Archaeology South-East

ASE

A POST-EXCAVATION ASSESSMENT AND UPDATED PROJECT DESIGN REPORT

Centre Buildings Redevelopment
London School of Economics and Political Science
Houghton Street, City of Westminster
London, WC2A 2AE

NGR: 530796 181121
(TQ 30796 81121)

Planning Reference: 14/12261/FULL

ASE Project No: 160162
Site Code: HUG16
ASE Report No: 2017001
OASIS ID: archaeol6-273370

By Sarah Ritchie, MA ACIfA

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Abstract

This report presents the results of archaeological investigations carried out by Archaeology South-East at the Centre Buildings Redevelopment, London School of Economics and Political Science, Houghton Street, City of Westminster, London, WC2A 2AE between March and November 2016. The fieldwork was commissioned by the London School of Economics in advance of the redevelopment of the site.

The earliest materials identified were residual Roman pottery and building materials presumed to derive from Londinium c. 900m to the east, however, the most significant period of evidence is mid- to late Saxon date and appears to peak between c.750 and c. 850 AD. This is typified by quarrying, refuse disposal, an enclosure system, agricultural activities, fence lines and temporary structures which mostly appear to fall within functionally-specific zones.

A small amount of medieval archaeology was recorded, namely gullies and a possible external gravel surface, which corroborates with historic maps in showing the area of the site as predominantly open land.

The early post-medieval expansion of London saw the area developed with tenement houses, Clare Market and various Inns of Chancery. The recorded archaeological evidence suggests that development was both rapid and recurrent. The evolution of tenement houses continued until 1844 when the St Clement Danes School was built, covering much of the site. This was replaced with the modern London School of Economics building in 1932.

This report is written and structured so as to conform to the standards required of post-excavation analysis work as set out in the National Planning Policy Framework (HM Gov 2012) and older documents Management of Research Projects in the Historic Environment (MoRPHE), Project Planning Notes 3 (PPN3): Archaeological Excavation (English Heritage 2008). Interim analysis of the stratigraphic, finds and environmental material has indicated a provisional chronology, and assessed the potential of the site archive to address the original research agenda, as well as assessing the significance of those findings. This has highlighted what further analysis work is required in order to enable suitable dissemination of the findings in a final publication. It is suggested that this should take the form of a journal article in the London and Middlesex Archaeology Society.

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1.0 INTRODUCTION

1.1 Site Location

1.1.1 Archaeology South-East was commissioned by the London School of Economics (LSE) to carry out an archaeological excavation prior to the Centre Buildings Redevelopment, London School of Economics and Political Science, Houghton Street, City of Westminster, London, WC2A 2AE (NGR: TQ 30796 81121; Figure 1).

1.1.2 The site itself is a large sub-rectangular parcel of land measuring some 0.25Ha on the east side of Houghton Street, occupied by the East Building; Clare Market Building; The Anchorage; Clements Inn Passage and St. Clements Building east. The main excavation area consisted of the footprint of The East Building whilst in the remainder of the site, ground reduction was monitored by watching brief with a provision for archaeological excavation where required (Figure 2).

1.1.3 The site lies within The Strand Conservation Area, and is located c. 350m to the north of the River Thames; 150m to the south of Lincoln's Inn Field; 75m to the east of Kingsway and 50m to the north of the Aldwych (Figure 3).

1.2 Geology and Topography

1.2.1 According to the British Geological Survey (BGS, 2017), the underlying geology comprises London Clay, a sedimentary bedrock formed approximately 34 to 56 million years ago, in the Palaeogene period in a local environment dominated by deep seas.

1.2.2 The superficial geology of the area is represented by drift deposits of Langley Silt Complex (brickearth) and Thames river terrace deposits of Hackney Gravel. Both Terrace Gravels and brickearth were laid down in the Pleistocene period.

1.2.3 The existing ground level at the site slopes gently from c. 21.2m OD to the south of Houghton Street to 21.7m OD to the north. The basements of the buildings then present on site ranged in depth from 18.21m OD to 14.25m OD. These levels are shown on Figure 2, and represent the top of our dig level for each area.

1.3 Scope of the Project

1.3.1 Planning permission for the demolition of the existing buildings known as Clare Market, The Anchorage, the East Building, St Clements (partial) and Tower One (partial); and redevelopment to provide replacement interconnected academic facilities comprising a two storey basement, a part six storey / part 13 storey building and a seven storey core extension to the St Clements building and associated cycle parking and other works, all arranged around a new public square, was granted consent by Westminster City Council (ref: 14/12261/FULL & 16/05155/FULL). Condition 9 of the planning required that a programme of archaeological work be undertaken prior to the commencement of any construction work:

A) No development including demolition shall take place until the applicant (or their heirs and successors in title) has secured the implementation of a programme of archaeological investigation in accordance with a written scheme which has been submitted by the applicant and approved by the local planning authority in writing and a report on that evaluation has been submitted to the local planning authority.

B) If heritage assets of archaeological interest are identified by the investigation under Part A, then before development commences the applicant (or their heirs and successors in title) shall secure the implementation of a programme of further archaeological investigation in accordance with a Written Scheme of Investigation which has been submitted by the applicant and approved by the local planning authority in writing.

C) No development or demolition shall take place other that in accordance with the Written Scheme of Investigation approved under Part (B).

D) The development shall not be occupied until the site investigation and post investigation assessment has been completed in accordance with the programme set out in the Written Scheme of Investigation approved under Part (B), and the provision for analysis, publication and dissemination of the results and archive deposition has been secured.

Reason:
To protect the archaeological heritage of the City of Westminster as set out in S25 of Westminster's City Plan (July 2016) and DES 11 of our Unitary Development Plan that we adopted in January 2007.

1.3.2 The proposed development detailed extensive impacts on the archaeological resource and, following consultation with Gillian King, GLAAS Archaeological Advisor, Written Scheme of Investigations for evaluation (PCA 2015a), and Written Scheme of Investigation for excavation and watching brief (PCA 2015b), and method statement (ASE 2016) phases of work were approved.

1.3.3 The evaluation was carried out by PCA (Fairman, 2015). The subsequent excavation and watching brief, that this document provides assessment of, was undertaken by ASE between March and November 2016. The site was staffed by ASE archaeologists, project managed by Andrew Leonard and directed by Sarah Ritchie with auxiliary supervision from Steve White. Dan Swift and Jim Stevenson project managed the post-excavation work.

1.4 Circumstances and Dates of Work

1.4.1 As discussed above in Section 1.3, the need for archaeological work arose as a condition of planning permission.

1.4.2 A specific history of all archaeological work relating to the site is as follows:

- An archaeological desk-based assessment was prepared (Gould & Boyer, 2014).
- An archaeological evaluation was carried out by PCA between the 14th October – 17th November 2015 (Fairman, 2015).
- An archaeological excavation was carried out by ASE between 14th March – 27th May 2016.
- A watching brief was carried out by ASE between 30th May – 9th November 2016

1.5 Archaeological methodology

1.5.1 All excavation and recording was carried out in line with CIfA and GLAAS guidelines (CIfA 2014; GLAAS 2015) and with the WSI and methodology (PCA 2015b, ASE 2016). Regular on-site meetings were held between ASE and Gillian King (GLAAS), allowing her to monitor the progress of the work and modify the methodology as necessary.

1.5.2 Based on the results of the archaeological evaluation (Fairman, 2015) and the information in the DBA (Gould & Boyer, 2014) a 750m^2 area of the development area was targeted for excavation (Figure 2). The excavation area was machine stripped using a tracked mechanical 360° excavator. All mechanical excavation was undertaken using toothless ditching buckets under the supervision of experienced archaeologists. Overburden deposits, in this instance the concrete slab and modern levelling layers, were removed first. Machine excavation was then carried out to the top of the archaeological features or deposits.

1.5.3 The stripped area was first hand-cleaned and then a 5m grid system was laid out across the site using a Global Positioning System (GPS). All features were 100% excavated in accordance with full excavation procedure.

1.5.4 The hand-excavations were recorded using a single context planning system. All deposits and features were recorded on standard ASE recording sheets.

1.5.5 A full digital photographic record of all features was maintained. The photographic record also includes working shots to represent more generally the nature of the fieldwork.

1.5.6 All finds recovered from excavated deposits were collected and retained in line with the WSI and methodology (PCA 2015b, ASE 2016).

1.5.7 The excavation area and spoil were metal detected for artefact recovery.

1.5.8 All archaeological finds retrieved from sealed archaeological contexts were collected.

1.5.9 After discussions with Sylvia Warman (Historic England Archaeological Science Advisor) and Gillian King (Greater London Archaeological Advisor), it was decided that a standard bulk sample size of 40 litres (or 100% of small features) would be taken from all Saxon and medieval contexts, with Saxon and medieval layers having, where possible, multiple 40L samples taken from different areas of the layer in order to assess the potential for identifying isolated areas of activity within larger open areas. Where waterlogged deposits were encountered specialist kubiena and measured bulk samples were recovered.

1.5.10 In agreement with Sylvia Warman and with research questions proposed within the London Research Framework (2002, p45-63) and Cowie, 2012 (p210-12) considered during the selection process, a sub-set of these samples was selected for processing.

1.6 Organisation of the Report

1.6.1 This post-excavation assessment (PXA) and updated project design (UPD) has been prepared in accordance with the guidelines laid out in Management of Research Projects in the Historic Environment (MoRPHE), Project Planning Notes 3 (PPN3): Archaeological Excavation (English Heritage 2008).

1.6.2 The report seeks to place the results from the site within their local archaeological and historical setting; to quantify and summarise the results; specify their significance and potential, including any capacity to address the original research aims, listing any new research criteria; and to lay out what further analysis work is required to enable their final dissemination, and what form the latter should take.

1.6.3 This report primarily concerns the results of the archaeological excavation and watching brief, however, significant archaeological remains from the evaluation (Fairman 2015) have also been integrated and assessed. The finds and environmental archives from both phases of work are all recorded under separate site codes: HGT15 for the evaluation and HUG16 for the excavation and watching brief.

2.0 ARCHAEOLOGICAL AND HISTORICAL BACKGROUND

2.1 Introduction

2.1.1 The following information is summarised from the archaeological desk-based assessment (Gould & Boyer, 2014) and evaluation report (Fairman 2015) with emphasis placed on information pertinent to the results of the excavation.

2.2 Prehistoric

2.2.1 Elephant remains from the last interglacial period (130000-110000 BC) have been reported from Pall Mall and St James' Square in 1758 and prehistoric animal bone (lion, hippopotami and rhinoceros) have been found around the Trafalgar Square area. Palaeolithic and Mesolithic flint tools have been recovered from sites in Westminster, but there is no certain evidence of settlement or habitation (Bradley and Pevsner 2003).

2.2.2 By the Bronze Age, starting c.2000 BC there is evidence of small settlements in several other inner London boroughs, but there is scarce evidence in Westminster, barring Thorney Island. This however lies some distance to the west of the site. An evaluation on the site revealed no prehistoric evidence (Fairman, 2015). Environmental and archaeological evidence suggests that the vicinity of the site was largely open ground from the prehistoric to the Roman period.

2.3 Romano-British

2.3.1 In the first century AD the Roman town of *Londinium* was established to the east of the site. Two Roman roads passed close to the site; the Strand and Fleet Street to the south and Oxford Street, New Oxford Street and High Holborn to the north. The Strand delineated the higher and dry ground from the riverside beach or strand. The closest known occupation during this period was a small hamlet near the present Bond Street underground station where the road crossed the Tyburn stream.

2.3.2 A Roman sarcophagus was found in 1741 in Surrey Street close to the Strand. Roman vases were also recovered during excavations at Arundel House, approximately 200m south of the site, where the excavators suggested the presence of a Roman bath house. Additional archaeological evidence attesting to Roman occupation derive from excavations carried out at St. Catherine's House and along Keeley Street, located less than 100m south, and c. 250m to the north-west of the site respectively. The former encountered residual Roman material within later cut features and the latter recorded Roman pottery, ceramic building material and three rubbish pits. A potential Roman structure is listed c.100m to the south. An evaluation on the site itself revealed no evidence of Roman activity (Fairman, 2015).

2.3.3 Two areas of higher ground around St Paul's Cathedral and Covent Garden; surviving islands of brickearth, doubtless contributed to the location of both Roman *Londinium* and Saxon *Lundenwic*. The brickearth is relatively free-draining and can easily be excavated for terracing, rubbish pits, wells and sumps. It is also a very useful material for construction, floor surfaces, loom weights and, possibly, pottery.

2.4 Saxon/Early Medieval

2.4.1 The Saxon settlement flourished between the 7th and 9th centuries AD and covered an area of perhaps as much as one hundred and fifty acres. Writing in 735, Bede called the settlement 'a mart of many peoples, coming by land and sea.' It has been estimated that the town covered an area from Trafalgar Square in the west, the river to the south and almost as far north as High Holborn (Schofield 2008). It appears that both former Roman roads within the immediate vicinity of the site were retained into the Saxon period. The earliest archaeological features suggest human settlement in the Middle Saxon period and form part of the town of *Lundenwic* (Leary 2004).

2.4.2 An excavation at the Royal Opera House in Covent Garden, c.400 south-west of the site, (Malcolm et al, 2003) found traces of timber buildings nearly 12 meters long and signs of a thriving, congested urban space. Numerous archaeological watching briefs and evaluations attest to Saxon occupation of the wider area. A watching brief carried out by MoLAS in 1991 at Wild Street encountered Middle Saxon occupation layers and rubbish pits, and possible structural features. Associated artefacts included pottery, loom-weight fragments and burnt daub with wattle impressions. Earlier investigations along Russell Street in 1987 recorded a Middle Saxon pit containing slag and Ipswich-ware pottery fragments.

2.4.3 An evaluation carried out at 29-33 Kingsway, to the west of the subject site, identified a pit or well cut into natural gravels. Within the backfill of the feature were fragments of burnt daub, Middle Saxon pottery and a round-headed copper alloy pin. These findings were reported as indicative of occupation, and therefore supported the notion that settlement during this period perhaps extended further to the east than had previously been surmised. Similar findings were reported from an evaluation at King's College, c.250m to the south of the subject site. Middle Saxon pits, postholes, occupation deposits and gravel surfaces were recorded.

2.4.4 Archaeological investigations at Bruce House, Kemble Street, c.150m west of the site revealed extensive evidence of Saxon occupation. Cut features including wells, rubbish pits and cess pits were identified, in addition to occupation layers, dump layers and deposits of *dark earth*. The high frequency of bone and antler offcuts retrieved also inferred that bone-working took place on or near the site. Additional work along Keeley Street to the north-west of the site encountered a wattle-lined well, numerous cesspits, rubbish pits and a large north-west south-east aligned ditch. Structural remains included shallow postholes and a timber building, plus a metalled surface. This area would have lain within the eastern portion of Middle Saxon Lundenwic.

2.4.5 An excavation by MoLAS in 1998 at St Catherine's House, c.80m west of the site, found additional evidence of occupation in the form of wells, pits and probable buildings of Middle Saxon date. An evaluation on the site itself revealed Saxon activity in the form of dumping, pitting, construction and the establishment of multi-phase boundaries dating between 720 and 850 AD (Fairman, 2015).

2.4.6 After an attack by Danish Vikings in 886 King Alfred ordered a return to the more defensible Roman town at *Londinium*. The site and its vicinity were not

settled again until the early 10th century when a community of Danes settled it and, reputedly, built the church of St Clement Danes, c.150m south of the site.

2.5 Medieval

2.5.1 The development of the area during the medieval period was heavily influenced by the growth of the City to the east and the royal courts, palaces and religious institutions to the west at Westminster. Situated close to the river and on the road between the two it was a convenient place to live for the wealthy and powerful and grand houses and courts were established; many with private wharves.

2.5.2 Arundel House, the palace of the Earl of Arundel, occupied the area around Surrey Street and Arundel Street. The house was demolished in 1678 and the streets were formalised and lined with terraced houses. Another major route close by to the west was Drury Lane, aligned north-west, which connected the Strand with the Holborn and the villages and hamlets to the north such as Tottenham Court.

2.5.3 A parallel development arose after 1234 when Henry II forbad the teaching of law in the City of London and a legal community in the area was founded. In 1370 the Society of Lincoln's Inn was formed and by the end of that century there were four Inns of Court. From the 15th century, there were other legal inns to the south and east of the site, these included Clement's Inn (by 1422), Lyon's Inn (by1420), perhaps Bosham's Inn, the Angel Inn and the New Inn (by 1460). The main hall of Clement's Inn survived until about 1900 when much of the area was cleared.

2.5.4 By the end of the 15th century there were several notable riverside palaces and mansions for the aristocracy, lawyers' premises, particularly around Chancellors (Chancery) Lane and a small tradesman's and artisan's community around Temple Bar. Portsmouth House is believed to have been located along Sardinia Street to the north west of the site.

2.5.6 Archaeological evaluations along Kemble Street recorded a cellar and brick-lined cesspits and rubbish pits. Additional evidence for medieval occupation was encountered during the excavations at Bruce House which recorded a ditch and topsoil, indicative of former farmland. Similar findings of topsoil were reported from an excavation along Keeley Street. The evaluation within the site itself produced no evidence of medieval activity (Fairman, 2015).

2.6 Post-Medieval

2.6.1 The Earl of Clare opened a meat market in 1648 which was called Clare Market and gave its name to the vicinity. During this time the area was developed with a complete layout of streets and terraced housing. The only area of the site not occupied by housing was to the south, this land was owned by St Clements Danes Church and had been purchased in 1552 by its wardens. In 1749 the parish of St Clement Danes was a thriving area and contained 78 butchers, 64 victuallers, 8 poulterers, 1 tripeman, 9 publicans, 19 distillers, 6 inn holders, 32 peruke (gentlemen's wig) makers and 2 booksellers. By the 19th century, the area of Clare Market was described as

a 'cluster of narrow dirty streets and passages (Weinreb and Hibbert 1983, 184).

2.6.2 The area in the 17th century was dominated by both the market and its proximity to Drury Lane and the theatres. To this end, the success or failure both of actors and plays appeared to have greatly depended on the verdict of the butchers of Clare Market, whose approval was sometimes recorded by managers in their advertisements (Thornbury, 1878,36). By the 18th century the butchers' boys from the market were famous for monopolizing the playing of rough music at weddings and playing the role of groundlings in the theatres of the neighbourhood. Clare Market was also a notable point of origin for many of the men and women tried for participating in the Gordon Riots.

2.6.3 Watching briefs carried out along Wild Street, Drury Lane, Lincoln Inn Field's and Chancery Lane recorded post-medieval structures including walls, floors and brick-lined cesspits. Comparable results were reported from an evaluation along East Russell Street, c.300m south west of the site. Works here established that post-medieval ground raising deposits extended between 3 and 4 metres below current road level.

2.6.4 Numerous archaeological investigations have taken place along Kingsway, to the immediate west of the site. Cesspits and sewers dating between the 17th and 18th centuries were identified in addition to drainage features, rubbish pits and an air raid shelter. Investigations along St Mary-le-Strand and at King's College, to the south of the site, encountered post-medieval structural remains. The former evaluation and watching brief identified several phases of wall construction, a potential burial vault and boundary wall associated with the original 18th century churchyard, whereas the latter identified the remnants of drains indicative of a building within the vicinity, a 17th century wall and an oven or tank subsequently sealed by demolition debris. Wells, cesspits and walls were also identified during excavations at Bruce House.

2.6.5 The earliest cartographic source consulted was Agas' map of 1557. The site appears to lie within open ground, with a concentration of development appearing to the south. Drury House is clearly marked to the north-west, as are several Inn's including New Inn, Clements Inn and Lincolns Inn to the south and south-east respectively.

2.6.6 By 1682 the street plan, including Houghton Street, Clare Market and Clements Lane have been formalised. The footprint of the St. Clement's building appears almost entirely developed by properties fronting Clements Lane. The location of the Anchorage and the Clare Market buildings are similarly now developed, whereas the southern limits of the East Building appear empty.

2.6.7 Rocques' map of 1746 illustrates that the site of the East Building was also built upon by this stage with houses facing west onto Houghton Street and south onto New Inn Passage. This map shows the new buildings of Clements Inn running adjacent to the eastern boundary of the site and some of these survive until the mid-twentieth century. The general area appears otherwise little changed from 1682.

2.6.8 Shortly after this, further development takes place in the vicinity of the market as buildings fill in some of the open space. Horwood's map of 1792-99 depicts

a row of terraced houses built facing south onto Clements Inn Passage. Individual earlier and probably timber framed properties were no doubt being replaced or rebuilt at this time and throughout the nineteenth century. Into the early 19th century the street plan remains largely unaltered and although a Greenwood map of 1827 is not very accurate in its scale, it shows new buildings being erected to the rear of houses facing onto Houghton Street.

2.6.9 In 1844 the St Clements Danes School was constructed upon land that is now occupied by the East Building and completely replaced the earlier buildings and the terraced housing. The school remained until 1928 when the land was purchased by the LSE. The first edition Ordnance Survey map of 1867-74 illustrates that by this time the Anchorage has been built and the footprints of the other buildings within the site have been developed in their entirety.

2.6.10 By 1894-1896, no changes appear to the areas of the Clare Market, Anchorage or East Buildings. The St Clement's Building (east) however shows a clear plot indicating the demolition of the earlier terraced housing and public house. A large area to the east of 'Vestry Hall', north of Clare Market, also appears to have been cleared. In the late 19th century, much of the area north of the Strand and south of Lincolns Inn Fields, contained densely-packed slum dwelling. From 1862 to 1882 the Law Courts complex was built to designs by G.E. Street. The newly formed London County Council (LCC) sought to address the problems of poverty and overcrowding with large scale urban planning. In 1899 the LCC (Improvements) Act was passed which gave the council powers of compulsory purchase to carry out a scheme of slum clearance and new roads were to be driven through the heart of a residential and business district with the erasure of the old street pattern. The cost was £5.24 million and in the Clare Market area approximately 3200 people were removed.

2.6.11 The grand thoroughfares of the Aldwych and Kingsway were set out to improve access between the Strand and Holborn and new large-scale commercial buildings on either side were to be faced in stone with classical details creating a triumphal tree-lined carriageway. The formal opening of Kingsway took place in 1905. It was a broad avenue 30.5m wide with a tunnel beneath for electric trams (the south part of which was used by cars from 1961).

2.6.12 The Ordnance Survey map of 1906-09 illustrates the construction of 'Strand Newspaper House', which later became St Clement's Building (west), and the laboratory of the Government Chemist, which was later replaced by St Clement's Building (east). The streets and terraced properties adjacent to Houghton Street, including Holles Street, have been cleared, in addition to properties lining the south-western side of Houghton Street. Additional clearances have taken place within the former New Inn Gardens, presumably to make way for Aldwych House.

2.6.13 The opportunity for development, offered by so many vacant plots of land, was seized by the LSE which was looking to expand and find a more suitable and permanent home. The Passmore Edwards Hall was built in 1902 on a site in Clare Market allotted by the LCC for an indefinite period and a minimal rent. This was to form the core of the modern 'Old Building', as it came to be known. It increased in size either by extension following compulsorily purchase of

earlier properties and demolition, or by the acquisition and use of neighbouring properties as School buildings.

2.6.14 By 1932 the LSE East Building is depicted in its entirety (even though the east part was not built until 1938), with the completed Aldwych House to the east. The areas later occupied by the Clare Market Building, St Clement's Building (east) and still occupied by the Anchorage appear little changed from 1906.

2.6.15 The Ordnance Survey map of 1969 shows that by this time the Clare Market Building and St Clements's Building (east) and the former terraced properties had been cleared. No changes are illustrated on the Ordnance Survey map of 1987, and the site remains unaltered to the present.

2.6.16 The archaeological evaluation of the site (Fairman, 2015) revealed 16th and 17th century development, comprising dumped debris, refuse pits and the construction of basement walls. A property boundary, potentially timber-lined, was identified in the north-east of the site and related to a former terrace along Clements Lane. Development relating to the 19th century construction of St. Clement Danes Grammar School was also observed within a number of trenches. The majority of earlier features and horizons were overlain by late 19th century levelling/demolition material associated with the construction of the extant university buildings.

3.0 ORIGINAL RESEARCH AIMS

3.1.1 The original research aims and objectives of the excavation were set out in the Written Scheme of Investigation (PCA 2015b).

ORA1: To determine the natural topography of the site, and the height at which it survives

ORA2: To establish the nature and extent of Saxon archaeology on the site. Do the post holes found in (evaluation) trench AP9 suggest that there was Saxon settlement in this area or do they relate to more peripheral activities in keeping with the theory that the site is outside the main settlement of Lundenwic

ORA3: To establish whether a former channel runs north-south along the eastern edge of the site

ORA4: To establish if the water present in trench AP1 means that waterlogged Saxon remains may be present on the site

ORA5: To establish the nature and extent of medieval remains on the site

ORA6: To establish the extent of truncation by later post-medieval remains

4.0 ARCHAEOLOGICAL RESULTS

4.1 Introduction

4.1.1 This section of the report presents an assessment of the stratigraphic findings of the main excavation integrated with relevant results from the evaluation.

4.1.2 In order to aid interpretation of the stratigraphic data, individual contexts, cuts, fills, deposits etc., are referred to thus [123], and have been sub-grouped together during post-excavation analysis (SG12). Some features, such as linear features or those partially dug at evaluation, have multiple context numbers. These have been grouped (GP12) and are discussed as single entities. The fills of the slots excavated through linear features are referred to by context numbers. Environmental samples are listed within triangular brackets <12> and registered finds thus: RF<12>. References to sections within this report are referred to thus: (3.7).

4.1.3 A provisional structure of dated periods has been devised based on initial interpretations of stratigraphic and spatial relationships, and on the dateable finds assemblages. The archaeology is discussed under these provisional date-phased headings:

- Residual Roman material
    - Pottery
    - CBM
    - stone
- Period 1: Mid-Late Saxon
    - ditches
    - pits
    - stake holes and postholes
    - Wells
    - Dump and levelling layers
    - Occupation layers
- Period 2: Medieval c. 1200-1375AD
    - ditches
    - pits
    - occupation layers
- Period 3: Early post-medieval c. 1550-1750AD
    - Cess pit
    - Robber cuts
    - Masonry
    - Possible pond
- Period 4: Late post-medieval c. 1770-1850
    - St Clement Danes Grammar School
    - Masonry cess pit

- Masonry cellar
- Rubbish pits

- Period 5: Modern c. 1900 - Present

4.1.4 The finds and environmental samples ultimately deposited as part of the archive are dependent on specialist recommendations and regional archive requirements.

Context sheets	1,072
Section sheets	18
Plans sheets	800
Colour photographs	0
B&W photos	0
Digital photos	2,341
Context register	27
Drawing register	0
Watching brief forms	20
Trench Record forms	0

Table 1: Quantification of site paper archive

Bulk finds (quantity e.g. 1 bag, 1 box, 0.5 box 0.5 of a box)	n/a
Registered finds (number of)	145
Flots and environmental remains from bulk samples	68
Waterlogged wood	14
Wet sieved environmental remains from bulk samples	68

Table 2: Quantification of artefact and environmental samples

4.2 Natural Deposits (Figure 2)

4.2.1 The existing basement levels within the site ranged from 18.21m OD to 14.10m OD, which impacted heavily on the level of the natural deposits. To the north and north-west, beneath St Clement's Building (East) and Clare Market Building, the basement level was located at 14.98m OD, and revealed London Clay directly beneath the slab at 13.98m OD.

4.2.2 To the east, beneath The Anchorage building, the basement level was located at 15.35m OD. Natural gravel deposits were observed at 14.85m OD at the northern end of the building, sloping down to 14.25m OD to the south of the area.

4.2.3 Within the main excavation area, the basement level sloped from c.16.40m OD in the north-east down to 16.10m OD in the south-west. The natural geology consisted of banded gravels to the north-east located at c.14.73m OD, overlain by Langley Silt (brickearth) across the central part of the excavation area at c.15.22m OD, and oxidised silty-clay river alluvium within the south-western area of the area at c.14.95m OD.

4.3 Residual Roman Material

4.3.1 Sixteen sherds of late Roman pottery were recovered from the site. All were residual, and spread throughout contexts of Saxon, medieval and post-medieval date (section 5.3). These sherds do little more than inform us that residual Roman pottery survives within the area, however three whole pot bases were recovered which may have been trimmed for reuse, most likely during the Saxon occupation of the site.

4.3.2 Further evidence of Saxon and medieval reuse of Roman materials can be seen in the CBM and stone collected from later features (Sections 5.5 & 5.9), which, as on other sites within *Lundenwic*, highlight how popular Roman stone and brick from the largely abandoned Roman settlement were for salvage and reuse during the Saxon occupation.

4.4 Period 1 Mid-Late Saxon (Figure 4)

4.4.1 Evidence of mid-late Saxon activity consisted of post and stake holes; pits; ditches and made ground layers. The majority of identified pottery from these features are dated to the 8th - mid-9th century, with a peak refuse disposal period of c.750-850 AD (Section 5.4). Further stratigraphic refinement may help to narrow these dates, and perhaps aid in the identification of individual phases of activity.

Stake and post holes (Figure 5)

4.4.2 Interspersed across the central and southern areas of the site, numerous stake and post holes were recorded. These were cut into the natural brickearth and alluvium, and were sealed by the greenish-grey clay-silt layers, where they survived, discussed in Section 4.4.4 below. This makes the stake holes one of, if not the, earliest phase of activity on site. They occur in rows as well as in seemingly random clusters and are not clearly laid enough out to form identifiable structures, so it is likely that they mark out fence lines and possibly small animal pens. Similar series of seemingly random stake holes have also been noted at other Saxon sites within *Lundenwic*, and have been interpreted in a variety of ways, such as for fences marking property boundaries; animal pens and enclosures, or as temporary barriers around pits (Cowie, 2012, sites H, J & L, 46-61 & 64-65; Brown & Rackham, 2004, 41; Leary 2004, 7; Leary & Wooldridge 2004, 74; Malcolm & Bowsher, 2003, 22-3; Pickard, 2004, 88).

4.4.3 The lack of associated deposits, and the seemingly rapid sealing of these features by the silting layers mentioned below, suggest that the structures they represent were short-lived. Many of the stake holes respect the line of ditches [1647] and (GPs 5, 6 & 7), and they therefore may represent earlier versions of the same boundaries, or lines of posts setting-out boundaries and structures prior to development.

Silting layer (Figure 6)

4.4.4 Located just above the natural brickearth, and sealing many of the stake and postholes on site were greenish-grey clay-silt layers [1097=1219], [1236=1204=1174=1156], [1231=1255=1259=1260], [1599=1746],

[1364=1394=1499] and [1690], which contained some animal bone and pot, including some predating c.750 AD and thus the earliest on site (Section 5.4).

Wells (Figure 7)

4.4.5 Features [1080]; [1490] and [1496] are interpreted as wells based on their form. All three had vertical shafts and flat bases, typical of Saxon wells previously recorded in *Lundenwic* (Cowie, 2012, 126). No evidence of *in situ* barrel or wattle lining survived within any of the features, however [1124], the primary fill of well [1080], contained a large amount of waterlogged wood and organic material, which could be the remains of a well lining.

4.4.6 The primary fills were all organic in nature and were likely formed during use, and immediately in post-abandonment. Above these dumps of rubbish including animal bone, pottery and CBM were discarded.

Refuse & latrine pits (Figure 8)

4.4.7 Features [1029], [1037], [1084], [1100], [1135], [1143], [1233], [1240], [1254], [1256], [1403], [1480], [1489], [1543], [1585], [1621], [1665], [2001], [2005], [2007], [2011] and [2014] are interpreted as refuse and latrine pits. This interpretation is based primarily on the fills, which were all greyish-brown or grey and of a silty-clay consistency, often waterlogged and containing domestic waste, such as oyster shell, animal bone, and fragments of loomweights. Refuse pit [1143] in particular contained a large quantity of loom weights; seeds and mineralized wheat and rye grains; a coprolite and a small twig. Insect evidence from this pit contained evidence of litter derived from the cleaning and processing of fleeces and wool. Pit [1240] contained a U-shaped staple or joiners dog, and [1665] contained a double ended hook which may be part of a pot crane.

4.4.8 The majority of the pits are sub-rectangular in shape, an increasingly common shape for refuse and latrine pits in the Late Saxon period (Thomas, 2011, 45; Hamerow, 2012, 95).

Pits with in situ burning (Figure 8)

4.4.9 Intercutting pits [1006] and [1087] contained large quantities of charcoal from wood burnt *in situ* within the primary fills. The upper fills of these pits contained large amounts of structural fired clay daub possibly from nearby structures.

Possible storage pit (Figure 8)

4.4.10 Excavation of pit [1267] revealed an irregular “bell” shaped profile and postholes within its base and sides suggesting that it had once ether been lined with wattle, or had some form of wooden structure within it.

4.4.11 The feature is not thought deep enough to have served as a well and it has been interpreted as a storage pit. It is hoped that further environmental analysis of the fills will aid in the interpretation of this pit.

Quarry pits (Figure 9)

4.4.12 Pitts [1344], [1346], [1372], [1374], [1390], [1393], [1407], [1498], [1511], [1532], [1535], [1553], [1563], [1590] and [1722], are interpreted as quarry pits. All are circular in shape with concave bases and are cut into an east-west running band of brickearth in the central area of the site.

4.4.13 In addition to this similarity in form, was a similarity in the sequence of fills within the pits. A primary phase of silting, indicative of being left open after the extraction of brickearth, was followed by secondary refuse fills, sometimes with a clayey cap sealing them and a final dark silty fill containing large amounts of structural daub, derived from demolition. Structural daub was present within almost all of the quarry pits; only excluding some of the shallower pits, or those which had been excessively truncated.

Ditches (Figure 10)

4.4.14 The series of ditches excavated have been split into two types: those that are well established, deeply cut and cut from higher within the Period 1 sequence: (GP4); [1647]=[9_090], [1416], [1451], [1401], [1412], [1414], and those that are shallower and reside lower in the sequence: (GP5), (GP 6), (GP7), [1405], [1549], [1429]= [1759] [1431] [1644] and [1566].

4.4.15 The interpreted function of the ditches is not currently set; however, it is possible that (GP5), (GP 6) and (GP7) may represent variants of the same enclosure or property boundary ditch, being re-cut along broadly the same line. Potentially (GP4), coupled with east-west ditches [1451] and [1416], represent a deeper 'more permanent' re-digging of the same enclosure boundary at a later date. Similar remodelling of enclosures has been observed on sites such as Lordship Lane, Cottenham; Cardinal Park in Godmanchester and Wolverton Mill (Mortimer, 2000; Gibson, 2003; Preston, 2004). Property enclosures vary in size and shape, however they share similar characteristics, such as relatively insubstantial ditches, evidence of repeated re-cutting, and often extensive remodelling to meet changing needs (Hamerow, 2012, 88-94).

4.4.16 The possibility that (GP5), (GP 6), (GP7) represent the remains of a track or drove way has also been considered, although no associated surface was observed between the ditches. Further investigation into the stratigraphic sequence is needed in order to discuss the likelihood of this interpretation.

4.4.17 It is uncertain what east-west ditches [1401]; [1412]; [1414]; [1549] and [1644] represent at present. It is likely they represent other enclosure boundaries, however not enough of them or their alignments survive to further interpret them at this stage.

4.4.18 None of the ditches on site were clearly identifiable as part of the large boundary ditch that defined the limits of *Lundenwic*. Only ditch (GP4) appeared substantial enough to be considered, measuring at least 1.3m wide and 1.18m deep (c.14.33m OD at base) with a U-shaped profile. This is comparable to the possible ditch sections identified at Kingsway Hall and Sheffield Street, both to the north-west of the site (Figure 3; Cowie, 2012, Site L p64-66; Miles & Yendell, 2015, p98-99). However, extrapolating the line of the boundary ditch from the possible sections identified at Kingsway Hall and

Sheffield Street shows that their alignments run north-west--south-east down towards the Thames, this does not match that of (GP4) ditch within the site, which is aligned north-east—south-west. In fact, the evidence from Kingsway Hall and Sheffield Street suggests that the entire site would have lain within *Lundenwic*, and the boundary ditch would have run to the north-east of the site (Figure 11).

Zones of activity

4.4.19 The majority of the refuse pits were located in the north-western part of the site with quarry pits and wells in the central and eastern areas suggesting that specific functional activities were undertaken within geographical zones. This scenario is seen on other Saxon sites, such as at Steyning, where wells were primarily situated to the south of the buildings and rubbish pits to the north (Gardiner, 1993); and at Bishopstone and Lyminge, where the disposal of domestic and human waste also appears to have taken place within specific areas (Thomas, 2011, 45).

4.4.20 The potential "zoning" of activities within the site may be linked with the possible ditch systems – for example, all the quarry pits fall to the east of ditch (GP4) and all bar two of the refuse pits fall to the west of it. Further research and interrogation of the stratigraphic data is needed in order to prove the veracity of the "zoning" of activities.

4.4.21 Enclosure systems are often more closely associated with rural settlements (Hamerow, 2012, Reynolds, A. 1999) however it must be remembered that this site is situated within the very east of *Lundenwic*, on the fringes of the settlement where there would have been room for farms (Cowie, 2012, 2-3) and within an area dominated by activities such as quarrying and animal husbandry as evidenced at St. Catherine's House and Kingsway Hall (Cowie, 2012, sites Q & L 85-86 & 64-66). This hypothesis is supported by the pollen evidence from the site (Section 5.19), which suggests that it was situated in a relatively open landscape, dominated by wild grasses and sedges, with little woodland cover nearby, and some evidence of bare ground and disturbed soils.

Daub Deposits

4.4.22 In addition to the daub fills in the quarry pits, large quantities of daub were also present within the upper fills of refuse pits [1006], [1135], [1233] and [1256], and wells [1490] and [1496].

4.4.23 These 'daub deposits' seem to identify an intermediate phase of activity during which the tops of disused features were infilled in order to level uneven ground, perhaps prior to a change of use of the area. The demolition material itself raises its own intrinsic questions, as no obvious evidence for buildings was found on the site, so it must have been imported from elsewhere.

4.4.24 The structural daub within the final pit fills was predominantly sealed beneath the dump layers/midden spreads discussed below. These layers do not contain any structural daub, emphasising difference between the deliberate dumping of demolished structural material within disused features, and the subsequent phase of activity on the site.

Dump layers/possible midden spreads (Figure 12)

4.4.25 Gravel rich layer [1740=1581=1611] was located immediately below the early post-medieval deposits within Area B. This appeared to be a gravel laid (but not metalled) surface, which contained frequent shell, animal bone and horn core working waste. This may represent an external working area within the site.

4.4.26 A series of dark grey silt layers were recorded within all three areas of the excavation [1089=1218], [1361], [1356] and [1612=1613=1641], containing animal bone, CBM, pot and oyster shell inclusions. These have been interpreted as multiple phases of refuse dumping which have created external midden layers, as seen at other areas of Lundenwic (Malcolm and Bowsher, 2003, 162-4; Leary 2004, 7-8 & 142).

4.4.27 These layers are formed late in the Period 1 sequence, and are sealed by Period 2 and truncated by Period 3 activity, suggesting that the final surviving use of this area of Lundenwic was as an open space on the periphery of town. It is possible that these dump layers indicate an abandonment of the area and that it has effectively become a place for early medieval fly tipping.

4.5 Period 2 Medieval c.1200-1375AD (Figure 13)

4.5.1 Very little evidence of medieval activity survived on the site. In Area A, a series of dump deposits [1144] and [1153], dated to c.1200-1300 AD, underlying a layer of gravel [1141] were recorded. The gravel layer, dated to 1275-1375, was not associated with any structures or cut features, and so likely represents the remains of an external gravel surface, possibly laid down because the area was damp or waterlogged. Overlying gravel layer [1141] was dump layer [1035]. This contained a large quantity of butchered animal bone as well as charred animal bone from samples <29> and <30>, and hammer scale. The lack of associated features, such as hearths or structures suggest that this layer is predominantly made up of scattered domestic waste, rather than areas of primary activities. This area was horizontally truncated at this level by the modern made ground and concrete slab of the existing building

4.5.2 Evidence for medieval activity within Area C consisted of a similarly dated sequence; c.1250-1350. This consisted of dump layer [1378] with two parallel, north-east—south-west orientated linear gullies [1366] and [1380] cut into it. Sealing these were further layers [1355=1328=1354] and [1341], which both showed evidence of repair in the form of clay dumps within hollows in the layers. Cut into layer [1341] was refuse pit [1377]. All the medieval activity from Area C was located within the north-east of the area; the southernmost two thirds having been truncated by Period 3 and 4 activities.

4.5.3 No evidence for medieval activity was recorded within Area B, possibly due to horizontal truncation of the area within Period 3, as discussed in section 4.6.4.

4.5.4 It is uncertain as to whether the medieval activity on site was associated with nearby settlement activity, as the scant nature of the medieval evidence could equally point to the continued use of this area as open land on the periphery of the town, that is occasionally used as a dumping ground for rubbish. This suggestion is reinforced by the large period of time between c.900AD and

c.1200AD when there appears to be no evidence of human activity on the site at all.

4.6 Period 3 Early post-medieval c.1550-1750AD

Possible pond (Figure 14)

4.6.1 The earliest post-medieval activity is possible pond [1309] and its subsequent infilling and disuse. The feature consisted of a large rectangular cut feature orientated east-west which spanned the southern part of Area C and encroached into Area B, measuring at least 9.2m long by 4.5m wide.

4.6.2 Filling the feature were a series of waterlogged deposits. Primary fill [1308] consisted of a compact mid-brown clay dated to c.1620-1700. Overlying this was a bluish-grey clay secondary fill with bands of organic material [1247]. The final fill of the feature consisted of a waterlogged brown silty clay with pottery and fragments of leather shoes with a date range of 1630-1700. The consistency and waterlogging of the fills are suggestive of the natural silting up of a water feature which has subsequently been used for the dumping of rubbish.

4.6.3 The function of this feature is unknown, and it is not marked on any currently identified maps, however it has been interpreted as a possible pond for now, pending further historical research.

Occupation layers

4.6.4 Very few occupation layers attributed to Period 3 were recorded, probably due to horizontal truncation by the modern basements. Occupation layer [1830=1579=1088] and levelling/patching [1556] within it (Area B) have been dated to c.1600-1700. An unusually large proportion of both residual Saxon and medieval pottery was collected from within this layer, and might suggest a significant degree of horizontal truncation, which would explain the marked lack of medieval activity from this area of the site.

4.6.5 Area C revealed layers [1342] and [1353], which date to 1550-1650 and 1600-1700 respectively. These layers were truncated by later Period 3 Area C building 2, discussed in further detail in Section 4.6.10.

Masonry Walls (Figure 15)

4.6.6 A variety of red brick walls from Period 3 were uncovered during the excavation. Very few of the walls match obviously with those marked on the known maps of the area, and all have a rough build date of c.1600-1700 (Figure 19). For now, the Period 3 walls have been grouped tentatively, however it is hoped that further documentary research and interrogation of the stratigraphy will further rationalise the interpretation of these walls.

Possible New Inn walls (Area C building 1)

4.6.7 Truncating possible pond [1309] were red brick walls [1016]=[1384] and [1250]. These walls were unusually wide, with a width of c.1.5m, which could possibly have been to counter the waterlogged state of the area. The bricks

have a wide date range, however, based on the mortar and stratigraphic sequence they likely date from *c*.1666-1680.

4.6.8 The map regression carried out to date has not revealed any likely buildings that these walls could be associated with, however it is possible that these walls are related to, or part of, the buildings surrounding the New Inn and Clement's Inn gardens.

4.6.9 Founded in the 15th century by displaced law students from St. George Inn, Holborn at a common hostelry called Our Lady Inn on land adjacent to St. Clements Inn, New Inn was attached to the Middle Temple and included Sir Thomas Moore among its students (Steel, 1907, 589-90; Parker, 1844, 81-88). The buildings, pulled down in 1902 during the redevelopment of the area, were described by Strype in the early 1700's thus: *This* [New] *Inn is of late much encreased by the new Buildings in the Garden Part; which is severed in with Pallisadoes, and neatly kept with Grass Plats and Walks, set with Rows of Trees, so that the Chambers (which all front the Garden) are very pleasant and airy. Thro' this Inn there is a Passage into Haughton Street, and another into St. Clements Inn* (Strype, J. 1720).

Area C building 2

4.6.10 Within the central area of Area C were the remains of a small building consisting of red brick walls [1331], [1339], [3_021], [3_022] and [3_023]. The brickwork has a wide date range of 1480-1700, however, the walls were sitting on levelling layer [1353]=[1342], the date which suggests a mid to late 17th century build date for the walls.

4.6.11 Based on the orientation and size of the walls and the similarities in the mortar used, these are likely associated with the possible New Inn walls discussed above. However, the level of truncation of these walls by subsequent robbing and dumping phases have meant that this cannot be stated with any great certainty at this stage.

4.6.12 The interior of both buildings 1 and 2 were filled with various dump deposits representing the demolition and abandonment of the buildings and the levelling of the area attributed to the mid-18th century.

Houghton Street building and Area B wall

4.6.13 North-west—south-east red brick walls [1063] and [1154], and north-east—south-west walls [1123], [1127] and [1171] represent the remains of one of the buildings fronting Houghton Street. The construction cut backfill of these walls dates the build to 1600-1700. Map evidence shows that the upper end of Houghton Street and the buildings observed during excavation, were developed by 1682. Strype describes the area as: …*Haughton Street, also falling into the Market, all which three last Streets are well built and inhabited* (Strype, J. 1720).

4.6.14 It is likely that the remains of north-west—south-east wall [1546] within Area B is part of wall [1063], however as this does not correspond with the current information from the relevant mapping, they have been kept separate until further research can be carried out.

4.6.15 The area, originally open land called Clement's Inn Fields, was first developed in 1640 with the construction of Clare Market to the north of the site, and tenements with *"…low projecting eaves, arched doorways, and bulkheads built on narrow, dark, and irregular alleys…"* filled with butcher's shops, green grocers and public houses. In later years, the area around Wych Street was known for the sale of *"…books and prints of indecent and immoral class"* (Thornbury, 1878, 32).

Unassociated Walls

4.6.16 Walls [1012], [1020], [1319], [1509] and [1525] have not yet been attributed to building groups. All of these walls have date ranges of 1600-1700, and are similar in form and size to those previously discussed. It is likely that, with further research, these walls can be associated with known buildings on site.

Robber cuts (Figure 16)

4.6.17 Many of the walls discussed above were subsequently robbed by [1019], [1067], [1246], [1321], [1324], [1333], [1352], [1539] and [1546] (Figure 16). The dating from the robber trenches all falls within a consistent range of c.1610-1700, however much of the mortar used within the construction of the walls is believed to be post 1666, thus suggesting that their destruction and robbing is likely to be closer to 1680-1700 in date.

Pits (Figure 17)

4.6.18 The Period 3 pits were predominantly clustered within the north-west of Area A (Figure 17). Pits [1137], [1139], [1152], [1187], [1188], [1193], [1197] [1200], [1202], [1561], [1577], [1580] and [1835] were filled with domestic waste, as well as fragments of CBM, and date to the early 17th century, stratigraphically pre-dating the walls discussed in Section 4.6.13.

4.6.19 Pit [1660], located within Area B included the neck from a wine bottle dating to the first half of the 18th century, as well as a body and base fragment from a thin-walled cylindrical bottle dating between c. 1600 and 1750. The size of this pit and the lack of material culture within its fill suggests it could have been a quarry for gravel extraction. Pit [1335] contained fragments of window glass, dating to 1650-1750.

Cess-pit/soakaway (Figure 17)

4.6.20 The latest phase of activity within Period 3 Area C, was the building of cess-pit/soakaway [1434]. The circular cess-pit/soakaway was built of unfrogged red brick [1434] with an inner clay lining [1433]. Finds from the fill date the feature to c. 1680-1710.

4.6.21 Stratigraphically, the cess-pit truncates red brick wall [1250], discussed above in Section 4.6.7.

Post and stake holes (Figure 17)

4.6.22 A fence line of square stake holes consisting of contexts [1102] - [1122] were cut into the backfill of robber cut [1067]. Located just below the existing

modern basement slab, stratigraphically this is the latest archaeological feature in this part of the site.

4.6.23 Posthole [1555] was filled with broken fragments of red brick, believed to be packing for a large post. There is a lack of associated structural remains within the vicinity of this posthole, however it is possible that it is associated with the wall robbed by cut [1539] immediately to the south of the posthole.

4.7 Period 4 Late post-medieval c.1770-1850 (Figure 18)

Robber cut

4.7.1 One Period 4 robber cut was excavated on site within Area C and dated to c.1780-1820. It is likely this is associated with the robbing of Period 3 wall [1339].

Masonry cellar (GP3)

4.7.2 Red brick masonry cellar (GP3) consisted of brick floor [1059]; walls [1056], [1057] and [1095]. Two consolidation layers [1071] & [1072] beneath the floor surface have been dated to *c.*1740-1770, and the bricks used within the build are a mix of 18th century and re-used Tudor, likely robbed from the earlier walls discussed in Period 3.

4.7.3 The cellar likely corresponds to the back of the buildings fronting this part of Haughton Street, which were built after 1682 and extant by 1746. The high level of re-used Tudor bricks within the various elements of the cellar suggest that the buildings were altered on several occasions, as highlighted by (GP2, 4.7.2). Further map regression and interrogation of the stratigraphic data could help refine the dates and evolution of this building.

Masonry cess-pit (GP2)

4.7.4 Cellar (GP3) was subsequently repurposed as a cess-pit by adding intrusive walls [1054] and [1055] and covering the interior of the now cess-pit walls with a layer of hard lime mortar likely to represent a form of waterproofing [1074]. The fill of the cess-pit dated to 1810-1830, and included a large assemblage of domestic waste, including a bone toothbrush, glass drinking vessels and Chinese porcelain in the form of bowls; teapots; a candlestick and chamber pots.

Postholes

4.7.5 Two possible postholes [1027] and [1327] were recorded on site. It is not clear what these are associated with, and it is possible they are simply localised areas of deeper late post-medieval truncation. [1327] contained pottery dating to *c.*1850-1875.

St Clement Danes Grammar School (GP1) (Figures 18 & 20)

4.7.6 The school was founded in c.1844, and existed on the site until c.1932 when LSE bought the land for the expansion of the university. The surviving structure is located within the south-west and northern areas of the site.

4.7.7 The surviving structure within the south-western area of the site included walls [1030], [1049], [1050], [1052] and Yorkstone flag floor [1093]. This sequence truncated that of the earlier cellar (GP2) and subsequent cess-pit (GP3). The surviving structure within the northern area of the site included walls [1363], [1518], [1519], and brick floor [1517].

4.7.8 The surviving walls consisted of stepped red brick foundations with a hard-grey mortar. The walls were horizontally truncated by the brick and concrete foundations and basement slab of the LSE East building, built in 1932.

Dump Layer

4.7.9 Mixed dump/demo layer [1316] extended over almost the entire of Area C, and consisted of dark-brown sandy silts with CBM and pottery dating to c. 1800-1900. This layer, measuring c.0.50m thick, has been interpreted as a systematic process of make-up and ground levelling associated with the construction of the St. Clement Danes Grammar School.

Rubbish Pits

4.7.10 Two late 19th- early 20th century rubbish pits [1327] and [1524] were excavated on the site. Cut through dump layer [1316], both were domestic in nature, with rubbish pit [1327] contained leather shoe fragments as well as stoneware vessels and fragments of metal and glass.

4.8 Period 5 Modern c. 1900 - Present

4.8.1 The modern material within the main excavation area consisted of a concrete slab c.0.30m thick located at c.16.40m OD in the north-east and sloping down to c.16.10m OD in the south-west, interspersed with various modern red brick wall foundations; concrete pier bases and the remains of a lift shaft. Beneath the basement slab was a layer of modern made ground consisting mainly of broken brick and concrete, which varied in depth between 0.10m – c.1m.

5.0 FINDS AND ENVIRONMENTAL ASSESSMENTS

5.1 Summary

5.1.1 A large assemblage of finds was recovered. These are predominantly Middle Saxon and post-medieval although small quantities of finds from other periods are also present.

5.1.2 All of the finds were washed and dried or air dried as appropriate. Hand-collected bulk finds were quantified by count and weight and bagged by material and context (Appendix 2). A large collection of finds was also retrieved from the residues of environmental samples, quantified in Appendix 9.

5.1.3 A total of 145 objects were recorded as registered finds (Appendix 3). All of these objects have been assigned a unique registered find number (RF<00>) and are recorded on the basis of material, object type and date, and are described by functional categories. A detailed methodology concerning conservation can be found in Section 5.17. All finds have been packed and stored following CIfA guidelines (2014).

5.2 **The Flintwork** by Karine Le Hégarat

5.2.1 The excavation produced just four pieces of struck flint weighing 164g. A further 48 fragments of burnt unworked flint (621g) were also recovered from 11 contexts. Early post-medieval construction fill [1508] contained a large irregular broken flake in a poor condition. Two small flakes were found unstratified in Area A, one of which is rolled and glossy. Middle/Late Saxon occupation layer [1394] produced a blade-like flake.

5.3 **The Roman Pottery** by Anna Doherty

5.3.1 A very small residual assemblage of Roman pottery was recovered from the site amounting to 16 sherds, weighing 396g. The pottery was examined using a x20 binocular microscope and quantified by sherd count, weight and estimated vessel number (ENV) on *pro forma* records and in an Excel spreadsheet. Fabrics and forms were recorded using the London regional Roman type-series (Marsh & Tyers 1978).

5.3.2 The Roman assemblage, quantified by fabric type in Table 3, was found in nine different contexts, all of which are considered to belong to later stratigraphic periods. None of the contexts produced more than five sherds. The fabrics suggest that this is predominantly a late Roman assemblage. However, one sherd from grog-tempered bead rim jar probably dates to the 1st century AD and two thin-walled conjoining sherds in a fine white ware, though unsourced, are probably more characteristic of the earlier Roman period. Elsewhere the assemblage is mostly composed of typical late Roman regionally-traded fabrics such as Alice Holt Farnham ware, Overwey/Portchester D ware, Nene Valley colour-coated ware and Oxfordshire red-slipped and white wares. Central Gaulish samian ware is also represented.

5.3.3 Few feature sherds are present amongst this material but these include a late (4M) bead and flange bowl in Portchester D ware and a possible Dragendorff

38 style bowl in Oxfordshire red-slipped ware. In three cases, whole bases were recorded which could possibly have been trimmed for reuse, though this is uncertain in the case of examples from Middle/Late Saxon ditch [1401], and post-medieval occupation layer [1579]. It was clearer in the case of the base of a central Gaulish samian vessel assigned the registered find number RF <24>. Although this was found in a post-medieval context, in pit [1139], it seems possible that the modification of Roman pottery for reuse was carried out during the Saxon occupation of the site.

Fabric	Description	Sherds	Weight (g)	ENV
AHFA	Alice Holt Farnham ware	1	31	1
GROG	Grog-tempered ware	1	16	1
NVCC	Nene Valley colour-coated ware	2	93	1
OXID	Unsourced oxidised ware	1	8	1
OXIDF	Unsourced fine oxidised ware	2	6	1
OXRC	Oxfordshire red-slipped ware	3	105	3
OXWW	Oxfordshire white ware	1	13	1
PORD	Portchester D ware	1	17	1
SAMLZ	Lezoux samian ware	2	8	2
SAND	Unsourced coarse unoxidised ware	2	99	2
Totals		**16**	**396**	**14**

Table 3: Quantification of Roman pottery fabrics

5.4 **The Post-Roman Pottery** by Luke Barber

Introduction

5.4.1 The excavations recovered 1217 sherds of post-Roman pottery, weighing 41,971g, from 124 individually numbered contexts. In addition a further 104 sherds (653g) were recovered from one of 23 sample residues. The latter are only briefly considered in this assessment. The overall assemblage is of variable condition with a great range of sherd sizes. There is a notable proportion of small to medium-sized sherds (to 50mm across), typically for the earlier periods, but the post-medieval assemblages contain a number of large sherds and a few complete or near complete vessels. There is a similarly wide range of abrasion, with many small sherds showing quite extensive signs of wear – the earliest and latest post-Roman pottery often being the freshest.

5.4.2 The overall site assemblage is characterised at a basic level in Table 4 in order to give a rough idea of quantities by period. The exact division between periods is approximate as the MoLA fabric groups often cross the actual dates allocated here, a case in particular with the post-medieval red earthenwares PMRE, PMR and RBOR which span the late medieval to early post-medieval and early post-medieval to late post-medieval boundaries respectively.

5.4.3 The hand-collected assemblage has been fully quantified (number of sherds/weight/estimated number of vessels) by fabric and form on pro forma, using the MoLA fabric code where known, and spot dated for archive. The results of this work have been input onto an excel database. There are a few

fabrics that still need checking but this will be done during the Stage 2 analysis. The post-Roman pottery from the residues has only been briefly scanned at this stage in an attempt to establish if the material adds anything to the hand-collected assemblage and thus warrants further analysis. Typically very small sherds, frequently with extensive signs of abrasion, dominate the residues. Virtually all are from deposits that produced larger fresher sherds from hand collection though one or two of these contained feature sherds of note. Only six of the residues produced pottery where previously none had been present: contexts [1156], [1255], [1376], [1382], [1478] and [1611]. The latter two produced tiny intrusive high medieval sherds, but the remainder contained pottery in keeping with the contexts site phasing.

Period	No/weight (g)	Average sherd weight(g)	Provisional no. of different fabric groups	No. of stratified contexts
Middle-Saxon (C.700-900)	159/5648 (ENV 100)	35.5	Local – 6 Regional – 2 Imported - 4	53
Early/high medieval (C.1050-1350)	111/1163 (ENV 69)	10.5	Local? – 7 Regional – 4 Imported - 1	7
Late medieval (C.1350/75-1550)	12/261 (ENV 11)	21.8	Regional – 2 Imported - 1	0
Early post-medieval (C.1550-1750)	809/27,139 (ENV 474)	33.5	Local - 12 Regional - 15 Imported - 7	51
Late post-medieval (C.1750-1900+)	126/7760 (ENV 82)	61.6	Local - 1 Regional - 9 Imported - 0	10

Table 4**:** Characterisation of pottery assemblage by period. NB. Totals include all residual/intrusive and unstratified material but exclude material from the residues. Local equates to London wares; regional to other English wares.

5.4.4 Overall the date range of the pottery from the site spans the 8th to mid-19th centuries though the peaks of refuse disposal appears to be between *c*. 750 and 850 and *c*. 1600-1700.

Middle Saxon: c.8th to mid-9th centuries

5.4.5 The Saxon assemblage (159/5648g) can all be placed within a 8th- to mid-9th-century date range and is very much in keeping with larger groups recovered from other sites in *Lundenwic* (Blackmore 2003 and 2012). However, the current assemblage is notably small - many Middle Saxon sites have produced assemblages of 600-700 sherds or more (Blackmore 1988 and 1989). Despite this, the majority of the sherds are of a reasonable average size and do not appear to have been subjected to significant reworking. The large average sherd size in Table 4 is distorted by the quantity of large Ipswich vessels represented. Feature sherds are present but not in great numbers. Fine quartz with chaff tempered sherds (CHSF 4/46g), perhaps the earliest on site and predating c. 750, were recovered from occupation layer [1394] and pit [1407]. However, these were found in association with Ipswich medium and fine sherds (IPSM, IPSF) that are normally ascribed a c. 730-850 date

range. As such the chaff-tempered wares within this assemblage are probably at the end of their chronological range towards the middle of the 8th century. The rarity of them in the present assemblage would be in keeping with this – they can comprise up to 60% of later 7th- to mid-8th- century contexts in *Lundenwic* (Blackmore 2003, 230).

5.4.6 By far the majority of the Middle Saxon assemblage comprises Ipswich ware (128/5078g). The medium sand tempered version (IPSM) is the most common. Most sherds are body fragments from large vessels, often with horizontal furrowing, but where feature sherds are present they mainly comprise simple squared flaring rims typical of jars. A couple of sherds have stamped decoration: Levelling layer [1356] contained a bodysherd with rosette stamping while the residue from fill [1399], ditch [1401], produced one with incised chevrons and circular stamping – both may well derive from spouted pitchers.

5.4.7 Other fabrics are represented by a scatter of sherds including a few sandy (e.g. SSANA) and shelly (e.g. MSSC) wares but all consist of featureless bodysherds. Imported material is also present in small quantities and consists of two (38g) sherds of Badorf whiteware (ditch [1650] and occupation layer [1613]) and two sherds of North French greyware (occupation layer [1328] and pit [1490]). Unfortunately none of the imported sherds are attributable to form though pitchers are suspected.

Early and High Medieval: mid 11th to mid-14th centuries

5.4.8 The medieval assemblage is small (111/1163g) and is more fragmented than that of the Middle Saxon period. A significant proportion of the assemblage appears to have been reworked and a notable number of sherds are intrusive or residual in earlier/later deposits respectively. Although there are a few early medieval sherds of the 12th century (e.g. a probable residual shelly EMSS in occupation layer [1378]), the majority of the assemblage is best placed in the 13th to mid-14th centuries. London ware (LOND: 41/446g) jugs, usually with white slipped decoration, are common as are fragments of plainer green glazed Kingston whitewares (KING: 25/210g) and South Hertfordshire-type greywares (SHER:27/298g). The latter mainly consist of cooking pots with everted or expanded rims. The remaining sherds consist of a mixture of sand tempered types, a few Mill green (MG) jug fragments and a 1g scrap from a probable Saintonge green glazed jug (SAINT) from occupation layer [1378]. This deposit produced by far the largest medieval assemblage from the site (54 sherds) and although primarily of the mid-13th century contains six residual or intrusive sherds.

Late Medieval: Mid 14th to mid-16th centuries

5.4.9 The late medieval assemblage is notably small at just 12 sherds but it represents low-level refuse disposal throughout the period despite the absence of actual features. All of the pottery of this period appears to be residual or intrusive. Coarse Border ware (CBW) jugs and bowls are the earliest type but just over half of the assemblage is later, dating to the later 15th to mid-16th centuries. These include a scattering of Tudor Green (TUDG) and German Raeren mug and jug bases. It is likely that some of the slipped post-medieval redwares (PMSRG etc) belong to the latter part of this period

but they are considered under the early post-medieval period as their range extends well beyond the mid-16th century.

Early Post-medieval: mid 16th to mid-18th centuries

5.4.10 The early post-medieval assemblage is the largest (Table 4) and is mainly characterised by medium-sized sherds to 50mm across. This is in keeping with the reworked nature of many of the deposits in which it was found. However, some contexts produced much larger fresher sherds and these are clearly in their primary place of discard. For example, the fragmented but largely complete chamber pots from destruction layer [1719]. There is a little residuality and intrusiveness amongst the sherds of this period but where it does occur it is usually easily isolated.

5.4.11 Although there is a small quantity of sherds of the later 16th century, most notably the early redwares (PMRE and PMSR etc) and some early Frechen stoneware (FREC) vessels the vast majority belongs to the 17th century. London-area post-medieval redware (PMR), Essex-type fine redware (PMFR) and Border Ware (BORDG, BORDY, BORDB and BORDO) make up the majority of the assemblage. A range of domestic vessels for storage, food preparation, serving, drinking and sanitary needs are present. Metropolitan slipwares (METS) and Essex-type blackwares (PMBL) are also represented together with a few buff earthenwares probably originating from the Weald and/or Verwood. There is a moderate scatter of vessels in English tin-glazed ware (TGW – 60 sherds) with mainly 17th- century decorative types (TGW A, B, C, D and H) and one possible imported small dish from pit [1152] that needs further comparative work. In addition there are a few sherds from butter pots in Midlands Orange and Midlands Purple (MORAN and MPUR).

5.4.12 The most common 17th- century import consists of Frechen stoneware bottles, often with moulded medallions and facemasks (110/4468g). The latter include at least two examples of the degraded arms of Amsterdam, but there are several arms of uncertain origin. Other imports of this period are much less common but include a 2g sherd of Westerwald stoneware (cut [1333]), Werra slipware (two sherds from the same dish in pond [1309]), North Italian marbled slipware sherd (pit [1152]) and a fragment of Spanish olive jar (cut [1435]).

5.4.13 There is a scatter of material belonging to the first half of the 18th century, including Red Border ware (which becomes proportionally more common at this time), Staffordshire-type combed slipware dishes (3/136g) and Staffordshire-type white salt-glazed stoneware (1/96g). There is also a notable assemblage (31/846g) of Chinese porcelain from the site. Although pit [1561], dated to this period, produced a small piece of saucer the remainder was recovered from deposits dated to the late post-medieval period (Period 5), most notably cess pit [1055], dated to 1810-1830. The Chinese porcelain vessels in question are clearly fresh depositions in this feature but they were almost certainly old when deposited, but whether they are of the first or second half of the 18th century is yet to be finalised.

Late post-medieval: mid-18th- to 19th centuries

5.4.14 The 126 sherds (7760g) of this period are mainly of the second half of the 18th century or early 19th century. With the possible exception of a couple of late 19th- century refined whiteware pot lids and late English stonewares from pit

[1327] nothing need post-date 1825. The majority of pieces were recovered from a small selection of features. Most notable amongst these is cess pit [1055], which, as already noted above, contained a significant quantity of 18th-century Chinese porcelain. The sherds are large and a number of vessels are, or are virtually, complete/reconstructable. Wares include Black Basaltes (a teapot), creamware (bowls, plates, tureens, teapot, candlestick and chamber pots), pearlware (a plate with Type 1 blue shell-edge decoration and a measure with industrial slip), transfer-printed pearlware (plates, usually with Chinese temple designs, dishes, cups, saucers and a coffee can) and a single refined redware sherd from a saucer with yellow under glaze floral transfer-print. Another fresh assemblage was recovered from cut [1085] (26/654g), this time totally dominated by pearlware/transfer-printed pearlware (plates, bowls, cups, saucers, jugs and a fish dish). Although Chinese patterns are common, this group has a more diverse suite of patterns including English landscapes and foliage designs suggesting a slightly later deposition date in comparison to the assemblage from pit [1055].

Stratigraphic context

5.4.15 The assemblage was derived from cut features such as ditches and pits as well as occupation and demolition layers. Small context groups dominate the overall assemblage. Of the excavated contexts containing post-Roman pottery 91 have fewer than 10 sherds apiece. The largest Middle Saxon context group consists of just 18 sherds (872g) from ditch [1176] (SG 72) (fills [1175] and [1181] combined). All of these sherds are Ipswich ware. The contexts that contain 50 sherds or more are listed in Table 5.

Context	No. sherds	Weight	Date	Comment
1058	91	7452g	c. 1810-1830	Cess pit [1055] Group 2
1066	69	2068g	c. 1610-1640	Robber cut [1067] SG 95
1194	50	1164g	c. 1610-1660	Construction cut [1195] SG 161
1317	59	3210g	c. 1630-1700	Pond [1309] SG 439
1378	60	566g	c. 1200-1325	Occupation layer SG 192
1719	60	2616g	c. 1680-1710	Destruction layer SG 392

Table 5: Summary of all context groups containing over 50 sherds

5.5 Ceramic Building Material (CBM) by Isa Benedetti-Whitton

Introduction

5.5.1 A moderately sized, well preserved assemblage of 521 pieces of CBM, weighing 210,981g was collected from 113 contexts. The date of the material ranges from Roman to the 20th century, with a significant quantity of medieval and post-medieval CBM present. The Roman material is most likely residual, or the consequence of re-used building materials during the Saxon and later periods. With the exception of the post-medieval material, all of the CBM found during excavation was kept, and bricks were sampled from nearly all post-medieval standing structures. Table 6 displays the comparative quantities and weight of each category of building material with the exception of structural clay or daub, which is discussed separately.

CBM type	Quantity	% of total	Weight (g)	% of total
Roman brick	159	30.3	30,450	14.4
Roof tile	140	26.9	10,687	5.1
Brick	92	17.9	150,676	71.4
Tegula	58	11.1	8129	3.9
Floor tile	12	2.3	2837	1.3
Flue	10	1.9	1238	0.6
Imbrex	7	1.3	449	0.2
Unknown	3	0.6	237	0.1
?paving brick	2	0.4	4744	2.2
Ridge tile	2	0.4	356	0.2
Cement	1	0.2	15	0.0
Lime mortar	1	0.2	93	0.0
Pantile	1	0.2	465	0.2
Spall	33	6.3	605	0.3
Totals	**521**	**100.0%**	**210,981g**	**100.0%**

Table 6: CBM forms by quantity and weight

Methodology

5.5.2 All of the material was quantified by form, weight and fabric and was recorded on standard recording forms. This information was then entered into a digital Excel database. Fabric descriptions were developed with the aid of a x20 binocular microscope and use the following conventions: frequency of inclusions as sparse, moderate, common or abundant; the size of inclusions as fine (up to 0.25mm), medium (up to 0.25 and 0.5mm), coarse (0.5-1.0mm) and very coarse (larger than 1.0mm). Fabric samples and items of interest have been retained.

Fabrics

5.5.3 Ten Roman fabrics and twelve post-Roman fabrics were identified All the post-Roman fabrics were compared with samples from the established Museum of London Archaeology (MOLA) fabric type series and all conformed

to existing fabric types (see Appendices 4-7). The Roman fabrics have been defined on a site specific basis, although ideally these too should be compared with the London typology. Where applicable, MOLA codes will be used throughout the following report.

5.5.4 Several of the MOLA fabrics, when considered alongside form, can be used as a dating tool. This is particularly so for bricks, but also for some tile. Roof tile fabric 2271 was used broadly from the 12th century until the post medieval period, but thinner examples with a reduced core are more likely to date to the medieval end of this spectrum, whereas thicker examples with fine moulding sand are of post-medieval date (MOLA type 2276). A few fragments of shouldered peg tile in 2273 are definitely medieval, as are all the glazed examples of fabric 3216.

5.5.5 All the floor tile fabrics (with the exception of 2196) appear to be of Low Countries origin, which were imported into London in large quantities throughout the 15th century, but also during the 16th and 17th centuries. The decorated tin-glazed tiles ('delftware') in fabric 2196 are of definite 17th century date, and most likely manufactured in London. Comparable examples include tiles from the ?Pickleherring and Rotherhilde pothouses, which date c.1618-50 (Betts and Weinstein 2010, plates 83; 93, 104-107).

5.5.6 Of the five post-Roman brick fabrics, 3033 and 3046 are Tudor period fabrics, although they can date as late as 1700. 3032 and 3034 are both post-Great Fire fabric types, and 3038 is an early modern dry-compressed brick fabric, dating to the late 19th or early 20th century.

Roman brick and tile

5.5.7 Roman material made up a significant proportion of the assemblage; Roman brick, for examples, accounts for 30% of the whole assemblage. This apparent preference during the Saxon period for re-using brick rather than other Roman CBM forms has been noted elsewhere also (Smith 2012, 218). Other typical Roman forms were also present in lesser quantities, including tegulae and imbrices, and some pieces of box flue tile. Considering the large amounts of Roman brick found compared to the other Roman forms it is not surprising that Roman brick also displayed the greatest diversity in fabric types; bricks were present in all Roman fabric types (R1-R9), whereas tegulae, imbrices and combed flue tile pieces were only found in fabrics R1, R2, R2A, R3 and R4.

5.5.8 The majority of the Roman brick was comprised of broken pieces, which were identified as brick based on their comparative thickness. Those fragments of >30mm were defined as brick, whereas as those of <30mm were recorded as tegula, which typically are thinner than Roman brick, although there are of course exceptions to this rule. The box flue fragments all had the remains of various combing patterns, in some instances very abraded, which aided identification, and the imbrices were all of characteristic curved form, and ranged in thickness from 12-20mm.

5.5.9 Only a small quantity of the Roman CBM still retained traces of any mortar. In most instances these were very meagre traces of lime-based mortar, although a brick from [1399] and a flue tile piece from [1378] had small quantities of *opus signinum* present. The mortar traces on the flue tile was generally within

the combed striations, and probably represents the original mortar used to conceal flue tiles when in situ. On the other forms it appeared on upper and base surfaces, as well as broken edges, indicating that at least some of the material was used as rubble foundations or within walls. The mortar on the brick from [2006] was vitrified, but generally across the Roman assemblage there was only a very small number of pieces that were over-fired or heated to the extent of vitrification.

5.5.10 Possible signature marks were noted on a brick from [1014] and tegula pieces from [1491] and [1494]. Another brick from [1376] had parallel finger sweeps present, but the object of greatest interest was a well preserved piece of Roman brick from [1141] which had several lines of written graffiti across one surface, the language and sentiment of which are yet to be determined (see 'recommendations for further work').

Medieval roof tile

5.5.11 Approximately 38% of the roof tile assemblage is medieval in date. This includes two co-joining fragments of glazed and shouldered peg tile in MOLA 2273 from context [1397], which date to the 13th century (Betts 1987). Another more unusually shaped glazed fragment in the same fabric from [1342] might be part of a decorative ridge tile (I. Betts, pers. comm.).

5.5.12 Contexts [1342] and [1378] produced glazed tile fragments in fabric 2271. The glaze was brownish-yellow in colour, and glaze of any colour is typically a medieval characteristic. These fragments also conform to the thinner dimensions associated with earlier tiles in London and several too have a reduced core and a coarser moulding sand than the post-medieval examples. Glazed tile in fabric 3216 was also collected from [1597], which could indicate that the other tile in this fabric is also medieval in date. On the only fragment with a surviving peg hole this is round; and within London peg holes in the medieval period tend to be round, so whilst not conclusive, the available evidence does not contradict the suggestion that tiles in 3216 may all be medieval.

Post-medieval roof tile

5.5.13 The post-medieval roof tile was a fairly homogenous collection of peg tile fragments in fabrics 2271 and a sandy version of 2586. Although nearly all the surviving peg holes were of the round type – which can date either to the medieval or post-medieval periods – there were also some with square and diamond shaped holes, which become more common during the post-medieval period. The fine and very fine moulding sand present on these later-dated examples of 2271 and 2586 is also typical of post-medieval tile (MOLA type 2276).

5.5.14 A number of peg tile fragments had patches of lime mortar on the upper and lower surfaces, and others had mortar on broken edges, indicating that some peg tile served structural purposes other than roofing tile. A single fragment of very thin and hard-fired tile from context [1247] had a thin layer of bitumen on one surface, indicating that it was used (or re-used) significantly later than the other post-medieval roof tile, c.19th-20th century.

5.5.15 Only a single fragment of s-shaped pantile was found in context [1205]. It was formed from a sandy version of 2586, and most probably dates to the late 17th or 18th century.

Medieval and post-medieval floor tile

5.5.16 The only floor tile of probable medieval date is a fragment in MOLA fabric 2504 collected from [1536]. Only faint traces of glaze were still visible across the remaining edges, and the presence of sandy lime mortar across one broken edge indicates this tile was later re-used.

5.5.17 With the exception of the delftware floor tiles from [1194] and [1579] the majority of the floor tiles are likely to date to the 15th or 16th centuries. Tiles in Flemish fabrics 2850 and 2318 were collected from contexts [1066, 1308, 1317, 1437 and 1536]. Traces of green and brown glaze were present on a number of the fragments, and the surviving edges were all knife-trimmed and slightly bevelled. The tile from [1066] was slightly thinner than the Low Countries tile (25mm) and similar in form to Westminster tiles which to the 13th century, or Penn tiles that date to the 14th century (Betts 2002).

5.5.18 The fragment of floor tile from [1437] is the only unglazed piece. It is of a slightly different form to the other examples and has clearly burnt and sooted areas on the edges and ?upper surface. This tile is believed to date later, c.17th or 18th century. Likewise all the delftware tiles are dated to the early-mid 17th century.

5.5.19 Three different designs were present on the delftware tile, although it is possible that two fragments from [1579] are broken pieces of the same tile. One of the [1579] fragments had an angular border of concentric blue lines with a green pigmented area; the other used the same blue pigment but as the background to an abstract white design. The better preserved example from [1195] had a very different style of decoration, with lots of white space and motif drawn using washes of blue. Not enough of the tile was still intact to assess what original form this decoration took. Both are believed to be English examples of delftware tiles.

Post-medieval brick

5.5.20 Ninety-five post-medieval bricks were recovered from 37 contexts. Of these, sixty were sampled from the standing remains of 24 masonry contexts [1016; 1020; 1031; 1054; 1055; 1056; 1057; 1059; 1063; 1123; 1171; 1250; 1319; 1339; 1384; 1434; 1509; 1514; 1515; 1516; 1517; 1522; 1545; and 1609]. A single fragment of Roman brick was also collected from post-medieval cesspit or soakaway [1434]. No CBM was sampled from masonry structures [1030; 1049; 1050; 1052; 1074; 1094; 1127; 1154; 1331; or 1518].

5.5.21 Although a large quantity of the post-medieval brick (74%) was identified as being Tudor period fabrics 3033 and 3046, it appears to all have been used in later structures. In several instances this later reuse is indicated by the post-1666 character of the mortar, which contains charcoal fragments and other items of refuse that were incorporated into both brick clay and mortar following the Great Fire. Bricks sampled from [1055, 1056, 1069, 1123, 1171, 1514, 1516 and 1545] all had remains of this post-1666 grey, debris-tempered mortar still attached, with perhaps the most distinctive example being the

3032 bricks from foundation [1509], to which was attached mortar that included window glass amongst the inclusions.

5.5.22 The presence of both 3033 and 3032 bricks in structure [1016] further demonstrate the later re-use of Tudor brick. 3032 is a post-1666 fabric which continued to be manufactured and used until the 19th century. The key characteristic of fabric 3032 is the use of 'Spanish' – a combination of ash and household refuse – as temper. All the 3032 bricks included Spanish, which would suggest the bricks were manufactured in the earlier half of the 18th century, as the addition of Spanish was allegedly banned in the 1725 Brick Making Act (Proctor, Sabel and Meddens 2014, 195).

5.5.23 A further brick tax established in 1796 (Lucas 1997, 30) set the standard size for bricks as 10 x 5 x 3 inches (254 x 127 x 76mm). This is considerably larger than any of the 3032 bricks sampled here, which measure between 215-227 x 80-108 x 60-65mm. The only brick that came close to the later dimensions it that sampled from [1061], which was 240mm in length. Although the success these taxes had in actually standardising brick sizes across Britain could be debated, it is likely that those produced in the London area – where they would most likely have been subjected to greater scrutiny than in rural locations – would best display the trends set by the taxes, and thus it can be asserted that the 3032 bricks recovered were at least manufactured by the mid-18th century.

5.5.24 Purple 3032 stock bricks are often found in conjunction with the slightly later variety of stock brick, 3035, but at HUG16 no 3035 bricks were retrieved at all. Yellow-coloured 3035 bricks are believed to have overtaken the purple 3032 stock bricks in popularity c.1770 (Cox 1997), and their absence could be used to further support a mid-18th century date for most of the standing masonry at HUG16. Some walls are attributed the 1844 reconstruction of St Clements Danes School, but no brick samples were collected from any of the contexts associated with this structure.

5.5.25 The latest dating brick pieces recovered were fragments of burnt and vitrified dry-compressed 3038 brick. This is the 'Fletton' type brick that became vastly popular in the early 20th century, but in this instance probably represents 20th-21st century refuse.

5.6 **The Fired Clay** by Trista Clifford

5.6.1 A little over 2000 fragments of structural fired clay weighing *c.*89kg were recovered during the excavations, from 160 separate contexts. The fired clay derives from structural daub however very little was recovered from primary contexts associated with buildings and two pit fills ([1004] and [1512]) producing over 65% of the assemblage (by weight). No sampling strategy was employed during the excavations therefore the total amounts to 100% of the daub present within these features. A 50% sample of the excavated assemblage from the largest pit fill [1512] was examined and recorded for the purposes of assessment; 100% of all other features were assessed.

5.6.2 The assemblage was briefly assessed for form and character. Each piece of diagnostic daub was recorded individually with a schematic diagram of any wattle impressions present. Fabric was differentiated by eye and not recorded in detail. Two predominant fabrics were observed: A coarsely sandy fabric

with grassy organic inclusions and a finer version of this fabric which also sometimes contained calcareous inclusions. These are similar to those recorded during previous excavations (Smith 2012, 216). Small amounts of a more densely calcareous fabric were also noted, as well as some pieces which may have originated from an estuarine or brackish clay source, having been fired to a pinkish, grey or purple hue. These latter fabrics appear synonymous with very early 'esturine' brick fabrics and a number of pieces were indistinguishable from very abraded early brick.

5.6.3 The most common distinguishing characteristics within the assemblage are flat, smoothed surfaces and wattle or timber impressions. Three quarters of the assemblage exhibited at least one wattle impression; fragments frequently exhibit up to three wattle impressions and over 130 pieces have four or more with one piece exhibiting 12 impressions. Rod diameters range from c4mm up to 39mm and the mean diameter is 14.9mm. Other structural timber impressions such as lathes, posts (both square and round) and split withy impressions were evident on 27 daub fragments. A further five fragments appear to show the pointed end of staves or wattles. Several differing arrangements of rods are present including parallel impressions and intersecting upright and horizontal rods. Very few features contained unburned daub; most was burned, probably as a result of accidental fire before disposal.

5.6.4 Eight fragments also appear to have textile impressions on the outer surface. This was also in evidence on fragments from elsewhere in *Lundenwic* (e.g. Goffin 1988, 115; Goffin 1989, 112). Other surface treatments such as possible lime wash, wiped surfaces and finger smears were also noted.

5.7 The Clay Tobacco Pipe by Elke Raemen

Introduction and methodology

5.7.1 A medium-sized assemblage, comprising 250 stem, bowl and mouthpiece fragments (weight 1646g), was recovered from 37 individually numbered contexts. The majority dates to the 17th century, although a few later pieces are included as well. The material is largely unabraded, suggesting a minimum of reworking. By far the largest group was recovered from destruction debris [1719] contained 99 clay tobacco pipe fragments, mostly dated to the late 17th to early 18th century.

5.7.2 The clay tobacco pipe assemblage recovered during the evaluation was briefly scanned, but not physically re-examined. It is taken into brief consideration below. Pipes were all recorded in full on *pro forma* sheets for archive and data was entered onto Excel spread-sheet. Bowls were classified according to the London "Chronology of Bowl Types" (prefix AO) by Atkinson and Oswald (1969, 177-180). Pipes were recorded following guidelines as set out by Higgins and Davey (2004). A total of 28 pipes were marked and/or decorated and were assigned accession numbers unique to this site (CP<00>).

Overview of the assemblage

5.7.3 A total of 87 bowls, 154 stem fragments and 9 mouthpieces were recovered. Of the 154 stem fragments, 82 were found in destruction debris [1719]. The stem versus bowl ratio across all other contexts is unusually low and this almost certainly reflects a bias in on site collection.

5.7.4 All nine mouthpieces were formed by simple straight cuts. Included are two nibs finished with red paint and three examples with green glaze. All five date to c. 1750 onwards. An overview of the different bowl types can be found in Table 7. Many of the early bowls (e.g. AO5) show a good quality finish, with fine burnishing and full milling.

Bowl Type	Count	Early Date	Late Date
AO4/5	3	1610	1640
AO5	4	1610	1640
AO6/8	1	1610	1640
?AO7	1	1610	1640
?AO8	1	1610	1640
AO9	3	1640	1660
AO9/10	1	1640	1660
AO10	2	1640	1660
AO10/13	1	1640	1680
AO11	2	1640	1670
AO13	2	1660	1680
AO14	4	1660	1680
AO15	3	1660	1680
AO16	1	1640	1690
AO18	7	1660	1680
AO20	1	1680	1710
AO21	13	1680	1710
AO22	1	1680	1710
AO25	1	1700	1770
AO26	3	1740	1800
AO27	15	1780	1820
AO27/28	5	1780	1860
AO28	8	1820	1860
AO30	3	1850	1910
AO33	1	1840+	
Total	**87**		

Table 7: Overview of clay tobacco pipe bowl types

5.7.5 A number of later 17th century bowls may represent regional imports. The type AO13 bowls in particular may have originated in the West Country, although the type was also produced in London. Type AO16, which is represented just once in this assemblage, is another potential import, either produced in the

West Country, or by pipe manufacturers relocated to London from the West Country. West Country style pipes are relatively common finds in London and in particular in Westminster (Chris Jarrett pers comm).

5.7.6 A total of 25 bowls retains maker's marks. One of the early pipes (CP<14>, [1067], bowl type 4/5) displays a stamp with initials "WK" beneath the heel. Another stamp was found beneath the heel of a type AO10 bowl (CP<27>, [1578]), consisting of a stamp in the shape of a heart. The latest stamp found beneath the heel comprises the initial S beneath the heel of a type AO21 bowl (CP<28>, [1719]).

5.7.7 Many of the later bowls (AO27 and later) display maker's marks on the heel sides. Symbols encountered include a flower, sunburst and shield. None of their makers can be identified. Many of the initials cannot be attributed to a single manufacturer as several makers with the same initials were working in London during the relevant period. Identified makers include John Hurst, represented by three pipes with flower on the heel sides and a stamp reading "HURST COW CROSS" on the bowl facing the smoker. John Hurst was working at Cow Cross Street around 1808-1849 (Atkinson and Oswald 1969, 192). Of interest is a thick-walled Irish style pipe which contains a stamp "MILO STRAND" referring to Theophilus Milo who was a tobacconist at the Strand from at least the 1840s onwards. Perhaps this particular pipe was aimed at the market of Irish immigrants.

5.7.8 Decoration nearly all consists of simple oak leaf or wheat sheaf decorated seams. A few fluted bowls were also present.

5.7.9 In addition, the evaluation assemblage comprises six bowls (identifiable types comprise AO6, AO10 and two examples of AO15), two mouthpieces and 31 stems. The former range in date between c.1610 and 1680 (Jarrett 2015a) and the assemblage is therefore of a similar date range to that recovered during the excavation stage. None of the bowls from the evaluation were marked, although they all showed a good quality finish (ibid).

5.8 **The Glass** by Elke Raemen

Introduction and methodology

5.8.1 A relatively small assemblage of glass comprising 47 fragments of glass (weight 946g) was found during the excavations. Glass was noted in 17 different contexts, and is largely of post-medieval date. A single fragment of possible Roman glass was also found. The largest group was recovered from late post-medieval cess pit [1055] (fill [1058], SGP8), which contained 17 fragments.

5.8.2 A small quantity of post-medieval glass (six fragments weighing 133g) was recovered during the evaluation. The most notable piece comprises a mid-17th century wine bottle (Jarrett 2015b). As the evaluation assemblage adds nothing to the excavation stage of the assemblage, it is not further considered here.

5.8.3 The assemblage was recorded in full on *pro forma* sheets for archive and data was entered onto digital spreadsheet.

Roman

5.8.4 Occupation layer [1342] contained a single piece of glass which may be from a Roman matt/gloss window pane. The blue/green piece is partially melted and identification is therefore uncertain. Other material in the same context is of early post-medieval date.

Early post-medieval vessel glass

5.8.5 The earliest bottles represented were found in pit [1660] (fill [1662], SGR 389). Fragments recovered include the neck from a wine bottle dating to the first half of the 18th century, as well as a body and base fragment from a thin-walled cylindrical bottle dating between c. 1600 and 1750. Other early material consists of an amber/green vessel base which probably derives from a flask and which dates to the 16th to mid-17th century ([1196]). Two phial base fragments (diam 39 and 45mm) were recovered from pond [1309] (fill [1317], SGP439) and destruction debris [1719] (SGP 392). Both date to the mid-17th to mid-18th century.

5.8.6 Two beaker fragments were also found, including a green tinged rim fragment ([1330]) adorned with horizontal trail, dating to the 17th century, and a grey tinged base ([1578]) with moulding, dating to the mid-16th to mid-17th century. The colour of the latter vessel fragment suggests a high lead content.

Early post-medieval window glass

5.8.7 Three window pane fragments dating to the 16th or 17th centuries were recovered ([1362], [1556] and [1574]). All three are green tinged and at least one probably represents crown glass.

Late post-medieval vessel glass

5.8.8 Two wine bottle fragments were recovered. Included are a 19th-century fragment from [1000] (backfill [1323]) and a small body shard dating to the mid-18th to 19th century from [1363] (backfill [1362]). Other bottles comprise cylindrical and panelled types of 19th-century date which would probably have contained pharmaceutical, toiletry or household products. A probable mineral water bottle fragment dating to the mid-19th to early 20th century was recovered from pit [1327] (fill [1326], SGP 178).

5.8.9 Drinking vessel fragments were recovered from five different contexts. Cess pit fill [1058] (SGP8) contained fragments of four wine glasses and one possible rummer, which range in date between c. 1750 and 1800, although some may date up to 1850. All five are probably of lead crystal. Included are a facetted, a fluted and three plain stems, some with air tear. Most have a plain conical foot, although a conical hollow folded foot was also noted. Only the base of each bowl survives, too little to establish types with certainty, although two fluted and one conical form are probable. Other wine glass fragments comprise a lead crystal plain conical foot dating to the mid-18th to mid-19th century ([1086]) and an inverted baluster with air tear, dating to the second half of the 18th century ([1719]).

5.8.10 Finally, an undiagnostic melted aqua glass fragment of post-medieval date was recovered from cess pit [1055] (fill [1058], SGP8), which also contained a colourless fragment from a cylindrical vessel dating to the 19th century.

Late post-medieval window glass

5.8.11 Eight window pane fragments are of late post-medieval date. All eight are colourless. Included are five 18th-century fragments from pit [1335] (fill [1365], SGP176) and three pieces from cess pit fill [1058], dating to the 18th or 19th centuries.

5.9 The Geological Material by Luke Barber

Introduction

5.9.1 The excavations at the site produced 235 pieces of stone, weighing 100,290g, from 52 individually numbered contexts. These totals include 159 pieces, weighing 1680g from one of 22 environmental residues. On the whole the material from the residues consists of very small, and often intrusive, pieces. The assemblage has been fully listed on geological record sheets for the archive, with the resultant information being used to create an excel database as part of the current assessment. Each main stone type was allocated a code number for archive though many of these have variations that have been kept separate by the addition of a letter to the type number. The assemblage is characterised in Table 8 by type and period.

Period 1: Middle Saxon c. 730-850

5.9.2 The Middle Saxon contexts produced the largest assemblage and was recovered from a range of context types, including pits, ditches dumps, occupation layers, post-holes and a well. Three main groupings of stone can be recognised: building material, worked objects and miscellaneous pieces. The former constitutes the majority of the assemblage and is notably dominated by Kentish Ragstone (Table 8). Although many of the pieces are unworked, a number do have rough facing, while others, faced or not, have traces of mortar adhering. This material almost certainly represents re-used Roman building fabric - a suggestion borne out by some of the other stone types present. The material is widely distributed between different contexts with the largest groupings coming from layer [1174] (3/17,110g), pit [1344] (3/8924g) and pit [1496] (3/15,010g). The 5b Lower Greensand type is likely to derive from a similar source but clearly came from a different geological bed than the typical Kentish Ragstone. The 3446g fragment of oolitic limestone appears to have some facing surviving (post-hole [1652], SG253), as does the block of tufa (dump [1174], SG55). Both are types commonly used in the Roman city and undoubtedly represent further robbed materials. The exact reason for the collection of this material is uncertain, but post-hole packing and hard-standings may have utilised the stone.

5.9.3 Worked stone objects are represented by a modest scatter of quern and hone fragments. The former are exclusively of German lava (19/2444g), small fragments of which are scattered widely between contexts with no obvious concentrations. The largest piece comes from a 25mm thick stone with worn face and diameter of around 380mm (well [1080], SG70) but most have, at best, thicknesses only surviving (20-34mm thick). Although lava quern was

the most common in use in Middle Saxon London (Goffin 2003a) a fragment from ditch [1414] (SG454) has traces of mortar on its broken edge, suggesting some of the quern fragments could in fact be re-used Roman examples. The two hone fragments are of different stone types. The fine-grained grey sandstone example from post-hole [1243] (SG40) has some fine glauconite suggesting either a Hythe Beds (Lower Greensand) or Thanet Beds source. The fine-grained black example from pit [1407] (SG475) is of uncertain origin, but certainly not from the Weald. Both types are not out of place with previous findings from *Lundenwic* (Goffin 2003b).

5.9.4 The remaining Middle Saxon stone assemblage consists of a sparse scatter of unworked pieces from Wealden and other uncertain origins. Although coal is represented by large numbers (49 pieces), all consist of tiny granules that would have easily worked their way down the soil profile. All are therefore considered to be intrusive from post-medieval activity

Period 2: medieval c. 1200-1375

5.9.5 The majority of the assemblage from medieval contexts clearly consists of intrusive granules of post-medieval coal. The bulk of the remainder could easily be seen as residual material from the Middle Saxon activity – most notably the Kentish Ragstone. Ironically, the only probable medieval stone appears to be residual in early post-medieval deposits.

Period 3: early post-medieval c. 1550-1750

5.9.6 Contexts allocated to this period produced the second largest assemblage from the site but there is clearly quite a high residual element to it. The three pieces of Reigate stone (robber cut [1019], SG28 and robber cut [1324] (SG182) are all from moulded or plain faced blocks that are likely to be of medieval origin (that from [1019] having part of a surviving carved roll) and the piece from a Purbeck limestone grinding mortar is also certainly of medieval date (make-up [1556], SG403). The likely date of the notable quantity of Kentish Ragstone is less certain. The vast majority was recovered from robber cut [1324] which produced a sizeable group of irregular and roughly faced blocks, often with mortar adhering to them (7/12,684g). Although they could be residual/re-used Roman/Middle Saxon pieces their association with the Reigate stone suggests they may in fact be from a medieval structure (though such a structure may well have re-used Roman materials itself).

5.9.7 The only stone that can be fairly confidently ascribed to the early post-medieval period is the coal and coal shale, the latter including a notably large piece (236g) from pond [1309] (SG439).

Period 4: Late Post-medieval c. 1750-1900

5.9.8 Just a single burnt piece of coal shale was recovered from contexts of this period (construction cut [1048]).

	Period 1 Middle Saxon	Period 2 Medieval	Period 3 Early Post-medieval	Period 4 Late Post-medieval	Unphased
No. of contexts	33	6	11	1	1
1a Grey medium-grained sast (calcareous)	2/402g	-	-	-	-
2a Reigate stone	-	-	3/2688g+	-	-
2b Upper Greensand	-	-	1/208g	-	-
3a Coal shale	-	-	3/279g	1/2g	1/22g
3b Coal	49/10g	96/6g	1/1g	-	-
4a German lava	19/2444g*	-	3/188g*	-	-
5a Kentish Ragstone	21/52,046g+	1/230g	10/25,054 g+	-	-
5b Lower Greensand	1/3724g	2/1136g	1/648g	-	-
5c Lower Greensand chert	2/24g	-	-	-	-
6a Tufa	1/4020g+	-	-	-	-
7a Uncertain/ceramic	1/1312g	-	-	-	-
8a Fine-grained grey sast	3/814g*	-	-	-	-
8b Bedded fine sast	-	2/180g	-	-	-
9a Flint pebble	-	1/20g	2/36g	-	-
9b Flint cobble	2/770g	-	-	-	-
10a Black fine-grained sast	1/94g*	-	-	-	-
11a Purbeck lmst	-	-	1/172g*	-	-
12a Oolitic lmst	1/3446g+	-	-	-	-
13a Wealden clay ironstone	1/312g	-	-	-	-
14a Slate (misc)	-	1/1g	-	-	-
Fossil	1/1g	-	-	-	-
Totals	105/ 69,419g	103/ 1573g	25/ 29,274g	1/ 2g	1/ 22g

Table 8: Characterisation of the geological material by type/period (* = type includes worked objects, + type includes shaped building materials)

5.10 The Metallurgical Remains by Luke Barber

Introduction

5.10.1 The excavations recovered 5494g of material initially classified as slag from 58 individually numbered contexts. This total consists of 3235g (23 individual pieces) of hand-collected material with the remainder being derived from one of 57 environmental residues. The actual weight of material is slightly under 5494g as the smallest weight measurement allocated was 1g, despite many deposits producing less than 1g of the micro slags and other heated materials. The assemblage has been fully listed by context and type on metallurgical *pro forma* sheets, which are housed with the archive. The information from these has been used to create an Excel database for the digital archive.

5.10.2 The current assessment represents an overview of the slag by type and provisional period, the latter drawing on ceramic dating, stratigraphy and association. Although some deposits could chronologically shift a little during final analysis this is considered unlikely at the present site. As such the current overview is considered to be a reliable guide to the main trends and allows an informed assessment of potential. To that end the assemblage is summarised in Table 9.

Type/Phase	Period 1 Middle Saxon	Period 2 Medieval	Period 3 Early post-medieval	Period 4 Late post-medieval
Number of contexts	49	6	1	2
Iron concretion	647g	104g	-	20g
Magnetic Fines	187g	44g	-	4g
Fuel ash slag	81g	5g	24g	-
Hearth Lining	74g	-	-	-
Burnt clay	50g	-	-	-
Hammerscale	22g	10g	-	1g
Smithing	3432g	618g	112g	-
Undiagnostic iron		12g	-	-
Lead ore	44g	-	-	-
Lead waste	1g	-		-
Clinker	2g	-	-	-
Totals	**4540g**	**793g**	**136g**	**25g**

Table 9: Summary of slag assemblage by period

Period 1: Middle Saxon

5.10.3 The majority of the assemblage was recovered from this period, though in part, this may be due to the large number of Middle Saxon samples processed. With the exception of four pieces of intrusive clinker (2g) from pit [1006] and the top of well [1080] all the slag appears to be contemporary with the period. However, it should be borne in mind that if Roman building materials were re-used in Period 1 there is a danger residual slag could also have been introduced. Much of the material is not in fact slag – there are a number of pieces of iron concretion, probably derived from corrosion products on iron objects, and magnetic fines. The latter are sub-rounded granules of clay and ferruginous stone that have had their magnetism enhanced through burning. Such fines could be created by any burning event, including domestic hearths, and are therefore not indicative of metalworking. The fuel ash slag could also have been created in domestic hearths and ovens though the current material is suspected of deriving from smithing due to associations.

5.10.4 Definite iron smithing slag makes up the majority of the Middle Saxon assemblage by weight (3432g). The material is fairly typical – a quite dense but well aerated rusty brown slag, usually of irregular form. Conjoining pieces from ditch [1416] (SG202) appear to be from a forge bottom measuring c. 115mm in diameter and 48mm thick (838g). The piece has notably steep-sides with a gently rounded base and is similar in form to a fragment from another forge bottom from ditch [1401] (SG456) which also has traces of a dull red sandy clay hearth lining adhering. The only other hearth lining from period 1 was recovered from pits [1344] and [1374] (SGs 443 and 464 respectively) and are of similar sandy clay suggesting they may also derive from smithing hearths. Hammerscale from iron smithing is widespread, coming from period 1 contexts in all three excavation areas (21 different contexts), but is never present in large quantities. Residues usually contain in the region of 25 to 50 flakes and less than 20 spherical pieces, always well under 1g per context. This suggests that although Middle Saxon iron smithing was clearly occurring in the general vicinity it was not close to the currently investigated areas.

5.10.5 There are just two non-ferrous pieces from the excavations. One consists of a 1g runnel fragment of lead (ditch [1176] SG75) and a 44g piece of lead ore from pit [1374] (SG465). The presence of lead waste is well-attested in *Lundenwic* where it was either worked for its own sake, or as part of the process for other non-ferrous metals (Keys 2003). As such its presence here is not unexpected and the quantities involved, as with the smithing, suggest any non-ferrous metalworking that was occurring was not happening in the immediate vicinity of the currently investigated areas.

Period 2: Medieval

5.10.6 The medieval assemblage is much smaller than the Saxon one and has the potential to contain a significant quantity of residual material. Just three pieces of amorphous smithing slag were recovered – all from occupation layer [1378] (SG192}. Hammerscale was recovered from six medieval deposits, the densest concentration coming from occupation layer [1035] where between *c.* 100-150 flakes and *c.* 25-50 spheres were noted in the residue. However, considering this deposit also contains significant intrusive post-medieval pottery the metalworking waste is not considered secure. The remaining material consists of a sparse scatter of miscellaneous types of little consequence.

Period 3: Early Post-medieval

5.10.7 The very small assemblage of slag from this period was all recovered from pit [1197] and is composed of two pieces of smithing slag and a clearly related piece of fuel ash slag (with some iron staining) in which is embedded a piece of partially burnt coal shale. This would suggest that there was indeed some smithing occurring at this time and, considering the degree of intrusive coal granules found in earlier contexts, must shed some uncertainly about just how much of the period 1 and 2 hammerscale could be intrusive.

Period 4: Late Post-medieval

5.10.8 The assemblage from this period consists of a single 4mm hammerscale flake and some scraps of iron concretion and magnetic fines. All could easily be residual.

5.11 The Bulk Metalwork by Trista Clifford

5.11.1 A small assemblage of 79 iron objects weighing 3845g was recovered from 26 individual contexts. Of these, 24 are nails (wt 196g). The assemblage is in a variable condition. None is particularly well preserved but the iron from certain contexts, particularly those of periods 3 and 4, is heavily corroded and completely mineralised.

5.11.2 The majority of nails are from Period 1 contexts (n=10) although these are mostly fragments. No heavy duty nails are present, and general purpose nails are either headless or circular headed with square or rectangular section. Two tacks with circular heads came from Period 4 context [1058].

5.11.3 The remaining bulk metalwork consists of amorphous lumps, strap or plate fragments, and rod fragments which are undiagnostic of function. The bulk of

these are highly corroded fairly large fragments from Period 4 cess pit fills [1058] and [1326] (wt=3167g).

5.12 The Animal Bone by Hayley Forsyth-Magee

Introduction

5.12.1 The excavations produced a large assemblage of animal bone containing 8,462 fragments from 209 contexts. The majority of the assemblage is dominated by mammal bone, with a moderate quantity of fish, bird, small mammal and anuran remains also present. Provisional dating indicates that the majority of the assemblage derives from the mid-late Saxon (675-900) period, predominately from pit and ditch fills. A moderate quantity of faunal remains were also recovered from medieval (1200-1375), early post-medieval (1550-1750) and late post-medieval (1770-1850) contexts.

5.12.2 The evaluation (Rielly, 2015) recovered 657 fragments of animal bone which were recorded in detail. The evaluation uncovered evidence of Middle Saxon occupation as well as post-medieval activity. The evaluation and excavation assemblages are assessed together.

Methodology

5.12.3 The assemblage has been recorded onto an Excel spreadsheet in accordance with the zoning system outlined by Serjeantson (1996). Where possible bone fragments have been identified to species and the skeletal element, part and proportion, represented. Specimens that could not be confidently identified to taxa, such as long-bone and vertebrae fragments, have been recorded according to their size and categorised as 'large', 'medium' or 'small' mammal.

5.12.4 In order to distinguish between the bones and teeth of sheep and goats a number of identification criteria were used including those outlined by Boessneck (1969), Boessneck *et al* (1964), Halstead et al (2002), Hillson (1995), Kratochvil (1969), Payne (1969, 1985), Prummel and Frisch (1986) and Schmid (1972). Sheep have been positively identified within the assemblage, there is no evidence of goat, although it may be possible that a small goat population was present on the site.

5.12.5 The identification of deer has been undertaken with reference to Lister (1996), where identifications have not been possible specimens have been categorised as deer. The identification criteria of rabbit and hare specimens has been undertaken with reference to Callou (1997). The identification of domestic fowl has been undertaken with reference to the criteria outlined by Tomek and Bocheński (2009), with the identification of additional bird bones using Serjeantson and Cohen (1996). Small mammal remains have been separated into rodent and anuran categories with identifiable elements noted for further identification to taxa. Fish bones have been recorded and analysed separately. NISP counts (Number of Identifiable Specimens) will be used to identify the presence, and importance, of different species from each phase.

5.12.6 Age at death data has been collected for each specimen where observable. Tooth eruption and wear has been recorded from mandibular dentition with

two or more teeth in-situ, according to Grant (1982). The state of epiphyseal bone fusion has been recorded as fused, unfused and fusing.

5.12.7 Mammalian metrical data has been taken in accordance with Von den Driesch (1976) and avian metrical data has been recorded using Cohen and Serjeantson (1996). Specimens have then been studied for signs of butchery, burning, gnawing and pathology. The location and direction of butchery marks on the bones has been recorded. Burnt bone has been recorded as charred or calcified.

Assemblage

5.12.8 The assemblage contains 8,462 fragments weighing approximately 193kg, of which 7,822 fragments have been identified to taxa (Table 10). The majority of the assemblage has been retrieved through hand-collection as well as recovering a moderate assemblage from the bulk samples. The majority of the specimens are in a moderate state of preservation with some signs of surface erosion and weathering evident. It is possible that the bones exhibiting taphonomic erosion may have been left exposed to the elements before being buried, or were re-deposited, a number of these remains were covered in a gravel-concretion. Bones in moderate condition may have been reburied soon after deposition. A small quantity of complete bones are present within the assemblage.

Period		**No. Fragments**	**NISP**	**Preservation**		
				Good	**Moderate**	**Poor**
1	Mid-Late Saxon (675-900)	6,869	6,320	10%	84%	6%
2	Medieval (1200-1375)	665	630	3%	79%	18%
3	Early Post-Medieval (1550-1750)	825	792	20%	73%	7%
4	Late Post-Medieval (1770-1850)	90	67	15%	82%	3%
UD	Undated	2	2	-	100%	-
US	Unstratified	11	11	-	100%	-
	Total	**8,462**	**7,822**			

Table 10: The total number of fragments, NISP (Number of Identifiable Specimens) count and percentage preservation based on the NISP

5.12.9 Due to the high quantity of faunal bone recovered from the bulk samples a representative quantity consisting of 1,888 fragments has been recorded at this stage. The majority of the bulk sampled faunal remains were identifiable to species, the remainder of which will be recorded during the next stage of analysis. The bulk samples produced a moderate quantity of identifiable small mammal and anuran remains. Burnt faunal bone was also retrieved in moderate quantities from the bulk samples, where possible fragments have been identified to element and taxa. No human bone is present within the bulk sampled burnt bone.

5.12.10 A range of faunal taxa have been identified (Table 11), the main domesticates; cattle, sheep/goat and pig dominate the assemblage. The remainder of the assemblage is comprised of other domesticates including horse, dog, cat, bird, chicken and goose. The wild taxa are present in smaller quantities and

are represented by deer, hare, rabbit, bird, pheasant, possible crane, anuran and small mammal (rodentia and insectivoria) remains. Large and medium mammals have been recorded in greater quantities due to high levels of fragmentation caused by butchery practices and taphonomic processes. The robusticity of these elements have biased the survivability of these remains over that of the remaining assemblage.

	Period					
Taxa	**1**	**2**	**3**	**4**	**U/S**	**U/D**
Cattle	883	96	161	9		1
Sheep	234	26	55	7		
Sheep/goat	461	43	68	5		1
Pig	478	65	34	3		
Horse	7		1			
Deer	4					
Deer?	2		1			
Dog	8		14			
Cat	4		1			
Hare	1					
Rabbit	1		1			
Large Mammal	2148	167	259	16		3
Medium Mammal	1773	211	171	19	2	6
Small Mammal	112	7	2	1		
Bird	41	5	9	1		
Chicken	22	2	11	1		
Chicken/Pheasant	4	1				
Pheasant		1				
Goose	25	1	3			
Crane?	1					
Anuran	111	5	1	5		
Total	**6320**	**630**	**792**	**67**	**2**	**11**

Table 11: the total number of fragments, NISP (Number of Identifiable Specimens) count by Taxa and Period

5.12.11 Evidence of butchery, burning, gnawing, pathology and non-metric traits have been recorded. Where observable, age at death data and metrical analysis has also been noted.

Mid-Late Saxon 675-900 (Period 1)

5.12.12 The Mid-Late Saxon period produced the largest assemblage of identified faunal remains with 6,320 fragments from 150 contexts. The majority of the remains have been retrieved from pit and ditch features with smaller quantities recovered from layer, dump, posthole, well and gully features.

5.12.13 All three of the main domesticates are present in large quantities with cattle being the most prevalent, followed closely by sheep/goat and lastly pig. The remainder of the assemblage contained other domesticates including horse, dog, cat, chicken, chicken/pheasant and goose. Wild taxa were present in smaller numbers, including deer, deer?, hare, rabbit, bird, possible crane, small mammals and anuran bones. Single specimens of hare and rabbit, as well as the small number of deer bones present implies that wild taxa were not exploited as a regular dietary supplement. The presence of these remains may be linked to fur and antler working by-products, utilising the whole

carcass. Small mammal and anuran remains are the only wild taxa present in greater numbers, this is likely due to good recovery through bulk sampling. Large and medium mammals dominate this assemblage with 3,921 fragments. Fifty-eight bulk samples produced 948 identifiable faunal remains including the main domesticates as well as bird, small mammals and anurans primarily from pit and layer features.

5.12.14 Analysis of element representation indicates that meat and non-meat bearing bones are present within this assemblage. Butchered taxa includes large mammal, cattle, sheep/goat, medium mammal, pig and a single goose. The majority of these remains have been heavily chopped axially, evidence of transverse chopping, smashing, cutting and slicing has also been recorded. All carcass parts are represented, which suggests primary butchery and carcass dressing occurred on site.

5.12.15 From the chicken bones present within the assemblage only one could be positively identified as male, based on the presence of a 'cockspur' in posthole [1224]. The limited quantity and poor survivability of domestic fowl bones is likely to have affected these results. The presence of male domestic fowl could indicate the exploitation of these birds for breeding and consumption, another possibility is for sport, for example cockfighting. Fifteen pig canines; twelve male from [1174], [1235], [1394], [1395], [1415], [1491], [1492, [1548], [1581], [1599] and three female from [1174], [1395] and [1667] were present within the assemblage, all with evidence of wear. Male and female sheep horncores are present, including those of mature and young adults and remains of several cattle horncores are also included within the assemblage. A small number of sheep/goat pelves have shown signs sexual dimorphism suggesting the presence of males and females. Evidence of bone working was recovered from well [1080] a decorated bone comb (Figure 21), pit [1345] with a pin-beater? and cattle horncore working waste from dump [1581].

5.12.16 Burnt faunal bone was recovered from twenty-three hand-collected contexts consisting of 43 medium mammal, large mammal, cattle, sheep/goat, pig and domestic fowl bones from pit, ditch and dump features. The majority of these remains are meat-bearing bones and may have been burnt through cooking or domestic waste disposal. Fifty-six bulk samples produced a large quantity of burnt faunal bones, of which thirty-three contained 357 identifiable faunal bone fragments retrieved from pit, ditch, gully, dump, well and layer features.

5.12.17 Gnawing by canid was observed in twenty-six mostly meat-bearing bones including sheep/goats, cattle, large and medium mammals from pit, ditch, dump and layer features. A single large mammal pelvis from dump [1612] exhibited signs of rodent gnawing.

5.12.18 Non-metric traits were observed in the dentition of three cattle mandibular and maxillary third molars recovered from dump [1174], pit [1235] and ditch [1397] features, showing evidence of absent and reduced hypoconulids (Argant *et al* 2013). Dentition from two sheep mandibles retrieved from pit [1370] and ditch [1597] have congenitally absent 2nd premolars.

5.12.19 Pathological lesions have been observed in over twenty cattle, sheep/goat, large mammal, medium mammal and a single bird bone recovered from pit, ditch and dump features. Some of the pathological lesions have been obscured by concretion deposits on the bones, x-raying these remains will

confirm the presence of pathology. A range of pathologies have been tentatively identified including fractures, joint disease, metabolic conditions and dental disease. These pathologies show signs of healing and moderate bone remodelling which suggests the animals may have been cared for.

5.12.20 Seventy-one ageable mandibles and seventy-two measurable bones were recorded. Analysis of the fusion data available shows both adult and juvenile individuals are present within this phase.

Medieval 1200-1375 (Period 2)

5.12.21 The medieval (Period 2) assemblage produced a smaller quantity of 630 identifiable faunal remains from ten contexts; [1035], [1141], [1144], [1153], [1251], [1252], [1253], [1355], [1367] and [1378] consisting of pit, layer, dump, gully and made ground features.

5.12.22 Taxa that have been identified include cattle, sheep/goat, pig, small mammal, bird, chicken, chicken/pheasant, pheasant, goose and anuran. Large and medium mammal bone fragments dominate the assemblage considerably. Eleven bulk samples produced moderate quantities of faunal remains, a small quantity of which was identifiable to taxa including small mammal and anuran bones as well as remains from the main domesticates and birds.

5,12.23 Analysis of element representation indicates that meat bearing bones dominate the assemblage, although small quantities of non-meat bearing remains are also present suggesting the slaughter and primary butchery occurred on site.

5.12.24 A single chicken tarso-metatarsus was identified as male on the presence of a 'cockspur' in layer [1035]. Six pig canines; four male recovered from made ground [1141] and pit [1251] features, and two female from layer [1378] were identified within the assemblage, all with evidence of wear. A single sheep pelvis from layer [1378] has also tentatively been identified as female based on the morphology of the bone. No sheep horncores or cranial remains were present within the assemblage, making it uncertain as to whether the flock contained polled or horned animals. A single fragment of worked bone was recovered from sample <34> from made ground [1141].

5.12.25 Evidence of butchery was observed in sixty-seven predominantly meat-bearing bones, the majority retrieved from layer features [1035], [1355], [1378] with smaller quantities recovered from made ground [1141] and dump features [1144]. Butchered taxa includes large mammals, cattle, medium mammals, sheep/goat and pig that exhibit a range of axial chopping, as well as smash and cut marks.

5.12.26 Charred and calcined burnt faunal bone fragments were recovered from all eleven bulk samples; <29>, <30>, <33>, <34>, <38>, <39>, <41>, <92>, <111>, <117> and <122> weighing 109g. Only eleven fragments could be identified to taxa. No burnt faunal remains were retrieved from the hand-collected contexts suggesting that burning may have occurred as a by-product of cooking jointed meats or the disposal of domestic waste, rather than during the primary butchery stage and carcass dressing.

5.12.27 Gnawing by canid was observed in one medium mammal radius fragment from layer [1378]. Four ageable mandibles and eight measurable bone were recorded. Analysis of the fusion data available shows both adult and juvenile individuals are present within this phase. No pathology or non-metric traits were observable within the assemblage.

Early Post-Medieval 1550-1750 (Period 3)

5.12.28 The early post-medieval assemblage (Period 3) produced a moderate assemblage of 792 faunal remains from thirty-six contexts including pits, robber cuts, construction cuts, dumps, layers, ponds, backfill, destruction debris, gully and made ground features.

5.12.29 Cattle and sheep/goat dominate the assemblage in this period, the remaining taxa identified includes pig, dog, chicken, bird, goose, small mammal, horse, deer, cat, rabbit, anuran. However large and medium mammal bone fragments are present in quantities greater than the main domesticates. A single bulk sample; <54> retrieved from a construction cut [1195] produced fragments of small mammal and anuran bones. Localised charring was observed in a single cattle calcaneus from backfill [1536].

5.12.30 Sexual dimorphism was observed in a single chicken tarso-metatarsus with the presence of a 'cockspur'. Possible distinctions between male, castrates and female specimens can also be observed through macroscopic and metrical analysis of the assemblage, this is evident in the cattle and sheep long bones and horncores from this period. Four male sheep horncores with one exhibiting signs of a butchery mark were recovered from three contexts; [1573, [1579] and [1586]. No pig canines have been recovered from this phase to determine if the specimens present are male or female.

5.12.31 A small quantity of bone, horn and antler working waste was present within this phase; a fragment of cattle horn sheath from robber cut [1019], a medium mammal long bone fragment from gully [1365] and a fragment of deer antler tine with evidence of saw marks from dump [1586]. Retrieval of the objects from these features suggests that they may have been discarded before use.

5.12.32 The assemblage contains both meat and non-meat bearing bones. Evidence of butchery is present in 180 bones, comprised mainly of the three main domesticates as well as large and medium mammal bones and a single goose bone. The butchered bones were recovered from 23 contexts, with the majority recovered from dump, layer, robber cut and pit features. The predominant method of butchery observed is chopping axially, and to a lesser extent transversely, and has affected the main domesticates; the majority being large mammal and cattle bones including axial and appendicular elements. Cut marks suggestive of dismemberment were recorded in large mammal, sheep/goat, cattle, pig, medium mammal and a goose bone. A small quantity of large mammal, medium mammal and a single sheep showed evidence of bone smashing. Cattle metacarpals were the most abundant elements from the three main domesticates, this is due in part to the size, shape and robusticity of these bones.

5.12.33 Canid gnawing was present in a cattle ulna from backfill [1536] and medium mammal pelvis fragment from dump fill [1586]. A cattle radius and pig ulna

from dump fill [1588] also exhibited signs of canid gnawing. Rodent gnawing was observed in a single large mammal rib fragment from cut [1066].

5.12.34 Pathological lesions were observed in eight specimens and include dog, cattle and large mammal bones. Five dog bones; humerii and ulna from context [1066], ulna from [1067], and a single radius from [1196] exhibited signs of joint disease. A dog femur with a mis-aligned healed fracture with associated infection was recovered from context [1317]. Evidence of joint disease was observed in a cattle astragalus from context [1579] and a single large mammal rib from context [1536] showed signs of periosteal new bone growth. Ten ageable mandibles, ten measureable bones and three horncores were recorded. Fusion data where observed, indicated that both adult and juvenile remains are represented within this phase.

Late Post-Medieval 1770-1850 (Period 4)

5.12.35 The late post-medieval assemblage (Period 4) contains a small quantity of just 67 identifiable faunal remains recovered from nine contexts. The majority of the remains have been retrieved from fills of construction cuts and a cess pit, with the remainder of the assemblage originating from wall, cellar, pit and layer contexts. Taxa that have been identified include sheep/goat, cattle, pig, anuran, bird, chicken and small mammal. Medium and large mammal fragments are present in moderate quantities and dominate the assemblage from this period. No distinctions between males and females could be observed in the domestic fowl bones present. A single ram horncore was present from context [1048], which may suggest the animal was utilised for breeding. A small collection of identifiable anuran remains were recovered from bulk sample <20>, a cellar feature.

5.12.36 Evidence of butchery was observed in sixteen predominately meat bearing bones from six contexts within this phase; [1048], [1058], [1072], [1323], [1326], [1362] consisting of construction cut, cess pit, layer, robbed wall and backfill respectively. The majority of the butchery marks observed were those of chop marks consisting of axial splitting and transverse chops present in a range of taxa including a large and medium mammal rib fragment and a sheep tibia from context [1048]. A large mammal vertebrae fragment, cattle radius, skull and mandible fragments from context [1058] exhibited splitting and horizontal chop marks. A large mammal rib fragment from context [1072] had also been chopped and cut as well as a medium mammal cervical vertebrae that exhibited signs of axial splitting and cattle metatarsal horizontally split from context [1323]. A cattle radius from context [1326] and a large mammal long bone fragment from context [1362] exhibited signs of splitting. Saw marks were also observed in a large mammal rib fragment, sheep/goat femur and two pelves from context [1058].

5.12.37 Gnawing by canid was present in a single sheep/goat pelvis fragment from cess pit fill [1058] that also exhibited signs of butchery. Possible dental pathology was observed in a single sheep mandible from context [1058] with evidence of inflammation to the alveolar bone. Two ageable mandibles and one measurable bone were recorded. Fusion data suggests that the majority of the bones recorded within this phase are adult, although a small number of juvenile remains are also present. This suggests that the animals were bred on location, or locally. No burnt bones were recorded.

Unstratified and Undated Phases

5.12.38 A negligible quantity of eleven faunal remains were retrieved from unstratified and undated contexts. The taxa identified includes medium mammal and large mammal long bone and rib fragments as well as a large mammal and a sheep/goat mandible fragment and an incomplete cattle horncore.

5.12.39 Evidence of butchery was observed in one bone; a large mammal mandible fragment exhibited chop marks to the mandibular ramus. No burning, gnawing, pathology or non-metric traits were observed. No ageable mandibles or measurable bones were recorded.

Discussion

5.12.40 The faunal assemblage is dominated by mid-late Saxon bones. Moderate quantities of bone were also recovered from the medieval and early post-medieval periods, with a small assemblage dated to the late post-medieval.

5.12.41 Further analysis of the faunal remains is necessary to determine the function of this site, its importance within the Saxon landscape and relationship with *Lundenwic* and neighbouring local sites in London, the South-East and further afield.

5.12.42 The three main domesticates are represented in moderate quantities, represented by a range of elements which suggests that primary butchery, carcass dressing and general processing was undertaken on site. Cattle remains are present in the greatest quantity, however sheep/goat remains are also present in some abundance and suggests that both taxa were of importance, primarily for meat as well as secondary resources such as traction, milk and wool. Analysis of the butchery methods and taxa may highlight function and social and economic status within the Saxon landscape.

5.12.43 Sexual dimorphism and age at death data indicates that male and female, juvenile and adult specimens have been exploited. The presence of juvenile remains suggests that animals may have been bred on site (Reilly, 2012). Further analysis of this data will highlight animal husbandry practices, and may indicate consumer, producer or distribution aspects.

5.12.44 The limited presence of wild taxa suggests that these resources were not overly exploited and the Saxon diet was not supplemented by deer, hare, rabbit or birds, with the exception of the minor exploitation of domestic fowl and goose.

5.13 The Fish Bone by Gemma Ayton and Hayley Forsyth-Magee

5.13.1 Excavations produced a moderately sized fish bone assemblage that was retrieved through hand-collection and from the samples. The bulk of the material derives from mid-late Saxon (AD675-900) deposits and provides a relatively rare chance to analyse the diet and fish husbandry regimes of the inhabitants of Lundenwic.

5.13.2 Of the 234 whole-earth samples taken during the excavation, 61 have been processed at this stage with a sub-sampling strategy being implemented incorporating samples from a range of features and periods and which are

evenly distributed across the site. Unsurprisingly, the majority of the fish bones derive from pits (Table 12).

	PERIOD			
	1	**2**	**3**	**4**
Layer	35	37	2	
Ditch	47			
Pit	553		1	7
Pit Quarry	27			
Stake hole	1			
Well	29			
Dump	25	14		
Dump Layer	4			
Wall				10
Gully	22			
Made Ground		11		
Construction Cut				3
Backfill				2
Grand Total	**743**	**62**	**3**	**22**

Table 12 Fish Bone NISP (Number of Identifiable Specimens) by Feature and Period

5.13.3 The fish bone has been rapidly assessed at this stage which involved, in most cases, identifying the assemblage to element and family level to give a broad overview of the fish present by Phase (Table 12).

	PERIOD			
	1	**2**	**3**	**4**
Eel	149	13		5
Pleuronectidae	133	13		7
Cyprinid	73	4		4
Gadid	291	9		1
Clupeidae	20	11	2	
Perciformes	11			1
Shark	7			
Serrenidae	6	1		
Scombridae	4	1		
Triglidae	2			
Ray	1	1		
Fish	46	9	1	4
TOTAL	**743**	**62**	**3**	**22**

Table 13 Fish Species NISP (Number of Identifiable Specimens) by Period

5.13.4 The assemblage was in a moderate to good state of preservation though few complete, and no measurable bones, were recovered. Vertebrae were the most commonly occurring element with very few cranial bones recovered. The hand-collected assemblage included cranial elements identified to Pleuronectidae, as well as a small number that were unidentified to species. A small quantity of Gadid and Pleuronectidae vertebrae were also recovered through hand-collection.

Period 1, Mid-Late Saxon (AD675-900)

5.13.5 The bulk of the fish bone assemblage has been provisionally dated to this period and a range of taxa have been identified including both freshwater and marine taxa. Further identification can be undertaken on two cyprinid pharyngeals recovered from samples <94> and <102> as it should be possible to assign these to species. A range of gadids are represented including the larger species (cod and haddock) and smaller taxa (whiting) whilst the family Clupidae is represented primarily by herring.

5.13.6 It will be possible to make useful comparisons with fish bones assemblages from other Lundenwic sites including Southampton Street (Ayton in prep), Long Acre and Drury Lane (Reilly *et al* 2012) and Maiden Lane (Locker 1988).

5.13.7 The assemblages from Phases 2, 3 and 4 are too small to warrant further analysis and any information required for the publication report regarding the taxa present can be taken from Table 12.

5.14 The Human Bone by Dr Paola Ponce

5.14.1 One disarticulated fragment of unsided human fibula was recovered from the fill of context (1323), a robber cut dated to Period 4: late post-medieval 1770-1850. This measured 112.06mm in length and weighed 18.3 grams. Animal bone was also recovered from this context (5.12).

5.14.2 On the basis of the general morphology and development of the bone (Buikstra and Ubelaker 1994), the age assessment of the fragment suggests it belonged to an adult individual. The sex of the individual was impossible to discern, as no dimorphic features were observed in the bone and it was not possible to carry out osteometric analysis.

5.14.3 As this disarticulated fragment has no potential to further increase our understanding of the functionality of the site, no further work is required.

5.15 The Shell by Trista Clifford

5.15.1 A small assemblage of hand collected marine shell weighing 286g was recovered from 17 individual contexts. The assemblage derives predominantly from contexts of Period 1 and is dominated by Ostrea edulis (edible oyster). Context [1512] produced a small fragment from a Mytlius edulis (Common mussel) shell.

5.16 The Registered Finds by Trista Clifford

5.16.1 The excavations produced a moderately-sized registered finds assemblage of 145 objects including ceramic and copper alloy and small numbers of iron and lead objects (Appendix 3). The assemblage is well stratified and overall in fair to good condition although the ironwork is mineralised and heavily corroded. The assemblage is dominated by objects associated with textile production, in particular weaving, and dress accessories.

5.16.2 A brief assessment was carried out at this stage in order to broadly characterise the assemblage and target areas for further analysis. The

assemblage is discussed chronologically by functional category (Table 14). Conservation is ongoing at the time of writing (see Section 5.17); radiography is complete.

	Period					
Functional category	**0**	**1**	**2**	**3**	**4**	**Total**
Dress and personal adornment		4		19	16	39
Health and hygiene		1			1	2
Textile manufacture		47	3	1		51
Household utensils or furniture		4	1	2	7	14
Buildings and services		1		2		3
Tools		4	1	1		6
Fasteners and fittings	1	2		1	3	7
Bone working	1	1		3		5
Security equipment			1			1
Coins and tokens	2	4	4	4	3	17
Uncertain function		2	1	3	7	13
Totals	**4**	**70**	**11**	**36**	**37**	**158**

Table 14: Overview of the registered finds assemblage by period and functional category

Dress accessories

5.16.3 Objects from period 1 include three pins from occupation layer [1089], ditch fill [1401] and pit fill [1449], as well as a glass bead of hexagonal section from well fill [1080]. While the pins are of Saxon type, the bead may in fact be Roman. A small group of dress pins was recovered from Period 3 layer [1719]. The remaining assemblage is dominated by leather shoe fragments. These occur in two discrete groups: those from Period 3 pond feature [1309] which can be dated typologically to the 18th century and a later group of 19th century date from the fill of pit [1327].

Health and Hygiene

5.16.4 One of the most interesting objects recovered from the site is an asymmetric bone comb from Period 1 well fill [1080] (Figure 21), dating to the 8-11th century AD (Ashby 2011). Period 4 cess pit fill [1058] produced a bone toothbrush.

Textile manufacture

5.16.5 This category is constitutes the largest group of objects within the assemblage and is dominated by annular loom weight fragments of Saxon date. Just fewer than 50 individual weights are represented recovered largely from pit contexts in areas A and C. In contrast, only one bone pin beater was recovered from period 1 pit fill [1345]. The vast majority of these weights are well stratified within Period 1 contexts; only three come from later occupation layers. No evidence was found for other stages in the production process such as fibre

preparation, spinning or fulling, although one possible copper alloy needle fragment was recovered from period 1 refuse pit [1403].

Household utensils and furniture

5.16.6 The majority of household objects are glass vessel fragments, considered separately in Section 5.8. A stone object, possibly a burnisher came from period 1 pit fill [1395] and pit [1665] contained a double ended hook which may be part of a pot crane. Period 3 and 4 contexts produced a lead vessel fragment, a bone spoon and an ivory knife handle.

Buildings and services

5.16.7 A large U shaped staple or joiners dog came from period 1 pit fill [1241]. Two lead window came fragments and a hinge pivot were recovered from period 3 contexts.

Tools

5.16.8 This category is under represented within the assemblage. Period 1 features produced two unidentified tools, a probable knife fragment and possible whetstone. Two further knives came from features of later date.

Fasteners and fittings

5.16.9 The small assemblage from this category consists of tacks, mounts and a hook.

Bone and antler working

5.16.10 Waste fragments such as small horn offcuts and sawn bone/ antler fragments associated with bone or antler working make up this small group; none are intrinsically dateable.

Coins and tokens

5.15.11 Of the thirteen coins and tokens recovered, only one has been identified so far. The remaining coins are currently undergoing cleaning and conservation. The assemblage includes a silver sceatta of 8th century date from period 1 ditch fill [1450]; another coin was recovered from period 1 ditch fill [1175].

Uncertain function

5.16.12 Thirteen objects currently remain unidentified; further work will focus on identifying those from periods 1-3

5.17 Conservation by Elena Baldi

Overview of objects requiring conservation and storage conditions

5.17.1 The registered finds are manufactured in metal, fired clay, bone, leather and glass, each presenting varied conditions of preservation and issues related to their stabilisation. There are also 20 coins and tokens, mostly heavily corroded and illegible, boxed in a separate Stewart tub. Metalwork is boxed

in airtight Stewart tubs with silica gel. Overall, the condition of the metal objects is poor, heavily mineralised and corroded. The leather finds were waterlogged and they are also stored in a cool area in airtight Stewart tubs, with dark lining to prevent bacterial growth. The fired clay and bone objects are stored in a separate cardboard boxes.

Radiography

5.17.2 All of the bulk metal finds and some of the metal registered finds have already been radiographed. The machine used was a Faxitron 110kV Inspection Cabinet, Model 43855B. The plate numbers are 329 to 342 and they were taken at variable exposures, from 70 to 100 Kv irradiated for 90 seconds, according to their size, thickness and degree of deterioration.

Conservation

5.17.3 A few objects have already been fully conserved for temporary display purposes. These are RF <1> and <11> (metal pins), RF <2> (a bone comb; Figure 21), RF <6> (a bone loom beater), RF <81>, a wood spoon, and RF <5> (a coin).

5.17.4 The bone objects were gently cleaned with a solution of demineralised water or a 50:50 solution of IMS and water. Most of the work, particularly the conservation of the bone comb, was carried out under a binocular microscope, to allow detailed cleaning of crevices and broken areas, as well as evidencing the decorative pattern on the handle of the comb (Figure 21).

5.17.5 Both pins and the coin presented only a very thin layer of superficial corrosion products and dirt. The objects were cleaned mechanically, with cotton wool swabs, scalpel and sharp tools, as appropriate to the different stages of cleaning. After this first stage, they were first dewatered in 100% solution of ethanol (overnight), immersed in 3% BTA in ethanol (overnight) and finally immersed in 5% Paraloid B44 in Acetone (overnight).

5.18 The Environmental Samples by Stacey Adams and Mariangela Vitolo

Introduction

5.18.1 Two hundred and thirty-five bulk soil samples were taken during excavations at the London School of Economics, City of Westminster, for the recovery of environmental remains such as plant macrofossils, wood charcoal, faunal remains and Mollusca, as well as to assist finds recovery. Seventy-five samples, deemed to have good potential and following discussion with Sylvia Warman, were selected for assessment. The remaining samples have been retained and will be discarded after completion of the post-excavation assessment, unless further processing is required. The selected samples were taken from pit, ditch and posthole features as well as occupation layers, dumps, levelling deposits and a well. Occupation of the site dated from the mid-late Saxon period (675-900 AD) with later medieval and post-medieval activity. The following report assesses the potential of the plant macrofossils and wood charcoal to inform on the arable economy, fuel use and selection and the local environment.

Methodology

Charred plant remains

5.18.2 Bulk samples from dry deposits, ranging from 10 to 40L in volume, were processed by flotation using a 500µm mesh for the heavy residue and a 250µm mesh for the retention of the flot before being air dried. The residues were passed through 8, 4 and 2mm sieves and each fraction sorted for environmental and artefactual remains (Appendix 8). Artefacts recovered from the samples were distributed to specialists, and are incorporated in the relevant sections of this volume where they add further information to the existing finds assemblage.

5.18.3 The flots were scanned in their entirety under a stereozoom microscope at 7-45x magnifications and their contents recorded (Appendix 9). Provisional identification of the charred remains was based on observations of gross morphology and surface structure and relevant reference material was consulted where necessary (Cappers *et* al, 2006; Jacomet, 2006). Quantification was based on approximate number of individuals. Nomenclature follows Stace (1997) for wild plants and Zohary and Hopf (1994) for cereals.

Waterlogged plant remains

5.18.4 A series of samples were rich in organic material and/or were taken from waterlogged deposits and were therefore wet-sieved. Sub-samples of 2 liters were washed through a stack of geological sieves ranging from 4mm to 250µm, and each fraction was retained wet. Of the remaining sub-samples, 8L were sent to an external specialist for insect assessment. However, in some cases, the presence of organic material was not immediately apparent; therefore some samples underwent both wet sieving and flotation and the flots were retained wet.

5.18.5 The wet flots and wet sieved fractions were scanned under a stereozoom microscope at 7-45x magnifications and their contents recorded (Appendix 10). Identifications of waterlogged macrobotanical remains have been made through comparison with published reference atlases (Cappers *et al*. 2006, Jacomet 2006, NIAB 2004), and nomenclature used follows Stace (1997).

Charcoal

5.18.6 Charcoal fragments were fractured by hand along three planes (transverse, radial and tangential) according to standardised procedures (Gale & Cutler, 2000; Hather, 2000).Specimens were viewed under a stereozoom microscope for initial grouping, and an incident light microscope at magnifications up to 500x to facilitate identification of the woody taxa present. Taxonomic identifications were assigned by comparing suites of anatomical characteristics visible with those documented in reference atlases (Schoch *et al*, 2004; Hather, 2000; Schweingruber, 1990). Identifications were given to species where possible, however genera, family or group names have been given where anatomical differences between taxa are not sufficient enough to permit satisfactory identification. Ten fragments were submitted for identification from samples with >3g of wood charcoal from the >4mm

residues. Quantification and taxonomic identifications of charcoal are recorded in Appendix 8 and nomenclature follows Stace (1997).

Results

Charred and Mineralised Plant Macrofossils

5.18.7 The majority of the plant remains were preserved as a result of charring, as carbonised remains. These remains consisted of cereal caryopses and a small amount of nutshells and seeds of wild plants. No chaff remains were noted. By-products of the processing of cereals such as barley and free-threshing wheat consist of fragments of straw and rachis as well as associated weeds. Straws and rachises tend to be eliminated at an early stage of crop processing and rarely find their way into charred archaeobotanical assemblages. The absence of weed seeds from many of the samples also suggests the presence of a clean product originating from a late crop processing stage. Throughout the periods of site occupation, no changes in the range of crops were noted. Preservation of the plant macros was variable, but generally ranged from poor to moderate.

5.18.8 In addition to carbonised remains, preservation through mineral replacement was also noted. These remains consisted of fruit pips, such as grape, possible fig and apple/pear, as well as cereal caryopses.

Waterlogged Plant Remains

5.18.9 All waterlogged samples were taken from Phase 1 contexts. Uncharred and charred wood was recorded from nearly all of the waterlogged samples. The texture was fairly hard and no twigs were noted. Very few fragments were large and identification was not carried out.

5.18.10 A small number of seeds had also preserved in anoxic conditions. Bramble, elders, goosefoots and members of the Polygonaceae family, which includes knotweeds and docks for example, were the most common. Other less commonly occurring taxa included flax, blackthorn, hawthorn, buttercups, stinging nettle, knotgrass and sedges.

Wood Charcoal

5.18.11 Assessment of wood charcoal was carried out on fragments from 33 of the samples, the majority of which date to the mid-Saxon features. Wood charcoal from medieval layers [1035] and [1141] and dump [1144] were also assessed. Overall preservation of the wood charcoal was moderate to good with 10% of the fragments indeterminate. A number of the fragments showed evidence of vitrification, a process that distorts the charcoal, giving it a glassy appearance. Vitrification has often been associated with high burning temperatures, although recent experiments indicate no correlation between the two (McParland *et al*, 2010). Radial cracks, present in several fragments, are attributed with the burning of wet or moist wood and are often indicators of the exploitation of fresh live wood (Keepax, 1988). Preservation of the fragments was also affected by post-depositional sediment, associated with the changing water table, and general distortion from the charring process and mechanical factors, such as excavation and flotation.

Period 1 Mid Saxon (675 – 900 AD)

Samples <1> [1004], <17> [1044], <20> [1096], <28> [1140], <37> [1156], <42> [1175], <48> [1174], <64> [1222], <68> [1231], <75> [1241], <94> [1356], <96> [1368], <107> [1376], <108> [1382], <112> [1361], <113> [1385], <119> [1392], <120> [1394], <123> [1395], <137> [1430], <140> [1399], <151> [1481], <155> [1491], <167> [1530], <173> and <174> [1542], <190> [1599], <195> [1613] and <204> [1666].

Charred Plant Macrofossils

5.18.12 The majority of the sampled features dated to Period 1. The flots contained generally a small amount of uncharred rootlets, which are indicative of low level disturbance. Uncharred seeds occurred more frequently and included elders, bramble, buttercups and knotgrasses/docks, among others. Given the high number of uncharred seeds present and the fact that most of them are fairly woody, it is possible that they preserved in partially anoxic conditions, perhaps because the deposits were intermittently waterlogged. Charred plant macrofossils consisted mostly in hulled barley and free-threshing wheat. A small number of caryopses resembled rye, although preservation did not allow for a secure identification. Oat grains were also recorded in low numbers. The absence of diagnostic floret bases meant that it was not possible to tell whether they represented a crop or a weed. It is possible that pulses were part of the human diet; however they have left no traces in this assemblage, except for two single large seeded legumes that had lost their *hilum* and *testa*. Pulses tend to be under-represented in charred archaeobotanical assemblages, perhaps because of their different processing requirements compared to, for example, some cereals. Seeds of wild plants, possibly crop weeds, were also present in small amounts and included goosefoots, meadow and large grasses, clovers/medicks and sedges, among others. Charred bramble seeds and hazelnut shell fragments indicate the presence of shrubby vegetation in the local area. It is possible that some of these wild resources were exploited for food procurement.

5.18.13 Mineralised remains occurred in eight contexts. These consisted mostly of fruit pips, such as grapes, possible figs, and members of the Rosaceae family, including apple and pear. However, in fill [1222] a number of mineralized wheat and rye grains were also recorded. Seeds can become mineralized after passing through the digestive tract, and it is possible that this material is of fecal origin.

Wood Charcoal

5.18.14 Oak (*Quercus* sp.) was the most frequent taxon in the Mid Saxon samples dominating 47% of the assemblage; it was present in all samples, excluding occupation layer [1613]. Oak was likely to have been selected for use as structural timber (Taylor, 1981) or for use as fuel as it can maintain high burning temperatures for long periods of time. Oak and chestnut (*Castanea* sp.) are anatomically similar and can often only be determined by the presence of multiseriate rays, where absent, fragments have been recorded as oak/ chestnut. Birch (*Betula* sp.) and hazel (*Corylus avellana*) were often exploited for semi-structural timber (Huntley, 2010) and are also valued as a fuel source (Austin, 2003), along with elm (*Ulmus* sp.). Field maple (*Acer campestre*) and ash (*Fraxinus excelsior*) suggest the presence of nearby

open areas (Polunin & Walters, 1985) whilst poplar/ willow (*Populus/ Salix*) and alder (*Alnus* sp.) indicate the exploitation of local rivers and/or wetlands (Rodwell, 1991). It is unlikely that alder was deliberately collected for fuel as it has poor burning qualities; its presence at the site may represent opportunistic wood collection. Charcoal fragments of the apple sub-family (Maloideae) and the plum genera (*Prunus* sp.) were occasional within the samples and were likely selected as fuel for their long burning time and high temperatures (Austin, 2003: 99). Wood charcoal of dogwood-type (*Rosa* sp.), hornbeam (*Carpinus* sp.) and whitebeam-type (*Sorbus*-type) were also identified within the samples, albeit in small numbers. The charred wood assemblage from well [1096], half of which consisted of oak but with birch, alder, field maple and a fragment from the apple sub-family also present, is indicative of the exploitation of large branch or stem wood from woodland areas.

Period 2 Medieval (1200 – 1375 AD)

Samples <29> [1035], <34> [1141] and <38> and <41> [1144].

Charred Plant Macrofossils

5.18.15 Samples from medieval contexts produced a scatter of cereal caryopses and other plant remains, probably originating from domestic waste. These included hulled barley and free-threshing wheat. The assemblages were again fairly clean, with a single charred knotgrass present in fill [1141]. Preservation ranged from poor to moderate.

Wood Charcoal

5.18.16 Oak was the dominant taxon in the medieval phase of occupation. Wood charcoal of the apple sub-family and plum genera were present along with field maple and poplar/ willow. The charcoal from sample <38> taken from dump [1144] was distorted by post-depositional sediment making 6 of the 10 fragments unidentifiable.

5.19 Insect and pollen assessment by Enid Allison and Tom Hill

Insects

5.19.1 A total of seven samples from refuse/latrine pits, quarry pits and a well, of Saxon date, were submitted to assess the survival of insect remains and their potential to provide data on the nature of settlement during the period and for environmental reconstruction. A provisional list of insect species noted during scanning and details of individual samples are presented in Appendix 11 and Table 15.

Methodology

5.19.2 The samples were received from ASE as raw sediment. Insect remains were extracted by paraffin flotation after using the 'washover' method to separate organic material from the mineral component (Kenward *et al*. 1980). The recovered paraffin flots were examined in industrial methylated spirits (IMS) using a low-power stereoscopic zoom microscope (x10 – x45) to establish whether insects and other invertebrates were present. Abundances of beetles

(Coleoptera) and bugs (Hemiptera) and their state of preservation were subsequently recorded, and the potential for further analysis was assessed. Taxa noted were categorized into broad ecological groups following Kenward *et al*. (1986) and Kenward (1997). Nomenclature for Coleoptera follows Duff (2012).

Insects Results

Fills of well [1080]
Context 1098, sample <23>; context 1124, sample <25>

5.19.3 Both of the samples produced sizable assemblages of insect remains dominated by decomposer beetles, many of which are regarded as synanthropes (favoured by human occupation and activity). Cereal bran was notably common in sample <25> and this together with the presence of the seed weevil *Bruchus* (common in sample <25>, present in sample <23>) was highly suggestive of the presence of faeces. *Bruchus* were frequently ingested with infested pulses in the past, subsequently being passed from the body in faeces and they are highly characteristic of cess deposits (e.g. Smith 2013). Also, present in both samples, were a group of beetles typical of organic litter from within buildings (Hall and Kenward 1990; Kenward and Hall 1995; Carrott and Kenward 2001). These very probably represent the disposal of sweepings or discarded floor litter which may have helped to dampen smells emanating from the cess. Sample <23> produced a large group of oxyteline rove beetles indicating wet nutrient-rich mud.

Fills of refuse pit/latrine pit [1143]
Context 1222, sample <64>

5.19.4 A very small assemblage of insects was recovered, but despite this it was clear that litter from within buildings had contributed to the fill of the pit, the contents of which appeared from the presence of cereal bran to have also included faeces. The present of fragments of ked (*Meolophagus ovinus*) puparia was of particular interest. Keds are wingless flies that are exclusive ectoparasites of sheep. The puparia frequently occur in archaeological insect assemblages in contexts where they appear to be derived from the cleaning or processing of fleeces or wool, and have a particular association with floors of building where textiles were processed. They are likely to have arrived in the pit with waste from within buildings.

Fill of refuse/latrine pit [1543]
Context 1562, sample <179>

5.19.5 The only invertebrate material recovered consisted of occasional fragments of earthworm egg capsules, very small indeterminate beetle fragments and other fragments of possible insect cuticle.

Fill of quarry pit [1344]
Context 1369, sample <97>; context 1381, sample <110>

5.19.6 The small insect assemblage from sample <97> consisted of various decomposers characteristic of occupation waste, with the seed weevil *Bruchus* suggesting a faecal component. A single poorly preserved elytron of a corylophid beetle and indeterminate scraps of insect cuticle were the only insect remains recovered from sample <110>.

Fill of quarry pit [1374]
Context 1386, sample <114>

5.19.7 The large insect assemblage was dominated by synanthropic decomposers, some of which would have been derived from within buildings. There were hints of a faecal component from the presence of *Bruchus*, while ked puparia suggested that fleece or wool processing was being carried out in some of the buildings from which litter was derived.

Context	Sample	Sample volume (litres)	Paraffin flot volume (ml)	Est MNI beetles and bugs	State of preservation of insect remains	Invertebrates noted during scanning (identifications should be regarded as provisonal)	Potential for analysis
1098	<23>	10L	10ml	150+	Moderate; fragmentation fairly low, high proportion of pale sclerites/fragments	Earwig; Hemiptera nymphs; *Clivina* [oa], *Trechus obtusus* or *quadristriatus* [oa], *Bembidion* [oa], *Pterostichus*[ob], *Amara* [oa], Carabidae spp. [ob], *Helophorus* [oa-w], *Hydrobius fuscipes* [oa-w], *Cercyon unipunctatus*[rf-st], *Cercyon analis* [rt-sf], *Cercyon* spp. [rt], *Megasternum concinnum* [rt], *Ptenidium* [rt], *Catops* or *Choleva* [u], *Lesteva* [oa-d], Omaliinae spp. [u], *Cordalia obscura* [rt-sf], Aleocharinae spp. [u], *Coprophilus striatulus* [[rt-st], *Anotylus rugosus* [rt], *Oxytelus sculptus* [rt-st], *Platystethus cornutus* group [oa-d], *Platystethus arenarius* [rf], *Carpelimus* [u], *Lathrobium* [u], *Neobisnius* ?*villosulus* [rt], *Gyrohypnus fracticornis* [rt-st], Xantholinini [u], Staphylininae spp. [u], *Trox scaber* [rt-sf], *Aphodius* spp. [ob-rf], *Ptinus* ?*fur* [rd-sf], *Anobium punctatum* [l-sf], *Rhizophagus* [rt-sf], *Monotoma* [rt-sf], *Atomaria* [rd], *Latridus minutus* gp [rd-st], *Corticaria* [rt-sf], *Bruchus* [u], Apionidae [oa-p], ?*Hylesinus varius* [l], Ceutorhynchinae [oa-p], Coleoptera spp. [u], insect larval fragments, mites	HIGH
1124	<25>	3.5L	20ml	100+	Good to moderate; some pale sclerites	Earwig; Auchenorhyncha [oa-p]; *Nebria brevicollis* [oa], Carabidae spp. [ob], *Cercyon nigriceps* [rf-st], *Cercyon analis* [rt-sf], *Cercyon* [rt], *Catops* or *Choleva* [u], Omaliinae spp. [u], Aleocharinae spp. [u], *Coprophilus striatulus* [[rt-st], *Anotylus rugosus* [rt], *Anotylus sculpturatus* group [rt], *Oxytelus sculptus* [rt-st], *Carpelimus* [u], Xantholinini [u], Staphylininae spp. [u], *Trox scaber* [rt-sf], *Aphodius* spp. [ob-rf], *Onthophagus* [oa-rf], *Anobium punctatum* [l-sf], *Rhizophagus* [rt-sf], *Cryptophagus*, *Atomaria* [rd], *Orthoperus* [rt], *Latridus minutus* gp [rd-st], Corticarinae [rt], *Bruchus* [u], Apionidae [oa-p], Coleoptera spp. [u], insect larval fragments, mites, spider	MODERATE
1222	<64>	8L	5ml	~10	Moderate; pale sclerites/fragments	Ked puparia fragments; Auchenorhyncha [oa-p]; *Trox scaber* [rt-sf], *Anobium punctatum* [l-sf], ?*Cryptophagus* [rd-sf], *Latridius minutus* group [rd-st], *Omonadus* [rt], Curculionidae [oa-p]	LOW
1369	<97>	5L	10ml	~15	Good to moderate	Earthworm egg capsules; ked puparia fragments; Carabidae [ob], *Acritus nigricornis* [rt-st], Omaliinae spp. [u], *Anotylus nitidulus* [rt-d], *Anotylus* [rt], *Carpelimus*[u], *Trox scaber* [rt-sf], *Aphodius*[ob-rf], *Oxyomus sylvestris* [rt-sf], *Bruchus* [u], insect larval fragments, mites	LOW
1381	<110>	5L	5ml	1	Poor	Corylophidae sp. [rt], indeterminate beetle (adominal segments)	NONE

Context	Sample	Sample volume (litres)	Paraffin flot volume (ml)	Est MNI beetles and bugs	State of preservation of insect remains	Invertebrates noted during scanning (identifications should be regarded as provisonal)	Potential for analysis
1386	<114>	4L	15ml	150+	Good to moderate; fair proportion of sclerites pale	Earthworm egg capsules; ked puparia, fly puparia; ?Coreidae [oa-p], *Clivina* [oa], *Pterostichus*[ob], *Amara* [oa], Carabidae spp. [ob], *Helophorus* spp. [oa-w], *Cercyon nigriceps* [rf-st], *Cercyon unipunctatus*[rf-st], *Cercyon analis* [rt-sf], *Cercyon* spp. [rt], *Megasternum concinnum* [rt], *Catops* or *Choleva* [u], Omaliinae spp. [u], *Falagria* or *Cordalia* [rt-sf], Aleocharinae spp. [u], *Coprophilus striatulus* [[rt-st], *Anotylus nitidulus* [rt-d], *Anotylus rugosus* [rt], *Platystethus cornutus* group [oa-d], *Platystethus arenarius* [rf], *Stenus* [u], *Lathrobium* [u], *Neobisnius* ?*villosulus* [rt], *Gyrohypnus fracticornis* [rt-st], Xantholinini [u], Staphylininae spp. [u], *Trox scaber* [rt-sf], *Aphodius* spp. [ob-rf], *Oxyomus sylvestris* [rt-sf], *Ptinus* ?*fur* [rd-sf], *Anobium punctatum* [l-sf], *Ptilinus pectinicornis* [l], *Omosita* [rt-sf], *Monotoma* [rt-sf], *Atomaria* [rd], *Latridus minutus* gp [rd-st], *Corticaria* [rt-sf], *Omonadus* [rt], *Bruchus* [u], *Chaetocnema concinna* or *picipes* [oa-p], Chrysomelidae [oa-p], Curculionidae [oa-p], Coleoptera spp. [u], insect larval fragments, mites	HIGH
1562	<179>	4L			Very poor	Occasional earthworm egg capsule fragments, indeterminate beetle fragments and indeterminate ?insect cuticle fragments	NONE

Table 15: Results of insect assessment

Pollen

5.19.8 A total of 14 samples, shown in Table 16, were submitted for pollen assessment from a sedimentary sequence extracted from contexts associated with two waterlogged quarry pits ([1344] and [1374]), in addition to a selection of samples from basal alluvium (1394). The 14 samples under investigation were taken at regular intervals through the different contexts and deposit and were found to comprise a mix of organic-rich and minerogenic sediments.

Methodology

5.19.9 Pollen preparation followed standard techniques including potassium hydroxide (KOH) digestion, hydrofluoric acid (HF) treatment and acetylation (Moore et al., 1991). A count of at least 100 total land pollen grains (TLP) excluding aquatics and spores were attempted for each sample. However, a number of the samples were found to produce very low pollen concentrations ([1344] 0.08-0.09m, (1394) 0.37-0.38m and 0.47-0.48m), or alternatively be barren of contemporary pollen ([1344] 0.12-0.13m, 0.16-0.17m, 0.22-0.23m) and as a consequence, assessment counts were not possible for these depths. However, other microscopic remains were often encountered and hence further comments will be made, where relevant.

Feature	Context	depth (m)
1344		0.00-0.01°
		0.04-0.05°
		0.08-0.09°
		0.12-0.13*
		0.16-0.17*
		0.22-0.23*
1374	1385	0.14-0.15°
	1386	0.07-0.08°
		0.10-0.11°
	1387	0.14-0.15°
		0.17-0.18°
		0.20-0.21°
Basal silt	1394	0.37-0.38*
		0.47-0.48*

Table 16: Summary of pollen samples Samples with visible organic content are highlighted with ° and those found to have poor pollen preservation are highlighted with *

Pollen Results

Quarry pit [1344] <101>

5.19.10 A total of six samples were assessed from [1344], and all derived from a 25cm monolith tin taken from the basal deposits (Appendix 12). It is understood that the monolith sampled a tripartite sequence, comprising an upper layer of 'dumped material', a middle layer of 'poorly humified peat' and a basal layer of 'blue silts'. Considerable variation was encountered within the palynological results, primarily in terms of pollen presence/absence.

5.19.11 The upper two samples (<101> 0.00-0.01m and 0.04-0.05m) were found to contain abundant pollen. The samples were dominated by Poaceae (wild grasses), and Cyperaceae (sedges), with occasional Chenopodiaceae (goose foots), and Aster-types, including Lactuceae (dandelions) and Compositae (dasies). *Centaurea cyanus* (cornflower) and *C. nigra* (knapweed) were also common, in addition to the presence of Apiaceae (carrot family). Some cereal pollen is believed to be present, but full analysis would be required to confirm this. Ericaceae undiff. (heathers) were encountered occasionally. Trees and shrubs were rare, with only isolated grains of *Alnus* (alder), *Pinus* (pine) and *Corylus-Myrica* type (hazel or sweet gale). There is an absence of any identifiable aquatic species within the assemblages encountered. The underlying sample (<101> 0.08-0.09m), in contrast, was found to contain pollen in much lower abundances. However, whilst a full count was not possible for this sample, the key species encountered were *broadly* comparable to those encountered in the overlying samples, with herbaceous taxa dominating through Poaceae, Cyperaceae, Apiaceae, *Centaurea* sp. etc, although no tree pollen was encountered.

5.19.12 In contrast, the basal three samples yielded very different results. Samples <101> 0.12-0.13, 0.16-0.17m and 0.22-0.23m contained almost no identifiable

Quaternary pollen or spores. Occasional bisaccate pollen was encountered, but the level of preservation suggested these are likely to be pre-Quaternary in origin. Of note however was the abundance of pre-Quaternary dinoflagellate cysts, potentially Eocene in age, discussed further below. The upper sample (0.12-0.13m) did however contain some *Trichuris* eggs, but these were not encountered in the basal samples.

Quarry pit [1377]

5.19.13 A total of six samples were analysed from [1377], deriving from a sequence of contexts (1385; one sample), (1386; two samples) and (1387; three samples). All samples yielded sufficient pollen for assessment. In addition to pollen grains, all samples contained microcharcoal in relative abundance. In addition, one sample from (1386), 0.07-0.08m depth, and all three samples from (1387) contained *Trichuris* eggs.

5.19.14 Samples from contexts (1385) and (1386) contain similar pollen assemblages to that encountered in the uppermost section of pit [1344], namely dominated by Poaceae with occasional Chenopodiaceae, Lactuceae and Compositae, in addition to the presence of Apiaceae. Trees and shrubs were similarly rare, with only isolated grains of *Alnus* (alder), *Betula* (birch), *Quercus* (oak) and *Corylus-Myrica* type. There continues to be an absence of any identifiable aquatic species within the assemblages encountered. When considering the three from context (1387) that underlies (1385) and (1386) however, whilst the herbaceous pollen continue to dominate the overall pollen assemblage (namely Poaceae, Lactuceae, Compositae and Chenopodiaceae), there is an increase in tree and shrub taxa. Pollen grains of *Alnus*, *Pinus* and *Quercus* were common, in addition to the presence of *Fagus* (beech) which is generally under-represented in pollen spectra, whilst there are also increases in the number of *Corylus-Myrica* type and the noted presence of *Hedera helix* (ivy)

Basal silt (alluvium)

5.19.15 Two samples derived from the basal silt [1394] 0.37-0.38m and 0.47m and 0.48m yielded very low pollen grains. Only occasional *Pinus*, and Lactuceae pollen and (in the case of 0.37-0.38m) Caryophyllaceae was identified, both these are from the wild flower family. Microcharcoal was encountered in abundance. It is suggested that the deposit has experienced substantial post-depositional weathering to result in only the more resistant pollen grains surviving. No palaeoenvironmental interpretations can therefore be made.

Discussion: pollen and insects

5.19.16 The waterlogged deposits recovered for assessment from both quarry pits and latrine/refuse pits and a well demonstrate a variable survival of palaeoenvironmental remains. The upper samples of [1344] (0.00-0.01, 0.04-0.05, 0.08-0.09m) contain sufficient pollen to indicate a relatively open landscape, dominated by wild grasses and sedges, with little woodland cover nearby. The evidence of human activity is evidenced through the theorised presence of cereal pollen and decomposer species of insect associated with occupation waste. The pollen likely derives from cereal processing/cultivation or indeed the dumping of waste.

5.19.17 The supporting herbaceous taxa within the pollen assemblage indicates disturbed ground proximal to the site. The absence of aquatic taxa within the quarry pits, suggests they were relatively dry features which may also account for the poor insect preservation. The basal samples (0.12-0.13, 0.16-0.17, 0.22-

0.23m), due to the dominance of pre-Quaternary dinoflagellate cysts (in addition to the lack of identifiable Quaternary pollen and spores), are assumed to have derived from the 'blue silt' unit encountered at the base of [1344]. Dinoflagellates are essentially marine microfossils, and those encountered have been provisionally dated to the Eocene. Considering the location of the study site, these samples are likely to have derived from the London Clay (Geoff Eaton, pers. comm). Their presence has therefore been interpreted to suggest that sampling of the feature may have extended into the natural underlying strata. Alternatively, the pit has been lined with clay from a proximal outcrop of London Clay.

5.19.18 Quarry pit [1377] contains a similar vegetation picture to that of [1344], with an open landscape dominated by wild grasses, and some evidence of bare ground and disturbed soils proximal to the site. The larger component of tree and shrub taxa within the basal context (1387) could suggest woodland was slightly more influential (perhaps closer) to the site during the early phase of the feature's use.

5.19.19 The insect assemblage suggests that pit [1143] and well [1080] were used for the disposal of both refuse from within buildings and also cess material. The refuse material looks to include the waste from the processing of fleeces providing further information as to the types of activity found in the vicinity of the site. The plant macrofossil assemblage demonstrated variable preservation within the waterlogged deposits although cereals were present (wheat, rye, oat) as well as weed and wetland species which support the origin of the material as cess and refuse from within buildings. The presence of sedge may reflect the site location proximal to the Thames and may indicate that parts of the site were seasonally waterlogged.

6.0 POTENTIAL & SIGNIFICANCE OF RESULTS

6.1 Realisation of the original research aims

6.1.1 In this section relevant original research aims have been combined and reframed as questions (OR's) and the potential of the site archive to address them is discussed.

ORA1: Determine the natural topography of the site, and the height at which it survives

6.1.2 Within the north and north-west of the site, beneath St Clement's Building (East) and Clare Market Building, the natural topography was truncated by the existing basement down to the London Clay, which was observed beneath the slab at 13.98m OD.

6.1.3 To the east, beneath The Anchorage building natural clay and gravel deposits were observed at 14.25m OD to the south of the area, rising to 15.05m OD at the northern end of the building.

6.1.4 Within the main excavation area, the natural geology consisted of banded gravels to the north-east located at c.14.73m OD, overlain by Langley Silt (brickearth) across the central part of the excavation area at c.15.22m OD, and oxidised silty-clay river alluvium within the south-western area of the area at c.14.95m OD. The alluvium demonstrated poor preservation of pollen which is typical of such deposits.

ORA2: Establish the nature and extent of Saxon archaeology on the site. Do the post holes found in trench AP9 suggest that there was Saxon settlement in this area or do they relate to more peripheral activities in keeping with the theory that the site is outside the main settlement of Lundenwic

6.1.5 Evidence of Saxon activity was observed across the site. The lack of evidence of urban development similar to that found at sites situated closer to modern day Covent Garden, suggest the site lay outside the settled core of *Lundenwic*, and was within a more rural area used for small scale quarrying, refuse deposition and agricultural activities. The high number of finds asociated with textile manufacture, coupled with high numbers of cattle and sheep bone and insect evidence of the cleaning and processing of fleeces or wool, suggest perhaps the site was used for animal farming and textile production.

6.1.6 The post and stake holes on the site do not form obvious structures, nor is there any evidence of hearths or floor surfaces asociated with the post and stake holes, and so it is likely they represent fence lines and small temporary structures like buildings and animal pens.

6.1.7 Although the presence of large quantities of structural daub within the destruction/abandonment fills of many features could largely have come from disused animal pens and outhouses, there must have been some domestic buildings nearby. There is, however, no evidence that they were situated within the site itself.

ORA3: Establish whether a former channel runs north-south along the eastern edge of the site

6.1.8 No evidence of a channel was observed within the site although a thin covering of alluvium was recorded suggesting the site was located at the flooplain edge.

ORA4: Establish if the water present in trench AP1 means that waterlogged Saxon remains may be present on the site

6.1.7 Waterlogged Saxon remains were present in the bases of many of the deep cut features, such as pits and wells. These waterlogged fills produced plant remains, a small number of seeds, charred and uncharred wood and a coprolite.

ORA5: Establish the nature and extent of medieval remains on the site

6.1.8 Very little evidence of medieval activity survived on the site. What did survive consisted of dump deposits and a possible gravel surface with overlying scattered domestic waste debris in Area A. Within Area C was an occupation layer with two parallel, north-east—south-west orientated linear gullies cut into it. These gullies are on a broadly similar alignment to (GP5, GP6 and GP7) from Period 1, which suggests a possible continuity in the layout and use of the area over a period of some 600 years. Sealing these were layers which showed evidence of repair.

ORA6: To establish the extent of truncation by later post-medieval remains.

6.1.9 The level of post-medieval truncation varied across the site, with the north-west and south-eastern areas being most heavily truncated. The truncation was largely due to post-medieval walls and subsequent robber cuts.

6.2 Significance and potential of the individual datasets

The Stratigraphic Sequence

Period 1

6.2.1 As deep basements and heavy truncation within this area of London usually means that only deep cut Saxon features survive, the Saxon remains are of local and regional significance. The presence of Saxon stratigraphy in this area of London is relatively rare and allows an opportunity to better understand Saxon activity within this area of London, as well as enabling better understanding of the layout of *Lundenwic,* and its development as a town, and comparison to other Saxon *wics*.

Period 2

6.2.2 The medieval evidence has local significance in that it adds to our understanding of the kinds of activities taking place in the area at the time. Although the dataset is in itself quite small the information that can be drawn from comparing the data to that from Period 1 has potential to inform on the changes in use of the area.

Period 3

6.2.3 The early post-medieval remains are of local significance, and have potential to aid in our understanding of the social and structural development of a rapidly evolving area during the mid- late 17th century. The dataset has the potential to inform on elements of New Inn, a little known Chancery Inn. Documentary sources should be researched to further augment our understanding of the area, the buildings within it and the local population at the time.

Period 4

6.2.4 The later post-medieval remains are of local significance, and have the potential to inform on the social and structural development of the area. Documentary sources should be researched to further augment our understanding of the building and the local society at the time.

The Flintwork

6.2.5 The flint assemblage is very small consisting of three flakes and a blade-like flake; and while some of these pieces are likely to be prehistoric, none are chronologically diagnostic. It is possible that some may simply represent flakes from building stone.

6.2.6 The assemblage has no potential to further increase our understanding of the chronology of occupation of the site

The Roman Pottery

6.2.7 Low levels of residual Roman material have frequently been recorded in Saxon and later features in and around *Lundenwic*. The current assemblage is small and apparently entirely redeposited. It is therefore of very limited significance.

6.2.8 There is no potential for further analysis.

The Post-Roman Pottery

6.2.9 The Middle Saxon assemblage is somewhat small and not particularly rich in feature sherds (though there are a number of drawable pieces). The suite of fabrics is also quite limited with Ipswich ware totally dominating. However, despite its modest size the assemblage relates to an intense period of use at the site and provides another assemblage that will facilitate future synthetic analysis on the ceramic trends of *Lundenwic.* As such the assemblage is considered to warrant publication with the best feature sherds being illustrated. Comparative work with other published Middle Saxon assemblages from the area will set the site in a wider context by comparing percentages of different fabrics at different times. This may allow some refinement in the current spot dating if done in close consultation with the stratigraphic matrix.

6.2.10 The medieval assemblage is small and composed of somewhat fragmented and often abraded pieces that appear to have been subjected to reworking. Some fabrics still need to be checked/correlated with the London fabric series

but generally they appear to be of types well known of in the capital, where much larger less contaminated groups have been published. The current assemblage, which is virtually devoid of drawable sherds, only really has the potential to address chronological issues on the current site.

6.2.11 The early post-medieval assemblage is of a reasonable size and contains a number of feature sherds. However, the types are well-known of in London and there are very few clean groups devoid of residuality or intrusiveness. The material only has the potential to address site-specific issues.

6.2.12 The late post-medieval assemblage is quite small and of well-known types. However, it contains a few larger fresher groups that are of interest in shedding light on the on-site occupation in the later 18th to early 19th centuries as well as providing some useful groups for future comparative work. A number of vessels are substantially complete and could be illustrated photographically in the final publication.

The Ceramic Building Material

6.2.13 Whilst the variety of CBM types and fabrics present made this a stimulating collection to work through, its significance is diminished by the fact that much of the more interesting CBM items – e.g. the inscribed Roman brick and the delftware tiles – were all located in dump deposits that reveal nothing about their original locations, which reduce their interpretational potential. However, these items are still of intrinsic significance as they add to the existing corpus of, respectively, Roman bricks with graffiti, and known delftware designs that can be associated with particular workshops, so whilst in terms of the LSE site they have limited research value they have the potential for use in future work.

6.2.14 The Roman CBM assemblage provides further evidence of the re-use of Roman material during the Saxon period (Smith 2012, 217-18), although none of the CBM was found in contexts that indicate in what ways it was used. In terms of the post-medieval material the LSE assemblage is not particularly unusual and presented the same fabrics as one would anticipate from a post-medieval London site c.18th century.

6.2.15 As an assemblage showing a broad spectrum of CBM forms and fabrics across all periods of London's history it is of local significance, as it reflects the nearly continuous settlement of that area and adjacent portions of the city (Londinium) from the Roman period to the present day. The Roman brick with graffito – depending on what it transpires to say – may be considered of broader importance, as London has produced several unique examples of Roman script and graffiti and this could represent a further example.

6.2.16 The assemblage as it currently stands is of no national or international importance, although the translation of the graffiti on the Roman brick has the potential to reveal several strands of information regarding Roman London. Depending on what it says and the language it is written in (which is most likely to be Latin) it could indicate who wrote the graffiti, i.e. the brick maker or potentially a person who chose to deface it whilst it was left to leather. If the former than this is particularly interesting as it would provide additional evidence of a certain standard of literacy amongst a population that it might otherwise be easy to dismiss as unlikely to have these skills, as well as

revealing what a brick maker would choose to write. Examples of trade-related graffiti have been found elsewhere, but often the graffito on Roman brick and tile is very basic, comprising of dates or tally numbers, although figural designs have also been found (Brodribb 1987, Fig. 60, 130; Benedetti-Whitton in prep).

6.2.17 There is also potential to firm up the dating criteria for what have been identified as 3032 bricks dating to the mid-18th century. If these structures can be dated and support the time frame suggested by the character of the bricks and the available literature, then HUG16 would provide an evidence-based type-site for dating 3032 bricks in the future, including the minor variation from brick to brick (e.g. size, frogged/non-frogged), and also the mortar type, which would be of great value as very little has been done to develop a dated type series for mortar varieties.

The Fired Clay

6.2.18 The assemblage is one of the largest from a Saxon site within London, three times the size of that recorded from Drury Lane (Smith 2012, 216), the next largest assemblage which produced just over 30kg of daub. However, it is unclear whether any sampling strategy was employed at Drury Lane and this must be borne in mind when comparing assemblage sizes. Nevertheless, the location of such a large assemblage on the fringes of the wic is also significant and raises questions regarding the whereabouts of the building(s) it derives from and the reasons for the disposal of such a volume of material.

6.2.19 However, assessment has shown that the assemblage is very similar to those previously excavated, consisting of the same range of fabrics and with similar building techniques in evidence. The presence of textile impressions on a small number of pieces is also consistent with previous excavations. Additionally, all of the material is residual. It's potential to elucidate any new information regarding Middle Saxon building technologies is therefore limited. Overall, while the assemblage as a whole is locally and regionally significant, its potential for further work is considered to be restricted by its uniformity and lack of association with specific buildings.

The Clay Tobacco Pipe

6.2.20 The assemblage contributes to the chronological refinement of the site. Further research into maker's marks may tighten the date range on some of these bowls.

6.2.21 Of particular interest is the 17th century group. Pipes dating up to 1660 usually occur as isolated finds (Jarrett 2005, 76) and as such this assemblage, comprising 20 bowls (including two from the evaluation) dating between 1610 and 1660, is of some interest and certainly of local significance. As such, the pipes form a useful group that has the potential to contribute toward the overarching study of pipes within the capital.

The Glass

6.2.22 The assemblage is small and lacks good or large groups. None of the fragments are of intrinsic interest. However, the assemblage does contribute to dating evidence and is as such of limited local significance.

6.2.23 The assemblage is not considered to hold potential for further analysis.

The Geological Material

6.2.24 The stone assemblage is of small to moderate size, particularly when considered by site and period, and does not contain a high number of worked pieces. The material from Periods 2 to 3 is clearly dominated by residual pieces. Most are unworked, but where they are worked, they are of fairly typical types and forms for London.

6.2.25 The Middle Saxon assemblage is of slightly more interest. Not only is it the largest from the site, it contains contemporary worked pieces. Some residuality is present, but much of this may be seen as deliberate collection and re-use of Roman materials. As such it sheds light on the procurement of stone in Middle Saxon *Lundenwic.*

6.2.26 Only the Middle Saxon assemblage has the potential for further analysis, including consideration of the site stratigraphy and comparison to other published stone assemblages from the area. This should allow more reliable conclusions on the re-use of materials as well as the likely sources for the contemporary worked objects.

The Metallurgical Remains

6.2.27 The excavations have produced a small assemblage of slag. The majority of material appears to relate to iron smithing activity during the Middle Saxon period, but quantities are not high and it is likely the material represents a background scatter from a smithy located some distance from the investigated area. The presence of a little lead is interesting but not out of place in *Lundenwic* – unfortunately the pieces are somewhat isolated finds. Analysis of the medieval assemblage is problematic because of the likelihood of residuality and intrusiveness and the post-medieval assemblages are just too small or residual to be of interest.

6.2.28 As such the slag assemblage is not considered to hold any potential for further analysis beyond that undertaken for this assessment.

The Bulk Metalwork

6.2.29 The nail assemblage is small, fragmentary and fairly homogenous therefore is of low significance. The remaining bulk objects are undiagnostic of form or function and are therefore also of minimal significance.

6.2.30 There is no potential for further analysis.

The Animal Bone

6.2.31 The faunal assemblage is of local, regional and national significance. The level of preservation and the size of the Saxon assemblage enables direct comparisons to be drawn from local faunal assemblages including the excavations of *Lundenwic* as well as *wics* in south-eastern England, and in addition to Saxon sites; James Street, Exeter Street, Maiden Lane, Jubilee

Hall, National Portrait Gallery, Charing Cross Road, Old Brewer's Yard, Kingsway Hall and the Royal Opera House to name a few.

6.2.32 Analysis of the faunal remains from the Saxon period will give an insight into the animal husbandry practices of this region, including butchery practices and consumption, the utilisation of wild resources, and bone, antler and horn craft industries.

6.2.33 Of the three main domesticates cattle remains often dominate urban Saxon sites (Rackham, 1994; Holmes, 2014; Reilly, 2015), later Saxon periphery sites however show an increase in sheep/goat remains, (Reilly, 2015). Although cattle are present in greater abundance at Houghton Street, there is a marginal difference between the numbers of cattle and sheep/goat remains that have been recovered. The abundance of cattle in urban centres is not unusual as these animals provide a greater meat yield than sheep/goat. Further analysis of the domesticates present, age at death, sex and element distribution at Houghton Street will provide valuable information as to the role of the site; consumer, producer or distribution centre.

6.2.34 The Saxon assemblage forms the majority of the faunal remains recovered at Houghton Street. Although there have been several excavations in the London area producing large comparable faunal assemblages there are very few sites producing assemblages of a similar size in the eastern regions of *Lundenwic* (Rielly, 2015). Detailed analysis of the assemblages from Houghton Street will go some way to understanding how similar sites were provisioned and the nature of the agricultural economy (Holmes, 2014).

6.2.35 Although the faunal assemblages of the medieval and post-medieval periods are smaller than the Saxon assemblage, analysing these assemblages is also important with regards to site utilisation, social and economic functions.

6.2.36 Further study of the faunal assemblage is therefore highly recommended.

6.2.37 The assemblage has the potential to provide valuable information for the Saxon period and to some extent the medieval and early post-medieval phases.

6.2.38 Chronological analysis of the three main domesticates compared with local sites can be utilised to highlight animal husbandry practices and identify the functions of the assemblage at Houghton Street as a consumption, production or distribution site (Armitage, 2004; Holmes, 2014).

6.2.39 Further analysis of element distribution and element representation of the three main domesticates will highlight the functions of the site in all phases. Assemblage analysis at feature and group level will give an indication as to whether the site had specialist industry or guild activity areas for butchery and bone working, or if these activities were carried out by families on a self-sufficient basis.

6.2.40 Production of mortality profiles for cattle, sheep/goat and pig will give an insight into the exploitation of these faunal assemblages to determine whether they were utilised for meat, dairy, wool, traction or breeding stock. Analysis of the sex, metrical and age at death data will also provide further information as to the exploitation and function of the main domesticates. This will give an

indication as to the quantity of animals bred on site and those that may have been imported (Reilly, 2012) as well as identifying the presence of males, females and castrates. Isotope analysis of the cattle remains would be beneficial to determine whether stocks were bred locally or imported from other areas of England. Analysis of the presence and absence of wild taxa will provide further dietary information to determine whether these resources were exploited regularly or utilised as a supplement to the main domesticates.

6.2.41 Assessing butchery methods, carcass processing, element distribution and disposal practices will give an insight into the social and economic activity at Houghton Street. Comparisons of similar Saxon sites as well as those identified with different functions; market towns, religious and industrial activity will provide an insight into butchery practices. Comparisons of the identified Saxon butchery practices with those of the Roman and Medieval periods may highlight the presence of a butchery guild, craftsman or local practices. Analysis of the faunal remains that displayed signs of pathological lesions will give an insight into the exploitation and animal husbandry practices at Houghton Street.

6.2.42 Detailed animal biometrics and biogeography may be possible with a faunal assemblage of this size, dependent on preservation levels. Isotope analyses of the three main domesticates, could give an insight into the animal husbandry practices including the presence of local species, trade and exchange of stock, mobility and provenance of taxa (Pilaar Birch, 2013). Ancient DNA analysis may also provide valuable information regarding livestock biometrics such as breeds.

6.2.43 A proportion of the bulk samples were processed providing evidence of birds, small mammals and anurans (and fish - see separate report). Processing the remainder of these samples will likely provide similar results, however it is worth considering.

6.2.44 A moderate quantity of rodent and anuran remains are present within the assemblage, further identification and analysis of these remains will provide information regarding exploitation, for example as food resources or pests. Insight can also be gained into the climate and environment of the site through time, anurans are particular as to habitat conditions. These remains are common within archaeological deposits and may be linked to pit-fall traps with little human interaction (O'Connor, 2000; Hambleton, 2008). However due to the high frequency of pit and ditch features at the site, further analysis may suggest the presence of a relationship between the quantity of rodent and anuran remains with links to human interference.

Bird Bone

6.2.45 Comparable to the other taxa only a small quantity of bird bone has been recovered from the assemblage, this is likely due to poor survivability of fragile bones. The Saxon assemblage has produced the greatest quantity of faunal remains and the assemblage has the potential to provide information regarding the exploitation of birds at Houghton Street. Further analysis to identify the remaining bird bone to species would be beneficial. The possible crane bone needs to be positively identified at Fort Cumberland, and could potentially be of interest for further analysis. The goose bones should be

analysed further to determine whether these remains are from domestic or wild taxa.

The Fish Bone

6.2.46 This assemblage is of regional and national significance and will supplement our understanding of fish exploitation during the mid-late Saxon period.

6.2.47 This assemblage has the potential to address a number of research aims including:

- What type of fish are being consumed?
- Were fish processed and/or consumed on site?
- What can the habitat of the fish taxa represented tell us about the techniques used to capture them?
- Was fishing a seasonal or a year round activity?
- Can refined phasing identify chronological changes in fishing techniques and fish consumption?
- Can site comparisons identify geographical differences in fish consumption?
- Is there a difference in the taxa represented in different features i.e. between ditches and pits?
- Are there any artefacts from the site that can enhance our interpretation (e.g. small finds associated with fishing?).

The Shell

6.2.48 The assemblage is very small, the largest group containing only eight individuals; therefore, it is of minimal significance.

6.2.49 The assemblage has no potential for further work.

The Registered Finds

6.2.50 The registered finds assemblage derives largely from Period 1 features (44% of the total assemblage) representing rubbish deposited on the fringes of *Lundenwic.* The character of the Period 1 assemblage broadly mirrors that of other site assemblages from *Lundenwic*, for example there is a paucity of objects associated with textile production other than loom weights which has previously been noted (Keily and Blackmore 2012, 157). The largest group here consists of 17 fragments from pit [1143]; few other sites within the *wic* have produced such numbers (ibid).

6.2.51 The quantity of ironwork appears to be lower than on comparative sites, and the range of functions represented is also at variance to those within the town. However, drawing any conclusions from this observation is difficult due to a lack of comparable datasets from proximate excavations.

6.2.52 The quantity of medieval material is considerably lower and contains a proportion of residual Saxon finds therefore its significance is reduced. Period 3 and 4 features also suffer from the same problem of residuality to some extent but constitute 25% of the assemblage each. Both are dominated by groups of leather shoe parts from waterlogged contexts, however only the

earlier of these two groups is significant (the later consisting largely of parts of the same boot of probable 19th century date). The Period 3 group is more interesting, containing the remains of at least 3 shoes which are diagnostic of date and well preserved. That said, these types are very well known and unlikely to contribute significantly to the existing understanding of contemporary footwear fashion or manufacture.

6.2.53 The coins remain unassessed at this time therefore their significance is unclear.

6.2.54 The assemblage as a whole therefore holds variable local and regional significance with some areas of potential for further analysis.

6.2.55 The Saxon assemblage has some potential to elucidate the nature of activity during the 8th-10th centuries and there is limited potential to compare the assemblage to those within *Lundenwic*. A small number of individual finds, such as the bone comb, are of intrinsic interest.

6.2.56 Although the group of 18th century leather shoe fragments is small it is very well stratified therefore there is some potential for further analysis. The group could be published as a summary with accompanying catalogue.

6.2.57 The coin assemblage may also have some potential to refine the dating of features.

The Environmental Samples

Charred and Mineralised Plant Macrofossils

6.2.58 The significance of the plant remains assemblage is variable. The later contexts only yielded a scatter of waste, perhaps originating from domestic activities, such as food preparation. For these reason the medieval and post medieval samples do not hold much significance. The Saxon contexts on the other hand have yielded a moderate amount of charred cereal grains, which can provide valuable information on the plant foods that were present in the human diet at the time. Further, the presence of mineralized plant remains is interesting. Whilst these types of remains are not uncommon at large urban sites, especially in central London, whole and perfectly preserved mineralized cereal caryopses are much rarer. The Saxon samples would therefore allow for discussion of agrarian economy and diet, whilst permitting comparisons both with contemporary sites in central London (e.g. Vitolo & Demicoli 2016) and with other large assemblages from both rural and urban sites in south-east England (*e.g*. Carruthers 2008).

Waterlogged Plant Remains

6.2.59 Given the small number and low taxa diversity, the waterlogged plant remains have a low significance.

Wood Charcoal

6.2.60 The wood charcoal predominantly consists of taxa that are valuable fuel woods, such as oak, hazel, ash and wood from the apple sub-family and plum genera. It is likely that selective wood collection was being practiced with taxa

with the best burning properties being targeted. The presence of woodland, scrub, wetland and open area taxa imply that several environmental niches were exploited for wood selection. The fragments of the apple sub-family may derive from apple/pear (*Malus/ Pyrus*) trees as these are amongst the most common fruits referred to in the Anglo-Saxon Chronicles (Rackham, 1994). It is likely that the trees of the plum genera, including cherry, sloe and hawthorn, were being cultivated within the local area and exploited for both fruits and fuel. At this stage there appears to be little difference in the choice of taxa for fuel wood between the occupation phases, although further analysis may identify changes in fuel selection over time. The wood charcoal may be linked to economic activities at the site such as crop processing and metalworking as a number of the samples contained charred cereal remains and industrial material.

6.2.61 The wood charcoal assemblage can be compared to the contemporary central London site at Covent Garden (Vitolo & Demicoli, 2016) and those from the wider London area including Northolt Manor (Levy, 1961) to the east. Comparison to such sites will allow for an understanding of the local environment and fuel procurement in Saxon and medieval London to be developed.

Charred and Mineralised Plant Macrofossils

6.2.62 The bulk soil samples have yielded a varied archaeobotanical assemblage. Whilst the remains from the medieval and post medieval contexts represent a background signature, the Saxon deposits have yielded a larger amount of remains, and three different types of preservation occurred. Charred and mineralized assemblages have distinct formation processes and as such when both are present they can provide complementary information on the human diet. The samples certainly derive from clean products following crop processing, given the absence of rachis and straw fragments, as well as the low amount of weed seeds. The small number of seeds lowers the potential of these samples to provide a full picture of the local vegetation environment, but could complement the information provided by the charcoal data.

Waterlogged Plant Remains

6.2.63 Nearly all of the waterlogged samples produced some plant remains preserved in anoxic conditions. These include taxa that have economic value, such as flax, elderberry and bramble. Most of them are however from wild sources and their low number is not indicative of use. They hold therefore low potential in informing us on diet, agrarian economy and other plant use.

6.2.64 The identified taxa give us a partial picture of the local vegetation environment, indicating the presence of shrubs, plants of waste ground and a minority that are typical of wetlands, for example sedges. The seeds are however present in fairly small amounts and the low variety of taxa mean that further analysis of the waterlogged plant remains is unlikely to provide more information on the local environments and soil conditions in the Saxon period.

6.2.65 Uncharred wood was present in low amounts and full analysis is not likely to provide further information.

Wood Charcoal

6.2.66 Wood charcoal data from the Saxon period in Southern England, and particularly London, is currently scarce (Smith, 2002). The wood charcoal assemblage therefore has the potential to contribute to this limited dataset as well as to inform on the environment of central London at the time and the nature of fuel procurement in the expanding city. It is recommended that the majority of samples should be submitted for analysis as they contain a variety of well-preserved taxa that have the ability to inform on both of these themes. Sample <75> [1241] contains <30 fragments in the >4mm fraction of the residue whilst 6 of the 10 fragments assessed from sample <38> [1141] were indeterminate due to poor preservation, for these reasons it is recommended that these samples be omitted from any further analysis.

Recommendations: Charred and Waterlogged Plant Macrofossils

6.2.67 Analysis of the plant remains should try to answer the following research questions:

- What range of crops were cultivated and/or used at the site in the Saxon period?
- Can the plant remains inform us on crop husbandry practices?
- What non-cereal plant foods contributed to the human diet?
- What information can the plant remains give regarding the local vegetation environment?
- How does the assemblage compare with others originating from central London and from large urban sites in the south-east?

Recommendations: Wood Charcoal

6.2.68 Further work on wood charcoal should address the following research aims:

- What kind of vegetation grew near the site and how was it exploited by the occupants of the site?
- Is the wood charcoal associated with economic activities such as crop processing and metalworking?
- Is there any evidence of woodland management techniques?
- How does the charcoal assemblage compare with other contemporary assemblages from the area?
- Can a picture of the local environment and fuel procurement for central London be generated for the Saxon period?

Insects

6.2.69 Three samples produced substantial assemblages of insect remains, primarily beetles, and these have a good potential to provide information on waste disposal, living conditions and craft activities in the Saxon settlement. Beetles associated with outdoor habitats were limited but some taxa, notably ground beetles (Carabidae) and plant-feeding leaf beetles (Chrysomelidae) and weevils (Apionidae, Curculionidae), may provide limited data on local ground conditions and vegetation.

6.2.70 It is recommended that two assemblages are subjected to detailed analysis, one from the fill of well [1080] (sample <23>, context 1098), and the second from the lower fill of quarry pit [1374] (sample <114>, context 1386). A third sample from another fill of well [1080] (sample 25>, context 1124) should be scanned in more detail to provide additional information.

Pollen

6.2.71 Whilst pollen was sparse in (1394), preservation was found to be good throughout much of [1344] and [1377]. Overall the vegetation stays broadly the same, with herbaceous taxa dominating. If there are any specific (geo)archaeological research questions associated with the time period under investigation that is covered by these two features, then it is recommended that the samples go to full analysis. However, as a standalone project, the samples do not warrant being studied in further detail.

7.0 PUBLICATION PROJECT

7.1 Revised research agenda: Aims and Objectives

7.1.1 This section combines those original research aims that the site archive has the potential to address with any new research aims identified in the assessment process by stratigraphic, finds and environmental specialists to produce a set of revised research aims that will form the basis of any future research agenda. Original research aims (OR's) are referred to where there is any synthesis of subject matter to form a new set of revised research aims (RRA's) posed as questions below.

7.1.2 RRA1: Can further interrogation of the stratigraphic sequence identify separate phases of activity within Period 1?

RRA2: Is there any possibility that the use of the site within the Saxon period varied between domestic, agricultural and/or was peripheral to both?

7.1.3 RRA2: Can the contents of the refuse pits from Period 1 shed light on the activities taking place on site?

7.1.4 RRA3: Can the use of the refuse pits be further defined – are there different sets of pits containing specific types of materials?

7.1.5 RRA4: Can the possible wooden structure within storage pit [1267] be further understood, and if so can it aid interpretation of the pit? Are there similar examples within the archaeological record?

7.1.6 RRA5: Can further investigation of the pits with *in situ* burning shed any light on what was being burnt and why? Does this activity represent the disuse of the site?

7.1.7 RRA6: Can further structures or buildings be observed within the patterns of stake and postholes on the site?

7.1.8 RRA7: Can further investigation confirm the theory that the ditches are part of an enclosure system? Is it possible that (GP5-7) are in fact a droveway or other routeway?

7.1.9 RRA8: Can anything further be understood about both the activities taking place on the site and the apparent "zoning" of these activities during Period 1? Are the different activities taking place happening at the same time, or showing a change in use of the site over time?

7.1.10 RRA9: How does the Period 1 activity on the site inform on our wider understanding of Saxon *Lundenwic*?

7.1.11 RRA10: Is it possible to further understand the sites land use during Period 2? Can the continuation of ditch alignments from Period 1 to Period 2 tell us anything about the use of the site?

7.1.12 RRA11: Can further documentary research and map regression shed light on the development of the area during Period 3?

7.1.13 RRA12: Can further refining of the sequence of development and destruction of the various phases of buildings within Period 3 and 4 shed light on the development of the area?

7.1.14 RRA13: Is it possible to prove the early post-medieval buildings in Area C are associated with New Inn?

7.2 Preliminary Publication Synopsis

7.2.1 It is suggested that the results of the excavation should be published in an illustrated journal article in the London and Middlesex Archaeology Society

7.2.2 The article should seek to address the site-specific research agenda and presented within a chronological framework.

7.2.3 The article should follow these broad headings:

- Introduction
- Natural geology, topography and environment
- Residual Roman material
- Middle – Late Saxon (Period 1)
- Medieval (Period 2)
- Early post-medieval (Period 3)
- Late post-medieval (Period 4)
- Specialist sections
- Discussion, comparisons and conclusions
- Bibliography

7.3 Publication project

Stratigraphic Method Statement

7.3.1 The major tasks to be completed by the principal stratigraphic author at the next stage of analysis and to complete the publication are shown in Table 23.

7.3.2 Once subgrouping is finalised, the subgroups will be grouped and a basic land use model will be established for the site. This will provide a land-use led chronological framework for the full analysis and reporting of the site.

7.3.3 After completion of the specialist analysis, reporting and documentary research, an integrated period-driven narrative of the site sequence will be prepared. This will draw on specialist information in order to fully address the revised research aims. The narrative will include relevant selection of period/phase plans, sections, photographs and finds illustrations.

7.3.4 The narrative will then be assessed with those from other Saxon sites within Greater London to create an overview of recent archaeological work in the town and to define the themes to be addressed by the forthcoming synthetic publication.

The Flintwork

7.3.5 No further work is required.

The Roman Pottery

7.3.6 The presence of residual Roman pottery should be mentioned in the stratigraphic narrative but it is recommended that the assemblage should be excluded from any further specialist analysis or reporting.

The Post-Roman Pottery

7.3.7 It is proposed that the pottery assemblage be subjected to some limited further analysis and a summary report be produced for publication. The report will concentrate on the Middle Saxon material but will outline the other period assemblages too. The latter will have descriptive narrative texts on key groups produced for integration with the site narrative.

Checking some fabrics/correlation with MoLA codes	1 day
Updating archive and database	1 day
Consultation fee and travel	1 day
Study of key stratigraphic sequences/spatial distribution	1 day
Parallels	0.75 day
Report writing	1 day
Selection of material for illustration and description	0.75 day
Narrative text on pot from key contexts	1 day
TOTAL	**7.5 DAYS**

The Ceramic Building Material

Compare Roman fabrics with MOLA collection and then again to the Roman CBM found across other *Lundenwic* sites detailed in Cowie and Blackmore 2012 (+ travel costs to London)	1.5 days
Contact relevant expert and have graffiti on Roman brick translated	0.5 days
Consider post-medieval brick with final phasing information to ascertain dates for 3032 bricks and associated mortar type	0.5 day
Conduct background research on graffiti on bricks from Roman London / south east to provide context for LSE example	0.5 days
Integrate phasing information and write publication summaries for:	
i) The Roman material and brick with graffito	1day
ii) The 17th-18th century CBM: 3032 brick and delftware tiles	1day
Organise site archive, extract illustration material	0.5 days
Total	**5.5 days**

The Fired Clay

7.3.8 The assemblage has been recorded summarily for the site archive.

A short report should be included for publication which can largely be drawn from this report, including further analysis of the textile impressions.

Microscopic analysis of the textile impressions	2 days
Produce a summary report for publication based on current records	2 days
Total	**4 days**

The Clay Tobacco Pipe

7.3.9 An analysis report will be prepared accompanied by a catalogue of those bowls with maker's marks. The evaluation assemblage is to be integrated with the excavation material. Research should be undertaken into the makers in an attempt to tighten date ranges.

Prepare analysis report incl evaluation material	1 day
Prepare catalogue of maker's marks	1 day
Further research into makers	1 day
Total	**3 days**

The Glass

7.3.10 The assemblage has been recorded in full on pro forma sheets for archive and data has been entered onto Excel spreadsheet. No further work is proposed.

The Geological Material

7.3.11 It is proposed to undertake some further research on the Middle Saxon stone assemblage and produce a concise report for publication. No additional work is proposed for the post-Saxon assemblage. The few key points from this later material can be extracted from the archive and the current post-excavation assessment by the site director for use in the integrated site narrative.

Further study of site stratigraphy and spatial distribution of stone 0.75 day
Comparative study of other Middle Saxon assemblages from London 1 day
Concise report for publication 0.75 day

Total 2.5 days

The Metallurgical Remains

7.3.12 Comment should be made on the presence of the Mid Saxon material in the site narrative, but no separate report is proposed on the slag; summary information from the above report can be drawn into the stratigraphic narrative as required.

The Bulk Metalwork

7.3.13 No further work is recommended; the assemblage has been x-rayed and recorded for the site archive and can be disposed of.

The Animal Bone

Identification and recording of the bone from the evaluation = 4 days
Analysis of data: Further Anuran and Rodent identification = 1days
Analysis of data: Further Bird identification = 1 day
Analysis of the Anglo-Saxon assemblage = 5 days

- Analysis of data: NISP, MNE & MNI counts for mammalian, avian, anuran, rodent & fish
- Analysis of data: Metrical analyses of all faunal remains
- Analysis of data: Statistical analyses
- Analysis of data: Age data analyses
- Analysis of data: Butchery
- Analysis of data: Pathology
- Analysis of the medieval and post-medieval assemblages = 1 days
  Comparison with local sites = 1 days
  Production of written report = 3 days

Total 16 days

The Fish Bone

Further identification of key elements (e.g. cyprinid pharyngeal)	1 Day
Further identification of elements to species within family groups using reference collections at Fort Cumberland	4 Days
Site comparison	3 Days
Production of written report addressing research aims listed above	4 Days
Total	**12 days**

The Shell

7.3.14 The assemblage has been recorded in full for the archive. No further work is required and disposal is recommended

The Registered Finds

7.3.15 Further work will concentrate on the Period 1 and Period 3 assemblages. It should include recording of the loom weights using the fabric type series devised by Blackmore (1988, 11). A full analysis of the Saxon material is proposed including a catalogue and illustration of up to 70 objects. A brief overview of the Period 3 assemblage is also proposed including a catalogue.

7.3.16 A short report and catalogue of the coins is also proposed once conservation is complete. Specialist input may need to be sought for this as there appear to be some uncommon types present.

Full recording and analysis of the textile manufacturing assemblage	8 days
Recording of the Period 3 shoe fragments	2 days
Production of a full archive and publication catalogue	3 days
Write publication text	4 days
Coin summary	1 days
Total	**20 days**

Conservation

7.3.17 Radiography still has to be carried out on some of the registered finds. It also may be necessary to take more plates with different exposures for some of the unidentified metal finds, as well as some metal objects that were recovered from the flotation of samples. It is estimated that an additional 2-4 plates will be required

7.3.18 Several of the metal objects show a high degree of corrosion. Further work will be necessary to stabilise and preserve the objects in the long-term, and to aid the specialist with identification of some of the undiagnostic objects.

7.3.19 Conservation is also strongly suggested for the coins and tokens recovered from the site. Their overall condition is very poor; the pieces are mostly illegible and cannot currently be identified. Cleaning of the coins is therefore a necessary procedure for the potential dating of features.

Total **3 days**

The Environmental Samples

Charred Plant Macrofossils

7.3.20 It is recommended that the following samples undergo analysis: <1> [1004], <18> [1879], <107> [1376], <108> [1382], <119> [1392], <123> [1395] and<140> [1399]. Sample <64> [1222] is also recommended for analysis, given the presence of mineralized plant remains. Analysis of the latter will involve sorting of the flot as well as of a subsample of the retained residues. Identification of both charred and especially mineralized plant remains will be carried out with the help of a modern comparative collection. Subsequently, a report suitable for publication should be produced.

Waterlogged Plant Remains

7.3.21 No further work is recommended.

Wood Charcoal

7.3.22 It is recommended that further analysis be carried out on the following 30 samples: *<1> [1004], <17> [1044], <20> [1096], <28> [1140], <29> [1035], <34> [1141], <37> [1156], <41> [1144], <42> [1175], <48> [1174], <64> [1222], <68> [1231], <94> [1356], <96> [1368], <107> [1376], <108> [1382], <112> [1361], <113> [1385], <119> [1392], <120> [1394], <123> [1395], <137> [1430], <140> [1399], <151> [1481], <155> [1491], <167> [1530], <173> and <174> [1542], <190> [1599], <195> [1613] and <204> [1666].*

Time Requirements

Charred and mineralised plant macrofossils

- Sorting and identification of plant remains from 8 samples	4 days
- Identification of mineralised plant remains from the residues	0.5 days
- Visit to a reference collection	1 day
- Literature consultation and report production	1day
Total	**6.5 days**

Analysis of wood charcoal fragments from 30 samples:

- Identifications and data entry	12 days
- Literature consultation and report production	2 days
Total	**14 days**

Insects

7.3.23 It is recommended that two assemblages are subjected to detailed analysis, one from the fill of well [1080] (sample <23>, context 1098), and the second from the lower fill of quarry pit [1374] (sample <114>, context 1386). A third sample from another fill of well [1080] (sample 25>, context 1124) should be scanned in more detail to provide additional information.

Costs for further work (based on the size of the paraffin flots, size of the assemblages and species composition)

Full analysis of two samples: £872

Detailed scan of one sample: £65

TOTAL = £937

Pollen

7.3.24 No further work is recommended on these samples.

Illustration/Photography

Pottery

7 illustrations to be selected from the Middle Saxon assemblage
15 illustrations and/or photographs from the early post-medieval assemblage
17 illustrations and/or photographs from the late post-medieval to draw/photograph 3 days

CBM

1 illustration: graffito on Roman brick from [1141]
4 photographs: graffito on Roman brick from [1141]; Deltftware tiles from [1194] and [1579]; an example of post-medieval 3032 brick, with mortar (to be selected) 1.5 days

Fired clay

10 illustrations of diagnostic fired clay pieces 1.5 days

Stone objects

2 illustrations (to be selected) 0.5 day

Clay tobacco pipes

6 illustrations 1.5 days

Registered finds

70 illustrations (to be selected) 17 days

Stratigraphic figures

c. 15 figures 5 days

Stratigraphic Tasks	**Time**
Finalise subgrouping, draw as many as yet unphased or undated features as possible into the phases	1 day
Define groups. The c.500 subgroups created at assessment level are likely to form some 30 groups (dated feature types etc). The groups will be defined using stratigraphic, spatial and chronological analysis, using the subgroup matrix and dating evidence.	3 days
Draw date phased group matrices	1 day
Define landuse. The c. 50 groups are likely to form some 10 - 15 landuses (buildings, open areas, boundaries etc.). They will be defined using stratigraphic, spatial and chronological analysis, using the group matrix and dating evidence.	3 days
Describe landuse. Interpretative text will be written about each landuse element including a definition of the buildings, open areas and boundaries etc., their form and function on a site-wide basis.	7 days
Define periods. The general chronological phases of activity across the site will be identified from the group matrix and defined landuses. These phases will form a chronological framework of the site. There are likely to be 8 periods consisting of 10 phases of activity. The groups and phases forming each period will be mapped. It is estimated that 2 periods can be defined per day	1 day
Describe periods. A textual summary, built from the landuse and group texts where appropriate, will be formed for each period. Plots of each period will be produced using Auto-Cad, GIS and/or hand-annotated plans, these will include feature conjecture.	7 days
Documentary research will be conducted prior to commencement of the authorship of the period-driven narrative by the principal author. This should include relevant study of archaeological features, sites and published themes of the surrounding area, region, and the south-east.	5 days
Digestion and association of finds and environmental publication reports	3 days
Prepare period-driven narrative of the site sequence. This task comprises the combination of the stratigraphic period descriptions and the relevant portions of completed finds, environmental, documentary and integrated analytical reports. Suitable photographic and drawn images such as sections and plans will also be selected from the archive at this point. Completion of this task will result in the first (unedited) draft of the site sequence period-driven narrative and will work towards compilation of a synopsis for the thematic monograph.	7 days
Write Introduction, Discussion and Conclusion sections	3 days
Post-referee editing	5 days
Sub-Total	**46 days**
Specialist Analysis	
Post-Roman pottery	7.5 days
CBM	5.5 days
Fired Clay	4 days
Clay Tobacco Pipe	3 day
Geological material	2.5 days
Animal bone	16 days
Fish bone	12 days
Registered finds	20 days
Conservation	3 days
Environmental	20.5 days
Insects	£937
Illustration	
Pottery and finds illustration / photography	25 days
Stratigraphic figures	5 days
Production	
Editing of the period-driven narrative	5 days
Project Management	2 days

Table 23: Resource for completion of the period-driven narrative of the site sequence

7.4 Artefacts and Archive Deposition

7.4.1 The site archive is currently held at the offices of ASE. Following completion of all post-excavation work, including any publication work, the site archive will be deposited with LAARC.

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Appendix 1: Context Register

Context	Type	Interpretation	Parent	Subgroup	Group	Period
1000	Cut	Robber cut	1000	189		4
1001	Cut	Pit	1001	98		1
1002	Fill	Fill	1001	98		1
1003	Fill	Fill, upper	1006	22		1
1004	Fill	Fill, intermediate	1006	22		1
1005	Fill	Fill, intermediate	1006	22		1
1006	Cut	Pit	1006	21		1
1007	Layer	Dump	1007	154		3
1008	Cut	Posthole	1008	20		4
1009	Fill	Fill	1008	20		4
1010	Fill	Fill, upper	1022	144	4	1
1011	Fill	Fill, primary	1022	143	4	1
1012	Masonry or other construction	Wall	1012	155		3
1013	Cut	Construction cut	1013	155		3
1014	Fill	Fill	1041	146	4	1
1015	Fill	Backfill	1017	156		3
1016	Masonry or other construction	Wall	1016	156		3
1017	Cut	Construction cut	1017	156		3
1018	Fill	Fill	1019	28		3
1019	Cut	Robber cut	1019	28		3
1020	Masonry or other construction	Wall	1020	29		3
1021	Cut	Construction cut	1021	29		3
1022	Cut	Ditch	1022	143	4	1
1023	Fill	Fill, tertiary	1006	21		1
1024	Fill	Fill, secondary	1006	21		1
1025	Void	Floor	1025			
1026	Fill	Fill	1027	27		4
1027	Cut	Pit	1027	27		4
1028	Fill	Fill, secondary	1029	99		1
1029	Cut	Pit	1029	99		1
1030	Masonry or other construction	Wall	1030	4	1	4
1031	Masonry or other construction	Wall	1031	23		4
1032	Cut	Construction cut	1032	23		4
1033	Fill	Fill, upper	1087	26		1
1034	Fill	Fill, tertiary	1087	26		1
1035	Layer	Occupation layer	1035	32		2
1036	Fill	Fill, upper	1037	66		1
1037	Cut	Pit	1037	66		1

Context	Type	Interpretation	Parent	Subgroup	Group	Period
1038	Layer	Leveling layer	1038	30		3
1039	Fill	Fill, primary	1006	21		1
1040	Fill	Fill, secondary	1041	146	4	1
1041	Cut	Ditch	1041	145	4	1
1042	Fill	Fill, primary	1029	99		1
1043	Fill	Fill, secondary	1087	25		1
1044	Fill	Fill, basal	1087	25		1
1045	Fill	Fill, upper	1048	157	1	4
1046	Fill	Fill, secondary	1048	157	1	4
1047	Fill	Fill, primary	1048	157	1	4
1048	Cut	Construction cut	1048	7	1	4
1049	Masonry or other construction	Wall	1049	158	1	4
1050	Masonry or other construction	Wall	1050	6	1	4
1051	Masonry or other construction	Floor	1051	2	1	4
1052	Masonry or other construction	Wall	1052	3	1	4
1053	Fill	Fill	1048	157	1	4
1054	Masonry or other construction	Pit, cess	1054	9	2	4
1055	Masonry or other construction	Pit, cess	1055	9	2	4
1056	Masonry or other construction	Wall	1056	10	3	4
1057	Masonry or other construction	Wall	1057	11	3	4
1058	Fill	Fill	1055	8	2	4
1059	Masonry or other construction	Floor	1059	12	3	4
1061	Fill	Fill, primary	1037	66		1
1062	Fill	Fill, basal	1041	145	4	1
1063	Masonry or other construction	Wall	1063	97		3
1064	Cut	Construction cut	1064	97		3
1065	Fill	Construction cut fill	1064	97		3
1066	Fill	Fill	1067	95		3
1067	Cut	Robber cut	1067	95		3
1068	Fill	Fill	1067	95		3
1069	Masonry or other construction	Wall	1069	77		3
1070	Layer	Dump	1070	30		3
1071	Deposit	Consolidation layer	1071	12	3	4
1072	Deposit	Consolidation layer	1072	12	3	4
1073	Layer	Foundation layer	1073	97		3
1074	Fill	Waterproofing	1074	9	2	4
1075	Layer	Made ground	1075	14		4

Context	Type	Interpretation	Parent	Subgroup	Group	Period
1076	Void					
1077	Void					
1078	Void					
1079	Fill	Fill, upper	1080	70		1
1080	Cut	Well	1080	67		1
1081	Fill	Fill	1080	70		1
1082	Fill	Fill, upper	1084	15		1
1083	Fill	Fill	1084	15		1
1084	Cut	Pit	1084	15		1
1085	Deposit	Consolidation layer	1085	7	1	4
1086	Fill	Consolidation layer	1085	7	1	4
1087	Cut	Pit	1087	24		1
1088	Deposit	Occupation layer	1088	103		3
1089	Deposit	Occupation layer	1089	104		1
1090	Fill	Fill	1091	7	1	4
1091	Cut	Construction cut	1091	7	1	4
1092	Fill	Fill	1093	7	1	4
1093	Cut	Construction cut	1093	7	1	4
1094	Masonry or other construction	Floor	1094	5	1	4
1095	Masonry or other construction	Wall	1095	10	3	4
1096	Fill	Fill, tertiary	1080	70		1
1097	Deposit	Occupation layer	1097	134		1
1098	Fill	Fill, secondary	1080	69		1
1099	Fill	Fill	1100	102		1
1100	Cut	Pit	1100	102		1
1101	Fill	Fill	1102	87		3
1102	Cut	Stakehole	1102	87		3
1103	Fill	Fill	1104	88		3
1104	Cut	Stakehole	1104	88		3
1105	Fill	Fill	1106	90		3
1106	Cut	Stakehole	1106	90		3
1107	Fill	Fill	1108	91		3
1108	Cut	Stakehole	1108	91		3
1109	Fill	Fill	1110	92		3
1110	Cut	Stakehole	1110	92		3
1111	Fill	Fill	1112	93		3
1112	Cut	Stakehole	1112	93		3
1113	Fill	Fill	1114	86		3
1114	Cut	Stakehole	1114	86		3
1115	Fill	Fill	1116	85		3
1116	Cut	Stakehole	1116	85		3
1117	Fill	Fill	1118	84		3

Context	Type	Interpretation	Parent	Subgroup	Group	Period
1118	Cut	Stakehole	1118	84		3
1119	Fill	Fill	1120	94		3
1120	Cut	Stakehole	1120	94		3
1121	Fill	Fill	1122	89		3
1122	Cut	Stakehole	1122	89		3
1123	Masonry or other construction	Wall	1123	105		3
1124	Fill	Fill, primary	1080	68		1
1125	Masonry or other construction	School structure number	1125			
1126	Masonry or other construction	Cellar structure number	1126			
1127	Masonry or other construction	Wall	1127	106		3
1128	Cut	Construction cut	1128	106		3
1129	Fill	Fill	1128	106		3
1130	Fill	Fill	1131	11	3	4
1131	Cut	Construction cut	1131	10	3	4
1132	Cut	Ditch	1132	147	4	1
1133	Fill	Fill	1132	148	4	1
1134	Fill	Fill, primary	1135	123		1
1135	Cut	Pit	1135	122		1
1136	Fill	Fill	1137	83		3
1137	Cut	Pit	1137	83		3
1138	Fill	Fill	1139	101		3
1139	Cut	Pit	1139	101		3
1140	Fill	Fill, secondary	1135	122		1
1141	Deposit	Made ground	1141	71		2
1142	Fill	Fill, upper	1143	81		1
1143	Cut	Pit	1143	81		1
1144	Deposit	Dump	1144	76		2
1145	Fill	Fill	1146	112		1
1146	Cut	Stakehole	1146	112		1
1147	Fill	Fill	1152	366		3
1148	Fill	Fill	1152	366		3
1149	Fill	Fill	1152	366		3
1150	Fill	Fill	1152	366		3
1151	Fill	Fill	1152	366		3
1152	Cut	Pit	1152	366		3
1153	Deposit	Dump	1153	71		2
1154	Masonry or other construction	Wall	1154	96		3
1155	Cut	Construction cut	1155	96		3
1156	Deposit	Dump	1156	55		1
1157	Cut	Stakehole	1157	109		1

Context	Type	Interpretation	Parent	Subgroup	Group	Period
1158	Fill	Fill	1157	109		1
1159	Cut	Stakehole	1159	111		1
1160	Fill	Fill	1159	111		1
1161	Cut	Stakehole	1161	113		1
1162	Fill	Fill	1161	113		1
1163	Cut	Stakehole	1163	116		1
1164	Fill	Fill	1163	116		1
1165	Cut	Stakehole	1165	108		1
1166	Fill	Fill	1165	108		1
1167	Cut	Stakehole	1167	114		1
1168	Fill	Fill	1167	114		1
1169	Cut	Stakehole	1169	115		1
1170	Fill	Fill	1169	115		1
1171	Masonry or other construction	Wall	1171	106		3
1172	Cut	Construction cut	1172	106		3
1173	Fill	Fill	1172	106		3
1174	Layer	Dump layer	1174	55		1
1175	Fill	Fill	1176	72	5	1
1176	Cut	Ditch	1176	73	5	1
1177	Cut	Stakehole	1177	110		1
1178	Fill	Fill	1177	110		1
1179	Cut	Stakehole	1179	107		1
1180	Fill	Fill	1179	107		1
1181	Fill	Fill, primary	1176	73	5	1
1182	Layer	Consolidation layer	1182	106		3
1183	Fill	Fill	1184	75	7	1
1184	Cut	Ditch	1184	75	7	1
1185	Fill	Fill	1199	75	7	1
1186	Fill	Fill	1187	159		3
1187	Cut	Pit	1187	159		3
1188	Cut	Pit	1188	124		3
1189	Fill	Fill	1188	124		3
1190	Cut	Ditch	1190	74	6	1
1191	Fill	Fill	1190	74	6	1
1192	Fill	Fill	1193	160		3
1193	Cut	Pit	1193	160		3
1194	Fill	Fill	1195	161		3
1195	Cut	Construction cut	1195	161		3
1196	Fill	Fill	1197	100		3
1197	Cut	Pit	1197	100		3
1198	Fill	Fill	1199	75	7	1
1199	Cut	Ditch	1199	75	7	1

Context	Type	Interpretation	Parent	Subgroup	Group	Period
1200	Cut	Pit	1200	125		3
1201	Fill	Fill	1200	125		3
1202	Cut	Pit	1202	129		3
1203	Fill	Fill	1202	129		3
1204	Deposit	Dump layer	1204	55		1
1205	Fill	Fill	1835	126		3
1206	Fill	Fill	1207	56		1
1207	Cut	Posthole	1207	56		1
1208	Fill	Fill	1209	33		1
1209	Cut	Pit	1209	33		1
1210	Fill	Fill	2011	34		1
1211	Cut	Stakehole	1211	34		1
1212	Fill	Fill	1213	35		1
1213	Cut	Stakehole	1213	35		1
1214	Fill	Fill	1215	41		1
1215	Cut	Stakehole	1215	41		1
1216	Fill	Fill	1217	57		1
1217	Cut	Pit	1217	57		1
1218	Layer	Occupation layer	1218	104		1
1219	Layer	Occupation layer	1219	134		1
1220	Fill	Fill	1221	58		1
1221	Cut	Posthole	1221	58		1
1222	Fill	Fill, intermediate	1143	81		1
1223	Fill	Fill, tertiary	1143	81		1
1224	Fill	Fill	1225	36		1
1225	Cut	Posthole	1225	36		1
1226	Fill	Fill	1227	37		1
1227	Cut	Posthole	1227	37		1
1228	Fill	Fill, upper	1256	117		1
1229	Void					
1230	Fill	Fill, secondary	1143	81		1
1231	Layer	Occupation layer	1231	59		1
1232	Fill	Fill, basal	1143	81		1
1233	Cut	Pit	1233	119		1
1234	Fill	Fill, primary	1233	119		1
1235	Fill	Fill, upper	1233	120		1
1236	Layer	Occupation layer	1236	55		1
1237	Fill	Fill, primary	1256	117		1
1238	Fill	Fill	1239	39		1
1239	Cut	Posthole	1239	39		1
1240	Cut	Pit	1240	121		1
1241	Fill	Fill	1240	121		1
1242	Fill	Fill	1243	40		1

Context	Type	Interpretation	Parent	Subgroup	Group	Period
1243	Cut	Posthole	1243	40		1
1244	Cut	Construction cut	1244	170		3
1245	Fill	Backfill	1244	170		3
1246	Cut	Robber cut	1246	172		3
1247	Fill	Fill, secondary	1309	439		3
1248	Fill	Fill, secondary	1309	439		3
1249	Fill	Fill	1246	172		3
1250	Masonry or other construction	Wall	1250	170		3
1251	Fill	Fill, upper	1254	31		2
1252	Fill	Fill, secondary	1254	31		2
1253	Fill	Fill, primary	1254	31		2
1254	Cut	Pit	1254	31		2
1255	Layer	Occupation layer	1255	59		1
1256	Cut	Pit	1256	117		1
1257	Fill	Fill	1258	60		1
1258	Cut	Posthole	1258	60		1
1259	Layer	Occupation layer	1259	59		1
1260	Layer	Occupation layer	1260	59		1
1261	Cut	Stakehole	1261	64		1
1262	Fill	Fill	1261	64		1
1263	Cut	Stakehole	1263	65		1
1264	Fill	Fill	1263	65		1
1265	Cut	Stakehole	1265	118		1
1266	Fill	Fill	1265	118		1
1267	Cut	Pit	1267	130		1
1268	Fill	Fill, primary	1267	130		1
1269	Fill	Fill, secondary	1267	131		1
1270	Fill	Fill, tertiary	1267	132		1
1271	Fill	Fill, upper	1267	133		1
1272	Cut	Stakehole	1272	45		1
1273	Fill	Fill	1272	45		1
1274	Cut	Stakehole	1274	46		1
1275	Fill	Fill	1274	46		1
1276	Cut	Stakehole	1276	47		1
1277	Fill	Fill	1276	47		1
1278	Cut	Stakehole	1278	48		1
1279	Fill	Fill	1278	48		1
1280	Cut	Stakehole	1280	49		1
1281	Fill	Fill	1280	49		1
1282	Cut	Stakehole	1282	50		1
1283	Fill	Fill	1282	50		1
1284	Cut	Stakehole	1284	51		1

Context	Type	Interpretation	Parent	Subgroup	Group	Period
1285	Fill	Fill	1284	51		1
1286	Cut	Stakehole	1286	52		1
1287	Fill	Fill	1286	52		1
1288	Cut	Stakehole	1288	53		1
1289	Fill	Fill	1288	53		1
1290	Cut	Stakehole	1290	54		1
1291	Fill	Fill	1290	54		1
1292	Cut	Stakehole	1292	43		1
1293	Fill	Fill	1292	43		1
1294	Cut	Stakehole	1294	44		1
1295	Fill	Fill	1294	44		1
1296	Fill	Fill	1297	61		1
1297	Cut	Posthole	1297	61		1
1298	Fill	Fill	1299	63		1
1299	Cut	Posthole	1299	63		1
1300	Fill	Fill	1301	62		1
1301	Cut	Posthole	1301	62		1
1302	Cut	Posthole	1302	130		1
1303	Fill	Fill	1302	130		1
1304	Cut	Posthole	1304	130		1
1305	Fill	Fill	1304	130		1
1306	Layer	Natural wind blown deposit	1306	82		1
1307	Layer	Natural wind blown deposit	1307	82		1
1308	Fill	Fill, primary	1309	439		3
1309	Cut	Pond	1309	439		3
1310	Cut	Stakehole	1310	130		1
1311	Fill	Fill	1310	130		1
1312	Cut	Stakehole	1312	130		1
1313	Fill	Fill	1312	130		1
1314	Cut	Stakehole	1314	130		1
1315	Fill	Fill	1314	130		1
1316	Deposit	Dump	1316	477		4
1317	Fill	Fill, upper	1309	439		3
1318	Cut	Construction cut	1318	11	3	4
1319	Masonry or other construction	Wall	1319	167		3
1320	Cut	Construction cut	1320	167		3
1321	Cut	Robber cut	1321	181		3
1322	Fill	Fill	1321	181		3
1323	Fill	Backfill	1000	189		4
1324	Cut	Robber cut	1324	182		3
1325	Fill	Fill	1324	182		3

Context	Type	Interpretation	Parent	Subgroup	Group	Period
1326	Fill	Fill	1327	178		4
1327	Cut	Pit	1327	178		4
1328	Layer	Occupation layer	1328	183		2
1329	Layer	Dump	1329	186		3
1330	Fill	Fill	1333	187		3
1331	Masonry or other construction	Wall	1331	188		3
1332	Fill	Construction debris	1333	187		3
1333	Cut	Robber cut	1333	187		3
1334	Fill	Fill	1335	176		3
1335	Cut	Pit	1335	176		3
1336	Fill	Fill	1337	177		2
1337	Cut	Pit	1337	177		2
1338	Cut	Construction cut	1338	190		3
1339	Masonry or other construction	Wall	1339	190		3
1340	Fill	Fill	1333	187		3
1341	Layer	Occupation layer	1341	179		2
1342	Layer	Occupation layer	1342	174		3
1343	Fill	Fill, upper	1344	443		1
1344	Cut	Pit, quarry	1344	440		1
1345	Fill	Fill, upper	1346	451		1
1346	Cut	Pit	1346	450		1
1347	Deposit	Dump	1347	180		2
1348	Fill	Fill, upper	1352	187		3
1349	Fill	Fill, tertiary	1352	187		3
1350	Fill	Fill, secondary	1352	187		3
1351	Fill	Fill, primary	1352	187		3
1352	Cut	Robber cut	1352	187		3
1353	Layer	Occupation layer	1353	174		3
1354	Deposit	Dump	1354	183		2
1355	Layer	Occupation layer	1355	183		2
1356	Deposit	Levelling deposit/dump	1356	191		1
1357	Fill	Fill	1358	201		1
1358	Cut	Unknown	1358	201		1
1359	Fill	Fill, primary	1346	451		1
1360	Fill	Fill, tertiary	1344	442		1
1361	Layer	Occupation layer	1361	191		1
1362	Fill	Backfill	1363	175	1	4
1363	Cut	Construction cut	1363	175	1	4
1364	Layer	Occupation layer	1364	209		1
1365	Fill	Fill, primary	1335	176		3
1366	Cut	Gully	1366	185		2

Context	Type	Interpretation	Parent	Subgroup	Group	Period
1367	Fill	Fill	1366	185		2
1368	Fill	Fill, secondary	1344	441		1
1369	Fill	Fill, primary	1344	441		1
1370	Fill	Fill, secondary	1372	468		1
1371	Fill	Fill, primary	1372	468		1
1372	Cut	Pit	1372	467		1
1373	Fill	Fill, upper	1374	465		1
1374	Cut	Pit, quarry	1374	460		1
1375	Void					
1376	Fill	Fill, intermediate	1374	465		1
1377	Fill	Fill, basal	1337	177		2
1378	Layer	Occupation layer	1378	192		2
1379	Fill	Fill	1380	184		2
1380	Cut	Gully	1380	184		2
1381	Fill	Fill, basal	1344	441		1
1382	Fill	Fill, intermediate	1374	464		1
1383	Fill	Fill, tertiary	1374	463		1
1384	Masonry or other construction	Wall	1384	156		3
1385	Fill	Fill, secondary	1374	462		1
1386	Fill	Fill, primary	1374	462		1
1387	Fill	Fill, basal	1374	461		1
1388	Fill	Fill, upper	1390	448		1
1389	Fill	Fill, primary	1390	447		1
1390	Cut	Pit, quarry	1390	449		1
1391	Fill	Fill, upper	1393	466		1
1392	Fill	Fill, primary	1393	466		1
1393	Cut	Pit	1393	478		1
1394	Layer	Occupation layer	1394	209		1
1395	Fill	Fill, upper	1407	475		1
1396	Layer	Natural gravel outcrop	1396	207		
1397	Fill	Fill, upper	1416	202		1
1398	Fill	Fill, intermediate	1407	475		1
1399	Fill	Fill, secondary	1401	456		1
1400	Fill	Fill, primary	1401	455		1
1401	Cut	Ditch	1401	455		1
1402	Fill	Fill, upper	1403	457		1
1403	Cut	Pit, refuse	1403	457		1
1404	Fill	Fill	1405	234		1
1405	Cut	Ditch	1405	234		1
1406	Fill	Fill, tertiary	1407	474		1
1407	Cut	Pit	1407	471		1
1408	Fill	Fill, secondary	1407	473		1

Context	Type	Interpretation	Parent	Subgroup	Group	Period
1409	Fill	Fill, primary	1407	472		1
1410	Fill	Fill, secondary	1403	457		1
1411	Fill	Fill, basal	1407	472		1
1412	Cut	Ditch	1412	458		1
1413	Fill	Fill	1412	458		1
1414	Cut	Ditch	1414	454		1
1415	Fill	Fill	1414	454		1
1416	Cut	Ditch	1416	203		1
1417	Fill	Fill, primary	1403	457		1
1418	Fill	Fill	1419	162		1
1419	Cut	Stakehole	1419	162		1
1420	Fill	Fill	1421	163		1
1421	Cut	Stakehole	1421	163		1
1422	Fill	Fill	1423	164		1
1423	Cut	Stakehole	1423	164		1
1424	Fill	Fill	1425	165		1
1425	Cut	Stakehole	1425	165		1
1426	Fill	Fill	1427	166		1
1427	Cut	Stakehole	1427	166		1
1428	Fill	Fill	1429	470		1
1429	Cut	Gully	1429	470		1
1430	Fill	Fill	1431	469		1
1431	Cut	Gully	1431	469		1
1432	Fill	Fill	1435	169		3
1433	Fill	Lining	1435	168		3
1434	Masonry or other construction	Pit, cess	1435	168		3
1435	Cut	Construction cut	1435	168		3
1436	Fill	Fill, primary	1416	203		1
1437	Fill	Backfill	1435	168		3
1438	Fill	Fill	1439	226		1
1439	Cut	Posthole	1439	226		1
1440	Fill	Fill	1441	225		1
1441	Cut	Posthole	1441	225		1
1442	Fill	Fill	1443	233		1
1443	Cut	Posthole	1443	233		1
1444	Fill	Fill	1445	232		1
1445	Cut	Posthole	1445	232		1
1446	Fill	Fill	1447	231		1
1447	Cut	Posthole	1447	231		1
1448	Fill	Fill	1449	210		1
1449	Cut	Posthole	1449	210		1
1450	Fill	Fill	1451	204		1

Context	Type	Interpretation	Parent	Subgroup	Group	Period
1451	Cut	Ditch	1451	204		1
1452	Fill	Fill, upper	1496	446		1
1453	Fill	Fill, intermediate	1496	445		1
1454	Fill	Fill	1455	222		1
1455	Cut	Stakehole	1455	222		1
1456	Fill	Fill	1457	221		1
1457	Cut	Stakehole	1457	221		1
1458	Fill	Fill	1459	220		1
1459	Cut	Stakehole	1459	220		1
1460	Fill	Fill	1461	219		1
1461	Cut	Stakehole	1461	219		1
1462	Fill	Fill	1463	218		1
1463	Cut	Stakehole	1463	218		1
1464	Fill	Fill	1465	217		1
1465	Cut	Stakehole	1465	217		1
1466	Fill	Fill	1467	216		1
1467	Cut	Stakehole	1467	216		1
1468	Fill	Fill	1469	215		1
1469	Cut	Stakehole	1469	215		1
1470	Fill	Fill	1471	214		1
1471	Cut	Stakehole	1471	214		1
1472	Fill	Fill	1473	213		1
1473	Cut	Posthole	1473	213		1
1474	Fill	Fill	1475	212		1
1475	Cut	Stakehole	1475	212		1
1476	Fill	Fill	1477	211		1
1477	Cut	Stakehole	1477	211		1
1478	Fill	Fill, upper	1480	459		1
1479	Fill	Fill, primary	1480	459		1
1480	Cut	Pit, refuse	1480	459		1
1481	Fill	Fill, tertiary	1496	445		1
1482	Fill	Fill	1483	224		1
1483	Cut	Posthole	1483	224		1
1484	Fill	Fill	1485	223		1
1485	Cut	Posthole	1485	223		1
1486	Fill	Fill, secondary	1496	445		1
1487	Fill	Fill, upper	1489	205		1
1488	Fill	Fill, primary	1489	205		1
1489	Cut	Pit	1489	205		1
1490	Cut	Pit	1490	452		1
1491	Fill	Fill, upper	1490	453		1
1492	Fill	Fill, tertiary	1490	453		1
1493	Fill	Fill, primary	1496	445		1

Context	Type	Interpretation	Parent	Subgroup	Group	Period
1494	Fill	Fill, secondary	1490	453		1
1495	Fill	Fill, primary	1490	453		1
1496	Cut	Pit	1496	444		1
1497	Fill	Fill	1498	171		1
1498	Cut	Pit	1498	171		1
1499	Layer	Dump	1499	206		1
1500	Fill	Fill	1501	230		1
1501	Cut	Stakehole	1501	230		1
1502	Fill	Fill	1503	229		1
1503	Cut	Stakehole	1503	229		1
1504	Fill	Fill	1505	228		1
1505	Cut	Stakehole	1505	228		1
1506	Fill	Fill	1507	227		1
1507	Cut	Stakehole	1507	227		1
1508	Fill	Fill	1510	383		3
1509	Masonry or other construction	Wall	1509	383		3
1510	Cut	Construction cut	1510	383		3
1511	Cut	Pit	1511	248		1
1512	Fill	Fill, upper	1511	367		1
1513	Fill	Fill, primary	1511	246		1
1514	Masonry or other construction	Wall	1514	394		3
1515	Masonry or other construction	Wall	1515	400		3
1516	Masonry or other construction	Wall	1516	401		3
1517	Masonry or other construction	Floor	1517	386	1	4
1518	Masonry or other construction	Wall	1518	386	1	4
1519	Masonry or other construction	Wall	1519	387	1	4
1520	Fill	Fill	1521	153	4	1
1521	Cut	Ditch	1521	152	4	1
1522	Masonry or other construction	Wall	1522	241		3
1523	Fill	Fill	1524	239		4
1524	Cut	Modern truncation	1524	239		4
1525	Cut	Construction cut	1525	241		3
1526	Fill	Backfill	1525	241		3
1527	Layer	Dump	1527	244		3
1528	Cut	Ditch	1528	149	4	1
1529	Fill	Fill	1528	151	4	1
1530	Fill	Fill	1532	368		1
1531	Fill	Fill, primary	1532	369		1
1532	Cut	Pit	1532	369		1

Context	Type	Interpretation	Parent	Subgroup	Group	Period
1533	Fill	Fill, secondary	1528	150	4	1
1534	Fill	Fill, secondary	1535	381		1
1535	Cut	Pit	1535	382		1
1536	Fill	Fill	1539	384		3
1537	Fill	Fill	1539	384		3
1538	Fill	Fill	1539	384		3
1539	Cut	Robber cut	1539	384		3
1540	Fill	Fill	1528	151	4	1
1541	Fill	Fill, upper	1543	250		1
1542	Fill	Fill	1543	250		1
1543	Cut	Pit	1543	250		1
1544	Fill	Fill	1535	382		1
1545	Masonry or other construction	Wall	1545	402		3
1546	Cut	Robber cut	1546	395		3
1547	Fill	Fill	1546	395		3
1548	Fill	Fill	1549	398		1
1549	Cut	Ditch	1549	399		1
1550	Fill	Packing	1543	250		1
1551	Fill	Fill, primary	1528	149	4	1
1552	Fill	Fill	1553	249		1
1553	Cut	Pit	1553	249		1
1554	Fill	Packing	1555	370		3
1555	Cut	Posthole	1555	370		3
1556	Layer	Make up	1556	403		3
1557	Fill	Backfill	1559	372	1	4
1558	Fill	Fill	1559	372	1	4
1559	Cut	Construction cut	1559	372	1	4
1560	Fill	Fill	1561	371		3
1561	Cut	Pit	1561	371		3
1562	Fill	Fill, primary	1543	250		1
1563	Cut	Pit	1563	378		1
1564	Fill	Fill	1563	377		1
1565	Fill	Fill	1566	476		1
1566	Cut	Ditch	1566	476		1
1567	Fill	Fill, upper	1577	373		3
1568	Fill	Fill	1577	373		3
1569	Fill	Fill	1570	243		1
1570	Cut	Stakehole	1570	243		1
1571	Fill	Fill	1572	245		1
1572	Cut	Stakehole	1572	245		1
1573	Fill	Fill	1577	373		3
1574	Fill	Fill	1577	373		3

Context	Type	Interpretation	Parent	Subgroup	Group	Period
1575	Cut	Posthole	1575	240		1
1576	Fill	Fill	1575	240		1
1577	Cut	Pit	1577	373		3
1578	Fill	Fill	1580	374		3
1579	Layer	Occupation layer	1579	251		3
1580	Cut	Pit	1580	374		3
1581	Layer	Dump	1581	375		1
1582	Fill	Fill, upper	1585	80		1
1583	Fill	Fill, secondary	1585	79		1
1584	Fill	Fill, primary	1585	78		1
1585	Cut	Pit	1585	78		1
1586	Layer	Dump	1586	251		3
1587	Fill	Fill, primary	1563	378		1
1588	Layer	Dump	1588	251		3
1589	Fill	Fill	1590	430		1
1590	Cut	Pit	1590	430		1
1591	Fill	Fill	1592	431		1
1592	Cut	Posthole	1592	431		1
1593	Fill	Fill	1594	423		1
1594	Cut	Pit	1594	423		1
1595	Fill	Fill	1596	376		1
1596	Cut	Pit	1596	376		1
1597	Fill	Fill	1598	136	5	1
1598	Cut	Ditch	1598	136	5	1
1599	Layer	Occupation layer	1599	319		1
1600	Fill	Fill	1601	235		1
1601	Cut	Stakehole	1601	235		1
1602	Fill	Fill	1603	236		1
1603	Cut	Stakehole	1603	236		1
1604	Fill	Fill	1605	237		1
1605	Cut	Stakehole	1605	237		1
1606	Fill	Fill, upper	1607	138	5	1
1607	Cut	Ditch	1607	137	5	1
1608	Fill	Backfill	1610	432		3
1609	Masonry or other construction	Wall	1609	432		3
1610	Cut	Construction cut	1610	432		3
1611	Layer	Dump	1611	375		1
1612	Layer	Dump	1612	385		1
1613	Layer	Occupation layer	1613	385		1
1614	Fill	Fill	1615	238		1
1615	Cut	Stakehole	1615	238		1
1616	Cut	Construction cut	1616	402		3

Context	Type	Interpretation	Parent	Subgroup	Group	Period
1617	Fill	Backfill	1616	402		3
1618	Fill	Backfill	1619	401		3
1619	Cut	Construction cut	1619	401		3
1620	Fill	Fill	1621	419		1
1621	Cut	Pit	1621	419		1
1622	Fill	Fill	1623	379		1
1623	Cut	Stakehole	1623	379		1
1624	Fill	Fill	1625	264		1
1625	Cut	Stakehole	1625	264		1
1626	Fill	Fill	1627	263		1
1627	Cut	Stakehole	1627	263		1
1628	Fill	Fill	1629	262		1
1629	Cut	Stakehole	1629	262		1
1630	Fill	Fill	1631	261		1
1631	Cut	Stakehole	1631	261		1
1632	Fill	Fill	1633	260		1
1633	Cut	Stakehole	1633	260		1
1634	Fill	Fill	1635	259		1
1635	Cut	Stakehole	1635	259		1
1636	Fill	Fill	1637	258		1
1637	Cut	Stakehole	1637	258		1
1638	Fill	Fill	1639	257		1
1639	Cut	Stakehole	1639	257		1
1640	Fill	Fill, primary	1607	137	5	1
1641	Layer	Occupation layer	1641	385		1
1642	Cut	Pit	1642	420		1
1643	Fill	Fill	1642	420		1
1644	Cut	Gully	1644	421		1
1645	Fill	Fill	1644	421		1
1646	Fill	Fill, upper	1647	427		1
1647	Cut	Ditch	1647	424		1
1648	Fill	Fill, tertiary	1650	141	7	1
1649	Fill	Fill, secondary	1650	141	7	1
1650	Cut	Ditch	1650	140	7	1
1651	Fill	Fill	1652	253		1
1652	Cut	Posthole	1652	253		1
1653	Fill	Fill	1654	254		1
1654	Cut	Stakehole	1654	254		1
1655	Fill	Fill	1656	255		1
1656	Cut	Posthole	1656	255		1
1657	Layer	Redeposited natural	1657	289		1
1658	Fill	Fill	1659	380		1

Context	Type	Interpretation	Parent	Subgroup	Group	Period
1659	Cut	Stakehole	1659	380		1
1660	Cut	Pit	1660	389		3
1661	Fill	Fill	1660	389		3
1662	Fill	Fill	1660	389		3
1663	Deposit	Dump	1663	390		3
1664	Deposit	Redeposited natural	1664	391		3
1665	Cut	Pit	1665	422		1
1666	Fill	Fill, primary	1665	422		1
1667	Fill	Fill, secondary	1665	422		1
1668	Fill	Fill, upper	1650	141	7	1
1669	Fill	Fill, upper	1665	428		1
1670	Fill	Fill	1671	139	6	1
1671	Cut	Ditch	1671	139	6	1
1672	Fill	Fill	1673	417		1
1673	Cut	Posthole	1673	417		1
1674	Cut	Construction cut	1674	387	1	4
1675	Cut	Construction cut	1675	386	1	4
1676	Fill	Fill	1677	256		1
1677	Cut	Posthole	1677	256		1
1678	Fill	Fill	1679	252		1
1679	Cut	Stakehole	1679	252		1
1680	Fill	Fill	1681	142	6	1
1681	Cut	Ditch	1681	142	6	1
1682	Fill	Fill, basal	1650	140	7	1
1683	Fill	Fill, primary	1549	399		1
1684	Masonry or other construction	Wall	1684	397		4
1685	Fill	Fill	1686	433		1
1686	Cut	Pit	1686	433		1
1687	Deposit	Dump	1687	404		3
1688	Fill	Fill, secondary	1647	426		1
1689	Fill	Fill, basal	1647	425		1
1690	Deposit	Levelling deposit	1690	408		1
1691	Fill	Fill	1692	405		1
1692	Cut	Posthole	1692	405		1
1693	Fill	Fill	1694	406		1
1694	Cut	Posthole	1694	406		1
1695	Fill	Fill	1696	407		1
1696	Cut	Stakehole	1696	407		1
1697	Fill	Fill	1698	303		1
1698	Cut	Stakehole	1698	303		1
1699	Fill	Fill	1700	304		1
1700	Cut	Stakehole	1700	304		1

Context	Type	Interpretation	Parent	Subgroup	Group	Period
1701	Fill	Fill	1702	305		1
1702	Cut	Stakehole	1702	305		1
1703	Fill	Fill	1704	306		1
1704	Cut	Stakehole	1704	306		1
1705	Fill	Fill	1706	307		1
1706	Cut	Stakehole	1706	307		1
1707	Fill	Fill	1708	308		1
1708	Cut	Stakehole	1708	308		1
1709	Fill	Fill	1710	309		1
1710	Cut	Stakehole	1710	309		1
1711	Fill	Fill	1712	311		1
1712	Cut	Stakehole	1712	311		1
1713	Fill	Fill	1714	312		1
1714	Cut	Stakehole	1714	312		1
1715	Fill	Fill	1716	313		1
1716	Cut	Stakehole	1716	313		1
1717	Layer	Redeposited natural	1717	296		1
1718	Layer	Destruction debris	1718	393		3
1719	Deposit	Destruction debris	1719	392		3
1720	Cut	Construction cut	1720	394		3
1721	Fill	Backfill	1720	394		3
1722	Cut	Pit	1722	247		1
1723	Fill	Fill	1724	294		1
1724	Cut	Stakehole	1724	294		1
1725	Fill	Fill	1726	292		1
1726	Cut	Stakehole	1726	292		1
1727	Fill	Fill	1728	293		1
1728	Cut	Stakehole	1728	293		1
1729	Fill	Fill	1730	297		1
1730	Cut	Stakehole	1730	297		1
1731	Fill	Fill	1732	298		1
1732	Cut	Stakehole	1732	298		1
1733	Fill	Fill	1734	290		1
1734	Cut	Stakehole	1734	290		1
1735	Fill	Fill	1736	291		1
1736	Cut	Stakehole	1736	291		1
1737	Fill	Fill	1738	429		1
1738	Cut	Posthole	1738	429		1
1739	Layer	Dump	1739	388		3
1740	Layer	Occupation layer	1740	412		1
1741	Fill	Fill	1742	409		1
1742	Cut	Posthole	1742	409		1

Context	Type	Interpretation	Parent	Subgroup	Group	Period
1743	Fill	Fill	1744	295		1
1744	Cut	Posthole	1744	295		1
1745	Layer	Redeposited natural	1745	299		1
1746	Layer	Occupation layer	1746	413		1
1747	Fill	Fill	1748	396		1
1748	Cut	Posthole	1748	396		1
1749	Fill	Fill	1750	418		1
1750	Cut	Posthole	1750	418		1
1751	Fill	Fill	1752	301		1
1752	Cut	Stakehole	1752	301		1
1753	Fill	Fill	1754	300		1
1754	Cut	Stakehole	1754	300		1
1755	Fill	Fill	1756	320		1
1756	Cut	Stakehole	1756	320		1
1757	Void					
1758	Fill	Fill	1759	410		1
1759	Cut	Gully	1759	410		1
1760	Cut	Pit	1760	416		1
1761	Fill	Fill	1760	416		1
1762	Cut	Pit	1762	415		1
1763	Fill	Fill	1762	415		1
1764	Cut	Pit	1764	414		1
1765	Fill	Fill	1764	414		1
1766	Fill	Fill	1767	310		1
1767	Cut	Stakehole	1767	310		1
1802	Fill	Fill	1803	316		1
1803	Cut	Stakehole	1803	316		1
1806	Fill	Fill	1807	314		1
1807	Cut	Stakehole	1807	314		1
1808	Fill	Fill	1809	315		1
1809	Cut	Stakehole	1809	315		1
1824	Fill	Fill	1825	317		1
1825	Cut	Stakehole	1825	317		1
1826	Fill	Fill	1827	318		1
1827	Cut	Stakehole	1827	318		1
1830	Layer	Occupation layer	1830	411		3
1831	Cut	Stakehole	1831	287		1
1832	Fill	Fill	1831	287		1
1833	Cut	Stakehole	1833	288		1
1834	Fill	Fill	1833	288		1
1835	Cut	Pit	1835	126		3
2000	Fill	Fill	2001	42		1

Context	Type	Interpretation	Parent	Subgroup	Group	Period
2001	Cut	Pit	2001	42		1
2002	Fill	Fill	2003	38		1
2003	Cut	Posthole	2003	38		1
2004	Fill	Fill	2005	13		1
2005	Cut	Pit	2005	13		1
2006	Fill	Fill	2007	16		1
2007	Cut	Pit	2007	16		1
2008	Fill	Fill, upper	2011	17		1
2009	Fill	Fill, secondary	2011	18		1
2010	Fill	Fill, primary	2011	19		1
2011	Cut	Pit	2011	19		1
2012	Fill	Fill, upper	2014	128		1
2013	Fill	Fill, primary	2014	127		1
2014	Cut	Pit	2014	127		1
2015	Layer	Occupation layer	2015	480		1
2016	Fill	Fill, single	2017	481		1
2017	Cut	Pit	2017	481		1
2018	Layer	Natural gravel	2018	482		1
1/067	Fill	Fill, upper	1/068	354		1
1/068	Cut	Pit	1/068	354		1
1/070	Fill	Fill, primary	1/068	354		1
1/071	Layer	Natural wind blown deposit	1/071			
2/001	Layer	Backfill	2/003	1	1	4
2/002	Masonry or other construction	Wall	2/002	1	1	4
2/003	Cut	Construction cut	2/003	1	1	4
2/004	Fill	Fill, upper	2/005	144	4	1
2/005	Cut	Ditch	2/005	143	4	1
2/006	Fill	Backfill	2/003	1	1	4
2/007	Layer	Natural wind blown deposit	2/007			
2/008	Fill	Fill	2/009	434		3
2/009	Cut	Pit	2/009	434		3
2/010	Fill	Fill, primary	2/005	143	4	1
3/011	Layer	Dump	3/011	200		4
3/012	Fill	Fill	3/013	193		3
3/013	Cut	Robber cut	3/013	193		3
3/014	Layer	Dump	3/014	194		3
3/015	Fill	Fill	3/013	193		3
3/016	Layer	Dump	3/016	174		3
3/017	Fill	Fill	3/018	194		3
3/018	Cut	Robber cut	3/018	194		3
3/019	Layer	Occupation layer	3/019	191		1

Context	Type	Interpretation	Parent	Subgroup	Group	Period
3/020	Layer	Occupation layer	3/020	209		1
3/021	Masonry or other construction	Wall	3/021	197		3
3/022	Masonry or other construction	Wall	3/022	198		3
3/023	Masonry or other construction	Wall	3/023	199		3
3/024	Fill	Backfill	3/025	199		3
3/025	Cut	Construction cut	3/025	199		3
3/026	Fill	Fill	3/027	195		3
3/027	Cut	Pit	3/027	195		3
3/028	Fill	Fill	3/018	194		3
3/029	Layer	Dump	3/029	200		4
3/030	Layer	Natural alluvial deposit	3/030			
3/031	Layer	Dump	3/031	193		3
3/032	Layer	Dump	3/032	193		3
3/033	Layer	Dump	3/033	193		3
3/034	Layer	Dump	3/034	174		3
3/035	Layer	Rubble spread	3/035	174		3
3/036	Layer	Dump	3/036	193		3
3/037	Layer	Dump	3/037	193		3
3/038	Layer	Occupation layer	3/038	191		1
3/039	Fill	Fill	3/040	208		1
3/040	Cut	Posthole	3/040	208		1
3/041	Fill	Fill	3/042	196		3
3/042	Cut	Linear	3/042	196		3
3/043	Layer	Occupation layer	3/043	191		1
4/093	Layer	Redeposited natural	4/093	358		4
4/094	Layer	Dump	4/094	479		4
4/095	Fill	Backfill	4/096	357		4
4/096	Cut	Construction cut	4/096	357		4
4/097	Masonry or other construction	Wall	4/097	357		4
4/098	Fill	Backfill	4/099	356		4
4/099	Cut	Construction cut	4/099	356		4
4/100	Masonry or other construction	Drain	4/100	356		4
4/101	Fill	Fill	4/100	355		4
4/102	Layer	Natural	4/102			
5/044	Cut	Pit	5/044	359		3
5/045	Fill	Fill	5/044	359		3
5/046	Fill	Fill, tertiary	5/047	361		3
5/047	Cut	Ditch	5/047	361		3
5/048	Fill	Fill, upper	5/047	360		4

Context	Type	Interpretation	Parent	Subgroup	Group	Period
5/049	Layer	Dump	5/049	362		3
5/050	Fill	Fill, secondary	5/047	361		3
5/051	Fill	Fill, primary	5/047	361		3
5/052	Layer	Natural	5/052			
5/053	Layer	Natural	5/053			
5/054	Layer	Natural wind blown deposit	5/054			
6/002	Void					
6/056	Layer	Natural	6/056			
6/057	Layer	Natural	6/057			
6/058	Masonry or other construction	Wall	6/058	363		3
6/059	Cut	Construction cut	6/059	363		3
6/060	Fill	Backfill	6/059	363		3
6/061	Masonry or other construction	Wall	6/061	364		3
6/062	Fill	Fill	6/194	365		3
6/063	Layer	Natural	6/063			
6/194	Cut	Linear	6/194	365		3
7/065	Masonry or other construction	Wall	7/065	351		3
7/066	Masonry or other construction	Wall	7/066	352		3
9/069	Fill	Fill, secondary	9/073	373		3
9/072	Fill	Fill, primary	9/073	373		3
9/073	Cut	Pit	9/073	373		3
9/074	Fill	Fill	9/075	373		3
9/075	Cut	Pit	9/075	373		3
9/076	Fill	Backfill	9/077	242		3
9/077	Cut	Construction cut	9/077	242		3
9/078	Masonry or other construction	Wall	9/078	242		3
9/079	Layer	Dump	9/079	251		3
9/080	Fill	Fill	9/081	435		3
9/081	Cut	Posthole	9/081	435		3
9/082	Layer	Dump	9/082	436		3
9/083	Layer	Dump	9/083	437		3
9/084	Layer	Dump	9/084	375		1
9/085	Fill	Fill, secondary	9/086	374		3
9/086	Cut	Pit	9/086	374		3
9/087	Fill	Fill, tertiary	9/090	427		1
9/088	Fill	Fill, primary	9/086	374		3
9/089	Layer	Dump	9/089	375		1
9/090	Cut	Ditch	9/090	424		1
9/091	Fill	Fill	9/092	135	5	1
9/092	Cut	Ditch	9/092	135	5	1

Context	Type	Interpretation	Parent	Subgroup	Group	Period
9/103	Fill	Fill, primary	9/090	425		1
9/104	Fill	Fill	9/105	438		1
9/105	Cut	Pit	9/105	438		1
9/106	Layer	Occupation layer	9/106	385		1
9/107	Layer	Occupation layer	9/107	385		1
9/108	Fill	Fill	9/109	302		1
9/109	Cut	Posthole	9/109	302		1
9/110	Fill	Fill	9/111	277		1
9/111	Cut	Stakehole	9/111	277		1
9/112	Fill	Fill	9/113	274		1
9/113	Cut	Pit	9/113	274		1
9/114	Layer	Levelling deposit	9/114	275		1
9/115	Layer	Levelling deposit	9/115	276		1
9/116	Layer	Redeposited natural	9/116			
9/117	Fill	Fill	9/130	278		1
9/118	Fill	Fill	9/131	279		1
9/119	Fill	Fill	9/132	321		1
9/120	Fill	Fill	9/133	322		1
9/121	Fill	Fill	9/134	323		1
9/122	Fill	Fill	9/135	324		1
9/123	Fill	Fill	9/136	325		1
9/124	Fill	Fill	9/137	326		1
9/125	Fill	Fill	9/138	340		1
9/126	Fill	Fill	9/139	327		1
9/127	Fill	Fill	9/140	328		1
9/128	Fill	Fill	9/141	329		1
9/129	Fill	Fill	9/142	330		1
9/130	Cut	Stakehole	9/130	278		1
9/131	Cut	Stakehole	9/131	279		1
9/132	Cut	Posthole	9/132	321		1
9/133	Cut	Stakehole	9/133	322		1
9/134	Cut	Stakehole	9/134	323		1
9/135	Cut	Stakehole	9/135	324		1
9/136	Cut	Stakehole	9/136	325		1
9/137	Cut	Stakehole	9/137	326		1
9/138	Cut	Stakehole	9/138	340		1
9/139	Cut	Stakehole	9/139	327		1
9/140	Cut	Stakehole	9/140	328		1
9/141	Cut	Stakehole	9/141	329		1
9/142	Cut	Stakehole	9/142	330		1
9/143	Fill	Fill	9/144	265		1
9/144	Cut	Posthole	9/144	265		1

Context	Type	Interpretation	Parent	Subgroup	Group	Period
9/145	Void					
9/146	Fill	Fill	9/162	331		1
9/147	Fill	Fill	9/163	332		1
9/148	Fill	Fill	9/164	333		1
9/149	Fill	Fill	9/165	334		1
9/150	Fill	Fill	9/166	335		1
9/151	Fill	Fill	9/167	336		1
9/152	Fill	Fill	9/168	337		1
9/153	Fill	Fill	9/169	338		1
9/154	Fill	Fill	9/170	339		1
9/155	Fill	Fill	9/171	280		1
9/156	Fill	Fill	9/172	281		1
9/157	Fill	Fill	9/173	282		1
9/158	Fill	Fill	9/174	283		1
9/159	Fill	Fill	9/175	284		1
9/160	Fill	Fill	9/176	285		1
9/161	Fill	Fill	9/177	286		1
9/162	Cut	Stakehole	9/162	331		1
9/163	Cut	Stakehole	9/163	332		1
9/164	Cut	Stakehole	9/164	333		1
9/165	Cut	Stakehole	9/165	334		1
9/166	Cut	Stakehole	9/166	335		1
9/167	Cut	Stakehole	9/167	336		1
9/168	Cut	Stakehole	9/168	337		1
9/169	Cut	Stakehole	9/169	338		1
9/170	Cut	Stakehole	9/170	339		1
9/171	Cut	Stakehole	9/171	280		1
9/172	Cut	Stakehole	9/172	281		1
9/173	Cut	Stakehole	9/173	282		1
9/174	Cut	Stakehole	9/174	283		1
9/175	Cut	Stakehole	9/175	284		1
9/176	Cut	Stakehole	9/176	285		1
9/177	Cut	Stakehole	9/177	286		1
9/178	Fill	Fill	9/179	273		1
9/179	Cut	Stakehole	9/179	273		1
9/180	Fill	Fill	9/187	266		1
9/181	Fill	Fill	9/188	267		1
9/182	Fill	Fill	9/189	268		1
9/183	Fill	Fill	9/190	269		1
9/184	Fill	Fill	9/191	270		1
9/185	Fill	Fill	9/192	271		1
9/186	Fill	Fill	9/193	272		1
9/187	Cut	Stakehole	9/187	266		1

Context	Type	Interpretation	Parent	Subgroup	Group	Period
9/188	Cut	Stakehole	9/188	267		1
9/189	Cut	Posthole	9/189	268		1
9/190	Cut	Posthole	9/190	269		1
9/191	Cut	Stakehole	9/191	270		1
9/192	Cut	Stakehole	9/192	271		1
9/193	Cut	Stakehole	9/193	272		1
15/200	Masonry or other construction	Wall	15/200	342		4
15/201	Fill	Backfill	15/202	342		4
15/202	Cut	Construction cut	15/202	342		4
15/203	Layer	Dump	15/203	341		4
15/204	Layer	Dump	15/204	341		4
15/205	Layer	Dump	15/205	341		4
15/206	Layer	Dump	15/206	343		3
15/207	Layer	Dump	15/207	344		1
15/208	Layer	Dump	15/208	347		1
15/209	Fill	Fill	15/210	346		1
15/210	Cut	Pit	15/210	346		1
15/211	Fill	Fill	15/212	345		1
15/212	Cut	Pit	15/212	345		1
15/213	Layer	Redeposited natural	15/213	348		1
15/214	Layer	Natural	15/214			
15/215	Layer	Natural wind blown deposit	15/215			
16/055	Layer	Dump	16/055	349		3
16/064	Layer	Dump	16/064	350		1

Appendix 2: Quantification of bulk finds

Context	Lithics	Weight (g)	Pottery	Weight (g)	CBM	Weight (g)	Stone	Weight (g)	Slag	Weight (g)	Iron	Weight (g)	Metal	Weight (g)	Bone	Weight (g)	Clay Tobacco Pipe	Weight (g)	Fire Cracked Flint	Weight (g)	Fired Clay	Weight (g)	Glass	Weight (g)	Other	Weight (g)	Shell	Weight (g)
U/S	10	61	15	787	3	249									11	179												
1002			1	2											4	32												
1003					1	361									3	54												
1004															41	719			11	22	313	23508						
1005															123	3865					47	4775					1	1
1007			5	311	1	13									1	29												
1010															9	176												
1011											3	7			18	115												
1014					3	256					1	31			34	372					4	31						
1015																					28	1803						
1016					4	10371																						
1019			45	1057			2	331							15	644	6	42										
1024															42	781					1	3						
1028															51	1049											16	152
1034															20	416					3	68						
1035			5	199	30	65									18	183							1	1			1	1
1036											1	9			10	258					9	729					1	33
1039															6	152					2	37						
1042															11	386												
1043			1	16											18	593					1	48						
1044															6	31												

Context	Lithics	Weight (g)	Pottery	Weight (g)	CBM	Weight (g)	Stone	Weight (g)	Slag	Weight (g)	Iron	Weight (g)	Metal	Weight (g)	Bone	Weight (g)	Clay Tobacco Pipe	Weight (g)	Fire Cracked Flint	Weight (g)	Fired Clay	Weight (g)	Glass	Weight (g)	Other	Weight (g)	Shell	Weight (g)
1047			20	442											7	9	4	26					1	28				
1048			20	419			1	1							7	100												
1057					2	4966																						
1058			85	7440					2	19	11	1664			37	889	15	153					3	30			1	19
1061															28	590												
1065			11	413	1	3									12	288	3	34										
1066			72	2092	2	168									68	1760	17	120										
1067			37	1025			1	39			4	41			41	616	4	29										
1070			1	288	1	264																						
1071																	1	3										
1072			6	67											1	44	3	36										
1073			2	3													1	2										
1079			1	39	1	123									59	1529					9	1214						
1081							7	607			2	7									2	244						
1082															5	77					3	92						
1086			28	696													3	13					1	3				
1087			2	33											69	2069												
1089															11	174												
1096			1	68			1	251							43	1194					1	50					1	1
1097			1	3																								
1099					1	30					2	45			237	3863					2	69						
1127			2	18													1	3										

Context	Lithics	Weight (g)	Pottery	Weight (g)	CBM	Weight (g)	Stone	Weight (g)	Slag	Weight (g)	Iron	Weight (g)	Metal	Weight (g)	Bone	Weight (g)	Clay Tobacco Pipe	Weight (g)	Fire Cracked Flint	Weight (g)	Fired Clay	Weight (g)	Glass	Weight (g)	Other	Weight (g)	Shell	Weight (g)
1129																	1	4										
1133															2	33												
1134			1	34											12	412			1	39	48	2772						
1136																	3	14										
1138			4	102	1	49									15	35	1	8										
1140			3	57											85	1679												
1141			6	44	20	1872			4	106					99	2334					50	2401	1	2				
1142					1	88									96	1866											1	1
1144			3	37							1	9			73	1249					34	617						
1147			3	47																								
1148			30	1441	1	204									6	98	1	1										
1149			14	257			1	2							1	10	1	12							0	<2		
1150			1	87	1	4									2	19												
1151			1	29	4	163									5	102												
1153					1	566									2	21												
1156															28	773					1	66						
1174			1	23	3	1032	5	22292	1	204	1	1769			188	5786					27	756						
1175			9	599							1	280			127	3763					5	94						
1181			10	336	1	120									12	3192					3	83						
1183			1	4	5	2319	2	3566							19	862											1	5
1185					1	527	1	282							8	221											1	1
1186			5	60											2	60	1	1										

Context	Lithics	Weight (g)	Pottery	Weight (g)	CBM	Weight (g)	Stone	Weight (g)	Slag	Weight (g)	Iron	Weight (g)	Metal	Weight (g)	Bone	Weight (g)	Clay Tobacco Pipe	Weight (g)	Fire Cracked Flint	Weight (g)	Fired Clay	Weight (g)	Glass	Weight (g)	Other	Weight (g)	Shell	Weight (g)
1189			4	25			1	2							8	87												
1191															25	356					1	28					3	1
1194			51	1164	1	86									14	622	2	5										
1196			19	489					3	138					39	1702	3	13					1	27				
1198			6	64	1	350									39	591					3	11						
1199			2	12																								
1201			1	16																								
1203			2	14																								
1204															1	64												
1205			1	5											2	487												
1206															4	21												
1208			1	58	1	42									7	95												
1216															4	82												
1218			1	26																								
1222			2	7											34	788					1	108						
1223			2	10							2	18			7	82									2	20		
1224															101	899					13	234						
1228															14	216					15	439						
1231					3	638									6	103			1	32	3	59						
1234															7	65												
1235			2	11					1	90	5	38			35	879					11	140						
1237			1	39											22	532					5	148						

Context	Lithics	Weight (g)	Pottery	Weight (g)	CBM	Weight (g)	Stone	Weight (g)	Slag	Weight (g)	Iron	Weight (g)	Metal	Weight (g)	Bone	Weight (g)	Clay Tobacco Pipe	Weight (g)	Fire Cracked Flint	Weight (g)	Fired Clay	Weight (g)	Glass	Weight (g)	Other	Weight (g)	Shell	Weight (g)
1238					4	634									30	705			1	4								
1241			3	30							4	156			16	166												
1242															20	411					6	93						
1247			1	18			1	139																				
1250					4	10278																						
1251															6	110					1	32						
1252															2	39												
1253															3	30												
1255															9	97					9	123						
1257					1	268									23	589					4	75						
1260															7	268												
1268															26	392												
1269															24	412												
1270															6	78												
1271															113	2788												
1288			1	671																								
1296																					12	199						
1298			1	38			1	18	1	2					1	8					3	19						
1300									1	39					2	45					33	1126						
1308			27	1622	2	305									1	41												
1316			7	139	25	1243					1	36																
1317			63	3254	4	263	2	37			1	108			1	12							1	10				

Context	Lithics	Weight (g)	Pottery	Weight (g)	CBM	Weight (g)	Stone	Weight (g)	Slag	Weight (g)	Iron	Weight (g)	Metal	Weight (g)	Bone	Weight (g)	Clay Tobacco Pipe	Weight (g)	Fire Cracked Flint	Weight (g)	Fired Clay	Weight (g)	Glass	Weight (g)	Other	Weight (g)	Shell	Weight (g)
1319			1	58	2	5089																						
1322			9	230							1	13			3	43	4	28										
1323			26	498	4	639					5	48			12	281	13	53					1	25				
1325			2	33	1	1037	8	15120																				
1326			14	1243							26	2811			40	63	19	119					7	217				
1328			1	8																								
1329			3	97													1	7										
1330			1	768													1	5					1	2				
1339					2	4941																						
1340			11	76													1	9										
1342			2	51	2	138																	1	3				
1343			1	106											34	493												
1345															78	2619												
1348			18	257											1	22	1	10										
1349					22	1272	1	209							2	4					30	737						
1353			8	54											1	4												
1355			21	211							4	42			21	2176												
1356			20	359											48	158					2	34						
1360							2	7750																				
1361															5	80												
1362			11	142	3	175					2	28			24	280	3	41										
1365			1	9							2	274			1	10							5	27				

Context	Lithics	Weight (g)	Pottery	Weight (g)	CBM	Weight (g)	Stone	Weight (g)	Slag	Weight (g)	Iron	Weight (g)	Metal	Weight (g)	Bone	Weight (g)	Clay Tobacco Pipe	Weight (g)	Fire Cracked Flint	Weight (g)	Fired Clay	Weight (g)	Glass	Weight (g)	Other	Weight (g)	Shell	Weight (g)
1367															3	30												
1368					2	535									11	281												
1369															1	12												
1370															16	379					2	154						
1371			2	55	3	359					3	37			56	1382					3	93						
1373					1	250	1	2945							54	1031			1	17	110	2300						
1376					1	233									31	1220												
1377			1	3																								
1378			66	696	68	4565	5	1551	6	622					207	3224					6	250	6	2				
1382					1	391			2	69					8	131											1	1
1384					3	4832																						
1386			1	49																								
1388			9	280	1	121					2	22			8	122					3	78						
1389			1	3			1	828							9	331					7	72						
1392			1	17	3	206									17	404					1	106						
1394	1	4	10	62	3	537									29	631												
1395			9	343	9	758					1	32			65	1730					7	247						
1396			1	54											2	4												
1397			9	277	24	2682			2	841	1	41			37	1161					5	368						
1399			86	143	25	3137	3	815	2	1010			1	4	404	12657			1	10	7	144						
1402					4	251									63	1280												
1408															25	688												

Context	Lithics	Weight (g)	Pottery	Weight (g)	CBM	Weight (g)	Stone	Weight (g)	Slag	Weight (g)	Iron	Weight (g)	Metal	Weight (g)	Bone	Weight (g)	Clay Tobacco Pipe	Weight (g)	Fire Cracked Flint	Weight (g)	Fired Clay	Weight (g)	Glass	Weight (g)	Other	Weight (g)	Shell	Weight (g)
1409															1	57												
1410															25	365												
1413			3	234	6	442									47	860					2	29						
1415			3	93	8	1406	2	490							147	4457					10	178						
1417			1	12											98	1512					5	64					1	1
1430			7	214	5	1250									35	2114					1	74					1	10
1432			14	121													6	42										
1433			9	334	1	44											1	16										
1434					5	8277																						
1437			11	213	1	630											8	57										
1444															1	54												
1452					1	1918	3	11436							48	1318					30	1188						
1453					1	613	3	12497							39	1207												
1464			1	9																								
1479															26	174					6	72						
1481					1	67									6	637												
1488															9	256												
1491			2	44	4	402									156	3758					6	151	1	2				
1492					6	1797					1	16			181	3810			1	58								
1494			5	225	4	382									388	6433												
1495															42	1071												
1497					4	1047									7	271												

Context	Lithics	Weight (g)	Pottery	Weight (g)	CBM	Weight (g)	Stone	Weight (g)	Slag	Weight (g)	Iron	Weight (g)	Metal	Weight (g)	Bone	Weight (g)	Clay Tobacco Pipe	Weight (g)	Fire Cracked Flint	Weight (g)	Fired Clay	Weight (g)	Glass	Weight (g)	Other	Weight (g)	Shell	Weight (g)
1508	1	98	2	23																								
1509					4	11290																						
1512					6	407	1	305							7	76			5	24	921	35249					2	61
1513			1	2	5	356									23	1112												
1514					2	4862																						
1515					2	5010																						
1516					2	5087																						
1517					2	4768																						
1520			1	62							1	6			18	546					1	14						
1522					2	5362																						
1523			7	84													1	4										
1529															5	180					7	136						
1530											1	43			19	560					1	36						
1531			1	18											2	24												
1533					1	147					1	16			4	46					59	1572						
1534											1	14			10	526					3	132						
1536			41	1778	14	2954					1	16			64	2552	8	1202										
1537			6	200											2	362												
1540					1	74									1	2					7	336						
1541															23	276												
1542															2	12												
1545					2	4896																						

Context	Lithics	Weight (g)	Pottery	Weight (g)	CBM	Weight (g)	Stone	Weight (g)	Slag	Weight (g)	Iron	Weight (g)	Metal	Weight (g)	Bone	Weight (g)	Clay Tobacco Pipe	Weight (g)	Fire Cracked Flint	Weight (g)	Fired Clay	Weight (g)	Glass	Weight (g)	Other	Weight (g)	Shell	Weight (g)
1547			30	602											17	736	10	50										
1548			3	186							2	7			15	410					16	420						
1551					1	40									4	30					22	440						
1556			5	80	2	184	1	172							2	248							1	2				
1560			2	44	1	80									4	84												
1562			1	18			1	6																				
1564			2	116	2	330									19	913					14	822						
1565							1	610							5	484												
1567			21	467	12	2438									12	239												
1568			2	47	4	1695																						
1572			8	168																								
1573			4	132	2	1611									317	88			1	20								
1574			20	246	6	1606									39	534	1	4					1	4				
1578			11	222	1	80									64	1037	2	24					1	22				
1579			17	238	30	2957	4	7119							177	6380												
1581			5	160	1	186	2	222							230	6257					6	92						
1586							3	6625							170	5611												
1588					3	1536									14	807												
1589			4	30											32	759					1	5						
1593															23	601					1	42						
1596			1	6															1	1								
1597			6	236											40	982							1	4				

Context	Lithics	Weight (g)	Pottery	Weight (g)	CBM	Weight (g)	Stone	Weight (g)	Slag	Weight (g)	Iron	Weight (g)	Metal	Weight (g)	Bone	Weight (g)	Clay Tobacco Pipe	Weight (g)	Fire Cracked Flint	Weight (g)	Fired Clay	Weight (g)	Glass	Weight (g)	Other	Weight (g)	Shell	Weight (g)
1599			5	134	7	1516	1	584							442	14672					1	50					9	34
1606			4	222											41	898												
1609					2	5354																						
1612			1	28											19	514											1	8
1613			2	54	12	982									55	2680							1	1				
1620			2	47					1	102	1	71			108	2354					4	65						
1640															1	64												
1645																					3	29						
1646															4	128												
1648			1	10											12	501												
1649															7	238												
1651					3	569																						
1655					3	550					2	6			14	398												
1657															14	316					2	9						
1662			3	113																			3	141				
1666					1	37					2	125			104	2126					1	50						
1667															20	320												
1668			2	50	2	902	1	1502							102	2541					3	468						
1671															173	5032												
1673															27	590												
1680															24	517											1	2
1682															7	388												

Context	Lithics	Weight (g)	Pottery	Weight (g)	CBM	Weight (g)	Stone	Weight (g)	Slag	Weight (g)	Iron	Weight (g)	Metal	Weight (g)	Bone	Weight (g)	Clay Tobacco Pipe	Weight (g)	Fire Cracked Flint	Weight (g)	Fired Clay	Weight (g)	Glass	Weight (g)	Other	Weight (g)	Shell	Weight (g)
1689							1	313							105	4138					4	58						
1690															14	299												
1709																					1	5						
1718			1	1																								
1719			61	2656							2	12			19	376	98	565					2	42				
1741															3	144												
1745																			24	394								
1747															14	68					1	2						
1755			1	16																								
1758			1	16																								
2000			1	48																	4	69						
2002																					43	375						
2004					1	175																						
2013					1	4															4	24						
area/abc			3	54													1	12										
Total	12	163	1342	42582	506	156388	70	98664	26	3242	102	7898	1	4	7772	192674	250	2767	48	621	2086	89133	41	595	2	20	43	332

Appendix 3: Quantification of registered finds

RF No	Context	Material	Type	Count	Weight	Date Min	Date Max	Notes
1	1089	Copper alloy	HAIR PIN	1	3	43 AD	410 AD	Stem incomplete, globular head with reel/collar just below.
2	1079	Bone	COMB	1	43	410 AD	1066 AD	See MacGregor pg89 fig 500 http://intarch.ac.uk/journal/issue30/3/type3.cfm Type 3 asymmetric comb with handle and part of comb remaining.
3	1079	Glass	BEAD	1	1	43 AD	410 AD	small green glass bead, hexagonal shaped section
4	1175	Copper alloy	COIN	1	1			illegible
5	1342	Copper alloy	COIN	1				
6	1345	Bone	Pin beater	1	7			Weaving tool. V. polished from use.
7	1378	Copper alloy	KEY (LOCKING)	1	5	1540 AD	1901 AD	Complete
8	1378	Copper alloy	unk	1	2			?Gilded
9	1378	Copper alloy	unk	1	1			copper alloy wire, D shaped section
10	1355	Copper alloy	COIN	1	1			Illegible
11	1355	Copper alloy	unk	1	13			Furniture fitting?
12	1450	Silver	COIN	1		410 AD	1066 AD	Silver sceat, series K. reversed die obv bust L, U being ?cross before. Poss type 32a. Rev wolf curled head to tail. Metcalf p118 S803.c
13	1491	Copper alloy	HAIR PIN	1	1			Complete pin with globular head/ reel
14	1492	Bone	unk	1	1			Unworked.
15	1586	Copper alloy	PIN	1	1			globular headed pin

RF No	Context	Material	Type	Count	Weight	Date Min	Date Max	Notes
16	1719	Copper alloy	PIN	1	1			globular headed pin with textile remains
17	1719	Copper alloy	PIN	1	1			globular headed pin
18	1719	Copper alloy	PIN	1	1			globular headed pin
19	1719	Copper alloy	PIN	1	1			globular headed pin broken
20	1719	Copper alloy	unk	1	1			Fragment of mount or button?
21	1719	Pewter	VESSEL	1	11	1540 AD	1901 AD	Moulding on one side. probable vessel fragment
22	1719	Lead	unk	1	24	1540 AD	1901 AD	Ferrule?
23	1058	Bone	TOOTHBRUSH	1	11	1540 AD	1901 AD	
24	1139	Ceramic	DISC	1	65	43 AD	410 AD	Samian ware vessel base, possibly reused/ reshaped?
25	1433	Ceramic	DISC	1	10	1540 AD	1901 AD	
26	1365	Bone	Bone working waste	1	6			Sawn at both ends,
27	1047	Bone	BUTTON	1	1	1066 AD	1540 AD	Early medieval button. Bone disc with incised concentric lines and central hole
28	1058	Bone	BUTTON	1	1	1066 AD	1540 AD	Early medieval button. Bone disc with central hole.
29	1019	Horn	Bone working waste	1	1			Sheet fragment
30	1395	Stone	burnisher	1	93			multiple smoothed facets
31	1242	Stone	whetstone	1	194			incomplete whetstone found in post hole
32	1399	Copper alloy	PIN	2	1			two in fragments
33	1316	Copper alloy	COIN	1	20			V. fragmentary/ poor condition. With some soil matrix.

RF No	Context	Material	Type	Count	Weight	Date Min	Date Max	Notes
34	1058	Copper alloy	COIN			1540 AD	1901 AD	
35	1058	Copper alloy	COIN	1	10	1540 AD	1901 AD	very corroded
36	1058	Copper alloy	COIN	1	9	1540 AD	1901 AD	
37	1058	Copper alloy	COIN	1	13	1540 AD	1901 AD	
38	1058	Copper alloy	COIN	4	1	1540 AD	1901 AD	4 fragments of a coin
39	1086	Copper alloy	COIN	1	3	1540 AD	1901 AD	v corroded coin found stuck to 19th/20th C pot
40	1058	Copper alloy	unk	1	1	1540 AD	1901 AD	Disc with central perforation. Has ridge on one side.
41	1058	Composite	WATCH	1	92	1540 AD	1901 AD	Pocket or fob watch, v. poor condition. Composite of copper alloy, iron, enamel, glass.
42	1058	Copper alloy	unk	1	41	1540 AD	1901 AD	Corroded lump
43	1058	Copper alloy	TACK	1	1	1540 AD	1901 AD	
44	1058	Composite	unk	1	28	1540 AD	1901 AD	Concretion of ?objects
45	1236	Copper alloy	unk			1540 AD	1901 AD	Concretion of objects- coin and tack?
46	1395	Ceramic	LOOMWEIGHT	1	173	410 AD	1066 AD	
47	1005	Ceramic	LOOMWEIGHT	1	325	410 AD	1066 AD	
48	1222	Ceramic	LOOMWEIGHT	1	320	410 AD	1066 AD	
49	1222	Ceramic	LOOMWEIGHT	1	226	410 AD	1066 AD	
50	1222	Ceramic	LOOMWEIGHT	1	183	410 AD	1066 AD	
51	1399	Ceramic	LOOMWEIGHT	1	97	410 AD	1066 AD	

RF No	Context	Material	Type	Count	Weight	Date Min	Date Max	Notes
52	1491	Ceramic	LOOMWEIGHT	1	167	410 AD	1066 AD	
53	1142	Ceramic	LOOMWEIGHT	1	53	410 AD	1066 AD	
54	1142	Ceramic	LOOMWEIGHT	2	273	410 AD	1066 AD	
55	1389	Ceramic	LOOMWEIGHT	3	419	410 AD	1066 AD	
56	1222	Ceramic	LOOMWEIGHT	1	118	410 AD	1066 AD	
57	1376	Ceramic	LOOMWEIGHT	1	120	410 AD	1066 AD	
58	1142	Ceramic	LOOMWEIGHT	1	68	410 AD	1066 AD	
59	1453	Ceramic	LOOMWEIGHT	1	128	410 AD	1066 AD	
60	1222	Ceramic	LOOMWEIGHT	16	264	410 AD	1066 AD	
61	1453	Ceramic	LOOMWEIGHT	1	216	410 AD	1066 AD	
62	1453	Ceramic	LOOMWEIGHT	1	163	410 AD	1066 AD	
63	1453	Ceramic	LOOMWEIGHT	4	132	410 AD	1066 AD	
64	1453	Ceramic	LOOMWEIGHT	1	132	410 AD	1066 AD	
65	1395	Ceramic	LOOMWEIGHT	8	200	410 AD	1066 AD	
66	1004	Ceramic	LOOMWEIGHT	1	128	410 AD	1066 AD	
67	1222	Ceramic	LOOMWEIGHT	1	249	410 AD	1066 AD	
68	1222	Ceramic	LOOMWEIGHT	3	216	410 AD	1066 AD	
69	1378	Ceramic	LOOMWEIGHT	1	103	410 AD	1066 AD	
70	1222	Ceramic	LOOMWEIGHT	1	162	410 AD	1066 AD	
71	1378	Ceramic	LOOMWEIGHT	1	60	410 AD	1066 AD	
72	1392	Ceramic	LOOMWEIGHT	1	119	410 AD	1066 AD	
73	1392	Ceramic	LOOMWEIGHT	1	44	410 AD	1066 AD	
74	1378	Ceramic	LOOMWEIGHT	1	123	410 AD	1066 AD	
75	2013	Ceramic	LOOMWEIGHT	2	112	410 AD	1066 AD	

RF No	Context	Material	Type	Count	Weight	Date Min	Date Max	Notes
76	1453	Ceramic	LOOMWEIGHT	2	485	410 AD	1066 AD	
77	1378	Metal	unk	1	1			
78	1536	Lead	CAME	2	2	1540 AD	1901 AD	
79	1586	Antler	WASTE	1	23			
80	1353	Copper alloy	COIN	1	1			illegible
81	1086	Bone	SPOON	1	1	1540 AD	1901 AD	Missing part of bowl
82	1058	Ivory	HANDLE	1	18	1540 AD	1901 AD	Knife handle? Delaminated, stained
83	1581	Bone	WASTE	1	70			Horn core with some skull. tip has been cut off,
84	1668	Ceramic	LOOMWEIGHT	3	230	410 AD	1066 AD	
85	1222	Ceramic	LOOMWEIGHT	1	227	410 AD	1066 AD	
86	1222	Ceramic	LOOMWEIGHT	1	174	410 AD	1066 AD	
87	1222	Ceramic	LOOMWEIGHT	1	262	410 AD	1066 AD	
88	1222	Ceramic	LOOMWEIGHT	1	176	410 AD	1066 AD	
89	1222	Ceramic	LOOMWEIGHT	1	167	410 AD	1066 AD	
90	1222	Ceramic	LOOMWEIGHT	1	133	410 AD	1066 AD	
91	1417	Ceramic	LOOMWEIGHT	2	442	410 AD	1066 AD	
92	1096	Ceramic	LOOMWEIGHT	1	251	410 AD	1066 AD	
93	1384	Copper alloy	unk	1	24	1540 AD	1901 AD	Domed circular object with mortar within hollow
94	1417	Copper alloy	NEEDLE	1	1			Possible needle fragment
95	1536	Iron	KNIFE	1	37			Incomplete
96	1579	Copper alloy	TOKEN	1	1			
97	1655	Copper alloy	unk	1	1			Mineralized

RF No	Context	Material	Type	Count	Weight	Date Min	Date Max	Notes
98	1530	Ceramic	LOOMWEIGHT	1	118	410 AD	1066 AD	
99	1589	Ceramic	LOOMWEIGHT	1	146	410 AD	1066 AD	
100	1579	Ceramic	LOOMWEIGHT	1	201	410 AD	1066 AD	
101	1415	Ceramic	LOOMWEIGHT	1	75	410 AD	1066 AD	
102	1415	Ceramic	LOOMWEIGHT	1	114	800 AD	1066 AD	
103	1415	Ceramic	LOOMWEIGHT	1	90	410 AD	1066 AD	
104	1382	Ceramic	LOOMWEIGHT	2	501	410 AD	1066 AD	
105	1382	Ceramic	LOOMWEIGHT	1	100	410 AD	1066 AD	
106	1371	Ceramic	LOOMWEIGHT	1	182	410 AD	1066 AD	
107	1326	Leather	SHOE	1	8			Fragment
108	1058	Leather	SHOE	1	11			Fragment
109	1317	Leather	SHOE	1	1			Fragment
110	1317	Leather	SHOE	1	1			Fragment
111	1317	Leather	SHOE	1	6			Fragment
112	1317	Leather	SHOE	1	13			Fragment
113	1317	Leather	SHOE	1	10			Fragment
114	1317	Leather	SHOE	1	4			Fragment
115	1317	Leather	SHOE	1	1			Fragment
116	1317	Leather	SHOE	1	1			Fragment
117	1317	Leather	SHOE	1	2			Fragment
118	1317	Leather	SHOE	1	13			Fragment
119	1317	Leather	SHOE	1	6			Fragment
120	1317	Leather	SHOE	1	75			Sole
121	1317	Leather	SHOE	1	18			Sole or insole?

RF No	Context	Material	Type	Count	Weight	Date Min	Date Max	Notes
122	1317	Leather	SHOE	1	7			Fragment
123	1345	Glass	VESSEL	1	1			
124	1343	Glass	VESSEL	1	3			
125	1141	Glass	VESSEL	1	1			
126	1058	Glass	VESSEL	1	62	1540 AD	1901 AD	
127	1058	Glass	VESSEL	1	113	1540 AD	1901 AD	
128	1058	Glass	VESSEL	1	45	1540 AD	1901 AD	
129	1058	Glass	VESSEL	1	49	1540 AD	1901 AD	
130	1058	Glass	VESSEL	1	76	1540 AD	1901 AD	
131	1326	Leather, copper alloy	BOOT	1	14	1540 AD	1901 AD	Fragment- including eyelets
132	1326	Leather	SHOE	1	21	1540 AD	1901 AD	Sole
133	1326	Leather, iron	BOOT	1	40	1540 AD	1901 AD	Heel
134	1326	Leather	SHOE	1	2	1540 AD	1901 AD	Fragment
135	1326	Leather	SHOE	1	2	1540 AD	1901 AD	Fragment
136	1326	Leather	SHOE	1	2	1540 AD	1901 AD	Fragment
137	1326	Leather	SHOE	1	1	1540 AD	1901 AD	Fragment t
138	1326	Leather	SHOE	1	2	1540 AD	1901 AD	Fragment
139	1326	Leather	SHOE	1	2	1540 AD	1901 AD	Fragment
140	1326	Leather	SHOE	1	1	1540 AD	1901 AD	Fragment
141	1326	Leather	SHOE			1540 AD	1901 AD	Fragment
142	1365	Iron	FLAT IRON	1	263	1800 AD	1901 AD	Handle from a flat iron, oval section
146	1317	Iron	PINTLE	1	107	1200 AD	1700 AD	L shaped pintle

RF No	Context	Material	Type	Count	Weight	Date Min	Date Max	Notes
147	1371	Iron	HINGE	2	36			Possible strap hinge- xray shows strap with slot?
148	1397	Iron	TOOL	1	41	700 AD	1500 AD	Punch or awl? Tapering with blunt point
149	1395	Iron	MOUNT	1	31	675 AD	900 AD	Domed mount attached to strap fragment
150	1099	Iron	UNK	1	45	500 AD	900 AD	Curved rod with looped terminal, tip missing L126mm
151	1014	Iron	KNIFE	1	31	500 AD	900 AD	Mineralised. Tip missing tang broken L105mm W25mm Th13.8mm
152	1241	Iron	STAPLE	1	84	500 AD	900 AD	Arms broken
153	1241	Iron	TOOL	1	89	600 AD	900 AD	From xray appears to be awl or punch
154	1144	Iron	KNIFE	1	9	1200 AD	1500 AD	Tang and part of blade of small knife, lenticular section
155	1666	Iron	HOOK	2	68	600 AD	900 AD	In two fragments.
157	1323	Iron	FERRULE	1	29	1750 AD	1900 AD	
158	1326	Iron	HOOK	1	98	1750 AD	1900 AD	S shaped hook with circular section
EVAL 1	9/072	Copper alloy	MOUNT	1	5			EVAL RF 1 domed mount head
EVAL 3	9/085	Copper alloy		1	5			EVAL RF 3 copper alloy rod?
EVAL 4	9/085	Copper alloy		1	5			EVAL RF 4 tapering copper alloy strip, bracelet?
EVAL 5	3/038	Bone		1	14			EVAL RF 5 bone with hole drilled at one end

Appendix 4: Roman CBM fabric descriptions

Fabric code	Description
R1	Dense and evenly fired (often over-fired) slightly micaceous red-orange fabric with common fine quartz, sparse medium quartz and calcareous deposits.
R2	Evenly fired orange fabric, similar to R1 but with moderate sub-angular medium and coarse quartz. Sparse ferrous inclusions.
R2A	More quartz-rich version of R2; sparse-moderate calcareous deposits.
R3	Finely gritty texture (similar to R4) but with sparse-moderate calcareous material up to 4mm.
R4	Finely gritty texture with common fine and medium quartz, moderate fine-medium ferrous pellets; red iron-rich deposits up to 3mm.
R5	Pale orange fabric with common pale/cream marbling; sparse ferrous inclusions up to 1mm.
R6	Medium orange fabric with common-abundant sub-angular rose quartz. Very distinctive fabric.
R7	Dense and creamy [gault?] clay with fine-medium ferrous spackle and inclusions up to 3mm.
R8	Medium pink-orange coloured fabric with pale silty deposits. Sparse iron rich deposits and inclusions; no other apparent inclusions.
R9	Micaceous and fairly hard red fabric with areas of paler clay. Sparse-moderate quartz of ~0.5mm, irregularly shaped ferrous material up to 4mm, and cream silty deposits up to 3mm. (Identified as Roman due to opus signinum remnants on intact surfaces.)

Appendix 5: Post-medieval CBM fabric descriptions

MOLA code	Description
3032	Dark red, reddish purple fabric; parts of the surface are often discoloured by fine yellow speckling. Common burnt black ash and flint inclusions (up to 6mm) with varying amounts of quartz (up to 0.8mm). Clay pipe stems in some bricks.
3033	Fine fabric with scatter of quartz up to 0.8mm, calcium carbonate inclusions up to 1.5mm, and black iron oxide up to 1.5mm. Occasional flint fragments and small pebbles up to 7mm.
3034	As fabric 3032 but with common yellowish white silty bands in clay matrix.
3038	Dry-compressed brick fabric; pinkish colour with moderate-common calcareous material. 'Fletton' brick fabric.
3046	Sandy version of fabric 3033 with frequent quartz up to 1.0mm and occasional calcium carbonate.

Appendix 6: Roof tile fabric descriptions

MOLA code	Description
3216	Dense medium orange fabric with finely gritty texture; common fine and medium quartz; sparse coarse quartz and calcareous deposits.
2271 (A)	Dense, hard reddish fabric, slightly micaceous and nearly sterile. Sparse ferrous inclusions up to 4mm. Occasional sparse calcareous material.
2586 (near 2273)	Orange fabric with common unsorted angular and sub-angular quartz.
2271 (B)	Medieval version of 2271 (A) but with sparse calcareous and plate-y white inclusions. Includes glazed examples.

Appendix 7: Floor tile fabric descriptions

MOLA code	Description
2850 (near 3246)	Dense orange fabric with moderate paler silty deposits and sparse medium quartz and red iron rich deposits up to 1mm. Polychrome glaze.
?2318	Orange-y fabric with occasional cream layers; common unsorted medium and coarse quartz; sparse hard ferrous inclusions up to 2mm. Monochrome glazed floor tile fabric.
2318	Red, evenly fired fabric with common medium-coarse quartz; sparse ferrous inclusions up to 1.5mm.
2508	Hard, well-fired red fabric with moderate medium and coarse calcareous speckle; sparse medium quartz; sparse iron-rich deposits up to 1.5mm (post-medieval fabric).
2318	Reddish fabric with common unsorted quartz up to 1mm; sparse cream-coloured silty deposits up to 10mm; sparse oxides and ferrous material up to 1mm.
2196	Dense, pinkish fabric with laminated quality. Moderate-common clear and rose quartz up to 0.5mm. 17th century delftware floor tile fabric.

Appendix 8: Residue quantification (* = 1-10, ** = 11-50, *** = 51-250, **** = >250) and weights in grams

Sample Number	Context	Context / deposit type	Sample Volume liters	Sub-Sample Volume liters	Charcoal >4mm	Weight (g)	Charcoal <4mm	Weight (g)	Charcoal Identifications	Charred botanicals (ex charcoal)	Weight (g)	Mineralised botanicals	Weight (g)	Bone and Teeth	Weight (g)	Burnt bone >8mm	Weight (g)	Burnt bone 4-8mm	Weight (g)	Burnt Bone 2-4mm	Weight (g)	Fishbone and microfauna	Weight (g)	Marine Molluscs	Weight (g)	Land Snail Shells	Weight (g)	Other (e.g., pot, cbm) (presence/ weight)
1	1004	P	40	40	***	22	**	<2	*Quercus*(7) [V:3, PDS:2] *Prunus* sp.(2) [V:1, PDS:1] Indet(1) [V:1]	**	2			***	146	**	25	**	13	**	4	*	<2	*	71	*	<2	FCF (*/78g) Pot (*/4g) Slag (*/6g) Daub (****/8398g) Coal (*/<2)Flint (*/ 21g) Mag.Mat (***/36g)
17	1044	P	35	33	****	269	****	434	*Prunus spinosa*-type(6) [PDS:2] *Prunus* sp.(1) [D:1] *Fraxinus excelsior*(2) [PDS:1, V:1] *Quercus(*1) [V:1]					*	<1			*	<1			**	<1					FCF (****/403g) Fired Clay (**/29g) Mag.Mat >2mm (****/4g) Mag.Mat <2mm (****/35g)
18	1879	P	40	40	**	4	**	2		**	<2			***	456	**	10	**	8	**	<2	**	2	***	416			Mag.Mat (***/10g) Burnt Stone (*/44g) CBM (*/<2g) Stone? (*/<2g) Slag? (*/2g)Fired Clay (**/84g) Pot (*/16g)

Sample Number	Context	Context / deposit type	Sample Volume liters	Sub-Sample Volume liters	Charcoal >4mm	Weight (g)	Charcoal <4mm	Weight (g)	Charcoal Identifications	Charred botanicals (ex charcoal)	Weight (g)	Mineralised botanicals	Weight (g)	Bone and Teeth	Weight (g)	Burnt bone >8mm	Weight (g)	Burnt bone 4-8mm	Weight (g)	Burnt Bone 2-4mm	Weight (g)	Fishbone and microfauna	Weight (g)	Marine Molluscs	Weight (g)	Land Snail Shells	Weight (g)	Other (e.g., pot, cbm) (presence/ weight)
20	1096	CW	40	40	**	8	****	16	*Quercus*(5) [PDS:1, V:1] Maloideae(1) [PDS:1] *Betula* sp.(1) *Alnus* sp.(1) *Acer campestre*(1) Indet.(1) [V:1]	*	<2					***	1350	**	10	***	12	**	4	***	772			FCF (*/50g) Fired Clay (*/48g) Pot (*/6g) Fe (*/2g) Flint (**/4g) Mag.Mat (***/8g) Glass (*/<2g)
28	1140	P	40	32	***	8	****	8	*Quercus*(6) [PDS:1, V:2] *Castanea/ Quercus*(3) [V:1] *Prunus* sp.(1) [V:1]	*	<2			***	1713	**	57	**	14	**	<2	**	6	***	2085	*	4	FCF (*/38g) F.Clay (**/630g) Stone (*/2g) Glass (*/22g) Coal(*<2g) Metal (*/18g) Mag.Mat (***/10g) Cu (*/2g)
29	1035	OL			***	8	****	4	*Quercus*(6) [V:4, PDS:1] *Acer campestre*(1) [PDS: 1] Indet.(3) [V:1, KW:1, D:1]					****	1394			**	14	*	<1	**	2	**	153			Pot (*/15g) F.Clay (*/9g) Coal (**/<1g) Mag.Mat >2mm (*/<1g) Mag.Mat <2mm (***/<1g)

Sample Number	Context	Context / deposit type	Sample Volume liters	Sub-Sample Volume liters	Charcoal >4mm	Weight (g)	Charcoal <4mm	Weight (g)	Charcoal Identifications	Charred botanicals (ex charcoal)	Weight (g)	Mineralised botanicals	Weight (g)	Bone and Teeth	Weight (g)	Burnt bone >8mm	Weight (g)	Burnt bone 4-8mm	Weight (g)	Burnt Bone 2-4mm	Weight (g)	Fishbone and microfauna	Weight (g)	Marine Molluscs	Weight (g)	Land Snail Shells	Weight (g)	Other (e.g., pot, cbm) (presence/ weight)
30	1035	OL			**	2	**	2						***	105	*	4	*	<1	*	<1							FCF (**/41g) Pot (*/37g) CBM (**/137g) F.Clay (*/10g) Glass (*/<1g) Coal (*/<1g) Mag.Mat >2mm (**/2g) Mag.Mat <2mm (****/8g)
33	1141	LD	40	40	**	2	**	2						***	498	*	6	**	8	**	2			*	4	*	<2	Pot (**/20g) CBM (**/76g) F.Clay (**/94g) Flint (*/2g) Coal (**/<2g) FCF (**/150g) Mag.Mat (***/6g) Glass (*/2g) Ind.Mat (*/2g)
34	1141	LD	40		***	9	**	1	*Quercus*(4) [PDS:2, RC:2] Maloideae(3) [V:1] *Acer campestre*(1) *Populus/ Salix*(1) [PDS:1] Indet.(1)[PDS:1]			*	<1	****	1006			**	<1	*	<1	**	<1	**	97			F.Clay (**/39g) FCF (*/6g) CBM (**/16g) Mag.Mat <2mm (****/2g) Pot (*/37g) Coal (**/<1g) Glass (*/<1g) Mag.Mat >2mm (**/2g)

Sample Number	Context	Context / deposit type	Sample Volume liters	Sub-Sample Volume liters	Charcoal >4mm	Weight (g)	Charcoal <4mm	Weight (g)	Charcoal Identifications	Charred botanicals (ex charcoal)	Weight (g)	Mineralised botanicals	Weight (g)	Bone and Teeth	Weight (g)	Burnt bone >8mm	Weight (g)	Burnt bone 4-8mm	Weight (g)	Burnt Bone 2-4mm	Weight (g)	Fishbone and microfauna	Weight (g)	Marine Molluscs	Weight (g)	Land Snail Shells	Weight (g)	Other (e.g., pot, cbm) (presence/ weight)
37	1156	DU			****	9	****	8	*Quercus*(3) [PDS:1, RC:1] *Castanea/ Quercus*(1)[V:1] *Corylus avellana*(1) *Acer campestre*(1) cf. *Acer* (1) [V:1] cf. *Fraxinus* (1) [V:1, PDS:1] Indet. (2) [KW:1, V:1]					****	2423	**	17	**	7	*	<1	*	<1	****	1010			Pot (*/14g) Coal(*/<1g) CBM (**/41g) Mag.Mat <2 (****/5g) Mag.Mat <2mm (***/<1g)
38	1144	DU			***	8	***	<1	*Quercus*(2) [PDS:1] Maloideae(1) *Prunus* sp.(1) Indet.(6) [PDS:5, D:1]					****	1116	*	3	**	3	*	<1	*	<1	***	669			F.Clay (****/1276g) CBM (*/83g) Pot (*/65g) Mag.Mat >2mm (**/<1g) Mag.Mat <2mm (***/<1g)
39	1153	DU			**	3	****	<1						****	1116	*	3	**	3	*	<1	*	<1	***	249			CBM (*/43g) F.Clay (*/36g) FCF (**/34g) Pot? (*/1g) Coal(*/<1g) Mag.Mat >2mm (***/3g) Mag.Mat <2mm (***/10g)

Sample Number	Context	Context / deposit type	Sample Volume liters	Sub-Sample Volume liters	Charcoal >4mm	Weight (g)	Charcoal <4mm	Weight (g)	Charcoal Identifications	Charred botanicals (ex charcoal)	Weight (g)	Mineralised botanicals	Weight (g)	Bone and Teeth	Weight (g)	Burnt bone >8mm	Weight (g)	Burnt bone 4-8mm	Weight (g)	Burnt Bone 2-4mm	Weight (g)	Fishbone and microfauna	Weight (g)	Marine Molluscs	Weight (g)	Land Snail Shells	Weight (g)	Other (e.g., pot, cbm) (presence/ weight)
41	1144	DU			***	6	****	8	*Quercus* 4) [PDS:1] cf. *Quercus*(1) *Acer campestre* (1) *Prunus* sp. (1) Maloideae (1) Indet.(2) [V:2]					****	1906	*	1	*	1	*	<1	*	<1	***	669			FCF (*/183g) Pot (*/7g) Mag.Mat >2mm (***/4g) Mag.Mat <2mm (****/6g) F.Clay (****/4042g)
42	1175	D	40	40	**	10g	**	<2g	*Acer campestre* (3) *Quercus*(1) [V:1*] Populus/ Salix*(1) *Fraxinus excelsior(*1) [BW: 1] Indet.(4) [PDS:3, D:1]					****	2606	***	84	***	18	**	<2	**	<2	***	1470			FCF (*/18g) F.Clay (**/742g) Glass (*/<2g) Metal (*/202g) Slag (*/10g)
48	1174	D			***	12	****	8	*Quercus*(4) [V:2, PDS:2, RC:1] *Prunus*(1) *Alnus*(1) *Rosa*(1) *Sorbus*-type(1) *Populus/ Salix*(1)Indet.(1) [V:1, PDS:1]					****	920			**	12	*	<1	*	<1	***	388			F.Clay (***/48g) Pot (*/19g) Mag.Mat <2mm (****/1g) Mag.Mat >2mm (*/<1g) Coal (*/<1g)
51	1174	DU			*	1	***	1						***	125			*	6	*	<1	*	<1	*	26			F.Clay (*/53g) Flint (*/2g) Mag.Mat >2mm (*/<1g) Mag.Mat <2mm (***/<1g)

Sample Number	Context	Context / deposit type	Sample Volume liters	Sub-Sample Volume liters	Charcoal >4mm	Weight (g)	Charcoal <4mm	Weight (g)	Charcoal Identifications	Charred botanicals (ex charcoal)	Weight (g)	Mineralised botanicals	Weight (g)	Bone and Teeth	Weight (g)	Burnt bone >8mm	Weight (g)	Burnt bone 4-8mm	Weight (g)	Burnt Bone 2-4mm	Weight (g)	Fishbone and microfauna	Weight (g)	Marine Molluscs	Weight (g)	Land Snail Shells	Weight (g)	Other (e.g., pot, cbm) (presence/ weight)
54	1198	D	40	40	**	<2g	**	<2g						**	316	*	4	**	4	**	<2	*	<2	**	84			FCF (*/8g) F.Clay (**/82g) Mag.Mat (**/<2g)
60	1220	PH			*	<1	**	<1						**	23			*	<1					*	13			FCF (*/48g) Mag.Mat <2mm (***/<1g) F.Clay (*/7g) Mag.Mat >2mm (*/<1g)
64	1222	P	40	32	***	36	****	2	*Fraxinus excelsior*(3) [RW:2] *Quercus*(3) [PDS:2, RW:1] Maloideae(2) [RW:1, PDS:1] *Populus/ Salix*(1) [PDS:1, RW:1] Indet.(1) [V:1, PDS:1]			****	6	***	29	**	20	**	8	**	2	***	2	*	<2			Wood (**/16g) Insects (*/<2g) Slag (*/12g) FCF (*/6g) CBM (*/2g) F.Clay (**/16g) Mag.Mat (**/2g) Nat.Deposit (**/178g)
66	1204		40	40	*	<1	***	1						**	54			*	<1	*	<1	*	4					FCF (*/7g)
67	1223	P			**	<2	**	<2						*	6			*	<2	*	<2							FCF * 10g/ Industrial * 2g/ Mag. Mat ** <2g
68	1231	OL			**	5	***	1	*Quercus*(8) [V:6, PDS:1] *Acer campestre*(1)					****	901			**	24	**	2	**	<1	***	241			CBM (*/33g) F.Clay (*/14g)

Sample Number	Context	Context / deposit type	Sample Volume liters	Sub-Sample Volume liters	Charcoal >4mm	Weight (g)	Charcoal <4mm	Weight (g)	Charcoal Identifications	Charred botanicals (ex charcoal)	Weight (g)	Mineralised botanicals	Weight (g)	Bone and Teeth	Weight (g)	Burnt bone >8mm	Weight (g)	Burnt bone 4-8mm	Weight (g)	Burnt Bone 2-4mm	Weight (g)	Fishbone and microfauna	Weight (g)	Marine Molluscs	Weight (g)	Land Snail Shells	Weight (g)	Other (e.g., pot, cbm) (presence/ weight)
									[V:1] Indet.(1) [V:1]																			
69	1232	P			**	3	***	2		*	1			**	47			*	<1			*	<1					Mag.Mat (**/<1g)
70	1237	P	40	40	***	2	***	4		*	<2			***	244	**	14	**	8	**	<2	**	<2	*	18	*	<2	FCF (**/22g) Pot (*/2g) F.Clay (***/56 g) Mag.Mat (**/4g)
75	1241	P	20	20	**	4	**	<2						**	66	**	66	99	24	**	2	*	<2	**	56			Stone (*/2g) FCF (**/26g) F.Clay(**/1082g) Slag (*/<2g)Fe (*/<2g Mag.Mat (***/10g)
86	1269	P	30	24	****	241																						
89	1265	SH			**	5	***	1						**	77			**	4	**	<1	*	<1					FCF (**/25g) F.Clay (**/32g) Pot (*/2g) Mag.Mat <2mm (***/<1g) Coal (*/<1g)
91	1343	P	40	40	**	<2	**	4		*	<2			***	984	**	40	**	12	**	4	**	5	**	144			F.Clay (*/61g) FCF (**/86g) Slag (**/54g) CBM (**/312g) Mag.Mat (***/2g)

Sample Number	Context	Context / deposit type	Sample Volume liters	Sub-Sample Volume liters	Charcoal >4mm	Weight (g)	Charcoal <4mm	Weight (g)	Charcoal Identifications	Charred botanicals (ex charcoal)	Weight (g)	Mineralised botanicals	Weight (g)	Bone and Teeth	Weight (g)	Burnt bone >8mm	Weight (g)	Burnt bone 4-8mm	Weight (g)	Burnt Bone 2-4mm	Weight (g)	Fishbone and microfauna	Weight (g)	Marine Molluscs	Weight (g)	Land Snail Shells	Weight (g)	Other (e.g., pot, cbm) (presence/ weight)
92	1355	OL	40		**	2	**	<2		*	<2			**	101			*	2	*	<2	*	<2	*	4			CBM (*/69g) FCF (*/19g) Coal (*/<2g) Pot (*/11g) Glass (*/<2g) F.Clay (*/2g) Mag.Mat (***/3g)
94	1356	LD	40	40	***	16	***	8	*Quercus*(6) [PDS:2, D:1] cf. *Quercus*(2) [D:1, V:1] *Populus/ Salix*(1) *Fraxinus excelsior*(1)					****	1602	**	58	**	22	**	2	**	6	***	1498			FCF (*/42g) CBM (*/40g) Slag (*/2g) Stone (*/18g) F.Clay (**/150g) Fe (*/10g) Mag.Mat (***/10g)
95	1360	P	40	40	**	2	***	6						***	270	**	8	**	4	*	<2	*	<2	**	71			FCF (**/40g) F.Clay (**/25g) Mag Mat (***/2g) Stone (*/2121g)
96	1368	P	40	30	***	3	**	<2	*Prunus* sp.(3) [PDS:1, V:1] cf. *Prunus*(1) [V:1, D:1] *Quercus*(2) [V:2, PDS:1] Maloideae(1) *Acer campestre*(1) *Corylus*					***	490	*	7	*	2	*	<2	*	<2	**	122			FCF (*/101g) F.Clay (*/8g) Mag.Mat (**/2g) Insects (*/<2g)

Sample Number	Context	Context / deposit type	Sample Volume liters	Sub-Sample Volume liters	Charcoal >4mm	Weight (g)	Charcoal <4mm	Weight (g)	Charcoal Identifications	Charred botanicals (ex charcoal)	Weight (g)	Mineralised botanicals	Weight (g)	Bone and Teeth	Weight (g)	Burnt bone >8mm	Weight (g)	Burnt bone 4-8mm	Weight (g)	Burnt Bone 2-4mm	Weight (g)	Fishbone and microfauna	Weight (g)	Marine Molluscs	Weight (g)	Land Snail Shells	Weight (g)	Other (e.g., pot, cbm) (presence/ weight)
									avellana(1) [RW:1] Indet.(1) [V:1]																			
97	1369	P	30	22	**	2	**	<2						**	208	*	4	*	<2	*	<2			*	16			FCF (*/26g) Pot (*/10g) Flint (*/<2g) Mineral (*/<2g) Mag.Mat (***/2g)
102	1373	P	40	40	**	<2	***	2		*	<2g			***	423	**	68	**	20	**	2	**	3	*	50			FCF (**/167g) Glass (*/<2g) Pot (*/31g) Flint (*/<2g) Nat? (*/2g) CBM (*/3g) F.Clay (***/592g) Mag.Mat (***/8g)
107	1376	P	40	40	***	12	***	<2	*Quercus*(6) [V:3] *Acer campestre*(2) [RW:1] *Prunus* sp.(1) *Corylus avellana*(1)	*	<2			***	432	**	38	**	17	***	5	***	3	*	75			FCF (*/77g) Slag (**/20g) Glass (*/<2g) Pot (*/5g) Lead (*/45g) Stone (*/37g) F.Clay (***/338g) Mag.Mat (***/7g)
108	1382	Pit	40	20	***	45	****	8	*Quercus*(3) [V:2, PDS:1] *Prunus* sp.(1) [V:1] Maloideae(1) *Corylus*					***	491	**	50	**	23	***	8	**	17	**	158			FCF (*/11g) G.Lava (*/<2g) Slag (*/<2g) F.Clay (*/19g)

Sample Number	Context	Context / deposit type	Sample Volume liters	Sub-Sample Volume liters	Charcoal >4mm	Weight (g)	Charcoal <4mm	Weight (g)	Charcoal Identifications	Charred botanicals (ex charcoal)	Weight (g)	Mineralised botanicals	Weight (g)	Bone and Teeth	Weight (g)	Burnt bone >8mm	Weight (g)	Burnt bone 4-8mm	Weight (g)	Burnt Bone 2-4mm	Weight (g)	Fishbone and microfauna	Weight (g)	Marine Molluscs	Weight (g)	Land Snail Shells	Weight (g)	Other (e.g., pot, cbm) (presence/ weight)
									avellana(1) Indet.(4) [D:4, V:1, PDS:1]																			
111	1378	OL	40	40	**	2	**	<2		*	<2			***	300	*	4	**	6	**	<2	**	2	**	48			FCF (**/50g) F.Clay (*/8g) Pot (*/6g) CBM (*/4g) G.Lava (*/4g) Glass (*/<2g) Mag.Mat (***/6g)
112	1361	OL			**	7	**	2	*Quercus*(4) [V:2] *Castanea/ Quercus*(1) *Acer campestre*(2) *Corylus avellana*(1) [RW:1] Carpinus sp.(1) Maloideae(1)					****	785			**	7	**	1	**	<1	***	194			FCF (****/149g) F.Clay (*/12g) CBM (*/41g) Pot (*/25g) Coal (**/1g) Mag.Mat >2mm (****/8g) Mag.Mat <2mm (****/10g)

Sample Number	Context	Context / deposit type	Sample Volume liters	Sub-Sample Volume liters	Charcoal >4mm	Weight (g)	Charcoal <4mm	Weight (g)	Charcoal Identifications	Charred botanicals (ex charcoal)	Weight (g)	Mineralised botanicals	Weight (g)	Bone and Teeth	Weight (g)	Burnt bone >8mm	Weight (g)	Burnt bone 4-8mm	Weight (g)	Burnt Bone 2-4mm	Weight (g)	Fishbone and microfauna	Weight (g)	Marine Molluscs	Weight (g)	Land Snail Shells	Weight (g)	Other (e.g., pot, cbm) (presence/ weight)
113	1385	P	40	32	****	334	***	24	*Quercus*(5) [V:1] cf.*Quercus*(1) [V:1, D:1, PDS:1] *Corylus avellana*(2) *Acer campestre* (1) [RW:1] *Alnus* sp.(1)	*	<2			***	472	**	34	***	52	***	16	**	<2			*	4	Stone (*/210g) F.Clay (*/50g) Wood? (**/4g) FCF (**/8g) Mag.Mat (**/<2g)
117	1389	P	10	10	**	10	***	61g		*	<2g			***	150	*	2	**	2	**	2	**	2	**	30			FCF (**/208g) Stone (*/18g) Flint (*/132g) CBM (*/58g) Coal (*/<2g) Fe (*/<2g) Fired Clay (*/6g) Glass (*/<2g) Slag (*/<2g) Mag.Mat (***/4g)
119	1392	P	40	40	***	30	****	16	*Quercus* (5) [PDS:1, D:1, V:1] *Prunus* sp.(2) [D:1] Maloideae(1) *Acer campestre*(1)	*	<2			***	732	**	410	**	18	**	<2	**	2	**	528			FCF (**/90g) Mortar? (*/2g) Fe (*/4g) Pot (*/26g) F.Clay (**/22g) Glass (*/<2g) Wood? (*/4g) Mag.Mat (***/4g)

Sample Number	Context	Context / deposit type	Sample Volume liters	Sub-Sample Volume liters	Charcoal >4mm	Weight (g)	Charcoal <4mm	Weight (g)	Charcoal Identifications	Charred botanicals (ex charcoal)	Weight (g)	Mineralised botanicals	Weight (g)	Bone and Teeth	Weight (g)	Burnt bone >8mm	Weight (g)	Burnt bone 4-8mm	Weight (g)	Burnt Bone 2-4mm	Weight (g)	Fishbone and microfauna	Weight (g)	Marine Molluscs	Weight (g)	Land Snail Shells	Weight (g)	Other (e.g., pot, cbm) (presence/ weight)
									Fraxinus excelsior(1)																			
120	1394	OL	40		***	8	****	20	Maloideae(3) *Prunus* sp.(2) *Corylus avellana* (2) [PDS:1] *Quercus*(1) cf. *Ribes*(1) Indet.(1) [PDS:1]					****	1361			**	5	*	<1	*	<1	***	957			FCF (**/85g) F.Clay (*/13g) Glass (*/<1g) Mag.Mat >2mm (**/<1g) Mag.Mat <2mm (****/3g)
122	1378	OL	40	40	**	2	**	2		*	<2			***	296	*	8	**	4	**	<2	**	<2	**	6			FCF (**/70g) F.Clay (*/38g) Pot (*/36g) Glass (*/<2g) Flint (**/7g) Slag (*/11g) Slate (*/<2g) Mag.Mat (***/2g)
123	1395	P	40	40	***	5	***	2	*Quercus*(6) [V:2, PDS:2, RC:1, D:1] Maloideae (1) [V:1] *Prunus* sp.(1) *Corylus avellana(*1) Indet.(1) [V:1, D:1]					***	112	**	30	**	24	**	2	***	3	**	485			Stone (*/6g) CBM (**/17g) FCF (**/47g) F.Clay (**/78g) Flint (*/<2g) Fe (*/207g) Mineral (*/<2g) Mag.Mat (***/7g)

Sample Number	Context	Context / deposit type	Sample Volume liters	Sub-Sample Volume liters	Charcoal >4mm	Weight (g)	Charcoal <4mm	Weight (g)	Charcoal Identifications	Charred botanicals (ex charcoal)	Weight (g)	Mineralised botanicals	Weight (g)	Bone and Teeth	Weight (g)	Burnt bone >8mm	Weight (g)	Burnt bone 4-8mm	Weight (g)	Burnt Bone 2-4mm	Weight (g)	Fishbone and microfauna	Weight (g)	Marine Molluscs	Weight (g)	Land Snail Shells	Weight (g)	Other (e.g., pot, cbm) (presence/ weight)
137	1430	G	40	40	***	8	**	<2	*Quercus* (8) [V:1] *Acer campestre*(2)					***	2096	**	78	**	22	**	<2	**	4	**	38			Pot (*/72g) Slag (*/4g) Flint (*/2g) FCF (*/2g) Glass (*/<2g) CBM (*/2g) Mag.Mat (***/4g)
139	1394	OL	40	40	**	<1	**	<1						**	50			*	1	*	1	*	<1	*	<1			Glass (*/<1g) CBM? (*/2g) F.Clay? (*/3g) Pot (*/<1g)
140	1399	D	40	40	***	8	****	8	*Quercus*(8) [V:1] *Acer campestre*(1) Maloideae(1) [RW:1]	*	<2			****	2908	**	24	**	16	**	<2	***	4	**	68			FCF (**/102g) F.Stone (*/198g) F.Clay (**/142g) Pot (*/92g) CBM (*/16g) Coal (*/<2g) Flint (**/2g) Metal (*/<2g) Glass (*/<2g) Mag.Mat (***/4g)
144	1438	PH	10		*	<1	**	2						*	51			*	<1	*	<1							
146	1450	D	30	30	**	2	**	<2						**	260	**	4	**	2	*	<2	*	<2	**	2			FCF ** 54g/ Flint * <2g/ CBM * 2g/ Stone * <2g/ Mag Mat ** <2g
151	1481	P	40		***	6	***	<1	*Quercus*(3) [V:1] *Castanea/ Quercus*(2) *Fraxinus*					***	310			**	21			*	<1	**	1210			F.Clay (*/76g)

Sample Number	Context	Context / deposit type	Sample Volume liters	Sub-Sample Volume liters	Charcoal >4mm	Weight (g)	Charcoal <4mm	Weight (g)	Charcoal Identifications	Charred botanicals (ex charcoal)	Weight (g)	Mineralised botanicals	Weight (g)	Bone and Teeth	Weight (g)	Burnt bone >8mm	Weight (g)	Burnt bone 4-8mm	Weight (g)	Burnt Bone 2-4mm	Weight (g)	Fishbone and microfauna	Weight (g)	Marine Molluscs	Weight (g)	Land Snail Shells	Weight (g)	Other (e.g., pot, cbm) (presence/ weight)
									excelsior(2) [PDS:1] Maloideae(1) *Populus/ Salix(*1) *Alnus* sp.(1)																			
155	1491	P	40	40	**	6	***	8	*Quercus*(2) cf. *Quercus*(1) [V:1, D:1] *Ulmus* (1) [V:1] *Prunus* sp.(1) [V:1] *Alnus* sp.(2) cf. *Alnus* sp.(1) *Fraxinus excelsior(*1) Indet.(1) [D:1]	*	<2			****	1774	**	56	**	18	**	2	**	4	**	108			FCF (**/134g) F.Clay (**/140g) Flint (*/2g) Pot (*/4g) Glass (*/<2g) CBM (*/6g) Fe (*/18g) Nat.Deposit? (*/2g) Mag.Mat (***/6g)
162	1499	DU			*	<1	**	<1						***	430	*	11	*	2	*	<1	*	<1	**	10			F.Clay (*/25g) CBM (*/15g) FCF (*/62g) Pot (*/3g) Mag.Mat >2mm (**/<1g) Mag.Mat <2mm (***/<1g)
167	1530	P	40		***	85	**	1	*Quercus* (8) [PDS:4, V:4] *Corylus avellana* (2) [PDS:1]					****	721			***	95					***	406			F.Clay (**/1g) Worked Bone (*/<1g) Glass (*/2g)

Sample Number	Context	Context / deposit type	Sample Volume liters	Sub-Sample Volume liters	Charcoal >4mm	Weight (g)	Charcoal <4mm	Weight (g)	Charcoal Identifications	Charred botanicals (ex charcoal)	Weight (g)	Mineralised botanicals	Weight (g)	Bone and Teeth	Weight (g)	Burnt bone >8mm	Weight (g)	Burnt bone 4-8mm	Weight (g)	Burnt Bone 2-4mm	Weight (g)	Fishbone and microfauna	Weight (g)	Marine Molluscs	Weight (g)	Land Snail Shells	Weight (g)	Other (e.g., pot, cbm) (presence/ weight)
173	1542	P			***	6	****	4	*Quercus*(3) [RW:2, RC:1, V:1] *Sorbus*-type(2) *Acer campestre*(2) *Alnus* sp.(1) Indet.(2) [PDS:2]					**	48			*	<1			***	10	*	6			Mortar? (**/5g) F.Clay (*/12g) FCF (*/1g) Mag.Mat <2mm (*/<1g)
174	1542	P			***	6	****	8	*Quercus*(7) [RC:2, V:2, PDS:1] *Acer campestre*(3) [PDS:1]					**	44			*	<1	*	<1	***	2					Mag.Mat >2mm (*/<1g) Mag.Mat <2mm (***/<1g)
179	1562	P	40	32	*	<1	**	<1						**	27							*	<1					Coal (*/<1g)
183	1581	DU	40		**	1	**	<1						****	727			*	1			*	<1	****	443			F.Clay (*/14g) Pot? (*/<1g)
190	1599	OL			***	5	***	12	*Quercus*(9) [V:5, RC:1] Maloideae(1)					****	1108									**	88			CBM (*/93g) F.Clay (*/25g) Mag.Mat >2mm (***/<1g) Mag.Mat <2mm (****/2g)
193	1611	DU	40		**	3	***	4						**	30			*	3			*	<1	*	<1			Pot (*/<1g) F.Clay (*/5g)
194	1612	DU	40		**	2	****	4						**	217			*	1	*	<1	*	<1	**	82			FCF (*/16g) CBM (*/1g) Mag.Mat >2mm

Sample Number	Context	Context / deposit type	Sample Volume liters	Sub-Sample Volume liters	Charcoal >4mm	Weight (g)	Charcoal <4mm	Weight (g)	Charcoal Identifications	Charred botanicals (ex charcoal)	Weight (g)	Mineralised botanicals	Weight (g)	Bone and Teeth	Weight (g)	Burnt bone >8mm	Weight (g)	Burnt bone 4-8mm	Weight (g)	Burnt Bone 2-4mm	Weight (g)	Fishbone and microfauna	Weight (g)	Marine Molluscs	Weight (g)	Land Snail Shells	Weight (g)	Other (e.g., pot, cbm) (presence/ weight)
																												(*/<1g) Mag.Mat <2mm (****/<1g)
195	1613	OL	40		***	8	***	2	*Corylus avellana*(3) *Prunus avium*-type(2) *Acer campestre*(2) *Fraxinus excelsior*(1) Maloideae(1) [RW:1] *Quercus* (1)					***	868	*	4	**	3	*	<2	**	<2	**	54			Flint (*/22g) Pot (*/5g) CBM (*/123g) Mag.Mat (**/3g)
198	1641	OL	20	20	**	3	**	<2						**	188	*	3	*	2	*	<2	*	<2	*	14			CBM (*/<2g) F.Clay (*/19g) Mag.Mat (**/<2g) FCF (*/2g)
204	1666	P	40	40	**	4	**	<2	*Quercus*(5) [PDS:2, V:2, RC:1] *Castanea/ Quercus*(1) *Acer campestre* (1) *Betula* sp.(1) *Corylus avellana*(1) Maloideae(1)					****	3654	***	920	***	240	***	48	**	2	**	1696			Fe (*/<2g) F.Clay (*/19g) Mag.Mat (**/<2g) FCF (*/2g)

Sample Number	Context	Context / deposit type	Sample Volume liters	Sub-Sample Volume liters	Charcoal >4mm	Weight (g)	Charcoal <4mm	Weight (g)	Charcoal Identifications	Charred botanicals (ex charcoal)	Weight (g)	Mineralised botanicals	Weight (g)	Bone and Teeth	Weight (g)	Burnt bone >8mm	Weight (g)	Burnt bone 4-8mm	Weight (g)	Burnt Bone 2-4mm	Weight (g)	Fishbone and microfauna	Weight (g)	Marine Molluscs	Weight (g)	Land Snail Shells	Weight (g)	Other (e.g., pot, cbm) (presence/ weight)
223	1657	N	40	40	**	<2	**	<2						**	76			*	<2	*	<2			*	4			FCF (***/38g) F.Clay (*/22g) Mag.Mat (***/2g)
224	1717	N	30	30	**	<2	**	<2						**	69			*	<2	*	<2			*	3			Nat? (**/32g) FCF (**/81g) Mag.Mat (***/2g)
229	1755	SH			*	<1	*	<1						*	3			*	<1					*	<1			Mag Mat <2mm (***/<1g)
233	1745	N			*	<1				*	<1							*	<1g									Coal? (*/<1g) FCF (*/21g)
235	1288	JF	2	2	*	1								*	<1					*	<1							Ag frag (*/<1g) FCF (*/<1g) Burnt Slate (**/5g) Coal (***/19g) Slag (**/1g) Ind.Mat (****/14g) Mag.Mat. (**/<1g) Flint (*/<1g) Mortar (*/1g)

Context/ Deposit Type: P = pit, D = ditch, DU = dump, PH = posthole, OL = occupation layer, LD = levelling deposit, CW = cellar wall SH = stakehole, G = gully, N = natural, JF = jug fill.

Charcoal Key: V = vitrified, RC = radial cracks, PDS = post-depositional sediment, D = distorted RW = roundwood, BW = branch wood.

Appendix 9: Flot quantification (* = 1-10, ** = 11-50, *** = 51-250, **** = >250) and preservation (+ = poor, ++ = moderate, +++ = good)

Sample Number	Context	Weight g	Flot volume ml	Volume scanned	Uncharred %	Sediment %	Seeds uncharred	Charcoal >4mm	Charcoal <4mm	Charcoal <2mm	Crop seeds charred	Identifications	Preservation	Weed seeds charred	Identifications	Preservation	Other botanicals charred	Identification	Preservation	Min. botanicals	Identification	Preservation
1	1004	2	<10	<10	20	30		**	**	****	**	*Hordeum* sp., *Triticum* cf *aestivum sl, Triticum* sp.	+ +	*	*Poa/Phleum* sp. (1), *Carex* sp. (1)	+	*	*Corylus avellana* (uncharred)	+			
16	1043	41	140	140	20	20		**	***	****				*	*Avena* sp.	++	*	Poaceae stem fragments, culm nodes	+ +			
17	1044	10	40	40	40	10	** *Ranunculus* sp., *Carex* sp., *Chenopodium* sp., Polygonaceae		**	****	*	*Hordeum* sp. (2)	+ +							*	cf *Prunus* sp. (1)	+
18	1879	6	30	30	30	20	* *Rubus* cf *idaeus, Sambucus* sp.	*	**	****	**	*Triticum* cf *aestivum sl, Triticum* sp.	+ +/ + + +	*	*Chenopodium* sp.	++						
20	1096	10	35	35	30	20		*	**	****	*	Hordeum sp., hulled, Triticum/Hordeum sp.	+	*	cf *Vicia/Lathyrus* sp. (1)	+	*	*Corylus avellana*	+ +			
29	1035	2,5	30	30	60	20	* Solanaceae, *Sambucus* sp.		*	**	*	*Hordeum* sp., hulled (2), cf *Triticum* sp. (2)	+ +/ +									

Sample Number	Context	Weight g	Flot volume ml	Volume scanned	Uncharred %	Sediment %	Seeds uncharred	Charcoal >4mm	Charcoal <4mm	Charcoal <2mm	Crop seeds charred	Identifications	Preservation	Weed seeds charred	Identifications	Preservation	Other botanicals charred	Identification	Preservation	Min. botanicals	Identification	Preservation
30	1035	2,5	<10	<10	60	10	*** *Sambucus* sp, *Rubus* sp., cf *Ficus carica*		**	***												
33	1141	4	10	10	60	30			*	**												
34	1141	4	25	25	60	20				***				*	*Polygonum* cf *aviculare*							
37	1156	9	18	18	70	10				***	*	*Triticum/Hordeum* sp. (1)	+									
38	1144	2,5	10	10	60	20	*** *Sambucus nigra*	*	*	**	*	hulled Hordeum sp. (3),cf *Triticum* sp. (1)	+/+ +									
39	1153	4,5	20	20	70	20	* *Sambucus* sp.			**	*	*Hordeum* sp. (1), cf *Triticum* sp. (1)	+									
41	1144	3	<10	<10	30	40		*	*	***	*	*Triticum* cf *aestivum sl* (4), *Hordeum* sp, hulled (3)	+ +									

Sample Number	Context	Weight g	Flot volume ml	Volume scanned	Uncharred %	Sediment %	Seeds uncharred	Charcoal >4mm	Charcoal <4mm	Charcoal <2mm	Crop seeds charred	Identifications	Preservation	Weed seeds charred	Identifications	Preservation	Other botanicals charred	Identification	Preservation	Min. botanicals	Identification	Preservation
42	1175	5	10	10	60	10	* *Sambucus* sp.			****	*	Hordeum sp., hulled (1)								*	cf *Malus/Pyrus* sp.	+ +
48	1174	4	10	100	20	30	*Rubus* (*) *Carex* (*) *Sambucus* (*)	*	**	***	*	Cereal indet.	(+)									
51	1174	0,5	10	10	40	20				***												
54	1198	10	15	15	40	20		*	**	****	*	Hordeum sp. (2)	+ +	*	cf *Euphrasia/Odontites* sp. (1)							
60	1220	<0.25	<10	<10	30	40				**												
64	1222	7	18	18			*** *Rubus* sp., *Sambucus* sp., *Polygonum/Rumex* sp.													**	cf *Ficus carica* (1), cf *Malus/Pyrus* sp. (2), *Triticum* sp., Rosaceae, *Secale cereale*, *Triticum* sp.	+ + +
66	1204	1,5	10	10	60	30	* *Rubus* sp.		*	**												
68	1231	1,5	<10	<10	40	30		*	**	***												

Sample Number	Context	Weight g	Flot volume ml	Volume scanned	Uncharred %	Sediment %	Seeds uncharred	Charcoal >4mm	Charcoal <4mm	Charcoal <2mm	Crop seeds charred	Identifications	Preservation	Weed seeds charred	Identifications	Preservation	Other botanicals charred	Identification	Preservation	Min. botanicals	Identification	Preservation
70	1237	5	15	15	20	10		**	***	****	*	Triticum sp. (3), Cerealia (1)	+ +				*	Corylus avellana (uncharred)	+ +			
75	1241	1,5	<10	<10	30	10	* *Galium* sp.	*	**	****	*	Cerealia (3), *Triticum* cf *aestivum* sl (1)	+				*	indet pod	+			
89	1265	0,5	10	10	20	40				**	*	cf *Triticum* sp. (1)	+									
91	1343	13	50	50	50	20	** *Rubus* sp., Solanaceae	*	**	****	*	cf *Hordeum* sp. (2), *Triticum/Hordeum* sp. (1), *Triticum* sp. (1)	+	*	indeterminate seeds (3), *Polygonum aviculare* (1)	++						
92	1355	8	15	15	30	20				***	*	*Triticum* sp. (2)	+									
94	1356	10	20	20	60	10		*	*	**	*	Triticum/Hordeum sp.(1), Hordeum sp. (1)										
95	1360	4	20	20	10	20		*	***	****												
96	1368	14	50	50	30	30	** Sambucus sp., Rubus sp.	*	**	****	**	*Triticum* cf *aestivum sl, Triticum* sp.	+ +									
97	1369	4	18	18	60	10	* *Rubus* sp.			***	*	*Triticum* cf *aestivum sl*. (2), *Hordeum* sp., hulled (2)	+ +									

Sample Number	Context	Weight g	Flot volume ml	Volume scanned	Uncharred %	Sediment %	Seeds uncharred	Charcoal >4mm	Charcoal <4mm	Charcoal <2mm	Crop seeds charred	Identifications	Preservation	Weed seeds charred	Identifications	Preservation	Other botanicals charred	Identification	Preservation	Min. botanicals	Identification	Preservation
102	1373	8	25	25	30	10	* *Rubus* sp., Solanaceae	**	***	****				*	*Poa/Plheum* sp.	++						
107	1376	17	45	45	30	10		**	***	****	**	Cerealia , *Hordeum* sp. , cf Triticum sp., *Triticum* cf *aestivum sl.*	+/+ +	**	*Trifolium/Medicago* sp., cf Asteraceae indet, *Chenopodium* sp., cf *Brassica/Sinapis* sp.	++						
108	1382	3	15	15	30	10	*** *Sambucus nigra*			****	**	*Triticum* sp., *Hordeum* sp.	+ +/+ + +	*	Large Poaceae (1)	+						
108	1382	6	30	30	30	10	*** *Sambucus nigra*	*	**	****	**	*Hordeum vulgare*, twisted, *Hordeum* sp., Triticum sp.										

Sample Number	Context	Weight g	Flot volume ml	Volume scanned	Uncharred %	Sediment %	Seeds uncharred	Charcoal >4mm	Charcoal <4mm	Charcoal <2mm	Crop seeds charred	Identifications	Preservation	Weed seeds charred	Identifications	Preservation	Other botanicals charred	Identification	Preservation	Min. botanicals	Identification	Preservation
111	1378	14	25	25	30	30	* *Rubus* sp.			****	*	*Hordeum* sp. (2)	+									
112	1361	13	45	45	60	20	** *Vitis vinifera, Rubus* sp.			***	*	*Hordeum* sp. (1), *Triticum* sp. (1), *Triticum/Secale* sp.(1),	+ +	*	Rubus sp., Poaceae	+						
113	1385																					
117	1389	1	10	10	30	40		*	*	****												
119	1392	22	70	70	30	20	** *Sambucus* sp.	*	**	****	**	*Triticum* cf *aestivum sl, Hordeum sp., Triticum sp., Triticum/Secale sp.*	+ +/ +	*	Poaceae large	+						

Sample Number	Context	Weight g	Flot volume ml	Volume scanned	Uncharred %	Sediment %	Seeds uncharred	Charcoal >4mm	Charcoal <4mm	Charcoal <2mm	Crop seeds charred	Identifications	Preservation	Weed seeds charred	Identifications	Preservation	Other botanicals charred	Identification	Preservation	Min. botanicals	Identification	Preservation
120	1394	10	35	35	30	20	* Polygonaceae	*	**	****	*	*Triticum* cf *aestivum* sl (1), *Triticum* sp. (1)	+ +							*	*Vitis vinifera* (1)	+ + +
122	1378	3,5	<10	<10	30	20	* Polygonaceae, Solanaceae	*	**	****	*	Hordeum sp. (3)		*	*Sambucus* sp. (1), cf Poaceae large (1)	+	*	Corylus avellana	+	*	*Vitis vinifera(* 2)	+ + +
123	1395	14	50	50	30	10	* Polygonaceae	*	**	****	**	hulled *Hordeum* sp., *Triticum* sp., *Triticum* cf *aestivum* sl.	+ +/ +	*	*Fallopia convolvulus, Polygonum/Rumex* sp.							

Sample Number	Context	Weight g	Flot volume ml	Volume scanned	Uncharred %	Sediment %	Seeds uncharred	Charcoal >4mm	Charcoal <4mm	Charcoal <2mm	Crop seeds charred	Identifications	Preservation	Weed seeds charred	Identifications	Preservation	Other botanicals charred	Identification	Preservation	Min. botanicals	Identification	Preservation
139	1394	14	60	60	30	20		*	**	****	*	*Triticum* cf *aestivum* sl.(3), *Vicia/Lathyrus/Pisum* sp. (2), *Hordeum* sp., hulled (1)	+ +/+	*	Avena sp. (1)	+						
140	1399	32	90	90	10	10		**	***	****	**	*Triticum* cf *aestivum sl* , *Triticum* sp., *Hordeum* sp., hulled, *Triticum/Secale* sp.,	+ + +/+ +	**	Galium sp., *Chenopodium* sp.	++	*	Poaceae culm node	+ +			
144	1438	1	10	10	20	40		*	**	***												

Sample Number	Context	Weight g	Flot volume ml	Volume scanned	Uncharred %	Sediment %	Seeds uncharred	Charcoal >4mm	Charcoal <4mm	Charcoal <2mm	Crop seeds charred	Identifications	Preservation	Weed seeds charred	Identifications	Preservation	Other botanicals charred	Identification	Preservation	Min. botanicals	Identification	Preservation
146	1450	1	20	20	20	20	* *Rubus* sp.	*	**	***	*	*Triticum* cf *aestivum sl.* (2)	+									
151	1481	6	30	30	20	10		**	**	****	*	*Hordeum* sp., hulled, cf *Hordeum* sp., cf *Triticum* sp., Cerealia	+/ + +	*	*Chenopodium* sp.	++						
155	1491	10	35	35	30	20		**	***	****	*	*Triticum/Hordeum* sp. (1), Triticum sp. (4)	+ +/ +	*	*Polygonum* sp.	+	*	Corylus avellana	+			
162	1499	13	45	45	20	30	* Polygonaceae	**	**	****	*	Hordeum sp., hulled (1)								*	*Vitis vinifera* (1)	+ + +

Sample Number	Context	Weight g	Flot volume ml	Volume scanned	Uncharred %	Sediment %	Seeds uncharred	Charcoal >4mm	Charcoal <4mm	Charcoal <2mm	Crop seeds charred	Identifications	Preservation	Weed seeds charred	Identifications	Preservation	Other botanicals charred	Identification	Preservation	Min. botanicals	Identification	Preservation
167	1530	9	20	20	20	20	** *Rubus* sp., *Sambucus* sp.			****	*	*Hordeum* sp. (1)	+ +							*	*Prunus* sp., cf *Malus/Pyrus* sp.	+ +/ +
173	1542	10	50	50	70	20	*** *Prunus* sp., *Rubus* sp., *Sambucus* sp.			*												

Sample Number	Context	Weight g	Flot volume ml	Volume scanned	Uncharred %	Sediment %	Seeds uncharred	Charcoal >4mm	Charcoal <4mm	Charcoal <2mm	Crop seeds charred	Identifications	Preservation	Weed seeds charred	Identifications	Preservation	Other botanicals charred	Identification	Preservation	Min. botanicals	Identification	Preservation
174	1542	5	40	40	70	20	*** *Rubus* sp., *Sambucus* sp., cf *Thlaspi arvense*			**										*	*Prunus* sp., *Prunus* cf *spinosa*, Rosaceae	+ + +
179	1562	1,5	20	20	70	20	*** *Rubus* sp., *Sambucus* sp.			*												
183	1581	2	10	10	40	30				**	*	*Triticum* cf *aestivum* sl	+ +									
190	1599	13	20	20	30	20		**	***	****	*	Cerealia (embryo end)	+	*	*Vicia/Lathyrus/Pisum* sp. (1)	+						
193	1611	2	20	20	60	30				*	*	*Triticum/Secale* sp. (1), *Hordeum* sp., hulled (1)	+									

Sample Number	Context	Weight g	Flot volume ml	Volume scanned	Uncharred %	Sediment %	Seeds uncharred	Charcoal >4mm	Charcoal <4mm	Charcoal <2mm	Crop seeds charred	Identifications	Preservation	Weed seeds charred	Identifications	Preservation	Other botanicals charred	Identification	Preservation	Min. botanicals	Identification	Preservation
194	1612	2	20	20	40	30		*	**	***												
195	1613	2	10	10	60	20				**	*	Triticum/Hordeum sp. (2), Cerealia (1)	+									
198	1641	6	20	20	30	30		*	**	****	*	*Triticum/Hordeum* sp. (1)	+									
204	1666	2,5	<10	<10	30	20		*	**	****	*	cf *Hordeum* sp. (1), *Triticum* cf *aestivum* sl (4), *Hordeum/Triticum* sp. (1)	+									
223	1657	4	35	35	60	30				***	*	*Hordeum* sp., hulled (1)										
224	1717	1,5	20	20	10	30		*	**	***												
229	1755	0,25	<10	<10	60	20				*												
233	1745	1	<10	<10	60	30				*												
235	1288	13	35	35	20	30		*	**	**												

Appendix 10: Waterlogged samples data with quantification (* = 1-10, ** = 11-50, *** = 51-250, **** = >250)

Sample Number	Context	Sieves used	Sub-sample scanned	Macrobotanical Remains	Idenitifcation and preservation notes	Wood	Notes on Preservation of Wood
23	1098	4, 2,1mm, 500 & 250 micron	30 ml	**	*Rubus* sp., Polygonaceae, *Chenopodium* sp.	**	large wood fragments, fairly hard to the touch. Some twigs also recorded
25	1124	4, 2,1mm, 500 & 250 micron	30 ml		*Prunus spinosa, Crataegus monogyna, Rubus* sp., Polygonaceae, *Chenopodium* sp.	*	small amount of wood, no round wood noted
28	1140	flot	30 ml	*	*Hordeum* sp., hulled, caryopsis, charred (1), *Corylus avellana* (charred)	*	large amount of charred wood, no uncharred fragments noted
64	1222	4, 2,1mm, 500 & 250 micron	30 ml	**	*Linum* sp., *Rubus* sp., cf *Ranunculus* sp.	*	large wood fragments, fairly hard to the touch. Some twigs also recorded
67	1223	flot	30 ml			*	very small charcoal fragments in low amounts
69	1232	flot	30 ml	*	*Urtica dioica, Rubus* sp., cf *Secale cereale* (mineralised), cf *Malus/Pyrus* sp. (mineralised)	**	small amount of charred and waterlogged wood.
86	1269	flot	30 ml			**	mostly charcoal, some small uncharred wood present
97	1369	4, 2,1mm, 500 & 250 micron	30 ml	**	*Rubus* sp*., Ranunculus acris/repens/bulbosus, Urtica dioica, Sambucus* sp.		

Sample Number	Context	Sieves used	Sub-sample scanned	Macrobotanical Remains	Identitfcation and preservation notes	Wood	Notes on Preservation of Wood
110	1381	4, 2,1mm, 500 & 250 micron	30 ml	*	*Rubus* sp.	*	small wood fragments, no round wood noted
113	1385	flot	30 ml	*	Polygonaceae, Sambucus sp., *Corylus avellana* (charred and uncharred)		
114	1386	4, 2,1mm, 500 & 250 micron	30 ml	*	*Polygonum aviculare, Carex* sp., *Chenopodium* sp.	**	both charred and waterlogged wood present.Not too spongy. No round wood present
137	1430	flot	30 ml	*	*Triticum* sp. Caryposis, charred (1)	**	charcoal
179	1562	4, 2,1mm, 500 & 250 micron	30 ml				

Appendix 11: Insects and other inverterbrate taxa noted during scanning

Identification has not been pressed to species level in many cases, and the list should be regarded as provisional. Ecological codes shown in square brackets for Coleoptera (beetles) and Hemiptera (bugs) are as follows: d – damp ground/waterside, l - wood/timber, oa – outdoor taxa, ob – probable outdoor taxa, p – plant-associated taxa, rd – dry decomposers, rf – foul decomposers, rt – eurytopic decomposers, sf – facultative synanthropes, st – typical synanthropes, u – uncoded, w – aquatics. Some taxa are uncoded pending closer identification. Nomenclature for Coleoptera follows Duff (2012)

ANNELIDA: **OLIGOCHAETA** (earthworms)
- Oligochaeta sp. egg capsules

INSECTA:
DERMAPTERA (earwigs)
- Dermaptera sp.

HEMIPTERA (bugs)
- Heteroptera
  - ?Coreidae sp. [oa-p]
- Homoptera
  - Auchenorhyncha spp. [oa-p]

Hemiptera sp. nymph

DIPTERA (flies)
- *Melophagus ovinus* (Linnaeus)
- Diptera spp. (puparia)

COLEOPTERA (beetles)
- Carabidae (ground beetles)
  - *Clivina* sp. [oa]
  - *Nebria brevicollis* (Fabricius) [oa]
  - *Trechus obtusus* or *quadristratus* [oa]
  - *Bembidion* sp. [oa]
  - *Pterostichus* sp(p). [ob]
  - *Amara* spp. [oa]
  - Carabidae spp. [ob]
- Helophoridae (grooved water scavengers)
  - *Helophorus* spp. [oa-w]
- Hydrophilidae (water scavengers and allies)
  - *Hydrobius fuscipes* (Linnaeus) [oa-w]
  - *Cercyon nigriceps* (Marsham) [rf-st]
  - *Cercyon unipunctatus* (Linnaeus) [rf-st]
  - *Cercyon analis* (Paykull) [rt-sf]
  - *Cercyon* spp. [u]
  - *Megasternum concinnum* [rt]
- Histeridae (pill beetles)
  - *Acritus nigricornis* (Hoffman) [rt-st]
- Ptiliidae (featherwing beetles)
  - *Ptenidium* sp. [rt]
- Leiodidae
  - *Catops* or *Choleva* sp.
- Staphylinidae (rove beetles)
  - *Lesteva* sp(p). [oa-d]
  - Omaliinae spp. [u]
  - Aleochariinae spp. [u]
  - *Coprophilus striatulus* (Fabricius) [rt-st]
  - *Anotylus nitidulus* (Gravenhorst) [rt-d]
  - *Anotylus rugosus* (Fabricius) [rt]
  - *Anotylus sculpturatus* group [rt]
  - *Oxytelus sculptus* Gravenhorst [rt-st]
  - *Platystethus cornutus* group [oa-d]
  - *Platystethus arenarius Stenus* spp. [u]
  - *Carpelimus* sp(p). [u]
  - Stenus sp. [u]
  - *Lathrobium* sp. [u]
  - *Neobisnius* ?*villosus* [rt]
  - *Gyrohypnus* fracticornis sp. [rt]
  - Xantholinini sp(p). [u]
  - Staphylininae spp. [u]

Trogidae (hide beetles)
Trox scaber (Linnaeus) rt-sf]
Scarabaeidae (dung beetles and chafers)
Aphodius spp. [ob-rf]
Onthophagus sp. [oa-rf]
Ptinidae (spider and woodworm beetles)
Ptinus ?*fur* (Linnaeus) [rd-sf]
Anobium punctatum (De Geer) [l]
Ptilinus pectinicornis (Linnaeus) [l-sf]
Nitidulidae (sap or pollen beetles)
Omosita sp. [rt-sf]
Monotomidae
Rhizophagus sp. [rt-sf]
Monotoma sp(p). [rt-sf]
Cryptophagidae (silken fungus beetles)
Cryptophagus sp. [rd-sf]
Atomaria spp. [rd]
Corylophidae (minute fungus beetles)
Orthoperus sp. [rt]
Corylophidae sp. [rt]
Latridiidae (minute brown scavenger beetles)
Latridius minutus group [rd-st]
Cortcaria sp. [rt-sf]
Corticariinae sp. [rt]
Anthicidae
Omonodus sp(p). [rt]
Chrysomelidae (seed and leaf beetles)
Bruchus sp(p). [u]
Chaetocnema concinna or *picipes* [oa-p]
Chrysomelidae sp. [oa-p]
Apionidae (apionid weevils)
Apionidae sp. [oa-p]
Curculionidae (curculionid weevils)
Ceutorhynchinae sp. [oa-p]
?*Hylesinus varius* (Fabricius) [l]
Curculionidae spp. [oa-p]
Coleoptera spp. and spp. Indet. [u]

Insecta spp. larval fragments

ARACHNIDA
Acarina spp. (mites)
Aranae sp. (spider)

		SAMPLE													
		[1344]						[1377]						(1394)	
								(1385)	(1386)		(1387)				
		0.00-0.01	0.04-0.05	0.08-0.09	0.12-0.13	0.16-0.17	0.22-0.23	0.14-0.15	0.07-0.08	0.10-0.11	0.14-0.15	0.17-0.18	0.20-0.21	0.37-0.38	0.47-0.48
Trees	*Alnus*	4	2					1	3	2	6	4	3		
	Betula							1	2			2			
	Fagus										8		3		
	Fraxinus														
	Juglans														
	Pinus	1	1		1						5	7	2	4	5
	Quercus							4	1	9	7	2	2		
	Tilia						1								
	Ulmus											1			
Shrubs	*Corylus-Myrica* type	2	3	1				8	8	13	18	10	12		
	Ericeceae undif.	7	3	2							1		2		
	Hedera helix									1	4	2	2		
	Ilex											1			
	Salix		1										1		
Herbs	Poaceae	41	52	7				131	81	143	52	64	53		
	Cyperaceae	6	16	3				1		6	9		5		
	Cereal type	2	9					2	1	2	2	3			
	Apiaceae (Umbelliferae) undif.	9	15	2				5	2	6	5	6	3		
	Artemisia											1			
	Compositae	4	11	1				24	4		13	9	18		
	Lactuceae	9	5					5	10		16	12	15	5	6
	Brassiccaceae							1	1	1	2		2		
	Caryophyllaceae		2								1	2	5	3	
	Centaurea cyanus	3	3	1					1				1		
	Centaurea nigra	2	7	1					1		1	2	2		
	Chenopodiaceae	8	6					7	2	4	8	5	14		
	Rubiaceae undiff.		2								2		1		
	Helianthemum														
	Helleborous														
	Plantago sp.		2							3	2		2		
	Polygonum														
	Ranunculus														
	Rumex									2			2		
	Sanguisorba														
	Succisa										2				
	Thalictrum									3					
	Urtica	2						3	2	5	3	3	2		
Spores	*Diphasiastrum*														
	Osmunda														1
	Polypodium							1		1			1	1	
	Pteridium	1	6	1				2		3			3		1
	Pteropsida (monolete) undif.		2	2				3		6		2	3		1
	Sphagnum												2	1	
Aquatics	*Myriophyllum*														
	Nuphar														
	Nymphaea														
	Potemogeton	1													
	Sparganium														
	Typha angustifolia														
	Typha latifolia														
Pre-Quaternary pollen & Spores					xx	xxx	xxx								
Dinoflagellate systs					xxx	xxx	xxx						x	x	
microcharcoal		xx	xx	xx				xx	xx	xx	xx	xx	xx	xxx	xxx
Trichuris eggs		xx		xxx	xx				xx		xx	xx	xx		

Appendix 12: Pollen results

Appendix 13: HER Summary

Site code	HUG16					
Project code	160162					
Planning reference	14/12261/FULL					
Site address	Center Buildings, Houghton Street					
District/Borough	City of Westminster					
NGR (12 figures)	530796 181121					
Geology	Brickearth and Hackney Gravel					
Fieldwork type	WB	Excav				
Date of fieldwork	14th March-9th November 2016					
Sponsor/client	LSE					
Project manager	Andy Leonard					
Project supervisor	Sarah Ritchie					
Period summary						
	Roman	Anglo-Saxon	Medieval	Post-Medieval		
Project summary **(100 word max)**	*The earliest activity on the site is represented by residual Roman pottery and building material robbed from the Roman town and reused in later periods.* *The most significant aspect of the archaeology recorded is evidence of mid-late Saxon activity on the site. The Saxon activity can all be attributed to the 8th to mid 9th century, with a peak refuse disposal period of c.750-850 AD, consisting of evidence of a possible enclosure system, and evidence of quarrying; refuse pits and dumping; possible agricultural activities; and evidence of fence lines. The various activities identified appear to be grouped into different areas or "functional zones" within the site.* *Some small-scale evidence of medieval activity was present on the site, suggesting that the area was open land at this time, with some activity in the form of gullys and a possible external work surface.* *Early post-medieval expansion of London saw the area developed with tenement houses, Clare Market and various Inns of Chancery. The archaeological evidence suggests that the growth of the area was rapid and redeveloped frequently, as evidenced by the multiple phasing of the brickwork and significant number of robber cuts. This evolution of the tenement houses within the area continued until 1844 when the St Clement Danes school was built over much of the site, subsequently being replaced with the modern London School of Economics building by 1932.*					

Finds summary

Find type	Material	Period	Quantity
Pot	Ceramic	Saxon, med, post-med	
Brick	Ceramic	Roman, med, post-med	
Fired Clay	Ceramic	Saxon	
Bone	Bone	Saxon, med, post-med	
Tile	Ceramic	Med, post-med	
CTP	Ceramic	Post-med	
Shell	Shell	Saxon, med	
Loomweight	Ceramic	Saxon	
Hair Pin	Cu	Saxon	
Comb	Bone	Saxon	
Coin	Cu	Post-med	
Coin	Silver	Saxon	
Pin Beater	Bone	Saxon	
Key	Cu	Post-med	
Bead	Glass	Roman	
Pin	Cu	Post-med	
Vessel	Pewter	Post-med	
Toothbrush	Bone	Post-med	
Button	Bone	Med-post-med	
Burnisher	Stone		
Whetstone	Stone	Saxon	
Watch	Composite	Post-med	
Spoon	Bone	Post-med	
Token	Cu	med	
Shoe	Leather	Post-med?	
Vessel	Glass	Saxon, post-med	
Pintle	Iron	Med, post-med	
Tool	Iron	Med, post-med	
Hook	Iron	Saxon	
Knife	Iron	Med, post-med	

Appendix 14: OASIS Summary

OASIS ID: archaeol6-273370

Project details	
Project name	Centre Buildings Redevelopment, London School of Economics and Political Science, Houghton Street, City of Westminster,
Project dates	Start: 14-03-2016 End: 09-11-2016
Previous/future work	Yes / No
Any associated project reference codes	HUG16 - Sitecode
Type of project	Recording project
Site status	None
Current Land use	Other 2 - In use as a building
Monument type	WALL Post Medieval
Monument type	GULLY Medieval
Monument type	PIT Post Medieval
Monument type	LAYER Post Medieval
Monument type	LAYER Medieval
Monument type	PIT Medieval
Monument type	PIT Early Medieval
Monument type	DITCH Early Medieval
Monument type	POSTHOLE Early Medieval
Monument type	STAKEHOLE Early Medieval
Monument type	LAYER Early Medieval
Significant Finds	POT Early Medieval
Significant Finds	POT Medieval
Significant Finds	POT Post Medieval
Significant Finds	POT Roman
Significant Finds	CBM Roman
Significant Finds	CBM Early Medieval
Significant Finds	CBM Post Medieval
Significant Finds	FIRED CLAY Early Medieval
Significant Finds	ANIMAL BONE Early Medieval
Significant Finds	LOOMWEIGHT Early Medieval
Investigation type	"Full excavation","Watching Brief"
Prompt	Direction from Local Planning Authority - Direction 4
Project location	
Country	England

Site location	GREATER LONDON CITY OF WESTMINSTER CITY OF WESTMINSTER Centre Buildings Redevelopment, London School of Economics and Political Science, Houghton Street
Postcode	WC2A 2AE
Study area	0.25 Hectares
Site coordinates	TQ 30976 81121 51.513314620957 -0.112275054239 51 30 47 N 000 06 44 W Point
Height OD / Depth	Min: 13.98m Max: 15.22m

Project creators

Name of Organisation	Archaeology South-East
Project brief originator	PCA
Project design originator	Archaeology South-East
Project director/manager	Andy Leonard
Project supervisor	Sarah Ritchie
Type of sponsor/funding body	Client
Name of sponsor/funding body	LSE

Project archives

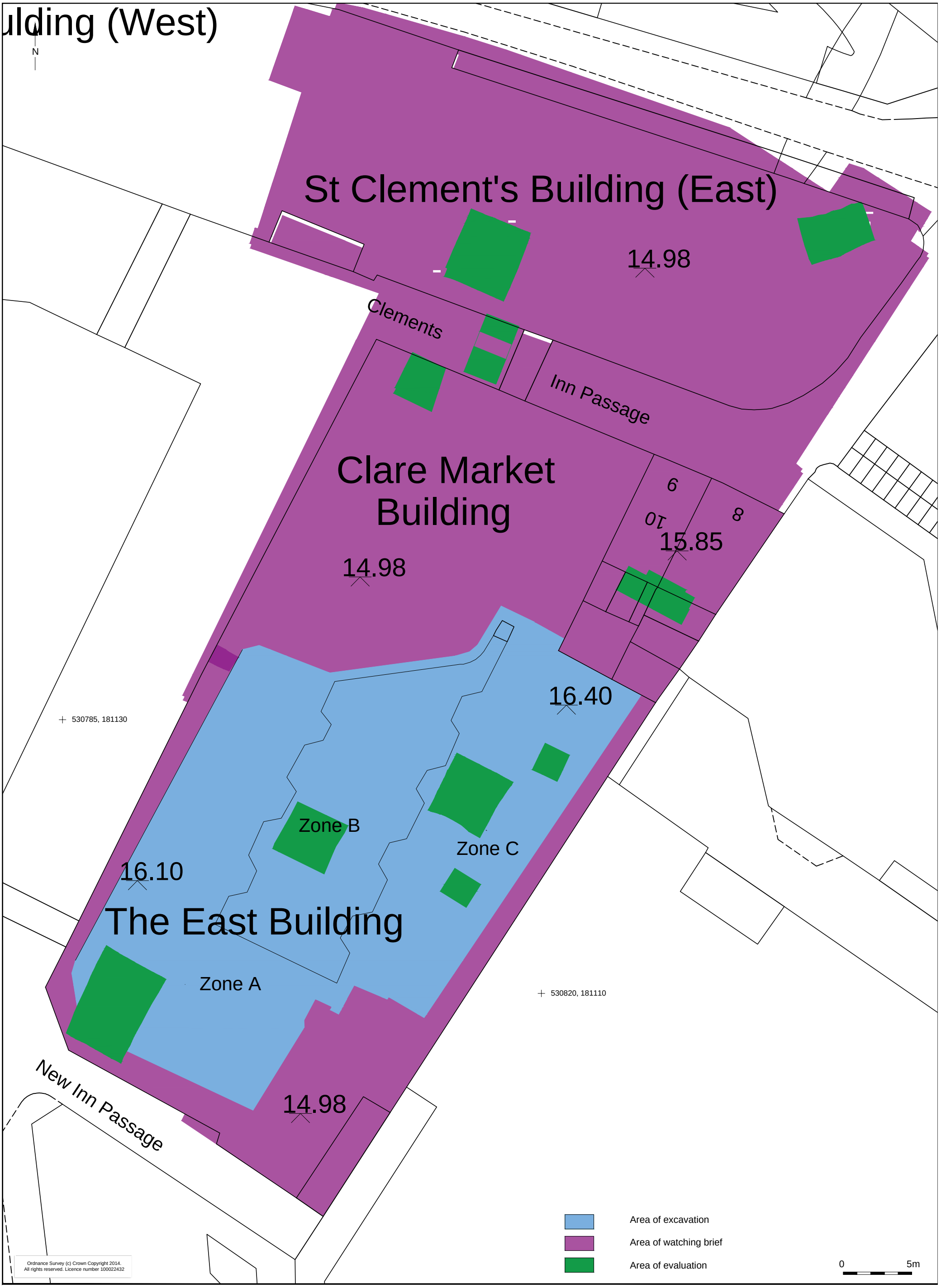
Physical Archive recipient	LAARC
Physical Archive ID	HUG16
Digital Archive recipient	LAARC
Digital Archive ID	HUG16
Paper Archive recipient	LAARC
Paper Archive ID	HUG16

Project bibliography 1

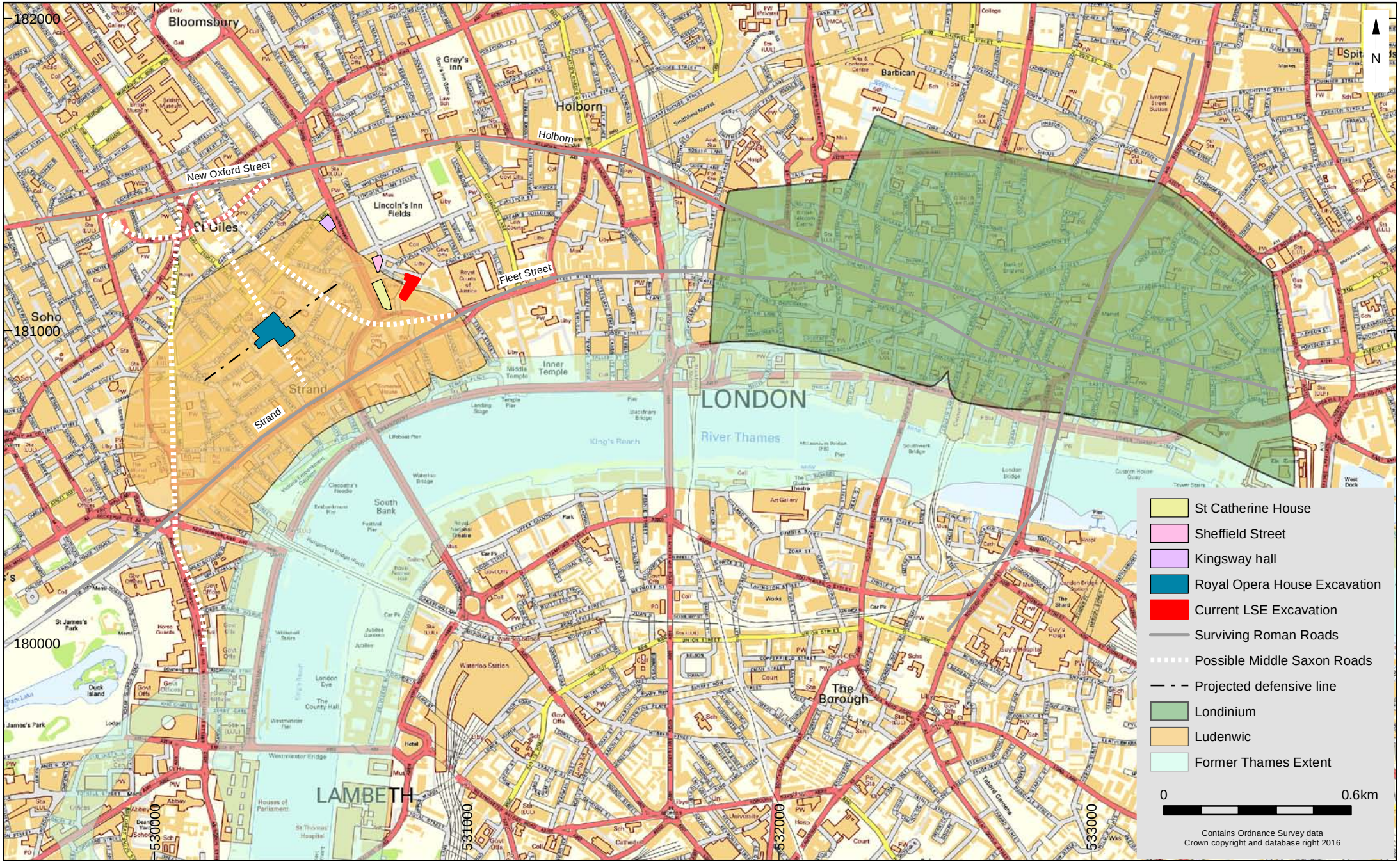
Publication type	Grey literature (unpublished document/manuscript)
Title	ARCHAEOLOGICAL EXCAVATIONS AT Centre Buildings Redevelopment, London School of Economics and Political Science, Houghton Street, City of Westminster, London, WC2A 2AE.
Author(s)/Editor(s)	Ritchie, S.
Date	2017
Issuer or publisher	Archaeology South-East
Place of issue or publication	London

Entered by	Sarah Ritchie (s.ritchie@ucl.ac.uk)
Entered on	16 January 2017

© Archaeology South-East		Centre Buildings Redevelopment, LSE, Houghton Street, City of Westminster	Fig. 1
Project Ref: 160162	01 - 2017	Site location	
Report No: 2017001	Drawn by: NG		



© **Archaeology South-East**		Centre Buildings Redevelopment, LSE, Houghton Street, City of Westminster	Fig. 2
Project Ref: 160162	01 - 2017	Areas of excavation, watching brief, and evaluation, showing existing levels	
Report Ref: 2017001	Drawn by: NG		



© Archaeology South-East		Centre Buildings Redevelopment, LSE, Houghton Street, City of Westminster	Fig. 3
Project Ref: 160162	01 - 2017	The site within its wider context	
Report Ref: 2017001	Drawn by: NG		

© **Archaeology South-East**		Centre Buildings Redevelopment, LSE, Houghton Street, City of Westminster	Fig. 4
Project Ref: 160162	01 - 2017	Period 1 : All Features	
Report Ref: 2017001	Drawn by: NG		

N

530785, 181130

Stakeholes Area B, looking north

Stakeholes Area B, facing east

Stakeholes Area B, looking west

530820, 181110

Postholes

Stakeholes

0 5m

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Project Ref: 160162	01 - 2017	Period 1 : Stakeholes and postholes
Report Ref: 2017001	Drawn by: NG	Fig. 5

N

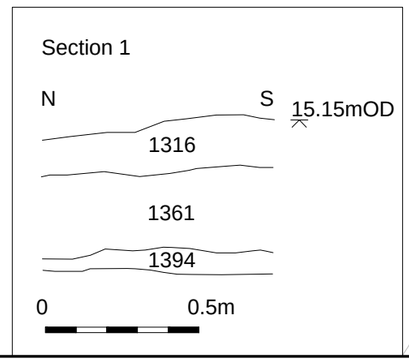
530785, 181130

Layers 1236=1204=1174=1156, looking south

Ditch 1190 cutting silting layer 1174, looking south

530820, 181110

Section 1



0 5m

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Project Ref: 160162	01 - 2017	Period 1 : Silting layers	
Report Ref: 2017001	Drawn by: NG		

N

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1490

1496

1080

EVAL TRENCH

Area C

LOE

AP 3 eval trench

Well 1490, looking west

Well 1496, looking east

well 1080, looking west

Well 1490, working shot

530820, 181110

0 5m

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Project Ref: 160162	01 - 2017	Period 1 : Wells	
Report Ref: 2017001	Drawn by: NG		

N

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1100
1143
1187
2014
1267
1240
1256
1233
1135
1543
1665
1621
2011
2002
1029
1084
2005
1006
1087
2001
1403
1486
1489

concrete
wall
TF
EVAL TRENCH
Area C
LOE
AP 3 eval trench

Pit 1087, with in situ burning, looking south

Storage pit, looking west

Working shot

Refuse pit, looking south

530820, 181110

Storage pit
In situ burning
Refuse and latrine

0 5m

Project Ref: 160162	01 - 2017
Report Ref: 2017001	Drawn by: NG

Centre Buildings Redevelopment, LSE, Houghton Street, City of Westminster

Period 1 : Refuse, storage and pits with in situ burning

Fig. 8

N

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Quarry pit 1344, looking north east

Section 2

Working shot, Area C

Quarry Pit 1374, looking north

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Quarry pits 1372, 1344, 1346, looking south

Section 3

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Project Ref: 160162	01 - 2017	Period 1 : Quarry Pits	
Report Ref: 2017001	Drawn by: NG		

N

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Section 4

N S 15.05mOD

1548
1683
1549

0 0.5m

1414
1401
1412
1416
1759
1549
1644
1431
1429
1405

Section 4

EVAL TRENCH

Area C

Ditch 1416, looking east

Intercuting ditches 1410 - 1412 - 1414, looking east

Ditch GP 7, looking north

Ditch GP 4, looking north

Enclosure ditches GP5, GP6 and GP7, looking south

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GP 4
GP 5
GP 6
GP 7
Other ditches

0 5m

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Project Ref: 160162	01 - 2017	Period 1 : Ditches	
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N

Projected line of the boundary ditch

530785, 181130

530820, 181110

1414
1401
1416
1412
1759
1549
1644
1431
1429
1405

GP 4
GP 5
GP 6
GP 7
Other ditches

0 5m

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Project Ref: 160162	01 - 2017	Plan showing the excavated ditches and the projected line of boundary ditch	
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N

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Layer 1581, looking north east

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0 5m

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Project Ref: 160162	01 - 2017	Period 1 : Dump layers and midden spreads	
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N

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Gullies 1366 and 1380, cut into layer 1378, looking south

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Features

Layers

0 5m

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Project Ref: 160162	01 - 2017	Period 2 : Medieval features 1200-1375	
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Pond 1308, cut by masonry (1016 & 1250), looking north

Pond 1308, looking east

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Project Ref: 160162	01 - 2017	Period 3 : Pond (1308) : plan and photographs	
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N

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Houghton Street Building

Area B Walls

Area C Building 2

Area C Building 1

SD A

SD B

SD C

SD D

EVAL TRENCH

EVAL TRENCH

AP 3 eval trench

Wall 1064, 1123, 1171 with robber cut 1067 in foreground, looking south

Wall 1016, looking south east

Wall 1127, facing west

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0 5m

unassociated walls

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Project Ref: 160162	01 - 2017	Period 3 : Masonry walls, plans and photos, colour coded by proposed grouping	
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N

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1067

1067

1546

1359

1019

1321

1324

1333

1332

1246

1352

EVAL TRENCH

EVAL TRENCH

Area C

AP 3 eval trench

LOE

Robber cut 1546, with surviving masonry 1515 and 1545

Robber cut 1539

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Robber Cut 1019

0 5m

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Project Ref: 160162	01 - 2017	Period 3 : Rubber cuts	
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Cess pit 1434

Cess Pit

Pit

Postholes

0 5m

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Project Ref: 160162	01 - 2017	Period 3 : Pits, postholes and cess-pit	
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N

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530820, 181110

Robber cut

EVAL TRENCH

Area C

School building GP 1, Cess-pit GP2 and cellar GP 3

GP 1
GP 2
GP 3
Pit

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Project Ref: 160162	01 - 2017	Period 4 : Late post-med 1770-1850 features	
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Project Ref: 160162	01 - 2017	Horwood's Map 1792 with periods 3 walls	
Report Ref: 2017001	Drawn by: NG		

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Project Ref: 160162	01 - 2017	OS 1888 Insurance plan with GP 1	
Report Ref: 2017001	Drawn by: NG		

Figure RF <2> before conservation

RF <2> after conservation, inserted in plastazote cut out.

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Project Ref: 160162	01 - 2017	Photograph of bone comb RF<2> before and after conservation	
Report Ref: 2017001	Drawn by: NG		

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