.3) to the east and was truncated by a modern brick wall to the west. The central section of wall [132] appeared to have been re-built at a later date (see context [145], Phase 7, para 13.33). The east section of the wall measured 1.60m long, 0.40m wide and survived to a height of 1.65m and the western section was 1.70m long, 0.40m wide and was 1.90m high (a maximum of 17 courses). Overall the wall [132] would have been at least 5.50m long. It was built with unfrogged orange fabric 3033 brick with a few bricks of 3032 fabric (see Appendix 7). These were laid in an irregular English Garden Wall bond, on a lime and sand mixed mortar with occasional fragments of charcoal. The brickwork is dated c. 1450/1480 to c. 1666/1700. This wall was probably the external east/west aligned north wall for the cellared building (S 1). The precinct wall [247], which had been incorporated into the building, now formed the external north/south orientated east wall.
- 11.4 To the south of wall [132] and internal to the building (S 1) were two buttresses [263] and [254] that also abutted the precinct wall [247]. The buttresses projected 0.78m east-west, were 0.46m wide at the base but were stepped in to be 0.36m wide after the first brick course. They were at least 0.62m in height and were built with unfrogged bricks in an orange fabric (3033/3032). The bonding material was a yellow/white lime sand mortar. The buttresses probably represent the position of a 1.50m wide fireplace.
- 11.5 Abutting the wall [132], the buttresses [263], [254] and the precinct wall [247] was a spread of compacted light orange coarse sandy lime mortar [350]. This measured 10.25m north-south, 5.20m east-west and was up to 0.10m thick, but was truncated to the west and south. Only residual medieval pottery was associated. The highest level was at 11.54m OD. This layer defines the extent of building S 1 on the site, which measured at least 5.5m east-west and 11.0m north-south.

- 11.6 Layer [350] was truncated by an east/west orientated beam slot [318] (fill [317]) that measured 4.97m east-west, 0.10m wide and was 0.09m deep but it was truncated to the west. The cut had vertical sides falling to a flat base and was filled with a sandy clayey silt. Pot from the beam slot dates to AD1690 – 1700. This feature probably represents an internal timber-partitioning wall that would have divided the cellar into at least two rooms. Room 1 to the north measured a minimum of 5.50m east-west by 4.50m north-south. To the south Room 2 measured c. 6.0m north-south and at least 5.50m east-west.

Room 1

- 11.7 On the northwest side of Room 1 a short north/south orientated linear cut [374] (fill [373]) was identified measuring 0.66m long, 0.26m wide and 0.09m deep. It had vertical sides falling to a flat base and was filled with degraded wood. This beam slot could have been to level and support brickwork [349a].
- 11.8 Overlying slot [374] was a single course of unfrogged brick [349a] in an orange fabric (3033/3032), laid on bed. The brickwork, which measured 1.50m N-S and 0.28m E-W and was composed mostly of ½ bats could have been the remains of a N/S internal dividing wall. In which case it would define the west wall of Room 1 and indicate that the room was 4.50m square.
- 11.9 However within Room 1 there were two other areas of brick similar to [349a]. Contexts [349b] and [349c], which were laid on bed and over the mortar [350]. Context [349b] measured 0.68m E-W and c. 0.30m N-S and abutted the buttress [263] while [349c] measured 0.80m E-W and 0.36m N-S and abutted buttress [254]. All the brickwork [349] appears to date to AD c. 1450/1480 to 1666/c. 1700. Historical archive material indicates a post- 1690 date. It may be that the bricks [349a], [349b] and [349c] represent the remains of a brick floor at c. 11.55m OD or alternatively they may represent the remains of sleeper walls that supported timber floor joists, or [349a] represents an internal dividing wall with [349b] and [349c] constituting sleeper walls or floor.

Room 2

- 11.10 South of the partition [318] within Room 2 mortar surface [350] was truncated by a series of north/south orientated linear slots all given the group number [316] (fill [315]). The cuts were shallow being only c. 0.05m deep, and varied in length from c. 3.50m to 0.70m and were generally 0.20m wide. They were arranged in seven rows. The interval between the first five rows (moving west to east) was approximately 0.24m, where the gap then widened to c. 1.0m but then narrowed to c. 0.70m. All the slots were characterised by vertical sides falling to a flat base and were filled with similar sandy silt. Pottery from these features could only be dated to within the broad date range of AD 1580 – 1800. A particularly rare find from an archaeological context were several lantern horn plates, (sf <124>). Also found was copper waste (sf <111>). The slots probably represent the impressions of wooden floor joists (that have rotted away or been taken up) that would have supported a timber floor.

Garden Soil

- 11.11 To the east of the Tudor boundary wall [247]/[123] (see Phase 4, para 10.3) the archaeological evidence suggests the rapid accumulation of 'garden soil' with the deliberate dumping of domestic refuse, possibly cess (night soil), some demolition rubble, mixed in a matrix of clayey sandy silt.
- 11.12 Recorded in section S<103> the possible ditch/gully [57] (see Phase 3, para 9.10) was overlain by a dumped deposit [54], which was in turn overlain by a sequence of dumped deposits [54], [53], [55], [103], and [52] recorded in section S<102>. The basal layer was a mid grey brown, clayey silt [54] with fragments of cbm, oyster shell and animal bone. The excavated area measured 3.30m east-west, 2.83m north-south and the deposit was 0.18m thick. Pottery from the layer dates to AD 1630 – 1700 and the clay tobacco pipe dates to AD 1660 – 1680. A late 14th or 15th century French jetton (sf <2>) was also found.
- 11.13 Overlying [54] was a was a similar deposit context [53] but of a noticeably darker hue. This layer was also 0.18m thick. Pottery associated with layer [53] dates to the 17th century.
- 11.14 Layer [53] was in turn overlain by chalk rubble and silty sand [55] 0.15m thick and a dark grey black clay silt [103] 0.12m thick.
- 11.15 The upper most deposit was a sandy silt [52] with frequent fragments of oyster shell, cbm, and charcoal, c. 0.35m thick. Pottery from the layer dates to the late 17th century and the clay tobacco pipe dated to AD 1660 – 1680. A corroded coin (sf <1>) was also retrieved from the deposit, the top of which was at 12.58m OD.
- 11.16 Overlying part of the cemetery soil (context [90], see Phase 2) in the northeast corner of the site and excavated in plan, was a layer of silty clay [370]. It measured 1.50m by 1.50m and was 0.12m thick but continued beyond the edge of excavation to the east. Pottery from the layer can only be broadly dated to AD 1580 – 1900. Layer [370] was covered by silty clay [326] measuring 7.0m east-west, 4.50m north-south and up to 0.30m thick but continued beyond the limits of the excavation to the north, east and west and was truncated to the south. The highest level was at 11.87m OD and the lowest was at 11.68m OD. Pottery associated with this deposit dates to AD 1630 – 1800. A coin sf <37>, a Charles I (1625 – 1649) rose farthing, was also found. At the interface of the layers [370] and [326] was a partially articulated skeleton of a pig (context [369]) (see Appendix 10).
- 11.17 Also recorded in the northeast part of the site but only in section S<104> was a layer of mid brown grey, clayey silty sand [80] with inclusions of charcoal flecking that measured 2.50m north-south and was 0.12m thick. A glass bead (sf <7>) was the only find from this deposit. This layer of probable horticultural soil overlay the layer of clayey sandy silt [89] (see Phase 3). The highest level on [80] was at 11.81m OD.

Hedge line

- 11.18 Truncating the horticultural soil described above was an east/west orientated slightly curvi-linear feature, cut [75] (fill [74]) measuring 1.20m east-west, 0.60m north-south and 0.13m deep but was truncated both to the east and west. The sides sloped to an irregular and undulating base. The cut was filled with soil of a similar composition to that of layer [89]. The feature may represent a hedge line.

Planting holes

- 11.19 Immediately to the north of the possible hedge-row was a roughly 2.0m long north/south line of five possible planting holes (dimensions are detailed in Table 4 below). The cuts were circular and characterised by sloping sides falling flat base. All the holes were circular and were filled with similar clayey sandy silt.

Table 4 details of planting holes

Context No	Shape	Dimensions (m)	Depth (m)	Fill
69	Circular	0.35 x 0.32m	0.15m	68
71	Circular	0.23m dia	0.09m	70
73	Circular	0.36 x 0.34m	0.13m	72
77	Circular	0.15 x 0.13m	0.09m	76
79	Circular	0.34 x 0.30m	0.10m	78

Rubbish Pits

- 11.20 Approximately 1.50m to the east of the line of planting holes was pit [298] (fill [297]). It was rectangular in shape with rounded corners, had near vertical sides falling to flat base and measured 1.60m by 1.30m and was c. 0.53m deep. The fill was a silty clay with frequent fragments of clinker, charcoal, cbm, oyster shell and animal bone. The highest level was at 12.63m OD and the 12.10m OD. Pottery recovered from the pit has a suggested deposition date of AD 1670 - 1690. The pit was probably for the disposal of domestic rubbish.
- 11.21 A second probable rubbish pit [302] (fill [301]) was recognised c. 1.50m further to the east of cut [298]. It measured 1.95m north-south, 1.20m east-west and was 0.63m deep but was truncated to the east. The sides were steeply sloping falling to a slightly rounded and uneven base. A clayey silt with frequent fragments of animal bone, moderate amounts of brick/tile and occasional oyster shell filled the pit. Pot dating to AD 1630 – 1680 was also found. The highest level was at 12.87m OD.
- 11.22 Truncating the southwest corner of pit [302] was a sub-circular pit [295] (fill [294], [293]) measuring 0.98m north-south, 0.84m east-west, and 0.41m deep but it was truncated to the east. It had near vertical sides falling to a flat base. The base of the pit was covered by horn cores [294], which were in turn covered by clayey silt [293] with occasional fragments of oyster shell and cbm. Clay tobacco pipe dating to AD 1660 – 1680 was recovered, as well as an iron knife/mount (sf <76>) and slag representing a smithing hearth bottom.

- 11.23 Three more probable rubbish pits were identified in the northeast of the site. Cut [344] (fill [343]) was sub-rectangular in shape and measured 1.60m north-south, 1.25m east-west and was 0.40m deep but was truncated to the west by a later intrusion. The pit was characterised by steeply sloping sides falling to a flat base. The fill was a clay silt with frequent fragments of animal bone and cbm. Clay tobacco pipe from the pit dates to AD 1660 – 1680. The highest level was at 11.74m OD.
- 11.24 Approximately 4.0m to the east, pit [330] (fill [329]) was identified. The cut was rectangular in shape with rounded corners and had steeply sloping sides falling to an irregular base. It measured 1.80m by 1.18m and was 0.73m deep. The fill was a clay silt similar to that of pit [344] (see above). From the pit pottery dating to AD 1625 – 1650 was recovered. A silver coin (sf <38>) dating to the 16th century probably a Henry VIII or Edward VI and an iron buckle (sf <112>) were also found.
- 11.25 A metre to the north of cut [330] another pit [321] (fill [320]) was identified. The cut measured 1.85m east-west, 1.20m north-south, and 0.36m deep but was truncated to the north and east. It had sloping sides falling to an uneven base and was filled with a sandy silt with moderate amounts of fragmentary oyster shell, charcoal and occasional cbm. Pottery dating to AD 1650 – 1700 and clay tobacco pipe dating to AD 1660 – 1680 was found in the pit.

Post-pit

- 11.26 Approximately one metre to the west of cut [321] a small rectangular cut [327] (fill [322]) was recognised. The cut had vertical sides falling to a flat base and measured 0.42m by 0.40m by 0.32m deep. The highest level was at 11.76m OD. The fill was a clay silt with frequent fragments of animal bone, cbm and charcoal. Pottery of similar fabric types and date range to that found in pit [321] were recovered from [327]. The characteristics and size of the feature [327] are suggestive of a post pit but its isolation from any other structural features makes any further interpretation difficult.

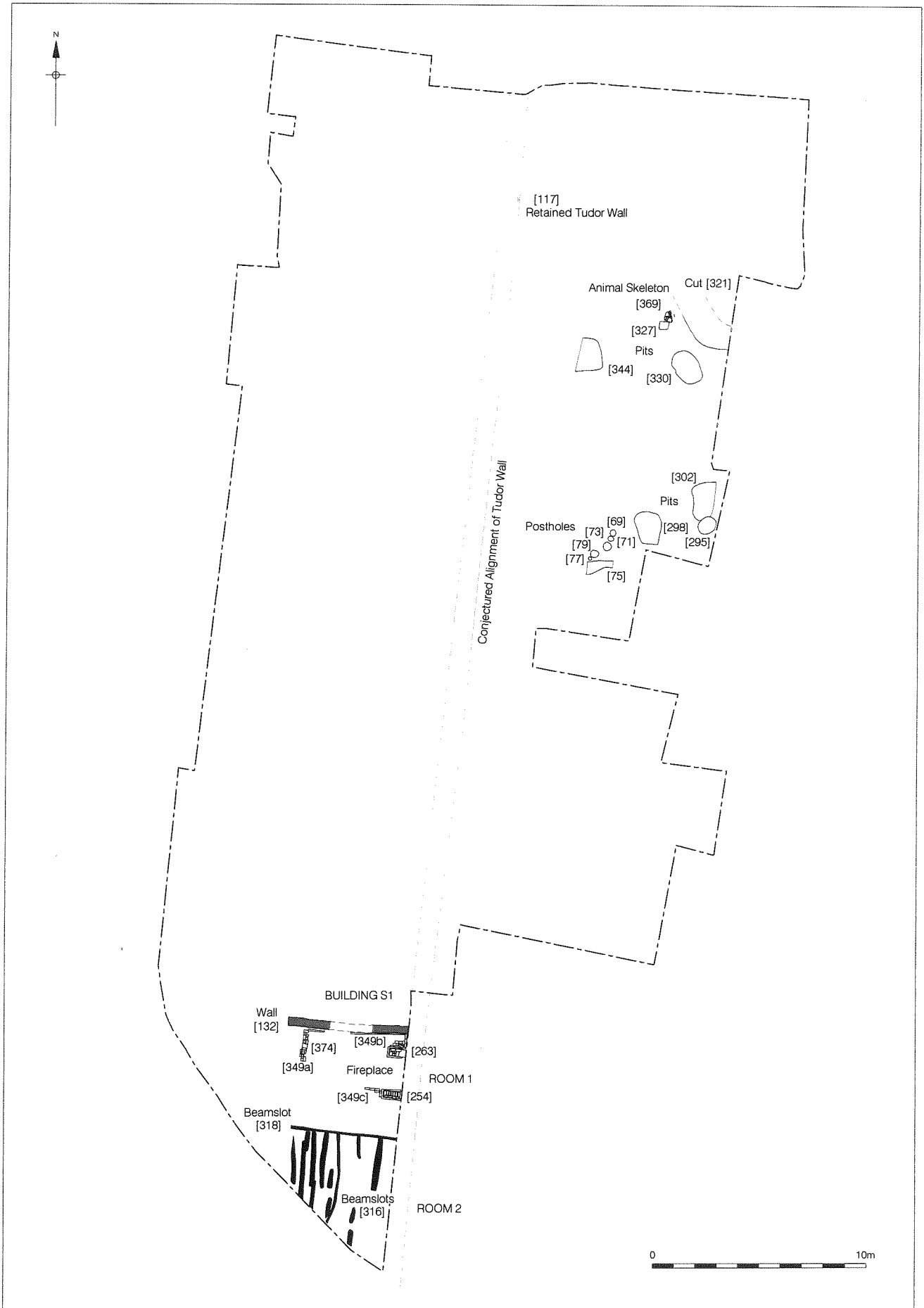


Figure 6
Phase 5
Late 17th Century
1:250

12 Phase 6 Early 18th Century (Fig 7& 8)

- 12.1 This phase represents early 18th century activity. To the east of the precinct wall, where part of a second building (S2) now encroached upon the site. The cellared building (S2) appeared to be an extension to the rear of the main part of the structure that would have fronted onto Crispin Street. Immediately to the rear of building S2 was a horn-core lined pit probably used for rubbish disposal. To the north of building S2 a cesspit was unearthed that may be associated with that building or the adjacent property. A possible bedding trench or ditch was recognised 16m to the south of building S2 and this feature too would have been located in the back garden or yard to a property that would have fronted Crispin Street.
- 12.2 To the west of the boundary wall, located in the back properties of buildings that would have fronted onto Gun Street, a cess pit, well and a rubbish pit were unearthed.
- 12.3 On the south side of the site, building S1 may have been in a state of partial collapse as it seems to have been necessary to support the ceiling with timber posts. The building then underwent renovation, when the external south wall appears to have been rebuilt and a new brick floor laid. In the northeast corner of room 1, between the fireplace and the north external wall, a raised tile platform was built about 0.10m above the floor. This platform may have been used for storage. This sub phase has been designated Phase 6.1.
- 12.4 Building S1 then underwent a second phase of alteration represented by the sub-phase 6.2. It appears that the dividing wall between rooms 1 and 2 was demolished and a floor makeup layer spread across the basement. However the partition between rooms 1 and 2 may have been reinstated, as the brick floor laid down in room 1 partially survived and its straight southern edge may indicate a wall line. Also in room 1 the base to the hearth was re-laid with brick and the raised platform between the fireplace and the north wall was rebuilt.

Features to the east of the Tudor boundary wall.

Building S2

- 12.5 In the northeast part of the site, part of a second cellared building (S2) was uncovered. Contexts [305], [306] and [307] represented the brick walls to the sunken structure. The walls were built with orange fabric unfrogged brick measuring 230 x 110 x 60mm, in alternate header and stretcher fashion and bonded with a grey mortar. The bricks date to the 17th or 18th century. The walls which were 0.40m thick, survived to a maximum height of c. 0.70m at 12.17m OD. Internally the structure measured 3.30m east-west, and 2.60m north-south but it continued east beyond the limits of the excavation.
- 12.6 In the northwest corner of the cellar (S2) the remains of a brick drain [334] (fill [333], [345]) were identified. The construction cut for the drain measured 0.45m by 0.45m and was 0.19m deep. It had vertical side falling to a flat base. Bricks similar to those used in the walls lined the cut, bonded with a light grey mortar

with frequent flecks of chalk. The fill was a clayey silt from which pottery was recovered, which dates to AD 1630 – 1680.

- 12.7 Context [332] overlain by [331] was a floor makeup deposit of compacted sandy clayey silt up to c. 0.10m thick. Pot from [332] dates to AD 1680 – 1710 and from [331] to AD 1700 – 1800. Clay tobacco pipe was only recovered from [332] and dates to AD 1660 – 1680. Waste pieces of antler working (<42>) were also found in [332]. Covering the makeup deposits was brick floor [304] built with on bed laid bricks. The level on the floor was at 11.98m OD. Part of the floor [304] was overlain by the remnants of a second brick floor [303] of similar construction. This surface was at 12.09m OD.

Horn core lined pit

- 12.8 Immediately to the west of building S2 (see Phase 6. para 12.5) and external to it was horn core lined pit [328] (fill [347]/[357], [324]/[325], [346] and [323]). The construction cut was rectangular with rounded corners and measured 3.26m by 2.05m and was 1.02m deep. It had vertical sides falling to a flat base. The sides of the pit were lined with horn cores and silty clay [347]/[357] and [324]/[325]. Pottery from [324] dates to AD 1730 – 1780 although the clay tobacco pipe is earlier c. AD 1660 – 1680, and probably residual. A copper object (<50>) possibly a mount/key/lock was also recovered from [324]. The 0.48m thick primary fill of the pit was clayey silt [346] with fragments of animal bone. Pottery from [346] dates to AD 1720 – 1780. The pit was probably used for rubbish disposal.

Cess Pit

- 12.9 Approximately 3.0m to the north of building (S2) the remains of a brick lined cess pit [361] (fill [360], [359]) were recorded. The rectangular construction cut measured 1.80m east-west, 1.58m north-south and was 1.30m deep. The bricks which lined the pit measured 230 x 110 x 60mm were unfrogged, in an orange fabric and date to the 17th or 18th century. The cess pit had been filled in with a silt clay with frequent fragments of cbm and oyster shell. Pottery from this feature dates to the early 18th century and the clay tobacco pipe to AD 1700 – 1740. Other associated artefacts were a silver? spoon (sf <43>), three coins (sf <44>, <45>), and (<103>), textile (sf <46>), a bone ring (sf <110>) and a wooden object (sf <47>).

Bedding Trench

- 12.10 On the east side of the site, 16m to the south of building S 2, a N/S orientated linear feature [164] (fill [163]) was identified. The cut measured 3.40m in length and was at least 0.60m wide and 0.43m deep but was truncated to the north, south and east and from above by modern machining. It had steeply sloping sides falling to a flat base and was filled with a redeposited brickearth. Although its dating is uncertain it truncated the cemetery soil [165] (see Phase 2) and was therefore post Roman. The feature would have been located to the back of a property fronting onto Crispin Street and may represent a bedding trench or land division.

Features to the west of the Tudor boundary wall.

Cess Pit

- 12.11 In the central part of the site, 12m to the north of building S1, a brick lined cesspit [160] (fill [148], [159], and [147]) was identified. The construction cut measured 1.80m east-west, 1.65m north-south and was 0.40m deep but it was truncated to the north. It had vertical sides falling to a flat base and was lined with bricks [148]. Four courses survived to a height of 0.30m. They were unfroged and in an orange fabric measuring 225 x 100 x 65mm and were bonded with a creamy lime mortar. The bricks date to c. AD 1664 to c. 1900. The backfill [159] was a silt sand clay. The fill was sandy silt [147] with frequent fragments of charcoal, cbm, and mortar and occasional lenses of ash. Pottery dates to AD 1690 – 1700 and the clay tobacco pipe to AD 1680 – 1710. A lead cloth seal (sf <14>) was also found.

Well

- 12.12 Seven meters to the north, a well [157] (fill [156], [155], [158]) was located. The circular construction cut had vertical sides falling to a flat base and measured 2.0m in diameter by 0.25m deep. Three courses of unmortared, unfroged orange fabric bricks measuring 228 x 110 x 64mm lined the cut. The backfill [155] to the construction cut was a brickearth type deposit. The well appeared to have been deliberately filled in with an ashy silt [158] from which only residual medieval pottery dating to AD 1230 – 1400 was recovered.

Rubbish Pit

- 12.13 Approximately 2.0m to the north of the well [156] a probable rubbish pit [152] (fill 151) was present. The cut measured 2.30m N-S, 1.30m E-W and was 0.32m deep but it was truncated to the south and east. It had vertical sides falling to a concave base and was filled with a sandy silt with occasional fragments of brick and animal bone.

Building S1

Phase 6.1 (Fig 8)

- 12.14 Building S1 appears to have fallen into a state of partial dilapidation and to have needed substantial repair. Three postholes were identified cutting the mortar layer [350] (see Phase 5, para 11.5) in Room 2. The full dimensions of the postholes are given in Table 5 below. All the postholes had vertical sides falling to a concave base and were filled with a similar sandy silt. Pottery recovered from posthole [292] dated to AD 1580 – 1750 and 18th century pot was found in posthole [372]. The postholes probably represent the position of timber uprights that could have supported the ceiling.

Table 5 details of postholes in Room 2

Context No	Shape	Dimensions (m)	Depth (m)	Fill
292	Sub-circular	0.54 x 0.46m	0.11m	356
363	Sub-circular	0.42 x 0.28m	0.11m	362
372	Sub-circular	0.44 x 0.38m	0.08m	371

The postholes described above were probably a temporary measure to shore up this building before more substantial re-building was completed.

- 12.15 Posthole [292] was truncated by the rebuilt southern and external wall [245]. This also formed the southern boundary to the site. A c. 7.0m length of the wall was partially exposed and investigated. It was aligned on a northwest/southeast axis but at its southern end returned to an east/west orientation for 1.0m and truncated the Tudor precinct wall. It stood up to 1.32m in height with the highest level at 13.28m OD. and was constructed in an irregular Flemish bond with a lime sand mortar with occasional lime and charcoal fragments. The wall is dated to the 18th – early 19th century.
- 12.16 Context [314] represented a floor makeup layer composed of sandy clayey silt with frequent fragments of chalk and plaster up to 0.10m thick which was laid down in both Rooms 1 and 2. Clay tobacco pipe associated with this deposit dates to AD 1680 – 1710 and the pottery dates to AD 1775 – 1800. This anomaly may be explained by contamination. A copper stud or mount (sf <39>) was also recovered from [314].
- 12.17 In Room 1 overlying makeup deposit [314] was the remains of a brick floor [313] that extended 3.10m east-west and 2.08m north-south and abutted the east/west north wall [132] (see Phase 5, para 11.3). The bricks were laid on bed, most were whole although some ½ bats were used. They were unfrogged, of an orange fabric and dated to AD 1480/1520 to 1900 (see Appendix 7). The level was at 11.65m OD.
- 12.18 In the northeast corner of Room 1 abutting walls [132], [247] and the north facing side of buttress [263] was a makeup deposit of sandy silt [319] c. 0.20m thick. This deposit overlay the bricks [349b] (see Phase 5, para 11.9). Covering [319] was tile floor [312] about 0.10m higher than the brick floor [313] (see above). Floor [312] was formed with square, orange fabric tiles measuring 170 x 170mm and were 13mm thick (these were probably cut and squared re-used roof tiles pers com K. Sabel). The tiled area measured 0.70m east-west and 0.60m north-south and the level was at 11.74m OD. This tile platform, raised higher than the brick floor and in an alcove next to the fireplace would have been an ideal place to store fire-lighting paraphernalia.

Phase 6.2 (Fig 8)

Building S 1

- 12.19 In room 2 overlying floor makeup [314] (see para 12.16) was a levelling layer of dark grey greenish brown sandy clayey silt [291] with fragments of oyster shell,

coal, charcoal, plaster and broken brick. The layer abutted wall [245] and measured 2.70m north-south, 2.20m east-west and was 0.05m thick. Overlying [291] was a deposit of sandy silt [286] with frequent fragments of cbm, mortar, coal and charcoal that extended over all of Rooms 1 and 2. The area covered measured 9.80m north-south, 4.80m east-west and was up to 0.14m thick. It would appear the partition between Rooms 1 and 2 had by now been demolished and the cellar had become a single space. Pottery from [286] dates to AD 1690 – 1710 as does the clay tobacco pipe.

- 12.20 In the central part of building S1 overlying makeup layer [286] were the fragmentary remains of a brick floor [287]. This measured 2.80m east-west and 1.45m north-south and was at 11.77m OD. It was constructed of orange fabric unfrogged brick measuring 225 x 110 x 55mm and dates to the 18th century (see Appendix 7). The straight southern margin to the floor [287] may be an indication that the partition wall between rooms 1 and 2 may have been reinstated in the same position as previously.
- 12.21 In the northeast corner of the building (in room 1) between the walls [132], [247] and the buttress [263] (in the same location as the earlier tile platform [312], (see Phase 6.1, para 12.18) was a makeup deposit of sandy silt [296] measuring 0.80m by 0.70m and 0.15m thick. The make up layer was partially covered by broken flagstones [290] measuring about 350 x 300 x 35mm. The level was at 11.88m OD. Again the rebuild to the floor of the alcove was 0.10m above the floor elsewhere in the basement. This recess was probably used for storage as it had been in Phase 6.1.
- 12.22 The base of the fireplace in room 1 was laid with a single course of ½ bat brick [289], the remnants of which measured 1.10m north-south and 0.31m east-west. The bricks were unfrogged, orange fabric measuring ? x 110 x 60mm laid on bed and in an irregular bond. They were probably re-used and date to the late 17th to early 19th century. The level was at 11.73 m OD.

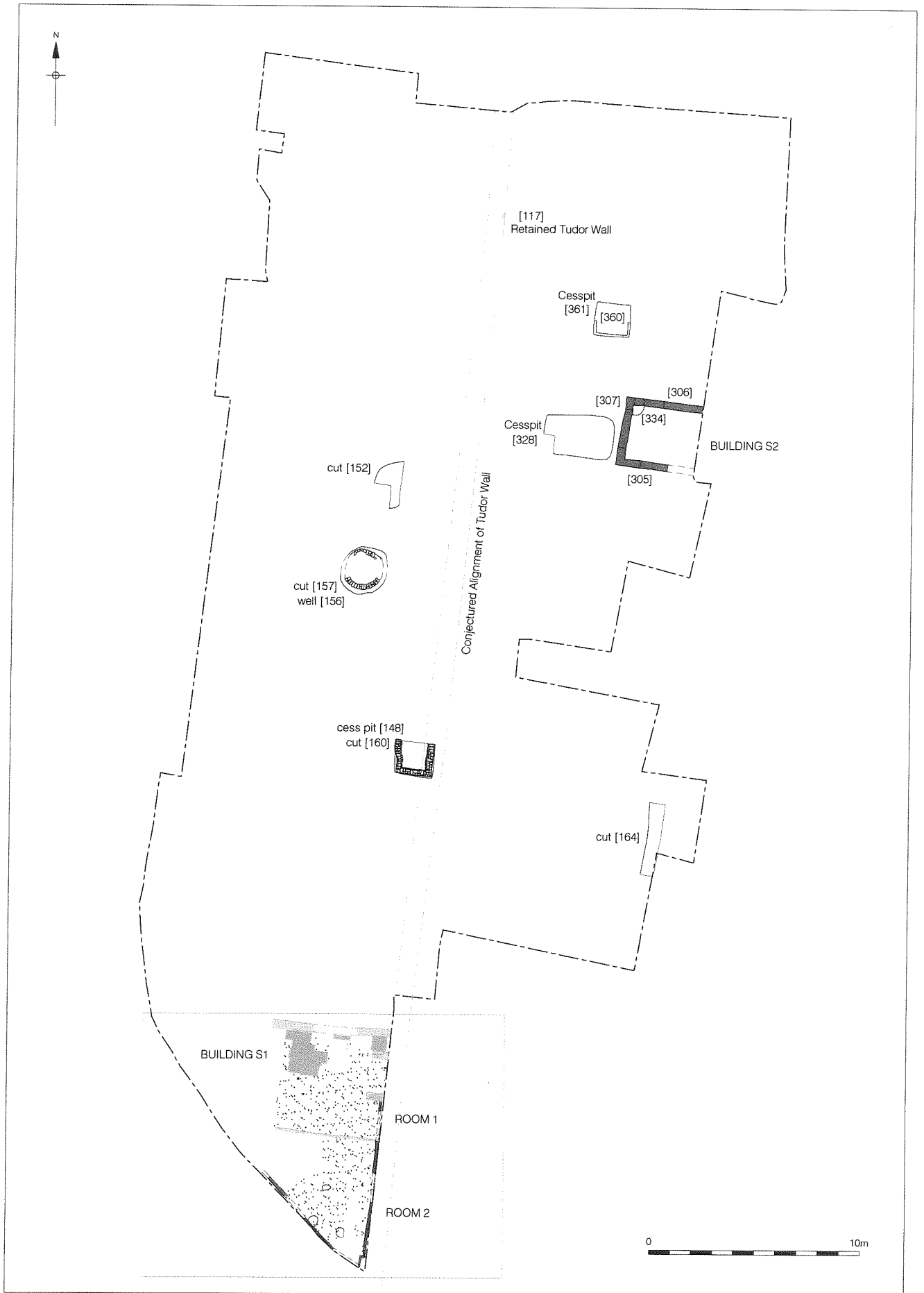
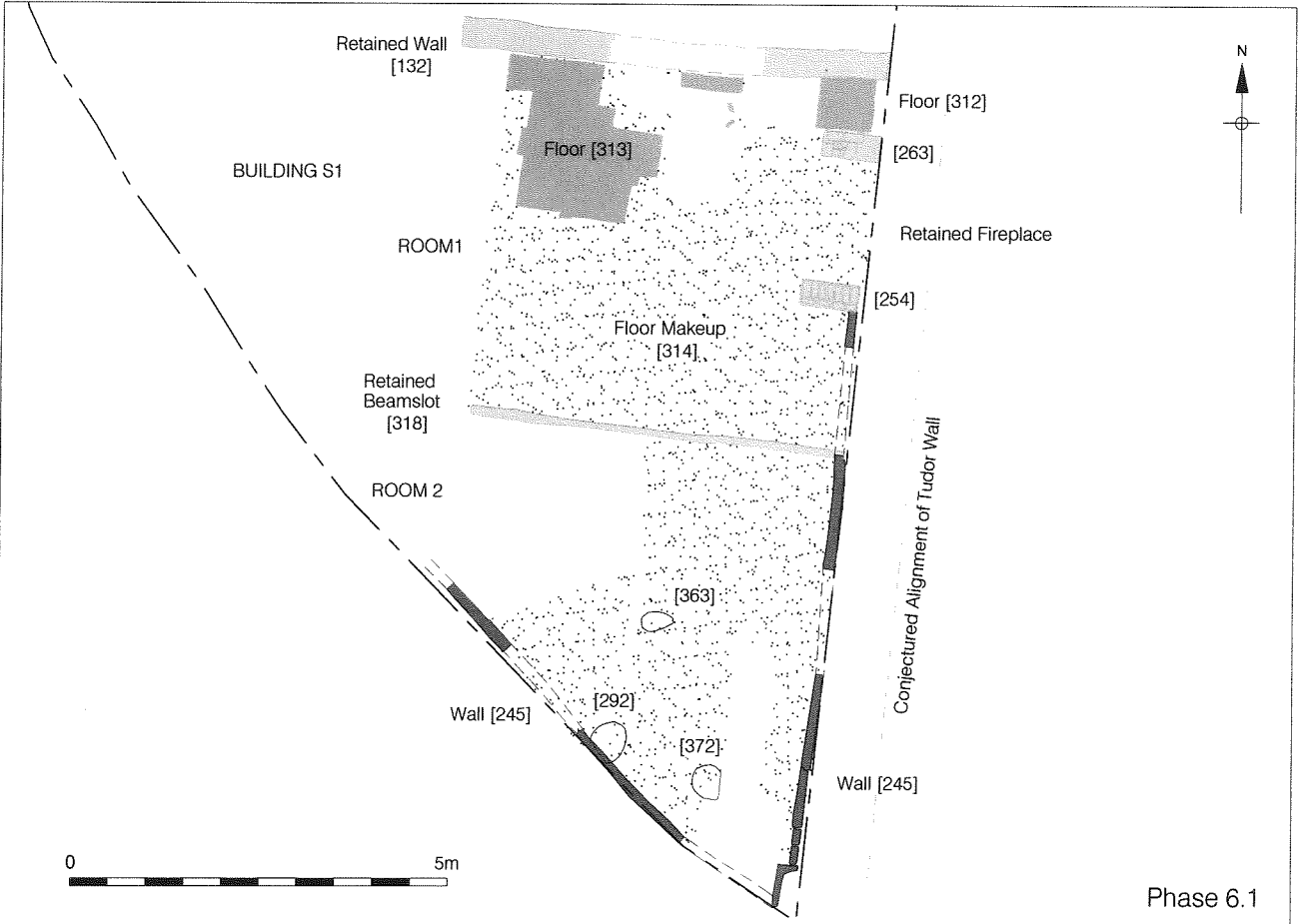
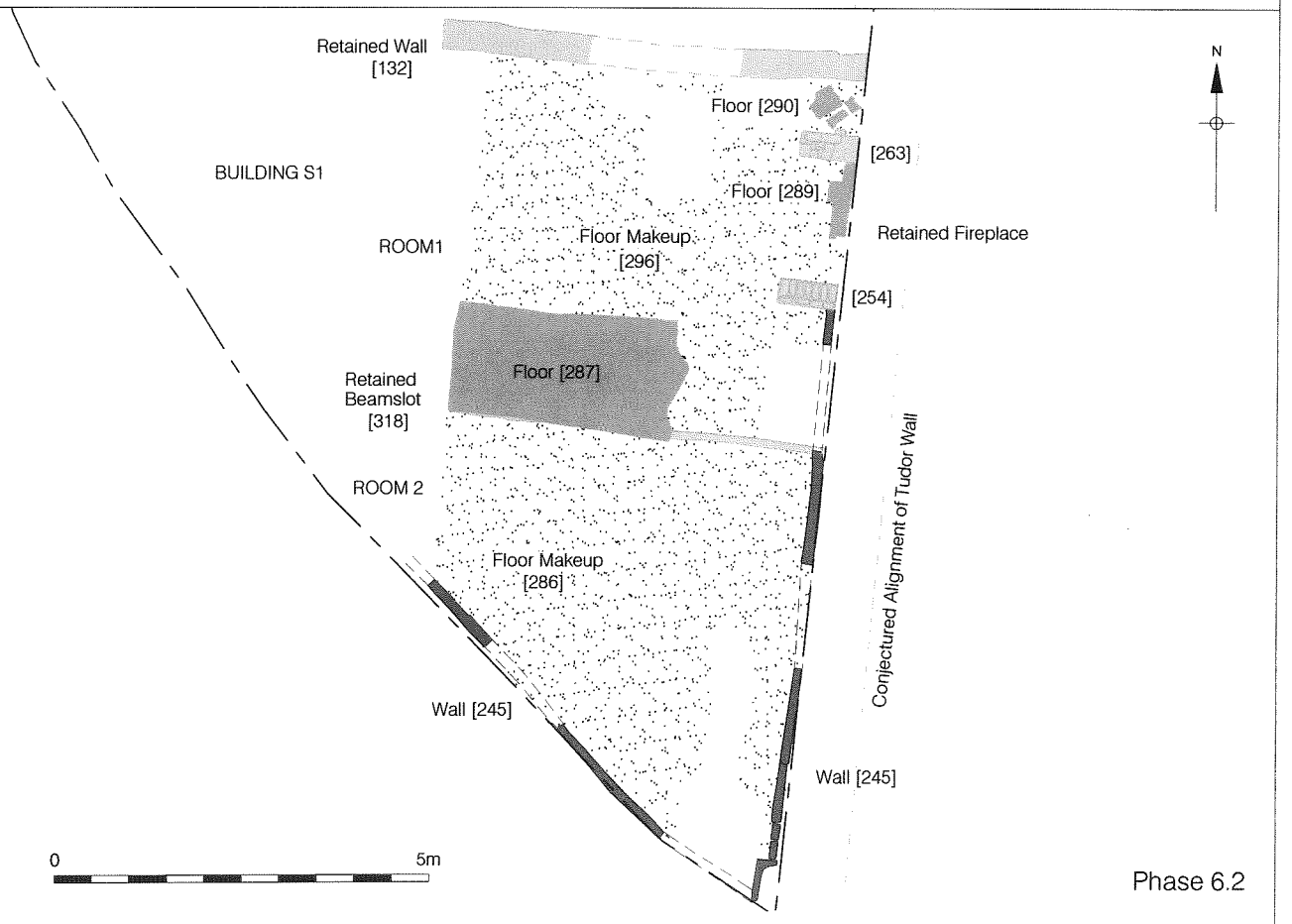


Figure 7
 Phase 6
 Early 18th Century
 1:250



Phase 6.1



Phase 6.2

Figure 8
 Detail of Building S1
 Phases 6.1 & 6.2
 Early to Late 18th Century
 1:100

13 Phase 7 Mid – Late 18th Century (Figs 9 & 10)

- 13.1 This phase represents the mid to late 18th century when a new building (S3) may have been built. The partial remains of S3 were identified on the northwest side of the site. It appears to have had at least two rooms at basement level. Room 1 to the north and room 2 to the south. Within room 1 part of the brick floor survived and set into it were brick drains. This may be an indication that the room had a utilitarian purpose possibly being used as a laundry. A brick lined sunken feature in the north of room 1 may have been a soakaway. Room 2 was probably also floored with brick or tile but this surface has since been removed, although the floor was probably re-tiled in the 19th century (see Phase 8). To the north a brick lined well was recorded. This was located to the rear of a property that would have fronted onto Crispin Street.
- 13.2 To the south of building S3, a pit was identified, which was probably associated with a property fronting onto Gun Street.
- 13.3 On the northeast side, building S2 appears to have remained standing and continued to be in use. Behind building S2 the horn core lined pit was deliberately filled in. A layer of silty clay and ash capped the feature suggesting that domestic refuse, including fire rake out continued to be spread in the back garden/yard area of this property.
- 13.4 On the north side the Tudor precinct wall appears at least in part to have been rebuilt and it would seem that it continued to demarcate property divisions. In particular the boundary divided the adjacent back properties that fronted on to Crispin Street from those that fronted onto Gun Street.
- 13.5 Alterations were also made to building S1 on the south side. The central section of the east/west orientated north wall was rebuilt and in both basement rooms a new brick floor was laid. Set into this was a north/south aligned brick drain that flowed north, through both rooms feeding into a soakaway also sunk into the floor. The soakaway was adjacent the north E/W orientated wall of the building. A drain that cut through the east/west north wall also flowed into the soakaway.
- 13.6 The brick base to the hearth was re-built as was the adjacent raised brick platform north of the fireplace.
- 13.7 A rectangular pit of indeterminate function, which truncated the floor makeup may have been dug at this time.

Building S 3 (Fig 10)

Walls

- 13.8 On the northwest side the remains of building (S 3) were identified. Context [219] represented a construction cut for an external east/west orientated wall. The cut was characterised by vertical sides falling to a flat base. It measured 2.91m east-west, 0.65m north-south and was 0.20m deep but was truncated to the east by a modern intrusion and continued west beyond the edge of excavation. The wall foundation [201], which was 0.48m wide, was built with unfrogged bricks, in an

orange fabric (3033), with a coarse sand yellowish white mortar and laid in alternate courses of headers and stretchers. The backfill to the construction cut comprised a clayey silt [218]. The highest level on the wall was at 12.13m OD.

- 13.9 One metre to the east of wall [201] was a north/south aligned wall [198], which could have been a return to it. Wall [198] was built in a similar fashion and with similar bricks and mortar to that used in [201]. It measured 1.73m north-south, and 4.0m east-west. The level was at 12.07m OD.
- 13.10 The configuration of the wall [201]/[198] suggests that it was an internal partition. However the thickness of the foundation probably indicates that it was a major load-bearing wall.
- 13.11 At the northern end of [198] an east/west orientated wall [203] abutted its east facing side. This [203] measured 1.05m east-west and was 0.35m wide and the level was at 12.07m OD. After a gap of 1.30m the east/west aligned wall continued designated as context [202]. Wall [202] was 1.56m long but was truncated to the east. To the north of and abutting both walls [203] and [202], was wall [195] which measured 1.45m east-west and 0.33m wide. The arrangement of the walls [203], [202] and [195] suggest that they represented the foundation to a chimney, with the fire place(s) being located on its south side.
- 13.12 A possible north/south return to wall [202] was recorded at c. 1.50m to the north where it was represented by the context [226]. Wall [226] measured 1.07m north-south, and 0.35m east-west and was at 11.88m OD. This north/south wall may have been the external east wall to the building.
- 13.13 The walls described above appear to delineate the remains of a cellared building of at least two rooms at basement level, room 1 to the north and room 2 to the south. The building measured at least 8.10m east-west by at least 5.0m north-south.

Room 1

Floor

- 13.14 To the north of the walls [201], [198], [203], [195] and [202] and to the west of [226] remnants of a brick floor were found. Context [189] represented the floor that abutted, which was to the north of wall [201]. It was composed of unfrogged bricks in an orange fabric (3032, with occasional 3033 and 3034), laid on bed and bonded with a creamy grey white mortar. The floor [189] measured 2.80m east-west by 2.12m north-south and was at a level of 12.04m OD.
- 13.15 Probably the same floor was identified 0.50m to the north of [189] where it was assigned the context [187]. Floor [187] measured 0.56m east-west and 0.36m north-south and the level was at 12.02m OD. To the east of [187] and separated from it by a brick drain [196]/[197] (see below para 13.22) was another patch of floor [188]. It [188] measured 0.80m by 0.75m and was at 11.99m OD.
- 13.16 Further to the east and abutting wall [195] was yet more of the same floor but here it was assigned context number [193]. Floor [193] measured 2.0m east-west

and 0.66m north-south and the level was at 12.05m OD. Approximately 0.60m to the north of [193] was the floor [192], which measured 2.70m east-west and 1.25m north-south and abutted the north/south aligned wall [226]. The level was at 12.05m OD.

- 13.17 The bricks used for the floor contexts [189], [188] and [193] were all set on bed and aligned north/south. However the southern straight edge of floor [192] was a single course of bricks set on bed but aligned east/west. The northern margin of [187] was also similarly edged with east/west orientated bricks. This edging of the brick surface may be an indication that [192] and [187] formed the base to a superstructure that supported the stairs or an indication of an east/west running corridor.
- 13.18 Approximately 2.50m to the west of floor [192] (see para 13.16) were the remains of a floor or an east/west aligned wall [190]. The bricks were similar to those used in the floor surfaces but here two course of bricks were laid side by side on bed, and aligned east/west. At the western end three bricks were laid on bed north/south. Both ½ bat and whole bricks were used in [190] and the level was at 12.03m OD.
- 13.19 Abutting wall [195] (see para 13.11) to the west, was layer of unfrogged orange fabric (3032, 3033 and 3034) bricks [204], laid on edge and bonded with a yellowish white sandy mortar. The masonry measured 0.77m by 0.34m and the level was at 12.05m OD. The bricks were dated to the 18th century, and could be part of the floor. However, bricks are often laid on edge to act as a base and support a weight and it may be that this was the intention here.
- 13.20 The floor surfaces described above probably represent the floor to room 1. The extent of the floor and the room was at least 7.75m E-W and 3.80m N-S but only the southern and eastern margins are certain.

Features set into the floor

- 13.21 Set into the floor [189] was a brick lined drain [199] 1.48m east-west, c. 0.15m wide and 0.15m deep. The level on the base of the drain was at 11.90m OD. The fill was a black silt [206] with frequent fragments of charcoal.
- 13.22 About a meter to the north of [199] and at right angles was another brick drain [196]/[197]. The sides of this one were built with unfrogged bricks in an orange fabric (3032, 3033 and 3034) laid on edge and bonded with a creamy white mortar. The drain measured 0.50m north-south, was 0.12m deep and 0.15m wide. The level on the edge of the drain was at 11.95m OD and the base was at 11.83m OD. The fill was dark grey silt with frequent mortar and occasional charcoal fragments.
- 13.23 In the north of room 1 the three sides of a rectangular brick lined pit [231] (fill [191], [230]) had been sunk into the floor. A modern drain had truncated the south side of the pit. The feature internally measured 0.97m north-south, 0.42m east-west and was 0.56m deep. The highest level was at 12.01m OD and the base was at 11.45m OD. The brick lining was 0.20m (2 brick courses) thick and built with unfrogged bricks in an orange fabric (3033) bonded with a creamy white

sandy lime mortar. The function of this feature is uncertain but it may have been a soakaway and it appears to be contemporary with rest of the 18th century build.

Room 2

- 13.24 On the south side of the wall [201] and partly overlying the foundations, was a layer of compacted clayey silt [214] measuring 2.90m east-west, 0.90m north-south and 0.10m thick but it continued west beyond the edge of excavation and was truncated to the south and east. Pottery from this layer dates to AD 1550 – 1700. The deposit, with a level of 12.02m OD, was probably make-up for a floor. Probably a brick or tile floor which once abutted the south face of wall [201] and which was internal to building S3. That wall [201] was indeed internal was confirmed by the chimney base, which indicated a fireplace opening up and heating a room to the south. The actual fireplace would probably have been on an upper storey. The remaining wall foundations and floor makeup suggest that the room measured at least 7.75m east-west by 1.20m north-south.

Pit

- 13.25 In the west central part of the site, a rectangular pit [60] (fill [59]) was identified measuring 0.66m north-south, 0.36m east-west and 0.28m deep. It had vertical sides falling to a flat base. The fill was a sandy silty clay with frequent fragments of cbm, mortar and charcoal. Its function is not known and its dating is uncertain although stratigraphically it is likely to be 18th century.

Building S2 (Fig 10)

- 13.26 A thin dark grey black sandy silt [308] with frequent fragments of charcoal and cinder covered the floor [304] (see Phase 6, para 12.7) of Building S 2. Pottery from [308] dates to AD 1720 – 1780 and the clay tobacco pipe dates to AD 1760 – 1780. A piece of tin-glazed wall tile (sf <33>) decorated with a biblical scene was also found.
- 13.27 The horn core lined pit [328] (see Phase 6, para 12.8) immediately to the rear of the building was probably deliberately filled in during this phase. The upper fill was a sandy silt [323]. Pottery from [323] dates to AD 1770 – 1850.
- 13.28 Capping pit [328] was a dump layer of clayey silt [58] with lenses of ash, measuring 4.0m east-west and c. 2.84m north-south but it continued to the east and west beyond the limits of excavation and was truncated to the south. The highest level was at 12.06m OD. The clay tobacco pipe from the deposit dated to AD 1700 – 1740 and the pottery to the mid 18th century. Two coin/token (sf <3>, <4>), a residual lead token of late 16th century date and a Charles I rosefarthing, dating to the 1630's, a thimble (sf <35>), an ivory knife handle (sf <55>), an ivory bobbin (sf <61>), a copper lace chape (sf <82>), and a copper pin (sf <83>) were also found. The layer probably represents a spread of household waste and fire rake out in the back yard/garden of the houses that fronted on to Crispin Street.

Rebuild of the Tudor precinct wall

- 13.29 On the north side of the site, contexts [119] represented a construction cut for a north/south orientated wall. With context [117] being the wall (later re-built in the 19th century, see Phase 8) and [118] the backfill to the construction cut. Only a very small part of this wall was seen and it appeared to be an 18th century rebuild to the Tudor precinct wall (see Phase 4). This suggests that the precinct wall was still a property boundary in the 18th century.
- 13.30 A dumped deposit of silty clay [113] and broken brick and mortar up to 0.33m thick overlain by a sandy clayey silt [112] with frequent broken tile and silt, was noted in section S<105> and covered the backfill [118]. The level was at 12.28m OD. Pottery from [113] dates to AD 1550 – 1630.
- 13.31 A timber post [111] represented by decayed wood truncated layer [113] (see section <105>, fig 13). The post was at least a meter long and 0.20m by 0.12m. The post was probably associated with timber [143] that abutted wall [117]. This horizontal timber [143] was at least 1.70m long and 0.12m thick may have served to shore up wall [117]. Context [112] was overlain by a silty clay [110], which was probably packing around the post [111].
- 13.32 Seen only in section S<107> (see fig 13), overlying the dumped deposit [110] was a layer of silty clay mixed with broken brick and tile [106]. This deposit measured 1.15m east-west and was up to 1.10m thick. Pottery associated with this layer dates to AD 1740 – 1800.

Building S1 (Fig 10)

- 13.33 On the south side, in building S 1, the central section of the north east/west wall [132] (see Phase 5, para 11.3) was rebuilt with orange fabric (3033 and 3032) bricks [145]. The bricks have a date ranging from the 17th to the 19th century but their stratigraphic position would be consistent with an 18th century use date. The rebuild was 2.0m in length, 0.40m wide and survived to a height of 1.80m (17 brick courses). The highest level was at 13.19m OD.
- 13.34 In both room 1 and 2 a layer of sandy silt [276] with frequent fragments of cbm, mortar and shell, between 0.15m and 0.30m thick was present. Clay tobacco pipe dating to AD 1680 – 1710 and pottery dating to AD 1690 – 1710 was found but this is likely to be residual. Overlying [276] was a bedding layer of silty mortar and sand [275] c. 0.10m thick. This layer was in turn covered by a brick floor [246] in both rooms. The floor was composed of unfrogged bricks in a red and purple fabric (3032) laid on bed, that date to the late 18th or 19th century. The level on the floor in both rooms was at c. 11.95m OD.
- 13.35 The partition between rooms 1 and 2 was also rebuilt but the position was shifted c. 2.0m to the north. As a consequence room 1 was now smaller measuring at least 5.50m east-west and 3.0m north-south, and room 2 enlarged so that it now measured 7.50m (maximum) north-south and at least 5.50m east-west.
- 13.36 Set into the floor and running south to north through both rooms was a brick lined drain [252]. The sides of this were composed of unfrogged brick (3033 and 3032) laid on bed 3 courses deep. The bricks have a date range from 17th to 19th century. The drain was 7.36m long, 0.10m wide and 0.16m deep but was

truncated to the south. The fill was a sandy silt [253]. Associated pottery dates to AD 1550 – 1650 and is probably residual.

- 13.37 Drain [252] flowed into a soakaway [267] (fill [266], [281], [274], [272], [265]) and was sunk into the floor and set adjacent to the north wall [145]. The sub circular construction cut measured 0.85m x 0.76m and was 0.81m deep. It had vertical sides falling to a flat base. The highest level was at 11.93m OD and the lowest at 11.12m OD. Only the top 0.13m (2 brick courses) of the cut was lined mostly with broken brick [266], set on bed in header fashion. The bricks have been dated from the 15th to 18th century. The primary fill of the soakaway, a sandy clayey silt [281] 0.30m thick, was overlain by crushed coal [274] up to 0.20m thick. The coal was sealed by sand [272] 0.10m thick, which in turn was overlain by a 0.35m thick sandy silt [265]. Pottery from [265] dates to AD 1775 – 1850. A George III copper coin (sf <100>) with a date stamp of 1770 was also found.
- 13.38 A drain [282] also flowed into the soakaway from the north. This measured c. 0.18m wide and 0.25m deep and was cut through the rebuild [145] to the east/west wall.
- 13.39 In room 1, between wall [132] and the fireplace buttress [263] another brick platform [273] was constructed and raised slightly above the level of the floor. The platform measured 0.75m east-west and 0.70m north-south and was built with unfrogged bricks in an orange fabric laid on bed. The level on the bricks was at 12.01m OD.
- 13.40 The base of the fireplace was re-laid in unfrogged bricks [264] in an orange and purple fabric (3033 and 3032), laid on bed. The bricks date from the 17th to 19th century. The fireplace measured 1.59m north-south by 0.75m east-west and the level was at c. 12.01m OD.
- 13.41 Also in room 1, truncating layer [275] (see above) was a rectangular pit [352] (fill [351]) with vertical sides falling to a flat base, which measured 1.20m north-south, 0.90m east-west and was 0.68m deep. The fill was a sandy clayey silt with frequent fragments of shell and cbm. The pottery dates to AD 1630 – 1680 and the clay tobacco pipe to AD 1680 – 1710 but both were residual. The purpose of the pit is unclear but it was probably dug and filled when the building was undergoing this refurbishment.

Well

- 13.42 Located in the north of the site was a brick lined well [620] (fill [618], [619]) approximately 0.84m in diameter (internal). The well, parts of which were beyond the edge of the excavation to the north, was filled in with black sandy silt.

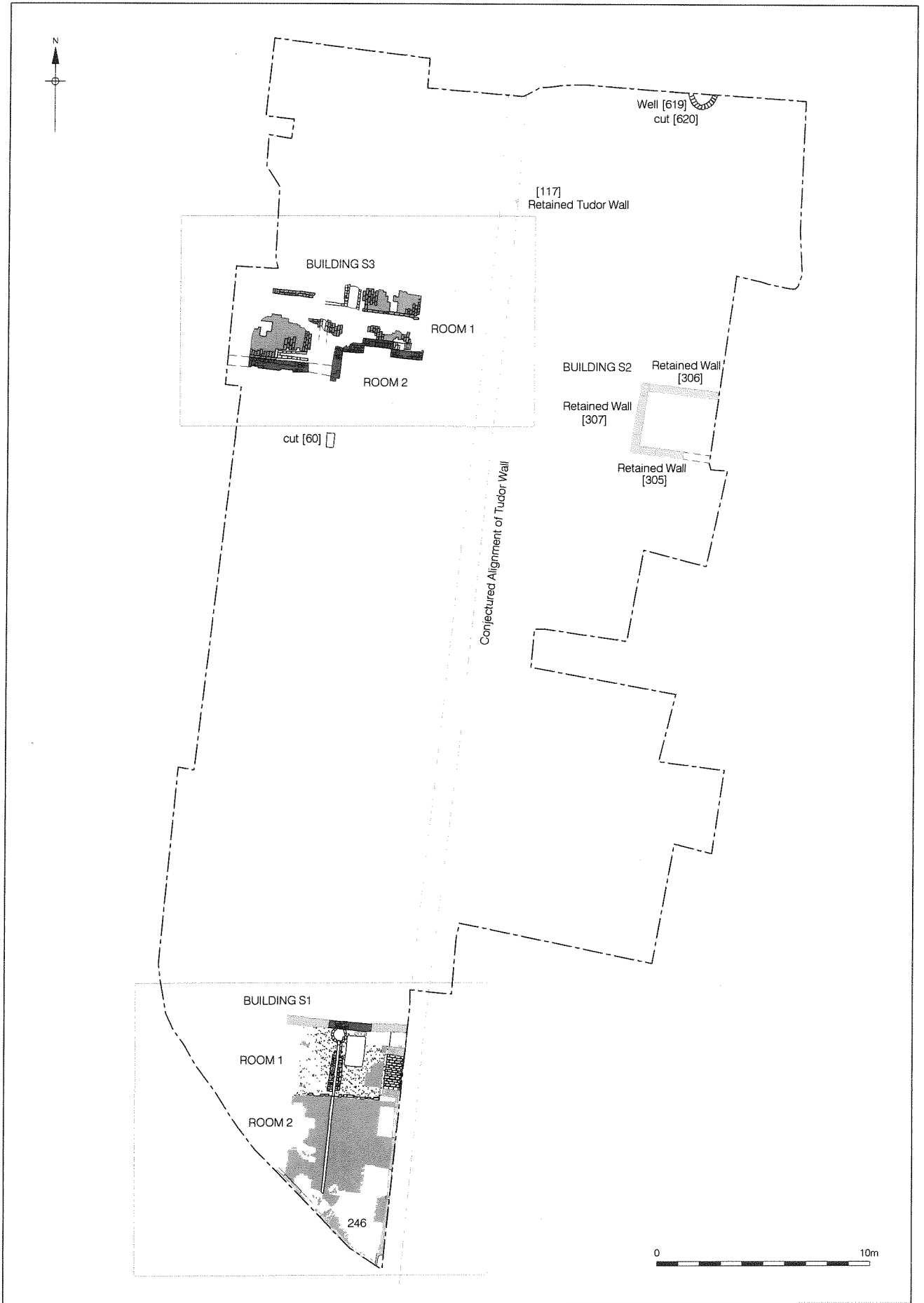


Figure 9
 Phase 7
 Mid to Late 18th Century
 1:250



Figure 10
Phase 7
Mid to Late 18th Century
Detail of Buildings S1 and S3
1:100

14 Phase 8 19th Century (Fig 11)

- 14.1 This phase represents the 19th century. In building S1, the soakaway in room 1, went out of use and was filled in and capped with masonry. This was an internal buttress that supported the north east/west wall of the building. The dividing wall between rooms 1 and 2 was rebuilt. A doorway that may have connected rooms 1 and 2 may have been blocked some time around this time. Also in room 1 there was evidence that the floor level was raised and a new brick and in part flag stone floor laid. This floor showed signs of wear and appeared to have been repaired in patches with stone cobbles and broken tile.
- 14.2 The possible 'soakaway' in building S 3 also appears to have been deliberately filled in during this phase. The floor in room 1 was raised and re-laid. While in room 2 a pit was identified that may be associated with the robbing of an earlier phase of this surface. This pit was covered over by a tile floor that may have been laid in the early 19th century.
- 14.3 In the northeast part of the site, the Tudor precinct wall, which had been re-erected in the 18th century (see Phase 7), was again constructed during the 19th century. An east/west return to the boundary wall was probably contemporary with the 19th century rebuild. This east/west wall probably demarcates the boundary between two properties to the north and south both of which would have fronted onto Crispin Street.
- 14.4 To the west of the 19th century version of the Tudor wall and abutting it were the remains of a brick lined cesspit. This would have been associated with a property fronting onto Gun Street. It was filled in by about AD 1870.

Building S1

- 14.5 The internal wall dividing rooms 1 and 2 was rebuilt and its position again changed and set further to the north. Context [133] represented the internal wall measuring 1.40m east-west, 0.22m wide and 1.11m high. It was truncated to the east and west but after a 1.20m break continued to the west where it measured 0.60m in length. The wall was built with unfrogged orange fabric brick (3033 and 3032) dated late 17th to 18th century, which were probably re-used. The wall, survived to 15 courses in height and was built in English garden bond and set in a grey sandy mortar with fragments of charcoal and cbm.
- 14.6 To the east of wall [133], on the same alignment to it and built over the earlier fireplace buttress [254] (see Phase 5, para 11.4) was the brickwork [135]. This masonry was probably a continuation of wall [133]. It was built with orange fabric (3033) brick, and bonded with a sandy lime mortar. It measured 0.49m east-west, 0.37m wide and survived to a level of 0.83m but truncated to the west by a modern drain. The position of the wall [133]/[135] confirms that the fireplace (present in all the earlier phases of the building) had now gone out of use.
- 14.7 Abutting [135] to the north and the Tudor wall [247] to the east was a possible buttress [134]. It measured 0.56m by 0.56m and stood c. 0.80m high and was built with orange fabric bricks which were probably re-used. These were bonded

with a Portland type cement indicating that they were laid in the 19th century. The highest level was at 13.14m OD.

- 14.8 The partition created a room to the north (room 1) that measured 5.50m east-west but was only 2.50m north-south and a room to the south (room 2) that measured 7.50m north-south by at least 5.50m east-west.
- 14.9 To the west of [133] and abutting it was brick work [136] which measured 0.32m in length, 0.23m wide and 1.0m (13 courses) in height but was truncated to the west. The bricks were unfrogged, all of the one orange fabric (3032) and bonded with a sandy lime mortar. They date from the late 17th to early 19th century. It may be that this masonry blocked a doorway that connected rooms 1 and 2.

The soakaway goes out of use

- 14.10 Built over the earlier soakaway and abutting the rebuild [145] to wall [132] was buttress [137]. The masonry measured 0.81m east-west, 0.54m north-south and it was 0.73m in height. It was built with orange fabric bricks (3032 and 3034) and was bonded with a Portland type of cement confirming a 19th century date for construction.

Floor

- 14.11 In room 1, the earlier 18th century floor [246] (see Phase 7, para 13.34) was overlain by a sandy silt [255], which was 0.05m thick. This deposit was a bedding layer for the brick floor [138] (see para 14.13).
- 14.12 Also in room 1, overlying the platform [273] (see Phase 7, para 13.39) was a layer of sandy silt [268] with frequent fragments of charcoal, cbm, and mortar. The associated clay tobacco pipe dates to AD 1700 – 1740 and is probably residual and the pottery dates to AD 1775 – 1850. An iron mount/binding sf <70> was also found. This deposit constitutes part of the makeup for a new stone and brick floor [138].
- 14.13 The remnants of the floor [138] measured 2.20m north-south and 1.0m east-west and was at 12.17m OD. The floor was built orange fabric (3033 and 3034) brick laid on bed and unmortared. Pottery from the floor makeup dates to AD 1780 – 1900 and the bricks have a date range from the 17th to 18th century.
- 14.14 Abutting the buttress [137] was a patch of brick and flag stone floor [139] measuring 2.20m east-west and 1.60m north-south. The bricks were mostly ½ bats in orange fabric (3035 and 3032) laid on bed and flagstones up to 0.44m by 0.36m. The level on the floor was at c. 12.15m OD.
- 14.15 A possible repair to surface [138] was represented by context [251] a roughly square patch of cobbles and broken tile measuring 0.80m east-west and 0.60m north-south.

Building S 3

- 14.16 In building S 3, on the northwest side of the site, a brick lined pit [191] appears to have gone out of use and been deliberately filled in, perhaps in the 19th century. The basal fill was a loose sandy silt [230] with ash and building rubble. Overlying [230] was a sandy ashy silt [217] 0.38m thick.

Room 1

- 14.17 Overlying the brick floor [193] in room 1, was a second brick surface [126] measuring 1.80m east-west by 1.20m north-south dating to the 19th century. The highest level was at 12.29m OD.

Room 2

- 14.18 Truncating the sub-floor [214] (see Phase 7, para 13.24) in room 2, was cut [213] (fill 212) measuring 2.90m east-west, 0.47m north-south, which was 0.37m deep but it was truncated to the south. The cut was characterised by steeply sloping sides falling to a concave base. The fill comprised broken brick and tile and crushed mortar. The clay tobacco pipe from the pit dates to the 18th century and the pottery dates to AD 1800 – 1850. Part of a leather shoe (sf <57>) and an iron chopper (sf <69>) were also found. The pit may have been associated with the robbing of a floor that was thought to have overlain the make-up deposit [214].

- 14.19 Partly covering the pit [213] was a layer of compacted clayey silt mixed with broken brick and tile [209]. The deposit measured 1.52m east-west, 1.22m north-south and was 0.10m thick but truncated to the south and it continued beyond the limits of the excavation to the west. The layer was a make-up deposit for the tile floor [200]. The floor was composed of square floor tiles measuring 300mm x 300mm x 40mm in an orange fabric bonded with a hard creamy white sandy mortar. The tiles have a date ranging from the late 17th to early 19th century but their stratigraphic position suggests that they were put down in the early 19th century. The level on the floor was at 12.22m OD.

The boundary wall

- 14.20 On the northeast side of the site, truncating the dumped deposit [106] (see Phase 7, para 13.32) was construction cut [141] (fill [109], [108]) for a north/south aligned wall. The cut was recorded only in section <107> (see fig 13), and it measured at least 0.50m wide and was 0.57m deep and had steeply sloping sides falling to a concave base. Filling the base of the cut was a compacted foundation of sand silt and clay [109] upon which wall [108] was built. This was constructed with purple bricks in an orange fabric (3034 and 3033), bonded with a sandy lime mortar, and it measured at least 1.70m in length, 0.30m wide and 0.40m high. The bricks date to the late 17th – 19th century. This wall was a rebuild to earlier wall [117].
- 14.21 Wall [108] appeared to have been repaired or a gap in it was filled in with brickwork [107] (see section <105>, fig 13) using purple fabric frogged brick dating to the mid – late 19th century. The masonry measured 0.70m in length, was 0.46m wide and was 0.27m high.

- 14.22 An east/west return to wall [108] was represented by context [116]. Wall [116] was built with similar bricks to those used in [108] and was tied into that wall. The east/west return measured 1.80m in length, 0.36m wide and was 0.26m high. Both wall [108] and [116] were probably demarcating property boundaries.
- 14.23 To the south of and abutting [116] was a ashy sandy silt [142] which measured 1.42m east-west, and 0.40m north-south that was thought to be the backfill for a drain run.

Cesspit

- 14.24 Abutting and to the west of the N/S wall [108] was a brick lined cesspit [124] (fill [99] [144], [98]). The brick lining was built in English garden bond, with both frogged and unfrogged orange fabric brick, dating to the early – mid 19th century. The cesspit measured externally 2.15m north-south, 1.80m east-west and was 2.0m deep. The backfill to the construction cut comprised a sandy silt [144] with frequent fragments of broken brick and tile. The cesspit appeared to have been deliberately filled in with a ashy silty clay [98]. The clay tobacco pipe from the fill dates to AD 1820 – 1840 and the pottery to circa AD 1870. A gold finger ring (sf <6>), an ivory handle (sf <62>), an iron button (<67>) and a coin (sf <12>), two copper taps (sf <85>), a copper knob (SF <86>), copper coins (sf <87>, <88>, <89>, <90>, <91>, <94>, <105>), copper buttons (sf <95>, <96>, <97>), copper mounts (sf <92>, <98>) a copper bell/vessel (sf <93>), and a bone toothbrush (sf <126>) were also found.

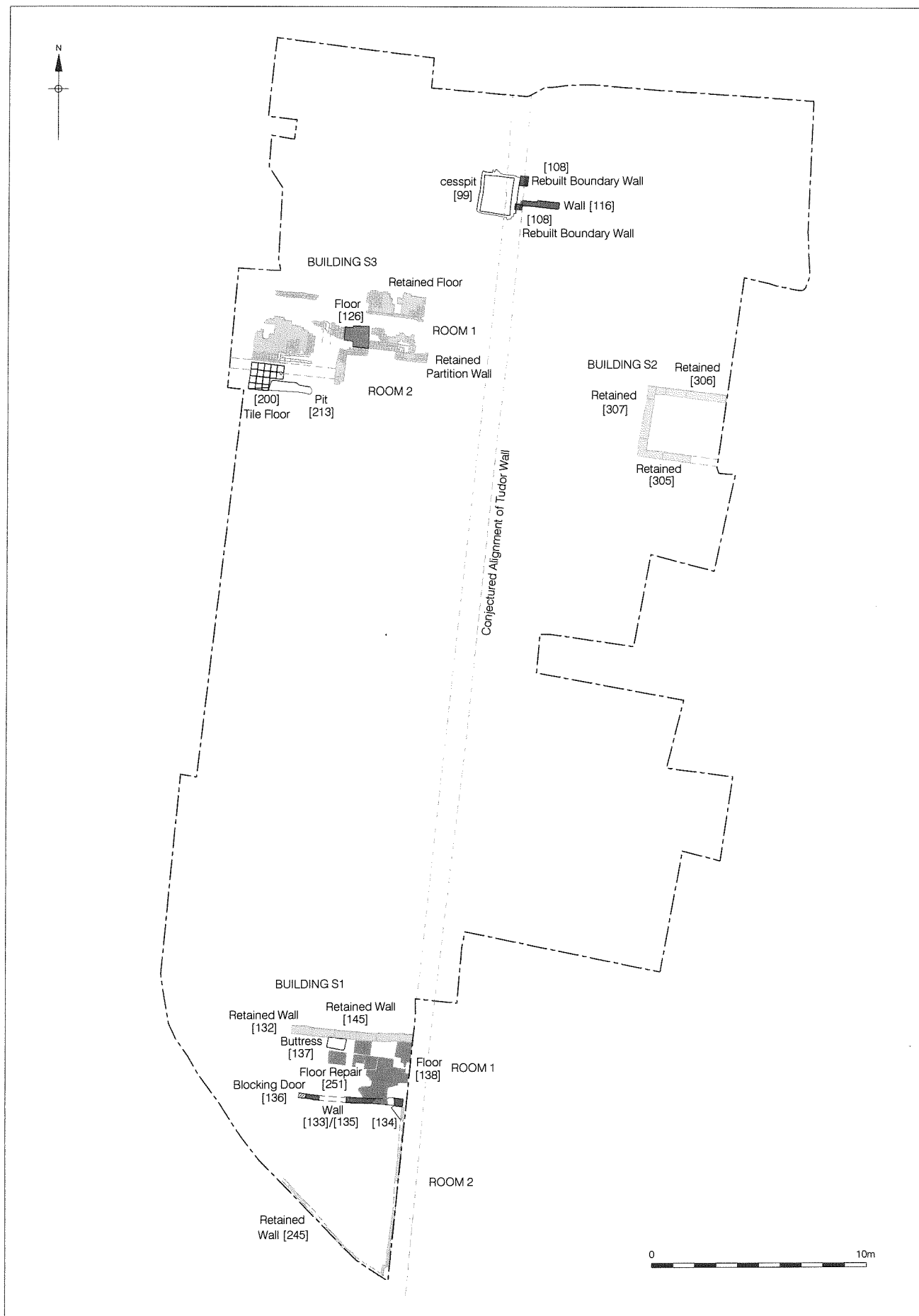


Figure 11
 Phase 8
 19th Century
 1:250

15 Phase 9 Modern (not illustrated)

- 15.1 This phase represents modern intrusions recorded across the site and on the south side of the site an engineering test pit and the rubble backfill to the basement of Building S 1. In the central sector a concrete stanchion was present and on the north side two ceramic drains were identified.
- 15.2 A pit [270] (fill [269]) up against the south (internal) face of wall [132]/[145] of building S 1 was probably a modern engineering test pit. The cut measured 1.25m east-west, 0.65m north-south and was 0.40m deep. It had vertical sides falling to a flat base. The fill was a mix of sandy silt and brick rubble.
- 15.3 Contexts [146]/[240]/[241] constituted the brick rubble filling the basement of building S1. Pottery from [240] dated to AD 1780 – 1850 and the clay tobacco pipe dates to AD 1820 – 1840 and the pot from [241] dates to AD 1780 – 1900 and the clay tobacco pipe to AD 1840 – 1880.
- 15.4 In the central part of the site, truncating pit [152] (see Phase 6, para 12.13), a concrete stanchion [150] (fill [149]) was located. The base measured 1.10m square and it was at least 0.50m deep.
- 15.5 On the northwest corner part of a modern drain [131] (fill [130]) was present. The construction cut measured 1.15m east-west, 0.45m north-south and it was at least 0.15m deep. The fill included a ceramic pipe set in concrete.
- 15.6 Approximately 0.50m to the north of [131] a second service run [128] (fill [129]) was identified. The construction cut measured 2.0m east-west, 0.70m north-south and it was 0.75m deep. It had vertical sides falling to a flat base. The fill was a mix of sandy clayey silt and brick rubble over a ceramic pipe embedded in concrete.

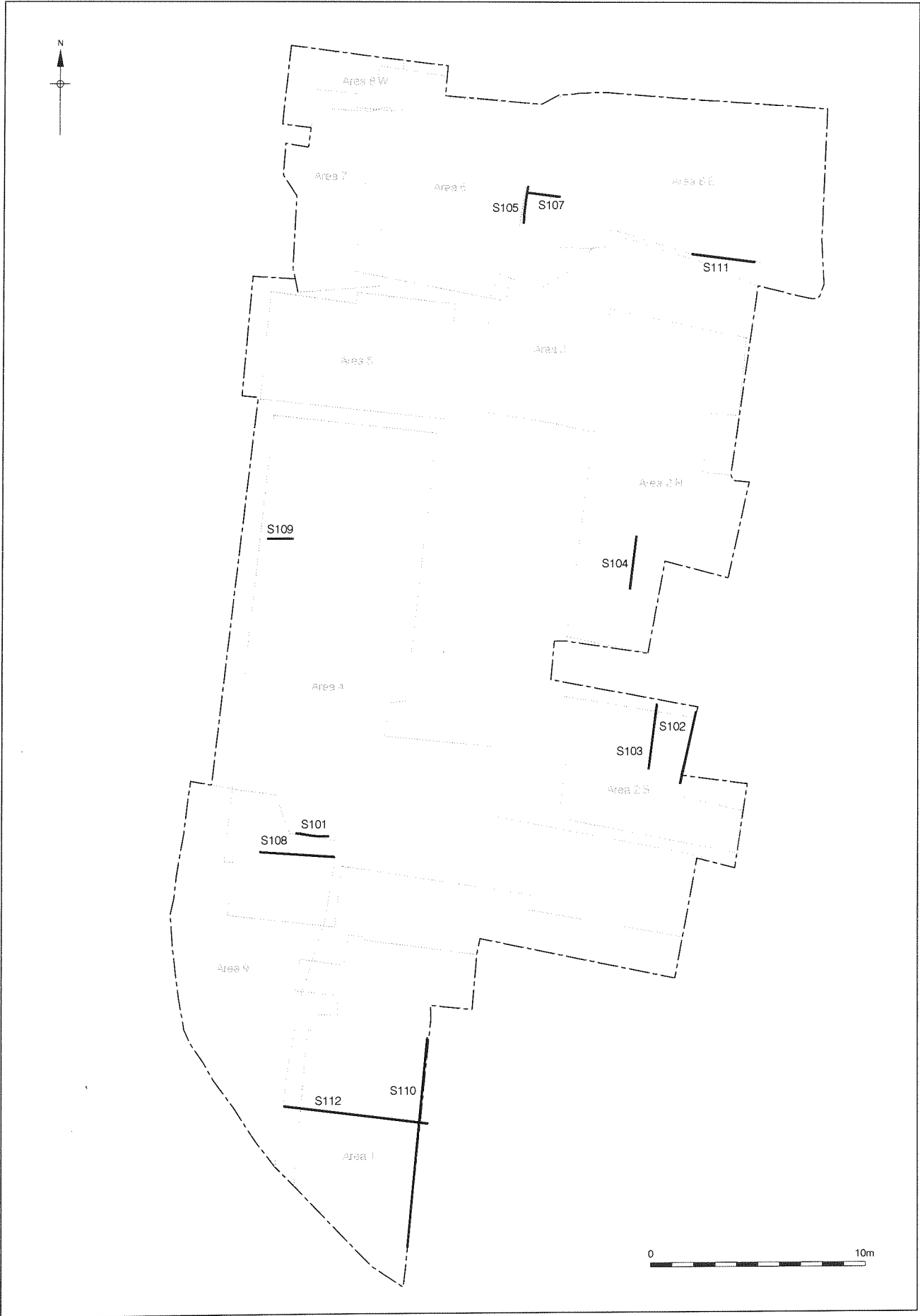


Figure 12
Section Location
1:250

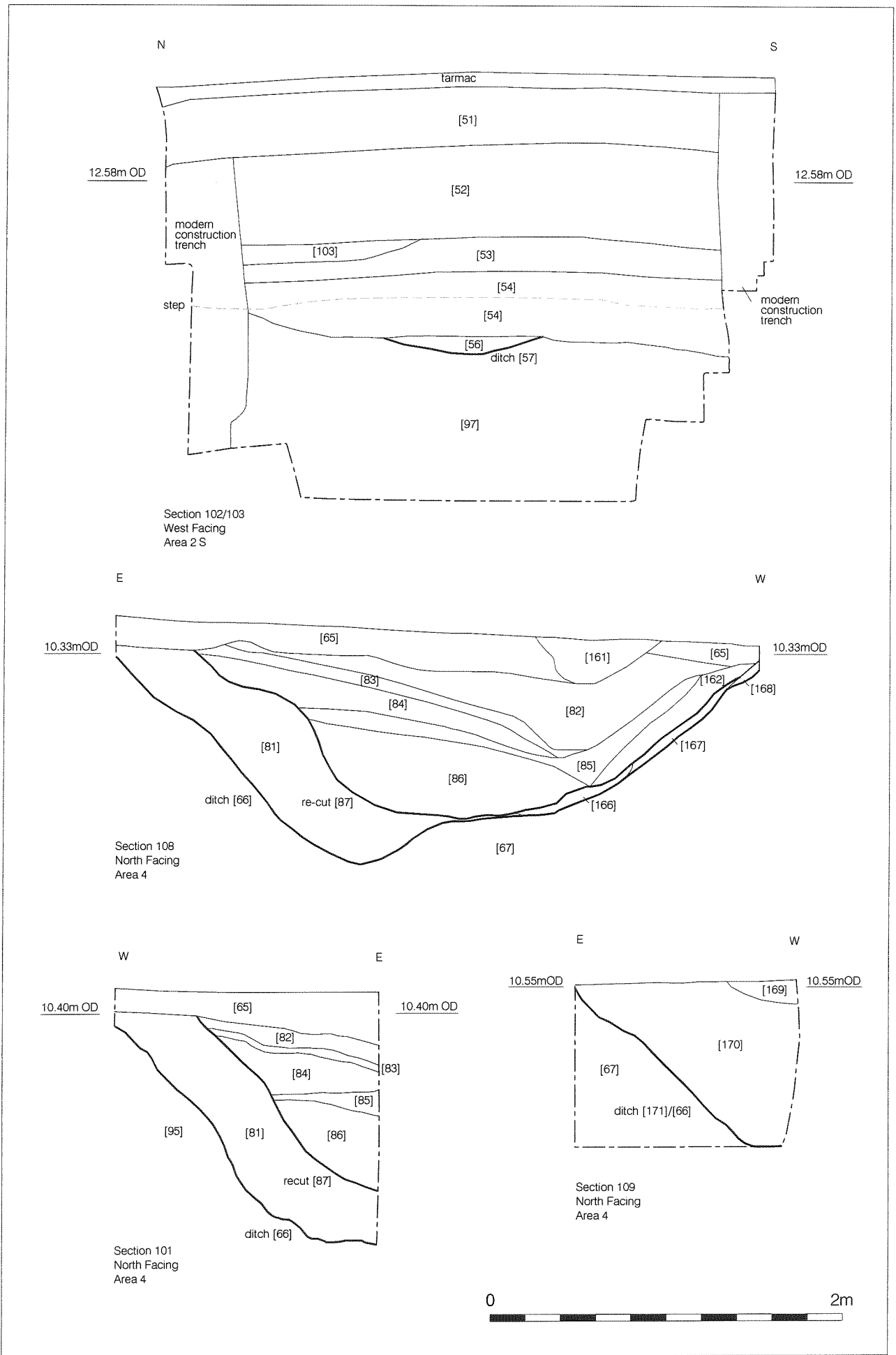
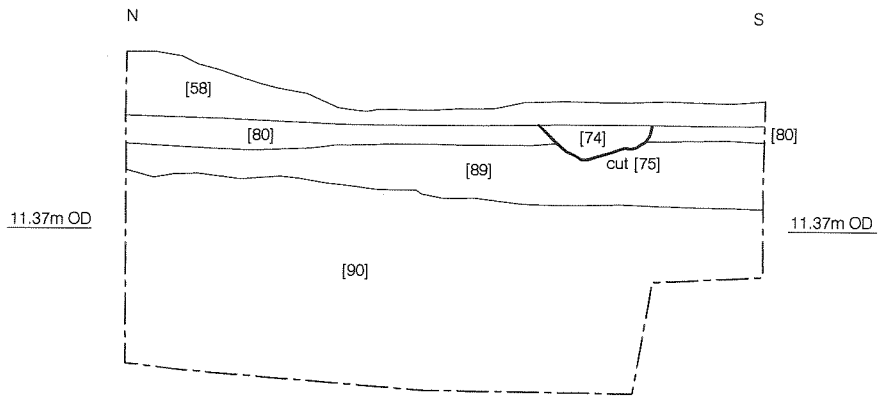


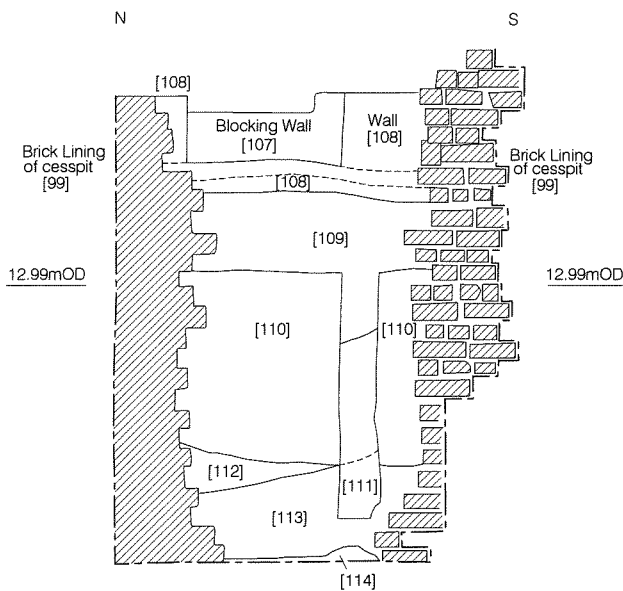
Figure 13
 Sections 101, 102, 108 & 109
 1:30



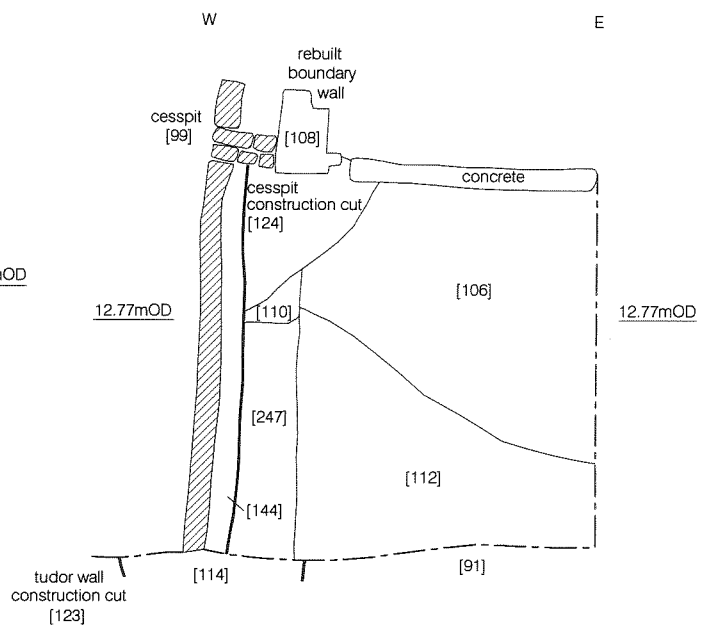
Section 104
West Facing
Area 2 N



Section 111
South Facing
Area 3



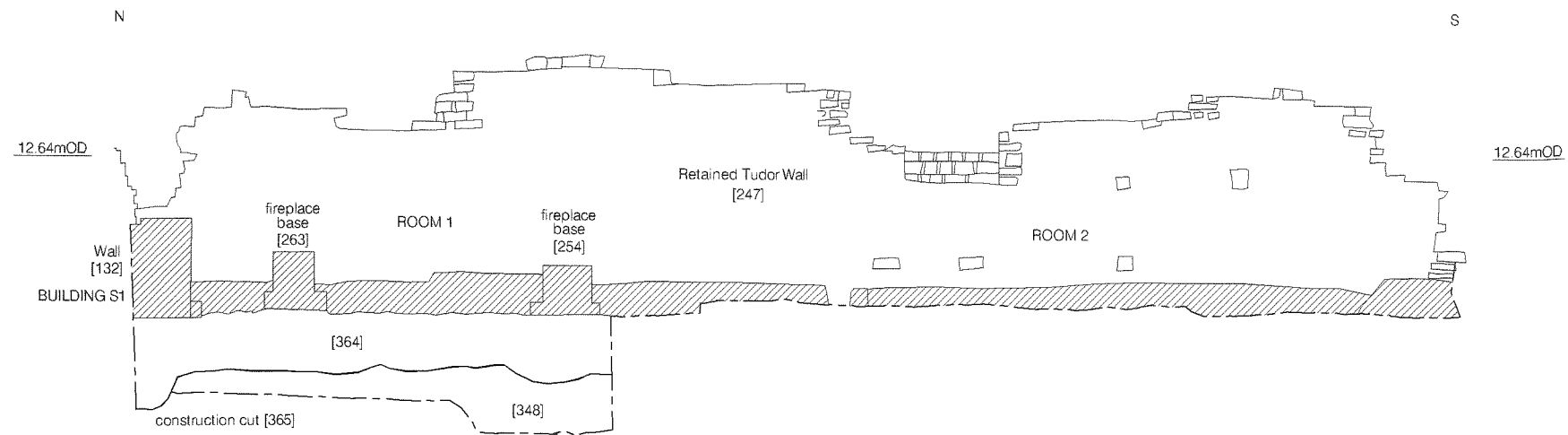
Section 105
West Facing
Area 3



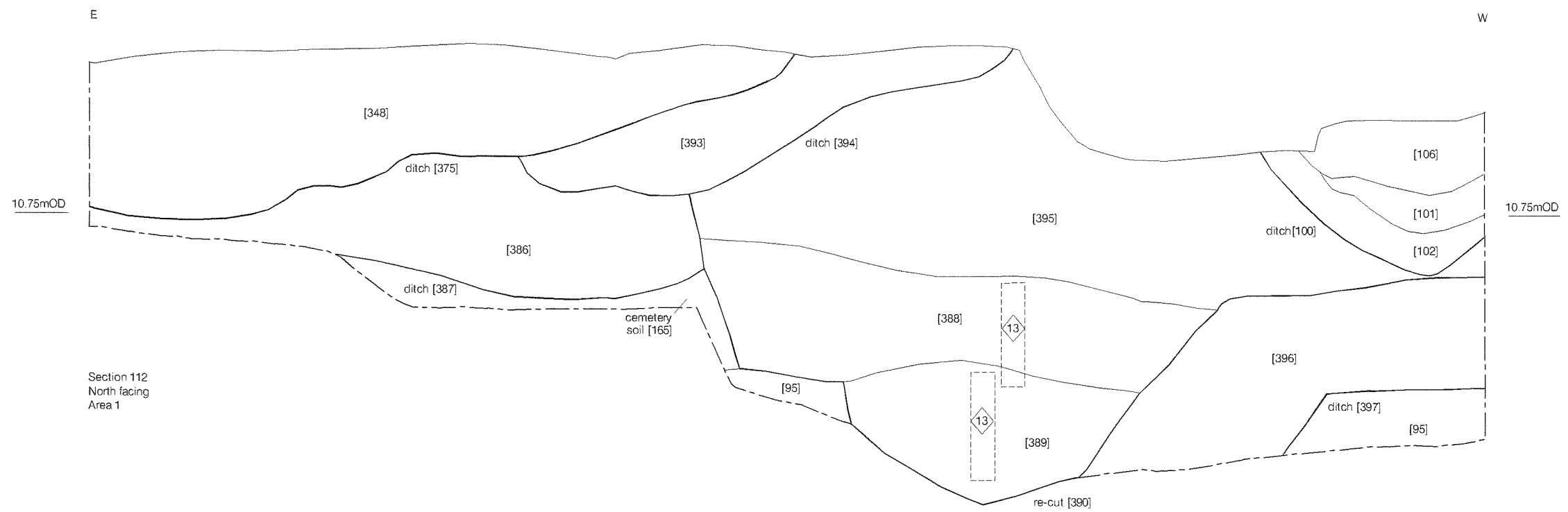
Section 107
South Facing
Area 3



Figure 14
Sections 104, 105, 107 & 111
1:30



Section 110
West Facing
Area 1



Section 112
North facing
Area 1



Figure 15
Sections 110 & 112
1:50

16 A SUMMARY OF THE ARCHAEOLOGICAL PHASES

- 16.1 Phase 1 represented the natural drift geology while the site was underlain by Taplow Terrace gravels which were encountered at between 10.76 and 10.02m OD. There was a gentle but perceptible slope from north to south towards the River Thames. The gravel was capped by a brickearth type deposit, Langley Silt which was recorded at c. 12.0m on the north side but because of later truncation at c. 11.70m OD elsewhere. The level on the brickearth is approximately a meter higher than generally reported in the area. The reason for this discrepancy is not known but may be related to a variation in topography.
- 16.2 Phase 2 represented the earliest human activity recorded and probably dates to the Roman era. A possible ditch on a southwest/northeast orientation was present on the north side of the site. This predated the Roman cemetery, and may have been dug to demarcate a land/property or ritual/sacred boundary. To the south of the ditch, also predating the cemetery was a possible quarry pit. These features are likely to date to the 1st or 2nd century. There was no evidence that Roman land use had been influenced by earlier patterns of human activity and this supports the idea of Londinium having been founded in c. AD 50 as a 'new town'.
- 16.3 By the 3rd century the ditch and the quarry pit appeared to have been filled in and the area of the site laid out as a cemetery ground. The human remains excavated from the Artillery Lane/Crispin Street are only a small sample from a the much larger northern cemetery, which extended well beyond the site boundaries.
- 16.4 Phase 3 represents the medieval period and the substantial north/south ditch recorded on the site almost certainly constitutes the outer-precinct boundary to the Priory and Hospital of St. Mary-without-Bishopsgate, founded in c. AD 1197. The site lies within and outside the southeast corner of the outer precinct. This precinct was probably acquired piecemeal but was thought to have been consolidated by c. AD 1270. Unfortunately most of the archaeologically excavated area was outside of the boundary ditch so that no evidence was gained for activities or structures within the precinct. Evidence for what may have been going on outside the precinct is also slight, an E/W orientated field ditch and a possible quarry pit were identified. It may be that the land had an agricultural use. The land may also have been used sporadically for the extraction of brickearth.
- 16.5 Phase 4 dates to the 16th century when the outer-precinct boundary ditch was filled in. However the property boundary was maintained with the building of a brick wall. In 1538 Henry VIII dissolved the monastic houses, the communities were turned out and their lands and buildings were sold off. Almost immediately, still in AD 1538 the outer-precinct was leased to the Honourable Artillery Company. It may be that the "new brick walls" which enclosed the Artillery Ground and are shown on the 'Copperplate' map of 1559 were built in the immediate post-dissolution period. Although based on the dating provided by the archaeological evidence the enclosure wall could have been built while the land was still under ecclesiastical control. The infilling of the precinct ditch with

domestic waste of a possibly noxious nature may be an indication that respect for church lands was not what it had been previously.

- 16.6 The pitting recorded on the east side of the enclosure wall suggests that the land was open ground. The 'Coppergate' map of 1559 shows the land adjacent to the Artillery Ground being used for recreation (archery, promenading) as well as a toilet. As late as the mid 17th century the area of the site outside the precinct wall was probably still open ground and used for the grazing of cattle³³. In AD 1669 a John Pike and others were forbidden from digging too close to the Artillery Ground wall in case they endangered it³⁴.
- 16.7 Phase 5 dates to the late 17th century when the modern street alignment appears to have been laid out. In the southern sector building S 1 was constructed. The house was notable for incorporating the Tudor precinct wall into its fabric where it formed the external N/S east wall. The other external walls exposed within the Trench included the E/W orientated north wall and the south wall on a NW/SE alignment. The orientation of the south wall reflected the alignment of Artillery Lane, which the building fronted. The building had two rooms at basement level, room 1 to the north and room 2 to the south. These rooms were probably divided by a wall represented by a beam slot. In room 1 wooden floors may have rested upon brick 'sleeper' walls but in room 2 the wooden floor seems to have rested upon wooden beams set into the ground.
- 16.8 The lantern horn plates sf <124> found in a beam slot from room 2 may represent waste from the manufacturing process (see Appendix 10) and are an indication that the building, as well as being for domestic habitation, may also have been a place of work. In deed the basement room 2 could have contained a horn workers workshop. Room 1 was provided with a fireplace probably used for cooking as well as heating and may be an indication that this room was the kitchen, although at this time rooms often shared more than one function.
- 16.9 On the northeast side of the site there was a concentration of rubbish pitting, which served for the disposal of waste discarded to the back properties that would have fronted on to Crispin Street. The pits included fragments of animal bone typical of domestic refuse as well as the remains of five dogs and three cats. The partially articulated skeleton of a pig was also discovered close to the pitting, evidence suggesting that pigs reared for food, would have been kept in the back yards. However the animal bone assemblage from these pits was dominated by horn cores a waste product associated with butchery, tanning and horn working. The zooarchaeological evidence and the historical data (see Appendix 10) suggests that horn working was the activity most likely to be associated with the horn cores at Providence Row.
- 16.10 Horticultural type soils, a possible hedge line and possible planting holes also attest to the likelihood that the back properties fronting onto Crispin Street were additionally used for gardening.

³³ Thomas et al, 1997, 150

³⁴ Ibid

- 16.11 The Tudor precinct wall (see Phase 5) to the north of Building S 1 remained standing and appears to have demarcated the back boundary to the properties that fronted on to Crispin Street.
- 16.12 Houses that fronted onto Crispin street at the junction of Crispin Street and Artillery Lane in the area of the site included a row of Almshouses, several private houses as well as a Town Hall³⁵.
- 16.13 Phase 6 dates to the first half of the 18th century by which time all the street frontages appear to have been built upon. On the northeast side the remains of another cellared building (S2) were unearthed. The structure appeared to have been part of an extension to the west and to the rear of the main part of a building that would have fronted on to Crispin Street. This was likely to have been used for utilitarian purposes such as a laundry, or for a pantry or perhaps a workshop. Immediately behind building S2 a horn core lined cesspit was excavated. These are evidence that the occupiers of building S2 were also involved in the horn workers craft. A piece of antler waste (sf <42>) found in the floor makeup of building S2 also suggests a connection with horn/animal bone working. The horn core lined pit was in the same locality as the rubbish pitting that contained horn core waste in Phase 6. This suggests a continuity of involvement in horn working from the late 17th century until at least the middle of the 18th century. In deed the quantity of horn cores recovered suggests that the industry had expanded from that in the 17th century and that their workshops were producing large quantities of this waste material.
- 16.14 To the north of building S2 was a brick lined cess pit that may have been associated with the adjacent property.
- 16.15 The precinct wall was probably still standing and separated the back yards and gardens from those that fronted on to Crispin Street from those that fronted on to Gun Street. To the west of the precinct wall and probably associated with properties that fronted onto Gun Street were features which included a brick lined well, a brick lined cess pit and a rubbish pit.
- 16.16 On the south side Building S1 appears to have fallen into at least a partial state of disrepair evidenced by postholes in room 2 which may have been necessary to hold posts that supported the ceiling. Two separate sub-phases (6.1 and 6.2) of rebuilding were identified. In Phase 6.1, the south wall of the building was rebuilt. The two separate rooms were retained but the original wooden floor (see Phase 5) in both rooms was replaced with a brick surface. In room 1 a platform raised slightly higher than the floor in an alcove between the external north wall and the fireplace was probably used for storage perhaps for fire lighting equipment, cooking or cleaning implements.
- 16.17 In Phase 6.2 The dividing wall between the two rooms was knocked down but it would be reinstated when a new brick floor was laid down. The layout of the rooms appears to have remained unchanged and the raised platform in room 1 was rebuilt with flagstones.

³⁵ Holder 1997, 15

- 16.18 The pottery assemblage from building S1 primarily from the floor makeup deposits include sherds of sugar refining vessels and syrup collection jars. Interestingly both 17th century Spanish and Portuguese pottery was included in the pottery assemblage from building S1 (see Appendix 5).
- 16.19 Phase 7 represents the latter half of the 18th century. In the northwest side of the site the remains of a cellared building with 2 rooms at the basement level were uncovered. Room 1 to the north had a brick floor and set into this were drains, which probably flowed into an internal soakaway. These may be an indication of the utilitarian function of the room perhaps for storage and/or a laundry or possibly for some light industrial function. In room 2 the original floor did not survive but it was likely to have been laid with brick or tile. The base of the chimney indicated that either room 2 (or a room above) contained a fireplace and may have included a kitchen function.
- 16.20 A pit excavated to the south of building S3 may be of 18th century date and was probably part of the adjacent building.
- 16.21 To the east of building S3 the Tudor precinct wall showed evidence of repair and modification but the wall still stood and demarcated the division between the back to back properties that fronted onto Gun Street and Crispin Street. Furthermore the space of the backyard to building S3 was only 3.0m wide.
- 16.22 Building S2 probably remained standing and in use during this phase and the back garden/yard apparently continued to be used as a space to spread household waste such as fire rake-out.
- 16.23 Building S1 also continued standing but underwent alteration. Once again the floor was raised and re-laid, as was the hearth and the platform in the alcove. The central section of the E/W orientated north wall was also rebuilt. This brickwork was probably necessitated by the installation of a soakaway sunk into the floor and set against the north wall. A drain set into the floor flowing through the centre of both rooms, discharged into the soakaway. A second drain was cut through the north wall and may also have emptied into the soakaway. The partition wall dividing rooms 1 and 2 was moved so as to make the former smaller and the latter larger.
- 16.24 The installation of the drains and the soakaway as well as alteration to the room sizes suggests that at least in the two basement rooms a change in function and/or in the use of space had occurred.
- 16.25 Phase 8 represents the 19th century. In building S3, in room 1 the floor was raised and a new brick floor laid down. It seems likely that the drains and the soakaway set into the floor of room 1 in the 18th century (see Phase 7) had now gone out of use and been covered over. In room 2 the floor appeared to have been re-laid with tiles.
- 16.26 Pottery from building S3 included a refined whiteware bowl with sponge decoration. Such ceramics are usually associated with low socio-economic housing and may be an indication that the building and the locality had declined in status by the early 19th century, or alternatively may have formed part of the

possessions of the servants servicing the high status household(s) using the premises.

- 16.27 Modern cartographic evidence shows building S3 (or a rebuild constructed on the 18th century footprint) as no. 7 Gun Street and that this structure stood until it was demolished as part of the Manhattan Loft Corporation development.
- 16.28 To the east of building S3 the Tudor precinct wall again showed evidence of rebuilding and an E/W orientated wall return appears to have been an entirely 19th century construction. The E/W aligned wall probably demarcates properties north and south that would have fronted onto Crispin Street. The O.S map of 1873 appears to show such a wall and the property to the south is identified as a 'convent'. The building S2 probably continued to be occupied until it was demolished in about AD 1868 to make way for the Convent of Mercy and Night Refuge.
- 16.29 Abutting and to the west of the rebuilt precinct wall was a brick lined cess pit. This feature probably represented a 'privy' located in the backyard of the property immediately to the north of building S3.
- 16.30 Building S1 continued to be inhabited but underwent some alteration. The internal dividing wall was rebuilt and its position was shifted further to the north, making room 1 smaller and enlarging room 2. The fireplace seems to have gone out of use suggesting a change in use for at least room 1. The soakaway was filled in and capped and the floor raised and re-laid but in a much more irregular fashion using brick, stone paving and cobbles.
- 16.31 Modern cartographic evidence identifies building S1 (or a later rebuild on the same foot print) as no 43 Artillery Lane and that it continued to stand until its demolition as part of the present re-development.
- 16.32 The filling in of the cess pit in c. AD 1870, and the soakaways in both buildings S3 and S1 are an indication that a municipal sewage system had been installed and that cess pits were now redundant.
- 16.33 Phase 9 represented modern features.

17 THE ORIGINAL AIMS, OBJECTIVES AND THE RESEARCH DESIGN

17.1 The evaluation will aim to address the following research aims:

What is the nature and extent of survival of the natural topography?

Is there any evidence for Prehistoric activity in the vicinity?

What evidence is there for industrial activity, including mineral extraction, in the area?

Was this area within part of the extensive Roman roadside cemeteries?

What evidence is there for the nature of Roman settlement and other activities within the vicinity?

What evidence is there for Medieval activities in the area?

Is there any evidence for activities relating to the Priory on the site?

Are there any remains for the original Outer Priory Wall surviving?

What is the history of the line of the Outer Priory Wall, later Old Artillery Ground Wall, within the site and how does it relate to the contemporary activities on either side of it?

Is there any evidence for the use of the land to the west of the Wall as a firing range or for artillery practice?

What evidence is there for other Post-Medieval activities in the area?

What evidence is there for the development of the site through the Post-Medieval period in terms of housing and municipal buildings?

Did the social status of the buildings and inhabitants on the site change over time?

What are the trading links and networks of the post-Medieval inhabitants?

Topography

17.2 The excavation revealed that the site was located on gently sloping land overlooking the River Thames to the south. The underlying Taplow Terrace gravel was capped by a brickearth type deposit, Langley Silt (British Geological survey, North London, 1982) at c. 12.0m OD.

Prehistoric

- 17.3 A small number of abraded pot sherds dating from the prehistoric to c. AD 150 were collected and are an indication that some kind of activity, was going on in the locality.

Roman

- 17.4 The earliest activity on the site was probably related to brickearth and gravel quarrying and dates to the 1st or 2nd centuries.
- 17.5 There was no evidence for actual Roman settlement within the area of the site. It lies beyond *Londinium* and to the east of Ermine Street in an area that was part of the previously identified northern Roman cemetery. The excavation recovered 26 inhumation burials in 2001, a further 3 in 2003 and another six in 2004/2005. From the ceramic evidence they all date to the 3rd century.
- 17.6 The group is only a small part of the larger northern cemetery and the results of this small sample although they can be published on their own should be considered in the wider archaeological study of the whole of the Roman cemetery at Spitalfields. A collation of all the available information on the individual burials is also given for ease of reference in a concordance chart, see Appendix 4.
- 17.7 Large cemeteries had been established close to the principal town gates by c. AD 100³⁶. The cemetery that has been most intensively archaeologically investigated is that east of the City and south of Aldgate which extended over an area 12ha. But cemeteries also existed to the west of Londinium from Holburn to the Cripplegate Fort, and south of the river in an 30ha area between Stane Street and Watling Street as well as late Roman burials that were cut into derelict buildings around a shrunken bridgehead settlement. To the north of the City cemeteries covered an area of 16ha, north and west of Bishopsgate. A major cemetery existed at Spitalfields some 500m beyond the City wall and set back from Ermine Street and it is this cemetery that the inhumations recorded here are a part. Over 150 inhumations have been excavated from the Spitalfields cemetery and cremations have also been recorded³⁷.
- 17.8 The absence of any infants and only one juvenile is striking. However the under-representation of juveniles and infants in many Roman cemeteries appears to be the norm. From the Eastern cemetery for instance the proportion of infants in the sample was far below that which would be expected from the representative burial of a normal population³⁸.
- 17.9 In the Eastern cemetery the most frequent age of death was 'mature' but not elderly at 41.3%³⁹. At Artillery Lane/Crispin Street mid/mature and mature

³⁶ Kendall 2000, 148

³⁷ Ibid; Swift 2003,8

³⁸ Barber and Bowsher 2000, 279

³⁹ Barber and Bowsher 2000, 278

individuals accounted for 26% of the sample. The most frequent age at death was young adult and adult forming 34% of the sample.

- 17.10 The ratio of males to females in the Artillery Lane/Crispin Street sample was 1.7:1, the same as in the Eastern cemetery. A ratio that is thought to represent a normal urban population rather than reflecting any military presence⁴⁰.
- 17.11 All the burials recorded at Artillery Lane/Crispin Street were inhumations and from the dating primarily of the pottery would appear to be of 3rd century date. This would fit well with the assertion that cremation was the most popular rite in Londinium in the 2nd century becoming rare in the 3rd century⁴¹.
- 17.12 Londinium in the 3rd century was a fully Romanised settlement and a place of competing religious doctrine. Mithras, mother goddesses, Isis, possibly AttisCybele, Christianity, the divinity of the emperor, were all cults thought to have had adherents in Londinium⁴². It may be that the heterogeneous character of the cemetery (with its range of burial rites and funerary practices such as burials aligned east-west or north-south, with different head locations, burials encased in coffins and those without, those covered with 'chalk' and those not, and those buried with grave goods and those without) mirror a population that was also mixed in life.
- 17.13 In the Eastern cemetery the inhumations were generally contained within wooden coffins. At Artillery Lane /Crispin Street there was evidence for at least ten coffins. It may be that more individuals were placed in coffins without the evidence surviving. It is also possible that some individuals were wrapped in a shroud or bindings although their use cannot be confirmed since no textile remains have survived.
- 17.14 Only a minority (29%) of the inhumations recorded contained grave goods although this is a much higher proportion than those in the Eastern cemetery where out of a total of 653 inhumations only 106 (16%) contained grave goods.
- 17.15 At Artillery Lane /Crispin Street the majority of grave goods were ceramic vessels predominately dating to the 3rd century a case paralleled in the Eastern cemetery⁴³. The traditional explanation for the burial of goods with the corpse is that they were placed there to provided sustenance, comfort or protection to the spirit of the departed while confined within the tomb, on the journey to or in the after life⁴⁴. It may be that all or some of the vessels contained food or liquid offerings but no evidence for this survived.
- 17.16 A further explanation for the deliberate deposition of an object may be that it was particularly associated with the deceased. It may have been felt necessary to deposit them within the grave not only to comfort the spirit but to avoid the persona of the dead individual exerting a malign influence through such objects if

⁴⁰ Barber and Bowsher 2000, 279

⁴¹ Kendall 2000, 148

⁴² Barber and Bowsher 2000, 318

⁴³ Ibid, 121

⁴⁴ Black 1986, 220

they passed to a new owner⁴⁵. Hence the use of pottery, shoes, jewellery and tools, examples for all of which have been recorded on this site. Other archaeological excavations have discovered mirrors and dice etc.

- 17.17 A coin placed in the mouth, near the head or hand is usually interpreted as rite associated with the classical tradition of payment to Charon to ferry the dead across the river Styx to the Underworld realm of Hades⁴⁶. Coins placed in other positions i.e. at the foot of the grave, or outside the coffin could have been placed there because of an intrinsic power perhaps to ward off evil⁴⁷.
- 17.18 In the burial sample studied from the Eastern cemetery burial goods could not be obviously ranked according to social status⁴⁸ and at Artillery Lane /Crispin Street a similar situation prevails.
- 17.19 From the Spitalfields cemetery a number of the inhumations so far discovered were 'plaster' burials⁴⁹. From the Eastern cemetery, in 81 (12.4%) of the inhumation burials a white substance, identified as deriving from marine chalk, was present around the body⁵⁰.
- 17.20 In Britain it is normally considered that the practice of encasing corpses in chalk, gypsum, lime or plaster mainly belongs to the 4th century and the earliest securely dated examples are 3rd century⁵¹. The practice is thought to have been introduced from North Africa⁵². At York it is associated with persons of high status, imitated by prominent families and then spread more generally. Later Christians may have adopted it, but the impetus for its adoption seems to have been as a symbol of status (Ibid.). However in the Eastern cemetery of Londinium the 'chalk' burials conform to the overall sample of burials in distribution of date ranges, incidence of grave goods, sex distribution and alignments showing a pattern similar to the average for all burials⁵³.
- 17.21 One association, which, was reported that differed from the mean was an apparent over representation of 'chalk burials' for infants and the immature with a converse under-representation among the adult. At Artillery Lane /Crispin Street one of the 'chalk burials' was categorised as young adult and the other adult so that at least one of the burials might be considered premature. Black⁵⁴ speculates that chalk around the body may have "served better to protect the living from the dead, particularly those that had died prematurely" hence the over representation of the practice in the graves of infants and the young. The idea that 'manes' might wander from their tomb and influence the living has been suggested for other measures to prevent this such as stone and tile packing and prone burials. Such practices may be especially necessary in the case of those

⁴⁵ Webster 1986, 131-2

⁴⁶ Barber and Bowsher 2000, 120

⁴⁷ Barber and Bowsher 2000, 120 cites McDonald 1979, 409

⁴⁸ Barber and Bowsher 2000, 323

⁴⁹ Swift 2000; Various unpublished MoLAS excavations.

⁵⁰ Barber and Bowsher 2000, 101

⁵¹ Philpott 1991, 91

⁵² Ibid, 223

⁵³ Barber and Bowsher 2000, 321

⁵⁴ Black 1986, 227

who died an untimely or violent death⁵⁵. However the one example from Artillery Lane /Crispin Street of a prone burial showed no evidence for a premature or violent death, although such evidence might leave no trace on the remaining skeletal material.

- 17.22 The use of chalk like substances may also have had some other symbolic value perhaps to be of use to the dead person or its whiteness could have held meaning perhaps representing light⁵⁶.
- 17.23 It has also been suggested⁵⁷ that patches of chalk on or near specific parts of the body may relate to a perception of which parts of the body had been a cause of death or were infected. There appears to be no correlation of chalk to pathology at Artillery Lane /Crispin Street.
- 17.24 Another suggestion for 'chalk' burials is that the presence of such a material would have warned the gravediggers of the presence of a body and thereby offers some protection against disturbance. With many of the graves which include chalk the material being at the base of the cut this hypothesis appears to be un-supported. Of course the use of chalk could simply be a fashion.
- 17.25 Chalk, plaster, lime, gypsum may have (and been perceived to have had) preservative qualities⁵⁸ and this may have been of particular importance to certain sections of the society. For instance Christians believed in the physical resurrection of the body and might therefore be particularly concerned to preserve the actual corpse. However in the Eastern cemetery there is no reason to strongly associate 'chalk' or 'plaster' burials with Christianity. The 'chalk' burials show a wide chronological range and rarely form a stratigraphic or spatial group⁵⁹. At Poundbury cemetery outside Dorchester, Dorset funerary rites such as the east-west orientation and encasing the corpse in gypsum possibly to preserve it were noted and are thought to be non-Christian in origin but to have been adopted by Christians⁶⁰.
- 17.26 Christians may have formed a significant part of late-Roman society but identifying distinctively 'Christian' burials is hard to do. The focusing on corpse alignment, respect for the dead, chalk or plaster burial, absence of grave goods are not in themselves indicators of a Christian. Christians were buried in cemeteries along side pagans and held the same views as to their commemoration and the respect due to their tombs⁶¹. There is no reason to link east-west alignment and head location to the west specifically with Christian belief indeed it has yet to be shown when Christianity adopted a predominately east-west burial. It seems likely that Christians were interred in mixed pagan-Christian cemeteries and in general adopted the burial customs that had evolved

⁵⁵ McDonald 1979, Black 1986, 227

⁵⁶ Barber and Bowsher 2000, 321

⁵⁷ Whytehead 1986, 57

⁵⁸ Barber and Bowsher 2000, 102

⁵⁹ *Ibid*, 321

⁶⁰ Henig 1989, 228 cites Green 1977, Thomas 1981, 128, 237-8 (gypsum burials) and 231-4 (orientation)

⁶¹ Harris 1992, 61

and become traditional by the 4th century⁶². At Artillery Lane /Crispin Street even in the 3rd century the most popular orientation of the inhumations was east-west with the head located to the west.

- 17.27 The discovery of a 'true' decapitation at Artillery Lane /Crispin Street is a rare find for London. Six inhumation burials were recorded in the Eastern Cemetery of Londinium where either the cranium or the mandible, or both were in an unexpected position. However there was no osteological evidence to support the interpretation for the deliberate removal of the head and other explanations have been considered for the unusual head position including deliberate post-mortem rearrangement once the soft tissue had decomposed or accidental disturbance perhaps occurring during the digging of later graves. For in all other respects there was nothing unusual about these skeletons other than that they had their skull or mandible displaced. All but one of these were from wooden coffins. The practice of head displacement with the possible interpretation of decapitation was restricted to east/west burials⁶³.
- 17.28 Parallels for beheaded skeletons do exist further a field, three are reported from Guilden Morden and four from Dorset. In many cases the head had been removed soon after death and placed at the feet or between the legs⁶⁴. These examples are supposed to date to the late 3rd or early 4th century. While Celtic religious practice shows signs of reverence for and unusual treatment of the head⁶⁵, the severed head cult of the Iron Age seems to be a practice that may have died out by the 3rd century. The date also seems to preclude a practice introduced with the influx of large numbers of 'barbarians' that may have occurred towards the end of the Roman period. Although religious practices can be particularly long lived, persisting despite changes in language, material culture and power relations⁶⁶.
- 17.29 In the Eastern cemetery the common alignment of grave pits was generally similar, either east-west or north-south, and many of the graves were laid out in rows, suggesting that considerable control was exercised over the positioning of burials. These rows may include graves on both alignments, often overlapping to form apparent clusters. Both alignments were present in a row even when there was no obvious sign that the space was restricted, suggesting that for some burials at least alignment was a matter of authentic choice⁶⁷. At Artillery Lane/Crispin Street although later truncation has probably destroyed many of the Roman graves a series of rows were still discernable.
- 17.30 The choice of possible burial rite used for a particular individual depends on many factors including wealth, fashion, social status, occupation, cultural tradition religious belief, as well as legal requirements⁶⁸. The diversity of the internment

⁶² Barber and Bowsher 2000, 322, Philpott 1991, 239-40

⁶³ Barber and Bowsher 2000, 90

⁶⁴ Salway 1993, 504

⁶⁵ Marsh and West 1981, Cotton 1996 cited in Barber and Bowsher 2000, 317

⁶⁶ Ruggles 1999, 142

⁶⁷ Barber and Bowsher 2000, 22

⁶⁸ Ibid, 310

practices recorded at Artillery Lane/Crispin Street and in the other cemeteries of *Londinium*, appears to reflect the diversity of the city's population.

Medieval

- 17.31 The excavation revealed an outer-Precinct boundary ditch to the Priory and Hospital of St Mary-without-Bishopsgate. The ceramic evidence from the lowest fills of the ditch suggested that it had originally been dug in the 13th century, confirming the historical record that monastic ownership of the outer-precinct had been consolidated by AD c. 1270.
- 17.32 Unfortunately most of the site lay outside the out-precinct boundary so that there was no information gained on activities undertaken within the precinct. Outside the precinct the land appears to have been used for pasture and for sporadic quarrying for brickearth and gravel.
- 17.33 Cobbling waste, part of an upper from a side-lacing shoe recovered from a late fill of the ditch may be an indication that shoe-making was being undertaken in the vicinity.
- 17.34 From the late 14th century onwards there were organised drives of cattle to the London markets⁶⁹. Ermine Street would have been one of the major thoroughfares into London for these drives. The drives (in later phases) would have ensured a constant supply of cattle hides for the leather workers as well as meat for the butchers and the raw material for the horners and bone workers.
- 17.35 The fills of the medieval ditch included part of a horse skeleton but the majority of the animal bone assemblage was typical of domestic waste. Although one piece of worked bone was found characteristic of a pin-makers bone (see Appendix 10).
- 17.36 Finds of late-Medieval jettons (see Appendix 8) some of which are from France and the Low Countries attest to the importance of these regions for English trade during the late Medieval and early post-Medieval period.

16th century

- 17.37 The precinct boundary ditch was maintained by repeated re-cutting until the early 16th century. The boundary continued to be maintained even after the ditch had been filled in, with a brick wall which enclosed the outer-precinct. The excavation revealed a still standing 10.40m stretch of the Tudor precinct wall in the southern part of the site, incorporated into the build of a later house. On the north side a much smaller section, 1.76m in length of the original build survived. The line of the precinct wall would remain an important property division marker throughout the post-Medieval period although the wall itself was much rebuilt and defined the parish boundary.

⁶⁹ Grew and de Neergaard 1996, 46

17.38 Following the dissolution of the monasteries the outer-precinct was acquired by the Honourable Artillery Company and used for gunnery practice. Unlike at 250 Bishopsgate (STE95) no archaeological evidence was discovered that the precinct had been used as a firing range.

17.39 To the east of the Artillery wall lay Spitalfield, which according to Stow⁷⁰ was 'broken up for clay to make brick'. During the course of digging these pits the brick makers disturbed the earlier Roman cemetery, with Stow noting that 'many earthen pots... were found full of ashes and burnt bone'. Pitting identified by the excavation to the east of the wall probably relates to the activities of these 16th century diggers.

17th century

17.40 By the late 17th century the modern street pattern appears to have been established and a building (S1) had been constructed on the south side of the site. This structure incorporated part of the Artillery wall into the build so that it formed its east side and external wall. The property which was probably brick built throughout was basemented with two rooms at that level and would have had two or possibly three stories above. It seems likely that the cellars would have been used as the kitchen and possibly a workshop. The floors above would have accommodated possibly shop and certainly living space.

17.41 The off cuts of lantern horn plates from building S1 may be an indication that the property would have been a place of work as well as a dwelling. The practice of living above ones place of work, which was common in the medieval period was of course a way of life that continued in to the early modern era before the advent of factories and mass production. The lantern plates could have course been brought onto the site for some reason unrelated to their manufacture but the presence of horn core lined pits suggests that the craft of horners was practiced in the immediate vicinity.

17.42 The rubbish pitting identified on the eastern side of the site does suggest that that frontage had also been built upon.

17.43 The excavation found no remains that related to the 'town hall' or the row of alms-houses that are historically known to have fronted onto Crispin Street during this period.

18th century

17.44 By the early 18th century the archaeological evidence suggests that all the frontages to the site had been built upon by then. The partial remains of a cellared building S2 fronting Crispin Street, were uncovered in the northeast. The horn core lined pit immediately to the rear of these remains suggests that the inhabitants continued to be involved in the horn and/or bone working trade.

17.45 Cess pits, wells and rubbish pits on the west side of the site, are indications that the frontage to Gun Street had been developed.

⁷⁰ Stow 1598, 183

- 17.46 Part of a cellared multi-storied building (S3) fronting Gun Street was revealed on the northwest side of the site. This building had purpose built brick drains feeding into a probable soakaway set into the floor of one of the two rooms. This suggests that the room had been designed from the outset to function in a particular way. Washing and laundry are obvious possibilities but there may be other commercial or light industrial purposes to which the room may have been put.
- 17.47 Two sub-phases of structural alterations to building S1 dating to the first half of the 18th century were identified. The principle changes were to raise and relay the floor while the lay out of the rooms remained unchanged. From the floor makeup deposits a significant quantity of sugar refining pottery was recovered, indicating that at the least, sugar refining was being undertaken in the vicinity.
- 17.48 Sugar was imported into Britain in the early 17th century mostly from Spain and Portugal but by the 18th century the English colonies of the West Indies had come to dominate this trade.
- 17.49 In the mid 16th century there were only 2 sugar-houses in London but by the 1650s there were 50 refineries in Britain and most of these in London. A century later there were 80 refineries in London⁷¹.
- 17.50 The sugar arrived in Britain in a semi refined state known as 'muscovado' in wooden casks or hogsheads. Once it had been unpacked and sorted it would be refined again to produce the quality of sugar required for the customer. It is this secondary refining process that may have been undertaken or otherwise associated with Building S1. Water would be added to the 'muscovado' and then boiled. Lime and egg white or bull's blood would be added to 'clarify' the syrup before it was strained through a cloth. Conical moulds and syrup collecting vessels would be used to set the sugar into loaves. Generally the smaller the loaf the finer the quality of the sugar⁷².
- 17.51 In the 18th century, on average each refinery gave work to 6 members of the family and nine yearly working servants⁷³. These individuals are not likely to have lived in the sugar refinery particularly because of the risk of fire.
- 17.52 Most sugar related pottery from excavations in London comes from sites on or near the river presumably to be close to the ships that imported the product and to be in proximity to a supply of water, a necessary element in the refining process. Sugar refineries were frequently constructed close to abattoirs to take advantage of readily available supply of blood⁷⁴. It may be that the easily accessible supply of bull's blood from the butchers known to have been located in the Spitalfield's area (see Appendix 10) may have attracted the sugar producers to this site.

⁷¹ Hugill 1978, 27

⁷² Brooks 1983

⁷³ Hugill 1978, 27

⁷⁴ Ibid

17.53 It is interesting that a drain feeding into a soakaway was set into the basement floor of building S1 during the later 18th century. The cellar rooms also underwent a change in configuration with one of the rooms becoming smaller and the other larger. Both these things suggests that there was a change in function and the use of space to which the cellar was put.

Later 18th century and 19th century

17.54 The excavation uncovered the internal features, notably the position of internal walls, fireplaces, drains and soakaways, of three buildings (S1, S2 and S3) that may provide an indication as to what purpose rooms within the buildings were put. Changes to these features may be an indication how the room and the space therein were being utilised and how this changed over time. Such alterations may also be a reflection in changes in technology and the provision of public services.

18 REVISED RESEARCH QUESTIONS

- 18.0 The burial group of Roman date must be analysed, described and compared in the light of the burial evidence uncovered on adjoining sites and sites in the vicinity, which have uncovered other parts of the northern cemetery. The evidence will need to be considered taking into consideration what is known of the cemetery as a whole and of Roman and native funerary traditions in particular, and the results will require publication
- 18.1 With respect to the ceramic component associated with the Roman burials parallels should be sought and compared for the purposefully broken vessels. It is worth considering whether their destruction served the purpose of enabling them to enter the world of the dead or alternatively to separate them from the world of the living. The pot stand from burial 15 and the wine strainer from pit 516 require more detailed research. Wine (as well as food, flowers and incense) was sometimes used in Roman burial rites and the presence of wine strainers may be an indication that such practices were undertaken here.
- 18.2 The fragmentary and poor condition of the skeletal remains makes further work on the material unnecessary. The group needs description for publication and the decapitated individual in burial 11 and the prone individual in burial 3 are uncommon and further parallels will be sought taking into account Roman and Celtic traditions.
- 18.3 The post-Roman pottery assemblage included material from the late medieval to the 19th century and was generally typical of domestic activity. However a number of ceramics indicated industrial activity such as the crucibles, which are an indication of metal work being undertaken in the area. The sugar-refining vessels are of particular interest and need to be drawn.
- 18.4 The domestic pottery was considered generally mundane but the large assemblage recovered from a 19th century cess pit has the potential to provide further information on household activities and social status particularly when linked to documentary and census information of the inhabitants. The post-Medieval assemblage should also be compared and contrasted with the much larger pottery group excavated by MoLAS at their excavation in Spitalfields and from excavations elsewhere in London.
- 18.5 The presence of the clay tobacco pipe and kiln muffle in a late 17th century pit is of interest. Documentary evidence indicates that tobacco pipe manufacture was widespread throughout the London region and included Spitalfields. Two tobacco pipe bowls dating to AD 1680 – 1710 had the initials W W and probably refer to a local maker. Further documentary research should be undertaken to discover if any of the properties on the site are associated with pipe production and whether W W initials can be associated with any of the pipe makers in the Spitalfields area. A bowl dating to c. AD 1660 – 1680 with a diamond shaped base requires further analysis. The diamond shape was not generally adopted and the presence of this type of bowl on other excavations in the area needs to be established. The muffle and the diamond shaped base need to be drawn and photographed (see Appendix 6).

- 18.6 The excavation revealed no Roman or Medieval structures and the ceramic building material recovered from the site dating to these periods was very abraded and often residual as a consequence no further work is required. Consideration should be given to the post-Medieval development of the street frontages and the buildings uncovered. Some of the tin-glazed wall tile fragments require illustration (see Appendix 7).
- 18.7 The animal bone assemblage from Phase 2 produced no evidence to suggest that animals were used as grave offerings (see Appendix 10). While the material collected from the Medieval and the 16th century (Phases 3 and 4) was typical of general domestic waste. However the animal bone from the 17th and 18th century was dominated by horn-working waste. The excavation has supported the historical data that the area around Petticoat Lane was a centre of bone working activity. The horn would have been easily available from the butchers of Aldgate. Much of the horn cores were recovered from pits in the back properties of buildings that would have fronted onto Crispin Street suggesting that the occupants were involved in that trade. The presence of horn sheets in building S1 may indicate a later stage in the production process whereby flattened sheets were split ready for use as lantern panes.
- 18.8 The horners had formed themselves into a City Company in AD 1464 and had the 'first right to buy' all rough horn in the City and in a radius of 24 miles. Further research should concentrate on the craft of horning and whether there is any historical evidence for members of that craft being domicile in the area. Further analysis would study the cattle breeds in post-Medieval London region and to what extent was there selective use of cattle horns. How far does the horn waste reflects the particular types of cattle being bred in the surrounding area? A comparison of the horn cores with other London sites would allow discussion on the standardisation of hornworking techniques and production methods.
- 18.9 Soil sample 4 from grave B 26 and sample 6 from grave B 15 produced bone, charcoal and shell and further analysis of these samples is recommended so as to provide more detailed information on the surrounding environment (see Appendix 12).
- 18.10 A column sample taken through the fills of the Medieval outer-precinct boundary ditch produced a very good pollen assemblage which indicated that the local environment was dominated by *Salix* (Willow) and *Poaceae* (Grass) with open mixed deciduous woodland (*Quercus*, *Ullumus*, *Alnus*), herb-rich grassland (*Heliantheum*, *Ghalium* type, *Thalictrum*) and areas of open water (*Typha latifolia*, *Myriophyllum*). Further analysis of the pollen is recommended. The nearby priory of course would probably have been cultivating medicinal herbs and may well have had fishponds.
- 18.11 The excavation produced an assemblage of pottery, and domestic artefacts in particular from the 17th, 18th and 19th century that gives an insight into the way of life of the inhabitants of this part of Spitalfields. A comparison of post-Medieval material culture and the structural elements recorded in ground appears to show a change from skilled artisans living and working in close proximity to that of a working class community. In particular a comparison of finds from the 19th century compared with the cultural material derived from the 17th and 18th century

may demonstrate and reflect changes in social organisation and patterns of production and consumption over the post-Medieval period.

19 PUBLICATION PROGRAMME

- 19.1 The remains uncovered are of importance on a local and regional level.
- 19.2 Publication of the results will aim for a peer reviewed journal such as the London and Middlesex Archaeological Society Journal.
- 19.3 The paper will discuss the evidence for the northern Roman cemetery and will draw in the evidence for the relevant surrounding sites both published and unpublished. It will not aim to re-analyse or re-assess existing information but will use existing data sets to achieve an integrated interpretation of the distribution of burials across the cemetery, associated finds assemblages and the physical evidence of the human remains.
- 19.4 The burial evidence will be reviewed and interpreted taking into consideration known Iron Age, Roman and Celtic funerary traditions.
- 19.5 The evidence for the boundary development along the excavated sector of the Priory and Hospital of St Mary Spital during medieval and post dissolution times will be reviewed taking into account the earlier extensively published information.
- 19.6 The post-medieval developments, and craft activities in the site area will be considered and included in the publication.
- 19.7 The specialist recommendations and revised research questions will be dealt with in the relevant sections of the paper.
- 19.8 Appropriate location, distribution and site plans, sections photographs, finds illustrations and other graphics will be included in the publication.

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Appendix 1 Stratigraphic Index

CONTEXT	AREA	GRID SQUARE	SECTION	PLAN	PHASE	TYPE	DESCRIPTION	Highest level	Lowest level	SF	SAMPLE
50	all			tr4	1	Layer	brickearth	10.7			
51	2S			91	1	Layer	natural brickearth	11.75			
52	2S			91	1	Layer	natural gravel	10.68			
53	2S		101	95	1	Layer	natural clay/gravel	10.2			
54	2S			207	1	Layer	brickearth	12.1			
55	2S			336	1	Layer	brickearth	11.65			
56	2S	105/205-210		508	1	Layer	brickearth	11.72	10.88		
57	2S	105/210		523	1	Layer	natural gravel	10.76	10.61		
58	2N		113	Area 8 East	1	Layer	natural gravel	10.56			
59	4			Area 8 East	1	Layer	natural sand	10.7			
60	4		114		1	Layer	Natural silty gravelly clay	9.83	9.7		
61	4		114	Area 9	1	Layer	natural gravel	9.7	9.6		
62	4			tr4	2	Fill	fill				
63	4			tr4	2	Cut	pit	10.6	10.31		
64	4		104		2	Layer	redepo brickearth	11.7		11, 107, 108	
65	4		103		2	Layer	redepo brickearth			84	
66	4			126	2	Layer	redepo brickearth	12.1			
67	4				2	Fill	fill				
68	2N			154	2	Cut	Roman pit	10.56	10.35		
69	2N			165	2	Layer	redepo brickearth	10.49			
70	2N			172	2	Skeleton		10.39	10.27		
71	2N			173	2	Cut	Grave	10.35	10.24		
72	2N				2	Fill	grave fill	10.57			
73	2N			175	2	Skeleton		10.57	10.53	53	
74	2N			175	2	Cut	grave	10.57	10.51		
75	2N			177	2	Skeleton		10.31	10.21		
76	2N			178	2	Cut	grave				
77	2N			179	2	Skeleton		10.37	10.24	18	

78	2N	179	2	Cut	grave	10.37	10.24			
79	2N	181	2	Skeleton	grave	10.47	10.27	19, 56		
80	2N	181	2	Cut	grave	10.47	10.27			
81	4	183	2	Fill	grave fill	10.22		16, 17, 21		
82	4	184	2	Cut	grave	10.22	10.08			
83	4	185	2	Skeleton		10.15	10.1			
84	4	184	2	Skeleton	disarticulated					
85	4	207	2	Layer	levelling deposit	12		20, 24		
86	4	210	2	Skeleton	skull	10.09				
87	4	216	2	Layer	redepo brickearth	11.53	22			5
89	2N	227	2	Layer	redepo brickearth	11.43				
90	2N	228	2	Skeleton		10.21	9.99	23, 58		12
91	3	229	2	Cut	grave cut	10.27	9.92			
92	3	236	2	Skeleton		10.85	10.66			
95	1, 2N, 2S, 4, 5, 6	238	2	Fill	grave fill	10.92				
96	1	238	2	Skeleton		10.93	10.76			
97	2S	239	2	Cut	grave cut	10.92	10.69			
98	3	243	2	Fill	grave fill	10.86				
99	3	243	2	Skeleton		10.84	10.67			
100	1	244	2	Cut	grave cut	10.86	10.63			
101	1	249	2	Fill	grave fill	10.3				4
102	1	249	2	Skeleton		10.27	10.15	30, 31, 32		7
103	2S	250	2	Cut	grave cut	10.3	10.15			
104	1	257	2	Skeleton		10.8	10.76			
105	1	257	2	Cut	grave cut	10.86	10.77			
106	3	260	2	Cut	grave cut	10.68	10.41			
107	3	260	2	Skeleton		10.52	10.43	28, 29		
108	3	236	2	Cut	grave cut	10.85	10.6			
109	3	277	2	Fill	chalk packing	10.27				
110	3	277	2	Skeleton		10.37	10.15	52		6
111	3	278	2	Cut	grave cut	10.37	10.12			
112	3	260	2	Coffin	5 nails	10.62	10.41			
113	3	257	2	Coffin	2 nails	10.77	10.76	27		
114	3		2	Fill	grave fill	10.39				

115	1	284	2	Skeleton		10.39	10.15	
116	3	285	2	Cut	grave cut	10.39	10.15	
117	3	184	2	Coffin	9 nails			
118	3	309	2	Skeleton		10.43	10.24	
119	3	309	2	Coffin	6 nails	10.43	10.32	34
120	3	309	2	Cut	grave cut	10.51	10.31	
121	3		2	Fill	grave fill	10.37		
122	3	338	2	Skeleton		10.41	10.2	
123	3	339	2	Cut	grave cut	10.37	10.19	
124	3 & 6		2	Fill	grave fill	10.32		
125	1	341	2	Skeleton		10.22	10.04	
126	5	342	2	Cut	grave cut	10.32	10.03	
127	5	353	2	Skeleton		10.51	10.39	8, 9
128	5	355	2	Cut	grave cut	10.46	10.37	
129	5	355	2	Coffin	fe fixings	10.48	10.41	40
130	5	355	2	Fill	grave goods	10.61	10.44	41
131	5	368	2	Fill	fill			49
132	1	367	2	Skeleton		11.28	11.2	10
133	1	368	2	Cut	burial cut	11.28	11.12	
134	1		2	Fill	grave fill	11.27		
135	1	380	2	Fill	chalk gravefill	11.27		11
136	1	380	2	Skeleton		11.26	11.2	
137	1	381	2	Coffin	fe fittings	11.28	11.23	51
138	1	382	2	Cut	grave cut	11.24	11.16	
139	1		2	Fill	grave fill	10.57		
140	1	384	2	Skeleton		10.58	10.56	
141	3	385	2	Cut	grave cut	10.57	10.51	
142	3	398	2	Skeleton		10.35	10.18	
143	3	398	2	Coffin	3 nails	10.25	10.17	60
144	3	400	2	Cut	grave cut	10.26	10.16	
145	1		2	Fill	grave fill	10.13		
146	1	402	2	Skeleton		10	9.97	
147	4	403	2	Cut	grave cut	10.13	9.91	
148	4		2	Fill	grave fill	10.77	10.68	500
149	4	501	2	Skeleton		10.71	10.68	500, 501
150	4	502	2	Cut	grave cut	10.77	10.61	

151	4	105/205-210	507	2	Layer	Cemetery soil	11.23	10.96	
152	4	105/205	509	2	Skeleton		10.96		502
153	4	105/205		2	Fill	grave fill	10.99		
154	4	105/205	509	2	Cut	grave cut	10.99	10.91	
155	4	105/210		2	Fill	Grave fill - No info			
156	4	105/210		2	Cut	grave cut - no info			
157	4	105/210	514	2	Skeleton		10.79	10.7	
158	4	105/205-210		2	Fill	Fill of cut [516]	10.91		
159	4	105/205-210	516	2	Cut	Pit	10.91	10.6	
160	4	105/205-210	519	2	Skeleton		10.62	10.5	
161	4	105/205-210		2	Fill	grave fill	10.73	10.7	503
162	4	105/205-210	519	2	Cut	grave cut	10.7	10.46	
163	4	105/205-210	519	2	Coffin	Nails			
164	4	105/210	522	2	Fill	Fill of cut [522] - not fully excavated	10.67		
165	1&4	105/210	522	2	Cut	Ditch	10.67		
166	4			2	Fill	Fill of cut [601]	10.85		
167	4		601	2	Cut	Roman pit/ditch	10.85	10.71	
168	4			2	Layer	redeposited brickearth - cemetery soil	11.14	10.64	
169	4		113	2	Layer	silty clay	11.54	11	
170	4			2	Fill	Fill of cut [614]			
171	4		613	2	Skeleton		11.08	10.91	
172	4			2	Cut	grave cut		10.78	
173	4			2	Fill	Fill of cut [617]			
174	4		616	2	Skeleton		10.7	10.68	
175	4			2	Cut	grave cut			
176	4			2	Layer	Silty clay overlying brickearth	10.9	10.48	
177	4		114	2	Layer	redeposited brickearth - cemetery soil	10.48	9.83	
178	4			2	Fill	Fill of cut [705]			
179	4		704	2	Skeleton		10.35	10.25	

217	5	109	3	Fill	fill	10.58	15
218	5		3	Cut	ditch cut	10.56	
219	5		3	Fill	fill	11	3
220	5		3	Fill	fill	11.69	
221	5		3	Cut	pit cut	11.69	
222	5	112	3	Fill	ditch fill	10.59	48
223	5	112	3	Cut	medieval ditch cut	11.5	13
224	5	112	3	Fill	ditch fill	11.01	13
225	5	112	3	Cut	ditch cut	10.69	113
226	5	112	3	Fill	ditch fill	10.63	13
227	2	112	3	Fill	ditch fill	10.05	13
228	4	112	3	Cut	medieval ditch cut	10.84	59
229	4		3	Fill	fill of posthole	10.18	
230	5		3	Cut	posthole	10.18	
231	5	112	3	Fill	ditch fill	10.03	
232	5	112	3	Fill	medieval ditch fill	11.53	13
233	5	112	3	Fill	ditch fill	11.03	13
234	5	112	3	Fill	ditch fill	10.06	13
235	5	112	3	Cut	ditch cut	10.04	13
236	2	105/205-210	3	Fill	upper fill of ditch [506]	11.22	
237	5	105/205-210	3	Fill	Secondary fill of ditch [506]	10.55	
238	5	105/205-210	3	Fill	Primary fill of ditch [506]	9.95	
239	5	501	3	Cut	Boundary ditch	11.22	9.68
240	1	113	3	Fill	Primary fill of cut [609]	11.09	10.78
241	1	113	3	Fill	Secondary fill of cut [609]	11.34	
242	5	113	3	Cut	Large pit	11.36	10.58
243	5		3	Fill	Fill of cut [717]	10.28	
244	5		3	Cut	Boundary ditch - same as [66]	10.28	9.6
245	1	105	4	Fill	ditch fill	11.24	5, 10
246	1	105	4	Fill	ditch fill	11.05	8, 9
247	1		4	Fill	construction fill		
248	2		4	Fill	postpipe	99	
249	2		4	Fill	postpipe	99	

287	1		5	Fill	fill	12.63			
288	4	298	5	Cut	pit cut	12.63	12.04		
289	1	302	5	Fill	fill	12.87			
290	1	302	5	Cut	pit cut	12.87	12.24		
291	1		5	Fill		11.54		111	
292	1	316	5	Cut	beam slots	11.54	11.39	124	
293	2N		5	Fill	fill of beam slots	11.58			
294	2N	318	5	Cut	beam slot				36
295	2N		5	Fill	fill				
296	1	321	5	Cut	ditch cut	12.83	12.45		
297	2N	330	5	Fill	fill	11.75			
298	2N	326	5	Layer	layer	11.87		37	
299	2N	327	5	Cut	pit cut	11.76	11.44		
300	2N	330	5	Fill	fill	11.75			
301	2N	330	5	Cut	pit cuts	11.75	11.02		38, 112
302	2N		5	Fill	fill	11.74			
303	2N	344	5	Cut	pit cut	11.74	11.34		
304	2N	349	5	Masonry	brick floor	11.57	11.54		
305	2N	350	5	Layer	mortar bedding	11.51			
306	2N	369	5	Layer	animal skeleton	11.6			
307	2N		5	Layer	layer	11.58			
308	2N		5	Fill	fill	11.51			
309	2S	374	5	Cut	beam slot	11.51	11.41		
310	2S		6	Fill	fill	10.6		14	
311	2S	148	6	Masonry	cesspit lining	10.6	10.19		
312	1		6	Fill	fill	10.6			
313	1	152	6	Cut	cut	10.6	10.28		
314	1	157	6	Fill	fill	10.55			
315	1	157	6	Masonry	brick cesspit	10.55	10.3		
316	1	157	6	Cut	construction cut	10.55	10.3		
317	1	156	6	Fill	fill	10.55			
318	1	148	6	Fill	construction fill				
319	1	148	6	Cut	construction cut				
320	2N		6	Fill	fill	10.49	10.29		
321	2N	164	6	Cut	cut	10.49	10.06		
322	2N	304	6	Masonry	brick floor	12.09			

323	2N	304	6	Masonry	brick floor	11.98		
324	2N	304	6	Masonry	brick wall	12.13	11.58	
325	2N	304	6	Masonry	brick wall	12.17	12.05	
326	2N	304	6	Masonry	brick wall	11.75	11.71	
327	2N	328	6	Fill	cesspitt lining	11.59		50, 114
328	2N		6	Fill	horncore lining	11.59	11.31	
329	2N	328	6	Cut	cesspitt cut	11.75	10.77	
330	2N	331	6	Layer	layer	11.87		
331	2N	332	6	Layer	layer	11.82		42, 78, 79, 80
332	2N	304	6	Masonry	brick drain	11.6	11.47	
333	2N	304	6	Cut	drain cut	11.6	11.41	
334	2N		6	Fill	drain fill			
335	2N		6	Fill	fill	11.25		
336	2N	328	6	Masonry	cesspitt lining	11.31	10.77	
337	2S	328	6	Fill	horncore lining	11.31	10.77	
338	2S	326 361	6	Fill	fill	11.81		43, 44, 45, 46, 47, 102, 103, 109, 110
339	2S	326 361	6	Masonry	brick lining	11.82	11.77	
340	2S	361	6	Cut	cesspitt cut	11.78	10.52	
341	2S	246	6.1	Masonry	brick wall	13.28	12.8	
342	2S	292	6.1	Cut	cut	10.49	10.38	
343	2N	312	6.1	Masonry	tile floor	11.74		
344	2N	313	6.1	Masonry	brick floor	11.67	11.65	
345	2N	314	6.1	Layer	floor m/up	11.62		39
346	2N	319	6.1	Layer	bedding layer	11.74		
347	2N		6.1	Fill	fill			
348	1		6.1	Fill	fill			
349	1	363	6.1	Cut	posthole	10.48	10.37	
350	1		6.1	Fill	fill			
351	1	372	6.1	Cut	post pad			
352	1	287	6.2	Layer	floor bedding	11.47	11.3	
353	2S	287	6.2	Masonry	brick floor			
354	2S	287	6.2	Masonry	brick floor			

355	2S	290	6.2	Masonry	flag floor				
356	1	291	6.2	Layer	levelling layer		11.61		
357	2N	290	6.2	Layer	floor m/up				3, 4, 35, 54, 55, 61, 82, 83
358	2S	tr2N pre-ex	7	Layer			12.06		
359	2N	tr4	7	Fill	dump layer				
360	2N	tr4	7	Cut	fill				
361	2N		7	Layer	cut				68
362	1	107	7	Layer	dump deposit		13.06		
363	1	105	7	Fill	fill		12.34		
364	1	105	7	Fill	fill of posthole		12.35		
365	1	105	7	Layer	dump deposit		12.28		
366	2N	116	7	Layer	dump deposit				
367	2N		7	Masonry	brick wall				
368	2N		7	Fill	construction fill				
369	2N		7	Cut	cut				
370	2N	tr1	7	Masonry	tile floor		12.16		
371	1	116	7	Timber	timber shoring		12.71		
372	1	tr1	7	Masonry	brick wall		13.19		
373	1	195	7	Masonry	brick floor		12.02		
374	1	195	7	Masonry	brick floor		11.99		
375	1	195	7	Masonry	brick floor		12.04		
376	2N	195	7	Masonry	brick floor		12.03		
377	2N	195	7	Masonry	brick floor		12.04	11.45	
378	2N	195	7	Masonry	brick floor		12.08	12.03	
379	2N	195	7	Masonry	brick floor		12.05	12.01	
380	2N	195	7	Masonry	brick wall		12.07	11.98	
381	2N	195	7	Masonry	brick flue		11.95		
382	2N	195	7	Masonry	brick flue		11.95		
383	1	195	7	Masonry	brick wall		12.06	11.96	
384	1	195	7	Masonry	brick wall		12.08	11.89	
385	1	195	7	Masonry	brick flue		12.13	12.06	
386	1	195	7	Masonry	brick wall		12.03		
387	1	195	7	Masonry	brick wall		12.07	11.93	
388	1	195	7	Masonry	doorway		12.06		
			7	Fill	fill		11.94		

389	1		7	Fill	fill of flue	12.08	
390	1	195	7	Cut	gully cut	11.94	11.85
391	1	214	7	Layer	dump deposit	12.02	
392	1	221	7	Fill	fill	11.95	
393	1	221	7	Cut	construction cut	11.95	11.75
394	1	221	7	Fill	fill		
395	1	221	7	Cut	construction cut		
396	1	221	7	Fill	fill		
397	1	221	7	Cut	construction cut	12.12	11.75
398	1	221	7	Fill	fill of [225]		
399	1	221	7	Cut	construction cut	11.82	11.76
400	1	195	7	Masonry	brick wall	11.88	11.82
401	1	231	7	Cut	construction cut	12.04	11.42
402	1	232	7	Cut	construction cut	11.93	11.78
403	1	246	7	Masonry	brick floor	12.07	
500	7	252	7	Masonry	brick drain		
501	7	138	7	Fill	fill of drain		
502	7	138	7	Layer	floor m/up		
503	7	254	7	Masonry	brick floor	12.1	11.98
504	7		7	Fill	fill		100
505	7	266	7	Masonry	brick soakaway	12.06	
506	7	267	7	Cut	cut	11.93	11.12
507	7		7	Fill	fill		
508	7	246	7	Masonry			
509	7		7	Fill	fill		
510	7	246	7	Layer	mortar bedding		
511	7		7	Layer	floor m/up	11.94	11.8
512	7		7	Fill	fill	11.42	
513	7	266	7	Cut	drain cut	12.09	11.85

514	7		7	Layer	burnt deposit							33
515	7		7	Fill	fill			11.59				101
516	7		7	Fill	fill	323		11.8				
517	7		7	Cut	pit cut	352		11.8			11.12	
518	7		7	Fill	Fill of well [619]	Area 8 East						
519	7		7	Masonry	Well	Area 8 East						
520	7		7	Cut	Construction cut for well	Area 8 East						6, 12, 62, 63, 64, 66, 67, 86, 87, 88, 89, 90, 91, 92, 93, 94, 95, 96, 97, 98, 99, 105, 126
521	7		8	Fill								
522	7		8	Masonry	cesspit fill	99		13.9			11.84	
523	7		8	Masonry	brick cesspit	99		13.75			13.48	
600	8 E		8	Masonry	blocking wall	99	105	14.03			13.33	
601	8 E		8	Fill	brick wall		105	13.28				
602	8 E		8	Masonry	construction fill	116						
603	8 E		8	Masonry	brick foundation	99						
604	8 E		8	Cut	construction cut	126						
605	8 E		8	Masonry	brick floor	TR1		12.29				
606	8 E		8	Masonry	brick wall	tr1		13.12			13.04	
607	8 E		8	Masonry	buttress	tr1		13.14				
608	8 E		8	Masonry	buttress	tr1		13.04				
609	8 E		8	Masonry	brick wall	tr1		13.12				
610	8 E		8	Masonry	buttress	tr1		12.71				
611	8 E		8	Masonry	brick floor	tr1 138		12.25			12.15	
612	8 W		8	Masonry	brick floor	tr1		12.16			12.14	
613	8 W		8	Cut	construction cut			13.28			12.76	
614	8 W		8	Fill	fill	116		12.97				
615	8 W		8	Fill	construction fill							
616	8 W		8	Masonry	tile floor	195		12.22			12.18	
617	8 W		8	Layer	rubble dump	209		12.11				
618	8 E		8	Fill	fill	213		12.01				57, 69
			8	Cut	pit cut	213		12.01			11.64	

619	8 E	195	8	Fill	fill	12.03	
620	8 E	138	8	Fill	fill	11.49	
700	9		8	Masonry	cobbled floor	11.98	70
701	9		8	Fill	fill		
702	9	113	8	Layer	19th c. made ground	11.87	
703	9	128	9	Cut	pipe trench cut	12.29	13
704	9	128	9	Fill	fill	12.29	
705	9	131	9	Fill	fill	12.05	
706	9	131	9	Cut	pipe trench cut	12.05	
707	9		9	Fill	basement fill		
708	9	150	9	Masonry	concrete base	10.57	
709	9	150	9	Cut	construction cut	10.57	
710	9		9	Fill	basement fill		26
711	9		9	Fill	fill		
712	9		9	Fill	fill		71, 72, 73, 74, 104, 106
713	9	270	9	Cut	cut for trialpit		
714	9		9	Layer	Modern rubble	110.3	10.9
715	9		+	Layer	clearing		25
716	9	195			structure no.		
717	9				structure number		
718	9				structure number		

Appendix 2: ASSESSMENT OF THE ROMAN POTTERY

by

Malcolm Lyne

1.Introduction.

The various trenches produced 106 sherds (1829 gm.) of pottery as well as 10 complete or partially complete vessels from Roman burials. The pottery spans the period from prehistoric to c.AD.270-300.

2.Methodology.

All of the pottery assemblages were quantified by numbers of sherds and their weights per fabric. Fabrics were classified according to MOLAS codings (Anon.2000) using a x8 magnification lens with inbuilt metric scale for determining the natures, forms, sizes and frequencies of mineral and other inclusions.

3.The Assemblages

3.1. Prehistoric to c.AD.150.

A number of small abraded sherds ranging in date from prehistoric to c.AD.100+ indicate some kind of activity (probably field-marling) during this period. Of more interest is part of a wine strainer in mica-dusted LOMI fabric (c.AD.60-160).

3.2. c.AD.150-300

Eight complete or partially-complete vessels were present as grave goods accompanying the inhumations in Graves 6 (3), 9 (2), 10 (1), 15 (1) and 21 (1). Two more complete and part-complete vessels came from Contexts 90 and 358 and were probably derived from graves.

All of these vessels fall within the date-range c.AD.150-270/300.

4. Recommendations.

The prehistoric and early-Roman sherds can be written up in note form with illustration of the wine strainer in LOMI fabric. The burials pots should be written up as information to be combined with that for other grave goods by the person writing up the site report. Special attention should be given to any evidence for the ritual breaking of vessels, omission of portions and other practices and compared with any evidence for similar practices from other burials previously excavated within the same cemetery (Barber and Bowsher 2000). All of the grave pots should be drawn. Particular attention should be given to the ?pot-stand fragment from Grave 15 and a search carried out for parallels.

5. Bibliography

Anon 2000 *MoL Specialist Services fabric codes for Roman pottery, as of October*

2000. Museum of London.

Barber,B.,Bowsher,D.2000 *The Eastern Cemetery of Roman London*,MOLAS Monogr
4.

Catalogue

Context	Fabric	Form	Date-range	No.of sherds	Weight in gm.	Comments
61.	SAMLZ	Dr.18/31 base	120-150	1	14 gm.	
65.	BB2	Pie-dish	130-200	5	20	
	VCWS	Closed	140-250	1	2	
	VRW	Mortarium	50-200	2	18	
	Total			8	40 gm.	
Date. c.AD.150-250						
70.	HADOX	Flagon	200-400	1	2 gm.	abraded
90.	HOO	Flagon	150-200	1	208 gm.	complete.SF11
105. Fill of Ditch 066	HOO		50-250	1	2	abraded
	OXID	Closed		1	4	abraded
	Total			2	6 gm.	
Date. ?Post-Roman						
153.	HOO			2	2	abraded
	VRW	Closed		1	4	abraded
	Total			3	6 gm.	
170	BB2	Open form	120-370	1	2	
	GROG		L.I.A.-70	2	14	abraded
	HWC	2E Jar	70-180	1	8	
	SAND	Indent bkr	200-400	1	4	
		Closed		10	40	
	VCWS			2	2	
	Total			17	70 gm.	
183. Fill of Grave 6	BB1	Handled beaker	140-300+	41	124	Most present
	LNVC	Closed	180-400	2	2	
	SAND	Ev.rim jar	120-200	1	222	complete,tiny.SF16
	Total			44	248 gm.	

184. Fill of Grave 6						
	SAND	Ev.rim jar		50	146 gm.	one pot.SF17
Date. 3rd c. (probably late 3rd c.)						
216. Fill of Grave 10						
	SAMLG		43-110	1	2 gm.	flake
Date. Residual in grave						
228. Fill of Grave 9 with skeleton						
	BB2	Pie-dish	150-270	1	360	most of.SF23
	COLOX	CAM 389 unguent pot	100-250	1	360	complete.SF58
	Total			2	720 gm.	
Date. c.AD.150-270						
234.						
	RDEK	Beaker	50-120	3	4	
	SAMLG		43-110	1	1	
	Total			4	5 gm.	
236. Fill of Grave 10 with skeleton						
	BB2	Pie-dish	150-270	1	140 gm.	part
237. Fill of Grave 11						
		Prehistoric		1	8 gm.	
238. Fill of Grave 11 with skeleton						
	GROG	Closed	L.I.A.-70	1	2 gm.	chip
260. Fill of Grave 14 with skeleton						
	NKFW?			1	1 gm.	abraded
276. Fill of Grave 15						
	SAMLZ	DR.38 base	140-200	1	94	
	SAND	?Pot stand		1	244	hm.crude
	Total			2	338 gm.	
277. Fill of Grave 15 with skeleton						
	LOXI	Lid	180-270	1	236 gm.	Complete.SF52
Date. c.AD.180-270						
283. Fill of Grave 16						
	BB1	Open form	120-300+	1	10 gm.	
Date. probably post-AD.270/300						
353/195. Fill of Grave 20						
	VRW	Tazza	150-250	2	22 gm.	
358.						
	SAND	Ovoid flagon	150-250	1	936 gm.	truncated.SF41

366. Fill of Grave 21						
	HWC+	Necked-jar	60-150	1	552 gm.	?complete.SF49
Area B						
+						
	SAMLG	Open forms	43-110	4	23 gm.	
1.Poplar						
	MEDIEVAL					
		Cooking pot	1250-1500	1	30 gm.	iron slag adhering
500. Grave fill						
	GAUL	Amphora		2	32	abraded
	SAND			1	3	abraded
	Total			3	35 gm.	
503. Upper fill of Ditch 506						
	FMIC		50-120	1	2	abraded
	HOO		43-100	1	1	
	SAND	Jar		2	8	abraded
	VCWS			1	2	abraded
	Total			5	13 gm.	
504. Secondary fill of Ditch 506						
	CGWH	Beaker	60-120	1	7	abraded
	LOMI	Wine strainer	60-160	4	17	abraded
		Wine strainer	60-160	3	231	fresh base
	SAND	Jar		2	10	fresh
	VCWS	Flagon		4	16	abraded
	Total			14	281 gm.	
505. Primary fill of Ditch 506						
	HOO	1A Flagon	43-80	3	10	
	SAMLG	Bowl	43-110	1	35	fresh
	VCWS	Closed		1	2	abraded
	Total			5	47 gm.	
507. Layer of cemetery soil						
	AHFA	2F Jar	270-400	1	8 gm.	abraded
515. Fill of Pit 516						
	LOMI	MT46 Wine strainer	60-160	8	416 gm.	fresh
518. Fill of Grave 519						
	LOMI	Jar base	60-160	2	17	abraded
	VCWS	Lid		2	10	abraded
	Total			4	27 gm.	
521. Fill of Ditch 522						
	LOMI		60-160	1	1 gm.	
527.						

	LOMI	Closed	60-160	3	24 gm.	
600.	VRW	Bowl base	130-250	3	95	
	OXID	Closed		1	10	painting horiz Stripes
	Total			4	105gm	
603.	OXID	Closed		1	8gm v abraded	
706.	SAMLZ	Dr.18/31/31	120-200			
		Dr.33	120-200	5	6gm. flakes	

Appendix 3: Assessment of the Human Bone

By Natasha Dodwell and Kathelen Sayer

Introduction

An assessment of the Romano-British inhumation burials excavated at Crispin Street, Spitalfields, London is presented below. The burials are variously aligned, there is one prone and one crouched burial which had been decapitated.

Quantity of material

A total of 35 inhumations, and disarticulated human remains from 9 contexts, were examined. Very few of the skeletons were complete and the skeletal elements which did survive were fragmentary. The material is held in 36 boxes (8 large and 28 small).

Condition of the bone and nature of the assemblage

The condition of the material, and as importantly which skeletal elements survive, greatly affects the ability to age and sex individuals and to recognise pathologies. The bones from Crispin Street are generally in a very poor condition. The burials had been dug into brick earth and although recorded on site, many of the bones did not survive lifting, and if they did, many survived only as fragments or scraps. Modern intrusions have also truncated or damaged many of the skeletons. In the majority of cases the pubic symphyses and auricular surfaces of the pelvis are missing, or if they survive are extremely abraded. Skulls were fragmentary and the majority of epiphyseal ends were missing or damaged. Many of the surviving fragments had concretions of iron panning on their surfaces. The dentition of 10 individuals (35%) could not be recorded and many of the teeth that could be observed were loose. Very little metrical data could be collected, and stature calculated from long bone length could only be determined for two individuals.

Methodology

Each skeleton was scanned to establish a provisional age and sex and to note any pathological changes. General methods used in the osteological evaluation are those of Bass (1992) and Buikstra and Ubelaker (1994). Due to the poor survival of the skulls, pelvis and epiphyseal ends of long bones, an assessment of age was based on the stage of dental eruption, the degree of dental attrition (Brothwell 1981) and where possible, epiphyseal fusion (Scheuer and Black 2000). As this method has limitations, the following broad age categories were used:

Juvenile	5-11 years
subadult	12-18 years
young adult	19-25 years
middle adult	26-44 years
mature adult	45 years +

Because of the fragmentary nature of the material there may be overlaps or broad categories such as adult. The sex of each individual was, where possible, ascertained from sexually dimorphic traits of the skull, metrical data and the general robusticity of the skeletons. Again these should be seen as tentative as in certain instances only two or three traits could be used. Osteological recording forms will be held in the archive.

Results

The results are summarised in the following table. Non metric traits that were observed are included in the pathology column in brackets and the following abbreviations are used for pathological conditions;

OA=osteoarthritis, NSPI=non specific infection, AMTL=ante mortem tooth loss

Burial	Context	Age/sex/stature	Preservation	Pathology observed	Notes
1	[172]	young adult female	only fragments of the pelvis, legs and right forearm survive	none	
2	[175]	young adult	only the fragmented skull, clavicles and ribs survive	calculus, (metopic suture retained)	part of dog to the imm. south
3	[177]	mid/mat. adult	fragmentary	caries, calculus	prone
4	[179]	mid/mat. adult	long bones survive only as splinters, ribs and vertebrae as crumbs	calculus	flint blade on chest
5	[181]	mid/mat.?male	many of the skeletal elements, particularly the pelvis, scapula, clavicles, ribs and vertebrae survive only as crumbs	calculus	struck flint over l. hand
6	[185]	mid/mat. adult	fragmentary, no epiphyseal ends, vertebrae and pelvis are scraps	NSPI on r. tibia & fibula, AMTL, caries, calculus, ? abscess	
7	[186]	young adult ?male	fragmentary with damaged/missing epiphyseal ends	none	Nail
8	[210]		fragmentary skull with no associated bones	none	
9	[228]	mid. adult ?male	fragmentary	calculus	oil bowl & bowl at feet
10	[236]	mid/mat. male	well preserved but still fragmentary	OA in right knee & lumbar spine	
11	[238]	young adult male	Excellent	calculus	crouched, decapitated
12	[243]	mat. adult female	well preserved	OA in cervical & lumbar spine, AMTL, caries	
13	[257]	Adult	only fragments/scraps of the lower legs and feet survive	none	
14	[260]	young adult ?female	fragmentary and only upper body survives (not inc. skull)	none	quernstone frag. on chest
15	[277]	mid/mat female	fragmentary	AMTL, calculus	pot lid by l. foot
16	[284]	mid/mat ?male	fragmentary	OA in right hip, AMTL, calculus, (septal aperture)	
17	[309]	mid. adult female	fragmentary, lower legs only as scraps, heavy concretions of Fe panning	calculus	
18	[338]	mid/mat. male	fragmentary, no face	Fractured l. clavicle, NSPI on l. fibula, OA cervical spine	
19	[341]	mid. adult male	fragmentary	fractured r. fibula, periostitis r. lower leg, AMTL, caries, calculus	
20	[353]	middle adult	fragmentary, lower legs truncated	caries, calculus	pot
21	[367]	older subadult	well preserved but upper body truncated	none	pot between legs
22	[380]	adult male	well preserved but torso, r.arm truncated & skull fragmentary	none	
23	[384]	Adult	poor, only scraps of skull, femur, hand, torso survive	none	
24	[398]	Young adult female	fragmentary and right leg missing	calculus	

25	[402]	young adult	poor, bone survives as splinters	none	
26	[249]	young adult female	well preserved but fragmentary	fractured r. calvicle, calculus	
27	[509]	Young adult	Poor, only the legs survive both of which are fragmentary. Upper body truncated.	none	
28	[517]	mid adult ?male	Poor, most of the body is present but very fragmentary	AMTL, calculus	
29	[500] + [501]	Juvenile	Poor, skull, scapulae, ribs and vertebrae survive but are fragmentary. Both femora are labelled as [500] fill of grave cut.		Shale bracelet, hob nails from shoe.
30	[613]	Mid adult male	Well preserved, lower legs, left hand and majority of skull missing.	Schmorls nodes on T8, 9, and 10 and L1. Small deposits of calculus on lingual aspects on the right mandibular teeth. Osteochondritis Dissecans medial condyle of the right femur	
31	[616]	Juvenile	Poor, fragmentary remains of long bones, ribs and vertebrae	none	2 adult skulls were included within this context. Both were very fragmentary. One showed traits of a young adult female.
32	[704]		Very fragmentary remains of tibiae, and feet		
33	[707]	Mid adult ?male	Poor, very fragmentary	Healed fracture of left clavicle, still in the process of remodelling. Slight deposits of calculus on all surviving teeth.	
34	[711]		Poor, fragments of femora and tibiae.		
35	[714]	Subadult	Poor. Very fragmentary skull and long bones		

A small quantity of human bone was excavated from the fill of a possible grave cut, [62], found on the western side of the site. The fill, [61], contained the proximal half of an adult ulna, a thoracic vertebra and nine rib fragments.

Disarticulated human bone was found in the following contexts;

context	Skeletal elements
[061]	adult proximal half of left ulna, a thoracic vertebra and rib fragments
[098]	adult left radius (22mm=diameter of head) and 2 metacarpals
[147]	permanent left central maxillary incisor
[165]	adult femur shaft and fragment of anterior mandible (no sockets survive)
[210]	skull fragments (gracile) including frontal, parietal and zygomatic.
[376]	adult right femur (no head) and distal half of left femur
[503]	Fragment of adult right innominate, possibly female
[521]	Adult femur shaft
[603]	Adult right femoral shaft.

It should be stressed that the human material excavated from Crispin Street is only a sample of a larger burial ground, which would have extended beyond the limits of the present development. In addition, it is highly probable that further burials have been lost

to modern truncation and the aggressive nature of the burial environment. All but four of the burials are adult. The four exceptions being two subadults, [367] and [714] and two juveniles, [501] and [616]. Not even a tentative sex can be attributed to 12 (34%) of the adults but both males and females were identified.

The diseases most commonly recognised in archaeological material, namely joint disease and dental disease were recorded in this assemblage. However, meaningful prevalence rates cannot be calculated in a sample of this size when so many articulating or joint surfaces are missing or damaged and so many teeth are missing or loose.

Certain observations can be made regarding the fractures and the decapitated individual. Three individuals, [249], [338] and [341] had suffered fractures; all were well healed or in the process of healing although only the former had good realignment. Skeletons [249], [338] and [707] had a fractured clavicle and skeleton [341] a fractured fibula. Fractures to the clavicle most often occur during a fall and the fracture to the fibula is likely to have been caused by a direct force or the twisting of the leg whilst the foot was held solid (Conheaney in Barber and Bowsher 2000, 285). The young adult male, [238] had been decapitated and his skull, had the upper 4 cervical vertebrae still attached. The position of the skull in relation to the body is uncommon (Philpott 1991, 78). Cut marks recorded on the 4th and 5th cervical vertebrae suggest that 2 or possibly 3 blows, struck from the front with a sharp, bladed instrument were made to achieve decapitation. That the blow was struck from the front suggests that the individual was probably dead before his head was removed or if not then heavily drugged.

Statement of Potential

The poor condition of this material precludes any further work. These burials are a small part of a larger Roman cemetery and they (the skeletons, grave goods, burial positions etc.) should be considered not as a separate group but in the light of this greater assemblage.

References

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Buikstra, J. E. and Ubelaker, D. H. (eds.) 1994 *Standards for the collection from human skeletal remains* Arkansas Archaeological Survey. Research Series No. 44. Fayetteville: Arkansas Archaeological Survey

Philpott, R. 1991 *Burial Practices in Roman Britain BAR (British Series 219)*

Scheuer, L. and Black, S. 2000 *Developmental Juvenile Osteology* Academic Press

Quantity:

Total number of boxes: 34 boxes

Methodology

The Museum of London Archaeology Specialist Service's pottery type codes have been used to classify the ceramics. Pottery was quantified for each context, by fabric, vessel shape, and decoration using sherd counts (with fresh breaks discounted) and estimated vessel numbers. However, the large volume of pottery recovered from contexts associated with medieval white earthenware pottery production necessitated the implementation of a sampling policy. The information entered onto a database, Access 97. A report produced from the database is available as part of the archive.

Condition of the Pottery:

The pottery from the site was mostly not abraded, consisted largely of sherd material with some complete or with complete profiles of post-medieval vessels present.

General characteristics comments:

The post-Roman pottery consists of 1491 stratified sherds (one sherd unstratified) dating from the late medieval period to the 19th century and was present in Phases 2 to 9. Table 1 shows the contexts containing pottery, the number of sherds present in each context (Size), the date range of the pottery types and a suggested deposition date. The pottery occurred as small (1-30 sherds) to very large (multiple boxes) sized groups. The pottery is discussed by phase and trench.

Phase 2 – Roman cemetery

Fill [383] with skeleton [384] in grave cut [385] produced in its cut a single sherd of an Early medieval crucible (EMCR), dated 1000-1200, but could be intrusive. In Trench 2, a layer of redeposited brick earth [97] produced sherds of London-type ware, Coarse Border ware, which included a large rounded jug, Siegburg stoneware and Late London ware, indicating a deposition date in the 15th century. The redeposited brickearth [165] in Trench 4 produced sherds of dishes in Red Border ware and Metropolitan slipware, indicating a 17th century date of deposition, but probably represent contamination or intrusive material.

Phase 3 – Medieval ditch

Pottery was recovered from fills from the boundary or precinct ditch and a number of re-cuts to this feature. The earliest ditch [66/115] produced in its upper fill [104] a single sherd of a London-type ware (LOND) jug with an applied vertical, rouletted strip and single small sherds of Kingston ware (KING), dated 1230-1400 and Coarse Border ware. This material suggests a deposition date of c. 1270-1350. From the area of ditch [66], fill [170] contained a single sherd of a London-type ware jug with external slip and glaze, dated c.1080-1350 as well as a small sherd of an unidentified fabric, possibly medieval in date.

Ditch [387/392/397] equates to [66/115] and produced in its fill [386] is a single flat-topped rim of a Coarse Border ware (CBW) bowl, dated 1270-1500, but probably dating to after c.1340.

A re-cutting of the ditch [87/100/390] produced in its fills [102], Coarse Border ware, Tudor green ware (TUDG), dated 1380-1500 and Late London ware (LLON), dated 1400-1500, indicating a 15th century date of deposition. Truncating the fills of ditch [390]. A later recut of the ditch; [394]

produced in its fill [393] sherds of Coarse Border ware jugs, including one with red slip decoration (CBW RED), dated 1340-1400 as well as sherds of Late London type ware, indicating a 1400-1500 deposition date. Cutting that fill, a later recut of the ditch [375] produced in its fill [348] sherds of a Kingston jug, a Coarse Border ware bowl with a flat-topped rim and a Cheam ware (CHEA) small dish rim, dated 1350-1500. Fill [503] only contained a very small sherd from a green-glazed Coarse Border ware jug, dated 1270-1350.

The east-west ditch [57] produced in its lowest fill [56] mostly late medieval pottery, which included a red-slip decorated Coarse Border ware jug and part of a Late London slip ware bowl (LLSL), dated 1400-1500 and indicates the deposition date.

In Trench 8 East, deposit [607] produced three sherds of pottery as a single sherd of Coarse Border ware and two sherds of Dutch redware, one sherd from a jar and these pottery types indicate a deposition date of 1300-1500.

Phase 4 – 16th century precinct wall

The latest fills [101] and [96] of the Trench 1 Phase 3 ditch [102] produced 16th century pottery as Early post-medieval redware (PMRE), dated 1480-1600, as sherds of a dishes and jars and a base sherd of a Green-glazed Border ware (BORDG) vessel, dated 1550-1700. A late 16th century date of deposition would be implied by the pottery. The construction cut for the Tudor precinct wall [365] contained in its fill [350] residual sherds of medieval pottery as the rim sherds of Kingston ware jugs, which included a Tulip-necked baluster (KING TUL), dated 1340-1400.

In Trench 2, the rubbish pit [300] produced in its fill [299] single sherds of Coarse Border ware and Early post-medieval redware jugs and a sherd of a whiteware crucible with an internal metal working deposit.

Phase 5 – 17th century

The Trench 2 ditch [377] produced in its fill [376] sherds of medieval pottery, but the latest pottery included sherds of Post-medieval bichrome redware (PMBR), dated 1480-1600 and undiagnostic sherds of Post-medieval redware (PMR), dated 1580-1900. A deposition date at the end of the 16th century or the 17th century is likely. Sealing this ditch layer [370] produced a single body sherd of an unglazed Post-medieval redware carinated shaped vessel which may have had an industrial application. Cut [75] produced in its fill mostly medieval pottery, but there was a small sherd of Post-medieval fine redware (PMFR), dated 1580-1700. Post-hole [73] contained in its fill [72] a sherd of a medieval London-type ware jug and sherd of Midlands Purple ware (MPUR), dated 1480-1750 and post-hole [79] had recorded in its fill [78] a single sherd of 15th century Late London ware.

Pit [327] produced in its fill [322] 17th century pottery types with mid 17th century pottery also present as Tin-glazed earthenwares decorated in style D and Metropolitan slipware as the rim of a jug. However, there were also sherds of a Staffordshire slipware cup (STSL), dated 1650-1800, which are probably dated to the end of the 17th century. A pit [321] produced in its fill [320] much of the same pottery types as that found in pit [327] with parts of the same Staffordshire slipware cup present in both features. Pit [330] contained in its fill [329] mostly sherds of Post-medieval redware, but also present was a mid 17th century dated Frechen stoneware jug base and a style A Tin-glazed earthenware charger, dated 1612-1650.

Pit [302] contained in its fill [301] sherds of a Raeren stoneware (RAER) jug, dated 1480-1610, a Midlands purple ware butter pot and Frechen stoneware (FREC), dated 1550-1700, which included at least two Bartman jugs. The redwares in this pit consisted of the base of a Post-medieval fine redware chamber pot, a green-glazed Red Border ware (RBORG) carinated bowl and Post-medieval redware bowls. The tin-glazed earthenwares in this feature were an Orton style A charger with an atypical Wanli border with a central rose design was present and dates to

the second quarter of the 17th century, as well as a straight-sided cup with external powdered manganese glaze (TGW B), dated 1630-80. A rim of a Metropolitan slipware (METS) dish, dated 1630-1700, would also suggest a mid 17th century date of deposition. Dump layer [52] produced two sherds of Post-medieval redware and a sherd of London Stoneware (LONS), dated 1670-1900.

In Trench 3, layer [113] produced sherds of Siegburg stoneware as a brown washed trichterhalskrug (SIEG TRIC) and salt-glazed sherds of jugs (SIEGS), dated 1550-1630, but late 16th and 17th century pottery was present as an olive-glazed Border ware bowl or dish and part of a Frechen stoneware bartman jug.

Context	Phase	Trench	Size	Date Range	Latest pottery type date	Suggested deposition date
5			S	1720 -1780	1720 -1780	1720-1780
52	5	2S	S	1580 -1900	1670 -1900	Late 17 th C
53	5	2S	S	1550 -1700	1580 -1700	17 th Century
54	3	2S	M	1050 -1800	1630 -1800	1630-1700
56	3	2S	S	1080 -1500	1400 -1500	1400-1500
58	7	2N	VL	0 -1900	1780 -1900	?mid 18 th Century
72	5	2N	S	1080 -1750	1480 -1750	1480-1750
74	5	2N	S	1050 -1700	1580 -1700	1580-1700
78	5	2N	S	1400 -1500	1400 -1500	1400-1500
96	3	1	S	0 -1900	1580 -1900	1480-1550
97	2	2S	S	1080 -1500	1400 -1500	1400-1500
98	7	3	VL	1580 -1900	1830 -1900	c.1870
101	3	1	S	1080 -1700	1550 -1700	1550-1600
102	3	1	S	1270 -1500	1400 -1500	1380-1500
104	3	1	S	0 -1500	1270 -1500	1270-1400
106	6	3	S	1570 -1900	1740 -1880	1740-1800
113	5	3	S	1380 -1700	1550 -1700	1550-1630
147	6	4	M	0 -1900	1690 -1800	1690-1700
158	6	4	S	1230 -1400	1230 -1400	1230-1400
165	2	1 4	S	1580 -1800	1630 -1700	1630-1700
170	3	4	S	0 -1900	1480 -1900	1080-1350
212	7	5	S	1550 -1900	1800 -1900	1800-1850
214	6	5	S	1550 -1700	1550 -1700	1550-1700
237	2	5	S			Pre-historic
240	9	1	S	1580 -1900	1780 -1900	1780-1850
241	9	1	S	1690 -1900	1780 -1900	1780-1900
253	7	1	S	1300 -1700	1550 -1700	1550-1650
255	7	1	S	1550 -1900	1780 -1900	1780-1900
265	7	1	S	1670 -1900	1775 -1900	1775-1850
268	7	1	S	1580 -1900	1775 -1900	1775-1850
276	7	1	VL	0 -1900	1780 -1900	1690-1710
286	6	1	VL	1480 -1900	1690 -1800	1690-1710
297	5	2N	S	1480 -1900	1670 -1690	1670-1690
299	4	2N	S	1080 -1900	1480 -1900	1480-1500
301	5	2N	S	1480 -1900	1630 -1700	1630-1680
308	6	2N	M	1550 -1900	1720 -1780	1720-1780
314	6	1	M	1480 -1900	1775 -1880	1775-1800
315	6	1	S	1580 -1900	1580 -1900	1580-1800
317	6	1	S	1550 -1900	1690 -1900	1690-1700
318	6	1	S	0 -1650	1350 -1650	1340-1450
320	6	2N	M	1500 -1900	1650 -1800	1650-1700
322	6	2N	M	1550 -1900	1650 -1800	1650-1700
323	6	2N	M	1570 -1900	1770 -1850	1770-1850
324	6	2N	M	1270 -1900	1730 -1780	1730-1780
326	6	2N	S	1270 -1900	1630 -1900	1630-1800
329	6	2N	S	0 -1900	1612 -1650	1625-1650
331	6	2N	S	1550 -1900	1700 -1900	1700-1800
332	6	2N	S	1550 -1800	1680 -1710	1680-1710
345	6	2N	S	1550 -1900	1630 -1900	1630-1680
346	6	2N	S	1580 -1900	1720 -1720	1720-1780
348	3	1	S	1230 -1500	1350 -1500	1350-1500
350	4	1	S	1230 -1400	1340 -1400	1340-1400
351	7	1	S	1550 -1700	1630 -1680	1630-1680
356	6	1	S	1480 -1900	1580 -1900	1580-1750

359	6	2N	L	1270 -1900	1701 -1711	Early 18 th C
370	5	2N	S	1580 -1900	1580 -1900	1580-1900
371	6	1	S	1570 -1800	1570 -1800	18 th C.
376	5	2N	S	0 -1900	1580 -1900	1580-1600
378	2	2N	S			
383	2	1	S	1000 -1200	1000 -1200	1000-1200
386	3	1	S	1270 -1500	1270 -1500	1270-1500
393	3	1	S	1270 -1500	1400 -1500	1400-1500
503	3		S	1270 -1500	1270 -1500	1270-1500
603	8	8E	S	1550 -1900	1825 -1900	1825-1900
607	3	8E	S	1270 -1650	1300 -1650	1300-1500

Table 1. List of contexts containing pottery, size of context assemblage, the date range of the pottery, the latest fabric and suggested deposition date. (S: 1-30 sherds, M: 31-100 sherds, L: 101+ sherds, VL: multiple boxes).

Phase 6 – 18th century

Features containing pottery in Trench 1 included a beam slot [318] that produced in its fill [317] a sherd of style H Tin-glazed earthenware (TGW H) as the base of a jug which is dated 1690-1800. Fill [315] of the beam slot [316] contained only sherds of Red Border ware and Post-medieval redware, indicating a 17th or 18th century. The beam slot [371] produced a single sherd of 18th century tin-glazed earthenware. Cut [292] contained in its fill [356] only the base sherd of a Midlands purple ware butter pot and the base of a Post-medieval redware syrup-collecting jar, probably discarded from a local sugar refining factory. Sealing these features, the floor make-up layer [314] produced sherds of Border ware, Red Border ware, Post-medieval redware (including part of a cistern) and a sherd of Staffordshire slipware. Of interest there is a rim sherd of a late 17th century blue and white Chinese porcelain tea bowl and the rim of a 17th century Portuguese faience (POTG) plate, decorated in blue and white and the complete profile of a Westerwald mug with purple decoration (WEST PURP), dated 1665-1750. The latest tin-glazed earthenwares in this deposit consist of style H, dated 1690-1800 while a sherd of Developed Creamware (CREA DEV), dated 1775-1880 may be intrusive.

A later floor bedding layer [286] produced a very large group of pottery with typical types of pottery expected to be found in 17th century London and included parts of a purple and blue decorated Westerwald stoneware jug and stein. The latest tin-glazed wares were Orton's China men in grasses (TGW F), dated 1670-90 as a charger and plate but there was also a style H bowl, dated 1690-1800, which is probably dated c.1690-1710. Another later floor make-up layer [276] also produced a very large sized assemblage of pottery with sherds link to the Westerwald vessels present in layer [286] and the latest Tin-glazed earthenwares were style H as bowls and dishes dating to the early 18th century. Also present was a sherd of Transfer-printed ware (TPW), dated 1780-1900, which may be intrusive.

Most of the deposits in this phase of Trench 1 and a small number of contexts in Trench 2 produced fragments of sugar refining vessels, either as sugar cone moulds, often internally white slipped, with simple rims. However, despite the fabric having the appearance of a local source, the sugar cones here are not typical of examples found in London and at the kiln sites of Deptford and Woolwich, often being thinner walled and an example in [286] had an hooked rim. These deposits also produced syrup-collecting jars and although examples existed here with a footring, there were also more uncommon examples present with the three feet.

In Trench 2 a layer [345] produced Tin-glazed earthenwares dating to the mid 17th century but one sherd with purple and dark blue decoration on a light blue background dates to the end of the 17th and start of the 18th century. Layer [326] produced a sherd of a Spanish micaceous ware (SPAM) vessel, dated 1480-1650 but the rest of the pottery was characteristic of the 17th century and included Post-medieval fine redware, Post-medieval redware and Border wares. The latest pottery in this fill was a sherd of plain white Tin-glazed earthenware (TGW C), dated 1630-1800. Cut into this layer was a cess pit [328] which contained in its fills [323], [346] and [347] typical 18th

century pottery as Chinese porcelain, style H Tin-glazed earthenware, Staffordshire white salt-glazed stoneware (SWSG), dated 1720-1780 and its cheaper slipped variant (SWSL), dated 1710-1760. Present in fill [346] was an almost complete Red Border ware chamber pot (which shows evidence for heating rather than its sanitary function) and a Staffordshire slipware cup. Agate ware (AGAT), dated 1730-1800 was the latest pottery type in the feature, except that in the top fill [323] the rim of a cup in transfer-printed Pearl ware (PEAR TR), dated 1770-1850, which is probably intrusive.

Layer [332] produced mostly 17th century pottery types but also included a sherd of a sherd of Persian blue tin-glazed earthenware (TGW E) with an external white painted design on the dark blue glaze and it is dated 1680-1710. Over this, layer [331] produced pottery which dated to the 18th century and included a Chinese porcelain 'Batavian' ware (CHPO BATV) tea bowl base, dated 1700-1750. A later burnt deposit in this sequence, [308] produced more 18th century pottery which included Nottingham stoneware (NOTS), dated 1700-1800 and Staffordshire white salt-glazed stoneware, as bowls and teawares consisting of a saucer, tea bowls and the rims of two tea pots.

In Trench 3 layer [106] contained as its latest pottery a London stoneware jug and a sherd of Creamware (CREA), dated 1740-1880.

One deposit in Trench 4 had a deposit dated to this phase, fill [147] of cess pit [160] which contained mostly 17th century pottery including a fragmentary type 2 green-glazed Border ware chamber pot, dated 1650-1700, and a sherd of purple and blue decorated Westerwald stoneware, dated 1665-1750. There is also in this fill a style H Tin-glaze bowl, dated c.1690-1800. Another cess pit [157] only produced in its top fill [158] a single sherd of medieval Kingston ware.

A dump deposit [214] in trench 5 produced a single sherd of green-glazed Border ware with a combed wavy line, dated 1550-1700.

Phase 7 – Late 18th –early 19th century

In Trench 1 the latest fill [265] of cut [267] produced sherds of London stoneware and transfer-printed Pearl ware (PEAR TR), dated 1770-1850 as a saucer and Developed Creamware (CREA DEV), dated 1775-1880. Sealing this deposit, layer [255] produced a sherd of Frechen stoneware and a sherd of early 19th century Transfer-printed ware.

In Trench 2 a very large group of pottery was collected from layer [58] consisting mostly of 17th century pottery. Items of note included the base sherd of a Portuguese faience dish with Chinese style decoration dating to the second quarter of the 17th century. There are also three Dutch Tin-glaze (DTGW) dishes, all decorated in blue on white, one with an octagonal panel on the inside base and another with a c.1670 dated Wanli style panel on the rim. The other dish is fluted with a dark blue pendant design and is late 17th century in date. Amongst the locally produced Tin-glazed wares was the base of a charger with an internal polychrome design of a man on horseback that probably represents a royal personage. There is also a Staffordshire slipware dish sherd with a moulded flower and the letters '.MA.' in relief. The latest pottery included the rim of a Lambeth polychrome tin-glazed bowl (TGW G), dated 1701-1711 and a single rim of a Transfer-printed mug, dated 1780-1900 may be intrusive.

Phase 8 – 19th century

In Trench 3 a brick cess pit [99] contained a very large assemblage of pottery in its fill [98] consisting largely of 19th century industrial finewares such as Creamwares, Pearl ware, Transfer-printed ware, with the Willow and Asiatic Pheasant designs and London stoneware. The makers' names on the plates would indicate deposition in c.1870.

A pit [213] in Trench 4 produced in its fill [212] 19th century industrial finewares, such as Pearl ware and Transfer printed ware. There was also a Refined whiteware bowl with purple sponge decoration, which is usually associated with low socio-economic housing and dates to the early 19th century.

From Trench 8 East deposit [603] produced nineteen sherds of pottery of 17th and 18th century types but the latest types are 19th-century transfer-printed ware including a colour transfer-printed (TPW 4) rectangular dish, dated 1825-1900.

Phase 9 – Modern

Layer [146/240/241] in Trench 2 produced 19th century pottery as a complete Green-glazed Creamware lid with moulded leaf decoration and Transfer printed wares and English porcelain.

Potential and recommendations: The Post-Roman pottery from CPN 01 shows activity from the late medieval period through to the 19th century. Much of the pottery is fairly mundane, typical of domestic assemblages, but a small number of industrial vessels, as crucibles in deposits [299] and [384] were present as well as the sugar-refining vessels recovered in Phase 6 of Trenches 1 and 2. The very large late 19th-century pottery assemblage recovered from the brick cess-pit [99] is of interest, as it has the potential to look at household activities, possibly linked to its owners through documentary evidence from population censuses. Excavations at Spitalfields Market by the Museum of London Archaeology Service produced one of the largest assemblages of Post-medieval pottery recovered from London and 19th century assemblages were analysed there. To date 19th century archaeology has largely been ignored in London, but at present there is a research project to rectify this and the CPN 01 may provide additional information to be compared and contrasted with pottery groups from Spitalfields Market and elsewhere in London.

It is proposed that a publication text be produced for the Post-Roman pottery from the CPN 01 site, describing the general sequence of the ceramics and discussing the occurrence of more unusual vessels. Of particular interest is the occurrence of sugar-refining vessels and these should be analysed in more detail. Table 2 shows the pottery recommended for illustration for the publication text. The 19th century pottery group also requires further analysis and during this process approximately 10 vessels will be selected for illustration, supplemented by photographs.

CONTEXT	FABRIC	Form
58	DTGW	Dish
58	DTGW	Dish, fluted
58	DTGW	Dish
58	POTG	Dish
286	PMR	Collecting jar
286	PMR	Collecting jar
286	PMR	Sugar cone
286	PMR	Collecting jar
286	WEST PURP	Stien
301	TGW A	Charger
314	PMR	Collecting jar
314	POTG	Plate

Table 2. List of vessels requiring illustration for the publication.

Appendix 5: CLAY TOBACCO PIPE ASSESSMENT by Chris Jarrett

Quantity:

Total number of boxes: 4

Methodology

The typology used to classify the clay tobacco pipe bowls follows the guidelines set out in D. Atkinson and A. Oswald (1969), coded AO, but the 18th century pipes have been referenced to Adrian Oswald, *Clay Pipes for the Archaeologist* (BAR 1975) and coded OS. A table listing the contexts containing clay tobacco pipes, their date ranges and the latest clay pipe occurs below.

Context	Phase	Size	Date range of tobacco pipes	Latest Oswald 18 th century type	Latest clay tobacco pipe
[5]		S	1660-1680		1660-1680
[52]	5	S	1660-1680		1660-1680
[54]	5	S	1660-1680		1660-1680
[58]	7	L	1640-1770	1700-1740	1700-1740
[98]	8	S	1820-1840		1820-1840
[106]	6	S	1680-1770	1700-1740	1700-1740
[112]	6	S	1680-1710		1680-1710
[147]	6	L	1660-1710		1680-1710
[207]	1	S	1680-1710		1680-1710
[212]	8	S	?18 TH C		
[240]	9	S	1680-1840		1820-1840
[241]	9	S	1680-1880		1840-1880
[268]	7	S	1700-1770	1700-1740	1700-1740
[269]	9	S	1680-1770	1700-1740	1700-1740
[273]	9	S	1680-1710		1680-1710
[276]	6	L	1660-1710		1680-1710
[286]	6	L	1660-1710		1690-1710
[293]	5	S	1660-1680		1660-1680
[297]	5	S	1660-1680		1660-1680
[308]	6	M	1640-1800		1760-1780
[314]	6	S	1680-1710		1680-1710
[320]	5	S	1660-1680		1660-1680
[322]	5	M	1660-1680		1660-1680
[323]	6	S	1660-1770		1730-1780
[324]	6	S	1660-1680		1660-1680
[329]	6	S	1660-1680		1660-1680
[332]	6	S	1660-1680		1660-1680
[343]	6	S	1660-1680		1660-1680
[351]	7	S	1680-1710		1680-1710
[359]	6	L	1660-1770		1700-1740
[603]	8	S	1700-1740		1700-1740

Table 1. Contexts containing clay tobacco pipes, the date range and latest bowl type. S: small size (1-30 fragments), M: medium sized (31-100 fragments), L: large (100+ fragments), VL: very large (multiple boxes).

Condition of clay tobacco pipes: The clay tobacco pipe bowls were in a good condition and therefore classification of bowl types was possible.

General comments: There are a total of 1186 fragments of stratified clay tobacco pipes in 33 contexts. There are unusually more bowl fragments, 596 than that of stems: 551 with additionally 33 heels and 22 nibs. Of note are two fragments of muffle (the inner wall of a tobacco pipe kiln) which together with two pipes with glaze drips found on the site, indicated that clay pipe manufacture was happening on or close to the site. The majority of contexts that produced fragments of clay tobacco pipes occurred as small groups (under 30 fragments), but there were five large groups (over 100 sherds): [58], [147], [191], [276] and [286]. The clay tobacco pipes ranged in date to between c.1640 and 1880 and are discussed by trench and phase.

Phase 1

In Trench 5, a layer of redeposited natural [207] produced single AO type 20 and 22 bowls.

Phase 5

In Trench, 2 the dump deposit [54] produced five AO type 15 bowls and a single AO type 18 bowl, both dated 1660-1680. A later dump layer [52] produced three AO type 15 clay tobacco pipes. Fill [301] of pit [302] produced a single pipe stem, but truncating this feature pit [295] produced in its fill [293] a single AO type 15 bowl. Pit [298] produced in its fill [297] four AO type 15 bowls, two of which were damaged. Fill [320] of ditch [321] produced four AO type 15 bowls, together with one spur of this type, as well as a single AO type 18 bowl, indicating deposition between c.1660-1680. Fill [322] of pit [327] produced six AO type 15 bowls and four AO type 18 bowls, which included a single variant. However, of particular note in this fill were two fragments of kiln muffle: a sealed chamber inside the kiln that protected the tobacco pipes from discoloration by the burning of the fuel. Both fragments of muffle were made of pipe clay with fragments or impressions of pipe stems used to strengthen the muffle. Additionally, one of the fragments of muffle contained an AO type 15 bowl, somewhat vitrified. Both the bowls and the example incorporated in the muffle indicated that a clay tobacco pipe manufacturer was located on the site or in the vicinity between 1660-1680.

Phase 6

In Trench 1 the floor make-up layer [314] produced single examples of AO type 20 and 22 bowls, both dated c.1680-1710. Stratigraphically above this, floor bedding layer [286] produced a large assemblage of clay pipes (189 fragments) with all the bowls dated between c.1680-1710, but the latest were seventeen examples of AO type 19 bowls dated 1690-1710. Another layer [276] produced a large group of tobacco pipes (115 fragments) and the bowl types dated to between 1660-1710, but the majority of the bowls dated to 1680-1710 with a type 19 bowl being the latest. There are 12 bowls initialled W W as ten AO type 20 and two AO type 22 bowls. The initials W W possibly refer to two makers, William Whitaker, 1682, St. Martins in the Field or William Whitfield, but other makers with the same initials probably exist at this time but are not listed.

In Trench 2, a burnt deposit [308] produced a medium sized assemblage of clay pipes with the latest bowl type being a plain spurred OS type 23 bowl, dated 1760-1780. However there was a single OS type 10 bowl dated 1700-40 and seven OS type 12 bowls, dated 1730-80. There were amongst these bowls single examples of A R and M R initialled bowls, for which there are no known listed makers at this time and one example of a bowl with the crowned initials W R on the heel, possibly for William Rushton, 1763, Moorfields. Fill [329] of pit [330] produced a single AO type 18 bowl and fill [343] of pit [344] produced the heel of an AO type 18 bowl as the latest bowl. A mortar layer [332] produced an AO type 15 bowl and the heel of a type 18 bowl, both dated 1660-80, but the latest bowl types dated to between 1680-1710 and consisted of single examples of AO type 20 bowls (with the initials W ?T/P) and AO22.

The horn core pit [328] produced in its lining [324] six AO type 15 bowls, but the latest bowl was an OS type 12 bowl, dated 1730-80, decorated with the Prince of Wales's feathers, but without the motto. The bowl was also initialled R B which may stand for Robert Baldwin, 1749 but armorial bowls tend to date more to the late 18th century. Two stems were present in the earliest fill [346] of the horn core pit but the latest fill [323] produced as its latest bowls an OS type 10 bowl initialled W W and two OS type 12 bowls dated 1730-80.

A brick-lined cess pit [360] produced a large clay pipe assemblage (191 fragments) with bowl types dating between 1660-1740, the latest bowl type being OS type 10 bowls, dated 1700-1740 as 42 examples. Initialled examples consisted of W W, one set of initials being crowned and one bowl has the initials I D for which there are numerous possible makers (see Oswald 1975, 136). There are also three earlier AO type 22 bowls, dated 1680-1710 with the initials W W. and an AO type 21 bowl with a crown on each side of the heel.

From this phase in Trench 3 a dump layer [112] produced a single AO type 22 bowl dated 1680-1710. A later layer, [106] produced three OS type 10 bowls, dated 1700-1740. Trench 4 deposits in this phase included fill [147] of the cess pit [148] produced a large assemblage of clay pipes as 110 fragments but mostly as stems. There were single examples of AO type 15 and 18 bowls, both dated 1660-1680 and six AO type 20 and three AO type 22 bowls, both dated 1680-1710.

Phase 7

In Trench 1 the hearth floor layer [273] produced a damaged AO type 22 bowl dated 1680-1710 and above it fill [268] produced a single example of an OS type 10 bowl dated 1700-1740. Pit [351] produced fourteen bowls dated 1680-1710, with one bowl each of AO types 20 and 22 initialled W W, probably from the same maker. The latest bowls are five examples of AO type 19 bowls, dated 1690-1710.

From Trench 2 was a dump layer [58], which sealed many of the features in Trench 2 North, produced the largest number of clay tobacco pipe fragments in one context on the site, as 312 fragments. The latest tobacco pipe bowls in this deposit were OS type 10 bowls, with initialled examples I D (with a dot above the I), R R, T W and WW, three of the latter being crowned while another bowl only had a crown on each side of the heel. However, there are a number of earlier 17th century tobacco pipes of interest. The first is

a very unusual bowl with a heel that is diamond-shaped in plan and a bowl shape datable to c.1660-80 (being similar to the AO type 15 bowl). The diamond base must have been a technological development to assist tobacco pipes to stand upright, but because this is such a rare design it must never have caught on. There was also an AO type 18 bowl with a stamp on the underside of the heel with the initials I C surrounded by tobacco leaves (Atkinson and Oswald 1969, Fig. 3.9). The initials I C may stand for James Cornish, 1658, Finsbury Place, Joseph Crumpton, 1659, Ratcliffe or James Court, 1668.

Phase 8

In Trench 3, fill [98], the fill of a cess pit [99] produced three AO type 28 bowls, dated 1820-40, one of which has oak leaf borders on the front and back of the bowl and is initialled F L, possibly Felix Lebrun, 1856-7, Tooley Street. The two other bowls are initialled but the letters are illegible; ? B and another ?I ?I with a clear (yellow/olive) glaze drip on the latter bowl, possibly from the glazing of the nib and may it represent a waster or second.

Fill [212] of pit [213] in Trench 5 produced undiagnostic fragments of clay tobacco pipes, but possibly includes part of an AO type 25 bowl, dated 1700-1770 and a heel possibly from an AO type 27 bowl, dated 1780-1820.

From Area 8 East deposit [603] produced three bowls as two AO 15 bowls and a later OS 10 bowl, dated 1700-1740 and initialled T ?W, the family name being illegible.

Phase 9

The basement fills [240/241] of a building in Trench 1 produced clay tobacco pipes, the latest type being an AO type 29 bowl initialled WW probably for a local pipe maker William Walker, 1837-40. This bowl was decorated with a vertical border of acorns and leaves on the front of the bowl and a plain oak leaf border on the back. There were also seventeen AO type 28 bowls with an oak leaf border on the front and back of the bowl and also initialled W W, probably the products of William Walker. Two other AO type 28 bowls were present, one initialled I H, for which there are numerous possible makers (see Oswald, 1975, p.138) and another bowl with unclear initials, possibly H F. A test pit [270] contained in its backfill [269] single examples of AO type 22 bowl and OS type 10 bowls.

Context [5] from the archaeological evaluation produced a single AO type 15 bowl. Amongst the unstratified material was of note were two more bowls of a c.1660-80 shape with the diamond shaped heels. There was also an AO type 15 bowl with a yellow glaze drip possibly representing more evidence for clay tobacco pipe production in the vicinity.

Potential and Recommendations: The potential of the clay tobacco pipe assemblage from this site is important in providing useful dating evidence for the post-medieval stratigraphy on the site. However, much more important on the site is the presence of clay tobacco pipe manufacture by the presence of kiln muffle and pipes with glaze splatter in pit [323] dating c.1660-80. There is also present on the site a new type of bowl with a diamond shaped base, a design development that was never adopted. Documentary evidence indicates that tobacco pipe manufacture was widespread through out London and included the Spitalfields area, but actual physical evidence

for pipe manufacture is rare in the capital. During the 1680-1710 period there are W W initials on two bowl types and probably refer to a local maker who owned at least two moulds for type 22 bowls. W W initials, a common combination, also occur on early 18th-century clay pipes and possibly indicate a continuation of this maker or his family's business.

It is recommended that the material associated with clay pipe manufacture be published. Documentary research should be employed to discover if any of the properties on the site are associated with pipe production. Documentary evidence should also be sought to see if the W W initialled bowls can be linked to a family of pipe makers in the Spitalfields area. The c.1660-80 dated bowl with the diamond shaped base also requires publishing and its presence on other excavations in the area or whether it has been previously published needs to be found out.

It is also recommended that the muffle fragments and the bowl with the diamond base are photographed and illustrated.

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APPENDIX 6: ASSESSMENT OF THE BUILDING MATERIALS

BY J Brown

1.0 METHODOLOGY

- 1.1 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. The material was examined under magnification (x20), quantified and weighed. A description of the fabrics appears at the end. Examples of the fabrics can be found in the archives of PCA and/or the Museum of London.
- 1.2 Quantification of items was undertaken and the data entered onto a computer database (Microsoft Access 97). After analysis the common fabric types were discarded, with a type sample kept for archive. Unusual pieces or uncommon fabrics were also kept for archive.
- 1.3 Several masonry structures were recorded in situ and the fabrics used therein were noted at excavation stage, negating the need for samples.

2.0 QUANTITY AND CONDITION

- 2.1 Building material was assessed from 112 contexts, with 329 individual pieces weighing 522.26kg fully quantified. The majority of the material was fragmentary, although some complete pieces were noted. Masonry samples were returned from several contexts. In addition several pieces showed at least two quantifiable dimensions.

3.0 DATE RANGES

- 3.1 There now follows a list of possible dates for the building material within the contexts. The first date is the earliest possible date for the latest material within the context. The end date is the latest date of the latest material in the context. Where a narrower date range can be suggested through the examination of the context as a whole or by other factors this date range appears in brackets.

3.2

Context	Date range	Context	Date range
13	1620/1640 to 1800+	53	1150/1180 to 1500+
54	c.1350/1380 to 1500+	56	c.1330 to 1500+
58	Late 17th to c.1900	65	1150/1180 to 1500+
70	1270/1360 to 1500+	72	c.1450/1480 to 1666/c.1700
74	c.1664 to c.1900	82	1150/1180 to 1500+
86	Late 17th to early 19th century	89	Medieval to Post-medieval
90	1620/1640 to 1800+	96	1480/1520 to c.1900
97	1150/1180 to 1500+	99	<i>Early to mid 19th century</i>
101	1270/1360 to 1360+	104	1270/1360 to 1500+
105	1270/1360 to 1360+	106	18th to 19th century
107	<i>Mid to Late 19th century</i>	108	<i>Late 17th to 19th century</i>
112	1620/1640 to 1800+	116	<i>c.1664 to early 18th century</i>
117	<i>Post-medieval</i>	126	<i>Post-medieval (19th century?)</i>
132	<i>c.1450/1480 to 1666/c.1700</i>	133	<i>Late 17th to 18th century (early 18th century)</i>
134	<i>19th century</i>	135	<i>17th to 18th century</i>
136	<i>Late 17th to early 19th century</i>	137	<i>Mid 19th to early 20th century</i>

138	<i>17th to 18th century (18th century)</i>	139	<i>19th century</i>
140	<i>18th to 19th century</i>	145	<i>Late 17th to 19th century</i>
148	<i>c.1664 to c.1900</i>	151	<i>1480/1520 to c.1900</i>
153	<i>55/70 to 140/200</i>	156	<i>Post-medieval</i>
158	<i>Uncertain</i>	163	<i>Pre 60/61 to Mid 2nd century</i>
165	<i>55/70 to 140/200</i>	187	<i>Late 17th to early 19th century (18th century)</i>
188	<i>Late 17th to early 19th century (18th century)</i>	189	<i>Late 17th to early 19th century (18th century)</i>
190	<i>Late 17th to early 19th century (18th century)</i>	191	<i>Late 17th to early 19th century (18th century)</i>
192	<i>Late 17th to early 19th century (18th century)</i>	193	<i>Late 17th to early 19th century (18th century)</i>
195	<i>Late 15th to 18th century (18th century)</i>	196	<i>Late 17th to early 19th century (18th century)</i>
197	<i>Late 17th to early 19th century (18th century)</i>	198	<i>Late 15th to 18th century (18th century)</i>
199	<i>Late 17th to early 19th century (18th century)</i>		

3.3

Context	Date range	Context	Date range
200	<i>Late 17th to early 19th century</i>	201	<i>Late 15th to 18th century (18th century)</i>
202	<i>Late 15th to 18th century (18th century)</i>	203	<i>Late 15th to 18th century (18th century)</i>
204	<i>Late 17th to early 19th century (18th century)</i>	216	1150/1180 to 1500+
226	<i>Late 17th to early 19th century (18th century)</i>	234	55/70 to 140/200
237	<i>50/60 to Mid 2nd century</i>	245	<i>18th to 19th century</i>
246	<i>Late 18th to 19th century</i>	247	<i>c.1450/1480 to 1666/c.1700</i>
252	<i>Late 17th to early 19th century</i>	254	<i>Late 17th to early 19th century</i>
263	<i>Late 17th to early 19th century</i>	264	<i>Late 17th to early 19th century</i>
266	<i>Late 15th to 18th century</i>	269	1620/1640 to 1800+
269	<i>Late 18th to 20th century</i>	273	<i>Late 17th to early 19th century</i>
276	<i>c.1330 to c.1390</i>	286	<i>Late 17th to early 18th century</i>
287	<i>Late 17th to early 19th century</i>	289	<i>Late 17th to early 19th century</i>
293	1620/1640 to c.1900	297	1620/1640 to c.1900
299	1150/1180 to 1500+		

3.4

Context	Date range	Context	Date range
301	1480/1520 to c.1900	303	<i>Post-medieval (17th to 18th century?)</i>
304	<i>Post-medieval (17th to 18th century?)</i>	305	<i>Post-medieval (17th to 18th century?)</i>
306	<i>Post-medieval (17th to 18th century?)</i>	307	<i>Post-medieval (17th to 18th century?)</i>
308	<i>Mid to late 18th century</i>	312	1620/1640 to c.1900
313	<i>Post-medieval (17th to 18th century)</i>	314	1480/1520 to c.1900
318	1150/1180 to 1500+	320	18th century
322	1620/1640 to 1800+	323	1620/1640 to 1800+
329	1480/1520 to c.1900	329	1620/1640 to 1800+
333	<i>Post-medieval (17th to 18th century?)</i>	345	1480/1520 to c.1900
348	1380/1400 to 1500+	349	<i>c.1450/1480 to 1666/c.1700 (17th to 18th century)</i>
351	c.1450/1480 to 1666/c.1700	356	Late 17th to early 19th century
359	1620/1640 to 1800+	360	<i>Post-medieval (17th to 18th century?)</i>
364	c.1450/1480 to 1666/c.1700	376	c.1450/1480 to c.1900
386	1150/1180 to 1500+	388	1150/1180 to 1500+
389	1270/1360 to 1500+	393	1480/1520 to c.1900
500	55/70 to 140/200 (post 200) R	503	1201 to 1500+
504	1201 to 1500+	505	Pre 60/61 to 1500+
521	50 to 200+ (post 200) R		

Contexts in *italics* are samples from masonry contexts.

(i) Possibly inclusive material

(r) Residual material

4.0 DISCUSSION

4.1 The majority of the material assessed consisted of post-medieval CBM assemblages, principally from three extant structures - [S1], [S2] and [S3]. The remainder of the material was comprised of medieval and Roman CBM assemblages. Very little in the way of stone building material was recovered. Materials of different periods and forms are discussed below. Fabrics that appear both in medieval and post-medieval forms are described in the first instance and noted in the second.

4.2 **Roman brick and tile Fabrics:** 2452, 2459a, 3004, 3006 (fabric group 2815); 3018, 3238?, 3060?

All of the Roman assemblage represented residual material that was often abraded. Almost all of the material came from local fabric group 2815, and all of the fabrics recovered had date ranges between the mid-first and the end of the second centuries AD. Apart from one fragment of a comb-scored box flue tile, and one possible tessera, all of the fragments were of common forms (brick, imbrices and tegulae). One fragment of tile had a nail hole, probably from a tegula. No pieces showed more than one quantifiable dimension.

4.3 **Medieval roof tile fabrics:** 2271, 2273, 2586, 2587, 3090, 3094

The dominant fabric types were local fabrics 2271 and a sandier version 2586. Apart from one ridge tile fragment, the only identifiable form was the peg tile, some of which were splash-glazed. Two thick tile fragments in fabrics 2273 and 3228 may represent early forms of roof tile (12th –13th century). One fragment of glazed tile had an unusual fabric and was nominally recorded as fabric cpn01/1. It may be a floor tile fabric.

cpn01/1: Fine silty fabric with moderate beige silt ball inclusions occasional iron oxide and frequent fine quartz <0.2mm. Orange in colour.

4.4 **Post Medieval roof tile fabrics:** 2276, 3216 (peg) 2275, 2279, 3225(pan)

Peg tiles were the dominant form of roof tile, although a significant proportion of pan tile fragments were recovered. Fabric 2276 formed the bulk of the post-medieval roof tile assemblage. Dimension ranges for both medieval and post-medieval tiles are recorded below.

FABRIC	Dimensions					
	MIN X	MAX	MIN Y	MAX Y	MIN Z	MAX Z
2271			152	152	14	17
2276			157	168	11	15
3216			153	153	15	15

4.5 **Medieval/Post Medieval floor tile fabrics:** 1810, 1811, 2894 (Penn), 2320 (Westminster), 1678, 1977, 2318, 2505 (Flemish), 3047? tgw (post-medieval)

The floor tiles can be divided into two basic groups, English medieval decorated and glazed fabrics and Flemish plain-glazed or unglazed fabrics. Penn type fabrics from

Buckinghamshire were most common in the first group, although one or two Westminster tiles (one of which was a waster), were recovered. Generally tiles in this group were badly worn and fragmented. The second group of Flemish fabrics tended to survive in better condition, with one example in fabric 1678 measuring 125x125x30mm. Also noted in situ were some late post-medieval floor tiles, possibly fabric 3047, and one floor tile fragment of decorated Tin-glaze was recovered, probably of 17th century date. This latter however was not found in context.

4.6 **Early Post-medieval/Post-medieval brick fabrics:** 3033, 3046 (Transitional), 3032, 3034 (Post-medieval), 3035, 3036, 3038

As to be expected at such a developed urban site, many masonry contexts were recorded, mostly associated with extant structure's [S1], [S2] and [S3]. Some individual masonry contexts represented cesspits or soakaways, although these features also showed the same range of fabrics as found in the major structures. They are probably contemporary ancillary structures. Brick samples were examined to determine the most common fabric types, and the majority of the material was discarded after being recorded. Large numbers of locally produced brick fabrics 3033, 3032 and to a lesser extent, their respective variants 3046 and 3034, formed almost the entire brick assemblage. Later 19th century footings intruding into areas of the site were of late post-medieval fabric 3035, and in individual contexts miscellaneous bricks in fabrics 3035, 3038 (machine-made, hard Fletton bricks) and 3036 (Dutch paving bricks) were utilised. Brick fabric types used in different structures are given below.

Brick fabric types and dimensions by structure.

STRUCTUR	FABRIC	TYPE	DIMENSIONS (mm)					
			Min X	Max X	Min Y	Max Y	Min Z	Max Z
S1	3032	BU	220	230	100	110	60	70
	3033	BU	220	230	100	120	60	60
	3034	BU	220	220	100	100	60	60
	3046	BU	230	230	110	110	70	70
S2	3032	B	220	230	100	110	55	70
		BF	220	220	110	110	54	54
		BU	216	230	100	116	55	70
	3032?	BU	220	220	100	100	60	60
	3033	B	220	230	110	115	50	60
		BU	216	230	105	120	50	64
	3034	B	210	230	110	110	55	70
	3035	BF			110	110	60	60
3047?	BP	110	110	100	100	80	80	
S3	3032?	B	230	230	110	110	60	60
	3033?	B	230	240	100	110	60	60
		BU	200	220	100	100	60	60

BU – unfroged brick, BF – froged brick, BW – wirecut brick, BWF wirecut froged brick, BP – paving brick

One feature of particular interest was the Tudor period boundary wall [247]. This feature survived very well to the south end of the site, having been incorporated into a basement structure [S2]. The bonding was irregular (English Garden Wall) and the fabric of the original wall was local red sandy fabric 3033. Bricks were still in situ so it was impossible to see if they were froged, although some features such as indented borders and

sunken margins were visible. This wall survived to a height roughly equivalent to the contemporary road level, with later additions in fabrics 3032, 3034 and re-used bricks in 3033.

Structures [S1] and [S2] both represented basement structures for domestic or light industrial buildings and are thought to be close in date of construction, the fabrics used suggest an original date of 17th or early 18th century with later additions, particularly noted in structure [S2]. Structure [S3] to the east of structure [S1] may have also been contemporary, but much of the surviving masonry represents later alterations.

4.7 Tin-glazed wall tiles: tgw

A few fragments of tin-glazed wall tiles were recovered from the excavation and descriptions are given below. All were fragmented with no piece showing a complete width. These are probably all of late 17th or 18th century date.

CONTEXT	THICKNESS	COMMENT	DR?
58	7	Blue on white, corner fragment; a mountain range? Landscape?	N
58	13	Blue on white, corner fragment - double-barred bullshead finial, English	N
286	11	Blue on white, design not clear, broad brush strokes	N
308	8	Bible scene, manganese on white. man up a tree and saint	Y
320	13	Blue, brown, on white. Unusual colour brown decoration, fine moderate sandy	Y

6.0 Recommendations

- 6.1 Some of the tin-glazed wall tile fragments may be considered suitable for illustration.
- 6.2 For the Roman period, the material is very abraded and often of a residual nature and no further work is considered necessary. The Medieval material is very typical of London area assemblages and probably requires no further work unless in connection with later medieval masonry structures. The post-medieval material relating to in-situ structures is interesting in terms of analysing the development of the street frontage and enclosing of the previously open ground. Therefore further consideration of the structures recorded on site would be necessary for publication.

7.0 FABRICS

Brick:

3032	Usually hard fabric with a surface very resistant to damage by abrasion. Less well fired examples can be brittle. Yellow and white calcium carbonate specks and iron oxide show throughout the fabric. Both stock moulded and machine examples occur. Some machine-pressed bricks have shallow frogs, stock moulded are usually unfrogged.
3032nr3033	Usually hard fabric with a surface very resistant to damage by abrasion. Less well fired examples can be brittle. Yellow and white carbonate specks and iron oxide show intermittently, with fewer inclusions than 3032. no indented borders or frogs(?) typically 218-230x98-108x60-68mm
3033	Some bricks have moderate coarse quartz <0.8mm, otherwise moderate quartz <0.5mm. Occasional black iron oxide <0.8mm, yellowish white silty inclusions <4mm, occasional fine stones & pebbles. Individual bricks have a high degree of uniformity of texture & colour. Soft texture crumbles easily if scratched. Stock moulded bricks, often frogged, often indented borders.
3034	Most obvious inclusions are calcium carbonate and clinker. The matrix is streaky, fabric fairly hard and sandy. Stock moulds and wire-cut machine-pressed bricks occur. The latter usually have shallow frogs. Apart from lensing this fabric is very similar to 3032.
3035	Inclusions are frequent fine specks of ash and charcoal. The fabric is riddled with tiny air pockets where organic matter has burned out during firing. The fabric is hard, with both machine pressed wire cuts and stock moulded examples. Shallow frogs are moderate.
3036	Notably hard bricks of uniform texture without obvious inclusions in the fabric. Two sizes, fine bricks 160-180x70-85x40-42mm, coarse bricks +- 235x +- 112 x37-45mm
3038	Very hard and well fired, distinctive granular fabric with frequent fine white inclusions, fletton brick, machine pressed with deep V frogs.
3046	Sandy fabric with frequent coarse quartz <1mm in sandy clay matrix. Soft texture crumbles easily if scratched. Iron oxide moderate, occasional fine stones & pebbles. Stock moulded bricks, often frogged, often indented borders.
3047	Fine sandy fabric, moderate quartz <0.4mm, dark red iron oxide <6.0mm, fine quartz moulding sand <0.1mm on outside

Floor tile:

1678	moderate fine quartz & calcium carbonate <0.2mm, occasional iron oxide <0.8mm
1810	Sandy fabric, frequent medium quartz <0.4mm, occasional iron oxide <2mm. No fine grains. Many examples have cream coloured silty bands
1811	Fine sandy fabric with frequent quartz <0.3mm. Moderate red iron oxide <0.3mm. Occasional calcium carbonate inclusions <2.0mm. Similar to [2316]
1977	Moderate medium-coarse quartz <0.6mm, frequent red iron oxide/clay inclusions <2.0mm, creamy silt bands & lenses. As [2318] but with more silty bands and less quartz.
2199	Little visible quartz, occasional muscovite, moderate-frequent black iron oxide <0.01mm, moderate-frequent red iron oxide <1.0mm. similar to [2505]
2318	Sandy fabric, abundant quartz <0.5mm, frequent red iron oxide & clay inclusions <2.0mm; cream silty bands & lenses
2320	Fine sandy fabric, moderate quartz <0.3mm, occasional black iron oxide <1.0mm; c. carbonate & rock fragments <2.0mm
2505	Very fine sandy fabric, moderate quartz <0.1mm, occasional black iron oxide <0.01mm; frequent red iron oxide <2.0mm
2850	Moderate quartz <0.5mm, frequent red iron oxide/clay inclusions <2.0mm, moderate silty bands & lenses; as 1977 but less prominent silty bands.
2894	Varying amounts of well sorted quartz <0.5mm. Occasional iron oxide <1mm. A less sandy version of 1810. Similar to 2324 but smoother background matrix. Some examples have occasional cream coloured inclusions.

Tile:

2271	Hard, well fired fabric with fine texture, occasional coarse quartz <0.6mm, occasional calcium carbonate and red iron oxide <0.5mm, occasional muscovite mica <0.05mm.
2273	Distinct sandy fabric with abundant coarse quartz <1mm, moderate calcium carbonate <0.8mm. Very similar to fabric [2272] except without shelly inclusions - from the same clay source.
2275	Fine well fired texture with occasional quartz <1.0mm, occasional clay, black/red iron oxide & calcium carbonate inclusions <1.5mm.
2276	Hard, well fired fine texture with few visible inclusions - occasional quartz <0.6mm, occasional calcium carbonate and red iron oxide <0.5mm, muscovite mica <0.05mm. Same as [2271] except with fine moulding sand.
2279	Fine well fired texture, sandy fabric with moderate quartz <1.0mm, occasional black/red iron oxide & calcium carbonate inclusions <1mm.
2586	Fine clay matrix with moderate quartz inclusions <0.5mm, occasional red & black iron oxide <1mm; amount of quartz can vary, sandy version

	of fabric 2271
2587	Lumpy clay texture, moderate quartz, occasional rounded light brown cream silty inclusions <5mm, frequent fine black iron oxide grains <0.05mm and red iron oxide <1mm.
3090	Frequent fine quartz <0.5mm. Occasional coarser red iron oxide/clay inclusions <1mm, frequent very fine black iron oxide <0.05mm, very similar to 2587
3094	Moderate quartz <0.5mm. Occasional silty and iron oxide inclusions <2mm, frequent very fine black iron oxide <0.05mm, similar to 2587, peg & pan tile
3216	Fine sandy fabric, abundant fine quartz <0.05mm, occasional iron oxide and mica.
3225	Fine well fired texture with abundant quartz <0.3mm, occasional black/red iron oxide & calcium carbonate inclusions <1mm.
3228	Distinct sandy fabric with abundant fine to medium quartz, very similar to fabric 2273 except with fine sand.

Roman Fabrics:

2452	Fairly fine fabric. Fine but varying amounts of quartz <0.5mm. Usually with occasional limestone, siltstone and iron oxide <2.0mm.
2459a	Fine sandy fabric; few quartz grains <0.2mm; occasional i.o. 2459a - normal msand; 2459b - fine msand; 2459c - straw moulding
3004	Sandy fabric with moderate quartz <0.7mm, occasional iron oxide and limestone <0.7mm
3006	Covers the fabric range between 2459a (normal msand) and 3004. Individual tiles vary. most have frequent quartz < 0.3mm with occasional iron oxide and limestone
3018	Fine clay matrix. Frequent orange clay/siltstone bands and inclusions, iron oxide, varying amounts of occasional quartz <1.0mm. frequent silty bands and nodules in certain examples
3060	Frequent quartz <0.2mm; moderate fine black iron oxide <0.1mm; occasional coarser red iron oxide<1.0mm. Some tiles have less black iron oxide, 3060b = coarse msand
3238	White silty streaks, occasional/moderate medium quartz, mottled clay matrix, occasional red i.o.

Other fabric codes

tgw-Tin-glazed wares

Appendix 7: ASSESSMENT OF THE SMALL FINDS AND SLAG

By L. Keys and M. Gaimster

Introduction and methodology

A total of 126 small finds were recovered during excavation. A number of these were subsequently found not to be small finds while, conversely, a number of nails were allocated a number because they represent parts of coffins. Occasionally the coffin small find number was suffixed by another number and these have been included in the small finds table below.

Characteristics of the assemblage

The copper alloy and iron finds were extremely corroded and in many cases even x-rays could not aid identification. This problem was further compounded by the second x-ray plate X007 still being in Chatham (yes - there are two plates with this number). Its absence was only discovered when the coins were examined and found not to be on X007 or any other x-ray plate for the site).

Most of the small finds, including the coins, can be dated to the post-medieval period with some slightly earlier objects, in particular the jettons. One, with a bear amongst trees on its obverse, is a late medieval French example.

The one exception to the assemblage date is a fragmentary Roman coin from cess pit fill (98) in Phase 7. The rest of the group contained post-medieval objects including quite a few buttons - possibly waste from a workshop producing them or a garment maker's premises.

The bone objects include a number of horn plates <124> (316) found in 'beam slots'. These plates would normally have been used in lantern manufacture but why or how they came to be found in more than one beam slot requires further exploration.

Although most of the finds came from fill of pits, ditches, or dumps and were generally domestic in nature (e.g. spoons, pins, thimbles, buttons), some finds were associated with coffins or skeletons. Usually these were iron nails or studs. Although these coffin fittings had been allocated to Phase 2 (Roman), the material is more likely to be post-medieval.

Conservation

The state of preservation of many of the metal items is poor and further consolidation or cleaning will not yield improved results.

Potential for further work

Some of the coins, including jettons and tokens, have potential to be more closely dated. Some further material identification may be possible in particular with SF <38> (329).

The lead cloth seal <14> (147) requires further work - possibly unfolding - to date and further identify it.

Table of the small finds by s.f. number, context, material:

s.f.	CPN01 cont. material	Crispin St. identification	date	Artillery Row, Spitalfields comments
1	52 copper	coin		with milled edges but too corroded to identify
2	54 copper	jetton	L 14 th 15 ^{thc}	Jetton/counter France
3	58 lead	token	16 ^{thc}	token; Elizabethan, obv. Tudor rose, rev. double-headed eagle
4	58 copper	coin	17 ^{thc}	Charles I (1630's) rose farthing
5	96 copper	jetton	m-l 16 ^{thc} ?	jetton; badly corroded, Neurenberg
6	98 gold	finger ring	pmed	with enamel?
7	80 glass	bead	pmed	
8	101 copper	needle		
9	101 copper			
10	96 iron	horse shoe	pmed?	half
12	98 copper	coin	Roman	fragmentary; 4th century?
13	129 bronze	coin	1848- 1851	French <i>centime</i>
14	147 lead	seal	pmed?	Cloth seal; folded
15	170 iron	nail		
20	208 copper	jetton	m. 15 ^{thc} ?	jetton; France Tournai
22	216 copper	coin	330- 335c	Silvered Nummus
24	208 copper	mount		frag. decoratively stamped sheet
25	0 bone	brush	pmed	
26	240 iron	tool		
27	257 iron	nails		coffin
28	260 stone	quern		tiny fragments
29	260 iron	nails		coffin; skeleton 279
31	249 iron	unidentifiable		
32	249 mortar	not tessera		
34	310 iron	nails		coffin
35	58 copper	thimble	pmed	18 ^{thc} ?
37	326 copper	coin	17 ^{thc}	Charles I (1630's) rose farthing
38	329 silver	coin	16 ^{thc}	Elizabeth I penny
39	314 copper	stud/mount		
42	332 antler	waste		
43	359 silver	spoon	pmed	maker's marks on bowl & back of handle
46	359 fibre	textile	pmed?	
48	348 iron	buckle		horse harness?
50	324 copper	mount/key/lock		
51	381 iron	nail		coffin
51	381 iron	nails		coffin
51	381 iron	unidentifiable		small fragment
54	58 copper	unidentifiable		
55	58 ivory	handle	pmed	and iron; cutlery knife?
60	399 iron	nails		coffin
61	58 ivory	bobbin	pmed	
62	98 ivory	handle	pmed	two scales with three copper rivets
63	98 bone	waste	pmed	offcut
64	98 bone	waste	pmed	offcut

65	78 iron	nail		
66	98 iron	mount/structural fitting?		
67	98 iron	button	pmed	numerous; composite or with textile impressions
68	106 iron	structural fitting		
69	212 iron	chopper		
70	268 iron	mounts/bindings		
71	269 iron	structural fitting		
72	269 iron	structural fitting		same object as <73>
73	269 iron	structural fitting		same object as <72>
74	269 iron	rod-pivot hinge		
75	276 iron	slag		
76	293 iron	knife/mount?		treated or thickened edges visible on x-ray
78	332 iron	nail		
79	332 iron	nail		
80	332 iron	hook		chain hook
81	376 iron	unidentifiable		
82	58 copper	lace chape		very large
83	58 copper	pin	pmed	
84	97 copper	coin	l. 14thc	jetton; Bear type, French, Languedoc
85	98 copper	taps	pmed	two
86	98 copper	knob?	pmed	
87	98 copper	button/coin	pmed	not identifiable from x-ray
88	98 copper	button/coin	pmed	not identifiable from x-ray
89	98 copper	coin		corroded
90	98 copper	button/coin	pmed	not identifiable from x-ray
91	98 copper	coin		corroded and unidentifiable
92	98 copper	mount	pmed	
93	98 copper	bell/vessel		
94	98 copper	coin		with milled edges but too corroded to identify
95	98 copper	buttons	pmed	and textile; two
96	98 copper	button	pmed	and textile
97	98 copper	button	pmed	composite
97	98 copper	mount?		
99	98 copper			
100	265 copper	coin	18thc	George III 1772; corroded
101	323 copper			
102	359 copper	unidentifiable		"blob"
103	359 copper	coin		too corroded to identify
104	269 lead/tin	sheet/plate	pmed	
105	98 copper	coin	18thc?	central countermark but coin surface eroded
106	269 copper	spoon	pmed	possibly silver plated
107	90 iron	knife/mount		
108	90 iron	nail		
109	359 iron	mount		
110	359 bone	ring	pmed	
111	315 copper	waste		
112	329 iron	buckle		
113	386 iron	unidentifiable		
114	324 iron	nail		
124	316 bone	waste	pmed	horn plates
126	98 bone	toothbrush	pmed	handle

40/10	355 iron	studs	
40/11	355 iron	unidentifiable	
40/12	355 iron	nail	
40/13	355 iron	nail	
40/14	355 iron	nail	
40/2	355 iron	coffin	nails and studs
40/3	355 iron	coffin	nails and studs
40/4	355 iron	nail	
40/5	355 iron	studs	coffin decoration
40/6	355 iron	studs	coffin decoration
40/7	355 iron	coffin	nails and studs
40/8	355 iron	nails	
40/9	355 iron	coffin	nails and studs
51/4/6	381 iron	nail	coffin
51/5/6	381 iron	mount	with rivets; coffin
51/6/6	381 iron	unidentifiable	not on x-ray plate; coffin
	58 iron	slag	pmed undiagnostic 103g
	98 wood	coconut frag.	to be sent to environmental specialist
	153 iron	nail	
	183 iron	nails	
	269 iron	nail	
	293 iron	slag	smithing hearth bottom 1207g 140/110/75mm
	322 iron	nail	
	350 iron	nail	
	359 iron	nail	
	402 iron	nail	coffin

Appendix 8: THE LEATHER

By Q. Mould

Part of the upper from a side-lacing shoe of adult size was found in fill of the precinct ditch dated c. AD 1380-500. It had been cut from the shoe sole below the lace holes suggesting it to be cobbling waste. The remaining one-piece quarters with lace hole lining, both of cow hide, come from a shoe that laced up the side through four pairs of lace holes, a style popular from the 13th through to the later 15th century.

Catalogue description

One-piece quarters for a side-lacing shoe. Much of the lasting margin, stitch length 5mm, worn away, deliberately cut off below the left front seam. Straight top edge with edge/flesh whip stitching. Short, butted edge/flesh left front seam with four lace holes above. Right side seam torn off. Stitching to attach a triangular heel stiffener present at centre back on flesh side. Part of lining for lace holes present, lasting margin also cut off, whip stitching around edge to attach to flesh side of quarters.

Surviving height centre back 43+mm. Adult size.

Leather quarters cow hide, lining calf/cow hide.

Appendix 9: Assessment of Animal Bone.

By L. Yeomans

Introduction and Methodology

This assessment report on the faunal remains from Artillery Lane is based on 1665 fragments of bone recovered from the various phases of site utilisation.

The animal bone was recorded to species/taxonomic category where possible and to size class in the case of unidentifiable bones such as ribs, fragments of longbone shaft and the majority of vertebra fragments. Recording follows the established techniques whereby details of the element, species, bone portion, state of fusion, wear of the dentition, anatomical measurements and taphonomic including natural and anthropogenic modifications to the bone were registered.

Composition and Attributes of the Faunal Assemblage by Phase

Phase 2: Roman

There was very limited animal bone in the Roman phase deposits. During this period the vicinity was used as a cemetery and the animal bone recovered would have been merely background material. There is no evidence to suggest that animals were used as grave offerings with the presence of a few bones in grave fills coincidental.

What is striking about the bone from this phase is the difference in preservation compared to all later phases. The animal bone is in a poor condition, probably caused by a combination of slow burial and the sheer length of time that the bone had been remained in its depositional context. A few bones that could be identified to species showed the presence of cattle, horse and sheep (Table 1) but the relative frequency of bones identified to species level was low again reflecting the state of preservation.

Phase 3: medieval

The fill of the medieval ditch contained a number of elements of an articulating horse skeleton. Preservation of the bone from his phase was average and the majority of the faunal waste could be classified as typical domestic waste. As with the Roman phase, only a limited sample of animal bone was retrieved during the excavation.

One piece of worked bone was recovered from the Medieval ditch; manufactured from the distal shaft portion of a cattle metatarsal, the bone had been sawn to produce six flat sides of uneven width almost parallel to the bones long-axis. Two thin grooves were partially cut at an angle into the flattened surfaces; although broken the form is typical for a pin-makers bone.

Species/animal size class	2	3	4	5	6	7	8	9
Cattle (<i>Bos taurus</i>)	9	8	12	223	75	83		1
Horse (<i>Equus caballus</i>)	2	6	18	2		2		
Pig (<i>Sus scrofa</i>)	1	3	2	17	8	27	2	
Red Deer (<i>Cervus elaphus</i>)				2		1		
Large cervid			1		2			
Sheep/Goat (<i>Ovis aries/Capra hircus</i>)		6	5	28	18	43	1	
Sheep (<i>Ovis aries</i>)	1	2	6	39	29	40		3
Goat (<i>Capra hircus</i>)						1		
Dog (<i>Canis familiaris</i>)		2	3	89	2	53		

Cat (<i>Felis catus</i>)				57	13	12		
Rabbit (<i>Oryctolagus cuniculus</i>)				2		2		
Human	1	1		1		2		
Indeterminate (horse/cattle size)	21	11	41	64	19	110	4	3
Indeterminate (pig size)	6	3	3	43	11	15		5
Indeterminate (sheep/goat/dog size)	34	16	28	117	27	89	3	2
Indeterminate (cat/hare size)				3				
Indeterminate					1			1
Domestic Fowl (<i>Gallus gallus</i>)		1	1	1		1		
Goose (<i>Anser anser</i>)			1	2	1	2		
Duck (<i>Anas platyrhynchos</i>)						1		
Indeterminate bird				2	2	1		
Total identified to species	14	29	49	463	148	270	3	4
Total	75	59	121	692	208	485	10	15
Percentage identified to species	18.7	49.2	40.5	66.9	71.2	55.7	30.0	26.7

Table 1. Summary of the faunal remains from Artillery Lane based bone fragment counts.

Phase 4: 16th century

A slightly larger sample of bone was recovered from features of 16th century date deriving from just 3 contexts. The horse bone would have been articulated as in the previous phase, and was found in the ditch fill (376). The rest of the bone identified to species level comprised of the occasional piece of domestic debris along with a few dog bones dispersed between the ditch fills (376) and (96) and pit fill (96).

Phase 5: 17th century

The majority of the faunal remains from this phase originated from a number of pits and was dominated by horn-working waste (see below). Although a few fragments of bone represent domestic refuse, the bulk of the identified assemblage was made up from cattle horn cores (39.7%). Aside from the hornworking waste and some domestic waste, the pits were used for the disposal of dog and cat skeletons that, whilst not found in articulation, clearly originated from a limited number of skeletons. Minimum numbers of individuals (MNI) estimates for dogs represented in this phase are two from (293), two from (297) and one from (301). At least two cats were represented in the material from (297) and a single one from (301). The skeletal elements present suggest these animals were deposited in the pits complete. None of the bones displayed cuts marks to provide any evidence for skinning and it seems that the rubbish pits in the yards of the buildings were used as a convenient place to dispose of the complete carcasses of dogs and cats. A partially articulated pig skeleton mainly consisting of ribs, vertebra and other elements of the torso region was identified during the excavation and given context number (369). This was probably the remains of what would probably have been a number of swine kept in backyards, fed domestic refuse before being slaughtered for the table. Most of the general domestic waste seems to have been removed from the site, perhaps being

sold for manure⁷⁵, whilst the remains of whole carcasses and waste from craft activities may have been more difficult to remove from the property.

Evidence of horn working in the 17th century at Artillery Lane

Although faunal assemblages dominated by cattle horn cores are typical of either butchery, tanning or horn working; additional evidence all seems to suggest that the third of these trades was the most likely activity taking place in the portion of site around the building fronting onto Gun Street. Firstly the quantity of horn-cores and frontal bones relative to all other skeletal elements, including metapodials, shows a highly skewed body-part representation. The lack of metapodials, which are often still attached to the hides as they are transported to the tanneries, implies that waste is unlikely to be the remains from trimmed skins. Secondly a number of the horn cores were had been sawn through at the base detaching the core from the frontal bone of the skull.

The most convincing evidence for the origin of the industrial waste at Artillery Lane site is the fact that historical data backs up the zooarchaeological interpretation. The tanneries of post-medieval London were mainly situated south of the river in Bermondsey and although butchers were present in the area, horn-workers were found to the north of Aldgate High Street (formerly Whitechapel Street) and concentrated around Middlesex Street (previously Petticoat Lane)⁷⁶.

The recovery of horncores during the excavation of phase 5 features was generally complete producing a total of 184 cattle horncore fragments. Almost all (182 of them) were found in pits surrounding the building fronting onto Gun Street; these rubbish pits dug in the backyard of the building were used to discard the waste horncores after the sheaths had been removed. The actual number of cattle represented by the fragmented horncores was considerably lower than the fragment count suggests; Table 2 displays the MNI estimate for each of the phase 5 contexts that contained cattle horncores.

Context	MNI	Context	MNI
293	1	318	1
294	8	320	1
297	1	322	10
301	15	329	1

Table 2: Minimum number of individuals represented by the cattle horncores from phase 5 contexts.

Two horncores were recovered from context (318) the fill of a beam-slot from a separate building. Additionally a number of flattened horn plates, given small find 124, were recovered from another beam slot of the same building suggesting that this additional building was also involved in the horn working industry to a certain extent during the 17th century.

Reconstruction of the industrial process

Whilst there is clear evidence for the disposal of waste generated during the preparation of horn, none of the features excavated at the site could be attributed to an actual processing area. The pits may have originally been part of the production sequence; but there was certainly nothing on the scale of the 14th century horner's workshop uncovered

⁷⁵ Eadle 1971

⁷⁶ Fisher 1936

during excavations at Hornpot Lane in York⁷⁷. At Hornpot Lane a number of shallow clay and timber-lined pits arranged around a floor surface had been found. Similarly clay-lined pits dating to the 16th and 17th century were found in Stamford and interpreted as soaking vats associated with horn preparation⁷⁸. It is unlikely that horn-soaking pits were located outside the excavated area at Artillery Lane since the waste clearly surrounded the building fronting onto Gun Street with the backyard of the building more or less covered by the excavation trench. An alternative method of removing the horn sheath from the horncore would be to simply pile the horns and wait for the bond between the core and the sheath to breakdown un-accelerated.

The faunal can help reconstruct other aspects of the industry such as the selection of raw material in terms of the ages and sexes of cattle. Aging of cattle into broad categories is possible from the texture of horn cores⁷⁹, the age classes represented by the horn cores fragments from phase 5 are shown in Table 3 in the suggested age groups given by Armitage⁸⁰. A number of the fragments of horn cores could not be assigned to a specific age group because not enough of the original horn core survived to be definitely attributed to one of the different age classes.

Age class	Suggested age range (years)	Number specimens
Juvenile	1-2	0
Sub-adult	2-3	2
Young adult	3-7	6
Adult	7-10	24
Old adult	10+	34
Indeterminate		71

Table 3. Frequency of cattle horn cores from different age classes of animal in phase 5; indeterminate fragments were too small for the method of aging the horncore to be accurate.

Although the horn cores from older animals were the most frequently represented, this may not be a reflection of the availability of cattle from the butchers but of the horner's preference for the horns from different animals. Ox horn was valued at a significantly higher price than cow horn because the size of pieces of horn that could be manufactured from them would have been larger⁸¹ and similarly older cattle would have provided a better horn. Based on the definitions given by Armitage⁸² on the lengths of horn cores, short and medium-horn cattle were present in the sample from phase 5. The relative infrequency of complete examples makes it difficult to provide a more accurate profile of the types and sex of animal present although measurements are provided in table 5.

In terms of the preparation techniques utilised at the site only saws were used in this phase. The placement of this modification on ten cores exhibiting traces of this process imply that it was performed to cut the element into suitable portions ready for use once the sheath was separated from the core.

⁷⁷ Wenham 1964

⁷⁸ Cram 1982

⁷⁹ Armitage 1982

⁸⁰ Armitage 1984

⁸¹ Armitage and Clutton-Brock 1976

⁸² Armitage 1982a

Phase 6: 18th century

The pattern of land utilisation between phase 5 and phase 6 appears to have been similar and represents continued use of the same building for horn working. Again articulating bones of dog and cat are frequent with low MNI and probably the result of similar disposal practices as in the phase 5.

Two dog humeri, both from context (322) and probably from the same animal since they were of similar size but opposite sides of the body, showed evidence of osteoarthritis. The right humerus displayed extensive new bone around the distal articulation and erbanation on the medial side of the trochlea. On the left humerus the new bone growth was more pronounced across the lateral side and the erbanation was more confined to the region lateral of the trochlea on the side of the septal aperture. This is a relatively unusual placement of the modification of the bone caused by the wear of bone surfaces onto one another and could have been the result of a traumatic injury causing a misalignment of the limb-bones.

Evidence of horn working in the 18th century at Artillery Lane

Of particular interest is a horn-lined pit [327]; this feature contained material typical of a cesspit although horn cores were also found in the fill. The lining of the pit would apparently have been to support reinforce the sides of the feature but it is worth noting the manner of construction since the skeletal waste was laid very carefully. The rectangular pit, with rounded corners, was lined from the base with layers of horn cores all facing in the same direction within the individual strata. Each core had its tip pointing to the external surface and was orientated that it neatly fitted into the curvature of adjacent cores. A segment of the frontal bone remained attached to the horncore and forming the internal side of the lining. Occasionally specifically selected small horn cores were placed into the gaps created as the tips of the cores radiated apart at the corners. The construction technique is similar to the method of building walls from cattle horncores described by Kalm in the eighteenth century.

“The quick is so cut off that part of the skull commonly goes with it. The quicks are then set quite close beside one another over the earth that has been upcast for the wall, and this so that the larger and thicker ends of the quick, or that to which a portion of the skull is attached, is turned outwards or lies just in the face of the side of the wall. In this way two rows of quicks are laid, viz.: one row on one side of the wall, and the other on the other, so that the small ends of the horns quicks meet in the middle. Over this is afterwards cast earth about six inches thick, when again in the aforementioned manner is laid a *stratum* of double-ranged ox-horn quicks” (Kalm 1748:69-70).

Only a fraction of the horn cores were taken from the site for analysis but taking into account that the western side of the pit had been truncated away by a modern wall, nearly 700 horncores would have been present based upon the number of horncores counted during the excavation of part of the feature. The level from which the pit was excavated was apparently substantially lower than the height of the ground surface when the pit was originally dug and perhaps as many as 1000 horncores lined the feature. The volume of the cesspit was not that substantial but additional horncores were also retrieved from the fill. Overall the number if horncores present suggests that the hornworking trade in the earlier 18th century had increased and the horners employed in the workshop would have been producing large quantities of the material. Whilst the majority of the horn cores from the construction of the pit lining where complete the fill contained some sawn into sections. Particularly interesting is the evidence that tips of the cores were sawn off and a number of these were found within

the fill. Since the tips are solid horn they were often sawn off early in the production process and used immediately to make small solid items. This practice also reduces the length of time taken for the bonds holding the horncore and sheath together to decay since the decomposition is initiated from both the base and the tip⁸³. One horn core had a sawing initiation point discontinued from which it was possible to measure the width of the saw used as 2.0mm.

A single core displayed a number incisions around the base which would have been made by tracing around the base with a knife to assist in the removal of the sheath. Since this is the only example of this modification it seems that generally the added effort was not required to separate the two elements.

Bearing in mind the comments given on the sample of horn cores taken from the lining and the possible selectivity in the incorporation of horn cores, the material from phase 6 shows the presence of small, medium and long horned cattle. The age of cattle represented appears to be less restricted during phase 6 although the majority are from adults.

Age class	Suggested age range (years)	Number specimens
Juvenile	1-2	0
Sub-adult	2-3	13
Young adult	3-7	30
Adult	7-10	28
Old adult	10+	23
Indeterminate		4

Table 4. Frequency of cattle horn cores from different age classes of animal in phase 6.

Phase 7: Late 18th – 19th centuries

The animal bone from phase 7 originated from two contexts; the material from (276) a floor make-up layer was typical of domestic refuse. Dump layer (58) contained a number of cattle horn cores including three which were dissected into portions by sawing; the material may well be redeposited material from the horn working industry that was present in the previous phases.

Evidence for bone working in Phases 6-8

Descriptions of the worked bone from post-medieval contexts are given in Table 5. In addition to finished items there were a number of off-cuts from the bone working process implying that the actual process of manufacture was also practiced in the area. This interpretation is based not only on the location of modifications to the bone, which are not consistent with butchering, but the use of the saw throughout the different phases. There is no evidence that butchers prior to the 18th century used saws and “cutting with a saw is in itself indicative of the use of a somewhat specialised tool-kit”⁸⁴. Bone working in the post-medieval period was not a specialised trade; whilst there was the potential for specialist bone workers, the tradition seems to have been involved craftsmen producing certain functional groups of artefacts in a variety of raw materials.

Phase 8: Modern

A minimal quantity of animal bone was present in modern deposits.

⁸³ MacGregor 1991

⁸⁴ MacGregor 1991

Discussion and recommendations for further research

From a zooarchaeological perspective most interesting aspect of the Artillery Lane site relates to the horn-working industry of post-medieval London. The location of the site would have been ideally placed to recoup horns from the butchers of Aldgate and confirms historical evidence of the importance of the horn working industry in the streets around Petticoat Lane. It seems that the successive occupants of the building fronting onto Gun Street identified by the excavation were men of this trade and evidently producing large quantities of horn. In addition the presence of horn sheets from a second building could indicate later stages in the production process whereby the flattened horn sheets were split ready for use as lantern panes. This research should be complemented by historical research concerning this trade. The assemblage from Artillery Lane will also provide an important source of metrical data for the analysis of the cattle breeds in post-medieval London and the potentially selective utilisation of cattle horns by hornworkers. The horners company pooled purchasing of raw material with selected members responsible for obtaining the raw material to be distributed amongst its members accordingly. In 1464 the company was given the right of purchase over all rough horn in the City of London or within 24 miles⁸⁵. It will be worth considering these rules governing the supply of horns to the hornworkers and comparing the sample of horncores from Artillery Lane to other sites. Additionally, comparison with other assemblages will allow discussion the standardisation of hornworking techniques and production methods.

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⁸⁵ Robertson 1989

Appendix

Phase	Context	Element	Species	Description
5	297	Longbone shaft	Cow-sized	A bone working off-cut that was a portion of shaft sawn into a segment 49mm long.
5	301	Rib	Cow-sized	A least five chops were made to the anterior border of the rib producing a saw tooth pattern partially down this edge.
6	308	Femur	Sheep	A series of deep cuts circumscribe the shaft of the bone at the mid point, this could have been preparation for working into a ring that was never completed.
6	308	Metatarsal	Sheep	Sawn through the middle from a medial to lateral direction with last 1.8mm snapped off; probable bone working waste.
6	332	Indeterminate	Indeterminate	Fine bone handle but broken at the neck where it tapers in. Highly polished. Small find number 42
6	345	Metatarsal	Cattle	Sawn thorough leaving only the proximal 48mm of the bone. Traces of sawing where only just visible suggesting that this surface was then smoothed over. A hole had been drilled down through the centre of the proximal articulation (width=12.0mm).
6	359	Longbone shaft	Sheep-sized	Bone ring with external diameter of 28.3mm, thickness of 4.5mm and depth of 3.6mm. Tapers to wards the external surface. Small find number 110
7	58	Metacarpal	Cattle	Sawn through the mid shaft, probably an off-cut
7	98	Humerus	Cow-sized	A disc of bone 18mm in width was sawn from part of a humerus proximal shaft (based on the cross section) of a cow-sized animal. The bone came from a young animal since the surface was still porous. The start of another saw cut reveals the width of the implement was 1.1mm; probable bone working waste.
7	98	Rib	Cow-sized	Off-cut of rib sawn through leaving a portion 66mm in width. Small find number 63
7	98	Humerus	Sheep-sized	Bone off-cut although measuring 9.5mm in width its cross-section is typical of a humerus, probably sheep/goat but no anatomical features left to allow species identification. Small find number 64.
7	212	Longbone shaft	Cow-sized	Sawn out section of long bone with the sawn edges smoothed; length is between 72 and 74mm. The shaft is broken longitudinally so the width is only 21mm. Appears to be evidence pressure flaking on the external side of the sawn edges that may relate to use rather than post-depositional damage.
7	276	Metatarsal	Cattle	Sawn section of mid-shaft measuring 91mm in length, longitudinal break on one side and sawing on the other halved the bone. All sawn section appear to have been smoothed afterwards.
7	276	Metatarsal	Sheep	Sawn through just below the midpoint from the medial to the lateral side.

Table 5. Descriptions of worked bone from phases 5 through 7.

Phase	Length of external curvature	Circumference around base	Maximum diameter of base	Minimum diameter of base
5		150	48.4	40.0
5	225	172	56.3	47.8
5	240	170	57.4	44.7
5		185	63.0	53.3
5		165	55.8	47.1
5		185	63.0	51.9
5		195	61.8	54.5
5		135	45.0	36.9
5		160	51.6	47.4
5		175	57.6	50.0
5	180	150	49.5	42.8
5	170	150	50.0	43.1
5			46.1	43.3
5		162	55.8	45.0
5	320			
5	230	150	47.7	41.7
5		196	65.5	53.4
5		185	61.5	51.9
5		148	48.2	39.8
5	218	165	55.0	45.6
5		160	54.3	48.4
5		205	64.2	59.3
5	195	160	52.4	46.6
5		204	72.9	56.7
5		165	57.2	48.8
5		185	62.2	51.7
5		190	63.3	52.5
5		155	53.1	43.9
5		168	57.5	45.3
5	162	162	49.1	43.8
5	222	152	48.6	44.3
5		205	70.0	57.8
6		245	83.9	70.9
6	175	145	48.6	38.5
6		230	81.6	66.3
6		148	48.0	38.4
6		215	74.4	65.5
6		170	60.7	44.9
6		215	72.4	55.7
6		160	55.1	39.2
6	180	170	55.0	50.3
6		145	50.2	41.7
6		235	80.1	70.7
6	290	212	71.4	62.9
6		265	89.5	78.7
6	415	250	82.9	72.9

6		220	74.5	63.5
6		218	72.6	61.3
6		230	73.7	67.2
6		206	66.3	61.0
6		258	86.5	72.0
6	140	135	44.2	37.4
6	265	178	59.0	50.4
6	215	170	55.5	42.0
6		205	69.0	55.9
6		245	82.6	69.8
6	320	200	70.1	54.9
6	202	166	58.2	
6		235	80.2	68.0
6	305	165	58.1	45.3
6		226	77.8	63.2
6		218	72.2	60.9
6	235	173	59.9	46.9
6		180	60.0	56.6
6		218	72.6	65.1
6		270	926.0	71.7
6		178	62.7	50.6
6			85.0	61.5
6		215	73.9	56.7
6		290	96.2	81.5
6		195	73.1	51.0
6		249	86.7	63.0
6		165	56.4	43.8
6	166	130	42.5	35.5
6		172	61.2	42.2
6		190	64.4	57.7
6		215	75.1	59.7
6	235	158	51.6	45.9
6		194	66.1	56.5
6		215	69.2	64.0

Table 6. Measurements taken on the cattle horn cores from phases 5 and 6 given to three significant figures

Appendix 10: GLASS ASSESSMENT

By S Carter

The glass assemblage is exclusively post-medieval in date and will not require further analysis, but will require description for the publication of the post-medieval component of the excavations.

Number of boxes: 7

Number of fragments: 346

Number of contexts: 20

Of the 346 glass fragments recovered from the excavation, 297 (85%) were from identifiable vessels, 5 (1%) were from miscellaneous glass objects, 6 (2%) were from unidentifiable vessels and 38 (11%) were window glass. Of the identifiable vessel glass fragments the majority (265 fragments or 89%) were from utilitarian vessels, mostly wine bottles but also other types of bottles, phials, medicinal bottles, stoppers from medicinal bottles, and pharmaceutical glass tubes. The remaining 32 fragments (11%) were from tablewares. These were mostly drinking vessels (28 fragments) and vases (4 fragments).

The bottles range in date from the 17th century to the late 19th and maybe even 20th century and include some interesting imported spa bottles. The drinking vessels have an even broader date range, with the earliest example from the late 16th century and the latest being 19th-20th century wares. These drinking vessels include two degraded but identifiable beakers from the 16th to early 17th century and two unusual late 17th stemmed wine glasses.

CATALOGUE

Bottles

Context 58: 2 adjoining fragments of weathered, natural green glass from the base and sides of a wine bottle with a slight kick and a visible pontil scar. Late 17th century.

Context 58: Almost complete wine bottle in weathered, natural green glass with straight sides, a high kick and a visible pontil scar. c.1750-1770.

Context 58: 1 fragment of weathered, natural green glass from the base and body of a wine bottle with a kick and a visible pontil scar. c.1710-1720.

Context 58: 1 fragment of weathered, natural green glass from the base of a wine bottle with a kick and a visible pontil scar. Late 17th-Early 18th century.

Context 58: 1 fragment of weathered, natural green glass from the base of a wine bottle with a high kick. Mid 18th century.

Context 58: 1 fragment of weathered, natural green glass from the shoulder and neck of a wine bottle 18th century.

Context 58: 1 body fragment of weathered, natural green glass from a wine bottle. 17th-18th century.

Context 98: 2 adjoining fragments of natural pale green glass from the neck, rim and shoulder of a case bottle. 17th century.

Context 98: 1 fragment of natural dark green glass from the base of a wine bottle with a high kick and a sagged base. Late 18th century.

Context 98: 1 fragment of natural green glass from the base of a straight-sided wine bottle with a high kick, sagged base and visible pontil scar. Late 18th century.

Context 98: 1 fragment of natural green glass from the base of a wine bottle with a high kick, sagged base and visible pontil scar. Late 18th century.

Context 98: 1 fragment of natural, dark green glass from the base of a straight-sided wine bottle with a high conical kick and a sagged base. Early 19th century.

Context 98: 4 adjoining fragments from the base and body of a wine bottle with a high kick, visible pontil scar and a sagged base. Late 18th century.

Context 98: 1 fragment of natural dark green glass from the neck and rim of a wine bottle with a double string rim. Late 18th century.

Context 98: 2 adjoining fragments of natural dark green glass from the neck of a wine bottle. Late 18th century.

Context 98: 4 body fragments of natural dark green glass from wine bottles, probably those above. 18th century.

Context 98: 2 fragments of natural green glass from wine bottles 18th-19th century

Context 98: 3 adjoining fragments of natural pale green glass from the body, shoulder, neck and rim of a small moulded bottle with a wide, flattened string rim. 18th-19th century.

Context 98: 1 fragment of natural pale green glass from the neck and rim of a small moulded bottle with a wide, flattened string rim. 18th-19th century.

Context 98: 1 fragment of natural pale green glass from the rim of a small bottle with a string rim. 18th-19th century.

Context 98: 1 fragment of natural pale green glass from the base of a moulded bottle Late 18th-19th century.

Context 98: 1 fragment of natural pale green glass from the base of a bottle with a high kick. 18th century.

Context 98: 1 fragment of natural pale green glass from the base of a small moulded bottle with decorative indents around the base. Late 18th-19th century.

Context 98: 1 fragment of colourless glass from the base of a small part-moulded bottle. Has vertical ribs around it and a pontil scar on the base indicating that the rim was finished by hand. 18th-19th century.

Context 98: 12 body fragments of weathered colourless glass from wine bottles. 18th-19th century.

Context 98: 2 adjoining fragments of weathered, natural green glass from the base of a wine bottle with straight sides and a kick. Late 18th-Early 19th century.

Context 98: 5 adjoining fragments of natural green glass from the body of a straight sided wine bottle. 18th-19th century.

Context 98: 1 fragment of natural green glass from the neck and rim of a wine bottle with a flattened, wide string rim, possibly French. Mid 19th-20th century.

Context 98: 1 fragment of natural green glass from the shoulder, neck and rim of a wine bottle with an applied double string rim. Late 18th century.

Context 98: 1 fragment of natural green glass from the neck and rim of a wine bottle with an applied double string rim. Late 18th-early 19th century.

Context 98: 1 fragment of natural pale green glass from the body of a straight sided bottle, probably a sauce bottle. 19th century.

Context 98: 1 fragment of natural pale green, bubbled glass from the neck and rim of a small bottle with an applied string rim. Probably a sauce bottle. 19th century.

Context 147: 1 fragment of weathered, natural green glass from the base of a wine bottle with a kick and a visible pontil scar. Late 18th-early 18th century.

Context 147: 1 fragment of weathered, natural green glass from the neck of a wine bottle. 17th-18th century.

Context 147: 5 body fragments of weathered, natural green glass from wine bottles. 17th-18th century.

Context 240: 8 adjoining fragments which form an almost complete moulded bottle in natural pale green glass with "IMPERIAL PINT" embossed around the shoulder. Probably a milk bottle. Late 18th-19th century.

Context 240: almost complete moulded bottle in natural pale green glass with "LEA AND PERRINS" embossed vertically up the body, "WORCESTER SAUCE" embossed around the shoulder and the letter "A. C. B. Co" embossed on the base. 19th-20th century.

Context 240: 2 fragments of natural pale green glass with surface patina from the necks and rims of small moulded sauce bottles. 19th-20th century.

Context 240: 1 fragment of natural green glass from the neck and rim of a wine bottle with a bulbous neck and a double string rim. Early 19th century.

Context 255: 1 fragment of weathered, natural green glass from the body of a wine bottle. 17th-18th century.

Context 265: 1 fragment of natural green glass from the body of a wine bottle. 17th-18th century.

Context 268: 2 adjoining fragments from the shoulder, neck and rim of a wine bottle in weathered, natural green glass with a conical neck and a triangular applied string rim. Late 17th-early 18th century.

Context 268: 1 fragment of weathered, natural green glass from the shoulder, neck and rim of a wine bottle. With a short conical neck and a triangular applied string rim. Late 17th-early 18th century.

Context 268: 1 fragment of weathered, natural green glass from the base of a wine bottle with a high kick and a visible pontil scar. Late 17th-early 18th century.

Context 268: 1 fragment of weathered, natural green glass from the base of a wine bottle with a high kick and a visible pontil scar. Late 17th-early 18th century.

Context 268: 1 fragment of weathered, natural green glass from the base of a wine bottle with a high kick and a visible pontil scar. Late 17th-early 18th century.

Context 268: 2 adjoining fragments of weathered, natural green glass from the base of a wine bottle with a kick. Late 17th century.

Context 268: 7 body fragments of weathered, natural green glass from wine bottles. 17th-18th century.

Context 276: 1 fragment of weathered, natural green glass from the base of a wine bottle with a slight kick and a visible pontil scar. Late 17th century.

Context 276: 1 fragment of weathered slightly bubbled, natural green glass from the body of a wine bottle. 17th-18th century.

Context 276: 2 fragments of badly weathered natural green glass from the body of wine bottles. 17th-18th century.

Context 286: 3 body fragments of weathered, natural green glass from wine bottles. 17th-18th century.

Context 301: 1 fragment of weathered, natural green glass from the neck of a bottle with a thin neck and a cracked off rim. Probably a small spa bottle, possibly a European import. 17th-18th century.

Context 308: 2 fragments from the bases of two wine bottles in weathered, natural green glass with a kick. Early-mid 18th century.

Context 308: 1 fragment from the base of a wine bottle in weathered, natural green glass with a high kick. 18th century.

Context 308: 1 fragment of natural, slightly bubbled, green glass from the base of a wine bottle. 18th century.

Context 308: 1 fragment of weathered, natural green glass from the base of a wine bottle with a high kick and straight sides. Mid-late 18th century.

Context 308: 2 adjoining fragments from the body, neck and rim of a wine bottle in weathered, natural green glass with a narrow conical neck, applied triangular string rim and straight sides. Mid 18th century.

Context 308: 1 fragment from the neck and rim of a wine bottle in weathered, natural green glass with a thin conical neck and applied string rim. Late 17th-Mid 18th century.

Context 308: 1 fragment of weathered, natural green glass from the shoulder, neck and rim of a wine bottle with a tall, thin conical neck and a triangular applied string rim. Mid 18th century.

Context 308: 2 adjoining fragments of natural dark green, bubbled glass from the shoulder, neck and rim of a wine bottle with a short conical neck and an applied triangular string rim. Early 18th century.

Context 308: 7 fragments of weathered, natural green glass from wine bottles. 17th-18th century.

Context 308: 1 fragment of natural dark green, bubbled glass from the body of a wine bottle. 18th century.

Context 320: 1 fragment of weathered, natural green glass from the rim of a large wine bottle with an applied string rim. Mid 17th century.

Context 323: Almost complete wine bottle in natural dark green, slightly bubbled glass with a kick base and a visible pontil scar and an applied, triangular string rim. c.1730-1750.

Context 323: 9 adjoining fragments of natural, dark green glass from the base, body, neck and rim of a straight-sided wine bottle. With a high kick, visible pontil scar, conical neck and applied triangular string rim. Early-Mid 18th century.

Context 323: 2 adjoining fragments from the base and body of a straight-sided wine bottle in weathered, natural green glass with a high kick and a visible pontil scar. Mid-Late 18th century.

Context 323: 4 adjoining fragments of weathered, natural green glass from the base and body of a straight-sided wine bottle with a high kick and a visible pontil scar. Mid-Late 18th century.

Context 323: 3 adjoining fragments of weathered, natural green glass from the body of a globular wine bottle. 17th-18th century.

Context 323: 1 fragment of weathered, natural pale green glass from the neck and rim of a bottle with an applied string rim. The string rim has been applied unevenly and has ridges typical of German bottles from c.1660. The bottle has a seal on the neck, immediately below the string rim, with a crest bearing three lozenges at the base, a rampant animal, possibly a lion to the upper left (dexter) and at least three horizontal bars

to the upper right (sinister). There is a crown above the crest and some lettering around it, which reads "POUHON IN SPA" This water bottle is from the Belgium town of Spa, which was known for hundreds of years for its drinking and bathing waters. Pouhon was the first source discovered in this town and the water was known as "Eau Rouge" because of the iron content which gives the water its colour. Mid 17th century. Other examples of Pouhon In Spa bottles have been excavated by PCA at Fulham Island (VAC01 context 537) and Kew Palace (KEW4 context 8). Illustrate.

Context 323: 1 fragment of natural green glass from the neck and rim of a wine bottle with an applied string rim. 18th century.

Context 323: 1 fragment of weathered, natural green glass from the neck and rim of a wine bottle with a short conical neck and an applied string rim. Late 17th-Early 18th century.

Context 323: 1 fragment of weathered, natural green glass from the neck and rim of a wine bottle with a short conical neck and an applied string rim. Early 18th century.

Context 323: 1 fragment of weathered, natural green glass from the neck and rim of a wine bottle with a tall neck and an applied, triangular string rim. Mid-Late 18th century.

Context 323: 1 fragment of badly weathered natural green glass from the neck of a wine bottle. 17th-18th century.

Context 323: 5 body fragments of natural green glass from wine bottles. 17th-18th century.

Context 323: 4 body fragments of weathered natural green glass from wine bottles. 17th-18th century.

Context 324: 2 fragments of weathered, natural green glass from a spa bottle with flattened sides. The neck is long and very thin and has marks indicating that the glass was stretched during manufacture. Possibly a European import. 17th-18th century.

Context 346: 1 fragment of weathered, natural green glass from the shoulder, neck and rim of a wine bottle with an applied string rim. Late 17th-early 18th century.

Context 359: 1 fragment of weathered, natural green glass from the base of a wine bottle with a slight kick. Mid 17th century.

Context 359: 1 fragment of weathered, natural green glass from the base of a wine bottle with a slight kick and a visible pontil scar. c.1660-1670.

Context 359: 1 fragment of weathered, natural green glass from the base of a wine bottle with a slight kick and a visible pontil scar. c.1640-1670.

Context 359: 1 fragment of weathered, natural green glass from the base of a wine bottle with a slight kick and a visible pontil scar. Late 17th-early 18th century.

Context 359: 4 fragments of weathered, natural; green glass from the bases of wine bottles with slight kicks. 17th-18th century.

Context 359: 7 body fragments of weathered, natural green glass from wine bottles. 17th-18th century.

Context 603: 1 fragment of weathered natural green glass from a wine bottle. 17th-18th century.

Phials and other pharmaceutical bottles

Context 58: 1 fragment of natural blue-green glass from the base of a phial with a kick and a visible pontil scar. 18th century.

Context 98: 6 fragments of weathered, natural pale green glass from an octagonal-sectioned medicinal bottle with "DAFFY'S ELIXIR" embossed on one side. Daffy's Elixir was advertised from the 1680s till the 19th century and appears to have been sold in bottles of unspecified shape until the Victorian period when "True Daffy's Elixir" was sold in octagonal bottles. 19th century. (Ref English Glass Bottles for the Collector, G Wills 1974)

Context 98: 5 fragments, 4 adjoining of natural pale green glass from the base and body of an octagonal-sectioned medicinal bottle. 19th century.

Context 98: 1 fragment of pale green glass from the neck and rim of a small medicinal bottle with an applied string rim. 18th-19th century.

Context 98: 1 fragment of green glass from the base and body of a phial with a rounded kick. Mid 18th century.

Context 98: 1 fragment of colourless glass from the neck, rim and body of a small phial with a flat everted rim. Mid-Late 18th century.

Context 98: 1 fragment of colourless glass from the base of a phial with a kick and a visible pontil scar. Mid-Late 18th century.

Context 98: 1 fragment of weathered colourless glass from the base of a phial with a slight kick and a visible pontil scar. Mid-Late 18th century.

Context 98: 1 fragment of colourless glass from the shoulder and neck of a small phial. Early-Mid 19th century.

Context 98: 1 fragment of weathered colourless glass from the base of a phial. 18th-19th century.

Context 98: 1 fragment of natural pale blue-green glass from the neck and rim of a small medicinal bottle. 18th-19th century.

Context 98: 1 fragment of colourless glass from the body of a small moulded, rectangular-sectioned medicinal bottle. Late 18th-19th century.

Context 98: 2 body fragments of thin colourless glass from phials. 18th-19th century.

Context 98: 1 fragment of blue glass from the base of a small medicinal bottle. 19th century.

Context 98: 1 fragment of weathered, colourless glass which forms the body of a phial with a slight kick and a visible pontil scar. Mid-Late 18th century.

Context 98: 1 fragment of weathered, colourless glass from the neck, rim and body of a small phial with a short neck and a flat everted rim. Mid-Late 18th century.

Context 98: 1 fragment of weathered, colourless glass from the body, neck and rim of a phial with a short neck and flat, everted rim. Mid-Late 18th century.

Context 98: 4 fragments, 3 adjoining, of thin colourless glass from the body of a phial, possibly same as above. Mid-Late 18th century.

Context 98: 1 fragment of dark blue glass from the neck and shoulder of a bottle 19th-20th century.

Context 98: 1 fragment of natural pale green glass from the base and body of an octagonal-sectioned medicinal bottle with a slight kick and a visible pontil scar. Has the letters "& N 10...CHUR...YARD...LONDON" embossed on one side. 18th-19th century.

Context 98: 1 fragment of pale blue glass from the base of a small cylindrical bottle with a slight kick and the letters "...TTLE C..." embossed on the base. 19th century.

Context 98: 2 fragments of weathered, thin, dark blue glass from the body of a poison bottle. 19th-20th century.

Context 98: 2 adjoining fragments of colourless glass from a small bottle with optic-blown wrythen ribs, the top of the bottle has been cracked off roughly indicating that it had a metal collar. Probably a scent bottle or snuff holder. 19th-20th century.

Context 240: Almost complete moulded, rectangular-sectioned medicinal bottle in weathered, pale blue glass with embossed horizontal lines on one. 19th-20th century.

Context 240: 3 adjoining fragments from a small, almost complete moulded bottle in colourless glass with a short neck and a rolled over rim. Probably a pomade bottle. 19th-20th century.

Context 240: Almost complete moulded phial in pale blue glass. 19th-20th century.

Context 240: 2 complete glass stoppers in dark blue glass with octagonal-shaped top from poison bottles. 19th-20th century.

Context 240: 3 complete glass stoppers in natural pale green glass with octagonal-shaped tops, from pharmaceutical bottles. 19th-20th century.

Context 240: 2 complete glass stoppers in natural pale green glass with flat tapered tops. 19th-20th century.

Context 240: 1 almost complete glass stopper in pale blue glass with a flat tapered top. 19th-20th century.

Context 240: 1 complete glass stopper in pale blue glass with a disc-shaped top. 19th-20th century.

Context 240: 2 almost complete colourless glass stoppers with a flattened rectangular top. 19th-20th century.

Context 240: 1 complete small stopper in colourless glass with a flattened square-shaped top. 19th-20th century.

Context 240: 2 cylindrical colourless glass fragments which are parts of glass stoppers for pharmaceutical bottles. 19th-20th century.

Context 276: 1 fragment of natural pale blue-green glass from the base of a phial with a conical kick and a visible pontil scar. Mid 17th –18th century.

Context 308: 1 fragment of natural pale green glass from the base of a phial with a slight kick and a visible pontil scar. 18th century.

Context 308: 1 fragment of natural pale green glass from the base of a phial with a kick and a visible pontil scar. Mid 17th- 18th century.

Context 323: 2 adjoining fragments of natural pale green glass from the shoulder, neck and rim of a phial with a short neck and a flat, everted rim. 18th century.

Context 323: 2 fragments of natural pale blue-green glass from the bases of two phials with kicked bases and visible pontil scars. Mid-Late 18th century.

Context 323: 9 body fragments of natural pale blue-green glass from phials. Mid 17th-18th century.

Context 323: 1 fragment of natural pale green glass which is from a tube, probably part of a pharmaceutical instrument. 18th–19th century.

Context 324: 1 fragment of thin, natural pale green glass which forms a thin tube, narrow at the centre and flaring out at each end, possibly for pharmaceutical use. 18th-19th century.

Context 324: 11 fragments of thin, natural green glass from a thin glass tube, probably for pharmaceutical use. 18th-19th century.

Context 346: 1 fragment of natural pale blue-green glass from the base of a large phial with a high kick and a visible pontil scar. Late 17th-Mid 18th century.

Context 359: Complete, small phial in natural pale green glass with a short neck and flat everted rim. 17th century. Illustrate.

Context 359: 1 fragment of natural pale green glass from the shoulder, neck and rim of a phial with a short neck and flat everted rim. 18th century.

Context 359: 1 fragment of natural green glass which forms a narrow glass tube which is narrowest in the centre and flares out at each end. Probably for pharmaceutical use. 18th-19th century.

Drinking Vessels

Context 98: 1 fragment of colourless glass from the base of a tumbler with a flat base and a visible pontil scar. 18th-early 19th century.

Context 98: 1 fragment of weathered, colourless glass from the base of a tumbler with a flat base and a visible and crude pontil scar. 18th-Early 19th century.

Context 98: 1 fragment of colourless glass from the body of a tumbler. 18th-19th century.

Context 98: 1 fragment of colourless glass from the foot, stem and base of bowl of a wine glass with a solid conical foot, plain, short stem and a wide bowl. With a visible pontil scar on the base. Mid 19th century.

Context 98: 1 fragment of weathered colourless glass from the foot, stem and base of bowl of a wine glass with a plain conical foot, a simple knob, short stem and a bucket-shaped bowl. With a visible pontil scar on the base. Mid 19th century.

Context 98: 2 adjoining fragments of colourless glass from the foot, stem and bowl of a wine glass with a plain conical foot. The stem has a basal knob and a central angular knob with a stepped junction and a fluted, funnel bowl. This type of wine glass was fairly common in Victorian times. c. 1830-40. (see Hume 1976) Illustrate.

Context 98: 3 adjoining fragments of thin colourless glass with surface patina from the rim of a wine glass. 18th-19th century.

Context 98: 6 fragments, two adjoining, of thick, weathered colourless glass from the body and part of the handle of a tankard with vertical, mould-pressed ribs 19th century.

Context 240: 5 adjoining fragments of colourless glass from the pedestal and base of a moulded goblet or wine glass with a square solid foot with a hollow "lemon squeezer" internal moulding. 18th-19th century.

Context 276: 1 fragment of colourless glass with a grey tint from a beaker with optic-blown vertical ribs and thin horizontal trails in the same metal. Late 16th-Mid 17th century. Illustrate.

Context 346: 1 fragment of colourless glass from the foot and stem of a wine glass. The foot is folded with radiating ribs, the stem has an angular knob wrapped around the base of the pointed funnel bowl. This unusual wine glass is not a Ravenscroft design but the quality of the metal,(possibly soda glass) and the ribbed foot indicates that it is probably the product of another early lead crystal glasshouse, copying late 17th century styles. Late 17th century. Illustrate.

Context 359: 2 adjoining fragments of colourless glass from the foot and stem of a wine glass. The foot has radiating ribs, the stem has a rounded knob wrapped around the

base of the pointed funnel bowl. This unusual wine glass is not a Ravenscroft design but the quality of the metal, (probably lead crystal glass) and the ribbed foot indicates that it is probably the product of another early lead crystal glasshouse, copying late 17th century styles. Late 17th century. Illustrate.

Context 607: 2 adjoining fragments from the base of a small beaker, now weathered, in pale green glass with optic-blown vertical ribs and a pointed kicked base. The ribs may have been pinched at the top of the vessel into "nipped diamond waives" Possibly an import from Northern Europe. This form dates from the late 15th century but is more common in the 16th to early 17th century. Illustrate.

Context 607: 1 fragment of weathered pale green glass from a small beaker with optic-blown ribs and a pointed kicked base. The ribs may have been pinched at the top of the vessel into "nipped diamond waives" Possibly an import from Northern Europe. This form dates from the late 15th century but is more common in the 16th to early 17th century. Illustrate.

Vases

Context 98: 3 adjoining fragments of thick colourless glass from the base of a press-moulded vase with a hexagonal pedestal, with mould-pressed decoration on the body. 19th-20th century.

Context 240: 1 fragment of thick colourless glass from the base of a large jar. 19th century.

Miscellaneous

Context 98: 1 fragment of bark blue glass from a press-moulded oval-shaped dish. 19th-20th century.

Context 98: 1 fragment of colourless glass from the base of a small press-moulded vessel with small, petal-shaped feet. Probably an egg cup or cruet. 19th-20th century.

Context 147: 1 fragment of colourless glass which forms a droplet, probably waste from manufacture.

Context 240: Complete small cup from a candelabra in colourless glass with a ground base and sides. 19th century.

Context 240: 1 fragment of opaque white "milk glass" which is a narrow tube from an indeterminate vessel, possibly part of a flower holder or part of a light fitting. 19th-20th century.

Indeterminate Vessels

Context 98: 3 fragments of colourless glass from indeterminate vessels.

Context 98: 1 fragment of colourless glass with enamelled floral decoration from the base of an indeterminate vessel with a pedestal, possibly a vase. 19th century.

Context 147: 1 fragment of weathered colourless glass from an indeterminate vessel.

Context 322: 1 fragment of weathered colourless glass from an indeterminate vessel.

Window Glass

Context 98: 1 fragment from the crown of pale green window glass.

Context 98: 1 fragment of colourless window glass with a green tint.

Context 212: 1 fragment of colourless window glass with a blue tint.

Context 286: 1 fragment of pale green window glass.

Context 308: 3 fragments of weathered colourless window glass with a green tint. Both have evidence of where the comes were attached and grozing along two edges.

Context 308: 1 fragment of colourless window glass with a green tint and surface patina.

Context 323: 24 fragments of thin colourless window glass with a green tint. All are weathered and three fragments have evidence of where the comes were attached. Two fragments have grozing along one edge.

Context 323: 3 fragments of weathered colourless window glass with a green tint. All three have evidence of where the comes were attached and grozing along one edge.

Context 359: 3 fragments of colourless window glass with a green tint and some surface patina.

POTENTIAL AND RECOMMENDATIONS

Recommendations for further work should include further study of the two 16th-17th century beakers (context 607) which may be European imports in order to ascertain their provenance. Also, the two unusual stemmed wine glasses (contexts 359 and 346) warrant further work to see if parallels can be found and possibly to locate the glass house where they were manufactured. The presence of at least three spa bottles, especially the sealed Pouhon bottle also warrants further study and comparison with other spa bottles found in London.

Illustrations:

Context 323: Pouhon spa bottle

Context 98: typical Victorian stemmed wine glass

Context 276: beaker with optic-blown ribs and trails

Context 346: stemmed wine glass

Context 359: stemmed wine glass

Context 607: 2 beakers

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Appendix 11: Environmental Archaeological Assessment

By A. Williams and N. Branch

Introduction

This report presents the results of an environmental archaeological assessment carried out by **ArchaeoScape** at Providence Row, Crispin St, Spitalfields, London, E1 (CPN01). Bulk and column samples were obtained from the site, and the following methods were used to assess their potential for further, more detailed, investigation of local environmental conditions, former vegetation cover and past subsistence practices at the site: (1) assessment of charcoal and other finds from each sample, and (2) assessment of fossilised pollen grains and spores. The aim of the assessment, therefore, was to assess whether the site provides any potential for significantly enhancing what is already known from the area.

Methods

Three methods were employed in the analysis of the samples from CPN01:

- (1) A bulk sample assessment, specifically of bone, charcoal, shells, and the 0.3 and 0.5mm flots recovered from a standard flotation procedure, were studied using a zoom stereomicroscope
- (2) A pollen-stratigraphical assessment. The pollen grains and spores were extracted as follows:

Approximately 1cm³ of sediment was taken at an 8cm resolution from column sample 13. The samples were put through standard pollen preparation techniques at Royal Holloway, University of London, compiled by Dr. Nick Branch. These techniques include flotation of the sample using Sodium Polytungstate (specific gravity of 2.0g/cm³). The slides were then scanned using a high-powered microscope (40x and 100x magnification).

- (3) Loss on ignition (LOI) was also carried out on column 13 at an 8cm resolution in order to assess the % organic matter content throughout the sequence. The results are presented in Table 1 and Figure 1.

Results

The results indicate that three samples have potential for further, more detailed, environmental archaeological work. Two of the samples, 4 and 6 (context nos. 248 and 216 respectively), both contain high quantities of bone and charcoal. The size of the charcoal fragments are, on the whole, less than 1cm³ and may require identification using a Scanning Electron Microscope. The bone, both burnt and unburnt, within the samples are also identifiable. Samples 4 and 6 contain a reasonable amount of well-preserved Mollusca. Sample 9 (context nos. 363 and 165) contains charred hazel nuts.

The LOI reveals that column sample 13 contains a very low amount of organic matter (between 3 – 5%). Nevertheless, pollen analysis of column 13 (contexts 388 and 389) contains a well-preserved diverse pollen assemblage, with the lower context having the best preservation. No coleopteran remains were found in the samples.

Recommendations

Sample 4 (context 248) comes from a Roman grave fill. Further analysis of the bone, shell and charcoal, would provide information on the local environment and vegetation surrounding the grave location.

Sample 6 (context 216) is re-deposited brickearth from a Roman grave fill. Further analysis of the charcoal and shells would provide more detailed information on the local environment and vegetation surrounding the grave cut.

The quantity of material obtained for flotation from samples 4 and 6 (1.3 and 0.75 litres respectively) was inadequate for a detailed assessment and therefore unsuitable for analysis. Further material will need to be obtained prior to the analysis phase.

Sample 9 (context 363/165) is a small amount of sediment from a Roman grave cut filled with re-deposited brickearth. No further analysis is necessary.

Many of the samples processed come from the interior of pots associated with Roman grave cuts. Further geochemical analysis of these deposits may reveal the use and contents of the pots prior to burial.

Column 13 comes from a Roman drainage ditch that has been re-cut during the Medieval period (contexts 388 and 389 – [390]). Despite the low LOI values, the pollen preservation in column 13 is very good. Assessment of the pollen assemblage indicates that the local environment surrounding the drainage ditch was a riparian ecosystem, generally dominated by *Salix* (Willow) and Poaceae (Grass), with open mixed deciduous woodland (*Quercus*, *Ulmus*, *Alnus*), herb-rich grassland (*Heliantheum*, *Galium* type, *Thalictrum*) and areas of open water (*Typha latifolia*, *Myriophyllum*). Further analysis is recommended.

OASIS ID: preconst1-9284

Project details

[Add or edit entries](#)

Project name Excavations at Artillery Lane, London Borough of Tower Hamlets

Short description of the project

This report details the results and working methods of an archaeological investigation undertaken by Pre-Construct Archaeology Ltd, at Providence Row, Crispin Street, Spitalfields, London Borough of Tower Hamlets. Elements of the northern Roman cemetery along Ermine Street outside the Roman city defences were identified, as were remains of the outer precinct of a medieval hospital. Features linked to the 16th century Artillery Ground, which was located in the area following the dissolution including parts of the boundary wall, were found. The latter appeared to be on a similar alignment and parallel to the early medieval precinct boundary ditch. Evidence of a sequence of 17th century, 18 and 19th residential developments and craft activities was also uncovered.

Project dates Start: 02-10-2001 End: 18-02-2005

Previous/future work No / No

Any associated project reference codes CPN 01 - Sitecode

Type of project Recording project

Site status Area of Archaeological Importance (AAI)

Current Land use Other 3 - Built over

Monument type SN Roman

Monument type UF Medieval

Significant Finds Ritual burial Roman

Significant Finds Grave goods Roman

Status Incomplete

Missing Fields Fields from the project type section

Project location	England	Add or edit entries
Site location	GREATER LONDON TOWER HAMLETS TOWER HAMLETS Excavations at Artillery Lane, London Borough of Tower Hamlets	
Postcode	E1	
Study area	1750 Square metres	
National grid reference	TQ 3352 8171 Point	
Height OD	Min: 11.70m Max: 12.00m	
Status	Incomplete	
Project creators		Add or edit entries
Name of Organisation	Pre-Construct Archaeology Ltd	
Project brief originator	Self (i.e. landowner, developer, etc.)	
Project design originator	Peter Moore	
Project director/manager	Peter Moore	
Project supervisor (other)	Alistair Douglas	
Sponsor or funding body (other)	Manhattan Loft Corporation & Osborne Group	
Status	Incomplete	
Project archives		Add or edit entries
Physical Archive recipient	LAARC	
Physical Archive ID	CPN 01	

Physical Contents	'Animal Bones', 'Ceramics', 'Environmental', 'Glass', 'Human Bones', 'Industrial', 'Leather', 'Metal', 'Worked bone', 'Worked stone/lithics'
Digital Archive recipient	LAARC
Digital Archive ID	CPN 01
Digital Contents	'Animal Bones', 'Ceramics', 'Environmental', 'Glass', 'Human Bones', 'Industrial', 'Leather', 'Metal', 'Stratigraphic', 'Survey', 'Worked stone/lithics'
Digital Media available	'Database', 'Images raster', 'Images vector', 'Spreadsheets', 'Survey', 'Text'
Status	Incomplete
Missing Fields	Paper Archive recipient, Paper Contents

Project bibliography 1

Grey literature (unpublished document/manuscript)

Add or edit entries



Title	Phased Summary and Assessment Document of the Excavations at Artillery Lane, London Borough of Tower Hamlets.
Author(s)/Editor(s)	Alistair Douglas
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Date	2005
Issuer or publisher	Pre-construct Archaeology Ltd
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