

**BRANDON HOUSE
170-194 BOROUGH HIGH STREET
LONDON SE1**

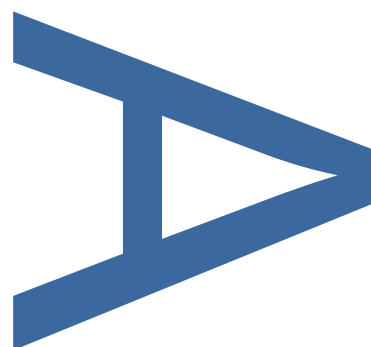
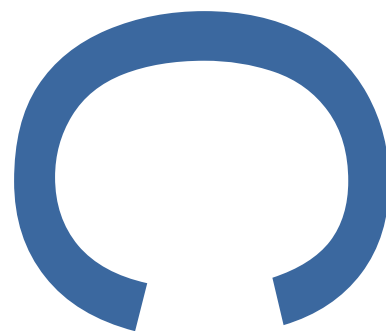
**AN ARCHAEOLOGICAL
ASSESSMENT**

**LOCAL PLANNING AUTHORITY:
LONDON BOROUGH OF SOUTHWARK**

PCA REPORT NO: R12804

SITE CODE: BBO10

JULY 2017



PRE-CONSTRUCT ARCHAEOLOGY

DOCUMENT VERIFICATION

BRANDON HOUSE
170-194 BOROUGH HIGH STREET
LONDON SE1
LONDON BOROUGH OF SOUTHWARK
ARCHAEOLOGICAL EXCAVATION

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An Assessment of an Archaeological Excavation on Land at Brandon House, 170-194 Borough High Street, Southwark, London SE1 1LH

Site Code: BBO10

Central National Grid Reference: TQ 3244 7978

Report Number: R12804

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Pre-Construct Archaeology Limited, July 2017

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1 Abstract

- 1.1 Following an earlier archaeological evaluation (Bright 2011), an archaeological excavation was undertaken by Pre-Construct Archaeology Ltd. on land at Brandon House, 170-194 Borough High Street, Southwark, London SE1 1LH. The works were commissioned by CgMs Consulting on behalf of Crest Nicholson. The site was bordered to the south by Marshalsea Road, to the west by Disney Place, to the north by Little Dorrit Park and 160-168 Borough High Street and to the east by Borough High Street itself.
- 1.2 The archaeology was multi-phase with the features dating to nine historic periods: AD 43-250, AD 250-400, 1050-1150, 1150-1350, 1350-1480, 1480-1600, 1600-1700, 1700-1820 and 1820-modern.
- 1.3 Geologically the site was underlain by floodplain gravels, which descended from the southern end of the site towards the north. This may well reflect the location of the Borough Channel.
- 1.4 Early Roman activity comprised a thin deposit of peat along the southern edge of the site, along with evidence of revetting, and a dog burial. Considerable attempts were made to consolidate the land through ground raising and dumping before a number of Roman buildings were established on the site and further attempts were made at channel reclamation.
- 1.5 The late Roman period reflected a decline on the site as the buildings were vacated and the area was abandoned. A dark earth deposit began to form, and this horizon continued to develop into the Saxo-Norman period. It was at this stage that the site was tentatively reoccupied as a ditch and several pits were introduced.
- 1.6 Initial medieval evidence (1150-1350) consisted of two barrel wells, a ditch and some timber-lined pits. Between 1350 and 1480 Brandon Place was established on the site and chalk and Reigate stone foundations provided evidence for the foundations of this structure.
- 1.7 After inheriting Brandon Place in 1510 from his uncle, Sir Thomas Brandon, Charles Brandon set about constructing his own mansion on the site. Known as Suffolk Place this is understood to have been constructed in the early 16th century, and evidence for the building was revealed in the form of brick wall foundations, floor surfaces and a large brick drain or conduit in the north-eastern corner of the site. These foundations are believed to relate to the southern and eastern ranges of the mansion. Recovered from demolition deposits was a large assemblage of architectural terracottas that once adorned Suffolk Place. This assemblage is of national importance and may enable a reconstruction of the building's façade to be attempted.
- 1.8 Charles Brandon lost ownership of Suffolk Place in 1536 to the crown and it was later granted to the Archbishop of York who promptly disposed of it with the buildings being demolished in the mid 16th century. Archaeological activity relating to between 1600 and 1700 comprised a

series of demolition deposits as well as evidence of wall robbing. A square building was established in the south-eastern corner of the site.

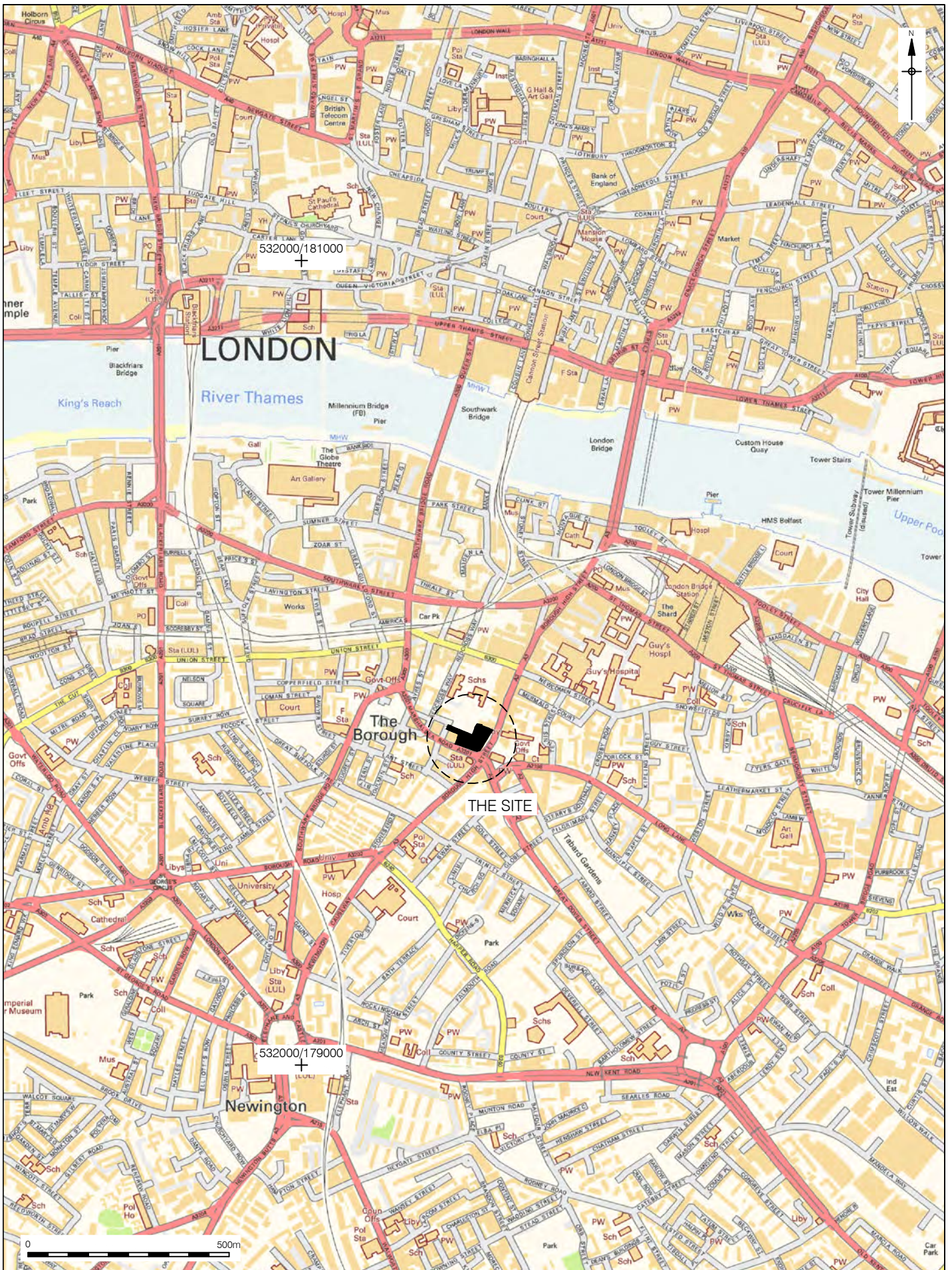
- 1.9 The main archaeological evidence relating to the period between 1700 and 1820 comprised a large industrial building at the northern end of the site. This comprised a number of rooms and several internal circular brick structures. The final phase of activity related to structures erected during the occupation of the site by Messrs Mosers.

2 Introduction

- 2.1 This report details the results and working methods of an archaeological field excavation undertaken by Pre-Construct Archaeology Ltd. on land at Brandon House, 170-194 Borough High Street, Southwark, London SE1 1LH (Fig. 1). These works took place in advance of a proposed redevelopment of the site for mixed purposes including residential, commercial and office use. The site central National Grid Reference is TQ 3244 7978. The field excavation was conducted between November 2014 and December 2015.
- 2.2 The site was located on land which previously formed part of the Brandon House complex, a four storey office structure constructed between 1979 and 1980. The building was demolished prior to the archaeological investigations. The site was bounded to the south by Marshalsea Road, to the west by Disney Place, to the north by Little Dorrit Park and 160-168 Borough High Street and to the east by Borough High Street (Fig. 2).
- 2.3 The site is located within an Archaeological Priority Zone (Borough, Bermondsey & Riverside), as defined in the London Borough of Southwark's Southwark Plan (2007).
- 2.4 The site had previously been the subject of an archaeological investigation in 1979 which revealed a wide channel across the north-east corner of the site. Fifty-two stakeholes representing the foundations of a building or jetty were driven into marshy deposits in the late 1st century. This was covered with 2nd-century dumps and then deposits of dark earth. A large brick foundation which may have been part of Tudor Suffolk Place was found together with other post-medieval features including an 18th-century barrel well (Thompson *et al.* 1998, 182; Hinton 1988, 480). An Archaeological Risk Assessment by MOLA in 2008 highlighted the high potential for both Roman and post-medieval remains on the site (Miles 2008). An Archaeological Impact Assessment of the site was undertaken in 2009 (Hawkins 2009) which recommended an evaluation be undertaken to determine the presence or absence of features relating to the Tudor palace of Suffolk Place. The evaluation was undertaken in 2010 by PCA which revealed an alluvial deposit associated with the channel at the north of the site, a chalk foundation possibly associated with Suffolk Place and a series of late post-medieval features (Bright 2011).
- 2.5 The site was commissioned by CgMs Consulting on behalf of Crest Nicholson. The field excavation was undertaken by Pre-Construct Archaeology Ltd. under the supervision of Richard Humphrey and the project management of Chris Mayo, overseen by Duncan Hawkins of CgMs Consulting. The work was additionally monitored for the local planning authority by Dr. Christopher Constable, Senior Archaeology Officer for the London Borough of Southwark. The present report was written by Alexis Haslam.
- 2.6 Both a series of Written Scheme of Investigations (Mayo 2014; 2015) and a Health and Safety Method Statement & Risk Assessment (Mayo 2014) detailing the methodology and work programme for the archaeological investigation were prepared prior to and during the fieldwork.

2.7 The completed archive comprising written, drawn and photographic records will be deposited at the London Archaeological Archive and Research Centre (LAARC), 46 Eagle Wharf Road, London N1 7ED.

2.8 The site was allocated the site code BBO10.



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Figure 1
 Site Location
 1:12,500 at A4



Figure 2
Trench Location
1:500 at A4

3 Planning Background

3.1 National Planning Policy Framework (NPPF)

3.1.1 In March 2012 the Department for Communities and Local Government issued the National Planning Policy Framework (NPPF), replacing Planning Policy Statement 5 (PPS5) 'Planning for the Historic Environment' which itself replaced Planning Policy Guidance Note 16 (PPG16) 'Archaeology and Planning'. It provides guidance for planning authorities, property owners, developers and others on the investigation and preservation of heritage assets.

3.1.2 In considering any planning application for development, the local planning authority will be guided by the policy framework set by government guidance, in this instance NPPF, by current Unitary Development Plan policy and by other material considerations.

3.2 Regional Guidance: The London Plan

3.2.1 The over-arching strategies and policies for the whole of the Greater London area are contained within the Greater London Authority's London Plan (March 2016) which includes the following statement relating to archaeology.

Policy 7.8: Heritage assets and archaeology

Strategic

- A London's heritage assets and historic environment, including listed buildings, registered historic parks and gardens and other natural and historic landscapes, conservation areas, World Heritage Sites, registered battlefields, scheduled monuments, archaeological remains and memorials should be identified, so that the desirability of sustaining and enhancing their significance and of utilising their positive role in place shaping can be taken into account.
- B Development should incorporate measures that identify, record, interpret, protect and, where appropriate, present the site's archaeology.

Planning decisions

- C Development should identify, value, conserve, restore, re-use and incorporate heritage assets, where appropriate.
- D Development affecting heritage assets and their settings should conserve their significance, by being sympathetic to their form, scale, materials and architectural detail.
- E New development should make provision for the protection of archaeological resources, landscapes and significant memorials. The physical assets should, where possible, be made available to the public on-site. Where the archaeological asset or memorial cannot be preserved or managed on-site, provision must be made for the investigation, understanding, recording, dissemination and archiving of that asset.

LDF preparation

- F Boroughs should, in LDF policies, seek to maintain and enhance the contribution of built, landscaped and buried heritage to London's environmental quality, cultural

identity and economy as part of managing London's ability to accommodate change and regeneration.

- G Boroughs, in consultation with English Heritage, Natural England and other relevant statutory organisations, should include appropriate policies in their LDFs for identifying, protecting, enhancing and improving access to the historic environment and heritage assets and their settings where appropriate, and to archaeological assets, memorials and historic and natural landscape character within their area.

3.3 Local Policy: Archaeology in the London Borough of Southwark

3.3.1 The study aims to satisfy the objectives of the London Borough of Southwark, which fully recognises the importance of the buried heritage for which it is the custodian. Relevant policy statements for the protection of the buried archaeological resource within the borough are contained within the following documents:

- The Southwark Plan (adopted 2007)
- Southwark Policy Guidance (Archaeology) (2007)

3.3.2 The proposed development of the site is subject to the Council's Archaeology Policies and justifications:

Policy 3.19 Archaeology

Planning applications affecting sites within Archaeological Priority Zones (APZs), as identified in Appendix 8, shall be accompanied by an archaeological assessment and evaluation of the site, including the impact of the proposed development. There is a presumption in favour of preservation in situ, to protect and safeguard archaeological remains of national importance, including scheduled monuments and their settings. The in situ preservation of archaeological remains of local importance will also be sought, unless the importance of the development outweighs the local value of the remains. If planning permission is granted to develop any site where there are archaeological remains or there is good reason to believe that such remains exist, conditions will be attached to secure the excavation and recording or preservation in whole or in part, if justified, before development begins.

Reasons:

Southwark has an immensely important archaeological resource. Increasing evidence of those peoples living in Southwark before the Roman and medieval period is being found in the north of the borough and along the Old Kent Road. The suburb of the Roman provincial capital (Londinium) was located around the southern bridgehead of the only river crossing over the Thames at the time and remains of Roman buildings, industry, roads and cemeteries have been discovered over the last 30 years. The importance of the area during the medieval period is equally well attested both archaeologically and historically. Elsewhere in Southwark, the routes of Roman roads (along the Old Kent Road and Kennington Road) and the historic village cores of Peckham, Camberwell, Walworth and Dulwich also have the potential for the survival of archaeological remains.

3.4 Site Specific Constraints and Planning Background

3.4.1 The site is located within an Archaeological Priority Zone as set out within the LB Southwark's

The Southwark Plan (adopted 2011). The site does not lie within the vicinity of a Scheduled Ancient Monument, Historic Battlefield or Historic Wreck site.

3.4.2 Planning permission was sought for the redevelopment of the site. As part of the application process the client was required to submit an archaeological impact assessment, which was prepared by CgMs Consulting (Hawkins 2009) and the results of a trial trench evaluation (Bright 2011). Planning consent for the redevelopment of the site was granted by the London Borough of Southwark in 2013 under application number 11/AP/2012. The consent included an archaeological condition as follows:

- 4 Before any work hereby authorised begins, the applicant shall secure the implementation of a programme of archaeological work in accordance with a written scheme of investigation for the area of the proposed basement and other development impacts that has been submitted to and approved in writing by the Local Planning Authority. The results of the archaeological work will be detailed in an interim report and survey drawings that will identify any structural remains attributable to the 15th/16th century Suffolk Place / Brandon House within the area of the proposed basement. Subject to such remains being found, the basement and foundation plans shall then be designed to preserve these features in situ and/or display them and provide public access.

Reason

In order that details of the foundations, groundworks, and all below ground impacts of the proposed development are detailed and accord with the programme of archaeological mitigation works to ensure the preservation of archaeological remains of national importance relating to the 15th and 16th century house of Brandon House / Suffolk Place by record and in situ in accordance with Strategic Policy 12 – Design and Conservation of The Core Strategy 2011, Saved Policy 3.19 Archaeology of the Southwark Plan 2007 and the National Planning Policy Framework 2012.

3.4.3 A Written Scheme of Investigation was originally produced in 2012 (Mayo 2012) which was subsequently updated on two occasions (Mayo 2014; 2015).

4 Geology & Topography

4.1 Geology

- 4.1.1 According to the British Geological Survey (BGS England and Wales sheet 270 – South London 1:50,000 series. Solid and Drift Geology), the site is located on the cusp of two different geological zones. Along the southern edge of the site the Eocene London Clay is overlain by the Kempton Park River Terrace Gravels. To the north lie alluvial deposits composed of sand, silt and clay.
- 4.1.2 The geology of Southwark is incredibly complicated. From the late Devensian glacial stage (c.9,500 years BC) up until the medieval period the area was characterised by a riverine landscape, and flooding inundated large areas on numerous occasions (Killock *et al.* 2015, 3). During the Roman period the topography of north Southwark was comprised of two islands surrounded by mudflats and tidal channels jutting out into the River Thames. These islands, or ‘eyots’ are commonly referred to as the ‘north island’ and the ‘south island’ and it was across these two landmasses that the core of Southwark’s Roman settlement developed. Further to the east, two further eyots – the Horselydown Eyot to the north and the Bermondsey Eyot / Peninsular to the south (Cowie & Corcoron 2008, 177) were also settled, although somewhat less intensively.
- 4.1.3 Brandon House lies on the Western side of Borough High Street and archaeological excavations on the eastern side of the High Street at St George’s Church suggest that both sites were positioned on the edge of the Borough Channel. This channel separated the southern side of Southwark’s south Island from the raised Kempton Park gravel terrace of the mainland to the south (Watson 2014, 31).

4.2 Topography

- 4.2.1 Prior to the excavation the site was broadly level at c.4.6m OD.

5 Archaeological & Historical Background

5.1 The following section of this report comprises of a summary of the archaeological and historical background of the site as detailed in the Archaeological Risk Assessment (Miles 2008) and the Archaeological Impact Assessment (Hawkins 2009).

5.2 Prehistoric

5.2.1 The area around the site has revealed a number of stray finds of prehistoric flint tools. At 201-211 Borough High Street one sherd of prehistoric pottery (of uncertain date) was recovered from a subsoil horizon. Recent excavations at 34-70 Long Lane, south-east of the site revealed a Bronze Age stream channel, infilled with fluvial sediments. Evidence of human activity at Long Lane was demonstrated by finds of prehistoric pottery and flint tools (Miles 2008).

5.3 Roman

5.3.1 The site was situated on the west side of the convergence of Stane Street and Watling Street within the southern portion of the Roman settlement of Southwark.

5.3.2 Excavations to the north of the site at 201-211 Borough High Street in 1972-73 revealed a north-west to south-east aligned palaeochannel which naturally infilled with standing water sediments during the 1st century AD. Recent excavations to the south-east of site along Long Lane revealed evidence of late 1st-century AD clay and timber buildings with painted plaster walls and brickearth floors (Killock *et al.* 2015, 21). Work opposite the site at St George the Martyr showed initial Roman activity consisting of fragments of several late 1st-century AD clay and timber buildings (Watson 2014, 37).

5.3.3 Roman settlement in Southwark was not completely abandoned until sometime during the early 5th century. Excavations under Borough High Street along the approach road to the Roman bridge revealed evidence of late 4th-century occupation, but no sign of 5th-century (Drummond-Murray *et al.* 2002, 145). However, excavations alongside the Guy's Channel revealed that during either the late 4th or early 5th century a series of drainage ditches were dug alongside the channel, then at some uncertain date the area was abandoned until c.1300, due to constant floods caused by rising sea-level (Taylor-Wilson 2002, 34-38). Southwark was apparently not reoccupied until the 10th century (Miles 2008).

5.4 Saxon

5.4.1 The Burghal Hidage of c.AD 915 contains the first recorded mention of Southwark: it was referred to as Suthringa geweorche (the [defence] work of the men of Southwark). Southwark was reoccupied as part of a system of defences including the reoccupied Roman urban centre of Londinium (refortified in AD 886), which was intended to prevent seaborne Viking

raiders sailing up the Thames. Elements of the Roman road network were reused, but often realigned in the Southwark area. During this period domestic occupation nearby at 201-211 Borough High Street is evidenced by residual finds of Pingsdorf type ware (AD 900-1250) and early medieval shelly ware cooking pots (1000-1150) (Miles 2008).

5.5 Medieval

- 5.5.1 Documentary evidence concerning Southwark is found in the Domesday Book (1086). It describes a community of at least four dozen houses with a dock, a trading shore, herring fishery, and a minster. This settlement evidently was yet unmanorialised.
- 5.5.2 The medieval settlement of Southwark was concentrated around the southern bridgehead of London Bridge, which was rebuilt in stone in 1176.
- 5.5.3 In 1122 St George's church (the dedication is recorded) was given to Bermondsey Abbey. The excavation carried out there showed several phases of fragmentary masonry foundations, interpreted as elements of the nave and chancel of the pre-17th century church (Watson 2014, 53). Within the remains of the pre-1733 church were some 150 medieval to early post-medieval burials interpreted as part of an external medieval cemetery (Watson 2014, 58-59). Pottery recovered from earlier deposits and the cemetery dates to 1270-1350. Given the church's foundation date, it is possible that this indicates that the medieval village did extend down to the area of the site (Miles 2008).

5.6 Post-Medieval

- 5.6.1 The Brandon family had a house on the site from at least 1465. In 1510 the house, known as Brandon Place, was inherited by Charles Brandon from his uncle Sir Thomas Brandon (Watson 2011, 21). A favourite of Henry VIII, Charles Brandon was created Duke of Suffolk in 1514. In 1515 he married Henry VIII's younger sister Mary, following the death of her husband, Louis XII of France. He would have four children with her. Charles had already been married twice before and had three illegitimate children. He also had two daughters from his 1508 marriage to Anne Browne. In 1516 he purchased 11 messuages and 8 gardens in Southwark to enlarge the house which he then rebuilt on a palatial scale between 1518 and 1522 (Watson 2011, 21).
- 5.6.2 In view of the size and scale of the late medieval and Tudor Palace it is likely that the buildings footings extended well into the natural gravel. This appears to be confirmed by the 1979 archaeological investigations which identified chalk filled footings cut into the gravel, according to the site archive, though the short published report refers only to brick walls (Thompson *et al.* 1998, 182; Hinton 1988, 480).
- 5.6.3 In 1533 Mary Tudor died, at which point Charles's relationship with the Crown changed. His debt settlement would cost him both Suffolk Place and Westhorpe Hall in Suffolk, which had

been built between 1526 and 1533. In 1536 Henry VIII, having first arranged alternative accommodation for the Bishop of Norwich in Cannon Row, Westminster, granted the bishop's former house near Charing Cross to Charles Brandon in exchange for Brandon House (or Suffolk Place as it was now known) which became part of the jointure of Queen Jane Seymour. A keeper of Suffolk Place was appointed and for the next twenty years the house was used periodically as a Royal Residence or, more frequently, to house distinguished visitors.

- 5.6.4 In or around 1545 a Royal Mint was established in a part of the building - though it was closed in 1551 as a result of fraud. Queen Mary and her husband Philip of Spain spent the night at Suffolk Place in August 1555. In February 1556 Queen Mary granted Suffolk Place to the Archbishop of York as compensation for the loss of York Place (Whitehall Palace) which Henry VIII had seized.
- 5.6.5 From a survey during the reign of Edward VI it is clear that parts of the Palace grounds had already been leased out and that small tenements had been built along the street frontage. Following receipt of the House the Archbishop of York promptly disposed of it. By July 1557 Elles Dyall and Jon Tull 'Citizens and Tylers' were in possession. The break up of the Palace began immediately and it was completely demolished by June 1562 when the site was sold to Anthony Cage.
- 5.6.6 By 1651 the site was occupied by 14 properties. The subdivision of the site into a number of properties is shown in Newcourt's map of 1658 and Rocque's map of 1745.
- 5.6.7 From 1787 the study site was partly occupied by Messrs Mosers Ltd who ultimately were to acquire the entire site. Horwood's map of 1792-1799 shows buildings along all three street frontages with yardage and ancillary buildings behind. A majority of buildings on the Borough High Street and Marshalsea Road frontages would have been cellared.
- 5.6.8 Messrs Mosers presence in and around the site is indicated by the "Iron warehouse" just north of the existing site boundary. A public house is shown on the Borough High Street frontage of the site and is likely to have contained a cellar.
- 5.6.9 By 1898 the site had changed only in detail: the location of the public house (by this date demolished) on the Borough High Street frontage of the site had now become the principal site entrance. By this time part of the site was now acting as a goods depot for the London and South Western Rail company (L & S W R).
- 5.6.10 Following the First World War, Messrs Mosers began to significantly expand their operations on the site with rebuilding commencing from 1929 though much of the site was still occupied by Georgian and Victorian buildings. Nos. 184-192 and Nos. 178 to 182 Borough High Street were rebuilt in 1935-1939 including provision for a basement level across the building footprints 10 feet (3m deep). The buildings were founded on deep pad footings set in the gravel below the basement floor level.

- 5.6.11 During the Second World War the study site underwent significant damage from a V2 rocket. Messrs Mosers Limited decided to replace all the buildings on the Marshalsea Road frontage of the site from 1948.
- 5.6.12 By 1950, Nos. 178 to 182 and 184 to 192 Borough High Street had been repaired, Nos. 2-4 Marshalsea Road rebuilt and the remaining buildings on Marshalsea Road cleared.
- 5.6.13 In 1978/79 the site was completely cleared of buildings. The extent of basements visible at this time has been confirmed with participants of the 1979 investigations. In total basements appear to have occupied 50% of the total site area including most of the footprint of the existing building (Hawkins 2009).

6 Archaeological Methodology

6.1 Project Design, Sequence and Duration

- 6.1.1 Further to the completion of the evaluation undertaken in 2010 (Bright 2011), a mitigation scheme was designed which would see the archaeological excavation of areas of proposed impact beyond the existing and historic basements at the site, and a watching brief / strip, map and record within those areas (Mayo 2014). Works were commenced in accordance with that approved scheme in November 2014, supervised by Richard Humphrey of Pre-Construct Archaeology Limited. The initial investigations were located in the north-west corner to the site within the proposed northern mews block.
- 6.1.2 In this location (Northern Mews Block), mechanical plant was used to excavate within the proposed footprint in steady, controlled spits of up to 100mm until archaeological significant strata were exposed. These were then cleaned and investigated by archaeological staff using hand tools, prior to being remachined until either formation level or natural ground was exposed.
- 6.1.3 After the completion of the archaeological works in this location in December 2014, the demolition of Brandon House proceeded through January to April 2015.
- 6.1.4 PCA reattended site from mid April 2015 to monitor the breaking of the basement slab within Brandon House working from the northern site boundary to the south. Archaeological remains and deposits rapidly became apparent surviving between 20th-century construction. As the machine excavation headed southwards, extensive survival of Tudor brickwork and Roman deposits was seen.
- 6.1.5 The supervised machine strip continued heading south within the basement of Brandon House and then turning west, until the extent of archaeology within the footprint of the former basements and the newly proposed basement could be discerned. The machine strip was completed by mid August 2015. This included two discrete locations beyond the new footprints where crane bases were required for the new scheme (referred to as Eastern and Western Crane Bases, Fig. 2).
- 6.1.6 The discovery of remains beyond those expected led to an Updated Written Scheme of Investigation being prepared (Mayo 2015) which designed the preservation in situ of two localised areas of Tudor brickwork but the excavation of all other archaeological deposits and structures within the proposed basement footprint. This excavation work was undertaken by PCA between mid-August and October 2015, supervised by Richard Humphrey. The excavation interventions were referred to as the Excavation Area (Fig. 2).
- 6.1.7 The Updated Written Scheme of Investigation included a proposed methodology for archaeological investigation within the western mews block. This work was completed in November-December 2015, and supervised by Stacey Harris. The proposed methodology was amended somewhat due to severe logistical constraints, such that the mitigation actually

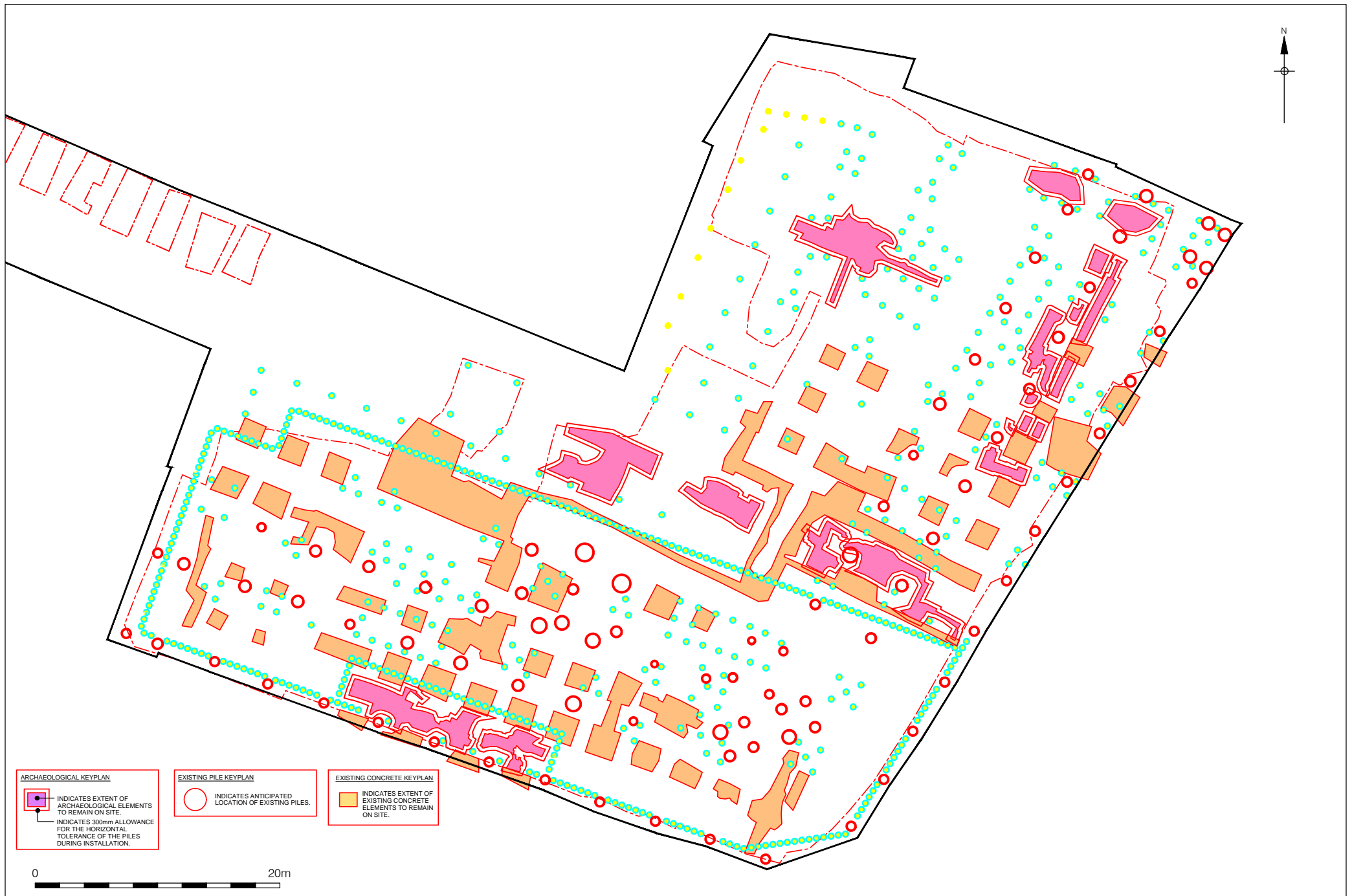
comprised a watching brief during machine excavation of all pile cluster locations, with archaeological access to the pile locations afforded by trench-boxes to complete hand investigation and recording if required. The result was the archaeological monitoring and/or excavation of Trenches 35 to 43 (Trench numbers allocated by contractors and adopted), depending on whether archaeological remains were encountered in the trenches.

6.2 Methodology

- 6.2.1 The works were undertaken in accordance with the approved Written Schemes of Investigation (Mayo 2014; 2015).
- 6.2.2 All site records were identified using the unique site code BBO10, which was allocated to the site by the London Archaeological Archive and Research Centre (LAARC) in 2010 at the start of the evaluation. All numbering (i.e. trenches, contexts, sections etc) was sequential from the previous phase of work to ensure no conflict.
- 6.2.3 The investigation of all significant archaeological deposits, features and structures was undertaken by full-time archaeologists employed by PCA. Features were predominantly fully excavated by hand-tools, although some half-sectioning was undertaken with the agreement of the London Borough of Southwark's Senior Archaeologist.
- 6.2.4 All significant deposits and features were assigned individual context numbers and recorded using the standard single context recording system compatible with that used elsewhere in the London Borough of Southwark. Context information was recorded on pro-forma context sheets and all plans and sections were drawn at a scale of 1:20 and 1:10 respectively on polyester based drawing film (permatrace).
- 6.2.5 A full photographic record of the site was maintained in HQ digital photography.
- 6.2.6 All finds from the site were retained for off-site assessment. Samples were taken from appropriate contexts for off-site processing and assessment.
- 6.2.7 Feature and site plans were drawn from a combination of baselines and a site grid established by PCA and surveyed to the OS grid. The site grid was checked by PCA's surveyor at regular intervals.
- 6.2.8 Site levels and datums were established from spot heights derived from a 'Topographical Survey' of the site produced by Maltby Land Surveys Ltd (drawing number 08/121/01, Rev B, dated June 2008).

6.3 Site Archive

- 6.3.1 Upon completion of all phases of work the archive will be submitted to LAARC for deposition under the BBO10 site code.
- 6.3.2 It is possible that from the site archive, some items (such as the terracottas) may be displayed with The Cuming Museum in Southwark once it is fully operational. However, this has yet to be negotiated and no timetable has been set.



From Crest Nicholson drawing 10033-14520TA-2251-C1 Piling Layout - 309015 05/10/15

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18/07/17 JB

Figure 3
Plan of features intended to be preserved *in situ*
1:400 at A4

7 Phased Archaeological Sequence

7.1 Phase 1: Natural

- 7.1.1 The earliest deposit encountered on the site was a horizon of natural gravel, variously described as a mid to light brown or orange yellow in colour. This natural layer is understood to represent floodplain gravels which were deposited within the braided river system of the Late Pleistocene / Early Holocene (c.15,000-10,000 years ago). As such, the gravels are likely to be associated with the Shepperton Gravels.
- 7.1.2 The gravels were observed at a highest level along the southern edge of the site boundary, in particular in the south-west corner. They were recorded at a maximum of 0.83m OD [1603] and sloped down to the east to a low of -0.03m OD [2631]. In the south-west corner they dropped towards the north to a low of -0.11m OD. The most significant drop was however observed towards the northern end of the site where they descended to a low of -1.19m OD [564].
- 7.1.3 Naturally deposited alluvial clay sealed the gravels and was variously described as yellow to blue grey in colour. Measuring between 0.06m [2093] and 0.56m [2398] in thickness, these clay deposits followed the topography of the underlying natural gravels. They were observed at a highest level of 0.85m OD [1574] in the south-west of the excavation area and sloped downwards towards the north and east, reaching lowest levels of 0.15m OD to the north [2093] and 0.09m to the east [3132].
- 7.1.4 Cut into the clay in the south-eastern area of the excavation was a channel [2627] / [2678] (Fig. 4) which measured up to 1.2m in depth and 0.4m in width at 0.26m OD. This channel was filled with a clean deposit of clay gravel and appeared to have been naturally scoured during an episode of run-off.

7.2 Phase 2: Early Roman (AD 43-250) (Figs. 5 & 6)

2.1: Early features and peat deposition

- 7.2.1 The earliest features observed on the site comprised a series of four stakeholes which were given the group number [2334]. Aligned along a north-west south-east axis in the southern portion of the site, these stakes were recorded at a highest level of 0.33m OD and continued over a distance of 0.30m before returning to the north-east at the southern end. Given the limited number of stakeholes revealed, little could be stated in regards of their structural significance. The only other features cut directly into the alluvial clays consisted of two possible natural features, two pits, a posthole and the remnants of a gully. All four of the non natural features were observed at between 0.4m OD and 0.53m OD, and the posthole [1396] produced pottery dating to between AD 70 and AD 160. The north-east south-west aligned gully [1400] extended for 1.26m in length, 1.54m in width and 0.31m in depth and was filled

by a deposit of silty sand. The largest pit [1392] was sub square in plan and measured 1m by 0.85m and 0.12m in depth.

- 7.2.2 Sealing these features and the earlier natural alluvial horizons was a layer of peat. In several instances this horizon was recorded as a deposit of up to four horizons, although in general a single context number was given. Described as a dark purple brown layer, the peat again appeared to follow the natural underlying topography of the site and was recorded at a highest level of 1.15m OD [1195] in the south-western corner of the excavation area. It then dropped off to the north to a low of 0.22m OD [2092] and to the east to a low of 0.46m OD [2438]. At the very northern end of the site the peat was observed at 0.09m OD [113]. In general terms this horizon was not particularly thick, measuring between 0.1m and 0.5m in depth. At the very northern end of the site however it was discovered at up to 1.6m in thickness [2113]. Pottery was recovered from the peat and was early Roman in date, with contexts [2113] and [2187] producing the tightest date ranges of between AD 70 and AD 100. Slightly earlier pottery was retrieved from [3146] and dated to between AD 40 and AD 100.
- 7.2.3 The only significant feature recorded in relation to the peat was a series of fifteen stakes which were driven into peat layer [2989] and sealed by subsequent peat horizon [2988]. These stakes were situated in the south-eastern corner of the excavation area and were aligned along a north-west south-east axis, extending over a distance of 4m as seen with [3084] representing the westernmost stakehole and [3022] representing the easternmost stakehole. Observed at 0.6m OD the stakeholes were generally 0.15m in diameter and continued up to a depth of 0.61m. They were filled by the remnants of degraded timbers.

2.2: Early occupation and land reclamation

- 7.2.4 The earliest evidence of settlement on the site appears to have begun on or around AD 70. This activity was primarily located in the south-western corner of the excavation area on the ridge of the higher gravel. Here a large oval pit was cut directly into the natural. As this feature was truncated it was given two separate cut numbers [1174] & [1247] and measured 1.8m in width, 1.6m in length and 0.86m in depth at 1.15m OD. Oval in plan, the pit contained four separate fills comprising silts sands and gravels. Little diagnostic material was recovered, with final fill [1244] containing Roman pottery broadly dated to between AD 50 and AD 400.
- 7.2.5 Situated to the east of [1174] / [1247] was the remnants of a heavily truncated north-west south-east aligned ditch or gully [1249] which measured 3m in length, 2.8m in width and 0.23m in depth as seen at 1.69m OD. It was filled by [1248], a soft, dark red clay silt which contained pottery dating to between AD 50 and AD 200. Within this deposit was [1290], a dog burial which was missing its head as a result of truncation to the west. Recorded at 1.80m OD the burial had been placed within the gully with a degree of care and attention, with the rear legs flexed and drawn up beneath the front legs towards the west. The spine was curved and the general position of the skeletal remains was as if the dog was sleeping.

- 7.2.6 Further activity relating to this phase concerned a series of levelling deposits which covered the southern end of the site. These were mostly mixed horizons of yellow to green brown deposits comprising sands, silts and gravels which elevated the underlying deposits by approximately 0.3m in the south-west, but by up to nearly 0.70m towards the north-eastern corner of the southern area. This was where the peat and the underlying natural deposits dropped off towards the channel. This large scale episode of dumping and ground raising produced a fairly level surface across the southern end of the site, generally at between 0.86m OD and 1.25m OD. The dumps were mostly recorded as single layers, although in some instances up to four separate contexts were observed. Although the pottery recovered from the contexts was often broad ranging at between AD 50 to AD 200 (e.g. [1292], [1362], contexts [2562], [1219], [2361] provided a tighter date range of between AD 70 and AD 120 and material from [2947] dated to between AD 70 and AD 100.
- 7.2.7 The only other feature relating to this period concerned a number of stakes at the northern end of the site. Given the group number [549], this structure comprised a total of 25 timber stakes which were driven directly into the peat. Arranged along a north-west south-east aligned axis they covered a distance of 2.5m and were recorded at between 0.29m OD and 0.71m OD. This structure was not fully excavated, but it was interpreted as a wattle lined fence which may have been associated with revetting the Borough Channel.

2.3: Pitting

- 7.2.8 Following the episode of ground raising, subsequent activity on the site consisted of pitting episodes. There was no evidence of direct habitation in the form of structures or buildings, with the pits mostly situated along the southern site boundary. In many instances these features intercut, but they were generally found to contain either one or two fills comprising silts, sands and gravels. Pit [2184] also contained a clay lining, suggesting that it had been used in some form of storage capacity.
- 7.2.9 All of the pits were observed at between 0.56m OD and 1.87m OD, with [2961] representing the largest example at 1.78m in length, 1.2m in width and 0.29m in depth. The diagnostic material recovered from the pits provided an almost identical date to that of the ground raising or dump layers, with pits [3124], [2937], [3066] and [2554] all producing pottery dating to between AD 70 and AD 120. A slightly tighter date range was provided by the pottery recovered from pit [2127], which dated to between AD 70 and AD 100. This suggests that the pit groups were contemporary with the episodes of ground raising across the southern side of the site, and pitting must have started shortly after the deposits were laid down. Such features suggest proximity to a settlement, but the disorganised nature of the pits is suggestive of peripheral activity.
- 7.2.10 The only other features relating to this phase of activity concerned a heavily truncated north-west south-east aligned channel [1329], which measured 10m in length, 2.7m in width and

0.3m in depth at 0.93m OD. The precise function of this feature was unclear, although it may have been excavated for drainage purposes. It contained two fills from which pottery dating to between AD 70 and AD 150 was recovered. The only other identified linears were [2127] and [1289], although these features were so heavily truncated that very little could be stated about them.

2.4 – Buildings

Building 1

- 7.2.11 Building 1 was situated in the south-eastern corner of the excavation area. Interpreted as a clay and timber structure it was defined by a series of beamslots and associated postholes and appeared to have undergone at least one later stage of rebuilding. The eastern extent of the structure was formed by north-east south-west aligned beamslot [3032], which measured 2.6m in length, and 0.41m in depth at 0.98m OD. It extended into the eastern limit of excavation, but as seen was at least 0.70m wide. The southern extent of the building was not revealed, but the northern limit was defined by beamslots [2969] and [3117]. Although [2969] was slightly wider than [3117], it seems likely that these two cuts formed part of the same structure, with slumping or robbing having affected the width of [2969]. The westernmost beamslot [3048] ran parallel with [3057] and perpendicular to [2969]/[3117], although it was truncated to the south. As seen it was 1.9m long, 0.94m wide and 0.48m deep at 1.19m OD. In combination, the internal dimensions of the structure were 6m from east to west and 2.6m from north to south. All of the beamslots contained between one and two fills, with the pottery recovered from [3057] and [3117] providing a deposition date range of between AD 70 and AD 120. A slightly tighter date range of between AD 90 and AD 100 was defined by the ceramic material from [2969].
- 7.2.12 Further structural evidence associated with Building 1 included a series of six postholes within [3057]. These were likely to represent the remains of earthfast posts associated with the structure. They measured up to 0.22m in diameter and 0.21m in depth at between 0.78m OD and 0.98m OD. Further single postholes were recorded in association with [2969] and [3048]. One internal feature was recorded in the south-east corner of the building in the form of square pit [3032]. This feature extended into the southern limit of excavation and was truncated to the west, but as seen measured 0.66m in width, 0.71m in length and 0.32m in depth at 1.13m OD. It contained a single fill which produced pottery dating to between AD 70 and AD 120.
- 7.2.13 At a distance of 8m to the west of [3048] a series of eight stakeholes were recorded running parallel with the rear of Building 1. Measuring 0.06m in diameter and 0.13m in length, these stakes were observed at between 0.47m OD and 0.6m OD. A further two associated stakes, [2344] and [2345], were observed further to the north at almost identical level heights, and collectively this group has been interpreted as a property boundary. Covering a distance of at

least 10m, these stakes most probably formed a fenceline to the rear of a series of dwellings which fronted onto a thoroughfare roughly aligned with modern day Borough High Street.

- 7.2.14 Building 1 does appear to have undergone subsequent alteration. A brickearth floor surface [3046] sealed [3117] at 1.38m OD, and three north-south aligned stakeholes and a single square posthole [3098] were recorded in association with this rebuild. Truncating both [2969] and [3117] was a later beamslot which ran parallel with [3057] at a distance of 1.8m to the east. As seen, this cut extended for 1.8m in length, 0.9m in width and 0.27m in depth at 1.17m OD. It contained pottery dating to between AD 70 and AD 100 and was recorded with two associated postholes. To the rear of Building 1, square pit [2951] contained pottery dating to between AD 50 and AD 160.

Building 2

- 7.2.15 Building 2 was situated to the immediate north-east of Building 1, and may well have formed part of the same building complex. The initial foundations were formed by a sequence of make up or bedding deposits which comprised sands, clays and gravels. These layers contained pottery dating to between AD 70 and AD 160 and measured up to 0.4m in thickness. Cutting into these horizons were the beamslots which formed the outline of the building. The northern limit of the structure was defined by north-west south-east aligned beamslot [2987], which measured 1.42m in length, 0.47m in width and 0.19m in depth at 0.72m OD. Five postholes were recorded in association with the beamslot and represented earthfast posts associated with the wall. Two north-east south-west aligned cuts [2805] / [2811] were recorded to the west of [2987], although these most probably represented a single beamslot which formed the western extent of the building. The southern limit initially appears to have been defined or marked out by a square posthole [2958] which was sealed by another bedding or make up layer. A subsequent posthole [2887] was also recorded, although this was again sealed by a sequence of bedding or make up deposits which dated to between AD 70 and AD 120. Cutting into these was the southernmost beamslot [2851], which measured 2.66m in length, 0.88m in width and 0.06m in depth at 1.26m OD. This was accompanied to the north by an internal rectangular pit [2902], which measured 0.9m by 0.5m and which contained chalk and plaster within the fill.
- 7.2.16 Although the structure extended beyond the eastern limit of excavation, as far as could be determined the internal dimensions of Building 2 measured at least 7.5m from east to west and 5.5m from north to south. The ceramic material recovered would also suggest a contemporary date with Building 1 at between AD 70 and AD 120. The only other features recorded in association with this structure were two postholes which were located to the rear of the property, with [3003] again containing pottery to between AD 70 and AD 120.

Building 3

- 7.2.17 Building 3 was situated to the immediate north of Building 2. The northern limit of the structure was defined by north-west south-east aligned beamslot [2654], which extended 3.4m in length, 0.2m in width and 0.1m in depth at 0.66m OD. No further beamslots were recorded in association with the building, but to the west a series of three large post pits represented the rear of the property. They were cut into a contemporary bedding horizon [2537] and ran perpendicular to [2654], with pit [2560] demarking the north-west corner. The pits varied in size although they were large, with [2574] measuring 2.56m by 1.3m and 0.23m in depth at 1.03m OD. In combination, the beamslot and the post-pits provided internal dimensions of 6m from north to south and 6.5m from east to west. Pottery recovered from the pits and beamslots suggested a construction date of between AD 70 and AD 100.
- 7.2.18 To the north of Building 3 a series of eight postholes were observed arranged along a north-east south-west axis. This arrangement followed precisely the same alignment as the fenceline to the rear of Building 1. Extending over a distance of 7m the postholes were observed at between 0.41m OD [2120] and 0.74m OD [2107] and were also likely to have formed a property division. To the south of the fence line a north-west south-east aligned timber drain [2098] was recorded at 0.7m OD. This drain was situated within construction cut [2136] and was most probably associated with Building 3. An associated timber plank [2099] was observed to the north.

Building 4

- 7.2.19 Building 4 was situated at the western end of the excavation area. The northern limit of the structure was defined by a truncated beamslot which was given three separate context numbers – [1337], [1335] and [1349]. These cuts were observed at c.0.68m OD and measured up to a maximum of 0.8m in width. Beamslot [1354] formed the eastern side of the building, whilst the southern limit was defined by another truncated beamslot which was given the context numbers [1382] and [1356]. The western side of the structure was harder to define, although beamslot [1345] remains a possibility. If this was the case, then the building had internal dimensions of 7.5m by 12m. Further possible division was however identified in the form of postholes [1367], [1359] and [1327]. Associated bedding deposits were also recorded and the ceramic material recovered from the structure suggested a construction date of between AD 90 and AD 160. Pottery recovered from [1382] dated to between AD 70 and AD 100.
- 7.2.20 At a distance of 2m to the south of [1382] a further truncated parallel linear was identified. Assigned the context numbers [1205] and [1218], this feature may also have functioned as another beamslot associated with Building 4, possibly representing a corridor or another room on the south side of the building. As seen, the cut measured 4.4m in length, 1m in width and up to 0.26m in depth at 0.67m OD. An associated internal posthole [1098] was recorded to the north. Pottery dating to between AD 90 and AD 160 was recovered from [1205].

7.2.21 At a distance of 4m to the south of [1205] / [1218] an arrangement of 10 postholes was recorded. Identified as a fenceline or property boundary most probably associated with Building 4, this structure was observed at between 1.08m OD and 1.14m OD and extended over a distance of 7.5m along a north-west south-east alignment. Two further isolated postholes were recorded to the south ([1207] and [1197]), although it was unclear if these belonged to the same structure.

Another Building?

7.2.22 To the west of Building 1 beyond the rear fenceline a further potential building was identified, although in this instance the structure was poorly defined. Running parallel with the fence at a distance of c.2m to the west was beamslot [3143], which measured 1.6m in length and 0.25m in width as seen at 1m OD. This was complemented by parallel beamslots [3174] and [3143] which were located 4.5m further to the west. These beamslots may have defined the western and eastern limits of a building, although the north and south sides were never exposed. A further isolated north-west south-east aligned linear was identified to the west of [3174] / [3224], yet it was unclear if this formed part of the same structure.

2.5 – Channel Reclamation and Building Maintenance

7.2.23 During this period, at the very northern end of the site a series of deposits were recorded within the lower area of what has been interpreted as the Borough Channel. The lowest deposit [115] was recorded as a charcoal rich layer and was observed at 0.33m OD. This was sealed by [118], a deposit of grey clay, which was in turn overlain by sandy deposits at between 0.53m OD and 0.83m OD. Pottery recovered from these horizons suggested that deposition occurred between AD 120 and AD 160. Slightly further to the east, identical flooding or silt deposits were observed sealing timber structure [549]. Recorded at between 0.64m OD and 0.95m OD, these layers also contained pottery, with an identical date range of AD 120 to AD 160 provided by the ceramic material from [378] and [524].

Building 5

7.2.25 To the north-west of Building 1 lay Building 5. The earliest deposit associated with this structure was a layer of clay [2325], possibly used as a bedding or waterproofing deposit, which sealed fenceline stakeholes [2344] and [2345] at 0.8m OD. A further bedding deposit [2565] was also recorded in association with the structure and was 0.31m thick at 0.73m OD. The western side of the building was defined by north-east south-west aligned beamslot [2461], which extended for 4.84m in length, 0.7m in width and 0.37m in depth at 0.45m OD. Although the northern and southern extents of the building were not revealed due to truncation, the eastern side was defined by beamslot [2425] (Plate 2). This cut ran parallel

with [2461] for 4.4m and terminated at the southern end in a rounded form which may once have housed a posthole. Three fills were associated with this cut, one of which contained pottery and animal bone, possibly suggestive of a foundation deposit (Plate 1). Five stakeholes were also recorded within the cut and would have formed part of the timber framework. The beamslot measured 0.62m in width and 0.49m in depth and was complemented to the south by a continuation in the form of beamslot [2327]. It is possible that due to the termination of [2425] and the extension of this linear arrangement in the guise of [2327], that a doorway was located between these two features. If so, the gap provided was at most 0.9m wide at a highest level of 1.07m OD.

7.2.26 Building 5 measured 8m from east to west and at least 6.5m from north to south. These measurements do seem large for a Roman clay and timber building, but two further postholes were recorded within the centre of the structure which may represent some further internal subdivision. Pottery recovered from the various beamslots and bedding deposits indicated a construction date of between AD 120 and AD 150.

7.2.27 Shortly after construction, Building 5 underwent a substantial rebuild. Beamslot [2425] went out of use and was replaced by a parallel beamslot [2533] at 1m OD to the east. Immediately to the west of [2425] another parallel beamslot [2531] was established at 0.87m OD. Both [2533] and [2531] had a number of postholes associated with them which would have housed timber supports. Further cuts [2384] and [2280] have been interpreted as continuations or alterations to the linear arrangement of [2531]. Bedding deposits and postholes associated with both [2531] and [2533] provided a highest surface level at 1.24m OD, with the combined ceramic evidence from the various deposits and features suggesting that the rebuild occurred at some point between AD 120 and AD 130. This suggests that Building 5 was altered shortly after its establishment. It is possible that [2461] was retained and that the 3m gap between the two new beamslots acted as either a new room or a corridor. The distance between [2461] and [2531] was 6m.



Plate 1: Foundation Deposit within beamslot [2425] – Building 5 (0.5m scale)



Plate 2: Beamslot [2425] – Building 5, facing north (0.5m scale)

Building 2 - Rebuild

- 7.2.28 It was also during Phase 2.5 that Building 2 underwent a substantial rebuild. The earlier western beamslot was removed and new bedding deposits were laid down at 1.28m OD. Replacing the earlier beamslot was a series of six postholes and post pits, with [2735] representing the largest of the group at 0.75m by 0.7m and 0.16m in depth. Along the southern edge of the building the remnants of a collapsed wall [2829] were recorded at 1.39m OD, suggesting that at least partial demolition had taken place. This may have related to earlier wall [2851], which was removed during this phase of reconstruction. Sealing the collapsed wall was a sequence of bedding deposits which were recorded at a highest level of 1.46m OD [2732]. The southern side of Building 2 appears to have been narrowed, as the new beamslot [2799] which formed the south of the building was constructed slightly to the north of [2851]. This cut followed precisely the same alignment as the earlier wall however, and measured 1.8m in length, 0.6m in width and 0.29m in depth at 1.35m OD. A single posthole [2801] was recorded in association with this beamslot. A further square post-pit [2819] to the south of [2799] suggested that the building may have continued to the south and again may have been associated with the same structure as Building 1.
- 7.2.29 At the northern end of the building earlier beamslot [2987] was removed, as evidenced by cuts [2981] and [2983] and pits [2938] and [2941] which appear to have related to robbing and / or re-flooring. A sequence of bedding layers contemporary with those observed in the southern half of the building were then laid down and included a deposit of wall plaster [2846], which may well have related to the demolition of the earlier wall. This was capped by a loose mortar floor surface [2866] at 1.55m OD. The new wall was defined by beamslot [2924], which followed precisely the same alignment as earlier cut [2987] and measured 1.98m in length, 0.6m in width and 0.14m in depth at 1.15m OD. A series of four postholes were associated with the beamslot and would have housed timber structural supports. Within the centre of the building a further series of five postholes were recorded, with four of these arranged on a perpendicular axis to both [2924] and [2799], and potentially representing an internal division within the structure.
- 7.2.30 Following the rebuild, Building 2 now had internal dimensions of 5m from north to south, and at least 6.5m from east to west. The ceramic material recovered from the various structural features and bedding deposits suggested that these works took place between AD 120 and AD 150. A sequence of two pits and a posthole to the west of the property contained pottery dating to between AD 70 and AD 160.
- 7.2.31 One final phase of rebuilding was recorded in association with Building 2, and these works again centred upon the north of the structure. Beamslot [2924] was removed, as evidenced by a series of robber cuts. A new, larger linear cut [2701] was then introduced on the same alignment and measured 4.1m in length at 1.47m OD. Interpreted as a beamslot, it was however possible that the wall footings had been removed at a later date and that [2701] was in fact a robber cut. A new north-east south-west aligned wall footing [2714] was then

introduced to the east and represented either the new eastern extent of the building or a new internal partition. Measuring 1.54m in length, 1.36m in width and 0.45m in depth, a total of fourteen postholes were recorded within the cut. An associated beaten clay floor surface [2715] was also recorded at 2.09m OD. Ceramic evidence suggested that these final alterations took place between AD 90 and AD 160.

Building 3 – Rebuild

- 7.2.32 Building 3 underwent some dramatic alterations in Phase 2.5. The initial northern beamslot [2654] was removed, as evidenced by a small number of pits and levelling deposits. Layer [2622] appeared to have been heat modified and in turn was sealed by [2610], a deposit which contained both the remnants of a demolished wall and fragments of glass slag at 0.97m OD. The new arrangement of the building was then defined by beamslot [2597], which ran perpendicular to earlier beamslot [2654] along a north-east south-west alignment. This was complimented by beamslot [2583], which followed the earlier arrangement of [2654], although in terminated to the west. Associated posthole [2581] to the east is likely to have acted as a structural support.
- 7.2.33 The south of the building was defined by a new beamslot [2491], which measured 4.2m in length, 0.8m in width and 0.39m in depth at 0.95m OD. This cut ran parallel with [2583] and was accompanied by a large post pit [2516] at its western end which appeared to define the south-west corner of the building. Associated post pits [2498] and [2502] followed the same arrangement as the earlier post pits in terms of defining the western extent of the building, whilst [2496] and [2483] have been interpreted as external features.
- 7.2.34 The new layout of the structure therefore suggests that [2597] represented a new subdivision, and that the gap between this beamslot and [2583] may have acted as an entrance to another room to the north. As seen, the new dimensions of this building were 7m from north to south and 6.5m from east to west. The diagnostic material recovered from the features and deposits suggests that these alterations took place between AD 120 and AD 150, although a tighter date range of AD 120 to AD 130 was provided by the pottery recovered from [2632].

Building 4 – Alterations

- 7.2.35 A number of new floor deposits were recorded in association with beamslot [1205] / [1218] on the southern side of the building. Recorded as sands and clays, these were observed at a 1.17m OD, with deposit [1084] containing pottery dating to between AD 120 and AD 160.

2.6 – Decline

- 7.2.36 The final sub-phase of early Roman activity related to a contraction of occupation on the site as the buildings went out of use and the area returned to more peripheral activity. A number of pits were recorded directly above Building 2, along with a section of collapsed wall [3250], which was observed at 1.5m OD. These cuts and deposits are likely to have been associated with the collapse and / or demolition of the structure which occurred at some point during the mid to late 2nd century. Notably a deposit associated with this sequence [2376] contained pottery dating to between AD 120 and AD 150, but also glass slag, suggesting an industrial association with Building 3. These two structures may well have formed part of the same complex.
- 7.2.37 Similar activity was noted in regards of Building 3, where several pits directly overlay the footprint of the building. Pottery recovered from pit [2500] dated to between AD 120 and AD 200, whilst square pit [2551] was interpreted as a possible cess pit. These cuts again suggest that the upstanding structure had largely been removed by the time the pits were excavated.
- 7.2.38 In much the same way, pitting associated with Building 5 indicated that this structure had also gone out of use, although little diagnostic material was recovered in association with these features. Numerous contemporary pits were recorded across the site in relation to this phase of activity and again indicate outlying activity. They were generally observed at between 0.45m OD and 1.27m OD and pottery recovered from the various pit fills indicated deposition at some point between AD 120 and AD 180. Several contemporary dumped deposits were also recorded at between 0.99m OD and 1.46m OD. Pit [2011] to the north of Building 3 was also found to contain glass slag, and this material most probably derived from Building 3.

7.3 Phase 3: Late Roman (AD 250-400) (Fig. 5)

- 7.3.1 During the Late Roman period the site appears to have been largely abandoned. Several deposits were recorded at between 1.1m OD and 1.33m OD, although these were largely sandy layers which did not relate to specific structures or features. Pottery recovered from [2150] provided a deposition date of between AD 270 and AD 300.
- 7.3.2 The remaining features belonging to Phase 3 comprised 9 pits which were recorded at between 0.74m OD and 1.33m OD. Pottery recovered from [2013] dated to between AD 250 and AD 400 whilst pottery from [2352] dated to between AD 270 and AD 400. Little could be stated about these features which did not appear to belong to or form part of any specific structures.
- 7.3.3 The final sequence of deposits on the site relating to Phase 3 concerned the creation of 'dark earth' horizons, reflecting the near complete abandonment of the site. These layers were observed at between 1.12m OD and 2.34m OD and many contained pottery dating to the entire Roman period. Tighter date ranges were however provided by context [2261] (AD 240-300) and [2041] (AD 270-300). Glass slag was recovered from layer [2885].

7.4 Phase 4: Saxo-Norman (1050-1150) (Fig. 8)

- 7.4.1 Evidence of Saxo-Norman activity on the site was very limited. Two deposits very similar to the Late Roman 'dark earth' horizons were recorded at between 1.38m OD and 1.45m OD. Layer [2000] contained pottery dating to between 1080 and 1150.
- 7.4.2 Along the eastern site perimeter a truncated north-east south-west aligned ditch survived and was given three separate context numbers – [2429], [2454] and [2456]. Measuring up to 1.2m in width and 0.4m in depth at a highest level of 1.6m OD, this linear extended over a distance of 9m. Notably, it followed the same alignment as the earlier Roman buildings and also followed the alignment of modern Borough High Street. As such it may have functioned as a roadside ditch or boundary division. A smaller gully [2427] lay to the west of the ditch and has been interpreted as an earlier incarnation of the subsequent linear.
- 7.4.3 The only other features relating to Phase 4 comprised a series of isolated pits which were observed at between 1.1m OD and 1.78m OD. Of these, [2488] and [2284] contained pottery dating to between 1080 and 1200 whilst [2301] contained a clay lining. Horn and antler working waste was recovered from pit [2470].

7.5 Phase 5: Medieval (1150-1350) (Fig. 9)

- 7.5.1 The site was occupied during Phase 5, yet the archaeological evidence suggested that the area was still sparsely settled. A number of pits were recorded in relation to this period, although few of these contained diagnostic material. Two of the most interesting cuts were observed at the northern end of the site in the form of two timber barrel wells (Plate 3). No finds were recovered from [517], which measured 0.89m in diameter by 0.66m in depth at 1.7m OD. A clay cap [515] was however observed in the upper reaches of the barrel, which may well indicate an industrial usage. Slightly further to the south, barrel well [541] measured 0.86m in diameter and 0.76m in depth at 1.44m OD. This feature contained five fills and produced pottery dating to between 1240 and 1350. Timbers from the barrel [540] were sent for dendrochronological assessment and have been identified as oak staves produced between 1219 and 1249. The staves originated from either northern France or south-western Germany, suggesting that barrel was originally used for transporting wine. The only other Phase 5 pit which produced diagnostic material was [1528], which contained pottery dating to between 1180 and 1350.



Plate 3: Timber barrel well

- 7.5.2 In the south-eastern corner of the site, a north-west south-east aligned linear was recorded over a distance of 7m. As this cut was truncated it was assigned two separate context numbers ([2704] and [2695]), and measured up to 0.74m in width and 0.52m in depth at 1.79m OD. Pottery recovered from the fills of both cuts dated to between 1140 and 1200. The ditch was subsequently re-cut and was given the context numbers [2688] and [2684]. Pottery retrieved from the fill of [2688] suggested that this episode occurred between 1180 and 1270.
- 7.5.3 Perhaps the most significant feature associated with Phase 5 was a large square pit cut [1600], which was revealed in the south-western corner of the excavation area. This cut was not fully exposed, but as seen measured 2.6m by 2.1m and 0.31m in depth at 1.18m OD. Lining the eastern side of the cut was a timber plank [1516], which measured 1.6m in length and 0.04m in width at 0.93m OD. In total, 24 stakes were recorded along the northern and eastern edges of the cut, with several to the south suggesting that the southern edge of the cut originally lay very close by. In the south-western corner, a small pit [1438] was likely to have functioned as a post pit. It was clear that the stakes were designed to provide structural support to [1600], and this feature would originally have been timber-lined along all four sides. It was most probably used for storage or waste purposes, and was filled by [1520], a deposit of silty clay which contained pottery dating to between the late 12th and early 13th centuries. Pottery recovered from [1438] dated to between 1170 and 1350. Several further stakeholes were recorded close to [1600], although it was unclear if these were related to the timber-lined structure.
- 7.5.4 Immediately to the south of [1600] a similar square pit [1455] was revealed, although this was truncated to the north and east. As seen it measured 2.2m by 1.4m and was 0.27m in depth

at 0.82m OD. A series of five posts were observed along the western and southern edges of the cut, suggesting that it was likely to have served the same function as [1600].

- 7.5.5 Sealing the backfill of [1600] was layer [1436]. This was recorded at 1.64m OD and contained pottery dating to between 1270 and 1350. Several other contemporary dumped deposits were observed across the site at between 1.14 and 2.21m OD, with [2638] dating to between 1180 and 1270, [1167] dating to between 1270 and 1400, [1480] dating to between 1240 and 1300 and [1138] dating to between 1240 and 1350.

7.6 Phase 6: Medieval (1350-1480) (Fig. 10)

- 7.6.1 Activity on the site increased considerably during Phase 6 as a number of structures were established. Representing the footings of buildings, many of the identified wall foundations are thought to have formed part of Brandon Place, the precursor to what would later become Charles Brandon's Suffolk Place.
- 7.6.2 Initial activity comprised levelling and dumped deposits, which were recorded at between 1.53m OD and 2.67m OD. At the northern end of the site, layer [317] represented the foundation level at which the walls were constructed at 2.41m OD. The earliest footing [244] was constructed from rough chalk blocks bonded with a light grey sandy mortar. Heavily truncated it was unclear in which direction the wall was aligned, yet it measured 1.18m in length and 0.64m in width. Abutting [244] to the south was north-west south-east aligned wall [155], which was 6m long and 1.1m in width at 2.51m OD. This linear was constructed from both rough chalk and Reigate stone blocks, bonded with an identical mortar to that of [144]. It is therefore possible that the stump of masonry represented by [244] originally ran perpendicular to [155].
- 7.6.3 At a distance of 1m to the west of [155] was a further fragment of chalk wall [297] which had been subject to a robbing episode. Recorded at 2.05m OD, this masonry formed part of the same wall as [155], yet returned to the north, where it was accompanied by a further fragment of truncated wall [311]. This suggested that [155] represented the southern limit of a structure with [297] and [244] forming the western and eastern counterparts, providing internal dimensions of up to 6m from east to west. A mortar spread [245] was recorded to the north of [244] at 2.36m OD and has been interpreted as a bedding deposit for a floor surface. A further wall fragment [305] was observed to the west of [155] although this survived in isolation.
- 7.6.4 Towards the southern end of the site, a further fragment of chalk wall foundation was identified in the form of [1024]. This wall ran parallel with [155] to the north, but as seen measured 2.02m in length, 1.41m in width and 0.6m in depth at 1.4m OD. At a distance of 4m to the north, a further parallel portion of wall was identified [1389], and these two footings may possibly have formed part of the same structure. A further fragment of isolated wall [3112] was identified to the south-east of [1024], whilst a possible sunken floor surface [2083] was identified at 0.63m OD to the north.

- 7.6.5 A further masonry structure was identified in the south-eastern corner of the excavation area, and this again aligned with the walls situated to both the north and the west. It was heavily truncated, but as far as could be determined the eastern side of the building was defined by north-east south-west aligned chalk wall foundation [579], which measured 1.44m in length, and 0.56m in width at 1.64m OD. At a distance of 5.5m to the west, parallel chalk wall [573] formed the western side of the building. The southern limit was delineated by wall [601], which lay 3.9m to the south of [573]. A chalk floor surface survived between [579] and [601], and a lack of further evidence for walls in the south-eastern corner of the structure suggested that an entrance may have been located in this position.
- 7.6.6 The remaining features belonging to Phase 6 comprised isolated pits and postholes, none of which produced a great deal of diagnostic material. These were generally observed at between 1.47m OD and 1.99m OD.

7.7 Phase 7: Early Post-Medieval (1480-1600) (Fig. 11)

The north-western structure

- 7.7.1 Phase 7 represented the establishment of Suffolk Place on the site following Charles Brandon's inheritance of Brandon Place from his uncle Sir Thomas Brandon in 1510. At the northern end of the site, initial construction of this building was indicated by the deposition of a number of levelling deposits. This was followed by the establishment of a north-west south-east aligned wall. The first element of construction was defined by a small chalk foundation block [110] which supported the main structure of the overlying wall [85]. This wall constructed from red unfrogged bricks bonded with a lime mortar and measured 8.7m in length, 0.4m in width and 1.5m in depth at 3.47m OD. A further portion of the wall was recorded in the form of [84] which represented a possible repair on the south side of [85]. At a distance of 2m to the south-east of [85], perpendicular wall [247] / [246] was interpreted as forming part of the same structure.
- 7.7.2 Running parallel with [85] at a distance of 3.5m to the south was contemporary wall [158] which measured 2.3m in length and 0.6m in width at 2.5m OD. This was butted along its southern edge by perpendicular wall [159], which measured 1.1m in length as seen. A similarly aligned wall [158] was recorded at a distance of 3.43m to the east of [159] and aligned with [246] / [247], extending over a distance of 3.92m as seen. A crushed brick and mortar floor surface [233] was recorded between wall [85] and [158], suggesting that this was internal to a building which was most probably bounded by [246] / [247] to the east. The combination of wall [159] and return of [158] to the south of [158] indicated the presence of either a corridor extending to the south, or another room belonging to the same building. External features to the east of [246] / [247] included a stump of wall [249] and a drain [228] with an associated brick floor [229], which was observed at 1.38m OD.

The north-eastern structure

- 7.7.3 One of the most substantial features relating to Suffolk Place was discovered in the north-eastern corner of the excavation area where a long, linear sunken brick feature was revealed (Plate 4). This structure was clearly situated within a large construction cut. The southern end was defined by north-west south-east aligned brick wall [459] which was constructed from red unfrogged brick bonded with a yellow lime sandy mortar. Measuring 3.65m in length and 0.80m in width at 1.59m OD, both the western and eastern ends of the wall returned towards the north-east. At a distance of 2.6m to the north of [459]'s eastern end was a continuation of the north-east south-western return in the form of wall [371], which was 1.12m long, 0.51m wide and 0.3m deep at 1.51m OD. This wall was accompanied by parallel wall [370], which was situated 0.58m to the west. Notably [370] did not represent a direct continuation of [459]'s western end, suggesting that a further north-west south-east return was located at some point between these two fragments of wall.
- 7.7.4 Further continuation of the structure was discovered 2.45m to the north of [371], where [371] carried on as [369] and [366] for a further 10.78m at 1.62m OD. At the northern end of this stretch the wall narrowed to 0.24m in width and was given the context number [440]. Here it continued for a further 1.07m before widening out again to 0.45m in the form of wall [442].
- 7.7.5 The western side of the structure continued to the north of [370] as [368] for a further 2.9m before returning to the north-west. After continuing for 1.96m, [368] then returned to the north-east for a further 3.82m before returning again to the south-east for 1.6m. At this point [368] abutted wall [367] which ran parallel with [366] for 2.35m at which point the wall was truncated. It did however continue 2.8m to the north in the form of wall [365], which measured 2.1m in length, 0.45m in width and 1.08m in depth at 1.37m OD.
- 7.7.6 The base of the structure was defined by a series of brick floor surfaces which had suffered various degrees of truncation. Floor [444] was recorded between walls [369] and [368] and survived at 0.3m OD. This was accompanied to the north by floor [443] at 0.33m OD which was abutted by [503] at 0.34m OD. Further to the north between walls [365] and [440], floor [442] was recorded at 0.29m OD. This was overlain by timber planks [448] and [450] which were laid lengthways along the base of the structure. These were separated by a series of bricks [449], which were in turn sealed by another large timber [500] at 0.63m OD.
- 7.7.7 The structure continued further to the north at this point, with wall [2670] representing a continuation of [441] at a distance of 2.5m to the north. On the western side, wall [2669] represented a continuation of [365] at a distance of 0.5m to the north. Wall [2669] continued for a further 2.5m before returning on a right angle towards the north-west. Also assigned the context number [2672], this wall then continued for a further 12.8m at a highest level of 1.58m OD. It was accompanied on its northern side by parallel wall [2671], which continued for 7.8m before being truncated at its eastern end. A further continuation was recorded 1.47m to the east in the form of wall [2662]. Brick floor surface [2706] survived at 0.33m OD between walls [2670] and [2669]. Further evidence of the floor [2725] was recorded between walls [2662]

and [2669] at 0.51m OD. In combination therefore, this structure extended at least 14.2m at its northern end along a north-west south-east axis, before returning to the south-west over a distance of 22m. The gap between the two walls was generally c.0.6m in width.

- 7.7.8 Remaining features possibly associated with the structure included a fragment of wall [458] to the south-west of [370], and wall [460] which ran parallel with [459] at a distance of 3.43m to the south.

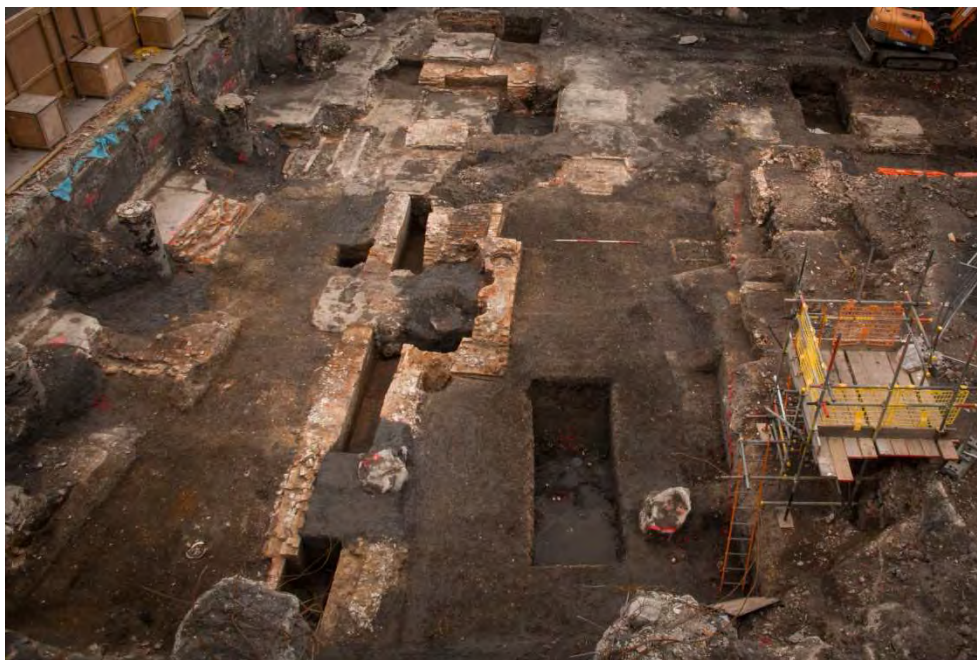


Plate 4: Brick walls [365], [366], [367], [369], [370], [371] & [459], looking south

A substantial wall

- 7.7.9 The truncated remains of a substantial wall footing were recorded to the south of wall [460]. Running parallel along a north-west south-east alignment, the western end of this wall was defined by [787], which was constructed from red unfrogged brick bonded with a yellow sandy lime mortar. Recorded at a highest level of 1.83m OD, this block of masonry was accompanied by three associated stakeholes to the west, which may have been associated with the construction process.
- 7.7.10 Further elements of the wall were observed to the east as contexts [712], [717] and [569], with these footings measuring up to 2.5m in width at between 1.35m OD and 2.62m OD. The total depth of the foundations was not observed as the remnants of the wall were left in situ. The wall continued to the east of [569], although slightly further to the south, suggesting that there may have been a north-east south-west return at this point. It was also noted that the continuation in the form of wall [577] / [599] was thinner at this point, measuring just 0.36m in width at 2.04m OD. Further remnants of the wall were then discovered to the east as [586],

[587] and [588], although the western end of [586] returned towards the south-west, and [588] also formed the north-east south-west return to [587].

7.7.11 In total therefore, this wall extended over a considerable distance of at least 28.13m. A number of bedding deposits capped by chalky floor surface [575] at 2.16m OD to the north of wall [577] / [599] indicated that the open space between the wall and [460] may well have been internal. To the north of [787] a further fragment of wall was revealed [719], and this appeared to align with wall [159] which formed part of the structure in the north-west corner. It was clear that walls [586], [587] and [588] belonged to another room or structure to the south of the wall, and this measured 2.74m in width.

Internal cellars and further walls

7.7.12 To the south of [577] / [579], a series of internal cellars were recorded. All of these were situated within construction cuts indicating that they were subterranean features. The northernmost of the three was defined by north-west south-east aligned wall [2168] which was constructed from orange unfrogged brick bonded with a sandy mortar. This wall measured 2.9m in length before it returned towards the south-west for a further 3.9m. It measured 0.5m in width and 0.64m in depth at 2.22m OD. Abutting the southern end of [2168] was buttress [2289], which was conjoined by north-west south-east aligned wall [2169]. This formed the southern limit of the cellar, giving internal dimensions of 3.3m by at least 2.35m. A potential continuation of [2289] was observed to the east in the form of wall [597].

7.7.13 Abutting the western end of [2169] was a further north-east south-west aligned wall [2170]. It was unclear if this wall represented an original part of the northern cellar, or possibly an alteration to the cellar arrangement. This wall represented the western extent of another cellar and measured 3m in length, 0.21m in width and 0.87m in depth at 1.9m OD. The southern side of this central cellar was defined by wall [2205], although this was heavily truncated and measured just 0.58m in length. Bedding layers were observed within the centre of the structure and were sealed by the remnants of brick floor surface [2322] at 1.63m OD. A charcoal deposit recorded in association with the floor contained pottery dating to between 1480 and 1600.

7.7.14 A third cellar was then defined to the south, with this structure's northern extent represented by wall [607]. Again little remained of [607], although it is possible that this wall formed a continuation of [2205]. The eastern and southern sides of the southern cellar were defined by wall [603], providing internal dimensions of 3.43m by at least 2.45m. An internal mortar floor surface [2258] was recorded at 1.85m OD and contained pottery dating to between 1480 and 1600.

7.7.15 The overall impression created was therefore of three cellars running from north to south, although with the central cellar offset to the west of the northern cellar, and the southern cellar

offset to the west of the southern cellar. Further features associated with these structures included north-east south-west aligned wall [606] and associated floor surface [605].

7.7.16 A further series of contemporary brick walls were recorded to the south-east of the three cellars. Surviving in poor condition, little could be stated about these structures due to their fragmented nature. It was clear however that north-west south-east aligned wall [632] was internal. This measured 1.46m in length and 0.47m in width at 2.13m OD and had bedding layers for internal floor services recorded at between 2.04m OD and 2.1m OD to the south and east. The remnants of an associated perpendicular wall [633] were observed to the south. Another wall to the east [611] was heavily truncated, although this revealed the construction method used in much of the Phase 7 foundations. This principally comprised an arched footing constructed from unfrogged red brick bonded with a light yellow mortar. This footing was aligned east west, and thus formed a continuation of [632]. It was abutted to the north by perpendicular wall [3119] which was 1.96m long and 1.09m wide as seen at 1.73m OD. Wall [3119] notably aligned with wall [588] further to the north.

7.7.17 Little could be stated about wall [619] and floor surfaces [2697] and [2698], which survived in isolation at 1.79m OD.

The southern extent

7.7.18 A considerable amount of Tudor masonry was revealed along the southern site boundary, and these structural remains also related to Suffolk Place. Once again they had suffered heavily from truncation, and at this stage determining the precise layout of the building is not possible. The foundations were generally situated within deep construction cuts, and arched footings were regularly used for structural support.



Plate 5: An example of one of the arched wall footings – [2212], [2611 & [2086], looking east

7.7.19 From what can be determined however, the possible internal frontage of the southern range of the building was defined by substantial north-west south-east aligned wall consisting of brick walls [1104] and [1210] resting on large chaff foundations [1317] / [1315] (Plate 6). Extending over 16.37m in length, 1.8m in width and 1.2m in depth at 1.5m OD, this wall was truncated at both ends. At a distance of 3.23m to the east of [1315] / [1317] was perpendicular wall [2354]. Along with wall footings [2046], [2047] and [3019], this masonry formed a substantial north-east south-west aligned foundation which was 1.4m wide and extended over a distance of at least 14.31m. The remnants of brick floor surfaces above [2354] and [3019] as well as to the east of [2047] at between 1.89m OD and 1.96m OD did suggest however that these footings were structural, and did not represent specific internal partition walls.



Plate 6: Brick walls [1104] / [1210] on top of chalk foundations [1317] / [1315], looking east (1m scale)

7.7.20 A parallel Series of footings survived at a distance of 3.43m to the east and consisted of [2255], [3241] / [647], [2066] and [643]. In combination, these foundations extended over a distance of 12.74m and measured up to 0.71m in width at 1.78m OD. Floor surfaces were again observed to the west of [647] / [3241], suggesting that an open area covered both of the north-east south-west aligned footings. The eastern foundation does appear to have formed a partition however, as a perpendicular wall survived to the east of [2255]. This group of footings would have joined the eastern group forming an internal partition. It comprised walls [628] and [627] which appeared to carry on towards wall [606]. If this were the case, then the footing extended over a distance of 20.5m.

- 7.7.21 A parallel north-west south-east aligned foundation was observed at a distance of 5.8m to the south of [628] in the form of footing [2825], which was extant at 1.86m OD. No further evidence of this wall was recorded to the east, but brick floor surfaces were observed between the two groups of footings at between 1.65m OD and 1.72m OD. This suggested an internal area. A further north-west south-east aligned wall in between the two footings [3243] provided evidence of further internal partition. Another parallel footing [2611]/ [2212] with arched foundation [2086] (Plate 5) was recorded to the north of [2255], and this would have abutted [2047] of the western group of north-west south-east aligned footings. Such a foundation may have provided another partition, although a brick floor surface [2203] was observed on the south side of the wall.
- 7.7.22 Along the very southern perimeter of the site to the south of the two large north-east south-west aligned footings, a further series of brick features were revealed. Interpreting these structures accurately has not as yet been possible, but both walls [648] and [649] were similar in plan and appeared square to rectangular in shape. As seen, [648] measured 3.9m in length from east to west, with right angle returns at both the western and eastern ends extending up to 1.9m. This suggested that the room or area defined by the red brick walls may have been used for storage, and further evidence for a similar structure was revealed to the west. Following the same north-west south-east alignment of [648] and [649], walls [697] and [695] defined a further brick edifice which measured 4.3m in length. Wall [495] returned to the south-west at its eastern end, before returning to the south-east once again. This provided an internal width for the structure of 0.98m at a highest level of 1.94m OD. At the base of the structure was brick floor [696] which was observed at 1.58m OD. The western end was formed by wall [705], whilst a later internal partition appeared to have been formed by the introduction of wall [698]. All three structures were clearly arranged in a row along the southern side of the building and as such they may well have functioned as vaulted cellars.
- 7.7.23 The remaining walls belonging to the building were hard to define with [1059] and [2940] as yet remaining uninterpreted. Walls [671] and [1519] did however run parallel at a distance of 0.8m to the west of the westernmost north-east south-west aligned footings, and may have functioned as part of a room or corridor.

Demolition

- 7.7.24 Suffolk Place was demolished in the mid 16th century, and demolition deposits associated with this episode were primarily located within the long linear structure in the north-eastern corner of the site. Numerous timber planks were recovered from the backfill of the drain along with a number of roundels from a terracotta frieze (see Appendix 12). It seems likely that the timbers represented the fittings to which the terracottas were attached, and that they were backfilled into the brick linear when the building was torn down.

7.8 Phase 8: Post-Medieval (1600-1700) (Fig. 12)

- 7.8.1 Suffolk Place is understood to have been demolished in 1557 following the sale of the site by Nicholas Heath, the Archbishop of York. There was little archaeological evidence relating to the period between 1557 and 1600 however, particularly in regards of the ceramic dating. Demolition deposits were recorded across the site, especially towards the north-west and the south-east, and these horizons were observed at between 1.45m OD [452] and 2.73m OD [270]. Much of this material appears to have been landscaped during the 17th century and pottery was recovered from contexts [710] and [711], respectively dated 1580-1700 and 1630-1700.
- 7.8.2 Many of the remaining features were pits, from which very little dating evidence was recovered. In the north-western area of the site a considerable attempt at robbing seems to have taken place, with numerous chunks of Phase 6 wall [155] removed. Of the various robber cuts recorded here, [219] contained pottery dating to between 1650 and 1700, and [174] contained pottery dating to between 1650 and 1750. Across the site, further fragments of Suffolk Place's foundations had also been removed.
- 7.8.3 Little structural evidence was recorded in relation to this phase of activity, although some evidence was revealed along the southern site boundary. Towards the south-west, a series of three cuts formed a square structure. North-west south-east aligned cut [1418] measured 1.2m in length, 0.3m in width and 0.09m in depth at 1.89m OD. It was accompanied to the west by perpendicular cut [1424] and to the east by [1420]. All three footings contained crushed brick material and provided an internal space of at least 0.98m by 0.98m. Set within the centre of the structure was posthole [1422], which measured 0.17m in diameter and 0.26m in depth at 1.88m OD. The precise function of this structure was unclear.
- 7.8.4 Further isolated fragments of brick wall included [1044] and east-west aligned wall [2074] and [2075]. In the south-eastern corner of the site however, the remnants of a more substantial structure were revealed. Set within a construction cut, north-east south-west aligned wall [2213] extended for 0.58m in length and 0.12m in width at 1.91m OD. This was accompanied to the south by perpendicular wall [2253] which continued towards the south-east and measured 1.79m in length and 0.37m in width. The structure had been subject to later repairs, and [2253] was overlain by brickwork [2254], which measured 3.12m in length. Wall [2213] was overlain by [2172]. These two walls represented the western and southern limits of a building and internal features included pit [2245] and stakeholes [2235] and [2233]. This clearly represented a property which once fronted onto Borough High Street. Further potential elements included north-west south-east aligned walls [610] and [636] as well as stone floor surfaces [608] and [2641] which were respectively observed at 1.93m OD and 1.64m OD.

7.9 Phase 9: Post-Medieval (1700-1820) (Fig. 13)

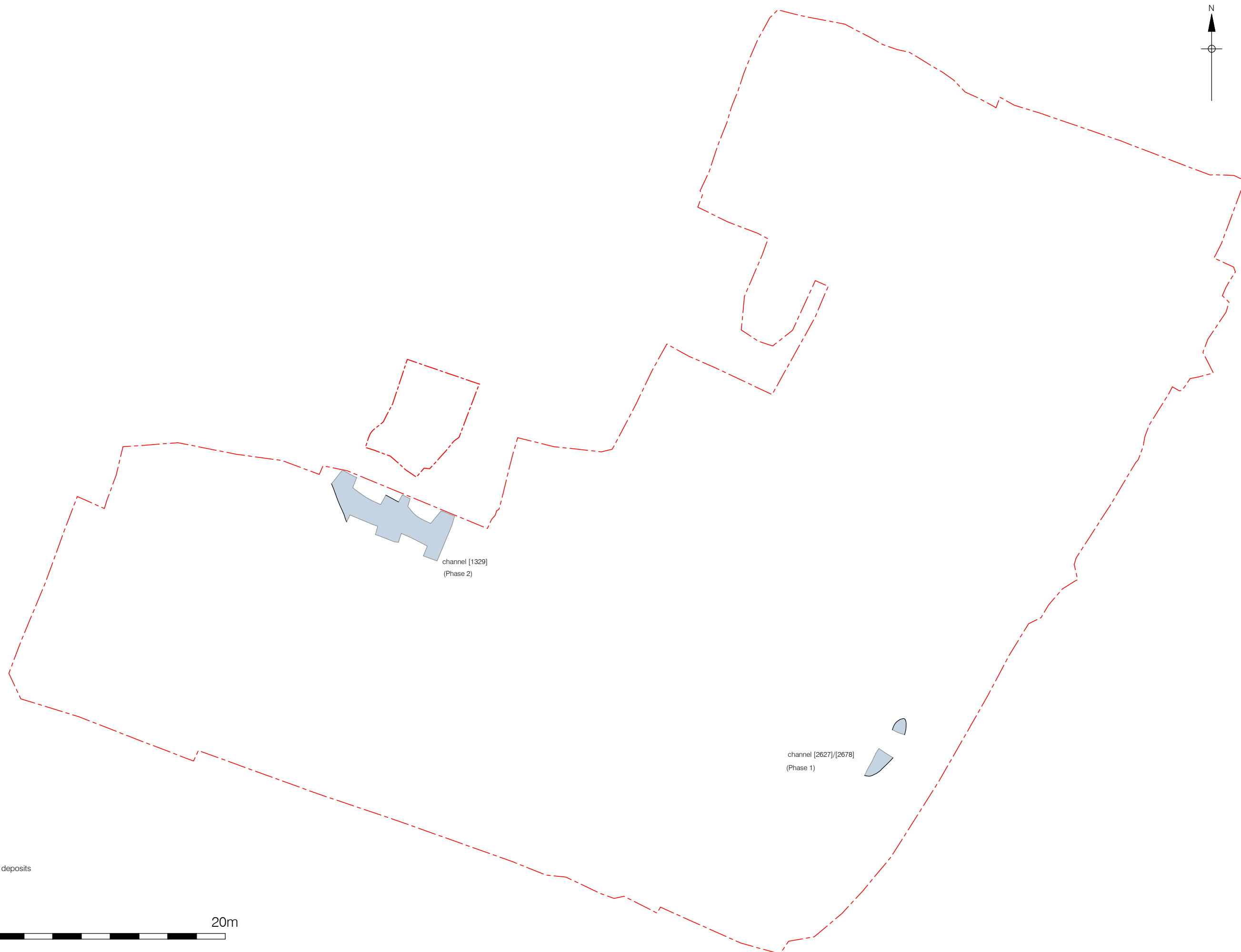
- 7.9.1 The primary focus of activity during Phase 9 was centred on the northern end of the excavation area. This appeared to relate to a single building which may have had an industrial function. The northern limit of the structure was defined by north-west south-east aligned walls [109] and [87]. Constructed from unfrogged red brick bonded with a lime mortar, these two walls measured 0.6m in width and extended over a distance of 5.8m at 3.09m OD. A truncated internal drainage system running parallel with the walls was identified 3.7m to the south and comprised four walls. The northern side of [102] formed the northern half of the drain along with [100], whilst the southern side was defined by [108] and the southern element of [102]. In combination the drain measured 4.1m in length and 0.70m in width at 2.03m OD. A later addition to the system was identified in the form of [98], a north-west south-east aligned red brick drain which measured 1.15m in length and 0.58m in width at 2.06m OD. The base of the drain was tile [99] at 1.89m OD. Further elements of masonry associated with the drainage system included [103] and [105].
- 7.9.2 Additional structural elements of the building were recorded to the south-east, and based on conjecture [98] drained either to or from these structures. The western limit of the south-eastern area of the property was defined by north-east south-west aligned brick wall [154]. This measured 4.8m in length and 0.2m in width at 3.62m OD. It was not fully exposed, but a south-eastern return in the form of brick wall [199] was recorded to the south. Effectively, these two walls formed the western and southern elements of a room which measured at least 3.13m in width and 4.8m in length. Internally the remnants of a brick floor surface [152] & [153] survived at 2.65m OD, whilst a drain [816] and a barrel well [172] were recorded at the northern end of the room.
- 7.9.3 To the east of this room a north-west south-east aligned corridor was defined by northern walls [190] and [191], and by southern walls [254] and [255]. Whereas the northern walls were constructed from brick, re-used material in the form of chalk and Reigate stone was observed within the southern walls. In total the corridor measured 9.6m in length and 1.47m in width, with the walls observed at a highest level of 2.76m OD.
- 7.9.4 A further room was recorded to the north of the corridor, with the eastern extent defined by north-east south-west aligned wall [181]. This measured 2.12m in length and an associated chalk and Reigate stone wall [178] survived to the north-east. This effectively formed the northern extent of the room and it was abutted at its eastern end by wall [180]. This wall ran from north-east to south-west before returning towards the north-west at its southern end. Dimensionally this room measured 5m from north to south and at least 5.1m from east to west. An internal floor surface [179] was recorded at 2.52m OD whilst the remnants of a tile hearth [290] abutted wall [191]. Notably two large circular brick structures [182] and [185] were situated within this room. They were not excavated, but clearly had some of industrial function, although at present this is unclear. Clay tobacco pipe recovered from [186], the fill of [185], dated to between 1680 and 1710.


7.9.5 An additional room was most probably situated at the eastern end of the corridor as a further circular brick structure [194] was identified in this location. Wall [258] is understood to have been all that remained of the northern and western elements of the structure. To the east a brick floor surface [364] was observed at 1.96m OD along with a rectangular pit [408] which was internally lined with clay and tile.

7.9.6 The remaining features belonging to Phase 9 were limited and consisted of isolated pits, one of which [716] contained pottery dating to between 1710 and 1750. A well was identified in the south-eastern corner of the site [2649], whilst a north-west south-east aligned drain was revealed in the form of masonry [2256], [2171], [2292] and [2204]. Continuing over a distance of 1.96m, this drain returned towards the south-west at its eastern end for a further 1.96m. It was capped with tiles at 2.1m OD.

7.10 Phase 10: Post-Medieval (1820-Modern) (Fig. 14)

7.10.1 The final phase of archaeological activity concerned modern footings and intrusions. Little could be stated about these features which were spread across the site. The potential outline of a building was revealed in the south-eastern corner of the site along with an associated drain.



 channel deposits



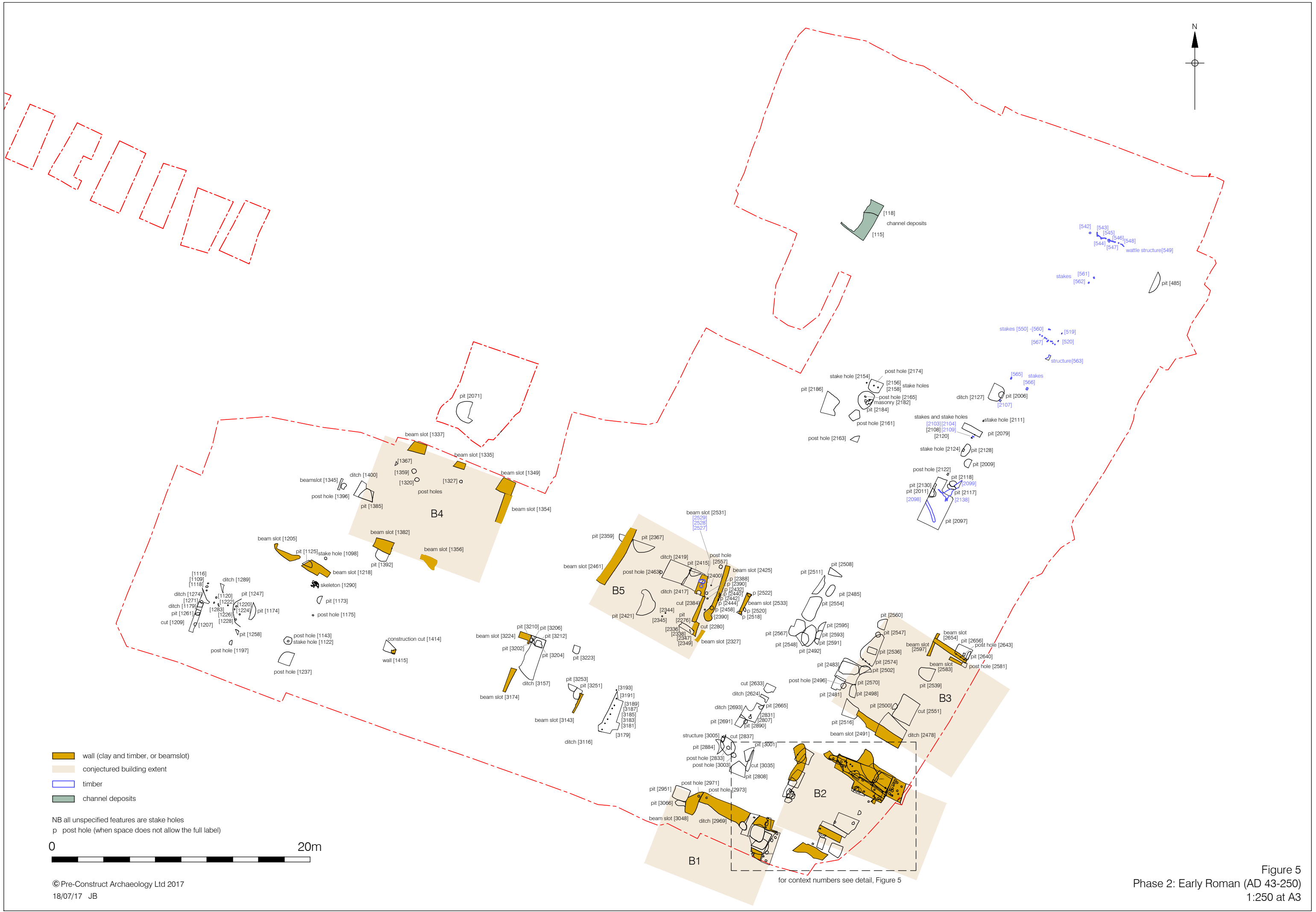
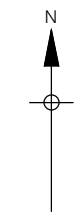


Figure 5
Phase 2: Early Roman (AD 43-250)
1:250 at A3

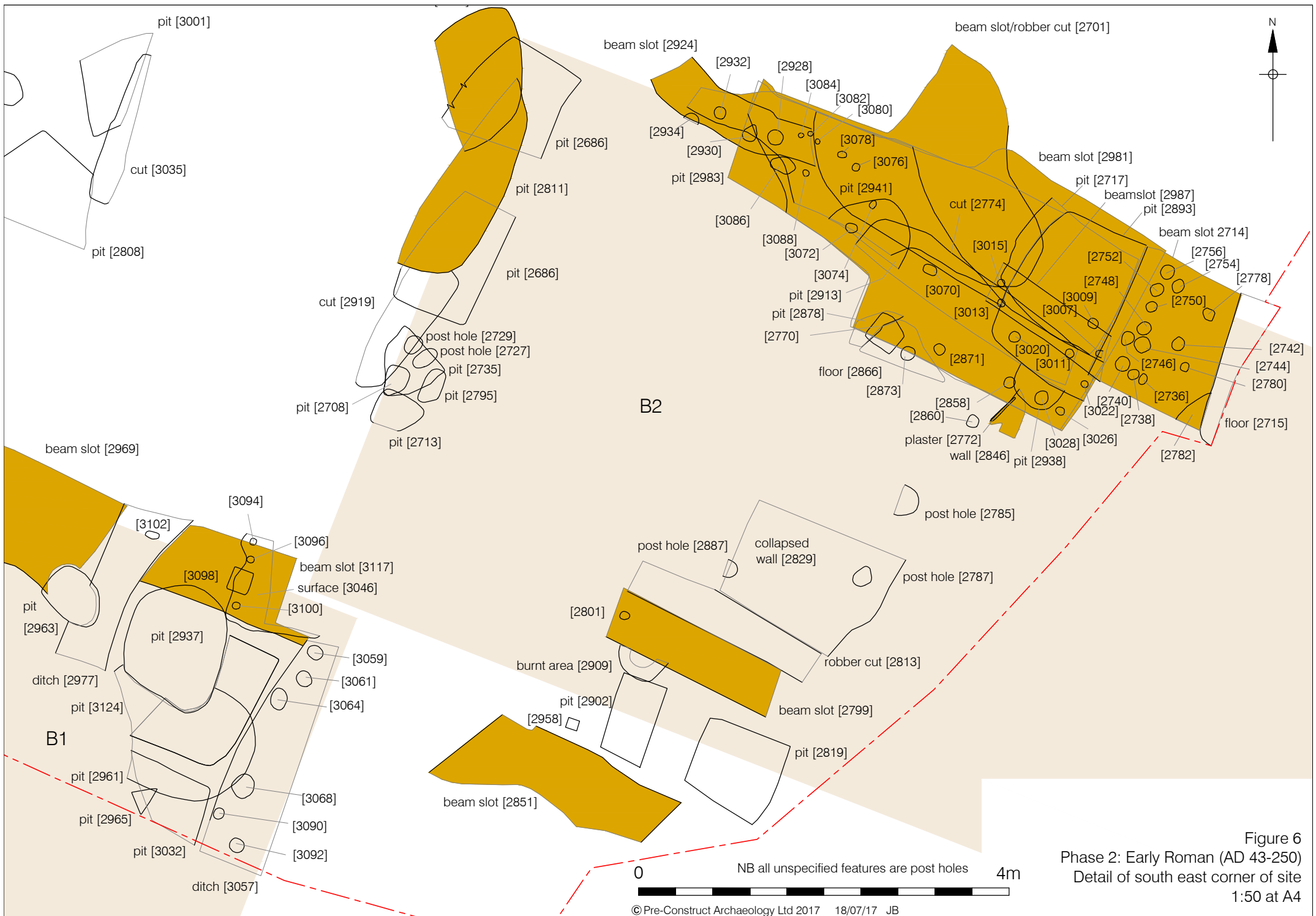
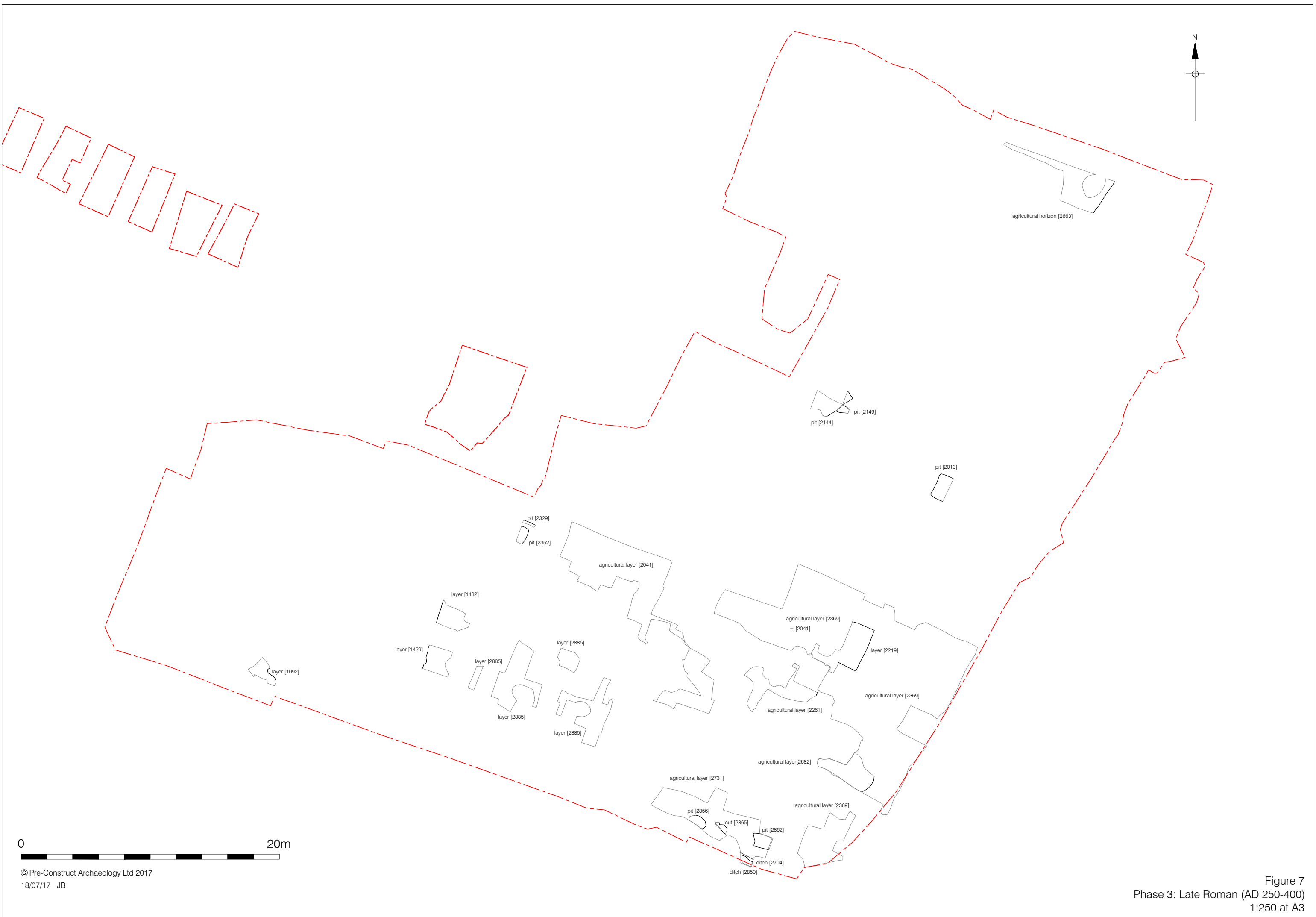


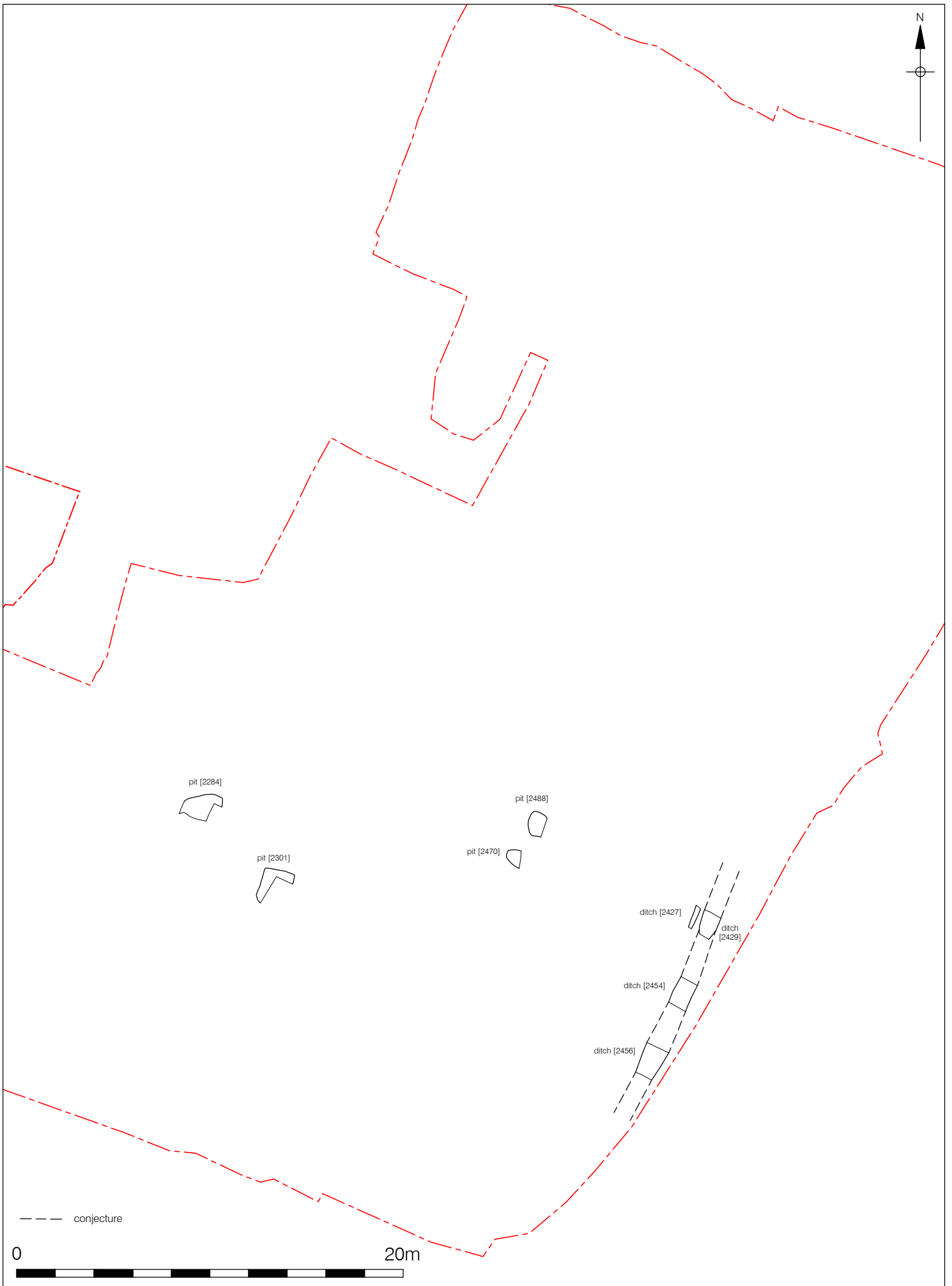
Figure 6
 Phase 2: Early Roman (AD 43-250)
 Detail of south east corner of site
 1:50 at A4

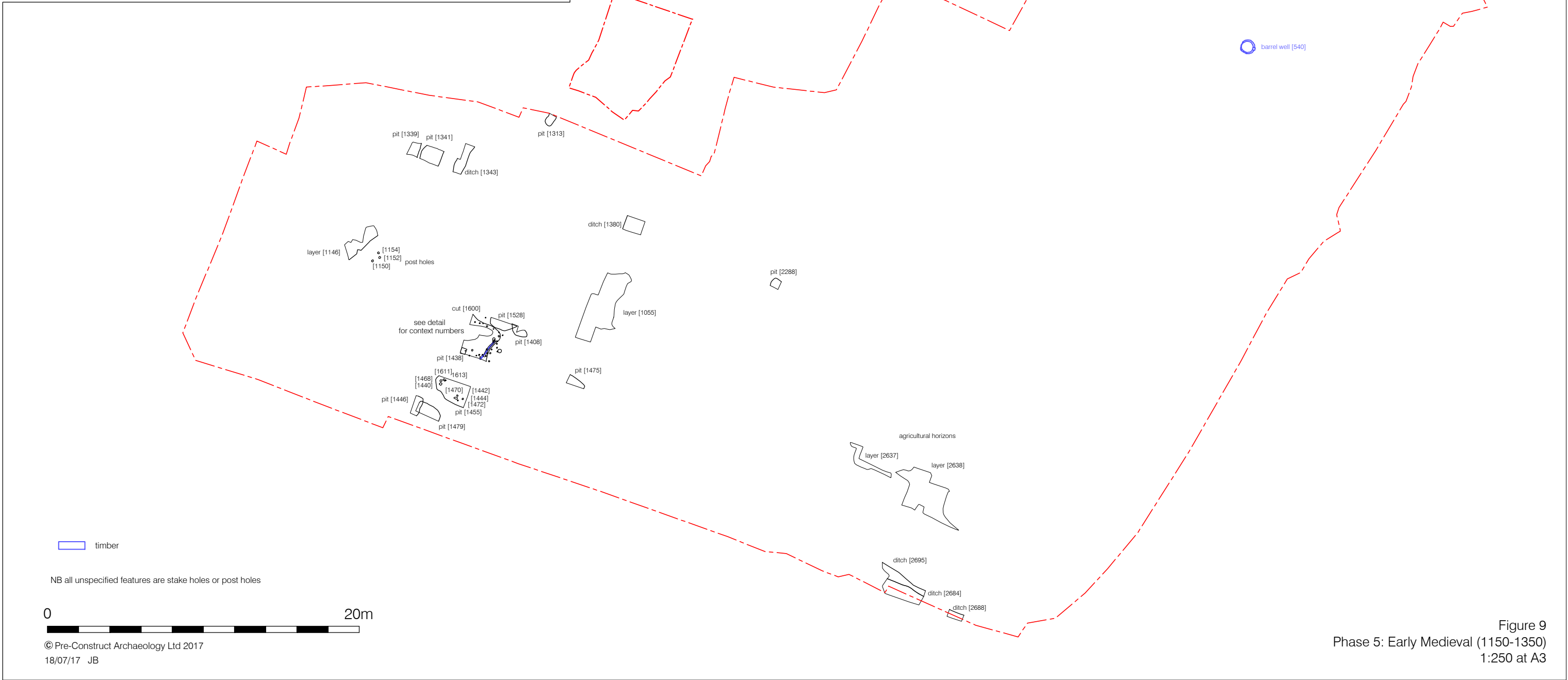
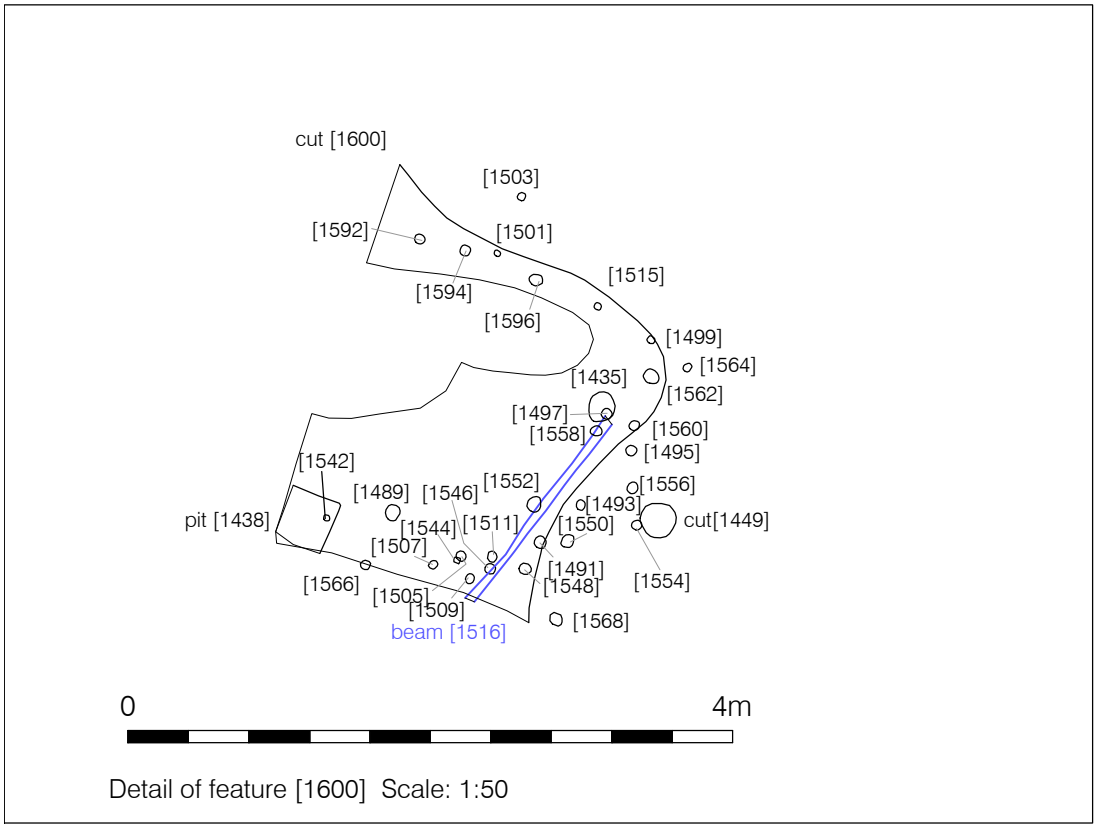


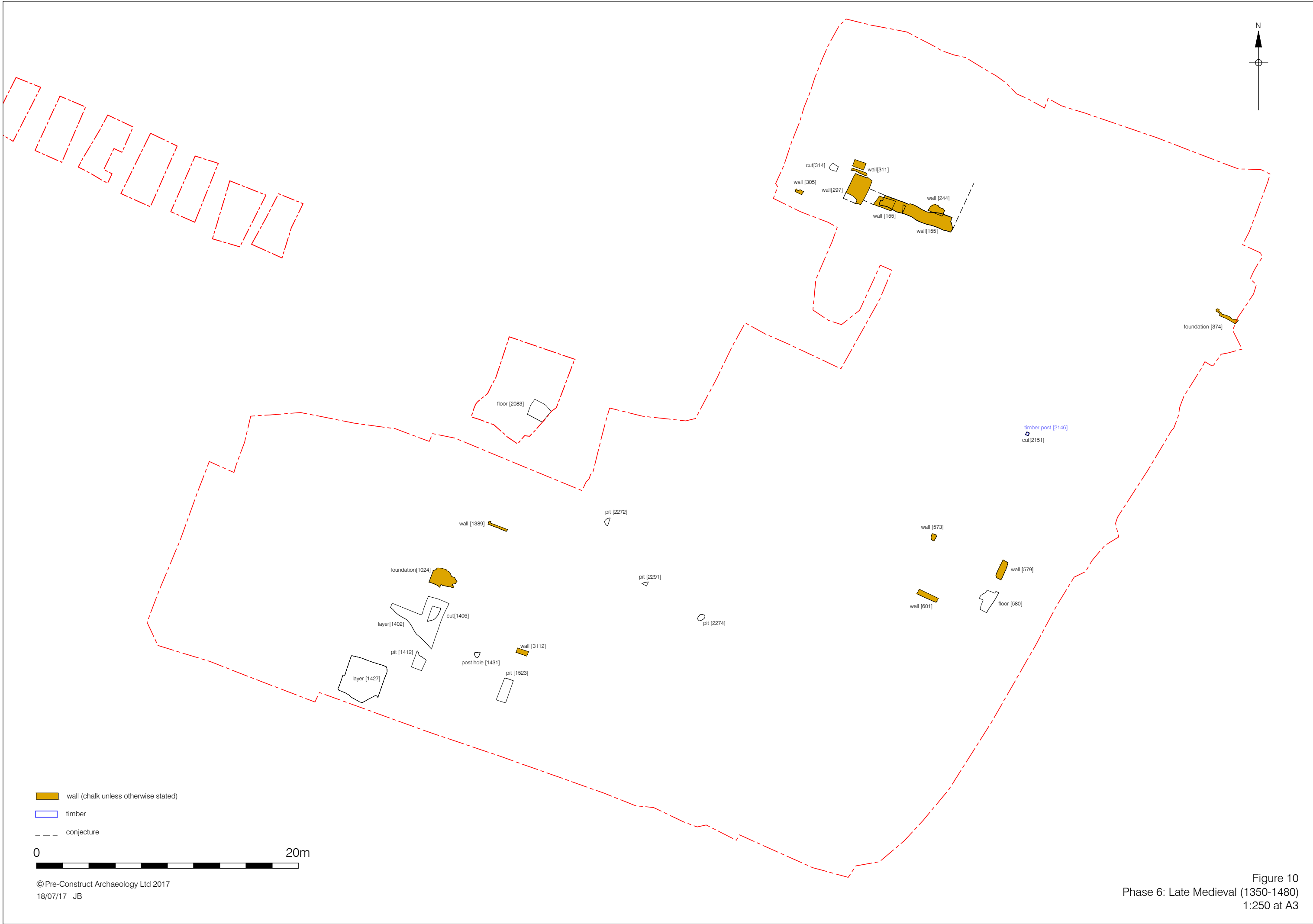
0 20m

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Figure 7
Phase 3: Late Roman (AD 250-400)
1:250 at A3







■ wall (chalk unless otherwise stated)

■ timber

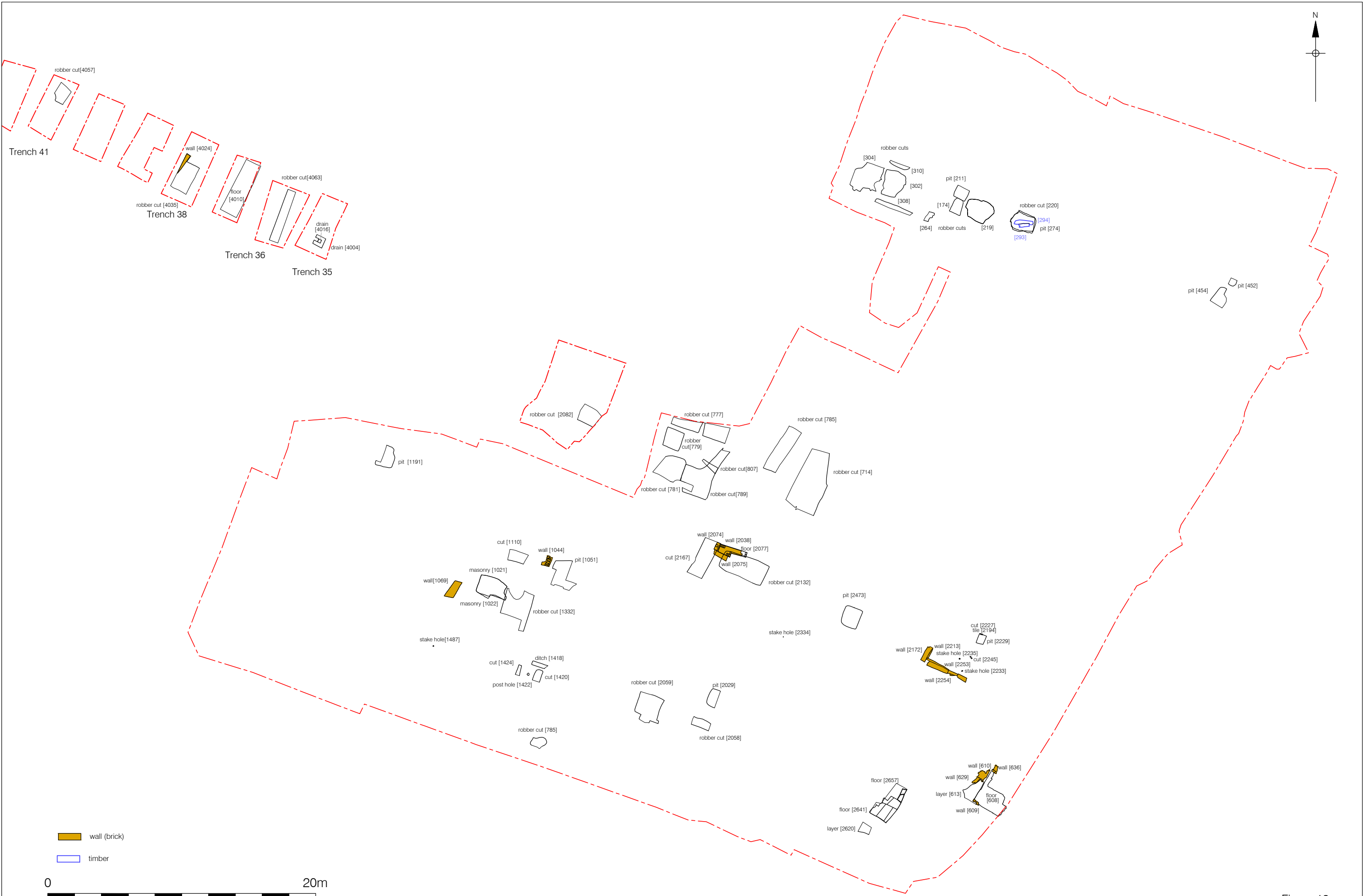
- - - conjecture





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Figure 10
Phase 6: Late Medieval (1350-1480)
1:250 at A3





-  wall (brick)
-  timber

0  20m

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Figure 12
Phase 8: Mid Post Medieval (1600-1700)
1:250 at A3

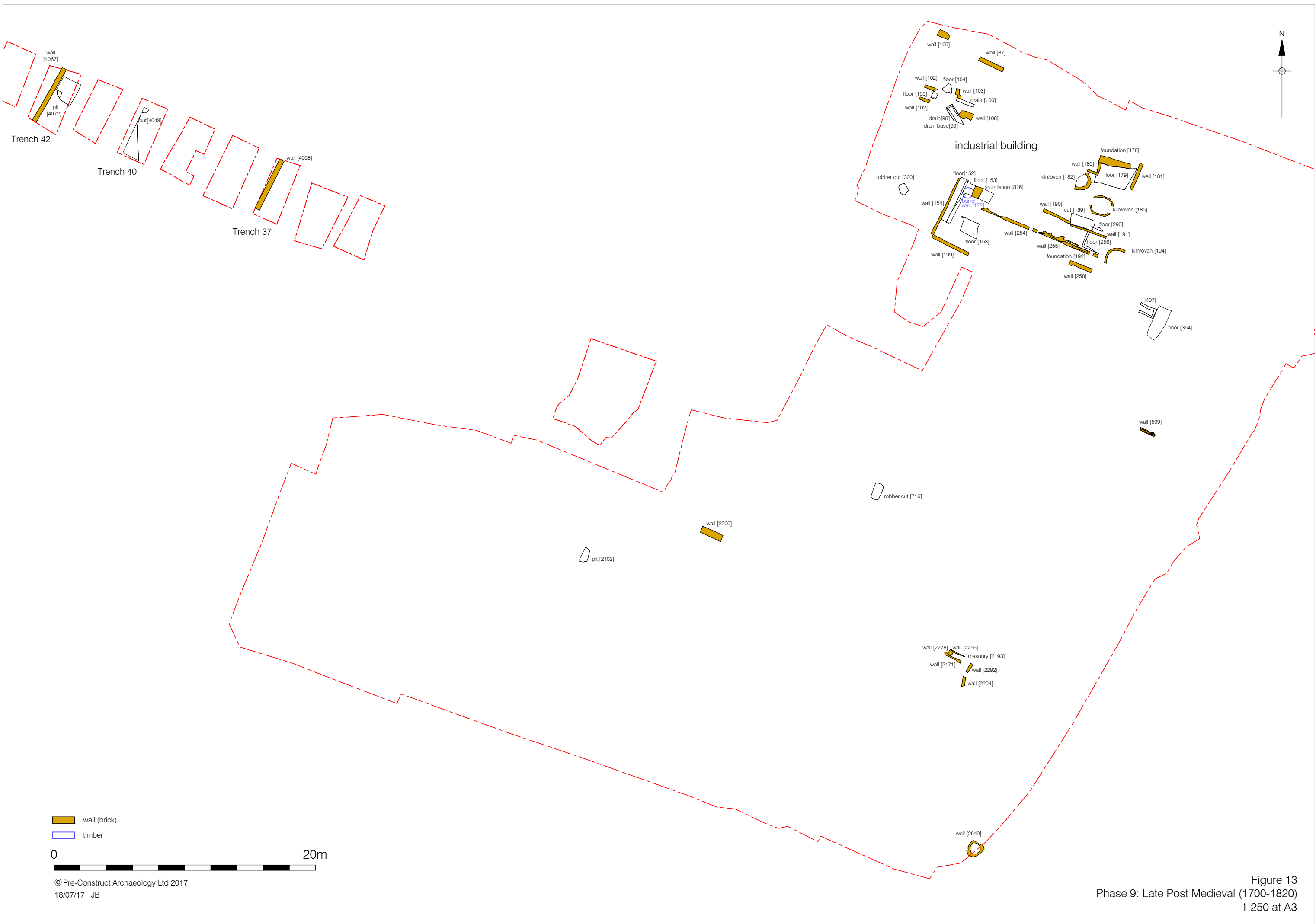
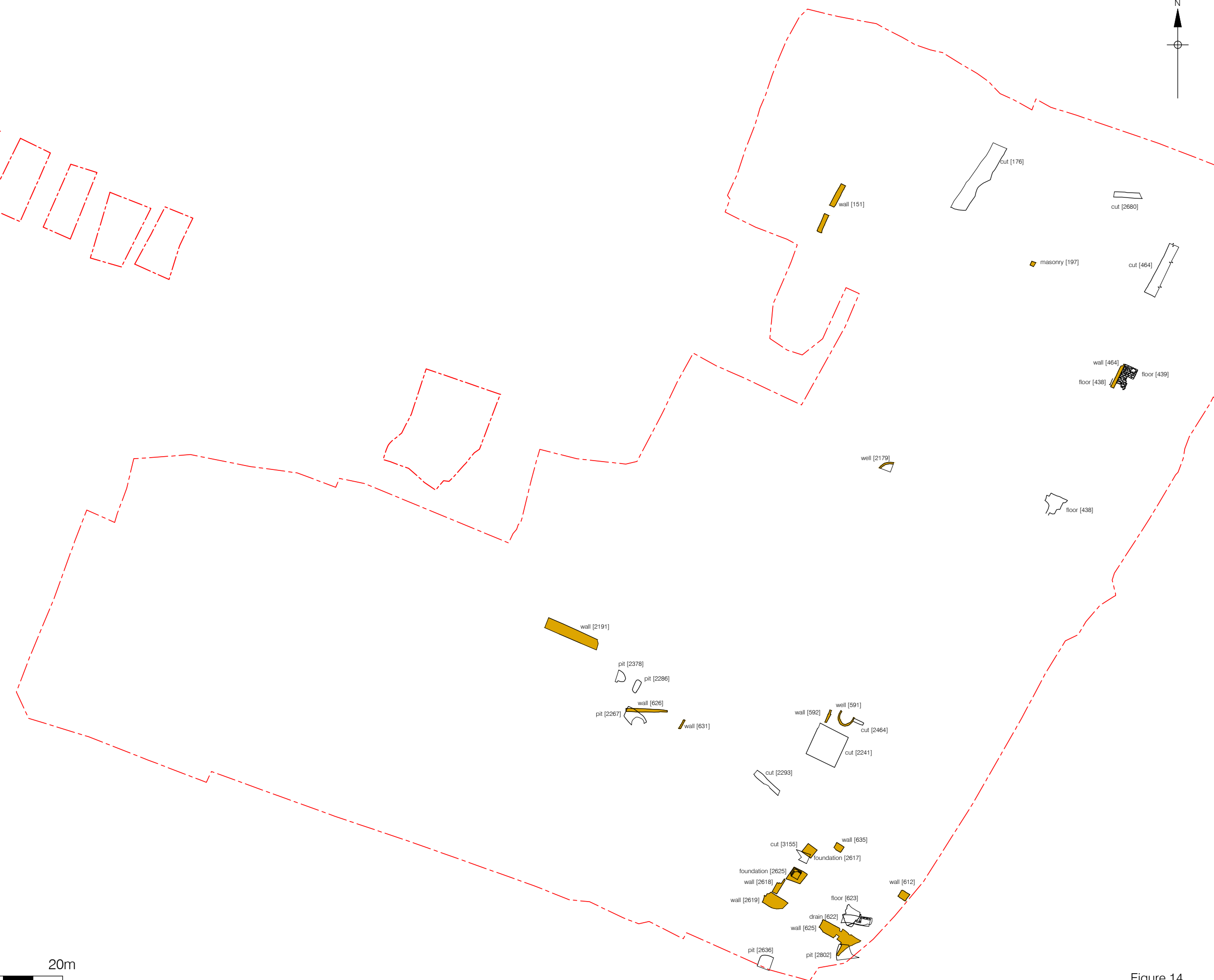
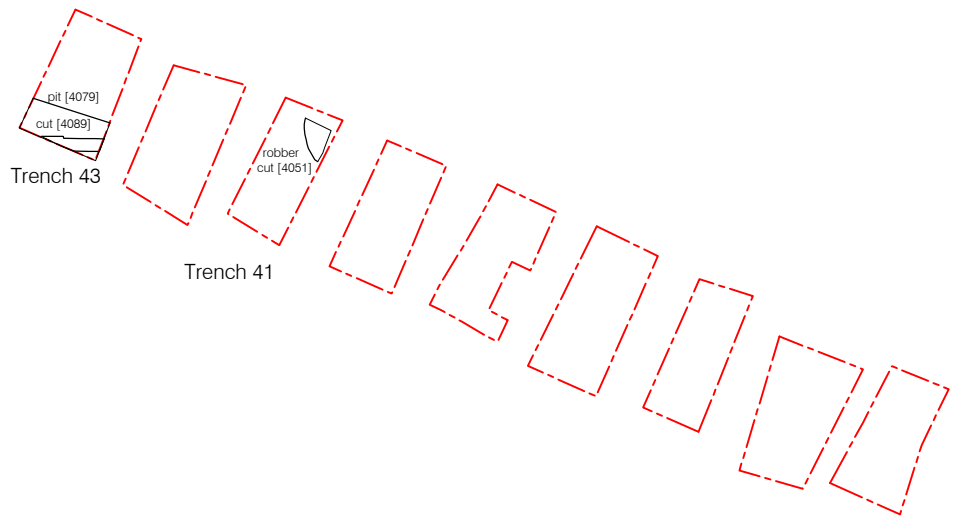


Figure 13
Phase 9: Late Post Medieval (1700-1820)
1:250 at A3



wall



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Figure 14
Phase 10: Modern (1820 - present)
1:250 at A3

8 Archeological Phase Discussion

8.1 Phase 1: Natural

- 8.1.1 Geologically the site has long been understood to lie within the centre of the Borough Channel. This watercourse separated Southwark's South Island from the mainland's raised gravel terrace of the Kempton Park Gravel formation to the south (Watson 2014, 31). The levels on the natural gravels observed within the site boundary would appear to suggest that the underlying natural topography is however somewhat more complex than the interpreted model.
- 8.1.2 Gravels were observed at a fairly high level, although they descended towards the north. This indicates that the Borough Channel did in fact lie to the north of the study site. Archaeological investigations to the immediate east of Brandon House at St George's Church may however offer an alternative interpretation. Here the gravels were once again discovered at a lower level on the northern portion of the site, with further sites in the vicinity also suggesting that St George's Church does not lie within the centre of the Borough Channel, but instead on the southern margins, close to the interface with the Kempton Park Terrace (Watson 2014, 33-34). As such, both St George's Church and Brandon House may have been located on an elevated plot of land, effectively a small eyot located within the Borough Channel or perhaps a peninsular which extended into it.
- 8.1.3 Sealing the gravel were the natural alluvial silts and clays, which again followed the underlying gravels and descended from the south of the site towards the north and east. These layers were also observed at St George's Church and were interpreted as low energy deposits laid down in slow or stagnant water conditions. These conditions eventually became dry as the channel was abandoned, migrated or reduced in width (Watson 2014, 34), which may well explain the shallow scoured channel observed in the south-eastern area of the excavation.

8.2 Phase 2: Early Roman (AD 43-250)

2.1: Early features and peat deposition

- 8.2.1 Very little could be stated about the early features observed beneath the peat, although the pottery recovered from the posthole suggested an early Roman date. The archaeological excavations undertaken to the east of the site at St George's Church recorded similar horizons at between 0.6m OD and 0.8m OD. These deposits were however interpreted as humified, organic, silty clays containing large quantities of wood and plant remains rather than peat. The similarity in regards of level height and organic matter would suggest a comparable deposition with the interpreted 'peat' on Brandon House, and at St George's Church environmental sampling indicated that the basal sequence of this deposition began during the Iron Age at some point between 790 BC and 420 BC (Watson 2014, 34-35). Immediately to

the south at 5-27 Long Lane, the peat at the base of the recorded sequence has been dated to between the Mid to Late Bronze Age (Douglas 2007, 18-19).

- 8.2.2 At both St George's Church and 5-27 Long Lane however, the upper sequence of the organic deposits have been dated to between the Late Iron Age and the early Roman period, with the upper part of the sequence at St George's Church forming between 40 BC and AD 80. Given the shallow nature of the peat along the southern edge of the Brandon House site, the formation of this deposit is likely to be contemporary with the latter part of the peat sequences to the east. A very early Roman date for this deposition does therefore seem likely, with the recovered pottery from these horizons supporting such an interpretation. The peat sequence to the north of Brandon House was however much thicker, presumably as it was formed within the centre of the Borough Channel. The lower part of this sequence may therefore date to some point between the Mid to Late Bronze Age and the Iron Age.
- 8.2.3 The precise function of the two stake alignments recorded in the southern and south-eastern portion of the sites is unclear. A relationship between the two groups should not be discounted, although given truncation and the considerable distance between the two arrangements this is hard to prove. The north-west south-east alignment of both groups is of interest as it was noticeable that the underlying topography dropped off to the north-east. As such, these stakes may represent early attempts at ground consolidation, possibly in the form of revetting.

2.2: Early occupation and land reclamation

- 8.2.4 Considered development and habitation on the site appears to have begun in around AD 70, with this activity primarily located on the higher ground in the south-western corner of the site. Features relating to this period included the large pit and the ditch or gully which contained the dog inhumation. The careful placement or selective deposition of animals within liminal boundaries during the Roman period is not uncommon. Such inhumations have previously been referred to by J. D. Hill in relation to the Iron Age as 'special animal deposits', whereby fully or semi-articulated animal remains were deposited within specific features (Hill 1995, 27-28). The dog burial at Brandon House was clearly of significance, and perhaps suggests that further early Roman occupation lay beyond the site boundary to the south and west.
- 8.2.5 The remaining activity belonging to this phase of activity concerned the ground raising or levelling dumps, which were clearly deposited in order to make the area more habitable. Judging from the pottery recovered, this ground preparation appears to have taken place at some point between AD 70 and AD 120. At the northern end of the site, the wattle lined fence was driven directly into the peat and was therefore most probably located on the margins of the Borough Channel. As such, it may have related to an early attempt at revetment and hence bank stabilisation.

2.3: Pitting

- 8.2.6 Following the episode of ground raising the newly levelled land surface initially appears to have been used for pitting. The precise function of these pits was unclear, although the clay lining within [2184] would indicate a functional purpose rather than simple rubbish disposal. With no direct evidence in the form of structures or buildings on the site it seems likely that at this point the site was located on the periphery of a settlement and was not fully occupied. No direct evidence for land division or property plots can be attributed to this phase of occupation. The small number of linears present may however indicate that further water management was required in the form of drainage, although with so little of these features left an accurate interpretation is almost impossible.

2.4: Buildings

- 8.2.7 Period 2.4 represented a phase of intense activity on the site as the land was developed, with at least four clay and timber buildings established on the site (Buildings 1-4, with one further possible building). It is quite possible that Buildings 1, 2 and 3 actually formed part of the same complex, although given the truncation this was difficult to prove. The diagnostic material recovered from the various structures suggested that construction took place at some point between AD 70 and AD 100, although a possible tighter date range of AD 90 to AD 100 was provided by Building 1. This phase of development correlates with similar activity at both St George's Church, where a number of clay and timber buildings dating to between AD 60 and AD 100 were recorded (Watson 2014, 50), and at Tabard Square, where a number of early Roman buildings were established between AD 80 and AD 120 (Killock *et al.* 2015, 19).
- 8.2.8 This clearly represents a period of expansion in Southwark, and at Brandon House several of the buildings also had associated property divisions in the form of fencelines close to the structures themselves. It was notable that the buildings and the fences aligned with modern Borough High Street, which correlates with the interpreted road from London Bridge to the junction of Watling Street and Stane Street. It has however been suggested that at this point in Southwark, the road lay just to the east of St George's Church (Watson 2014, 37).

2.5: Channel reclamation and Building Maintenance

- 8.2.9 The site continued to be occupied and developed during this phase of activity, as Buildings 2, 3 and 4 were renovated, and Building 5 was established. These construction works took place at some point between AD 120 and AD 150, although pottery associated with the renovation of Building 3 could be refined to between AD 120 and AD 130. Building 3 proved to be perhaps the most interesting of the 3 structures, with a heat affected floor surface containing fragments of glass slag. This suggested that the building had an industrial use and was not

simply a domestic dwelling. The foundation deposit within Building 5 was also of interest and was the only building which had such placed items within its foundations.

- 8.2.10 At the northern end of the site, the Borough Channel appears to have been at least partially filled in as dumped deposits dating to between AD 120 and AD 160 were recorded at between 0.64m OD and 0.95m OD.

2.6: Decline

- 8.2.11 The final phase of occupation in relation to Phase 2 reflected a decrease in activity on the site. The previously extant buildings appear to have been either demolished or abandoned, as evidenced by pitting within the former structural footprints. Across the site there was further evidence of dumping and pitting, suggesting that the area had reverted to a peripheral open zone. Glass slag was however recovered from the demolition deposits associated with Building 2, and also from a pit to the north of Building 3. The ceramic material suggests that the decline on the site occurred between AD 120 and AD 180, which is somewhat later than St George's Church where all of the buildings had been abandoned by the early 2nd century (Watson 2014, 50). A general decline in terms of settlement is noted in Southwark during the 3rd century (Cowan *et al.* 2009, 25-32), although at Brandon House this abandonment would appear to have occurred somewhat earlier.

8.3 Phase 3: Late Roman (AD 250-400)

- 8.3.1 Very little activity was recorded in relation to this phase of activity on the site. The Late Roman period reflected the decline of the site, which had almost been completely abandoned by the third century. The only archaeological evidence comprised a small number of deposits and some pitting. The dereliction of the site was reflected in the formation of the dark earth horizons, which contained pottery dating to between AD 240 and AD 300. Much has been written about 'dark earth;' formation patterns, with current theories including evidence of low intensity manuring for cultivation, subsequent weathering and dumping (Killock 2010, 184).

8.4 Phase 4: Saxo-Norman (1050-1150)

- 8.4.1 Activity during the Saxo-Norman period was again incredibly limited. Some evidence of the continuing formation of 'dark earth' was again recorded as the site appeared to remain uninhabited between 1080 and 1150. The only features identified comprised a number of isolated pits and a ditch along the eastern site perimeter. This ditch aligned with both Borough High Street and the earlier Roman buildings, suggesting that either a street or thoroughfare remained extant, with the linear possibly functioning as either a roadside ditch or a boundary marker. One of the pits was of interest in that it contained horn and antler working waste.

8.5 Phase 5: Medieval (1150-1350)

8.5.1 Between 1150 and 1350 activity increased on the site, although no direct evidence of either domestic or industrial properties was discovered. This may again be suggestive of activity proximate to a settlement, yet several of the features were indicative of close habitation. The two barrel wells may have had an industrial use, with the clay cap observed in [517] and a 'sticky white fill' recorded within [541]. The precise function of the timber-lined pits [1600] and [1455] was also unclear, although they may again have been used in some form of industrial processing. Little could be stated about the remaining isolated pits, although the dumped deposits dated to the 12th and 13th centuries. Further evidence of land division and maintenance was evidenced by the ditch and subsequent re-cut in the south-eastern corner of the excavation area and interestingly, this alignment followed the route of the modern Marshalsea Road. All of the evidence points to an increase in activity in the area between the mid 12th and mid 14th centuries, and contemporary features were discovered during the excavations at St George's Church (Watson 2014, 51).

8.6 Phase 6: Medieval (1350-1480)

8.6.1 A number of structures were established on the site during Phase 6, and the chalk and Reigate stone foundations almost certainly belonged to Brandon Place. Although heavily truncated, as far as could be determined up to three structures were identified, with one at the northern end of the site, one to the south-east and one towards the south-west of the excavation area. All followed the same alignment which again reflected the arrangement of Borough High Street and Marshalsea Road.

8.6.2 Brandon Place was the predecessor to Suffolk Place, and was certainly extant in the 15th century when Sir John Howard (the later Duke of Norfolk) stayed at 'Brandennes Place in Sothwerke' in 1465. It is probable that Sir William Brandon, who was killed at Bosworth Field, and his father (also Sir William) lived there. Thomas Brandon, son of the elder William, inherited the property from his mother in 1497 (Darlington 1955, 22-25). Judging from the stratigraphy, the chalk and Reigate foundations were almost certainly introduced after 1350, but the residence was clearly well established by the time of Sir John Howard's visit in 1465. Little could be stated about the remaining features, which mostly comprised isolated pits and postholes.

8.7 Phase 7: Early Post-Medieval (1480-1600)

8.7.1 Phase 7 represented one of the most significant periods of activity on the site and related to the construction of Suffolk Place by Charles Brandon. At present, interpretation of the structure remains tentative, and much more work will need to be undertaken at the publication

stage. The foundations along the southern limit of excavation are believed to relate to the southern range, and primarily comprised arch built brick foundations situated within large construction cuts. Brick floor surfaces and bedding deposits were also revealed, and to the very south a series of possible brick vaults were revealed. Structures situated along the eastern end of the site are believed to belong to the eastern range, and these included a series of three brick cellars.

- 8.7.2 Perhaps the most interesting structure comprised the linear subterranean brick feature which returned towards the north-west at its eastern end. This had a brick base, and it does seem possible that this feature represented a large drain. It may have housed a pipe which drew water into the building, and evidence of a timber and brick conduit was revealed at the northern end. Judging from the levels on the floor surface, the direction of flow certainly seemed to descend from the north to the south. The demolition backfill of this feature was most intriguing and contained timber planks along with fragments of a terracotta frieze.
- 8.7.3 A further structure was also revealed in the north-western corner of the site, and this may again have formed part of the eastern range. If this was the case, then the internal courtyard would have been located further to the west.
- 8.7.4 From what we know of Suffolk Place, it was inherited by Charles Brandon from his Uncle Sir Thomas Brandon in 1510 (Watson 2011, 21). At the time it was known as Brandon Place and most of the estate had been left to Lady Jane Guildford. Charles bought the estate off her however for an annual annuity of £47 6s 8d (Watson 2011, 21). In 1516, Charles then bought '11 messuages and 8 gardens' to enlarge his Southwark property and subsequently rebuilt Brandon Place as Suffolk Place after the Dukedom he received in 1514 (Watson 2011, 21).
- 8.7.5 It is unclear when the building works began, although Charles was purchasing timber in 1518 and between 1521 and 1522 he sold 30,000 bricks which had been produced at his nearby kiln. A further 8 cartloads of brick bats were supplied to the Bridgehouse Estates, which suggest that the building had been completed by this point in time (Watson 2011, 21).
- 8.7.6 According to Wyngaerde's London Panorama of 1544, Suffolk Place was a three storey palace which most probably had an inner and an outer courtyard. This image also appears to depict an elaborate terracotta decoration along the east range, and it is likely that this is where the terracottas within the drain derived from. Similar fragments were recovered during the excavations at St George's Church, although these were discoloured, overfired and substandard and had clearly been discarded (Watson 2014, 62). Between 1526 and 1533 Charles Brandon built another palace in the form of Westhorpe Hall in Suffolk, and again terracottas were used as part of the building fabric (Anderson 2003, 125).
- 8.7.7 Charles Brandon lost possession of Suffolk Place in 1536 as debt settlement resulted in it being given to the King. It was granted to the Archbishop of York, Nicholas Heath, in 1556 who subsequently sold it in 1557. The building was then pulled down (Watson 2011, 24).

8.8 Phase 8: Post-Medieval (1600-1700)

8.8.1 There was very limited archaeological evidence relating to the immediate period following the demolition of Suffolk Place. Although this is understood to have taken place c.1557, the demolition deposits associated with the destruction contained very limited quantities of ceramic material. Those that did generally dated to the 17th century. Evidence of robbing of the wall foundations suggested that efforts were made to retrieve both bricks and chalk for re-use. Following Heath's sale of the site to a merchant or merchants (believed to be Elles Dyall and Hohn Tull) numerous small cottages were understood to have been built on the site (Watson 2011, 24). The foundations of such structures are unlikely to have been substantial, and it is therefore unsurprising that little was revealed in regards of associated footings.

8.8.2 Isolated patches of brickwork survived at the southern end of the site, but the most substantial structure concerned the square building in the south-eastern corner. This property clearly fronted onto Borough High Street and may have been subterranean in the form of a cellar. Further possible evidence of the building was revealed to the south in the form of brick wall fragments and stone floor surfaces.

8.9 Phase 9: Post-Medieval (1700-1820)

8.9.1 The majority of the archaeological activity relating to Phase 9 was situated at the northern end of the excavation area. This appeared to comprise a large building which had been constructed from both red brick and reused material in the form of chalk and Reigate stone. As far as could be determined the building was industrial, evidence of which was supported by a number of circular brick structures which were internal to the building. More research will need to be carried out into the building, but if the circular features were internal they were unlikely to have functioned as kilns. Evidence of drainage to the north-west may infer some form of industrial processing, which would appear to be supported by the clay lined pit or tank. The remaining features belonging to the phase were difficult to interpret, and consisted of isolated pits, a drain and a well.

8.10 Phase 10: Post-Medieval (1820-Modern)

8.10.1 Little could be stated about Phase 10. Many of these features were modern intrusions which were assigned context numbers during the excavation, whilst a number of them are likely to have related to the occupation of the site by Messrs Mosers.

9 Original Research Questions and Revised Research Questions

9.1 Original Research Questions

9.1.1 The excavation's aims and objectives, as defined after the evaluation but before the excavation, were presented in the Written Schemes of Investigation (Mayo 2014; 2015). These mostly concerned the extent of the survival of Brandon Place and Suffolk Place and the decorative elements associated with the latter.

- a) To determine the palaeotopography of the site.
- b) To recover and assess environmental samples from the channel present towards the north-northeast of the site.
- c) To determine the presence or absence of prehistoric activity.
- d) To determine the date and extent of Roman activity, and its location in relation to the Roman street to the east.
- e) To place in context the Roman findings from the 1979 investigation (Thompson *et al.* 1998, 182; Hinton 1988, 480).
- f) To determine the types of activities which were being undertaken at the site in the Roman period.
- g) To establish the presence or absence of late medieval activity, in particular relating to the late medieval phases of the documented Brandon House.
- h) To assess the presence of, type, function and date of any remains of houses which pre-date Suffolk Place.
- i) To establish the presence or absence of post-medieval activity, primarily associated with the remains of the Tudor Brandon House and specifically to the Palace complex built by Charles Brandon in 1518-1522, its use as a Royal Palace and Mint.
- j) To determine the extent in plan of the Tudor remains where they have escaped truncation.
- k) To determine whether the site contains evidence for a moat surrounding Suffolk Place. If so, was this feature managed? When was it put of use?
- l) To collect and assess examples of the terracotta architectural moulding which may be present as demolition debris within post-1550 layers.
- m) To determine the types of activities which were being undertaken at the site in the Tudor period.
- n) To determine whether there was a clear transition or continuation from the Tudor to the post-medieval periods.
- o) To establish the early to mid post-medieval development of the site.
- p) To establish the types of land-uses which were present.
- q) To set the site into a local context with regards to contemporary and neighbouring remains / finds.
- r) To establish the extent of past post depositional impacts on the archaeological resource
- s) Can the layout of Suffolk Place be established with certainty?

-
- t) If it can be established, how does the layout of Suffolk Place compare with contemporary palaces such as Nonsuch and Bridewell?
 - u) Can the position of the SE range and the Great Hall / Chapel be pinpointed?
 - v) What can we say of the transition from the medieval house to sixteenth century palace?
 - w) What can we say of the transition from the palace of Charles Brandon to that of Henry VIII?
 - x) Can structural elements of each building phase (15th century, 1518-22, Henry VIII's alterations and the use of the site as a royal mint) be identified?
 - y) How thoroughly was the site demolished in 1557-8?
 - z) Can the source of the raw materials which served the production of the terracottas be established?
 - aa) Can the manufacturer(s) of the terracottas be identified either from the stamps or form comparison with other contemporary assemblages?
 - bb) Can the decorative patterns which adorned the facade of Suffolk Place be identified?
 - cc) To ascertain if possible the alignment of the Borough Channel through the site, and establish or estimate its width.

9.1.2 Some of these research questions are considered in Section 8 'Archaeological Phase Discussion' above. Evidence of Roman activity including clay and timber buildings together with the foundations of both Brandon Place and Suffolk Place were discovered, as were numerous terracottas which would have been situated on a frieze belonging to Suffolk Place. At this stage however, further analysis will be required to answer these questions fully and these research aims will be more fully considered in the publication of the site.

9.2 Revised Research Questions

Questions arising out of the excavations are as follows:

9.2.1 How does the site fit in topographically with the interpreted model of Roman Southwark? Is the site situated on an eyot within the Borough Channel, or on a peninsular which extended from the mainland into the Channel itself?

The underlying geology and topography of the site was intriguing. Based on previous models the site should have either been situated on the southern side of Southwark's south island, or within the Borough Channel itself. Instead, the underlying natural descended towards the north.

It is recommended that:

- 1) The site is compared to contemporary sites within the area in order to determine how it fits in with the surrounding area.
- 2) Attempts are made to topographically model the site and place it within an updated model of the immediate area.

9.2.2 What can be stated about the peat discovered on the site? Are the thin deposits at the southern end of the site different to those located to the north and presumably within the Borough Channel?

Evidence suggests that the thin deposits along the southern end of the site were Late Iron Age to Roman in date, whereas those to the north were Mid to Late Bronze Age

It is recommended that:

- 1) The peat samples are further analysed and radiocarbon dated if possible to see if any differentiation can be identified.
- 2) The significance of the Late Iron Age to early Roman peat is assessed and the conditions in which these deposits formed is looked into.

9.2.3 What is the significance of the early Roman revetting? Was this associated with Borough Channel and is there contemporary evidence for similar activity in the local area?

Evidence of early Roman revetting was discovered on the site. It seems likely that this relates to ground and bank stabilisation on the edge of the Brorough Channel.

It is recommended that:

- 1) Comparable evidence of revetting is researched within the local region.

9.2.4 What is the significance of the early Roman dog inhumation? Does this represent peripheral activity? Are there comparable examples within the local region?

An early Roman dog burial was discovered within a ditch on the high gravel along the southern edge of the site boundary.

It is recommended that:

- 1) Research is undertaken into the significance of dog burials during the early Roman period.
- 2) Comparable examples are researched within the local vicinity.
- 3) The importance of the location of such burials is considered.

9.2.5 What is the significance of the Roman buildings on the site? How do they fit in with the settlement patterns in this area of Southwark during the early Roman period? Is there any evidence for the use of these buildings? What is the significance of their alignment with Borough High Street?

A series of Roman clay and timber buildings were recorded on the site, and these appeared to align with the modern Borough High Street.

It is recommended that:

- 1) Research is undertaken into the development of early Roman Southwark and how these buildings fit into the patterns of expansion.
- 2) The buildings should be compared to similar contemporary structures within the local area.
- 3) Attempts are made to identify what the buildings may have been used for, i.e. domestic or industrial.
- 4) The significance of Borough High Street is considered in regards of the arrangement of the buildings.

9.2.6 What is the significance of the glass slag recovered from Buildings 2 and 3? Does this represent industrial activity on the site? Is there any other evidence for such activity in Southwark?

Fragments of Roman glass slag were recovered during the excavation, with much of this material recovered from the footprints of Buildings 2 and 3.

It is recommended that:

- 1) Research is undertaken into Roman glass working within the region.

9.2.7 What can be stated about the decline on the site during the Late Roman period? How does this fit in with the pattern of supposed abandonment in Southwark during this phase of activity? What can be stated about the dark earth formation?

The late Roman period represented a phase of decline on the site, with buildings abandoned and dark earth forming above the abandoned areas.

It is recommended that:

- 1) The site is placed into context within the region, particularly in relation to the conceived ideas of abandonment during the late Roman period.
- 2) The formation of dark earth should be studied to ascertain whether this represents abandonment or not.
- 3) The coins recovered will be particularly important in regards of dating the last evidence of Roman activity on the site.

9.2.8 What is the significance of the horn and antler working waste recovered from the Phase 4 pit?

One of the pits belonging to Phase 4 contained both horn and antler working waste.

It is recommended that:

- 1) Comparable craft activities are researched within Southwark.
- 2) Research is undertaken into horn and antler working during the Saxo-Norman period.

9.2.9 Are there any comparable examples of the medieval barrel wells discovered on the site? Is it possible that they were originally used as wine barrels? What do we know about cross channel trade during the early medieval period? What industrial purpose were they re-used for?

Two barrel wells were recorded as belonging to Phase 5. The staves from these casks suggested that the timber used derived from either northern France or south-west Germany. As such they may have originally been used as wine barrels. Their re-use did however indicate industrial activity on the site.

It is recommended that:

- 1) Comparable examples are looked for within the local region.
- 2) Research is undertaken into cross channel wine trade during the early medieval period.
- 3) Research is undertaken into Southwark's industrial history during the early medieval period.

9.2.10 What was the function of the two timber lined pits recorded in association with Phase 5?

Two large timber lined pits were discovered at the southern end of site. It seems likely that these features had an industrial use.

It is recommended that:

- 1) Comparable examples are researched within the local region.
- 2) An attempt is made to identify what the tanks were used for.

9.2.11 What can the chalk and Reigate stone foundations tell us about Brandon Place? Can any more information be discovered in regards of this property? Is it possible to identify building outlines from the foundation remains?

A series of chalk and Reigate stone foundations were recorded on site. These are understood to represent the footings of Brandon Place.

It is recommended that:

- 1) Historical research is undertaken in an attempt to recover more information on Brandon Place.

-
- 2) Attempts are made to define the structure based upon the remaining foundations.

9.2.12 Can plans of Suffolk Place be reproduced based upon the footings of the building discovered during the excavation? How were the terracottas fitted to the superstructure of the building, and what did the frieze look like? What were the upper stories of Suffolk Place made from? What is the significance of the vaults and cellars recorded in association with the building?

The archaeology recorded in association with Phase 7 comprised the brick footings associated with Suffolk Place, the residence of Charles Brandon.

It is recommended that:

- 1) Attempts are made to define the plan of Suffolk Place based upon the foundations discovered.
- 2) Historical sources are consulted in an attempt to find out more about the building and how it was laid out.
- 3) Research is undertaken into the terracottas. Their popularity during this period, how they were made and how they may have fitted upon a frieze.
- 4) Research is undertaken into the construction and layout of Tudor urban mansions and how they were built.
- 5) Attempts are made to find contemporary and comparable vaults and cellars and to identify what they were used for.

9.2.13 What was the function of the long linear brick structure discovered in the north-eastern corner of the site?

The precise function of the long linear brick structure recorded in the north-eastern corner of the site as yet remains undefined. It may well have functioned as a drain, or possibly as a conduit or quill which drew water into Suffolk Place

It is recommended that:

- 1) Attempts are made to identify what this structure was used for.
- 2) Research is undertaken into comparable examples within Tudor buildings.
- 3) Research is undertaken into early post-medieval plumbing systems.

9.2.14 Is there any information regarding the square structure belonging to Phase 8?

Little archaeological evidence was recorded in relation to Phase 8 other than a square building located in the south-eastern corner of the site.

It is recommended that:

- 1) Historical research is undertaken in an attempt to identify what this building was.

9.2.15 What is the large industrial structure belonging to Phase 9 that was recorded at the northern end of the site? Can any information be discovered in relation to this building? What was the function of the internal circular structures?

The footprint of a large building was revealed at the northern end of the site. The presence of large circular brick structures and a clay and tile lined tank within the internal rooms of this structure suggested that it may have had an industrial function.

It is recommended that:

- 1) Historical research is undertaken in an attempt to identify the building.
- 2) Comparable examples are looked for in relation to how the building functioned and what it was used for.

10 Contents of the Archive

10.1 The paper archive:

		Drawings	Sheets
Context Sheets			2804
Plans	1:20	c.1400	c.2000
Sections	1:10	144	200

10.2 The finds archive:

Roman pottery	71 boxes
Post Roman pottery	25 boxes
Lithics	16 struck, 115 burnt pieces
Glass	11 boxes
Clay tobacco pipe	4 boxes
Building material	70 crates, 17 large fragments
Roman coins	160 objects
Roman small finds	560 objects
Post Roman small finds	270 objects
Wall plaster	934 fragments
Slag	6 boxes
Timber	74 pieces
Animal bone	75 boxes
Environmental samples	111 bulk samples, 19 column samples

10.3 The photographic archive

Digital images	1972
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11 Importance of the Results, Further Work & Publication Proposal

11.1 Importance of the Results

11.1.1 The most important periods recorded during the excavations at Brandon House are 1) natural, 2) early Roman (AD 43-250), 3) late Roman (AD 250- 400), 4) Saxo-Norman (1050-1150), 5) medieval (1150-1350), 6) late medieval (1350-1480), 7) early post-medieval (1480-1600) and 8) post-medieval (1700-1820).

Natural

11.1.2 The underlying geology and topography of the site is of particular importance. Previous topographic models suggested that the site lay either on the south side of Southwark's south island, or within the Borough Channel itself. Recent archaeological evidence and the discoveries at Brandon House suggest however that the site lay on either an eyot within the channel, or on a peninsular which extended north into the channel.

Early Roman (AD 43-250)

11.1.3 The site appears to have been settled during the late 1st century. An initial peat formation is understood to date to between the Late Iron Age and early Roman periods and early activity included pitting and a dog burial within a ditch. Following episodes of revetting and ground raising a number of buildings were established on the site. These appear to have been variously repaired and glass slag was recovered above the footprints of both Building 2 and Building 3.

Late Roman (AD 250-400)

11.1.4 The late Roman period represented a decline on the site as the buildings were abandoned and dark earth began to form above the previously occupied horizons.

Saxo-Norman (1050-1150)

11.1.5 Very little archaeology was recorded in relation to the Saxo-Norman period. One pit was of interest however and contained both horn core and antler waste.

Medieval (1150-1350)

11.1.6 The main features of interest dating to the medieval period comprised two timber lined pits and two barrel wells. All appear to have served an industrial purpose, although the two barrels were of interest. They had been made from wood derived from either northern France or south-western Germany and hence may once have functioned as wine barrels.

Late medieval (1350-1480)

11.1.7 The main features associated with this phase of activity were a series of chalk and Reigate stone footings. These are understood to have formed the foundations of Brandon Place.

Early post-medieval (1480-1600)

11.1.8 This phase of activity represented one of the most important periods of activity on the site. Following his inheritance of the site from Sir Thomas Brandon in 1510, Charles Brandon set about building a new mansion. Named Suffolk Place, this was represented in the archaeological record by a series of brick foundations and floor surfaces which are understood to have formed the southern and eastern ranges. In the north-eastern corner a long linear brick structure was revealed. The function of this structure is as yet unclear, although it is likely to have functioned as either a drain or a conduit bringing water into the building.

Post-medieval (1700-1820)

11.1.9 The main archaeological evidence relating to this phase of activity concerned a brick building located in the northern excavation area. The presence of a series of circular brick structures and a clay and tile lined tank suggested that the building had an industrial function.

11.1.20 The Roman remains and artefacts are of major local importance and are potentially part of the large ritual landscape identified at Tabard Square and Swan Street (Killock *et al.* 2015; Beasley 2007). The glassworking waste will also make an important contribution to knowledge about this industry in Roman London. Whilst the remains of Brandon Place and Suffolk Place with its large assemblage of terracotta is of regional and national importance.

11.2 Further Work

11.2.1 Further analysis of the environmental bulk and column samples will need to be undertaken together with research on peat and alluvial deposits and levels on site in order to recreate the extent and environment of the Borough channel on the site.

11.2.2 A refining of the Roman phases needs to be undertaken and further analysis of the structural remains, both Roman and later, need to be undertaken to refine the layout of Roman buildings and more crucially the ground plan of Brandon Place and Suffolk Place.

11.2.3 Further research needs to be undertaken by consulting the archaeological archives of sites in vicinity held by LAARC including the investigation on the site itself in 1979 (Thompson *et al.* 1998, 182; Hinton 1988, 480). Further cartographic and documentary research needs to be undertaken on the post-medieval structures on the site, including Brandon Place, Suffolk Place and the later industrial structure to the north.

Roman pottery

11.2.4 A series of key groups will need to be identified for publication by the site supervisor and the pottery specialist, which may enable a sub-division of Phase 2 and produce a more meaningful discussion and functional analysis of the pottery from the site. Spatial and functional analysis of the 'dark earth' deposits is recommended as it can contribute to our understanding of the formation and composition of these types of deposits. The collection of

sherds with post-firing holes also deserves a more thorough analysis. It is recommended to include a pottery report in the publication.

- 11.2.5 The majority of the pottery can be described with reference to known typology and corpora, which should minimise the need for illustrations. However, some unusual forms (tettina, bucket etc.), sherds with graffito and stamps, and a selection of forms characterising the key groups should be illustrated.
- 11.2.6 Although a basic quantification and identification has been carried out for the purpose of this report, it is recommended that J.M. Mills looks at the Samian assemblage including the stamps.
- 11.2.7 The most commonly occurring amphora forms and fabrics have been identified, but it would be recommended to have a specialist examine the assemblage, especially the unidentified amphora fabrics and the stamp.
- 11.2.8 *Mortaria* have been identified and quantified, including most of the stamps. The unidentified/uncertain *mortarium* stamps should be examined by Kay Hartley in case they are included in any of the key groups, and it would be also beneficial to ask for her advice on the possible Colchester second.
- 11.2.9 It is recommended to have all the graffiti from site sent to Roger Tomlin. It is also recommended to publish the OXRC *mortarium* sherd with the *chi-ro* graffito separately (possibly in Britannia), as it is a rare find.

Post Roman pottery

- 11.2.10 Any further analysis of publication of the assemblage should focus on the larger and more diagnostic groups of pottery, particularly those associated with known or suggested establishments, but should encompass the full spectra of changes encompassing the site over time. A comparison with the associated glass assemblages will also be important to create a more holistic view of these groups, and to confirm and enhance an understanding of them. A total of 12 illustrations will be required.

Glass

- 11.2.11 It is recommended that a publication report is produced on the glass. The Roman glass should be reported upon by a specialist in this field, such as John Shepherd. Resources should be put aside for scientific analysis of the glass composition using ICPS in order to compare the Roman Southwark glass industry to that of the City.
- 11.2.12 The post-Roman glass publication should concentrate on the high status items associated with Suffolk House and the glass groups associated with the Dun Horse Inn which occupied the site. The glass assemblage from contexts [2115] and [2614] will be analysed in

conjunction with the pottery and clay tobacco pipes in order to determine how the material culture of the Dun Horse Inn compares to other studied inn groups.

- 11.2.13 Approximately 20 vessels require illustrating and at least four vessels need photographing to complement the publication text, although the number may increase or decrease with the specifications made by the Roman glass expert.

Clay tobacco pipe

- 11.2.14 A publication report should be written for the clay tobacco pipes from the site, relating them where possible to activities on the site and if there are correlations to documented activities. Comparison of this assemblage should be made with material from other sites, particularly those located on Borough High Street, to determine how well the local clay tobacco pipe industry is represented. Approximately 21 bowls and the kiln furniture fragment require illustrating to supplement the text. Documentary research is required into the clay tobacco pipe maker James Bourne to achieve a better understanding of his working period.

Lithics

- 11.2.15 The struck assemblage is relatively small but demonstrates Mesolithic / Early Neolithic and perhaps later Bronze Age activity at or close to the site. Unfortunately, due to it being largely residual and with no diagnostic pieces present, its interpretational value is limited and no further metrical or technological analyses are warranted. It does, however, provide evidence of early activity at the site and can contribute to a more comprehensive understanding of prehistoric settlement and landscape occupation in the north Southwark area. It is therefore recommended that a short description of the assemblage, which can largely be based on this report and associated catalogue, should be included within any published accounts of the excavations.

Roman Coins

- 11.2.16 Whilst smaller in size than other nearby sites, the coins from Brandon House are useful to add to a growing sample set of Roman coin assemblages in Southwark. The coins should be published with a full list and some photography. Further statistical work needs to be undertaken on the coin loss profile. Conservation should be undertaken where appropriate. This will help to answer some of questions regarding coin loss profiles and also the nature of the 2 small hoards.

Roman small finds

11.2.17 Full analysis of the finds is recommended to help understand them both within a wider context and spatially within the site itself. Further identification is needed on some objects, in particular bone object SF 473. Objects should be x-rayed/conserved/illustrated where appropriate, in particular the unidentified iron finds.

Post Roman small finds

11.2.18 The metal and small finds form an integral component of the finds and should, where relevant, be included in any further publication of the site. For Brandon House, the objects discussed here would all provide important data for further work. A number of these finds, along with other metal objects, however, will require further x-raying to aid full identification. The two silver coins will need cleaning by conservator, as will the small copper-alloy stud with traces of gilding. Iron nails can now be discarded, as may fragmented and undiagnostic metal once x-rayed.

Building materials

11.2.19 The chronological depth, variety and quality of building materials from the excavations at Brandon House have identified a number of individual items of artistic merit and fabrics that require follow up work at publication stage. Further analysis includes petrological work, investigative research into function/age/parallels, artistic value - illustration and photography. In chronological order these are:

11.2.20 Roman - As part of a wider understanding into the origin of high status material dumped on the fringes in the South Island – Southwark and Borough Channel; a more in depth look at the different dumping episodes from this very large and diverse ceramic building and stone assemblage. Could some of the statuary for example relate to the Temple complex at Tabard Square or represent dumped funerary material from Great Dover Street. The petrology of the inlays and cornices show a marked petrological similarity with those from the bath house building towards the bridgehead (Hayward in prep. a) as do some of the early box flue tiles. How does this assemblage compare with other sites in the vicinity, e.g. BOH13 and those in archive (Pringle 2009)? Thin section petrological analysis of some possible Alwalton marble statuary would determine whether or not this rock is being used in Roman London. It is recommended that the artistic merit and interpretation of statuary items are looked at by Professor Martin Henig and Penny Coombe. The scheme of the painted wall plaster already preliminarily assessed by Berni Seddon (see Appendix 12) would further shed light on the character and origin of any high status buildings in the vicinity.

11.2.21 Medieval – although little of decorative value can be assigned to the earlier medieval Brandon Place from these excavations, any publication must take into account the significance of the numerous chalk foundation walls, which pre-date the Tudor brick structures and outline and the handful of floor tiles (Decorative Penn Tile) found within the medieval footprint.

11.2.22 Tudor – the quality of preservation and very large number of items of high status building material recovered from the structural remains and demolition of 1518-1522 to 1557/58 brick Suffolk Place provides a unique chance to investigate in detail their form, decoration, and fabric. The preservation of the easily degradable Reigate stone, for example, allows for accurate recording of the highly decorative window tracery moulds including an examination of their pigment and plaster. It also provides a unique and rare chance to see crisp, fresh sections of unblemished Reigate that may be of use for conservation study. Thin section petrological analysis of the limestone types, one of which may be an early Portland stone, the other an unknown (Chilmark? Wheatley? Doulling? Stone) will shed more light on the quarrying and supply of freestone to the capital in the Tudor period. An existing study from Somerset House (Hayward in prep. b) has shown how thin-section analysis has altered our understanding of where these materials were coming from during the 1540s and connections between the outcrop source and rich and influential people have been made.

11.2.23 Comparison in brick size and form, as well as mortar/plaster type with existing Tudor foundation and moulded brick reference collections (e.g. Hampton Court) may help understand whether there is any chronological standardisation in brick size at Suffolk Place and whether there may have been recycling from the earlier pre-1518/1522 Brandon Place.

Terracotta

11.2.24 It is the uniquely preserved and very large Terracotta assemblage however, that has the greatest potential for further study and publication on the site. An enormous amount of information can be gleaned from the quantity and quality of this assemblage which can only be gauged following a detailed extensive and intensive review and reconstruction at publication.

11.2.25 The alternative to the palace being a largely brick construction of the foundations and parts of the lower sections of the palace having been constructed of brick with the upper parts of the palace comprising a conventional timber framed construction with the terracottas having been attached to the timber frame will be tested and explored.

11.2.26 The modular form of the terracottas deserves further analysis as this suggests that the design depended on a 'prefabricated' concept of construction in which the finished pieces could be rapidly assembled following a simple repeating format.

11.2.27 Several distinct impressed makers' stamps are found in significant numbers of examples across the assemblage. Makers' marks though previously recognised in the earlier excavated material was not common in the earlier recovered group (Smith *et al.* 2014, 107). A corpus of the markers' marks identifiable within the assemblage will be created to serve as a

comparison with contemporary British and continental parallels. An attempt will be made to narrow down the origin of the producers of the materials.

- 11.2.28 The corpus of material recovered from the earlier excavations (Thompson *et al.* 1998, 182: Hinton 1988, 480) and the present site will be pattern matched to establish whether parts, sections or whole designs can be modelled and reconstructed.
- 11.2.29 The modelled terracotta facade elements will be matched to the architectural reconstruction of the building's facade based on Wyngaerde drawings (both published and potentially present in the archives of the Ashmolean Museum in Oxford), floorplans reconstructed from archaeologically recorded foundations and wall elements and speculative earlier published models (Smith *et al.* 2014; Watson 2011).
- 11.2.30 It has been suggested that the rebuilding of Suffolk Place in 1518 to 1522 comprised the construction of a reverse L shaped block forming two wings at the south eastern corner of the earlier Brandon Place complex (Smith *et al.* 2014). The veracity of this interpretation will be tested.
- 11.2.31 The iconography present within the decorative motifs present in the terracotta assemblage will be studied to establish the meaning and significance of the symbolism present in the individual pieces and the overall design. Comparisons will be made with the motives and designs identified at other contemporary architectural parallels (such as Hampton Court, Westhorpe House, Clerkenwell, Great Cressingham Manor Norfolk etc).
- 11.2.32 Comparisons will be made with designs from other contemporary examples (such as Layer Marney) to establish whether identical moulds were used in their production indicative (perhaps) of employment of itinerant specialists (see the question regarding makers' marks).
- 11.2.33 Petrological study of a small number of examples of the previously excavated examples has suggested the raw materials for the production of the terracottas were sourced locally (Smith *et al.* 2014 101). Further chemical characterisation of the fabrics is advisable to further define the sourcing of the raw materials used in their manufacture. Studies for example relating to chemical ICPMS petrological techniques of the different fabrics to determine source of the clays should supplant the unsuccessful thin section analysis of terracottas recovered from earlier excavations at Brandon House (Williams 2014). The benefits of geochemically fingerprinting the different clays in bricks has already proven successful in studies from Poland (Hayward in prep. c) and Scotland (Hayward 2015).
- 11.2.34 Any paint residues adhering to the terracottas will be sampled and analysed in order to establish and reconstruct the colour pallet, range and configuration of pigments deployed on the external faces of the terracottas.
- 11.2.35 The pieces recovered in the current Brandon House excavations are thought to originate from the demolition of the palace. Comparison with the production waste material recovered from the excavations from the St George's church site may facilitate the making of estimates of the failure rates experienced in the production process.

11.2.36 External specialists such as Dr Chris Green, Simon Thurley and others will be consulted for their input and contribution to understanding the production and use of the terracottas and the formulation of additional research questions.

Wall plaster

11.2.37 Further analysis of this assemblage should include a full quantification of the plaster, including analysis and measurement of the base coats. Once this has been completed the unpainted plaster can be discarded. The plaster recovered derives from schemes that are well paralleled in contemporary assemblages in Southwark and across early Roman Britain so a brief summary of the schemes will be sufficient for any future publication, with up to 8 accompanying illustrations.

Slag

11.2.38 Before further work is undertaken the phasing should be checked and made secure. Plans showing location of features with slag will be required so any possible focus of smithing in the Roman period (and later) can be located. It is recommended that further analysis is undertaken and a publication report produced.

Timber

11.2.39 When further dating work is carried out and the provisional phasing is checked and revised, (possibly including the C14 dating of the possible late prehistoric cleft logs etc) an updated fully reference version of this report with c.4-5 explanatory draft figures should be produced. It would also be important to see a selection of the relevant plan, section and site photographic records made.

Animal bone

11.2.40 Further analysis should concentrate on Roman Phases 2 and 3 and possibly Phase 7 from the late medieval/early post-medieval period. Fish bone should be identified by the relevant specialist to confirm the taxa present and to add information of diet and possible environment.

Environmental samples

11.2.41 Based on the preservation of environmental material observed in the assessed samples, the following work is recommended:

- 11.2.42 In samples where the concentrations of seeds and/or charred cereals is significant (>100 specimens) it is recommended that a complete assessment is carried out prior to publication. This material could provide valuable information regarding the changing environment of both the site and the local area over the various periods of occupation, as well as the level to which cereal cultivation is being carried out. In addition we may be able to gain an insight into local diet, and any arable industry and associated processing that could be being undertaken in the vicinity.
- 11.2.43 Where pieces are of a suitable size (>2mm in length and width) are available, species identification should be carried out on selected charcoal samples. This could inform as to the local landscape and ground cover, and the extent to which local resources are being used for both domestic and large-scale combustion by the sites residents. This may also provide a valuable material for radiocarbon dating in features where suitable cultural material is absent.
- 11.2.44 Where suitable column samples are available, target sampling and analysis should be carried out on the malacological record, as this could provide further information on the changing hydrology of both the site and the local environment.
- 11.2.45 During excavation bulk peat columns were taken for insect and macrobotanical analysis; it is recommended that a complete assessment of this sequence be undertaken, as the assessment has suggested that the preservation of insect remains on the site is good. A similar assessment should be carried out on similar deposits where suitable material has been retained.
- 11.2.46 Nineteen column samples were taken from features across the site; an assessment and subsequent high-resolution analysis of targeted column samples from the site should be carried out where possible, for both pollen and diatom remains. This proxy data, along with the macrobotanical data from the bulk samples, is essential to building our understanding of the local environment and landscape-human interactions in the area.

11.3 Publication Proposal

11.3.1 The results of the archaeological excavation will be published as two Pre-Construct Archaeology monographs. The first will concentrate on the possible prehistoric, Roman and early medieval remains. The second will concentrate on the late medieval and post-medieval remains focussing on masonry and artefacts associated with Brandon Place and Suffolk Place, but also considering the later use of the site. The format of the publications will follow that of a typical publication report:

- Abstract
- Introduction
- Geological and topographical background
- Archaeological background
- Archaeological evidence, by phase

- Finds assemblage reports
- Discussion

The illustrations will include:

- Location plans
- Phase plans
- Plans of features and groups of features
- Sections
- Photographs
- Finds illustrations

12 Acknowledgments

- 12.1 Pre-Construct Archaeology Limited wishes to thank CgMs Consulting, particularly Duncan Hawkins, for commissioning this project on behalf of Crest Nicholson who kindly funded it.
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- 12.4 The following staff at Pre-Construct Archaeology Limited are thanked for their hard work on the project:

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Photography	Streph Dukering and Armando Ribiero
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Post-Excavation Management	Jon Butler and Frank Meddens
Editing	Jon Butler
Project Management	Chris Mayo

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APPENDIX 1: CONTEXT INDEX

Context	Trench	Section	Plan	Type	Phase	Description	Length	Width	Depth	Levels high	Levels low
1	6	1, 2		Masonry		Cobbles.	0.4	5.45	0.1	4.42	
2	6	1, 2		Layer		19th century dump layer/levelling/rubble.	2.25	0.4	0.3	4.32	
3	6	1		Layer		Dump/levelling layer.	1.15	0.14	0.15	3.99	
4	6	1		Layer		Oyster shell dump layer.	1.35		0.05	4.09	
5	6	1		Layer		Dump layer- possibly from iron working activity.	3		0.09	3.96	
6	6	1		Layer		Oyster shell dump layer.	2.7		0.18	3.91	
7	6	1		Layer		Dump/levelling layer.	3.15		0.15	3.84	
8	6	1		Layer		Oyster midden/dump.	3.15		0.25	3.74	
9	6	1		Layer		Dump/levelling layer/ garden soil.	1.7	3.15	0.44	3.71	
10	6	1		Fill		Backfill of construction cut [11].	0.6		0.13	3.99	
11	6	1		Cut	11	Construction cut for wall [28].	1.7	0.6	0.65	4.01	3.36
12	6	1		Layer		Dump or accumulated layer.	1.7	2.35		3.39	
13	6	1		Layer		Pre-wall dump or garden soil layer.		3.05	0.22		
14	6	1		Cut		Construction cut for [17].		0.25	0.15	4.04	3.89
15	6	1		Fill		Backfill of construction cut [14].		0.25	0.15	4.04	
16	6	1		Layer		Dumped layer.		1.3	0.06	4.24	
17	6	1		Masonry		Redbrick 19th century garden wall.	1.7	0.48	0.37	4.23	
18	6	1		Layer		Dump layer that post-dates garden walls.		1.8	0.16	4.36	
19	6	1		Layer		Dump layer abutting [17].		0.53	0.29	4.22	
20	6	1		Layer		Dump/levelling layer.		1	0.14	4.46	

21	6	1		Layer		Possible tile surface above possible sand bedding layer [23].		0.85	0.08	4.34	
22	6	1		Masonry		Possible brick floor seen in section.		0.45	0.07	4.28	
23	6	1		Layer		Possible bedding layer for [21].		0.6	0.04	4.26	
24	6	1		Layer		Dump/levelling layer.		1	0.15	4.24	
25	6	1		Layer		Oyster midden/dump.		0.8	0.07	4.12	
26	6	1		Layer		Dumped layer or garden soil.	1.7	1.2	0.15	4.07	
27	6	1		Layer		Dump/levelling layer.		1.2	0.16	4.26	
28	6	2		Masonry		19th century garden wall.	1.7		0.23	4.04	
29	6			Layer		Oyster midden/dump layer.	1.4	1		3.94	
30				Void		20th century made ground.					
31	4	3		Layer		20th century made ground.			1.7	4.45	
32	4	3		Masonry		Concrete?				2.81	
33	4	4		Layer		Mixed 20th century made ground.			1.8	4.39	
34	5	4		Layer		Modern gravel/shingle- may be from a service trench.	0.5	0.5	0.1	2.59	
35	6	2, 1		Fill			1.7	0.5	0.57	3.79	
36	6	1		Masonry		19th c basement cellar floor.	0.52	0.58	0.1		
37	6	1		Layer		Med to post-med accumulation.	0.7	1.6	1.4	2.4	
38	1	7		Layer		Made ground.	1.2	0.6	1.2	2.12	
39	1	7		Fill		Channel fill.	1.2	0.6	0.5	1.02	
40	1	7		Fill		Alluvial deposit within channel.	1.2	0.6	0.2	0.52	
41	1			Masonry		N-S aligned chalk foundation. Suggested to be from precursor to Charles Brandon's Tudor palace.	1.3	2.6	0.1	1.96	1.95
42	1			Layer		Medieval agricultural soil.	1.3	2.3		1.9	1.85
43	1			Masonry	10	E-W redbrick wall of vaulted	0.7	1.8		4.37	

					cellar.					
44	1			Masonry	Collapsed vaulted arch [43].	0.7	1	1.23	4.37	
45	1			Masonry	Partition wall of 'bomb shelter'.	0.8	0.2	1.17	4.31	
46	1			Masonry	Frogged yellow brick. Bricked up doorway.	1	0.1	0.98	4.12	
47	1			Masonry	Partition wall of 'bomb shelter'.	0.9	0.2	0.97	4.11	
48	1			Masonry	Partition wall of 'bomb shelter'.	1.2	0.2	0.98	4.35	
49	1			Masonry	Blocked up doorway.	0.9	0.2	1.01	4.38	
50	1			Fill	Rubble fill of 'Room 2'.	2.6	1.4		3.37	
51	1			Fill	Backfill of 'Room 1'.	2.4	1.2			
52		9		Fill	Rubble infill of 'Room 3'.	2.5	1.25	1.1	3.5	
53	1			Other	Structural metal girder supporting roof of cellar in 'Room 3'. Suggested to relate to conversion of cellar to a bomb shelter.				4.45	
54	1			Other	Structural metal girder supporting roof of cellar in 'Room 2'. Suggested to relate to conversion of cellar to a bomb shelter.				4.45	
55	1	8		Layer	Dumped layer/levelling layer. 20th century.	4.8	5	0.6	4.45	4.38
56	1	8		Masonry	Partition wall of 'bomb shelter'.	2.15	0.08	0.85	4.35	4.32
57	1			Other	Corrugated iron sheeting from 'bomb shelter'.	1.12	0.5	1.16	4.32	
58	1	8		Masonry	E-W aligned wall of vaulted cellar defining northern extent of 'Rooms 1, 2, 3' and southern extent of 'Room 4'.	1.2	4.5	1.75		

59	1	8		Fill		Brick rubble fill of 'Room 4'.	1.85	4		2.93	
60	1	8, 6		Masonry		Yellow frogged brick partition/structural wall from suggested conversion of vaulted cellars to 'bomb shelter'.	1.25	4	2.02	4.26	2.24
61	1			Masonry		Frogged red and yellow brick N-S aligned retaining wall related to cellar and 'bomb shelter'.	7.75	0.08	2.34	4.41	2.07
62	1	6		Masonry		Concrete floor.	0.6	1		1.98	
63	1			Layer		20th century dump/levelling layer.	2.5	1.1	1	2.87	
64	1			Fill		Rubble fill of 'Room 5'.	0.7	1.8	1.25	3.08	
65	1			Masonry		E-W orientated red brick wall of vaulted cellar wall.	1.3	4.5		4.25	
66	1			Cut		Construction cut for service trench- modern?	0.7	0.3		2.07	
67	1			Fill		Backfill of [66].	0.7	0.3		2.07	
68	3	5		Layer		20th century made ground.			1.4	4.43	
69	6	1		Layer		Roman alluvium.	0.7	1.6		0.96	
70	1			Layer		Modern made ground.			1.1	1.72	
71	1			Layer		Undated dumped horizon identified in auger borehole.			0.4	0.62	
72	1			Layer		Organic silt/alluvium seen in auger hole.			0.2	0.22	
73	1	9		Layer		Med – post-med made ground.	1.6	0.6	1.2	1.72	
74	1	9		Layer		River lain sands within channel?	1.6	0.6	0.2	0.62	
75	1	9		Layer		Alluvium within channel.				0.47	
76	7	10		Masonry		Concrete foundation.	1.5	0.6	0.4	4.06	
77	7	10		Masonry		Frogged and unfrogged yellow, red and purple brick.	1.7	1.11	2	4.37	

78	7	10		Masonry		20th century concrete foundation.	1.7	0.48	0.6	4.53	4.01
79	7			Masonry		NW corner of 19th century brick wall.	0.8	0.3	0.7	4.23	
80	7	10		Layer		Modern concrete and gravel levelling layer.			0.12	4.37	
81	7	10		Fill		Modern rubble backfill.	1.6	0.65	0.8	4.37	
82	7	10		Fill		20th century rubble backfill.	1.7	0.9	0.75	4.2	
83	1			Cut		Construction cut for foundation [41].	1.3	2.6	0.1	1.9	1.87
84			84	Masonry	7	E-W redbrick wall.	8.7	0.3	1.07	3.81	2.55
85			85	Masonry	7	Refacing of [84].	8.7	0.4	1.5	3.47	1.94
86				Masonry	9	Early 18th c. Foundation.	0.95	3.18	0.7	2.35	2.34
87		13	87	Masonry	9	E-W redbrick wall.	0.36	0.6	2	3.09	
88		12		Masonry	9	NE-SW redbrick wall.	8.1	0.24	1.25	3.78	2.57
89		14		Masonry	9	N-S 18th century redbrick wall.	5.3	0.34	0.24	2.54	
90				Masonry	9	N-S 18th century redbrick wall.	2.89	0.2		2.82	2.71
91				Masonry	9	18th century drain contemporary with and built into wall [89].	0.35	0.82	0.12	2.53	2.29
92				Masonry	10	20th c. Basement wall.	0.44	0.28	0.07	2.52	
93				Masonry	10	20th c. basement wall.	1.68	2.5		2.49	2.42
94				Masonry	10	Early 18th century wall or footing with reused Tudor 3033 brick.	2.5	0.47	0.22	2.43	2.37
95		12, 13		Masonry	9	Red unfrogged brick wall. NE-SW possible refacing of [88].	0.27	3	0.7	3.22	2.37
96		13		Masonry	10	Earliest phase of 19th century basement walls with repairs.	2.37	2.35	0.34	2.61	2.31

97				Masonry	10	1850-1900 basement. Four walls with later poured concrete floor.	1.96	4.33	0.2	2.39	2.21
98			98	Masonry	9	Red brick drain.	1.15	0.58	0.14	2.06	2.01
99			99	Masonry	9	Tile floor from drain [98].	1.07	0.51	0.12	1.89	
100			100	Masonry	9	E-W red unfrogged brick wall at base of sondage.	0.86	0.12	0.4	2.43	2
101			101	Masonry		Floor surface in sondage.	0.9	0.7	0.11		
102			102	Masonry	9	E-W red unfrogged brick wall on W edge of sondage.	0.4	0.11	0.11	2.03	
103			103	Masonry	9	Partial red unfrogged red brick structure on N edge of sondage.	0.24	0.15	0.11	2.04	
104			104	Masonry	9	Red unfrogged brickwork above N edge of surface [101].	0.33	0.4	0.06	2.13	2.08
105			105	Masonry	9	Heat modified red unfrogged brickwork.	0.4	0.2	0.05	2.12	
106			106	Masonry		Baked clay- possible oven lining.	0.45	0.15		2.14	2.1
107			107	Fill	9	Rubble fill between oven and drain.	1.45	0.85		2.06	2.03
108			108	Masonry	9	Red unfrogged brick wall aligned E-W in sondage.	1	0.6	0.18	1.87	1.73
109			109	Masonry	9	E-W aligned wall in sondage. Possibly a doorway.	0.9	0.25	0.28	3.05	2.76
110			110	Masonry	7	Chalk foundation of [85].	0.2	0.1		1.93	1.93
111				Masonry	9	N-S aligned chalk foundation in NE corner. Suggested to be the same as [86]. No associated occupation surfaces seen.	1.2	0.36		2.33	2.2

112		14		Fill	2	Roman ground raising deposit as seen in test sondage. Light to mid greeny-grey. Has lots of Roman finds. Equivalent to Roman marsh deposit seen across the rest of the site.	5	2	0.5	0.83	
113		14	113	Layer	2	Organic layer- peat fill of channel with Roman material in the top.	2.1	1		0.09	-0.08
114		14	114	Layer	2	Green sandy layer- Roman ground reclamation.	2.1	1.2		0.53	0.47
115			115	Layer	2	Interface between peat and [116] and reclamation layer [113]. Charcoal-rich layer suggests occupation.	2.2	1		0.33	0.32
116		14	116	Layer	2	Organic peat layer with Roman material.	1.8	1.2		0.43	0.35
117		14	117	Layer	2	Green sandy layer- ground raising/marsh deposit.	1	0.6		0.58	0.54
118			118	Layer	2	Grey silty-clay. Interface between ground reclamation and peat layers.	1	1.1		0.42	
119		14	119	Layer		18th century compacted floor surface- dark silty sand.	0.8	1.38		2.04	
120			120	Layer		18th century rubble floor layer with chalk flakes. No depth recorded as NFE.	1.7	2		1.94	1.85
121		15, 19, 14	121	Layer	3	Post-medieval ground raising.	3.6	3.5		1.97	1.74
122				Fill	8	Top fill of cut [124].	2.2	0.7		1.82	
123				Fill	8	Rubble fill of [124].	2.2	1		1.7	
124			124	Cut	8	Post-med rubbish pit. NFE	2.2	1.7		1.82	1.7

125				Fill	8	Rubble fill of post-medieval pit [126] presumably from the demolition of a 17th century structure in the locality. Unex.	1	1.1		1.81	
126			126	Cut	8	Post-med pit cut. NFE	1.1	1		1.81	
127				Fill	8	Rubble fill of [128].	1	0.2		1.97	
128			128	Cut	8	Partially exposed post-med pit. Only seen in plan on step of excavation.	1	0.2		1.97	
129			129	Masonry	9	N-S foundation for [130]. Red brick, mortar, chalk. Only seen in section?	3.4	0.9		1.91	1.7
130				Masonry	9	N-S red unfrogged brick wall only seen in section.	0.7		0.4		
131			131	Layer	8	Rubble layer running along S edge of trench from east to west.	0.75	1.6		1.7	
132		14		Fill	8	Fill of p-m pit [133]. Seen in section only.	1	0.5	0.67	1.75	1.67
133		14		Cut	8	Unexcavated pit cut, seen in section only.	1	0.5	0.67	1.67	1.17
134		14		Fill	2	Fill of [135]. Only seen in section.	1.3		0.5	1.27	0.83
135		14		Cut	2	Unexcavated pit cut- seen in section only.	1.3		0.65	1.27	0.62
136		14		Layer	2	Dark Roman deposit. Only seen in section.	1.4		0.8	1.27	
137		14		Fill	2	Fill of Roman pit [138]. Seen in section only. Part excavated for dating evidence.	1.2	0.6		0.52	0.48
138		14	138	Cut	2	NFE Roman pit cut- seen in section only.	1.2	0.6		0.52	0.48
139			139	Timber	2	Roman Timber- stake.	0.17	0.05	0.05	0.41	

140			140	Timber	2	Roman Timber.	0.33	0.05	0.8	0.41	
141			141	Timber	2	Large Roman timber pile with tapered base point.	1.08	0.16	0.24	0.57	
142			142	Timber	2	Roman Timber.	0.43	0.07	0.05	0.4	
143		14		Fill	8	Fill of [144].	0.7		0.55	1.81	
144		14		Cut	8	Post-med pit cut- only seen in section.	0.7		0.55	1.81	1.53
145				Timber		Unstratified Roman timber-recovered loose from Roman	0.4	0.1	0.09		
146				Fill		Fill of [147]. As exposed in test slot/sondage.	1	1	1	2	
147				Cut		Pit cut seen in test slot.	1	1	1	2	1
148				Fill		Primary fill of [150]. Post-med.	1	1	1	2	
149				Fill		Secondary fill of [150].	1	1	1	2	
150				Cut		Pit cut seen in test slot. Probably Tudor pitting.	1	1	1	2	1
151			151	Masonry	10	N-S aligned red unfrogged brick wall.	3.6	0.47		4.18	4.17
152		17	152	Masonry	9	Red unfrogged brick basement floor. NFE	3.5	0.35		2.65	
153			153	Masonry	9	Red unfrogged brick basement floor. Not fully exposed.	4.9	3	0.2		
154			154	Masonry	9	Red unfrogged brick basement wall aligned N-S. Not fully exposed.	4.8	0.2		3.62	3.61
155		15	155	Masonry	6	Large medieval/Tudor wall foundation. Aligned E-W. Not fully excavated.	0.84	1.1		2.51	1.51
156		17		Fill	9	Clay backfill of [157]- suggested capping of possible barrel well.	0.9	0.9		2.37	

157			157	Cut		Cut for chalk wall. Superseded by [211]. Uncertain if this represents a construction cut for a wall or a robber cut.	1.1	0.8		2.44	
158		17	158	Masonry	7	E-W red unfrogged brick wall. Brick sample not taken as bricks from wall too well bonded and left in the ground as assumed to be part of retained Tudor archaeology.	0.6	2.3		2.5	2.2
159			159	Masonry	7	N-S orangey-red unfrogged brick wall.	1.1	0.36		2.59	
160			160	Masonry	7	N-S red unfrogged brick wall. Overlies [159]?	0.9	0.35		2.68	
161			161	Masonry	9	E-W red unfrogged brick wall. No height as NFE.	0.2	0.8		4.17	
162			162	Layer	8	Demolition rubble spread. No depth as not fully exposed-recorded only in plan.	1.5	1.4		2.39	
163			163	Cut	6	Construction cut for [155]- E-W aligned masonry. Not fully exposed.	1	2.2		2.4	
164		17		Fill	10	Rubble backfill filling room space made by walls [151] and [152].	3.6	0.7		2.97	
165			165	Fill	8	Rubble backfill/demolition horizon.	1	0.6		2.54	
166				Fill		Rubble backfill of robber trench. Superseded by [212]. No depth as not fully excavated.	1.3	0.8		2.44	
167			167	Fill	10	Backfilled rubble in drain. No depth as not fully excavated.	0.9	0.6		2.69	

168			168	Layer	9	Rubble dump layer.	3.7	2.7		2.42	2.15
169				Fill	9	Backfill of possible well [170].	0.7	0.7		2.35	
170			170	Cut	9	Construction cut for well.	0.7	0.7		2.35	
171		17	171	Cut	9	Construction cut for barrel well [172]. No depth as NFE.	0.9	0.9		2.37	
172		17	172	Timber	9	Timber lining of barrel well. Recorded in plan only- no depth.	0.7	0.7		2.35	
173				Fill	8	Backfill of robber cut [174].	0.8	0.8	0.63	2.44	
174			174	Cut	8	Robber cut for chalk wall.	0.8	0.8		2.51	1.81
175				Fill	10	Fill of [176]- modern truncation. Depth not recorded as NFE.	5	1.22		2.47	
176			176	Cut	10	Modern truncation- no depth as not fully excavated.	5	1.22		2.47	
177			177	Layer	8	Lower made ground deposit- not fully excavated so no depth.	8.16	6.7		2.74	2.45
178			178	Masonry	9	Chalk/Reigate stone foundation. Suggested reused stone. No depth as not fully excavated.	0.54	2.22		2.5	2.45
179			179	Layer	9	Crushed brick floor- no depth as not fully excavated.	1.86	2.56		2.52	2.49
180			180	Masonry	9	Red brick wall foundation. NFE	0.96	1		2.64	2.62
181			181	Masonry	9	Basement wall- 18th century.	2.12	0.27		3.18	3.14
182			182	Masonry	9	Circular brick well-like industrial feature: kiln?	1.43	1.1		2.57	2.48
183				Fill	9	Backfill of [182]. Not fully excavated.	1.06	0.82		2.57	
184			184	Cut	9	Construction cut for [182]. No depth as NFE.	1.43	1.1		2.57	

185			185	Masonry	9	Circular red brick industrial feature- kiln? Oven? Furnace?	1.55	1.7		2.56	
186				Fill	9	Backfill of [185]. No depth as NFE.	1.32	1.4		2.6	
187			187	Cut	9	Construction cut for [185].	1.52	1.69		2.56	
188				Fill	9	Fill of [189]. No depth as NFE.	0.8	1.98		2.7	2.62
189			189	Cut	9	Linear cut abutting wall [191]. No depth as NFE.	0.8	1.98		2.7	
190			190	Masonry	9	E-W aligned wall red brick foundation. No depth as NFE.	2.3	0.23		2.76	2.71
191			191	Masonry	9	E-W aligned red brick wall foundation. No depth as NFE.	2.9	0.15		2.65	2.62
192			192	Masonry	9	E-W aligned red brick wall foundation. No depth as NFE.	0.28	0.31		4.04	
193				Fill	9	Fill of [194]. No depth as NFE.	1.26	0.9		3.68	
194			194	Masonry	9	Circular industrial feature. No depth as NFE.	1.44	1.06		3.63	
195				Fill	9	Clay backfill/lining in [196]. No depth as NFE.	1.6	3		3.62	
196			196	Cut	9	Construction cut for [194]. No depth as NFE.	1.6	3		3.62	
197			197	Masonry	10	Wall fragment. Red and yellow stock brick wall. Probably late post-medieval.	0.32	0.3		4.04	
198			198	Layer	10	Modern made ground. No depth as NFE.	6.45	2.2		4.66	3.5
199			199	Masonry	9	E-W aligned unfrogged red brick wall. Only N-face visible in section.	0.22		0.22	2.52	2.01
200				Masonry	9	Redbrick floor. No depth as NFE.	0.7	1.5		2.67	2.62

201				Masonry	10	Rectangular N-S redbrick feature/structure. Appears as two discrete tanks, formed by 4 outer walls and a dividing wall between the two. Uncertain as to function.	2.55	1.95	1.31	2.57	1.26
202				Masonry	9	L-Shaped redbrick wall. No depth as NFE.	1.2	1.54		2.57	2.54
203				Masonry	9	L-Shaped redbrick wall. No depth as NFE.	1.18	1.2		2.56	2.51
204				Cut	9	N-S cut filled with rubble [205]. No depth as NFE.	0.5	0.3		2.68	
205				Fill	9	Fill of [204]. No depth as NFE.	0.5	0.3		2.68	
206				Cut	9	Cut for possible robbed out wall. No depth as NFE.	1.3	0.42		2.69	
207				Fill	9	Fill of [206]. No depth as NFE.	1.3	0.42		2.69	
208				Fill	10	Backfill of drain [203].	1.2	1.04	0.1	2.59	
209				Fill	10	Backfill of tank feature/structure [201].	0.88	1.48	1.31	2.57	2.44
210				Fill	10	Backfill of tank feature/structure [201].	0.85	1.48	1.31	2.57	2.44
211			211	Cut	8	Pit cut.	0.9	0.86	0.35	2.45	1.92
212				Fill	8	Fill of pit cut [211].	0.9	0.86	0.35	2.45	2.3
213				Masonry	10	Circular brick structure- possibly an oven? No depth as NFE.	0.8	1.58		2.34	2.08
214				Masonry	8	Chalky cellar backfill around wall [158].	0.8	0.3		2.5	
215				Fill	10	Fill of possibly oven [213]. No depth as NFE.	0.48	1.24		2.05	
216				Fill	8	Rubble backfill of ?Tudor drain @ end of chalk wall [228], [229].	1.04	1.34	0.9	2.28	

217				Fill	8	Backfill of ?Tudor drain [228], [229].	1.04	1.34	0.1	1.58	
218				Fill	8	Backfill of ?Tudor drain [228], [229].	1.04	1.34	0.05	1.41	
219		16	219	Cut	8	Robber cut made into wall [155].	0.34	0.4	0.89	2.08	1.19
220		15	220	Cut	8	Robber cut made into wall [155].	1.5	1.9	0.32	2.45	2.13
221		15	221	Layer	7	Layer over chalk wall- possible floor. NFE	0.85	0.85	0.14	2.5	
222		15	222	Fill	7	Sandy rubble layer overlying fill [221]. Overlain by [223].	0.8	1.1	0.18	2.71	
223		15	223	Fill	7	Chalk rubble layer.	0.15	1.05	0.16	2.77	
224		15	224	Cut	9	Construction cut for wall [88].	0.63	2.7	0.21	2.77	2.56
225		15		Fill	9	Backfill of construction cut [224].	0.63	2.7	0.05	2.6	2.43
226				Fill		Fill of robber cut [219].	0.34	0.4	0.89	2.08	1.19
227				Fill	8	Fill of robber cut [220]. NFE. Soft to firm mid yellow brown silty-sand.	1.5	1.9	0.32	2.45	
228			228	Masonry	7	Red brick drain wall on southern side of medieval chalk wall [155].	1.4	1.4	1.2	2.29	1.58
229			229	Masonry	7	Brick floor associated with drain wall [229]. No depth as NFE.	1.1	1.26		1.38	
230				Cut	10	Construction cut for masonry (201)- tank feature/structure.	2.55	1.95	1.31	2.57	1.26
231				Fill	8	Backfill of basement [158].	3.6	2.95	1.4		
232			232	Fill	7	Clay lump overlying floor [233].	0.28	0.45			
233			233	Layer	7	Floor surface composed of brick, mortar and chalk. No depth as NFE.	1	1.4		2.48	2.4
234		16		Fill	8	Fill of robber pit [219] - Final fill is rubble.	0.76		0.31	2.48	

235		16		Fill	8	Fill of robber pit [219] - charcoal rich fill.	0.65		0.48	2.47	
236		16		Fill	8	Fill of robber pit [219] - dark clayey fill.	0.7		0.44	2.46	2.41
237		16		Fill	8	Fill of robber pit [219].	0.83		0.49	2.46	
238		16		Fill	8	Fill of robber pit [219] - Tiles, CBM, etc.	1.4	2.9		2.35	2.22
239		16		Fill	8	Fill of robber pit [219].	0.26	0.4	0.1	2.27	
240		16		Layer	7	Compact, dark grey soil under pink mortar layer seen in S16.		0.42	0.08	2.41	
241		16		Layer	7	Crushed and degraded chalk and mortar layer seen in S16 only.		0.45	0.14	2.35	
242		16		Layer		Layer seen in S16.		0.6	0.11	2.22	
243		16		Layer		Layer seen in S16.		0.8	0.05	2.1	1.95
244			244	Masonry	6	Chalk wall return N-S.	1.18	0.64		2.47	
245			245	Layer	6	Mortar spread - mid yellowish brown.	1.35	1.72		2.36	2.52
246			246	Masonry	7	N-S wall - red tiles.	0.64	0.4		2.7	
247			247	Masonry	7	N-S wall - red brick. Associated with [246]. No depth recorded at time of excavation.	1.1	0.7		2.64	2.58
248		15	248	Layer	7	Chalk rubble layer.	1.4	2.9	0.3	2.35	2.22
249			249	Masonry	7	Short section of red brick aligned N-S					
250				Fill	8	Fill of robber pit [220]. Same as [227]. Soft to firm yellow-brown silty sand with CBM.	1.5	1.9	0.32	2.45	
251				Fill		Superseded [292].					
252				Cut		Superseded [291].					

253	18	253	Masonry	9	E-W red brick with N-S spur. Faced on S side by limestone wall [254].	1.5	2		2.38	2.33
254	19	254	Masonry	9	E-W limestone wall. Cut by [253].	4.2	0.2		2.35	2.14
255	19	255	Masonry	9	E-W chalk wall.	0.32	1.45	0.3	2.41	
256		256	Layer	9	Floor surface - lime mortar. No depth as NFE.	1.12	1.4		2.21	
257	18	257	Layer	9	Silty clay dark green cess material that underlies surface [256].	1.5	0.52		2.14	
258	18	258	Masonry	9	E-W red brick with N-S spur.	1.8	0.3		2.73	2.37
259	18	259	Layer	9	Red brick rubble up against wall [253]. Not fully excavated	0.84	0.66		2.3	
260		260	Layer	8	Red brick rubble. Not fully excavated.	0.8	0.4		2.73	
261	18		Fill	9	Fill of construction cut [262] - for wall [253]. Not fully excavated.	0.18	1.4		2.38	2.33
262	18	262	Cut	9	Construction cut for wall [253]. Not fully excavated.	0.18	1.4		2.38	2.33
263	17		Fill	8	Backfill of [264] - unexcavated. No depth as NFE.	0.8	0.45		2.41	
264	17	264	Cut	8	Cut for robbing chalk from wall [155]. No depth as NFE.	0.8	0.45		2.51	
265	18	265	Cut		Construction cut for wall (258). No depth as NFE.	0.1	1.9		2.37	
266		266	Cut	9	Construction cut for wall [255]. No depth as NFE.	0.12	1.6		2.35	
267			Fill	9	Backfill of [266]- construction cut for walls [255] and [254].	0.12	1.6		2.35	

268		18		Fill	9	Backfill of construction cut [265]. NFE	1.8	0.03		2.73	
269		17		Layer	9	Bedding layer for floor [152]. Only seen in section (S17).			0.04	2.75	2.6
270		17		Layer	8	Crushed brick dump. Very similar to presumed backfill of cut [264]. Only seen in S17.				2.73	2.59
271		17		Fill	9	Top fill of barrel well (172). Only seen in S17.	0.4		0.2	2.63	2.6
272				Fill		Upper fill of [274]- similar to fill [273].	1.3	1.85	0.53	2	
273				Fill		Lower fill of [274].	1.1	1.5	0.27	1.47	
274			274	Cut	8	Square pit cut filled with timbers. Same as [220].	1.3	1.85	1.5	2.71	1.2
275		18		Fill	10	Fill of pit/posthole. Only seen in section.	0.3		0.45	3.41	
276		18		Cut	10	Cut of small pit/posthole. Only seen in section.	0.3		0.45	3.41	2.96
277		18		Layer	10	Modern made ground. Only seen in section.	1.15		0.18	3.56	3.41
278		18		Layer	10	Made ground - Demolition material. Only seen in section.	0.84		0.52	3.38	3.24
279		18		Layer		Made ground - Charcoal rich demolition material.	0.6		0.4	3.26	3.24
280		18		Layer		Made ground - mixed demo material.	1.05		0.52	3.36	
281		18		Layer	10	Re-deposited London Clay. Only seen in section.	2.6		0.45	3.16	
282		18		Layer	10	Mixed Demo Material - Made Ground.	0.72		0.52	3.18	2.86

283		18	283	Layer	10	Degraded mortar in a clay matrix. Only seen in section.	1.32	0.18	0.5	2.71	2.41
284		18	284	Layer	10	Charcoal rich dump - Hearth/Furnace? Only seen in section.	0.7		0.2	2.41	2.16
285		18		Layer	10	Made ground - dump of black soil against north wall of [258]. Seen in section 18 only.	0.55		0.34	3.26	
286		18		Masonry	9	North-South spur from wall (253). Only recorded in section 18.	1.2		0.52	2.68	
287				Layer	9	Layer of clay associated with tiles or "hearth".					
288		18		Layer	9	Layer of compacted soil - same as [121]?	1.22	1.22	0.07	3.54	2.05
289		18		Layer	9	Plaster render from wall [253] - Also created floor surface.	1.66	1.28		2.3	2.16
290			290	Masonry	9	Tiles set vertically on edge to create hearth/furnace.	0.49	0.86	0.04	2.19	
291			291	Cut	7	N-S cut on East side of [228].	1.62	0.9	1.04	2.5	1.46
292				Fill	7	Fill of cut [291].	1.62	0.9	1.04	2.5	1.46
293				Timber	8	Plank at bottom of [274].	0.6	0.26		1.26	
294				Timber	8	Plank at bottom of [274].					
295				Fill		Fill of robber cut [296].	0.53	1.26	0.09	1.95	
296			296	Cut		Robber cut.	1.3	0.54	0.09	1.95	1.86
297		23	297	Masonry	6	Robbed medieval/Tudor wall. No depth as NFE.	1.5	2.05		2.05	1.92
298			298	Cut	6	Construction cut for wall [297].	1.5	2.1		2.28	1.92
299				Fill	9	Fill of cut [300].	0.8	0.78	0.32	2	
300			300	Cut	9	Circular robber cut.	0.78	0.8	0.32	2	1.68

301		26		Fill	8	Fill of cut [302].	1.7	1.96	0.43	1.99	
302		26	302	Cut	8	Large robber cut.	1.7	1.96	0.43	1.99	1.49
303		20		Fill	8	Fill of cut [304].	1.95	1.98	0.52	2.02	
304		20	304	Cut	8	Robber cut.	2.1	2.3	0.52	2.02	1.41
305		24	305	Masonry	6	Chalk wall. Not fully bottomed so depth unknown.	0.62	0.23		2.09	
306		24	306	Cut	6	Construction cut for (305) for wall [305]. NFE	0.64	0.3		2.09	
307		24		Fill	8	Backfill of robber cut [308]. Not fully excavated. Laminated bands of crushed CBM.	0.46	2.96		2.03	
308		24	308	Cut	8	Possible robber cut. NFE	2.94	0.33		2.1	
309				Fill	8	Backfill of robber cut [310]. NFE	0.35	1.63			
310		25, 21	310	Cut	8	Robber cut associated with wall [311]. NFE	1.56	0.28		2	
311		21, 25	311	Masonry	6	Heavily truncated chalk wall/foundation.	1.18	0.25	0.57	2.19	1.62
312			312	Cut	6	Construction cut for wall [311].	1.27	0.16	0.57	2.19	1.9
313				Fill	6	Fill of cut [314]. NFE	0.4	0.6		1.99	
314			314	Cut	6	Pit cut. NFE	0.6	0.54		1.99	
315		21, 23		Fill	8	Fill of robber cut [316]. Seen in section 21, 23 only.	0.27	0.78	0.8	2.81	2.65
316		23, 21		Cut	8	Robber cut. Seen in section only.	0.27	0.78	0.8	2.81	1.98
317		23, 20, 25, 26, 24		Layer		Layer of silty clay truncated by robber cuts- medieval horizon. Part machine excavated and subsequently only seen in section. Medieval ground-raising/dumped ground.				2.41	1.7

318		22		Layer	10	Laminated post-med dump layer. Only seen in section.	2.87		0.82	3.85	3.7
319		22		Layer	9	Crushed chalk basement floor layer. Only seen in section.	2.65		0.16	3.16	3.01
320		22		Fill	10	Fill of [321].	0.5		0.41	3.83	3.83
321		22		Cut	10	Post-med pit. Only seen in section.	0.5		0.41	3.83	3.41
322		25, 21, 22		Layer	8	Post-med dump layer. Seen in section only.	3.03		0.2	3.16	2.86
323		25, 21		Fill	8	Secondary fill of [310]. Seen in section only.	2.53		0.8	2.66	2.91
324		21, 22		Fill	10	Fill of construction cut [325]. Only seen in section.		0.14	0.64	3.45	3.45
325		22, 21		Cut	10	Construction cut of post-med wall [333]. Seen in section only.	0.14		0.64	3.45	2.79
326		20		Layer	10	Post-med dump layer. Seen in section only.	2.27		0.5	3.04	2.96
327		20, 24		Layer	8	Chalk demolition layer.	0.88	0.7	0.1	2.78	2.54
328		24, 20		Layer	8	Red brick and mortar demolition layer.	2.37	0.4	0.43	2.7	2.54
329				Void		Void					
330		20, 24		Layer	8	Mortar and brick demolition layer. Seen in section only.	0.35		0.1	2.44	2.44
331		20		Layer	8	Secondary fill of [304]. Seen in section only.	1		0.12	2.47	2.4
332				Void		Void					
333				Masonry	10	Masonry (post-med) - construction cut [325]. Seen in section only. Fragmentary /damaged.	0.22		0.4	3.41	3.41

334				Fill	10	Fill of [336]. NFE	1.02	2.07	2.2	2.93	
335				Masonry	10	Post-med soak away.	1.3	2.33	2.2	4.12	2.84
336		21, 22		Cut	10	Construction Cut for [335].	1.3	2.33	2.2	3.83	3.7
337		24		Layer		Cinder Layer. Seen in section only.	3.95		0.25	3.61	3.56
338		24		Layer	10	Sandy Layer, seen in section only.	0.89		0.09	3.41	3.36
339		24		Layer	10	Dump Layer – Post-med. Seen in section only.	1.45		0.25	3.41	3.41
340		24		Layer	9	Floor surface of basement. Seen in section only.	1.4		0.11	3.17	3.17
341		24		Layer	9	Dump Layer – Post-med. Seen in section only.	1.5		0.4	2.73	2.73
342		24		Fill	10	Fill of cut [343]. Seen in section only.	0.65		0.95	3.57	3.57
343		24		Cut	10	Pos- med pit cut. Seen in section only.	0.65		0.95	3.57	2.6
344		24		Masonry	10	Masonry in construction cut [346]. Seen in section only.	0.31		0.5	3.06	3.06
345		24		Fill	10	Fill of [346]. Seen in section only.	0.9		1.02	3.47	3.47
346		24		Cut	10	Construction cut for (444) - *note this is likely supposed to be [344]. Seen in section only.	0.9		1.02	3.47	2.52
347		24		Masonry	10	Floor surface/paving. Seen in section only.	1.3		0.1	3.56	3.56
348		24		Layer	10	Dump Layer – Post-med. Seen in section only.	2.5		0.95	3.39	3.39
349		24		Layer	8	Dump Layer. Seen in section only.	1.3		0.3	2.64	2.32
350		24		Fill	8	Fill of [351]. Seen in section only.	1.45		0.47	2.72	2.72

351		24		Cut	8	Robber cut, seen in section only.	1.45		0.47	2.72	2.23
352		24		Layer	6	Occupation layer/floor/surface. Seen in section only.	1.35		0.05	2.34	2.34
353		24		Fill	6	Backfill of construction cut [306]. Seen in section only.	0.63		0.23	2.41	2.24
354		23		Layer	10	Post-med dump layer. Seen in section only.	2.62		0.34	3.05	2.95
355		23		Masonry	9	Floor surface/paving? Seen in section only.	1.36		0.07	2.75	2.65
356		23		Fill	9	Fill of construction cut [357]. Seen in section only.	1.36		0.04	2.75	2.65
357		23		Cut	9	Construction cut for (355). Seen in section only.	1.36		0.12	2.75	2.6
358		23		Layer	8	Demolition layer. Seen in section only.	0.58		0.3	2.62	2.6
359		23		Fill	8	Fill of [340]. Seen in section only.	2		0.82	2.75	2.67
360		23		Cut	8	Robber cut, made into wall [297]. Seen in section only.	2		0.82	2.75	1.98
361		30		Fill	7	Backfill between walls in drain/passageway of palace.	0.61	0.81	0.8	1.37	1.12
362		30		Fill	7	Lower backfill between walls. Only seen in section.		0.81	0.34	0.64	0.48
363				Fill		Demo back fill.					
364			364	Masonry	9	17/18th c. Brick surface.	2.6	1.05	0.14	1.96	1.94
365		30	365	Masonry	7	N-S Tudor Wall.	2.1	0.45	1.08	1.37	1.33
366		34, 46	366	Masonry	7	N-S red unfrogged brick and chalk Tudor Wall.	8.4	0.7	1.12	1.62	1.1
367		37	367	Masonry	7	N-S red brick Tudor Wall.	2.6	0.5	1.22	1.46	
368		52, 59, 38, 31,	368	Masonry	7	N-S red brick and chalk Tudor Wall.	5.25	2.25	0.55	2.01	0.74

		43, 37									
369		31, 34, 39	369	Masonry	7	N-S chalk Tudor Wall.	2.34	0.57	0.33	1.62	1.53
370			370	Masonry	7	N-S red brick and chalk Tudor Wall.	1.37	0.59	0.58	1.87	
371			371	Masonry	7	N-S red brick and chalk Tudor Wall.	1.12	0.51	0.3	1.53	
372			372	Masonry		Red unfrosted brick Floor.	1.8	1.3	0.17	1.72	1.55
373			373	Cut		Cut for Brick Floor [372].	1.79	0.88	0.13	1.69	1.56
374			374	Masonry	6	Chalk Wall Foundation.	1.79	0.88	0.13	1.69	1.56
375				Fill		Fill between cut [373] and floor [372]- backfill of construction cut?	1.79	0.04	0.06	1.69	1.63
376			376	Masonry	7	Truncated chalk floor rubble-foundation?	2.1	0.75	0.12	1.38	
377		36, 34, 35, 33, 44, 43, 42, 52	377	Layer	2	Generic number given to green gravel Roman dump layer/marsh deposit.	3.38	3.62	0.27	1.98	1.54
378		36, 44, 43, 34		Layer	2	Flood deposit of grey coarse sand and gravel. Seen across site. Levels taken from S43.			0.2	0.74	0.54
379		36, 34, 44, 43, 42, 35	565	Layer	2	Roman Peat observed across site, initially in a test sondage in BL3 and 10a. Levels for [379] taken from S43- heights at base of 10a sondage are part truncated.				0.64	0.43
380				Masonry	7	Brick wall below (369). Possibly same as [366].	2.34	0.57	1.15		

381				Masonry	9	Brick wall of tank thought to relate to post-medieval industrial activity on site.	2.4	2.47	1.37	3.79	3.2
382				Masonry	9	Course of brickwork within 'tank' [381]- internal division?	0.8	0.23	0.06	3.24	
383		27		Masonry	8	Fragmented wall, only seen in section.	0.7		0.14	1.92	
384				Cut	8	Construction cut for (383). Only seen in section.	0.7		0.14	1.78	
385		27		Layer	8	Dumped deposit. Only seen in section.	1.45	1.05	0.19	1.9	1.78
386		27		Layer	8	Demolition layer. Initially thought to be from demolition of a Tudor wall but actually later.	1.44	1.05	0.08	1.73	1.58
387		27		Fill	8	Back fill for construction cut [389]. Only seen in section.	0.14		0.1	1.77	
388		27		Masonry	8	Fragment of wall, only seen in section. Post-Tudor.	0.25		0.23	1.77	
389		27		Cut	8	Construction cut for [388]. Only seen in section. NFE	0.45		0.24	1.78	1.58
390		27		Fill	8	Back fill for [391]. Only seen in section.	0.58		0.5	1.64	
391		27		Cut	8	Undeterminable cut feature. Only seen in section.	0.58		0.5	1.64	1.13
392		27		Layer	8	Dump layer. Only seen in section.	0.95		0.3	1.78	
393		27		Fill	8	Backfill for [394]. Only seen in section.		0.39	0.26	1.74	
394		27		Cut	8	Undeterminable feature, only seen in section.	0.39		0.26	1.74	1.38

395				Masonry	9	E-W red brick wall.	0.24	2.6	0.72	3.11	2.32
396				Fill	9	Fill of Masonry [381].	2.9	2	0.46	3.24	
397				Fill	9	Fill of Masonry [381]. Only visible in section.			0.11	2.78	
398				Fill	9	Fill of Masonry [381]. Only seen in section.			0.14	2.67	
399				Fill	9	Fill of construction cut [400] for wall [395].	0.15	1.7	0.75	2.53	
400				Cut	9	Cut for wall [395]. Not fully excavated.	1.7	2.6	0.75	3.11	
401				Fill	9	Fill of clay lined pit [403]. Not fully excavated.	1.3	0.6			
402				Fill	9	Clay lining of pit [403]. NFE	1.3	0.45			
403				Cut	9	Clay lined pit. Not fully excavated.	1.3	0.67			
404		28		Fill	10	Demolition material in [411]	1.42	1.03	0.31	3.11	
405				Layer		Fill between two east-west walls [395] and [381]. NFE	1.7	0.75	0.14	2.33	
406				Fill	9	Fill of clay and CBM lined pit [408]. Not fully excavated.	0.44	1.01		1.99	
407			407	Fill	9	Clay and CBM lining of pit [408]. NFE	0.82	1.34		2.18	
408			408	Cut	9	Cut of rectangular pit. NFE	0.82	1.2		2.18	
409				Layer	6	Dumped layer cut by [308]. NFE	1.7	1.2			
410		27		Layer	2	Layer - green - continuation of [377]. Only seen in section.	3.5		0.65	1.67	1.48
411		28		Cut	10	Cut for fill (404). Seen in section only.	1.42	1.03	0.31	3.11	2.76
412		28		Fill	9	Fill capping well [414]. Seen in section only.	1.25	1.03	0.1	3.13	3.1

413		28		Fill	9	Fill in brick feature [414]. Only seen in section.	0.87		0.29	3.06	3.03
414		28		Masonry	9	Circular brick feature- not thought to be related to a well but maybe has an industrial purpose. Seen in section. NFE	1.12	0.6	0.36	3.05	2.77
415		28		Fill	9	Backfill in [416] around [414]. Seen in section. NFE	0.36	0.17	0.25	3.03	
416		28		Cut	9	Cut for brick feature [414]. Seen in section- NFE.	1.26	1.45	0.38	3.03	
417		28		Fill	9	Fill robber cut of [418]. Only seen in section- NFE.	0.28		0.2	2.77	
418		28		Cut	9	Robber cut. Only seen in section- NFE.	0.28		0.2	2.77	2.55
419		28		Fill	9	Fill of [420]. Not fully excavated. Seen in stepped section.	0.15	0.18	0.28	2.91	
420		28		Cut	9	Cut next to wall [434].	0.15	0.18	0.37	2.91	
421		29, 28		Fill	6	Fill of construction cut [422]. Seen in section only- NFE.	0.13	1.15	0.6	2.76	
422		28, 29		Cut	6	Construction cut for [434]. NFE. Section only.	1.15	0.13	0.37	2.76	2.21
423		28, 29		Layer	6	Made ground- laminations of demolition debris. Seen in section only- NFE	1.7	0.9		2.67	
424		29, 28		Fill	8	Upper fill of pit [427]. Seen in section only. NFE	1.08	1.25	0.42	2.82	2.61
425		28		Layer	9	Layer- topsoil? Only seen in section. NFE	0.18	0.8	0.39	3.07	
426		29		Fill	8	Lower fill of pit [427]. Seen in section. NFE	1.2		0.34	2.52	

427		29		Cut	8	Pit cut. Filled with [426], [424].	1.16	1.08		2.62	2.2
428		29		Masonry	7	Small, heavily truncated wall.	0.65	0.26	0.24	2.6	
429		29		Cut	7	Construction cut for [428]. Section only. NFE	0.65	0.26	0.24	2.25	
430		29		Layer	7	Demolition layer over floor [432]. Section only- NFE.	0.61	0.56	0.13	2.37	
431		29		Layer	7	Demo over floor (432) - same as [430]? Section only. NFE	0.17	0.62	0.22	2.5	
432		29, 32		Layer	6	Coarse sand under floor [435]. Seen in section only- NFE.	2.04	0.56	0.04	2.29	2.22
433		29, 32		Layer		Dumped layer- abandonment horizon? Section only- NFE	2.04	1.1	0.32	2.24	2.22
434		29		Layer	6	N-S medieval? Chalk wall.	1.18	0.4	0.38	2.61	
435		32		Layer	6	Clay floor, on top of levelling [432] and abutting wall [434]. Only seen in section- NFE.	0.75	0.61	0.05	2.27	2.26
436		32		Layer	2	Roman strat- same as [377]? Only seen in section, NFE.	1.35	0.3	0.51	1.96	
437			437	Masonry	10	Circular brick structure, set into Tudor wall. Too small to be a well. Maybe a small oven.	0.7	0.82	0.25	2	
438			438	Masonry	10	Brick floor, thought to be late post-medieval in date and set into earlier Tudor masonry.	1.4	1.38	0.06	2.06	2
439		52	439	Masonry	10	Brick floor, associated with [368]? Not fully excavated.	1.46	0.98		1.95	1.87

440	30	440	Masonry	7	Post-Tudor brickwork and pre-Great-Fire, thought to potentially represent blocking-up of doorway or staircase down into servants' passageway. NFE	1.07	0.24	1.07	1.21	1.15
441		441	Masonry	7	Tudor wall- part of palace. Forms eastern wall of servants' passageway and thought to be inside the northern extension of the palace. NFE	0.05	0.22	0.33	1.17	
442	30	442	Masonry	7	Tudor brick floor of passageway between [440] and [365]. NFE	1.5	0.45		0.29	
443	37, 40	443	Masonry	7	Tudor brick floor - same as [442]. NFE	0.8	0.6		0.33	0.3
444		444	Masonry	7	Brick floor - same as [442]	3.04	0.7		0.3	
445	30		Layer	7	Backfill of passageway / drain. Only seen in section: NFE	0.6		0.19	0.88	0.67
446	30		Layer	7	Silt layer in passageway / drain. Only seen in section- NFE		0.81	0.23	0.82	0.62
447	30		Layer	7	Silt layer in passageway / drain. Only seen in section.		0.28	0.11	0.33	0.29
448	30	448	Timber	7	Timber plank in Passageway/drain.	1.56	0.25	0.01	0.41	0.33
449	30	449	Masonry	7	Bricks positioned between timber planks [448] and [450] in passageway. Possible suggested function is bowling alley or tennis courts.	1.5	0.42	0.08	0.45	0.37
450	30	450	Timber	7	Timber plank on floor of passageway/drain.	1.51	0.55	0.02	0.24	
451			Fill	8	Fill of post-med pit [452].	0.56	0.53	0.15	1.45	

452			452	Cut	8	Cut of post -med pit.	0.56	0.53	0.15	1.45	1.3
453				Fill	8	Fill of post-med pit [454].	1	0.7	0.52	1.57	
454		37	454	Cut	8	Cut of post-med pit.	1.24	0.7	0.82	1.6	0.78
455		31		Fill	7	Middle fill in passageway. NFE- seen only in section.	0.67		0.45	1.52	
456		31		Fill	7	Lower fill in passageway.	0.67		0.52	0.8	
457		31		Fill	7	Top fill of passageway.	0.67		0.55	1.57	
458			458	Masonry	7	Small fragment of Tudor wall- remnant of 'tower' or staircase at back (W-side) of northern extension. Not fully excavated.	0.7	0.3		1.03	0.49
459			459	Masonry	7	U shaped section of Tudor wall (possible gate house?). NFE	1.9	3.65		1.59	0.71
460		33	460	Masonry	7	Straight section of Tudor wall/gate house.	0.45	2.1	0.35	1.52	1.42
461			461	Cut	10	Cut for circular brick feature [437] made into Tudor wall [368].	0.7	0.82	0.25	2	
462			462	Layer	10	Layer between floors [438] and [439].	1.66	0.98	0.06	1.98	1.95
463		52	463	Layer	10	Demolition deposit.	1.38	0.3	0.15	1.94	1.9
464		52	464	Masonry	10	N/S wall below floor [439].	1.76	0.22	0.14	1.99	1.87
465		51	465	Cut	7	Construction cut for wall [458]. NFE	0.7	0.3		1.03	
466			466	Cut	7	Construction cut for wall [459]. Not fully excavated.	1.9	3.65		1.59	1.52
467		33	467	Cut	7	Construction cut for wall [460]. NFE	1.9	3.1	1.4	1.52	1.12
468		33		Fill	7	Upper fill of cut [470].	0.5	2.1	0.25	1.17	
469		33		Fill	7	Middle fill of [467]. Seen in section only.	0.5		0.32	0.92	

470		33		Fill	7	Lower fill of [467]. Seen in section only.	0.5		0.6	0.6	
471		34		Layer	2	Redeposited river gravels on top of Roman deposits, perhaps used as a metallated surface.	0.68	0.47	0.18	1.15	1.12
472		34		Cut	7	Construction cut for turret. Section only.	0.54	0.21	0.9	0.99	0.14
473		34		Fill	7	Cement mortar fill in [472]. Section only.	0.54	0.21	0.92	1.1	
474		34		Masonry	7	Tudor wall.	0.49	0.05	0.12	1.12	
475		33		Layer	2	Grey clay silt deposit. Possibly the same as [378].	1.7	1.7	0.45	0.52	0.47
476		34	476	Cut	7	Construction cut for Tudor walls and floors.	1.04	0.4	1.18	1.14	0.26
477		34		Fill	7	Mortar fill in [476]- seen in S34 only- NFE	0.57	0.24	0.75	0.97	
478		34		Fill	7	Backfill in construction cut [476]. Seen in section only.	1.04	0.4	0.31	1.31	0.99
479		34	479	Cut	7	Construction cut for chalk wall [369] truncating [366], although thought to belong to same phase.	0.12	0.55	0.38	1.42	1.01
480				Layer	2	Roman dump layer.	3.4	1	0.3	1.54	1.53
481		33		Layer	3	Dark-earth horizon between Roman levels and medieval activity. Seen in S33 only.	1.1	2.1	0.43	1.43	
482		34		Fill	7	Backfill of construction cut [479] for wall [369]. Seen in S34 only.	0.55	0.12	0.21	1.16	1.07
483		46	483	Cut	7	Construction cut for walls [441] and [366]. Not fully excavated as masonry to be preserved.	7.2			1.62	

484		46		Fill	2	Fill of pit [485].	1.76	0.48	0.52	1.06	0.54
485		46	485	Cut	2	Pit, cut by construction cut [483] for Tudor wall.	1.76	0.48	0.49	1.03	0.54
486				Fill	7	Backfill of wall construction cut [483] for walls [366] and [441]. Not fully excavated.	7.2			1.62	
487				Fill	7	Fill of construction cut [458] for wall [440]. Not fully excavated.	1.52	0.34		1.04	
488			488	Cut	7	Construction cut for wall [400].	1.52	0.34		1.04	
489		52, 36, 35, 44, 43, 41		Layer		Start of dark earth formation in late Roman period. Represents post-Roman abandonment and pre-medieval accumulation of dark, humic material, potentially some residual Saxon material. Site may have become flooded in this period. Seen over entire site so dimensions and heights widely variable.				1.26	1.16
490		43		Fill	7	Backfill of construction cut for wall [491]. Not fully excavated.	5.32	1.7		1.46	
491		52, 43	491	Cut	7	Construction cut for walls [367] and [368].	5.32	1.7		1.75	0.25
492				Fill	9	Backfill of well. NFE	1.2	0.5			
493				Masonry	9	Brick well.	1.6	0.22	0.6		
494				Cut	9	Construction cut for [493]. NFE	1.75	0.9			
495				Fill	7	Backfill above wall [370]- uncertain if actually exists- walls are thought to be trench built				1.87	
496			496	Cut	7	Construction cut for wall [370]. NFE	1.26			1.87	

497				Fill	10	Unexcavated backfill of wall construction cut [498]. Uncertain if it actually exists as thought that walls were trench built.	1.12			1.53	
498			498	Cut	10	Construction cut for wall [371]. NFE	1.12			1.53	
499		37		Fill	7	Mortar fill on floor [444]/ [503].	1	0.15	0.1	0.49	0.34
500			500	Timber	7	Large timber on passageway floor.	1.02	0.3	0.08	0.63	0.41
501		40		Layer	7	Brick and mortar demo layer below floor [443]. Seen in section only.			0.35	0.25	
502		40		Masonry	7	Chalk foundation seen in S40 only.			0.35	0.25	
503			503	Masonry	7	Tudor brick floor. NFE	0.7	0.8		0.34	0.27
504			504	Masonry	7	Tudor brick floor. NFE	2.42	0.62		0.3	0.22
505				Structure		Number given to palace structure.					
506		43		Layer	2	Peaty layer below [379]- natural peat without any anthropogenic activity. Seen in window samples and boreholes in test sondage made through [379].				0.49	0.19
507			507	Masonry	6	E-W chalk wall. Recorded on step of excavation area- not fully exposed. Probably lines up with a wall over to the west. Trench built within cut [508].	1.23	0.32	0.32	2.55	2.23
508			508	Cut	6	Construction cut for [507]. Not fully exposed as positioned on step of excavations.	1.23	0.32	0.4	2.63	2.23

509			509	Masonry	9	Post-med E-W wall. NFE	1.24	0.28		1.39	0.67
510			510	Cut	9	Construction cut for [509]. NFE	1.25	0.25	0.72	1.69	0.97
511		41		Fill	10	Modern fill of [512].	0.22		0.78	1.7	0.9
512		41		Cut	10	Modern cut. Only seen in section.	1.55		1.01	1.7	0.9
513		41		Fill	5	Upper fill of Barrel [516].	0.54		0.53	1.7	
514		41		Fill	5	Clay cap in barrel [516].	0.53		0.01	1.3	
515		41		Fill	5	Lower fill of Barrel (516). Seen in section only.	0.53		0.3	1.2	
516		41, 42	516	Timber	5	Wooden barrel well.	0.88		0.41	1.34	
517		41	517	Cut	5	Cut for Barrel (516). NFE	0.89		0.66	1.7	
518		43		Masonry	7	Chalk foundation for tower/turret. Only seen in section (S43)- could well be the same as [368]. Current suggestion is that the floors were built before the walls, although this may potentially be the reverse. Not fully excavated.	0.9	0.38	0.65		
519		43	563	Timber	2	Timber stake and rotted remains.		0.11	0.18	1.29	0.46
520		43	563	Timber	2	Timber stake and rotted remains.	0.17		0.11	1.23	0.51
521		43		Fill	9	Fill of cut [522]. Seen in S43 only-NFE.	1		0.37	1.61	1.23
522		43		Cut	9	Pit cut. Lots of tile in fill.	1		0.37	1.61	1.23
523		43		Layer	2	Sandy clay layer- seen in S43 only.	2.4		0.22	1.3	1.06
524		43		Layer	2	Sandy gravel layer. Seen in S43 only.	3.83		0.36	0.95	0.53
525		43		Layer	2	Thin organic layer. Seen in S43	1.15		0.04	0.65	0.61

						only.					
526		43		Layer	2	Sand Layer - maybe the same as [527]. Seen in S43 only.	0.72		0.18	0.64	0.46
527		43		Fill	2	Clay fill of [528]. Seen in S43 only	0.4		0.22	0.73	0.61
528		43		Cut	2	Cut of shallow pit or possibly a structure. Filled by [527]. Only seen in S43.	0.4		0.22	0.73	0.61
529		43		Fill	9	Fill of pit cut [530]. Seen in section only.	1.03		0.42	1.46	1.08
530		43		Cut	9	Post-med pit cut filled by [529] and seen in S43 only.	1.03		0.42	1.46	1.08
531		43		Fill	9	Fill of pit cut [532]. Seen in S43 only.	2		0.69	1.69	
532		43		Cut	9	Post-med pit cut seen in S43 only.	2		0.69	1.69	1.04
533		43		Fill	2	Fill of small pit [534]. Seen in S43 only.	0.31		0.41	1.29	
534		43		Cut	2	Small pit cut filled by [533]. Seen in S43 only.	0.31		0.41	1.29	0.88
535		45		Fill	5	Upper fill of barrel [540].	0.84	0.84	0.4	1.4	
536		45		Fill	5	Fill of barrel [540].	0.81	0.81	0.28	1.13	
537		45		Fill	5	Fill of barrel [540].	0.75	0.75	0.13	0.87	
538		45		Fill	5	Sticky white fill of barrel [540].	0.74	0.74	0	0.76	
539		45		Fill	5	lowest fill of barrel [540]	0.78	0.78	0.06	0.75	
540		45	540	Timber	5	Timber barrel well.	0.85	0.85	0.55	1.25	0.72
541		45	541	Cut	5	Cut for barrel well [540].	0.86	0.86	0.76	1.44	0.68
542			549	Timber	2	Stake 320mm x 80mm.				0.51	
543			549	Timber	2	Stake- 50 x 190mm.				0.49	
544			549	Timber	2	Stake - 90mm x 90mm.				0.45	
545			549	Timber	2	Stake - 30 x 90mm.				0.47	

546			549	Timber	2	Stake - 120 x 80mm.				0.49	
547			549	Timber	2	Stake - 40 x 80mm.				0.5	
548			549	Timber	2	Stake - 30 x 200mm.				0.46	
549			549	Timber	2	Structure number of possible wattle-lined fence line. Not fully excavated.	2.4	0.3		0.47	0.26
550			563	Timber	2	Stake - NFE. 50mm diameter.				0.41	
551			563	Timber	2	Stake - 40mm in diameter. NFE				0.41	
552			563	Timber	2	Stake - 50mm diameter. NFE				0.31	
553			563	Timber	2	Stake - 45mm diameter. NFE				0.39	
554			563	Timber	2	Stake - 43mm diameter.				0.39	
555			563	Timber	2	Stake - 70mm diameter.				0.39	
556			563	Timber	2	Stake - 75mm diameter.				0.39	
557			563	Timber	2	Stake - 80mm x 180mm.				0.39	
558			563	Timber	2	Stake - 221mm x 65mm.				0.39	
559			563	Timber	2	Stake - 45 x 200mm.				0.39	
560			563	Timber	2	Stake - 65 x 160mm.				0.39	
561			562	Timber	2	Boxed/squared timber pile. 90 x 90mm.				0.36	
562			562	Timber	2	Stake- 320 x 100 x 80mm.				0.71	
563		43	563	Timber	2	Part of a "structure" -wattle lined?	0.48	0.25	0.4	0.29	
564		43	565	Layer	1	Natural gravel seen in auger holes made through peat layer in sondage at N of site.				-1.19	-1.63
565			565	Timber	2	Roman Pile - Revetment? 115 x 65 mm. NFE				0.48	
566			565	Timber	2	Roman Pile - Revetment? NFE. 218 x 120 x 75mm.				0.69	
567				Timber	2	Stake- 65mm diameter. NFE				0.39	

568		46		Fill	7	Backfill of construction cut [483] for wall [366]. Only recorded in section.		0.22	0.47	1	0.54
569			569	Masonry	7	N/S Tudor Wall. Not fully excavated as retained.	2.86	0.82		2.16	1.99
570			570	Layer	8	Rubble - Linear shape. Possibly a wall.	1.5	0.6		1.95	1.79
571		50	571	Layer	8	Rubble - possible floor surface, partly covered with grey layer [572]. NFE	1.7	1.46		2.14	2.11
572				Void	10	Fill of modern drain cut.	1.7	1.46		2.14	2.11
573		50	573	Masonry	6	Chalk wall fragment. Not fully excavated.	0.5	0.4		2.1	
574			574	Masonry	7	Eroded brick layer. NFE	0.5	0.9		2.04	
575		50, 49	575	Masonry	7	Chalky Floor.	1.2	1.7		2.16	2.1
576		49	576	Layer	7	Sand bedding layer- NFE	1.2	1.72		2.08	
577		50	577	Masonry	7	E-W Tudor wall. Retained so NFE.	1.5	0.36		2.04	2.04
578			578	Layer	8	Dark brown layer.	2.61	4.12		1.99	1.24
579			579	Masonry	6	Chalk wall.	1.44	0.56		1.64	1.51
580			580	Masonry	6	Chalk surface - possibly floor. NFE	1.8	1.14		1.91	1.87
581			581	Layer	6	Mixed black and soft brown. NFE	1.58	2.02		1.63	1.54
582			582	Layer	7	Green silty sand layer.	1.8	0.3		1.89	1.76
583			583	Layer	10	Dark Grey - (same as voided 572). NFE	1.9	1.09		1.89	1.75
584			584	Layer	8	Rubble layer. NFE	1.58	1.43		1.7	1.64
585			585	Layer	8	Very dark grey silty clay. NFE	2.79	4.46		1.61	1.49
586			586	Masonry	7	Wall- possibly Tudor- NFE- top of vaulted foundation arch?	1.6	1.9		2.03	1.7

587		48	587	Masonry	7	E-W Wall- possibly Tudor and related to vaulted arch [586]. NFE	2.34	0.38	0.3	1.81	1.58
588			588	Masonry	7	Red N-S red unfrogged brick wall. NFE as to be retained. Vaulted foundation arch- North side of bulk of Tudor palace pre-Northern extension	0.82	0.26		2.16	1.7
589			589	Layer	7	Rubble layer- maybe masking the top of bonded of masonry. Not Fully Excavated as to be retained.	0.94	2.04		1.58	1.51
590				Masonry		Superseded.					
591		157	591	Masonry	10	Post-med brick well. NFE	0.83	1.24		2.12	2.02
592		161	592	Masonry	10	N-S Tudor wall.	1.14	0.21	0.64	2.12	2.1
593		157	593	Layer		Rubble floor layer. Recorded in plan only- NFE	3.4	2.2		2.14	1.94
594				Masonry		E-W wall relating to room of palace.	0.3	1.3		2.1	
595				Masonry		N-S wall relating to room within palace.	1.86	0.75		1.99	
596				Masonry		Rubble floor layer.	0.5	1.15		1.99	
597			597	Masonry	7	Red brick Tudor wall. Suggested to be the same as [2289]. Built within construction cut [2346].	1.79	0.3	0.2	2.03	2.01
598				Masonry		Modern wall.	1.45	2.5		1.86	1.79
599			599	Masonry	7	E-W ?Tudor wall. NFE.	1.3	0.42		2.87	2.87
600				Masonry	8	E-W post-med wall.	1.2	0.5	0.16	2.03	1.97
601			601	Masonry	6	E-W chalk wall, presumed to be from predecessor to Tudor palace.	1.6	0.43		2.06	2.05

602		158	602	Masonry	7	Fill inside wall [603]. Superseded.	1.82	0.8		1.92	
603		158	603	Fill	7	L unfrogged red brick wall- Tudor? NFE at time of recording. Superseded.	2.25	0.8		2.04	1.91
604			604	Masonry	7	Rubble layer. NFE at time of recording. Superseded	0.78	1.66		2.07	1.94
605			605	Layer	7	Floor within wall [606]. Superseded.	0.74	0.62	0.22	1.98	1.76
606		167	606	Masonry	7	N-S wall. [2412] is the construction cut. Superseded.					
607		158	607	Masonry	7	Red, unfrogged brick wall, aligned E-W. Superseded.	0.24	0.5		1.92	1.86
608			608	Masonry	8	Stone floor. Not fully excavated.	2.75	2.4		1.93	1.82
609			609	Masonry	8	E-W brick wall built on floor [608].	0.56	0.2	0.08	1.99	1.99
610			610	Masonry	8	Row of Tudor bricks recorded on BL plan and NFE.	1.08	0.72		2.09	1.97
611		184	611	Masonry	7	Line of bricks, recorded in baseline plan only.	1	1.3		2.15	2.1
612			612	Masonry	10	Wall or perhaps a pillar. NFE at time of recording. Extends beyond trench limit of excavation. Probably modern.	0.61	0.6		2.07	1.99
613			613	Layer	8	Dark grey layer-bedding or levelling for suggested reused Tudor brick masonry	1.8	1.36		2.06	2
614			614	Layer	7	Grey layer.	0.88	0.8		2.1	2.07
615				Layer	8	Yellow layer. No separation between [613] and [615] discernible from plan.	1.8	1.36		2.06	2

616			616	Deposit	8	Plaster deposit.	0.58	0.06	0.01	2.07	1.93
617			617	Layer	10	Rubble layer. NFE at time of recording.	3.25	1.61		2.07	1.97
618			618	Layer	7	Layer associated with wall [619]. Firm pale yellow silty-clay.	0.58	0.46		2.01	
619			619	Masonry	7	Remnant of Tudor Wall.	0.28	0.58		2.16	2.1
620			620	Layer	7	Associated with walls [619] and [621]. Layer of firm mid green-brown silty-clay.	0.54	0.78		2.11	2.04
621			621	Masonry	10	Very small remnant of wall thought to be built on bedding layer [620]. Thought to be built on bedding layer [620].	0.16	0.15		2.15	
622			622	Structure	10	Modern drain.	0.58	1.86	0.3	2.07	1.84
623			623	Masonry	10	Machine-cut slabbed floor surface	1.34	1.12	0.05	2.02	
624			624	Layer		Brown layer. Southwark 'dark earth' horizon. Same as [2369].	2	1.02		2.04	1.93
625			625	Masonry	10	E-W red and yellow stock brick wall. Some bricks have frogs, some are reused Tudor bricks. NFE at time of recording.	0.74	2.4	0.31	2.31	1.67
626				Masonry	10	Late post-med east-west wall red and yellow stock brick wall.	0.22	3		2.1	1.95
627			627	Masonry	7	Tudor wall foundation. NFE at time of recording.	0.78	1.4		1.74	
628		159	628	Masonry	7	Tudor Masonry/East-West Wall of Suffolk Place. Thought to potentially relate to an inner wall that encircled/formed a courtyard. NFE at time of Built	3.1	0.82		2.09	1.97

						along line of [628]- cuts into it at an angle.					
629				Masonry	8	N-S wall. Post-med. NFE at time of recording	0.58	0.3		2.13	2.12
630		630	Layer	7	Mid soft green-yellow silty-sand bedding layer for a floor.		1.34	1.7		2.04	1.93
631				Masonry	10	Post-med N-S wall. NFE at time of recording.	0.7	0.12		2.11	
632		632	Masonry	7	East-West Tudor red brick wall.		1.46	0.47		2.13	2.09
633		633	Masonry	7	Remnant of suggested Tudor wall.		0.42	0.36		2.08	2.07
634		634	Layer	7	Layer abutting walls [632] and [633].		0.55	1.11		2.07	
635		635	Masonry	10	Modern red and yellow frogged brick wall.		0.62	0.44		2.17	2.08
636		636	Masonry	8	North-South wall fragment. NFE at time of recording.		0.6	0.36			
637		637	Masonry	7	Small patch of Tudor brick floor. NFE at time of recording.		0.8	0.6		1.86	
638		638	Layer	7	Mortar/rubble floor; Tudor. NFE at time of recording.		4	2.1		1.88	1.76
639		639	Layer	7	Sand bedding layer for walls [637] and [638].		1.15	2.4	0.02	1.73	1.72
640		640	Layer	7	Sandy silty bedding layer below [639].		0.6	0.8	0.02	1.71	
641		641	Masonry	7	North-south truncated Tudor wall. NFE at time of recording.		1.08	0.71		1.78	

642			642	Deposit	8	Rubble deposit. NFE at at time of recording.	0.71	0.5		1.76	
643			643	Masonry	7	Tudor wall. Not fully excavated at time of recording.	2.74	1.16		1.79	1.16
644			644	Masonry	7	Tudor wall fragment. Not fully excavated at time of recording.	1.54	1.2		1.88	1.73
645			645	Layer	7	Mortar layer (for a floor?). NFE at time of recording. Thought to have been built after and up against wall [644].	0.52	2.06		1.76	1.71
646			646	Deposit	8	Rubble- from demolition of wall [643]? NFE at time of recording.	0.68	1.18		1.49	
647			647	Masonry	7	North-south Tudor wall. NFE at time of recording.	3.34	0.3		1.77	1.67
648			648	Masonry	7	Tudor wall. Preserved in situ. NFE	3.9	1.9		1.94	
649			649	Masonry	7	Tudor wall. Preserved in situ. NFE	2.1	1.75		1.93	
650			650	Layer	7	Sand layer, remnant of a Tudor floor surface. NFE at time of recording.	2.1	1.75		1.93	
651			651	Masonry	7	Tudor floor surface built following on from foundation [648]. NFE.	1.2	0.6		1.71	1.7
652			652	Masonry	7	Tudor floor surface. NFE @ time of recording.	1.7	0.9		1.89	
653			653	Layer	7	Mortar floor from Suffolk Place. NFE at time of recording.	2.64	1		1.71	1.6
654			654	Layer	8	Crushed mortar and brick pieces. Possibly from demolition of Suffolk Place. NFE at time of	1	1.8		1.98	

						recording.					
655			655	Layer	8	Crushed mortar and brick pieces. From demo of palace? NFE at time of recording.	1.44	1.08			
656			656	Layer	8	Mixed rubble layer. NFE at time of recording.	1.7	0.64		2.01	
657			657	Masonry	7	Possible Tudor floor. NFE at time of recording.	0.34	0.3		1.84	
658			658	Layer	8	Crushed mortar and brick rubble. From demolition of the palace? NFE at time of recording.	1.56	2.1		1.86	1.85
659			659	Layer	10	Modern rubble layer.	2.54	4.1		1.81	1.02
660		121	660	Masonry	7	Red brick Tudor wall. Flemish bond. Originally exposed during the removal of a concrete footing and seen in section (recorded in S121). Thought to represent a N-S aligned wall associated with the western end of the palace. Modern concrete seems to have respected its face and been built around it.	1.34	0.5	1.2	1.9	1.84
661			661	Layer	10	Mid yellow brick mortar rubble. From demolition of palace? NFE at time of recording.	1.6	1.76		1.89	
662			662	Layer	7	Clay bedding/floor layer that sits above an earlier floor, also thought to be Tudor. NFE at time of recording.	1	1.2		1.96	1.96

663			663	Masonry	7	Floor surface. NFE at time of recording.	1.7	2.1		1.89	1.82
664			664	Layer	8	Layer of rubble- from demo of palace? NFE at time of recording.	2.6	0.6		1.95	1.87
665			665	Layer	7	Layer of sand bedding for floor [663].	2.1	1.8		1.78	
666				Layer		Layer of mortar mixed with CBM. No context sheet filled out at time of recording.	1.42	0.3		1.92	
667			667	Layer	2	Green layer- same as [377]? NFE at time of recording.	4.2	1.2		1.77	1.65
668			668	Layer	3	Dump layer or abandonment phase- typical Southwark 'dark-earth' horizon. Same as [121]?	2.5	1.3		1.75	1.29
669			669	Layer	8	Layer of loose rubble. NFE at time of recording.	1.6	1.4		1.72	
670			670	Masonry	7	Floor surface. NFE at time of recording.	1.6	1.1		1.69	1.43
671			671	Masonry	7	Masonry fragment- NFE at time of recording.	0.44	0.17		1.8	
672			672	Layer	7	Sand bedding for wall [671]. NFE at time of recording.	0.76			1.52	
673			673	Masonry	8	Later post-medieval masonry. NFE at time of recording.	1.1	1.1		1.81	
674			674	Masonry	7	Wall core (Tudor). Retained.	3.6	1.9	1.5		
675			675	Masonry	7	Wall core (Tudor). Retained. NFE	2	2		1.95	
676			676	Masonry	7	Tudor brick floor. NFE at time of recording.	0.7	0.12		1.49	
677			677	Layer	8	Mortar layer- demolition. NFE at time of recording.	1.4	0.9		1.66	1.56

678			678	Masonry	8	Later post-medieval masonry-NFE at time of recording. Preserved.	1.2	0.9		1.95	
679				Other	8	Plaster lining of barrel post-med barrel well..	0.66	0.66		1.96	1.92
680				Cut	8	Cut for a barrel well. NFE	0.66	0.66		1.96	
681				Timber	8	Remains of barrel bottom.	0.66	0.66		1.91	
682				Masonry	10	Very late post-med wall.	1.53	0.76		1.92	
683				Masonry	10	Late post-medieval wall.	4.1	0.84	0.2	2.07	1.91
684				Masonry	10	Very late post-medieval wall.	1.7	0.84	0.06	1.91	
685				Masonry	10	Late post-medieval wall fragment.	1.15	0.35		1.35	
686				Masonry	10	Late post-medieval wall.	0.47	0.48	0.23	2.13	
687				Void		Void					
688				Cut	10	Construction cut for wall [682]. Recorded by GPS. NFE at time of recording.	1.53	0.76		1.92	
689				Cut	10	Construction cut for wall [683]. Recorded by GPS. NFE at time of recording.	4.1	0.84		2.07	
690				Cut	10	Construction cut for wall [684]. Recorded by GPS. NFE at time of recording.	1.7	0.85		1.91	
691				Masonry	7	Post-medieval wall. Recorded by GPS. NFE at time of recording.	1.25	1.3		1.48	1.43
692				Cut	7	Construction cut for wall [691]. Recorded by GPS. NFE at time of recording.	1.25	1.3		1.5	
693				Structure	10	Modern basement.	2.32	0.26			
694				Cut	10	Cut of structure [693].	2.32	1.8			

695			695	Masonry	7	Western extension to wall [697]. NFE as to be retained.	1.48	2.29		1.84	1.44
696			696	Masonry	7	Floor of western extension to Tudor palace. NFE at time of recording as to be retained. Holes thought to be for drainage- garderobe/soakaway.	1.05	3.1		1.58	0.94
697			697	Masonry	7	Truncated Tudor wall. NFE at time of recording as to be retained.	1.9	2.7		1.94	1.5
698			698	Masonry	7	Thin wall above floor [696]. NFE at time of recording as to be retained.	1	0.1	0.39	1.9	1.62
699		121	699	Masonry		North-South wall maybe same as [697]. Unfrogged red Tudor brick. Abutted by [660].	1.94	2.7	0.72	1.94	1.93
700				Fill	7	Fill within wall [660]. NFE at time of recording, remains in situ.	0.42	1.3		1.76	
701				Layer	7	Bedding layer. NFE as to be retained.	1.26	0.6		1.29	
702				Layer	7	Rubble layer under floor [696]. NFE as to be retained.	1.26	1		1.4	
703				Layer	10	Rubble fill/demo layer.	1.26	1.12		1.9	
704			704	Cut	7	Cut for wall [695]. NFE	1.48	2.29		1.84	
705			705	Masonry	7	Portion of vaulted brickwork- southern external wall to Tudor palace.	0.8	1.6		1.92	1.68
706		47		Fill	7	Fill within wall [695] top.	1		0.3	1.74	
707		47		Fill	7	Middle fill within wall [695].	1		0.3	1.47	
708		47		Fill	7	Base fill over [695].	1		0.3	1.2	
709			709	Layer	8	Demo layer.	1.5		0.3	1.95	1.74

710			710	Layer	8	Post-Tudor demo layer.	1.48	0.88		2.26	
711			711	Layer	8	Demo layer.	1.78	0.74		2.5	
712		60	712	Masonry	7	Tudor wall- main southern E-W wall of Suffolk Place. NFE. Remains in situ.	6	2.5		2.62	1.68
713				Fill	8	Post-Tudor demo fill above [712].	0.5	0.7		2.55	1.68
714			714	Cut	8	Robber cut for Tudor masonry? NFE	2	2.5	0.85	2.55	1.68
715				Fill	9	Post-Tudor fill of [716]	1.26	0.7	0.3	2.64	2.39
716			716	Cut	9	Robber cut for Tudor masonry?	1.26	0.7	0.3	2.68	2.39
717			717	Masonry	7	Truncated corner of Tudor wall. NFE as thought to be preserved at time of excavation.	1.55	2.07		1.35	1.32
718			718	Layer	8	Demo rubble layer.	2.5	2.28		1.56	1.33
719			719	Masonry	7	Tudor vaulted arch foundation. NFE- retained. NFE	1.62	0.62		2.12	2.07
720		49		Layer	7	Reddish brown floor surface (?). Section only.	0.83		0.02	2.48	2.47
721		49		Layer	7	Surface layer, black. Section only.	0.87		0	2.5	2.48
722		49		Layer	7	Chalk layer.	1.15		0.04	2.54	2.48
723		49		Layer	7	Black charcoal layer.	1.03		0.01	2.54	2.5
724		49		Layer	7	Dark reddish brown sand. Section only.	0.15		0.01	2.52	2.51
725		49, 49		Layer	7	Chalk layer. Seen in section only.	0.4		0.01		
726		49		Layer	7	Dark yellowish brown sand surface.	0.25		0.01	2.54	2.51
727		49		Layer	7	Grey sand surface. Section only.	1.1		0.01	2.55	2.53
728		49, 49		Layer	7	Reddish yellowish brown sand layer.	0.85		0.01	2.55	2.54

729		49		Layer	7	Chalk lumps layer.	0.4		0.08	2.62	2.54
730		50	730	Layer	8	Red and grey crushed CBM layer- from demolition of Tudor building.	0.46	1.06	0.1	2.14	2.09
731		50		Layer	7	Mid yellow brown sandy layer.	0.48		0.04	2.06	2
732		50		Layer	7	Grey matrix with chalk rubble. Seen in section only.	0.17		0.1	2.08	
733		50		Fill	6	Fill of cut [736] for medieval chalk wall. Packing material.	0.47		0.32	2.05	1.98
734		50		Masonry	6	Medieval chalk wall, seen in section only.	0.65		0.46	1.92	1.83
735				Cut	6	Cut for medieval chalk wall [734]. Seen in section only.	0.65		0.41	1.86	
736		50, 50	736	Cut	6	Cut for medieval chalk wall [573]. Seen in section only.	0.9		0.38	2.05	
737		50	737	Deposit	5	Dark grey deposit- made ground dumped before construction of [573].	2.5	1.22	0.68	2.07	1.82
738		50		Deposit	8	Mid yellowish brown sandy deposit with broken CBM. Seen in section only.	1.5		0.37	2.14	2.08
739		50		Layer	8	Dark grey layer with occasional pebbles- made ground/levelling.	1.61		0.16	2.02	1.91
740		50		Layer	8	Sandy layer with chalk rubble- made ground or demolition horizon. Seen in section only.	1.46		0.15	1.96	1.83
741		50		Layer	5	Dark grey layer with medieval pottery, CBM, bone and shell. Seen in section only.	1.34		0.51	1.93	1.74
742		50		Layer	5	Dark grey layer. Medieval accumulation. Seen in section	0.89		0.4	1.85	1.76

						only.					
743		49, 51		Layer	7	Sand bedding layer, seen in section only.	0.15		0.01	2.57	2.56
744		51		Layer	6	Mid green grey clay layer. Seen in section only.	2.6		1.05	2.48	1.44
745		51		Cut	10	Pit cut made through [744]. Seen in section only.	1.2		0.7	2.47	1.79
746		51		Fill	10	Fill of [745]. Seen in section only.	1.22		0.34	2.13	2
747		51		Fill	10	Tip line in [745].	0.85		0.04	2.47	2.22
748		51		Fill	10	Top fill of [745]. Seen in section only.	0.81		0.18	2.47	2.25
749				Fill	10	Tertiary fill of [745]. Seen in section only.	0.88		0.17	2.25	2.15
750		51		Fill	10	Tip line of charcoal seen in [745]. Seen in section only.	0.82		0.05	2.07	2
751		51		Cut	9	Pit cut. Cut by [745]. Seen in section only.	0.6		0.57	2.33	1.86
752		51		Fill	9	Bottom fill of [751]. Seen in section only.	0.66		0.18	2.03	1.86
753		51		Fill	9	Secondary fill of [751]. Seen in section only.	0.66		0.48	2.33	1.94
754		51		Layer	9	Sandy thick surface fragment within the cut of [751].	0.24		0.08	2.43	2.36
755		51		Cut	10	Large post-med pit cut with later wall construction cut [761] made through it. Seen in section only.	2.65		0.87	2.44	1.58

756		51		Fill	10	Appear in section as being the lowest fill of [755]- a large p-m pit cut. [756] is composed of crushed red brick demolition material.	2.42		0.2	2.05	1.58
757		51, 51		Fill	10	Black silt layer- fill of [755] between [756] and [758]. Seen in section only.	0.6		0.16	1.77	1.71
758		51		Fill	10	Rubble layer. Seen in section only.	1.55		0.4	2.07	
759		51		Fill	10	Demolition fill of sandy-silt within pit cut [755]. Seen in section only.	1.3		0.3	2.38	2.07
760		51		Fill	10	Top fill of [755]- green-grey sandy-silt. Seen in section only.	1.55		0.35	2.35	
761		51		Cut	10	Construction cut for late post-med wall [43]. Seen in section only.	1.15		0.45	2.5	2.08
762		51		Fill	10	Backfill of construction of cut [761]. Seen in section only.	1.15		0.45	2.35	
763		51		Layer	6	Black silty clay deposit- stratigraphically similar to [744]. Seen in section only.	275		0.55	2.13	
764		51		Layer	9	Black sandy clay deposit. Seen in section only.	1.5		0.22	2.33	
765		51		Layer	9	Rubbly mixed deposit. Seen in section only.	2.25		0.1	2.4	2.33
766		51		Cut	9	Post-med pit cut. Seen in section only.	1.55		0.3	2.2	1.9
767		51		Fill	9	Fill of [766]. Seen in section only.	1.55		0.3	2.2	

768		51		Layer	6	Dark grey brown clay make up layer. Seen in section only.	1.95		0.44	2.18	
769		51		Layer	6	Blackish brown grey clay dump layer/made ground.	2.1		0.26	1.75	
770		51		Layer	6	Black clayish silt- medieval make up layer. Seen in section only.	2.1		0.15	1.53	1.45
771		51		Cut	9	Pit cut. Seen in section only.	0.4		0.55	2.23	1.78
772		51		Fill	9	Fill of the [771].	0.4		0.53	2.2	
773		51		Fill	9	Top fill of [771]. Seen in section only.	0.4		0.45	2.23	
774		52		Fill	7	Fill of construction cut [491] in Section 52- same as [490]. Seen in section only.		0.15	0.32	1.45	
775		51		Fill	10	Fill of [745]. Seen in section only	1.1		0.34	2.47	2.21
776		53		Fill	8	Robber cut [777] backfill. Only seen in S53. NFE.	4.25	1.22	0.62	2.2	2.04
777		53	777	Cut	8	Robber cut. Seen in S only. NFE	4.25	1.22	0.61	2.2	1.45
778		53		Fill	8	Robber cut [779] backfill.	1.45	1.3	0.41	2.04	1.65
779		53	779	Cut	8	Robber cut.	1.3	1.4	0.42	2.16	1.59
780		53, 57		Fill	8	Fill of robber cut [781].	2.1	2	0.6	2.04	2.01
781		57, 53	781	Cut	8	Large robber cut, from taking Tudor masonry of palace. NFE	2.1	2	0.6	2.04	1.46
782		55, 53, 58, 57	782	Layer	5	Dark brown humic layer seen in slot.	4.2	7	0.3	2.21	1.69
783		57, 55	783	Fill	10	Modern/late post-medieval pit fill.	1.08	0.96	0.23	2.54	2.53
784		55	784	Fill	8	Demolition fill of robber cut.	3.82	0.96	0.98	2.55	2.1
785		55	785	Cut	8	Robber cut, seen in section only.	3.82	0.72	0.98	2.31	1.61
786		55		Layer	7	Layer of redeposited material from [782]- removed for	0.2	0.96	0.4	2.32	2.3

						construction of Tudor wall.					
787		55	787	Masonry	7	Tudor brick arch (part of wall). Runs East to West.	8	1.70	0.37	1.83	1.44
788		58, 57		Fill	8	Post-palace robber cut fill.	3.21	5.8	0.68	1.99	
789		57, 58	789	Cut	8	Robber cut.	3.21	5.8	0.68	1.99	1.46
790		57		Layer	8	Demolition spread.	1.01	0.92	0.32	1.4	1.31
791				Masonry	6	Late medieval foundation. Retained archaeology.	0.34	0.86		0.95	
792		56		Masonry	7	Arch Foundation seen as an impression left on modern concrete.	0.7	0.76		1.52	
793		55		Layer	7	Tudor construction layer/ground raising. Section only?	0.09		0.15	1.92	1.9
794		54		Masonry	7	Servants' alleyway wall in Tudor palace.	3.4	0.63	0.65	1.6	
795		54		Masonry	7	Servants' alleyway wall.	3.4	0.63	0.53	0.95	
796				Fill	7	Fill of stakehole [797].	0.09	0.09	0.17	1.64	
797				Cut	7	Stakehole.	0.09	0.09	0.17	1.64	
798				Fill	7	Fill of [799].	0.08	0.1	0.25	1.64	
799				Cut	7	Stakehole.	0.08	0.1	0.25	1.64	1.4
800				Fill	7	Fill of [801].	0.15	0.12	0.2	1.45	
801			801	Cut	7	Stakehole.	0.15	0.12	0.2	1.45	1.29
802		55		Cut	10	Cut filled with [783].	1.13	0.96	0.24	2.53	2.29
803		57	803	Layer	10	Loose demolition deposits, poss. Modern.	1.57	0.54	0.1	2.13	
804		57		Layer	8	Possible demolition layer of medieval building [791].	0.36	0.86	0.23	1.18	
805		58		Layer	8	Layer of redeposited brown soil.	0.9	0.9	0.55	2.19	2.17
806		58		Fill	8	Fill in cut [807]. Seen in slot.	1.23	0.96	0.4	1.69	

807		58	807	Cut	8	Large pit/robber cut.	1.3	0.5	0.89	2.19	1.3
808			808	Fill	7	Brick arch fill of [809]- main Tudor foundation for northern wall of Suffolk Place. Recorded in section.	3.3	2.5	1.7	2.65	1.62
809		60		Cut	7	Construction cut for foundation wall. Not fully excavated- Tudor masonry preserved.	3.3	2.5	2	2.65	
810		60		Layer	6	Black layer made ground. Seen in section only.	2.2		1.1	1.92	1.16
811		60		Fill	7	Fill of [809] mortar and rubble. Part of foundation.	1.6		0.36	1.7	1.76
812		60		Fill	7	Fill of [809] rubble. Part of foundation.	1.07		0.21	1.4	
813		60		Fill	7	Fill of [809] mortar. Seen in section only.	1.7		0.1		
814		60		Fill	7	Fill of [809]; rubble. NFE. Section only.	1.6		0.32	1.12	
815		60		Fill	7	Fill of [809]; mortar foundation.	1.4		0.15	0.84	
816			816	Masonry	9	Recorded as a drain but might be a foundation. NFE at time of recording.	0.6	0.9		2.69	
817			817	Cut	9	Rectangular cut made through floors [152], [153]. NFE	1	0.7		2.69	
818				Cut		Circular CC for [213]- kiln? Furnace? [213] recorded by GPS survey. NFE	1.6			2.34	
819			819	Cut	7	Cut for [228] and [229]. NFE at time of recording.	1.6	2.05		2.29	
820		43		Timber	2	Shadow of timber seen in S43.	0.12		0.34	1.25	
821		43		Timber	2	Shadow of timber seen in S43.	0.38		0.13	1.28	

822		43		Timber	2	Shadow of timber seen in S43.	0.22		0.1	1.28	
823		16		Layer	8	Pink mortar layer. Not recorded at time by WP. Seen in S16. Seals backfills of robber trench [219].		0.75	0.08	2.51	
824		16		Cut	8	Cut seen in S16 filled with [234] and [235].		0.95	0.52	2.48	1.96
825		13		Masonry	9	Red brick masonry recorded in S13.	1.79		0.54	2.39	2.37
826		13		Masonry	9	Chalk and mortar wall foundation recorded in S13.	0.97		0.49	2.24	2.22
827		13		Fill	9	Backfill of modern intrusion that has been part removed to expose section face. Recorded in S13 only. Sits up against walls [95], [96].	1.46		0.45	2.36	2.23
828		15		Fill	7	Backfill of [224]. Context same as [225] in appearance.	0.4		0.12	2.6	
1000		101	1000	Layer	10	Friable grey-brown sandy-clay with pebbles. 19th century layer/surface seen in S101.	1.1	1.05	0.15	1.94	1.85
1001		100, 101	1001	Layer	10	Mortar layer seen in S101.	1.4	1.16	0.25	1.85	1.77
1002		100, 101		Fill	10	Silty/chalk/CBM mix fill of [1026]. Seen in S101.	1.4	1.25	0.05	1.83	1.74
1003		100, 101		Fill	10	Mortar fill of [1026]. Seen in S101.	0.8	1.25	0.05	1.64	1.59
1004		101, 100		Fill	8	Brick rubble fill of [1110] seen in S101.	0.84	1.46	0.1	2.14	2
1005		101, 100		Fill	8	Chalk rubble fill of [1110]. Seen in S101.	0.84	1.46	0.15	1.59	1.53
1006		100, 101		Fill	8	Brick rubble fill of [1110]. Seen in	0.84	1.46	0.2	1.44	1.38

						S101.					
1007				Void		Superseded wall [1315].					
1008		101		Layer	8	Brick rubble layer above [1315].	0.84	1.46	0.3	1.4	1
1009		101		Fill	5	Fill of [1333] or post-Roman, pre-medieval 'Southwark' dark earth accumulation.	1.9	0.8	0.16	1.6	1.53
1010		102, 101, 100	1010	Layer	10	Compact light red CBM and mortar layer inc. peg tile. Demolition horizon following demolition of palace.	1.12	5.5	0.65	1.92	1.85
1011		101	1011	Cut	10	Demolition cut.	1.99	3.74	0.98	1.84	0.86
1012		103, 101		Fill	10	Fill of cut [1011]- rubble dump.	1.99	3.74	0.98	1.84	0.86
1013		101		Fill	10	Black demolition material, fill of [1015].	1.62	1	0.39	1.6	0.88
1014		101, 102		Fill	10	Sand/mortar demolition material fill of [1015].	1.7	1.48	0.34	1.5	1.19
1015		102	1015	Cut	10	Robber/demolition cut.	1.74	3.5	0.7	1.57	0.87
1016		101		Fill	8	Friable very dark brown sandy-silty-clay. Fill of pit [1015].	1.56	1.15	0.25	1.65	1.36
1017		101, 102		Layer		Mixed demolition layer.	1.5	4.4	0.45	1.59	1.16
1018		101, 102	1018	Layer	5	Medieval dark grey-brown silty-clay dump layer.	0.9	9.4	0.6	1.81	1.53
1019		101, 113, 102	1019	Layer	2	Greenish black Roman ground raising layer.	1.96	10.9	0.5	1.22	0.81
1020		101		Void		Void					
1021		101	1021	Masonry	8	Red brick fragments in pale brown yellow mortar that seal crushed masonry [1022].	1.44	2.3	0.25	1.94	1.85
1022		101	1022	Masonry	8	Crushed brick fragments seen to seal floor [1306] as seen in S101.	1.6	2.3	0.21	1.77	1.7

1023	101	1023	Masonry	7	Levelling foundation layer consisting of chalk lumps and crushed brick.	1.44	2.66	0.45	1.53	1.48
1024	101	1024	Masonry	6	Chalk foundation, possibly from medieval predecessor to Suffolk Place	1.41	2.02	0.6	1.4	0.99
1025	101	1025	Layer	10	Gravel layer (modern rubble).	4.92	3.16	0.03	1.92	1.89
1026	101, 100	1026	Cut	10	Sub-rectangular shallow 'demolition' (?robber) cut- pit.	0.8	1.15	0.22	1.78	1.56
1027	100, 101	1027	Layer	6	Moderately compacted dark grey silty-sand layer. Late post-med ground raising/dump.	1.2	2	0.35	1.86	1.81
1028	100	1028	Layer	2	Dark grey-brown silty-gravel. Possible external path/surface.	1.6	0.6	0.07	1.58	1.49
1029	100	1029	Layer	2	Firm brown-yellow brickearth layer- floor surface?	1.6	0.6	0.1	1.53	1.4
1030	101, 100	1030	Layer	2	Firm green-brown silty-sand. Abandonment horizon?	2.1	1.1	0.2	1.44	1
1031			Void		Void					
1032			Void		Void					
1033			Void		Void					
1034			Void		Void					
1035			Layer		Dark green/brown layer, superseded by (1357).					
1036			Void		Void					
1037			Void		Void					
1038			Void		Void					
1039	101, 100		Fill	8	Firm dark brown sandy-silty-clay fill of cut [1110].	0.84	1.46	0.06	1.27	1.22
1040	100, 102		Masonry		Superseded by [1315].					

1041		100		Floor		Superseded by [1210].					
1042		100		Cut	8	?Construction cut for ?wall-filled by crushed brick [1046]. Recorded in section only.		0.73	0.42	1.41	0.99
1043		100		Fill	8	Backfill of [1042]. Seen in section only.		0.73	0.42	1.41	
1044		100	1044	Masonry	8	Bonded brick wall in CC [1042] built upon crushed bricks [1045].	0.86	0.6	0.32	1.8	
1045		100		Fill	8	Crushed brick and mortar foundation for wall [1044] in [1042].		0.65	0.15	1.41	
1046		100		Fill	8	Crushed brick fill of [1042], used as a foundation for wall [1044].		0.65	0.32	1.31	1.25
1047		100		Layer	8	Recorded in section S100. Mixed layer of dark green mortar and crushed red brick.		0.66	0.26	1.73	1.67
1048		100		Layer	8	Crushed mortar surface seen in S100.		0.7	0.1	1.56	1.46
1049		100		Fill		Soft dark-green sandy-silty-clay. Backfill of construction cut [1111].	0.3	1.6	0.2	1.53	1.51
1050		100		Fill	8	Stiff dark green silty-clay fill of pit [1051].	2	2.1	0.6	1.72	1.67
1051		100	1051	Cut	8	Truncated sub-circular pit cut.	1.1	1.02	0.21	1.26	1.05
1052		100	1052	Masonry	10	Modern wall. Visible as rubble in S100. Built in cut [3267].		1.01	0.17	1.79	
1053		100	1053	Layer	8	Compacted light red brick rubble demolition layer.	3.64	2.24	0.23	1.9	
1054		100, 116	1054	Layer	7	Hard off-white crushed mortar layer seen in S100.	3.94	2.2	0.1	1.51	

1055	100	1055	Layer	5	Firm dark-grey clay-silt. Southwark 'dark earth'? Post-Roman abandonment accumulation.	4	2.32	0.23	1.69	1.55
1056	100, 116	1056	Layer	2	Dark green Roman layer, same as seen across site. Seen in slot where S100 recorded.	2.2	2.2	0.3	1.31	1.05
1057			Fill		Suggested to be the same as [1043]. Seen and recorded in section only.		0.03	0.44	1.75	
1058	100, 123	1058	Cut	7	Construction cut for wall [1059].	1.58	0.74	0.52	1.49	0.97
1059	123, 100	1059	Masonry	7	Red brick N-S aligned Tudor wall.	2.97	0.63	0.38	1.82	1.37
1060	123, 100		Fill	7	Crushed mortar and broken brick backfill of construction cut [1058] for Tudor wall [1059].	1.58	0.74	0.15	1.36	1.3
1061	100, 123		Fill	7	Crushed brick fill of [1058], suggested to have been used as bedding for wall [1059].	1.58	0.74	0.27	1.24	1.21
1062			Fill	8	Brick rubble fill of robber cut [1332].	2.9	2.1	0.4	1.87	1.84
1063	100	1063	Masonry	7	Chalk wall, presumably from predecessor to Charles Brandon's palace.	1.8	1.24	0.05	1.33	1.31
1064			Layer	10	Mixed greyish brown layer. Planned in pre-ex but not excavated. Voided	2.38	0.4		1.1	
1065			Layer	10	Greenish layer. Planned in pre-ex but not excavated.	1.22	0.84		1.1	
1066	102		Layer	8	Very dark brown layer, possibly same as [1049]. Seen in S102 only.		1.78	0.21	1.47	

1067		102		Layer	7	Mortar layer, seen in S102 only. Possibly a floor surface or demolition horizon (although a suspicious absence of bricks)		1.5	0.13	1.23	1.1
1068		102		Layer		Very dark grey layer. Recorded in S102 only. Abuts top of chalk wall [1040]		0.42	0.28	1.56	
1069			1069	Masonry	8	Not recorded at time of excavation- details taken from plan sheet.	1.38	0.58		1.94	
1070				Layer		Dark grey deposit over natural gravels. Not excavated.	0.54	0.53		1.06	
1071				Natural		Orange natural gravel. NFE	1.78	1.52		1.06	
1072				Layer		Greyish layer recorded on pre-ex plan but not excavated.	0.6	0.32		1.11	
1073				Layer		Dark brown clay-silt layer. NFE	1.14	1.28		1.07	
1074			1074	Layer	2	Orange gravel containing pot. Recorded as natural but unlikely- perhaps redeposited.	2.36	1.04	0.24	1.01	0.8
1075		105	1075	Layer	2	Mixed green-brown sandy-silt. Truncated by stakeholes [1109], [1118] and by ditch cut [1209] or thin layer of sandy-clay cut by postholes [1109].	3.2	2	0.06	1.14	1.06
1076		106, 110	1076	Layer	2	Mid green orangey-brown layer of clay-silt.	1.8	0.3	0.04	1.14	1.1
1077			1077	Layer	2	Green-yellow silty-sand with pottery and CBM. Has a number of stake/postholes cut through it and overlies a large pit.	2.5	1.4	0.1	1.18	
1078				Layer		Modern concrete.	1.9	1	0.1	1.14	

1079				Layer	10	Mixed greyish brown layer. Suggested to have been unexcavated.	4.2	2.1		1.07	
1080				Layer		Mixed greyish brown layer. Recorded as having been removed as a modern deposit.	4.88	5.98		1.11	
1081		104		Layer	5	Dark greyish brown layer of silty-clay with CBM. Seals ditch feature or is in fact fill of [1138].	2.4	1.76	0.34	1.3	
1082			1082	Layer	2	Mixed brownish sandy layer overlying remains of a possible floor surface- [1140].	3.35	2.35	0.12	1.17	
1083				Fill	2	Dark ashy fill/deposit of [1125].	1.01	0.62	0.09	1.16	
1084			1084	Layer	2	Mod compacted mid grey silty-sand dump layer of domestic waste suggested to be for levelling.	2	4	0.4	1.15	0.77
1085				Void		This number superseded by [1219].					
1086				Fill	2	Green-brown sandy-silt fill of [1173].	0.5	0.4	0.21	1.19	1.19
1087				Layer		Superseded by [1212].					
1088				Layer		Superseded by [1170].					
1089			1089	Layer	2	Compacted dark brown clay layer- surface?	1.4	0.45	0.3	1.19	1.07
1090			1090	Layer	2	Mixed greyish brown layer-yellow stock brick- prob pressed in.	5	0.44	0.13	1.25	1.22

1091			1091	Layer	2	Loose orange gravel layer- appears to have been interpreted as slumping of a bank into a channel.	2	1.5	0.16	1.06	0.9
1092		111, 107	1092	Layer	3	Mixed loose greenish brownish layer. Layer slumping into cess pit [1237] and being cut by [1138].	2.2	1.8	0.2	1.14	0.9
1093				Void		Greenish layer.					
1094				Void		Greenish layer.					
1095				Void		Orange gravel layer.					
1096				Void		Greenish layer.					
1097				Fill	2	Soft mid brown-grey sandy-silt with pottery and bone. Fill of [1098].	0.2	0.15	0.16	1.15	
1098			1098	Cut	2	Sub-oval cut of posthole.	0.2	0.15	0.16	1.16	1
1099				Void		Void					
1100		100		Cut		Construction cut for Tudor wall [1004], [1005], [1006] and [1039] with chalk foundation. Same as [1111].	2.4	7.66	0.7	1.76	1.07
1101			1101	Cut	10	Modern construction cut.	3.5	0.8	0.36	1.77	1.41
1102				Layer	10	Modern fly ash layer.					
1103			1103, 1103	Layer	7	Stiff mid green very dark brown silty-clay- dump layer?	3.6	2.3	0.25	1.82	1.66
1104		103	1104	Masonry	7	Brick foundation within cut [1127].	5.5	1.8	0.5	1.37	0.95
1105			1105	Layer	9	Brick demolition rubble.	1.3	1.7		1.53	

1106			1106	Layer	3	'Black layer'. Possibly Southwark 'dark earth' horizon.	5	1.55		1.42	
1107			1107	Layer	10	'Black layer'.	0.42	2		1.81	1.63
1108				Fill	2	Loose brown-grey sandy-silt fill of [1109]. Degraded timber from stake.	0.14	0.1	0.31	1.11	
1109			1109	Cut	2	Sub-oval shaped stakehole.	0.14	0.1	0.31	1.12	0.87
1110		101	1110	Cut	8	Construction cut for wall [1015] and [1026].	0.84	1.46	0.45	1.57	1.12
1111			1111	Cut	7	Construction cut for wall [1315]. Same as [1318].	2.4	7.66	1	1.19	0.19
1112				Layer	10	'Black layer'.	0.57	2.12		1.91	
1113				Void		Superseded by [1300]					
1114		101	1114	Cut	6	Construction cut for wall [1024]	2.75	1.6	1	1.92	0.9
1115				Fill	2	Firm mid grey-brown sandy-clay: Fill of stakehole [1116]	0.09	0.08	0.17	1.11	
1116			1116	Cut	2	Sub-oval shaped stakehole. Prob associated with stakeholes [1118] and [1120].	0.09	0.08	0.17	1.11	0.95
1117				Fill	2	Soft grey-brown silty-sand. Fill of stakehole [1118].	0.09	0.08	0.16	1.09	
1118				Cut	2	Sub-circular shaped stakehole cut.	0.09	0.08	0.16	1.09	0.94
1119				Fill	2	Soft degraded wood- remains of stake. Fill of stakehole [1120].	0.12	0.12	0.43	1.12	
1120			1120	Cut	2	Sub-circular shaped stakehole cut.	0.12	0.12	0.43	1.12	0.84
1121				Fill	2	Backfill of stakehole cut [1122]: soft orange-brown silty-gravel.	0.15	0.15	0.32	1.15	
1122			1122	Cut	2	Sub-oval cut of stakehole.	0.15	0.15	0.32	1.15	0.83

1123				Fill	2	Soft dark brown decayed timber post. Fill of [1124].	0.1	0.07	0.24	1.08	
1124			1120	Cut	2	Sub-oval shaped stakehole Filled with [1123].	0.1	0.07	0.24	1.08	0.87
1125			1125	Cut	2	Oval shaped pit cut containing burnt material.	0.48	0.8	0.05	1.12	1.07
1126				Fill		Sticky/friable dark brown-grey clay. Fill of [1125].	0.48	0.8	0.05	1.12	
1127		103		Cut	8	Rectangular cut for brick footing [1104].	2.1	0.8	1.04	1.84	0.8
1128		103	1128	Fill	8	Loose very dark-brown silt with brick fragments. Layer of backfilled robber trench over wall [1104]. Unrobbed masonry still lower down in trench.	1.8	0.8	0.25	1.57	1.37
1129		103		Layer	7	Southwark 'dark earth deposit' seen in south side of S103 drawing. Represents layer through which construction cut for palace as well as robber cuts are made.		0.2	0.4	1.9	0.86
1130		103		Fill	8	Base fill of robber cut [1127] that directly overlies bonded masonry, that has been partially robbed by this cut. Described as a loose light brown sand.	1.8	0.75	0.1	1.5	
1131				Fill		Number taken out but no plan or sheet filled out.					
1132				Cut		Number taken out but no plan or sheet filled out.					
1133				Fill	10	Moderate to firm grey-brown silty-clay. Fill of cut [1134].	0.54	0.48	0.3	1.04	

						Similar to layer [1080].					
1134			1134	Cut	10	Sub-square shaped mid-sized pit cut. Filled with [1133].	0.54	0.48	0.3	1.04	0.77
1135		108, 104	1135	Layer	2	Firm dark grey brown clay. Seals a ditch or channel cut and fill-possible inundation event.	1.76	2.4	0.34	1.14	
1136		108, 104		Fill	2	Firm dark grey silty-clay with frequent gravel Fill of channel cut [1138]. Seals [1137].	2.4	1.14	0.15	0.9	0.85
1137		108, 104		Cut	2	Firm grey-brown clay fill of ditch cut [1138]. Seals [1147].	2.7	0.9	0.2	0.82	0.7
1138		107, 111, 108	1138	Cut	2	Linear ditch cut backfilled with clay deposits [1147], [1137], [1136], [1135]. Aligned NW-SE. Appears as man made rather than natural as it cuts features with anthropogenic materials inside.	2.7	2	0.9	1.15	0.55
1139		104, 108		Fill	2	Firm mid green-yellow silty-sand Fill of [1174].	1.94	1.84	0.15	1.16	0.54
1140			1140	Layer	2	Dark brown and light grey silty-clay with sandy patches: floor surface.	2.32	2.8	0.18	1.06	0.95
1141			1141	Layer	2	Moderately compacted clayey-silt layer, dark grey-brown. Rotten timber observed.	3.5	1.4	0.18	1.12	1.07
1142				Fill	2	Firm grey-brown clay-silt. Fill of posthole [1143].	0.66	0.6	0.44	1.15	
1143			1143	Cut	2	Sub-rounded shaped posthole.	0.6	0.62	0.44	1.15	0.71

1144				Layer		Modern layer with no dimensions or heights recorded. Seals layer [1145].					
1145				Layer		'Plastic' mid-brown silty-clay. Suggested to be an organic layer sealing a sand layer.	1.9	2.55			
1146			1146	Layer	5	Soft, loose light brown sand. Suggested to be an accumulation along a channel bank and possibly Roman.	1.9	2.55	0.15	1.06	0.91
1147		108			2	Layer that is the same as [1141] and [1148].					
1148				Layer		Same as [1141] and [1147].	2.58	0.6	0.15	1.19	1.04
1149				Fill	5	Soft brown degraded timber.	0.1	0.12	0.09	0.93	0.84
1150			1152	Cut	5	Sub-circular posthole Filled with [1149].	0.1	0.12	0.09	0.93	0.8
1151				Fill	5	Soft mid brown coarse sandy-clay. Fill of posthole [1152].	0.1	0.1	0.06	0.93	
1152			1152	Cut	5	Circular posthole cut.	0.1	0.1	0.06	0.93	0.87
1153				Fill	5	Soft mid brown sand/clay with timber- old post.	0.12	0.12	0.06	0.93	
1154			1152	Cut	5	Sub-circular posthole cut.	0.12	0.12	0.06	0.93	0.87
1155				Fill	10	Modern backfill of borehole.	0.56	0.56	0.1	1.02	
1156			1156	Cut	10	Modern geotech cut.	0.52	0.52	0.1	1.02	0.92
1157				Fill	10	Modern borehole fill.	0.2	0.2	0.49	1.04	
1158			1158	Cut	10	Modern borehole.	0.2	0.2	0.49	1.4	0.55
1159				Fill		Friable yellow grey silty-sand. Same as [1091] Fill of [1138].	3.2	0.7	0.15	1.06	0.9
1160			1160	Layer	2	Firm mid grey brown silty-clay.	2.3	1.1	0.2	0.9	0.88

1161				Masonry	7	Chalk mortar layer possibly the same as [1315].					
1162			1162	Layer	2	Friable yellow-brown silty-gravel. Suggested to be an attempt at levelling.	1.4	1.18	0.12	0.92	0.79
1163			1163	Cut	10	Modern borehole.	0.2	0.22		1.15	
1164				Fill	10	Fill of modern borehole.	0.2	0.22		1.15	
1165			1165	Cut	10	Modern test pit.	0.48	0.5	0.2	1.15	0.77
1166				Fill	10	Fill of modern test pit [1165].	0.48	0.5	0.25	1.15	
1167			1167	Layer		Rich organic deposit sealing possible Roman channel- is this a flood level?	3	4.8	0.29	1.08	0.79
1168		111, 107		Fill	2	Firm green-grey silty-clay Fill of channel [1138].	7.5	1.8	0.2	1.15	0.67
1169		108, 104		Fill	2	Same as [1245]. Firm grey-brown sandy-silt fill of pit [1174]/[1247].	1.94	1.84	0.7	0.98	0.46
1170			1170	Layer	2	Mod compacted brown-grey silty-clay.	3	2	0.2	0.88	0.78
1171			1171	Layer	2	Soft light brown coarse sand layer with pottery and CBM finds. May be a flooding horizon.	2.1	2.7	0.26	0.98	0.72
1172			1172	Layer	2	Friable mid brown green coarse sandy-organic layer. Associated with Roman channel bank and potentially sedimentation process	2.9	4.8	0.53	1.15	
1173			1173	Cut	2	Semi-circular pit cut Filled with [1086]. Potentially natural or animal burrowing.	0.5	0.4	0.22	1.19	0.99

1174			1174	Cut	2	Sub-circular- truncated by modern drain cut. Pit cut. Filled with [1169]. Appears from plans to be similar to [1247] on west side of truncation.	1.6	0.35	0.7	1.03	0.34
1175			1175	Cut	2	Circular posthole cut. Disturbed by modern footings. Filled by [1176].	0.12	0.1	0.22	1.12	0.78
1176				Fill	2	Loose light brown degraded timber of a post. Fill of [1175].	0.12	0.1	0.22	1.12	
1177				Fill		Firm dark grey silty-clay. Primary fill of [1138].	2.5	0.9	0.65	0.93	
1178				Fill	2	Loose grey-brown silty-sand fill of [1179].	0.38	0.4	0.1	1.1	
1179			1179	Cut	2	Linear gully cut. Filled with [1178].	0.38	0.4	0.1	1.1	1
1180				Cut		Cut of a ditch or gully.					
1181				Fill		Fill of [1180].					
1182		111		Fill	2	Compacted very dark brown/grey clay. Fill of channel [1138].	2.2	1.9	0.05	0.7	0.45
1183				Layer	2	Layer of accumulated silty-clay. Make-up, levelling or a floor.	0.58	0.3	0.04	1.13	1.07
1184				Layer	2	Loose light grey-brown clay-silt.	0.58	0.3	0.15	0.99	0.92
1185				Layer	2	Firm grey-brown clay-silt layer.	1.18	0.3	0.13	1.13	
1186		110		Layer	2	Fairly compacted mid brown grey silty-clay layer. Possibly same as [1188].	1.4	0.3	0.34	1.13	
1187			1187	Layer	2	Small layer of silty-sand with pottery, metal and CBM finds.	1.56	2.46	0.11	0.97	0.92
1188		106, 110	1188	Layer	2	Dark grey silty-clay with pottery	1.1	0.9	0.56	1.19	

						and CBM.					
1189		110		Layer	2	Firm blue-grey silty-clay layer.	1.23	0.3	0.34	0.89	
1190		110	1190	Layer	2	Firm mid brown clay-silt with pottery, glass, CBM and worked stone.	1.4	0.33	0.1	0.61	0.55
1191			1191	Cut	8	Sub-square with rounded edges, flat base backfilled with [1213] and [1192].	1.8	0.95	0.65	1.7	1.09
1192				Fill	8	Solid grey-brown clay-sand. Upper fill of [1191].	1.8	0.95	0.41	1.7	
1193		106	1193	Layer	2	Firm very dark brown/grey green silty-clay layer of made ground suggesting to be slumping into a ditch.	0.62	0.35	0.2	1.05	
1194		106, 110	1194	Layer	2	Firmly compacted silty-sand with gravel. May be a surface of sorts	1.1	0.9	0.4	0.87	0.39
1195			1195	Layer	2	Dark brown peat layer. Contains early Roman pottery and CBM.	3	2.8	0.61	1.15	0.54
1196				Fill	2	Friable brown-colour sandy-silt with degraded timber post in it.	0.36	0.22	0.14	0.73	
1197			1197	Cut	2	Irregular shaped posthole cut Filled with [1196].	0.36	0.22	0.14	0.73	0.53
1198				Layer		Firm mid green-brown clay-silt layer. Same as [1193]?	0.3	0.3	0.4	1.14	0.99
1199				Void		Void					
1200			1200	Layer	8	Roman demolition/dump horizon with plaster, pot and CBM. P-M dump layer.	1.98	1.5	0.16	1.66	1.62
1201				Layer	8	Soft dark brown clay-sand demolition layer.	1.9	1.88		1.64	1.6

1202		111		Fill	2	Basal fill of [1138] as represented in S111.	2.7	1.62	0.44	0.81	0.5
1203			1203	Layer	1	Recorded as a gravel layer at base of Roman channel bank-channel number is not recorded. Maybe just a natural gravel layer.	2.9	3.1	0.57	1.01	0.48
1204		109		Fill	2	Organic/peaty fill of gully/drain [1205].	1.8	1	0.26	0.67	0.45
1205			1205	Cut	2	Linear cut with flat base that has been interpreted as a gully or drain. Drains from east to west. Aligned NW-SE.	1.8	1	0.26	0.67	0.41
1206				Fill	2	Fill of pit or posthole [1207].	0.28	0.2	0.06	0.58	
1207			1207	Cut	2	Small pit or posthole cut. Filled with [1206]	0.28	0.2	0.06	0.58	0.52
1208		110		Fill	2	Loose mid brown grey sandy-silt fill of [1209] with pot, bone, CBM and metal inclusions.	1.2	0.3	0.23	0.61	0.49
1209			1209	Cut	2	Linear cut of channel. Fills have anthropogenic finds in them.	1.4	0.3	0.85	0.6	0.26
1210		100	1210	Masonry	7	Eastern extension of [1104] truncated by [1015]. Undulating nature of [1315] requires having [1210] to have lowest courses of brickwork able to be built on a flat plane.	1.68	4	0.3	1.5	1.3
1211		111	1211	Fill	2	Dark grey brown silty-clay fill that has slumped into channel. Overlain by channel fill [1168] and overlies [1202]	1.8	1.3	0.4	0.72	0.64

1212			1212	Fill	2	Mod compacted dark green-brown clay. Gravel that has slumped into channel [1138]. Overlain by [1168] and overlies [1202]	1.7	3	0.4	1	0.8
1213				Fill	8	Lowest fill of pit [1191]. Moderately compacted green-grey silty-clay. Lots of Tudor tile, presumably from demolition of palace.	1.8	0.95	0.2	1.56	
1214			1214	Layer	8	Friable red-brown mortar/sand. Demolition layer removed to expose Tudor masonry. Perhaps this is from robbing.	2	1.95	0.1	1.76	1.61
1215		104	1215	Natural	1	Natural orange-brown sandy gravel. NFE	1.1	0.9		0.54	
1216				Natural		Natural gravel-silt, loose, light-brown to mid orange.					
1217				Fill	2	Soft dark red-brown peaty-silt fill of [1218].	1.8	1	0.26	1.09	0.94
1218			1218	Cut	2	Linear cut with flat base that has been interpreted as a gully or drain. Drains from east to west. Aligned NW-SE. Filled with [1217]. Same as [1205]	1.8	1	0.26	1.09	0.52
1219		109	1219	Layer	2	Moderate to firm silty-sand layer with Roman pottery.	2.9	2.1	0.22	1.12	0.91
1220			1220	Cut	2	Circular stakehole cut. Filled with [1221].	0.06	0.06	0.28	1.14	0.86
1221				Fill	2	Firm brown-grey silty-clay fill of [1220].	0.06	0.06	0.28	1.14	0.86

1222			1220	Cut	2	Probably circular posthole/stake hole.	0.04	0.04	0.08	1.14	1.06
1223				Fill	2	Firm mid brown-grey silty-clay. Fill of [1222].	0.04	0.04	0.08	1.11	0.86
1224			1220	Cut	2	Irregular/circular stakehole /posthole.	0.05	0.04	0.12	1.12	1
1225				Fill	2	Fill of posthole [1224]	0.05	0.04	0.12	1.12	1
1226			1220	Cut	2	Circular posthole cut. Filled with [1227].	0.06	0.06	0.2	1.14	0.94
1227				Fill	2	Mid grey-brown silty-clay fill of [1226].	0.06	0.06	0.2	1.14	
1228			1220	Cut	2	Circular posthole cut.	0.07	0.07	0.11	1.14	0.89
1229				Fill	2	Brown-grey silty-clay fill of posthole [1228].	0.07	0.07	0.11	1.14	
1230				Fill	10	Backfill of construction cut [1231]- friable grey-brown sandy clay. NFE so no depth measurement.	1.3	1.36	0.2	1.68	
1231			1231	Cut	10	Modern cut. Filled with [1230].	1.3	1.36	0.2	1.68	1.48
1232			1232	Layer	2	Layer of burnt sandy-clay with pottery.	2.9	2.1	0.3	0.89	0.72
1233			1233	Layer	2	Firm grey-brown silty-sand with charcoal flecks. Associated with Roman channel?	2.9	2.1	0.18	0.9	0.76
1234			1234	Fill	2	Fill of [1241]	2.2	1	0.1	1.04	
1235		109	1235	Natural	2	Moderate to firm yellow-grey silty-sand.	3	2.5	0.33	0.76	0.43
1236		107		Fill	2	Green-grey clayey-silt fill of pit [1237].	1.1	1	0.4	0.57	
1237		107	1237	Cut	2	Circular shaped pit cut filled with [1236]. Possibly a cess pit.	1.1	1	0.4	0.56	0.26

1238				Fill	2	Fill of beamslot/gully/channel [1239].	1.03	0.66	0.18	1.02	0.98
1239			1239	Cut	2	Linear, concave based beam slot/ channel. Fill of [1238].	0.95	0.66	0.36	0.95	0.6
1240			1240	Layer	2	Layer of loose red-brown sandy-silt.	2.2	1.3		1.06	0.93
1241			1241	Fill	2	Sub-oval shaped pit cut filled by [1234].	2.2	1	0.3	1.05	0.75
1242				Cut	2	Posthole cut.	0.08	0.08		1.18	
1243				Fill	2	Fill of posthole [1242].	0.08	0.08		1.18	
1244				Fill	2	Top fill of [1247].	1.94	0.36	0.26	1.15	
1245				Fill	2	Fill of [1247].	1.94	1.84	0.4	0.81	
1246			1246	Fill	2	Friable light grey-brown silty-sand. Base fill of [1247] with pot and CBM finds.	1.9	1.84	0.36	0.51	
1247			1247	Cut	2	Large circular pit cut that contains a dog burial. Filled with [1244], [1245] and [1246]	1.94	1.84	0.86	1.15	0.28
1248		109		Fill	2	Soft dark red-brown clay-silt fill of [1249].	2.8	3	0.23	0.69	
1249		109	1249	Cut	2	Cut of gully or cess pit.	2.8	3	0.23	0.69	0.06
1250				Fill		Compact light-grey sandy mortar, fill on top of masonry [1210]. Demolition spread post robbing of Tudor masonry?	1.4	1.5	0.05	1.5	
1251				Fill		Friable sandy-silt with pottery and CBM finds. Lower fill of channel [1239].	0.9	0.4	0.16	0.85	0.84
1252				Fill	8	Fill of [1051].	1.05	1.35	0.09	1.5	1.49

1253				Fill	8	Soft green-grey sandy-clay. Changed to a fill of [1051] from fill of [1254]	0.6	0.7	0.16	1.48	1.22
1254				Void		Sub-rectangular pit cut. Voided as thought to be within pit [1051]	0.6	0.7	0.16	1.48	1.22
1255				Void		Circular pit cut filled with [1256].	0.45	0.5	0.44	1.44	1
1256				Fill	8	Friable very dark brown sandy-silty clay with pot, CBM and bone. Originally thought to be fill of [1255] but more likely part of [1051].	0.45	0.5	0.44	1.44	
1257				Fill	2	Fill of [1258]. Very similar to [1193] on other side of concrete intrusion.	0.17	0.16	0.2	1.14	0.88
1258			1258	Cut	2	Pit cut or possibly small ditch or gully- heavily truncated.	0.17	0.16	0.2	1.14	0.88
1259		108		Fill	2	Primary fill of [1174] (that is the same as [1247])	1.94	1.35	0.15	0.9	0.3
1260				Fill	2	Fill of cut [1261].	0.28	0.28	0.14	0.86	
1261			1261	Cut	2	Small pit or posthole. Filled with [1260]. Recorded as a small channel feeding into [1209] but more likely a small pit or posthole	0.28	0.28	0.14	0.86	0.68
1262			1262	Layer	2	Firm light green-grey silty-clay layer on top of ditch fill [1273]. Contains metal and CBM.	1.3	0.3	0.02	0.83	0.81
1263				Fill		Backfill of construction cut for Tudor wall [1210].	0.3	1.12	0.1	1.42	1.4

1264			1264	Layer		Friable dark grey clay surface with pot and bone inclusions. Underneath [1075] and cut by [1106] and [1116].	1.06	1.22	0.1	1.04	1
1265				Fill	10	Backfill of modern pit cut.	0.75	1.6	1.2	1.58	
1266			1266	Cut	10	Modern construction cut. Filled with [1265]. NFE. Construction cut for 20th century footings.	0.75	1.6	1.2	1.58	0.38
1267				Layer		Sandy bedding layer for Tudor wall	0.48	1.3	0.1	0.55	0.42
1268				Fill		Soft light yellow grey sandy-silt. Suggested to be a underneath Tudor wall so presumably related to its construction or medieval.	0.48	1.3		0.42	
1269				Masonry		Tudor red brick wall seen in northern section of [1266]. Heavily truncated. Possible arch to east- similar to others seen associated with palace.	0.08	1.3	0.9	1.59	0.55
1270				Fill	2	Fill of stakehole [1271]. Loose dark grey silty-charcoal.	0.18	0.21	0.06	0.82	
1271			1271	Cut	2	Circular stakehole cut. Filled by [1270].	0.18	0.21	0.06	0.83	0.77
1272			1272	Layer	2	Plastic mid-brown coarse silty-sandy clay layer with pottery and CBM.	2.66	2.4	0.27	1.01	0.74
1273				Fill	2	Loose mid red-brown silt and 'humic' material.	2.1	0.76	0.24	0.83	0.79
1274			1274	Cut	2	Channel cut- linear with gradual sides. Cut by [1209] and [1239].	2.1	0.9	0.22	0.81	0.59

1275			1275	Layer	2	Friable brown silty-sandy-gravel. Prehistoric ground raising or occupation that seals natural.	0.4	0.75	0.06	0.77	0.54
1276				Fill		Fill of [1277].	0.68	0.47	0.44	1.07	0.63
1277			1277	Cut	10	Circular pit cut. Heavily truncated.	0.68	0.47	0.44	1.07	0.63
1278				Void		Firm grey-brown silty-clay with flint and charcoal. Fill above [1286] of channel [1280].	0.9	0.5	0.18	1.07	
1279				Void		Firm brown-grey clay primary fill of [1280].	0.9	0.5	0.08	0.79	
1280			1280	Void		Suggested cut of linear channel/ditch/gully.	0.9	0.5	0.36	1.07	0.71
1281			1281	Natural	2	Very clean loose light brown-grey silty-sand- no finds. Natural strat?	0.78	0.7	0.08	1.08	
1282				Fill	2	Fill of stakehole [1283].	0.2	0.06	0.06	1	
1283			1283	Cut	2	Stakehole. Filled with [1282].	0.2	0.06	0.06	1	0.94
1284			1284	Layer	2	Loose light grey-brown silty-sand.	0.3	0.34		1	
1285			1285	Natural	2	Natural peat layer.	2.66	2.4	0.83	0.9	0.6
1286				Fill		Firm orange-brown silty-sandy-gravel. Fill of of channel [1280].	0.9	0.5	0.1	0.83	
1287				Fill	2	Firm green-grey sandy-silt. Secondary Fill of [1289].	0.6	0.4	0.15	0.97	
1288				Fill	2	Primary fill of [1289]. Firm grey-brown silty-clay.	0.6	0.4	0.15	0.82	
1289			1289	Cut	2	Linear cut- ditch or gully. Filled with [1287] and [1288].	0.9	0.4	0.3	0.97	0.67

1290			1290	Skeleton	2	Number given to dog burial (minus skull) seen in [1248].				1.8	1.75
1291			1291	Natural	2	Firm, friable yellow-grey silty-clay. Very clean. Probably natural.	1.8	1.1	0.04	0.71	0.69
1292			1292	Layer	2	Roman layer composed of firm mid yellow to light brown silty-clay.	4.1	2.66	0.15	0.65	0.65
1293			1293	Layer	2	Firm light to mid green silty-sand. No finds. Seals Roman layer.	0.8	2.4	0.1	0.87	0.81
1294			1294	Layer		Friable to firm dark brown-grey clay-silt layer.	4.1	2.66	0.1	0.7	0.54
1295			1295	Layer	6	Layer of chalk used to form a foundation.	1.1	1.1	0.2	0.68	0.55
1296			1296	Layer	6	Layer of silty-gravel below [1295] and above natural gravel. Seen in slot.	1.1	1.1	0.15	0.48	0.4
1297			1297	Natural	1	Natural mid to light brown sandy-gravel layer seen in slot. NFE	1.1	1.1		0.34	0.28
1298			1298	Cut	10	Modern construction cut Filled with [1299].	1.04	1.7	0.67	1.87	
1299				Fill	10	Backfill of modern construction cut [1298].	1.04	1.7	0.67	2.19	1.52
1300		101	1300	Layer	8	Layer seen in S101 that replaces [1113].					
1301			1301	Layer	8	A layer of crushed red brick abutting wall [1059]	2.9	0.18	0.19	1.99	1.75
1302				Fill	7	Fill of posthole or small pit [1303].	0.44	0.44	0.47	1.59	

1303		116	1303	Cut	7	Small circular pit or posthole cut. Filled with [1302].	0.44	0.44	0.47	1.59	1.12
1304				Layer		'Black layer' from context register.					
1305			1305	Layer	7	Trample layer on floor surface [1306]. Firm blue-grey silty-clay	1.2	1.4	0.1	1.56	1.52
1306		101	1306	Masonry	7	Tudor red brick surface. 1 course thick. Associated with Suffolk Place	1.3	1.3	0.05	1.59	1.44
1307				Fill	10	Modern backfill of [1314]	0.96	0.5	0.75	0.88	
1308			1308	Layer	7	Very hard chalk and crushed brick foundation/make up.	1.06	1.54	0.25	1.39	1.1
1309				Fill	10	Backfill of [1310]- modern cut. Not fully excavated.	0.96	1.04	0.55	1.01	
1310			1310	Cut	10	Modern sub-circular pit cut. Not fully excavated.	0.96	1.04	0.55	1.1	0.46
1311		117, 118, 112	1311,	Layer	3	Possible Southwark 'dark earth' horizon? Post Roman abandonment/ pre-medieval reoccupation.	3.1	10.5	0.22	1.12	0.8
1312				Fill	5	Fill of pit [1313].	0.58	0.5	0.25	0.76	
1313			1313	Cut	5	Cut of sub-circular/irregular shaped ?Roman pit/ditch. NFE. Stratigraphy suggests this to be late med or later.	0.5	0.58	0.25	0.76	0.51
1314			1314,	Cut	10	L-shaped construction cut for chalk wall	0.96	0.5	0.75	0.84	
1315		101, 115	1315	Masonry	7	Reused chalk foundation for Tudor palace. Same as [1317].	10.5	2.66	1.2	1.5	0.87

1316				Fill		Backfill of construction cut [1318] associated with wall [1104].	4.7	0.15	0.09	1.23	
1317			1317	Masonry	7	Tudor chalk wall foundation. Reused chalk from earlier medieval foundation. Same as [1315]	10.4	1.8	1.2	0.94	0.3
1318		115	1318	Cut	7	Linear construction cut for walls [1315] and [1317]. Same as [1111]	10.5	2.5	1	1.29	0.3
1319				Fill	9	Fill of posthole [1320].	0.3	0.36	0.14	0.79	
1320			1320	Cut	2	Circular, undated posthole cut.	0.3	0.36	0.14	0.79	0.65
1321		112, 117		Fill		Firm grey clay Fill of [1329].	3.1	6.5	0.2	0.53	
1322		112, 117		Fill	2	Firm mid purple grey silty-clay Fill of channel [1329]. Contains CBM bone and wood.	2.7	10	0.17	0.7	
1323		117, 112		Fill	2	Loose dark red brown peat with glass, flint, CBM, bone and wood inclusions.	3.6	10	0.2	0.53	
1324		112	1324	Fill	2	Firm mid grey alluvial clay, filling channel [1372]. Burnt and struck flint inclusions.	3.1	10	0.3	0.4	
1325		112, 117		Natural	1	Soft yellow sandy alluvial clay. Natural geology.	3.1	10	0.28	0.88	0.31
1326		112		Fill	2	Fill of posthole [1327]. Includes degraded timber, presumably from post.	0.22	0.2	0.2	0.48	0.28
1327		112	1327	Cut	2	Circular posthole cut with vertical sides.	0.22	0.2	0.2	0.48	0.28
1328		112	1328	Layer	2	Natural silting-up/alluvial deposit in channel.	0.9	4.6	0.2	0.63	0.52

1329		112	1329	Cut	2	Cut of channel. Appears shallow from sections although has been horizontally truncated. Filled by waterlain, alluvial deposits.	2.7	10	0.3	0.93	0.65
1330		100		Fill	7	Fill of cut [1331]	1.25	0.5	0.58	1.55	
1331		100	1331	Cut	7	Linear, although heavily truncated, pit cut. Same as [1051]?	1.25	0.5	0.58	1.55	1
1332			1332	Cut	8	Robber cut filled with brick rubble [1062].	2.9	2.1	0.4	1.93	1.46
1333			1333	Cut	5	Linear cut filled by [1009]. Possibly a small ditch.	1.9	0.8	0.46	1.58	0.99
1334		112		Fill	2	Loose light yellow-green silty-sand. Fill of linear cut [1335]. Clean- natural?	0.8	0.5	0.14	0.68	
1335		112	1335	Cut	2	Linear cut with vertical sides and flat base. Filled with [1334]	0.8	0.5	0.14	0.68	0.54
1336				Fill	2	Fill of cut [1337].	0.8	0.5	0.14	0.62	
1337			1337	Cut	2	Linear cut with vertical sides and flat base. Filled with [1336]	1.2	0.8	0.18	0.62	0.44
1338		113		Fill	5	Moderately compacted dark grey-blue sandy-silt. Fill of pit cut [1339]	0.96	1.15	0.47	1.31	1.09
1339		113	1339	Cut	5	Semi-circular pit cut. Heavily truncated. Filled with [1338]	0.96	1.15	0.47	1.08	0.74
1340		113		Fill	5	Firm dark grey blue sandy-silt with painted Roman wall plaster, glass and pottery. Fill of pit [1341]	1.22	1.35	0.6	1.26	
1341		113	1341	Cut	5	Sub-circular pit cut. Filled with [1340]. Heavily truncated.	1.22	1.35	0.6	1.26	0.46

1342		113		Fill	5	Fill of linear feature [1343].	1.98	0.56	0.57	1.23	
1343		113	1343	Cut	5	Linear ditch or gully Filled with [1342].	1.98	0.85	0.76	1.23	0.47
1344		113		Fill	2	Dark blue grey clayey-silt fill of [1345].	0.9	0.18	0.22	1.06	
1345		113	1345	Cut	2	Linear cut, heavily truncated. Filled with [1344].	0.9	0.18	0.22	1.06	0.84
1346		113		Fill	2	Soft dark blue-grey sandy-silt fill of [1347].	0.93	0.45	0.21	1.2	
1347		113	1347	Cut	2	Prob linear cut feature but poorly surviving owing to heavy truncation. Cut into Roman levels.	0.93	0.45	0.21	1.2	0.99
1348				Fill	2	Seals [1321], according to context sheet but uncertain of this. Loose light yellow-green silty-sand. Fill of linear [1349].	1.2	0.8	0.2	0.61	
1349			1349	Cut	2	Linear cut with vertical sides and flat base.	1.2	0.8	0.2	0.61	0.42
1350		113	1350	Natural	2	Peat layer with some anthropogenic activity.	1.9	14.66	0.3	0.72	0.48
1351		113	1351	Natural	2	Grey sandy-clay alluvial layer.	1.5	15.9	0.1	0.56	0.19
1352		113	1352	Natural	1	Soft light to mid yellow brown clay-silt. Not excavated.	15.9	1		0.51	0.17
1353		118		Fill	2	Fill of linear [1354]. Loose light yellow green silty-sand with pot.	2.2	0.54	0.22	0.75	
1354			1354	Cut	2	Linear cut. Same as [1349], [1335] and [1337]	2.2	0.54	0.22	0.75	0.48
1355				Fill	2	Fill of [1356].	0.77	1.16	0.15	1.12	1.02

1356			1356	Cut	2	E-W aligned linear cut. Fill [1355] has a high charcoal content-suggested industrial function.	0.77	1.16	0.15	1.18	0.83
1357		100, 114	1357	Layer	2	Firm, friable mid yellow-green silty-sand with Roman material. Occupation surface? Floor?	2.3	1.37	0.9	1.46	0.83
1358				Fill	2	Fill of posthole [1359] with degraded timber, presumably from post.	0.4	0.4	0.28	0.7	
1359			1359	Cut	2	Circular shaped posthole.	0.4	0.4	0.28	0.7	0.42
1360				Fill		Stiff grey-brown clay with degraded timber, presumably from post.	0.5	0.5	0.37	0.72	
1361			1361	Cut		Cut of small pit or large posthole.	0.5	0.5	0.37	0.72	0.35
1362		114	1362	Layer	2	Compact, plastic mid brown/purple sandy-clay layer, representative of interface with peat. Contains pottery, CBM and bone.	1.84	1.38	0.08	0.83	0.75
1363		114	1363	Natural	2	Loose to moderately compacted dark purple peat and sand with charcoal and animal bone.	1.84	1.38	0.05	0.67	0.61
1364		114	1364	Natural	2	Firm mid purple grey clay and silt layer under peat [1363] with residual burnt flint- natural with washed in material?	1.84	1.38	0.03	0.65	0.55
1365		114	1365	Natural	1	Loose light-green yellow-sand: natural. NFE.	1.84	1.38		0.55	0.4
1366				Fill	2	Stiff purple-brown Fill of posthole [1367]. Degraded	0.3	0.3	0.34	0.56	

						timber in fill.					
1367			1367	Cut	2	Semi-circular posthole. Filled with [1366]	0.3	0.3	0.34	0.56	
1368		117	1368	Layer	2	Stiff purple-grey clay with charcoal and burnt and struck flint. Prehistoric layer.	1.75	0.7	0.04	0.48	
1369		116	1369	Layer	2	Firm, friable mid yellowish brown silty-sand. Contains Roman pottery and plaster fragments.	1.18	1.38	0.13	1.08	0.86
1370		116	1370	Layer	2	Loose green-grey silty-sand dump layer with Roman pottery, glass and CBM.	2.48	1.5	0.4	0.95	0.82
1371				Fill	2	Same as [1324]. Grey alluvial clay. Fill of [1372]	3.3	4.5	0.3	0.88	
1372			1372	Cut	2	Linear early channel cut filled by [1371]: same alluvial clay as [1324].	3.3	4.5	0.3	0.88	0.6
1373		116	1373	Natural	2	Firm purple-grey silty-clay with charcoal flecks. Probably natural	2.5	1.5	0.07	0.67	0.45
1374		116	1374	Natural	1	Loose mid brown yellow sandy-silty-gravel. Natural; NFE	2.48	1.5		0.59	0.37
1375		113	1375	Layer	2	Soft green-brown Roman ground raising layer.	0.98	0.36	0.5	1.22	
1376		113	1376	Layer	2	Soft green-brown Roman ground raising layer.	1	1	0.5	1.26	0.81
1377		116	1377	Layer	2	Water lain, clean mid grey-brown silty-clay that seals [1374]. Probably alluvial clay.	2.44	1.1	0.05	0.48	0.43

1378			1378	Layer	2	Loose green-grey sandy-silt. Roman made ground.	2.5	1.8	0.2	0.93	0.73
1379		113		Fill	5	Fill of linear [1380].	0.9	1.2	0.27	0.76	0.49
1380		113	1380	Cut	5	Linear cut/gully filled by [1379] that contains Roman material. Heavily truncated.	0.9	1.2	0.27	0.76	0.49
1381				Fill	2	Fill of gully [1382]. Charcoal lense near edge of cut (perhaps another fill?).	1.6	0.9	0.5	0.69	
1382			1382	Cut	2	Linear gully or ditch cut.	1.6	0.9	0.5	1.02	0.52
1383				Layer	2	Roman dump/ground raising layer.	2	1.6	0.2	1.04	0.83
1384				Fill	2	Loose grey sandy-gravel fill of pit [1385]. Contains pottery and CBM	0.84	1.14	0.47	0.66	
1385			1385	Cut	2	Semi-circular Roman pit cut.	0.84	1.14	0.47	0.66	0.19
1386				Fill	2	Soft light yellow brown sandy-silt with pottery and CBM; Fill of [1387].	0.7	0.9	0.3	0.71	
1387			1387	Cut	2	Sub-circular Roman pit cut. Truncated by Tudor construction cut [1111]. Filled with [1386].	0.7	0.9	0.3	0.71	0.43
1388			1388	Natural	2	Soft dark red-brown peat layer.	2	1.6	0.3	0.7	0.62
1389			1389	Masonry	6	Heavily truncated medieval chalk wall.	0.3	1.54	0.53	0.81	
1390			1390	Cut	6	Linear construction cut for chalk wall [1389].	0.3	1.54	0.54	0.82	0.28
1391				Fill	2	Fill of [1392].	1	0.85	0.12	0.53	
1392			1392	Cut	2	Sub-circular shallow pit cut.	1	0.85	0.12	0.53	0.34

1393			1393	Layer	1	Alluvial clay- natural. Seals natural [1352].	2.28	1.58		0.46	
1394			1394	Layer	2	Lense of stiff light grey clay containing burnt and struck flint.	0.95	1.6	0.1	0.41	
1395				Fill	2	Soft blue-grey silty-clay with shell; Fill of posthole [1396].	0.45	0.37	0.16	0.5	
1396			1396	Cut	2	Sub-circular/oval posthole. Filled with [1395].	0.46	0.4	0.16	0.52	0.36
1397			1397	Fill		Loose mid red-brown clay. Fill of posthole/pit [1398].	0.5	0.4	0.1	0.4	0.31
1398				Cut		Semi-oval shaped small pit or posthole cut filled with [1397].	0.5	0.4	0.1	0.4	0.31
1399				Fill	2	Firm light yellow-green silty-sand. Fill of linear cut [1400]. No finds.	1.26	1.54	0.31	0.58	
1400			1400	Cut	2	Linear cut Filled with [1399]. Prob same feature as [1384] to east.	1.26	1.54	0.31	0.52	0.21
1401				Fill		Soft dark grey-brown sandy-silt. Backfill of construction cut [1111] for Tudor wall.	4.7	6.1	0.9	1.23	
1402		119	1402	Layer	6	Compact dark brown-grey silty-clay with coin small finds	3.72	4	0.24	1.79	1.69
1403				Void		Superseded by [1575]					
1404		120	1404	Layer	2	Firm green-grey clay-gravel Roman made ground/dump layer.	3.06	4	0.3	1.27	1.1
1405		119, 120		Fill	6	Fill of pit [1406].	1.2	0.64	0.3	1.6	
1406		120, 119	1406	Cut	6	Rectangular shaped, N-S aligned pit cut.	1.2	0.64	0.3	1.6	1.3
1407		120, 119		Fill	5	Fill of pit [1408].	0.4	0.6	0.18	1.6	

1408		120, 119	1408	Cut	5	Irregular shaped pit cut. Filled with [1407]	0.6	0.4	0.18	1.6	1.4
1409				Void		Void					
1410				Void		Void					
1411		119		Fill	6	Fill of [1412]. Recorded in section only.		1.45	1.2	1.85	1.76
1412		119	1412	Cut	6	Cut of large pit seen in section only. Filled with [1411]		1.45	1.2	1.85	0.64
1413		119, 120		Fill	2	Backfill of construction cut [1414] for med or Roman wall [1415]	0.5	1	0.38	1.08	0.91
1414		119	1414	Cut	2	Linear construction cut for medieval or Roman wall [1415].	1	0.76	0.38	1.08	0.7
1415		120	1415	Masonry	2	Possible remains of a medieval or Roman dry stone wall- a collection of stones forming a crude wall.	0.36	0.3	0.3	1.05	
1416				Void		Void					
1417				Void		Void					
1418			1418	Cut	8	Linear construction cut part filled with demolition material [1419] but suggested to relate to a small internal palace wall [1424].	1.2	0.3	0.09	1.89	1.79
1419				Fill	8	Mixed dirty-grey red brick fragments and demolition material- Fill of [1418].	1.2	0.3	0.09	1.89	1.79
1420			1420	Cut	8	Linear construction cut for a footing associated with [1424] and [1418].	0.88	0.56	0.2	1.87	1.66

1421		121		Fill	8	Loose red-brown grey lime mortar with brick demo material. Fill of short truncated linear cut [1420].	0.88	0.56	0.2	1.87	1.66
1422			1422	Cut	8	Sub-circular cut of posthole Filled with [1423].	0.18	0.16	0.26	1.88	1.62
1423				Fill	8	Compact rubble fill of posthole [1422]. Suggested to be post-med.	0.18	0.16	0.26	1.88	
1424			1424	Cut	8	Rectilinear construction cut for a small wall [1425].	0.76	0.3	0.16	1.89	1.73
1425				Fill	8	Deliberate crushed red brick fill of linear construction cut [1424]. Suggested structural aspect.	0.76	0.3	0.16	1.89	1.73
1426		121	1426	Layer	8	Demolition horizon of Tudor bricks.	3.2	2	0.07	1.8	1.76
1427		125, 124	1427	Layer	6	Firm dark brown clay-sand-silt. Is this the Southwark 'dark earth' horizon seen across the site? Machine excavated.	3.24	3.1	0.8	1.23	1.09
1428				Void		Void					
1429			1429	Layer	3	'Dark layer'.	1.98	2.2		1.8	1.69
1430				Fill	6	No details as no context sheet. Heights and dimensions taken from plan.	0.48	0.4	0.3	1.79	
1431			1431	Cut	6	No details as no context sheet. Heights and dimensions taken from plan.	0.48	0.4	0.3	1.79	1.49
1432		123	1432	Layer	3	Firm very dark grey silty-clay. Southwark 'dark earth' horizon?	0.82	2.6	0.24	1.42	1.4

1433			1433	Masonry	7	Tudor brick internal floor surface associated with Brandon's palace. Built on sand bedding [1456] and uses medieval wall [1473] as support.	1.8	1.24	0.06	1.41	1.37
1434				Fill	5	Fill of stakehole [1435].	0.19	0.18	0.41	1.49	
1435			1435	Cut	5	Sub-circular shaped posthole cut with angled orientation of post. Filled with [1434].	0.19	0.18	0.41	1.52	1.11
1436		120, 119	1436	Layer	5	Blue-grey silty-clay dump layer; contains a lot of Roman material.	2.94	3	0.16	1.64	1.49
1437				Fill	5	Fill of pit cut [1438].	0.35	0.3	0.1	1.65	
1438			1438	Cut	5	Square shaped pit cut filled with [1437]. Also a possible lining.	0.35	0.3	0.1	1.62	1.54
1439				Fill	4	Decayed timber fragments of post. Fill of posthole [1440].	0.16	0.16	0.15	0.72	0.72
1440			1440	Cut	4	Rectangular shaped posthole cut Filled with [1439]. Degraded timber in fill from post.	0.16	0.16	0.15	0.72	0.63
1441				Fill	4	Degraded timber, presumably from a rotten wooden post. Fill of [1442].	0.2	0.14	0.06	0.79	
1442			1442	Cut	4	Semi-oval shaped posthole cut. Filled with [1441]- contains degraded timber from post in fill.	0.2	0.14	0.6	0.79	0.73
1443				Fill	4	Fill of posthole [1444].	0.1	0.1	0.06	0.82	0.82
1444			1444	Cut	4	Circular cut of posthole. Filled with [1443].	0.1	0.1	0.06	0.82	0.78

1445		125		Fill	5	Firm grey-brown silty-clay with pottery and CBM. Fill of [1446].	1.22	0.6	0.56	0.82	0.8
1446		125	1446	Cut	5	Suggested Tudor pit cut. Sub-square in shape; truncated.	1.22	0.55	0.56	0.77	0.38
1447		125		Layer	5	Recorded as a natural alluvial clay layer but contains finds of pot and CBM so more likely archaeological. Probably redeposited natural material.	0.76	1.5	0.51	0.8	
1448				Fill	5	Degraded timber fill of posthole [1449].	0.2	0.2	0.48	1.5	
1449			1449	Cut	5	Circular post/stakehole cut.	0.2	0.2	0.48	1.5	1.21
1450				Void		Void					
1451		124	1451	Layer	4	Soft to firm grey-brown sandy-clay with decayed timber, pottery, CBM and worked stone.	1.84	1.6	0.41	0.82	
1452				Void		Void					
1453				Void		Void					
1454				Fill	4	Backfill of large quarrying pit [1455].	2.2	1.4	0.27	0.81	0.75
1455			1455	Cut	4	Large, irregular shaped quarrying pit backfilled with redeposited alluvial clay [1454]. Also possibly related to cess pits associated with the Tudor palace.	2.2	1.4	0.27	0.82	0.65
1456			1456	Layer	7	Sand bedding layer for floor [1433]	1.8	1.24	0.02	1.35	1.32
1457				Void		Void					

1458		121		Layer	7	Clay bedding layer for Tudor floor [1430]/[1429]. Recorded in section only.		0.78	0.12	1.76	
1459		121		Fill	5	Main fill of [1475] that seals fill [1461]. Appears to have been recorded in section S121 only.		1.33	0.62	1.8	1.76
1460		121	1460	Layer	3	Firm dark green sandy-silt with charcoal layer. Contains pottery, coins, tesserae and a bone pin. Remnants of Roman material in a suggested Southwark 'dark earth' horizon. Seen in section only.		1.8	0.26	1.54	
1461		121		Fill	5	Secondary fill of [1475]. Seen in S121 only.		1	0.39	1.43	
1462				Void		Void					
1463		121	1463	Layer	2	Firm grey clay-sand-silt ash layer.	2.1	2.1	0.3	1.24	1.16
1464		121	1464	Layer	2	Loose mid green brown sandy-silt. Green Roman ground raising layer, beneath Southwark 'dark earth'.	2.1	2.1	0.25	1.12	1.06
1465		121	1465	Natural	2	Natural sterile peat layer.	2.1	2.1	0.1	0.95	
1466				Void		Void					
1467				Fill	5	Fill of posthole [1468].	0.12	0.14	0.15	0.65	
1468			1472	Cut	5	Rectangular to semi-oval posthole cut. Suggested to relate to postholes [1470] and [1472].	0.12	0.14	0.15	0.65	0.5
1469				Fill	5	Soft very dark brown silty-clay. Fill of [1470].	0.1	0.1	0.2	0.78	
1470			1472	Cut	5	Rectangular to semi-oval posthole cut. Suggested to relate to postholes [1468] and [1472].	0.1	0.1	0.2	0.78	

1471				Fill	5	Soft very dark brown silty-clay. Fill of [1472]	0.06	0.06	0.05	0.78	
1472			1472	Cut	5	Rectangular to semi-oval posthole cut. Suggested to relate to postholes [1468] and [1470].	0.06	0.06	0.05	0.78	0.73
1473		125, 123	1473	Masonry	7	Chalk and mortar N-S aligned wall, thought to be medieval. Supports Tudor floor surface [1433].	1.8	1.24	0.41	1.29	1.28
1474				Void		Void					
1475			1475	Cut	5	Roughly triangular pit cut that is made through Southwark 'dark earth' horizon [1460]. Filled with [1579].	1.08	0.55	0.46	1.53	1.07
1476		122, 121	1476	Layer	7	Demolition horizon consisting of Tudor bricks- same as [1426].	3.26	1.3	0.07	1.96	1.93
1477		125		Fill	5	Firm mid brown grey silty-clay. Primary fill of quarry pit [1479].	0.76	1.5	0.07	0.52	
1478		125		Fill	5	Secondary fill of quarry pit [1479].	0.1	0.3	0.09	0.29	
1479		125	1479	Cut	5	Large sub-rectangular pit cut that has been excavated as far down as gravels and therefore interpreted as a quarrying pit although might as easily be a cess pit or soakaway associated with Suffolk Place or its medieval predecessor on site.	0.76	1.5	0.51	0.85	0.14
1480		124	1480	Layer	5	Laminated layer of sand, gravel and clay- probably alluvial. Includes medieval pottery and Roman samian ware, thought to be residual. Made ground.	3	3.1	0.18	0.78	0.68

1481		121	1481	Masonry	7	Red Tudor brick floor surface, recorded in section only. Thought to be from interior of Suffolk Place.		1.05	0.1	1.9	1.81
1482		124	1482	Layer	5	Described as a layer of alluvial blue-grey silty-clay and interpreted as a water lain deposit. Contains pottery and CBM. Not fully excavated.	3	3.1	0.45	0.6	0.42
1483		123		Layer	2	Firm dark green-brown sandy-silt. Roman dump layer. Seen in section only.		0.87	0.3	1.37	1.19
1484		123	1484	Layer	2	Firm dark brown silty-sand with lots of Roman finds. Dump layer/made ground.	1.04	1.88	0.48	1.08	0.83
1485		121	1485	Layer	2	Firm dark grey-brown sandy-silty-clay. Roman surface.		0.63	0.15	1.38	1.34
1486				Fill	5	Fill of stakehole [1487] .	0.06	0.08	0.1	0.97	
1487			1487	Cut	8	Cut of post/stakehole.	0.06	0.08	0.1	0.97	0.87
1488				Fill	5	Fill of stakehole [1489].	0.1	0.1	0.2	0.93	
1489			1487	Cut	5	Circular cut of stakehole or posthole Filled with [1488].	0.1	0.1	0.2	0.93	0.73
1490				Fill	5	Fill of stakehole [1491].	0.08	0.08	0.06	1	
1491			1487	Cut	5	Circular cut of stakehole Filled with [1490].	0.08	0.08	0.06	1	0.94
1492				Fill	5	Fill of stakehole [1493].	0.08	0.06	0.36	1	
1493			1487	Cut	5	Circular stakehole/posthole.	0.08	0.06	0.36	1	0.64
1494				Fill	5	Fill of stakehole [1495].	0.07	0.07	0.1	1	
1495			1487	Cut	5	Circular stakehole/ posthole. Filled with [1494].	0.07	0.07	0.1	1	0.9

1496				Fill	5	Fill of stakehole [1497].	0.07	0.06	0.2	1.09	
1497			1487	Cut	5	Circular stakehole cut filled with [1496].	0.07	0.06	0.2	1.09	0.89
1498				Fill	5	Fill of posthole [1499].	0.04	0.06	0.1	1.01	
1499			1487	Cut	5	Cut of stakehole filled with [1498].	0.04	0.06	0.1	1.01	0.91
1500				Fill	5	Fill of stake hole [1501].	0.04	0.04	0.27	1.12	
1501			1487	Cut	5	Circular stakehole cut filled with [1500].	0.04	0.04	0.27	1.12	0.85
1502				Fill	5	Fill of stakehole [1503].	0.05	0.06	0.09	1.09	
1503			1487	Cut	5	Cut of stakehole. Filled with [1502].	0.05	0.06	0.09	1.09	1
1504				Fill	5	Fill of stakehole [1505].	0.05	0.08	0.12	1.26	
1505			1505	Cut	5	Sub-circular stakehole cut.	0.05	0.08	0.12	1.26	1.14
1506				Fill	5	Fill of stakehole [1507].	0.05	0.05	0.07	1.2	
1507			1505	Cut	5	Cut of posthole. Circular with vertical edges.	0.05	0.05	0.07	1.2	1.13
1508				Fill	5	Fill of posthole [1509].	0.06	0.08	0.06	1.15	
1509			1505	Cut	5	Circular cut of posthole.	0.06	0.08	0.06	1.15	1.09
1510				Fill	5	Fill of stakehole [1511].	0.06	0.06	0.06	1.14	
1511			1505	Cut	5	Circular stakehole cut.	0.06	0.06	0.06	1.15	1.09
1512		125		Void		Void					
1513				Void		Void					
1514				Fill	5	Fill of stakehole [1515].	0.08	0.06	0.09	0.88	0.86
1515			1515	Cut	5	Sub-circular stakehole cut Filled with [1514].	0.08	0.06	0.09	0.88	0.79
1516			1516	Timber	5	N-S aligned rotting timber plank, suggested to be medieval and related to a barrier. Has lots of stakeholes associated with it,	1.6	0.04	0.2	0.93	0.88

						perhaps to keep it in place.					
1517			1517	Void		Void					
1518		122		Layer	7	Sand bedding layer for Tudor wall [1521]. Seen in S122 only. Same as [1531].		0.33	0.12	1.56	1.55
1519		122	1519	Masonry	7	Red brick wall- Tudor? Built on foundation [1521]. Aligned N-S.	2	1	0.16	1.76	1.71
1520				Fill	5	Soft mid brown-grey silty-clay. Fill within partition [1516] in cut [1600]. Suggested to be from flooding or possibly a fish-pond.	2.6	2.1		1.21	1.11
1521		122, 121	1521	Masonry	7	Single layer of red unfrogged brick foundation for wall [1519]. Relates to an internal wall.	1.98	0.32	0.08	1.66	1.59
1522		122	1522	Cut	7	Construction cut for foundation [1521] and wall [1519].	0.33	2	0.12	1.74	1.43
1523		121	1523	Cut	6	Cut of late medieval/Tudor pit. Recorded in S121 only. Filled with [1524], [1525], [1526].		1.3	0.78	1.65	1.03
1524		121		Fill	6	Loose lenses of sandy silt. Primary fill of Tudor pit [1523]. Seen in S121 only		0.45	0.1	1.24	
1525		121		Fill	6	Clay backfill of [1523] seen in S121 only. Secondary backfill.		1.37	0.45	1.58	1.48
1526		121		Fill	6	Hard green-black clay-sand fill of [1523]. Tertiary fill. Seen in S121 only.		1.33	0.36	1.86	1.8

1527				Fill	5	Firm dark brown-grey silty-clay. Fill of pit cut [1528]. Contains pot, glass, CBM and bone.	0.54	1.74	0.6	1.26	0.94
1528			1528	Cut	5	Semi-circular shaped pit cut with convex sides. Filled with [1527].	1.74	0.54	0.6	1.26	0.45
1529		121		Masonry	7	Brick rubble foundation for Tudor wall [699] as seen in S121 only.		2.2	0.17	1.12	
1530		121		Masonry	7	Crushed loose red Tudor brick used as an underlying foundation level, beneath [1529] for palace wall [699]		2.2	0.25	1.04	0.94
1531				Layer	7	Loose light grey degraded lime mortar bedding layer for surface [1521]. Seen in S121 only. Same as [1518].		1.3	0.05	1.84	1.69
1532		121		Fill	7	Upper fill of pit cut [1534]. Composed of firm dark grey-brown sandy-clay. Only seen in S121.		1.3	0.3	1.84	1.68
1533		121		Fill	7	Primary fill of [1534]. Composed of compacted green-grey clay. Seen in S121 only.		1.3	0.38	1.74	1.54
1534		121	1534	Cut	7	Recorded as being square although only recorded in section. Gradual sides. Filled by [1532], [1533]. Suggested to be a Tudor pit cut.		1.05	0.48	1.8	1.32
1535		121		Layer	2	Suggested to be a Roman occupation layer. Composed of firm dark grey-green sandy-silt. Seen in S121 only.		1.3	0.32	1.34	

1536		121		Layer	2	Firm grey clay with charcoal. Roman dump layer?		0.9	0.16	1.24	1.2
1537		121		Cut	2	Filled with [1538], [1539], [1540]. Suggested Roman pit cut visible in S121 only.		1.9	0.38	1.04	0.74
1538		121		Fill	2	Upper fill of pit [1537] seen in S121 only. Composed of yellow- grey sandy-silt.		0.55	0.1	1.09	
1539		121		Fill	2	Not recorded on context sheet. Fill of pit [1537]. Only recorded in section.		0.65	0.06	1.1	0.99
1540		121		Cut	2	Primary fill of pit cut [1537]. Recorded in section S121 only.		1.9	0.37	1.02	0.94
1541				Fill	5	Fill of stakehole [1542].	0.04	0.06	0.16	1.37	1.27
1542			1566	Cut	5	Circular cut of stakehole.	0.04	0.06	0.16	1.32	1.16
1543				Fill	5	Fill of stakehole [1544].	0.03	0.03	0.16	1	0.93
1544			1566	Cut	5	Square cut of stakehole.	0.03	0.03	0.16	1.41	1.25
1545				Fill	5	Fill of stakehole [1546].	0.07	0.07	0.11	1.36	1.31
1546			1566	Cut	5	Circular cut of stakehole.	0.07	0.07	0.11	1.36	1.25
1547				Fill	5	Fill of stakehole [1548].	0.08	0.07	0.64	1.34	1.3
1548			1566	Cut	5	Cut of stakehole.	0.08	0.07	0.64	1.34	0.7
1549				Fill	5	Fill of stakehole [1550].	0.09	0.07	0.16	1.35	1.2
1550			1550	Cut	5	Oval shaped stakehole cut. Filled with [1549].	0.09	0.07	0.16	1.35	1.19
1551				Fill	5	Fill of stakehole [1552].	0.11	0.08	0.55	1.34	1.29
1552			1550	Cut	5	Oval shaped cut of stakehole.	0.11	0.08	0.55	1.34	0.79
1553				Fill	5	Fill of stakehole [1554].	0.07	0.06	0.12	1.31	1.29
1554			1550	Cut	5	Circular cut of stakehole.	0.07	0.06	0.12	1.31	1.19
1555				Fill	5	Fill of stakehole [1556].	0.09	0.07	0.1	1.29	1.27

1556			1550	Cut	5	Cut of stakehole. Filled with [1555].	0.08	0.07	0.1	1.29	1.19
1557				Fill	5	Fill of stakehole [1558].	0.08	0.08	0.1	1.35	1.28
1558			1550	Cut	5	Circular cut of stakehole.	0.08	0.08	0.1	1.35	1.25
1559				Fill	5	Fill of stakehole [1560].	0.06	0.06	0.1	1.37	1.31
1560			1550	Cut	5	Oval shaped stakehole.	0.06	0.06	0.1	1.37	1.27
1561				Fill	5	Fill of stakehole [1562].	0.1	0.08	0.14	1.34	
1562			1550	Cut	5	Oval shaped stakehole.	0.1	0.08	0.14	1.34	1.2
1563				Fill	5	Fill of stakehole [1564].	0.06	0.05	0.16	1.26	1.22
1564				Cut	5	Oval shaped stakehole cut.	0.06	0.05	0.16	1.26	1.1
1565				Fill	5	Fill of stakehole [1566].	0.06	0.08	0.12	1.28	
1566			1566	Cut	5	Circular shaped stakehole.	0.06	0.08	0.12	1.28	1.19
1567				Fill	5	Fill of stakehole [1568].	0.1	0.1	0.2	1.36	
1568			1568	Cut	5	Circular stakehole cut.	0.1	0.1	0.2	1.36	1.16
1569		121	1569	Layer	2	Moderately compacted mid red-brown gravel with occasional panning. Dump layer above peat?	1.7	1.3	0.06	1.01	0.9
1570				Masonry		No plan or context sheet. Context register describes it as 'N-S red brick wall remains'.					
1571				Masonry		No plan or context sheet. Context register describes it as 'E-W red brick wall remains'.					
1572		124, 125	1572	Layer		Clay suggested to have formed in association with channel. Roman material found within it. Possibly a flood horizon.	3.08	3.08	0.6	0.85	0.26
1573			1573	Natural	1	Natural loose light yellow-brown sandy-gravel. No depth as NFE.	3.1	3		0.43	0.2

1574		121	1574	Natural	1	Soft yellow sandy-clay with no anthropogenic material: presumed to therefore be natural. No depth as NFE.	2.1	2.1		0.85	0.82
1575					6	No records whatsoever except context register that describes this as a 'green layer' and having superseded [1403].					
1576		120		Fill	2	Firm mid brown-grey silty-clay Fill of ditch cut [1577] with pottery and CBM finds.	2.38	4	0.88	1.12	1.07
1577		120	1577	Cut	2	Large, NW-SE aligned ditch cut filled by [1576] and thought to be Roman from finds.	4	2.38	0.88	1.12	0.24
1578		121		Fill	5	Secondary fill of [1475]. Composed of loose grey sandy-gravel with charcoal. Recorded in section S121 only.		1	0.14	1.29	1.27
1579		121		Fill	5	Firm grey clay lining of pit cut [1475]. Seen and recorded in S121 only. Primary fill.		1.35	0.7	1.69	1.14
1580			1580	Masonry	7	Square pillar of Tudor red bricks that sits on top of masonry [1590]. Depth taken from sketch so not wholly accurate. Thought to relate to an external wall.	1.1	1.4	0.25	1.88	
1581		125		Fill	8	Fill of post-med rubbish pit seen in N-facing section S125.	1.15	1	0.95	1.95	
1582		125		Cut	8	Large post-medieval pit cut seen in N-facing section only.	1.15	1	0.95	1.92	1.06
1583		125		Layer	5	Sandy clay layer seen in S125- thought to be Roman from strat.		2	0.1	0.98	

1584		125		Fill	5	Firm mid grey-brown clay top fill of quarry pit [1479]. Uncertain of date at present. Seen in S125 only.		1.6	0.3	0.87	
1585			1585	Natural	2	Firm dark purple brown peat. Natural.	1.32	1.8	0.25	0.6	0.54
1586			1586	Natural	1	Naturally deposited alluvial sandy-clay layer. Firm mid brown-grey sandy-clay with small pebbles. No depth as excavation stopped at this height.	1.32	1.8		0.45	0.37
1587			1587	Cut	7	Construction cut for Tudor masonry [1590]. Masonry not fully archaeologically excavated.	1.1	1.4	0.75	1.83	1.08
1588		124		Cut	8	Only seen in section so uncertain of shape- pit cut that is suggested to be post-med.		1.2	0.52	1.21	0.63
1589		124		Fill	8	Firm grey-brown clay-silt.		1.2	0.52	1.21	
1590					7	Backfill/foundation of construction cut [1587] for Tudor masonry [1580].	1.1	1.4	0.55	1.63	
1591				Fill	5	Fill of stakehole [1592].	0.06	0.06	0.19	0.66	0.56
1592			1592	Cut	5	Circular stakehole cut.	0.06	0.06	0.19	0.66	0.47
1593				Fill	5	Fill of stakehole [1594].	0.08	0.08	0.19	0.9	0.82
1594			1592	Cut	5	Circular cut of stakehole.	0.08	0.08	0.19	0.9	0.71
1595				Fill	5	Fill of stakehole [1596].	0.1	0.1	0.18	0.86	
1596			1592	Cut	5	Circular stakehole cut.	0.1	0.1	0.18	0.86	0.75

1597		122		Layer	5	Layer of friable gravelly-sand-silt though which cut [1522] is made as seen in S122. Possibly the same as other Southwark 'dark earth' horizons as it represents a layer through which med and Tudor construction cuts are made.		1.1	0.35		1.78	
1598		122		Fill		Backfill of construction cut around footing [1521]. Seen in S122 only.		0.34	0.05		1.6	
1599				Void		Void						
1600			1600	Cut	5	Semi-circular cut of suggested 'partition' - cut. Filled with [1516] and [1520]. Uncertain of function of this at the moment.	2.6	2.1	0.31		1.18	0.61
1601				Cut		Construction cut for wall [660].	1.34	0.3			1.9	
1602			1602	Cut	7	Construction cut for wall [699]/[697].	1.94	2.7			1.94	
1603		120	1603	Natural	1	Firm brown-yellow natural sand. Thought to be natural. No depth as excavation stopped at this height. Cut by [1577] and [1528].	4.36	4			0.83	0.69
1604		120		Layer	2	Natural peat layer recorded in S120 only.		3.06	0.14		0.95	0.82
1605		120		Natural	1	Natural layer seen in S120 only. No details recorded.		1.15	0.81		0.81	0.73
1606		123		Cut	7	Construction cut for chalk wall [1473].						
1607		157		Masonry	7	Chalk foundation.					1.71	1.58

1608		162		Masonry	7	Tudor brick component part to large N-S tudor foundation, possibly representative of the W external wall to the palace.	2.05	1.2	0.3	1.37	1.35
1609		162		Masonry	7	Crushed brick demolition material foundation as part of large N-S external wall to Tudor palace.	2.05	1.2	0.33	1.2	
1610		162		Masonry		Primary fill of construction cut [2223] that represents a rubble core foundation for a large N-S western external wall foundation to the Tudor palace.	2.2	1.2	0.39	0.9	0.85
1611			1611	Cut	4	Cut for timber [1612].	0.12	0.12		0.75	
1612				Timber	4	Timber post associated with [1614], [1439], [1441] and [1442].	0.12	0.12		0.75	
1613				Cut	4	Cut for timber [1614].	0.15	0.04		0.75	
1614				Timber	4	Rectangular post recorded on M/C plan only. Associated with [1612], [1439], [1441] and [1443].	0.15	0.04		0.75	
2000		152		Layer	4	Dark earth, post-Roman abandonment, pre-medieval accumulation. Seen in slot.	11.55	1.8	0.49	1.38	1.25
2001		152		Layer	2	Mottled green Roman layer. Seen in slot.	4.1	1.8	0.25	0.83	0.49
2002			2002	Layer	8	Dumped clay layer sealing Tudor floor. Suggested bedding for reuse.	2	1.3	0.2	2.12	2.09
2003				Layer	8	Dumped Tudor brick layer.	2.3	2.9	0.28	2.11	1.83

2004			2004	Layer	8	Dumped clay above floor [647]. Sealing of floor for reuse?	1.1	0.85	0.13	1.84	1.81
2005				Fill	2	Pit fill.	0.52	0.39	0.22	0.96	0.72
2006				Cut	2	Roman oval-shaped cut feature.	0.52	0.39	0.22	0.96	0.77
2007			2007	Layer	8	Dumped clay layer.	1	2.7	0.14	1.97	1.82
2008				Fill	2	Firm silty-sand fill of [2009].	0.64	0.43	0.12	0.99	0.93
2009				Cut	2	Roman circular pit cut.	0.64	0.43	0.12	0.99	0.84
2010				Fill	2	Firm dark grey clay-silt, Roman pit fill.	0.65	0.39	0.25	0.99	0.92
2011				Cut	2	Roman pit cut.	0.65	0.39	0.25	0.99	0.72
2012				Fill	3	Roman pit fill. Dark brown silty- clay.	2	1.12	0.17	0.96	0.83
2013		152		Cut	3	Cut of Roman pit/ditch.	2	1.12	0.69	0.96	0.49
2014		150	2014	Masonry	7	Tudor brick floor.	7.94	1.9	0.1	1.96	1.78
2015		152		Fill	3	Firm silty-sand, middle fill of [2013].	2	1.12	0.3	1.74	1.67
2016				Masonry		20th century slab floor.	8.6	7.1	0.07	1.86	1.77
2017				Masonry		Modern brick partition wall.	4.6	0.3	0.55	2.12	2.05
2018				Masonry		Modern wall.	1.25	0.4	0.3	2.14	
2019				Masonry		Modern wall.	1.95	0.4	0.1	1.92	
2020				Masonry		Modern wall.	0.75	0.37	0.11	1.82	
2021				Masonry		Modern wall.	2.7	0.36	0.29	2.1	2.08
2022				Masonry		Modern wall.	1.5	0.3	0.45	2.14	
2023				Masonry		Modern wall. Levels not recorded on plan- thought to be c.2m OD.	2.9	0.4	0.27	2	
2024				Masonry		Modern wall. No depth recorded.	2.7	1.5		1.83	
2025				Masonry		Modern partition wall. Depth not recorded.	0.95	0.35		1.76	

2026				Masonry		Modern partition wall.	0.77	0.14	0.1	1.83	
2027		152		Fill	3	Primary fill of cut [2013].	2	1.12	0.22	1.5	1.46
2028		200		Fill	8	Rubble fill of p-m pit [2029].	1.1	0.7	0.35	1.73	
2029		200	2029	Cut	8	Post-med cut made into [2829].	1.1	0.7	0.35	1.73	1.43
2030				Masonry		Post-med red brick wall. Levels not recorded. Thought to be c. 2m.	0.75	0.5	0.5	2	
2031				Masonry		Red brick post-med wall.	1.6	0.36	0.3	2.1	
2032				Masonry		Post-med red brick wall.	1.9	0.35	0.2	2.03	
2033				Masonry		Modern red brick wall.	2.2	0.6	0.1	1.9	
2034			2034	Layer	8	Post-med demolition layer.	2.04	3.3	0.59	1.89	1.35
2035		152		Layer	2	Green-brown Roman layer.	1.8	7.49	0.55	0.99	0.93
2036		150		Fill	8	Tudor rubble fill. Not fully excavated- seen in S150. Fill of robber cut.	1.02			2.16	1.79
2037		150		Cut	8	Cut made into Tudor wall- robber cut? Seen in section. NFE?	1.02			2.21	
2038		150	2038	Masonry	10	Late post-medieval wall thought to reuse Tudor bricks.	0.57	1.93	0.28	2.21	2.11
2039		150	2039	Layer	8	Bedding layer.	2.43	0.6	0.03	1.83	1.82
2040		150		Fill	8	Fill of [2061]. Dark-brown silty-clay. Suggested bedding fill for wall [[2038].	1	1.5	0.2	1.82	1.79
2041		159, 150	2041, 2369	Layer	3	Brown/black clay layer. Post Roman abandonment, pre-medieval accumulation of Southwark 'dark-earth'. Same as [2885].	17.34	19.23	0.89	2.34	0.97
2042		150	2042	Layer	8	Mortar layer	1.56	0.28	0.05	1.85	1.83
2043		162, 166,	2043	Layer	7	Dump layer.	0.9	3.5	0.75	1.8	1.74

		162, 150									
2044		150	2044	Masonry	7	N-S Tudor red brick wall	0.83	0.2	0.32	2.04	1.97
2045		150	2045	Layer	7	Bedding layer under Tudor floor [2014].	7.94	1.9	0.1	1.92	1.74
2046		166, 150	2046	Masonry	7	Tudor wall.	0.9	2.44	0.42	1.75	
2047		150	2047	Masonry	7	Chalk wall with Tudor brickwork on top. Seen in section and part exposed but not fully excavated.	3.76	0.9	1.17	1.37	0.55
2048		150		Layer		Layer of clay containing painted plaster. Originally only seen in section, so no length. Superseded by [2331].		0.45	0.19	1.27	1.11
2049		150		Layer		Pre-Roman peat layer. Originally seen in S150 then recorded later as [2049].		0.3	0.31	0.96	0.95
2050		150		Layer		Clay layer- alluvium- seen originally in S150 then recorded again as [2375].	0.28		0.31	0.68	0.66
2051		162, 150		Fill	7	CBM rubble below wall [2044].	3.4	0.6	0.75	1.78	1.73
2052		162, 150	2052	Cut	7	Cut filled with rubble.	4	1.3	0.75	1.8	1.04
2053		150		Fill	10	Modern backfill in [2054].	4	0.36	1.5	1.84	
2054		150	2054	Cut	10	Modern cut.	4	0.36	1.5	1.84	
2055				Fill	10	Rubble backfill of [2056]. Post-med.	0.64	2.1	1.35	1.87	
2056		201	2056	Cut	10	Post-med robber cut.	2.1	0.64	0.4	1.87	1.6
2057				Fill		Fill of [2058]- Post-med robber cut.	0.56	1.3	0.3	1.9	
2058			2058	Cut	8	Robber cut.	0.56	1.3	0.3	1.9	1.57
2059			2059	Cut	8	Robber cut following line of foundation [643] and cutting floor [647]. Filled by [2034].	2.15	2.01	0.41	1.72	1.3

2060		150	2060	Cut	7	Cut for Tudor wall [2044] and [2080]?	0.24	3.22	0.3	2.02	
2061		150	2061	Cut	8	Cut for wall [2038], filled initially by [2040] then wall.	2.8	1.04	0.35	2.04	1.66
2062		150	2062	Layer	8	Dark brown clay layer- foundation layer for late post-medieval floor.	1.54	0.54	0.11	1.85	1.81
2063		150	2063	Cut	7	Cut for wall [2046]; [2047]. Same as [2474].	2.4	1.9	0.45	1.75	1.3
2064		150		Layer		Alluvial deposit. Only seen in section S150.	0.25		0.05	0.37	
2065			2065	Layer	7	Brick layer.	1.82	1.4		1.66	1.51
2066			2066	Masonry	7	Surviving fragment of Tudor arch foundation [643].	0.55	0.41	0.17	1.54	1.43
2067			2067	Layer	12	Clay/rubble layer. NFE at time of recording.	5.2	1		0.93	
2068			2068	Layer	2	Dark green sand- Roman ground raising or bedding? NFE at time of recording.	2.1	1.7		0.97	0.81
2069		151	2069	Layer	2	Light yellow sand- Roman. NFE at time of recording.	1.4	4.4		0.96	0.86
2070		151, 150		Fill	2	Organic pit fill.	1.6	1.6		0.89	
2071		151, 150	2071	Cut	2	Circular pit cut. NFE at time of recording.	1.6	1.6		0.89	
2072			2072	Layer	2	Dark brown layer.	0.4	2.4		0.88	
2073			2073	Fill	8	Tudor mortar fill/layer. Nfe at time of recording. Uncertain about phasing.	1.8	3		0.92	0.81
2074			2074	Masonry	8	N-S reused Tudor brick wall.	0.61	0.24	0.44	2.2	2.18
2075			2075	Masonry	8	E-W red brick wall, reusing Tudor bricks.	1.08	0.36	0.44	2.21	2.19

2076		150	2076	Layer	10	Concrete floor. 3cm thick.	2.06	0.7	0	1.99	1.98
2077		150	2077	Masonry	10	Modern brick floor.	2.1	0.72	0.08	1.98	
2078				Fill	2	Dark charcoal pit fill- Roman.	0.48	1.58	0.18	0.71	0.61
2079				Cut	2	Roman pit cut.	0.48	1.58	0.18	0.71	0.53
2080			2080	Masonry	7	N-S Tudor wall.	1.29	0.33	0.14	2.09	2.01
2081				Layer		Rubble layer.					
2082			2082	Cut	8	Robber cut for taking floor [2084].	1.2	1.5	0.15	0.83	0.63
2083			2083	Layer	6	Compacted chalk floor, sealed by floor [2084]. NFE at time of recording.	1.2	1.5		0.63	
2084			2084	Masonry	7	Tudor brick floor surface. NFE at time of recording.	0.4	1.2		0.82	
2085			2085, 2085	Masonry	7	Reigate block brick/work? Built on brick arch so more likely Tudor, reusing earlier materials.	0.33	0.56	0.2	2.09	2.05
2086		162	2086	Masonry	7	Tudor red brick arched foundation, associated with [2611] and [2212].	2.2	1.2	48	2.06	1.44
2087		152		Layer	2	Roman yellow clay layer-bedding or levelling.	1.95	1.04	0.09	0.82	0.72
2088			2088	Layer	10	Modern brick rubble.	2	1.46	0.29	2.23	2.23
2089				Fill	8	Fill of p-m robber cut [2082].	1.2	1.5	0.15	0.82	
2090		151		Layer	2	Sandy-clay grey layer. Unexcavated and presumed to have been seen only in section.			0.05	0.72	0.63
2091		151		Layer	2	Clay layer- alluvium? Recorded in section only.			0.12	0.68	0.61
2092		151		Layer	2	Peat layer. Recorded only in section.			0.12	0.22	

2093		151		Layer	1	Alluvial deposit under clay. Recorded only in section.			0.06	0.15	
2094		151		Layer	1	Natural gravel layer. Only observed with auger				-0.11	
2095		152		Layer	2	Early Roman grey-clay layer. Possibly from flooding. Seals earlier Roman material in peat.	6.89	1.8	0.25	0.56	0.44
2096		152		Fill	2	Pit fill- green-yellow clayey-sand.	3.74	1.8	0.36	0.82	0.69
2097		152		Cut	2	Roman pit cut.	3.74	1.8	0.36	0.75	0.46
2098				Timber	2	Timber found within fill [1296]. Drain- hollowed out.	1.71	0.21	0.28	0.7	0.55
2099				Timber	2	Timber plank found within [2013]	0.36	0.27	0.11	0.5	0.46
2100		159	2100	Masonry	7	Tudor masonry surface.	2.2	1.4	0.32	1.53	1.31
2101				Fill	9	Late post-medieval pit fill.	1.2	0.52	0.3	1.9	1.85
2102			2102	Cut	9	Late post-med rubbish pit cut.	1.2	0.52	0.3	1.9	1.6
2103				Timber	2	Timber stake- part of group [2139]. 75 x 235 x 45mm.				0.51	0.31
2104				Timber	2	Timber stake- part of group [2139]. 40 x 120 x 220mm.				0.54	0.31
2105	Void			Void		Void					
2106				Timber		Timber stake- part of group [2139]. 400 x 120 x 80 mm.				0.6	0.29
2107				Timber	2	Timber stake- part of group [2139]. 360 x 100 x 55mm.				0.74	0.38
2108				Cut	2	Cut for stake [2103]. Part of [2139]. 75 x 45 x 20mm.				0.44	0.31
2109				Cut	2	Cut for stake [2104]. Part of group [2139]. 40mm x 120mm x 100mm.				0.46	0.31

2110	Void			Void		Void						
2111				Cut	2	Cut for stake [2106]. Part of group [2139]. 120 x 80 x 320mm.					0.52	0.29
2112				Cut	2	Cut for stake [2107]. Part of group [2139]. 360 x 100mm.					0.52	
2113		152		Layer	2	Peat layer. Dimensions represent layer as seen in slot. Depth as exposed in auger holes as being 1.60m before hitting gravel.	11.55	1.8	1.6		0.52	0.43
2114		152		Layer	2	Thin clay layer above peat [2113]. Contains Roman material.	1.52	0.86	0.2		0.74	0.54
2115		157		Fill	10	Fill of post-med well [591]. Not bottomed.	0.8	0.8	0.5		2.12	2.02
2116				Fill	2	Roman pit fill.	0.7	0.72	0.22		0.45	0.27
2117				Cut	2	Truncated Roman pit cut.	0.58	0.72	0.11		0.44	0.34
2118				Cut	2	Roman pit cut.	0.48	0.56	0.22		0.43	0.27
2119	Void			Void		Void						
2120				Cut	2	Posthole- part of group [2141].	0.06	0.08	0.04		0.41	0.37
2121				Fill	2	Fill of posthole. Presumed to be Roman. Part of group [2141]?	0.16	0.1	0.21		0.32	0.11
2122				Cut	2	Posthole seen made into Roman peat.	0.16	0.1	0.21		0.32	0.11
2123				Fill	2	Fill of Roman pit.	1.04	0.52	0.06		0.45	
2124				Cut	2	Roman stakehole.	0.17	0.11	0.2		0.43	0.22
2125				Fill	2	Fill of stakehole. NFE.	0.17	0.11	0.2		0.43	
2126				Fill	2	Fill of linear cut [2127].	1.3	0.86	0.3		0.29	
2127				Cut	2	Linear cut made through peat.	1.3	0.86	0.3		0.34	0.04
2128				Cut	2	Roman pit cut.	1.04	0.52	0.06		0.45	0.39
2129				Fill	2	Mid greenish-grey pit fill.	1.06	0.32	0.23		0.48	

2130				Cut	2	Roman pit cut.	1.06	0.32	0.23	0.48	
2131				Fill	8	Fill of robber cut [2132].	1.74	3.55	0.59	2.09	1.89
2132			2132	Cut	8	Robber cut for taking Tudor brickwork.	1.74	3.55	0.59	1.96	1.37
2133	Void			Void		Void					
2134	Void			Void		Void					
2135				Fill	2	Backfill of cut [2136]- construction cut for Roman timber drain?	1.75	0.55	0.1	0.55	0.54
2136				Cut	2	Cut for wooden drain [2098].	1.75	0.55	0.1	0.55	0.47
2137				Fill		Fill within wooden drain [2098].		0.14	0.05		
2138				Timber	2	Base of tree.	0.86	0.46	0.11	0.47	0.39
2139				Group	2	Group number given to a series of stakes driven into Roman peat. Consists of [2103], [2104], [2106], [2107].					
2140			2140	Masonry	7	Tudor floor.	0.34	0.7	0.09	1.63	1.53
2141				Group	2	Linear stake group consisting of [2103], [2104], [2106], [2107], [2142]. Suggested to form a revetment.					
2142				Fill	2	Silty-sand fill of posthole, forming a suggested revetment.	0.06	0.08	0.04	0.41	
2143		155		Fill	3	Pit fill.	2.4	2.78	0.62	1.38	0.72
2144		155		Cut	3	? Large Roman pit cut.	2.4	2.78	0.62	1.38	0.72
2145		153		Layer	4	Dark earth horizon? Contains late Roman material.	1.62	3.5	0.23	1.45	1.23
2146		152		Timber	6	Timber post.	0.54	0.2	0.18	2.28	1.73
2147		156		Layer	3	Dark green-brown sandy-silty-clay.	1.8	1.24	0.43	1.55	

2148				Fill	3	Fill of small Roman pit.	0.66	0.74	0.15	1.15	
2149				Cut	3	Roman pit cut.	0.66	0.74	0.15	1.15	1
2150		156, 153		Layer	3	Green Roman made ground layer.	5	1.44	0.14	1.19	1
2151		152		Cut	6	Post-hole. Filled with [2146].	0.2	0.22	0.35	2.08	1.73
2152				Layer	3	Dark organic layer.	1.36	1.54	0.1	1.1	1
2153				Timber	2	Roman stake made into cut [2154].	0.08		0.33	1.16	
2154				Cut	2	Stakehole cut.	0.08		0.33	1.1	0.77
2155				Timber	2	Stake in [2156].	0.08		0.55	1.14	0.59
2156				Cut	2	Stakehole cut.	0.08		0.55	1.14	0.59
2157				Timber	2	Stake in [2158].	0.08		0.6	1.16	0.56
2158				Cut	2	Stakehole cut.	0.08		0.6	1.16	0.56
2159				Fill	8	Firm silty-clay fill of robber cut [2167].	2.3	1.2	0.1	1.98	
2160				Fill	2	Fill of posthole [2161].	0.92	0.84	0.37	0.9	0.84
2161				Cut	2	sub-square posthole.	0.92	0.84	0.37	0.9	0.53
2162		156		Fill	2	Dark green-grey sandy-silt fill of posthole [2163].	0.62	0.52	0.26	0.97	
2163		156		Cut	2	semi-circular posthole cut. Filled with [2162].	0.62	0.52	0.26	0.97	0.71
2164				Fill	2	Fill of posthole [2165]. Fill suggests degraded timber.	0.1	0.16	0.15	1.03	
2165				Cut	2	Roman posthole.	0.1	0.16	0.15	1.04	0.89
2166		150		Fill	8	Demolition/backfill of robber cut.	3.05	1.32	0.39	1.94	1.66
2167			2167	Cut	8	Robber cut filled with demo rubble [2159] and [2166].	3	1.1	0.36	1.94	1.55
2168		160, 156	2168	Masonry	7	Tudor red brick wall.	4.46	0.5	0.64	2.22	1.93
2169			2169	Masonry	7	Tudor red brick wall.	0.16	1.34	0.27	1.73	1.63

2170		165, 161, 164	2170	Masonry	7	Unfrogged Tudor red brick wall.	3	0.21	0.87	1.9	1.34
2171		161	2171	Masonry	9	Truncated internal red brick wall.	1.3	0.19	0.32	2.1	1.7
2172		161	2172	Masonry	8	N-S red brick wall forming a room. Thought to be Tudor?	1.24	0.36		2.1	
2173		153		Fill	2	Mid to dark brown silty-clay.	0.9	1	0.34	1.08	1.06
2174		153		Cut	2	Large ?Roman posthole.	0.9	1	0.34	1.08	0.74
2175		153		Layer	2	Grey/green sandy-silty-clay: interface layer.	3.6	1.32	0.14	1.04	0.97
2176		155, 153, 154, 156		Layer	2	Roman dump/consolidation layer.	5	5	0.35	0.97	0.51
2177				Layer	2	Green-brown-grey clay-silt interface layer- possibly upper part of [2176].	2.78	1.8	0.08	0.9	0.79
2178				Fill		Rubble backfill of well [2179].	0.52	0.52	0.05	0.91	
2179				Masonry	10	Frogged red/yellow/purple brick well or soakaway.	0.62	0.6	0.5	0.91	
2180				Cut	10	Construction cut for well [2179]. NFE	0.62	0.6	0.5	0.91	
2181		153, 156, 155		Layer	2	Layer above peat-consolidation/habitation surface. Same as [378]?	5	4.8	0.23	0.67	0.61
2182				Masonry	2	Packing material in pit [2184]- amphorae and CBM.	0.5	0.6	0.1	0.71	0.56
2183				Fill	2	Clay lining to pit [2184].	1.16	0.88	0.1	0.64	0.53
2184				Cut	2	Large, shallow Roman pit cut. Clay lining [2183] suggests waterproofing.	1.43	1.16	0.21	0.64	0.43
2185		155		Fill	2	Fill consisting of lenses of cemented gravel and loose clay.	1.7	1.1	0.67	0.64	

2186		155		Cut	2	Semi-circular large Roman pit cut that truncates peat horizon [2187].	1.7	1.1	0.67	0.64	-0.03
2187		153, 154, 156, 155		Layer	2	Natural peat horizon, suggested to have formed as a result of repeated flooding of the area. Contains Roman cultural material washed into the upper reaches.	5	4.8	0.59	0.59	0.24
2188		154		Layer	2	Seen in section only: NFE. Mid grey-brown sandy-silt.	1.85		0.36	1.31	0.88
2189		154		Layer	2	Clayey-sand layer. Potential Roman occupation surface. Seen in section only so NFE.	1.71		0.2	0.94	
2190		154		Layer	2	Roman dump/made ground horizon that seals peat [2187] and is overlain by potential occupation surface [2189]. Seen in S154 only so NFE.	1.03		0.27	0.79	
2191			2191	Masonry	10	Post-med red N-S stock-brick wall.	3.7	0.72	0.34	1.92	1.53
2192			2192	Cut	10	Construction cut for N-S wall [2191].	3.7	0.72	0.34	1.93	1.53
2193			2193	Masonry	9	Tile cladding used to cover the north face of wall [272]. Heavily disturbed but the plaster bond survives. Truncated by well [591].	0.34	0.2	0.02	2.1	1.9
2194			2194	Masonry	8	Remnant of tile cladding on [2168]. 15mm thick.	0.21	0.15	0	1.9	
2195				Fill		Backfill of construction cut [2231] for well [591]. NFE	0.16	0.14		2.11	

2196				Masonry		Plaster bond placed on internal wall faces within [590]. Covers N-face of [2169] and W-face of [2168].	5.23	0.39	0.02	2.13	
2197				Masonry		Plaster wash over Southern internal face of [2168]. Not levelled.	0.85	0.02	0.4		
2198		156		Layer	1	Grey-blue alluvium beneath peat [2187]. Depth is at least 0.39m.	1.54	1.2	0.39	0.04	-0.01
2199		156		Layer	1	Yellow-orange alluvium beneath blue-grey alluvium [2198]. NFE	1.44	0.66	0.27	-0.1	
2200			2200	Masonry	9	Late post-med wall made from ?red bricks.	1.7	0.58	0.2	1.92	1.84
2201			2201	Cut	9	Construction cut for wall [2200].	1.7	0.58	0.2	1.92	1.44
2202			2202	Layer	8	Post-med demolition material spread.	0.56	0.8	0.07	1.94	
2203			2203	Masonry	7	Post-med floor- possibly Tudor.	1.31	1.57	0.08	1.83	1.78
2204			2204	Masonry	9	Rebuilt section of wall [2170].	0.71	0.21	0.19	2	1.97
2205			2205	Masonry	7	Wall foundation composed of a mixture of worked and unworked stone and red brick fragments. Thought to be Tudor that reuses late-medieval materials.	0.58	0.22	0.51	1.94	
2206				Void		Void					
2207				Void		Void					
2208				Void		Void					
2209				Fill		Recorded as fill but cut has been voided- is this a layer?	0.63	0.47	0.07	1.93	1.82
2210				Void		Void					

2211			2211	Layer	8	Grey-brown sandy-silt. Demolition horizon.	1.6	0.66	0.1	1.61	
2212		162	2212	Masonry	10	Red brick Tudor wall.	0.68	0.57	0.43	1.73	1.59
2213		157		Masonry	8	Red brick N-S wall.	0.58	0.12	0.47	1.91	
2214		157		Void		Void					
2215		157		Layer		Roman layer seen across site composed of firm dark-grey sandy silt.	3.58	2.74	0.5	1.6	1.47
2216		157		Void		Void					
2217				Void		Void					
2218				Void		Void					
2219		161, 157	2219	Layer	3	Roman dark grey-brown sandy- silt layer.	3.58	2.74	0.5	1.6	1.47
2220		157	2220	Layer	8	Firm dark grey-brown levelling deposit. Not sure about phasing.	3.58	2.4	0.08	1.65	1.51
2221		157	2221	Layer	8	Firm yellow-brown clay levelling layer.	3.44	2.76	0.04	1.72	1.62
2222				Fill		Firm dark-grey silty-clay around brick floor [2203].	0.68	0.66	0.2	1.77	
2223		162	2223	Cut	7	Construction cut for Tudor vaulted arch foundations [2086] and [2212]. Made into [2041].	4.04	2.18	1	1.86	1.27
2224				Fill		Silty-clay backfill of Tudor foundation above [2212].	1.41	0.76	0.22	1.72	
2225		157	2225	Layer	8	Sandy-gravel levelling layer with stakeholes made through it. Phasing uncertain.	3.44	2.76	0.11	1.71	1.6
2226		161	2226	Fill	7	Firm silty-sand levelling layer. Phasing uncertain.	1.77	0.73	0.27	1.74	1.71
2227			2227	Cut	8	Cut for wall [2194] below floor	0.24	0.11	0.02	1.69	1.67

						layer [593]					
2228				Fill		Mortar fill of cut [2227]..	0.24	0.11	0.09	1.69	
2229			2229	Cut	8	Rectangular post-med pit cut made into gravel [2225].	0.72	0.54	0.07	1.69	1.62
2230				Fill		Fill of [2229]. Post-med.	0.72	0.54	0.07	1.69	
2231		157	2231	Cut	10	Construction cut for well [591]. Abuts [2172] and [2213]. NFE	0.9	1.14	1	1.76	
2232				Fill	8	Fill of stakehole [2233].	0.08	0.08	0.02	1.68	
2233			2233	Cut	8	Shallow stakehole.	0.08	0.08	0.02	1.68	1.66
2234				Fill	8	Fill of stakehole [2235].	0.06	0.06	0.03	1.68	
2235			2235	Cut	8	Stakehole cut into gravel floor [2225].	0.06	0.06	0.03	1.68	1.65
2236			2236	Layer	8	Firm light grey clay levelling layer.	0.3	1.05	0.04	1.74	1.68
2237			2237	Layer	8	Light grey clay levelling layer for floor [593].	0.32	0.3	0.02	1.68	
2238			2238	Layer	8	Sandy-deposit with CBM rubble, suggested a make-up layer for floor [593].	0.84	0.34	0.05	1.66	
2239			2239	Layer	8	Compact yellow-brown sandy-mortar used for levelling.	0.56	0.46	0.03	1.66	
2240				Void		Void					
2241			2241	Cut	10	Cut for modern pillar.	2.25	2.2	1	1.93	
2242				Fill	10	Modern fill of [2241]..	2.2	2.25	0.66	1.93	1.88
2243				Fill		Secondary backfill of [2063] for wall [2046]- loose brick rubble.	2.4	1.98	0.25	1.75	
2244		166		Fill	7	Loose sandy-mortar. Primary fill of cut [2063] for wall [2046].	2.4	0.9	0.2	1.55	
2245			2245	Cut	8	Cut that truncates levelling layer [2221].	0.28	0.11	0.05	1.62	1.57

2246				Fill	8	Charcoal fill of [2245].	0.28	0.11	0.05	1.62	
2247			2247	Layer	8	Dump deposit betwixt [2221] and [2225].	0.33	0.23	0.03	1.71	1.68
2248				Fill	7	Rubble fill of [2249]. Unsure of phasing	0.4	0.4	0.11	1.79	
2249			2249	Cut	7	Sub-circular, shallow posthole.	0.4	0.4	0.11	1.79	1.59
2250		150	2250	Masonry		Red brick wall foundation - associated with Tudor palace.	3.22	0.34	0.06	1.81	1.76
2251			2251	Fill	7	Compact brown rubble fill of [2252]- construction cut for wall [627].	0.78	0.66	0.18	1.51	1.45
2252			2252	Cut	7	Construction cut for wall [627]. NFE	2.48	1.8	1.2	1.65	0.42
2253		163, 164	2253	Masonry	8	Post-med E-W red brick wall.	1.79	0.37	0.11	1.83	1.81
2254		163	2254	Masonry	8	E-W red brick wall built upon earlier walls.	3.12	0.38	0.21	2.13	2.05
2255		170	2255	Masonry		Tudor vaulted arch foundation. NFE	1.73	0.68	0.25		
2256		163	2256	Masonry	9	Mixed rebuilding of walls with brick, tile, mortar and plaster.	0.22	0.96	0.21	2.11	
2257		160	2257	Masonry	7	Orange-red tile, part of tile cladding.	0.15	0.9	0.1	1.66	
2258		158	2258	Layer	7	Light yellow-brown silty-sand mortar surface.	1.82	0.81	0.07	1.85	1.83
2259				Fill		Rubble fill within [2260].	1.79	0.45	0.25	1.78	1.74
2260			2260	Cut		Late post-med rubble filled cut.	1.78	0.45	0.31	1.78	1.47
2261		183, 158, 167	2261	Layer	3	Dark earth deposit. Post-Roman abandonment, pre-medieval settlement. Same as [2041] [2369] [2043] [2145] [2219] [2215] [634] [613] [614] [618]				2.18	2.04

						[620] [624].					
2262				Void		Compacted brickearth floor/occupation surface inside room.	3	2.26	0.26	1.62	1.52
2263		161, 164	2263	Layer	8	Chalk block rubble levelling deposit.	1.6	0.36	0.36	1.88	1.8
2264				Void		Void					
2265		161	. 2265	Layer		Firm red-brown silty-clay dump deposit.	2.18	2.96	0.21	1.82	1.73
2266				Fill	10	Fill of modern cut [2267]. NFE	1.49	0.96	1.27	1.89	
2267			2267	Cut	10	Large modern pit cut. NFE	0.96	1.49	1.27	1.89	0.62
2268				Fill		Backfill of construction cut [2269] for Tudor vaulted arch foundation [2255].	1.74	1.8	0.2	1.78	1.77
2269		170	2269	Cut	7	Construction cut for Tudor arch [2255]. NFE	1.73	1.8		1.78	1.74
2270		158	2270	Cut	7	Construction cut for Tudor palace wall [607].	0.24	0.51	0.09	1.84	1.75
2271				Fill	6	Light grey-brown sandy-silt posthole or pit fill. Truncated so NFE.	0.56	0.4	0.34	1.78	
2272			2272	Cut	6	Small pit/large posthole.	0.56	0.4	0.34	1.78	1.36
2273				Fill	6	Loose dark grey-brown silty sand fill of [2274].	0.54	0.48	0.35	1.6	1.45
2274			2274	Cut	6	Circular pit cut that truncates Roman horizons and is under palace horizons.	0.54	0.48	0.35	1.6	1.25

2275				Fill	2	Dark grey-brown silty-clay fill of [2276].	0.62	0.82	1.1	1.22	
2276			2276	Cut	2	Roman pit cut.	1.26	0.62	0.82	1.22	0.4
2277		170	2277	Masonry	7	Tudor red brick floor foundation.	1.6	0.38	0.23	1.76	1.61
2278			2278	Masonry	9	Rebuild of wall [2154] using orange-red unfrogged bricks (reused Tudor?).	0.43	0.24	0.15	1.97	
2279				Fill	2	Fill of Roman gully.	1.14	0.46	0.24	1.24	1.08
2280			2280	Cut	2	Flat based shallow Roman gully aligned N-S.	1.14	0.46	0.24	1.24	1
2281		158	2281	Cut	7	Construction cut for wall [603].	1.58	1.21	0.23	2.01	1.69
2282			2282	Layer	7	Layer of mortar against outside of wall [2168].	1.45	0.15	0.3	2	1.9
2283				Fill	4	Silty-clay fill of large pit [2284].	1.45	1.45	0.51	1.78	
2284			2284	Cut	4	Large ?medieval pit cut.	1.45	1.45	0.51	1.78	1.27
2285				Fill	10	Dark grey brown sandy silt, fill of pit [2286].	0.88	0.42	0.34	1.39	
2286			2286	Cut	10	Large post-med pit cut. Possibly modern.	0.88	0.42	0.34	1.58	1.24
2287				Fill	5	Dark green-brown sandy-clay fill of Tudor/med pit [2288].	0.6	0.6	0.32	1.43	
2288			2288	Cut	5	Square, vertically sided med or Tudor pit cut.	0.6	0.6	0.32	1.43	1.11
2289			2289	Masonry	7	Part of post-med rebuild in room.	0.3	0.29	0.23	1.92	
2290				Fill	6	Greenish-grey silty-sand, fill of [2291].	0.4	0.38	0.5	1.47	
2291			2291	Cut	6	Suggested med or Tudor cut associated with [2255] and [2277].	0.4	0.38	0.47	1.47	1

2292			2292	Masonry	9	Rebuild of wall [2170] where truncated by [2254].	0.76	0.22	0.15	1.97	
2293			2293	Cut	10	Construction cut for Victorian stoneware pipe.	2.3	0.37	0.35	1.77	1.35
2294				Fill	10	Dark grey-brown sandy-silt, backfill of [2293].	2.3	0.37	0.35	1.72	1.35
2295				Fill		Top fill of pit [2301]. Unsure of phase.	1.92	1.58	0.51	1.59	1.53
2296				Fill		Clay lining of pit [2301].	1.52	0.92	0.02	1.58	1.08
2297				Fill		Mid fill of [2301].	1.92	1.58	0.57	1.56	1.06
2298				Fill		Mid brown organic/timber fill of [2301].	1.7	1.58	0.02	0.99	
2299				Fill		Green-brown sandy-clay-silt, fill of pit [2301].	1.92	1.47	0.08	0.97	
2300				Fill	4	Clay lining of [2301].	1.75	1.42	0.05	0.91	0.86
2301			2301	Cut	4	Sub-rectangular, vertically sided large pit cut.	1.92	1.58	0.73	1.59	0.86
2302			2302	Masonry	7	Red brick foundation for [2168], built in/on [2393]. Tudor wall?	0.77	0.33	0.06	1.58	1.49
2303			2303	Masonry	7	Red brick Tudor wall?	0.35	0.48	0.06	1.46	
2304			2304	Masonry	7	Red brick wall base- Tudor?	1	0.35	0.12	1.49	1.47
2305				Fill		Moderately compacted sandy-silt backfill of construction cut [2393].	0.95	0.1	0.5	1.91	1.87
2306			2306	Masonry		Corner of structure- walls extending east and south. Masonry- wall.	0.26	1.4	0.65	1.88	1.28
2307			2307	Layer	8	Bedding/construction layer for wall [2172].	1.24	0.42	0.02	1.88	1.86

2308			2308	Layer	9	Red brick rubble construction layer for [2278].	0.34	0.32	0.09	1.85	
2309				Void							
2310				Fill		Fill of posthole [2311], brown-grey sandy-silt	0.38	0.16	0.08	1.32	
2311		166	2311	Cut		Circular posthole cut filled with [2310].	0.38	0.16	0.08	1.32	1.23
2312		159	2312	Layer	2	Roman 'green' layer?	6.52	6.32	0.29	1.24	0.97
2313		159	2313	Layer	2	Blue-green Roman dump horizon, sealed by [2312].	4.38	1.52	0.27	1.04	0.89
2314			2314	Cut	9	Rectangular shaped, flat-based construction cut for wall [2171].	1.17	0.22	0.29	1.79	1.79
2315			2315	Cut	7	Construction cut for post-palace wall [2169].	1.32	0.13	0.27	1.46	1.46
2316			2316	Cut	8	Rectangular-shaped, flat based construction cut for wall [2254].	1.3	0.3	0.32	2.05	1.73
2317			2317	Cut	8	Construction cut for walls [2213] [2253].	1.86	0.9	0.4	1.88	1.48
2318				Void		Void					
2319			2319	Cut	7	Construction cut for wall [2306].	1.47	0.35	0.55	1.32	1.26
2320			2320	Cut	7	Construction cut for wall [2289].	0.1	0.1	0.21	1.69	
2321		167	2321	Layer	7	Part of foundation for vaulted arch of Tudor palace [606].	1.32	0.72	1.38	1.85	1.75
2322		161	2322	Masonry	7	Truncated red brick floor surface.	1.2	0.45	0.65	1.63	1.57
2323			2323	Fill	7	Small charcoal dump up against floor [2322].	0.76	0.44	0.04	1.68	1.68
2324			2324	Layer	8	Dark grey-brown clay-silt levelling layer.	1.24	0.82	0.03	1.55	

2325	159	2325	Layer	2	Clay layer overlying peat. Two timbers removed- natural or anthropogenic?	4.4	1.52	0.17	0.8	0.62
2326	159		Fill	2	Compact green-blue silty-sand fill of [2327]. Same as [2313].	0.98	0.5	0.1	0.8	
2327	159	2327	Cut	2	Linear ditch or beam slot. NFE.	0.98	0.5	0.1	0.8	0.7
2328	166		Fill	3	Loose green-black silty-sand. Fill of pit cut.	1.95	0.98	0.2	1.03	1
2329	166	2329	Cut	3	Possible construction cut for Roman building or a separate cut entirely.	0.98	0.2	0.2	1.03	0.83
2330	162	2330	Layer	3	Brown-green sandy-clay dump layer.	3.46	0.9	0.29	1.31	1.23
2331	162	2331	Layer	2	Yellow-grey mortar floor or occupation surface.	1.1	1.4	0.21	1.02	0.83
2332			?							
2333	166		Fill	3	Green-grey sandy-clay fill of pit [2352]. Related to Roman building [2343].	1.25	0.8	0.03	0.82	0.63
2334		2334	Cut	2	Group number given to stakeholes [2334], [2336], [2338], [2347], [2349]. Only visible after removal of peat layer [2342].				0.33	
2335			Timber	2	Generic number given to fills of stakeholes in group [2334].				0.33	
2336		2336	Cut	2	Stakehole- part of group [2334].	0.02			0.33	0.31
2337			Timber	2	Fill of stakehole [2336].	0.02			0.33	
2338		2338	Cut	2	Stakehole cut.	0.23			0.31	
2339			Timber	2	Timber fill of stakehole [2338].	0.23			0.31	
2340	183, 167	2340	Layer	2	Firm green-brown sandy-silt.	2.46	0.78	0.83	1.4	1.21

2341		183		Fill	2	Firm green-brown silty-sand fill of [2666].	1.95	0.57	0.52	1.17	0.91
2342		171, 159	2342	Layer	2	Peat layer. Features both sealed and cut into this layer.	7.5	6.54	0.5	0.73	0.52
2343		166	2343	Fill	3	Fill of Roman pit [2352].	1.25	0.8	0.12	0.94	0.84
2344			2344	Cut	2	Stakehole cut. Filled with [3265].	0.06	0.1	0.05	0.54	0.49
2345			2345	Cut	2	Stakehole cut. Filled with [3266].	0.1	0.08	0.05	0.6	0.55
2346			2346	Cut	7	Cut for wall Tudor wall [597].	1.7	0.4	0.24	1.83	1.8
2347			2347	Cut	2	Cut of stakehole. Filled with [2348]. NFE	0.02			0.31	
2348				Timber	2	Timber within stakehole [2347]. Not bottomed.	0.02			0.31	
2349			2349	Cut	2	Group number given to stakeholes [2334], [2336], [2338], [2347], [2349].	0.02			0.3	
2350				Timber	2	Fill of stakehole [2349].	0.02			0.3	
2351		166	2351	Layer	3	Mid greyish-black silty-sand.	2.52	0.68	0.6	1.38	1.27
2352		166	2352	Cut	3	Roman pit-cut Filled with [2371].	1.3	0.65	0.26	0.74	0.1
2353			2353	Layer	7	Rubble layer under floor [2045].	3.6	1.4	0.2	1.73	1.7
2354			2354	Masonry	7	Remains of a wall or floor. Top of wall?	4.4	1.4	0.13	1.5	1.48
2355			2355	Cut	7	Construction cut for brick wall [2354], with chalk [2430] underneath.	4.4	1.2	0.4	1.7	1.3
2356		162	2356	Layer	2	Dark brown dump- small localised area of Roman dumping.	1.6	0.54	0.13	0.86	0.8
2357		162	2357	Layer	2	Roman dumped mortar layer.	2.68	1.62	0.03	0.8	0.77
2358				Fill	2	Mid to loose dark brown silty-clay.	1.2	0.6	0.32	1.14	1.03
2359			2359	Cut	2	Roman pit cut.	1.2	0.6	0.32	1.14	0.82

2360		166	2360	Layer	2	Mid grey-green silty-sand. Roman dump?	0.5	0.9	0.16	1.06	1.03
2361		166	2361	Layer	2	Soft green-grey silty-sand. Pre-Roman dump [2360].	2.3	0.9	0.2	0.87	0.7
2362		166	2362	Layer	2	Pre-Roman dump horizon?	2.3	0.9	0.06	0.67	0.63
2363		161	2363	Layer	7	Brickearth/clay levelling layer for Tudor room.	3	2.26	0.26	1.62	1.52
2364		168, 166	2364	Layer	2	Peat deposit.	2.3	0.9	0.2	0.59	0.57
2365		162	2365	Layer	2	Dark brown Roman dump layer.	3.46	1.4	0.19	0.77	0.5
2366				Fill	2	Soft mid brown sandy-clay pit fill.	1.7	0.8	0.33	0.79	0.12
2367			2367	Cut	2	Semi-circular shaped Roman pit cut.	1.7	0.8	0.33	1.12	0.79
2368			2368	Masonry		Northern wall in a room- part of palace?	0.7	0.18	0.16	1.53	1.5
2369		181, 184	2369	Layer	3	Dark brown clayey silt abandonment layer- post Roman abandonment, pre-medieval occupation.	20.16	21.3	0.5	1.89	1.35
2370		167		Layer		Peat interface layer. Only recorded in section.	0.41		0.08	0.78	0.76
2371		166		Fill	3	Primary fill of pit cut [2352].	1.3	0.65	0.45	0.48	0.48
2372				Void							
2373				Void							
2374		162	2374	Layer	2	Green-yellow sand layer- same as [377].	3.46	1.4	0.13	0.6	0.48
2375		162	2375	Layer	2	Soft purple-brown peat.	3.46	1.4	0.16	0.47	0.45
2376		170	2376	Layer	2	Green-brown sandy-clay Roman layer.	7	4.2	1	1.41	1.11
2377				Fill	10	Mid-brown fill of pit [2378]- rubble-dense?	0.82	0.62	0.24	1.68	1.67

2378			2378	Cut	10	Irregular shaped PM pit cut.	0.82	0.62	0.24	1.68	1.44
2379		160	2379	Layer	7	Foundation for wall [2168].	3	2.7	0.17	1.72	1.38
2380			2380	Cut	7	L-Shaped construction cut for wall [2379].	3	2.72	0.15	1.6	1.27
2381				Void		Void					
2382			2382	Layer	8	Yellow-brown clay-silt dumped deposit.	1.33	1.22	0.2	2.04	1.81
2383				Fill	2	Backfill of pit cut [2384]- firm grey-brown silty-clay.	2.3	0.32	0.44	1.08	
2384			2384	Cut	2	Rectangular, vertically sided pit cut.	2.3	0.32	0.44	1.08	0.64
2385				Fill		Fill of pit cut [2386].	1.34	1.14	0.2	1.49	1.44
2386			2386	Cut		Sub-circular pit cut. Filled with [2385].	1.34	1.14	0.2	1.49	1.28
2387				Fill	2	Fairly firm grey-brown silty fill of posthole	0.24	0.24	0.09	1.09	
2388			2390	Cut	2	Roman posthole?	0.24	0.24	0.09	1.09	1
2389				Fill	2	Fairly firm grey-brown silty fill of posthole.	0.12	0.12	0.05	1.03	
2390			2390	Cut	2	Stakehole.	0.12	0.12	0.05	1.03	0.98
2391				Fill	2	Fairly firm grey-brown silty fill of posthole.	0.11	0.11	0.05	1	
2392			2390	Cut	2	Stakehole.	0.11	0.11	0.05	1	0.95
2393			2393	Cut	7	L-shaped construction cut for wall [2168].	3.95	2.78	0.6	1.64	1.38
2394			2394	Layer	8	Firm blue-grey sandy-silt.	0.38	0.41	0.35	1.73	1.38
2395				Void		Void					
2396				Fill	6	Compact green-grey sandy-silty-clay pit fill.	1.18	1.25	0.33	1.78	1.54
2397			2397	Cut	6	Oval shaped pit cut.	1.18	1.25	0.33	1.53	1.16
2398		168	2398	Layer	1	Interface between peat and	3.6	3.5	0.56	0.24	-0.03

						gravels below.					
2399				Fill	2	Fill of stakehole [2400]. Fairly firm grey-brown silty fill of stakehole.	0.12	0.12	0.25	1.06	
2400			2390	Cut	2	Stakehole.	0.12	0.12	0.25	1.06	0.81
2401				Void		Void					
2402				Void		Void					
2403				Void		Void					
2404				Void		Void					
2405				Void		Void					
2406				Void		Void					
2407				Void		Void					
2408				Void		Void					
2409				Fill	9	Mid brown grey sandy-silt: fill of brick soakaway.	1.2	0.42	0.21	2	
2410				Masonry	9	Post-med brick drain.	1.7	0.6	0.21	2.09	1.93
2411				Cut	9	Construction cut for brick drain [2410].	1.7	0.6	0.21	2.09	
2412			2412	Cut	7	Construction cut for [2321].	1.32	1.14	1.34	1.75	0.41
2413			2413	Layer	2	Firm whitish mortar- Roman.	0.26	0.78	0.1	1.13	1.1
2414				Fill	2	Firm grey-black silty-clay. Backfill of [2415].	1	0.38	0.13	0.98	
2415			2415	Cut	2	Roman pit feature. Similar to [2367], [2359].	1	0.38	0.13	0.98	0.85
2416		169		Fill	2	Fill of Roman ditch [2417].	1.5	1.28	0.44	1.03	
2417		169	2417	Cut	2	Roman ditch cut.	1.5	1.28	0.44	1.08	0.65
2418		169		Fill	2	Fill of Roman ditch cut [2419].	2.65	1.7	0.67	1.12	1.09
2419		169, 159	2419	Cut	2	Linear ditch cut. Roman.	1.55	1.76	0.67	1.04	0.37
2420				Fill	2	Fill of Roman pit cut. Grey-brown sandy-silt.	1.26	1.2	0.34	1.25	1.22

2421			2421	Cut	2	Irregular shaped pit cut.	1.26	1.2	0.34	1.25	0.91
2422			2422	Layer	7	Bedding layer for brick wall [2354] and chalk foundation [2430].	4.4	1.2	0.05	1.35	1.33
2423			2423	Layer	8	Firm grey-brown sandy-silt dump layer.	2.06	3.9	0.18	2.07	1.93
2424				Fill	2	Grey-brown clay-sand. Fill of beam slot.	4.4	0.62	0.32	1.08	0.92
2425			2425	Cut	2	Linear beam slot cut.	4.4	0.62	0.49	1.07	0.58
2426				Fill	4	Fill of small linear feature.	1.16	0.2	0.06	1.5	
2427			2427	Cut	4	Linear cut, similar to beam slot, gully or drain.	1.16	0.2	0.06	1.5	1.16
2428				Fill	4	Ditch fill.	1.35	0.7	0.2	1.5	
2429			2429	Cut	4	Ditch or gully.	1.35	0.7	0.2	1.5	0.91
2430			2430	Masonry	7	Loosely compacted chalk surface.	4.4	1.14		1.35	1.31
2431				Fill	2	Soft dark grey brown fill of posthole [2432].	0.16	0.16	0.1	0.73	0.71
2432			2432	Cut	2	Square posthole.	0.16	0.1	0.1	0.73	0.63
2433		170		Fill	2	Fill of linear [2487]. Only seen in section so NFE.	0.87		0.3	0.7	
2434		170		Layer	2	Roman layer, only visible in section: NFE.	1.1		0.52	0.82	
2435		170		Layer	2	Peat deposit seen in S170. NFE	1.22		0.4	0.64	
2436		169		Layer	2	Sandy layer seen in section only.	0.7		0.41	1.03	
2437		169		Layer	2	Grey sand layer.	0.64		0.12	0.62	
2438		170, 169	2438	Layer	2	Peat layer seen in section. NFE	1.96		0.21	0.46	
2439				Fill	2	Fill of posthole [2440].	0.12	0.12	0.08	0.72	0.7
2440			2432	Cut	2	Roman posthole.	0.12	0.12	0.08	0.74	0.6
2441				Fill	2	Silty-sand fill of posthole [2442].	0.09	0.09	0.08	0.8	0.8

2442			2432	Cut	2	Posthole cut.	0.09	0.09	0.08	0.81	0.74
2443				Fill	2	Fill of posthole [2444].	0.1	0.1	0.09	0.89	0.88
2444			2432	Cut	2	Posthole.	0.1	0.1	0.09	0.87	0.85
2445				Fill		Fill of posthole [2446].	0.15	0.15	0.12	0.89	0.77
2446			2432	Cut		Posthole.	0.15	0.15	0.12	0.85	0.72
2447		170		Layer	2	Grey clay layer. Only seen in section.	1.22		0.12	0.23	
2448		170		Layer	1	Natural gravel. Seen in section S170.	1.2		0.1	1	
2449			2449	Cut		Construction cut for wall [2170].	3	0.21	0.84	1.45	1.43
2450			2450	Cut	7	Construction cut for wall [2205].	0.56	0.28	0.2	1.44	1.24
2451			2451	Cut	7	Construction cut for wall [592].	1.14	0.21	0.12	1.48	1.48
2452			2452	Cut	8	Cut for wall Tudor wall [2172].	1.24	0.3	0.24	2.1	1.86
2453				Fill	4	Fill of [2454]- ditch fill.	1.6	0.9	0.4	1.6	
2454			2454	Cut	4		1.6	0.9	0.4	1.6	1.01
2455				Fill	4	Ditch fill.	1.7	1.2	0.4	1.53	
2456			2456	Cut	4	Ditch- same as [2429], [2454].	1.7	1.2	0.4	1.53	1.16
2457				Fill	2	Fill of posthole [2458].	0.38	0.38	0.1	0.86	
2458			2432	Cut	2	One of a group of 6 other postholes [2432], [2440], [2442], [2444], [2446], [2458].	0.38	0.38	0.14	0.82	0.68
2459		170		Fill	7	Fill of construction cut for Tudor arch.	0.34		0.48	1.02	
2460				Fill	2	Fill of linear feature [2461] as exposed in slot prior to machining. Roman?	4.84	0.7	0.37	0.45	0.44
2461			2461	Cut	2	Shallow, linear ditch/gully. Thought to be Roman. Fill and profile only seen in slot.	4.84	0.7	0.37	0.45	0.07
2462				Fill	2	Fill of posthole [2463]	0.2	0.2	0.12	0.53	

2463			2463	Cut	2	Round posthole cut. Uncertain as to whether it was seen driven through peat or the overlying clay layer- most likely the latter.	0.2	0.2	0.12		
2464			2464	Cut	10	Construction cut for wall [2368]	0.7	0.2	0.16	1.37	1.34
2465			2465	Layer	2	Dark green later Roman dump level seen across the site. Machine excavated.	9.6	5	0.4	1.35	0.95
2466			2466	Cut	8	Construction cut for wall rebuild [2254].	1.62	0.32	0.25	1.82	1.79
2467				Fill		Fill of cut [2468]. Finds suggested Late med. NFE	0.86	1.24	0.76	1.1	
2468			2468	Cut		Late med pit cut. NFE.	0.86	1.24	0.76	1.1	0.34
2469				Fill	4	Fill of pit cut [2470]. Lots of horn/antler found in fill.	0.88	0.77	0.32	1.12	
2470			2470	Cut	4	Semi-circular pit cut. Fill contains lots of horn/antler waste.	0.77	0.88	0.32	1.16	0.84
2471		188, 175	2471	Layer	2	Roman dump layer.	2.1	7.55	0.5	1.11	0.99
2472				Fill	8	Backfill of pit cut- uncertain of date.	1.2	1.44	0.38	1.02	
2473			2473	Cut	8	Rectangular pit cut with flat base and steep sides. Uncertain as to date.	1.2	1.44	0.38	1.02	0.72
2474			2474	Cut	7	Cut for foundations [2047] and [2430]. Made into Roman very-dark brown layer [2043] (actually layer [2351] according to plan matrix). Same as [2063].	3.8	1.3	1.4	1.37	-0.03

						Very dark grey (black). Very similar to layer [2041]. Perhaps redeposited within cut [2269] during construction of arch and floor [2255] and [2277]. Seen in section only?		0.35	0.34	1.35	1.32
2475		170		Fill	7						
2476				Fill	2	Fill of Roman pit cut [2492].	1.7	1.04	0.28	1.18	
2477				Fill	2	Green-grey fill of pit cut [2478]. Soft green-grey clay-silt.	2.4	2.12	0.19	1.12	0.91
2478			2478	Cut	2	Roman or pre-Roman shallow ditch or linear cut.	2.4	2.12	0.19	1.12	0.91
2479				Fill	2	Upper fill of pit [2481]. Dark red-brown sandy-silt with small gravel but no finds- uncertain of phase.	0.7	0.41	0.04	1.13	1.12
2480				Fill	2	Lower fill of pit cut [2481]. Dark blue-grey clay-silt.	1	0.85	0.08	1.13	1.08
2481			2481	Cut	2	Square, vertically sided pit cut. Filled with [2479], [2480].	1	0.85	0.23	1.26	1.03
2482				Fill	2	Very dark brown sandy-silty-clay. Fill of Roman pit [2483].	1	1.48	0.23	1.27	
2483			2483	Cut	2	Shallow Roman pit cut.	1	1.48	0.23	1.27	1.04
2484				Fill	2	Lower fill of Roman pit cut [2425].	4.54	0.72	0.22	0.82	0.79
2485			2485	Cut	2	Oval shaped pit cut. Filled with [2486].	0.74	0.46	0.23	1.12	0.84
2486				Fill	2	Loose mid green-brown silty-sand. Fill of [2485].	0.74	0.46	0.22	1.11	1.01
2487			170	Cut	2	Flat based cut- suggested to be linear in plan but recorded as only being visible in section.		0.87	0.3	0.7	0.48

2488			2488	Cut	4	Circular pit cut. Filled with [2489].	1.3	0.85	0.62	1.1	0.46
2489				Fill	4	Loose dark grey-brown silty-sand. Fill of pit [2488].	0.78	0.74	0.2	1.11	1.1
2490				Fill	2	Soft dark green-brown fill of [2491].	4.2	0.8	0.39	0.95	0.56
2491			2491	Cut	2	E-W linear Roman ditch cut.	4.2	0.8	0.39	0.95	0.56
2492			2492	Cut	2	Oval shaped Roman pit cut. Filled with [2476].	1.7	1.04	0.26	1.16	0.9
2493				Fill		Void					
2494				Cut		Void					
2495				Fill	2	Fill of posthole [2496]. Firm brown-yellow silty-sand with no finds.	0.47	0.45	0.18	1.12	1.03
2496			2496	Cut	2	Circular large posthole or small pit cut.	0.47	0.45	0.18	1.12	0.94
2497				Fill	2	Light brown-yellow silty-sand. Fill of [2498].	1	0.64	0.34	1.11	
2498			2498	Cut	2	Truncated pit cut. Filled with [2497].	1	0.64	0.34	1.11	0.73
2499				Fill	2	Fill of [2500]- loose green-brown silty-sand.	0.4	0.33	0.21	1.01	
2500			2500	Cut	2	Small pit cut truncated by modern foundations.	0.4	0.33	0.21	1.01	0.8
2501				Fill	2	Firm brown-black sandy-clay. Fill of [2502]	0.8	0.76	0.35	1.15	
2502			2502	Cut	2	Shallow sub-circular pit cut	0.8	0.76	0.35	1.15	0.8
2503			2503	Layer	2	Firm brown sandy-clay layer	2.2	1.5	0.2	1.15	1.13
2504			2504	Layer	2	Firm mid yellow-green-brown sandy-silt layer.	1.57	0.9	0.2	1.12	1.11

2505		171	2505	Layer	2	Hard yellow-brown sandy-gravel layer with charcoal inclusions.	1.73	1.5	0.1	0.92	0.82
2506			2506	Fill	2	Firm mid grey-brown sandy silt. Suggested foundation deposit within beam slot [2425]. Contains whole pots and semi-articulated animal bones	1	0.2	0.06	0.66	0.6
2507				Void		Void					
2508			2508	Cut	2	Roman pit cut. Filled with [2509]. Sub-rectangular. Vertical sides. Recorded as NFE.	0.27	1.08	0.58	0.53	
2509				Fill	2	Friable, dark-brown fill of [2508].	0.27	1.08	0.58	0.53	
2510				Fill	2	Secondary fill of pit [2511].	1.65	0.4	0.12	1.09	1.03
2511			2511	Cut	2	Semi-oval shaped pit cut with flat base.	1.65	0.4	0.42	1.09	0.67
2512		172, 173	2512	Layer		Firm dark-grey silty-clay. Post-Roman abandonment?	7.2	3.2	0.21	1.27	1.13
2513				Void		Void					
2514				Void		Void					
2515				Fill	2	Stiff mid grey-green sandy-silt. Upper fill of [2516].	0.95	0.97	0.25	0.98	
2516			2516	Cut	2	Sub-circular, steep sided and flat bottomed Roman pit cut.	1.14	1.32	0.34	0.98	0.64
2517				Fill	2	Firm dark grey-brown silty-clay.	0.44	0.26	0.23	1.02	
2518			2518	Cut	2	E-W linear truncated pit or posthole. Thought to be Roman. Filled with [2517].	0.44	0.26	0.23	1.02	0.84
2519				Fill	2	Moderately firm grey-brown clay. Fill of posthole [2520].	0.2	0.2	0.26	1.01	
2520			2518	Cut	2	Roman posthole.	0.26	0.2	0.26	1.01	0.15

2521				Fill	2	Mod compacted grey-brown clay-silt. Fill of posthole [2522].	0.24	0.36	0.22	0.97	
2522		2518		Cut	2	Small pit or posthole. Filled with [2521].	0.24	0.36	0.22	0.97	0.75
2523				Layer		Machined off post-Roman, pre-med layer.	15	10	0.15	1.45	1.21
2524		2524		Layer	2	Moderately loose mid greyish-brown sandy-silt.	4.94	1.97	0.2	1.23	1.16
2525		2525		Layer		Firm green-orange -grey silty-clay. Roman made ground.	1.9	3.6	0.3	0.95	0.69
2526				Fill		Firm green-brown silty-clay. Lower fill of [2516].	1.06	1.32	0.13	0.98	0.73
2527		2527		Timber	2	Vertically driven stake/post in line with [2528], [2529].	0.26	0.26	0.27	0.61	0.34
2528		2527		Timber	2	Vertically driven stake/post. In line with [2527] and [2529].	0.33	0.33	0.22	0.63	0.6
2529		2527		Timber	2	Stake/post seen in line with [2527] and [2529]. Fence line?	0.3	0.46	0.36	0.61	0.25
2530				Fill	2	Loose grey-brown sandy-clay.	1.45	0.76	0.31	0.88	0.77
2531		2531		Cut	2	Linear cut with convex sides and flat base.	1.45	0.76	0.31	0.87	0.57
2532				Fill	2	Firm grey-brown silty-clay, fill of beam slot.	1.74	0.2	0.31	1	0.92
2533		2533		Cut	2	N-S beam slot.	1.74	0.2	0.31	1	0.69
2534		2534		Cut	7	Cut for chalk floor [2540]-thought to be post-med.	0.4	1.54	0.2	1.8	
2535				Fill	2	Soft dark purple brown peaty-clay- decayed timber in a posthole.	0.45	0.74	0.25	1.06	

2536			2536	Cut	2	Decayed timber fill suggests this might have been a posthole. Thought to be Roman.	0.45	0.74	0.25	1.07	0.82
2537			2537	Layer	2	Green roman dump layer.	5.25	1.94	0.25	1.07	0.79
2538				Fill	2	Loose light-brown-green sandy-silt. Fill of small Roman pit [2539].	1.05	1.2	0.49	0.83	0.76
2539			2539	Cut	2	Circular pit cut with concave base.	1.05	1.2	0.49	0.77	0.55
2540				Fill	7	Confusion between whether this is a fill or a layer- firm crushed/compacted chalk layer.	0.4	1.54	0.2	2	
2541				Fill	2	Firm brown-grey silty-clay Fill of [2547].	0.4	0.4	0.31	1.07	
2542				Fill	2	Loose dark green-grey silty-sand: top fill of Roman pit cut.	1.72	1.69	0.18	0.99	
2543			2543	Cut	7	Construction cut for post-med wall [632].	0.52	1.42	0.04	2.06	2
2544			2544	Cut	7	Construction cut for wall [633].	0.4	0.46	0.05	2.04	1.99
2545			2545	Cut	10	Construction cut for [635].	0.46	0.96	0.11	2.04	1.93
2546			2546	Cut	7	Construction cut for wall [630]. Likely to be contemporary with [633] and [632].	1.36	1.8	0.16	2.09	1.93
2547			2547	Cut	2	Sub-circular pit cut/posthole. Roman. Filled with [2541].	0.4	0.4	0.31	1.07	0.76
2548			2548	Cut	2	Roman pit cut.	0.86	1.1	0.18	1.87	1.72
2549				Fill	2	Dark brown grey silty-clay-roman finds in fill.	1.1	0.86	0.18	1.87	
2550				Fill	2	Fill of possible Roman cess pit.	1.9	1.6	0.32	0.93	
2551			2551	Cut	2	Cut for Roman cess pit.	1.9	1.6	0.32	0.93	0.61

2552				Fill	2	Secondary fill of Roman pit cut [2554].	2	0.9	0.9	0.89	0.89
2553				Fill	2	Primary fill of [2554]- Roman pit cut.	2	0.9	0.12	0.8	0.71
2554			2554	Cut	2	Irregular shaped, flat base Roman pit cut.	2	0.9	0.21	0.89	0.68
2555				Fill	2	Charcoal fill within cut [2570].	1.44	1	0.05	0.92	
2556				Fill	2	Lower fill of truncated Roman pit [2570].	1.69	1.21	0.1	0.94	
2557			2557	Cut	2	Square cut for posthole. No date recorded.	0.26	0.26	0.1	0.99	
2558				Fill	2	Fill of posthole [2557].	0.26	0.26	0.1	0.99	0.89
2559				Fill	2	Fill of Roman pit [2560]- loose dark grey-brown sandy-silt.	0.84	0.64	0.22	1.09	
2560			2560	Cut	2	Semi-circular, flat based pit cut. Filled with [2559].	0.84	0.63	0.22	1.08	0.86
2561				Fill	2	Fill of Roman rubbish pit [2567].	1.18	0.64	0.25	0.89	0.78
2562		175	2562	Layer	2	Loose dark-brown silty-gravel. Unexcavated in this area. Same as [2644].	5	2.1	0.3	0.86	0.84
2563				Fill		Fill of Roman pit cut [2564]. Firm whitish-brown gravel.	3.4	0.8	0.28	0.98	0.94
2564			2572	Cut		Rectangular shaped pit cut with a flat base. Filled with [2563].	0.8	3.4	0.28	0.98	0.7
2565				Fill	2	Floor surface (layer) or pit fill. Demolition material suggests latter. Compact mid grey-brown silty-clay.	3.48	1.04	0.31	1.02	
2566				Fill		Lower fill of cut [2570]. Same as [2579].	1.69	1.12	0.06	0.82	
2567			2567	Cut	2	Sub-circular shaped Roman	1.18	0.64	0.25	0.64	

						rubbish pit.					
2568		172, 173	2568	Layer	2	Compact dark green-brown Roman dump horizon.	7.18	3.46	0.34	0.94	0.8
2569			2569	Cut		Rectangular shaped pit cut with concave base. Filled with [2580].	1.05	2.6	0.4	0.56	0.36
2570			2570	Cut	2	Roman rectangular shaped pit cut. Filled with [2542], [2556], [2555].	1.72	1.69	0.39	0.99	0.63
2571				Void							
2572			2572	Cut	2	Cut for floor surface [2565].	3.48	1.04	0.31	0.73	0.59
2573				Fill	2	Compacted grey-green-brown silty-clay and silty-gravels.	2.56	1.3	0.2	1	
2574			2574	Cut	2	Large sub-oval Roman pit cut.	2.56	1.3	0.23	1.03	0.8
2575				Fill	2	Primary fill of pit [2511].	1.65	0.4	0.42	0.82	
2576				Fill		Top fill of Roman rubbish pit [2569].	1.05	1.4	0.05	1.04	1
2577				Fill		Fill of Roman pit cut [2578].	1.5	1.2	0.15	0.87	
2578			2578	Cut		Circular pit cut. Roman.	1.5	1.2	0.15	0.87	0.66
2579				Fill		Primary fill of Roman pit cut [2570].	1.69	1.21	0.06	0.82	
2580				Fill	2	Moderately loose dark-brown green fill of Roman rubbish pit [2569].	1.05	2.6	0.55	0.85	0.8
2581			2581	Cut	2	Cut of posthole related to timber beam slot [2583].	0.4	0.35	0.12	0.71	0.6
2582				Fill	2	Loose mid-brown silty-sand. Fill of posthole [2581].	0.4	0.35	0.12	0.71	
2583			2583	Cut	2	Linear cut- possibly beam slot relating to Roman structure.	1	0.24	0.18	0.96	0.73

2584				Fill	2	Loose grey-brown sandy-silt; fill of beam slot [2583].	1	0.24	0.18	0.95	0.94
2585			2585	Layer	2	Firm to compacted mid grey yellow silty-sand. Dumped gravel layer.	2.68	1.35	0.27	1	0.66
2586		174		Fill	2	Soft yellow-brown sand and charcoal fill of [2587].	1.34	2.04	0.08	0.92	0.86
2587		174	2587	Cut	2	Sub-circular Roman pit cut. Filled with [2600] and [2586].	1.34	1.94	0.25	0.83	0.72
2588		188, 175	2588	Layer	2	Natural peat deposit- not fully excavated.	1.6	3.1		0.86	0.47
2589			2589	Layer	2	Sandy layer, same as [2525] and [2313].	2.08	0.54	0.09	0.73	0.71
2590		172		Fill	2	Fill of Roman pit cut [2591].	0.38	0.22	0.07	0.75	
2591		172	2591	Cut	2	Roman sub circular pit cut.	0.38	0.22	0.07	0.75	0.68
2592				Fill	2	Firm dark brown-grey silty-clay fill of [2593].	0.7	0.5	0.15	0.84	
2593			2593	Cut	2	Circular Roman pit cut.	0.7	0.5	0.15	0.84	0.7
2594				Fill	2	Moderately compacted mid-grey brown sandy-silt Fill of [2595].	0.75	0.5	0.1	0.74	
2595			2595	Cut	2	Sub circular Roman rubbish pit.	0.75	0.5	0.1	0.74	
2596				Fill	2	Fill of possible beam slot [2597].	1.8	0.23	0.22	0.82	
2597			2597	Cut	2	Possible Roman beam slot.	1.8	0.23	0.22	0.86	0.64
2598		171		Layer	1	Alluvial clay deposit.	2.02	0.44	0.53	0.23	0.16
2599		174	2599	Layer	2	Layer of loose light orange sandy-gravel.	0.3	2.02	0.06	0.94	0.92
2600		174		Fill	2	Soft dark green-brown sandy clay; lower fill of pit [2587].	1.24	1.94	0.17	0.89	0.85
2601		174		Layer	2	Dark green-brown sandy-silt. Roman made ground horizon.	4.92	2	0.25	0.91	0.81

2602		174		Layer	2	Natural peat layer.	5	0.72	0.5	0.69	0.49
2603		174		Layer	1	Natural alluvial clay.	3.2	0.6	0.54	0.26	0.21
2604		173	2604	Layer	2	Moderately compacted mid brown grey clay. Grey clay above peat.	1.25	2	0.14	0.68	0.62
2605		173, 172	2605	Layer	2	Natural peat layer.	1.7	3.4	0.27	0.6	0.55
2606		172	2606	Layer	1	Natural alluvial blue clay.	1	1.5	0.36	0.18	
2607		171		Layer	2	Soft grey sandy-silty-clay. Possible flood deposit. Seen in section only.	1.75		0.2	1.66	1.6
2608				Fill		Fill around modern feature.	1.12	0.91	0.47	2.1	1.63
2609			2609	Cut	10	Construction cut for modern masonry.	1.12	0.91	0.5	2.1	1.6
2610		188	2610	Layer	2	Demolition of 'brickearth wall'- collapsed wall.	1.68	1.05	0.14	0.97	0.85
2611		162	2611	Masonry	7	Remains of a red brick wall foundation.	1.64	0.84	0.06	2.06	1.78
2612			2612	Layer	2	Firm green-brown silty-clay. Uncertain of phasing. NFE	1.12	2.3		1.24	
2613				Void		Void					
2614			2614	Layer	10	Modern demolition layer	1.5	1.7	0.4	2.03	1.90
2615			2615	Layer	10	Demolition rubble layer.	0.7	1	0.8	2.02	
2616			2616	Layer	9	Demolition rubble.	1.4	1.5	0.46	2.05	
2617			2617	Masonry	10	Modern brickwork.	0.73	0.74	1.01	2.05	
2618			2618	Masonry	10	Modern wall on flagstone floor.	1.13	0.42	0.61	2.14	
2619			2619	Masonry	10	Modern wall. NFE	1.61	0.94		2.13	1.91
2620			2620	Layer	8	Thought to be post-Tudor. NFE	0.85	0.78		1.9	
2621		183	2621	Layer	2	Truncated layer/deposit.	1.16	0.58	0.23	1.24	1.23
2622		188	2622	Layer		Roman layer that appears to have been heat modified.	2.1	1.1	0.1	0.9	0.78

2623		183		Fill	2	Firm dark yellow-brown silty-sand. Fill of [2624].	0.63	0.4	0.08	1.17	1.14
2624		183	2624	Cut	2	Shallow linear feature. No phase suggested on sheet. Filled with [2623].	0.63	0.4	0.08	1.17	1.08
2625			2625	Masonry	10	Modern brick foundation.	0.65	0.71	0.47	2.16	
2626		175		Fill	1	Firm light yellow-grey clay/gravel.	2	1.2	0.4	0.24	0.22
2627		175	2627	Cut	1	Linear channel/gully/ditch cut. Filled with [2626].	2	1.2	0.4	0.24	0.16
2628		175	2628	Layer	1	Alluvial blue clay. No dimensions recorded as NFE.				0.24	0.21
2629				Fill		Modern backfill of CC [2630].	0.58	1.03	0.42	2.05	1.63
2630			2630	Cut		CC for modern wall [2618].	1.03	0.58	0.42	2.05	1.63
2631		175		Layer	1	Natural gravel. NFE so no dimensions.				-0.03	-0.21
2632			2632	Layer	2	Natural clayey-peat? NFE	2.7	1.4		0.78	0.73
2633		183	2633	Cut	2	Sub-rectangular shaped truncated pit cut.	0.73	0.65	0.26	1.14	0.89
2634		183	2634	Layer		Laminated dump deposits.	0.98	0.56	0.13	1.13	1.03
2635				Fill	10	Modern dump layer.	0.92	0.86	0.07	1.85	
2636			2636	Cut	10	Modern pit cut.	0.92	0.86	0.08	1.85	1.77
2637			2637	Layer	5	Southwark 'Dark earth' deposit-post Roman abandonment, pre-medieval occupation.	7	2.9	0.75	1.99	1.21
2638			2638	Layer	5	Post Roman abandonment, pre-medieval reoccupation, Southwark 'dark earth' deposit.	7	2.9	0.75	1.99	1.21
2639		188		Fill	2	Loose yellow and grey sand-silt-gravel. Fill of [2640].	0.6	0.2	0.1	0.73	0.72

2640			2640	Cut	2	Shallow, concave based linear ditch cut.	0.6	0.2	0.1	0.72	0.67
2641			2641	Masonry	8	Machine cut stone flagstones.	2.8	1.7	0.7	1.64	1.63
2642				Fill	2	Loose to soft grey-brown clay/silt/sand.	0.18	0.13	0.15	0.66	0.66
2643			2643	Cut	2	Square cut Roman posthole.	0.18	0.13	0.15	0.68	0.53
2644			2644	Layer	2	Yellow green silt-clay-gravel. Possible remains of [2562] used as levelling material.	3.15	1.75	0.3	0.89	0.66
2645				Layer		Soft light brown silt/sand/ash. Covers masonry [2617]. Thought to be modern.	0.8	0.7	0.5	1.57	1.04
2646			2646	Cut	10	Sub rectangular construction cut for wall [2617].	0.8	0.7	0.5	1.57	1.04
2647				Void		Void					
2648			2648	Cut	10	Linear construction cut for Victorian drain.	0.72	1.86	0.3	1.99	1.54
2649			2649	Masonry	9	Late post-med brick well.	1.2	1.18	0.4	1.72	1.39
2650			2650	Cut	9	Construction cut for well [2649] with fill [2660].	1.36	1.34	0.4	1.73	
2651				Fill	9	Unexcavated fill of well [2649]. No dimensions recorded.				1.3	
2652			2652	Cut	10	Construction cut for wall [625].	0.74	2.4	0.31	2.02	1.71
2653				Fill	2	Loose dark-brown-grey sandy-gravelly-silt. Fill of beam slot.	3.4	0.2	0.1	0.66	
2654			2654	Cut	2	Linear beam slot for suggested early ?Roman building.	3.4	0.2	0.1	0.66	0.53
2655		188		Fill	2	Dark brown-grey silty-gravelly-sand. Fill of suggested IA pit.	0.6	0.56	0.3	0.62	0.6
2656			2656	Cut	2	Rectangular pit cut suggested to	0.6	0.56	0.3	0.66	0.41

						date to IA.					
2657		194, 189	2657	Layer	8	Late post-med floor make-up.	2.9	1.3	0.25	1.56	1.53
2658				Fill		Fill of construction cut [264] for wall [622].	0.72	1.86	0.06	1.99	
2659				Fill		Backfill of construction cut [2652] for wall [625].	0.74	2.4	0.1	2.02	2
2660				Fill		Backfill of construction cut [2650] for wall [2649].	1.36	1.34	0.4	1.73	
2661			2661	Cut	10	Construction cut for wall [619]. Suggested to be Tudor.	0.32	0.54	0.14	2.09	1.95
2662		178, 182		Masonry	7	East-West aligned red brick wall. Parallel to [2662] suggesting a possible corridor.	3.4	0.7	0.8	1.2	1.17
2663				Layer	3	Southwark dark earth layer. Post-Roman abandonment, pre-medieval/Tudor occupation. NFE	2.9	4.4		1.53	0.99
2664				Layer	3	Firm yellow-brown sand/silt/clay. Roman dump layer. NFE	2.8	4.4		0.79	
2665		183	2665	Cut	2	Irregular shaped shallow and concave pit cut. Filled with [3261].	0.42	0.44	0.16	1.05	0.89
2666		183	2666	Cut		Irregular shaped vertical to steep sided pit or linear feature.	2.28	0.84	0.31	1.04	0.73
2667		183	2667	Layer	2	Light grey-brown silty-sand. Roman made ground.	1.3	1.18	0.28	1.07	1.04
2668				Fill		Top fill of ditch [2684]. Green-grey silty-clay.	0.73	2.72	0.21	1.7	1.68

2669		178, 177		Masonry	7	N-S Tudor wall. Part of servants' passage/bowling alley/tennis court. Curves around to the west.	1.58	3.85	1.17	1.37	0.81
2670		177		Masonry	7	Tudor red brick wall that extends parallel to [2669] forming a passage.	1.45	0.85	0.85	0.96	0.14
2671		179		Masonry	7	Northern wall of passageway for Tudor palace.	1.3	0.29	1.45	1.61	1.54
2672		179		Masonry	7	Southern red brick wall of Tudor passageway.	3.1	0.44	1.4	1.58	1.56
2673		178		Fill	7	Demolition material within Tudor passageway.	3.4	0.7	0.5	1.07	0.53
2674		177		Fill	7	Secondary backfill in servants' passageway of Tudor palace.	0.85	0.7	0.3	0.94	
2675		179		Fill	7	Demolition fill in Tudor passageway.	3.3	0.7	1.2	1.6	
2676				Fill	2	Yellow-brown sandy-silt pit fill	1.3	0.6	0.4	1.37	
2677				Fill	1	Firm light yellow-grey clay/gravel. Same as [2626]. NFE	0.8	0.9		0.2	
2678			2678	Cut	1	Same as [2627]. NFE. Linear channel/gully/ditch cut. Below peat.	0.8	0.9		0.2	
2679				Fill	10	Unexcavated Victorian drain fill. Unexcavated.	0.4	1.8		1.52	1.42
2680				Cut	10	Construction cut for Victorian drain. Unexcavated.	0.4	1.8		1.53	
2681				Layer		Light grey to mid brown-yellow sandy-silty-gravel levelling layer.	0.8	0.6	0.1	0.66	0.57

2682	184	2682	Layer	3	Loose light brown-green silt with occasional gravel. Southwark 'dark earth'; post Roman abandonment.	4.6	2.36	0.14	1.47	1.42
2683	196, 176		Fill	5	Mid grey-brown silty-clay fill of ditch [2684].	2.72	0.92	0.75	1.7	1.49
2684	176	2684	Cut	5	Suggested recut of [2695]- linear ditch cut with flat base.	2.7	0.82	0.99	1.71	0.72
2685			Fill	2	Mid brown sandy-silt. Continuation of [2676] past truncation by [2646].	0.8	1	0.4	1.52	1.51
2686		2686	Cut	2	Sub-rectangular vertically sided pit cut.	3.1	1	0.4	1.35	1.05
2687			Fill	5	Compact dark grey-brown clayey-silt. Fill of ditch [2688].	0.46	0.98	0.36	1.79	1.43
2688		2688	Cut	5	Roman ditch cut (strat suggests later).	0.46	0.98	0.36	1.79	1.43
2689	176		Fill	5	Secondary fill of [2684]. Compact dark grey silty clayey sand. Not bottomed.	2.32	0.24	0.23	0.95	
2690	183		Fill	2	Loose grey-green silty-sand. Fill of Roman pit cut [2691].	0.91	0.58	0.14	0.8	
2691	183	2691	Cut	2	Shallow Roman sub-rectangular pit cut.	0.9	0.58	0.14	0.77	0.66
2692	183		Fill	2	Firm green-brown silty-clay fill of Roman linear.	1.7	1.06	0.2	0.87	
2693	183	2693	Cut	2	Roman linear feature.	1.7	1.06	0.2	0.86	0.78
2694	176		Fill	5	Compact green-grey gravel-sand-silt. Fill of [2695] pit cut.	3.22	1.2	0.5	1.71	1.68

2695	176	2695	Cut	5	Suggested boundary ditch. Fill [2694] contains glazed pottery so thought to be post-med. Possibly same as [2684].	3.22	1.2	0.5	1.71	1.21
2696			Fill	5	Moderately compacted grey-green clay-silt fill of ditch [2704]. Suggested to have been recut as [2688].	0.74	1.08	0.52	1.79	1.76
2697		2697	Masonry	7	Small patch of Tudor floor.	0.36	0.1	0.19	1.76	
2698		2698	Masonry	7	Tudor brick floor.	0.23	0.11	0.06	1.59	1.59
2699		2699	Cut	7	Cut for Tudor wall [2697].	0.1	0.36	0.19	1.76	1.57
2700		2701	Fill	2	Loose brown-green silty-clay. Fill of [2701].	4.1	2.32	0.25	1.47	1.42
2701	184	2701	Cut	2	Irregular shaped owing to heavy truncation; large shallow Roman pit cut.	4.1	2.32	0.25	1.47	1.2
2702	183	2702	Layer	2	Soft yellow-brown silty-sand layer.	2.82	1.26	0.17	0.87	0.7
2703		2703	Cut	7	Construction cut for Tudor red brick floor [2698].	0.46	0.35	0.07	1.51	
2704		2704	Cut	5	Suggested Roman ditch cut; possibly the continuation of [2695]. (strat suggests later).	0.74	1.08	0.52	1.79	1.36
2705	177		Fill	7	Primary backfill above Tudor floor [2706].	0.84	0.89	0.3	0.64	0.32
2706	177	2706	Masonry	7	Red brick floor in passageway of palace. NFE so no depth.	0.84	0.7		0.33	0.28
2707	177		Layer	7	Rubble bedding for Tudor floor [2706].	0.84	0.8	0.2	0.5	0.19
2708		2708	Cut	2	Sub-circular posthole cut made through Roman levelling layer	0.4	0.3	0.22	1.32	1.1

						[2757]. Filled with [2709].					
2709				Fill	2	Friable silty-sand fill of [2708]	0.4	0.3	0.22	1.32	
2710		183	2710	Layer	2	Thin sandy layer with Roman pottery.	0.76	1.34	0.05	0.82	0.76
2711		183	2711	Layer	2	Loose clean silty-sand layer-Roman finds from layers above and below.	0.76	1.34	0.1	0.75	0.68
2712		177	2712	Timber	7	Timber plank laid horizontally within servants' passage part of palace.	1.1	0.56	0.02	0.64	0.49
2713		181, 196	2713	Cut	2	Sub-rectangular Roman pit cut, Filled with [3246].	0.4	0.6	0.05	1.33	1.28
2714		181, 196	2714	Cut	2	Construction cut for a wooden (and possibly clay) wall likely forming a Roman dwelling or outhouse. Cut is truncated by 14 postholes suggesting a related wooden wall or structure.	1.36	1.54	0.45	1.42	0.97
2715		181	2715	Layer	2	Beaten clay floor surface within Roman building. Truncated by several postholes, presumably from the walls of the building.	0.48	1.68	0.12	2.09	1.99
2716			2717	Fill	2	Firm very dark grey-brown silty-clay, Fill of [2717].	1.3	1.15	0.15	1.46	1.41
2717			2717	Cut	2	Sub-square Roman pit cut, Filled with [2716].	1.3	1.15	0.15	1.46	1.31
2718			2718	Timber	7	Timber post seen within backfill of servants' passageway in palace.	0.74	0.1	0.05	0.69	0.57

2719			2719	Timber	7	Timber plank seen within backfill of servants' passageway in palace. Has nails visible. Retained.	0.4	0.7	0.03	0.65	
2720		183	2720	Layer	2	Thin organic layer, Roman finds from layers above and below.	0.88	1.3	0.05	0.7	0.62
2721		179		Timber	7	Timber plank seen only in section, so NFE.		0.69	0.08	0.46	0.32
2722		179		Masonry	7	Floor in passageway of Tudor palace- seen in section only: NFE		0.72	0.09	0.36	
2723		179		Layer	7	Rubble bedding layer beneath floor [2722].	0.72		0.11	0.23	
2724		178		Void		Timber floor?					
2725		178	2725	Masonry	7	Red brick floor of servants' passageway in Tudor palace.	3.44	0.7	0.1	0.51	0.44
2726		178		Layer	7	Demolition rubble seen in servants' passageway associated with timber planks such as [2724].	3.44	0.7	0.5	0.42	
2727			2727	Cut	2	Circular posthole cut Filled with [2728].	0.25	0.3	0.28	1.23	0.95
2728			2727, 2729	Fill	2	Fill of posthole [2727]. Composed of soft grey-yellow-brown silty-sand.	0.25	0.3	0.28	1.23	0.95
2729				Cut	2	Circular posthole cut.	0.2	0.2	0.23	1.23	1
2730		196		Fill	2	Fill of posthole [2729]; composed of soft green-yellow-brown silty-sand.	0.2	0.2	0.23	1.23	1.23

2731			2731	Layer	3	Loose very dark-grey silty-sand. Post-Roman abandonment, pre-medieval reoccupation layer. Southwark 'dark earth' horizon.	7.8	3.9	0.55	1.88	1.54
2732		193	2732	Layer	2	Suggested Roman dump layer.	2.28	1.8	0.08	1.46	1.29
2733			2733	Layer	2	Roman made ground/dump horizon.	2.4	3.66	0.3	1.5	1.31
2734			2735	Fill	2	Fill of pit [2735]- firm to friable green-brown silty-clay	0.75	0.7	0.16	1.37	
2735			2735	Cut	2	Irregularly shaped ?Roman pit cut.	0.75	0.7	0.16	1.37	1.21
2736			2736	Cut	2	One of 14 postholes forming a suggested Roman timber structure. Filled with [3249].	0.12	0.12	0.04	0.97	0.93
2737			2736	Fill	2	Silty fill- remains of rotted timber?	0.12	0.12	0.04	0.97	0.93
2738			2736	Cut	2	One of 14 postholes forming a suggested Roman timber structure.	0.12	0.12	0.04	0.97	0.93
2739			2736	Fill	2	Silty fill- remains of rotted timber?	0.16	0.16	0.04	0.97	
2740			2736	Cut	2	One of 14 postholes forming a suggested Roman timber structure.	0.16	0.16	0.04	0.97	0.93
2741			2736	Fill	2	Silty fill- remains of rotted timber?	0.15	0.15	0.09	1.05	
2742			2736	Cut	2	One of 14 postholes forming a suggested Roman timber structure.	0.15	0.15	0.04	1.05	0.96
2743			2736	Fill	2	Silty fill- remains of rotted timber?	0.18	0.18	0.03	0.97	

2744			2736	Cut	2	One of 14 postholes forming a suggested Roman timber structure.	0.16	0.16	0.03	0.97	0.94
2745			2736	Fill	2	Silty fill- remains of rotted timber?	0.15	0.15	0.05	0.97	0.92
2746			2736	Cut	2	One of 14 postholes forming a suggested Roman timber structure.	0.13	0.13	0.05	0.97	0.92
2747			2736	Fill	2	Silty fill- remains of rotted timber?	0.13	0.13	0.12	1.04	0.92
2748			2736	Cut	2	One of 14 postholes forming a suggested Roman timber structure.	0.13	0.13	0.12	1.04	0.92
2749			2736	Fill	2	Silty fill- remains of rotted timber?	0.11	0.11	0.08	1.04	0.96
2750			2736	Cut	2	One of 14 postholes forming a suggested Roman timber structure.	0.11	0.11	0.08	1.04	0.96
2751			2736	Fill	2	Silty fill- remains of rotted timber?	0.14	0.14	0.07	1.04	0.97
2752			2736	Cut	2	One of 14 postholes forming a suggested Roman timber structure.	0.14	0.14	0.07	1.04	0.97
2753			2736	Fill	2	Silty fill- remains of rotted timber?	0.16	0.16	0.07	1.04	0.97
2754			2736	Cut	2	One of 14 postholes forming a suggested Roman timber structure.	0.16	0.16	0.07	1.04	0.97
2755			2736	Fill	2	Silty fill- remains of rotted timber?	0.16	0.16	0.08	1.04	0.96
2756			2736	Cut	2	One of 14 postholes forming a suggested Roman timber structure.	0.16	0.16	0.08	1.04	0.96

2757		190, 194, 189	2757	Layer	2	Friable green-yellow silty-sandy-clay. Roman? Same as [377]?	4.8	2.1	0.38	1.43	1.04
2758		183	2758	Layer	2	Light brown-grey silty-clay. Roman surface?	0.88	1.3	0.1	0.62	0.6
2759		183	2759	Layer	2	Firm dark blue-brown clayey-peat.	4.1	1.52	0.28	0.53	0.42
2760			2760	Timber	7	Plank as seen within backfill of Tudor palace passageway. Uncertain as to function.	0.76	0.24	0.06	0.53	52
2761			2761	Timber	7	Timber planks as seen within passageway of Tudor palace. Bowling alley? Tennis court? Or possible from façade of palace.	1.2	0.5	0.06	0.54	0.51
2762			2762	Timber	7	Timber planks as seen within passageway of Tudor palace. Bowling alley? Tennis court? Or possible from façade of palace.	1.64	0.28	0.1	0.52	0.43
2763			2763	Timber	7	Timber planks as seen within passageway of Tudor palace. Bowling alley? Tennis court? Or possible from façade of palace.	1.7	0.36	0.1	0.49	0.48
2764			2764	Timber	7	Timber planks as seen within passageway of Tudor palace. Bowling alley? Tennis court? Or possible from façade of palace.	1	0.4	0.04	0.47	
2765			2765	Timber	7	Timber planks as seen within passageway of Tudor palace. Bowling alley? Tennis court? Or possible from façade of palace.	0.18	2.1	0.03	0.48	0.46
2766			2766	Timber	7	Timber planks as seen within passageway of Tudor palace. Bowling alley? Tennis court? Or	3.1	0.32	0.03	0.49	0.48

						possible from façade of palace.					
2767			2767	Timber	7	Timber planks as seen within passageway of Tudor palace. Bowling alley? Tennis court? Or possible from façade of palace.	2.76	0.36	0.03	0.44	0.42
2768			2768	Timber		Timber planks as seen within passageway of Tudor palace. Bowling alley? Tennis court? Or possible from façade of palace.	1.48	0.32	0.03	0.45	0.43
2769			2769	Timber	7	Timber planks as seen within passageway of Tudor palace. Bowling alley? Tennis court? Or possible from façade of palace.	2.22	0.24	0.03	0.43	0.43
2770			2770	Cut	2	Sub-square to circular posthole cut. Filled with [2771].	0.4	0.39	0.22	1.49	1.27
2771			2770	Fill	2	Dark-brown grey sandy-silt. Fill of posthole [2770].	0.4	0.39	0.22	1.49	1.27
2772			2772	Masonry	2	In situ painted Roman wall plaster.	0.4	0.05	0.05	1.44	1.39
2773			2773	Layer	2	Light brown-orange silty-clay floor surface with inclusions of daub, wall plaster and gravel.	2.27	0.57	0.1	1.58	1.49
2774			2774	Cut	2	Sub-rectangular cut- suggested to be the construction cut for a robbed out wall [2846], of which floor surface [2773] is related.	0.56	2.66	0.23	1.36	1.16
2775			2774	Fill	2	Firm to compact light brown-yellow sandy-silt with frequent daub. Fill of cut [2774]- CC for robbed out wall.	0.56	2.66	0.23	1.36	

2776			2776	Masonry	7	Brick footing for wooden planks seen in passageway of palace. Bricks placed directly on floor [2725] and the planks rested on top of them perhaps to raise them up and protect them from damp?	2.6	0.8	0.8	0.41	0.32
2777			2736	Fill	2	Firm dark grey-brown sandy green clay-silt. Fill of [2778].	0.12	0.12	0.05	1.13	1.08
2778			2736	Cut	2	One of 14 postholes forming a suggested Roman timber structure. Filled with [2777].	0.12	0.12	0.05	1.13	1.08
2779			2736	Fill	2	Fill of Roman posthole [2780].	0.09	0.09	0.05	1.05	1
2780			2736	Cut	2	One of 14 postholes forming a suggested Roman timber structure. Filled with [2779].	0.09	0.09	0.05	1.05	1
2781			2736	Fill	2	Fill of Roman posthole [2783].	0.4	0.32	0.13	1.13	
2782			2736	Cut	2	Larger posthole seen as part of group labelled as [2714]. Suggested that the post was removed and it has backfilled with silt in a similar way to ditch fill [2796]. Size is also suggested to represent the feature had some degree of structural significance, perhaps an enhanced degree of load bearing.	0.4	0.32	0.13	1.13	1
2783			2783	Cut	7	Construction cut for Tudor walls [2670], [2669], [2662]. Not fully excavated.	1.4	5		1.37	

2784				Fill	2	Loose dark green-brown silty-clay. Fill of [2785].	0.34	0.24	0.05	1.42	1.4
2785			2785	Cut	2	Circular, large posthole or pit cut. Filled with [2784].	0.34	0.27	0.05	1.42	1.4
2786				Fill	2	Fill of Roman posthole [2787].	0.22	0.2	0.08	1.46	1.4
2787			2787	Cut	2	Circular posthole cut. Filled by [2786].	0.22	0.2	0.08	1.46	1.38
2788		178		Layer	7	Rubble bedding layer for Tudor floor. Recorded in section only.	0.7	3	0.07	0.3	
2789			2789	Cut	7	Construction cut for Tudor walls [2672] and [2671]. NFE as masonry retained.	9.5	1.4		1.61	
2790				Fill	2	Fill of pit [2808] with suggested organic lining.	0.9	1.2	0.32	1.66	1.56
2791		183	2791	Layer	2	Silty-peaty-clay layer with suggested charcoal flecks.	3.34	1.34	0.13	0.76	0.63
2792		194, 190	2792	Layer	2	Clay floor or make-up layer.	0.4	0.65	0.1	1.28	
2793		190, 194	2793	Layer	2	Green-yellow sandy-clay layer.	1.3	1.6	0.09	1.19	1.16
2794			2795	Fill	2	Fill of small Roman pit.	0.4	0.24	0.23	1.21	
2795			2795	Cut	2	Small Roman pit-cut.	0.4	0.24	0.08	1.21	1.13
2796		181	2714	Fill		Primary fill of [2714]. Firm mottled grey-brown-green sandy-green clay and silt. Suggested to be backfill around a degraded wooden wall that would have risen from several postholes ([2736]) at the base of construction cut [2714].	0.93		0.28	1.25	1.01

2797				Fill	10	Fill of pit [2802] that is suggested to be related to well [2645]- thought to be post-med (strat suggests Roman?). Composed of loose sandy-silty-gravel.	1	1.3	0.3	1.47	1.4
2798			2799	Fill	2	Firm dark grey-brown with green hues, silty-clay. Infilling of ditch cut [2799].	0.6	1.8	0.29	1.35	1.06
2799			2799	Cut	2	Cut of ditch/drain.	0.6	1.8	0.29	1.35	1.06
2800			2801	Fill	2	Mid grey clay/sand. Fill of [2801].	0.1	0.08	0.12	1.12	
2801			2801	Cut	2	Stakehole.	0.1	0.08	0.12	1.12	1
2802			2802	Cut	10	Cut of post-medieval pit cut (strat suggests Roman?), suggested to relate to well [2649].	1	1.3	0.3	1.68	1.34
2803		193	2803	Layer		Firm yellow-brown clay. Suggested to be an internal floor surface from a Roman structure.	0.99	1.3	0.04	1.4	1.33
2804				Fill	2	Loose to friable mid grey-brown sandy-silt. Fill of [2805].	1.6	1.1	0.39	0.92	
2805			2805	Cut	2	Sub-circular pit cut. Filled with [2804].	1.6	1.1	0.32	0.92	0.7
2806				Fill	2	Fill of stakehole [2807]. Soft dark purple-brown silty-clay.	0.18	0.2	0.33	0.67	
2807			2807	Cut	2	Cut of Roman stakehole.	0.18	0.2	0.27	0.67	0.4
2808			2808	Cut	2	Sub-square/rectangular shape Roman pit cut. Has organic lining. Suggested leaching out to form concretion around sides of cut.	0.9	1.3	0.32	1.57	1.23

2809		190, 189, 191, 192, 194	2809	Layer	2	Loose grey-yellow coarse sand. Suggested levelling or bedding for Roman structure. Depth varies depending on section recorded.	4.5	2.1	0.3	0.96	0.88
2810				Fill	2	Soft grey-yellow silty-clay-sand. Fill of [2811].	1.23	0.85	0.28	0.98	0.7
2811			2811	Cut	2	Roman pit cut Filled with [2810].	1.23	0.85	0.28	0.98	0.7
2812				Fill	2	Backfill of suggested robbed construction cut [2813]- compact grey-brown sandy-silt with painted Roman wall plaster inclusions.	0.44	2.18	0.23	1.41	1.38
2813			2813	Cut	2	Linear, vertically sided, flat based cut. Suggested to be from the robbing of a Roman wall from a structure. Truncated by well cut and drain [2799].	0.44	2.18	0.23	1.41	1.38
2814		193	2814	Layer	2	Dump layer containing large amounts of painted Roman wall plaster. Coloured pieces seen to east with just white pieces seen to the west: suggested to relate to the interior and exterior of a structure.	2.16	0.52	0.21	1.51	1.44
2815				Cut		Void					
2816		194, 190, 191, 192, 189	2816	Layer	2	Archaeologically sterile natural peat layer. Not fully excavated.	1.4	4.5		0.31	0.28
2817			2817	Layer	2	Mixed demolition dump layer.	1	0.92	0.13	1.38	1.33

2818			2819	Fill	2	Firm dark-grey clay and sand. Suggested backfill of a post-med pit [2819].	0.94	1	0.18	1.27	
2819			2819	Cut	2	Shallow post-med pit cut filled with [2818].	0.94	1	0.18	1.27	1.09
2820			2820	Layer	2	Levelling layer of soft grey-orange silty-clay with Roman finds.	2.4	3.66	0.15	1.28	1.21
2821			2851	Fill	2	Loose dark grey clay-sand with Roman finds. Suggested to be fill of linear cut [2851]- Roman wall.	0.88	2.66	0.29	1.26	1.03
2822		183	2822	Layer	2	Firm purple-brown silty-clay with pot and CBM. Roman dump layer?	3.34	1.34	0.1	0.69	0.58
2823			2823	Layer	2	Compact dark grey-brown clayey-sand.	2.8	3.1	0.32	1.56	
2824				Fill		Firm to loose very dark brown organic silty-sand. Possible lining to pit? Straw like consistency.	1.2	0.82	0.25	1.55	1.26
2825			2825	Masonry	7	Tudor unfrogged red brick wall. Possibly double-numbered.	1.4	0.9		1.86	1.7
2826			2826	Masonry	7	Unfrogged red brick wall- Tudor. Associated with [647].	2	1.1		1.72	1.43
2827			2827	Layer	2	Loose dark brown-green silty-sand. Suggested natural silting up, but seals Roman cut feature.	2.42	3.3	0.36	1.46	1.16
2828		183	2828	Layer	2	Yellow grey-brown silty-sandy-clay with charcoal flecks. Suggested pre-Roman date.	0.98	0.42	0.22	0.61	0.43

2829	193	2829	Layer	2	Either from demolition and representative of a collapsed wall ([2814/5]), or fill of a robber cut containing remnants of robbed materials.	1.3	1.7	0.21	1.39	1.36
2830			Fill	2	Degraded timber fill of stakehole [2831].	0.06	0.07	0.09	0.58	
2831		2831	Cut	2	Square shaped stakehole cut, adjacent to [2807].	0.06	0.07	0.09	0.58	0.49
2832	183	2832	Layer	2	Suggested pre-Roman layer of yellow-grey silty-sandy-clay with no finds. Might well be natural.	0.52	0.82	0.14	0.57	0.43
2833		2833	Cut	2	Cut of semi-circular posthole	0.26	0.26	0.3	1.45	1.15
2834		2833	Fill	2	Loose dark-grey silty-sand fill of posthole [2833].	0.26	0.26	0.3	1.48	1.46
2835		2835, 2833	Cut		Shallow posthole cut. Roman?	0.3	0.3	0.01	1.48	1.38
2836			Fill		Dark grey loose silty-sand: Fill of posthole [2835].	0.3	0.3	0.1	1.48	1.36
2837		2837	Cut	2	Construction cut for concreted feature (possibly industrial) [2922].	1.2	1.2	0.34	1.51	1.01
2838			Fill		Top fill of [2837]- loose to compact dark grey-yellow silty-sands.	1.3	0.7	0.31	1.5	1.46
2839		2839	Layer	2	Mixed layer of yellow clay/grey-yellow sand with gravel. Possible bedding layer for a wall.	0.5	1.3	0.08	1.27	1.12
2840		2840	Layer	2	Compacted mid grey-yellow sandy-gravel levelling layer.	0.84	1.16	0.04	1.2	1.18

2841			2841	Layer	2	Loose grey-yellow silty-sand: levelling layer.	0.46	0.48	0.05	1.16	1.15
2842		193	2842	Layer	2	Moderately compacted green-grey clayey-sandy-silt: dump layer.	4.3	3	0.07	1.3	0.93
2843		183, 168	2843	Layer	2	Firm dark purple-grey silty-clay: interface with natural peat later. No finds.	2.96	1.3	0.24	0.61	0.53
2844		194, 190	2844	Layer	2	Continuation of layer [2757]-separated to include [2972]. Friable green-yellow silty-sandy-clay. No finds.	4.8	2.1	0.3	1.19	1.15
2845				Cut		Void					
2846			3131, 2846	Masonry	2	Clay wall as part of a clay and timber structure associated with [2846] plaster and [3131] construction cut.	0.42	0.36	0.41	1.39	
2847		183	2847	Layer	2	Firm to compact grey-purple brown clay/peat. Pottery recovered that suggest late IA or Early Roman.	0.85	1.52	0.23	0.64	0.45
2848			2848	Layer		Bedding sand for floor [647].	1.5	1.9	0.01	1.68	
2849				Fill	3	Firm very dark grey silty-clay fill of ditch/linear [2850].	0.92	0.38	0.2	1.33	1.16
2850			2850	Cut	3	Linear ditch cut with moderate sides and flat base.	0.92	0.38	0.2	1.33	1.16
2851			2851	Cut	2	Construction cut for wall or robber cut from wall.	0.88	2.66	0.06	1.26	1.03
2852		183		Fill	2	Soft yellow-orange-brown clay-silt. Fill of [2853].	0.45	0.23	0.27	0.56	

2853		183	2853	Cut		Small pit cut with no dating evidence in fill [2852]. Suggested to be associated with [2720].	0.45	0.23	0.27	0.56	0.29
2854		183	2854	Layer	2	Friable mid orange brown clay-silt. Small deposit filling an undulation in the peat.	1.08	0.7	0.12	0.59	0.49
2855				Fill	3	Compact dark green-grey with red-brown hues. Clay-sand with pot, metal and CBM. Suggested to be late/post-Roman.	1.4	0.6	0.16	1.32	
2856			2856	Cut	3	Semi-oval shaped pit cut. Concave base.	1.4	0.6	0.16	1.32	1.16
2857				Fill	2	Loose grey-brown sandy-silt fill of posthole [2858].	0.1	0.11	0.3	1.3	2858
2858			2873	Cut	2	Circular posthole cut.	0.1	0.11	0.34	1.3	0.96
2859				Fill	2	Loose grey-brown sandy-silt. Fill of posthole [2860].	0.09	0.1	0.46	1.44	
2860			2873	Cut	2	Circular posthole cut.	0.09	0.1	0.46	1.44	0.98
2861				Fill	3	Loose grey-yellow-brown silty-sand. Fill of pit cut [2862].	1.5	1	0.13	1.33	1.2
2862			2862	Cut	3	Irregular shaped pit cut with flat base.	1.4	1	0.13	1.33	1.2
2863		196	2863	Layer	2	Loose brown-orange silty-clay. Bedding layer or demolition layer.	1.82	0.74	0.23	1.32	1.27
2864				Fill	3	Loose mid grey silty-sand. Suggested to be natural backfilling of a tree-bole.	1.05	0.5	0.12	1.32	
2865			2865	Cut	3	Irregular shaped cut features suggested to be a tree bole.	1.05	0.5	0.12	1.32	1.2

2866		196	2866	Layer	2	Roman mortar floor surface, thought to be from an external yard. Possibly damaged during demolition of wall [2846].	0.5	0.94	0.23	1.55	1.3
2867			2867	Layer	2	Stiff brown-yellow silty-clay levelling or bedding layer.	2.3	1.72	0.3	1.51	1.28
2868		193	2868	Layer	2	Loose mid pink-brown silty-sand. Levelling layer. Superseded by [3248].	2.2	1.55	0.25	1.09	1.01
2869			2869	Cut	7	Construction cut for Tudor wall [2825]. Filled initially by rubble [2879].	1.5	1.2	0.37	1.7	
2870				Fill	2	Fill of posthole [2871]. Loose grey-brown sandy-silt.	0.1	0.12	0.27	1.44	
2871			2873	Cut	2	Circular posthole cut.	0.1	0.12	0.27	1.44	1.17
2872				Fill	2	Loose grey-brown silty-sand. Fill of posthole [2873].	0.14	0.16	0.03	1.46	
2873			2873	Cut	2	Circular posthole cut. Filled with [2872]	0.16	0.14	0.03	1.49	1.43
2874				Void		Void- Superseded by layer [3250].					
2875				Void		Void					
2876		191, 190, 189	2876	Layer	2	Mixed sand, gravel, charcoal and silt- suggested to be 'foreshore trample' but uncertain. Sterile.	2.85	1.7	0.05	0.9	0.78
2877				Fill	2	Loose grey-brown sandy-silt. Fill of [2878].	0.46	0.22	0.39	1.5	
2878			2878	Cut	2	Small pit cut or posthole. Filled with [2877].	0.46	0.22	0.39	1.5	1.11

2879				Masonry	7	Rubble fill as part of foundation or Tudor wall [2825] within cut [2869]. No depth as unexcavated.	1.5	1.2		1.7	
2880		197	2880	Layer	3	Compact to loose dark green-brown silty-sand. Is this the same Roman dumped horizon as [377]?	3.6	9.76	0.17	1.33	1.16
2881			2881	Layer	2	Soft dark grey sandy-clay. Levelling layer.	0.5	0.92	0.04	1.21	
2882			2882	Layer	2	Mid yellow-brown gravel and sand Roman bedding layer. Superseded by [3248].	0.56	1.12	0.08	0.93	0.9
2883				Fill	2	Mid brown loose sandy-silt. Fill of [2884].	1	0.3	0.1	1.44	1.39
2884			2884	Cut	2	Irregular shaped pit cut with flat base. Filled with [2883].	0.4	1.1	0.11	1.41	1.3
2885		198, 203, 185, 202, 205	2885	Layer	3	Southwark 'dark earth' horizon. Post-Roman abandonment, pre-medieval reoccupation. Same as [2041].	6.4	10.9	0.6	1.85	1.5
2886				Fill	2	Loose dark-grey brown sandy-silt. Fill of posthole [2887].	0.19	0.13	0.05	1.03	
2887			2887	Cut	2	Semi-circular posthole cut. Truncated to west by modern pile.	0.19	0.13	0.05	0.98	0.93
2888		192	2888	Layer	2	Firm orange-brown gravelly-sand layer. From section appears to be a dumped layer perhaps as ground raising. No finds recorded.	0.9	0.8	1.8	1.01	0.64

2889				Fill	2	Fill of posthole/pit [2890] composed of friable mid orange brown clay-silty-sand.	0.34	0.28	0.11	0.44	
2890			2890	Cut	2	Oval shaped pit cut or posthole. Cut into dark organic/peat layer [2891].	0.31	0.23	0.11	0.4	0.29
2891		183	2891	Layer	2	Firm dark brown clay-silt layer with CBM inclusions. Very organic- peat?	1	1.4	0.3	0.44	0.35
2892		196		Fill	2	Loose grey brown sandy-silty-clay. Pit fill or a layer NFE as only seen in section. Truncated to N and S by modern [+].		0.47	0.25	1.1	1.09
2893		196	2893	Cut	2	Large pit cut.	1.82	1.2	0.23	1.1	0.87
2894		196	2894	Layer	2	Brickearth (clay) layer on top of wall [2092].	1.22	1.06	0.06	1.13	1.07
2895				Fill	2	Loose grey-brown silty-sand. Fill of posthole [2896].	0.3	0.16	0.18	1.13	1.1
2896			2896	Cut		Semi-circular posthole cut.	0.3	0.16	0.18	1.1	0.98
2897		193		Layer	2	Compacted mid green-brown silty-sandy-gravel levelling layer only recorded in section S193. Suggested to extend to a much greater width than that recorded in section.		1.62	0.55	1.04	0.79
2898				Fill	7	Soft sandy-silt rubble- backfill of pre-Tudor robber cut [2899]. Revealed masonry [2914].	0.5	0.3	0.29	1.76	1.47
2899			2899	Cut	7	Medieval robber cut.	0.5	0.3	0.29	1.76	1.47

2900	196	2900	Layer	2	Suggested waterlain loose green-yellow sand and gravel layer or bedding for a clay and timber building.	1.14	4.58	0.07	1.19	1.07
2901		2901	Masonry	2	Compacted chalk and plaster suggested to form a wall foundation.	0.88	0.6	0.06	1.12	1.02
2902		2902	Cut	2	Construction cut for wall foundation [2901].	0.9	0.5	0.04	1.12	0.97
2903			Fill		Rubble fill of robbed out cut [2056].	2.4		0.25	1.87	
2904		2904	Layer		Roman gravel dump layer. Superseded by [3248].	0.9	1.05	0.06	0.87	0.85
2905		2905	Layer		Loose pink-grey sand. Roman dump layer. Superseded by [3248].	4.4	2.1	0.2	0.81	0.8
2906	193	2906	Layer	2	Loose dark brown-grey silty-ash: Roman dump layer.	4.4	3	0.05	0.92	0.72
2907			Void		Void					
2908	189	2908	Layer	2	Firm dark-brown charcoal/peat-early occupation layer?	3.4	1.1	0.4	0.67	0.65
2909		2909	Layer	2	Burnt floor layer- has the Roman structure burnt down? Composed of burnt clay.	0.26	0.56	0.07	1.1	1.04
2910		2910	Layer	2	Firm orangey-brown sandy-gravel suggested to represent a construction horizon.	2.24	2.4	0.27	1.24	0.97
2911		2913	Fill	2	Loose silty clay top fill of [2913].	1.22	2.88	0.05	0.95	0.9
2912	184	2913	Fill	2	Primary fill of [2913]. Loose dark brown green sandy-silt.	1.22	2.88	0.17	1.02	0.97
2913	184	2913	Cut	2	Large Roman pit cut filled with	1.22	2.88	0.21	1.1	0.89

						[2911], [2912].					
2914			2914	Masonry	7	Heavily truncated remains of Tudor palace floor.	0.6	0.7	0.2	1.65	1.47
2915			2915	Layer	2	Firm to friable gravel-sand layer-Dump layer?	0.8	0.52	0.07	0.74	0.62
2916				Fill		Chalky fill within [2056].	2.3	0.5	0.29	1.62	1.33
2917		200		Fill	7	Loose mid grey-brown rubble/chalk/silt. Rubble backfill or foundation of [2918].	1.8	0.6	0.23	1.47	
2918		200	2918	Cut	7	Construction cut for [2914].	1.8	0.6	0.23	1.7	1.47
2919			2919	Cut	2	Sub rectangular ?pit cut. Filled with [2920].	1.6	0.5	0.13	0.6	0.48
2920				Fill	2	Backfill of ?pit [2919]. Firm orange sandy-clay.	1.6	0.5	0.13	0.62	
2921				Fill		Loose dark green-brown silty-sand fill. Confusion regarding whether this is backfill of [2922] or the secondary fill of [2837] [2828] is the same as [2837].	1.3	1	0.36	1.49	1.37
2922			2922	Layer	2	Strongly cemented material-possibly from leaching of bonding material such as lime from masonry or alternatively as a result of an industrial activity and related to heat transference. Semi-circular shape. May well actually be fill within a cut.	1.3	1.4	0.41	1.54	1.13
2923			2924	Fill	2	Clay fill within [2924]- possibly a wall or floor.	0.6	1.98	0.14	1.15	

2924			2924	Cut	2	Linear cut Filled with clay 'wall' [2923]. Truncated by postholes.	0.6	1.98	0.14	1.15	0.96
2925				Fill		Chalk and flint backfill in cut [2956]. Packing/foundation for wall?	3.4	2	0.13	1.4	1.27
2926		192	2926	Layer	2	Patchy clay deposit seen above natural peat- alluvially deposited clay from flooding?	1.82	1.51	0.2	0.67	0.25
2927			2927	Layer	7	Loose yellow-grey sand. Bedding layer for floor [663].	1.7	1.8	0.05	1.8	1.75
2928			2928	Cut	2	One of four postholes seen cut into clay surface or wall [2923], interpreted as to represent phase of building. Alternatively, the posts may have been driven straight into cut [2924] to add integrity to [2923].	0.16	0.16	0.23	1.16	0.93
2929			2928	Fill	2	Loose to moderate dark yellow-brown sandy-silt. Fill of posthole.	0.16	0.16	0.23	1.16	
2930			2928	Cut	2	One of four postholes seen cut into clay surface or wall [2923], interpreted as to represent phase of building. Alternatively, the posts may have been driven straight into cut [2924] to add integrity to [2923].	0.18	0.14	0.13	1.15	1.02
2931			2928	Fill	2	Loose to moderate dark yellow-brown sandy-silt. Fill of posthole.	0.18	0.14	0.13	1.15	

2932			2928	Cut	2	One of four postholes seen cut into clay surface or wall [2923], interpreted as to represent phase of building. Alternatively, the posts may have been driven straight into cut [2924] to add integrity to [2923].	0.12	0.12	0.19	1.17	0.98
2933			2928	Fill	2	Loose to moderate dark yellow-brown sandy-silt. Fill of posthole.	0.12	0.12	0.19	1.17	
2934			2928	Cut	2	One of four postholes seen cut into clay surface or wall [2923], interpreted as to represent phase of building. Alternatively, the posts may have been driven straight into cut [2924] to add integrity to [2923].	0.16	0.16	0.2	1.2	1
2935				Fill	2	Loose to moderate dark yellow-brown sandy-silt. Fill of posthole.	0.16	0.16	0.2	1.2	
2936				Fill	2	Compact dark grey-brown clayey-silt. Primary Fill of pit [2937].	1.24	1.08	0.22	1.23	1.01
2937			2937	Cut	2	Circular Roman pit cut.	1.24	1.08	0.44	1.23	0.79
2938			2938	Cut	2	Small Roman pit cut or posthole.	0.26	0.38	0.11	1.14	1.03
2939				Fill	2	Loose light grey-brown silty-sand.	0.26	0.38	0.11	1.14	
2940			2940	Masonry	7	Red brick Tudor wall or floor. Heavily truncated. No depth as NFE.	0.9	1.1		1.71	1.53
2941			2941	Cut	2	Mid-sized circular pit cut Filled with [2942].	0.54	0.92	0.1	1.16	1.06
2942			2941	Fill	2	Loose mid-brown silt with occasional oyster shell.	0.54	0.92	0.1	1.16	

2943				Fill	2	Secondary fill of pit [2937]. Some confusion over levels on context sheets- primary fill [2936] seems too high.	1.24	1.08	0.22	1.01	0.79
2944		196	2944	Layer	2	Loose green-brown silty-sand. Suggested to be an occupation surface, associated with nearby structures. Yard surface?	0.86	0.54		1.12	
2945		196	2945	Fill	2	Recorded in section only. Suggested to be fill of [2893] or a layer that is the same as [2900].	1.5		0.09	1.1	0.84
2946			2924	Fill		Firm grey-yellow silty-clay with rubble. Suggested to be backfill of construction cut [2924] for wall [2923].	0.6	1.98	0.14	1.15	
2947			2947	Layer	2	Green-yellow-brown sandy dump layer. Lots of Roman finds. Same as [377]?	2.6	2.5	0.5	1.15	0.78
2948			2948	Layer	2	Recorded as 'dark layer' on a superseded MC plan only. Possibly the same as [2900] and [2945].	0.3	1.46			
2949				Void		Void					
2950				Fill	2	Soft grey-brown sandy-silt. Fill of Roman pit cut [2951].	1.02	1.08	0.26	1.13	
2951			2951	Cut	2	Large Roman pit cut Filled with [2950].	1.02	1.08	0.26	1.13	0.87
2952			2952	Cut	7	Construction cut for Tudor wall [2940]. No depth as NFE.	0.9	1.1		1.71	
2953				Layer		Sheet missing.					
2954				Layer		Sheet missing.					

2955			2826, 2955	Masonry	7	Chalk wall foundation for [2826]. No levels taken or thickness/depth recorded. No record in section.	3.6	2			
2956			2956	Cut	7	Construction for [2955]. No levels taken or thickness/depth recorded. No record in section.	3.6	2			
2957				Fill	2	Soft dark brown sandy-clay fill of posthole [2958].	0.1	0.11	0.21	0.8	
2958			2958	Cut	2	Sub-square shaped Roman posthole.	0.1	0.11	0.21	0.8	0.59
2959				Fill	2	Friable dark green-brown sandy- silt. Secondary fill of [2961].	1.78	1.2	0.19	1.22	
2960				Fill	2	Primary fill of [2961]. Firm silty- clay.	1.78	1.2	0.1	1.03	
2961			2961	Cut	2	Large Roman pit cut.	1.78	1.2	0.29	1.22	0.93
2962				Fill	2	Loose mid yellow grey sandy-silt- fill of posthole [2963].	0.59	0.54	0.09	1.15	
2963			2963	Cut	2	Circular shaped small pit cut or posthole.	0.59	0.54	0.09	1.15	1.04
2964				Fill	2	Dark green-grey silt- fill of posthole/pit [2965].	0.23	0.26	0.3	1.06	
2965			2965	Cut	2	Triangular shaped cut for posthole or small pit.	0.23	0.26	0.3	1.06	0.76
2966				Fill		Superseded by [3031].	0.51	0.62		1.05	
2967		186, 187		Fill	2	Top fill of linear feature [2969]. Lots of Roman finds.	1.2	3.84	0.28	1.03	
2968		186, 187		Fill	2	Primary fill of [2969]. Roman finds.	1.2	3.84	0.26	0.75	

2969	186	2969	Cut	2	Linear, vertical sided E-W ditch cut. NFE- extends beyond l.o.e to north of area between concrete piles.	1.2	3.84	0.64	1.15	0.51
2970			Fill	2	Soft dark brown grey fill of [2971].	0.22	0.22	0.38	1.14	
2971		2971	Cut	2	Circular shaped posthole cut.	0.22	0.22	0.38	1.14	0.76
2972			Fill	2	Fairly-soft dark brown grey silty-sand, Fill of posthole [2973].	0.18	0.18	0.1	1.09	
2973		2973	Cut	2	Circular shaped posthole within ditch cut [2969].	0.18	0.18	0.1	1.09	0.99
2974			Fill		Primary fill of pit [3048], cut by posthole [2971].	0.94	0.65	0.23	1.19	0.96
2975			Void		Void					
2976	197		Fill	2	Loose mid grey-green sandy-silt-Fill of [2977].	1.8	0.9	0.27	1.17	
2977	197	2977	Cut	2	Linear ditch cut, currently thought to be Roman.	1.8	0.9	0.27	1.17	0.9
2978	195		Fill	2	Firm silty-clay fill of [2981].	1.32	2.22	0.22	1.04	0.93
2979	196, 195		Layer		Homogenous mid-grey sand layer- possibly water lain/flooding.	1.32	2.22	0.07	1	0.82
2980	196, 195		Fill	2	Loose very dark-brown silty charcoal, fill of [2981]- suggested in situ burning or dump of burnt material from elsewhere.	1.32	2.22	0.05	0.87	0.75
2981	195, 196	2981	Cut	2	Rectangular construction cut, suggested to be for a timber building.	4.6	0.9	0.12	0.87	0.75
2982	195, 196		Fill	2	Loose mid-brown sandy-silt filled with occupational waste.	2.24	1.38	0.2	0.89	0.81

2983		195, 196	2983	Cut	2	Linear ditch cut, Filled with [2982]. Possibly a levelling cut for the area in preparation for occupation/structures.	1.32	2.22	0.13	0.91	0.74
2984		184, 195	2984	layer	2	Loose mid green-yellow silty-sand. Suggested to be part of a natural silting/flooding process.	1.74	4.3	0.13	0.89	0.84
2985		195	2985	Layer	2	Stiff light grey-green clay-archaeologically sterile.	0.9	0.32	0.04	0.76	0.72
2986		195		Fill		Loose dark red-brown redeposited peat. Fill of construction cut for a beam slot.	1.42	0.47	0.19	0.7	0.65
2987		195, 196	2987	Cut		Linear beam slot for construction of Roman building.	1.42	0.47	0.19	0.72	0.53
2988		195, 184, 196	2988	Layer	2	Clay and peat interface layer-natural.	4.6	1.7	0.1	0.73	0.64
2989		196, 184	2989	Natural	2	Firm red-brown peat.	1.7	4.6	0.5	0.62	0.48
2990				Void		Void					
2991				Void		Void					
2992				Void		Void					
2993				Void		Void					
2994				Void		Void					
2995				Void		Void					
2996				Void		Void					
2997				Void		Void					
2998				Void		Void					
2999				Layer							
3000				Fill	2	Firm grey-brown silty-clay Fill of [3001].	1.14	1.2	0.18	1.12	1.06

3001			3001	Cut	2	Square shaped pit cut that may have originated from a much higher level. Uncertain of phasing.	1.14	1.2	0.18	1.12	1
3002				Fill	2	Grey-brown silty-clay: Fill of posthole [3003].	0.4	0.4	0.3	1.08	
3003			3003	Cut	2	Circular posthole cut.	0.4	0.4	0.3	1.07	0.78
3004				Fill		Firm yellow-brown sandy-clay. Lower fill of concreted structure [3005]: may be a floor or washed in material. Suggested to relate to industry.	0.32	0.3	0.04	1.03	0.99
3005			3005	Structure	2	Cemented material forming a sub-rectangular type structure that is suggested to be related to Roman industry.	0.75	0.23	0.08	1.14	1.06
3006		183		Layer	2	Natural alluvial deposit/layer above gravel [3108].	0.92	1.05	0.3	0.28	0.09
3007		196	3008	Cut	2	Circular stakehole/posthole cut associated with Roman structure.	0.07	0.07	0.12	0.7	0.58
3008		196		Fill	2	Loose brown wood and peat-degraded timber fill of posthole [3007].	0.07	0.07	0.12	0.7	
3009			3008	Cut	2	Circular stakehole cut, associated with Roman building.	0.11	0.11	0.15	0.7	0.55
3010		203		Fill	2	Degraded timber fill of posthole [3009].	0.11	0.11	0.15	0.7	0.55
3011			3008	Cut	2	Circular stakehole cut in association with Roman structure.	0.1	0.1	0.15	0.7	0.55

3012				Fill	2	Degraded timber fill of posthole [3011].	0.1	0.1	0.15	0.7	0.55
3013			3008	Cut	2	Circular posthole cut seen in association with a Roman structure.	0.08	0.08	0.15	0.69	0.54
3014				Fill	2	Degraded timber fill of posthole.	0.08	0.08	0.15	0.69	0.54
3015			3008	Cut	2	Circular posthole cut seen in association with a Roman structure.	0.08	0.08	0.15	0.69	0.54
3016				Fill	2	Degraded timber fill of posthole [3015].	0.08	0.08	0.15	0.69	0.15
3017		193	3017	Layer	2	Firm natural peat layer as exposed by hand auger.	4.36	2.86	0.22	0.68	0.57
3018		185		Fill	7	Compacted dark grey-brown silty-clay backfill of construction cut [3030] for med wall [3019].	1.85	1.35	0.4	1.8	
3019		185, 204, 202	3019	Masonry	7	Chalk and red brick/tile wall aligned N-S.	1.85	1.35	0.97	1.39	0.45
3020			3020	Cut	2	Circular shaped (and apparently very deep) posthole cut associated with Roman structure.	0.13	0.13	0.59	0.6	0.01
3021				Fill	2	Degraded timber in posthole [3020].	0.14	0.14	0.59	0.6	
3022			3020	Cut	2	Circular posthole cut associated with Roman structure.	0.08	0.08	0.52	0.6	0.08
3023				Fill	2	Degraded timber fill of posthole [3022].	0.08	0.08	0.68	0.6	-0.08
3024				Fill	2	Degraded timber in circular posthole cut [3025].	0.09	0.09	0.58	0.55	-0.03
3025			3020	Cut	2	Circular posthole cut.	0.09	0.09	0.58	0.55	-0.03

3026			3020	Cut	2	Circular posthole cut. Filled with [3027].	0.08	0.08	0.56	0.56	0
3027				Fill	2	Degraded timber fill of [3026].	0.08	0.08	0.56	0.56	
3028			3020	Cut	2	Circular post hole cut associated with Roman structure.	0.15	0.15	0.61	0.6	-0.01
3029				Fill	2	Degraded timber fill of posthole [3028].	0.15	0.15	0.61	0.6	
3030		203	3030	Cut	7	Construction cut for wall [3019].	1.85	1.35	0.97	1.39	0.45
3031				Fill	2	Firm dark green-grey silty-sand: fill of heavily truncated ditch [3032].	0.66	0.71	0.34	1.13	0.79
3032			3032	Cut	2	Irregular shaped, heavily truncated linear ditch cut.	0.66	0.71	0.34	1.13	0.79
3033		197		Fill	2	Secondary fill of cut [3057], [3114] being primary fill (according to S197).	2.6	0.7	0.25	0.98	
3034				Fill	2	Firm light yellow-brown sandy-clay: suggested internal floor surface but also recorded as a pit cut [3035].	1.7	0.28	0.16	1.05	0.97
3035			3035	Cut	2	Suggested construction cut for an internal floor surface (from a Roman structure?).	1.7	0.28	0.16	1.06	0.9
3036		190		Fill	2	Fill of posthole [3037]; seen in N-facing section S190 only.	0.25		0.43	1.29	1.27
3037		190		Cut	2	Small pit or posthole seen in section only.	0.25		0.43	1.29	0.86
3038		189		Fill	8	Fill of [3039]- only recorded in section.	1.04		0.62	1.6	
3039		189		Cut	8	Pit cut only recorded in section S189.	1.04		0.62	1.6	0.94

3040		191		Fill	2	Soft yellow sand Fill of pit/posthole [3042]. Seen in section only.	0.65		0.5	0.86	0.8
3041		191		Cut	2	Small pit or posthole cut; only seen in section.	0.23		0.32	0.86	0.55
3042		191		Fill	2	Fill of pit cut [3043]- seen in section only.	0.32		0.23	0.22	1.13
3043		191		Cut	2	Pit cut Filled with [3042] but seen in section only.	0.32		0.23	1.22	1
3044		191		Fill	2	Fill of pit cut [3045]; seen in section only.	0.51		0.26	1.13	1.1
3045		191		Cut	2	Pit cut seen in section only.	0.51		0.26	1.13	0.86
3046		197	3046	Layer	2	Compact dark brown-orange silty-clay: suggest Roman floor surface.	0.98	1.1	0.15	1.38	1.16
3047				Fill	2	Friable dark-grey silty-sand: secondary fill of [3048].	1.9	0.94	0.25	0.96	0.71
3048			3048	Cut	2	Large, irregularly shaped pit cut. Heavily truncated. Filled with [2974] and [3047].	1.9	0.94	0.48	1.19	0.71
3049				Void		Void					
3050				Void		Void					
3051		193		Layer	2	Mid grey compacted clay- same grey clay as seen across the site- flooding? Alluvial deposit. Only recorded in section.			0.05	0.68	0.64
3052		193		Layer	2	Loose light yellow-grey sand. Suggested to be levelling material or for the creation of a bank (next to a channel/streamlet?). Only seen in section.			0.14	0.65	0.61

3053		193		Layer	2	Very dark grey/brown charcoal/sand/silt- burnt material. Site of burning /settlement or dumped material. Only seen in section.			0.1	0.79	0.73
3054				Fill		Loose to soft light grey fill of concreted structure [3005].	0.95	0.28		1.15	1.11
3055		205, 202, 203	3055	Layer	2	Compact dark green-brown sandy-silty-clay.	4.06	1.93	0.4	1.24	1.02
3056				Fill	2	Base fill of Roman linear feature [3117], sealed by [3103].	1.97	0.84	0.24	1.25	
3057		197	3057	Cut	2	N-S ditch cut, likely contemporary with [3117]. Filled with [3114].	2.6	0.7	0.41	0.98	0.78
3058				Fill	2	Circular posthole cut.	0.16	0.16	0.21	0.98	
3059			3059	Cut	2	Roman posthole cut.	0.12	0.12	0.09	0.98	0.77
3060				Fill	2	Infilling of [3061]- firm dark-brown grey silty-clay.	0.12	0.12	0.21	0.98	
3061			3061	Cut	2	Cut of posthole seen following the removal of fills of ditch cut [3057].	0.16	0.16	0.21	0.98	0.77
3062				Layer	2	Peat layer containing some anthropogenic material, auger hole drilled through this to ascertain the thickness.	2.6	2.5	0.44	0.65	0.21
3063				Fill	2	Firm dark-brown grey silty-clay: fill of posthole [3064].	0.22	0.2	0.1	0.92	
3064			3064	Cut	2	Circular posthole cut- Roman in date.	0.22	0.2	0.1	0.92	0.82
3065				Fill	2	Firm green-brown silty-clay fill of Roman pit cut.	0.35	1.2	0.25	1.13	

3066			3066	Cut	2	Sub-rectangular shaped pit cut with flat base. Heavily truncated. Possible terminus.	0.34	1.2	0.25	1.13	0.84
3067				Fill	2	Dark brown-grey silty-clay Fill of [3068]. Complete pot recovered.	0.22	0.22	0.09	0.78	
3068			3068	Cut	2	Circular posthole cut. Roman. Filled with [3067].	0.22	0.22	0.09	0.78	0.69
3069				Fill	2	Loose light green-grey sand. Fill of posthole/pit [3070].	0.16	0.1	0.14	0.62	
3070			3020	Cut	2	Semi-circular posthole/pit cut.	0.16	0.1	0.14	0.62	0.48
3071				Fill	2	Degraded timber in posthole [3072].	0.12	0.12	0.2	0.51	0.41
3072			3020	Cut	2	Circular posthole cut filled by [3071]. Roman.	0.12	0.12	0.2	0.51	0.41
3073				Fill	2	Fill of posthole or possibly simply a void in the peat.	0.09	0.09	0.28	0.51	0.23
3074			3020	Cut	2	Posthole made into peat or possibly a void. Filled with [3073].	0.09	0.09	0.28	0.51	0.23
3075				Fill	2	Degraded timber fill of posthole [3076].	0.08	0.08	0.35	0.53	
3076			3020	Cut	2	Circular post hole cut Filled with [3075]. Associated with Roman structure.	0.08	0.08	0.35	0.53	0.18
3077				Fill	2	Degraded timber remaining in posthole.	0.1	0.06	0.36	0.56	0.2
3078			3020	Cut	2	Semi-circular posthole cut.	0.1	0.06	0.36	0.56	0.2
3079				Fill	2	Degraded timber fill within posthole.	0.06	0.06	0.18	0.5	
3080			3020	Cut	2	Circular posthole cut associated with Roman structure.	0.06	0.06	0.18	0.5	0.32

3081				Fill	2	Degraded timber fill within posthole.	0.05	0.05	0.24	0.5	
3082			3020	Cut	2	Circular shaped posthole associated with Roman structure.	0.05	0.05	0.24	0.5	0.26
3083				Fill	2	Degraded timber fill within posthole.	0.05	0.05	0.48	0.53	
3084			3020	Cut	2	Circular posthole cut associated with Roman structure.	0.05	0.05	0.48	0.53	0.05
3085				Fill	2	Loose dark brown degraded wood and peat fill of pit/posthole [3086].	0.26	0.18	0.25	0.52	
3086			3020	Cut	2	Small pit or posthole associated with Roman structure.	0.26	0.18	0.25	0.52	0.27
3087				Fill	2	Degraded timber fill of posthole.	0.06	0.06	0.24	0.49	
3088			3020	Cut	2	Circular posthole cut associated with early Roman structure.	0.06	0.06	0.24	0.49	0.25
3089				Fill	2	Firm dark brown-grey silty-clay fill of posthole [3090].	0.1	0.1	0.16	0.82	
3090			3090	Cut	2	Circular posthole cut seen within [3057].	0.1	0.1	0.16	0.82	0.66
3091				Fill	2	Firm dark grey-brown silty-clay fill of posthole [3092].	0.16	0.16	0.09	0.79	
3092			3092	Cut	2	Circular posthole cut seen in association with ditch [3057].	0.16	0.16	0.09	0.79	0.7
3093				Fill	2	Loose dark grey brown silty-clay Fill of [3094].	0.05	0.05	0.1	1.24	1.14
3094			3100	Cut	2	Stakehole suggested to relate to a fence line or partition in association with [3096], [3098] and [3100].	0.05	0.05	0.1	1.24	1.14

3095				Fill	2	Loose dark grey-brown silty-clay fill of stakehole [3096].	0.05	0.05	0.08	1.24	
3096			3100	Cut	2	Circular stakehole cut seen in association with similar cuts suggested to form a fence line or partition.	0.05	0.05	0.08	1.24	1.16
3097				Fill	2	Loose dark grey brown silty-clay Fill of stakehole [3098].	0.16	0.14	0.27	1.22	
3098			3100	Cut	2	Square shaped posthole Filled with [3097]. Seen in association with other stake/postholes suggested to form a fence line or partition.	0.16	0.14	0.27	1.22	0.85
3099				Fill	2	Loose dark grey-brown clay-silt Fill of stakehole [3100].	0.05	0.05	0.07	1.22	1.15
3100			3100	Cut	2	Small stakehole cut suggested to be related to other stake/postholes to form a fence line or partition.	0.05	0.05	0.07	1.22	1.15
3101				Fill	2	Loose dark grey-brown clay-silt Fill of [3102].	0.1	0.08	0.32	1.14	
3102			3102	Cut	2	Sub-circular stakehole cut. Driven through fill [2976] of ditch [2977].	0.1	0.08	0.32	1.14	0.82
3103		197		Fill	2	Compact light brown-grey silty-clay. Secondary fill of cut [3117], above [3056]. Contains whole pot with seeds in it.	0.95	1.2	0.22	1.24	
3104		183		Fill	2	Degraded timber representative of stake within cut [3105]. Seen in section only.	0.06		0.33	0.77	
3105		183		Cut	2	Cut of stakehole; seen in section	0.06		0.33	0.77	0.44

						only.					
3106		183		Fill	2	Loose dark brown degraded timber Fill of stakehole [3107]. Seen in section only.	0.1		0.52	0.56	
3107		183		Cut	2	Cut of stakehole seen only in section.	0.1		0.52	0.56	0.04
3108		183		Natural	1	Natural clay-gravel as seen in two slots excavated through peat. Presumed to extend across entirety of the area. NFE				0.08	-0.18
3109		185	3109	Layer	2	Compact dark grey-green sandy-silty-clay, suggested to be a Roman demolition layer.	2.1	1.3	0.4	1.39	1.25
3110			3110	Layer	2	Dark brown-green sand-clay-silt with Roman material: dump layer.	2.1	1.3	0.27	1.19	0.94
3111		210, 197, 208, 187, 209	3111	Natural	2	Natural peat horizon seen across site. In this instance observed in auger hole. Recorded in S197 as being 0.22m thick. Varies in thickness between 0.05 and 0.1m in auger holes.			0.22	0.84	0.38
3112			3112	Masonry	6	E-W aligned late medieval chalk and red CBM wall. Precursor to Tudor palace.	0.5	0.8	0.7	1.37	0.67
3113			3113	Cut	6	Construction cut for E-W wall [3112].	0.5	0.8	0.7	1.37	0.67
3114		197		Fill	2	Light green-grey silty-sand. Base fill of linear cut [3057].	2.6	0.7	0.26	1.26	
3115		198		Fill	2	Soft green-brown silt Fill of gully/ditch [3116].	3.3	1.3	0.38	1.15	

3116		198	3116	Cut	2	Linear, NE-SW aligned ditch or gully. U-shaped base.	3.3	1.3	0.38	1.15	0.77
3117		197	3117	Cut	2	Cut of E-W ditch, similar to [3057] and [3032]. Only partially exposed. Filled with [3056]. Contemporary with ditch [3057]?	0.78	1.96	0.45	1.14	0.83
3118		184	3118	Cut	7	Construction cut for wall [611]. Heavily truncated.	1.96	2	1.95	1.88	-0.07
3119			3119	Masonry	7	Unfrogged red Tudor brick used to form a wall section built into archway [611] for foundations of Suffolk Place.	1.96	1.09	1.95	1.73	1.79
3120		167, 168, 183	3120	Layer	2	Firm green-grey gravel and sandy-silt. Occasional oyster shells. Possibly natural and shells are residual.	1.22	0.74	0.23	0.8	0.78
3121		198	3141	Layer	2	Firm mid yellow-green silty-gravelly-clay. Green Roman dump layer with samian ware.	4.8	4.2	0.19	1.28	1.09
3122				Fill	2	Friable green-grey silty-sand. Primary fill of [3124]. Roman rubbish pit fill.	1.36	1.1	0.17	1.09	
3123				Fill	2	Firm very dark grey silty-clay. Secondary fill of Roman rubbish pit [3124].	1.36	1.1	0.17	0.9	
3124			3124	Cut	2	Irregular shaped Roman pit cut.	1.36	1.1	0.23	1.09	0.74
3125			3125	Layer	2	Firm dark brown green silt-sand-clay layer. Thought to be Roman. Heavily truncated.	1.35	0.7	0.3	1.14	
3126			3126	Layer	2	Loose mid yellow brown silty-sandy gravel. Dump layer.	1.26	1.26	0.15	0.92	

3127			3127	Layer	2	Firm dark green-grey silty-clay. Roman dump layer/ground raising seen across this part of site and comparable to other ground raising events seen across site from the later Roman period.	3.5	9.48	0.61	1.71	
3128			3128	Layer	2	Loose light brown-grey sandy-silt. Dump layer or ground raising. Possibly natural as very clean.	1.3	0.65	0.15	0.85	
3129		199	3129	Layer	2	Loose light brown-grey sandy-silt. Has few finds but does contain Roman glass. Possible dump layer or ground raising.	1.85	1.1	0.2	1.04	1.01
3130		196	3130	Layer	2	Redeposited peat layer that contains pottery. Maybe from a nearby cut associated with linear [2987].	0.78	0.64	0.2	0.8	
3131				Void?		Sheet missing.					
3132		184		Natural	1	Purple-yellow clay layer seen beneath peat in S184.		1.5	0.25	0.09	
3133			3133	Cut	2	Very shallow construction cut for beam slot [2846] from a suggested Roman clay and timber building.	0.45	0.3	0.09	1.39	1.3
3134				Cut		Void					
3135			3135	Natural	2	Natural peat layer.	1.1	0.55	0.5	0.71	
3136				Masonry		Void					
3137				Cut		Void					
3138				Fill	2	Loose light green-brown gravel/sand/silt. Fill of [3141].	0.85	1.3	0.38	1.15	

3139				Fill	2	Loose dark grey-brown silt-sand-clay Fill of [3141] with frequent charcoal flecks.	1.6	1.3	0.38	1.15	
3140		198		Fill	2	Primary fill of [3141]. Brickearth/mortar demolition material fill.	1.7	1.2	0.33	0.88	
3141		198	3141	Cut		NE-SW aligned ditch cut. Runs parallel to ditch [3116]-twin/double ditch feature?	4.8	1.2	0.85	1.09	0.53
3142				Fill	2	Compact orange-brown gravel and sand- fill of pit [3143]. Sheet says Tudor but also possibly Roman. CBM and pot recovered.	1.6	0.25	0.2	1	0.93
3143			3143	Cut	2	Cut of linear feature. Filled with [3142]. Thought to be Roman.	1.6	0.25	0.2	1	0.8
3144		199	3144	Layer	2	Loose light grey-brown sandy-silt with Roman glass.	1.9	0.8	0.15	0.91	0.89
3145		205		Fill	2	Upper fill of [3157]. Loose dark brown clay-silt with pot and CBM.	1.58	1	0.12	0.88	
3146		202, 205	3146	Natural	2	Natural peat layer as exposed in slots.	4.9	2.1	0.25	0.85	0.57
3147		210, 208, 209, 197		Natural	1	Firm light yellow-grey clay with gravel. Natural clay. Only exposed in small areas but presumed to represent underlying geology.			0.15	0.37	0.22
3148				Natural		Natural firm mid grey to brown silty clay. A frequent amount of organic inclusions.			0.56	0.3	-0.28

3149		199	3149	Layer	2	Peat layer that contains anthropogenic material- metal and bone. Pre-Roman occupation.	1.9	0.9	0.1	0.76	0.61
3150		198	3150	Layer	2	Firm yellow-brown silty-sand. Probably same as [3129]. Cut by stakeholes.	3.4	0.35	0.46	0.93	
3151		197		Layer	2	Firm dark grey-brown sandy-silt. As seen in section. Suggested to be either a natural accumulation or a trample horizon. Recorded in Section only. More likely to be fill in the base of cut [3117].	1.72	0.84	0.08	1.09	0.85
3152		197		Natural	2	Natural clay/peat layer. Recorded in section only.			0.24	1.03	0.85
3153		197		Natural	2	Loose mid yellow grey natural sand recorded in section only.			0.12	0.92	0.85
3154				Fill	10	Mod construction cut/demolition material fill.	0.7	0.1	0.28	1.3	
3155			3155	Cut	10	Mod construction cut.	0.7	1	0.28	1.3	1.05
3156		205	3156	Natural	2	Compacted grey-brown natural gravel layer.	2	1.45	0.12	0.89	0.88
3157		205	3157	Cut	2	Irregular shaped ditch or pit cut. Filled with [3158] and [3145].	3.2	1.3	0.33	0.8	0.47
3158		205		Fill	2	Firm, compact dark-brown silty-clay with Roman finds.	2.85	0.85	0.17	0.7	0.6
3159				Fill	2	Loose dark brown peat/clay. Suggested pit fill but appears as being very clean and natural-looking.	1.2	0.75	0.1	0.53	0.51

3160			3160	Cut	2	Suggested to be a cut filled with peat but more likely a variation in natural peat. No finds.	1.2	0.75	0.1	0.4	0.39
3161		199	3161	Natural	2	Very dark brown peat layer. Natural.	1.7	0.45	0.15	0.65	0.53
3162		199	3162	Fill	2	Rooting fill that has been identified as representing a tree bole or natural variation. Fill of [3262].	0.6	0.9	0.25	0.59	
3163		199	3163	Layer	2	Natural alluvium/flooding layer. Uncertain of depth.	0.9	0.6	0.3	0.51	
3164				Void		Void					
3165				Void		Void					
3166				Void		Void					
3167				Void		Void					
3168				Void		Void					
3169				Void		Void					
3170				Fill		Void					
3171				Cut		Void					
3172				Layer		Void					
3173		202		Fill	2	Moderately compacted light grey-brown silty-sand. Suggested fill of a Roman pit [3174]. Pot recovered.	2	0.44	0.29	0.7	
3174		202	3174	Cut	2	Flat based, linear cut aligned N-S. Filled by [3173] that contains Roman pottery.	2	0.44	0.29	0.7	
3175				Void		Void					
3176				Void		Void					
3177				Void		Void					

3178				Fill	2	Degraded timber fill of stakehole [3179].	0.06	0.06	0.13	0.6	
3179		3179		Cut	2	Stakehole, part of a series of stakeholes ([3179] to [3193]) running directly parallel and through the centre of ditch cuts [3116] and [3141].	0.06	0.06	0.13	0.6	0.47
3180				Fill	2	Degraded timber fill of stakehole [3181].	0.06	0.06	0.13	0.53	
3181		3179		Cut	2	Stakehole, part of a series of stakeholes ([3179] to [3193]) running directly parallel and through the centre of ditch cuts [3116] and [3141].	0.06	0.06	0.13	0.53	0.4
3182				Fill	2	Degraded timber fill of stakehole [3183].	0.06	0.06	0.13	0.48	
3183		3179		Cut	2	Stakehole, part of a series of stakeholes ([3179] to [3193]) running directly parallel and through the centre of ditch cuts [3116] and [3141].	0.06	0.06	0.13	0.48	0.35
3184				Fill	2	Degraded timber fill of stakehole [3185].	0.06	0.06	0.13	0.5	
3185		3179		Cut	2	Stakehole, part of a series of stakeholes ([3179] to [3193]) running directly parallel and through the centre of ditch cuts [3116] and [3141].	0.06	0.06	0.13	0.5	0.37
3186				Fill	2	Degraded timber fill of stakehole [3187].	0.06	0.06	0.13	0.49	

3187			3179	Cut	2	Stakehole, part of a series of stakeholes ([3179] to [3193]) running directly parallel and through the centre of ditch cuts [3116] and [3141].	0.06	0.06	0.13	0.49	0.36
3188				Fill	2	Degraded timber fill of stakehole [3189].	0.06	0.06	0.13	0.47	
3189			3179	Cut	2	Stakehole, part of a series of stakeholes ([3179] to [3193]) running directly parallel and through the centre of ditch cuts [3116] and [3141].	0.06	0.06	0.13	0.47	0.34
3190				Fill	2	Degraded timber fill of stakehole [3191].	0.06	0.06	0.13	0.49	
3191			3179	Cut	2	Stakehole, part of a series of stakeholes ([3179] to [3193]) running directly parallel and through the centre of ditch cuts [3116] and [3141].	0.06	0.06	0.13	0.49	0.36
3192				Fill	2	Degraded timber fill of stakehole [3193].	0.06	0.06	0.13	0.47	
3193			3179	Cut	2	Stakehole, part of a series of stakeholes ([3179] to [3193]) running directly parallel and through the centre of ditch cuts [3116] and [3141].	0.06	0.06	0.13	0.47	0.34
3194		198	3194	Layer	2	Thin light yellow-brown sandy layer that appears as representing a surface of some kind. Cut by regularly spaced stake/posthole cuts.	2.82	0.53	0.04	0.49	
3195		202	3195	Layer	2	Moderately compacted yellow sandy-clay. Associated with	0.72	0.8	0.09	0.85	

						[3197].					
3196			3196	Cut	10	Construction cut for [2619]-modern wall.	1.1	1.7		2.13	
3197		203	3197	Layer	2	Moderately compacted yellow sandy layer- no finds.	1.35	0.75		0.95	0.84
3198		203	3198	Layer	2	Loose dark-red brown silty-clay with flint finds.	2.2	1.24	0.14	0.94	0.72
3199				Masonry		Sheet missing					
3200		198	3200	Natural	2	Firm dark purple-brown peat, seen across site.			0.5	0.74	0.49
3201				Fill	2	Loose mid grey-brown sandy-silt; Fill of [3202] containing pottery and CBM.	0.35	0.5	0.22	1.25	1.03
3202			3202	Cut	2	Sub-circular, vertically sided, flat based pit cut. Visible when spoil removed and LOE moved to the north.	0.25	0.5	0.22	1.25	1.03
3203				Fill	2	Loose mid grey-brown sandy silt Fill of [3204]. Contains pottery and glass	0.5	0.6	0.41	1.29	
3204			3204	Cut	2	Irregular shaped small pit or posthole.	0.5	0.6	0.41	1.29	0.88
3205				Fill	2	Moderately compacted mid grey-brown sandy-silt with pot, glass, metal and CBM.	0.69	1.3	0.43	1.08	
3206			3206	Cut	2	Sub-circular/truncated pit cut, Filled with [3205].	0.69	1.3	0.43	1.08	0.65
3207			3207	Layer	2	Moderately compacted mid grey brown sandy silt with no finds.	2.4	2.1	0.2	1.28	1.19
3208			3208	Fill	2	Loose light brown sand with no	1.1	0.22	0.5	0.69	

						finds.					
3209				Fill	2	Loose mid brown-grey sandy-silt with no finds recorded.	0.3	0.3	0.29	1.07	
3210			3210	Cut	2	Small pit cut or posthole Filled with [3209]. No finds in fill.	0.3	0.3	0.29	1.07	0.78
3211		205		Fill	2	Loose dark pink-brown sandy-silt with pottery, metal and CBM finds. Fill of [2312]. Thought to be Roman but uncertain.	0.6	1.3	0.34	1.07	
3212		205	3212	Cut	2	Small pit cut. Thought to be Roman but uncertain. Filled with [2311].	0.6	1.3	0.34	1.07	0.73
3213		198	3213	Natural	2	Firm to hard yellow alluvial clay-water lain or flood deposit.	4.9	2.95	0.1	0.42	0.35
3214		199	3214	Natural	1	Semi-loose bright orange/light brown gravel- natural geology. NFE	1.6	1.8		0.2	
3215		199		Fill	2	Firm yellow sandy clay, upper (secondary) fill of pit [3251]. Lower fill is [3216].	0.64	0.48	0.33	0.45	0.38
3216		199		Fill	2	Firm green sandy-clay. Primary fill of pit cut [3251].	0.7	0.16	0.25	0.45	0.06
3217		198	3217	Natural	2	Soft yellow-brown clean sand. Probably natural.	0.8	0.4	0.7	1.28	
3218			3218	Natural	1	Loose mid yellow-red brown sandy-gravel: natural gravel geology. NFE	4.9	2.95		0.31	
3219				Fill	2	Soft dark red-brown organic material and clay with Roman pottery and CBM. Fill of linear/ditch [3224].	0.66	0.9	0.26	0.71	

3220				Fill		Loose grey-brown silty-clay Fill of pit [3221]. No dating evidence recovered although cut into top of Roman 'green' layer.	0.34	0.5	0.1	1.41	
3221			3221	Cut		Sub-circular shaped shallow pit cut with no dating evidence in fill although cut is made into top of Roman 'green' layer.	0.34	0.5	0.1	1.41	1.3
3222				Fill	2	Loose green-yellow sand Fill of pit [3223] with no dating evidence recovered.	0.6	0.5	0.17	0.68	
3223			3223	Cut	2	Semi-circular shaped pit cut. No dating evidence recovered from fill [3222].	0.6	0.5	0.17	0.68	0.51
3224			3224	Cut	2	Linear shaped, N-S aligned ditch cut, same as [3174]. NFE. Filled with [3219].	0.66	0.9	0.26	0.74	0.38
3225		203	3225	Layer	1	Soft alluvial ?clay. Seen and recorded from sections and plans.	2.21	1.24	0.11	0.67	
3226				Void		Void					
3227				Void		Void					
3228				Void		Void					
3229				Void		Void					
3230			3230	Layer	3	Dark brown clayey silt abandonment layer- post Roman abandonment, pre-medieval occupation.	20.16	21.3	0.5	1.89	1.35
3231		202		Natural	1	Grey sandy-clay layer recorded in section only. Natural.		1.5	0.08	0.69	0.67

3232		205, 203, 202		Natural	1	Loose mid yellow sandy-clay: natural alluvium. Seen in section and assumed to extend over entire site.	4.9	2.1	0.15	0.46	
3233		202, 204, 203, 205		Natural	1	Natural loose light brown-yellow sandy-clay with flint pebbles. Observed in several test slots- dimensions not representative of complete extent. NFE.	3.15	0.5		0.3	
3234		207		Fill	2	Firm green-brown silty-clay with pottery, glass and animal bone. Roman? Fill of [3235].	0.55	0.4	0.38	0.66	
3235		207	3235	Cut	2	Semi-circular pit cut. Truncated by modern wall. Filled with [3224].	0.55	0.4	0.25	0.66	0.38
3236		207	3236	Natural	1	Firm blue-grey natural clay. Depth is to limit of excavation and presumably much deeper.	1.24	1.44	0.13	0.45	
3237		207	3237	Natural	2	Firm dark brown clay/peat: natural.	1.42	1.46	0.34	0.8	0.68
3238		207	3238	Natural	2	Firm green-grey silty-clay brickearth: natural.	1.43	1.25	0.28	1.31	0.97
3239		207	3239	Layer	2	Loose grey silty-clay with frequent CBM, gravel and oyster shell.	1.42	1.46	0.24	0.95	
3240		207	3240	Cut	7	Rectangular shaped construction cut for wall [3241].	1.44	0.4	0.85	1.2	0.35
3241		207	3241	Masonry	7	Redbrick Tudor wall/foundation from Charles Brandon's palace.	1.42	0.36	0.85	1.03	1

3242			3242	Cut		Sub-rectangular construction cut for wall [3243]. Not fully excavated.	0.42	0.94			1	0.89
3243			3243	Masonry	7	Either a small section of N-S aligned surviving wall or collapsed bonded masonry from [3241]. Red unfrosted Tudor bricks. Not fully excavated.	0.42	0.94			1	0.89
3244				Fill		Moderately compacted mid orange brown sandy-silt. Fill of [3245]. Metal recovered.		1.4	0.75			
3245				Cut		Sub-circular pit cut recorded in section only. No levels taken. Not in S206 as suggested on sheet. Filled with [3244].		1.4	0.75			
3246				Fill	2	Friable green-yellow-brown silty-sand. Fill of pit cut [2713].	0.4	0.6	0.05		1.33	1.28
3247		181		Fill	2	Firm dark brown clay, peat and silt. Top fill of construction cut [2714]- this fill represents the renumbered [2713].	0.68		0.52		1.42	1.4
3248			3248	Layer	2	Firm and friable mixed sand, gravel and clay. Laminated Roman layer. Supersedes [2868], [2882], [2904], [2905].	4.4	3.2	0.44		1.09	0.9

3249		181		Fill	2	Fill of [2736]. Firm mottled grey-brown-green sandy-green clay and silt. Posthole [2736] filled with sediment after suggested deliberate removal of post. Same as [2796] suggesting that after building was demolished area was not in use and began to silt up.	0.12	0.12	0.04	0.97	0.93
3250			3250	Layer	7	Moderately loose light brown-orange silty-clay with plaster-demolition horizon from destruction of wall [2846]. (This context originally recorded as [2736].	1.66	0.79	0.18	1.5	1.31
3251			3251	Cut	2	Sub-circular small pit cut Filled with [3214]. Suggested to be cut into natural gravels and sealed by peat- is this really an anthropogenic feature or is it natural?	0.84	0.64	0.45	0.32	-0.13
3252				Fill	2	Firm mid grey-green sandy-clay. Suggested pit fill but also possibly natural.	0.76	0.42	0.23	0.37	0.3
3253			3253	Cut	2	Suggested pit cut recorded from S199. Quite possibly (and more likely) a natural variation.	0.76	0.42	0.23	0.37	0.14
3254		185	3254	Cut	7	Rectangular robber cut for the taking of wall [3019] and truncating [3030].	1.36	1.9	0.38	1.79	1.41
3255				Natural	1	Number given to natural gravels in post ex for this part of the				0.11	

						site.					
3256				Natural	1	Orange clay seen in auger hole S209. Natural clay.	0.1	0.1	0.5	0.04	-0.45
3257		159	3257	Cut	7	Rectangular construction cut for arch [2100]/ [628] filled by [3258].	2.12	4.08	1.73	2.01	0.26
3258		159		Masonry	7	Chalk foundation seen in Tudor foundation built within construction cut [3257]. Seals [3263]. Recorded from S159.		2.42	0.6	1.3	1.27
3259		159		Masonry	7	Light brown sandy mortar fill as part of Tudor arch foundation.		2.27	0.14	1.52	1.38
3260		183		Fill	2	Firm mid greenish-brown sandy-silt with frequent oyster shell. Fill of pit [2633]. No dating evidence recovered.	0.65	0.73	0.26	1.14	
3261		183		Fill	2	Firm to friable mid green-brown silty-sand. Fill of pit cut [2665]. Thought to be early Roman.	0.4	0.25	0.05	1.17	
3262		199		Cut	2	Pit or a ditch. Recorded from S199 only. Fill [3162] suggested to be natural, so possible tree bole.		0.54	0.2	0.58	0.46
3263				Masonry	7	Crushed chalk and lumps as part of large Tudor arched foundation. Recorded off of S159.		2.32	0.48	0.72	0.61

3264			3264	Layer		Firm mid yellow-green silty-clay that has been interpreted as a beaten Roman occupation surface. Initially recorded as [2562b]- quite different from [2562a] so given a new number.	3.6	2	0.3	0.93	0.89
3265				Fill	2	No fill in stakehole.	0.06	0.1	0.05	0.54	
3266				Fill	3	No fill in stakehole.	0.1	0.08	0.05	0.6	
3267		100		Cut		Construction cut for late post-med wall [1052].	1.52	0.7	0.18	1.79	1.61
4000		65, 64, 62, 61, 67		Layer	11	Modern tarmac.				0.88	
4001		62, 63, 64, 65, 66, 67, 68, 61		Layer	11	Modern concrete under road.				0.78	
4002		61	4002	Layer	8	Victorian dump deposit.	2	3.7	0.89	4.5	4.46
4003		61	4003	Layer	8	Post Tudor dump deposit.	2	4.3	0.56	3.74	3.69
4004			4004	Masonry	8	Substantial Tudor drain. Machined away?	0.82	0.76	1.31	2.53	1.21
4005		61	4005	Layer	8	Firm light grey-brown weathered mortar layer.	2.2	1.9	0.45	3.32	3.24
4006		61	4006	Layer	5	Soft and friable dark brown sandy-silty-clay.	4.33	2	0.9	3.19	2.84
4007		62	4007	Layer	10	Soft and friable dark brown silty-sandy-clay. Victorian dump layer.	4.3	1.5	0.65	4.75	4.57
4008			4008	Masonry	9	Post-med red brick wall.	4.5	0.35	2	4.39	4.08
4009		62		Fill	10	Loose light grey-brown silty-sand. NFE? Backfill of basement.	4.2	0.2	0.2	4.49	

4010		62	4010	Layer	8	Firm and friable mid brown orange sandy-silty-gravel. Post-med layer.	4.2	1.3	0.46	4.05	3.61
4011		62	4011	Cut	9	Construction cut for wall [4008] containing fill [4012]. Post-med.	4.2	0.8	2.4	4.05	1.65
4012		62		Fill	9	Backfill of construction cut [4011] for wall [4008].	4.2	0.7	2	4.05	
4013		62	4013	Layer	8	Post demolition of Tudor palace accumulation layer.	4.2	1.36	1.04	3.61	3.57
4014		62	4014	Layer	8	Suggested demolition layer from robbing of the palace.	4.2	1.36	0.7	2.55	2.29
4015		62	4015	Layer	2	Peat layer. NFE	4.24	1.4	0.7	1.93	
4016			4017	Masonry	8	Red brick drain. Heavily truncated.	0.28	0.24	0.1	2.53	
4017		61	4017	Masonry	7	Tudor red brick soakaway.	0.68	0.26	1.68	2.48	2.36
4018		61		Fill	7	Internal fill of soakaway [4017], [4020].	0.62	0.6	1.68	2.51	
4019				Fill	7	Internal fill of soakaway [4017], [4020].	0.25	0.4	0.57	2.36	
4020		61	4017	Masonry	7	Tudor red brick soakaway.	1.28	0.3	1.68	2.52	2.48
4021		61	4021	Layer	5	Firm and friable mid brown-grey silty-sand dump layer- suggested to be post Roman abandonment. Southwark dark soil?	4.35	2	0.45	2.33	
4022		61	4022	Layer	2	Suggested to be natural alluvial clay, perhaps from a channel fill.	4.35	2	0.7	2.02	
4023		61	4023	Cut	7	Construction cut for Tudor soakaway [4018].	1.58	1	1.65	2.52	
4024			4024	Masonry	8	Partial remains of a Tudor brick wall as well as demolition	1.7	0.3	0.41	2.42	

						material.					
4025				Fill	8	Backfill between two walls in [4024] and [4027].	2.26	0.8	0.4	2.42	2.01
4026		64	4026	Layer	10	Victorian dump layer.	4.5	2.2	0.95	4.54	
4027		64	4027	Masonry	8	Robbed Tudor masonry represented as a demolition horizon.	2.5	0.54	0.52	2.35	
4028		63		Layer	10	Victorian dump horizon.	2	4.7	0.5	4.49	
4029		63		Layer	10	Victorian shell midden dump.	2	4.7	0.26	4	
4030		63		Layer	10	Very dark brown silty-coarse-sand post-med horizon- garden soil?	4.7	2	1.2	3.74	
4031		63		Layer	8	Thick post-med dump or garden soil layer.	4.7	2	0.43	2.63	
4032		63		Layer	8	Demolition spread, perhaps relating to Tudor palace.	4.68	2	0.36	2.11	
4033		63		Natural	2	Natural clay- suggested to be alluvial and related to a stream deposit.	4.7	2	0.96	1.75	
4034		63		Natural	2	Natural peat.	2	4.7	0.2	0.98	0.88
4035		64	4035	Cut	8	Robber cut?	2.8	1.45	0.41	2.42	2.01
4036		64	4036	Layer	10	Victorian dump layer.	4.5	1.45	1.12	3.7	
4037		64	4037	Layer	8	Demolition layer.	4.5	1.45	0.3	2.58	
4038		64	4038	Natural	2	Alluvial clay.	4.5	1.45	1.45	2.34	1.8
4039		64	4039	Natural	2	Natural peat layer.	3.6	1.45	0.1	0.94	0.92
4040		65	4040	Layer	10	Victorian dump layers.	4.68	2.28	1.66	4.41	4.35

						Post-med dump layer composed of firm grey-brown sandy-silt with broken and weathered CBM, possibly from demolition of palace (most likely residual). Made ground.	4.68	2.28	0.43	2.77	2.57
4041		65	4041	Layer	9						
4042		65		Fill	9	Fill of robber cut [4043].	4.7	1.34	1.15	2.31	2.16
4043		65	4043	Cut	9	Robber cut from taking of Tudor masonry.	4.7	1.34	1.15	2.31	1.15
4044		65	4044	Layer	2	Alluvially deposited blue clay.	4.68	2.28	0.32	2.33	1.69
4045		65	4045	Layer	2	Peat deposit.	4.68	2.28	0.46	1.48	1.13
4046		66	4046	Layer	10	Victorian shell midden.	4.4	2.06	1.55	4.18	
4047		66	4047	Layer	10	Capping layer over fill of demolition/robber cut [4051].	4.4	2.06	0.25	2.63	
4048		66		Fill	10	Fill of robber cut- described as a 'demolition pit': loose brick.	1.1	1.22	0.5	2.38	
4049		66	4049	Layer	8	Trample layer over rubble deposit [4050].	4.4	2.06	0.78	2.39	1.95
4050		66		Fill	8	Demolition deposit, presumably from the demolition of Suffolk Place.	4.4	2.06	0.7	1.59	
4051		66	4051	Cut	10	Robber cut.	1.44	1.1	0.48	2.36	1.92
4052			4052	Masonry	7	Unfrogged red brick wall. Related to Palace?	1.6	0.7	0.6	1.38	
4053				Layer	8	Demolition deposit, potentially from the destruction of the palace.	0.16	0.15	0.77	1.71	
4054			4054	Layer	8	Demolition deposit?	0.16	0.15	0.77	1.71	0.94
4055		66	4055	Layer	2	Recorded as natural sandy-silt.	1.38	1.14	0.35	1.68	

4056	66	4056	Layer	2	Very dark brown pure silt layer, suggested to be geological owing to absence of finds.	1.38	1.14		1.36	
4057		4057	Cut	8	Robber cut made into wall [4052]. Backfilled with [4050]	1.4	1.1	0.44	2.36	1.92
4058	66	4058	Cut	7	Construction cut for wall [4052]. Not fully excavated: brickwork left in situ.	1.7	1.1		1.6	
4059	67	4059	Layer	9	Victorian topsoil.	4.6	2.96	2.02	4.58	
4060			Fill	8	Backfill of robber cut [4060] with [4061].	1.8	1.95	0.2	2.55	
4061	67		Fill	8	Soft, friable red-brown sandy-mortar with CBM fragments. Like [4060] is suggested to be backfill of robber cut [4063].	4.02	1.3	1.05	2.72	
4062	67	4062	Layer	2	Alluvial clay deposit.	4.02	1.3	0.89	2.35	1.6
4063	67	4063	Cut	8	Robber cut, presumably from taking masonry from Tudor palace.	4.02	1.3	0.69	2.35	1.6
4064	67	4064	Natural	2	Natural alluvial blue clay.	4.02	1.3	0.6	1.67	1.48
4065	70, 68	4065	Layer	10	Victorian dump layer.	4.25	2.75	0.68	4.43	4.26
4066	70, 68	4066	Layer	9	Post-med dump layer.	4.25	1.65	0.65	3.61	3.52
4067	70, 69	4067	Masonry	9	Suggested post-med wall that reuses Tudor bricks.	4	0.36	0.92	3.52	
4068	69	4068	Masonry	7	Red unfrogged brick- suggested to be a Tudor floor.	3.05	1.65		2.73	2.66

4069		70	4069	Layer	3	Very dark brown silty-sand. Suggested to represent Southwark 'dark earth' horizon: post Roman abandonment, pre-medieval occupation. NFE: part excavated with machine then stopped.	0.92	0.6		3	
4070		70	4070	Cut	9	Construction cut for wall [4067].	4	1.12	1.42	3.52	2.2
4071		68		Fill	9	Late post-medieval fill of pit [4072].	1.8	1.5	0.25	2.95	
4072		68	4072	Cut	9	Late post-med pit cut Filled with [2071].	1.8	1.5	0.25	2.95	2.6
4073		69	4073	Layer	7	Suggested layer of medieval material underneath floor [4068]- possibly make up for floor surface.	0.62	0.5	0.29	2.63	
4074		69	4074	Layer	7	Light grey-green silty-sand with flecks of charcoal and mortar. Only seen in a small slot.	0.62	0.5	0.28	2.35	
4075		69	4075	Layer	7	Suggested robbing but unsure exactly what has been robbed- if robbing is for Tudor material, then floor [4068] is unlikely to be Tudor. Described as soft and friable pale yellow-brown silty-mortar and red brick rubble: could easily be a make-up layer.	0.62	0.5	0.09	2.07	
4076		68	4076	Layer	9	Suggested post-Tudor floor [4068] dump layer composed of soft brown clay-silt with broken brick fragments.	3.05	1.65	0.34	2.95	2.94

4077		70		Fill	9	Backfill of construction cut [4070] for wall [4067].	4	1.12	0.92	3.52	
4078		70		Fill	10	Backfilling of post-medieval 'basement'. Composed of loose light grey-brown silty-sand.	1.1	0.8	0.5	3.5	
4079		71	4079	Cut	10	Victorian pit cut backfilled with shell-dense fill: recorded as layers in other trenches.	1.34	2.74	2.48	4.22	1.78
4080		71		Fill	10	Light grey-brown silty-sand with plentiful oyster shell inclusions.	1.34	2.74	2.48	4.22	
4081		71	4081	Layer	8	Post-Tudor dump/demolition layer composed of yellow-brown mixed coarse sand and silt with brick fragments.	2.95	2.7	0.72	4.22	
4082		71	4082	Layer	8	Soft grey-brown '?silty-clay' (unsure of this- RH 16/12/15). Suggested from context sheet to have been a garden soil. Contained broken Tudor masonry. Dump layer.	3.08	2.7	0.67	3.52	3.51
4083		71	4083	Layer	8	Clean mid-brown clay-silt, suggested to be a garden soil that seals Tudor demolition layers.	3.1	2.7	0.95	2.89	2.88
4084		71	4084	Layer	8	Demolition horizon from suggested demolition or robbing of Suffolk Place masonry.	1.62	2.6	0.35	2.35	2
4085		71	4085	Layer	7	Firm and sticky mid brown-grey silty-clay. Possible waterlain deposit. Moat?	2.7	4	0.72	2	1.76

4086		71	4086	Natural	2	Natural clayey-peat layer from which, two driven timber posts were recovered. Probably a natural channel fill.	3.4	2.8	0.5	1.28	1.25
4087		71	4087	Layer	8	Post-Tudor demolition horizon.	0.74	2.62	0.16	1.98	
4088		71		Fill	10	Backfill of Victorian drain [4089].	2	0.42	0.41	4.22	
4089		71	4089	Cut	10	Victorian drain cut, backfilled with [4088].	2	0.42	0.41	4.22	3.84
4090			4090	Timber	2	Vertically driven timber post, suggested to be Roman and part of a fence line or revetment.	0.64	0.07	0.05	1.28	0.8
4091			4090	Timber	2	Vertically driven timber post/pile, suggested to be part of a Roman fence line or revetment.	0.38	0.11	0.02	1.15	0.8

APPENDIX 2: ROMANO-BRITISH POTTERY ASSESSMENT

Eniko Hudak

Introduction

Excavations at Brandon House, Southwark (BBO10) produced a large assemblage of Roman pottery totalling at 11,994 sherds weighing 281.567kg and representing 281.53 EVEs. The pottery was fully quantified and catalogued using the standard measures of sherd count, weight, and Estimated Vessel Equivalent (EVEs). The pottery types and fabrics were recorded using standard Museum of London fabric and form codes (Symonds 2002) and a range of local typologies and corpora to aid identification and dating, into an MS Access database, which is based on standards established by the Museum of London Archaeology and Specialist Services.

The assemblage

The pottery survived in a variety of states from abraded to fresh ranging from minute fragments to semi-complete and complete vessels with a mean sherd weight of 23.48g. Very few sherds were noted with internal limescale or signs of burning/sooting, however, there are a considerable number of sherds with post-firing modifications including a variety of graffiti (14 sherds) and holes (106 sherds). There was also a single beaker base with glass working residue inside from context [2376].

There is a wide range of fabrics represented in the assemblage, both Romano-British and imported, all of which are well attested from other excavations in Southwark and London. The date range of the fabrics spans the entire Roman period, however, early Roman fabrics are better represented overall. The assemblage is dominated by coarse wares (74% of EVEs), the most prominent fabrics being HWC (17.43%), VRW (15.31%), and AHSU (13.29%), but BB2 and BB1 are also well represented (9.53% total). Fine wares account for 23% of EVEs, with Terra Sigillata being the most common (14.45%), followed by FMIC (2.42%), and LOMI (1.48%). Amphorae account for only 3% of the assemblage by EVEs, but almost a third of the entire site assemblage by weight.

The most commonly occurring forms are jars with a total of 81.55 EVEs, mainly figure-7 rim, bead-rim and everted-rim types (2D, 2A, and 2F) in AHSU and BB2. They are followed by 4F hooked-rim and 4A reeded-rim bowls mainly in HWC and VRW (43.95 EVEs bowls total); 1B ring-neck and 1C pinched-neck flagons in VRW (42.40 EVEs flagons total); and beakers, especially the 3F poppyhead type in HWC (22.19 EVEs total). Amphorae include Dressel 20 and Gauloise forms, but they are clearly under represented by EVEs. There are only 11.20 EVEs of *mortaria* in the assemblage, mainly 7HOF and 7BEF types in VRW (see below). Some unusual and interesting forms such as buckets, triple vases, *tazze*, face pots, and a feeding bottle (*tettina*) are also present (Chart 1).

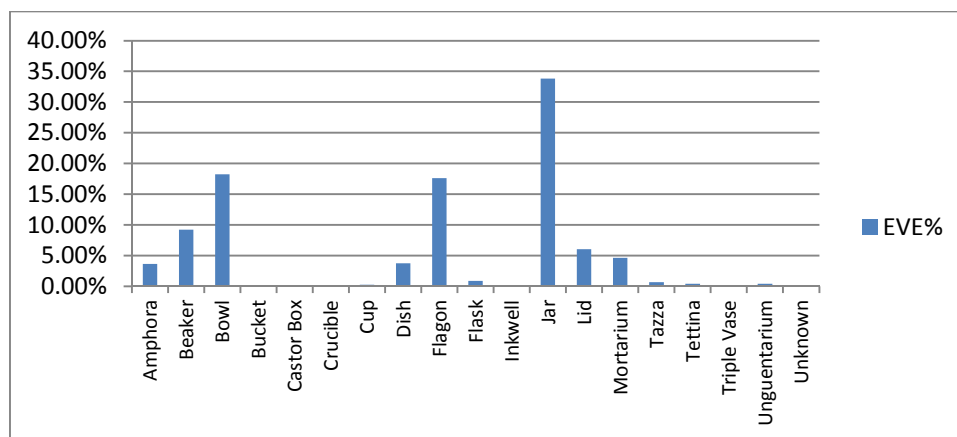


Chart 1: Form categories per EVE% (excluding Samian)

The pottery was recovered from 437 contexts from Phases 2-10; only 40 sherds were unstratified. Individual context assemblages varied in size from small (1-30 sherds) to large (100+ sherds) and a single very large assemblage (several boxes).

Phase 2: Early Roman (AD 43-250) – Chart 2

Phase 2 contexts yielded almost three quarters of the entire site assemblage by EVEs and weight (about two thirds by sherd count): a total of 7,734 sherds weighing 207.615kg and representing 207.25 EVEs. Although there is a wide variety of fabrics represented dating to the 1st-4th centuries AD, the large majority of the assemblage can be dated to the early Roman period.

Fabrics dominant of Ceramic periods 2-3 (AD 75-120) in the City (Davies *et al.* 1994), such as AHSU (AD 50-160), HWC (AD 70-160), and Verulamium region products (AD 50/70-200), account for about half of the phase assemblage. Other fabrics with an earliest production date in the second half of the 1st century AD, such as CCGW, Early Roman Sandy Wares (ERSB, ERMS), NKSH, LOMI, and FMIC are also well represented, but pre-Flavian fabrics (SLOW, LYON) are sparse and may well be residual. Black-burnished wares (BB1, BB2, and BBS) dated to after AD 120 are also present in considerable quantities in the phase assemblage (about 5%): in fact they are all present in varying quantities in the largest context assemblages of the phase (mainly dump layers).

Smaller quantities of wares dating to the second half of the 2nd/early 3rd century also occur in the assemblage, for example MOSL, CGBL, NVCC, and OXWW *mortaria* (7M18). Some possibly intrusive typical late Roman fabrics (mid-late 3rd and 4th century) as well as post-Roman material also occur in Phase 2 context assemblages.

The largest context assemblages in this phase all come from dump/levelling layers, which can possibly be linked to land reclamation and contain a mixture of rubbish. Based on the earliest production dates of some of the most common and characteristic fabrics in the assemblage certain peaks in activity can be identified – AD 50 (AHSU, VRW), AD 70 (HWC), and AD 120 (BB1, BB2) – but the nature of the deposits makes it difficult to assess the degree of residuality within the phase assemblage or to distinguish between different subphases of activity. Analysis of the pottery from selected key groups from structures and pits may enable the subdivision of this phase in the future,

which will allow comparison to nearby sites in Southwark and the Roman Ceramic Phases of the City as established by Davies *et al.* (1994).

Phase 3: Late Roman (AD 250-400) – Chart 3

Phase 3 contexts produced a considerably smaller assemblage than Phase 2 (1706 sherds, 29.480kg, 31.23 EVEs), with still wide variety but more restricted range of fabrics present. There is a high degree of residuality in this phase, which is not surprising given that two thirds of the phase assemblage was recovered from possible ‘dark earth’ horizon contexts containing a wide range of material. The assemblage is still dominated by Early Roman fabrics AHSU, VRW, and HWC, although the proportion of BB2 is considerably higher in this phase. There is a noticeable increase in typical late Roman fabrics such as AHFA, BB1, and Oxfordshire products (OXPA, OXRC, OXWC, OXWW), and ARGO and MHAD also appear in this phase (Chart 3), but other late Roman fabrics considered to be more common in 4th century of City and Southwark assemblages, such as MAYEN and CALC are absent (Gerrard 2011). The relatively small amount of Late Roman material in the assemblage could indicate reduced activity on site in this phase.

Phases 4-10 and unphased: (1050-Present)

A fifth of the total site assemblage by sherd count (15% by weight and EVEs) was residual in medieval, post-medieval and unphased contexts (Table 1), which is probably due to later activity disturbing/truncating the underlying Roman deposits.

Phase	SC	Wt(g)	EVEs
4	877	14449	14.55
5	395	5766	4.57
6	33	396	0.13
7	193	2281	3.16
8	202	3866	3.74
9	11	179	0
10	128	1299	1.69
Unphased	675	13906	13.82
TOTAL	2514	42142	41.66

Table 1: Quantification of Roman pottery in post-Roman phases

Context [2000] in Phase 4 produced the largest context assemblage from the site with 786 sherds (11.712kg, 13.05 EVEs), which is described as a post-Roman abandonment ‘dark earth’ deposit. Similarly to the Phase 3 assemblage AHSU, HWC, VRW and BB2 are the most commonly occurring fabrics. BB1 forms post-dating AD 250, AHFA, and Oxfordshire types are present, however, fabrics and forms dated to the 4th century are entirely absent from this assemblage.

Specialist wares

Samian

There are a total of 1,399 sherds of Terra Sigillata weighing 17.268kg (40.68 EVEs) in the site assemblage from South and Central Gaul, and a few possible sherds from Eastern Gaul. There are 390 sherds with decoration, 50 stamps including one in the shape of a flower and another possibly of a sun, 8 sherds with a variety of graffiti, and 13 sherds with post-firing holes. There is a wide range of forms represented with cups (6DR27, 6DR33), dishes (5DR18/31), and bowls (4DR37) being most common. It is recommended that J. M. Mills examines this material.

Amphorae

There are 844 sherds of amphorae in the assemblage weighing 87.860kg, and representing 8.83 EVEs. BAET Dressel 20 olive oil amphorae (including some very large sherds) and GAUL wine amphora fragments dominate the amphora assemblage. The remainder of the assemblage includes a few sherds of CADIZ, CAMP1, RHOD, and a smaller amount of unidentified fabrics. There is a single amphora stamp in the entire assemblage from [2369]. The amphora assemblage is recommended to be examined by a specialist.

Mortaria (excluding Samian)

A total of 203 *mortarium* sherds (23.043kg, 11.20 EVEs) have been identified in the assemblage. A range of Romano-British and Continental fabrics are represented dating to the 1st to 4th centuries AD. The majority of the *mortaria* came from Roman phases (Phases 2-3), but 35 sherds were found in post-Roman contexts.

Most of the *mortaria* are in good condition, some showing signs of internal wear, three have post-firing holes, and there is one with a *chi-ro* graffiti. There are 12 fresh fragments of a semi-complete VRW 7HOF *mortarium* from (377), and there is a complete possibly Colchester 7C497 *mortarium* in (2506), which seems to be a second as it is highly overfired (almost looking burnt) and has a rather distorted shape. There are 11 stamped fragments all in VRW of at least 7 different potters (see Table 2). There is one stamp too fragmentary to be identified, two stamps with uncertain readings, and one stamp with a clear reading, but no parallel could be found in the main publications. It is recommended to ask Kay Hartley's advice on these stamps for the publication.

Context	SF no	Fabric	Form	Stamp	Date	Reference
377	958	VRW	7HOF	Sollus	AD60-110	Hartley 1972, fig.146/38
2150	962	VRW	7HOF	ARIINT retrograde	AD110-140	Hartley 1972: Fig.146/41
2369	965	VRW	7HOF	ROA?	AD110-150	unsure, possibly Hartley 1972: Fig.146/34
2369	966	VRW	7HOF	Saturninus I	AD100-130	Hartley 1972: Fig.146/36
2490	970	VRW	7HOF	too fragmentary		
2490	971	VRW	7HOF	ARIINT retrograde	AD110-140	Hartley 1972: Fig.146/41
2515	973	VRW	7HOF	Marinus?		

2622	975	VRW	7BEF	Valentius	AD110-140	Seeley and Drummond Murray 2005: Fig.126/P75
2775	977	VRW	7HOF	ONIV		
2827	978	VRW	7HOF	Sollus	AD60-110	Hartley 1972: Fig.146/38
2947	980	VRW	7HOF	LVGVD, counterstamp of Albinus	AD65-95	Hartley 1972: Fig.145/6

Table 2: Identification of potters' stamps on *mortaria*

The majority of the *mortaria* were recovered from Phase 2 contexts, 125 sherds weighing 18.712kg, 8.53 EVEs. As expected from *mortarium* assemblages of this date, the most prominent fabric is VRW (forms 7HOF and 7BEF), followed by NFSE and Oise/Somme (Gillam 238). Although the Colchester and Kent potteries were very successful at their local markets in the 1st century and some of their products did reach *Londinium*, they did not seem to be an important source of *mortaria* of the period (Hartley and Tomber 2006; Davies *et al.* 1994), thus having a possible second could be of significance. There is also a small amount of late fabrics present in the Phase 2 assemblage; however, they still fit the date of the phase. There is a single sherd of NWWW, small amounts of OXWW, and a fragment of a giant *mortarium* in a Rhineland fabric. A very similar example of this was found at the Drapers' Gardens excavation and was dated to the 3rd century AD (Hudak and Gerrard in prep.).

Phase 3 contexts produced only 43 sherds of *mortaria* (2.078kg, 1.24 EVEs). The majority of the *mortaria* in this phase are the products of the Oxfordshire potteries (OXRC, OXWW) including forms 7C97, 7M17, and 7M18 (Young 1977). Oxfordshire *mortaria* reach London in the late 2nd-early 3rd centuries, and become more prominent in the later 3rd and 4th centuries (Symonds and Tomber 1991). The phase assemblage is rather small, thus percentages of fabrics can be misleading; however, the increase of OXWW, and the appearance of OXRC compared to the previous phase is noticeable. There is a considerable amount of VRW, VCWS and NFSE *mortaria* present, which are all residual in this phase.

Post-firing modifications

Perforations

There are the large number of sherds in the assemblage with post-firing holes, a total of 106 sherds – almost 1% of the entire site assemblage – from 66 different contexts. This is a very high proportion of perforated sherds, which stands out even more when compared to other large assemblages in Southwark and the City, such as Borough High Street (BOH13) where less than 0.45% of sherds were perforated, and Fenchurch Street (FEN14) with a single perforated sherd in an assemblage of more than 30,000.

The perforations in this assemblage occur in a range of forms including jars, bowls, beakers, *mortaria* and even amphorae, and they are mostly pierced through the body of the vessel, but pierced bases and a single rim are also present. In most instances there is only a single hole, but there are three sherds in the assemblage with two or more perforations (Tables 3 and 4).

	Single	Multiple	TOTAL
Base	20	0	20
Body	82	3	85
Rim	1	0	1
TOTAL	103	3	106

Table 3: Position and frequency of post-firing perforations

	Body	Base	Rim	TOTAL
Amphorae	10	0	0	10
Coarsewares	45	12	0	57
Samian	8	4	1	13
Finewares	22	4	0	26
TOTAL	85	20	1	106

Table 4: Position and occurrence of post-firing perforations

Perforations can be interpreted in a number of ways including repair holes, holes changing the function of the vessel, and holes signalling ritual activity. Although none of the perforations in the Brandon House assemblage are obvious repair holes (no rivets were noted) this option still remains a possibility, as a number of these sherds were found in dump layers. Biddulph (2015) concludes that most reports interpret base and lower body perforations as a change of function to strainers, vessels used in cheese making, or bases with single holes being reused as funnels. The size of some sherds makes it difficult to judge the position of the holes or whether it was a single hole or multiple, thus this interpretation cannot be ruled out either. The site's proximity to Lant Street (Ridgeway *et al.* 2013), Swan Street (Beasley 2007), and Tabard Square (Killock 2015); the high number of sherds with graffiti (see below), and the presence of the dog burial on site all point to a possible ritual element, so this interpretation cannot be discounted either. There are also some unusual sherds with holes, such as amphorae sherds, and a *mortarium* with a pair of closely spaced holes just underneath the flange, and another through the base. More detailed contextual analysis and research are needed for these sherds as the large numbers of perforations as well as the wide variety of vessels and positions they occur in are a very interesting feature of the site assemblage.

Graffito

There are also a high number of sherds with graffiti in the Brandon House assemblage. Again, compared to other nearby assemblages both in Southwark and the City, this high proportion stands out (Table 5).

Site	Total SC	Number of Graffito	% of total SC
Brandon House	11994	14	0.12%
Lant Street	1888	1	0.05%
Tabard Square	69307	17	0.02%
Drapers Gardens	44544	36	0.08%
Fenchurch Street	30425	11	0.03%

Table 5: Number of sherds with pre- and post-firing graffiti from Brandon House and other nearby sites (Gerrard and Lyne 2013; Gerrard 2015; Gerrard 2009)

Eight of the graffiti are on Samian, five on coarseware vessels, and a single on an OXRC *mortarium*. The graffiti include a variety of crosses and letters, one of which is a large and thick letter P carved into the surface of the vessel (SF1013). The OXRC *mortarium* sherd (SF976) is of intrinsic interest as the graffito seems to be the *chi-ro* symbol: a large letter P and a slightly offset letter X on its shaft on the exterior of the vessel just underneath the flange. It is recommended to send the graffiti to Roger Tomlin for further analysis, and to publish a separate note on the *chi-ro* symbol as it is a rare find.

Research questions

- Can the chronology of the site and of specific buildings/land uses be refined using the pottery evidence?
- Does the pottery assemblage reflect on the function and any changes in function of the site over time?
- How does the assemblage compare to those of other excavations in Southwark and the City? How does the site relate to the nearby sites at 127-143 Borough High Street, Lant Street, Tabard Square and Swan Street?
- What is the significance of the high proportion of pierced and graffito sherds on the site?
- Is there a ritual element to the site? Is there any other artefactual or ecofactual evidence on the site for ritual activity? How do these relate to the pottery assemblages?

Recommendations

A series of key groups will need to be identified for publication by the site supervisor and the pottery specialist, which may enable a sub-division of Phase 2 and produce a more meaningful discussion and functional analysis of the pottery from the site. Spatial and functional analysis of the 'dark earth' deposits is recommended as it can contribute to our understanding of the formation and composition of these types of deposits. The collection of sherds with post-firing holes also deserves a more thorough analysis. It is recommended to include a pottery report in the publication.

Illustrations

The majority of the pottery can be described with reference to known typology and corpora, which should minimise the need for illustrations. However, some unusual forms (tettina, bucket etc.), sherds with graffito and stamps, and a selection of forms characterising the key groups should be illustrated.

Specialist wares

Although a basic quantification and identification has been carried out for the purpose of this report, it is recommended that J.M. Mills looks at the Samian assemblage including the stamps.

The most commonly occurring amphora forms and fabrics have been identified, but it would be recommended to have a specialist examine the assemblage, especially the unidentified amphora fabrics and the stamp.

Mortaria have been identified and quantified, including most of the stamps. The unidentified/uncertain *mortarium* stamps should be examined by Kay Hartley in case they are included in any of the key groups, and it would be also beneficial to ask for her advice on the possible Colchester second.

Graffito

It is recommended to have all the graffiti from site sent to Roger Tomlin. It is also recommended to publish the OXRC *mortarium* sherd with the *chi-ro* graffito separately (possibly in *Britannia*), as it is a rare find.

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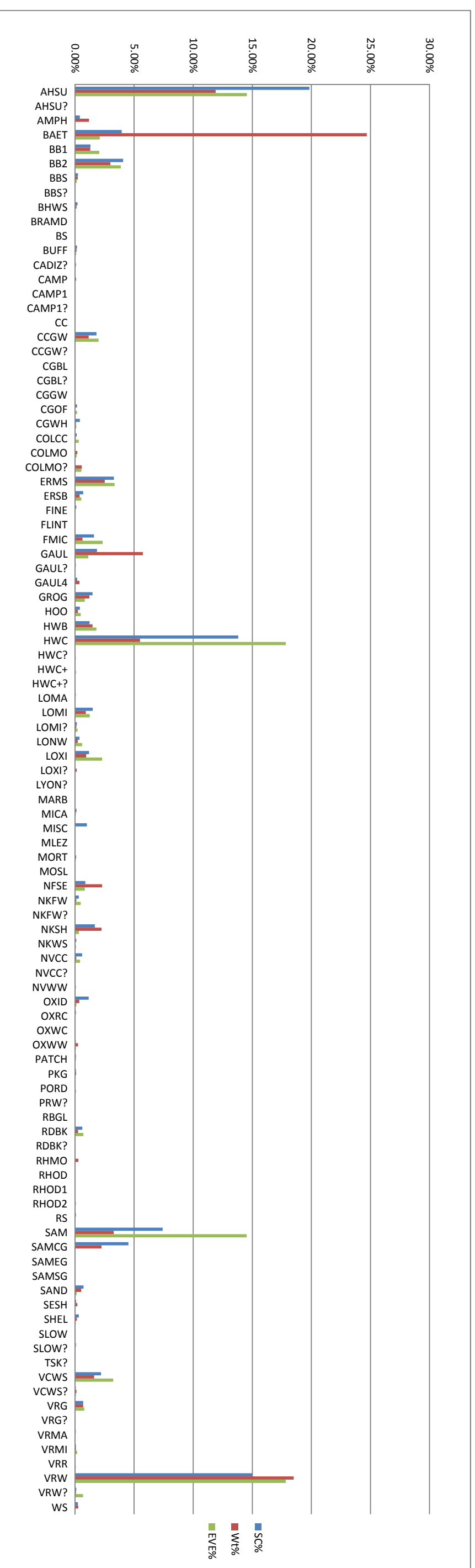


Chart 2: Phase 2 quantification by sherd count, weight, and EVES

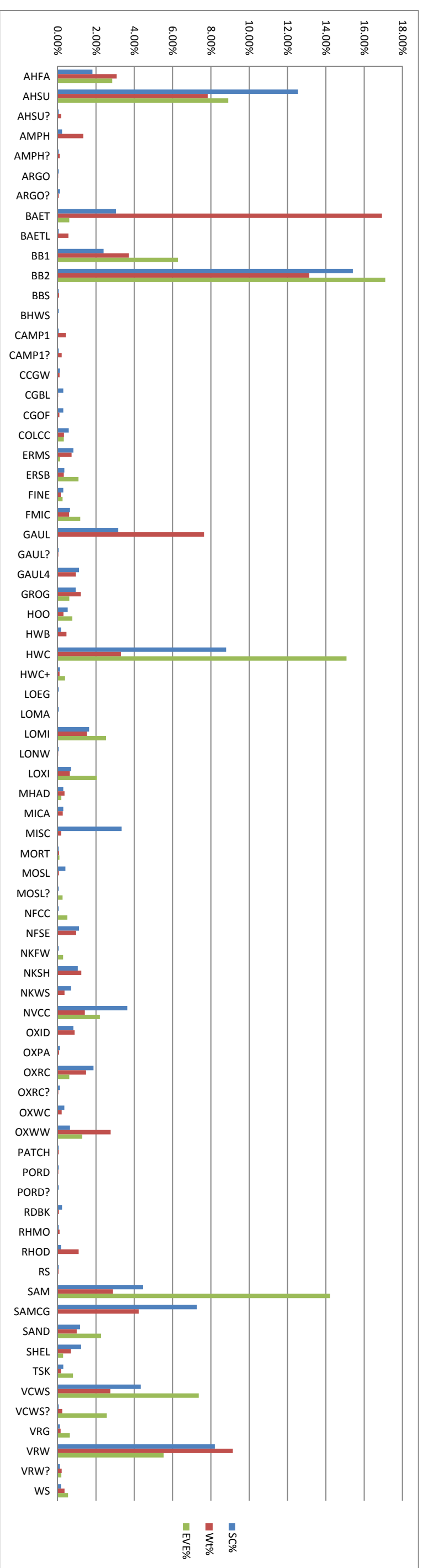


Chart 3: Phase 2 and Phase 3 quantification

CONTEXT	SPOTDATE	NOTES	CONTEXT	SPOTDATE	NOTES
112	AD120-150		2326	AD120-250	Samian only, single sherd
113	AD120-150		2328	AD160-250	some resid
114	AD120-160	some resid	2330	AD250-275	mostly resid
115	AD50-160	PMED	2331	AD140-150	
116	AD70-120		2333	AD250-400	
117	AD50-160		2334	AD90-100	
118	AD120-160		2340	AD70-100	
121	AD120-400	single sherd	2341	AD120-130	
183	AD50-400	samples only	2342	AD70-100	PMED
210	AD50-200	samples only	2343	AD160-200	some resid
218	AD50-400	single sherd, samples only	2356	AD150-160	
361	AD120-150	PMED	2357	AD70-160	single sherd
377	AD120/140-150	some resid	2358	AD160-250	
378	AD120-160	some resid	2360	AD120-140	
379	AD120-150	PMED	2361	AD70-120	
478	AD50-100		2362	AD70-150	single sherd
480	AD120-160		2365	AD120-130/150	
482	AD50-200	single sherd	2366	AD120-160	some resid
484	AD70-120		2369	AD350-400	PMED
489	AD150-160	some resid	2371	AD270-300	mostly resid
515	AD50-160	PMED	2374	AD50-160	
521	AD50-300		2376	AD160-200	some resid
523	AD70-160	single sherd	2383	AD90-100	
524	AD120-160		2385	AD120-130/150	probably slightly later?
535	AD120-160	samples only	2396	AD120-130	
536	AD120-160		2416	AD140-160	
537	AD200-250	samples only	2418	AD70-200	samples only
538	AD70-160	single sherd, samples only	2420	AD160-200	
539	AD70-160		2423	AD50-160	PMED
568	AD70-100		2424	AD70-100	
708	AD70-150	samples only	2428	AD120-160	
709	AD200-250	PMED	2438	AD50-160	
711	AD150-250	Samian only	2445	AD50-160	
1009	AD120-250	PMED	2455	AD70-100	
1012	AD120-250	Samian only, single sherd	2457	AD70-160	single sherd
1013	AD50-140		2465	AD120-130	some resid
1018	AD120-130		2467	AD90-150	Samian only, single sherd
1019	AD140-150	PMED	2469	AD50-160	single sherd
1029	AD70-100		2471	AD150-160	some resid
1030	AD120-160		2472	AD90-100	some resid

1050	AD120-250	Samian only, single sherd	2476	AD180-400	mostly resid
1053	AD120-160		2477	AD120-150	
1055	AD150-400	Samian only, single sherd	2480	AD70-160	single sherd
1056	AD120-160	some resid	2482	AD90-150	
1075	AD120-150	some resid	2484	AD70-120	
1082	AD70-160	samples only	2489	AD70-100	
1084	AD140-160		2490	AD120-140	some resid
1090	AD120-160	PMED	2499	AD120-150	
1091	AD180-200	PMED	2503	AD90-160	
1097	AD50-400	single sherd	2504	AD140-150	
1117	AD70-120	single sherd	2505	AD70-100	
1126	AD70-150	samples only	2506	AD140-160	
1133	AD70-160	samples only	2510	AD140-150	
1135	AD150-160	PMED	2512	AD120-160	some resid
1136	AD150-160	PMED	2515	AD110-140	single sherd
1140	AD120-130		2519	AD50-400	single sherd
1141	AD50-160	PMED?	2524	AD100-120	
1142	AD50-200		2525	AD90-150	
1146	AD70-160	samples only	2526	AD90-100	
1147	AD70-160		2530	AD50-100	
1148	AD120-160		2532	AD120-160	
1151	AD70-160	single sherd, samples only	2535	AD50-300	single sherd
1160	AD240-400	PMED	2537	AD120-130	
1161	AD50-160	samples only	2541	AD90-100	
1162	AD270-400	PMED	2542	AD120-160	
1167	AD160-200	PMED	2549	AD50-300	single sherd
1168	AD120-130	PMED	2553	AD70-100	
1171	AD120-150		2559	AD70-120	
1172	AD120-150	PMED	2562	AD70-100	
1177	AD50-100		2564	AD70-120	
1178	AD120-250		2565	AD50-150	
1181	AD140-160		2568	AD70-160	PMED
1183	AD70-160		2573	AD50-100	
1184	AD50-160	single sherd	2575	AD100-120	
1185	AD120-160		2576	AD50-130	
1187	AD50-100		2577	AD120-160	some resid
1188	AD50-150		2580	AD90-100	
1189	AD70-150	single sherd	2582	AD120-140	
1190	AD270-400	intrusive OXRC?	2586	AD70-150	samples only
1194	AD70-160		2589	AD50-160	single sherd
1198	AD50-100		2604	AD50-250	Samian only, single sherd
1200	AD50-250		2605	AD70-200	

1202	AD120-250	single sherd	2610	AD120-130	some resid
1204	AD90-160		2621	AD120-150	
1206	AD50-150	single sherd	2622	AD140-160	
1208	AD150-160/200		2632	AD120-130	
1211	AD50-250	Samian only	2637	AD70-140	
1212	AD120-160		2638	AD120-140	PMED
1217	AD120-150	PMED	2639	AD70-100	
1219	AD120-160		2644	AD90-100	
1232	AD50-120		2653	AD120-150	some resid
1233	AD50-250	single sherd	2655	AD120-150	
1234	AD120-200		2657	AD70-100	
1236	AD70-160		2658	AD120-160	
1238	AD70-160		2667	AD90-160	
1240	AD50-150		2668	AD70-160	PMED
1242	AD50-150	single sherd	2676	AD150-200	some resid
1244	AD50-400		2681	AD90-100	
1246	AD50-150	samples only	2682	AD70-120	
1248	AD50-200	single sherd	2683	AD50-250	single sherd
1250	AD50-160	single sherd	2685	AD120-150	some resid
1251	AD70-160	samples only	2689	AD50-250	Samian only, single sherd
1253	AD50-400	PMED	2690	AD70-100	
1256	AD50-200		2692	AD90-120	
1257	AD150-400	single sherd	2694	AD50-250	
1260	AD150-400	single sherd	2702	AD50-400	single sherd
1272	AD120-160	PMED	2709	AD70-120	
1276	AD50-250	Samian only, single sherd	2710	AD70-100	
1281	AD50-200		2714	AD90-160	
1283	AD90-160	single sherd	2716	AD50-160	single sherd
1285	AD90-150		2726	AD120-160	samples only
1292	AD50-100		2730	AD70-150	
1302	AD50-100		2731	AD350-400	PMED
1305	AD150-160	samples only	2741	AD90-150	
1309	AD150-160	samples only	2757	AD70-120	
1311	AD150-160	some resid	2775	AD90-120	
1312	AD120-150	samples only	2790	AD50-100	
1321	AD50-100		2791	AD50-100	
1322	AD70-120		2793	AD120-250	Samian only, single sherd
1324	AD50-400	samples only	2794	AD50-160	single sherd
1336	AD50-160		2798	AD90-150	
1338	AD200-250		2800	AD50-160	single sherd
1340	AD180-250	mostly resid	2804	AD90-120	
1342	AD150-160	samples only	2809	AD90-100	

1350	AD50-100		2811	AD50-160	
1355	AD120-160	samples only	2812	AD70-200	
1357	AD70-100		2814	AD50-160	
1362	AD50-200	single sherd	2816	AD100-120	
1369	AD70-200	single sherd	2817	AD70-120	
1370	AD120-160		2820	AD70-100	PMED
1375	AD50-100		2821	AD120-140	
1376	AD120-140	PMED	2823	AD150-250	single sherd
1378	AD120-150	some resid	2824	AD70-160	
1379	AD120-250		2827	AD90-100	
1381	AD140-160		2829	AD90-150	
1383	AD70-160	PMED	2834	AD50-160	single sherd
1386	AD50-200	single sherd	2836	AD70-160	
1388	AD50-250	single sherd	2838	AD70-160	
1395	AD70-160		2842	AD90-100	
1402	AD70-120		2847	AD50-100	
1403	AD90-100	PMED	2861	AD70-160	
1405	AD70-200		2867	AD50-160	
1409	AD120-160	PMED	2868	AD90-120	
1411	AD50-400		2880	AD270-400	1X OXRC
1413	AD150-200		2881	AD120-160	
1435	AD270-400		2883	AD120-160	
1436	AD120-160	PMED	2885	AD140-150	some resid
1437	AD120-250	PMED	2892	AD120-150	some resid
1447	AD50-300		2897	AD50-70	Samian only
1452	AD50-100	single sherd	2904	AD50-100	
1454	AD120-250	Samian only	2905	AD120-150	PMED
1458	AD120-160		2908	AD50-100	
1460	AD270-400	PMED	2910	AD70-100	
1461	AD150-250		2911	AD90-100	
1464	AD70-100		2912	AD70-100	
1478	AD50-100		2915	AD50-120	single sherd
1480	AD120-160	PMED	2921	AD270-400	mixed
1483	AD120-130		2922	AD70-120	samples only
1484	AD120-250	Samian only	2923	AD50-160	
1485	AD50-250	Samian only	2926	AD50-100	
1516	AD150-250	samples only	2936	AD120-150	
1520	AD120-160		2939	AD70-200	single sherd
1526	AD50-200	single sherd	2942	AD70-160	
1536	AD70-200		2943	AD70-100	
1572	AD90-160		2946	AD70-160	
1576	AD350-400	PMED	2947	AD70-100	90-100 or 120-150
2000	AD270-300	PMED	2948	AD70-160	
2001	AD160-200		2950	AD90-150	

2002	AD120-160		2959	AD70-100	
2003	AD50-200	single sherd	2960	AD70-100	
2005	AD70-100		2962	AD70-100	
2008	AD120-250	single sherd	2966	AD50-160	
2010	AD180-200		2967	AD120-140	some resid
2012	AD270-275		2968	AD90-100	
2027	AD200-250	some resid	2976	AD120-140	some resid
2035	AD120-150	some resid	2980	AD50-160	
2041	AD270-300	PMED	2982	AD90-150	
2043	AD270-400	some resid	2984	AD70-100	
2045	AD250-400		2985	AD90-100	
2047	AD120-250	Samian only	2986	AD50-160	samples only
2053	AD250-300	some resid	3002	AD70-120	
2078	AD90-120		3017	AD70-100	
2087	AD70-160		3031	AD70-120	
2095	AD180-200	intrusive OXWW?	3033	AD70-120	
2096	AD160-250	PMED	3046	AD100-120	
2113	AD70-120		3047	AD90-100	
2114	AD70-120		3050	AD100-120	
2116	AD200-250		3051	AD90-100	
2121	AD70-160		3055	AD120-150	
2123	AD50-100		3056	AD70-160	
2125	AD70-200	single sherd	3062	AD50-300	single sherd
2126	AD90-100		3065	AD100-120	
2129	AD150-160		3097	AD50-160	Samian only
2131	AD250-400	mostly resid	3103	AD70-150	
2143	AD150-160	samples only	3109	AD150-160	
2145	AD240-300	some resid	3110	AD120-130	
2147	AD180-200	some resid	3111	AD90-150	
2150	AD270-300	some resid	3115	AD150-160	
2152	AD250-400	mostly resid	3121	AD150-160	
2159	AD120-250	single sherd	3122	AD70-100	
2162	AD50-150		3123	AD90-100	
2173	AD70-160		3125	AD180-250	
2176	AD120-150	some resid	3139	AD120-130	samples only
2183	AD50-160		3140	AD120-150	
2185	AD120-130	samples only	3142	AD50-100	
2187	AD90-100		3146	AD40-100	
2201	AD70-160	single sherd	3170	AD50-200	single sherd
2224	AD90-160		3173	AD70-100	
2241	AD120-150	PMED	3201	AD120-150	
2253	AD70-150	samples only	3203	AD70-160	
2258	AD70-120		3205	AD120-160	some resid
2261	AD240-300	some resid	3211	AD70-100	

2273	AD120-150		3234	AD70-120	single sherd
2280	AD120-160		3238	AD120-150	
2283	AD70-100		3239	AD120-160	
2295	AD150-160	PMED	4045	AD50-100	
2297	AD150-250	Samian only	4085	AD120-250	PMED
2312	AD120-150		7550	AD120-140	
2313	AD70-100				

Table 6: Spotdates

APPENDIX 2: POST ROMAN POTTERY ASSESSMENT

Berni Seddon

A medium sized assemblage of pottery was recovered from the excavation phase, amounting to 1,993 sherds, 744 ENV and weighing 65.43kg (25 boxes). Added to the pottery recovered from the evaluation, this gives a site total of 2,033 sherds, representing some 783 vessels. Of this material just 24 sherds (24 ENV), weighing 2.66kg, were unstratified. With the exception of a single early Saxon sherd, recovered during the evaluation, the pottery dates from the 10th to 19th century, of which 37% is medieval and 63% is post-medieval. Very few sherds show evidence for abrasion (0.2% by sherd count) and were probably deposited fairly rapidly after breakage. Residual sherds made up less than 5% by sherd count of the total assemblage and intrusive material is very low at less than 1%. The fragmentation of the pottery ranges from sherd material to vessels with complete profiles, including five intact post-medieval items. Pottery was recovered from 167 contexts, of which the majority produced small groups of pottery (fewer than 30 sherds). Nine contexts produced assemblages of medium size (31-100 sherds), and just three contained large assemblages of over 100 sherds.

The assemblage was examined macroscopically and microscopically using a binocular microscope (x20), and recorded in an ACCESS database, by fabric, form and decoration. The classification of the pottery types is according to the Museum of London Archaeology and the material was quantified by sherd count, estimated number of vessels (ENV) and weight. A table summarising the pottery by type appears below (Table 1), accompanied by a short summary. This is followed by a discussion of the assemblage by phase and distribution.

The pottery types

Fabric code	Common name	Date range		SC	ENV	Forms
ESSAN	Early Saxon sand-tempered ware	400	650	1	1	Jar
LSS	late Saxon shelly ware	900	1050	1	1	-
THET	Ipswich/Thetford-type ware	900	1100	2	1	-
EMS	early medieval sandy ware	970	1100	1	1	-
NEOT	St Neots ware	970	1100	1	1	-
EMCALC	early medieval sandy ware with calcareous inclusions	1000	1150	1	1	-
EMSS	early medieval sand- and shell-tempered ware	1000	1150	3	3	Jar
EMGR	early medieval grog-tempered ware	1050	1150	3	1	-
EMIS	early medieval Surrey iron-rich sandy ware	1050	1150	4	2	Jar; spouted pitcher
EMSH	early medieval shell-tempered ware	1050	1150	65	10	Flared curfew; storage jar
STAM	Stamford-type ware	1050	1150	2	2	Spouted pitcher
LOGR	London-area greyware	1050	1170	2	1	-
LCOAR	coarse London-type ware	1080	1200	85	12	Jug
LCOAR SHEL	coarse London-type ware with shell inclusions	1080	1200	6	4	Jug
LOND	London-type ware	1080	1350	106	47	Cauldron/pipkin; Jug

						(incl. tulip-necked baluster)
LCOAR EAS	coarse London-type ware with early-style decoration	1140	1200	19	2	Jug
LOND EAS	London-type ware with early-style decoration	1140	1200	1	1	Jug
SSW	shelly-sandy ware	1140	1220	20	18	Bowl, jar
DEVS	developed Stamford-type ware	1150	1250	1	1	-
LIMP	Limpsfield-type ware	1150	1300	1	1	-
NFM	north French monochrome ware	1170	1300	2	1	Jug
SHER	south Hertfordshire-type greyware	1170	1350	66	19	Jar, jug
LOND NFR	London-type ware with north French-style decoration	1180	1270	24	3	Jug
LOND ROU	London-type ware with Rouen-style decoration	1180	1270	19	3	Jug (incl. baluster)
EARL	Earlwood-type ware	1200	1400	25	5	Jug
HARM	Harlow sandy ware	1200	1500	6	2	Jug
KING HD	Kingston-type ware in the highly decorated style	1240	1300	46	9	Jug
LOND HD	London-type ware in the highly decorated style (including anthropomorphic/zoomorphic)	1240	1350	10	6	Jug
KING	Kingston-type ware	1240	1400	43	23	Jug (incl. baluster, small rounded)
SAIM	Saintonge ware with mottled green glaze	1250	1650	5	1	-
SPGR	Spanish green-glazed ware	1250	1650	1	1	-
MG	Mill Green ware	1270	1350	84	7	Jug
CBW	coarse Surrey-Hampshire border ware	1270	1500	17	10	-
DUTR	Dutch red earthenware	1300	1650	5	5	Jug; pipkin
CBW FT	coarse Surrey-Hampshire border ware cooking pot with flat-topped rim	1340	1500	1	1	Cooking pot with flat-topped rim
CHEA	Cheam whiteware	1350	1500	9	7	Jug
CBW BIF	coarse Surrey-Hampshire border ware cooking pot with bifid rim	1380	1500	1	1	Cooking pot with bifid rim
LLON	late London-type ware	1400	1500	3	2	-
SIEG TRIC	Siegburg stoneware Trichterhalsbecher/Trichterhalskrug	1400	1500	1	1	Trichterhalskrug
MISC	miscellaneous unsourced medieval/post-medieval pottery	900	1500	57	14	Bowl; jug
MISC WW	miscellaneous unsourced medieval/post-medieval whiteware	900	1500	10	2	Measure
MPUR	Midlands purple ware	1400	1750	3	3	Butter pot
EBORD	early Surrey-Hampshire border whiteware	1480	1550	12	3	Pedestal cup; jug; sprinkler
PMRE	London-area early post-medieval redware	1480	1600	110	52	Bowl (incl. handled); cauldron (type 1A and 2); candlestick; carinated dish; industrial vessel; jug (incl. rounded); pipkin
PMREC	London-area early post-medieval calcareous redware	1480	1600	1	1	-
PMREM	London-area early post-medieval redware with metallic glaze	1480	1600	3	2	-
RAER	Raeren stoneware	1480	1610	10	7	Drinking jug; jug

PMSRG	London-area post-medieval slipped redware with green glaze	1480	1650	20	7	Pipkin
PMSRY	London-area post-medieval slipped redware with clear (yellow) glaze	1480	1650	16	10	Bowl (incl. handled); dish; mug
GERW	German whiteware	1550	1630	1	1	-
BORD	Surrey-Hampshire border whiteware	1550	1700	8	7	Chamber pot; pedestal goblet; lid; money box
BORDG	Surrey-Hampshire border whiteware with green glaze	1550	1700	31	24	Bowl; dishes (deep and flanged); money box; tripod pipkins (incl. Type 1)
BORDO	Surrey-Hampshire border whiteware with olive glaze	1550	1700	46	10	Chamber pot (type 1); dishes (deep and flanged); tripod pipkins (incl. Type 3)
BORDY	Surrey-Hampshire border whiteware with clear (yellow) glaze	1550	1700	37	29	Bowl; Chamber pot (type 1); dishes (deep and flanged); candlestick (saucer); tripod pipkins (incl. Type 2 & 3)
FREC	Frechen stoneware	1550	1700	15	15	Seltzer bottle; Bartmann jug
FRECW	Frechen whiteware	1550	1700	1	1	Jug
RBOR	Surrey-Hampshire border redware	1550	1900	50	28	Bowl (incl. rounded); chamber pot (type 1 & 2); Upright candlestick; dish (incl. deep & flanged); jar; lid; pipkin; porringer
TGW A	London tin-glazed ware with blue- or polychrome-painted decoration and external lead glaze (Orton style A)	1570	1650	6	4	Dish, storage jar
TGW	English tin-glazed ware	1570	1846	24	14	Bowl; storage jar; plate (incl. FBK)
TGW BISC	London biscuit-fired tin-glazed ware	1570	1846	1	1	-
PMBL	Essex-type post-medieval black-glazed redware	1580	1700	10	7	Tyg
PMFR	Essex-type post-medieval fine redware	1580	1700	104	22	Bowl; cauldron; pipkin; dish (incl. flanged); jug
RBOR SLTR	Surrey-Hampshire border redware with slip-trailed decoration	1580	1800	4	2	Flanged dish
RBORB	Surrey-Hampshire border redware with brown glaze	1580	1800	13	5	Jar (handled); mug
RBORG	Surrey-Hampshire border redware with green glaze	1580	1800	46	12	Bowl (handled); chamber pot; flanged dish; porringer; tripod pipkin
PMR	London-area post-medieval redware	1580	1900	32	23	Bowl (incl. deep and handled); chamber pot; deep dish; flowerpot; storage jar; pipkin
CHPO BW	Chinese blue and white porcelain	1590	1900	27	9	Bowl; plate; saucer; tea bowl
WEST	Westerwald stoneware	1590	1900	5	4	Seltzer bottle; rounded

						drinking jug; biconical jug; tankard
MART3	Martincamp-type ware type III flask (red earthenware)	1600	1650	1	1	-
BORDB	Surrey-Hampshire border whiteware with brown glaze	1600	1700	3	3	Bowl; rounded mug
STAR	starred costrel	1600	1750	1	1	Costrel
TGW D	London tin-glazed ware with blue- or polychrome-painted decoration and external lead glaze (Orton style D)	1630	1680	9	5	Dish
METS	metropolitan slipware	1630	1700	3	3	Bowl or dish; small rounded jug
TGW BLUE	London tin-glazed ware with plain pale blue glaze	1630	1846	4	3	Plate
TGW C	London tin-glazed ware with plain white glaze (Orton style C)	1630	1846	60	5	Chamber pot; plate (FBG)
BORDB CHP2	Surrey-Hampshire border brown-glazed whiteware flat-rimmed chamber pot	1650	1750	1	1	Chamber pot (type 2)
BORDG CHP2	Surrey-Hampshire border green-glazed whiteware flat-rimmed chamber pot	1650	1750	27	1	Chamber pot (type 2)
STSL	Staffordshire-type combed slipware	1660	1870	5	3	Rounded dish
TGW F	London tin-glazed ware with 'Chinaman among grasses' decoration (Orton style F)	1670	1690	1	1	Fluted bowl
LONS	London stoneware	1670	1926	14	14	Bottle; rounded drinking jug; shouldered jar
TGW H	London tin-glazed ware with pale blue glaze and dark blue decoration (Orton and Pearce style H)	1680	1800	48	7	Bowl (flared & rounded); plate (FBG & FBK)
TGW SPNG	London tin-glazed ware with sponged decoration	1700	1760	15	2	Plate (FBG)
DERBS	Derbyshire stoneware	1700	1900	1	1	Domed lid
ENGS	English brown salt-glazed stoneware	1700	1900	5	5	Bottle (cylindrical, ginger beer)
TGW G	London tin-glazed ware with 'Lambeth polychrome' decoration (Orton and Pearce style G)	1701	1711	1	1	Bowl
SWSL	dipped white salt-glazed stoneware	1710	1760	2	2	Tankard
CONP	continental porcelain	1710	1900	1	1	-
SWSG	white salt-glazed stoneware	1720	1780	6	4	Bowl; tea bowl
WEST CHP2	Westerwald stoneware chamber pot with flanged rim	1740	1760	2	1	Chamber pot (type 2)
CREA TORT	creamware with tortoiseshell glaze	1740	1770	1	1	Jug
SWSG COB	white salt-glazed stoneware with cobalt decoration	1740	1780	1	1	-
SWSG SCRIB	white salt-glazed stoneware with scratch blue decoration	1740	1780	2	1	Tea bowl
CREA	creamware	1740	1830	227	59	Bowl; chamber pot; deep dish; plate (dinner, dessert, oval and soup); strainer
ENPO PNTD	English porcelain with over- or under-glaze polychrome-painted decoration	1745	1900	1	1	Plate
ENPO OTR	English porcelain with over-glaze transfer-printed decoration	1755	1800	1	1	-

CREA DEV	creamware with developed pale glaze	1760	1830	3	3	Oval dish
PEAR BW	pearlware with under-glaze blue-painted decoration	1770	1820	42	19	Bowl (incl. fluted); plate (dinner, dessert, large and tea); saucer; tea bowl)
PEAR	pearlware	1770	1840	31	6	Chamber pot; cylindrical jar; plate
PEAR PNTD	pearlware with under-glaze painted decoration	1770	1840	3	2	Plate (dinner)
PEAR TR	pearlware with transfer-printed decoration	1770	1840	49	36	Bowl (incl. oval and rounded); cup; cream jug; dish (oval); plate (incl. oval and tea); saucer; tureen; tureen lid
CREA SLIP	creamware with slip decoration	1775	1830	4	2	Bowl; plate
PEAR SLIP	pearlware with slip decoration	1775	1840	14	2	Bowl
TPW	refined whiteware with under-glaze transfer-printed decoration	1780	1900	17	16	Bowl; chamber pot; dish (rectangular and fluted); plate (rectangular and oval); saucer
PEAR EARTH	pearlware with under-glaze polychrome-painted decoration in 'earth' colours	1790	1820	1	1	-
SUND	Sunderland-type coarseware	1800	1900	1	1	Bowl
REFW	refined white earthenware	1805	1900	4	4	Figurine; cylindrical jar; plate
REFW SLIP	refined white earthenware with slip decoration	1805	1900			-
PEAR TR3	pearlware with under-glaze brown or black transfer-printed decoration	1810	1840	1	1	-
TPW3	refined whiteware with under-glaze brown or black transfer-printed decoration	1810	1900	3	2	Dish
YELL	yellow ware	1820	1900	9	9	Bowl (rounded)
YELL SLIP	yellow ware with slip decoration	1820	1900	5	5	Bowl; rounded jug
PEAR TR4	pearlware with under-glaze colour transfer-printed decoration (green, mulberry, grey etc)	1825	1840	1	1	-
TPW4	refined whiteware with under-glaze colour transfer-printed decoration (green, mulberry, grey etc)	1825	1900	2	2	Plate; saucer
ENGS BRST	English stoneware with Bristol glaze	1830	1900	1	1	-
TPW FLOW	refined whiteware with under-glaze transfer-printed 'flow blue' decoration	1830	1900	2	2	Cup; plate
TPW 6	refined whiteware with under-glaze transfer-printed and over-glaze painted decoration	1840	1900	1	1	Cylindrical mug
MAJO	majolica	1850	1900	2	2	-

Table 1: The pottery types. SC = Sherd count. ENV = Estimated number of vessels.

Discussion of the pottery by phase

A summary of the phase assemblages appears below, including reference to the more notable groups. A more detailed breakdown of the assemblage by phase and fabric appears in Table 3 at the end of the section.

Phases 2 & 3: Early to late Roman

A total of 5% of assemblage by sherd count is intrusive within deposits dated to the Roman period (Table 3). The majority of this material is of medieval date, although nine sherds are of post-medieval date. Most was collected from layers, including flood and dump deposits, made ground and agricultural/horticultural soil, with fewer sherds from cut features. Some is evidently contamination, including the transfer-printed Pearlware (PEAR TR) from ditch [2417] and the Transfer-printed ware (TPW3) dish in peat layer [379], but others, such as a Stamford-type ware (STAM) spouted pitcher and an Early medieval shelly ware (EMSH) storage jar sherd from pits [2560] and [2097] may represent final infill of partially open features. The single sherd of Late Saxon shelly ware (LSS) recovered from site came from a slump layer within a channel [1091], along with a sherd of London-type ware (LOND).

Phase 4: 1050-1150

Less than 1% of the site assemblage was retrieved from Phase 4 features, amounting to just four sherds. These comprise three coarse London-type ware (LCOAR) jugs from dark earth layer [2000] and pits [2284] and [2289], and an early medieval Surrey iron-rich sandy ware (EMIS) spouted pitcher from pit [2802]. However, 4% of the total site assemblage dates from the 10th to mid 12th century, five sherds, representing four vessels dating to the 10th to 11th century, and 78 sherds, representing 19 vessels dating from the 11th to mid 12th century (largely recovered from Phases 2 to 5). With the exception of a single residual sherd of early Saxon pottery (ESSAN), the earliest five sherds are comprised of LSS, local early medieval sandy ware (EMS), and regional Late Saxon Ipswich/Thetford-type ware (THET) and St Neots-type ware (NEOT). This low figure is entirely in keeping with the recent findings of the Thameslink project where the distribution of the Late Saxon pottery types appears to be largely limited to the Late Saxon burgh, north of Borough Market (Jarrett and Cotter, forthcoming).

The 78 sherds of 11th to mid 12th-century date are comprised predominantly of EMSH (65 sherds), with smaller quantities of early medieval sandy ware with calcareous inclusions (EMCALC), early medieval sand- and shell-tempered ware (EMSS), early medieval grog-tempered ware (EMGR), EMIS and non-local STAM. As already observed, some of these are in-situ, representing the final infilling of earlier features or were incorporated into layers, including the dark earth (Phases 2 to 4), and some are residual. Although a fairly large proportion of the EMSH derives from a small number of long lived storage jars, deposited in late 12th-century backfill of ditch ([2683]), this early assemblage demonstrates 11th-century activity in the vicinity, even if relatively modest.

The presence of EMS and other pottery dating to after c.1050 just to the south of the Late Saxon burgh at Park Street and Stoney Street, again part of the Thameslink project, were suggested to represent the expansion of the Late Saxon Southwark settlement in the mid or late 11th century (ibid.). The current site is considerably further south, but the presence of late 11th century to early

12th-century activity on site, and also at nearby Tabard Square, might suggest this expansion was fairly rapid, extending quite quickly along Borough High Street and adjoining roads (Jarrett and Cotter, forthcoming; Sudds and Jarrett in prep.).

The composition of the early medieval assemblage is similar to other sites in Southwark (Jarrett and Cotter forthcoming; Sudds and Jarrett in prep.), although the quantity of EMSH is over inflated by the large number of sherds derived from a small number of vessels. There is an absence of early continental imports. Further north on the Thameslink excavations this is true of the Late Saxon period, suggesting there was little or no direct contact with France, The Low Countries or Germany, or redistribution through Lundenburh at this time, but these begin to appear after c.1050. The absence of imports of late 11th to early 12th-century date on site may be a reflection of the small size of the assemblage, as they are present, albeit in small numbers, at Tabard Square to the east. Jar forms dominate the early medieval assemblage, although storage jars, spouted pitchers and a small number of jugs are also present.

Phase 5: 1150-1350

The Phase 5 assemblage accounts for 30% of the pottery recovered from site (Table 3). This is the largest single group, but the phase encompasses a broader time span than any of the other post-Roman phases. Indeed, the post-medieval assemblage is twice the size of the medieval, but is divided across four phases (7 to 10).

Although 11th-century activity is evident on site, the first sizeable groups of pottery date to the late 12th century. These derive from ditches [2684], [2704] and pit [2695] and include Shelly-sandy ware (SSW), developed Stamford-type ware (DEVS) and LCOAR. The combination of these wares would suggest a date from c.1140 or 1150 to 1200 for these assemblages, although a slightly later date is possible. Of these the three backfills of ditch [2684] ([2668]; [2683]; [2689]) produced the largest group of pottery, amounting to 61 sherds, representing 34 vessels. These include SSW jars and bowls, including examples of both with thumbled rims. Other coarsewares include EMS, EMCALC and EMSH. It is possible some of the latter is residual, although the multiple large fresh sherds from two EMSH storage jars and a curfew, all three with thumbled strip decoration, suggest these vessels are long-lived. The glazed wares are comprised of LCOAR, coarse London-type ware with shell inclusions (LCOAR SHEL) and London-type ware jugs. Decoration of these is in keeping with the date, comprised of simple white slip and green glaze, early style decoration with green glaze or red-slip.

Groups dated from c.1170/1180 to the late 13th century include South-Hertfordshire greyware (SHER), London-type ware with north French-style (LOND NFR) or Rouen-style (LOND ROU) decoration and, in the case of pit [1277], one of the only two imported wares from the phase, a North French monochrome (NFM) jug sherd. The fill of feature [1600] ([1520]) contained four LOND jugs, 13 sherds of SHER from the same vessel and the near complete but fragmented remains of a stamped and green glazed jug. The vessel has been provisionally identified as LCOAR, which might suggest a late 12th-century date for the feature, but it is a little atypical and could represent a regional import.

Layer [2638] produced 16 sherds from the same LOND ROU baluster jug, and a single sherd of LCOAR, again possibly indicating a late 12th-century date, although a date into the 13th century is quite possible. Ditch fill [2687] contained LOND jugs, including one with scale decoration, in addition to the three sherds from the same LOND NFR jug.

Deposits post-dating c.1240 contain the first products of the Surrey Whiteware industry, namely Kingston-type ware (KING) or highly decorated London-type ware (LOND HD). These can also include SHER and LOND, dating up to c.1350, for example in barrel well [540], although a highly decorated Kingston-type ware (KING HD) might suggest a late 13th-century date for the group. The barrel well also contained 5 sherds from a Harlow sandy ware jug (HARM). The presence of a KING HD jug in layer [1480] with intricate applied dark green and orange strip decoration, is also suggestive of a late 13th-century date.

The latest dated groups attributed to this phase were retrieved from three layers ([1167]; [1403]; [1436]), dated from c.1270 to 1350, through the presence of a later development of the Surrey Whiteware industry, namely Coarse Border Ware (CBW), and/or well-made jugs of the Mill Green (MG) industry of Essex, in addition to form. Layers [1403] and [1436] contained fragments from the same vessels, and represents the largest group of pottery of this date from site, amounting to 329 sherds, representing 60 vessels. Notably, over two thirds are jugs, with a smaller number of coarseware jars and residual forms (Table 2).

London-type ware jugs are most numerous in the group, followed by Kingston-type ware and Earlswood-type ware examples from Surrey and Mill Green jugs from Essex. The decoration on these vessels is quite typical of their respective industries, including two particularly nice Earlswood-type ware examples, one with a bridged spout, thick slip and good glaze with complex combed decoration, and a second with a stamped face boss. The highly decorated London-type ware includes applied strips and flowers. Four South-Hertfordshire greyware examples were also recovered with slashed handles, and one with applied vertical thumbed strips. The group also contained a Saintonge ware jug with mottled green glaze, representing the only other import attributed to this phase, and a small number of highly decorated unprovenanced jugs that probably represent regional imports. The EMSH are redeposited fragments from the large storage jar and curfew forms encountered in the late 12th-century backfill of ditch [2684]. The few sherds of SSW are likely residual, although the London-type ware jugs with north French-style and Rouen-style decoration is probably long-lived.

Form	Fabric	Source	SC	ENV
Jug	EARL	Surrey	23	4
	KING	Surrey	21	5
	KING HD	Surrey	2	2
	LCOAR	London	6	1
	LOND	London	35	9
	LOND TUL	London	1	1
	LOND HD	London	9	5
	LOND NFR	London	14	1
	LOND ROU	London	3	2

	MG	Essex	82	6
	MISC	Unknown	33	3
	SAIM	France	5	1
	SHER	Hertfordshire	6	4
Jar	EMSS	Thames valley	1	1
	SHER	Hertfordshire	19	2
	SSW	London	3	1
Curfew	EMSH	Thames valley	1	0
Storage jar	EMSH	Thames valley	24	0
Unidentified	EMSH	Thames valley	9	2
	EMSS	Thames valley	1	1
	KING	Surrey	3	1
	LOGR	Thames valley	2	1
	LOND	London	6	2
	MISC	Unknown	3	1
	SHER	Hertfordshire	13	5
	SSW	London	3	3

Table 2: Summary of the pottery from layers [1403] and [1436]. SC = Sherd count; ENV = Estimated number of vessels.

The range and composition of the assemblage is again broadly typical of Southwark (Jarrett and Cotter forthcoming; Sudds and Jarrett in prep.). This phase sees the more numerous early medieval handmade wares replaced by a smaller range of wheel thrown wares. The change in technology also facilitated a diversification in form. Jars still form a significant component of assemblages but the numbers of jugs increase through the period. Bowls and cauldron/ pipkin forms are also evident. The first imports are also recorded during this phase, albeit just two, both of which are from France.

The residues, wear and sooting on vessels is consistent with domestic use and it is likely some of the material derives from contemporary households in the vicinity. The late 13th to early 14th-century group recovered from layers [1403] and [1436] has a higher number of jugs than would be expected at this time, however, including a considerable number of finer quality Mill Green and Earlswood-type examples, in addition to one from Saintonge. Although jugs represent a more significant component of assemblages by the late 13th and 14th century, a higher than typical number were also recorded at Tabard Square (Sudds and Jarrett in prep.) and a pit of this date excavated on the corner of the High Street and Kent Street was filled entirely with jugs (Goffin 1991).

A possible explanation for the high number of jugs may be found in the high concentration of inns that developed extramurally in Southwark along the course of Borough High Street. The Tabard Inn of Chaucer fame, on the east side of Borough High Street to the north of site (now Talbot Yard), is suggested to have been built by 1306 (Rendle 1888, 169-70). Admittedly, this is purported to be one of Southwark's most ancient hostelries, but others appear to have been constructed prior to 1350 (ibid.). Another possibility is that the assemblage derives from a high status household, of which a number are present along Borough High Street by this date, including the Bishop of Waverley's House on Stoney Street. A well connected individual would more readily account for the high number of finer vessels and the imported jug and, with possible estates held beyond London, perhaps the regional imports.

Phase 6: 1350-1480

Less than 1% of the site assemblage was retrieved from features attributed to Phase 6. More pottery of late medieval date was recovered from features dated to the late 15th or early 16th century, included under Phase 7, or occurred residually in later features, but pottery of this date still only accounts for just over 1% of the site assemblage. The Brandon family are understood to have had a house on the site from at least c.1465, but it is unlikely much waste from this structure was being deposited before Phase 7. Rather than a decline in activity, such a small assemblage may simply imply rubbish was being dumped off site, or that buildings and surfaces remained static.

Elsewhere in Southwark, the late 14th century sees a complete change in the pottery consumed, as industries ceased to function or marketed their wares elsewhere. Prior to 1350 London-type ware had been the main pottery type, but by the late 14th century the Surrey whiteware industries came to dominate and provided London and its environs with the majority of its kitchen and table wares (Blackmore 1999, 44-46). Just two groups of pottery were recorded. The fill of pit [1412] produced both London-type ware and Kingston-type ware but also a flat-topped coarse Border ware cooking pot that suggest the group was deposited post c.1340. The second small group from deposit [2207] contained a 15th-century Siegburg stoneware Trichterhalskrug, but with 4 sherds from an early Surrey-Hampshire border whiteware jug (EBORD), post-dating c.1480.

Phase 7: 1480-1600

The Phase 7 assemblage accounts for 11% of the pottery recovered from site (Table 3). Two groups contain pottery pre-dating 1500; [2169] produced a single sherd of late London-type ware (LLON) and the fill of cut [291] contained a Dutch redware jug (DUTR) and a coarse Border ware cooking pot with a bifid rim. This material pre-dates the construction of Charles Brandon's palatial house and is more likely associated with the earlier family house, present on the site from c.1465, or activity prior to this. A slightly larger number of deposits remain only broadly dated from c.1480 to 1600/10 or 1650, containing products of the London-area early post-medieval redware (PMRE) industry, replacing the Surrey Whitewares as the main supplier of pottery during the 16th century, or imported Raeren stoneware (RAER). These include fills [707], [708], [1330] and [2230], layers [593] and [2045] and floor [2258].

The majority of the pottery from Phase 7 was derived from deposits associated with the demolition of Suffolk Place, beginning in the late 1550s and completed by 1562, and made ground and bedding layers probably connected with the subsequent sub-division and re-development of the site. A notable group of demolition layers filling a passageway in the Palace ([361], [362], [455], [456]) are dated to c.1550 to 1600. London-area early post-medieval redware remains a significant component of these assemblages, but become increasingly replaced by the attractive green and yellow glazed whitewares of the Surrey/Hampshire Border ware industry (BORDG/Y) after their introduction in c.1550. Both the redwares and Border wares include food preparation and table wares including cauldrons, pipkins, jugs, mugs, bowls and dishes. Imported wares are also present including Raeren stoneware jugs and

drinking jugs, Frechen stoneware and Dutch redware. It is just possible these represent the household wares of the latest occupants of Suffolk Place, perhaps when it was used periodically as Royal residence, with some long-lived items from Charles Brandon and Mary's time, but the house was pulled down quite soon after these wares were introduced. Some of the material may have originated from the small tenements that were built along the street frontage on parts of the Palace grounds that had been leased out during the reign of Edward VI, but Border wares were only introduced 3 years before his death.

The made ground, bedding layers and soakaway fills that post-date c.1570 or 1580 contain tin-glazed ware dishes with blue- or polychrome-painted decoration (Orton style A) or Essex-type post-medieval black-glazed redware (PMBL), in addition to London-area early post-medieval redware, both glazed and slipped, Frechen stoneware Bartmann jugs and Border wares. These are too late in date to be associated with Suffolk Place, and instead likely relate to the occupation of site following the sale of the property by the Archbishop of York to Elles Dyll and Jon Tull.

Phase 8: 1600-1700

Just over 10% of the site assemblage was deposited in features attributed to Phase 8. A small number of groups remain only broadly dated, but groups pre-dating c.1650 include London-area post-medieval slipped redware (PMSRG/Y) and tin-glazed ware dishes with blue- or polychrome-painted decoration (Orton style A). This includes most of the pottery from robber cut [219], although a BORDY tripod pipkin with an externally lid-seated rim suggest the feature was probably backfilled after c.1650. Likewise, layer [4003] is dated to c.1630 to 1650, containing a Metropolitan slipware (METS) jug and a Martincamp-type ware type III flask, although may have been deposited slightly later. Layer [1214] contained a tin-glazed ware storage jar with unusual decoration, comprising orange segments outlined with blue. It is possible this vessel is English, but a source in the Low Countries is perhaps more likely, as is a date prior to c.1650.

Deposits dating to the later 17th century contain BORDY tripod pipkins with an externally lid-seated rims, such as backfill deposit [4025]. The latter also included BORDY and tin-glazed ware (Orton style D) dishes, PMBL tygs, a Frechen Bartmann jug and a Midlands purple ware (MPUR) butter pot. Groups dated to the very end of 17th century and into the 18th century include tin-glaze ware with dark blue painted floral decoration, or London stoneware (LONS). The fill of robber cut [4063] contained pottery of predominantly 17th-century date, including a Westerwald stoneware biconical jug with a face medallion, but also a Surrey-Hampshire border redware handled jar with a glossy iron-streaked brown glaze that probably dates to the early 18th century. Sherds of the same vessel were retrieved from a made ground deposit ([4041]) attributed to Phase 9.

The Phase 8 assemblage contains a high quantity of PMFR, more than London-area redware products put together. As with the medieval Mill Green products, Essex-type post-medieval fine redwares are of a better quality than their local counterparts, and as such might suggest some degree of affluence, particularly when present in quantity. The figures, however, are somewhat inflated by 48

sherds from a single cauldron. Imports account for 7% of phase, in keeping with levels observed in contemporary deposits elsewhere in Southwark. These are largely comprised of German stonewares, as is typical of 17th-century deposits in London, but also include German whiteware, Dutch tin-glazed and Martincamp-type ware. A near complete Mediterranean Star costrel was also recovered from site. The vessel is unstratified but is of 17th-, or possibly early 18th-century date.

By 1651 the site was apparently developed as 14 properties and by 1745 Rocque's map suggests the Dun Horse Inn had been established. The origins of this coaching inn are as yet unclear, but is possible an inn operated from one of these 14 properties in the 17th century. Unfortunately, the pottery is a little ambiguous in this respect. There are a higher number of candlesticks and money boxes than would typically be expected, and a number of drinking forms, but these are not concentrated in any particular location and could represent the waste from a domestic household.

Phase 9: 1700-1820

The Phase 9 assemblage comprises 19% of the site total by sherd count, some 381 sherds. Of this material 10% is residual. Surrey-Hampshire border redwares and London tin-glazed wares are the most numerous, accounting for 69% of the pottery recovered (Table 3). The Surrey-Hampshire border redwares occur as dishes, bowls, jars, porringers and tripod pipkins. There is also a single mug and, more unusually a dish-shaped lid, perhaps for a pipkin or jar. Whilst the focus of the tin-glazed industries remained in providing decorative tableware, by the 18th century there had been a move from dishes to plates. The current assemblage proves to be no exception with plates occurring most frequently, with a smaller quantity of bowls and chamber pots. Surrey-Hampshire border whiteware survives into the early 18th century only as chamber pots with broad flat rims, glazed internally and externally (CHP2), in addition to a few longer lived vessels and residual forms. The range of forms produced by the London-area post-medieval redware kilns became ever more restricted with the success of these industries, largely restricted to utilitarian forms. Again the assemblage from site is typical in this respect, comprised of large deep dishes and flowerpots.

Imports continue to account for 7% of 18th century groups, now occurring predominantly as Chinese porcelain, as it became increasingly attainable, with smaller quantities of Westerwald stoneware. Mass-produced refined wares, that came to dominate late 18th- and particularly 19th-century deposits, first appear in Phase 9, beginning with (SWSL; SWSG), followed by Creamwares and Pearlwares. These account for less than 4% of assemblages attributed to Phase 9.

Early 18th-century groups include those from layers [4041] and [4059], and also from the fill of robber cut [716]. The latter includes at least two Surrey-Hampshire border whiteware Type 2 chamber pots and a dipped white salt-glazed stoneware tankard. Groups dated to the mid or mid to late 18th century include a demolition layer included under Phase 8 ([2034]). Most of the pottery in the layer is 17th century but more unusually the group includes two German stoneware seltzer bottles, one of which, from Westerwald, has a possible letter 'P' to the shoulder. The fill of brick drain [2410] also contains group dated from c.1740 to 1780, with the majority of the pottery recovered from it dating to

the mid 18th century. This includes a Westerwald stoneware type 2 chamber pot with a floral medallion and a fairly high number of tin-glaze plates, some with Chinese-style decoration and some with sponged decoration. The same group also contains a number of Chinese porcelain and white salt-glazed stoneware tea bowls and saucers. The Dun Horse Inn is evidently existent on site prior to Rocques map of 1745. Given the high number of serving forms and functionally specific drinking forms it is possible these derive from the inn, although this would depend on where on the site they were deposited.

Phase 10: 1820-Present

The final 22% of the site assemblages derives from Phase 10 features. The majority of this material was recovered from four dump layers ([1010], [4040], [4046], [4065]), and the backfill of well [591], all dated to the mid or mid to late 19th century. Over 81% is composed of Creamware and Pearlware, predominantly in the form of dinner services and tea wares. There include dinner plates, dessert plates, tea plates, soup plates and oval serving plates in addition to tureens, bowls, cups, saucers and cream jugs. There are also a small number of chamber pots, English stoneware ginger and ale bottles and a smaller quantity of other refined wares (TPW, REFW, YELL), but very little else.

The public house present on the Ordnance Survey of 1872, within the boundary of site, is likely to be the Dun Horse. It is recorded as the Dun Horse on the 1841 census and, according to Rendle who had visited the establishment, remained as the Dun Horse until it ceased to be an Inn sometime around 1877, the yard then becoming a collecting place for the South Western Railway (Rendle 1888, 267). By 1898 the public house had been demolished to make an entranceway to the site, now largely owned by Messrs Mosers. The presence of some complete vessels, in addition to multiple examples of the same vessels, is a good indication that the Phase 10 assemblages discussed above are clearance groups. Although it is possible these derive from domestic households, particularly if they were of multiple occupancy, for example a lodging house, the high proportion of serving wares, almost to the exclusion of anything else, suggest that at least some of this material is likely to represent clearance from the Dun Horse Inn. Plotting the location of these assemblages will again be essential, as will be comparison with the glass assemblages from same groups.

Distribution table

Fabric code	Phase										Total SC	
	2	3	4	5	6	7	8	9	10	Unphased		
ESSAN											1	1
LSS	1											1
THET				2								2
EMS				1								1
NEOT	1											1
EMCALC				1								1
EMSS				3								3
EMGR	3											3

EMIS			1						3	4	
EMSH	2			62			1			65	
LOGR				2						2	
STAM	2									2	
LCOAR		1	3	80			2			86	
LCOAR SHEL				6						6	
LOND	12	3		82			7		2	106	
LCOAR EAS				19						19	
LOND EAS				1						1	
SSW	1			18			1			20	
DEVS				1						1	
LIMP									1	1	
NFM				2						2	
SHER	2			63		1				66	
LOND NFR				24						24	
LOND ROU				19						19	
EARL	1			24						25	
HARM				5		1				6	
KING	5			30		2	3	1	2	43	
KING HD	37			8					1	46	
LOND HD				10						10	
SAIM				5						5	
SPGR							1			1	
MG				82		1			1	84	
CBW	4			1			8		4	17	
DUTR						2	1	2		5	
CBW FT					1					1	
CHEA	2					2	3	1	1	9	
CBW BIF						1				1	
LLON						2		1		3	
MISC	4			51		1			1	57	
MISC WW									10	10	
MPUR							3			3	
SIEG TRIC					1					1	
EBORD					4			1	7	12	
PMRE	1					87	13	6	1	2	110
PMREC						1				1	
PMREM		2					1			3	
PMSRG						2	17			1	20
PMSRY						13	1			2	16
RAER		5				5				10	
BORD							3	3		2	8
BORDG				1		6	14	2	6	2	31
BORDO						40	4	2			46
BORDY						12	18	6	1		37
FREC						5	6	3		1	15
FRECW							1			1	
GERW							1			1	
RBOR	2					2	7	37	2		50
TGW							3	20	1		24
TGW A						4	1	1			6
TGW BISC							1				1
PMBL						1	5	4			10
PMFR						34	62	6		2	104

PMR		1				4	20	3	4	32
RBOR SLTR							4			4
RBORB						1	12			13
RBORG						9	37			46
CHPO BW							26	1		27
WEST						4	1			5
BORDB						1	2			3
MART3						1				1
STAR									1	1
METS						2			1	3
TGW BLUE							4			4
TGW C							58	2		60
TGW D						2	5	2		9
BORDB CHP2							1			1
BORDG CHP2							27			27
STSL							5			5
LONS						1	4	3	6	14
TGW F							1			1
TGW H							46	2		48
DERBS									1	1
ENGS								5		5
TGW SPNG							15			15
TGW G							1			1
CONP								1		1
SWSL							1	1		2
SWSG							5		1	6
CREA							3	224		227
CREA TORT							1			1
SWSG COB								1		1
SWSG SCRIB							2			2
WEST CHP2							2			2
ENPO PNTD								1		1
ENPO OTR								1		1
CREA DEV								2	1	3
PEAR								31		31
PEAR BW							1	41		42
PEAR PNTD								3		3
PEAR TR	2						1	45	1	49
CREA SLIP								4		4
PEAR SLIP								14		14
TPW								7	10	17
PEAR EARTH								1		1
SUND									1	1
REFW								2	2	4
REFW SLIP								1		1
PEAR TR3								1		1
TPW3	2							1		3
YELL								7	2	9
YELL SLIP								3	2	5
PEAR TR4								1		1
TPW4								1	1	2
ENGS BRST								1		1
TPW FLOW								2		2
TPW6									1	1

MAJO								1	1		2
Phase total	84	12	4	603	6	224	214	381	451	58	
% of overall assemblage	4%	1%	<1%	30%	<1%	11%	10%	19%	22%	3%	

Table 3: Distribution of the pottery by phase. SC = Sherd count. Including evaluation assemblage. Unphased including unstratified pottery.

Discussion and recommendations

The pottery recovered suggests there was activity on the site from at least the 11th century through to the 19th century. The medieval pottery is entirely in keeping with the ceramic profile of Southwark, which diverges significantly from assemblages to the north of the river in the City (Jarrett and Cotter forthcoming). There are evidently a narrower range of types than in the City, in part thought to be a geographical response, with the Thames acting as something of barrier to the distribution of pottery into Southwark. Assemblages to the north of the river are drawn from a wider area, including to the north of London, whereas those in Southwark originate largely from the Thames Valley. It has also been argued that political and economic pressures may have resulted in the City and Southwark having separate economic identities and developing their own distinct marketing and trading connections (*ibid.*). Tolls were charged by both the City and Southwark for crossing London Bridge but cross river freighting would also have increased the price of goods for the consumer, most particularly for Southwark. It was therefore in their interest to develop a similar waterfront infrastructure. Indeed, although acting as a barrier to pottery from the north of London to some extent, the Thames and its tributaries also offered a means by which pottery was traded to Southwark.

In this context, although it is clear there are fewer types, it is also apparent there are fabrics in some abundance that occur less frequently in the City. In the early medieval period, including on site, this explains the high quantity of EMSH, which finds a niche in the settlement, probably originating from a north-west Kent source, although made from the Woolwich Beds clay, which in the Thames Valley extends as far west as Southwark (Vince and Jenner 1991, 63). The medieval and late medieval assemblages continue to demonstrate some differences, including fewer imports, with the exception of the Dutch redwares, explained perhaps by the presence of a Dutch community in Southwark from the 14th century (Jarrett and Cotter forthcoming). The post-medieval assemblage is typical of those observed elsewhere in Southwark, and more broadly across London as ceramic supply became increasingly standardised, although the settlements retained their own divergent identities well into the 17th century.

The assemblage includes material from typical domestic households but also, perhaps from as early as the late 13th or 14th century to the 16th century, from high status establishments. It is possible that the high number of jugs present in certain medieval deposits derive from a nearby drinking establishment, but the quality of the vessels and range of types is more consistent with an affluent household. Whether this may have been a well-connected secular property, or the residence of a Bishop, both of which were evident along Borough High Street, is not clear from the pottery consumed. Whatever the origins, access to higher quality pottery appears to continue through the

tenure of the Brandon family, although perhaps surprisingly less evidently than might have been expected. Perhaps, as a consequence, a decline in the quality of the assemblage that might have been anticipated at the time of the sale and sub-division of the property from the late 16th to 17th century is not immediately apparent, although this is in part due to residuality. Although relatively limited, there is also some evidence in the 18th-century assemblage of the Dun Horse Inn, and more convincingly, what appear to be clearance groups from the demolition of this public house in the late 19th century.

Any further analysis of publication of the assemblage should focus on the larger and more diagnostic groups of pottery, particularly those associated with known or suggested establishments, but should encompass the full spectra of changes encompassing the site over time. A comparison with the associated glass assemblages will also be important to create a more holistic view of these groups, and to confirm and enhance an understanding of them. A total of 12 illustrations will be required.

Dating table

Context	Assemblage size	Date range of the pottery		Context considered date
0	S	1080	1900	-
4	S	1670	1900	19 th century
9	S	1820	1900	1825 – 1900
10	S	1780	1900	M.19 th century
12	S	1580	1900	1840 – 1900
35	S	1480	1900	M/L.19 th century
37	S	1580	1900	M/L.19 th century
42	S	400	1400	1240 - 1300
115	S	1550	1900	1550 - 1900
121	S	1580	1900	1600 - 1800
146	S	1550	1700	1550 - 1700
148	S	1480	1750	1690 - 1750
149	S	1480	1700	M.17 th century
168	M	1550	1900	X1 sherd 1770 – 1820/ x37 sherds 1650 – 1700
173	S	1400	1750	1650 – 1750
177	S	1700	1900	1700 – 1900
208	S	1630	1846	1630 – 1846
209	S	1770	1840	1770 – 1840
234	S	1480	1650	1480 – 1650
235	S	1480	1700	1580 – 1650
236	S	1550	1700	1650 – 1700
238	S	1270	1500	1270 – 1500
239	S	1580	1700	1580 – 1700
272	S	1550	1700	1550 – 1700
279	S	1480	1900	1550 – 1600
284	S	1550	1700	1550 – 1700
285	S	1550	1900	1580 – 1700
288	S	1580	1900	1580 – 1900
292	S	1300	1650	1380 – 1500
320	S	1590	1900	1735 – 1900
324	S	1480	1600	1480 – 1600
337	S	1600	1700	1600 – 1700
361	S	1240	1650	1480 – 1600

362	S	1170	1700	1550 – 1600
363	S	1480	1650	1480 – 1650
379	S	1810	1900	1810 – 1900
385	S	1550	1700	1550 – 1700
455	S	1480	1650	1550 – 1600
456	M	1480	1650	1550 – 1600
535	S	1080	1400	1240 – 1350
537	S	1170	1400	1240 – 1350
593	S	1480	1650	16 th century
602	M	1480	1900	1650 – 1700
630	S	1480	1700	1570 – 1650
707	S	1480	1600	1480 – 1600
708	S	1480	1600	1480 – 1600
709	S	1480	1600	1480 – 1600
710	M	1550	1700	1580 – 1700
711	S	1570	1700	1630 – 1700
715	M	1550	1900	1710 – 1750
1002	S	1240	1500	1350 – 1500
1010	M	1270	1900	M.19 th century
1017	S	1480	1600	1480 – 1600
1019	S	1050	1150	1050 – 1150
1025	S	1270	1700	1550 – 1700
1047	S	1350	1600	1480 – 1600
1050	S	1080	1500	1200 – 1350
1055	S	1240	1400	1240 – 1400
1090	S	1200	1600	1480 – 1600
1091	S	900	1350	1080 – 1350
1105	S	1400	1600	1480 – 1600
1135	S	1080	1400	1240 – 1350
1136	S	1080	1400	1240 – 1300
1144	S	1270	1500	1270 – 1350
1155	S	1550	1700	1550 – 1700
1160	S	1240	1400	1240 – 1300
1162	S	970	1350	1200 – 1350
1167	S	1080	1400	1270 – 1400
1168	S	1240	1300	1240 – 1300
1172	S	1050	1150	1050 – 1150
1192	S	1270	1500	1270 – 1500
1214	S	1500	1650	1500 – 1650
1230	S	1550	1830	1760 – 1800
1252	S	1080	1200	1080 – 1200
1253	S	1240	1500	1350 – 1500
1256	S	1080	1500	1350 – 1500
1272	S	900	1840	1770 – 1840
1276	S	1170	1300	1170 – 1300
1330	S	1240	1610	1480 – 1610
1383	S	1080	1350	1080 – 1350
1403	S	1000	1400	1270 – 1350
1409	S	1080	1350	1240 – 1350
1411	S	1080	1500	1340 – 1400
1426	S	1050	1350	1080 – 1150
1436	M	1000	1700	1270 – 1350
1437	S	1170	1350	1170 – 1350
1447	S	1240	1350	1240 – 1350
1452	S	1140	1350	1180 – 1270
1459	S	1080	1350	1080 – 1350
1460	S	1080	1350	1080 – 1350
1473	S	1480	1650	1480 – 1650

1476	S	1480	1700	1550 – 1610
1480	S	1080	1400	1240 – 1300
1482	S	1080	1350	1080 – 1350
1520	M	1080	1350	1180 – 1270
1527	S	1080	1400	1180 – 1350
2000	S	1080	1200	1080 – 1200
2028	S	1480	1650	1480 – 1650
2034	S	1480	1900	1740 – 1800
2045	S	1480	1600	1480 – 1600
2115	L	1680	1900	M.19 th century
2131	S	1480	1600	1480 – 1550
2169	S	1400	1500	1400 – 1500
2207	S	1400	1550	1480 – 1500
2220	S	1400	1650	1400 – 1650
2226	S	1480	1600	1480 – 1600
2230	S	1480	1600	1480 – 1600
2241	S	1775	1900	M/L.19 th century
2258	S	1480	1600	1480 – 1600
2263	S	1350	1500	1350 – 1500
2268	S			L.17 th – M.18 th century
2283	S	1080	1200	1080 – 1200
2295	S	1050	1200	1080 – 1200
2323	S	1480	1600	1480 – 1600
2334	S	1080	1200	1080 – 1200
2342	S	1170	1350	1240 – 1300
2369	S	1480	1610	1480 – 1600
2377	S	1480	1550	1480 – 1550
2382	S	1200	1650	1250 – 1400
2409	L	1550	1900	1740 – 1780
2416	S	1780	1840	1780 – 1840
2423	S	1080	1350	1240 – 1350
2467	S	1080	1350	1080 – 1350
2488	S	1080	1200	1080 – 1200
2559	S	1050	1150	1050 – 1150
2614	S	1770	1840	1770 – 1840
2638	S	1000	1270	1180 – 1270
2668	L	1050	1350	1150 – 1200
2674	S	1480	1600	1480 – 1600
2683	S	970	1350	1140 – 1200
2687	S	900	1350	1180 – 1270
2689	S	1080	1200	1080 – 1200
2694	S	1050	1200	1080 – 1200
2696	S	1080	1350	1140 – 1200
2731	S	1080	1200	1080 – 1200
2824	S	1050	1150	1050 – 1150
2880	S	1480	1610	1480 – 1610
2905	S	1050	1150	1050 – 1150
3111	S	900	1500	900 – 1500
3135	S	1050	1150	1050 – 1150
4002	S	1550	1900	1670 – 1700
4003	S	1480	1900	1630 – 1650
4007	S	1820	1900	1820 – 1900
4009	S	1770	1840	1775 – 1830
4019	S	1350	1700	1570 – 1650
4025	S	1480	1800	1650 – 1700
4026	S	1770	1900	1780 – 1840
4030	S	1745	1900	1805 – 1840
4040	S	1740	1900	M.19 th century

4041	S	1480	1900	E/M.18 th century
4042	S	1700	1900	1700 – 1900
4045	S	1300	1650	1480 – 1610
4046	S	1580	1900	M/L.19 th century
4048	S	1580	1900	1820 – 1900
4050	S	1080	1900	1550 – 1800
4059	M	1480	1900	1700 – 1760
4060	S	1550	1900	1600 – 1700
4061	S	1400	1800	1650 – 1750
4065	S	1780	1900	M/L.19 th century
4071	S	1580	1840	1770 – 1830
4073	S	1480	1700	1580 – 1650
4074	S	1480	1700	1550 – 1650
4080	S	1550	1700	1630 – 1700
4081	S	1550	1700	1580 – 1700
4082	S	1080	1700	1580 – 1700

Table 4: Dating table. Size: S = Small (1-30 sherds), M = Medium (31-100 sherds), L = Large (100+ sherds).

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APPENDIX 4: GLASS ASSESSMENT

Chris Jarrett

Introduction

A small sized assemblage of glass was recovered from the site (eleven boxes). The glass dates from the Roman, late medieval/early post-medieval and post-medieval periods. The glass is on the whole fragmentary (only six vessels are intact or were so before excavation and four other vessels have a complete profile). Although none of the material demonstrates evidence of abrasion, however the Roman glass includes material which has become redeposited (approximately 29 fragments are residual). Therefore, the glass appears to have been deposited under secondary and tertiary conditions and some of the material was deposited fairly rapidly after breakage. The Roman and post-medieval soda glass fragments often show evidence of weathering, while the medieval/early post-medieval natural glass is heavily weathered and resultant from the burial conditions. The material was quantified by the number of fragments, estimated number of vessels and weight. The assemblage was recovered from 190 contexts and individual deposits produced mostly small (fewer than 30 shards) sized groups, except for two medium (31-100 fragments) sized groups.

All of the glass (722 fragments, 434 ENV, 10.611kg, of which eighteen fragments, 16 ENV, 1.395kg is unstratified) was recorded in a database format, by glass type, colour and form. The assemblage is discussed by period and vessel shapes, together with its distribution. The assemblage is notable for producing Roman glass production

The Glass Forms

The quantification of the glass by the different archaeological periods is as follows:

Medieval-early post-medieval: 17 fragments, 6 ENV, 52g

Post-medieval: 264 fragments, 106 ENV, 8.777kg

Roman: 408 fragments, 299 ENV, 1.738kg

Undated: 33 fragments, 23 ENV, 43g

Roman

Beaker, rounded: 2 fragments, 1 ENV, 7g. Context: [3033]

The vessel has an upright, very short, fire-finished rim, everted neck and a rounded shoulder. One fragment has a ?horizontal trail, which may belong to another vessel.

Bottle: 4 fragments, 2 ENV, 17g. Context: [2035] and [2176]

Bottle?: 1 fragment, 1 ENV, 12g. Context: [2842]

Bottle/flagon?: 3 fragments, 3 ENV, 30g. Context: [2424], [2861] and [2905]

Bottle/flask: 1 fragment, 1 ENV, 30g. Context: [1084]

Bottle/jar, shouldered: 1 fragment, 1 ENV, 19g. Context: [2095],

Bowl: 5 fragments, 5 ENV, 9g. Context: [2035], [2041], [2181], [2477] and [2524]

Cup, rounded, indented: 1 fragment, 1 ENV, 24g. Context: [3121]

The vessel survives in clear glass with semi-transparent off white surfaces and has a base with a concave underside and a flaring ?cylindrical wall decorated with indentations.

Dish, fluted: 1 fragment, 1 ENV, 6g. Context: [2035]

Made in blue tinted glass the vessel survives as a basal fragment with external radiating fluting.

Flagon: 1 fragment, 1 ENV, 17g. Context: [2811]

Jar: 4 fragments, 3 ENV, 14g. Context: [2035], [2283] and [2383]

Jar, rounded: 4 fragments, 3 ENV, 17g. Context: [2095], [2610] and [2757]

Single examples with collared rims occurred in contexts [2610] and [2757], the latter being a hollow type. One vessel is decorated with same colour glass horizontal trails that are not always continuous (context [2095]).

Jar, shouldered: 5 fragments, 3 ENV, 14g. Context: [2095] and [2775]

Jar, shouldered, squat?: 1 fragment, 1 ENV, 3g. Context: [2883]

Jar, shouldered?: 1 fragment, 1 ENV, 30g. Context: [2968]

Jar, small rounded: 2 fragments, 1 ENV, 0.5g. Context: [2333],

Jug: 3 fragments, 2 ENV, 18g. Context: [2035] and [2638]

Jug/flagon: 1 fragment, 1 ENV, 19g. Context: [2692]

Phial: 4 fragments, 4 ENV, 25g. Context: [379], [2880], [2966], [3000]

These are small vessels often surviving as rounded bases and two are teardrop shaped (context [379] and [3000]). A rim fragment has an applied collar (context [2880])

Tesserae: 32 fragments, 31 ENV, 17.5g. Context: [1136], [1251], [1309], [1340], [1342], [1370], [1376], [1436], [1460], [1485], [2000], [2035], [2041], [2043], [2181], [2295], [2331], [2369], [2465], [2820], [3129], [3139] and [3140]

These occur mostly as opaque dark cobalt/blue colours (nine examples), or mid blue coloured (four examples), although many are in different hues of blue-green or variants of this, while one or two examples are noted in dark green (semi-translucent) and bluish white. The more complete examples are square shaped and the largest example measures 11mm x 10mm x 8mm thick. All of the examples show no evidence for a mortar deposit and were probably unused.

Unknown: 2 fragments, 2 ENV, 4g. Context: [2035] and [2041]

Unidentified form: 6 fragments, 1 ENV, 1.25g. Context: [1084], [2012] and [2610]

Vessel glass: 226 fragments, 166 ENV, 637.75g. Context: Unstratified, [113], [114], [379], [451], [478], [1056], [1084], [1162], [1181], [1190], [1309], [1323], [1340], [1342], [1355], [1376], [1378], [1483], [1485], [1527], [2001], [2027], [2034], [2035], [2041], [2049], [2053], [2095], [2113], [2114], [2116], [2123], [2126], [2129], [2150], [2159], [2176], [2177], [2181], [2185], [2313], [2315], [2328], [2330], [2333], [2341], [2342], [2360], [2365], [2369], [2371], [2396], [2420], [2424], [2465], [2471], [2477], [2489], [2499], [2512], [2525], [2537], [2568], [2586], [2610], [2653], [2692], [2726], [2730], [2731], [2775], [2793], [2804], [2811], [2814], [2821], [2842], [2864], [2877], [2880], [2883], [2885], [2905], [2909], [2910], [2942], [2946], [2947], [2966], [2967], [2968], [3002], [3109], [3025], [3047], [3050], [3051], [3121], [3122], [3129], 3144, [3203], [3234] and [3238]

A relatively small number vessel glass fragments are decorated. A single example has a shallow rounded, horizontal groove (context [2910]), while a neck sherd has wrythen decoration (context [2177]). The main type of decoration occurs as trails, which can be either thick or thin and vertical or horizontal (contexts [379], [478], [2041], [2116], [2315], [2471], [2880], [2909], [2964] and [3074]. A possible bottle neck has white trails, which have been marvered giving a marbled appearance (context [2365]).

Vessel glass, square section: 17 fragments, 16 ENV, 91g. Context: [2001], [2012], [2035], [2331], [2369], [2524], [2549], [2690], [2694], [2880] and [2967]

These include wall fragments and moulded base fragments with concentric ridges on the underside of the base (contexts [2001] and [2376]) and were optically blown.

Window pane?: 6 fragments, 4 ENV, 97g. Context: [2959], [2967], [2968] and [3047]

These fragments occur in clear or aquamarine coloured glass and have a straight, rounded thickened edge on one surface and are usually thick walled.

Cullet and production waste

A small proportion of the Roman glass is related to production. There are two groups of glass (contexts [2000] and [2376]) that may represent cullet, i.e. broken vessels collected for recycling and used to make new vessels. It is possible that this material is normal domestic household waste.

?Cullet vessels

Bottle: 1 fragments, 1 ENV, 4g. Context: [2376]

Bottle or phial: 2 fragments, 1 ENV, 10g. Context: [2000]

Bowl, rounded: 1 fragment, 1 ENV, 2g. Context: [2000]

Flagon?: 1 fragment, 1 ENV, 2g. Context: [2000]

Jar, rounded: 1 fragment, 1 ENV, 3g. Context: [2000]

A fragment with an upright neck and rounded body is decorated with two horizontal bands of staggered, vertical incised short lines.

Jug?: 1 fragment, 1 ENV. 4g. Context: [2376]

Vessel glass: 38 fragments, 28 ENV, 62g. Context: [2000] and [2376]

Vessel, square section: 1 fragment, 1 ENV, 10g. Context: [2376]

A base sherd with moulded concentric circles.

Window pane: 1 fragment, 1 ENV, 1g. Context: [2376]

Production

Vessel glass

Bottle: 3 fragment, 3 ENV, 6g. Context: [13] and [2000]

One fragment consists of the distorted neck and the start of the shoulder of the vessel and it is in a burnt condition with dull metallic surfaces and slag-like adherences.

Tank glass: 2 fragments, 2 ENV, 15g. Context: Unstratified and [2035]

The two fragments of tank glass occur as aquamarine coloured examples and measure 34mm+ x 32mm x 9mm thick (unstratified) and greenish blue with clear glass, measuring 28mm+ x 8mm x 5mm thick (context 2035).

Vessel glass: 1 fragment, 1 ENV, 13g. Context: [210], [2596] and [2676]

The first fragment is burnt and melted, although this could be a domestic vessel which has been in a fire (context [210]). A second vessel consists of a hollowed rim and part of the wall and the item is distorted. A third vessel survives as a base sherd with a hollow rounded footing and part of the wall has collapsed on to the foot ring (context [2676]).

Melted glass

Melted glass: 13 fragments, 3 ENV, 63g. Context: [209], [2000], [2034], [2181], and [2376]

The material from contexts [2000] and [2376] was more notable for containing vessels partially melted together.

Waste: 6 fragments, 2 ENV, 187g. Context: [2000]

A single curving fragment of turquoise glass with nobbles, probably represents a grab from a tank of molten glass.

Medieval-early post-medieval

The glass from this period was heavily decayed, often with buff surfaces and a white crystalline core.

Vessel glass: 1 fragment, 1 ENV, 3g. Context: [456]

Curved walled vessel with fresh breaks

Window quarry: 2 fragments, 1 ENV, 1g. Context: [217]

Window quarry: triangular 14 fragments, 4 ENV, 48g. Context: [177] and [217]

One fragment survives as an apex with nibbled edges and it is thin walled, 66mm+ x 68mm + (apex) x 2mm thick (context [177]). A second apex occurs with a long side with bevelled and nibbled edges. 55mm + x 52mm x 4mm thick (context [217]). A third quarry also survives as an apex and it is thin walled and also has nibbled edges: 66mm+ x 68mm + (apex) x 2mm thick (context [217]).

Post-medieval

Ale glass: 1 fragment, 1 ENV, 82g. Context: [2115]

Clear soda glass, free-blown. A fairly solid and flat foot with a central concave depression on the underside. Attached to the foot is a merese and a short stem with a rounded (inverted balustrade) knob, joined to a faceted funnel bowl. 18th century.

Beaker, cylindrical: 1 fragment, 1 ENV, 32g. Context: unstratified

Olive green soda glass, free-blown. Splayed base with rigaree-decoration. Shallow concave kick on the underside with around the edges radiating notches, which do not appear to continue on to the wall. c. 1550–1650

Beaker, pedestal: 7 fragments, 2 ENV, 86g. Context: [218]

Clear soda glass, free-blown. Complete profile, fragmentary. Flaring wall, pedestal base with a hollow, rolled finish, the rim has two horizontal bands of white slip dots or ovals that contain very fine bubbles in an 'overlapping' diamond pattern. The join of the vessel wall to the slightly kicked base has a gentle cordon with white glass decoration as dots above a band and below are small raised circle and the vessel is slightly weathered. 1500-1550

Bottle, cylindrical: 4 fragments, 2 ENV, 96g. Context: [1025], [1230]

Both vessels are made in clear soda glass, mould made and date to the 20th century. One item survives as a profile rim (context [1025]) while the other item survives as wall fragments from above the base and have printed on to the glass a red logo: '..NESS' in a SCROLL' and '...GH, S.E. 1/BOTTLE DAILY' and this vessel possibly represents a milk bottle (context [1230])

Bottle, flat octagonal section: 1 fragment, 1 ENV, 200g. Context: [320]

Dark olive green HLLA glass moulded base with narrow side panels. 1810 onwards.

Bottle, sectioned: 2 fragments, 1 ENV, 3g. Context: [462]

Clear soda glass, moulded wall fragment from a possible octagonal-section bottle. 1810 onwards.

Bottle, square section: 1 fragment, 1 ENV, 2g. Context: [377]

Blue tinted soda glass, moulded corner of the vessel wall with evidence for concave arcaded panels.
1810 onwards

Bottle/phial: 1 fragment, 1 ENV, 10g. Context: [718]

Aquamarine soda glass, free-blown base with a deep conical kick. 18th century

Bowl, straight-sided, squat: 1 fragment, 1 ENV, 46g. Context: [2409]

Clear soda glass, free-blown. Complete profile: simple rim and a slightly splayed base with a concave underside. 18th century

English wine bottle: 27 fragments, 10 ENV, 798g. Context: unstratified, [168], [183], [210], [453], [2034], [2369], [2409] and [2885]

Fragmentary free-blown wine bottles that could not be assigned to a type and made mostly in light to dark olive green glass that post-date c.1640.

English wine bottle, cylindrical, early: 7 fragments, 5 ENV, 1.925kg. Context: [2115] and [2285]

Free-blown light to dark olive green wine bottles fragments dating from c.1740.

English wine bottle, cylindrical, late type: 6 fragments, 6 ENV, 1.171kg. Context: [2614]

Moulded black/dark olive green wine bottles fragments dating from c.1810.

English wine bottle, globe and shaft, squat: 1 fragment, 1 ENV, 432g. Context: [177]

Olive green soda glass, free-blown. Complete profile and probably intact prior to excavation. The rim string finish is dated c.1680-90 and attached to a short conical neck and a globular body with a rounded kicked base. The exterior has a blue iridescence.

English wine bottle, mallet-type, squat: 23 fragments, 2 ENV, 905g. Context: [453]

The two free-blown examples are made in olive green natural glass and have 'old fashioned' types of rim finish with everted squared rims that have immediately below either a rounded or narrow flat cordon. One item is intact and the other was complete prior to excavation. c.1730

English wine bottle, onion: 9 fragments, 3 ENV, 1.486kg. Context: Unstratified and [715]

This form was made in green and olive green natural and soda glass and had string rim finishes dated between c.1680-1720.

Jar, cylindrical: 1 fragment, 1 ENV, 2g. Context: [2034]

The vessel, made in green soda glass, survives as a base with a kick and is notable for being decorated externally with thin spiralling white trails, more noticeable on the underside of the base and was optically blown. The item dates to the late 17th-early 18th century.

Lid/stopper: 1 fragment, 1 ENV, 17g. Context: unstratified

Made in clear soda glass, the item survives as a knob (20mm in diameter) and is decorated with two rows of bubble introduced centrally into the top of the stopper.

Phial: 2 fragments, 2 ENV, 11g. Context: [453]

The items consist of a rim sherd in clear natural glass and a base sherd made in green HLLA glass and the items date to the mid 17th-late 18th century.

Phial, conical: 1 fragment, 1 ENV, 37g. Context: [2115]

The vessel survives as a base made in clear soda glass and dated to the 17th-18th century.

Phial, cylindrical: 1 fragment, 1 ENV, 26g. Context: [2115]

The item is fragmentary and could be reconstructed to be complete. It is made in clear soda glass and dates to the 18th-19th century.

Phial, globular: 3 fragments, 3 ENV, 148g. Context: unstratified, [453]

The two unstratified items are intact and made in grey-blue and blue tinted soda glass while the third vessel is largely complete and was made in pale green HLLA glass and the items are dated to the mid 17th-late 18th century.

Rods, twisted: 2 fragments, 1 ENV, 13g. Context: [2409]

Two decorative rods with barley cane twists are made in clear soda glass and measure 4mm in diameter and have surviving lengths of 95mm and 103mm. These items may represent parts of a glass vessel or pieces from a composite item and are dated to the mid 18th century by the associated finds.

Sweetmeat glass: 1 fragment, 1 ENV, 16g. Context: [2115]

The vessel is made in clear soda glass and survives as a rim sherd with curving ribs on the exterior and it is dated to the 18th century.

Tumbler: 3 fragments, 3 ENV, 143g. Context: [2115]

The three vessels survive only as bases with plain flaring walls and are made in clear soda glass and are dated to the 18th-19th century.

Unknown: 1 fragment, 1 ENV, 1g. Context: [235]

The item survives as fragments of burnt and warped glass.

Vessel: 25 fragments, 13 ENV, 77g. Context: unstratified, [186], [195], [362], [377], [462], [602], [715], [2034], [2115] and [7550]

Amongst the vessel glass are two items of note. First, there is an unstratified item made in green tinted HLLA/soda glass and recorded as a stem with twisted ridges and additionally two fine white glass trails. Second, from context [362] (SF 32) was found in grey tinted soda glass a rod handle

(attached to the body of the vessel with a glass disc) and of a type that is often associated with narrow necked jugs dated c.1500-1625 (Willmott 2001, 77-78. fig. 92 and 93).

Window pane: 120 fragments, 34 ENV, 808g. Context: unstratified, [177], [183], [186], [195], [453], [462], [710], [715], [1025], [2034], [2110], [2115], [2409], [2423] and [4018]

The window glass is made in mostly soda glass, except for a small number of occurrences in natural and HLLA types and it is mostly clear coloured, although various shades of blue and green tinted examples are noted. The window glass was made using a number of different techniques and dates from the 16th century through to the 19th/20th century. A small number of items are of note. Fragments of an unstratified clear soda glass rectangular pane can be reconstructed to have the complete dimensions of 153mm x 78mm x 1.5mm thick and was cylinder made and broadly dated to the 16th-18th century. The bullseye of a fragment of crown made window glass was noted in context [2110] and the edge of a possible semi-circular window pane was found in context [453].

Window quarry: 4 fragments, 1 ENV, 5g. Context: [1002]

Window quarry, diamond-shaped: 1 fragment, 1 ENV, 4g. Context: [234]

The item (context [234]), made using the cylinder technique, is in clear soda glass and survives as two opposed angled edges and has dimensions of 51mm+ x 20mm+ x 1.5mm thick. The weathering of the glass indicates a possible painted diamond lattice, which shows up as pink and blue when held to the light. The window quarry is dated generally to the post-medieval period.

Wine glass: 4 fragments, 2 ENV, 193g. Context: [715], [718] and [2409]

The two wine glasses were both made in clear glass. Conjoining fragments of the first wine glass were recovered from contexts [715] and [718] and the item consists of a rounded bowl with fluting and squared bosses occur near the base, while the moulded stem is of a hollow Silesian-type with four vertical 'incised' lines running down its length. The join of the stem to the foot to the foot has small, fine vertical cuts. The foot is ribbed and the edge is rolled under and hollow. This type of wine glass is broadly dated c.1715-40/65.

The second wine glass survives with a complete profile and was recovered from context [2409]. It has a short trumpet-type bowl with no change in profile on to a thick, solid, flaring stem and a foot, which is thick walled and concave on the underside. The vessel is dated c.1740.

Distribution

The glass was recovered from Phases 2-10. Its distribution is shown in Table 1 and a summary of what was found in each phase is presented below.

Phase 2: Early Roman (AD 43-AD 250)

The largest quantity of Roman glass (248 fragments, 176 ENV, 1.109kg) was recovered from this phase and material from later periods was absent. The glass displays a wide range of functions, however, the largest number of tesserae (13 fragments) and glass working items (14 fragments) were noted in this phase. The majority of the deposits the glass was recovered from were layers and very few features (e.g. pits) produced glass.

Phase 3: Late Roman (AD 250-AD 400)

A total of 63 fragments (49 ENV and 172g) of glass are recorded for this phase and only three fragments (3 ENV and 43g) of glass appears to be intrusive post-medieval material. There is a small range of vessel functions identified and tesserae only accounted for seven fragments, while the evidence for glass manufacture was absent. The glass was again recovered from mostly layers and only a small number of features.

Context	Phase	Area	Trench	No frags	ENV	Wt (g)	Spot date
13			6	1	1	4	Roman
35			6	1	1	210	Roman
113	2	N-end Phase 2		2	2	3	Roman
114	2	N-end Phase 2		2	1	1	Roman
168	9	C-trench		2	2	30	1640–1740
177	8	E-end Phase 2		16	3	443.5	C. 1680–90
183	9	E-end Phase 2		28	1	94	1720–1900
186	9	E-end Phase 2		11	3	7	Post-medieval
195	9	E-end Phase 2		4	2	2	Post-medieval
209	10	C-trench		3	2	23	Undated
210	10	C-trench		7		17	1640+
217	8	C-trench		5	4	38	Late medieval – early post-medieval
218	8	C-trench		7	2	86	1500–1550
234	8	C-trench		1	1	4	Post-medieval
235	8	C-trench		1	1	1	Post-medieval
320	10	W-ext		1	1	200	1810–1900+
362	7			2		10	Early post-medieval
377	2	NE Corner		6	2	87.5	1810+
379	2	NE Corner		2	2	8	Roman
451	8			1	1	2	Roman
453	8			50	10	1130	1725–1760
456	7			1	1	3	Medieval - early post-medieval
462	10			6	3	15	1810+
478	7			2	2	2	Roman
535	5			1	2	0	Undated
602	7			1	1	9	Post-medieval
710	8			1	1	3	Post-medieval
715	9			12	4	643	C. 1715–40/65
718	8			2	2	52	C. 1715–40/65
1002	10	110/210		4	1	5	Early post-medieval
1025	10	110/210		2	2	37	20th century

Context	Phase	Area	Trench	No frags	ENV	Wt (g)	Spot date
1056	2	115/210		1	1	2	Roman c
1084	2	105/205		12	4	39	Roman
1135	2			1	1	0	Undated
1136	2			2	2	0	Roman
1146	5			1	1	0.5	Undated
1162	2			1	1	2	Roman
1181				1	1	4	Roman
1190	2			1	1	1	Roman
1230	10			3	1	62	20th century
1251				5	5	1.5	Roman
1305	7			1	1	0.5	Undated
1309	10			3	3	1.5	Roman
1312	5			1	1	2	Undated
1323	2			1	1	1	Roman
1340	5			6	6	3	Roman
1342	5			2	2	1.5	Roman
1355	2			3	3	5	Roman
1370	2			1	1	0	Roman
1376	2			2	2	2	Roman
1378	2			1	1	7	Roman
1436	5			1	1	0.5	Roman
1460	3			2	2	1	Roman
1482	5			1	1	0	Undated
1483	2			1	1	7	Roman
1485	2			4	4	7.5	Roman
1527	5			1	1	3	Roman
1576	2			1	1	0	Undated
2000	4			54	36	112	Roman
2001	2			6	4	33.5	Roman
2005	2			1	1	2	Roman
2010	2			1		67	Roman
2012	3			6	2	5.5	Roman
2027	3			1	1	1	Roman
2034	8	125/200; 125/205		24	11	67	1680–1760
2035	2			24	13	68.5	Roman
2041	3			14	13	22.5	Roman
2043	7			1	1	0.5	Roman
2049				6	5	25	Roman
2053	10			1	1	4	Roman
2078	2			2		0.5	Undated
2095	2			7	6	42	Roman
2110		Void	Void	18	4	532	Post-medieval
2113	2			9	7	16.5	Roman
2114	2			3	1	1	Roman
2115	10			18	16	2225	C. 1800–1850
2116	2			2	1	1	Roman
2123	2			2	2	13	Roman
2126	2			1	1	11	Roman

Context	Phase	Area	Trench	No frags	ENV	Wt (g)	Spot date
2129	2			1	1	1	Roman
2150	3	Crane Base 2		3	1	2.5	Roman
2152	3	Crane Base 2		2		0	Undated
2159	8	125/215		1	1	3	Roman
2176	2			5	2	17.5	Roman
2177	2			2	2	7	Roman
2181	2			4	4	9.5	Roman
2185	2			3	1	4.5	Roman
2253	8			1	1	0.5	Undated
2261	3			1	1	1	Undated
2280	2			1	1	1	Undated
2283	4			2	1	3	Roman
2285	10			1	1	27	1740–1850
2295				1	1	2	Roman
2313	2			1	1	1	Roman
2315	7			2	1	1	Roman
2328	3			1	1	1	Roman
2330	3			4	4	4	Roman
2331	2			2	2	3.5	Roman
2333	3			5	3	22.5	Roman
2341	2			1	1	15	Roman
2342	2			2	1	15	Roman
2360	2			1		2	Roman
2365	2			5	2	26.25	Roman
2369	3			13	10	37	1640–1900
2371	3			1	1	3	Roman
2376	2			9		72	Roman
2383	2			1	1	6	Roman
2396	6			1	1	1	Roman
2409	9			25	8	521	C. 1740
2418	2			1	1	0.5	Undated
2420	2			1	1	11	Roman
2423	8			2	2	2	19th-20th century
2424	2			2	2	9	Roman
2465	2			3	3	7	Roman
2471	2			9	7	8.5	Roman
2477	2			4	4	18	Roman
2484	2			1		0.5	Undated
2489	4			1	1	7	Roman
2499	2			1	1	1	Roman
2512				4		0.5	Roman
2524	2			2	2	11	Roman
2525				4	4	23	Roman
2537	2			2	2	7	Roman
2549	2			1	1	6	Roman
2568	2			2	2	11	Roman
2580	2			2		0.5	Undated
2586	2			1		0.5	Roman
2596	2			1		3	Roman

Context	Phase	Area	Trench	No frags	ENV	Wt (g)	Spot date
2610	2			3	3	5.25	Roman
2614	10			6	6	1171	Mid 19th century
2622				1	2	0	Undated
2635	10			1	1	8	Undated
2638	5			1	1	6	Roman
2653	2			1	1	2	Roman
2676	2			1	1	8	Roman
2690	2			1	1	5	Roman
2692	2			3	3	20	Roman
2694	5			1	1	11	Roman
2726	7			1	1	1	Roman
2730	2			1	1	1	Roman
2731	3			1	1	4	Roman
2757	2			1	1	6	Roman
2775	2			4	2	22	Roman
2793	2			1	1	11	Roman
2804	2			2	2	4	Roman
2811	2			2	2	20	Roman
2814	2			1	1	1	Roman
2820	2			1	1	0.5	Roman
2838/2921				3		0.5	Undated
2821	2			3	2	2	Roman
2824				1	1	0	Undated
2842	2			4	4	15	Roman
2861	3			1	1	17	Roman
2864	3			1	1	2	Roman
2877	2			1	1	2	Roman
2880	3			3	3	18	Roman
2883	2			3	1	3.5	Roman
2885	3			4	4	30	Late 17th-mid 18th century
2905				2	2	8	Roman
2909	2			1	1	2	Roman
2910	2			2	2	15	Roman
2922	2			1	1	0	Undated
2942	2			1	1	8	Roman
2946				1	1	2	Roman
2947	2			1	1	5	Roman
2959	2			3	1	18	Roman
2962	2			1		0.5	Undated
2966				2	2	6	Roman
2967	2			5	4	55	Roman
2968	2			5	5	52	Roman
3000	2			1	1	7	Roman
3002	2			1	1	1	Roman
3025	2			1	1	5	Roman
3033	2			2	1	7	Roman
3047	2			3	3	40	Roman
3050				5	1	1	Roman
3051	2			1	1	3	Roman

Context	Phase	Area	Trench	No frags	ENV	Wt (g)	Spot date
3109	2			1	1	1	Roman
3121	2			2	2	32	Roman
3122	2			1	1	1	Roman
3129	2			2	2	4.25	Roman
3139	2			1		0.25	Roman
3140	2			1	1	0.5	Roman
3144	2			1	1	3	Roman
3203	2			2	2	3	Roman
3234	2			1	1	7	Roman
3238	2			1	1	6	Roman
4018	7			1	1	0.5	Post-medieval
7550				1	1	12	Post-medieval

Table 1: BBO10: Distribution of the glass showing for each context it occurs in the phase, area, trench and quantification by number of fragments, ENV and weight and a considered deposition date, besides the presence of window glass.

Phase 4: Saxo-Norman (1050-1150)

All of the glass (57 fragments, 38 ENV, 122g) was dated to the Roman period and almost entirely found in the dark earth [2000] and is therefore residual.

Phase 5: Medieval (1150-1350)

The glass in this phase consisted of 16 fragments, 17 ENV, 27g and was all dated to the Roman period and therefore considered to be residual. The deposits the glass was found in consisted of mostly layers, except for a few features, such as fill [1340] of pit [1341]

Phase 6: Medieval (1350-1480)

A single fragment (1g) of residual Roman vessel glass was found in fill [2396] of pit [2397].

Phase 7: Post-medieval (1480-1600)

A total of 12 fragments, 9 ENV, 27.5g of glass were recovered from this phase, of which only five fragments, 3 ENV, 22.5g appears to be contemporaneous, the rest being residual Roman or undated material. The lower fill [456] in the passageway produced the heavily decayed natural glass vessel fragment dated to the medieval-early post-medieval period. A high status item is noted as a handle (SF 178) from a probable narrow necked jug, dated c.1500-1625 and it was found with the flaring wall of a soda glass vessel in the lower backfill [362] between walls [?]. An early post-medieval blue-green natural glass vessel with a slightly kicked base was noted in fill [602] inside wall [603].

Phase 8: Post-medieval (1600-1700)

Compared to the previous phase the quantity of glass increased in Phase 8 (219 fragments, 75 ENV, 3.649kg) and except for fragments of Roman glass, the rest was contemporaneous post-medieval material. Much of the glass was architectural, *i.e.* window glass (61 fragments, 19 ENV, 120g) and included a small quantity of late medieval-early post-medieval triangular window quarries, probably derived from leaded windows associated with Suffolk House and was found in the backfill [217] of the possible Tudor drain [228]/[229]. Fill [218] from the latter feature also produced a high-status object in the form of the white enamelled pedestal beaker, dated c.1500-50. Another high-status item is noted by the base of a c.1575-1650 dated cylindrical jar base made in green glass with thin white glass trails (demolition layer [2034]). Wine bottles appear first in this phase and a late globe and shaft type was noted in made ground deposit [177], while pit [454] contained in its fill [453] two early 18th-century squat mallet-types. Present with the latter are three pharmaceutical phials, including a globular example. The wine glass with the moulded Silesian-type pedestal stem, dated c.1715-40/65, was found in the demolition layer [718].

Phase 9: Post-medieval (1700-1820)

Glass was less frequent in this phase (82 fragments, 20 ENV, 1.297kg) compared to the previous one and except for a few fragments of undated glass it is all of a post-medieval date. Window glass was the most frequent form recorded and was generally fragmentary and widespread in deposits containing glass. Wine bottles were also quite frequent in this phase although they were largely fragmentary. Of note are a clear soda glass squat cylindrical bowl (fill [2409] of the brick soakaway [2410]) which occurred with a trumpet-shaped wine glass and both are dated to the early 18th century.

Phase 10: Modern (1820-present)

The phase produced 56 fragments/38 ENV/3.795kg of glass; less than that of Phase 9. A handful of fragments were residual Roman finds. Fill [2115] of the post-medieval masonry well [591] was deposited during the early 19th century and the glassware is strongly biased towards alcohol functions, with four early cylindrical wine bottles recorded, one of which is intact, besides an ale glass and three tumbler bases. Present with these items are also a sweetmeat glass and two phials, of which a cylindrical example was intact prior to excavation. Deposit [2614] produced solely wine bottles as six fragmentary moulded late cylindrical types dating to the mid 18th century. It is quite possible that the glass ware recovered from contexts [2115] and [2614] was associated with the inn/public house called the Dun Horse located on the site.

Other 19th-century moulded glass vessels are first noted in this phase and include a flat octagonal-section bottle (fill [320] of pit [321]). The latest glass ware, dating to the 20th century, is found in this phase as a cylindrical bottle with a priff rim finish (gravel layer [1025]) and fragments of a possible milk bottle with a printed label also occurs (backfill [1230] of construction cut [1231]).

Significance of the assemblage

The glass has significance at a local level. Roman glass production is very well documented north of the river in the City (Wardle *et al.* 2015) although it is less well understood in Roman Southwark. The occurrence of the unused glass tesserae on the site is of interest and may indicate these items were manufactured in Southwark. The distribution of glass tesserae in London indicates that these items are mostly concentrated in Southwark and particularly at the southern end of Borough High Street and this environs: 1200 tesserae were recovered in excavations at 27-29 Union Street and a smaller amount from 33 Union Street and these were unused. These tesserae were dumped during the period AD 120-270 and are therefore broadly contemporaneous with Phase 2 dated Brandon House deposits, where the greatest concentration of tesserae were recovered. It has been suggested that one use of the Southwark tesserae was for local bead making or enamelling (Gerrard 2009, 132-33).

A small number of high-status items are dated to the early 16th-early 17th century and these were undoubtedly derived from Suffolk House and give an important insight into the material culture of this residence.

The concentration of vessels with alcoholic functions recovered from 19th-century deposits [2115] and [2614] are a good indication that these items are associated with the Dun Horse Inn, which is known to have existed on part of the study area from at least the early 18th century. The holistic analysis of the glass, clay tobacco pipes and pottery recovered from deposits [2115] and [2614] is important for the understanding of the material culture of drinking establishments, as demonstrated by the analysis of the large group of finds recovered from The George Inn, Uxbridge (Pearce 2000). The glassware usually shows different functional categories, such as alcohol storage compared to that of pottery.

Comparable assemblages of glass have been recovered from other excavations in Southwark, such as Tabard Square (LLS02: Shepherd 2009), The Wolfson Wing, Borough High Street (BHB00: Cool 2002; Willmott 200) and the Thameslink project (Scott 2014).

Potential of the assemblage

The potential of the glass is to date the features it occurs in and a number of vessels require illustration or photographing. The Roman glass is important for understanding its use by the end user in Southwark and also importantly to have a better understanding of the glass making industry in this area of London. The early post-medieval glass has the potential to understand the material culture associated with the high socio-economic group resident at Suffolk House during the early 16th century. The later post-medieval glass is important for understanding how the study area developed after the demolition of Suffolk House and at least two groups of glass are probably associated with the Dun Horse inn.

Recommendations for further work

It is recommended that a publication report is produced on the glass. The Roman glass should be reported upon by a specialist in this field, such as John Shepherd. Resources should be put aside for scientific analysis of the glass composition using ICPS in order to compare the Roman Southwark glass industry to that of the City.

The post-Roman glass publication should concentrate on the high status items associated with Suffolk House and the glass groups associated with the Dun Horse Inn. The glass assemblage from contexts [2115] and [2614] will be analysed in conjunction with the pottery and clay tobacco pipes in order to determine how the material culture of the Dun Horse Inn compares to other studied inn groups.

Approximately 20 vessels require illustrating and at least four vessels need photographing to complement the publication text, although the number may increase or decrease with the specifications made by the Roman glass expert.

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APPENDIX 5: CLAY TOBACCO PIPE ASSESSMENT

Chris Jarrett

Introduction

A small sized assemblage of clay tobacco pipes was recovered from the archaeological work (four boxes). Most fragments are in a good condition, indicating that they had been deposited soon after breakage or discard; although elements of some groups of clay tobacco pipes contained small quantities of residual material. Clay tobacco pipes occur as mostly small (under 30 fragments) sized groups, although three medium (31-100 fragments) and two large (over 100 fragments) sized groups exist.

All of the clay tobacco pipes (521 fragments, of which none are unstratified) were recorded in a database format and classified by Atkinson and Oswald's (1969) typology (AO); 18th-century examples are by Oswald's (1975) typology and prefixed OS. The pipes are further coded by decoration and quantified by fragment count and follow the guidelines for recording clay tobacco pipes (Higgins and Davey 2004). Additionally, there is a small quantity of production waste (21 fragments) and a single piece of kiln furniture. The tobacco pipes are discussed by their types and distribution.

The clay tobacco pipe types

The clay tobacco pipe assemblage from the site consists of 165 bowls, 335 stems and 21 mouth parts. The clay tobacco pipe bowls range in date between 1610 and 1910. The majority of the bowls show evidence for being smoked. The bowl types and their quantification are shown in Table 1, while the extent of milling and the degree of milling of 17th-century bowls are shown in Tables 2 and 3: The possible makers of the bowls are shown in Table 4.

Bowl type	Description	Date Range	No. bowls	Context, initials, decoration and SF numbers
AO5	Flat heeled, rounded bowl	1610–1640	2	x2 [4025]: x1 stamped P C in relief on the heel base, <975> with a star between the initials and an ?arrow above and a briar below the letters.
AO9	Spurred, rounded bowl	1640–1660	2	x 1 [168], x1 [4025]
AO10	Heeled, rounded bowl	1640–1660	5	x 2 [168], x3 [4025]
AO15	Spurred, rounded bowl	1660–1680	43	X1 [8], x27 [168]: x1 with in relief an incuse I stamp on the top of the stem (SF <891>); x2 with a small relief gridded diamond within a border on the top of the stem (SF <891> and <892>), x5 [177], x10 [206]
AO18	Heeled, straight-sided bowl	1660–1680	1	x1 [168]
AO19	Spurred, tall rounded bowl	1680–1710	2	x2 [177], one of which has a milled line around the circumference of the stem (SF <895>)

Bowl type	Description	Date Range	No. bowls	Context, initials, decoration and SF numbers
AO20	Heeled, tall rounded bowl	1680–1710	3	x3 [177]
AO22	Heeled, tall straight-sided bowl	1680–1710	5	X1 [196], x 4 [715]
AO25	Heeled, upright, straight back, rounded front bowl (fragmentary OS10, OS11 and OS12 bowls)	1700–1780	1	x1 [2049]
OS10	Heeled, upright, straight back, rounded front bowl with thick stems	1700–1740	43	X1 [168], x1 [453], x31 [715], x6 [2034], x1 [2195], x2 [2268], x1 [2614], which include the following marked pipes: <p>With a crowned harp on the heel and the harp strut is nearest the heel: x1 [715], SF <900> ? : x1, the first initial is illegible and the second one is missing, [715], SF 905 ? : x1, the first initial is missing and the second one is illegible, [2034], SF 911 W ?: x1 [168], SF <894> W B: x1 [715], SF <899> R C: x1 [715], SF <906> W L: x1 [2268], SF <956> ?C M: x1 [715], SF <907> W M: x1 [715], SF <902> ?H R: x1 [715], SF <910> I R: x1 [715], SF <904> I ?W: x1 [715], SF <903></p>
OS11	Heeled, wide upright, straight back, rounded front bowl	1730–1760	2	X2 [453] one of which is marked with a raised dot on the left side of the heel (SF <896>) and: W ?B : (SF <898>)
OS12	Heeled, upright bowl with a straight back, rounded front and thin stems	1730–1780	2	X1 [715], marked T F (SF <901>), x1 [2409]
OS23	Spurred, upright bowl with a straight back, rounded front and thin stems	1760–1800	2	X1 [453] with moulded decoration of the Hanoverian Coat of Arms and a tulip on the front of the bowl (SF <453>) X1 [2115] a later 19th century version of this shape with a forward pointing spur initialled J W and on the back of the bowl (facing the smoker) is a circular incuse stamp with scrolls above and below ' SWIN/YARD ' (SF <938>)
AO27T	Square heeled, tall, upright bowl with a straight back and rounded front	1760–1830	10	X 7 [2115], x3 [2178], which includes the following maker marked pipes: H B : x2 [2115], SF <912>, <913> I B : x3 [2178], SF <950> and two additionally have poorly impressed incuse circular stamps on the back of the bowl containing the name ' BOURN ' in <i>serif</i> lettering with three circles above the name and below a scroll and three circles in a triangular formation. SF <941> and <942>. All three bowls are covered in either pipe clay, muffle or slag I M : x1 [2115], SF <922> G ?P : x1 [2115], SF <923> C R : x1 [2115], SF <932> G R : x1 [2115], SF <924>
AO27	Square heeled, upright bowl with a straight back and	1770-1845	25	x16 [2115], x9 [2178], which includes the following maker marked pipes:

Bowl type	Description	Date Range	No. bowls	Context, initials, decoration and SF numbers
	rounded front			<p>? B: x1 [2115], SF <929></p> <p>I B: x3 [2115], SF <914>, <915>, <916>; x7 [2178], SF <943>, <944>, <945>, <946>, <947>, <948> and <949>. Mostly heels and occur with the AO27T bowls stamped 'BOURN'</p> <p>W B: x3 [2115], SF <917> and <918>, whilst a third bowl has an incuse circular stamp on the back of the containing the name 'BROW[N]' in <i>serif</i> lettering and scrolls above and leaves below the name, SF <919></p> <p>I J: x2 [2115], one decorated with moulded, same size fluting (SF <921>) and the other with different sized fluting and wheat ear borders (SF <920>)</p> <p>S: x1 [2178], SF <953> with the bowl and the left side of the heel covered in muffle and the letter S is reversed (SF <953>)</p> <p>* W: x1 [2115], SF <926> with a star on the left side of the heel</p> <p>? W: x1 [2115], SF <931> where the first initial is smudged and possibly an R</p> <p>I W: x1 [2115], with a circular incuse stamp on the back of the bowl with the name 'WEEKS' and borders above and below the name comprised of four horizontal circles and a central tear drop shape, SF <924></p> <p>W W: x2 [2115], x1 SF <927> with just initials on the heel, x1 additionally with stars or flowers on the heel and fluting of different sizes on the bowl. Scale-type decoration occurs on the stem as well as fine relief lettering of the name and address of 'WILLIAMS' (left side) and '[KENT] ST. LONDON' (right side) in lozenges, SF <930></p> <p>Additionally, there is a damaged bowl with its heel missing that has large, rounded ended fluting alternating with thin ribs, the tops of which end with two prongs that almost form a border around the larger ribs: [2115], SF <933></p>
AO28	Spurred, tall, upright bowl with a straight back and, rounded front	1820–1860	3	<p>X3 [2115], which include the following marked pipes:</p> <p>* *: x1 a spur surviving with a daisy type flower on each side, SF <908></p> <p>J: x1 possible flowers on the spur and a wheat ear and grass border on the front of the bowl, while on the back of the bowl is a poorly impressed circular incuse stamp containing '[JEW]STER LON[DON]' around four petals in a cross formation. The spur has possibly been trimmed to form a flat base, (SF <925>)</p>
AO28S	Spurred, short, upright bowl with a straight back and rounded front	1860–1880	6	<p>X1 [12], x4 [2115], x1 [2614], which include the following marked bowls:</p> <p>* *: x1 [2115], with stars on the spur and leaf borders on the front and back of the bowl, SF <934></p> <p>O O: x1 [12], with circles on the spur and leaf borders on the front and back of the bowl, SF <890></p>

Bowl type	Description	Date Range	No. bowls	Context, initials, decoration and SF numbers
				? S: x1 [2614] with the first initial illegible (possibly a dot) and an oak leaf and grass border on the front and back of the bowl, S F <955> I T: x2 [2115], leaf borders on the front and back of the bowl, SF <935> and <936> ?W W: x1 [2115], with a wheat ear border only on the front of the bowl, SF <937>
AO29	Heeled, short, upright bowl with a straight back, rounded front and an angled rim	1840–1880	2	X1 [462], x1 [2115] and both are maker marked I?: x1 [2115], with a damaged heel, SF <937> T H: x1 [462] with acorns and oak leaves as a border on the front and only oak leaves on the back of the bowl, SF <498>
AO30	Without a heel or spur and usually rounded in shape, but variable profiles	1840–1910+	1	X1 [2241], with simple moulded ribs on both the front and back of the bowl, SF <940>

Table 1: BBO10: the clay tobacco pipe types showing the quantification for each bowl type, marked pipes and their small find numbers

Bowl type	Date range	Damaged bowl	None	Quarter	Half	Third	Full	Total
AO5	1610–1640					2		2
AO9	1640–1660					1	1	2
AO10	1640–1660					5		5
AO15	1660–1680	1	1	3	1	23	14	43
AO18	1660–1680		1					1
AO19	1680–1710			2				2
AO20	1680–1710	1	1				1	3
AO22	1680–1710		5					5
Total		2	9	5	1	31	16	64

Table 2: BBO10: Extent of milling found on 17th-century bowls

Bowl type	Date range	Poor	Average	Good	Fine	Total
AO5	1610–1640				2	2
AO9	1640–1660				2	2
AO10	1640–1660			2	3	5
AO15	1660–1680	3	1	17	22	43
AO18	1660–1680				1	1
AO19	1680–1710				2	2
AO20	1680–1710				3	3
AO22	1680–1710		2	4		6
Total		3	3	23	35	64

Table 3: BBO10: Quality of burnishing found on 17th-century bowls

The early 17th-century clay tobacco pipes (types AO5, AO9 and AO10) have mostly three quarters milling of the rim and only an AO9 example has full milling of the rim (Table 2) and their degree of finish or burnishing is good or mostly fine (Table 3) indicating that the early pipes are a good quality

product. This probably reflects the industry as a whole, in that early clay tobacco pipes were a populuxe good: a luxury item affordable to the masses. Only a single bowl, an AO5 (context [4025], SF <957>) from this period is maker marked with a circular stamp with the initials **P C** found on the underside of the heel (see Table 1 and 4 for details). This stamp die does not appear in the MOLA stamp catalogue (MOLA, n.d. http://webarchive.nationalarchives.gov.uk/20090510221705/http://museumoflondon.org.uk/claypipes/pages/mark.asp?mark_name=PC).

The 1660-1680 dated bowl shapes, dominated by the occurrence of the spurred AO15 type and typical for Southwark sites, mainly have three quarters or full milling of the rim and has fine or good burnishing of the bowl (see Tables 1 and 2) indicating that mostly well made pipes were in use on the study area. A small number of bowls are of a lesser quality and have minimum milling and inferior burnishing/finishes and reflect that clay tobacco pipe production intensified during this time and that the standards of production declined. The AO15 type bowl is very rarely maker marked as the shape did not lend itself very well to this practice, besides the phenomenon that during the mid and late 17th century London pipe makers had mostly stopped marking their pipes. However, context [168] produced three marked AO15 bowls with two different stamps found on the top of the stem and close to the bowl. The first stamp consists of an incuse **I** (SF <891>) on a nicely burnished bowl. The second stamp occurs on two not so well finished and burnished bowls and the mark is in relief and consists of a small gridded diamond with a border (SF <892> and <893>). The two stamps have not been recorded previously by Pre-Construct Archaeology and are not illustrated on the MOLA stamp website. These are almost certainly not London products. A small number of marked AO15 bowls were also recovered from the rear of inns at the Wolfson Wing site, Borough High Street (BHB00) as two bowls and two stems with an incuse **B** stamped on the top of the stem (Jarrett 2002). It is more than likely that the Brandon House and the Wolfson Wing AO15 bowls with incuse single letter stamps on the stems, represent a different, non-London tradition for marking pipes. These probably represent the belongings of travellers staying at inns etc on Borough High Street, which is still a main route into London from southern England.

The 1680-1710 dated clay tobacco pipes are small in number and mostly unremarkable, except for a spurred AO19 bowl with a milled line around the circumference of the stem (context [177], SF <895>).

The 18th-century bowls are well represented by the 1700-1740 dated OS10 bowls and the initialled bowls can be related to local pipe makers (see Table 4). Mid to late 18th-century bowls are less frequent although there are two examples of the rarely recorded large OS11 shape, dated 1730-70 and found in context [453] and this shape appears to occur more frequently in Southwark (Jarrett in prep.). The two spurred 18th-century bowl shapes are of the OS23 type and are of interest for consisting of a damaged armorial example with the Hanoverian Coat of Arms (Context [453], SF <453>) and a mid 19th-century copy of this bowl shape, initialled **J W** on the spur (the use of the letter **J** rather than an **I** starts to occur from c.1830) and a circular incuse stamp with the name **'SWIN/YARD'** (context [2115], SF <938>) (see Table 4 for information on this pipe maker). The tall AO27 bowls, the AO27T shape, appear to be mostly late 18th century in date and includes examples probably by Henry Blundell (context [2115], SF <912>, <913>) and by John Bourn, a poorly

documented pipe maker, recorded in London in 1795 (Hammond 2004a, 27). The bowls made by Bourn only occurred in context [2178] and two have his surname as an incuse circular stamp on the back of the bowl. The bowls appear to be wasters found with a fragment of kiln furniture (see below) and are important for locating this London pipe maker as working in Southwark, a previously unknown fact.

Bowl type	Date range	First name	Last name	No. of bowls	Possible pipe maker
AO5	1610–1640	P	C	1	Probably Peter Cornish, 1634 Charter (Oswald 1975, 134)
AO15	1660–1680		I	1	Probably a non-London area pipe maker
OS10	1700–1740	W	B	1, possibly 2	*, William Bull 2, 1704, St Olaves, ? William Brooks, 1701–1708, St Olaves, St Saviours (Hammond 2015)
OS10	“	R	C	1	Richard Child, 1708 (Oswald 1975, 134)
OS10	“	W	L	1	William Lamb, 1698-1721, Surrey Rec. Soc (Oswald 1975, 141)
OS10	“	C?	M	1	Not documented
OS10	“	W	M	1	* William Mitchell, 1700, Salisbury Street, St Mary Magdalene (Hammond 2015)
OS10	“	H?	R	1	Not documented
OS10	“	I	R	1	*John John Robertson, 1715–21, St. Olaves John Ramsdell, 1730, St Saviours (Walker 1981, 178, Hammond 2015),
OS10	“	I	W?	1	* also numerous contemporaneous pipe makers recorded in Southwark (Hammond 2015)
OS12	1750–1780	T	F	1	Thomas ?Foucs,1705 (died), St Saviours (Hammond 2015)
OS23	1760–1780	J	S	2	* James Swinyard, 1828-54, Westminster Rd (Oswald 1975, 145)
AO27T	1760–1830	H	B	2	Henry Blundell, Unicorn Alley, Kent Street, 1745–71 (died 1771) (Oswald 1975, 131; Hammond 2004b, 16)
AO27T	“	I	B	3	* James Bourn, 1795, London (Hammond 2004a, 27)
AO27T	“	I	M	1	* Possibly James Millsom, 1797, St John, Horsley Down, James Minto, 1809–34, Tooley Street (Jarrett and Hammond 2013, Hammond 2015)
AO27T	“	G	P?	1	*, possibly G R, see below
AO27T	“	C	R	1	*, possibly G R, see below
AO27T	“	G	R	1	Undocumented pipemaker
AO27	1770–1845	I/T?	?W	1	*, possibly Thomas Wooten, 1820-46, Park Street (Oswald 1975, 149)
AO27	“	I	B	11 possibly 12	* See AO27T entry above
AO27	“	W	B	3	*, William Birch, 1836-50, New Kent Rd, William Birchall, 1836, Rotherhithe, William Brown 2, 1805-44, Westminster (Oswald 1975, 132)
AO27	“	I	J	2	*, John Jewster 1-3, 1788–1862, 295 New Kent St, John Jewster 1 or 2 died in 1822 and bequeathed his dwelling house and premises to William and John Williams, who he was related to by marriage (Tatman 1994, 124–5)
AO27	“	I	W	2	* James Webb 2,1805, Portland St., John Williams 3, 1828-42, Kent St. (Oswald 1975, 148)
AO27	1760–1830	W	W	4	William Williams 1–3, Kent Street, 1822–64 (Tatman 1994, 144–6)
AO28	1820–1860		J	1	See AO27 entry above
AO28S	1860–1880	I	T	2	*
AO28S	“	W?	W	1	See AO27 entry above
AO29	1840–1860	I	?	1	Joseph Tingley, 1856-80, Old Kent Rd (Oswald 1975, 147)
AO29	“	T	H	1	* No pipe maker documented for this period

Table 4: BBO10: List of initialled bowls and the possible pipe makers, with particular reference to those working in Southwark. Illegible initialled examples have been omitted. * denotes multiple pipe makers with these initials, mostly working north of the Thames (Oswald 1975).

The 19th-century bowls include some of the regular AO27 shape, dated c.1770-1845 and include examples with incuse circular stamps on the back of the bowl contain the names **Brown** (context [2115], SF<919>) (see Table 4 details of this pipe maker) and **WEEKS** (context [2115], SF<924>), which probably represents a pipe maker working north of the Thames: James Weeks, 1820, Old Street (Oswald 1975, 148). The AO27, AO28, AO28S and AO29 bowls often have 19th-century decoration in the form of leaf borders on the front and back of the bowl, while two bowls are marked with the name of the related pipe makers William Williams 1-3 (an AO27, context [2115], SF <930>) and James Jewster (an AO28, context [2115], SF <925>) and they were all working very close to the site at 295 Kent Street (see Table 4 for details of these pipe makers).

A fragmentary clay tobacco pipe bowl

Context [2178] produced a fragmentary 19th-century decorative bowl (SF 951) that survived mostly as two conjoining stems with relief decoration and the name '**WOODROFFE**' on the left side of the stem and '**WHEELER ST. SPITALFIELDS**' on the right side. The style of decoration on the stem dates to the 1830s. There were a number of early 19th-century East London pipe makers known with the name Woodroffe (Oswald 1975, 148), although none are as yet documented as living or working at this address.

Clay tobacco pipe kiln furniture

A fragment of a roll (SF 954) with a curving end was found in context [2178]. The roll can be classified as a RL2 type (Peacey 1996, 64) and measures 36mm+ in length and 5-6mm in diameter. The item has a very slight oval depression on the 'internal' curving area. It is not fully understood what these items were used for, although it is presumed that they were used to keep the clay tobacco pipes in place while they were being fired in the muffle chamber of the kiln.

The production waster pipes

This material was solely recovered from context [2178] and produced ten bowls that were marked **I B** on the heel (SF <941>, <942>, <943>, <944>, <945>, <946>, <947>, <948>, <949> and <950>), and include the two bowls with circular incuse stamps containing the name **BOURN** (SF <941> and <942>). Many of the bowls only survived as heels and were assigned an AO27 bowl shape, although the more complete types are of the tall (AO27T) type. Six different moulds could be identified that were used to make these pipes. It is of note that seven of the bowls have muffle clay deposits stuck to them, indicating that they were incorporated into the construction of the muffle chamber, which was used to protect the pipes from smoke *etc.*, while they were being fired. Another bowl has in addition to the muffle a deposit of unfired pipe clay, while another example has a slag-like deposit and a third bowl has a slight iron stain. The example with the slag-like deposit may have been incorporated with dirt and used to form a temporary kiln roof.

The stems, which are thin with fine bores consist of 25 fragments that are covered in muffle or unfired/semi-fired clay and slag-like deposits, while the other 34 fragments are iron stained and have additional deposits that may or not be associated with clay tobacco pipe production. One other stem is stuck into a small rounded fragment of mortar and may have acted as a piece of kiln furniture. There are also three thin mouth parts with fine bores that either have a slight bevel and a 'nipple' around the bowl area, or a rounded bevelled finish (two examples). The mouth parts are also covered in muffle, while two of the items possibly have a deposit of under-fired pipe clay.

As all of the bowls that are wasters are marked **I B**, then the implication is that this is refuse from the workshop of James Bourn and that the material dates perhaps to the 1790s. Bourn's workshop may not necessarily have been located on the site, while a major clay tobacco pipe production centre was located to the south-east of the site (opposite Borough tube station) in the area of 200 Great Dover Street, where a late 17th-century kiln was found at Arcadia Buildings (Jarrett and Hammond 2013).

Distribution

The distribution of the clay tobacco pipes is shown in Table 5, which demonstrates the area, trench location, phase, number of fragments, assemblage size, date range of the latest bowl type (context ED and context LD) and a considered deposition date for each context the material occurred in. The clay tobacco pipes were recovered from Phases 7-10. A brief summary of the clay tobacco pipes by phase is provided.

Context	Area	Trench	Phase	No. frags	Assemblage Size	Context ED	Context LD	Context considered date
8		6		1	S	1660	1690	1660–1680
12		6		1	S	1840	1880	1840–1880
37		6		1	S	1580	1910	1730--1910
148	N-end Phase 2			1	S	1580	1910	1730–1780
168	C-trench		9	34	M	1660	1690	1660--1680
173	C-trench		8	6	S	1580	1740	1580–1740
177	E-end Phase 2		8	11	S	1680	1770	1680–1710
186	E-end Phase 2		9	1	S	1680	1710	1560–1710
206	C-trench		9	14	S	1660	1680	1660–1680
210	C-trench		10	2	S	1580	1910	1730–1910
225	C-trench		7	2	S	1580	1910	1730–1910
288	C-trench		9	2	S	1580	1740	1580–1740
453			8	29	S	1760	1800	1760–1780
462			10	1	S	1840	1880	1840–1880
715			9	120	L	1730	1780	1730–1740
715			9	1	S	1730	1780	1730–1740
1230			10	2	S	1580	1740	1580–1740
2003			8	2	S	1580	1740	1580–1740
2034			8	7	s	1700	1740	1700–1740
2115			10	150	L	1840	1880	c. 1840
2178				77	M	1820	1860	c. 1830s
2195				1	S	1700	1740	1700-1740

Context	Area	Trench	Phase	No. frags	Assemblage Size	Context ED	Context LD	Context considered date
2241			10	1	S	1840	1910	1840–1910
2268				6	S	1700	1740	1700–1740
2382			8	4	S	1580	1910	1730–1910
2409			9	27	S	1730	1780	1730–1780
2614			10	3	S	1840	1880	1840–1880
4018			7	2	S	1580	1910	1580–1740
4025			8	8	S	1640	1660	1640–1660
4071			9	1	S	1580	1910	1730–1910
4080			10	2	S	1580	1910	18th century
4081			8	2	S	1580	1740	1580–1740

Table 5. BBO10: distribution of the clay tobacco pipes showing for each context the clay tobacco pipes occurred in the Area, Trench location, phase, number of fragments, size of the assemblage, the date range of the latest bowl type (Context ED and Context LD) and a spot date (context considered date)

Phase 7

Two stems each were found in backfill [225] of the construction cut [224] and the internal fill [4018] of soakaway [4017]/ [4020].

Phase 8

The backfill [4025] between two walls in [4024] and [4027] produced two AO5 bowls, one of which is stamped **P C** in relief on the underside of the heel (SF <957>), as well as a single spurred AO9 bowl and three heeled AO10 bowls, the latter bowls indicating a deposition date of c.1640-60.

A made ground deposit [177] contained five AO15 spurred bowls, although the latest types are dated 1680-1710 and consist of two AO19 bowls, one of which has a milled line around the circumference of the stem (SF <895>) and three AO20 bowls.

From the post-medieval demolition layer [2034] were recovered only 1700-40 dated OS10 bowls and include two examples with heel marks, one has **?H R** initials (SF <910>) and the other has illegible marks (SF <911>).

The post-medieval pit [454] contained in its fill [453] a single OS10 bowl, two OS11 examples, including one marked **W ?B** (SF <898>) and a fragmentary, spurred OS23 bowl decorated with a Hanoverian Coat of Arms (SF <897>) and dated c.1760-1800.

Phase 9

The rubble dump layer [168] produced two stems and 32 bowls. The latter comprised one example of a spurred AO9 shape, two examples of the heeled AO10 type and 27 examples of the spurred AO15

bowls, two of which are stamped on the stem with an **I** (SF <891>) or with gridded diamond stamps (SF <892> and <893>). The latest bowl is a single 1700-40 dated OS10 type initialled **W ?** (SF <894>) and thought to be residual as the 1660-80 bowls are far more frequent.

Associated with cut [206] for a possible robbed out wall are fourteen fragments of clay tobacco pipe, which consist of two each of mouth parts and stems and seven AO15 spurred bowls. The latter survive with long stems and one example is nearly complete. The AO15 bowls indicate a deposition date of 1660-1680.

Backfill [186] of the masonry industrial feature [185] has only associated with it a single AO22 bowl, dated 1680-1710.

The robber cut for the Tudor masonry [716] contained in its fill [715] a total of 121 fragments of clay tobacco pipes, of which there are 35 bowls consisting of four residual AO22 bowls, 31 of the OS10 type and a single example of an OS12 bowl. Nine of the OS10 bowls are marked on the heel with either a harp (SF <900>), or **W B** (SF <899>), **R C** (SF <906>), **? C M** (SF <907>), **W M** (SF <902>), **I R** (SF <904>) and **I ? W** (SF <903>), while one example has only an illegible family initial surviving (SF <905>). The OS12 bowl is initialled **T F** (SF <901>). Together the bowls indicate a deposition date of c. 1730-40.

Clay tobacco pipes were found in fill [2409] of the brick soakaway [2410] and consisted of two mouth parts, 23 stems, two fragments of 18th-century bowls, categorised here under the umbrella code of the AO25 type, besides a damaged OS12 bowl, dated 1730-80, which dated the context.

Phase 10

The largest group of clay tobacco pipes (150 fragments) in the assemblage was found in fill [2115] of the masonry well [591] and consisted of 110 stems, seven mouth parts and 33 bowls. The latter consists of a 19th-century version of the OS23 bowl type and it is initialled **J S** and has a circular incuse stamp with the name '**SWIN/YARD**' (SF <938>). There are seven examples of the tall AO27 (AO27T) shape that comprise examples marked **H B** (SF <912> and <913>), **I M** (SF <922>), **G ? P** (SF <923>), **C R** (SF <932>) and **G R** (SF <924>). Sixteen examples are recorded as the standard AO27 shape and marked examples are: **? B** (SF <929>), **I B** (SF <914>, <915> and <916>), **W B** (SF <917> and <918>) one of which has the incuse name '**BROW[N]**' stamped in a circle and (SF <919>). Additionally there are two fluted bowls initialled **I J** (SF <920>) and one has the name '**JEWSTER**' and '**KENT STREET**' on the sides of the stem (SF <921>). Other AO27 bowls are marked * **W** (SF <926>), **? W** (SF <931>), **I** or **T ? W** (SF <933>) an **I W** example additionally has an incuse circular stamp containing the name '**WEEKS**' (SF <928>), as well as an example with flowers or stars on the heel (SF <927>) and the name and address of '**WILLIAMS**' and '**[KENT] ST. LONDON**' in lozenges on the stem (SF <930>). Another damaged bowl has different sized fluting (SF <933>). Three bowls are of the AO28 shape and survive with simple flowers on the spur (SF <908>), with a wheat ear and grass border on the front and an incuse circular stamp on the back of the bowl containing the name and address '**[JEW]STER LON[DON]**' (SF <925>). Four examples of the short AO28 type bowls

(AO28S) are recorded and these have leaf borders on the front and back of the bowls and all are initialled or marked: with stars (SF <934>), **I T** (SF <935> and <936>) and **?W W** (SF <937>) on the spurs. A single plain AO29 bowl is recorded with a damaged heel and only the first name **I** survives (SF <909>). Together, the bowls indicate a deposition date of c.1840.

Layer [462], excavated between floors [438] and [439], produced a single 1840-1880 dated AO29 bowl with acorn and oak leaf borders and it is initialled **T H** on the heel (SF <498>).

Two bowls were found in layer [2614], one of which is a residual unmarked OS10 bowl and the other is an 1840-80 dated AO28S bowl, decorated with an oak leaf and grass border on the front and just a leaf border on the back of the bowl and it is initialled on the spur **? S** (SF <955>).

Associated with cut [2241] was part of an AO30 bowl, dating to after 1840, that is decorated with a rib on the front and back of the bowl (SF <940>).

Not phased

The rubble backfill [2178] of the masonry well [2179] produced a total of 76 fragments of clay tobacco pipe, of which fourteen were bowls and of the AO27 or AO27T types. The fill is notable for containing clay tobacco pipe production waste that includes a fragment of kiln furniture in the form of a roll (SF <954>) and ten bowls that are initialled **I B** and two of these bowls additionally have an incuse circular stamp containing the name **BOURN** on the back of the bowl. Many of these bowls, as well as the stems and the mouth parts, have either a muffle or unfired pipe clay deposit and are associated with the pipe maker James Bourn, recorded in London in 1795, (Hammond 2004a, 27) (see 'The production waste' above for details). Additionally, there are fragmentary AO27 bowls initialled on the heel **I W** (SF <952>), or with the family name **S**, also covered in a grey muffle or a pipe clay deposit (SF <953>). A damaged bowl survives mostly as a stem with the name '**WOODROFFE**' on the left side and '**WHEELER ST. SPITTALFIELDS**' on the right side (SF <951>). The latter dates to the 1830s although the production waste probably dates to the 1790s.

Significance of the assemblage

The clay tobacco pipes have significance at a local level. The bowl types present on the site fit within the typology for London and it is presumed that amongst the wide variety of maker marked and decorated bowls, local clay tobacco pipe makers are represented in the assemblage, such as James Minto, William Williams (1-3) and John Jewster. However, other pipes appear to be non-local, such as the AO15 bowls found with stamps on their stems in context [168], while other marked bowls originate from north of the Thames, such as the **P C** stamped AO5 bowl (context [4025]) and the late 18th- and 19th-century examples stamps with the names of **Brown** (context [2115]), **Weeks** (context [2115]) and **Woodroffe** (context [2178]). These bowls almost certainly reflect the site's location on a main roadway leading to and from London and the pipes could represent the property of travellers. Also of interest is the location of the Dun Horse inn on the site, whose yard is shown on Rocque's 1741 map

and was still in operation until c.1869. Some of the clay tobacco pipe assemblage may relate to this drinking establishment. It is also interesting that similar and rare stamped AO15 bowls occur on the study area and also that of the inns (The Horse Head, later the Nag's Head, The Spur and The Christopher) located on the Wolfson Wing excavations (BHB00: Jarrett 2002).

The **P C** stamp found on the AO5 bowl (Context [4025], SF <495>) adds to the range of known die stamps for this pipe maker.

Also of interest is the small group of clay tobacco pipe production waste recovered from context [2178] which appears to be mostly concerned with pipes made by James Bourn, who is a poorly documented London tobacco pipe maker and known only from the fact that he took on an apprentice in 1795 (Hammond 2004a). The wasters from [2178] indicate that he was working in Southwark and that he was responsible for some of the AO27/T bowls initialled **I B** recorded in Southwark. The pipe wasters and the kiln furniture add to the limited archaeological evidence for pipe making in Southwark, which had a number of important locations for the industry locally and in London (Jarrett and Hammond 2013).

Potential of the collection

The main potential for the tobacco pipes is as an aide to dating the contexts in which they were found and to provide a sequence for them. A number of the pipe bowls merit illustration. Other local pipe assemblages have been recovered from Borough High Street (e.g. BHB00: Jarrett 2002), especially those excavations associated with the Thameslink project (Jarrett 2013), Southwark Bridge Road (SBK00: Jarrett 2006) and Tabard Square (Jarrett 2009). This assemblage adds to the knowledge of the local clay tobacco pipe industry.

The BBO10 clay tobacco pipe assemblage can be used to help investigate a research question posed in 'A research framework for London Archaeology 2002' (Nixon *et al.* 2002).

The documentary evidence of the inhabitants on the excavation area, their professions and socio-economic status may complement the interpretation of the clay tobacco pipe assemblage. The large group of clay tobacco pipes recovered from well [591] may have been recovered from a drinking establishment, such as the Dun Horse. This research would meet the L7 FRAMEWORK objective: Establishing how archaeology can contribute to the history of leisure in London, and identifying assemblage characteristics (Nixon *et al.* 2002).

Research aims

A number of research aims can be suggested as avenues of research for the clay tobacco pipe assemblage from BBO10.

- How do the clay tobacco pipes relate to the documentary evidence for the land use of properties on the site?

- How does the clay tobacco pipe assemblage from BBO10 compare to other local sites and what does that inform temporally on the local clay tobacco pipe industry?
- Do the non-local 17th century and the later City pipes occur in the area of Dun Horse?
- Can anymore documentary evidence be found on the pipe maker James Bourn?

Recommendations for further work

A publication report should be written for the clay tobacco pipes from the site, relating them where possible to activities on the site and if there are correlations to documented activities. Comparison of this assemblage should be made with material from other sites, particularly those located on Borough High Street, to determine how well the local clay tobacco pipe industry is represented. Approximately 21 bowls and the kiln furniture fragment require illustrating to supplement the text. Documentary research is required into the clay tobacco pipe maker James Bourne to achieve a better understanding of his working period.

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APPENDIX 6: LITHIC ASSESSMENT

Barry Bishop

Introduction

Archaeological excavations at the above site resulted in the recovery of assemblages of struck flint and unworked burnt flint fragments. All of the pieces have been individually catalogued and described; this including details of raw materials, condition and, where possibly a suggested date range (see Catalogue). This text summarizes the data presented in the catalogue; its aims are to quantify and describe the material, assess its significance in terms of its potential to contribute to the stated research aims and objectives, and to identify any further work needed in order that the material can achieve its full research potential.

All metrical descriptions follow the methodology established by Saville (1980).

Quantification

Type	Decoratation blade	Chip (<15mm)	Flake fragment (<15mm)	Flake	Prismatic blade	Blade-like flake	Core	Conchoidal chunk	Unworked burnt stone (no.)	Unworked burnt stone (wt:g)
No.	1	4	1	3	3	2	1	1	115	1408

Table 1: Quantification of the Lithic Material from Brandon House

The struck assemblage comprises 16 pieces that were recovered from 13 separate features (see Catalogue). The majority, 11 pieces, came from features assigned to Phases 1 or 2 which represent prehistoric deposits or early Roman disturbance to these deposits. The remainder came from post-Roman or unphased features, the former at least being residually deposited. Although many of the pieces came from prehistoric features, the nature of these suggests that they had been redeposited, possibly through erosion from occupation surfaces in the vicinity.

A total of 115 pieces of burnt but otherwise unworked flint weighing 1.4kg was recovered. It came from 34 separate features and was mostly present in low quantities; the largest amount from any individual feature comprises a single heavily burnt cobble from pit [1174] with the alluvium producing the only other (relatively) significant quantities. Phase 1 and 2 features again contained the bulk of the assemblage, providing 1,243g or nearly 90% of the total from the site. Again, it would appear likely that this was being produced on adjacent occupation surfaces and eroded or discarded into the alluvial deposits and subsequently reworked into later features.

Unworked Burnt Flint

The unworked burnt stone all consists of flint that had been heated to an intense degree, causing it to become 'fire-crazed' and change to a grey-white colour. Where identifiable, it mostly represented small rounded pebbles such as would be readily available from the local gravel terrace. The intensity and uniformity of burning indicates that it had close and prolonged contact with a hearth, and it is possible it was deliberately produced during cooking or craft activities. Although inherently undateable, unworked burnt flint is most commonly encountered on prehistoric sites and it is widely present within the prehistoric soils that have been recorded across north Southwark. No indications of in-situ burning were recorded at Brandon House and, although it probably had been mostly redeposited, it does demonstrate fairly intensive hearth-use in the vicinity.

One piece is of particular interest and may have a different origin. This is the complete cobble of burnt flint recovered from Roman pit [1174]. As well as being larger and comprising a possibly nodule with a rough cortex that may have been imported (see Raw Materials below), it appears to have a hard, clear and transparent vesicular material adhering in patches to its surface. This may well indicate that it had been used in craft or industrial processes, such as glass making, and is likely to relate to the Roman occupation.

Struck flint

The struck flint assemblage comprises a mix of flakes and blades; no retouched implements are present but one core was recovered. Indications that flint was being worked in the vicinity are also suggested by the presence of micro-debitage (flakes and flake fragments less than 15mm in maximum dimension) which makes up a little under a third of the assemblage.

Raw Materials

The raw materials used consist of a fine-grained and good knapping quality 'glassy' translucent flint that is predominantly dark brown or black in colour with a few lighter coloured opaque or mottled pieces also present. Cortex varies in thickness and although is weathered it is often still rough and had not experienced extensive alluvial rolling. Whilst some pieces may have been imported to the site, it is perhaps more plausible that these were preferentially selected from patches of less abraded cobbles present within the local gravel terrace deposits. One piece, a prismatic blade from the alluvium, was made from 'bullhead bed' flint which comes from the junction of the cretaceous Upper Chalk and overlying Tertiary deposits throughout Kent but which may have also been incorporated into the terrace deposits.

Condition

The condition of the pieces is variable but most pieces show only limited edge chipping or abrasion. Although it is thought that most pieces have been redeposited, it is unlikely that they had moved far from where originally discarded.

Technology and Typology

No retouched implements or other typologically diagnostic pieces are present but the technological traits of the assemblage suggest that it had been manufactured during more than one period. The bulk of the material derives from a blade-based reduction strategy that can be dated to the Mesolithic or Early Neolithic. These include the blades, most of which are prismatic, and the blade-like flakes which are indicative of the systematic and repeated production of standardized pieces from well-maintained cores. The core that was recovered is not typical or had been systematically reduced but it did produce some narrow flakes and blades and is perhaps most likely to also date to these periods. Similarly, the micro-debitage includes some very small blades and, although such small pieces are difficult to date, they could also easily belong to these periods.

The flintwork also provides indications of activity at a later date. These comprise the flakes from layer [1376] and pit [1313]. They are both hard-hammer struck, thick and broad that have wide obtusely angled striking platforms, similar to Martingell's 'squat' flakes (1990; 2003). Whilst such flakes were produced throughout the prehistoric period, they are much more commonly encountered during the later prehistoric period, particularly the latter parts of the Bronze Age and potentially even the Iron Age.

Significance and Recommendations

The unworked burnt stone assemblage, although not particularly large, demonstrates relatively intensive hearth use in the vicinity that is most likely to relate to the prehistoric period. One piece that is covered with vitreous residues may be a residue from Roman industrial processes and this has been retained for further analysis.

The struck assemblage is also relatively small but demonstrates Mesolithic / Early Neolithic and perhaps later Bronze Age activity at or close to the site. Unfortunately, due to it being largely residual and with no diagnostic pieces present, its interpretational value is limited and no further metrical or technological analyses are warranted. It does, however, provide evidence of early activity at the site and can contribute to a more comprehensive understanding of prehistoric settlement and landscape occupation in the north Southwark area. It is therefore recommended that a short description of the assemblage, which can largely be based on this report and associated catalogue, should be included within any published accounts of the excavations.

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Context	Type	Feature number	Feature	Phase	Ref	Decortication blade	Chip (<15mm)	Flake fragment (<15mm)	Flake	Prismatic blade	Blade-like flake	Core	Conchoidal chunk	Unworked burnt stone (no.)	Unworked burnt stone (wt:g)	Colour	Cortex	Condition	Suggested date range	Comments
535	Fill	541	Well	5	<109>									1	3	Unknown	None	Burnt	Undated	Heavily burnt flint
708	Fill	708	Wall	7	<114>									1	5	Unknown	None	Burnt	Undated	Heavily burnt flint
1084	Layer	1084	bedding/make-up/levelling	2	<133>									4	21	Unknown	Smooth worn	Burnt	Undated	Heavily burnt flint
1139	Fill	1174	Pit	2										1	357	Unknown	Rough	Burnt	Undated	Complete heavily and uniformly burnt flint cobble. Has some glassy material adhering. Retained
1168	Fill	1138	Ditch	2	<132>									1	5	Unknown	Smooth worn	Burnt	Undated	Heavily burnt flint
1204	Fill	1205	Ditch	2	<137>		1									Translucent black	None	Good	Meso/ENeo	Tiny prismatic blade
1234	Fill	1241	Pit	2	<138>									25	95	Unknown	Smooth worn	Burnt	Undated	Heavily burnt flint
1238	Fill	1239	Ditch	2	<139>									1	6	Unknown	None	Burnt	Undated	Heavily burnt flint
1305	Layer	1305	Trample	7	<148>						1					Translucent light grey	None	Slightly chipped	Meso/ENeo	Small but appears systematically produced
1309	Fill	1310	Pit	10	<149>									4	12	Unknown	None	Burnt	Undated	Heavily burnt flint

1312	Fill	1313	Pit	5													Mottled dark brown	Thin, rough	Slightly chipped	BA-IA	Thick typical 'squat' flake. Possible utilization damage
1323	Fill	1329	Alluvial deposit	2													Translucent dark brown	Thin, rough	Good	Undated	Small shattered core fragment
1323	Fill	1329	Alluvial deposit	2	<495>												Translucent dark brown	Bullhead bed	Slightly chipped	Meso/ENeo	Complete systematically produced. 34x15x4mm
1323	Fill	1329	Alluvial deposit	2									5	234			Unknown	Smooth worn	Burnt	Undated	Heavily burnt flint
1324	Fill	1372	Alluvial deposit	2	SF800												Translucent dark brown	None	Slightly chipped	Meso/ENeo	Systematically produced. Proximal end missing
1340	Fill	1341	Pit	5	<153>								2	6			Unknown	Smooth worn	Burnt	Undated	Heavily burnt flint
1342	Fill	1343	infilling/use	5	<157>								2	9			Unknown	Smooth worn	Burnt	Undated	Heavily burnt flint
1355	Fill	1356	Ditch	2	<152>								1	10			Unknown	None	Burnt	Undated	Heavily burnt flint
1368	Layer	1368	Preh alluvium?	2	<158>								6	61			Unknown	Smooth worn	Burnt	Undated	Heavily burnt flint
1368	Layer	1368	Preh alluvium?	2									9	120			Unknown	Smooth worn	Burnt	Undated	Heavily burnt flint
1376	Layer	1376	RB Made ground	2													Translucent dark brown	Thin, rough	Slightly chipped	BA-IA	Thick, poorly detached. Proximal end missing
1394	Layer	1394	Preh alluvium?	2	SF803												Semi-opaque light brown	Thick, weathered	Slightly chipped	Meso/ENeo	Large >50mm long, proximal end missing
1394	Layer	1394	Preh alluvium?	2									5	89			Unknown	Smooth worn	Burnt	Undated	Heavily burnt flint
2078	Fill	2079	Pit	2	<203>								2	9			Unknown	None	Burnt	Undated	Heavily burnt flint
2096	Fill	2097	Pit	2	<204>								2	8			Unknown	Smooth worn	Burnt	Undated	Heavily burnt flint

2113	Layer	2113	ERB Peat	2	<207>									1	6	Unknown	Smooth worn	Burnt	Undated	Heavily burnt flint
2126	Fill	2127	Ditch	2	<208>		1									Translucent dark brown	Thin, rough	Slightly chipped	Undated	Tiny cortical blade
2126	Fill	2127	Ditch	2	<208>									3	5	Unknown	None	Burnt	Undated	Heavily burnt flint
2143	Fill	2144	Pit	3	<213>									1	1	Unknown	None	Burnt	Undated	Heavily burnt flint
2152	Layer	2152		3	<215>									4	42	Unknown	Smooth worn	Burnt	Undated	Heavily burnt flint
2253	Masonry	2317	wall	8	<238>									2	11	Unknown	Smooth worn	Burnt	Undated	Heavily burnt flint
2313	Layer	2313	RB Made ground	2	SF35				1							Translucent dark brown	Thick, weathered	Slightly chipped	Meso-EBA	Small, well struck and thin
2313	Layer	2313	RB Made ground	2	SF636								1			Translucent dark brown	Thick, weathered	Slightly chipped	Undated	Nodular protrusion flake with a number of mostly narrow flakes removed. Possibly Meso / ENeo but odd. 54g
2331	Layer	2331	RB floor	2	<223>					1						Opaque mottled light grey	None	Good	Meso/ENeo	Systematically produced, almost blade dimensions.
2333	Fill	2352	Pit	3	<222>									4	18	Unknown	Smooth worn	Burnt	Undated	Heavily burnt flint
2365	Layer	2365	RB dump	2	<225>									3	7	Unknown	None	Burnt	Undated	Heavily burnt flint
2371	Fill	2352	Pit	3										2	58	Unknown	Smooth worn	Burnt	Undated	Heavily burnt flint
2424	Fill	2425	RB Beam slot	2	<227>									3	14	Unknown	None	Burnt	Undated	Heavily burnt flint
2460	Fill	2461	Ditch	2	<230>									2	2	Unknown	None	Burnt	Undated	Heavily burnt flint
2471	Layer	2471	RB dump	2										1	27	Unknown	Smooth worn	Burnt	Undated	Heavily burnt flint

2512	Layer	2512	RB abandonment?		<235>												Translucent dark brown	None	Slightly chipped	Undated	Tiny blade, possibly Meso ? ENeo
2512	Layer	2512	RB abandonment?		<235>												Translucent dark brown	None	Slightly chipped	Undated	Fragment of thin flake
2512	Layer	2512	RB abandonment?	2	<235>									1	8		Unknown	None	Burnt	Undated	Heavily burnt flint
2610	Layer	2610	RB dump	2	<242>									2	4		Unknown	None	Burnt	Undated	Heavily burnt flint
2626	Fill	2627	PC	1	<246>												Translucent dark brown	Thin, rough	Good	Undated	Narrow but not systematic
2634	Layer	2634	dump														Semi-opaque black	Thick, weathered	Slightly chipped	Meso-EBA	Primary blade, distal end missing
2922	Layer	2922	RB debris?	2	<255>									1	5		Unknown	None	Burnt	Undated	Heavily burnt flint
2936	Fill	2937	Pit	2	<252>									3	20		Unknown	Smooth worn	Burnt	Undated	Heavily burnt flint
2962	Fill	2963	Pit	2	<261>									1	11		Unknown	None	Burnt	Undated	Heavily burnt flint
2976	Fill	2977	RB Ditch	2	<256>									3	4		Unknown	None	Burnt	Undated	Heavily burnt flint
2986	Fill	2987	RB Beam slot	2	<257>									1	17		Unknown	Smooth worn	Burnt	Undated	Heavily burnt flint
3062	Layer	3062	Peat	2										1	87		Unknown	Smooth worn	Burnt	Undated	Heavily burnt flint
3139	Fill	3141	Ditch	2	<265>									2	2		Unknown	Smooth worn	Burnt	Undated	Heavily burnt flint
3148	Natural	3148	Alluvial deposit	1	<270>									2	9		Unknown	None	Burnt	Undated	Heavily burnt flint

APPENDIX 7: ROMAN COINS ASSESSMENT

Chris Faine

Introduction

One hundred and sixty Roman coins were recovered from the excavation along with a single Late Iron Age example. All coins were catalogued in an Excel 2000 spreadsheet using criteria set out by English Heritage (Brickstock 2004), with identifications (where possible) being made using *Roman Imperial Coinage* and *Late Roman Bronze Coinage*. Coin periods used are those suggested by Reece (1991) and in common usage in southern Britain (Table 1).

Coin period (Reece 1991)	Date (AD)
I	-41
II	41-54
III	54-68
IV	69-96
V	96-117
VI	117-138
VII	138-161
VIII	161-180
IX	180-192
X	193-222
XI	222-238
XII	238-260
XIII	260-275
XIV	275-296
XV	296-317
XVI	317-330
XVII	330-348
XVIII	348-364
XIX	364-378
XX	378-388
XXI	388-402

Table 1: Reece's coin periods

Phase 2: AD 43-250

Twenty coins were recovered from Phase 2 contexts. These consisted largely of illegible 1st/2nd-century coins along with 3 closely datable Flavian issues. Small finds 380 and 678 were *dupondii* of Vespasian dated AD 71 and AD 77-78 respectively. SF 325 was another *dupondius* (this time of Domitian) dated AD 87. Three other coins of Vespasian were also recovered but were not more closely dateable. An earlier issue of Nero (SF 752) was also recovered dating AD 54-68. Interestingly 2 coins of Valentinian were also recovered, along with several unidentifiable 4th-century issues. SF 677 is a *Securitas Republicae* issue of Valentinian I (AD 367-375, Constantinople mint). SF 393 was a *Victoria Avg* issue dating AD 383-392,

minted in Thessalonica. A later *Spes Romanorum* issue (SF 822), was also recovered, dating from AD 383-388.

Phase 3: AD 250-400

The largest assemblage of Roman coins (N: 62), was recovered from the Later Roman phase. No earlier residual coins were recovered, with all identifiable issues recovered dating from AD 270-361. The earliest coins recovered were both from [2369] and took the form of a single illegible radiate and a single issue of Aurelian/Tetricus (SF 663) honouring the deified Claudius II (AD 270). The majority of coins (N: 58) were recovered from [2369] and 2 other dark earth contexts [2041] & [2731]. Context [2041] largely contained illegible issues including 3 copies. A single Trier minted *Gloria Excercitus* issue (SF 613) dated AD 330-335 was also recovered, along with *Fel Temp Reperatio* issue of Constans (SF 565) dating from AD 345-351. Context [2731] again largely contained illegible 4th-century issues along with another possibly Trier minted *Gloria Excercitus* issue dated AD 341-346 (SF 732).

The majority of identifiable coins (N: 10) from [2369] consisted of *Gloria Excercitus* issues dating AD 324-46, along with other common 4th-century types (*Fel Temp Reperatio*, *Gloria Romanorum* & *Securitas Republicae*). More closely dateable coins include a Trier minted *Pietas Romana* issue of Theodora (SF 664) dating to AD 340, and another Trier minted *Providentiae Caess* issue of Constantinus (SF 655) dating to AD 325-326. Lyons was the only other mint present in the assemblage in the form of a *Constantinopolis* issue (SF 665) dated AD 337-341.

Phase 4: 1050-1150

Seventeen coins were recovered from Saxo-Norman contexts. Aside from a single illegible 1st/2nd-century example the majority are mid-late 4th-century *Fel Temp Reperatio* and *Gloria Excercitus* issues of the house of Constantine (including copies). Three of the latter (SFs 520, 526 & 806) were minted in Trier. A single *Constantinopolis* issue (SF 809), dating AD 330-333, was minted in Siscia (modern day Sisak, Croatia). Interestingly there are also a number of earlier late 3rd-century issues recovered from this phase, all from dark earth context [2000]. SFs 513 & 528 were overstruck barbarous radiates, with a further copy (possibly of a Britannic issue), also being recovered (SF 801). A mis-struck *antoninus* of Carausius (London mint) was also recovered dating from AD 287-293 (SF 529). Context [2000] also contained a further *antoninus* of Gallienus (AD 260-268). Context [2145] also contained a small hoard of 10 heavily corroded 1st/2nd-century issues.

Phase 5: 1150-1350

Four coins were recovered from Phase 5, including three 4th-century issues (1 Constantinian, 2 of the house of Valentinian). The latter included an Arles minted *Gloria Romanorum* type dated AD 364-378. (SF 815).

Phase 6: 1350-1480

Two illegible 4th-century issues were recovered.

Phase 7: 1480-1600

Phase 7 contexts produced 12 coins, again consisting largely of illegible 4th-century issues. A single *Securitas Republicae* issue of the house of Valentinian (SF 592) was recovered along with Arles and Trier minted *Gloria Excercitus* issues dated AD 335-337 (SF 586 & 589).

Phase 8: 1600-1700

Two 1st-century *asses/dupondii* were recovered from Phase 8 contexts. One was illegible, with the other (SF 230) being a Flavian *Fortunae Reduci* issue dated AD 69-96.

Phase 9: 1700-1820

A single illegible 1st/2nd-century *as/dupondius* was recovered (SF 1039).

Phase 10: 1820-Modern

Residual Modern examples are limited to three illegible 4th-century issues.

Un-phased

The majority of coins from un-phased contexts were recovered from dark earth layer [489], these included a single hoard of 16 coins (SF 373). The majority of these were illegible 4th-century *Gloria Excercitus* and *Fel Temp Reperatio* issues. A single issue of Aurelian/Tetricus honouring the deified Claudius II (AD 270), was also recovered, along with 2 badly preserved but probably contemporary examples. Six other illegible coins were recovered, along with a single Lyons minted *Gloria Romanorum* issue of Valentinian (SF 687) from context [2512], dated AD 364-367.

Discussion

Recent archaeological work in Southwark has vastly increased the sample size of Roman coins from the borough, with Hammerson (1992), noting a total number of 964. By 2002 this had increased to over 1800, largely due to the use of metal detectors on both features and dark earth layers during excavations on the Borough High Street Jubilee Line ticket hall (Hammerson 2002). A similar system was utilised during the Tabard Square excavations which resulted in the recovery of 958 coins, 754 of which were unstratified (Gerrard 2015). However, after conservation 678 coins could be assigned numismatic periods. Two hundred and ninety-four Roman issues were also recovered from the nearby PCA Borough High Street site (Killock 2016).

The coins can be arranged as a histogram using Reece's (1991) coin periods (Fig. 1), with the rate of coin loss being generally mirrored by other local sites with some differences (Hammerson 1992). There was seemingly low-level but significant activity in the mid- to late first century with a small peak in the Flavian period (AD 69-96), albeit with none of the Trajanic/Hadrianic issues seen at Borough High St (Killock 2016). The low level of 3rd-century coin loss can be seen in many British assemblages, with a corresponding increase from AD 260-290. A larger number of copies from this period ("barbarous radiates") were recovered than from Borough High St, which is more in line with the national mean than on the aforementioned site. As with Trinity St (Gerrard forthcoming), the lack of early 4th-century issues is unusual. On most sites nationally (with the Southwark area being no exception) the largest numbers of identifiable coins are recovered from periods 17 & 18 (AD 330-364). These are largely characterised (as at Tabard Square), by large number of Constantinian nummi, both officially struck and irregular (Gerrard 2015). Whilst this is partially the case at Brandon House there is a striking lack of period 18 coinage of the House of Valentinian in the assemblage. However, the poor condition of many mid-late 4th-century issues can make distinguishing between the 2 periods difficult. Further conservation of suitable coins will help to clarify this unusual feature of the coin loss profile. Coin loss ceases by AD 388. Whilst the broad coin loss distribution from Brandon House is similar to those from other sites locally and to a broader extent nationally, there are unusual aspects to it that mean it is difficult to link this coin profile with any of those published by Reece (1995). As with some other sites in Southwark (such as Trinity St), it appears to share similarities elements of a number of the published profiles but does not completely fit a single profile.

Significance and Recommendations

Whilst smaller in size than other nearby sites, the coins from Brandon House are useful to add to a growing sample set of Roman coins assemblages in Southwark.

- The coins should be published with a full list and some photography
- Further statistical work needs to be undertaken on the coin loss profile.

- Conservation should be undertaken where appropriate. This will help to answer some of questions regarding coin loss profiles and also the nature of the 2 small hoards.

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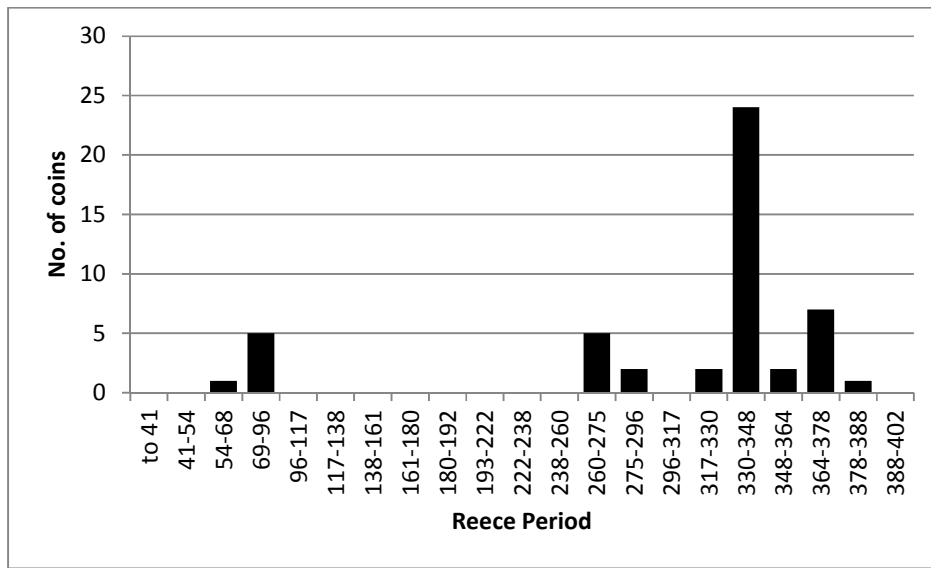


Figure 1: Coin assemblage by Period (Reece 1995)

SF No	Context	Date	Mint	Obv	Rev	Notes
0	168	C1st/2nd				
0	2145	C1st/2nd				x10 heavily corroded As/Dup
230	453	C1st/2nd				
230	453	69-96 AD		Bust facing right	Fill ofRTVNAE REDVCI	
241	377	C1st/2nd				
324	377	C1st/2nd				
325	377	87 AD	Rome	IMPCAESDOMITAVGGERM COSXIIICENSPERPP	MONETA AVGVSTI SC	RIC 546
373	489	270 AD		DIVOCLAVDIO		Quintillius/Aurelian of Claudius II
373	489	C4th			GLORIAEXCERCITUS 3	
373	489	C4th			GLORIAEXCERCITUS 3	
373	489	C4th			FELTEMPREPERATIO FH	
373	489	C4th			FELTEMPREPERATIO FH	
373	489	C4th				x9 illegible c4th issues
373	489	C3rd?				poss Tetricus or Claudius II
373	489	C3rd?				poss Tetricus or Claudius II
378	489	C4th				
380	379	71 AD		IMPCAESVESPASIANVSAVGCOSIII	Fill ofRTVNAE REDVCI	RIC 1138
386	489	337-361 AD		TIVSPFAVG	FELTEMPREPARATIO FH	
387	489	C4th				
390	489	C4th				
391	489	C4th				
392	489	C4th				
393	377	383-392 AD	Thess.		VICTORIAAVG	
396	377	69-79 AD	Rome	Vespasian		
407	0	C4th				Illegible nummus

513	2000	260-300 AD		Radiate bust right OVERSTRUCK		
515	2000	C4th Copy			FELTEMPREPARATIO FH	
519	2000	337-361 AD			FELTEMPREPARATIO FH	
520	2000	337-341 AD	TRP u	Bust facing right	GLORIAEXCERCITUS 3	LRBC 132-133
522	1460	C4th				
526	2000	330-335	TRP.		GLORIAEXCERCITUS 2	LRBC 55-57
528	2000	260-300 AD		Radiate bust right OVERSTRUCK		
529	2000	287-293 AD	Fill of ML	IMPCCARAVSIVS-	PAXAVG	As RIC 101?? Mistruck
530	2000	260-268 AD	ROME	Gallienus	LIBEROPCONSAVG	RIC 239/230
532	2000	C4th				
559	2143	324-341 AD			Wolf and twins	
560	2150					
565	2041	345-351 AD		DNCONSTANSPFAVG	FELTEMPREPARATIO GALLEY 1	
566	2041	C4th				
567	2041	C4th				
568	2041	C4th				
569	2041	C4th copy		Bust facing right		
583	2043					
584	2043					
585	2043	C4th				
586	2043	335-337 AD	PCONST	FLIVLCONSTANTIVSNOBC	GLORIAEXCERCITUS 3	LRBC 399
587	2283					
588	2043	Mid C4th			Standing figure	Barbarous copy of VICTORIAAVGETCAES
589	2043	335-337 AD	TRP		GLORIAEXCERCITUS 3	LRBC 87
590	2043					cut nummus

591	2043	C4th			GLORIAEXCERCITUS 3	
592	2043	367-375 AD			SECVRITASREIPUBLICAE	
595	2043					
598	2053					cut nummus
599	2043					
601	2053	C4th			GLORIAEXCERCITUS 3	
609	2041	C3rd?		Bust facing right	standing figure	Poss allectan?
610	2041	C4th				
611	2000	C4th Copy			FELTEMPREPARATIO FH	
612	2041	C4th				
613	2041	330-335 AD	TRP.	Bust facing right	GLORIAEXERCITUS 2	LRBC 55-57
614	2041	C4th		Draped bust right		
615	2041	C4th Copy				
616	2041	C4th Copy				
617	2041	C1st/2nd?				
618	2041	C4th				
619	2041					
620	2041					
621	2041	C4th				
624	2041	367-375 AD			SECVRITASREIPUBLICAE	
625	2041	C4th				
626	2041					cut nummus
627	2041					cut nummus
628	2041	C4th				
629	2041					
638	2041	C4th			Poss SECVRITAS	
642	2041					
649	2369	341-346	TRP		GLORIAEXERCITUS 3	LRBC 135/136

		AD				
650	2369	324-346 AD		CONSTANS	GLORIAEXERCITUS 2	
651	2369	C4th			GLORIAEXCERCITUS 3	
652	2369	C4th			GLORIAEXCERCITUS 2	
653	2369					cut nummus
654	2369					
655	2369	325-326 AD	STR	IVLCONSTANTINVSNOBC	PROVIDENT-IAECAESS	RIC 464
656	2369				GLORIAROMANORVM 8	
658	2369	C4th Copy		Bust facing right	FELTEMPREPARATIO FH	
659	2369	C4th Copy		Bust facing right	FELTEMPREPARATIO FH	Attempt at PLG? Mintmark copy of LRBC 198-199
660	2369					
661	2369	C4th			GLORIAEXCERCITUS 3	
662	2369	335-341 AD		CONS-	GLORIAEXERCITUS 3	
663	2369	270 AD		DIVOCLAVDIO		Quintillius/Aurelian of Claudius II
664	2369	340 AD	TRP	FLMAXTHEODORAEAVG	PIETASROMANA	RIC 43
665	2369	337-341 AD		FLCONSTANTIVSAVG	GLORIAEXCERCITUS 3	LRBC 100/101
666	2369	C4th			GLORIAEXCERCITUS 3	
667	2369	C4th			GLORIAEXCERCITUS 3	
668	2369	337-341 AD	Lyons	DIVOCONST-ANTINOP	Quadriga "Hand of god"	
669	2369	C2nd?				
671	2369	C4th			GLORIAEXCERCITUS 3	
671	2369	HofV copy		Helmeted bust right	SECVRITASREIPUBLICAE	
672	2369	260- 300AD		Radiate bust right		
673	2369					
674	2369	C4th Copy				
675	2369					

677	2465	367-375 AD	CON	DNVALENTINI-ANVSPFAVG	SECVRITASREIPUBLICAE	LRBC 514
678	2477	77-78 AD	Rome	IMPCAESVESPASIANAVGCOSVIIIIPP	Victory flying left SPQR	RIC 1225
679	2465	69-79 AD		VESPASIAN	PAX/SALVS	
686	2512					
687	2512	364-367 AD	LVGP	DNVALENTINI-ANVSPFAVG	GLORIAROMANORVM 8	LRBC 286
695	2471	C2nd?				
697	2512					
701	2542					
705	2568					
707	2568					
710	2340	C4th			GLORIAEXCERCITUS 3	
711	2621	C4th				
715	2434	C4th Copy		Bust facing right		
717	625	C1st/2nd				
722	2731	C4th		Bust facing right		
723	2731	C4th			GLORIAEXCERCITUS	
724	2731	C4th				
725	2731	337-361 AD		TIVSPFAVG	FELTEMPREPARATIO FH	
726	2731	C4th				
727	2731	C4th			Poss FH?	
732	2731	341-346 AD	TR?		GLORIAEXERCITUS 3	
740	2950	C1st/2nd				
752	3158	54-68 AD	Rome	IMPNEROCAEASRAVGPMAXTRPP	AVGVSTI SPQRSTC	
801	2000	260-300 AD		Radiate bust right	Standing figure	Poss copy of Britannic empire
804	1402	C4th				
805	1402	C4th				
806	1407	C4th				

806	2000	330-335 AD	TRP.	Bust facing right	GLORIAEXERCITUS 2	LRBC 55-57
807	1407	337-341 AD			GLORIAEXERCITUS 3	
808	2000	346-361 AD		DNCONSTAN-TIVSPFAVG	FELTEMPREPARATIO FH	
809	2000	330-333 AD	SISC	CONSTANINOPOLIS	Victory on prow	RIC 224
815	1468	364-378 AD	Arles	PD Dr bust right	GLORIAROMANORVM 6	Valens/Valentinian
816	1460	C4th				
817	2000	330-335 AD		CONSTANINUS-	GLORIAEXCERCITUS 2	
821	1485	C4th				
822	1485	383-388 AD		Bust facing right	SPESSROMANORVM *	Magnus Maximus
826	1461	367-378 AD			Poss VICTORIA AVG	
828	1458	C4th				

Table 1: Abridged coin table.

APPENDIX 8: ROMAN SMALL FINDS ASSESSMENT

Chris Faine (with contributions by Martin Henig)

Introduction/Methodology

Five hundred and sixty objects (including nails), that can be termed 'small finds' were recovered from Roman contexts. Finds were recorded using standard catalogues (Crummy 1983; Manning 1985), and entered on Microsoft Excel spreadsheet. Aside from cleaning no conservation was carried out, although each object was assessed for potential to be x-rayed or for further conservation/illustrations (see Table 3). Objects are considered by functional category (after Crummy 1983, see Table 1). Table 2 shows the finds by phase and functional category.

The Assemblage

As is common on most Roman-British sites, dress accessories are the most prevalent finds type, making up 52% of the assemblage (Gerrard 2015; Crummy, 2007). It is worth noting however, that some categories (such as dress accessories), are far wider in definition than others (such as military equipment) and can lead to overrepresentation of some categories. Dress accessories made from a variety of materials were recovered including copper-alloy, bone and glass. Bone pins are the most common finds type recovered, with 27 complete or partial examples being recovered. The majority of these consist of shafts, with 4 complete 1st/early 2nd-century types also being identified. A single unstratified "Crummy type 4" example dating from the 4th century was also recovered (SF 843) along with a 2nd/3rd-century "type 2" example (SF 678) from context [2742]. A 2nd-century example with a pine cone head (SF 500) was also recovered from context [2000]. Two copper-alloy pin shafts were also recovered. The bone pin assemblage is similar in date range and variety to those from Tabard Square and Borough High St (Killock 2015; 2016), with SF 500 being extremely well preserved. Whilst pine cone headed pins are paralleled in the wider Roman world (having religious connotations), they are relatively rare in Britain, with a more heavily stylised example being recovered from Bancroft Villa (Williams & Zeepvat 1994).

Seven brooches were also recovered, consisting largely of common 1st- and 2nd-century types, along with a late 2nd/early 3rd-century plate brooch (SF 633) from context [2865]. Another 2nd/3rd-century example was recovered from context [489] in the form of a British lozenge type enamelled plate brooch (SF 389). The latter is largely confined to the East of England, with other examples being recovered from London and Colchester (Mackreth 2011). A pin from a pennanular example (SF 330) was also recovered from context [379]. Glass beads consisted of 2 commonly occurring "melon" types, dating from the early Roman period, along with a blue glass barrel bead (SF 746) of generic Roman date. A segmented bead in dark blue glass (SF 746) of possible Later Roman date was recovered from context [746]. Context

2000 contained 2 copper-alloy D section finger rings of a generic Roman type (SFs 523 & 531), with a further example (SF 681) being recovered from context [2465]. Context [377] also contained 3 examples (SFs 242, 328 & 385). Only 1 dateable example was recovered from context [2731] in the form of a highly stylised snake ring (SF 719), most likely of 1st-century date. Context [537] contained a carved intaglio (SF 832), which has been analysed by Dr Martin Henig. He writes:

“The stone is a very dark chrome rich chalcedony, under a strong light it is translucent around the edges and dark green in colour with blackish inclusions. The probable source of this and of other chrome chalcedonies was the region of Eskeşehir in Anatolia (Platz-Horster 2010). It is cut to an oval shape and is convex on both faces (form A1), 11mm long, 6mm wide and has a max depth of 4mm (Henig 2007). This modest size is typical for gems of this sort, designed to be set in small rings of Type II and often figuring devices which appealed to women and children. They all appear to date to the 1st century AD.

Cupid is frequently figured on these green chalcedonies and in this case, meticulously engraved on a miniature scale, he is shown seated on a horse galloping left (reversed in impression). There is a short ground line under the rear feet of the horse. The gem-cutter has imparted considerable liveliness to the scene with a few deft strokes of the drill. The subject would seem to be an unusual one for these little gems at this date although in terms of size, style and material comparison may be made with an intaglio from the Merz collection; here the rider who lacks wings and holds a palm is doubtless simply a mortal charioteer performing a victory gallop (Vollenweider 1984). There are, however, cornelian intaglios of about the same date in Berlin and in the Getty villa at Malibu depicting cupids riding galloping horse (Furtwangler 1896).

Most examples of the type are later and include two near identical red jasper intaglios of 2nd-century date, evidently cut in the same workshop, from the Fortress Baths at Caerleon in Monmouthshire (Zienkiewicz 1986). Another, less streamlined example, also a red jasper example was found at South Shields (Henig 2007)”

Toilet implements from the site consist largely of copper toilet spoon (*ligula*) shafts with two intact examples (SFs 683 & 856) being recovered from contexts [2471] and [2775] respectively. Context [1375] contained a nail cleaner of 2nd to 3rd-century date (SF 801).

Textile working implements are limited to a single copper sewing needle fragment (SF 543) from context [2035].

The assemblage of household utensils consists of a late 1st/early 2nd-century bone spoon fragment (SF 503) from context [2000] and 2 ceramic *firmalampen* (SFs 535 & 540) from contexts [2005] and [2035] respectively. Two vessel fragments were also recovered from context [2967] one of carrara marble (SF 836) and one of iron (SF 1038). Context [378] contained a portion of possible sieve or strainer (SF 383). A single blue glass gaming counter (SF 839), was recovered from context [3057].

Probably of the most interest out of the whole Roman finds assemblage is a complete gilded copper-alloy folding rule (SF 197 [379]. The hinge is double toothed with the locking arm intact. Measuring 29.6cm when unfolded this would have represented one Roman foot or *Pes Monetalis* as opposed to the slightly longer *Pes Drusianus* (Duncan-Jones 1980). Three faces are divided into 4 *palmi*, 12 *unciae* & 16 *digiti* into which the *Pes Monetalis* was divided (Goodman 1964). Examples are not uncommon, with examples from St Swithin's House (Wilmott 1991) and Cannon St (Marshall, pers comm), although this one of the best preserved examples. Identical examples have been discovered further afield at Caerleon (Goodman 1964) and Vindonissa (Heinz 1991).

Two objects related to writing were recovered. A copper-alloy stylus (SF 538) was recovered from context [2035], with context [2550] containing a 1st-century seal box lid (SF 538). Tools consisted largely of copper-alloy knife ferrules (SFs 527, 547 & 851) along with 3 hone stones. Context [377] contained an example of Dorset mudstone (SF 388) with contexts [379] & [2967] yielding examples of Kentish ragstone (SF 198) and Kentish limestone (SF 744).

As one would expect, fasteners and fittings consisted largely of iron nails of indeterminate function along with two smaller furniture studs of iron and copper-alloy. The iron nail assemblage has been scanned at this stage, with the majority of identifiable types being "Manning type 1" examples of generic form and function. Three hundred and forty-five nails or probable nails were recovered. Two copper lock bolts (SF 692 & 708) were recovered from contexts [2489] & [2152] respectively. Three copper bells (SFs 329, 384 & 354) were recovered from contexts [377], [379] & [2035] respectively.

A number of military fittings were recovered. Two girdle tie rings from *lorica segmentata* (SFs 521 & 670) were recovered from contexts [2000] & [2369] respectively. SF 521 is made unusually made from lead, a seemingly poor choice of material for load bearing fitting. It maybe be that this represents a hasty replacement for a broken fitting and was not meant to be a long term repair (the fitting is indeed broken). The remainder of the assemblage were harness mounts and fittings of 1st-2nd-century date. Such mass produced military fittings are common, with 8 similar tie rings being recovered from Tabard Square (Killock 2015).

A substantial amount of lead casting waste was recovered, with the majority being unidentifiable fragments. A single piece of worked bone (SF 810) was recovered in the form a sawn cattle metatarsus from context [1483].

Of the currently unidentified objects, SF 743 is of the most interest. Recovered from Phase 2 context [2967], it resembles an ornate hairpin of Crummys "indeterminate" type, albeit inserted into 2 perforated bone discs at both top and bottom. No parallels could be found at this stage and although recovered from the early Roman phase it may represent an intrusive item. A single worked flint blade (SF 536) was also recovered from context [2005].

Discussion/Recommendations

Figure 2 shows a sample that at first glance suggests a typical Roman assemblage, being dominated by personal adornments & dress accessories (Gerrard 2015; Crummy 2007). There are proportionally fewer toilet implements than is average in Romano-British assemblages, a feature also noted in from Borough High St (Killock 2016). It is worth noting however, that some categories (such as dress accessories), are far wider in definition than others (such as military equipment) and can lead to overrepresentation of some categories. As one would expect the majority of finds were recovered from the Roman phases, in particular Phase 2 (1st-2nd century AD.) and this is borne out by the largely early date of many of the finds. There is little change over time in the types of dress accessories seen (unlike other Romano-British sites), although further analysis may change this. Industrial activity, in particular lead working is suggested by the relatively large amount of industrial waste. Unlike other sites in the area there is little suggestion of ritual activity from the small finds. Although smaller in sample size compared to other sites in the area the assemblage will add to the growing body of evidence regarding Roman Southwark.

Full analysis of the finds is recommended to help understand them both within a wider context and spatially within the site itself. Further identification is needed on some objects, in particular bone object SF 473. Objects should be x-rayed/conserved/illustrated where appropriate, in particular the unidentified iron finds. The flint blade should be examined by a specialist.

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Category Number	Description
1	Objects of personal adornment or dress
2	Toilet, surgical or pharmaceutical instruments
3	Objects used in the manufacture or working of textiles
4	Household utensils and furniture
5	Objects used for recreational purposes
6	Objects employed in weighing and measuring
7	Objects used for or associated with written communications
8	Objects associated with transport
9	Buildings and services
10	Tools
11	Fasteners and Fittings
12	Objects associated with agriculture, horticulture and animal husbandry
13	Military equipment
14	Objects associated with religious beliefs and practices
15	Objects and waste material associated with metalworking
16	Objects and waste material associated with horn and bone working
17	Objects and waste material associated with pottery working
18	Objects of unknown function

Table 1: Crummy's (1983) functional categories for the analysis of small finds

Phase	Crummy Category																		Total
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	
0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1
1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
2	35	7	1	5	1	1	2	0	0	8	17	3	3	0	28	0	0	5	116
3	9	0	0	0	0	0	0	0	0	1	8	0	3	0	11	0	0	1	33
4	12	0	0	1	0	0	0	0	0	1	0	0	1	0	0	0	0	3	18
5	3	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	4
6	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
8	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1
9	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
10	1	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	2
Total	62	7	1	6	1	1	2	0	0	10	25	3	9	0	39	0	0	9	175

Table 2: Small finds by phase and functional category.

Context	SF.	Type	Material	Date	Notes	Draw?
0	102	Counter	Bone	Roman	Flat bone counter. Not countersunk	
0	843	Pin	Bone	C3rd-4th	Bone pin with globular head. Crummy type 4	Y
377	283	Bead	Glass	Roman	Fragmented large barrel bead in light green translucent glass with single white paste trail.	
377	327	Harness fitting	Cua	Roman	"Spectacle" Strap terminal. 2 perforated discs with waisted strip. Knop missing.	Y
377	329	Bell	Cua	Roman	Simple conical bell with suspension loop	Y
377	395	Bead	Glass	C1st-2nd	Gadrooned melon bead in turquoise frit	
377	847	fitting	Pb	Roman	Cast lead fitting; round-section angled pin with narrowed finial.	
377	240	waste	Pb	Roman	Lead melting waste; one lump	
377	242	ring	Cua	Roman	Copper-alloy ring with round-section body corroded	
377	243	waste	Pb	Roman	Lead melting waste; one elongated piece	
377	244	ring	Fe	Roman	Iron ring; heavily corroded; diam.	
377	267	stylus	Fe	Roman	Heavily corroded iron pin with one thickened end; ?stylus	
377	328	ring	Cua	Roman	Copper-alloy ring with D-section body	
377	385	ring	Cua	Roman	Copper-alloy ring; rounded rectangular-section body	
377	388	hone	stone	Roman	Stone hone of fine Dorset mudstone; large tapering piece with one very fine polished surface.	
377	394	disc	Pb	Roman	Lead disc of thin sheet; possibly remains of one hole for fixing	
377	397	pin/bolt	Fe	Roman	Iron bolt or pin with domed head; incomplete.	
377	bulk	fitting	Fe	Roman	Iron fitting; curved sheet or strap.	
377	bulk	waste	Pb	Roman	Lead sheet waste two pieces	
378	382	Brooch	Cua	C1st	Colchester type b. Gilding survives on shaft and spring.	Y
378	338	fitting	Pb	Roman	Lead fitting; solid cast curved strap with flat extension at one end	
378	383	sieve/strainer	Cua	Roman	Copper-alloy sieve/strainer; fragment only with one straight and one curved edge;	
378	bulk	waste	Pb	Roman	Lead melting waste; two pieces	
379	195	Stud	Fe	Roman	Small conical head furniture stud.	
379	196	Object	Cua	Roman?	Flattened spherical object of fine copper-alloy sheet; three small perforations for fixing	
379	197	Folding rule	Cua	C3rd	Fine bronze folding rule with square-section hinged arms, one arm fitted with pivoted locking plate	Y
379	198	Hone	Stone	Roman	Stone hone of Kentish ragstone; slightly elliptical	
379	330	Brooch pin	Cua	Roman	Pin from pennisular brooch	
379	336	Strip	Cua	Roman?	Unidentified strip. Poss belt fitting?	
379	381	Bead	Glass	C1st-2nd	Gadrooned melon bead in dark grey/blue glass (poss burnt?) Earlier than SF395?	Y
379	384	Bell	Cua	Roman	Simple conical bell with suspension loop	Y

379	851	Ferrule	Cua	Roman	Knife collar with 2 concentric rings	
379	851	Ferrule	Cua	Roman	Ferrule with single concentric ring	
379	bulk	Waste	Pb	???	Lead waste	
1019	802	Pin	Bone	Roman	Bone pin shaft	
1135	bulk	waste	Pb	Roman	Lead waste; thin strip fragment only	
1272	bulk	sheet	Pb	Roman	Lead sheet; neatly folded double	
1355	bulk	object	Cua	Roman	Copper-alloy ?object; two small fragments only	
1375	801	Nail cleaner	Cua	C2nd-3rd	Crummy type 2b nail cleaner	Y
1483	810	waste	bone	Roman	Bone-working waste; sawn-off proximal end of cattle metatarsus	
1485	811	Object	Fe	Roman	Large masonry bolt	
1485	823	Chain	Cua	Roman	Figure of eight double ended chain loop	
1485	825	Stud	Cua	Roman	Small conical head furniture stud.	
1485	829	Strip	Cua	Roman?	Unidentified strip. Poss belt fitting?	
1540	865	mount	Pb	Roman	Lead sheet mount; incomplete; two fine nail holes with impressions of nail heads present	
1576	885	Bead	Glass	Roman	Standard spherical bead in white opaque glass	
1576	885	Bead	Glass	Roman	Standard spherical beads in white and blue opaque glass	
2001	537	Pin	Bone	Roman	Bone pin shaft	
2001	bulk	waste	Pb	Roman	Lead sheet waste; rough and corroded strip	
2005	535	Lamp	Ceramic	Late C1st- C2nd	Ceramic <i>firmalampen</i>	
2005	536	worked	lithic	??	Carefully worked and polished small wedge of flint	
2005	bulk	waste	Pb	Roman	Lead waste; two fine strips	
2005	bulk	rivet	Fe	Roman	Iron rivet; head diam.	
2035	538	Stylus	Cua	Roman	Stylus	
2035	540	Lamp	Ceramic	Late C1st- C2nd	Ceramic <i>firmalampen</i>	
2035	541	Object	Cua	Roman	Poss toilet spoon shaft	
2035	543	Needle	Cua	Roman	Crummy type 2 sewing needle	
2035	544	Bell	Cua	Roman	Bell fragment	
2035	545	Brooch	Cua	Late 1st- 2nd	Trumpet type Similar to Mackreth type 1.x2	Y
2035	546	Bead	Glass	Roman	Annular bead in light blue translucent glass	
2035	547	Fitting	Cua	Roman	Copper-alloy rivet (Knife handle?)	
2035	549	Brooch	Cua	C1st	Colchester type b. Gilding survives on shaft and spring.	Y
2035	552	Object	Cua	Roman	Poss toilet spoon shaft	
2035	bulk	waste	Pb	Roman	Lead sheet waste; five partly folded pieces	
2078	bulk	waste	Pb	Roman	Lead waste; thin strip fragment only	
2096	887	Bead	Glass	Roman	Annular bead in corroded light green glass with 3 spiralling bands of dark blue paste/.	Y

2113	551	object	Pb	Roman	Lead stud?	
2114	bulk	rivet	Fe	Roman	Minute iron rivet	
2114	bulk	object	Cua	Roman	Copper-alloy object; two corroded fragments only	
2176	575	Pin	Bone	Roman	Bone pin shaft	
2176	576	Bead	Glass	C1st-2nd	Gadrooned melon bead in turquoise frit	
2177	573	Harness pendant	Cua	Roman	Heart shaped pendant (Poss apron) with loop. Lunate lobes.	Y
2312	bulk	waste	Pb	Roman	Lead sheet waste; one corroded piece	
2331	bulk	waste	Pb	Roman	Lead melting waste; two pieces	
2341	716	Brooch	Cua	C2nd	Dolphin. Mackreth type 3a	Y
2341	bulk	fittings	Fe	Roman	Iron fittings; two corroded pieces	
2342	709	Object	Cua	Roman	Poss toilet spoon shaft	
2358	bulk	waste	Pb	Roman	Lead waste; thin irregular sheet	
2366	631	Pin	Bone	Roman	Bone pin shaft	
2376	bulk	waste	Pb	Roman	Lead melting waste; one piece	
2416	639	pipe	Pb	Roman	Lead pipe; short length with broad collar;	
2418	647	Pin	Bone	Early C1st	Bone pin with conical head. Crummy type 1	Y
2420	bulk	strap	Fe	Roman	Iron strap; heavily corroded piece	
2465	680	Pin	Bone	Roman	Bone pin shaft	
2465	681	Ring	Cua	Roman	Poss finger ring D section	
2465	bulk	waste	Pb	Roman	Lead melting waste; one piece	
2471	683	Toilet spoon	Cua	Roman	Short scoop ligula	Y
2471	684	Object	Cua	Roman	Copper-alloy pin shaft	
2471	696	Object	Cua	???	Unidentified object	
2471	702	Brooch	Cua	Roman	Heavily corroded CD brooch bow	
2471	868	Brooch	Cua	C1st	Heavily corroded body of Hod Hill type	
2471	871	mount	Pb	Roman	Lead sheet mount; fragment with remains of nail hole	
2471	bulk	waste	Pb	Roman	Lead melting waste; four pieces	
2482	bulk	ring/wire	Cua	Roman	Copper-alloy ring/wire; curved fragment only.	
2490	bulk	slag	Cua	Roman	Copper-alloy slag; lump with oxidised copper inclusions	
2538	bulk	fittings	Fe	Roman	Iron fittings; six larger and smaller corroded pieces	
2542	bulk	object	Cua	Roman	Copper-alloy object; corroded lump only	
2549	700	needle	bone	Roman	Bone needle; tapering oval-section fragment with remains of oval eye.	
2549	bulk	waste	Pb	Roman	Lead melting waste; one flat piece	
2550	698	Seal box	Cua	C1st??	Circular seal box lid with central hole and concentric groove. Andrews Type C2/D13	Y
2552	699	wire	Cua	Roman	Copper-alloy wire	
2568	703	Pin	Bone	C1st-2nd	Bone pin with 2 transverse grooves below conical head. Crummy type 2	Y

2568	704	Pin	Bone	Roman	Bone pin shaft	
2580	bulk	object	Cua	Roman	Copper-alloy object; small and heavily corroded lump only	
2580	bulk	waste	Pb	Roman	Lead melting waste; two pieces	
2580	bulk	fitting	Fe	Roman	Iron fitting; flat tapering piece	
2588	838	object	bone	Roman	Worked proximal horse metacarpus 195mm	
2610	876	strap	Fe	Roman	Iron strap	
2610	877	strap	Fe	Roman	Iron strap	
2610	889	Object	Fe	Roman	Unid fe tool.	
2610	bulk	pin	Cua	Roman	Copper-alloy pin head; globular fragment	
2639	bulk	object	Cua	Roman	Copper-alloy object; small corroded lump only	
2676	bulk	Object	Fe	Roman	Unid fe tool.	
2775	856	Toilet spoon	Cua	Roman	Short scoop ligula	
2775	bulk	fittings	Fe	Roman	Iron fittings; two corroded pieces	
2817	bulk	waste	Pb	Roman	Lead melting waste; one flat piece	
2820	729	Harness	Cua	Roman	Heavy cast possible buckle tongue?	
2820	bulk	waste	Pb	Roman	Lead sheet waste; roughly cut strip	
2821	bulk	waste	Pb	Roman	Lead melting waste; one flat piece	
2823	747	finial	Cua	Roman	Copper-alloy foot/finial; flattened globular base with part of moulded body	
2947	746	Bead	Glass	Roman	Small blue glass barrel bead	
2967	743	object	bone	Roman	Ornate bone pin; flat perforated bone disc at upper part; two fragments of a second bone disc	Y
2967	744	hone	stone	Roman	Stone hone of Kentish shelly limestone; small and flat rectangular portable piece; slightly waisted from use	
2967	836	vessel	marble	Roman	Stone vessel of Carrara marble; incomplete with one lug present	Y
2967	bulk	waste	compos	Roman	Lead melting waste; irregular flat puddle with corroded copper-alloy sheet attached to upper surface	
2967	bulk	vessel	Fe	Roman	Iron vessel; two angled pieces	
2976	bulk	object	Cua	Roman	Copper-alloy object; three small fragments	
3017	bulk	waste	Pb	Roman	Lead sheet waste; one small rolled piece	
3047	748	Object	Cua	Roman	Poss toilet spoon shaft	
3057	839	Counter	Glass	Roman	Convex dark blue opaque glass gaming counter	
1460	817	Pin	Bone	Roman	Bone pin shaft	
1460	818	Pin	Bone	Roman	Bone pin shaft	
1460	820	Fitting	Cua	Roman	Unidentified cast fitting. Poss harness fitting?	
2041	564	Bead	Glass	Roman	Annular bead in light green translucent glass	
2041	640	Pin	Bone	Roman	Bone pin shaft	
2041	641	Strip	Cua	Roman	Unidentified strip. Poss belt fitting?	
2041	570	waste	Pb	Roman	Lead melting waste; small piece only	
2041	605	waste	Pb	Roman	Lead melting waste; flat patch only	

2041	bulk	Mount	Cua	C2nd +	Elliptical apron mount with 2 rivets	Y
2041	bulk	waste	Pb	Roman	Lead melting waste; numerous rough pieces	
2041	bulk	fittings	Fe	Roman	Iron fittings; two flat pieces	
2152	bulk	pin	Fe	Roman	Iron pin; heavily corroded	
2261	596	Pin	Bone	Roman	Bone pin shaft	
2261	860	fitting	Cua	Roman	Copper-alloy fitting; incomplete with curved circular-section body	
2261	874	link	Fe	Roman	Iron link with loop at either end	
2261	bulk	waste	Pb	Roman	Lead melting waste; three flat pieces	
2330	bulk	waste	Pb	Roman	Lead melting waste; one flat piece	
2343	bulk	waste	Pb	Roman	Lead waste; two small pieces	
2369	670	Armour fitting	Cua	C1st-2nd	Girdle tie ring from lorica segmentata	Y
2369	870	disc	Pb	Roman	Lead disc; regular and carefully cut	
2369	657	object	Cua	Roman	Copper-alloy object; corroded fragment only	
2369	720	object	Cua	Roman	Copper-alloy object; narrow bar with extended finial	
2369	bulk	sheet	Cua	Roman	Copper-alloy sheet; four small pieces	
2369	bulk	pin	Pb	Roman	Lead pin; tapering shank and thickened head.	
2369	bulk	waste	Pb	Roman	Lead melting waste; six pieces	
2369	bulk	waste	Pb	Roman	Lead sheet waste; substantial curved strip with cut marks	
2369	bulk	fittings	Fe	Roman	Iron fittings; eight heavily corroded pieces	
2371	634	Pin	Bone	Roman	Bone pin shaft	
2731	738	Pin	Bone	Early C1st	Bone pin with conical head. Crummy type 1	Y
2731	719	finger ring	Cua	C1st	Copper-alloy snake ring. Giraud type 7b. Highly stylised.	Y
2731	bulk	object	Cua	Roman	Copper-alloy object; corroded lump only	
2731	bulk	fittings	Fe	Roman	Iron fittings; two corroded pieces	
2861	734	object	Cua	Roman	Copper-alloy object; domed fragment only	
2865	633	Brooch	Cua	Late 2nd/E 3rd	British plate brooch. Mackreth type 3b6	Y
2880	878	knife	Fe	Roman	Iron knife; heavily corroded	
2880	737	pin/wire	Cua	Roman	Copper-alloy pin/wire; tapering	
2880	bulk	waste	Pb	Roman	Lead waste; sturdy coil	
2880	bulk	fitting	Fe	Roman	Iron fitting; heavily corroded	
2000	500	Pin	Bone	C2nd	Bone pin with pine-cone head.	Y
2000	502	Strip	Cua	Roman?	Unidentified strip in 3 pieces. Poss belt fitting?	
2000	503	Spoon	Bone	Late C1st- E 2nd	Spoon shaft with bowl absent	
2000	504	Pin	Bone	Roman	Bone pin shaft	
2000	505	Pin	Bone	Roman	Bone pin shaft	
2000	507	Pin	Bone	Roman	Bone pin shaft	

2000	510	Pin	Bone	Roman	Bone pin shaft	
2000	511	Bead	Glass	Late Roman?	Circular section segmented bead in dark blue glass	
2000	512	Object	Cua	Roman	Copper-alloy pin shaft	
2000	514	Pin	Bone	Roman	Bone pin shaft	
2000	518	Object	Cua	Roman?	Unidentified object	
2000	521	Armour fitting	Pb	C1st-2nd	Girdle tie ring from lorica segmentata	Y
2000	523	Ring	Cua	Roman	Poss finger ring D section	
2000	524	Object	Pb	Roman??	Cut square lead strip	
2000	525	Pin	Bone	Roman	Bone pin shaft	
2000	527	Ferrule	Cua	Roman	Copper knife ferrule	
2000	531	Ring	Cua	Roman	Poss finger ring D section	
2000	533	Pin	Bone	Roman	Bone pin shaft	
2489	708	Lock bolt	Cua	Roman	Lock bolt, Corroded with no cut outs visible	Y
537	832	Intaglio	Jet	C1st	Jet intaglio with mounted cupid left	Y
1342	499	Pin	Bone	Roman	Bone pin shaft	
2638	730	Pin	Bone	Early C1st	Bone pin with conical head. Crummy type 1	Y
2638	869	Fitting	Cua	Roman	Leaf shaped harness pendant Poss medieval	Y
2472	678	Pin	Cua	C2nd-3rd	Globe headed pin with single bed and reel. Crummy Type 2	Y
2053	600	Pin	Bone	Roman	Bone pin shaft	
2053	602	Fitting	Pb	Roman	Cast belt fitting	
489	389	Brooch	Cua	C2nd-3rd	<i>Pelta</i> type British plate brooch. Lozenge shaped with 4 enamelled dots.	Y
2512	689	Object	Cua	Roman	Poss toilet spoon shaft	
2512	691	Pin	Bone	Roman	Bone pin shaft	
2512	692	Lock bolt	Cua	Roman	Lock bolt with asymmetrical ovoid cut outs	Y
2512	693	Object	Cua	???	Unidentified object	
2525	690	Object	Cua	Roman	Poss toilet spoon.	
2921	745	Pin	Bone	Roman	Bone pin shaft	
2921	888	Bead	Glass	Roman	Partial rectangular section bead in dark blue paste.	

Table 3: Small finds catalogue (Excluding nails).

APPENDIX 9: POST ROMAN METAL AND SMALL FINDS ASSESSMENT

Märil Gaimster

In total, around 270 individual metal and small finds are included in this report. The majority were retrieved from post-Roman contexts, alongside some finds from Roman and unphased contexts thought to be medieval or post-medieval. All finds are described in Table 1, and will be discussed here by phase.

Phase 4: Saxo-Norman (1050-1150)

The majority of finds from Phase 4 contexts are objects identifiable as Roman (see Faine Appendix 8). Only four objects are included here, an iron nail and a rivet, a piece of lead melting waste and fragments of copper-alloy sheet. These, too, may be most likely residual Roman finds. At least one find, residual in a Phase 5 context, is likely to be Late Saxon in date. Consisting of a single-ended pin beater, carved of bone and with polish from use, this is a type form of the Late Saxon period (SF 721). While the predecessor of this textile tool, the double-ended pin beater, is associated with the vertical warp-weighted loom in the Early and Middle Saxon periods, the single-ended version appears to follow the introduction of a different type of vertical loom, the two-beam loom, in the Late Saxon period (Walton Rogers 2014, 292). The introduction of this new form of loom is broadly placed in the 10th century for urban and high-status sites, while warp-weighted looms continued in use on rural sites into the 11th century (Leahy 2003, 72-4; Walton Rogers 2009, 296). Single-ended bone pin beaters are predominantly found in contexts of the 10th and 11th centuries, and are rarely found after the introduction of the horizontal loom in the 12th or 13th centuries (cf. Riddler 2004, 58). Another possible Late Saxon object is a corroded copper-alloy pin with a solid head (SF 718). The pin was recovered from an unphased context, but similar pins provide another Mid- to Late Saxon type form (cf. Rogers 2009, fig. 1.23).

Phase 5: Medieval (1150-1350)

Seventeen individual metal and small finds were recorded from this phase, eleven of which in the form of iron nails. Other identifiable objects include the blade of a tang-hafted iron knife (SF 872), a copper-alloy ring (SF 858) and an incomplete bone needle (SF 813). The needle has a smooth spatula-shaped head, below which is a figure-of-eight eye formed by double circular perforations. Sturdy needles such as this would have had a range of functions, including the manufacture and repair of nets and sailcloth, weaving tools, basketry and loose mesh knitting. Bone needles are frequent finds throughout the Anglo-Saxon period, which may suggest the needle is residual here (cf. MacGregor *et al.* 1999, 1950). However, needles seem to have been in common use until the 12th century (cf. Riddler *et al.* forthcoming). Besides these finds, an iron spur has a distinctive form that dates it to Phase 5 (SF 582). The spur has differently shaped terminals showing the use of a single,

long spur leather. On the outside of the wearers foot, the spur leather was attached to a ring-shaped terminal while the inside terminal has a horizontal slot for the leather to pass through. The use of a single spur leather appears to have been common from the late 13th century and up to around 1350 (Ellis 1995, 127-28). The spur was intrusive in a Phase 2 context. An unphased silver long-cross penny, possibly of Alexander III of Scotland (1249-1281) would also belong to this phase (SF 582). A further unphased find, a copper-alloy mount, is discussed under Phase 6, although, if medieval, it may conceivably belong to Phase 5 (SF 849).

Phase 6: Medieval (1350-1480)

No metal or small finds were recorded from Phase 6 contexts. Nevertheless, several objects may date from this period. One is a copper-alloy buckle with an internal forked spacer holding a rigid buckle plate (SF 1037), a form generally assigned to the mid-14th to early 15th centuries (Egan and Pritchard 1991, 78-82). The buckle came from a Phase 7 context, so it is perhaps likely to be residual there. However, some finds indicate this type of buckle may have continued in use into the very early 16th century (Griffiths *et al.* 2007, 93). Another possible late medieval dress accessory is represented by an unphased circular shoe buckle with a central bar (SF 374). The buckle is cast in lead-alloy, with traces of an iron pin; it is a form that is very common in the 15th century, but continues in use until c.1600 (cf. Egan and Pritchard 1991, 66 and fig. 40; Egan 2005, 34 and fig. 16 nos. 76 and 82). A feasible Phase 6 object is a copper-alloy mount or stud in the form of a sexfoil (SF 849). There are traces of gilding on the corroded surface. Small mounts in a variety of shapes are characteristic of the late medieval period and the fashion of highly ornate belts and girdles (cf. Egan and Pritchard 1991, 162-246; Willemsen 2012). In addition, some objects intrusive in Phase 2 contexts are likely to be late medieval in date. They include the fragment of the handle of a scale-tang knife with a copper-alloy end cap and remains of wooden scales (SF 867). The handle was associated with pottery dating from 1240-1300 (provisionally) but scale-tang knives are generally more common in than tang-hafted in the late medieval period (Cowgill *et al.* 1987, 26; Moore 2006, 6). Of particular interest, however, are three fragments of cast copper-alloy plate with embossed decoration (SF 571, 574 and 706). The decoration includes ring-and-dot circles, incised lines and cross-hatching with possible traces of tinned surfaces; the quality of these objects suggest they may be unfinished, and so a possible indication of non-ferrous metalworking on site. Some true edges suggest the fragments originate from one or several discs, with a possible parallel in a circular mount from Clarendon Palace near Salisbury in Wiltshire (cf. Goodall 2012, fig. 25 no. 149). The Salisbury mount is thought to date from the 14th century (*Ibid.*, 104).

Phase 7: Post-Medieval (1480-1600)

Just under fifty finds came from this phase; around 30 of these consisted of iron nails. With the exception of the possible copper-alloy buckle, discussed under Phase 6 above, there were few other identifiable objects. Further x-raying of some iron objects may however produce further material.

Phase 8: Post-Medieval (1600-1700)

Phase 8 only produced around twenty finds, with over half consisting of iron nails. The remaining objects will require further x-raying to aid identification.

Phase 9: Post-Medieval (1700-1820)

Again, this phase produced around twenty metal and small finds, half of which in the form of iron nails. Along with a few fragmentary copper-alloy pins, an unstratified copper-alloy dandy button with a sunburst design dates from the 18th century (SF 100). A copper-alloy livery or blazer button is likely residual in Phase 10; it has a cone-shaped setting for the fastening loop, a method that indicates production before 1800 (SF 866; cf. Noël Hume 1969, 90 and fig. 23 type 8;). An ivory disc with a small central perforation may be from a cotton- or cloth-covered button (SF 844). Other identifiable finds are a heavily corroded silver coin (SF 840) and a pistol-shaped ivory cutlery handle (SF 637).

Phase 10: Modern (1820-Present)

Just under twenty finds came from Phase 10 contexts, including at least six iron nails. Among the few identifiable finds is a copper-alloy medal commemorating the marriage of Albert Edward, Prince of Wales, to Princess Alexandra of Denmark, March 10 1863 (SF 580); the medal is pierced for suspension. A heavily corroded copper-alloy coin is likely a Victorian penny (SF 581). An unstratified copper-alloy penny token, stamped with the number 118 on the obverse, is also most likely from this period (SF 492). Part of a bone syringe, intrusive in Phase 2, would also belong here (SF 105), as may a group of four unstratified stone hones of millstone grit (SF 861–864).

Significance of the Finds and Recommendations for Further Work

While the assemblage of post-Roman metal and small finds from the Brandon House site produced relatively few identifiable objects, it does include some important finds that are informative on the use of the site, in particular during the later Saxon and medieval periods. A single-ended bone pin-beater, along with a possible copper-alloy dress pin, reflects the sparse but important recovery of finds from Southwark dating from the Saxo-Norman period. Medieval finds provide the largest coherent group, even if these finds are largely recovered from other phases. They include a bone needle, an iron spur and a silver coin from the high medieval Phase 5, and later medieval, or possibly very early modern, dress accessories in the form of a complete copper-alloy buckle and a lead-tin shoe buckle. Fragments of one or several copper-alloy discs or mounts with embossed decoration are of particular interest, and may represent non-ferrous metalworking on site during the medieval period. The only identifiable object from the early modern Phase 7 was the copper-alloy buckle, above; although representing a late medieval form, it may, along with the small shoe buckle, in fact belong to this

phase. The later post-medieval and modern Phases 8-10 similarly produced few identifiable objects, aside from two copper-alloy buttons and an 1863 copper-alloy medal.

The metal and small finds form an integral component of the finds and should, where relevant, be included in any further publication of the site. For Brandon House, the objects discussed here would all provide important data for further work. A number of these finds, along with other metal objects, however, will require further x-raying to aid full identification; these are all annotated in Table 1. The two silver coins will need cleaning by conservator, as will the small copper-alloy stud with traces of gilding. Iron nails can now be discarded, as may fragmented and undiagnostic metal once x-rayed.

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PHASE	CONTEXT	SF NO	PERIOD	POT DATE	DESCRIPTION	COMMENTS	NO. OBJ	RECOMMENDATIONS
2	112	103		n/a	copper-alloy wire; short length with both ends ?pointed; gauge 1.65mm; L 65mm	?implement	1	
2	112	105	Post-medieval	n/a	bone syringe; tapering nozzle with small bulbous end only; L 93mm	likely Phase 10	1	
2	2176	561	Med/post-med	n/a	iron dress pin; ?Caple Type B; remains of ?tinned surfaces; gauge 1.4mm; L 25mm	unusual find	1	
2	2176	bulk		n/a	iron nails; fifteen mostly incomplete and corroded; some of substantial length		15	discard
2	2176	bulk		n/a	lead melting waste; two pieces; L 30 and 70mm		2	
2	2177	571	?Medieval	n/a	copper-alloy plate fragment with ?one true curved edge; two punched ring-and-dot designs on one side; fine incised bands of parallel lines on the other ; L 23mm; ht. 23mm	?part of SF 574 and 706, ?mount; cf. Goodall 2012, fig. 25 no. 149	1	x-ray
2	2177	572		n/a	copper-alloy two-ply twisted wire with delicate slip-knot; wire gauge 1.05mm; L 250mm;	?bracelet	1	further identify

2	2177	574	?Medieval	n/a	copper-alloy ?cast plate fragment with one true curved edge; decorated on one side with circles formed by punched ring-and-dot around incised radiating lines; interspersed design of engraved cross-hatching; ?traces of tinned surface; W 20mm; ht. 33mm	?part of SF 571 and 706, ?mount; cf. Goodall 2012, fig. 25 no. 149	1	x-ray and clean for full identification
2	2177	bulk		n/a	iron nails; ten incomplete and corroded		10	discard
2	2342	709		1240-1300	copper-alloy wire; one ?pointed end; gauge 2.2mm; L 95mm			x-ray
2	2342	867	?Medieval	1240-1300	composite handle; finial end only of scale-tang implement with copper-alloy end cap; remains of ?wooden scales, fixed with solid copper-alloy rivets; W 10mm; L 30mm+	?late medieval	1	x-ray
2	2568	706	?Medieval	n/a	copper-alloy plate fragment with ?one true curved edge; faint band of incisedparallel lines on one side, along with numerous scratches; ?unfinished work; W 20mm; ht. 30mm	?part of SF 571 and 574, ?mount; cf. Goodall 2012, fig. 25 no. 149	1	x-ray
2	2568	bulk		n/a	iron nails; seven incomplete and corroded		7	discard
2	4044	830	Medieval	n/a	iron rowel spur; complete left-foot example for long, single spur leather; spur hook and double-oval spur buckle extant; rowel with eight points; D-section straight horizontal sides; neck L 45mm; rowel diam. 48mm buckle W 27mm	late 13th to mid-14th centuries; Phase 5	1	x-ray for spur buckle detail

4	2145	bulk		n/a	iron rivet with domed head; head diam. 12mm; L 19mm		1	x-ray
4	2145	bulk		n/a	lead melting waste; one piece		1	
4	2455	bulk		n/a	iron nail; incomplete and corroded		1	discard
4	2488	bulk		1080-1200	copper-alloy sheet; three heavily corroded fragments		1	x-ray
5	535	bulk		1240-1340	iron nails; two incomplete		2	discard
5	537	872		1240-1340	iron knife; tang-hafted and heavily corroded; ; W 15mm; L 122mm		1	x-ray
5	537	bulk		1240-1340	iron nail; L 60mm		1	discard
5	1009	858		n/a	copper-alloy ring; incomplete; rounded triangular section; diam. 24mm		1	
5	1018	bulk		n/a	iron nail; incomplete and corroded		1	discard
5	1055	bulk		1240-1400	iron ?nail; two corroded pieces		1	x-ray
5	1312	bulk		n/a	iron ?nails; three heavily corroded pieces		3	x-ray
5	1342	bulk		n/a	iron nail; incomplete and corroded		1	discard
5	1436	813		1270-1350	bone needle; upper part only with spatulate head above double-drilled eye; W 8mm; L 65mm+		1	
5	2637	721	?Saxon	n/a	bone thread picker; single-ended with polish from use; L 103mm		1	
5	2637	bulk		n/a	copper-alloy ?object; heavily corroded lump; 25 x 25mm		1	x-ray
5	2638	731		1180-1270	copper-alloy mount of thin sheet; several small nail holes present; W 30mm; L 50mm+		1	x-ray
5	2638	bulk		1180-1270	iron nail; incomplete and corroded		1	discard
5	2694	bulk		1140-1200	iron nail; L 75mm		1	discard

7	361	176		1480-1600	copper-alloy fitting; round-section stem with remnants of transverse sheet part fixed to one end; L 100mm		1	x-ray
7	361	bulk		1480-1600	iron nail; incomplete and corroded with remains of wood		1	discard
7	602	bulk		1650-1700	copper-alloy ?object; highly corroded lump; L 30mm		1	x-ray
7	708	bulk		1480-1600	iron nail; stem corroded fragment only		1	discard
7	1023	bulk		n/a	iron nail; clenched tip; L 78mm		1	discard
7	1302	bulk		n/a	iron nail; incomplete and corroded		1	discard
7	1330	1037	medieval	1480-1610	copper-alloy buckle; complete oval frame with composite rigid buckle plate; heavily corroded but visible punched and engraved decoration on front plate; buckle W 25mm; plates 18 x 42mm	mid-14th to early 15th centuries; Egan and Pritchard 1991, 78-82	1	x-ray
7	1458	bulk		n/a	iron nails; two incomplete and corroded		2	discard
7	2043	594		n/a	lead disc of thin sheet; small central perforation; diam. 25mm		1	
7	2043	597		n/a	lead waste; thin folded sheet; 35 x 45mm		1	
7	2043	bulk		n/a	lead melting waste; three pieces		3	
7	2043	bulk		n/a	iron ?object; one heavily corroded piece; 40 x 40mm		1	x-ray
7	2043	bulk		n/a	iron nails; nine incomplete and corroded		9	discard
7	2045	bulk		1480-1600	iron fittings; three heavily corroded pins; L 80, 155 and 160mm		3	x-ray

7	2226	bulk		1480-1600	iron nails; sixteen corroded pieces		16	discard
7	2363	bulk		n/a	iron nails; three incomplete and corroded		3	discard
7	2422	bulk		n/a	iron ?horseshoe; flat curved piece; L 115mm		1	x-ray
8	177	bulk		1700-1900	iron nails; three incomplete and corroded		3	discard
8	177	bulk		1700-1900	copper-alloy ?pin; shaft fragment only; gauge 1.77mm		1	discard
8	217	bulk		n/a	iron nails; two incomplete and corroded		2	discard
8	218	bulk		n/a	iron nail; incomplete and corroded		1	discard
8	453	231		n/a	copper-alloy pin; incomplete Caple Type C; gauge 1.1mm; L 20mm+; corroded		1	x-ray
8	1022	bulk		n/a	iron nail; corroded; L 75mm		1	discard
8	1200	489		n/a	iron nail; incomplete and corroded; substantial head		1	discard
8	2034	539		1740-1800	copper-alloy ?pin corroded head only		1	x-ray
8	2131	555		1480-1550	lead pin with rounded point and roughly flattened head; gauge 1.42mm; L 44mm		1	further identify
8	2131	bulk		1480-1550	iron ring; flat and heavily corroded; diam. 50mm		1	x-ray
8	2166	bulk		n/a	iron nail; incomplete and corroded		1	discard
8	2220	bulk		1400-1650	iron fitting; heavily corroded; L 95mm		1	x-ray
8	2220	bulk		1400-1650	iron nails; two; L 75mm		2	discard

8	2236	bulk		n/a	iron ring; incomplete and corroded to animal rib bone; diam. 45mm; small narrow copper-alloy object corroded to the ring; L 20mm		1	x-ray
8	2253	bulk		n/a	iron nail; incomplete and corroded		1	discard
8	2263	bulk		1350-1500	iron fitting; narrow corroded body; L 105mm		1	x-ray
8	4082	bulk		1580-1700	copper-alloy sheet/mount; curved fragment only; W 35mm; L 65mm		1	x-ray
9	0	100	Post-medieval	n/a	copper-alloy dandy button stamped with sunburst design within two fine borders; diam. 33mm	18th century	1	
9	168	840	Med/post-med	1770-1820	silver coin; incomplete and partly bent; heavily corroded; diam. 24mm		1	clean to identify
9	168	841	?Post-medieval	1770-1820	copper-alloy ?button; thick and heavily degraded disc; diam. 26mm		1	x-ray
9	168	bulk		1770-1820	iron nails; three incomplete and corroded		3	discard
9	168	bulk		1770-1820	copper-alloy ?object; several pieces of thin sheet		1	x-ray
9	168	bulk		1770-1820	iron fittings; rectangular 60 x 60mm strap loop and corroded bar		2	x-ray
9	183	bulk		n/a	iron nails; three incomplete and corroded		3	discard
9	183	bulk	Med/post-med	n/a	copper-alloy pins; several minute fragments; including at least one Caple Type C head		1	
9	183	bulk		n/a	copper-alloy sheet or strap; corroded fragment only; L 10mm		1	x-ray

9	186	bulk		n/a	lead melting waste; two pieces		2	
9	186	bulk		n/a	copper-alloy ?pin; shaft fragment only; gauge 0.97mm		1	
9	195	bulk		n/a	iron nails; two incomplete and corroded; one L 55mm		2	discard
9	715	bulk		1710-1750	iron nail; incomplete		1	discard
9	2409	637		1740-1780	ivory cutlery handle for scale-tang implement; tapering with pistol-shaped end and three iron rivets for fixing; L 90mm	18th century	1	
9	4071	844	Post-medieval	1770-1830	ivory ?button; thin disc with small central perforation; diam. 25mm		1	
9	4071	853		1770-1830	copper-alloy fitting; sheet ring with downturned edges; diam. 30mm		1	x-ray
10	0	492	Post-medieval	n/a	copper-alloy penny token; '1d' within raised circle, border of alternating dots and circles // '118' within raised circle, border of reeding; diam. 18mm		1	further identify
10	209	bulk		1770-1840	iron nail; incomplete and corroded		1	discard
10	209	bulk		1770-1840	lead melting waste; several elongated dribbles		1	
10	209	bulk		1770-1840	copper-alloy ?object; handful of small corroded lumps only		1	x-ray
10	210	850		n/a	small cylinder-shaped object of copper-alloy; diam. 7mm; L 14mm		1	x-ray
10	210	bulk		n/a	copper-alloy ?object; two corroded lumps only		1	x-ray
10	210	bulk		n/a	iron nails; a dozen heavily corroded fragments		1	discard

10	210	bulk		n/a	lead melting waste; several pieces		1	
10	1010	bulk		mid-19th century	iron fitting; solid, domed circular object; diam. 30mm; ht. 15mm		1	x-ray
10	1012	bulk		n/a	iron sheet/mount; W 55mm; L 155mm		1	x-ray
10	1025	bulk	Post-medieval	1550-1700	iron fittings; triangular sheet and heavily corroded ?bolt		2	x-ray
10	1210	491		n/a	stone alley of chalk rock; diam. 22mm		1	
10	1309	854		n/a	gold leaf; thin fragment		1	
10	1309	bulk		n/a	iron ?strap; heavily corroded piece; W 30mm; L 65mm		1	x-ray
10	1309	bulk		n/a	iron nails; four incomplete and corroded		4	discard
10	2115	866	Post-medieval	mid-19th century	copper-alloy livery/blazer button; complete with wire loop set in raised cone; diam. 12mm	18th century	1	x-ray
10	2115	bulk		mid-19th century	copper-alloy ?buttons; two heavily corroded discs; diam. 30mm		2	x-ray
10	2115	bulk		mid-19th century	copper-alloy ?pins/wire; two short lengths; also a copper-alloy ?lace-chape		3	x-ray
10	2241	580	Post-medieval	mid- to late 19th century	copper-alloy medal commemorating the marriage of Albert Edward, Prince of Wales, to Princess Alexandra of Denmark, March 10 1863; pierced for suspension; diam. 23mm		1	
10	2241	581	Post-medieval	mid- to late 19th century	copper-alloy coin; heavily corroded; diam. 30mm; likely Victoria 'Old head' penny, 1895–1901		1	x-ray

10	2614	714	Med/post-med	1770-1840	copper-alloy pin; ?Caple Type B; gauge 1.05mm; L 30mm; corroded		1	x-ray
u/p	12	bulk		1840-1900	iron nail; incomplete and corroded		1	discard
u/p	32	bulk	Post-medieval	n/a	iron floor nail; L 80mm		1	discard
u/p	42	849	?Medieval	1240-1300	copper-alloy ?sexfoil stud with short pointed shank; traces of gilding visible; diam. 15mm; shank L 13mm	?late medieval	1	clean surface to identify
u/p	251	109		n/a	copper-alloy ring; oval-section body; diam.20mm		1	
u/p	296	bulk		n/a	iron ?fittings; six heavily corroded pieces		6	x-ray
u/p	363	bulk		1480-1650	iron nail; incomplete and corroded		1	discard
u/p	489	374	Med/e post-med	n/a	lead alloy shoe buckle; crudely cast circular frame with off-centre central bar; ?remains of iron pin; diam. 20mm	c. 1400-1600	1	x-ray
u/p	489	375		n/a	lead sheet/melting wastetwo pieces		1	
u/p	489	376		n/a	iron ?rove; rectangular with ?nail at centre; 25 x 35mm		1	x-ray
u/p	489	bulk		n/a	lead melting waste; three small pieces		1	
u/p	489	bulk		n/a	iron nails; seven incomplete and corroded		7	discard
u/p	593	bulk		16th century	iron nails; two incomplete and corroded		2	discard
u/p	1167	bulk		1270-1400	iron nail; incomplete and corroded		1	discard
u/p	2081	bulk		n/a	iron nails; two incomplete and corroded		2	discard
u/p	2230	873		1480-1600	iron knife; near-complete but heavily corroded; tang-hafted with tapering blade; W 15mm; L 120mm+		1	x-ray

u/p	2230	bulk		1480-1600	iron nails; six complete; L 38–105mm		6	discard
u/p	2243	bulk		n/a	lead waste; partly folded flat puddle; L 65mm; W 45mm		1	
u/p	2243	bulk		n/a	iron nails; three incomplete and corroded		3	discard
u/p	2259	582	Medieval	1050-1150	silver long-cross penny of ?Alexander III of Scotland (1249–1281); incomplete and corroded		1	clean to identify
u/p	2265	875		n/a	iron knife; tang-hafted and heavily corroded; ; W 15mm; L 120mm		1	x-ray
u/p	2297	bulk		n/a	iron nail; L 50mm		1	discard
u/p	2512	694	Roman	n/a	lead mount; incomplete with remains of iron nail and possibly second nail hole; W 25mm+; L 30mm		1	x-ray
u/p	2512	bulk		n/a	lead sheet waste; six pieces		6	
u/p	2512	bulk		n/a	iron ?nails; eight corroded pieces		8	x-ray
u/p	2525	bulk		n/a	lead melting waste; five pieces		5	
u/p	2526	bulk		n/a	iron nail; incomplete and corroded		1	discard
u/p	2608	712	Post-medieval	n/a	ivory handle; flat-section and tapering with circular perforation at broad finial; likely from brush, with brush plate broken off; L 80mm		1	
u/p	2622	bulk		n/a	lead melting waste; one corroded piece		1	
u/p	2622	bulk		n/a	iron nails; three incomplete and corroded		3	discard
u/p	2668	718	?Saxon	1150-1200	copper-alloy pin; incomplete with solid ?globular head; gauge 2.25mm; L 22mm+; corroded	?Saxon	1	x-ray

u/p	2904	bulk		n/a	iron nail; near-complete; L 65mm		1	discard
u/p	2905	bulk		1050-1150	iron nails; two incomplete and corroded; one complete; L 65mm		2	discard
u/p	2921	bulk		n/a	lead melting waste; one piece		1	
u/p	2921	bulk		n/a	iron ?nail; one curved piece		1	x-ray
void	1452	bulk		1180-1270	iron ?fitting; one flat corroded piece		1	x-ray
void	2207	bulk		1480-1500	copper-alloy ?object; five small sheet fragments, one curved		1	x-ray
void	2207	bulk		1480-1500	iron nail; incomplete and corroded		1	discard
	0	101	Post-medieval		ivory fan; handle end only, with fifteen rounded ivory blade finials remaining on copper-alloy pin; W 22mm		1	
	0	102	Post-medieval		bone ?button; thin disc with small central perforation; diam. 12mm		1	
	0	398	Post-medieval		bone cutlery handle for tang-hafted implement; fashioned from sheep metatarsus; L 60mm		1	
	0	848			small coil of copper wire; slightly flattened ends; W 2mm; diam. 15mm		1	
	0	852			copper-alloy ?button; thin disc only; diam. 24mm		1	x-ray
	0	861	Post-medieval		stone hone of very fine millstone grit; oval-section and tapering; diam. 30–40mm; L 105mm		1	
	0	862	Post-medieval		stone hone of very fine millstone grit; rectangular-section and tapering with evidence of burning; W 35–45mm; 25–30mm thick; L 140mm		1	

	0	863	Post-medieval		stone hone of very fine millstone grit; rectangular-section and tapering with evidence of burning; W 40–45mm; 25–35mm thick; L 130mm		1	
	0	864	Post-medieval		stone hone of very fine millstone grit; rectangular-section and tapering; W 35–45mm; 25–30mm thick; L 135mm		1	

Table 1: Post Roman metal and small finds catalogue

APPENDIX 10: BUILDING MATERIALS ASSESSMENT

Kevin Hayward

Introduction and Aims

Seventy crates of stone, ceramic building material, mortar and daub together with 17 large loose items of stone were retained from BBO10, Brandon House, Southwark. This assessment also takes into account the results obtained from a site visit to BBO10 on 5th August 2015 which was undertaken to examine the in-situ mortar and brick fabric and form of the walls associated with the late medieval to late post-medieval structures and provide spot dates.

This very large sized assemblage, 4,959 examples 1,706kg, was assessed in order to:

- Identify (under binocular microscope) the fabric and forms of the Roman, medieval and post-medieval ceramic building material, (brick, roofing tile, floor tile; mortar; daub; painted wall plaster) in order to verify, refine or revise the phasing of the site and to produce a list of spot dates.
- Identify the materials used to construct the early 16th-century Suffolk Place.
- Identify from extant structural remains the late medieval pre-cursor to this construction (Brandon Place).
- Identify (under binocular microscope) the fabric and forms of stone samples to determine the geological character and source and (where possible) the function of the stone.
- Set up access catalogues, one each for the stone (BBO10 stone database.accdb) and Ceramic Building Material (BBO10 cbm.accdb) that accompany this document.
- Make recommendations for further study, illustration and publication.

The substantial decorated Terracotta assemblage from BBO10 is associated with the embellishment of Suffolk Place (Meddens & Humphreys 2015) is one of the largest in London and is assessed separately in Appendix 12. It is only briefly considered here as a means of dating the assemblage and considering its distribution.

Methodology

Where possible, two whole brick samples were retained from each structure in order to determine their construction date. For the remaining contexts, especially from the earlier Roman, medieval and post-medieval features, tile, brick, stone, plaster, mortar and daub was retained. An on-site review of the extant brick structures throughout the site was conducted on the 5th August 2015 with 21 mortar samples taken.

The application of a 1kg mason's hammer and sharp chisel to each example ensured that a small fresh fabric surface was exposed. The fabric was examined at x20 magnification using a long arm stereomicroscope or hand lens (Gowland x10). The building material was examined using the London system of classification with a fabric number allocated to each object

Ceramic Building Material

47,21 examples 1,403kg

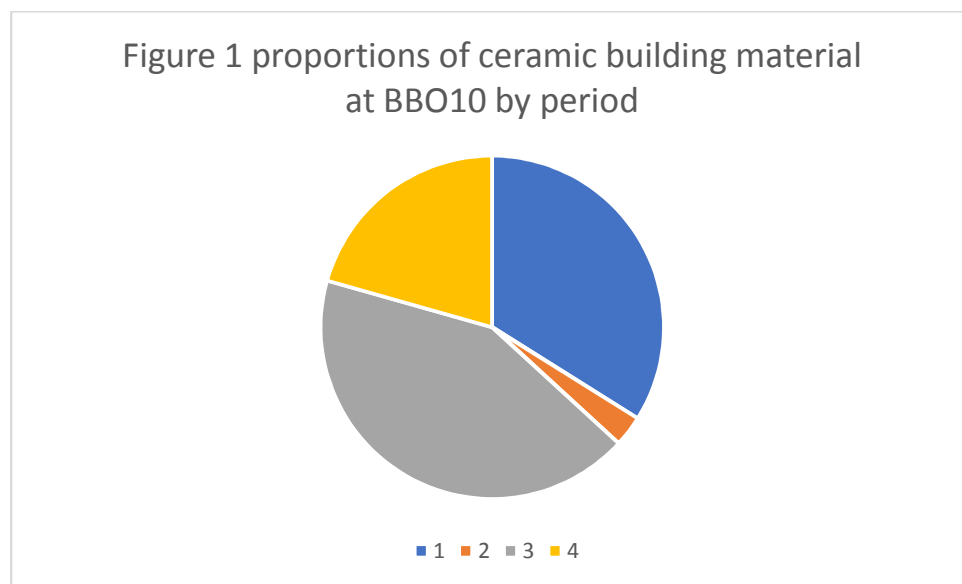
Roman 2,973 examples 477kg

Medieval 381 examples 41.3kg

Early Post-medieval 1,159 examples 599kg

Late Post-medieval 190 examples 290kg

This very large assemblage is dominated by large dumps of Roman ceramic building (477kg 34% by weight) and structures and demolition debris relating to Suffolk Place (599kg 43% by weight)¹. The small proportion of medieval tile (41kg 2.9%) was perhaps surprising given the known late medieval precursor to the brick structured Suffolk Place (subsequently identified at this site). Rather, the small quantities should perhaps be seen more in terms of the use of chalk ashlar for walling rather than bulky and dense brick in the late medieval period as well as the impact that later Tudor and later post-medieval structural truncation, had on the immediately underlying medieval features. The proportion of later post-medieval brick is quite high (290kg 21% by weight) almost entirely due brick foundations, cellar walls and culverts relating to the rapid mid to late 18th to 19th-century housing in this part of Southwark.



1= Roman 2= Medieval 3= Suffolk Place 1500-1550+ origin 4= Late post-medieval

¹ This excludes the 347 examples of very large decorated terracotta that were used to embellish Suffolk Place and are only briefly covered here in this assessment (see Appendix 12).

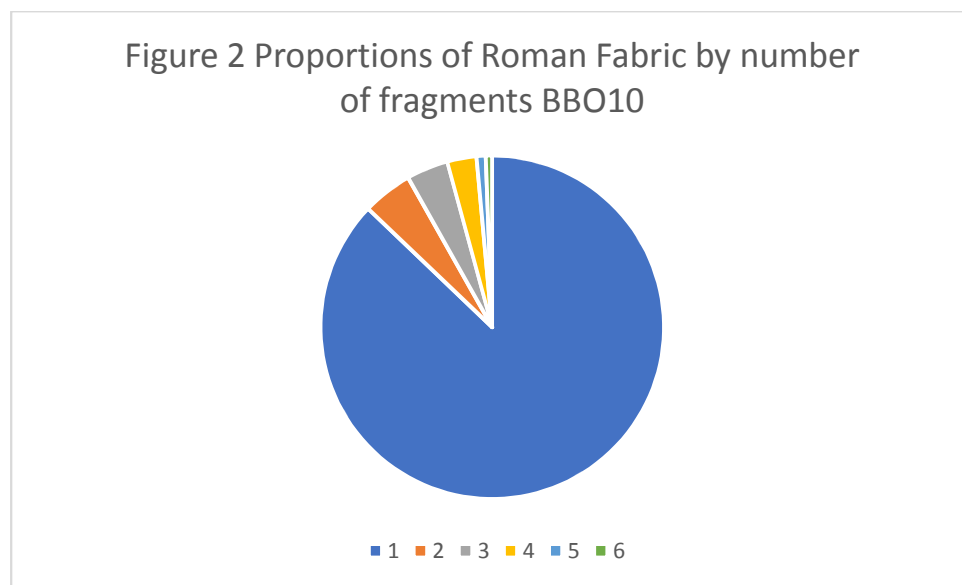
Roman Ceramic Building Material

2,973 examples 477kg

There is a substantial Roman fingerprint for this site with over a third (by weight) of the entire ceramic assemblage consisting of Roman building material. The site, which is located within Borough Channel, separating the South Island from the mainland of Roman Southwark is dominated by dumping and consolidation deposits, rather than any structures or buildings of note. This is substantiated from the assemblage by the fact that nearly all the brick and tile is in a highly fragmentary condition with approaching 3,000 individual pieces (63% of the entire assemblage by number). Complete square brick is absent and the only complete items are tightly angled curved tiles (that are possibly drainage related) from [2181] and small *opus spicatum* paving bricks [114].

Fabrics

The key fabrics and their proportion summarised below (see Figure 2) are broadly consistent with the overall percentages from other sites at Southwark (Pringle 2009, 191.), but not with sites close to the Bridgehead on the North Island, where the early Eccles cream fabric was especially prevalent (Hayward in prep. a). Overall, earlier mid-1st to mid-2nd century fabrics dominate whilst later 2nd and 3rd century sandy and calcareous fabric groups form only a tiny component (1.5%) by number of fragments. Given, the sizeable quantities of Calcareous roofing tegulae and imbrex seen at nearby Tabard Square (Hayward 2015a), very little of this later temple/villa material was dumped around this site.



1= Early London sandy group 2815 (AD 50-160); 2= Eccles fabric 2454 (AD 50-80); 3= Radlett group 3023 (AD 50-120); 4= Silty/Hampshire Groups (AD 50-140); 5= Late London sandy fabrics 2459b (AD 120-250); 6= Late Calcareous fabrics (AD 140-300)

Early London Sandy Fabric Group 2815 (AD 55-160) 2,533 examples 402kg
2452; 2459a; 3004; 3006

By far the most common fabric (85% by weight) both are the early (AD 50-160) 2815 red group using local brickearth with coarse moulding sand in the complete range of products: bricks, tegulae, imbrices, flat undiagnostic tile, tesserae. The very fine vitrified fabric subgrouping 2452 is especially common, with the coarser 3006 more common in imbrices and the extremely coarse 3004 only occasionally turning up in brick. The frequency of this mid first to mid second-century fabric group is such that in the dumps and consolidation layers it is often seen to mask the remaining fabric Roman groups, which together amount to a mere 1/6th of this group. Medieval features too are swamped by residual brick and tile from this group.

Later London Sandy Fabric Group 2459b (AD 120-250); 2459c (AD 140-250) 25 examples 6.7kg

By contrast examples of ceramic building material with much finer moulding sand (2459b) and chaff moulding (2459c) associated with the mica dusted rich later London group are poorly represented (1.4% by weight). This is a feature of the Roman sequence from the North Island (Hayward in prep a) and in Southwark (Pringle 2009, table 2.7).

Eccles Sandy Fabric 2454; 3022 (AD 50-80) 137 examples 24.3kg

This very fine early cream-pink sandy fabric manufactured around the area of the Eccles villa site in Kent during the mid-late first century is the second most common fabric from BBO10, forming just 5.1%, considerably less than the North Island (Hayward in prep. a) but on par with what is expected from the City and Southwark (Pringle 2009). Much of the debris consists of tegulae and imbrices and is therefore likely to represent dumped mid to late first-century roofing structures along Watling Street.

Radlett Iron oxide Group early 3023; 3060 (AD 50-120) 114 examples 17.3kg

Radlett Iron oxide Group late 3023b; 3060b (AD 170-230) 7 examples 1.3kg

Roman ceramic building made from the very early (mid first to early second century) soft Hertfordshire fabric group 3023 (AD 50-120) with frequent black iron oxide and small lumps of silt forms the third most common group at BBO10 (17.3kg – weight 3.7%). A range of specialist heated room material are often represented including scored and combed box flue tile, tegulae mammata and opus spicatum bricks.

It is also possible that the softer abraded brick and tile in this fabric with straw impressions may also be from a Kent source.

Examples of the much coarser late second to early third-century Radlett fabrics 3023b and 3060b are as with all later Roman fabrics very rare from this site. Where present they form degraded low flanged tegulae at [1576] [2537] [2549].

Silty Fabric 3028 (AD 71-140); 3238 (AD 71-100) 18 examples 2.8kg

Early banded silty Wealden Kent fabrics are rare forming only a background component (0.6% weight) to the overall assemblage. This small quantity, mainly of degraded brick and one example of tegulae mammata [2175] has no discernible pattern within Roman and post-Roman features at BBO10.

Hartfield Fabric 3009; 3018 (AD 100-120) 5 examples 0.6kg

This clay inclusion rich silty fabric manufactured from the kilns around Hartfield in Hampshire in the first decades of the second century is poorly represented in degraded tile, again with no pattern.

Hampshire Grog 3054; 3056 (AD 70-140); 57 examples 13.5kg

Far more common are this specialist group of early chaff grog tempered brick and roller stamped box flue. It is the fourth most common fabric at BBO10 (2.9% by weight), proportionally considerably greater than Southwark 0.3% (Pringle 2009). Examples are spread throughout the site.

Calcareous Fabrics 2453; 3012; 3055 (AD 140-300) 18 examples 1.8kg

The small proportion (just 0.4% by weight) of these pale-grey to pale-yellow calcareous building material with small lumps of clay and shell is as elsewhere in London restricted to roofing material (imbrices and tegulae). These were manufactured in the later Roman period (AD 140-300) for the London market probably from clays along the Thames estuary or even the Hampshire Basin (Betts and Foote 1994).

Tegulae form consists of a small very round (profile 27) with gently sloping upper cut-aways. Some of the tegulae and imbrices have a dusting of red brickearth moulding sand.

Unidentified Fabrics 6 examples 1.9kg

3500 (AD 50-200)

3227 (AD 50-100)

3070 (AD 50-80)

With four fabrics, it was not possible to find an exact match with the PCA reference collection. The first (fabric 3500), a void, red silty fine fabric maybe that seen at Tobacco Dock (Sudds 2011). Part of an imbrex made from a calcareous, vuggy shell rich and yellow clay fabric from [2330] with chaff fragments is comparable to rare Calcareous forms from Tabard Square (Hayward pers. obs.). There is also a degraded box flue edge from [2003] in a soft pale/cream white silty fabric with no quartz inclusions which appears to be a variant of 3227 (AD 50-100) rare for London but seen on the North Island in box flue tile (Hayward in prep. a) and associated elsewhere with early bath house material

(Pringle 2006; 2007). Also from probable early bath-house fabric is the extremely coarse flint inclusion fragment of brick from [2881] which resembles the very early fabric 3070 (AD 50-80) found in the earliest mid first-century demolition layers at Winchester Palace (Yule 2005; Hayward pers. obs.).

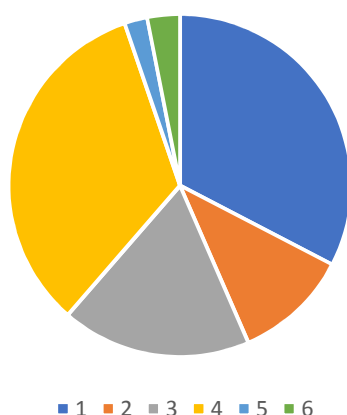
Roman structure?

Part of a very large 12kg ragstone block coated in very hard opus caementatum (Roman) cement from a foundation at [1024] was presumed to be a chalk foundation for the medieval precursor. Given the material's Roman affinities, however it will be necessary to investigate at publication stage whether this is reused Roman incorporated into a medieval wall or in fact a relict Roman masonry structure.

Form

The broken and fragmentary nature of the assemblage is borne out by the fact that undiagnostic flat tile forms the largest single component (157.5kg 34% by weight) and certainly by number of fragments (1,092 fragments 43%). The dump also contains appreciable amounts of both tegulae 84.4kg (17.9%) and imbrices 51.3kg (10.9%) as well as standard, not excessive amounts of brick (154kg 32.7%) again nearly all in a fragmentary condition. From this we may suppose that these dumps just represent the background poor quality demolition from this part of Southwark, with little sifting of better quality flat elements for use in buildings elsewhere. Indeed, very little flat brick is reused in the foundations of the medieval stone and Tudor brick Suffolk Place. Box flue tile is again at proportions (8.5kg 2 %) that would be expected for small cavity walling elements.

Figure 3 Proportion wt % of the major forms of Roman Ceramic Building Material from BBO10



1. Brick; 2. Imbrex; 3. Tegulae; 4. Flat undiagnostic tile; 5. Box flue tile; 6. Other (opus spicatum, tegulae mammata, tesserae, ridge tile, tubuli)

Box Flue and Parietalis 63 examples 9.1kg

A small, varied group of well-preserved early box flue dies, fabrics and forms were identified in the Roman levels. Occasional examples in fabric 3227 [2003], scored Eccles fabrics and thin walled box flue tile and possible half box flue tile [2036] suggest some of this debris represents bath house/heated room material that is mid to late first century in date (Pringle 2006; 2007). There are also several roller stamped designs. The important items are summarised in Table 4.

Scored parietalis from [112] and [1378] in fabric 2459a and an Eccles Parietalis from [1386] have been identified.

Type of Die	Context	Description	Fabric	Date
Scored	Dark Earth Layer [2000]	Thin scored box flue tile sanding on unscored sides (Early)	2452	AD 55-160
	Roman Layer [2035]	Scoring on early Radlett fabric	3023	AD 50-120
	Dump layer [2313]	Thin walled scored box flue tile	2452	AD 55-160
	Dump layer [2791]	Very thin score marks	3022	AD 50-80
Combed	Roman Fill [1407]	Combing two directions	3022	AD 50-80
	Dark Earth layer [2000]	Intricate combing	2459a	AD 50-160
				3023
Roller stamped	Residual in Tudor Feature [1192]	Wavy Billet Die 19-24 of Betts <i>et al.</i> (1997)	3054	AD 70-140
	Roman Layer [2035]	Wavy Billet Die 19-24 of Betts <i>et al.</i> (1997)	3054	AD 70-140
	Pit fill [2143]	Wavy Billet Die 19-24 of Betts <i>et al.</i> (1997)	3054	AD 70-140
	Fill relating to Roman building [2333]	Wavy Billet Die 19-24 of Betts <i>et al.</i> (1997)	3054	AD 70-140
	Pit fill [2367]	Die 5 of Betts <i>et al.</i> (1997)	2459a	AD 50-160
	Brickearth layer [2396]	Chevron Die 35 of Betts <i>et al.</i> (1997)	3023	AD 50-120

Table 1: Listing of key combed, scored and roller stamped box flue tiles from Brandon House (BBO10)

Tegula Mammata 6 examples 2.2kg

Some purpose made scored and curved bricks as well as those with clay projections, grouped as tegula mammata occur in small quantity. They have been classed together, as they, like the tubuli and box-flue tile relate to underfloor heating. Fragments are present from [1009] [2175] [2471] [2490] [2827] [3123].

In keeping with studies from Roman London (Crowley 1992, 145-146; Betts 2003, 112, Crowley 2005, 95, Pringle 2007, 206; Pringle 2009, 195-196), all 6 examples of *tegulae mammatae* which are defined as bricks attached at intervals by lumps of clay or *mammae* are of the shallower Brodrigg type A (1987, 60-1). Type A's would have been suitable as flooring and wall bonding courses, the *mammae* perhaps intended to assist with the bonding or keying into position (Brodrigg 1987, 62).

Opus spicatum brick 8 examples 4.1kg

Complete small paving bricks or *opus spicatum*, which when laid on their long edge produce a robust herring bone pavement surface are present Three examples are found to concentrate in channel fill and reclamation layers [113] [114] with another example on a mortar floor surface [2331] perhaps here for the purpose for which they were intended. Given that the fashion for using upturned paving bricks rather like opus-sectile stone tile elements was essentially a mid-late first-century phenomena, then the paving surface from [2331] may be early. The fact that a range of early fabrics including Radlett 3023 (AD 50-120) [113] [2331], Eccles 2454 (AD 50-80) [2424], Hampshire Grog 3054 (AD 70-140) [237] and sandy 2815 (AD 50-160) [114] [2341] [2504] [2741] were used indicates an early date.

These quantities (8) compare favourably with those [2341] from Southwark (52 examples) (Pringle 2009, 196-197)

Tubuli 4 examples 1.1kg

Very thick (22mm), 35-40mm diameter socketed drainage segments made in fabric 3006 were recovered from a gully fill [2183] and Roman dump layer [2471]. This form and fabric is common in Southwark (Pringle 2009, 200) and probably relate to drainage to and from a bath house or heated building. The example from [2471] also has a Tally mark X, suggesting that it formed part of a batch of ready-made drainage segments.

Brick 588 examples 154kg

Although there are no complete or near complete Roman bricks from BBO10, it is still possible to estimate brick size from thickness. As a vast majority (95%) fall within the range (28-40mm), this would indicate that they were once small bessalis bricks, occasionally pointed in opus signinum [1375] [2000] and mainly used originally as pilae stacks. Larger pedalis and Lydion bricks,

represented by thicknesses of between 52 and 65mm are only occasionally present [1047] [2222] [2538] [2892] [2901]. These were found to have opus caementatum mortar attached and were probably used as levelling courses within ragstone masonry buildings in the vicinity.

One curious large Lydion brick in late sandy fabric 2459b from layer [2398] was found to have a nail attached and may have had a specific function such as use in a kiln. The edge of another brick from the construction cut of a robbed out wall [2775] had side notches. These notches are usually indicative of much thinner wall tiles so it is not clear why this brick had these features.

Most of the fragmentary brick was dispersed throughout the site in Roman and as residual material in later medieval layers. Only occasionally were there discrete pockets such as in dark earth level [2731] and [2775] which may relate to a robbed-out wall.

Roofing Material 1,830 examples 293.2kg

Broken up roofing material, in the form of curved imbrex, flanged tegula and undiagnostic fragments of thin tile account for over 72% (by number of fragments) and 63% (by weight) of the Roman assemblage at Brandon House. It may be that the large quantity may be explained by the presence of timber framed wattle housing in the vicinity which often use ceramic roof tile on their roofing (Hayward in prep. a).

Imbrex 376 examples 51.3kg

Most of the large intermixed imbrex assemblage (11% by weight) consists of thick (22-26mm) rounded imbrex in several early fabrics, especially 3023 (AD 50-120), 3022 (AD 50-80) and 3006 (AD 50-160) all with coarse moulding sand. Only occasionally are there calcareous fabrics, representing later Roman roofing debris for example part of an imbrex made from a calcareous, vuggy shell rich and yellow clay fabric from [2330] with chaff fragments is comparable to rare calcareous forms from Tabard Square (Hayward pers. obs.).

Tegulae 362 examples 84.4kg

Nearly 18% by weight of the recovered Roman building material consists of fragmentary tegulae, 139 of which have definable profiles, consisting of 11 different profiles (see Table 2). There were 18 with cut-aways, 11 with the angular profile E, 5 with the stepped profile B with two more having profile C. Only occasional fresh examples have been identified.

One group stands out. The early sandy 2815 group accounts for 81% of definable profiles, of which the large straight profile 1, formed 80%. This profile is also common in the small number of Radlett tegulae. The small number of cream coloured Eccles fabric 2454; 3022 (AD 50-80) is represented by distinctive undercut flange profile 7, a feature seen elsewhere in Southwark towards the bridgehead on the North Island where they are particularly common (Hayward in prep a.).

By contrast the smaller, later 2nd to 3rd-century Roman tegulae profile 27 made from distinctive calcareous 2453 fabric (AD 140-300) is represented by one example. Whilst tegulae made from later London sandy fabrics 2459b and c (AD 120-250) are characterised by just three profiles (Types 2 and 6).

Flange Profile	1	2	3	6	7	8	10	12	14	27	40	TOTAL
Fabric												
Eccles	4	1	-	-	2	2	-	-	-	-	-	9
Early sandy	90	15	3	-	-	-	1	2	1	-	-	112
Radlett	10	-	-	-	-	-	-	-	-	-	1	11
Late sandy	-	2	-	1	-	-	-	-	-	-	-	3
Calcareous	-	-	-	-	-	-	-	-	-	1	-	1
Other	3	-	-	-	-	-	-	-	-	-	-	3
TOTAL	107	18	3	1	2	2	1	2	1	1	1	139

Table 2: Range of tegulae flange profiles and fabrics recovered from BBO10

Tile 1,092 examples 157.5kg

Most of this very large quantity of broken up, intermixed, often vitrified and reused tile almost certainly relates to tegulae with their flange removed, hence their inclusion into the roofing section. All the Roman tile fabric types from BBO10 are represented here and in large contexts such as [2035] the intermixing of both early and late fabrics is indicative of how heterogeneous these dumps and consolidation layers are.

Tessera 33 examples 794g

As well as the occasional stone design tesserae in black Kimmeridge dolostone and white indurated chalk there are a scattering of large (30mm x 26mm x 22mm) sub-rectangular to square red, pink and yellow border tesserae made from several tile fabrics. White Eccles is present from [2356] [2638] [2823] and occasional black iron oxide fawn fabric from Radlett terms up from [1274] and [2043]. The rest are made from the common 2815 red fabric. There are two peculiarities; one is tesserae made from pottery (an amphora fabric) from [2369] and one of daub [1535].

The absence of any mosaic fragments, their dispersal and infrequency would suggest that this group cannot be assigned to a particular pavement or building rather that it just represents background dumping.

Ridge Tile (High Angled) 3 examples 5.2kg

Complete examples of very high angled (60 degree) ridge tiles which probably formed along the apex of a roof were recovered from [2181] and [2182] made of early sandy 2459a fabric. It is possible, however given the proximity of the Borough Channel and other examples from nearby Tabard Square (Hayward 2015) that these could be drainage related features. It is interesting to note that where these high angled pieces occur that are nearly always in a complete or near complete condition.

Louvre (Chimney Fragment) 1 example 173g

Part of a possible finger pressed chimney fragment in coarse sandy fabric 3006 was recovered from [2043].

Daub, Loomweight and Mudbrick 30 examples 2.1kg

A substantial fragment of burnt mudbrick was recovered from the fill [2418] of a Roman ditch [2419]. These provided some of the earliest building materials for Roman London.

There was no keyed daub, although a shaped sill fragments from [2632] and [2959] provided evidence for timber framed wattle and daub structures in the vicinity. Some of the daub has been vitrified indicating that it has been subject to intensive heat. A case in point was a green vitrified shaped lump from [2238] which may be a loomweight or a sagger relating to glass production.

Medieval Ceramic Building Material

381 examples 41.3kg

Based on form, fabric and design, much of the small medieval ceramic building material (peg tile; bat tile, brick and floor tile) assemblage recovered from BBO10 has a later medieval (1250-1500) flavour to it. This is due to the complete absence of the very coarse sandy common 2272 and 2273 mid 12th to mid 13th-century fabric. It plays second fiddle to the stone (which is present in the form of chalk ashlar walls and foundations) and represents roofing and flooring material from the earliest Brandon Place. Small amounts of medieval peg tile were identified mainly as lacing courses within the chalk foundations (Table 3). Most of the ceramic building material concentrates between contexts [200] and [500] with other notable pockets around [1135] to [1172]; [1272] [1403] to [1480] [2369] [2396] [2423] [2635] [2797].

Context	Fabric	Feature	No.	Early date	End date	Mortar
99	2271; 2587	TILED FLOOR reused medieval peg tile	4	1180-1450	1240-1450+	Mortar not clear
155	3101	POSSIBLE LATE MEDIEVAL TUDOR WALL NO BRICK Very pale cream	1			1300-1600

		mortar				
178	2894; 1678	POSSIBLE REIGATE AND CHALK MEDIEVAL WALL Small Westminster and Early Calcareous Floor Tile	2	1250-1550	1380-1500	Mortar not clear
290	2271; 2586	HEARTH SURFACE Thin glazed medieval peg tile and thicker forms stacked vertically	4	1180-1600	1200-1500	No mortar
434	2271nr2272	N-S MEDIEVAL CHALK WALL medieval peg tile	3	1180-1500	1180-1500	No mortar
573	2586	CHALK WALL Late medieval peg tile ridge marks from kiln	19	1180-1800	1180-1500	No mortar
1473	2271	N-S ALIGNED CHALK WALL thin medieval peg tile	1	1180-1450	1180-1450	No mortar
2322	3030	TRUNCATED BRICK SURFACE late medieval brick fabric	1	1400-1660	1400-1660	No mortar

Table 3: Medieval Structures with CBM in BBO10²

Peg Tile 362 examples 34.7kg

2586 (1180-1800) 34 examples 4kg; 2587 (1240-1450) 56 examples 3.8kg; 2271 (1180-1800) 197 examples 18.6kg; 2274 (1080-1350) 59 examples 5kg; 3090 (1180-1800) 1 examples 0.2g; 3216 (1200-1600) 11 examples 2.7kg; OPR1 04/6 (1200-1500) 2 examples 0.1kg

A vast majority of the medieval ceramic building material (84% by weight) consists of fragmentary or partially complete peg tile. These are rectangular shaped tiles with two holes at one end for affixing to the roof with nail holes or wooden pegs. Some of the examples from BBO10 though were probably used as lacing courses within the late medieval walling foundations of Brandon Place as seen from peg tile taken from the chalk walls at [434] [573] [1473] or stacked vertically as a hearth surface [290] to retain the heat.

Most of the peg tile consists of fabrics 2271 >50% by weight with over 5kg of early 2271 and 2274 within dump [1436].

Bat and Curved Tile 5 examples 1.2kg

2271 (1180-1800) 4 examples 0.4kg; 2274 (1080-1350) 1 example 0.8kg

Very little medieval curved tile is present just five examples from [1436] [1520] in the common reduced tile 2271 fabric. Shoulder or bat tile which is used in roofing from the mid 12th to mid 13th century is represented by a solitary fragment from [1460].

² Chalk walled structures belonging to medieval Brandon Place without any tile include [41] [244] [305] [311] [369] [374] [507] [518] [601] [734] [1024] [1389] [3112]

Floor Tile 10 examples 2.6kg

2894 Westminster Floor Tile (1250-1310) 2 examples 0.8kg

1811; 2324; 3076 Penn Tile (1330-1390) 6 examples 1.8kg

1678; 2497 Calcareous Flemish Tile (1300-1550) 2 examples 0.8kg

This small group of compact, sometimes complete, 125mm x 125mm x 22mm, 13th to 15th-century plain and decorative glazed medieval floor tile include discrete clusters reused in the chalk and Reigate stone foundation [178] and Phase 7 backfill between drain and passageway and brick palaces [361]. Decorative and Plain Floor Tile was also recovered from the fill [602] inside wall [603] Phase 6 pit fill [2396] and a modern dump layer [2635]. This probably represent flooring materials used in late medieval Brandon Place especially [178].

Westminster Floor Tile

Late 13th-century Westminster floor tile fabric was identified in a complete plain glazed example from [178] and from [361].

Penn Tiles

The most common type identified from [361] [602] [2396] [2635], manufactured in Buckinghamshire from the mid 14th century is plain and decorative Penn floor tile. Two designs are comparable with the Eames (1980) catalogue (Table 4).

Design (Eames Number)	Context	No.	Fabric	Description Design
No clear match	[361]	1	2324	Crisp Criss-Cross Design
2037	[602]	1	2324	Chequer pattern

Table 4: Penn Floor Tile designs from Brandon House BBO10

Early Flemish Calcareous Floor Tile

Two small plain glazed floor tiles having a fabric characteristic of 14th to early 15th-century Flemish imported tile was recovered from [178] and [361]. The example from [178] is yellow glazed and complete.

Medieval Brick 3 examples 3.4kg

3030 (1400-1660); 3031; 3031nr3042 (1350-1450)

Examples of two-inch-thick later medieval brick from BBO10 are rare. Where present they either occur in the variegated pink and white fabric 3031nr3042, from an unstratified context as well as in the fill of

a late post-medieval feature [272]. Where these bricks do turn up in Southwark (Hayward in prep. b) they can be associated with kiln production e.g. 1613 at Montague Close (Dawson 1976), but the fabrics at BBO10 are 14th to 15th century. One example from [272] has a pronounced indent which is very unusual for a conventional structural brick.

A small dark sandy brown brick from a truncated brick surface [2322] resembles the late medieval brick fabric 3030 (1400-1660). However, given the long period of production associated with this fabric, it is possible that this structure may in fact form part of the brick constructed Suffolk Place.

Suffolk Place

The Brick; Floor Tile, Peg Tile & Terracotta (1500-1550)

1,159 examples 599kg

As expected ceramic building material relating to the 1518-1522 construction of Suffolk Place, either directly from the 16th-century foundations, robber fills and dumped floor tile, curved brick and terracotta relating to the demolition of the palace and reused red Tudor brick which was incorporated into the later post-medieval foundations form the lion's share of the assemblage (43% by weight). Most of this relates to whole brick samples taken from the foundation archways, passageways and walling of the palace. The totals do not include the substantial Terracotta assemblage (347 examples), which is discussed in Appendix 12.

When combined with the architectural stone assemblage dominated by substantial quantities (300kg) of Reigate stone and Tisbury limestone window tracery (see below), then close to 1,000kg of building material relates to the construction of the palace. What also sets this assemblage apart (particularly with the stone and terracotta) is the quite extraordinary level of preservation with relict paint and plaster still on crisply dressed (though easily degradable) Reigate stone mouldings and the level of decorative detail still present on the terracotta. This should be viewed entirely because the palace was only a standing structure for a mere 40 years, following its demolition in 1557-58 (Smith *et al.* 2014) and was very swiftly and systematically dismantled.

A more precise plan of building material type and use within the layout of the inner and outer courtyard at Suffolk Place will be tackled at publication stage.

Context	Fabric	Feature	No.	Early date	End date	Mortar
84	3033; 3101	E-W RED BRICK WALL Large wide Tudor Bricks Type 1 mortar	4	1450-1700	1500-1550+	1450-1700
87	3033	E-W RED BRICK WALL Henrician bricks no mortar	1	1450-1700	1500-1550+	No mortar
153	3046	BASEMENT FLOOR Henrician bricks no mortar	2	1450-1700	1450-1700	No mortar
158	3101	E-W WALL Type 1 mortar	1			1450-1700

159	3046; 3101	N-S RED BRICK WALL Two Henrician bricks	2	1450-1700	1500-1550	1450-1700
592	3046; 3101	N-S TUDOR WALL Tudor bricks Type 1 mortar one Henrician	10	1450-1700	1500-1550	1450-1700
597	3033; 3101	RED BRICK TUDOR WALL Two Henrician bricks Type 1 mortar	2	1450-1700	1500-1550	1450-1700
611	3033; 3101	LINE OF BRICKS Tudor bricks Type 1 mortar	2	1450-1700	1450-1700	1450-1700
660	3033; 3101	RED BRICK TUDOR WALL Henrician bricks Type 1 mortar	2	1450-1700	1500-1550	1450-1700
663	3033; 3101	FLOOR SURFACE Henrician bricks Type 1 mortar	4	1450-1700	1500-1550	1450-1700
699	3046; 3101	N-S WALL Henrician bricks mortar not clear	2	1450-1700	1500-1550	No mortar
1021	3046; 3101	BRICK STRUCTURE Large Henrician brick Type 1 mortar	1	1450-1700	1500-1550	1450-1700
1059	3046; 3033; 3101	N-S TUDOR WALL 4 complete Henrician bricks Type 1 mortar	4	1450-1700	1500-1550	1450-1700
1104	3046; 2271; 2276 3101	BRICK FOUNDATION Henrician sized bricks Type 1 mortar peg tile	4	1180-1900	1500-1550	1450-1700
1210	3033; 3101; 2271; 2276	EASTERN EXTENSION Wide large 3033 9 x 4 3/8 x 2 1/4 brick peg tile	10	1180-1900	1500-1550	No mortar
1306	3033	RED BRICK SURFACE 9 1/8 X 4 1/2 X 2 3/8 very large bricks	2	1450-1700	1500-1550	1450-1700
1317	2271; 3065; 3101	TUDOR CHALK WALL FOUNDATION Red Tudor brick and transitional peg tile unusual mortar Type 1a	6	1180-1800	1450-1700	1400-1800
1473	2271; 2276; 3046; 3042; 3101	CHALK AND MORTAR N-S ALIGNED WALL Late medieval and early post-medieval brick and peg tile; Type 1 mortar	22	1180-1900	1480-1900	1450-1700
1481	2276; 3046; 3101	RED TUDOR BRICK SURFACE Henrician brick and peg tile Type 1 mortar	7	1450-1900	1500-1550	1450-1700
1519	3046; 3101	RED BRICK WALL 2 Henrician bricks; Type 1 mortar	2	1450-1700	1500-1550	1450-1700
1580	3046; 3101	SQUARE PILLAR OF RED TUDOR BRICKS Henrician bricks Type 1 mortar	2	1450-1700	1500-1550	1450-1700
2044	3033; 3046; 3101	N-S WALL 2 Henrician and two larger Tudor Bricks Type 1 mortar	4	1450-1700	1500-1550	1450-1700
2046	2276; 2452; 3101; 3033	TUDOR WALL Early post-medieval peg tile and imbrex Type 1 mortar and residual ops cementatum; Two Henrician bricks Type 1 mortar	6	55-1900	1500-1550	1450-1700
2077	3101; 3033	BRICK FLOOR Tudor Brick Type 1 Mortar	2	1450-1700	1450-1700	1450-1700
2084	3101; 3033	TUDOR BRICK FLOOR Henrician bricks Type 1 mortar	4	1450-1700	1500-1550	1450-1700
2086	3065; 3101	TUDOR BRICK FLOOR Henrician bricks Type 1 mortar	5	1450-1700	1500-1550	1450-1700
2168	3033; 3046; 3101; 2276	TUDOR WALL Henrician bricks Type 1 mortar; peg tile	17	1480-1900	1480-1700	1450-1700
2194	2271; 3101	CLADDING Early post-medieval peg	1	1180-1800	1450-1800	1450-1700

		tile Type 1 mortar				
2204	3046	REBUILT WALL Henrician size mortar not clear	2	1450-1700	1500-1550	Mortar not clear
2205	3033	WALL FOUNDATION BRICK AND STONE Tudor Paving brick	1	1450-1700	1450-1700	No mortar
2212	3033; 3046	TUDOR FLOOR Henrician bricks Type 1 mortar	2	1450-1700	1500-1550	1450-1700
2253	3033; 3101	E-W WALL Henrician bricks Type 1 mortar	2	1450-1700	1500-1550	1450-1700
2256	2271; 3101	MIXED REBUILDING OF WALL Early post-medieval peg tile Type 1 mortar	1	1180-1800	1450-1800	1450-1700
2289	3065; 3033	ROOM REBUILD Henrician Tudor Bricks	2	1450-1700	1500-1550	No mortar
2825	3046	TUDOR WALL 2 Henrician bricks No mortar	2	1450-1700	1500-1550	No mortar
2914	3046; 3101	TRUNCATED TUDOR FLOOR 2 Henrician bricks Type 1 mortar	2	1450-1700	1500-1550	1450-1700
2940	3033; 3101	TUDOR WALL OR FLOOR 2 Henrician bricks Type 1 mortar	2	1450-1700	1500-1550	1450-1700
4017	3046	TUDOR SOAKAWAY Very Large sized Tudor Bricks	3	1450-1700	1450-1600	No mortar
4020	3033	TUDOR SOAKAWAY Very large Tudor Bricks Type 1 mortar	2	1450-1700	1450-1600	1450-1700
4027	3033; 3065	ROBBED MASONRY Tudor bricks Type 1 mortar one Henrician	3	1450-1700	1500-1550	1450-1700
4052	3046; 3033; 3101	BRICK WALL Henrician brick and Tudor Brick Type 1 mortar	2	1450-1700	1500-1550	1450-1700

Table 5: Suffolk Place Brick Structures 1518-1557/8 CBM in BBO10

Brick 547 examples 483kg

3046 (red loose sandy) 1450-1700; 3033 (compact orange sandy) 1450-1700; 3065 (poorly made red brick with flint inclusions) 1450-1700; 3039 (variegated silty red bricks) 1450-1700; 3030 (brown sandy brick) 1400-1660; 3042 (compact small maroon brick) 1400-1800

Primary in-situ, dumped and reused red/orange/fawn bricks with a fabric and form that fits with an early post-medieval period of use (1450-1700) for London form singularly the largest group of building material for Brandon House BBO10. The bricks come in a range of fabrics (3033; 3046; 3065; 3039; 3030; 3042) manufactured out of different brickearths. These come from many brickfields which outcrop around the fringes of early post-medieval Southwark, and north of the City of London and were exploited extensively over this period at places like Bricklane, Deptford, Woolwich, Moorfield, Lincoln's Inn and Whitechapel. Outside of the confines of the City and Southwark, these brickfields were exploited into the 18th and 19th century. So, for a construction the size and importance of the red Tudor brick Suffolk Place, the peak period of production of the City and Southwark (1450-1700) fits in with its known 1518/1522 build.

Primary 1518/1522 build

The number of bricks from structures with a form, fabric and mortar type (loose calf brown mortar Type 1) (see Table 7) that is indicative of this primary 1518/1522 build consist of 455 examples 365kg. The rest, nearly a quarter by weight (24%) (182 examples 118kg) have been reused in later post-medieval mortars and the house's foundations, culverts and walls are evidently a source or ready quarry of high quality brick for use in a variety of 17th-18th and 19th-century structures in this part of Southwark. Their impact is covered under the section later post-medieval building materials.

Wedge shaped and Moulded bricks 19 examples 10.5kg

Present in a variety of fabrics (3046; 3033; 3065); these mainly consist of precisely cut wedge-shaped bricks with angles of between 45 degrees and 60 degrees as with examples from demolition horizons [1010] [3019] [4050] or in Tudor walls [3019] usually 50mm or 2 inches thick. There are also arched forms from [1010] and a complex roll-holl design of a type usually associated with Reigate stone mouldings from [4050]. A majority are pointed in a fine smoothly applied white plaster mortar (Type 10) a similar type to that to which the North Wales Slate fragments have and quite different from the conventional Type 1 mortar for the Tudor Construction bricks. These are specialist window or arch elements associated with Suffolk Place, perhaps related to the terracotta embellishment. Such specialist bricks and plaster mortar were seen at Holywell Priory (Hayward 2016) in an early post-medieval chapel.

Paving bricks 3 examples 2kg

Very shallow 45mm 1¾ inch thick bricks in fabrics 3033 and 3046 were identified in demolition layer [1014] and walls [2205] [2254], They are a size and shape indicative of paving bricks.

Standard Construction bricks 433 examples 350kg

There are principally two different brick sizes bonded in the loose T1 mortar associated with walls, foundations and culverts of the 1518/1522 Suffolk Place. The most common are small compact, shallow, wide bricks 9 x 4¼ x 2 inch (230mm x 108mm x 51mm) used not only as paving in rooms e.g. [2084] [2086] but in many of the walls, e.g. [159] [699] (see Table 5). These dimensions are broadly comparable in size with the classic Henrician stock brick (Type D) and used at Hampton Court between 1520s and 1566. Like the Henrician stock brick the surface here is uneven, sometimes friable and present in a range of fabrics.

A second much larger brick size up to 9¾ x 4½ x 2¾ inch in size (240mm x 120mm x 68mm) and 2,800g as opposed to the 2,200g Henrician stock brick seems to relate to culvert structures, e.g. [4017] [4020], but also the eastern extension [1210] and flooring [1309]. In terms of brick size, they are somewhat comparable to the large Pre-Wolsey and Wolsey stock bricks (Type A and B) from Hampton Court (pre-1520s). However, as they are pointed using the same mortar type as the Henrician bricks at Suffolk Place, it seems unlikely that these two different brick sizes actually

represent chronological changes as they do at Hampton Court. One possibility, however is, that the larger bricks may be reused from an earlier structure in the vicinity and completed repointed in the new mortar type. One obvious candidate would be the existing late medieval Brandon Place.

Peg tile 514 examples 80.1kg

2271 (1400-1700); 2586 (1400-1700); 2276 (1480-1700)

Large groups of hand-made thick (12-14mm) unglazed late medieval to early post-medieval peg tile with indistinct vertical ridges running along the length of the tile are made from three fabrics; namely the sandy 2271 and 2276 and black iron oxide rich 2586. The 2586 fabric is usually characterised by rhomb shaped nail holes, although most of the sandy 2276 fabric have poorly made irregular round holes with which to place the wooden pegs. Most are a feature of the Tudor Suffolk Place roofing tile assemblage as are pointed in the same calf brown T1 mortar as that used in the Tudor bricks, apart from those that are reused in later builds. Others were certainly used as facing courses in the Tudor brick foundations [1104] [1210] [2168] [2826] and flooring for the interior of the rooms [1481], tile cladding [2194] and possibly also as hearths or fireplace surrounds of Suffolk Place when stacked vertically.

As expected very large quantities were recovered in palace demolition layers [363] [455] [456] [1010] [2238] and robber cut fills [4048] with complete examples from [148] associated with Tudor pitting.

Curved tile 2 examples 511g

2271 (1400-1700)

Two unglazed examples are present from [239] and from palace demolition layer [456]. They are likely to have been used as apex material for the roof.

Floor Tile 32 examples 9.7kg

Flemish glazed silty tile fabrics 1977; 2318; 2850; 3063 (1450-1600) 27 examples 8.7kg

Large glazed calcareous tile fabrics 1678; 2497 (1400-1550) 4 examples 1kg

Terracotta floor tile 3498 (1500-1550) 1 example <0.1kg [362] unglazed.

This small group of plain glazed cream, yellow black, brown and green glazed tile are nearly all imported from the Low Countries between 1450 and 1600. The exception was a terracotta floor tile. Based on associated mortar (T1 light brown and finer lime plaster mortar) (e.g. [234]) all are associated with the embellishment of the flooring at Suffolk Place. Indeed, nearly all of them are associated with the same Phase 7 and 8 demolition layers of Suffolk Place [361] [362] [363] [455] [456] [1010] as the Terracotta.

Of note, however, was the complete absence of decorated tin-glazed Cuenca and Antwerp floor tile, both a feature of floor decoration at other 1510 and 1520s Tudor palaces from this period in London, e.g. Bridewell Palace. The absence of locally produced Aldgate and Rotherhithe tin-glazed floor tile is

easy to explain, as these works begun producing floor tile at least 50 years after the demolition of Suffolk Place in 1557/58.

Terracotta floor tile

A byproduct of the decorated terracotta and brick may have been the production of small floor tile fragments. One, in the yellow terracotta fabric was seen in Phase 7 demolition layer [362].

Calcareous floor tile

Large 26-36mm yellow glazed floor tile made from the calcareous fabrics 2497 and 1678 were recovered from Phase 7 demolition levels in the passageway [361] [363] and Phase 8 Tudor brick robber-cut [2131].

Silty floor tile

By far the most common flooring material (27 examples 8.7kg) was the brown, black and yellow glazed silty floor tile. A range of fabrics are represented including the finely laminated 1977; coarser silty sand 2318; clay inclusion rich 3063 and the duller red 2850. A complete example from a rubble fill [2051] measures 250mm x 250mm x 45mm. A purpose made wedge shaped thin 20mm tile from [1192] was an unusual find and clearly had a specific decorative function, relating to the palace.

Later Post-Medieval Ceramic Building Material

190 examples 290kg

A vast majority of the ceramic building material that can be dated to after the demise of Suffolk Place in the 1550s consists of whole brick samples from the numerous walls associated with the later post-medieval development of this part of Southwark. There are however a number of different mortar types and reuse of Suffolk Place type brick (Tables 6 & 7) that indicate a more complex piecemeal development, including the re-use of the existing foundations of Suffolk Place rather than one single fresh build associated with late 18th-century residential and commercial development as is the case elsewhere in Southwark (e.g. Hayward in prep. b).

Builds Post Dating Demolition of Suffolk Place 1560-1750 56 Examples 87.7kg

Bricks Reused Tudor Bricks 3030; 3033; 3046; 3039; 3065 (1450-1700)

Early Post Great Fire Brick 3032nr3033 (1664-1725)

Context	Fabric	Feature	No.	Early date	End date	Mortar
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91	3033; 3030; 3101	DRAIN 18th century reused late medieval brick and large Tudor brick T20 mortar	2	1400-1700	1450-1700+	1600-1800
94	3033; 3101	E-W RED BRICK WALL Early post-medieval brick T20 mortar	1	1450-1700	1450-1700	1600-1800
154	3032; 3101	RED UNFROGGED BRICK BASEMENT WALL Post Great fire bricks T30 pink gravel mortar	2	1664-1900	1664-1800	1664-1725+
258	3046; 3032nr3033 3101	E-W RED BRICK WALL N-S SPUR Early post great fire brick and reused Tudor brick T20 mortar	2	1450-1725	1664-1725	1664-1800
603	3032nr3033; 3039; 3101	POSSIBLE RED BRICK TUDOR WALL Early Post great fire brick and reused Tudor Brick T20 mortar	2	1450-1725	1664-1725	1664-1800
605	3033; 3101	FLOOR IN WALL [606] Tudor bricks reused pink T30 mortar	2	1450-1700	1450-1700	1664-1725
606	2276; 3032nr 3033; 3046 3101	NORTH SOUTH WALL Early post-medieval peg tile Early post great fire and Tudor bricks some reuse T20 mortar	4	1450-1900	1664-1725	1664-1800
647	3033; 3101	N-S TUDOR WALL? Reused Henrician bricks T20 mortar	2	1450-1700	1500-1550	1600-1800
1023	3046; 3032nr3033; 3107; 2452; 2271	LEVELLING FOUNDATION LAYER OF CRUSHED CHALK AND BRICK Reused Henrician brick and fresh early post great fire brick pale grey mortar Type 20 flecks of brick Reused Reigate stone; Roman brick; peg tile late medieval	11	50-1725	1664-1725	1600-1800
1317	2271; 3065; 3101	TUDOR CHALK WALL FOUNDATION Tudor Brick T11 mortar pale brown inclusions	6	1180-1800	1450-1700	1600-1800?
2074	3033; 3101	N-S RED BRICK WALL REUSE OF OFTUDOR BRICKS Tudor brick reused in T20 mortar	1	1450-1700	1450-1700	1600-1800
2075	3032nr3033; 3101	E-W RED BRICK WALL REUSING RED TUDOR BRICKS Early post great fire brick T20 mortar on top of T30 pink mortar	1	1664-1725	1664-1725	1600-1800
2169	3032nr3033; 3101	RED TUDOR BRICK WALL Early Post great fire brick Sandy T25 mortar	1	1664-1725	1664-1725	1664-1725
2170	3033; 3101	UNFROGGED RED TUDOR BRICK WALL 3 reused Henrician bricks T20	3	1450-1700	1500-1550	1600-1800

		mortar				
2250	3033; 3046; 3101	RED BRICK Fill FOUNDATION OF TUDOR PALACE Tudor bricks and Henrician reused Sandy T25 mortar	3	1450-1700	1500-1550	1664-1725
2254	3065; 3032nr3033 3101	E-W RED BRICK BUILT ON EARLIER BRICK WALLS Tudor and early post great fire brick Sandy T25 mortar	3	1450-1725	1664-1725	1664-1725
2278	3032nr3033 3101	REBUILD OF WALL [2254] Early post great fire brick Sandy T25 mortar	2	1664-1725	1664-1725	1664-1725
2302	3033; 3101	RED BRICK FOUNDATION TUDOR? Reused Henrician bricks T20 mortar	3	1450-1700	1500-1550	1600-1800
2303	3033; 3101	RED BRICK WALL TUDOR? Reused Henrician bricks T20 mortar	3	1450-1700	1500-1550	1600-1800
2304	3065; 3101	RED BRICK WALL BASE Large Tudor bricks and Henrician in T20 mortar	3	1450-1700	1500-1550	1600-1800
2354	3033; 3046; 3101	REMAINS OF TOP OF WALL Reused Henrician bricks in T20 mortar	4	1450-1700	1500-1550	1600-1800
2611	3046; 3101	REMAINS OF RED BRICK Fill ofUNDATION Reused Henrician brick T20 mortar	1	1450-1700	1500-1550	1600-1800

Table 6: 17th and 18th-century brick builds post-dating demolition of Suffolk Place

Following the demolition of Suffolk Place there is evidence for some piecemeal structural development based around the foundation and layout of the house during the 17th and 18th century. The evidence for this comes in the form of at least 4 different mortar types (Types 11; 20; 25; 30) (see Figure 10) reusing Henrician and large Tudor Bricks as well as the introduction of some early post Great Fire bricks especially the maroon 3032nr3033 (1664-1725). The prevalence of the latter (50kg) suggests that many of the builds took place from the middle of the 17th century and into the first quarter of the 18th century. For the complete list of structures from this period see Table 6.

Builds Associated with Residential Development After 1780

Brick 125 examples 203kg

Post Great Fire Bricks 3032; 3034; 3032R (1664-1900)

Medway Bricks 3035 (1780-1940)

Staffordshire Blue bricks 3498 (1890-1950)

Fletton Brick 3038 (1880-2000+)

Gault Bricks 3498 (1850-1950)

Red sandy paving brick 3047 (1690-1900)

Victorian Red frogged brick 3046 (1800-1900+)

The bricks and structures from this period had a fabric and form typical of manufacture during from the late 18th to the 19th century. This was verified by the types of mortar associated with them (see Table 7). A majority were purple and red spotted and streaked clinker rich post Great Fire bricks. Their form was typically small, narrow (95-102mm) thick (62-68mm) some of which have a defined frog. The introduction of the brick tax after 1780, a form of legislation that minimised the size of brick to those dimensions makes it possible to date this group from 1780-1900. It was at this time that Southwark experienced a massive residential and commercial growth. The structures with narrow post Great Fire bricks and the associated T2 clinker mortar are a mixture of walls e.g. [635], culverts e.g. [625] and wells e.g. [493]. A full list follows- [88] [89] [98] [151] [152] [154] [161] [180] [182] [190] [191] [194] [201] – [203] [253] [286] [364] [414] [428] [591] [622] [1433] [4008] [4024].

Only occasionally are examples of yellow Medway brick [2285] identified. Two very large square red paving bricks fabric 3047, each 8kg (1690-1900) were seen at in rubble filled backspace [164]. These formed parts of an industrial surface.

Examples of specially produced black machined frogged Staffordshire Blue (1890-2000), a dense engineering brick from the Eturia Marls from Staffordshire came from [1131] whilst Moulded Gault bricks from the Cretaceous Clays of Bedfordshire (1850+) were used in a drain. This shows that by the Victorian period suitable brick types for industrial/commercial/trade and utilities use were brought in from much greater distance, made accessible by the burgeoning railway and sea network.

Pan Tile 31 examples 12.1kg

2279 (1630-1850)

Large groups of dumped, fresh, curved, nibbed tile – a style of roofing introduced from Holland from 1630 were deposited in backfills of robber cuts from Suffolk Place [173] [715] and demolition spreads [2034]. These merely represent demolition of debris of 18th- and 19th-century housing in the vicinity.

Floor Tile 4 examples 3.6kg

Flemish Silt Tile 2850; 1977 (1600-1800)

All the identifiable unglazed Flemish imported floor tile came from either Tudor demolition backfill from the passageway [361] and one intrusive example recorded from Dark earth soil [2637].

Mortar and Concrete

A summary of mortar types as well as their period of use from the excavations at BBO10 are given below (Table 7) and provide a chronological framework, which along with the brick and other building materials help to subdivide the Roman, medieval and post-medieval phases at Suffolk Place.

Roman mortar types consist of two hard lime mortars (opus cementum) (Type 40 and 42) and pink opus signinum (Types 41 and 43). Only one possible structure [1024] may be dated to the Roman period on the basis of the use of Type 40 mortar on a huge example of ragstone rubble.

The lime rich white mortar Type 4 is associated with only with late medieval peg tile fragments from one structure the chalk wall [155]. This may be the mortar used in the medieval Brandon Place.

The building of the brick palace during 1518-1522 resulted in the widespread use of a soft lime brown mortar (Type 1) in the construction, vaulting, foundations and culverts of the Palace. This is a common recipe for Tudor buildings. This same mortar was used for different sized Henrician and larger Wolsey type bricks within the palace. A separate finer grey plaster mortar (Type 10) was used for the finer elements of the palace such as window mouldings (Reigate stone), shaped brick, terracotta and roofing tile.

Following the demolition of the palace in 1557, there are a number of piecemeal buildings on top of the foundations of the palace using a range of pink brick (Type 30), loose sandy (Type 25), organic (Type 11) and light grey loose mortar (Type 10) which date from 1600-1800.

Victorian structural development is marked by the widespread use of Type 2 clinker mortar in walls and culverts from 1780 onwards and harder more robust recipes in the latter half of the 19th century (Type 2a, 9, 21, 22).

Mortar/Concrete Type	Description	Use at BBO10
a) Roman		
Type 40 Pink Opus signinum (coarse)	Coarse red pink opus signinum with very large angular chunks (20-25mm) or red ceramic building material	Associated with Roman bricks e.g. [2371]
Type 41 Opus caementatum Grey to pale grey hard cement	Dense coarse very hard gravelly ragstone, yellow Eccles cement	Very common throughout the Roman sequence. Present attached to large example of ragstone walling [1024]
Type 42 Opus caementatum green inclusions	Friable opus caementatum mortar with numerous large hassock greensand inclusions and lumps of charcoal	Rare one example [114]
Type 43 Pink Opus signinum (fine)	Fine red pink opus signinum with numerous fragments of red-pink ceramic building material about 5mm across	Very common Loose lumps of this type of opus signinum from [1056] [1073] [2093]
b) Medieval		
Type 4 White lime mortar	White lime mortar	Possible late medieval/Tudor Wall [155] attached to late medieval peg tile facing fragments
c) Post-medieval – Early		
Type 1 Friable brown mortar	Fine fawn sandy mortar with tiny chunks of chalk	1518-1522 Primary construction Tudor mortar for Suffolk Place found in foundation walls, brick

		walls and culverts associated with red brick Henrician and larger Tudor Brick, peg tile, floor tile [84] [87] [153] [158] [159] etc see Table 5 for full list
T1a Hard darker brown lime mortar	Hard fawn brown mortar than T1a	Probably 1518-1522 one structure [3109] associated with large bricks
Type 10 Low density plaster/mortar	Low density pale cream-grey fine homogeneous plaster with fine shell	1518-1522 Primary embellishment plaster mortar associated with moulded plinth bricks probably the terracotta, Roof slating and Window Tracery Reigate stone and Chilmark stone from palatial dumps [361] [363] [455] [456] [1010] [1023]
Type 30 Rose pink brick mortar	Distinctive coloured rose pink mortar	1664-1725 associated with repairs and rebuilds on demolished foundation of Suffolk Place [154] Floor within internal wall [605] and repairs to vaulted arch [2321] early post Great Fire bricks
Type 25 brown sandy loose mortar	Very loose brown sandy mortar	1664-1725 associated with repairs and rebuilds on demolished foundation of Suffolk Place used with early post Great Fire bricks 3032nr3033 internal floor of old palace [1433] brick walls and truncated brick walls of palace [2169] [2171] foundation [2250] rebuild on Tudor Brick Wall [2254] [2278] and wall section built into archway of foundations [3119]
Type 20 loose pale grey fawn mortar	Loose pale grey fawn mortar with flecks of brick	1675-1800 common mortar type associated with rebuilds on structure of palace later than T25 mortar [91] [94] [251] [258] [603] [606] [647] [1023] [2074] [2075] [2077] [2170] [2302] – [2304] [2354] [2611]
T11 pale brown mortar	Loose pale brown mortar with darker brown inclusions	1600-1800 [1317]
T6 pale grey organic mortar	Loose pale grey organic mortar with lots of vegetative matter	1600-1800 [209] [210] [2917]
d) Post-medieval – Late		
Type 2 grey clinker mortar	Loose pale grey clinker mortar	1780-1900 associated with brick structures, culverts and wells made from narrow post great fire bricks. Victorian residential and commercial development of this area [84] [88] [90] [98] [99] [152] [166] [191] [194] [199] – [201] [203] [225] [253] [335] [349] [364] [388] [428] [440] [493] [607] [632] [2294] [2649] [2698] [2824] [4008]
T2a Hard dark grey clinker	Hard dark grey clinker mortar	1825-1900 associated with

mortar		structures slightly later frogged machine post Great Fire bricks [89] [161] [202] [622] [625] [626] [628]
Type 9 Hard white mortar	Hard Portland type cement with shell	1840-1950 associated with brick structure [2294]
Type 22 Hard Roman Cement	Very hard dark grey-brown fine concrete	1875-1950+ associated with moulded Gault bricks [0]
Type 23 Hard gravel coalified mortar	Hard gravel coalified mortar	1875-1950+ associated with Fletton bricks [0] and [635]
Type 24 Concrete	Painted hard concrete	1875-1950+ cut for modern pillar [2241]

Table 7: listing of mortar types BBO10

The Worked Stone

238 examples 303kg

Relative to the quantities of ceramic building material present in this multi-period site there is surprisingly a small quantity of worked stone and building stone rubble recovered from BBO10. The preference for using brick and terracotta to construct and adorn the 16th-century Suffolk Place must be the main reason.

However, as with all multi-period sites in Southwark (Pringle 2009; Hayward 2015a; in prep a; in prep b) this is a very diverse worked stone assemblage in terms of fabric types (26 lithotypes), including examples of high status Roman inlays and mouldings some medieval ecclesiastical material as well as stone types used for example in window moulds and paving at Suffolk Place. Some of these rock types (Cipollino Mandalato; Wheatley limestone; Alwalton marble; Thassos marble) are rare for London.

The 26 rock types identified are listed below (Table 8).

MoL fabric code	Description	Geological Type and source	Use at BBO-10
3105	Fine hard dark grey sandy limestone	Kent ragstone, Lower Cretaceous, Lower Greensand Maidstone District - Kent	37 examples 47.8kg Roman many coated with hard opus caementatum Roman dated mortar [2182] one example 12kg reused in Foundation of pre-cursor to Tudor Suffolk Place [1024] other large pieces from [2041] One used as whetstone [2967]
3106	Yellow-green glauconitic sandstone	Hassock stone Lower Cretaceous, Lower Greensand Maidstone District - Kent	3 examples Roman 1.1 kg rubble [137] [1177] [2376]
3107	Fine grained low-density glauconitic limestone	Reigate stone – Upper Greensand, Lower Cretaceous Reigate-	31 examples 106.2kg Medieval Tudor large group of broken up ashlar [521] [531] [535] [1023] [178] [2085] crisp big

		Mertsham Surrey	group [1010] [1023] angular mould. Reigate stone tracery with same plaster as Red brick and roofing slate and very worn cusped tracery one element painted raised mould another heavily worn window tracery [2248] plaster backing for paint and roll holl mould [2369] Some of The structural ashlar e.g. [178] could be from the late medieval precursor to the Tudor brick Suffolk Place
3108	Hard banded olive green micaceous sandstone	York stone or Elland Flags (Upper Carboniferous) South Yorkshire	7 examples Post-medieval 4.1kg paving slabs 30-40mm thick [342] [2294] example from [4041] could be an industrial rubstone as it has 3 deep groves four more industrial rubstone from {+}
3109	Banded shelly oolitic rainstone (Dunham 1962)	Bibury type stone Bathonian, Middle Jurassic, Gloucestershire	4 examples 3.7kg Roman reused ashlar [2369] rubble [2622] sculptural elements broken up animal or human arm/leg [2821]
3110	Hard light-grey, fine grained oolitic grainstone (Dunham 1962)	Portland whit bed (Portland stone), Portlandian, Upper Jurassic, Isle of Portland Dorset and or Purbeck-Portland Portlandian Upper Jurassic Isle of Purbeck	4 examples 3.4kg post-medieval funerary slab {+} raised cornice [2369] and ashlar [475] rubble [1229] some may be associated with Tudor Palace early use?
3110a	Very fine hard light-grey oolitic grainstone (Dunham 1962)	Portland base bed (Portland stone), Portlandian, Upper Jurassic, Isle of Portland Dorset	1 example 1.1kg post-medieval paver [4081] some may be associated with Tudor palace early use?
3111	Very fine crumbly red brown ferruginous sandstone	Carrstone or Iron Pan probably Tertiary London Basin	Natural 1 example 37g [1272]
3112	A hard, grey fine, shelly Limestone packed with Small freshwater snails <i>Paludina carinifera</i>	Purbeck marble (Lower Cretaceous) Purbeckian, Isle of Purbeck Dorset	3 examples 1.7kg Roman paving slab [1576] inlay [2001] mortar with lug [2916]
3113	Dark grey cemented mudstone	Kimmeridge Dolostone Upper Jurassic (Kimmeridgian) Dorset coast	1 small tessera 12g [2313]
3114	A fine white crystalline Metamorphosed Limestone	Carrara Marble Triassic-Jurassic Tuscany Italy (Price 2007, 64-65)	2 examples 2.6kg post-medieval {+} funerary [2967] dish Roman
3115	Hard fissile dark grey fine meta-shale	North Wales Slate Cambrian-Ordovician North Wales	65 examples 10.3 kg Early post-medieval Tudor numerous roofing slates most collected in backfill of Phase 7 passageway [361] [363] and [455] [456] some backed with same plaster type as that used in moulding bricks for 1500-

			1550 Suffolk Place
3116	Fine white powdery limestone	Chalk Upper Cretaceous (Upper Chalk) London Basin near outcrop Greenwich	Late medieval early post-medieval ashlar blocks and rubble some used as foundation material to late medieval precursor of Suffolk Place [41] [155] [244] [305] [311] [369] [374] [434] [507] [518] [573] [601] [734] [1024] [1163] [1389] [1473] [3112] or possible later [85] [111] [178] [366] [368] [370] [1317] [2047] where reused with Tudor Bricks
3118	White nodular low-density calcareous stone	Calcareous Tufa - Holocene nearest outcrops chalk outcrops Thames Estuary or Medway	4 examples 1.6kg Roman [1350] Tufa ashlar and rubble [2536]
3120a	Calcareous sandstone Floating quartz in calcite cement organic wisps	Wealden sandstone Lower Cretaceous (Wealden Beds) Kent	4 examples 588g Roman Whetstone/ worn block [2685] two conical shaped possibly post-medieval [2685] another [2967] concavo convex Roman
3120b	Fine white cryptocrystalline sandstone	Sarsen – Palaeogene (Hertfordshire)	1 example 29g Roman hone cut mark [2619]
3120c	Coarsely crystalline white marble “crystal marble”	Thassos marble, Basement Rocks, Isle of Thassos, Greece	4 examples Roman 1.3kg inlay [361] [2041] [2096] cornice with opus signinum [2041]
3120d	Hard black oyster rich condensed limestone	Alwalton marble Upper Jurassic (Cornbrash) Peterborough Area	2 examples 0.7kg Roman [2471] reused block as rubble [2790] sculptural arm fragment heavily reused
3120e	Hard black very fine polished calcareous mudstone	Lithographic Stone Jurassic Solenhofen Limestone Bavaria	Part of a bookbinding resembles examples [377] 1 example 778g
3122	Yellow-grey concretionary clay	Septarian Nodule London Clay (Tertiary) London	1 example 42g Roman Rubble [2820]
3123	Hard, coarse, dark-grey vesicular basalt lava - with white (leucite) and black inclusions.	Neidermendig lavastone Tertiary-Andernach Region, NW Germany	5 examples 3.2 kg Roman originally rotary querns [+] [1176] one 110mm thick millstone x 2 [2621] but one example [361] clearly used as foundation rubble for Suffolk Place or another early post-medieval structure as it has T1 mortar attached.
3125	Compact hard indurated chalk	Hard chalk or clunch; Upper Cretaceous, Upper Chalk Chalk Downlands Portsdown area of Hampshire or East Dorset (Lithotype Lb of Allen and Fulford 2004)	2 example 12g Roman triangular design tesserae [1177] small rectangular design tesserae [2043]
3126	Hard light grey limestone (with numerous black oyster shells Bioclastic grainstone (Dunham 1962)	Purbeck limestone “Thornback” Upper Jurassic (Purbeckian) Isle of Purbeck	1 example 43g Roman whetstone [2936]
3129	Finely laminated calcareous sandstone	Wealden sandstone (Lower Cretaceous) Wealden to Lower Greensand (Hythe Beds) Weald Kent	38 examples 11.1kg Late Roman mainly roofing one paver especially [2731] [3211] also [2000] [2683] [2689] [2694] [2790] [2823] [2885] [2950]
3130	Medium-coarse grained angular textured quartz	Millstone Grit (Namurian) Upper Carboniferous	1 example 189g Roman [209] whetstone

	arenite	South Yorkshire and Derbyshire, also South Wales	
3133	Black fossiiferous coral rich (Caninia) limestone	Lower Carboniferous Bristol, Forest of Dean, South Wales the North	1 example 18g Roman used as a pendant [
3150	Yellow open textured shelly (echinoid and coral) grainstone	Wheatley Limestone, Upper Jurassic (Oxfordian), Oxfordshire	11 examples 99.7kg Early post-medieval Tudor 1.8kg [112] [474] paver [362] plinth mould [455] and lots of window tracery and door jamb moulds [1010]
3162	Weakly metamorphosed nodular limestone heavily chloritized rims and paler green chloritized/calcareous groundmass	Cipollino Mandalato - Devonian Tarteing, Esplas de Serou, Ariege, Mid Pyrenees	3 examples 0.9kg Roman [1483] [2817] [2838] inlay

Table 8: Listing of all rock types, source and use at BBO10

Mouldings, Decorative Stone and Stone Mortar 134 examples 226kg

It is appropriate in this petrological section to mention all the rock types used in ashlar and mouldings, This gives a better idea of stone material availability during Roman, medieval and post-medieval occupation.

Most of the materials below can be described as freestone, a fine grained, open porous limestone or sandstone that permits the rock to be worked or carved in any direction (Leary 1989). This section also includes the harder condensed native limestones include Purbeck marble and Alwalton marble and plain and polychrome decorative continental marbles used as inlays and statuary.

Roman freestone

Tufa 3118 coarse textured light cream limestone – Holocene spring deposits e.g. River Medway examples

Ashlar blocks [1350] [2356] made of these low-density materials were ideal roof vaulting materials and are found throughout Roman Southwark in early levels (Pringle 2009; Hayward 2015; in prep. a)

Banded shelly oolitic limestone 3109

Very common Bath-stone type as sculptural, funerary and architectural stone material throughout Roman London (Coombe *et al.* 2015) and Southwark including the adjacent temple site at Tabard Square (e.g. Hayward 2015a). There is part of sculptured arm or leg of an animal, person or deity from [2821] that requires further examination.

Roman native and continental marbles

Alwalton marble

Examples of a broken black oyster limestone sourced to the Upper Jurassic of the Peterborough area are very rare in London and the possible heavily degraded sculptural arm from [2790] may be the first example from Roman London known so far.

Purbeck marble

Easily the most common decorative stone type for Roman London, this freshwater limestone deposit is ubiquitous throughout Roman Southwark too (Hayward 2015). Examples from Brandon House include part of a stone mortar with lug [2916], inlay [2001] and paving [1576].

Thassos Marble

A common bath house material in Roman Southwark for example at BVK11 Borough High Street (Hayward in prep. a) white crystalline Thassos Marble again turns up at BBO10 as a cornice coated in opus signinum from [2041] perhaps as a rim for a hot or cold bath or sudatorium. Other examples include inlays from [2041] and [361].

Cipollino Mandalato

Two inlays [1483] [2838] are made from this green Pyrenean brecciated marble. This rock type has been identified from the bath house building at Southwark (Hayward in prep. a) and at numerous other sites in Roman Southwark (Pringle 2009) confirming it to be the most common polychrome marble in Southwark. These examples may, like the Thassos marble cornice and inlays relate to dumped bath house material.

Late medieval Early Post-medieval freestone

Reigate stone

Easily the most common type of freestone at BBO10 is the lime green glauconitic limestone quarried from the Upper Greensand Reigate and Mertsam. The examples from BBO10 are nearly all ashlar mouldings with the exception of one or two crisply dressed sometimes painted angular moulds and items of late medieval to early post-medieval cusped window tracery especially at [1024]. In all likelihood these are likely to represent Tudor mouldings from Suffolk Place. Although Reigate stone is a medieval material, it continues to be adopted and used in to the late 15th and 16th century as the large number of window and door surrounds at Hampton Court testify (Hayward pers. obs.). Another enormous group is from [1010] consisting of at least 9 tracery moulds.

Headington/Wheatley stone

Examples of fresh cornice or string courses and paving [112] [362] [455] [474] and especially cusped and late gothic window tracery from [1010] made from prominent open textured shelly limestone are comparable to Wheatley stone from the Upper Jurassic of Oxfordshire or just possibly Chilmark stone from Salisbury (Upper Jurassic). This rock has been identified in Tudor and Elizabethan palaces and mansions, e.g. Hampton Court, Bridewell Palace (Hayward in prep. c) and Somerset House (Hayward in prep. d).

Purbeck Portland and Portland Base Bed

It is possible that some of the fine oolitic limestone polished pavers and cornices, e.g. [2369] [4081], comparable to different types of Portland stone from the Isle of Purbeck and Portland may in fact be very early attempts at utilising this stone for architectural decoration to Suffolk Place. Although the widespread extraction and supply of Portland stone to London largely began with Inigo Jones work at the Banqueting House and Old St Paul's Cathedral in the 1630s, it is possible that smaller more specialised consignments ordered from highly influential individuals may have begun to trickle in 100 years earlier. The examples from BBO10 do not resemble the open textured Portland Whit Bed widely extracted in the 17th century but may be finer Portland Base Bed or even Portland-Purbeck stone, e.g. Pond Freestone, extracted from the cliffs along the Isle of Purbeck.

Rubblestone – Roman

Kentish ragstone

Comprising nearly 50% of the stone assemblage most of the 50kg of stone rubble from BBO10 has opus caementatum attached to it indicative of Roman use. The widespread use of Kentish ragstone in Roman London and Southwark masonry buildings is a pattern repeated time again and again. It is not clear, however whether the 12kg chunk coated in opus caementatum from a wall [2182] is a primary Roman structure or is in fact reused ragstone for the foundation walling of the later medieval precursor to Suffolk Place.

Rubblestone – Chalk

Although none of this material was retained from excavation, a large number of masonry walls, e.g. [41] [155] [244] [305] [311] [369] [374] [434] [507] [518] [573] [601] [734] [1024] [1163] [1389] [1473] [3112], were found to be dominated by chalk foundation and ashlar rubble. It is widely believed that these walls are the medieval precursor to the Tudor brick palace. The fact that many are reused along with fresh red Tudor brick in structures, e.g. [85] [111] [178] [366] [368] [370] [1317] [2047], would suggest that this is the case.

Roman - Tessera

It was inevitable that the occasional cube of design stone tessera, would like the ceramic tessera turn up in Roman dump deposits. They are made from the common indurated chalk or darker Kimmeridge Dolostone.

Roofing Materials

Roman – Banded laminated sandstone

One of the features of the stone assemblage from BBO10 is the large quantity of dumped roofing material that can be dated from its lithology to the Roman period. The stone, a calcareous laminated sandstone is one that is associated with late Roman roofing in stone and has been observed in Southwark (Pringle 2009) including adjacent Tabard Square (Hayward 2015a). Quantities particularly from the dark earth horizon at [2731] and a Roman dump [3211] each exceed 5kg. The suggestion here is that there was a substantial Late Roman stone tiled roof construction in the vicinity.

Tudor – North Wales Slate

Another group of roofing material, this time from the Phase 7 backfill of passageways [361] [363] [455] [456] consist of large quantities of North Wales slate. Their association with so many Tudor Bricks and backed by the same type of white plaster as some of the decorative bricks would suggest that they were used as roofing in the Tudor Brick Palace or in outbuildings associated with it.

Quernstone

Nediermendig lavastone

Large fragments of rotary quern including one millstone example over 110mm thick [2621] are found sporadically throughout the site mainly in Roman contexts. German lavastone is the most common quern stone type for Roman London, although here at BBO10 this very hard volcanic material has been reused in the foundations of the late medieval early Tudor building as the example found in the passageway backfill [361] is coated in the pale brown T1 Tudor Mortar.

Whetstone and Rubstones

An array of different stone types were used for whetstones with examples of the Wealden sandstone [2685] and Sarsen stone [2619], millstone grit [209] and York stone [4041] being used. Given the dearth of medieval peg tile and floor tile at BBO10 it is interesting to note that no Norwegian ragstone hones have been identified. This rock type was widely used during medieval occupation throughout London and Southwark so its absence here may affirm the lack of earlier medieval occupation in this part of Southwark.

Other

Lithographic stone

Part of a very smooth, polished and dense lithographic stone was recovered from [377]. It comes from the Solenhofen limestone, a Jurassic stone from the Bavarian Alps used in bookbinding since at least 1800.

Pendant

A small pendant made from a smoothed coral rich Lower Carboniferous limestone was recovered from [2471]. It contains the solitary fossil *Caninia* and as such comes from either South Wales or northern Britain.

Summary

The composition of the worked stone assemblage at Brandon House can, on the basis of rock-type, moulding style and stratigraphic position be subdivided into two main categories; a Roman grouping and a later early late medieval to early post-medieval component, with negligible later post-medieval materials

The Roman freestone and decorative stone types that turn up in Roman dumps are typical of the repertoire of high status materials for Southwark. The widespread use of Tufa vaulting, Coombe Down oolite for architecture and statuary, Purbeck marble is supplemented by the most common type of continental white marble (Thassos marble – Greece) and green polychrome marble (Cipollino Mandalato - Pyrenees) (Pringle 2009, 202-203). The latter two were both identified from the bath-house building 300m to the north (Hayward in prep. a). The only new rock type was the identification of Alwalton marble from Peterborough in a piece of limb statuary from [2790] which along with an example of limb statuary made from Coombe Down Oolite [2821] represent two new examples of native stone sculpture to be added to existing corpus for London (Coombe *et al.* 2015). Given the large number of limb fragments that turn up from nearby Tabard Square (Killock *et al.* 2015), that may relate to religious statuary from the Temple Complex it is not surprising examples have turned up in dumped deposits the other side of the Roman road in this adjacent site. Huge quantities of ragstone rubble including some blocks as large as 12kg would suggest that this material too may have come from the Temple complex. There is also a substantial dump of late Roman Wealden sandstone roofing, the preferred masonry roofing material of choice over ceramic tile in the late Roman period for south-east England (Boon 1974) which suggests masonry occupation in this part of Southwark continued into the 3rd and 4th century.

The late medieval early post-medieval grouping of stone relates to large quantities of chalk rubble and ashlar in the late medieval masonry precursor to the early 16th-century brick Suffolk Place and a particular suite of freestone materials (Reigate stone; Wheatley stone/Chilmark stone and just possibly Portland -Purbeck) that were used to embellish the paving, string courses and window tracery of the 16th-century palace but were very much supplementary to the red brick and terracotta

façade, foundation and superstructure of the palace. Fresh consignments of Reigate stone and Wheatley stone are a feature of many Tudor palaces in London (Hampton Court, Somerset House, Bridewell Palace) and as some of the mouldings of the highly degradable Reigate stone are crisply dressed it would follow that they could only have been used for a short period of time, perhaps representing the lifetime of the brick palace. It seems likely that black slate roofing was used to cover at least some parts of Suffolk Place, given the large number found in Phase 7 passageway dumps backed with the same type of mortar/plaster as that used on the decorative bricks. North Wales slate has been recorded before as probable roofing material for Suffolk Place (Smith *et al.* 2014).

Distribution (masonry structures in bold)

Context	Fabric	Material	Size	Date range of material		Latest dated material		Spot date	Spot date Mortar
0	3498; 3101; 3031nr3042; 3023; 2271; 3038; 2452; 3110; 3114; 3123; 3108; 2459a	Moulded Gault bricks drain; hard Roman Cement T21 Late medieval brick; Radlett tegulae; medieval peg tile; Fletton brick; Roman brick; German lavastone; Portland and Carrara marble funerary; York stone industrial hones box flue tile comb	33	50	2000	1890	2000	1890-2000+	1875-1950
84	3033; 3101	Large wide Tudor bricks T1 mortar	2	1450	1700	1450	1700	1500-1550+	1450-1700
87	3033	Henrician brick no mortar	2	1450	1700	1450	1700	1500-1550+	No mortar
88	3033; 3032; 3101	Reused Henrician brick and narrow post great fire brick; T2 mortar	2	1450	1900	1664	1900	1780-1900	1750-1900
89	3032; 3101	Narrow post great fire bricks and T2a hard clinker mortar	2	1664	1900	1664	1900	1780-1900	1750-1900
90	3065; 3101	Reused Tudor bricks T2 mortar	2	1450	1700	1450	1700	1450-1700+	1750-1900
91	3030; 3033; 3101	Drain reused late medieval and large Tudor type brick in T30 light grey brick mortar shell	2	1400	1700	1450	1700	1450-1700++	1600-1800
94	3033; 3101	Early post-medieval brick reused in T30 light grey brick mortar shell	2	1450	1700	1450	1700	1450-1700+	1600-1800
98	3046; 3032	Drain reused	2	1450	1900	1664	1900	1664-1800+	1750-1900

Context	Fabric	Material	Size	Date range of material		Latest dated material		Spot date	Spot date Mortar
		Henrician and proto post great fire in T2 mortar							
99	2271; 2586; 2587; 2276	Medieval and post-medieval peg tile reused in T2 mortar	4	1180	1900	1480	1900	1480-1700+	1750-1900
112	2459a; 2452; 3006; 2815; 3120a	Early sandy imbrex, tegulae, tile, brick and parietalis Rock paving	10	50	1950	55	160	55-160+??	No mortar
113	2452; 3023; 3104	Spicatum brick, opus signinum, Radlett tile and sandy brick	5	50	160	55	160	55-100+	50-400
114	2452; 2459a; 3006	Spicatum brick floor section tegulae and imbrex sandy	12	50	160	55	160	55-100+	50-400
115	2452; 2459a; 2815	Early sandy Roman tile, tegulae and brick	5	50	160	55	160	55-160	No mortar
117	2452;	Sandy tegulae, imbrex and brick	5	55	160	55	160	55-160	No mortar
121	2452; 2459a; 3006; 2815; 2816	One medieval peg tile rest Roman brick, teguale, imbrex and tile	16	50	1900	1200	1800	1200-1500	No mortar
124	2271; 3046; 2459a	Late medieval early post-medieval peg tile and brick, Roman Tile	12	50	1800	1180	1800	1450-1700	No mortar
132	3046; 3054; 3101	Early post-medieval brick and Hampshire Grog brick, post type 52 mortar	2	70	1700	1450	1700	1450-1700+	1450-1700?
134	2452; 2459a	Early sandy tile	9	50	160	55	160	55-160+	No mortar
136	2452	Roman brick	1	55	160	55	160	55-160	No mortar
137	2452; 2454; 3101; 3106	Early Roman tile imbrex and tegulae Eccles imbrex, opus caementatum mortar; Hassock rubble	5	50	160	55	160	55-160	50-400
143	2271; 3046; 3101	Early post-medieval brick and peg tile T1 mortar attached	4	1180	1800	1180	1800	1450-1700	1450-1700
148	2586; 3065	Early post-medieval brick and fresh diagonal holed peg tile	9	1180	1800	1180	1800	1450-1700	No mortar
151	3032; 3101	Reused narrow post great fire brick pointed in a rare very white shelly mortar	1	1664	1900	1664	1900	1780-1900	1825-1900

Context	Fabric	Material	Size	Date range of material		Latest dated material		Spot date	Spot date Mortar
152	3032; 3101	Narrow post great fire bricks pointed in T2 clinker mortar	2	1664	1900	1664	1900	1780-1900	1750-1900
153	3046	Henrician slightly larger bricks floor	2	1450	1700	1450	1700	1450-1700	No mortar
154	3032; 3032R; 3101	Narrow post great fire bricks pointed in pink gravel mortar	2	1664	1900	1664	1900	1780-1900	1700-1900
155	3101	T1 mortar??							1450-1700
156	3046	Reused early post-medieval brick	1	1450	1700	1450	1700	1600-1700+	Mortar not clear
158	3101	T1 mortar	8						1450-1700
159	3033; 3101	Two Henrician bricks T1 mortar	2	1450	1700	1450	1700	1500-1550	1450-1700
161	3032; 3101	Two narrow post great fire bricks T2a mortar	2	1664	1900	1780	1900	1780-1900	1800-1900
164	3047	Complete paving brick square; T2 mortar	3	1690	1900	1690	1900	1690-1900	1750-1900
173	2279; 2276; 3101	Fresh pan tile and peg tile; T52 lime gritty mortar	5	1480	1900	1480	1900	1650-1850+	1700-1850
178	1678; 2894	Calcareous Flemish and Westminster floor tile	2	1250	1500	1380	1500	1380-1500	Mortar Not Clear
180	3032;	Narrow post great fire brick sharp arises no mortar	2	1664	1900	1664	1900	1750-1900	No mortar
182	3032	Narrow frogged and unfrogged post great fire brick	2	1664	1900	1780	1900	1825-1900	No mortar
188	3046	Machine frog red Victorian brick stamped H	2	1750	1950	1750	1900	1850-1925	No Mortar
190	3032; 3101	Narrow post great fire bricks T2a mortar	2	1664	1900	1780	1900	1780-1900	1700-1900
191	3032; 3101	Narrow post great fire brick T2 mortar	2	1664	1900	1664	1900	1780-1900	1750-1900
194	3032; 3032R	Narrow post great fire brick T2 mortar	2	1664	1900	1664	1900	1780-1900	1750-1900
199	3033; 3101	Reused Henrician brick T2 mortar	1	1500	1550	1500	1550	1500-1550+	1750-1900
200	3033; 3039; 3101	Reused Early post-medieval brick some large Tudor in T2 mortar	2	1450	1700	1450	1700	1450-1700+	1750-1900
201	3032; 3032R; 3101	Narrow post great fire bricks	2	1664	1900	1664	1900	1780-1900	1750-1900

Context	Fabric	Material	Size	Date range of material		Latest dated material		Spot date	Spot date Mortar
		T2 mortar							
202	3032; 3032R; 3101	Narrow post great fire bricks T2a mortar	2	1664	1900	1664	1900	1780-1900	1825-1900
203	3032; 3101	Narrow post great fire brick T2 mortar	2	1664	1900	1664	1900	1780-1900	1750-1900
209	2276; 3032R; 3130	Reused post Great fire brick and post-medieval peg tile T6 mortar; Millstone Grit whetstone	3	1664	1900	1664	1900	1700-1900	1600-1850+
210	2279; 3032R; 3101	Narrow post great fire brick and pan tile	3	1630	1900	1664	1900	1750-1900	1700-1850+
212	3046; 2271	Medieval peg tile and early post great fire brick	4	1180	1800	1180	1800	1450-1700+	No mortar
216	3065; 2776	Early post-medieval peg tile and large bricks; T1 mortar	10	1450	1900	1480	1900	1480-1700	1450-1700
217	3046	Early post-medieval brick	1	1450	1700	1450	1700	1450-1700+	No mortar
218	2586	Burnt late medieval early post-medieval peg tile	3	1180	1800	1180	1800	1300-1600+	NO mortar
221	2271; 3006	Fragments of medieval peg tile and Roman tile	3	50	1800	1180	1800	1180-1450+	No mortar
223	2276	Early post-medieval peg tile	1	1480	1900	1480	1900	1480-1700	No mortar
225	2271; 2587; 2279; 2276; 3046; 3101	Medieval peg tile, early post-medieval peg tile and brick, pan tile; T1 mortar overprinted by T2 clinker mortar	10	1180	1900	1480	1900	1700-1850+	1750-1900
234	2850; 3046; 3065; 3101	Tudor bricks sunken margin, Flemish silt floor tile glaze removed type 1 mortar	3	1450	1700	1450	1700	1450-1600+	1450-1700
235	2276	Early post-medieval peg tile	3	1480	1900	1480	1900	1480-1700+	No mortar
236	2587; 2276	Medieval peg tile and early post-medieval peg tile rhomb nail hole	2	1240	1900	1480	1900	1480-1700	No mortar
237	3054; 2276; 3046	Hampshire Grog opus spicatum brick; post-medieval peg tile and brick sunken margin	6	70	1900	1480	1900	1480-1700+	No mortar
238	3046; 2276	Post-medieval peg tile mainly and post-medieval	8	1450	1900	1480	1900	1480-1700	1450-1700

Context	Fabric	Material	Size	Date range of material		Latest dated material		Spot date	Spot date Mortar
		brick T1 mortar							
239	2271; 2586; 2276	Late medieval and early post-medieval peg tile and curved tile	5	1180	1900	1480	1900	1480-1700	No mortar
250	2587; 2586; 2271; 3065; 3498	Terracotta, medieval peg tile and early post-medieval brick	7	1180	1800	1450	1700	1500-1550+	No mortar
251	2271; 2276 3046; 3065; 3101	Reused early post-medieval brick, peg and medieval brick T20 grey lime white mortar	5	1180	1800	1480	1900	1480-1700+	1600-1800+
253	3032; 3032R; 3101	Narrow post great fire brick T2 mortar	2	1664	1900	1780	1900	1780-1900	1750-1900
258	3046; 3032nr3033; 3101	Early post great fire brick pale grey shelly mortar T30	4	1450	1725	1664	1725	1664-1725	1600-1800
263	2452; 3498; 2586; 3046	Roman Tile; late medieval to early post-medieval peg tile, brick and terracotta	12	55	1800	1180	1800	1500-1550+	Mortar not clear poss T20 lime mortar 1600-1800
270	3034; 3046	Glazed but def post great fire and early post-medieval brick	4	1450	1900	1664	1900	1664-1800+	No mortar
271	3046	Early post-medieval brick	2	1450	1700	1450	1700	1450-1700	No mortar
272	2815; 3031nr3042; 3046; 2276; 3101; 3032	Roman tile, medieval brick early post-medieval brick and peg tile; Type 1 mortar	12	50	1900	1664	1900	1664-1800+	1450-1700
273	2452; 227nr2276	Roman tile and late medieval peg tile	2	55	1800	1180	1800	1300-1600	No mortar
286	3032	Narrow post great fire brick no mortar	1	1664	1900	1664	1900	1780-1900	No mortar
290	2586; 2271	Late medieval peg tile	4	1180	1800	1180	1800	1300-1600	No mortar
295	2271; 2276; 3046	Late medieval to early post-medieval peg tile and early post-medieval brick	5	1180	1900	1480	1900	1480-1700+	Mortar not clear
299	3046; 3101	Early post-medieval brick T1 mortar	4	1450	1700	1450	1700	1450-1700	1450-1700
301	3046; 2276; 3101	Early post-medieval brick and peg tile T1 mortar	5	1450	1900	1480	1900	1480-1700	1450-1700
303	3046; 2276; 3101	Early post-medieval brick and peg tile T1 mortar	6	1450	1900	1480	1900	1480-1700	1450-1700

Context	Fabric	Material	Size	Date range of material		Latest dated material		Spot date	Spot date Mortar
307	3046; 3101	Early post-medieval brick T1 mortar	4	1450	1700	1450	1700	1450-1700	1450-1700
309	3046; 3101	Early post-medieval brick T1 mortar sunken margin	6	1450	1700	1450	1700	1450-1700	1450-1700
313	2271; 2586; 2276; 3101	Late medieval and early post-medieval peg tile; T1 mortar	11	1180	1900	1480	1900	1480-1700	1450-1700
315	2271; 2276; 2587; 3046; 3101	Late medieval glazed to early post-medieval peg tile and brick; Type 1 mortar	11	1180	1900	1480	1900	1480-1700	1450-1700
317	2276	Early post-medieval peg tile	2	1480	1900	1480	1900	1480-1800+	No mortar
318	3046	Early post-medieval brick	4	1450	1700	1450	1700	1450-1700	No mortar
320	3032; 2279	Pan tile and earlier post great fire brick	2	1630	1900	1664	1900	1664-1800+	No mortar
322	3046	Early post-medieval brick	2	1450	1700	1450	1700	1450-1700	No mortar
323	3046; 3101	Early post-medieval brick and T1 mortar	4	1450	1700	1450	1700	1450-1700	1450-1700
324	3046; 3032	Early post-medieval and post great fire brick	2	1450	1900	1664	1900	1664-1900	No mortar
326	2271; 3039; 3046	Early post-medieval brick and medieval peg tile	5	1180	1800	1180	1800	1450-1700	No mortar
327	3046; 3498	Glazed early post-medieval brick and Terracotta	3	1450	1900	1450	1900	1500-1550+	No mortar
328	3046; 3101	Early post-medieval brick T1 mortar	4	1450	1700	1450	1700	1450-1700	1450-1700
330	3046; 2276; 3101	Early post-medieval brick and peg tile T1 mortar	5	1450	1900	1480	1900	1480-1700	1450-1700
331	3046; 2276; 2271	Early post-medieval brick and peg tile, medieval peg tile	3	1180	1900	1480	1900	1480-1700	No mortar
335	3032R; 3101	Post great fire brick T2 mortar	2	1664	1900	1664	1900	1780-1900	1750-1900
337	3046	Reused early post-medieval brick T2 on top of T1 mortar	7	1450	1700	1450	1700	1450-1700+	1750-1900 on top of 1450-1700
339	2815; 2276; 3046; 3101	Roman tile early post-medieval peg tile and brick; Type 1 Mortar	4	50	1900	1480	1900	1480-1700	1450-1700
341	2276; 3046	Early post-medieval brick and peg tile	5	1450	1900	1480	1900	1480-1700	No mortar

Context	Fabric	Material	Size	Date range of material		Latest dated material		Spot date	Spot date Mortar
342	2276; 3046; 3101; 3108	Early post-medieval brick and peg tile T1 mortar; paving York stone	10	1450	1950	1700	1950	1700-1900	1450-1700
344	3046 3101	Early post-medieval red brick reused T2 mortar	2	1450	1700	1450	1700	1450-1700	1750-1900
345	2276; 3046; 3101	Early post-medieval brick and peg tile T1 mortar	4	1450	1900	1480	1900	1480-1700	1450-1700
347	3046; 3101	Early post-medieval brick T1 mortar	2	1450	1700	1450	1700	1450-1700	1450-1700
348	3046; 2276	Early post-medieval brick and peg tile	4	1450	1900	1480	1900	1480-1700	No mortar
349	2276; 3046; 3063	Glazed Flemish floor tile, early post-medieval brick and peg tile	3	1450	1900	1480	1900	1480-1600+	Mortar not clear
350	2452; 2271; 2276; 2586	Roman tile, medieval and early post-medieval peg tile	6	1180	1900	1480	1900	1480-1700+	Mortar not clear
352	2271; 3046	Medieval peg tile fragments and brick fragments	12	1180	1800	1180	1800	1450-1700	No mortar
358	2271; 2276; 3101	Late medieval early post-medieval peg tile Type 1 mortar	5	1180	1900	1480	1900	1480-1700	1450-1700
359	2276; 3046; 3101	Early post-medieval brick and peg tile T1 mortar	11	1450	1900	1480	1900	1480-1700	1450-1700
361	3046; 2497; 2324; 2894; 3046; 3101; 2497; 2452; 1977; 2279; 3063; 2271; 2276; 3123; 3115PM; 3114PM	Henrician brick, glazed, Flemish calc, silt, Penn and Westminster shaped; Pan tile, Roman tile and brick T1 mortar; late medieval early post-medieval peg tile; reused quern fragments; North Wales roofing slate; Thassos marble inlay	37	55	1950	1630	1850	1630-1700+	1450-1700
362	3063; 3046; 3498; 2276; 3150	Glazed Flemish floor tile; Vitrified Henrician bricks; Terracotta; early post-medieval peg tile; Headington stone mould	12	1450	1900	1480	1900	1500-1550	No mortar
363	2271; 2586; 3216; 3498; 2497; 3063; 2815; 2276; 3115pm	Terracotta, medieval peg tile some splash glaze; Glazed Flemish floor tile Roman tile; North	35	50	1900	1480	1900	1500-1550+	No mortar

Context	Fabric	Material	Size	Date range of material		Latest dated material		Spot date	Spot date Mortar
		Wales Slate							
364	3032; 3101	Narrow post great fire brick; T2 mortar	2	1664	1900	1664	1900	1780-1900	1750-1900
365	3046; 3101	Reused post-medieval brick T2 mortar	2	1450	1700	1450	1700	1450-1700	1750-1900
377	3022; 2452; 2459a; 3006 3101; 3054; 3105; 3120; 2454	Very large group of Eccles and early sandy fabric tegulae some sandy brick, tile and Eccles imbrex Machine made concrete fragments; Hampshire Grog Brick; Ragstone rubble; Lithographic stone or Kimmeridge mudstone bookbinding or whetstone	48	50	160	50	160	55-160+	1850-1950 lumps of modern concrete intrusive?
378	2459a	Roman tile	5	50	160	50	160	50-160	No mortar
379	2452; 2815; 3105; 2454	Tegulae; Roman brick; Kentish ragstone hone; Eccles brick	4	50	160	55	160	55-400	No mortar
381	3032R; 3101	Early post great fire bricks T1a hard mortar	2	1664	1900	1664	1900	1664-1800+	1664-1800+
388	3046; 3101	Henrician bricks T2 mortar reused	2	1450	1700	1450	1700	1500-1550+	1750-1900
404	2276; 2271	Post-medieval peg tile and medieval peg tile	6	1180	1900	1480	1900	1480-1700	No mortar
414	3032r	Narrow post great fire brick no mortar	4	1664	1900	1664	1900	1780-1900	No mortar
423	2276; 2271	Medieval and early post-medieval peg tile	4	1180	1900	1480	1900	1480-1700	No mortar
426	2276; 2271	Medieval and early post-medieval peg tile	4	1180	1900	1480	1900	1480-1700	Hard lime white mortar 1450-1600
428	3032; 3101	Narrow post great fire brick T2 mortar	2	1664	1900	1664	1900	1780-1900	1750-1900
434	2271nr2272	Reused medieval peg tile lime hard mortar	5	1180	1800	1180	1800	1180-1450+	Hard lime white mortar 1450-1600
440	3046; 3101	Reused Early Post-medieval brick T2 mortar	2	1450	1700	1450	1700	1500-1550+	1750-1900
441	3046; 3101	Reused early post-medieval brick T2 mortar	2	1450	1799	1450	1700	1450-1700	1750-1900
449	3065	Large complete poorly made Tudor brick with paw	1	1450	1700	1450	1700	1450-1700	No mortar

Context	Fabric	Material	Size	Date range of material		Latest dated material		Spot date	Spot date Mortar
		print							
453	3033; 2816	Vitrified Tudor brick standard size late medieval peg tile	4	1200	1800	1200	1800	1450-1700	Residual date Roman mortar only
455	2276; 3216; 3063; 3006; 3101; 2271; 2586; 3046; 2816; 3115pm; 3150	Relict Roman tile Glazed early post-medieval silty floor tile, late medieval and early post-medieval peg tile; opus caementatum mortar on Roman tile; Lots of North Wales slate roofing; Crisply dressed Wheatley stone; curved post-medieval brick	49	50	1900	1480	1900	1480-1600+	Hard white mortar plaster on Roofing slate 1450-1600+ Residual date Roman mortar only
456	2276; 2271nr 2276; 2586; 2271; 2452; 3063; 2318; 3498; 3065; 1977; 3030; 3105; 3115PM	Late medieval early post-medieval peg tile; Roman tile; Silty floor tile glazed fragmentary terracotta vitrified henry brick Curved tile; Yellow Kiln brick early Late medieval brick glazed; Ragstone rubble and North Wales slate roofing	60	50	1900	1480	1900	1480-1600+	Hard lime mortar 1450-1600
482	2452	Roman Brick	1	55	160	55	160	55-160	No mortar
487	3046; 2271; 3216	Medieval peg tile and early post-medieval brick	3	1180	1800	1180	1800	1450-1600+	White Lime mortar 1450-1600
489	2452	Small Roman Tessera	1	55	160	55	160	55-160	No mortar
493	3032R	Red post great fire brick	2	1664	1900	1664	1900	1780-1900	No mortar
515	2271; 2452; 3498	Late medieval peg tile; Roman Tile; Grog tempered peg tile fabric	6	55	1800	1180	1800	1300-1600	No mortar
521	2586; 3107	Late medieval peg tile; Reigate stone ashlar	4	1070	1800	1300	1600	1300-1600+	No mortar
523	2452	Tegulae	1	55	160	55	160	55-160	No mortar
531	2271; 2587; 3107	Medieval peg tile probably reused with ill defined mortar Reigate stone	7	1070	1800	1180	1800	1240-1450+	Mortar not clear
535	2452; 3107	Roman Brick; Reigate stone ashlar	2	55	1600	1070	1600	1070-1600	No mortar
539	2452	Tegulae, tile	3	55	160	55	160	55-160	No mortar

Context	Fabric	Material	Size	Date range of material		Latest dated material		Spot date	Spot date Mortar
557	1678	Calcareous floor tile glazed	1	1380	1550	1380	1550	1450-1550	No mortar
558	1678	Calcareous floor tile glazed	1	1380	1550	1380	1550	1450-1550	No mortar
568	3022; 3023; 2452	Eccles tegulae; Radlett imbrex, Roman sandy tile	3	50	160	55	160	55-160+	No mortar
573	2586	Late medieval early post-medieval peg tile	19	1180	1800	1180	1800	1400-1800	No mortar
591	3032	Post great fire modern narrow bricks one frogged no mortar	2	1664	1900	1664	1900	1800-1900	No mortar
592	3046; 3101	Tudor bricks T1 mortar one Henrician	10	1450	1700	1450	1700	1500-1550+	1450-1700
597	3033;3101	Two Henrician bricks T1 mortar	2	1450	1700	1450	1700	1500-1550+	1450-1700
602	2271; 2587; 2276; 1811	Decorated Penn tile, medieval and early post-medieval peg tile	14	1180	1900	1480	1900	1480-1600	No mortar
603	3032nr3033; 3039	Early post great fire brick reused and Tudor light grey mortar shell	2	1450	1725	1664	1725	1664-1725+	1600-1800
605	3033' 3101	Tudor brick reused in pink gravel mortar T30	3	1450	1700	1450	1700	1450-1700+	1600-1800
606	2276; 3032nr 3033; 3046 3101	Early post-medieval peg tile T1 mortar Early post great fire and Tudor bricks Relict type 1 mortar and light grey shelly mortar	2	1480	1900	1480	1900	1480-1700	Relict 1450-1700 reused 1600-1800
607	3032r; 3101	Early post great fire bricks pointed in T2 mortar	2	1664	1900	1664	1900	1664-1800+	1750-1900
611	3033; 3101	Tudor bricks T1 mortar	2	1450	1700	1450	1700	1450-1700	1450-1700
622	3032R	Machine frogged post great fire brick wider Type 2a mortar	3	1664	1900	1664	1900	1850-1900	1825-1900
625	3032; 3032R	Narrow unfrogged and wide frogged post great fire bricks T2a hard clinker mortar	4	1664	1900	1664	1900	1825-1900	1825-1900
626	3032; 3101	Narrow unfrogged post great fire brick T2a mortar	1	1664	1900	1664	1900	1780-1900	1825-1900
628	3046; 3032;	Reused Tudor	2	1450	1900	1664	1900	1664-1800	1600-1800

Context	Fabric	Material	Size	Date range of material		Latest dated material		Spot date	Spot date Mortar
	3101	brick and fresh early post great fire brick light grey mortar shelly							
632	3032; 3046; 3101	Reused Tudor and fresh post great fire brick T2 mortar	2	1450	1900	1664	1900	1750-1900	1750-1900
635	3032; 3101	Wide frogged machine post great fire brick Roman Cement	2	1664	1900	1664	1900	1850-1900	1850-1900+
647	3033;3101	Reused Henrician bricks in light grey mortar	2	1450	1700	1450	1700	1500-1550+	1600-1800
660	3033; 3101	Henrician bricks T1 mortar	2	1450	1700	1450	1700	1500-1550	1450-1700
663	3033; 3101	Henrician bricks T1 mortar	4	1450	1700	1450	1700	1500-1550	1450-1700
699	3046; 3101	Henrician bricks mortar not clear	2	1450	1700	1450	1700	1500-1550+	Mortar not clear
703	2276; 2271; 3101	Late medieval and early post-medieval peg tile lime mortar	2	1180	1900	1480	1900	1480-1700+	White lime mortar 1450-1600
707	2815; 2271	Tegulae; peg tile	5	50	1800	1180	1800	1400-1800	No mortar
708	2271; 2271nr2276	Late medieval peg tile	2	1180	1800	1180	1800	1300-1600+	No mortar
715	2279; 3065; 2276; 2271	Pan tile; late medieval peg tile; early post-medieval brick and peg tile	16	1180	1900	1480	1900	1630-1850	No mortar
719	3046; 3101	Vitrified post-medieval brick probable T1 mortar	1	1450	1700	1450	1700	1450-1700+	1450-1700
784	3033; 3101	Henrician brick fragments and T1 mortar	6	1450	1700	1450	1700	1500-1550+	1450-1700
1000	2459b; 3038; 3101	Fletton brick late Roman brick Fletton brick has classic Roman cement very hard	2	120	2000+	1890	2000+	1890-2000+	1875-2000+
1001	1977; 3115PM	Black Glazed Flemish floor tile; North Wales Slate	2	1450	1900	1500	1900	1500-1700+	No mortar
1002	3115PM	North Wales Slate	3	1500	1900	1500	1900	1500-1700+	No mortar
1009	2452; 3054; 3238; 3022; 3006	Mixed early group of sandy tile, Eccles tile, Hampshire Grog Teg Mamm and Wealden Silt brick sandy imbrex,	20	50	160	55	160	71-160+	No mortar
1010	1977; 2276; 3046; 3063;	Floor tile glazed silty, Terracotta,	42	1070	1900	1664	1900	1664-1800+	1600-1800 light grey shell

Context	Fabric	Material	Size	Date range of material		Latest dated material		Spot date	Spot date Mortar
	3498; 3101; 3032; 3033; 3033VL; 3107; 3150; 3110; 2271	post-medieval silty floor tile, curved and flat Tudor Brick, early post-medieval peg tile Type 1 mortar on brick and a White T7 plaster mortar on fine brick, post great fire brick light grey shell mortar; Voussoir Bricks with peaks plaster; Reigate stone mortar; Headington stone paver and Portland Base Bed paver							mortar also Traces of 1450-1700
1012	2271; 2276; 3032; 3065; 3033; 3101	Narrow post great fire bricks, 4 whole Henrician red bricks, post-medieval peg tiles with relict T1 brown mortar and T2 grey mortar	16	1180	1900	1664	1900	1780-1900	1800-1900 relict early post-med mortar 1450-1700
1013	2276; 3046; 3101	Early post-medieval peg tile and brick; T1 brown mortar	5	1450	1900	1480	1900	1480-1700+	1450-1700
1014	2276; 3033; 3032; 3101	Narrow post great fire brick Henrician early post-medieval brick and post-medieval peg tile T1 brown mortar	4	1450	1900	1664	1900	1750-1900	Relict early post-medieval mortar 1450-1700 on Tudor Brick
1016	3032; 2276; 3101	Early post great fire brick, reused post-medieval peg tile T2 reused	6	1480	1900	1664	1900	1664-1800+	1750-1900
1017	3032; 3046; 3101	Early post great fire brick and reused Tudor brick in light grey shelly mortar as [84]	4	1450	1900	1664	1900	1664-1800	1600-1800
1018	2452; 2459a; 3006	Early sandy Tegulae, brick, imbrex and tile	18	50	160	55	160	55-160	No mortar
1019	3060; 2452	Radlett tile and early sandy fabric and imbrex	4	50	160	55	160	55-160+	No mortar
1021	3046; 3101	Structure large Henrician brick T1 mortar	1	1450	1700	1450	1700	1450-1700	1450-1700
1023	3046; 3032nr3033; 3107; 2452; 2271	Structure Reused Henrician brick and fresh early post great fire brick pale grey mortar Type 20	11	55	1725	1664	1725	1664-1725	1600-1800

Context	Fabric	Material	Size	Date range of material		Latest dated material		Spot date	Spot date Mortar
		flecks of brick Reused Reigate stone; Roman brick; peg tile late medieval							
1024	3105; 3101	Ragstone rubble one very large piece opus caementatum	1	50	1600	50	1600	50-1600	50-400
1025	2271; 3115	Late medieval early post-medieval peg tile; North Wales slate roofing	4	1180	1900	1500	1900	1500-1700	No mortar
1028	2815	Roman Tile	1	50	160	50	160	50-160	No mortar
1029	2459a; 3006	Imbrex and Brick sandy	2	50	160	50	160	50-160+	No mortar
1036	2459c	Late sandy imbrex	1						
1039	2459a	Roman Tile	1	50	160	50	160	50-160+	No mortar
1047	2452; 2459a; 3004	Imbrex, tegulae flange profile 1 and Brick	10	50	160	55	160	55-160+	No mortar
1053	2276	Reused early post-medieval peg tile mortar not clear	2	1480	1900	1480	1900	1480-1700	Mortar not clear
1055	2279	Pan tile	1	1630	1850	1630	1850	1630-1850	No mortar
1056	2452; 2459a; 3006	Roman tegulae brick, imbrex and tile one tile with nail in	24	50	160	55	160	55-160	No mortar
1059	3033; 3046; 3101	4 complete Henrician bricks T1 mortar	4	1450	1700	1450	1700	1500-1550+	1450-1700
1062	3046	Fragment vitrified Tudor brick	1	1450	1700	1450	1700	1450-1700	NO mortar
1075	3104	Type 2 opus signinum backing	1						50-400
1077	2459a	Large tegulae	1	50	160	50	160	50-160	No mortar
1084	2459a; 2452; 3054	Large group of early sandy tegulae, brick, tile and imbrex	13	50	160	55	160	70-160	No mortar
1090	3032; 2271; 2276; 2452	Post great fire brick fragment; late medieval to early post-medieval peg tile; Roman tile	31	55	1900	1664	1900	1664-1800	No mortar
1091	2454; 2815; 3238; 2271	Medieval peg tile; Eccles and sandy tesserae lots of broken Roman tile fragments, Eccles, sandy, Wealden	38	50	1800	1180	1800	1180-1450	Residual 50-400 backing mortar tesserae
1092	2815	Burnt tile Roman	1	50	160	50	160	50-160+	No mortar
1104	3046; 2271; 2276 3101	Henrician sized bricks T1 mortar structure and peg tile	4	1180	1900	1480	1900	1500-1550	1450-1700
1105	3046; 3063	Burnt glazed	4	1450	1700	1450	1700	1500-1600+	No mortar

Context	Fabric	Material	Size	Date range of material		Latest dated material		Spot date	Spot date Mortar
		possible early medieval bricks used in glass kiln Henrician brick reused; Flemish glazed floor tile							
1131	3038; 3101	Modern Engineering brick and Roman cement	1	1880	2000+	1880	2000+	1880-2000+	1875-2000+
1133	3023	Fragment Radlett tile	1	50	120	50	120	50-120+	No mortar
1135	2452; 2271; 2274; 2271nr2272; 2587	Large group of sandy and iron oxide medieval peg tile Roman brick	20	55	1800	1180	1800	1240-1450+	No mortar
1136	3104; 2452; 3006; 2459c; 2454	Opus signinum; imbrex and tile and brick; late sandy tegulae; Eccles tegulae	23	50	250	140	250	140-250	50-400
1139	2587; 3065	Henrician brick and medieval peg tile	2	1240	1700	1450	1700	1500-1550+	No mortar
1141	2459a; 3006; 2271; 2587	Mainly Medieval peg tile Early sandy tile and imbrex	26	50	1800	1180	1800	1240-1450+	No mortar
1142	3038	Staffordshire Blue brick frogged and stamped	1	1890	1950	1890	1950	1890-1950+	No mortar
1145	2454; 2271; 2276	Eccles brick; medieval peg tile and early post-medieval peg tile	3	50	1900	1480	1900	1480-1700	No mortar
1147	3006	Roman tile	1	50	160	50	160	50-160+	No mortar
1159	2452; 2459a; 3023; 3006	Early Roman Radlett tile and sandy imbrex and brick	7	50	160	55	160	55-160	No mortar
1160	2274; 2452; 2815; 3060; 3006	Mainly Roman cbm coarse comb box flue tile, Roman tile and brick one medieval peg tile	11	50	1350	1060	1350	1060-1350+	No mortar
1162	2815; 2452	Roman Tile; Tegulae	8	50	160	55	160	55-160	No mortar
1167	2271; 2274; 2587; 2815; 2459a	Mainly medieval peg tile Fragmentary tegulae and Roman tile	27	50	1800	1180	1800	1240-1450+	No mortar
1168	2452; 2454; 2459a; 3023; 3238; 3054	Large early mixed fabric group of Eccles, Radlett, Grog and sandy tile, tegulae and box flue tile combed	20	50	160	55	160	70-140	No mortar

Context	Fabric	Material	Size	Date range of material		Latest dated material		Spot date	Spot date Mortar
1170	2271; 2274; 2815; 2452	Mainly medieval peg tile Roman tile and imbrex	8	50	1800	1180	1800	1180-1450	No mortar
1172	2271; 2274; 2452; 3006; 2459b; 3032	Some medieval peg tile mainly Roman tile and imbrex all early apart from one late fabric; post great fire brick	23	50	1900	1664	1900	1664-1900	No mortar
1177	2452; 2459a; 3004; 3006; 2454; 3115M; 3123; 3106	Roman tile and brick fragments mainly fragmentary some Eccles mainly sandy; Hassock stone, German Lavastone North Wales slate roofing intrusive?	20	50	160	55	160	55-160+	No mortar
1178	2815	Roman tile fragments	2	50	160	50	160	50-160	No mortar
1182	2452	Roman sandy brick and tegula	2	55	160	55	160	55-160	No mortar
1183	2454; 2815	Fragments of early red sandy and Eccles CBM	4	50	160	50	160	50-160	No mortar
1184	2454; 2815	Fragments of early red sandy and Eccles CBM	5	50	160	50	160	50-160	No mortar
1187	3006	Large imbrex	1	50	160	50	160	50-160	No mortar
1188	2452; 3023; 2459b	Tegulae and tile early and late Roman tile	3	50	250	120	250	120-250	No mortar
1189	2452; 3046; 3105	Sandy imbrex and Roman brick early post-medieval brick, metallic residue all over kiln, metal fragments; Ragstone rubble	11	50	1700	1450	1700	1450-1700	No mortar
1190	2815; 2452; 3054; 3105	Roman Grog brick, Tessera and mainly early sandy tile; Ragstone rubble	14	50	1600	50	160	70-160+	No mortar
1192	2271; 3046; 1977; 2271nr 2276; 3006; 3054; 3101	Mainly late medieval and early post-medieval cbm brick, glazed floor tile and peg tile, Hampshire Roller stamped box flue tile; Type 1 mortar	17	50	1700	1480	1700	1500-1550+	1450-1700
1198	2452; 3006; 3023; 3125	Sandy tesserae, Roman tile and imbrex one Radlett some reused; design tesserae	7	50	160	55	160	55-160+	No mortar

Context	Fabric	Material	Size	Date range of material		Latest dated material		Spot date	Spot date Mortar
		Clunch							
1200	2452; 2459a; 3046	Early post-medieval brick; imbrex Roman brick Type 1 mortar	4	50	1700	1450	1700	1450-1700	1450-1700
1208	2453; 2815; 3023; 2454	Mixture of Eccles, Radlett, Calcareous and sandy tile	17	50	350	140	350	140-300+	No mortar
1210	3033; 3101; 2271; 2276	Structure large feature eastern extension of truncated wall Wide large 3033 9 x 4 3/8 x 2 1/4 2600g each peg tile	10	1180	1900	1480	1900	1500-1550	No mortar
1211	2459a; 3054; 3104	Imbrex and Roman CBM; op sig attached	2	50	160	50	160	70-160+	50-400
1212	2815; 2452; 2459a; 3500; 2453; 3009	Mixture of early and late Roman fabrics, red silty as tile and imbrex, tegulae flange profile 1 no brick	29	50	300	140	300	140-300+	No mortar
1213	2586; 2454; 2452; 2276; 2271	Peg tile; Eccles tegulae; Roman tile imbrex, early post-medieval peg tile	34	50	1900	1480	1900	1480-1700	No mortar
1214	2276; 3046; 3101; 3115pm	Moulded brick plinth, peg tile T1 mortar; Nail holes North Wales slate plaster mortar	8	1450	1900	1480	1900	1500-1550+	1450-1700
1219	2452	Sandy tegulae	1	555	160	55	160	55-160	No mortar
1229	3110pm	Portland stone rubble	1	1630	1900	1630	1900	1630-1900	No mortar
1232	2452; 3104; 2454	Opus signinum fragment of Roman CBM; Eccles tile and sandy tile	9	50	160	55	160	55-160+	50-400
1233	2459a; 2452	Roman brick; Imbrex	2	50	160	55	160	55-160	No mortar
1235	2452	Roman tile	5	55	160	55	160	55-160	No MORTAR
1236	2452; 2459a; 3009	Hartfield, sandy Roman tile, brick and imbrex and box flue comb	13	50	160	55	160	55-160	No mortar
1248	3023; 2815	One large radlett Imbrex and Roman tile	4	50	160	50	160	50-160	No mortar
1250	3115	North Wales slate intrusive	1	1500	1900	1500	1900	1500-1900	No mortar
1251	3102; 3018	Loomweight and silty tile	2	1500bc	1600	1500bv	1600	71-400+	No mortar
1253	2274	Abraded peg tile	1	1080	1350	1080	1350	1080-1350+	No mortar

Context	Fabric	Material	Size	Date range of material		Latest dated material		Spot date	Spot date Mortar
1262	2454; 3102	Eccles tile and daub	2	1500bc	1600	1500bc	1600	50-100+	No mortar
1272	2459a; 2452; 2271; 2274; 2587; 3120a	Mainly medieval peg tile some Early sandy Roman tile and tegulae; Iron pan lump natural	8	50	1800	1180	1800	1180-1450	No mortar
1274	3023	Tesserae	1	50	120	50	120	50-120	No mortar
1276	2459a; 2452	Tegulae; Brick	2	50	160	55	160	55-160	No mortar
1285	3023; 3006; 2452	Box flue scored; imbrex; sandy brick; tessera	4	50	160	55	160	55-160	No mortar
1286	2587; 3046; 3101	Medieval peg tile and early post-medieval red brick Type 1 mortar	4	1240	1700	1450	1700	1450-1700	1450-1700
1294	2452; 2459A	Roman tile and tegulae sandy	3	50	160	55	160	55-160	No mortar
1300	3033; 3101	Henrician and large Tudor brick T1 mortar	2	1450	1700	1450	1700	1500-1550	1450-1700
1302	2276	Early post-medieval peg tile	1	1480	1900	1480	1900	1480-1900	No mortar
1306	3033	Structure floor Suffolk Place. very largest bricks 9 1/8 x 4 1/2 x 2 3/8	2	1450	1700	1450	1700	1500-1550	1450-1700
1317	2271; 3065; 3101	Red Tudor brick and transitional peg tile unusual mortar Type 11	6	1180	1800	1180	1800	1450-1700	1400-1800
1338	2452; 2459a; 3006; 3238; 2459b	Early and Late Roman sandy fabrics silty fabrics Roman tile, imbrex, brick	5	50	250	120	250	120-250+	No mortar
1340	2452; 2459a; 3006; 3023	Early sandy box flue combed, Tile and brick	18	50	160	55	160	55-160+	No mortar
1342	3022; 3023; 2459A; 3046; 3054; 2459b; 3022; 2454; 3006	Early Roman tile and tegulae fabrics, Eccles, Radlett and fresh sandy box flue tile combed. Early post-medieval brick (intrusive?); Grog brick; late Roman brick, imbrex	29	50	1700	1450	1700	1450-1700 intrusive?	No mortar
1350	3118	Tufa facing probably Roman	1	50	1200	50	1200	40-400+	No mortar
1362	2459a	Roman brick	1	50	160	50	160	50-160	No mortar
1369	2452	Abraded Roman brick	1	55	160	55	160	65-160	No mortar
1370	2452	Roman brick	1	55	160	55	160	55-160	No mortar
1374	2452; 3101	Roman brick; opus Caementatum	3	55	160	55	160	55-160+	Opus Caementatum

Context	Fabric	Material	Size	Date range of material		Latest dated material		Spot date	Spot date Mortar
									50-400
1375	2452; 2459a; 2455; 3023	Early Roman fabrics Roman imbrex, tile brick	7	50	160	55	160	55-160+	No Mortar
1378	2815; 2452; 2459a; 3023	Possible Parietals, brick, imbrex tegulae	8	50	160	55	160	55-160	No mortar
1381	2815	Burnt and reused Roman tile	6	50	160	50	160	50-160+	No mortar
1383	2459a	Roman imbrex and tegulae	2	50	160	50	160	50-160+	No mortar
1386	2459a; 3022	Imbrex and tegulae; Parietals Eccles	8	50	160	50	160	50-100	No mortar
1388	2459a	Roman tile and brick	4	50	160	50	160	50-160+	No mortar
1402	2459a; 3023; 2453; 3013; 3104	Rare Radlett half box flue tile early and Roman tile; late calcareous tile and imbrex; opus signinum	8	50	350	180	350	180-350+	50-400
1403	2452; 2271; 3023	Roman brick; glazed medieval peg tile; box flue wall jacketing	8	50	1800	1180	1800	1180-1450	No mortar
1405	3006; 3022; 3105	Roman tile and imbrex sandy and Eccles; Fissile ragstone	5	50	160	50	160	50-160+	No mortar
1407	2452; 2459a; 3022	Two box flue tile including Grey Eccles Thick comb 2 directions and scored early sandy thick and tile	4	50	160	55	160	55-100+	No mortar
1409	2454; 2586; 2271; 2815; 3105	Medieval peg tile and Eccles tile; bleached ragstone	7	50	1800	1180	1800	1180-1600	No mortar
1413	2452; 3104	Roman tile and brick; opus signinum	3	55	160	55	160	55-160	50-400
1425	2452; 2459a; 3102	Sandy Roman tile, imbrex and brick sill daub fragment	12	1500bc	1660	1500bc	1660	55-400	No mortar
1430	2276; 3046; 3033	Post-medieval brick and peg tile brick has evidence for vitrification	4	1450	1900	1480	1900	1480-1700	Mortar not clear
1433	3033; 3032nr3033; 3032; 3101	Tudor brick, early post great fire and narrow post great fire brick reused or fresh Sandy mortar	3	1450	1900	1664	1900	1700-1850+	1700-1900
1436	2271; 2271nr2272; 2587; 2274; 3054; 3023; 2452; 2815	Very large group of medieval peg tile, one curved tile, smaller group of Roman brick, imbrex, tile and	59	50	1800	1180	1800	1240-1450	No mortar

Context	Fabric	Material	Size	Date range of material		Latest dated material		Spot date	Spot date Mortar
		tegula, tesserae Radlett, Hampshire Grog, sandy							
1447	3006	Sandy tesserae	1	50	160	50	160	50-160	No mortar
1452	3023; 2459b; 2271	Roman tile and medieval peg tile	3	50	1800	1180	1800	1180-1450	No mortar
1458	2815	Roman tile	1	50	160	50	160	50-160	No mortar
1460	2587; 2274; 2452; 3046; 2586; 2459a; 3006; 2453; 3012; 2815	Medieval peg tile, bat tile Roman tile; early post- medieval brick; tegulae and imbrex	16	50	1800	1450	1700	1450-1700	No mortar
1473	2271; 2276; 3046; 3042; 3101	Late medieval and early post- medieval brick and peg tile; T1 mortar	22	1180	1900	1480	1900	1480-1660	No mortar
1476	3498	Moulded architectural Terracotta fragments	3	1500	1550	1500	1550	1500-1550+	No mortar
1480	2452; 2459a; 2274; 2271; 2587; 3105	Mixture of Roman tesserae, imbrex, tile, tegulae, brick and medieval peg tile; Ragstone rubble burnt	21	50	1800	1180	1800	1240-1500	No mortar
1481	2276; 3046; 3101	Henrician brick and peg tile T1 mortar	7	1450	1900	1480	1900	1500-1550+	1450-1700
1482	2815; 2452; 2459a; 2459b	Roman tile, imbrex and thick brick late and early sandy fabrics	9	50	250	120	250	120-250+	No Mortar
1483	2452; 2815; 3023; 3046; 3162	Early post- medieval peg tile Roman sandy and Radlett brick tile and tegulae; Green Cipollino Mandalato inlay	12	50	1700	1450	1700	1450-1700	Mortar not clear
1484	3054	Undercooked abraded Grog Brick	1	70	140	70	140	70-140+	No mortar
1485	2452; 3023; 3500; 2459b;	Mixture of early and late Roman fabrics late teg profiles, Roman tile and brick	18	50	250	120	250	120-250+	No mortar
1519	3046; 3101	2 Henrician bricks; T1 mortar	2	1450	1700	1450	1700	1500-1550+	1450-1700
1520	2452; 3006; 2459A; 2271; 2274	Roman brick, tile, medieval peg tile and curved tile	13	50	1800	1180	1800	1180-1450+	No mortar
1521	3046; 3101	Possible Reused Henrician brick light grey mortar	1	1450	1700	1450	1700	1500-1550	1600-1800
1525	3006	Imbrex	1	50	160	50	160	50-160	No Mortar

Context	Fabric	Material	Size	Date range of material		Latest dated material		Spot date	Spot date Mortar
1527	2271	Medieval peg tile glaze	1	1180	1800	1180	1800	1180-1450+	No mortar
1535	3102; 2459a	Roman tile and daub including a daub tesserae	3	1500bc	1600	1500bc	1600	50-400	No mortar
1572	2459a; 3065; 3006	Sandy Roman tile and imbrex, Tudor brick	3	50	1700	1450	1700	1450-1700	No mortar
1576	2459a; 3054; 3060b; 2454; 3055; 3112R	Mixture of early and late Roman fabrics including rare calc and late Radlett mainly tegulae and tile imbrex and narrow box flue comb; Roman Purbeck marble paving	13	50	350	200	350	200-350	No mortar
1580	3046; 3101	Henrician bricks structre; T1 Mortar	2	1450	1700	1450	1700	1500-1550	1450-1700
2000	2452; 3006; 3023; 2454; 2815 3009; 2459a; 3129	Roman intricate Radlett combed box flue tile fragments of Roman tile and imbrex tegulae, Roman brick lots thick sandy combed and thin scored; banded laminated sandstone roof	141	50	400	50	400	200-400	No mortar
2001	2452; 2815; 3004; 3006; 3022; 3101; 3112	Large group of Roman brick, tile, imbrex, tegulae mainly sandy some Eccles; wattle impressions on opus caementatum; Purbeck marble inlay	27	50	160	55	160	55-160	50-400
2003	3227	Smooth early Pringle box flue	1	50	100	50	100	50-100	No mortar
2005	2454; 2452	Eccles tegulae and imbrex, Roman sandy brick	3	50	160	55	160	55-100	No mortar
2008	2452	Parietalis or roller stamped brick unusual design	1	55	160	55	160	55-160	No mortar
2012	2459a; 3006	Early sandy Roman tile, imbrex and brick	8	50	160	50	160	50-160	No mortar
2015	2452	Early Roman tile	1	55	160	55	160	55-160	No mortar
2027	3023; 3006	Radlett and sandy tile and imbrex, tegulae	5	50	160	50	160	50-160+	No mortar
2028	3033; 3101; 2276	Henrician Brick T1 mortar; post-	4	1450	1900	1480	1900	1500-1550	1450-1700

Context	Fabric	Material	Size	Date range of material		Latest dated material		Spot date	Spot date Mortar
		medieval peg tile							
2034	2279	Pan tile fresh	6	1630	1850	1630	1850	1700-1850	No mortar
2035	3054; 2452; 2815; 3023; 3022; 3054; 2454; 2453	Roller die box flue tile; thick early sandy brick; sandy tile Radlett and Eccles tile; Imbrex Box flue; Roller stamped die and scored and combed; late Roman tile and tegulae	18	50	350	180	350	180-350	No mortar
2040	3046; 2276; 2271	Henrician brick vitrified; peg tile; curved tile	3	1450	1700	1450	1700	1500-1550	No mortar
2041	2452; 3006; 2454; 3023; 2459b; 3054; 3012; 2459a; 3129; 3105; 3114R	Mixture of Roman fabrics early Eccles, Radlett, Hampshire Grog and late Roman sandy tile, some brick, imbrex, Part of a bessalis, tegulae; laminated sandstone roofing; Ragstone; Thassos marble paving and cornice, opus signinum attached	83	50	350	180	350	180-350+	50-400
2042	3033; 2452	Early post-medieval brick fragment glazed; Roman Tile	2	55	1700	1450	1700	1450-1700	No mortar
2043	2459a; 3006; 2454; 3023; 2452; 2459b; 3046; 2453; 2276; 3125	Large group of early Roman Brick, tile, tegulae and probable Louver, Tesserae Radlett and early sandy, box flue early knife trimmed, imbrex, 1 brick lots of tile also one Tudor brick and peg tile Type 1 mortar; Clunch tesserae	46	50	1900	1480	1800	1480-1700	1450-1700 residual 50-400 traces of op. Camentatum
2044	3033; 3046; 3101	2 Henrician and two larger Tudor Bricks T1 mortar	4	1450	1700	1450	1700	1500-1550+	1450-1700
2045	2452; 2276; 3033; 3101	Large group Early post-medieval peg tile and near complete brick, tegulae sunken margin, Type 1 mortar	18	55	1900	1480	1900	1480-1700	1450-1700
2046	2276; 2452; 3101; 3033	Early post-medieval peg tile and imbrex Type	6	55	1900	1480	1900	1500-1550+	1450-1700 (residual op cement 50-400)

Context	Fabric	Material	Size	Date range of material		Latest dated material		Spot date	Spot date Mortar
		1 mortar and residual op cement; two Henrician bricks T1 mortar							
2051	2850; 3065	Complete glazed silty Flemish Floor Tile; early post-medieval brick	3	1450	1700	1450	1700	1450-1700	No mortar
2053	2459b; 3023; 2452; 3006	Early Roman sandy, Radlett, late sandy imbrex and tile	15	50	250	120	250	120-250	No mortar
2055	3046; 2276; 2271; 3101	Early post-medieval peg tile and Tudor brick Type 1 mortar	5	1180	1900	1480	1900	1480-1700	1450-1700
2070	2459a; 2459b	Late Roman sandy tile and early Roman tegulae	4	50	250	120	250	120-250	No mortar
2074	3033; 3101	Reused Tudor bricks in light grey mortar	2	1450	1700	1450	1700	1450-1700	1600-1800
2075	3032nr3033	Early post-medieval brick light grey mortar on top of pink mortar	1	1664	1725	1664	1725	1664-1725	1600-1800
2077	3101; 3033	Tudor Brick Type 1 Mortar	2	1450	1700	1450	1700	1450-1700	1450-1700
2078	2452	Roman Brick	1	55	160	55	160	55-160	No mortar
2080	3033; 3101	Very large Tudor Bricks possibly reused in light grey mortar or sandy mortar	2	1450	1700	1450	1700	1450-1700	1450-1700
2084	3033; 3101	Henrician bricks T1 mortar	4	1450	1700	1450	1700	1500-1550	1450-1700
2086	3065; 3101	Henrician bricks T1 mortar	5	1450	1700	1450	1700	1500-1550	1450-1700
2087	2459a; 2454	Eccles and sandy imbrex	2	50	160	50	160	50-160	No mortar
2092	2459a	Sandy imbrex	1	50	160	50	160	50-160	No mortar
2093	3014	Opus signinum	1						50-400
2095	2815; 2459a; 3238; 2453	Early sandy imbrex and tile, calcareous tile; Wealden brick	6	50	300	140	300	140-300	No mortar
2096	3120; 2452; 3006	Thassos marble inlay; Tegulae sandy and tile; imbrex	8	50	400	50	400	50-400	No mortar
2113	2452; 2815; 2454	Roman tile; brick; tegulae; Eccles tegulae; imbrex	12	50	160	55	160	55-160	No mortar
2114	2459a; 2452	Early sandy Roman tegulae and brick	2	50	160	55	160	55-160	No mortar
2116	2452; 3004	Roman brick and tile early sandy	2	50	160	50	160	55-160	No mortar

Context	Fabric	Material	Size	Date range of material		Latest dated material		Spot date	Spot date Mortar
		fabrics							
2126	2452; 3006	Roman tile; tegulae; Roman drain	5	50	160	55	160	55-160	No mortar
2129	2815; 3102	Burnt daub and Roman sandy tile	4	1500bc	1600	1500bc	1600	50-400	No mortar
2131	3498; 2276; 2271; 3033; 2452	Terracotta; early post-medieval peg tile; early post-medieval brick	10	1180	1900	1480	1900	1500-1550+	No mortar
2132	3006	Imbrex	2	50	160	50	160	50-160	No mortar
2143	2459a; 3023; 3054	Roman tile and tegulae Radlett and sandy; Roller stamped flue tile	10	50	160	50	160	70-160	No mortar
2145	2452; 2454; 3006	Roman brick; tile Eccles imbrex; tegulae	9	50	160	55	160	55-160	No mortar
2147	2815; 3006; 2452; 2454	Roman tile; imbrex; brick; Eccles tegulae	12	50	160	55	160	55-160	No mortar
2150	2452; 2459c	Roman tile; imbrex; tegulae brick; late chaff sandy tegulae	13	55	250	140	250	140-250	No mortar
2157	2586; 2452	Medieval peg tile; Roman tile	2	55	1600	1180	1800	1180-1600	No mortar
2159	3115PM	North Wales roofing slate	1	1500	1900	1500	1900	1500-1700	No mortar
2160	2454; 2452	Tegulae Eccles; sandy tile	3	50	160	55	160	55-160	No mortar
2162	2452	Roman tile	1	55	160	55	160	55-160	No mortar
2164	2452	Roman tile	1	55	160	55	160	55-160	No mortar
2166	3046; 3498; 2271; 2276; 2452	Larger Tudor bricks T1 mortar; Terracotta; late medieval peg tile; tegulae, tile	17	55	1900	1480	1900	1500-1550	1450-1700
2168	3033; 3046; 3101; 2276	Henrician bricks T1 mortar; peg tile	17	1480	1900	1480	1900	1480-1700	1450-1700
2169	3032nr3033	Early post great fire brick sandy mortar	1	1664	1725	1664	1725	1664-1725	1600-1750
2170	3033; 3101	Three Henrician bricks light grey mortar prob reused	3	1450	1700	1450	1700	1500-1550	1600-1800
2171	3032nr3033	Early post great fire brick sandy mortar	2	1664	1725	1664	1725	1664-1725	1600-1750
2173	2452	Roman brick; tegulae; tile	3	55	160	55	160	55-160	No mortar
2175	2452; 3006; 3238	Roman tile; tegulae; imbrex; brick; tegulae mammata	14	50	160	55	160	71-160	No mortar
2176	2452; 2459a; 3006; 3023;	Box flue sandy comb. Tile, imbrex	19	50	160	55	160	70-160	No mortar

Context	Fabric	Material	Size	Date range of material		Latest dated material		Spot date	Spot date Mortar
	2454; 3056	brick and tegulae; Eccles tile; Hampshire Grog Brick							
2177	2452; 2454; 2459a	Roman brick; tegulae; imbrex; Eccles tile	12	50	160	55	160	55-160	No mortar
2181	2454; 2459a; 3006; 2815	Roman tile sandy, Eccles tile, tegulae, imbrex; ridge tile	17	50	160	55	160	55-160	No mortar
2182	2452; 3023; 3105; 2459a	Sandy tile and Radlett imbrex; ragstone opus caementatum attached; ridge tile	6	50	1600	50	1600	50-160+	50-400
2183	2452	Imbrex	1	55	160	55	160	55-160	No mortar
2185	2459a; 2452	Roman brick; imbrex	2	50	160	55	160	55-160	No mortar
2194	2271; 3101	Early post-medieval peg tile T1 mortar	1	1180	1800	1180	1800	1450-1800	1450-1700
2204	3046	Henrician size mortar not clear	2	1450	1700	1450	1700	1500-1550+	Mortar not clear
2205	3033	Tudor paving brick	1	1450	1700	1450	1700	1450-1700	No mortar
2207	2271; 2586; 2850	Late med to early post-med peg tile; glazed floor tile silty	5	1180	1800	1180	1800	1450-1600+	No mortar
2211	3498	Terracotta	1	1500	1550	1500	1550	1500-1550+	No mortar
2212	3033; 3046	One Henrician one Tudor Brick T1 mortar	2	1450	1700	1450	1700	1500-1550	1450-1700
2213	3046	Tudor bricks one reused in light grey mortar	2	1450	1700	1450	1700	1450-1700	1600-1800
2222	2452; 2586	Late med to early post-med peg tile part of very thick brick bipedalis	2	55	1800	1180	1800	1400-1700+	No mortar
2226	2271; 2586	Late med to early post-med peg tile	7	1180	1800	1180	1800	1400-1700+	No mortar
2238	2271; 2586; 3102; 2452; 2276	Late medieval unglazed peg tile; daub and Roman tile and early post-medieval peg tile	23	1500bc	1900	1480	1900	1480-1700	No mortar
2241	2459a; 3101	Tegulae, concrete	2	50	160	50	160	50-160	1850-1950
2243	3033; 3046; 2276; 3101; 3107	Early post-medieval brick and peg tile some with sunken margin Henrician size Type 1 mortar; Reigate stone mould frag	10	1070	1900	1480	1900	1480-1600	1450-1700
2248	3033; 3046; 3107	Early post-medieval bricks T1 mortar; painted	5	1070	1700	1450	1700	1450-1700	1450-1700

Context	Fabric	Material	Size	Date range of material		Latest dated material		Spot date	Spot date Mortar
		Reigate fragment							
2250	3033;3046	Henrician And Tudor brick brown sandy mortar prob reused	2	1450	17001	1450	1700	1500-1550+	1600-1800
2251	3033; 3101	Henrician bricks T1 mortar	2	1450	1700	1450	1700	1500-1550+	1450-1700
2253	3033; 3101	Henrician bricks T1 mortar	2	1450	1700	1450	1700	1500-1550+	1450-1700
2254	3032nr3033; 3065; 3101	Early post great fire bricks and Henry T1 and sandy mortar	3	1450	1725	1664	1725	1664-1725	1600-1750 with some relict 1450-1700
2256	2271; 3101	Early post-medieval peg tile T1 mortar	1	1180	1800	1180	1800	1450-1800	1450-1700
2257	2276; 3101	Early post-medieval peg tile T1 mortar	1	1480	1900	1480	1700	1480-1700	1450-1700
2258	3046	Fragments of early post-medieval brick	5	1450	1700	1450	1700	1450-1700	No mortar
2271	3065; 2271	Early post-medieval brick medieval peg tile T1 mortar;	13	1180	1800	1180	1800	1450-1600	1450-1700
2275	2452; 2455; 3054	Hampshire Grog Brick, Eccles and early sandy tile	3	50	160	55	160	70-160	No mortar
2278	1664-1725; 3101	Early post great fire bricks in sandy mortar	2	1664	1725	1664	1725	1664-1725	1650-1800
2280	3023	Burnt Radlett	1	50	120	50	120	50-120	No mortar
2283	3006; 2587; 2452; 3238; 3498	Single tessera; imbrex, Wealden silt, medieval peg tile; Terracotta	8	50	1550	1500	1550	1500-1550+	No mortar
2285	3046; 3035; 3101	Early post-medieval and Medway yellow brick Portland cement	2	1450	1940	1780	1940	1800-1940	1825-1940
2289	3065; 3033	Henrician Tudor bricks	2	1450	1700	1450	1700	1500-1550+	No mortar
2290	2271; 3101;	Medieval to early post-medieval peg tile	3	1180	1800	1180	1800	1180-1699	No mortar
2292	3046; 2276	Early post-medieval red brick and peg tile	7	1450	1900	1480	1900	1480-1700+	Mortar not clear
2294;	2276; 3047; 3032; 3034; 3101; 3108	Early post-medieval peg tile fine sandy paving and frogged and unfrogged post great fire brick well made T9 mortar and T2	6	1480	1900	1690	1900	1850-1900	1750-1900

Context	Fabric	Material	Size	Date range of material		Latest dated material		Spot date	Spot date Mortar
		clinker mortar; York stone paving slab							
2295	2452 3023b; 2459b; 3004; 2586	Mixture of early and late Roman fabrics late medieval peg tile	6	50	1800	1180	1800	1300-1700	No mortar
2297	2459a; 3006; 3032	Post great fire brick, Roman tile and imbrex	3	50	1900	1664	1900	1664-1900	Mortar not clear
2302	3033; 3046; 3101	Henrician brick and Tudor brick reused in light grey shelly mortar	3	1450	1700	1450	1700	1500-1550+	1600-1800
2303	3033; 3101	Henrician bricks reused in light grey shelly mortar	2	1450	1700	1450	1700	1500-1550+	1600-1800
2304	3065; 3101	Henrician and very large Tudor bricks probable light grey shelly mortar	3	1450	1700	1450	1700	1500-1550+	1600-1800
2310	3046	Early post-medieval brick	1	1450	1700	1450	1700	1450-1700	No mortar
2312	2459a; 3004; 3006; 3009; 3038; 2452	Early Roman sandy tile, brick imbrex and flue tile Early Hartfield but also a Fletton Brick	17	50	2000	1890	2000	1890-2000	No mortar
2313	2454; 3022; 2452; 2459a; 3006; 2815; 3023; 3104; 3022; 3113	Eccles Roman tile, brick tegulae, box flue tile scored thin 3 examples and thick imbrex, op sig; Kimmeridge dolostone tesserae	27	50	160	55	160	55-160+	50-400
2321	2276; 3039 3046; 3101	Reused post-medieval peg tile and brick reused in a pink mortar T30	3	1450	1900	1480	1900	1480-1700+	1650-1800+
2322	3046; 3032nr3033; 3030	Kiln bricks Y stamp purpose made; early post great fire brick; late medieval to early post-medieval brick	4	1400	1725	1664	1725	1664-1725	Mortar not clear
2324	2271; 2586	Late medieval to early post-medieval peg tile	5	1180	1800	1180	1800	1400-1700	No mortar
2328	3104, 2452, 3006	Opus signinum early sandy tile and tegulae	3	50	160	55	160	55-160	50-400
2330	2452; 2459a; 3006; 2454; 2453; 3500	Early Roman tile, brick, imbrex and tegulae; late	54	50	350	140	350	140-350	No mortar

Context	Fabric	Material	Size	Date range of material		Latest dated material		Spot date	Spot date Mortar
		Roman imbrex; red silty							
2331	2452; 2459a; 3006; 3023	Roman tile, Imbrex, and opus spicatum	21	50	160	55	160	55-160+	No mortar
2333	3023; 3054; 2452; 2459a	Box flue roller stamp and comb; sandy Roman brick and tile, imbrex and tegulae	7	50	160	55	160	70-160	No mortar
2340	2459a; 2452	Roman tesserae, brick, imbrex, tile	6	50	160	55	160	55-160	No mortar
2341	2452; 2459a; 3006; 2454; 3023; 3054; 3046; 3022	Early Roman brick, spicatum, imbrex, tegulae, tile, early post-medieval brick	14	50	1700	1450	1700	1450-1700 but there is only one post-med brick rest Roman	No mortar
2342	2459a	Burnt Roman tile	1	50	160	50	160	50-160+	No mortar
2343	2452; 2459a; 3006; 2459b; 3054; 3104	Group of early fabrics mainly Imbrex, Roman brick, tile, tegulae and box flue tile scored diagonal op. sig attached	20	50	250	120	250	120-250+	50-400
2354	3033; 3046; 3101	4 Henrician bricks some with relict T1 other reused light grey shelly mortar	4	1450	1700	1450	1700	1500-1550+	1600-1800
2356	2459a; 2454; 3022; 3023	Very early Roman tegula and Eccles tesserae	5	50	160	50	160	50-160+	No mortar
2357	3046; 2459a; 2452	Early post-medieval red brick; Roman brick and tile	3	50	1700	1450	1700	1450-1700	No mortar
2358	2452; 2459a	Roman sandy tegulae, tile, and brick	3	50	160	55	160	55-160	No mortar
2360	2452	Roman tile	3	55	160	55	160	55-160	No mortar
2361	2452; 2459a; 3102	Daub, early sandy teg and tile and brick	10	1500bc	1600	1500bc	1600	55-400	No mortar
2362	2815	Roman Tile	2	50	160	50	160	50-160	No mortar
2363	2459a	Diamond lattice box flue tile possibly early and early large section of tegulae	7	50	160	50	160	50-100+	No mortar
2365	2452; 2459a; 3023; 3006; 2454	Roman brick imbrex and tegulae local Radlett, Eccles brick	11	50	160	55	160	55-160+	No mortar
2366	3102; 2452; 2459a; 3006; 3104	Worked daub, sandy imbrex, tegulae tile, opus signinum	8	1500bc	1600	1500bc	1600	55-160+	50-400

Context	Fabric	Material	Size	Date range of material		Latest dated material		Spot date	Spot date Mortar
2367	2452; 2459a; 2815	Roller stamp box flue tile, Roman tile and brick	47	50	160	50	160	75-160+	No mortar
2369	2452; 2459a; 2271; 2276; 3046; 2454; 3101; 3022; 3054; 3238; 3038; 3006; 3500; 3023; 3105; 3107	Huge intermixed group Roman Tile, Brick and Tegulae tesserae imbrex; post-medieval peg tile and brick; Type 1 mortar Roman silty, and Hampshire Grog also Eccles and Radlett Box combed flue tile and sandy box flue imbrex; Fletton brick, Ragstone rubble; Reigate roll holl mould and ashlar Portland mould and fragment of banded shelly oolitic limestone Roman	163	50	2000	1890	2000+	1890-2000+	Relict 1450-1700 attached to Tudor brick
2371	2815; 2452; 3023; 2459a	Roman tile and one sandy tess, tegulae Radlett some fresh	9	50	160	55	160	55-160+	Traces lime on tess 50-400
2375	2459a	Tegulae	1	50	160	50	160	50-160	No mortar
2376	2452; 2454; 3006; 3023; 3054 3065; 3004; 2453; 3104; 3106	Very large group of mixed early and late Roman especially imbrex, much less teg, brick ops sig attached, tile also a Tudor brick; Hassock rubble	45	50	1700	1450	1700	1450-1700	Traces of op sig 50-400
2383	; 2459a; 3023; 2586	Mainly early sandy tile and tegulae, peg tile	4	50	1800	1180	1800	1300-1700	No mortar
2386	2452	Roman tile sandy and brick	10	55	160	55	160	55-160	No mortar
2396	2271; 2274; 2586; 3023; 3046; 2452; 2459a; 2271nr 2272; 2587; 2276; 2324	Sizeable group of medieval peg tile some glazed plus; roller box flue tile die 35; voussoir bricks or Terracotta Roman brick and tile and tegulae; yellow glazed penn tile	57	50	1900	1480	1900	1480-1700	No mortar
2398	2459b	Large pedalis fragment of late Roman fabric nail attached	1	120	250	120	250	120-250+	No mortar
2410	3033; 3034; 3101	Reused Henrician brick and large post	2	1450	1900	1664	1900	1750-1900	1750-1900

Context	Fabric	Material	Size	Date range of material		Latest dated material		Spot date	Spot date Mortar
		great fire brick unfrogged reused in T2 mortar							
2416	2452; 2454	Large rhomb scored box flue tile Roman brick and tile Eccles and early sandy	8	50	160	55	160	55-100+	No mortar
2418	2452; 2454; 3102; 3023; 3006	Early sandy and Eccles brick, tegulae profile and thick imbrex; early mudbrick	9	50	160	55	160	55-100	No mortar
2420	2815	Roman tile	4	50	160	50	160	50-160	No Mortar
2423	2272; 2274; 2271	Bat tile, early medieval peg tile	5	1135	1800	1180	1450	1180-1450	No mortar
2424	3022; 2452; 3104; 3006	Opus spicatum brick Eccles and early sandy tile one with op sig attached, box flue tile thin scored	15	50	160	55	160	55-100+	50-400
2428	2452; 2459a; 3006; 2453	Roman tile, Roman imbrex and brick calc imbrex	5	50	350	140	350	140-350	No mortar
2455	2459a;	Roman tile and large tegulae	2	50	160	50	160	55-160+	No mortar
2457	3006	Early sandy tegulae	1	50	160	50	160	50-160+	No mortar
2465	2452	Early Roman tegulae, tile, imbrex and brick	7	55	160	55	160	55-160	No mortar
2467	2459a	Roman tile and tegulae	3	50	160	50	160	50-160	No mortar
2469	2452; 3023	Roman Tile	2	50	160	50	160	50-160	No mortar
2471	2452; 2459a; 2454; 3054; 3101; 3023; 3006; 3105; 3120b; 3120c	Large assemblage of Roman ceramic building material all forms and fabrics, Ragstone, Alwalton marble opus signinum; Derbyshire or South Wales fossil ring coral	38	50	160	55	160	70-160	50-400
2472	3023	Tegulae	2	50	120	50	120	50-120+	No mortar
2477	3102; 2452; 2459a	Roman tile, imbrex and tegulae, daub some industrial waste	10	1500bc	400	55	400	55-400	No mortar
2482	2815; 2452; 2459a	Roman tile, tegulae and brick	4	50	160	55	160	55-160	No mortar
2484	2452; 2459a; 3101	Roman tile, imbrex and brick, opus caementatum	15	50	160	55	160	55-160+	50-400
2488	2452; 2459a	Roman tile and	2	50	160	55	160	55-160	No mortar

Context	Fabric	Material	Size	Date range of material		Latest dated material		Spot date	Spot date Mortar
		tegulae							
2489	2459a; 3006; 3023	Roman tile, imbrex and brick, tegulae	14	50	160	50	160	50-160	No mortar
2490	2452; 2459a; 2459b; 3006; 2454	Roman tile, tegulae, brick and imbrex early and late sandy fabric some pedalis sized; teg mamm Eccles	16	50	250	120	250	120-250+	No mortar
2499	2459a	Roman tile and brick	4	50	160	50	160	50-160	No mortar
2501	2459a	Roman tile	1	50	160	50	160	50-160	No mortar
2504	2459a	Opus spicatum and conventional brick	3	50	160	50	160	50-160	No mortar
2505	2452; 3238; 3022	Sandy and silty brick; Eccles tile	5	50	160	55	160	70-160	No mortar
2512	2459a; 2452; 2454; 2459a	Combed box flue tile; tile; Eccles imbrex; brick; tegulae	14	50	160	55	160	55-160	No mortar
2514	2452; 2454	Sandy and Eccles tile	2	50	160	55	160	55-160	No mortar
2515	2452; 2459a; 3004; 3054	Roman tile, brick and tegulae	6	50	160	55	160	70-160	No mortar
2519	2452	Roman brick	1	55	160	55	160	55-160+	No mortar
2524	2454; 2459a; 3006; 3023; 2454	Roman tile, brick imbrex and tegulae early flange profile 1	23	50	160	55	160	55-160	No mortar
2525	2452	Tegulae, Roman tile and imbrex flange profile 1	6	55	160	55	160	55-160+	No mortar
2526	2815; 2452; 3022	Eccles and early sandy tile, tegulae and brick	10	50	160	55	160	55-160	No mortar
2530	2452; 2459a; 3006	Roman tile, tegulae and imbrex	4	50	160	55	160	55-160	No mortar
2532	2452; 2459a; 3006	Roman tile and tegula	3	50	160	55	160	55-160	No mortar
2535	2452; 2454; 2459A; 3118	Eccles tile and brick and imbrex; Tufa ashlar	6	50	1200	50	1200	55-400	No mortar
2537	2459a; 2452; 3006; 3023b; 3060; 2454; 3023; 3022	Roman tile, imbrex and tegulae flange profile 1; Radlett and late Radlett; Eccles no brick	29	50	230	170	230	170-230+	No mortar
2538	2452; 2454; 2459a; 3054	Sandy and Grog fabrics mainly brick some Pedalis thickness	10	50	160	55	160	70-160+	No mortar
2540	2276; 3030	Really good examples of late med to early post-med brick and peg tile	8	1400	1900	1480	1900	1480-1660	No mortar
2549	3060b	Late Roman	1	170	230	170	230	170-230+	No mortar

Context	Fabric	Material	Size	Date range of material		Latest dated material		Spot date	Spot date Mortar
		Radlett tegulae							
2552	3006	Coarse curved comb a la BVK11	1	50	160	50	160	50-160	No mortar
2556	2459a	Roman tegula	2	50	160	50	160	50-160	No mortar
2559	2452	Roman tile	2	55	160	55	160	55-160+	No mortar
2562	2459a	Roman tile	1	50	160	50	160	50-160	No mortar
2563	2815	Reused Roman tile	3	50	160	50	160	50-160+	Mortar not clear
2565	2452; 3006; 2459a; 3101	Large sections of Coarse scored box flue tile, tegulae profile 1, imbrex, tile, brick, op. caem	22	50	160	55	160	55-160+	Opus camentatum 50-400
2568	2452; 2459a	Early Roman brick, tile and tegulae, imbrex	12	50	160	55	160	55-160	No mortar
2570	3102; 2459A	Roman tile and daub	5	1500bc	160	1500bc	160	50-160	No mortar
2573	2452; 2459a; 3006; 2454	Roman brick; tegulae, imbrex and tile some reused	8	50	160	55	160	55-160+	No mortar
2577	2452; 2459a; 3054	Roman sandy and Hampshire Grog brick and tile reused	3	50	160	70	160	70-160+	No mortar
2580	2452; 2459a	Roman tile, brick imbrex, tegulae	24	50	160	55	160	55-160	No mortar
2582	2452; 3023; 3102	Roman sandy tile, Radlett and daub	7	1500bc	1600	1500bc	1600	55-120	No mortar
2610	3102; 2452; 2459a; 3006; 3023	Roman tile and tegulae and daub; box flue tile Radlett straight comb imbrex	10	1500bc	1600	1500bc	1600	55-120	No mortar
2610	3033; 3101	Reused Henrician bricks in light grey shelly mortar	2	1450	1700	1450	1700	1500-1550	1600-1800
2611	3033; 3101	Reused Henrician bricks in T20 mortar	2	1450	1700	1450	1700	1500-1550+	1600-1800
2618	3032	Well made frogged machined post great fire brick no mortar	2	1664	1900	1664	1900	1850-1900	No mortar
2619	3120c	Sarsen whetstone Roman	1	50	400	50	400	50-400	No mortar
2621	2452; 2815; 3123	Roman brick and tile German lavastone quern	4	50	400	50	500	50-400	No mortar
2622	2452; 3054; 3102; 2454; 2459a; 3109	Daub, Hampshire Grog brick, Roman sandy tile and brick tegulae Eccles quite a lot broken shelly oolitic limestone	23	1500bc	1600	1500bc	1600	70-400+	No mortar

Context	Fabric	Material	Size	Date range of material		Latest dated material		Spot date	Spot date Mortar
		mould							
2632	2454; 2452; 3023; 3102	Quite a bit of Eccles; daub, radlett and sandy brick, tile, tegulae and imbrex15	15	1500bc	1600	1500bc	1600	55-120+	No mortar
2634	2452; 2459a	Roman brick and imbrex	2	50	160	55	160	55-160	No mortar
2635	2276; 3046; 3076; 2271; 2586; 2459a	Large group of post-medieval brick and peg tile Penn floor tile and glazed medieval peg tile, Roman tile	16	50	1900	1480	1900	1480-1700	No mortar
2637	2850	Fresh glazed Flemish floor tile	1	1450	1600	1450	1600	1450-1600	No mortar
2638	2454; 3104; 2452; 3023; 3060b	Small tesserae; late Radlett tegula sandy brick tegulae and imbrex	14	50	230	170	230	170-230+	50-400
2649	2459a; 3023; 2452; 3046; 3101	Radlett imbrex and sandy tile and brick; Henrician brick reused in T2 clinker mortar	7	50	1700	1450	1700	1500-1550+	1750-1900
2653	2452	Roman tile	4	55	160	55	160	55-160	No mortar
2655	2452; 2459a; 3006	Sandy brick flue plain, tegulae, tile imbrex	9	50	160	55	160	55-160+	No mortar
2667	2459a; 3006	Roman brick and imbrex	2	50	160	50	160	50-160+	No mortar
2668	2452; 3006	Early box fue tile scored Roman sandy brick and tile	5	50	160	50	160	50-160+	No mortar
2676	2452; 2459a; 3054	Early Roman brick, tile sandy and grog Hampshire tegulae	6	50	160	55	160	70-160+	No mortar
2681	3006; 2452; 2459a; 3023	Early group box flue tile scored, Radlett and sandy teg and tile	5	50	160	55	160	55-100+	No mortar
2682	2452; 2459a; 3022; 3006	Roman brick and tegulae and tile	6	50	160	55	160	55-160	No mortar
2683	3018; 3028; 2452; 2459a; 2454; 3105; 3129	Roman tile imbrex brick some silty and Eccles material rest sandy; Kentish ragstone rubble laminated sandstone roofing	22	50	400	200	400	200-400+	No mortar; 3
2685	2459a, 3006; 3120c	Drain, tegulae and brick Two conjoined whetstones in a	6	50	1700	50	1799	50-1700	No mortar

Context	Fabric	Material	Size	Date range of material		Latest dated material		Spot date	Spot date Mortar
		greensand type material							
2687	2274; 2815	Early medieval peg tile and Roman tile	3	50	1350	1080	350	1080-1350+	No mortar
2689	2452; 3129	Roman tile and tegulae roofing tile laminated sandstone	4	59	400	200	400	200-400+	No mortar
2694	2455; 2459a; 3102; 3129	Daub, Eccles tile fragment, Roman brick and imbrex roofing tile laminated sandstone	6	1500bc	1600	1500bc	1600	200-400+	No mortar
2696	2459a; 3006	Roman tile and thick brick	6	50	160	50	160	50-160	No mortar
2697	3032; 3032nr3035	Post great fire bricks no mortar	2	1664	1900	1664	1900	1664-1900	No mortar
2698	3032; 3032nr3033; 3033; 3101	Reused Tudor and early post great fire brick and fresh post great fire brick in T2 mortar	3	1450	1900	1664	1900	1664-1900	1750-1900
2710	3006	Imbrex	1	50	160	50	160	50-160	No mortar
2712	3046; 3101	2 Henrician bricks T1 mortar	2	1450	1700	1450	1700	1500-1550	1450-1700
2731	2452; 2459a; 3006; 3238; 3023; 2454; 3054; 3129	Sandy Roman tile, imbrex, tegulae, brick; Hampshire, Radlett and Eccles; Hampshire Grog brick lots of imbrex a very large group of laminated sandstone roofing	82	50	400	200	400	200-400+	No mortar
2741	2459a; 3023	Wide 103mm opus spicatum brick special kiln related and Radlett tile	2	50	160	50	160	50-120+	No mortar
2757	3023; 3006	Roman brick and tile	4	50	160	50	160	50-160	No mortar
2759	3238	Silty Roman tile	1	71	100	71	100	71-100	No mortar
2775	2452; 2454; 3006; 2459a	Large Roman brick sandy and Eccles fresh tegulae flange 1, box flue curved coarse lots of tegulae fresh	35	50	160	55	160	55-160+	No mortar
2776	3046	Henrician size brick	7	1450	1700	1450	1700	1500-1550+	No mortar
2784	2459a	Imbrex	1	50	160	50	160	50-160	No mortar
2790	2815; 2459a; 3006; 2276; 3129; 3105; 3120b	Roman tile and tegulae, early post-medieval peg tile; laminated sandstone roofing ragstone rubble	12	50	1900	1480	1900	1480-1700	No mortar

Context	Fabric	Material	Size	Date range of material		Latest dated material		Spot date	Spot date Mortar
		lumachelle Altwalton sculptural??							
2791	2452; 2459a; 2454	Very early Eccles keyed knife scored Type 4 Pringle Roman brick and tegulae,	4	50	160	55	160	55-100	No mortar
2793	3006	Reused Roman tile	2	50	160	50	160	50-160+	No mortar
2797	2271; 2586; 2276; 2274 3030 2459a; 3046; 2587; 3006;	Roman imbrex mainly late med early post-med peg tile one late med early post- med brick; Tudor brick	29	50	1900	1480	1900	1480-1700	No mortar
2798	2815	Roman tile poor condition	3	50	160	50	160	50-160	No mortar
2804	2452; 3014	Roman brick and opus signinum	3	55	160	55	160	55-160+	50-400
2809	2459a; 3006	roman brick; imbrex, tegulae	3	50	160	50	160	50-160	No mortar
2812	2459a	Roman tile	1	50	160	50	160	50-160	No mortar
2814	2454	Eccles brick	4	50	80	50	80	50-80	No mortar
2816	2815	Roman tile	3	50	160	50	160	50-160	No mortar
2817	3162; 2452; 2815; 2459a; 3056; 2459c	Green Cippolino mandalato inlay; Roman brick; tegulae; tile; Grog Hampshire brick	31	50	400	50	400	140-400	No mortar
2818	2276; 3030; 3046; 3101	Peg tile, post- medieval brick T1 mortar	11	1400	1900	1480	1900	1480-1700+	1450-1700
2820	2452; 2459a; 3054 2276 2454; 3006; 3022; 3023; 3122; 3105	Early post- medieval peg tile, early Roman tessera, tile, brick, tegulae, imbrex; Radlett imbrex large; Septarian nodule and ragstone rubble	41	50	1900	1480	1900	1480-1700	No mortar
2821	3109	Sculptural fragment banded shelly oolite	2	50	400	50	400	50-400	No mortar
2823	2454; 2459a; 2815; 3105; 3129; 3120c	Eccles large tesserae; Roman brick and tile; Ragstone rubble; laminated sandstone roofing, Ardingly sandstone whetstone	13	50	400	200	400	200-400	No mortar
2825	3046	Henrician bricks no mortar	2	1450	1700	1450	1700	1500-1550+	No mortar
2826	3046; 2276	Tudor bricks and early post- medieval peg tile relict T1 mortar	4	1450	1900	1480	1900	1480-1700+	1750-1900?? Certainly relict 1450-1700

Context	Fabric	Material	Size	Date range of material		Latest dated material		Spot date	Spot date Mortar
		some possible reuse T2 on peg tile							
2827	2452; 2459a; 3006	Early sandy fabric teg mammata, tegulae, imbrex and tile	5	50	160	55	160	55-160	No mortar
2829	2459a; 2452	Roman tegulae, imbrex and brick	6	50	160	55	160	55-160	No mortar
2836	2459a	Imbrex	1	50	160	50	160	50-160	No mortar
2838	2452; 2459a; 3054; 3023; 3162	Roman brick and tegulae; Cipollino mandalato inlay	7	50	400	50	400	50-400	No mortar
2842	2452; 2459a	Roman tile and brick one pedalis thickness 62mm	4	50	160	55	160	55-160+	No mortar
2855	2452; 2459a	Roman tile and brick	4	50	160	50	160	55-160	No mortar
2868	2459a; 3038	Roman tegulae and possible intrusive Fletton brick	2	50	2000	1890	2000	50-160 possible Fletton brick intrusive	No mortar
2880	2452; 2459a; 2815; 2271	Roman tile, imbrex and brick, tegulae; peg tile	27	50	1800	1180	1800	1180-1600	No mortar
2881	3054; 3070; 2815; 2452; 3102	Very early and coarse Roman brick also Hampshire Grog; Roman tile; Roman brick; daub	22	1500bc	1600	1500bc	1600	70-140	No mortar
2883	2459a; 3105	Roman tile; Ragstone rubble	2	50	1600	50	1600	50-160	No mortar
2885	2452; 2459a; 3129	Tile, tegulae, imbrex brick all sandy; laminated sandstone roofing	9	50	400	200	400	200-400	No mortar
2891	2452	Fresh brick	1	55	160	55	160	55-160	No mortar
2892	2452; 2459a; 3006; 3028	Roman tegulae, imbrex, tile and brick	16	50	160	55	160	60-160	No mortar
2904	2459a; 2452	Flue tile no keying; Roman brick	2	50	160	55	160	55-160	No mortar
2905	2452; 2459a	Early sandy brick and tegulae	4	50	160	55	160	55-160	No mortar
2910	2459a	Tegulae	1	50	160	50	160	50-160	No mortar
2911	2459a	Imbrex	1	50	160	50	160	50-160	No mortar
2914	3046; 3101	Henrician bricks T1 mortar	2	1450	1700	1450	1700	1500-1550+	1450-1700
2916	2452; 3112	Roman tile; Purbeck marble mortar	2	50	400	50	400	50-400	No mortar
2917	2586; 3498; 2276; 3101	Early post-medieval peg tile possible medieval brick or early post-medieval kiln brick fabric pale grey chalky organic mortar T6	6	1180	1900	1480	1900	1500-1550	1500-1800

Context	Fabric	Material	Size	Date range of material		Latest dated material		Spot date	Spot date Mortar
		Terracotta							
2921	2452; 3009; 3105	Sandy brick and broken up reused Hartfield tile; Ragstone rubble	6	50	1600	50	1600	100-160+	No mortar
2936	3102; 2452; 3006; 3126a	Daub, Roman tile and Imbrex; Purbeck limestone whetstone	5	1500bc	1600	1500bc	1600	55-400	No mortar
2940	3033; 3101	2 Henrician bricks T1 mortar	2	1450	1700	1450	1700	1500-1550	1450-1700
2942	2452; 2459a; 3006	Box flue tile v coarse comb, Roman brick, tile and tegulae	11	50	160	55	160	55-160+	No mortar
2943	2455; 3023	Early Roman tegulae in Eccles and Radlett	2	50	120	50	120	50-120+	No mortar
2947	3022; 3006	Eccles and early sandy brick	3	50	160	50	160	50-160	No mortar
2950	3129	Laminated sandstone paving and roofing	2	200	400	200	400	200-400	No mortar
2959	2459a; 3102	Daub fragment, Roman tile and tegulae	7	1500bc	1600	1500bc	1600	50-400	No mortar
2960	3023	Tegulae	1	50	120	50	120	50-120	No mortar
2967	3006; 2454; 2452; 2459a; 3120	Roman tile, tegulae and brick one Eccles; Wealden sandstone concavo-convex hone	18	50	160	50	160	50-160+	No mortar
2968	2459a; 3006; 3023	Roman tile and imbrex Radlett and sandy	6	50	160	50	160	50-160	No mortar
2976	2452	Roman tile	1	55	160	55	160	55-160+	No mortar
2980	3102; 2452	Tegula and burnt daub	2	1500bc	1600	1500bc	1600	55-160+	No mortar
2984	2454; 2459a	Roman tile and Eccles teg	2	50	160	50	160	50-160+	No mortar
2985	2459a; 3006	Roman sandy brick and tile	2	50	160	50	160	50-160	No mortar
3000	3102	Burnt daub fragments	1	1500bc	1600	1500bc	1600	50-100+	No mortar
3002	2459a	Roman tegulae	1	50	160	50	160	50-160	No mortar
3017	2452; 2815; 3105	Sandy Roman brick and tegulae; rubble ragstone	4	50	1600	50	1600	55-160	No mortar
3019	3046	Wedge shaped voussoir Tudor brick T1 mortar	12	1450	1700	1450	1700	1500-1550	1450-1700
3033	2276	Early post-medieval peg tile	1	1480	1900	1480	1900	1480-1700	No mortar
3034	2452	Roman tile and tegulae	3	50	160	55	160	55-60+	No mortar
3046	3006; 2452; 2459a	Early Roman sandy tile, brick	5	50	160	55	160	55-160+	No mortar

Context	Fabric	Material	Size	Date range of material		Latest dated material		Spot date	Spot date Mortar
		and tegulae							
3047	2452; 2453; 2459a	Early sandy tile and imbrex Calcareous tile	5	50	300	140	300	140-300+	No mortar
3050	2452; 2459a	Roman tile and brick	3	50	160	55	160	55-160	No mortar
3051	2459a; 3022	Early Roman sandy tegulae and imbrex and Eccles imbrex	3	50	160	50	160	50-160	No mortar
3053	2452; 3054	Sandy and Hampshire Grog brick	4	55	160	55	160	70-140	No mortar
3055	2452; 2459a; 3054	Roman Tile, Imbrex, Brick sandy and Hampshire Grog	13	50	160	55	160	70-160+	No mortar
3065	2459a; 3006	Roman brick and tile	3	50	160	50	160	50-160	No mortar
3103	3023	Radlett Roman brick	1	50	120	50	120	50-120	No mortar
3109	2452; 2459a; 3006	Roman tile tegulae and brick	6	50	160	55	160	55-160	No mortar
3114	2452	Roman sandy brick	3	55	160	55	160	55-160	No mortar
3115	2452; 3006	Early sandy tile and imbrex	4	50	160	50	160	55-160	No mortar
3119	3033; 3101	Reused Tudor Brick in loose sandy mortar	3	1450	1700	1450	1700	1500-1550+	1600-1800
3121	2452; 2459a	Early sandy Roman tile and brick	9	50	160	55	160	55-160	No mortar
3122	3004	Imbrex	1	50	160	50	160	50-160	No mortar
3123	2452; 2459a; 2454	Teg Mamm, Roman tile brick, teg early sandy and Eccles	6	50	160	55	160	55-160	No mortar
3140	2459a	Roman tile	1	50	160	50	160	50-160+	No mortar
3145	2454; 2452; 3006	Roman tile and brick Eccles, early sandy scored flue tile	4	50	160	55	160	55-160+	No mortar
3146	2452; 2459a; 3006	Early sandy scored flue tile and Roman brick	3	50	160	55	160	55-160	No mortar
3170	2452; 2459a; 3004	Early sandy Tegulae, tile and brick flange profile 1	3	50	160	55	160	55-160	No mortar
3201	2459a	Roman brick	1	50	160	50	160	50-160	No mortar
3205	2452; 3500	Roman tile and imbrex tegulae sandy red silt fabric	6	50	200	50	200	55-200	No mortar
3211	3129	Laminated sandstone roofing	11	200	400	200	400	200-400+	No mortar
3238	2452	Roman tegulae flange profile 1	3	55	160	55	160	55-160	No mortar

Context	Fabric	Material	Size	Date range of material		Latest dated material		Spot date	Spot date Mortar
4003	2276; 3046	Early post-medieval peg tile and brick	4	1450	1900	1480	1900	1480-1700	No mortar
4004	3046; 2279	Medium sized Tudor brick no mortar; pantile	2	1450	1859	1630	1850	1630-1850	No mortar
4008	3032; 3032R	Narrow post great fire bricks unfrogged T2 mortar	2	1664	1900	1664	1900	1780-1900	1750-1900
4017	3046	Very large almost Wolsley sized Tudor bricks	3	1450	1700	1450	1700	1450-1600	No mortar
4020	3033	Very large Tudor Bricks T1 mortar	2	1450	1700	1450	1700	1450-1600	1450-1700
4024	30032; 3101	Narrow post great fire bricks T2 mortar	2	1664	1900	1664	1900	1780-1900	1750-1900
4025	2276	Peg tile early post-medieval	3	1480	1900	1480	1900	1480-1700	No mortar
4027	3033; 3065	Tudor bricks T1 mortar one Henrician	3	1450	1700	1450	1700	1500-1550	1450-1700
4032	3032	Narrow post great fire brick no mortar	1	1664	1900	1664	1900	1780-1900	No Mortar
4041	3108	Rubstone probably post-medieval knife marks York stone	1	1600	1900	1600	1900	1700-1900	No mortar
4042	3046; 3101; 2276	Tudor shaped bricks T1 mortar sunken margin Henry size; peg tile	9	1450	1700	1480	1900	1480-1700	1450-1700
4044	2271; 2587; 2452; 2815; 3006	Mainly medieval peg tile; Roman tile brick and imbrex	8	50	1800	1180	1800	1240-1450+	No mortar
4045	2452; 3023; 2271; 2276; 3046	Roman sandy brick tile and tegulae, one Radlett medieval and post-medieval peg tile early post-medieval brick	9	50	1900	1480	1900	1480-1700	No mortar
4046	2271; 2586	Late medieval to early post-medieval peg tile fresh	3	1180	1800	1180	1800	1400-1700	No mortar
4048	2271; 2276; 2586	Late medieval to mainly early post-medieval peg tile	28	1180	1900	1480	1900	1480-1700	No mortar
4050	2276; 3046; 3101; 3033; 3065	Wedge shaped and curved post-medieval brick and peg tile T1 mortar also T5 plaster backing One brick Henrician	12	1450	1900	1480	1900	1500-1550+	1450-1700
4052	3046; 3033;	Henrician brick	2	1450	1700	1450	1700	1500-1550+	1450-1700

Context	Fabric	Material	Size	Date range of material		Latest dated material		Spot date	Spot date Mortar
	3101	and Tudor brick T1 mortar							
4059	2279	Pan Tile	5	1630	1850	1630	1850	1700-1850	No mortar
4060	3046; 3032; 3101	Tudor Brick and reused poorly made post great fire brick; T2 mortar	2	1450	1900	1664	1900	1664-1900	1750-1900
4061	2276; 3046	Post-medieval red brick and peg tile sunken margin no mortar; Terracotta	6	1450	1900	1480	1900	1500-1550	No mortar
4062	3023; 2459a; 2453	Late Roman calc fabric and flange profile form, early sandy and Radlett tile	3	50	300	140	300	140-300	No mortar
4065	2279	Pan tile	1	1630	1850	1630	1850	1630-1850	No mortar
4068	3032R	Structure brick floor narrow post great fire bricks sharp arises scrape marks	2	1664	1900	1664	1900	1750-1900	No mortar
4071	3033; 3101	Tudor bricks; T1 mortar	2	1450	1700	1450	1700	1450-1700	1450-1700
4075	2276; 3046	Early post-medieval peg tile and brick	2	1450	1900	1480	1900	1480-1700	No mortar
4080	3065	Half a small Tudor brick with chaff marks	1	1450	1700	1450	1700	1450-1700	No mortar
4081	3046; 3110	Early post-medieval brick no mortar; Portland base bed paver	4	1450	1900	1630	1900	1630-1700+ or even earlier	No mortar
4082	3090	Medieval peg tile	1	1180	1800	1300	1600	1300-1600+	No mortar
4083	3032; 3032R	Narrow post great fire bricks	2	1664	1900	1664	1900	1780-1900	1750-1900
4084	2276; 3101; 3046; 3030	Fresh peg tile early post-medieval T1 mortar; Late medieval to early post-medieval brick	d5	1400	1900	1480	1900	1480-1600	1450-700
4085	3046	Fragments of early post-medieval brick	2	1450	1700	1450	1700	1450-1700	No mortar
7550	2459a; 2452	Roman tegulae and tile	6	50	160	55	160	55-160	No mortar

Recommendations

Potential

This very large and diverse group of building material recovered from BBO10 chronicles the development of this part of Southwark from Roman dumping episodes and settlement, medieval and Tudor 1518-1522 development of the brick Suffolk Place and subsequent post-medieval structural development.

Roman

The site, which is located on the fringes of Borough Channel, separating the South Island from the mainland of Southwark is dominated by 500-600kg of stone and ceramic building material in dumping and consolidation deposits. This is borne out by the fact that the assemblage that nearly all the brick and tile is in a highly fragmentary condition with approaching 3,000 individual pieces (63% of the entire assemblage by number). Nevertheless, there are numerous items of individual merit that deserve mentioning.

- a) Large quantity of bath house/heated room material including early forms of box flue tile (Pringle 2006; 2007), roller stamped dies, tubuli, parietalis and opus spicatum brick.
- b) Important groupings of decorative stone inlay and cornices with Cipollino mandato and Thassos marble prevalent.
- c) Items of broken statuary including an example of a limb in Alwalton marble – a rock not previously identified in Roman London before now and one of banded shelly oolitic limestone. These may have derived from the temple precinct area from Tabard (Killock *et al.* 2015) or possibly are funerary and come from Great Dover Street (Mackinder 2000).
- d) Whetstones and Quernstones
- e) A possible Roman wall from [1024]

Medieval

This small assemblage of just 40kg does however contain the occasional example of decorated Penn Tile and Westminster Floor tile including some from a Reigate and chalk stone wall [178]. These form one of a series of chalk stone masonry foundation footings that form the outline of the medieval Brandon Place

Suffolk Place

What this building assessment has shown is that approaching a half of the brick assemblage (500kg) consists of complete fresh Tudor brick in two sizes belonging to the arched foundation, rooms and culverts of the 1518-1522 brick Suffolk Place. Not only that there is a well preserved moulded stone assemblage of painted decorative Reigate stone tracery and as yet an unidentified limestone also used in the tracery, possibly Chilmark stone from Salisbury or Wheatley limestone from Oxfordshire.

There is North Wales Slate roofing in different shapes and a large collection of peg tile roofing and moulded brick which together forms upwards of 1,000kg of high quality building material with which to embellish this prestigious building.

However, it is the excellent preservation of 347 items of highly ornate and decorative terracotta from Suffolk Place, preserved in the robbed-out trenches and passageway dumps, following its 1557/58 demolition that mark this site out for national and international academic interest. It is because they were used over such a short period of time (40 years) that makes these (and indeed the painted Reigate stone tracery and moulded brick) such a unique assemblage. This an extremely large collection of terracotta, which even with preliminary analysis (Dr Chris Green) shows a great deal of potential for substantial publication work on its own (see Appendix 12).

Later post-medieval structural development

Detailed examination of the mortar types as shown that there was a complex, piecemeal structural development around the demolished Suffolk Place into the 17th and 18th centuries. At least four mortar types are associated with extensive reuse of Tudor bricks and new consignments of early post great fire bricks (1664-1725) show that there was a great deal of activity at this site around this time, as a precursor to the later 18th-century and 19th-century residential and commercial development which is again marked out by its own set of brick types and mortars.

Further Work

As set out above, the chronological depth, variety and quality of building materials from the excavations at Brandon House have identified a number of individual items of artistic merit and fabrics that require follow up work at publication stage. Further analysis includes petrological work, investigative research into function/age/parallels, artistic value - illustration and photography. In chronological order these are:

Roman - As part of a wider understanding into the origin of high status material dumped on the fringes in the South Island – Southwark and Borough Channel; a more in depth look at the different dumping episodes from this very large and diverse ceramic building and stone assemblage. Could some of the statuary for example relate to the Temple complex at Tabard Square or represent dumped funerary material from Great Dover Street. The petrology of the inlays and cornices show a marked petrological similarity with those from the bath house building towards the bridgehead (Hayward in prep. a) as do some of the early box flue tiles. How does this assemblage compare with other sites in the vicinity, e.g. BOH13 and those in archive (Pringle 2009)? Thin section petrological analysis of some possible Alwalton marble statuary would determine whether or not this rock is being used in Roman London. It is recommended that the artistic merit and interpretation of statuary items are looked at by Professor Martin Henig and Penny Coombe. The scheme of the painted wall plaster already preliminarily assessed by Berni Seddon (see Appendix 12) would further shed light on the character and origin of any high status buildings in the vicinity.

Medieval – although little of decorative value can be assigned to the earlier medieval Brandon Place from these excavations, any publication must take into account the significance of the numerous chalk foundation walls, which pre-date the Tudor brick structures and outline and the handful of floor tiles (Decorative Penn Tile) found within the medieval footprint.

Tudor – the quality of preservation and very large number of items of high status building material recovered from the structural remains and demolition of 1518-1522 to 1557/58 brick Suffolk Place provides a unique chance to investigate in detail their form, decoration, and fabric. The preservation of the easily degradable Reigate stone, for example, allows for accurate recording of the highly decorative window tracery moulds including an examination of their pigment and plaster. It also provides a unique and rare chance to see crisp, fresh sections of unblemished Reigate that may be of use for conservation study. Thin section petrological analysis of the limestone types, one of which may be an early Portland stone, the other an unknown (Chilmark? Wheatley? Doulling? Stone) will shed more light on the quarrying and supply of freestone to the capital in the Tudor period. An existing study from Somerset House (Hayward in prep. d) has shown how thin-section analysis has altered our understanding of where these materials were coming from during the 1540s and connections between the outcrop source and rich and influential people have been made.

Comparison in brick size and form, as well as mortar/plaster type with existing Tudor foundation and moulded brick reference collections (e.g. Hampton Court) may help understand whether there is any chronological standardisation in brick size at Suffolk Place and whether there may have been recycling from the earlier pre-1518/1522 Brandon Place.

The recommendations for further work on the terracotta assemblage is discussed in Appendix 12.

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APPENDIX 11: TERRACOTTA ASSESSMENT

Kevin Hayward, Chris Green & Frank Meddens

Introduction

Large quantities of crisply dressed, sometimes complete panels of moulded, terracotta in many different repeating patterns or reliefs were recovered mainly from the Phase 7 passageway dumps and relate to the architectural embellishment of the brick faced Suffolk Place (Meddens & Humphrey 2015). The enormous amount of information to be gleaned from the quantity and quality of the assemblage can only be gauged from a detailed extensive and intensive review and reconstruction at publication. Furthermore, the existing database of recovered decorated terracotta panels that relate to Suffolk Place is well known and has been the subject of numerous articles the most recent of which has been a comprehensive review of existing fabrics and styles (Smith *et al.* 2014). For this reason, only a review of its potential in this assessment based on initial investigations by Chris Green will be given both from its quantity, distribution and design. No attempt will be made to explore the more detailed artistic and scientific elements, nor any reconstruction.

Quantity and Distribution

Three hundred and forty-seven terracotta elements were identified from excavation at BBO10. They are deposited in discrete pockets usually as Phase 7 and Phase 8 demolition backfills between Tudor walls or robber fills and demolition spreads or horizons of Suffolk Place. The majority of the elements come from different Phase 7 demolition backfills [361] [362] [363] [455] [456] between the walls in the drain passageway at the palace. There are also occasional examples from the fill of a post-medieval pit [453] [2283], Phase 8 robber fills [250] [263] [2131] [4063] of more than one Tudor Wall, a Phase 8 chalk demolition layer [327], demolition horizons of the palace [1010] [1476] [2211] and foundation fill [2917].

Designs

Provisional analysis of the entire assemblage by Dr Chris Green identified ninety-four of the terracotta panels have a known decorative scheme, with the rest³ either too fragmentary or having a scheme that requires further investigation. Each decorative scheme and number of pieces can be referred to in the table compiled by Chris Green that accompanies this report. Further work is necessary here not only to determine what the unknown decorative schemes are but to amalgamate the data of the known decorative schemes with existing studies (Smith *et al.* 2014) to produce a more complete reconstruction of the terracotta façade at Suffolk Place.

Stamps

³ Thirty-seven of these unknowns were not examined by Dr Chris Green. These were recovered, separated out and amalgamated with the rest of the terracotta from bags of mixed ceramic building material.

Several of the examples (8) including many of those with Circular plinths design (smaller may be from flaming urns) have stamps on.

Fabrics

A number of different fabric types and colours were also observed which could, using tried and tested geochemical analytical techniques (ICPMS) e.g. (Hayward 2015b), be used to distinguish separate places of manufacture, workshop, something that was not determined using thin-section analysis in a recent study (Williams 2014, 101).

Importance of the material

The range of architectural components represented in the terracottas comprises window and elements and fragments of door and window frames and jambs, entablature (with cornice fragments), parapets and decorative panels including pilasters. These elements would have been combined to produce an elaborate hexagonal frieze of intertwined garlands adorned with heads of figures and animals in a repeating pattern.

The terracottas represent some of the earliest evidence of Renaissance design motifs in England.

These decorative architectural elements represent a group of very rare survivals of a highly significant of material both for understanding the architectural history and the development of Renaissance design in England during the Tudor period.

Research Questions and Recommendations for Further Work

Watson suggests that Suffolk Place was predominantly brick-built. Redevelopment on its site in 1887-88 and 1979 and the recent works revealed substantial brick foundations of Tudor date (Watson 2011, 24). The 310 terracotta pieces and fragments excavated in the recent work at Brandon House have very little mortar adhering suggesting that they had not been set in mortar against a brick facade. Several of the pieces have square profiled holes running centrally through the pieces indicating these were retained on a centrally positioned wrought iron bar. Other pieces have small retainer recesses. The alternative to the palace being a largely brick construction of the foundations and parts of the lower sections of the palace having been constructed of brick with the upper parts of the palace comprising a conventional timber framed construction with the terracottas having been attached to the timber frame will be tested and explored.

The modular form of the terracottas deserves further analysis as this suggests that the design depended on a 'prefabricated' concept of construction in which the finished pieces could be rapidly assembled following a simple repeating format.

Several distinct impressed makers' stamps are found in significant numbers of examples across the assemblage. Makers' marks though previously recognised in the earlier excavated material was not common in the earlier recovered group (Smith *et al.* 2014, 107). A corpus of the markers' marks

identifiable within the assemblage will be created to serve as a comparison with contemporary British and continental parallels. A working hypothesis would be that technicians and specialists from the nearby continent would have been brought over to supervise and manage the on-site production of the terracottas. Alternatively, English specialists could have been trained in their manufacture abroad. At this early stage of architectural ceramics production the technical expertise to manufacture high quality materials as represented here would have been difficult if not impossible to obtain locally, so contracting expertise from abroad for this part of the build could have been an efficient way to proceed. Local sources of clay and fuel would have been employed for the production process (Smith *et al.* 2014, 101). Carpentry and timber framing as a dominant local construction method would have meant that this expertise could have been easily sourced nearby. An attempt will be made to narrow down the origin of the producers of the materials.

The corpus of material recovered from the earlier excavations and the current site will be pattern matched to establish whether parts, sections or whole designs can be modelled and reconstructed.

The modelled terracotta facade elements will be matched to the architectural reconstruction of the building's facade based on Wyngaerde drawings (both published and potentially present in the archives of the Ashmolean Museum in Oxford, floorplans reconstructed from archaeologically recorded foundations and wall elements and speculative earlier published models (Smith *et al.* 2014; Watson 2011).

It has been suggested that the rebuilding of Suffolk Place in 1518 to 1522 comprised the construction of a reverse L shaped block forming two wings at the south eastern corner of the earlier Brandon Place complex (Smith *et al.* 2014). The veracity of this interpretation will be tested.

The iconography present within the decorative motifs present in the terracotta assemblage will be studied to establish the meaning and significance of the symbolism present in the individual pieces and the overall design. Comparisons will be made with the motives and designs identified at other contemporary architectural parallels (such as Hampton Court, Westhorpe House, Clerkenwell, Great Cressingham Manor Norfolk etc).

Comparisons will be made with designs from other contemporary examples (such as Layer Marney) to establish whether identical moulds were used in their production indicative (perhaps) of employment of itinerant specialists (see the question regarding makers' marks).

Petrological study of a small number of examples of the previously excavated examples has suggested the raw materials for the production of the terracottas were sourced locally (2014 101). Further chemical characterisation of the fabrics is advisable to further define the sourcing of the raw materials used in their manufacture. Studies for example relating to chemical ICPMS petrological techniques of the different fabrics to determine source of the clays should supplant the unsuccessful thin section analysis of terracottas recovered from earlier excavations at Brandon House (Williams 2014). The benefits of geochemically fingerprinting the different clays in bricks has already proven successful in studies from Poland (Hayward in prep. e) and Scotland (Hayward 2015b).

Any paint residues adhering to the terracottas will be sampled and analysed in order to establish and reconstruct the colour pallet, range and configuration of pigments deployed on the external faces of the terracottas.

The pieces recovered in the current Brandon House excavations are thought to originate from the demolition of the palace. Comparison with the production waste material recovered from the excavations from the St George's Church site may facilitate the making of estimates of the failure rates experienced in the production process.

External specialists such as Dr Chris Green, Simon Thurley and others will be consulted for their input and contribution to understanding the production and use of the terracottas and the formulation of additional research questions.

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Terracotta plates



Context [361] SF111 Face profile (Ariel)



Context [361] SF114 Quarter



Context [363] SF 182 Pilaster element depicting seahorses



Context [362] SF215 Crowned lion's head



Context [456] SF232 Emperor head



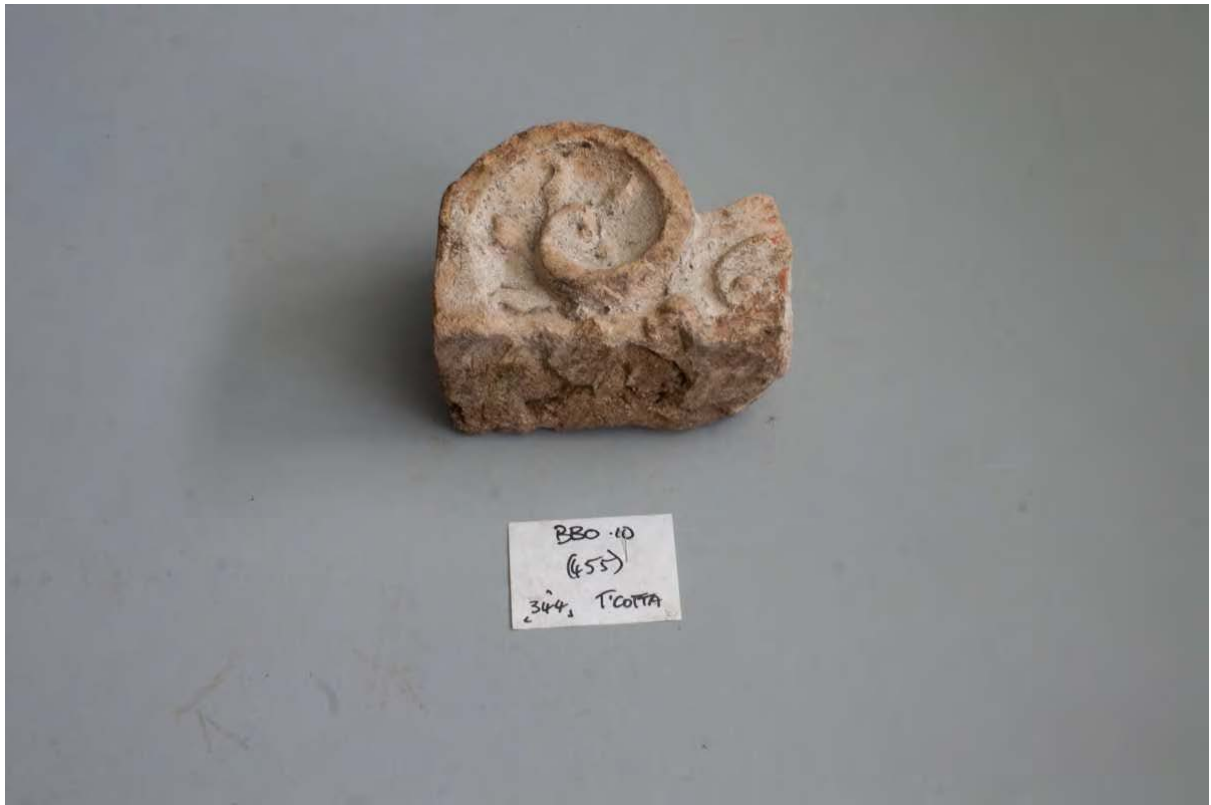
Context [456] SF238 Circular plinth



Context [456] SF279 Crown



Context [456] SF303 Female head



Context [455] SF344 Unknown decorative scheme



Context [455] SF345 Pilaster element



Context [363] SF181 Tudor rose



Context [361] Cornice corner moulding



Context [456] SF301 Putto facing right (heraldic supporter)



Context [363] SF179 Cornice corner moulding



Context [456] SF362 Cornice



Context [456] SF235 Arch



Context [363] SF183 Collared bay leaf rope



Context [456] SF281 Circular plinth



Context [456] SF300 Window element



Context [456] SF237 Putto facing right (heraldic supporter)



Maker's mark



Maker's mark

BRANDON HOUSE BBO 10 TERRACOTTAS

Terracotta wall

a) collared bay leaf rope

<i>Photo (ends)</i>	<i><sf></i>	<i>(cntxt)</i>
014	339	455
034	116	361
052	341	455
062	171	361
074	190	363
103	308	456
104	254	456
106	none	361
109	343	455
120	158	361
153	222	362
155	135	361
158	223	362
162	275	456
177	183	363
191	319	456
192	177	362
197	218	362
200	342	455
207	370	456
214	340	453
227	254	456
235	311	456
239	292	456
243	307	456
257	236	456
857	245	456
878	214	362

stamped

<i>Photo (ends)</i>	<i><sf></i>	<i>(cntxt)</i>
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Crown or coronet

145	none	361
154	113	361
219	221	362
252	302	456
307	279	456

Putto facing right

(heraldic supporter)

136	301	456
163	363	456
277	288	456
289	237	456
856	364	456

Putto facing left

(heraldic supporter)

140	280	456
143	160	361

b) heads and Tudor Rose

on octagonal bricks

089	181	363	<i>Tudor Rose</i>
099	257	456	<i>head fragment</i>
111	none	361	<i>Ariel complete</i>
196	232	456	<i>Emperor (2)</i>
210	213	362	<i>Ariel fragment</i>
306	303	456	<i>Female head</i>

<i>Photo</i>	<sf>	<i>(cntxt)</i>
<i>(ends)</i>		

Flaming urn

071	173	361
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Circular plinths (smaller may be from flaming urns)

045	355	455	
082	372	456	
121	120	361	<i>stamped</i>
131	163	361	<i>stamped</i>
132	247	456	<i>stamped</i>
193	246	456	<i>stamped</i>
244	256	456	
246	281	456	
247	282	456	
251	249	456	
301	285	456	<i>stamped</i>
304	238	456	<i>decorated</i>
859	306	456	<i>stamped</i>
863	323	456	
865	211	362	

Pilaster elements

031	345	455
075	186	363
160	182	363

<i>Photo</i>	<sf>	<i>(cntxt)</i>
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<i>(ends)</i>		
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Window elements

224	361	456
266	300	456
268	150	361
270	251	456
286	144	361
300	none	456

Cornices and corner mouldings

026	212	362	
050	none	361	
078	167	361	
084	165	361	
112	149	361	
135	none	361	<i>stamped</i>
148	179	363	
150	239	456	
156	362	456	
157	201	362	
230	210	362	
267	234	456	
294	146	361	<i>egg and dart</i>

other mouldings

028	127	361
029	217	362
073	159	361
122	353	455
182	122	361
205	none	361
231	254	456
256	142	361
259	250	456
295	143	361

<i>Photo (ends)</i>	<i><sf></i>	<i>(cntxt)</i>
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*unknown decorative
schemes*

021	317	456	
030	344	455	
037	347	455	
041	187	363	<i>imbricated</i>
053	none	361	
057	189	363	<i>?hair net</i>
063	332	455	<i>dolphin</i>
065	133	361	
066	125	361	<i>circular</i>
069	117	361	
077	155	361	
094	155	361	<i>155 bis</i>
102	none	361	
113	175	361	
114	180	363	<i>void for iron bar; ??stamped</i>
118	320	456	
119	162	361	
123	none	361	
125	200	361	
126	219	362	
161	365	456	
164	114	361	<i>¼ scheme of Farringdon</i>
175	235	456	<i>arch</i>
176	367	456	<i>stamped</i>
179	none	456	
181	none	456	
184	304	456	
198	X17	456	<i>sf no. illeg</i>

<i>Photo (ends)</i>	<i><sf></i>	<i>(cntxt)</i>	
201	204	362	
204	313	456	
211	369	456	<i>openwork</i>
213	220	362	
223	216	362	
228	215	362	<i>crowned lion's head</i>
232	368	456	
238	290	456	
245	248	456	
248	131	361	
249	284	456	
250	310	456	
254	141	361	
263	156	361	
273	136	361	
275	145	361	
285	121	361	
287	139	361	
293	147	361	
296	309	456	
308	none	456	
311	none	456	
312	none	361	
855	314	456	<i>½ roundel of pilasters</i>
860	172	361	<i>trophy</i>
862	207	362	
866	209	362	
871	331	455	
876	169	361	<i>column section</i>
883	346	455	
884	348	455	<i>? egg & dart (2)</i>

APPENDIX 12: WALL PLASTER ASSESSMENT

Berni Sudds

A medium sized assemblage of Roman wall plaster was collected during the excavation phase, amounting to 934 fragments, weighing 61,761kg. The assemblage was scanned, counted and weighed by context and scheme, the data recorded on an ACCESS database. The composition of the plaster was briefly assessed, along with any impressions to the reverse of the plaster that may reveal information about nature of the structure it originated from. A full description and quantification of individual arriccio and intonaco layers was not undertaken at this stage. The distribution of the plaster by Phase appears below in Table 1. In general, the plaster recovered from site was in a relatively poor state of preservation. With a few exceptions much is fragmentary, often with only a few fragments surviving and the schemes are difficult to interpret with any certainty. A total of 90 separate schemes were recorded, although given the degree of fragmentation and dispersal it is likely that some of these are related, and a smaller number of schemes present.

Phase	Total number	Total weight (grams)
2	797	53919
3	61	1990
4	2	13
5	8	91
6	1	119
7	5	72
8	14	112
10	12	521
Unphased	34	4924

Table 1: Roman wall plaster distribution by phase.

Phase 2: Early Roman (AD 43-250)

The vast majority of the wall plaster was derived from early Roman deposits. Where identifiable the schemes recovered are entirely in keeping with this date, essentially falling into one of two types; either polychrome panel based schemes on white ground or red panel schemes with black intervals. Both groups are rendered in two dimensions, with no attempt at architectural illusion or depth. Herringbone impressions from keyed daub are evident on a number of schemes, suggesting they derive from clay and timber buildings.

The white ground schemes with polychrome panel borders, usually black and red, include two from ditch fill [2418] and made ground [1376]. The latter has red borders and thin black framing lines or borders with some embellishment. There is also a possible green leaf, partially over-painted with a lozenge shaped red leaf or petal comprised of diagonal red stripes. This would suggest the scheme included more complex decoration, perhaps in the form of a candelabra or foliate element within the main zone or frieze. There are also red and black flecks on white ground, representing the simplest

form of imitation of marble. This technique was common throughout the Roman period, both in the dado and main zone, but taken together with the other elements of this scheme these fragments most likely derive from the dado (Davey and Ling 1982, 31-2).

There are a number of red and black schemes, the best preserved are those from dump layers [377] and [2814], floor [2331] and collapsed wall [2610]. The scheme from [377] has red fields with black intervals delineated by white lines. The black interval is painted with an elaborate yellow candelabra with white highlights, although is unusual in having red ground to one side of candelabra. It is not clear if this is internal embellishment to the interval or marks the border to the next red field. There are also fragments of red ground with a yellow candelabra with white highlights, perhaps from the main panels. The dado of this scheme is likely comprised, at least in part, of imitation marble comprised of grey ground with black, red and yellow specks. Fragments of white ground with red, black and blue panel borders and/or delineation lines appear to derive from the same scheme, possibly forming part of the frieze.

A similar scheme was recovered from floor [2331], but the red fields have yellow and possibly green borders, delineated with white lines, and the red fields are overpainted with a yellow and green candelabra. The fragments of maroon ground with white specks from this scheme probably also derive from the dado. The plaster from dump layer [2814] also has red fields with black intervals, the latter possibly overpainted by yellow candelabra and the red fields have internal yellow framing lines. The plaster from collapsed wall [2610] is also likely from a red ground scheme, but with a pink dado, flecked with red, white and black.

Red and black schemes are best paralleled in the Flavian and Trajanic period, thought to have been making their first appearance at this time (Davey and Ling 1982, 33 and 97). Similar schemes in Southwark, also dated to the late 1st century and 2nd century, are evident at Winchester Palace, Courage's Brewery, 15-23 Southwark Street, east of Borough High Street, across the Thameslink project and close by at Tabard Square (see above and Davey and Ling 1982, 33, 85 & 145; Ling 1985, 22-3; Goffin 2005, 105-113; 2003, 141 and 1992, 163; Drummond-Murray *et al.* 2002, 117-9; Sudds and Poole in prep.; Sudds 2015, 200). Indeed, variations on this scheme are typical of the late 1st and 2nd century across Britain and the north-western provinces (Davey and Ling 1982 33; Ling 1985, 22-23). White ground panel based schemes co-existed with the more elaborately coloured schemes but became more commonplace from the end of the second century (Davey and Ling 1982, 30-31; Ling 1985, 26). Where they are contemporary with more highly coloured schemes, the plainer white ground designs are likely to have been reserved for subsidiary rooms of less status, or less affluent households (Ling 1985, 26), requiring less time and resources to complete.

Much smaller fragments of plain white and red ground comprise much of the remaining Phase 2 plaster and are too incomplete to attribute to type. Pit fill [2565] contained one of the only renovated schemes, but preservation is poor and it is only possible to determine that the earlier scheme has traces of red paint and the later scheme is plain and poorly finished.

Phase 3: Late Roman (AD 250-400)

The smaller assemblage of plaster recovered from Phase 3 deposits is quite fragmentary, and as with much of the Phase 2 plaster difficult to reconstruct. A red ground scheme with a maroon marble dado with white flecks represents re-deposited fragments of the scheme from floor [2331]. Much of the rest of the plaster may also be re-deposited, although it is possible the few white ground schemes are contemporary with activity in vicinity, if not directly on site. These include further imitation marble, in form of yellow and red flecks on white from pit fill [2012], and white ground with yellow or red panel borders from pit fills [2328] and [2343].

Phases 4-10 and unphased plaster

The small quantities of re-deposited plaster recovered from Phases 4 to 10 and from unphased deposits is very fragmentary and for the most part cannot be attributed to type. The material is primarily comprised of fragments of plain white plaster or red ground. One fragment, from the fill of pit [1341], has a red panel border.

Recommendations for further work

Further analysis of this assemblage should include a full quantification of the plaster, including analysis and measurement of the base coats. Once this has been completed the unpainted plaster can be discarded. The plaster recovered derives from schemes that are well paralleled in contemporary assemblages in Southwark and across early Roman Britain so a brief summary of the schemes will be sufficient for any future publication, with up to 8 accompanying illustrations.

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APPENDIX 13: IRON SLAG AND RELATED HIGH-TEMPERATURE DEBRIS ASSESSMENT

Lynne Keys

Introduction and methodology

A medium assemblage of material (34kg), initially identified as slag, was recovered by hand on site and from soil samples processed after excavation. Much of the assemblage weight is from the samples (weighed over 23kg in total) which consisted mostly of heat-magnetised material such as grit, sand, small stones, charcoal and fired clay; occasionally, small quantities of slag were present in the samples. When the sample weight is deducted from the assemblage total, the quantity of slag from the site falls into the smaller range.

For this report the material was examined by eye and tested with a magnet. It was categorised on the basis of morphology. A magnet was used to test for iron-rich material and to detect smithing micro-slugs in the soil adhering to slags. Each slag or other material type in each context was weighed except for smithing hearth bottoms, which were individually weighed and measured for statistical purposes. Quantification data and details are given in the table below in which weight (wt.) is shown in grams, and length (len.), breadth (br.) and depth (dp.) in millimetres.

Quantification table for the assemblage

BBO 10			Brandon House, Borough High Street				
cxt	s^	slag type	wt	len	dp	br	comment
177	101	burnt coal	1				
177	101	micro-slugs	0				also hammerscale flakes & spheres
177	101	sample residue	8				slag dribbles, burnt coal
177	101	sample residue	631				<2mm. Some flake hammerscale & spheres; rest is heat magnetised charcoal and grit etc.
183	102	burnt coal	131				
186	103	fuel ash slag	9				
195	104	cinder	1				
195	104	sample residue	250				<2mm. Moderate amount of broken flake hammerscale, very, very occasional tiny spheres; rest is heat-magnetised grit etc.
209	106	ferruginous concretion	72				
209	106	sample residue	30				cess, iron
210	105	undiagnostic	8				
218	107	ashy cess	8				
377		iron-rich undiagnostic	39				
377		undiagnostic	165				very heavy for size
457		ferruginous concretion	23				
537		iron	105				in cess

708	114	micro-slags	0.5						Includes hammerscale flake & one sphere
708	114	sample residue	499						Mostly grit but includes broken hammerscale flake & some small spheres, fired clay etc.
708	114	undiagnostic	6						
1025		iron-rich undiagnostic	39						
1029	151	undiagnostic	2						
1084	133	hammerscale	0						two flakes
1126	121	undiagnostic	5						
1133	122	hammerscale	0						broken hammerscale flakes, one tiny sphere
1133	122	sample residue	307						Mostly grit but includes a mod. amount of broken hammerscale flakes & spheres
1133	122	undiagnostic	12						
1141	126	undiagnostic	1						
1146	125	slag dribble	1						
1160	127	hammerscale	0						one cindery sphere
1162		iron-rich undiagnostic	19						
1172		smithing hearth bottom	119	80	70	55			
1183		iron-rich undiagnostic	40						
1204	137	burnt coal	1						
1232	138	sample residue	382						charcoal bits in heat-treated natural material: grit etc.
1246	145	iron-rich undiagnostic	5						
1248	140	undiagnostic	2						
1251	141	sample residue	25						ferruginous concretion, charcoal
1281		iron-rich undiagnostic	38						
1305	148	sample residue	0.5						two hammerscale flakes, iron flakes, slag dribbles
1340	153	sample residue	900						Only very, very occasional broken flakes; rest is grit, fired clay and tiny shell fragments
1342	157	hammerscale	0						one flake
1342	157	sample residue	828						<2mm. Vry, very occ. Broken flake hammerscale; micro-slags and charcoal in grit
1355	152	hammerscale	0						one flake, one sphere
1355	152	sample residue	40						vitrified hearth lining, undiagnostic
1355	152	sample residue	1456						occasional micro-slags - including a few hammerscale flakes & spheres; rest is grit with charcoal inclusions
1376		vitrified hearth lining	23						possibly from copper-alloy working
1378		nail	22						
1378		undiagnostic	441						several
2000		undiagnostic	186						with vitrified hearth lining adhering
2001	202	sample residue	0						>2mm. Only a few tiny broken flakes
2001	202	sample residue	1731						<2mm. Some flake hammerscale; micro-slags, a few distorted spehres; rest is grit.
2001	202	undiagnostic	12						
2001		smithing hearth bottom	369	10	70	40			
				0					

2012	201	sample residue	11		<2mm. Very occasional hammerscale flake, rest is grit, charcoal, iron flakes, etc.
2012		vitriified hearth lining	34		
2035		fuel ash slag	12		
2035		iron-rich undiagnostic	59		
2035		nail	9		
2035		undiagnostic	21		with flake hammerscale adhering
2035		vitriified hearth lining	50		
2041		iron-rich undiagnostic	65		
2078	203	hammerscale	2		one large flake, one large and two small spheres
2078	203	sample residue	495		vitriified hearth lining, cinder, undiagnostic, flake hammerscale in soil
2078	203	sample residue	1545	**	<2mm. Moderate quantity of hammerscale flakes, only very occ. tiny spheres; rest is grit.
2096	204	sample residue	1		hammerscale flake & some spheres, also iron flakes
2096	204	sample residue	100		vitriified hearth lining, cinder, undiagnostic, iron nail
2096	204	sample residue	1281		<2mm. Moderate quantity of large broken hammerscale flakes, some occ. Tiny spheres; rest is grit, etc., etc.
2114	205	cess	13		
2114	205	cinder	8		
2114	205	sample residue	1120		<2mm. Very occasional flake hammerscale: no discernable spheres; rest is grit, fired clay etc.
2116	206	sample residue	27		cinder, undiagnostic, iron nail
2143	213	iron flakes	0		
2150	214	undiagnostic	5		
2185	218	cinder	4		
2226	220	micro-slugs	4		includes some large hammerscale flakes & mod. quantity of spheres; also iron flakes
2226	220	sample residue	359	**	undiagnostic slag, iron-rich undiagnostic, nail/rod fragment, coal
2226	220	sample residue	1518	**	<2mm. Good amount of broken flake hammerscale but poss more tiny spheres; rest is grit, fired clay etc. & occ. small iron flakes.
2226		ferruginous concretion	69		
2313		cinder	45		with broken flake inclusions
2323	221	sample residue	8		<2mm. Moderate quantity of hammerscale flakes, rest is grit, charcoal, fired clay, etc.
2323	221	undiagnostic	23		
2330		iron-rich undiagnostic	54		x2
2333	222	sample residue	887		<2m, fired clay, charcoal etc.m. Some broken flake hammerscale, no obvious spheres; the rest is grit, fired clay, charcoal, etc.

2365	225	sample residue	1					Micro-slags including one large hammerscale flake and distorted, undiagnostic spheres
2365	225	sample residue	491					<2mm. Some larger hammerscale flakes, occasional small spheres; rest is grit, charcoal, fired clay
2365		undiagnostic	176					
2396		smithing hearth bottom	124	70	65	20		
2416		iron-rich undiagnostic	59					could equally be iron
2418	226	hammerscale	0					one sphere
2424	227	fuel ash slag	1					
2471	234	hammerscale	0					flake, spheres and distorted micro-slags
2471	234	sample residue	919					<2mm. Some reasonably-sized hammerscale flake, no spheres, some tiny iron flakes; rest is grit, charcoal fired clay.
2471	234	sample residue	1633					<2mm. Small amounts broken flake hammerscale, some tiny spheres, charcoal; rest is natural material
2471		fuel ash slag	49					
2471		iron	8					Nail?
2471		iron-rich undiagnostic	53					in two pieces
2471		smithing hearth bottom	585	12	90	40		
				0				
2471		undiagnostic	384					
2526	236	vitified hearth lining	77					
2538		undiagnostic	65					
2538		undiagnostic	87	65	55	20		run
2555	237	sample residue	38					undiagnostic, charcoal
2568		undiagnostic	36					
2568		undiagnostic	446					x1
2576		smithing hearth bottom	303	90	65	40		
2576		undiagnostic	29					
2580	239	sample residue	338					<2mm. some very broken flake hammerscale, some tiny, tiny spheres; rest is natural material
2580	239	vitified hearth lining	193					with ferruginous concretion
2580		cinder	96					contains burnt pebble
2580		ferruginous concretion	143					plus bone
2580		ferruginous concretion	207	**				lots of hammerscale flakes included
2580		fuel ash slag	100					with cinder
2580		iron-rich undiagnostic	100					
2580		iron-rich undiagnostic	198					
2580		smithing hearth bottom	244	80	70	35		
2580		smithing hearth bottom	277	10	65	50		heavier because covered in water-lain clay
				0				
2580		undiagnostic	219	65	60	50		small smithing hearth bottom?
2580		undiagnostic	241					
2580		undiagnostic	245					heavier because covered in water-lain clay
2580		vitified hearth lining	82					
2586	240	micro-slags	1					includes a few hammerscale flakes & one large sphere

2586	240	sample residue	878				<2mm. Some tiny spheres, occas. very broken flake hammerscale; rest is grit, charcoal and heat-magnetised fired clay etc.
2586	240	undiagnostic	8				
2610	242	hammerscale	0				flake
2610	242	iron tool?	41	**			small chisel?
2610	242	undiagnostic	1				
2610		vitified hearth lining	62				iron-rich cinder
2622	243	slag dribble	1				
2626	246	cinder	1				
2653		undiagnostic	296				with vitified hearth lining and charcoal inclusions
2655		smithing hearth bottom	924	13	100	65	covered with hard soil & cinder
				0			
2655		undiagnostic	264				x1 with cinder attached
2655		undiagnostic	347				x1
2655		vitified hearth lining	306				x1
2661		iron-rich undiagnostic	60				x4
2668		undiagnostic	466				fragments of smithing hearth bottoms?
2676		iron	0	**			flat, heavy; width 40cm
2726	248	micro-slugs	0				
2726	248	sample residue	559				<2mm. Only very occ. iron flakes and distorted spheres, charcoal; rest is grit.
2730		slag dribble	29				
2731		iron-rich undiagnostic	153	**			x2
2838		iron-rich cinder	4				
2883	251	hammerscale	0				flake & distorted micro-slugs
2883	251	sample residue	190				<2mm. Very occasional tiny spheres, very very rare broken hammerscale flakes; most else is charcoal and grit
2921		iron-rich cinder	25				
2923	253	sample residue	208				<2mm. Some flake hammerscale but no spheres. rest is grit, charcoal, etc.
2936	252	micro-slugs	0				some hammerscale flakes
2936	252	sample residue	1123				<2mm. only tiny amounts of very broken flake & some tiny distorted spheres; the rest is natural & heat-magnetised material
2959		iron-rich undiagnostic	101				
2962	261	sample residue	794				Moderate quantity of broken hammerscale flake, very occasional spheres & micro-slugs; the rest is grit, fired clay & charcoal
2967		vitified hearth lining	52				
2976	256	sample residue	0				Occasional broken hammerscale flake & iron flakes
2976	256	sample residue	1511				Moderate quantity of broken hammerscale flake, spheres & micro-slugs; the rest is grit, fired clay & charcoal
3050	262	sample residue	770				<2mm. Moderate quantity of broken hammerscale flake & micro-slugs; rest is heat-magnetised grit which contains lots of tiny charcoal fragments
3055		cinder	5				green colour

3055	undiagnostic	141	x3
3055	vitrified hearth lining	182	
3097	micro-slags	22	including flake hammerscale
3139	265 sample residue	4	tiny undiagnostic, occasional micro-slags; most is heat-magnetised material

Total wt. = 35kg

Explanation of terms

Activities involving iron can take two forms, smelting or smithing:

Smelting is the manufacture of iron from ore and fuel in a smelting furnace. The products are a spongy mass called an unconsolidated bloom consisting of iron with a considerable amount of slag still trapped inside, and slag (waste).

No slags diagnostic of smelting were present in the Brandon House assemblage.

Smithing involves the hot working (using a hammer) of the bloom to remove excess slag (primary smithing) or, more commonly, the hot working of one or more pieces of iron to create or to repair an object (secondary smithing). As well as bulk slags, including the smithing hearth bottom (a plano-convex slag cake which builds up under the tuyère hole - hottest part - where the air from the bellows enters the hearth), smithing generates micro-slags; these can be hammerscale flakes from ordinary hot working of a piece of iron (making or repairing an object) and/or tiny spheres from bloom smithing or high temperature welding used to join or fuse two pieces of iron. Hammerscale, because of its tiny size, is usually only recovered by taking soil samples from fills and deposits but it is very magnetic and its presence can be detected using a magnet; it is most prevalent (thickest) in archaeological contexts in the immediate area of smithing, i.e. in the vicinity of the anvil and between it and the smithing hearth. Sometimes distorted micro-slags may result from smithing activity and are called such to distinguish them from diagnostic flakes and spheres.

The diagnostic slags from Brandon House were those of secondary smithing.

Slag described as undiagnostic cannot be assigned to smelting or smithing either because of morphology or because it has been broken up during deposition, re-deposition or excavation. Other types of debris in an assemblage may derive from variety of high temperature activities - including domestic fires - and cannot be taken on their own to indicate iron-working was taking place. These include fired clay, vitrified hearth lining, cinder (the lighter, vitrified portion of hearth lining) and fuel ash slag. If found in association with iron smelting and/or smithing slag they are almost certainly products of the process.

Slag types present in assemblage

Material type	Wt (g)	Process
cinder	160	not diagnostic
ferruginous concretion	514	not diagnostic
fuel ash slag	171	not diagnostic
vitrified hearth lining	1061	not diagnostic
iron-rich undiagnostic	1082	smelting or smithing
slag dribbles	31	smelting or smithing
undiagnostic	4340	smelting or smithing
iron-rich cinder	29	smithing
micro-slags	30 +	smithing
smithing hearth bottoms	3000	smithing

Smithing hearth bottom table (8 examples; total wt. 3kgs)

	Range	Median	Standard Deviation
weight	119 - 924	290	269
length	70 - 130	95	21
breadth	65 - 100	70	13
depth	20 - 65	40	14

Key groups

It is difficult, at present (given the uncertainty of some phasing) to decide on key groups but the Roman period (Phases 2 – especially - and 3) are the most significant for slag. Within this Roman period the following features stand out for various reasons.

Pit [2569]: quantity and types of slag (including 3 smithing hearth bottoms); Pit [2079]; Pit [2097];

Stakehole [2098] (micro-slags in fill); Dump (2001); Dump (2365) (with its hammerscale); Dump layer (2471) (smithing hearth bottom and hammerscale); Posthole [2963] (hammerscale)

In the post-Roman phases it is Phase 7 which is of slightly more than passing interest.

Layer (2226): (micro-slugs and hammerscale); Charcoal dump (2322): (hammerscale flake and some undiagnostic slag).

Discussion of assemblage

The most productive features for ironworking waste were the Phase 2 (particularly) and Phase 3 pits, layers, postholes, stakeholes and dumps. Without accurate phasing and plans, however, there was no possibility of examining the relationship of features with quantities of slag – particularly pits and other cuts - to others with similar diagnostic material.

The individual Roman-period dumps and layers contain relatively small quantities of slag which certainly represent re-deposited material. It is, at this stage, not possible to say whether this slag might have come from a focus of smithing nearby or from further afield. It appears to be ubiquitous across the site, at least at this stage.

What is very noticeable is the absence of large size (bulk) slags such as the smithing hearth bottom from the site. Only eight of the latter were recovered, seven of these from Roman deposits (and the eighth may be re-deposited Roman). Conversely, small quantities of micro-slugs, in particular hammerscale flakes and spheres, were present all over the site in Phases 2 and 3, and to a lesser extent in the post-Roman deposits. It may be that some smithing was taking place on or at the edge of the site, with the bulk slags being collected for re-cycling (as is known from other Roman sites in Southwark and the City) for land reclamation and road metalling and only the micro-slugs remaining as tell-tale clues. It is this recurring feature of Roman Southwark (absence of large slags, presence of the tiny) that necessitates such close examination of features and slag distribution to locate foci of ironworking; the proximity of postholes, stakeholes and pits to each other and to any structures/buildings may reveal where it was happening. Further analysis will – as is usual with Southwark - need to address this question and see what emerges from the present confusion of features which contain slag.

Significance of assemblage

The assemblage is of local importance to Southwark and, possibly, of regional importance. Once again the re-distribution of small quantities of slag in Roman pits, postholes, dumps and layers suggests the importance of Southwark for ironworking in the Roman period and may indicate, during later analysis, some limited activity on the site. For the post-medieval period, there is a possibility that limited ironworking may have taken place but close analysis will be required to determine whether this is the case or whether the slag is re-deposited Roman material. At the moment there is potential in the assemblage.

Recommendations for further work

Before further work is undertaken the phasing should be checked and made secure. Plans showing location of features with slag will be required so any possible focus of smithing in the Roman period (and later) can be located. It is recommended that further analysis is undertaken and a publication report produced.

APPENDIX 14: TIMBER ASSESSMENT

Damian Goodburn

Introduction and terms of reference of this report

The site lies next to the line of the Roman N-S Road (Sometimes termed 'Road 1') running roughly under the current Borough High Street, in low lying north Southwark. Previous excavations in the area have shown that part of the site would include zones where waterlogged deposits from the Roman and later periods could be expected. This waterlogged area lay adjacent to or over the edge of a known E-W tidal channel ('The borough channel') that separated the southern island of what became the Roman suburb of Southwark, from the mainland to the south. Therefore, some survival of waterlogged woodwork was expected and indeed found, despite restrictions on the depth to which excavation could extend.

The area continued to be low lying in later periods and was much under the influence of the tidal creeks extending down from the Thames to the north. Even much earlier in the late prehistoric period the area was also waterlogged, thus the possibility of finding pre-Roman woodwork also existed.

During the initial stages of the archaeological project evidence of a high status Tudor Building was found including rare decorative terracottas which focussed attention on features associated with that structure.

This writer was not involved on-site with this project but was commissioned to carry out the cleaning, recording, sampling and assessment of the lifted waterlogged woodwork from the project. The following report is a summary assessment of the excavated material examined first hand by this writer.

The range of early and historic waterlogged woodwork previously found in London, particularly that relevant to this project in the historic core of Southwark

Systematic excavations over the last 40 years in waterlogged areas of the historic core of London have revealed the waterlogged remains of many forms of early timber structures such as timber river walls, wharf frontages, the lower parts of buildings, building foundations, timber-lined drains, water pipes, casks, boats and many reused building and nautical timbers, shipyard installations, bridges, watermills and occasionally portable objects such as furniture. Most have been recorded in detail and closely dated providing a vast comparative archive of woodworking information from the Roman to recent periods, which is drawn on for this report. This writer has been professionally involved, first hand in this work since 1986. More recently such archaeological work has also revealed the remains of more post-medieval and even some late prehistoric woodwork broadening the corpus.

In the ancient historic core of Southwark the remains of range of waterlogged woodwork of several date ranges have also been found which differ in some respects from that found opposite in the City,

of London. A scatter of late prehistoric woodwork has been found in peat and alluvial deposits, particularly of the Late Bronze Age including, isolated worked timbers, cut stumps, platforms, causeways and fence lines. In the central core of the North Southwark islands including the general location of the Brandon House site, a variety of Roman timber structures have also been found such as relatively lightly built (private?) river, or channel walls and jetties, building foundations, a rare sunken warehouse, sunken tanks, timber-lined drains, fences, wells, timber road foundations, water pipes, parts of possible bridges and the famous Guys Hospital boat (Brigham and Goodburn *et al.* 1995). An obvious difference between the Roman water front structures so far found in Southwark compared to most of those found in the City is one of scale with those in Southwark generally being relatively simple and made of modest sized timbers, hence the suggestion that they are 'private structures' rather than municipal-governmental. However, the fact that they were also located along small, sheltered, tidal inlets suggests a lesser need for massive structures as found on the main Thames City frontage. This general distinction is important when assessing the possible functions of some of the relatively modest, probable revetment structures found at Brandon House (see also Taylor-Wilson 2002).

From the medieval period in the same Southwark core area the range of woodwork found includes, river and creek walls, occasional wharf frontages, bridge remains, drain and moat revetments, wells, fish ponds, parts of mills and reused timbers from boats, ships and buildings. In the post-medieval period a similar range of woodwork has also been found together with a range of new industrial features such as tanning pits, shipyard facilities, also bored elm water pipes, elaborate tide mills, fences, ancillary buildings, remains of the lower parts of theatres and several small, foot bridges. It is also the case that in the post-medieval period the remains of partially, timber-built cellars and sunken workshops become more common.

Archaeological evidence for tidal level changes in the vicinity

Summary of the archaeological study of changes in tidal levels of the Thames in the City-Southwark area relevant to the findings at Brandon House

It was early realised by archaeologists working on the Thames waterfront sites that riverside structures and features occurred at different OD levels related to period and also original function. The shoreside occupation features which remained normally dry such as, building floors and roads, changed minimum levels greatly through time. As there were often timber waterfront structures found adjacent that could be closely tree ring dated, the changes in shoreside occupation levels could be closely plotted through time. These levels are roughly equivalent to the highest spring tide high water levels, though very occasional minor flooding seems often to have been tolerated ('Spring tides' means the tides which are both highest and lowest in a by monthly cycle, not seasonally. 'Neaps tides' are the less fluctuating tides between spring tides). G Milne followed by T Brigham and others were able to plot approximate shore side occupation levels through time for most of the Roman and medieval period for the central London area at the head of the inner Thames estuary.

This work has been subject to even more practically orientated study in recent years and revised in some respects, following work on a number of waterfront sites in the region. The recent comparative work has also shown that the very limited tidal range suggested earlier (Such as 3m or less for the late medieval period) was in fact far greater and has also allowed the reappraisal of some previously published information. This is a complex subject but key archaeological information on tidal levels and range changes through time in the region are summarised in Goodburn and Davis 2010 and elsewhere.

Here we have to acknowledge that some shore side occupation levels reconstructed for some sites around the southern Southwark island have differed markedly from those to the north, east and west on essentially the same body of Thames tidal water (see Killock *et al.* 2015, 232-233 for example). We have to be clear that the tidal river finds the same, basically horizontal, level at any moment in time on both banks, except in exceptionally strong winds. Thus, the much larger body of tidal information from the City linked to surviving dated timber foreshore structures, and to the west and east of the Southwark core is given priority here. Lower levels than those outlined below clearly imply the existence of artificial tidal banks or 'mud walls', such as have been excavated in the area by PCA and others starting with an Iron Age example at Tanner Street. These are followed by Roman examples shown in published section diagrams from the Winchester Palace site (see Brigham 2001 appraisal of the evidence for a bank and timber structure at c. + 2m OD in the later 1st century AD) and at a larger medieval scale found at Bermondsey Wall West.

The key approximate changes in shore side occupation, with the survival of well waterlogged structures to just below those levels, are listed below, but it must be recognised that the presence of local earthen river walls can distort the picture. Even small mud walls only as little as 0.75m high would allow occupation well below the general levels set out below.

For the mid to late 1st-century AD shore side occupation levels from c. +1.7 to over 2.0m OD have been recorded in the area, these Roman shore side levels rapidly dropped to around 0.0m OD by c. AD 300 followed by a strong rise back up to c. + 1.7m OD by the later 7th century AD. Unfortunately clear evidence from waterfront sites between the early 4th century and later 7th century AD is currently lacking. The rise in shore side occupation levels, normally safe from tidal flooding then slowed a little, rising to c. 2.2m OD around 1200 and reaching c. 2.7m by 1500 and then c. 3.0m by the mid 17th century. Before the Thames barrier was built the equivalent level had risen to around +5m OD or a little higher. These dramatically changing high tide levels are absolutely crucial for the understanding of the probable functions of many of the timber structures found during excavations at Brandon House, as these lay on or close to the 'Borough' tidal channel.

Surprising coincidence of later Roman and Bronze Age foreshore timber structures occurring at the same OD levels

Though the general trend has been upward in river levels then high spring tide levels since the last glaciation there have been several periods of falling levels beyond that noted above. One such

fluctuation has resulted in the surprising result that Late Bronze Age and later Roman shore side timber structures can be found preserved at the same range of OD levels centering on 0.0 m OD. This is also potentially important for understanding the dating of some of the earliest worked timber found on the Brandon House site comprising cleft alder logs (Timber [2099] etc, see below).

Methodology of the specialist recording work carried out for this project

Firstly, it must be noted that a mixed approach to the excavation and recording of the woodwork found had to be used on this project due to restrictions on the depth of excavation permitted, access and the poor preservation of some of the timbers. This means that some of the recording was partial, limited to planning the tops of exposed timbers and basic descriptions made on-site.

For those timbers that could be lifted and wrapped for later recording full detailed records could be made and appropriate sampling carried out, following long established practice in the London area. This general approach to processing, recording and sampling waterlogged historic woodwork is laid out in the Museum of London Archaeological field manual 2nd edition onward and is also commensurate with the later national guidance on waterlogged wood of Historic England (Spence 1990; Brunning 1996).

Essentially this can be summarised as, following careful exposure of the wooden structures and the usual general recording using scale plans, sections, elevations, general written descriptions on structure or group context sheets and photographs, excavated woodwork was lifted for more detailed recording. The latter involved further gentle cleaning, recording by scale drawing and or measured sketching and completing pro-forma timber sheets, by this writer.

As is general practice with well-preserved material wood species ID samples were only taken of material without clear visual diagnostic features such as can easily be seen without magnification in mature timber of the oak, and elm families for this project. Tree-ring samples were taken of any timbers of the oak family with c. 50 annual rings or more, no timber of other dateable species such as the pines or beech were found on this project.

The detailed records made off-site by this writer form the bulk of evidence used to compile this report, assessed within a broad framework provided by similar specialist work in historic Southwark and elsewhere in Greater London, and beyond. The comments are also tempered by knowledge gained through many years of traditional woodworking, and serious, archaeology-lead experimental work in the field of early woodworking.

Quantification

The number of timbers individually labelled on site was 74, however, due to the circumstances noted above only a representative sample of the better preserved and accessible timbers could be fully excavated and recorded in detail by this writer totalling 24 items. Some of these were reasonably large, well over 2 m long, whilst others only survived in very truncated condition.

Many of the oak timbers contained too few annual rings (under c.50) for tree-ring study so only 8 were slice sampled. Whilst most of the material was easily identified oak with a little elm, a small amount was of less diagnostic timbers and sampled for species ID, a total of four items. All these samples were examined by I Tyers (see Tyers Appendix 15).

Additionally due to the possibility that some of the material from the base of the sequence found might be late prehistoric in date two C14 samples were taken and two Sp Id samples designated as also for C14 if needed (see below).

A total of 24 timbers were recorded on pro-forma timber sheets and sketched with 19 drawn to scale on gridded film. In terms of the material recorded in detail the assemblage is relatively small for the historic core of London in general, though with the addition of the material partially recorded on-site the assemblage would be medium sized.

Summary notes on the key features of the woodwork recorded in detail, in approximate chronological order as suggested in the provisional revised phasing)

Woodwork phased as of the early Roman period, Phase 2 AD 43-250

Timbers [2099] and [2138], from Context [32], cleft logs either of late prehistoric or early Roman date?

These two worked timbers were both, largely untrimmed, cleft half logs and identified visually as alder (Confirmed microscopically by I Tyers, see Appendix 15). Each had one original surviving end and one broken and decayed, with the tops lying at c. +0.5m OD. Timber [2099] survived 0.49m long by 210mm wide by 150mm thick with an eroded axe cut end. Timber [2138] was a little better preserved surviving 0.79m long by 250mm wide and 120mm thick. The sloping original end was clearly axe cut and had fairly sharp, incomplete axe stop marks c.55mm wide. These marks were also rather rounded as is commonly seen in late prehistoric woodwork. However, stratigraphically they currently appear to be of early Roman date.

A parallel here might be found in the 'late prehistoric looking' early revetment of cleft timbers found at Regis House on the City of London waterfront and dating to AD 52. It appears that in that case the work was done using small native axes in the pre-Roman style. Another, possibly even more relevant parallel, can be cited from a small excavation to the north in Southwark on the northern edge of the southern island where a corduroy layer of rough cleft alder logs was found overlying early Roman piles and associated with small oak stakes (at site BOH93, M. Birley 1993, also see the early Roman cleft oak log corduroy trackway surface found at Drapers' Gardens, Butler *et al.* 2009, 9). At the BOH93 site the cleft alder logs were laid cross wise, edge to edge as either, a corduroy road or foundation layer for the metalled Watling Street extension also known as 'Road 1'. So this last parallel throws up the possibility that these cleft logs may be, either part of an early Roman hard standing or debris from making the road corduroy timbers from local wetland trees.

A third possibility is that they are actually late prehistoric in date at a level where the late prehistoric and later Roman foreshore structures have been found on several London sites, including in Southwark. This means that running the C14 sample taken would be very worthwhile in this case to clarify the dating.

Tree stump in situ 'timber' [1447]

The remains of what appears to be an early wetland tree stump were also found preserved in situ and identified as poplar or willow by I Tyers (Timber [1447] see Appendix 15). This survived over 0.58m tall including the root bole and had a diameter of 100mm. Several London sites have provided preserved tree stumps *in situ* of early Roman date and this contributes to the picture of the living landscape of that period early in the development of the city and suburbs.

Stakes and upright timbers from Context [3], timbers [140], [142] and [145]

These three similar oak stake tips were all hewn to square cross sections with neat four faceted points. This form of stake is well known from the Roman and later periods. Timbers [145] and [140] were both cut from whole small oak logs, whilst timber [142] was hewn from a cleft section of oak. They all had decayed truncated tops and only survived between 0.33-0.40m long. The best preserved was timber [145] surviving 0.38m long by 100mm wide and 60mm thick. None of the stakes had sufficient annual rings for tree-ring study and so a C14 sample was taken from timber [145], which appeared to have some sapwood on the corners.

If these stakes were arranged in a linear fashion they would probably have been part of a fence line or very lightly built revetment of some type. Again the decayed tops of the timbers survived to c. +0.5m OD but would have been driven from much higher up which may well fit with an early Roman dating in this island edge location.

Bored timber water pipe [2098]

A solid but slightly decayed bored oak water pipe, timber [2098], must have been set in a cut dug down from higher up in the sequence originally. It was made by boring out a cleft section of oak roughly hewn to a rectangular cross section, as is typical of Roman water pipes found in the London region (Such as were found at Drapers Gardens for example, Butler *et al.* 2009, 25). Corroded traces of the linking, sharp iron collars typically used were also found. The timber was found with its top at c. +0.7m OD and it survived c.2.11m long by 220mm square. The eroded bore was c.80-90mm in diameter. Such pipes are quite distinct from the bored log pipes of 16th century and later date also found in the area, which are almost always made of elm logs.

Small Roman, oak uprights timbers [2104], [2106] and [2107]

This group of lifted Roman timbers comprised small oak uprights with [2106] and [2107] being small stakes and timber [2104] being a pale or very small earth fast post. All had anciently decayed tops surviving at c. +0.6- + 0.75m OD, but relating to substantially higher levels of at least + 1.0m OD. Stake [2106] was hewn to a rectangular section from a whole, knotty pole and was 125mm wide by 80mm thick and only 0.35m long. Stake [2107] was hewn to a roughly rectangular section, from a radially cleft 1/16th section 100mm wide and 60mm thick and survived 0.34m long.

None of these timbers were good tree-ring sample material though timber [2104] was slice sampled as a borderline candidate. Also a C14 sample was taken from the outer rings of Timber [2106]. Although these small timbers are similar to others found in better preserved early Roman fencing in waterlogged domestic sites in the City, they would not be out of place in an Anglo-Saxon or Saxo-Norman context. Recently small Saxon wooden structures have been found on several waterfront sites in the Greater London at around these levels. So, if possible running a C14 date of timber [2106] may be desirable.

Two upright timbers [4090] and [4091] from Roman Phase 2 but having Post-medieval technological features

Timbers [4090] and [4091] have both been provisionally phased as uprights of the early Roman period but have features strongly indicating a very late medieval or more likely post-medieval date. Timber [4090] was a stake broken in the ground and originally made from a second hand oak plank as indicated by a broken iron nail shank near the tip. The top survived to +1.28m OD and it was 0.65m long by 70mm wide and 35mm thick. Timber [4091] was an upright made from a sawn elm plank fragment surviving 0.38m long by 90mm wide and 24mm thick, with a sawn square base. As sawn elm planking is currently unknown in Roman London or elsewhere in Roman Britain (possibly due to a long episode of Dutch elm disease) this timber and [4090] must be very much later. The earliest use of elm planking documented in London is mid 15th century but it is far more common in the 16th to 17th centuries.

Bearing in mind these features it is suggested that these timbers were probably part of the base of a roughly made fence of post-medieval date and were clearly not Roman.

Later medieval woodwork

The lifted woodwork of this period is limited to a timber-lined well, outlined below. This indicates some local activity in the mid to late 13th century, even though clear remains of buildings of the period appear not to have been found. This may be due to truncation of shallow founded timber frame structures etc.

Timbers from the later medieval period (Phase 5), a reused cask-lined well, timber structure [540]

Staves and hoop fragments from the decayed base of a timber well lining made from a cask were lifted and cleaned off-site. After carefully cleaning all the timbers, looking for cooper's and merchant's

marks etc a sub sample of three representative staves were recorded in detail and tree ring sampled. The staves were all made from radially cleft oak from old, narrow-ringed trees. They had been trimmed and smoothed with a broad axe and the edges planed as is typical in medieval coopers' work. The ends were then shaped to fit the disk-like cask ends which were left out in reuse as a well lining. This comprised cutting the 'croze' groove, the 'howel' and bevelling the inside of the stave ends or 'chiming'. Additionally, in this cask 10mm peg holes were drilled in some of the stave ends which would have secured the ends of cross battens set outside the ends or 'heads' of the cask. This distinctive feature can still be seen in French traditional wine casks today.

The three staves were neatly made and well hollowed compared to those of many other medieval casks found in London none were more than 20mm thick and varied in width from c.170-175mm. Fragments of cleft ash hoop material was also found. A small iron nail shank was found in the end of stave [540] which was probably a fastening associated with the reuse of the cask in the well which could have been several years after its original making. The tree ring study of the samples from these three staves showed that they were made from trees felled between 1219 and 1249 in northern France or SW Germany (see Tyers Appendix 15). It thus seems that this cask was evidence of the wine trade from the region possibly of what might loosely be termed Rhenish wine. The wine trade was a very important part of medieval trade to a port like London but is only poorly documented. The craft of European coopers was crucial to these international trades and there were subtle changes through time and from region to region as shown in these timbers.

Post-medieval waterlogged woodwork

Some general considerations

It must be emphasised here that the woodwork outlined below lay at an OD level over 2 metres lower than the highest spring tide levels evidenced around 1500. This implies two things. Firstly, that the floor feature they were part of was wet enough to preserve the timber well, and was accessible implying local protection by mud walls (such as that found at Bermondsey Wall West, Brown & Taylor 2010). Secondly that these timbers were laid at cellar floor level.

Initially, it was hoped that some of these timbers might have been part of the superstructure of the high status Tudor building found at the site, and possibly linked to structures supporting the fine terracotta material also found which derives from the building. Despite careful cleaning no evidence of this was found.

The bulk of the post-medieval woodwork found and lifted from this project took the form of pit-sawn slabs cut from, irregular hewn ('Axe shaped'), oak saw baulks, left over planks with at least two reused planks. The slabs were typical, lower value left overs, or by products, that accumulated in the local shipyard sites a short distance to the NE of the site. This type of timber has been found used in many lower status structures of post-medieval date in the region, such as timber-lined drains and building foundation rafts etc. A few left over pit-sawn planks were also used and two second hand planks. The general impression given is that the owners of the structure at the time were attempting to

save money, by not buying new materials for the roughly made floor surfaces. Such floor surfaces without joists and containing much sapwood were also likely to have been short lived.

Timber [500], Phase 7

This timber was found with a top level of +0.63m OD. It was a thick slab of oak sawn from the outside of a hewn saw baulk and was 280mm wide by 90mm thick with waney edges (The layer under the bark, also known as 'bark edge'). This form of sawn slab is typical of a moderately low value off-cut from pit-sawing out other, higher value timber from the middle of the baulk. The presence of much irregular wane and perishable sapwood reduces its utility and rot resistance. However, this slab is thicker than most and would have contained much useable timber. It also appears to have had sufficient tree rings for dating but a match could not be obtained.

Timbers forming part of a roughly made sunken corridor floor, context [34], Phase 7, 1480-1600, timbers [2761], [2762], [2763], [2765], [2767] and [2769]

These planks and slabs of timber were found used as rough flooring to what appears to have been a post-medieval corridor, within a larger building. The upper surfaces of the slabs and planks lay between +0.69 and +0.49m OD. Over 2m below contemporary high spring tide levels. Examples of waste slabs included timbers [2763], [2765] and [2769]. These were all of oak and moderately eroded. Despite this, axe marks from the initial hewing out of the saw baulks survived on the hewn face of slab timber [2765], which was the best preserved surviving 1.99m long by 260mm wide and 45mm thick. Waste slab [2763] was markedly curved as might be expected in some distinctive shipyard by products whilst the other timbers were straight.

Sawn planks of better quality probably left over from other projects had also been acquired and used in the corridor floor including timber [2761] and [2762]. Plank [2761] was well preserved and had been carefully pit-sawn out to a very regular 25mm (1") thickness and a width of 420mm with a truncated length of 1.18m. Both faces bore the clear marks of pit-sawing.

Plank [2767] was also well preserved in places and bore clear pit-saw marks. It also had small areas of charring and had two small, relict iron nails, indicating previous use. Two of the corners of the plank had also been planed to a radius for its original use. It survived 2.28m long to broken ends and had a width of 320mm and thickness of 45mm. The original use is unclear.

Unfortunately this plank and slab material was fast grown with few annual rings and thus not good material for tree ring study. Only a maximum of c.50 annual rings could be seen and though timber [2769] was sampled it could not be matched and dated.

Timber [2719] part of context [34], Phase 7 a reused chest, or plank trough end

Timber [2719] was found reused in the rough timber corridor floor, context [32]. It was a damaged sawn elm plank which had lost some of its edges. It appears to have been the end of a plank built chest or trough originally of rectangular plan with sloping out sides. The plank was 30mm thick by 0.66m long, i.e. the parent container would have been around 0.75m wide and more than 350mm deep but of unknown length. The narrow basal edge was intact and pierced by close-set, corroded iron nails as were the less intact ends of the plank. Whatever the original construction had been, it was robustly made.

One face appeared to have a whitewash-like deposit on it and had one small through hole. Use as part of a large chest or industrial trough is implied and further comparison with broadly contemporary examples from sites like the Mary Rose may be useful. This plank was clearly part of a work a day container rather than a decorative building chest such as have occasionally survived in 'dry' collections above ground. Finds of this sort are uncommon in London.

An isolated oak post base, timber [2146], from Phase 7

This timber was a box quartered earth fast post base with a decayed top surviving to +2.28m OD. It was c.215mm by 200mm and survived 0.47m from its decayed top to its axe cut base. As an isolated feature it is difficult to interpret its function, it could have been a robust fence post, a gate post, a revetment upright or even a post for a crudely built ancillary building. Although slice sampled for tree ring study it could not be dated. Such neatly squared boxed quartered posts were common features of post-medieval London carpentry but less common earlier.

The potential for further analysis of the assemblage of waterlogged woodwork

The Roman woodwork is worthy of a limited amount of focussed study and comparison with other structural woodwork associated with revetting and draining, from the edges of the Southwark suburban islands. The 13th-century imported oak cask is also worthy of limited further analysis as a sample of the cooperage that made possible the medieval wine trade, probably from the greater Rhineland area. The rough sawn planks of the post-medieval corridor floor are worthy of strictly limited further analysis and presentation as samples of the evolving London sawyers' craft and timber trade in the Tudor period. The chest or trough end plank timber [2719] is worthy of further analysis in relation to finds of other Tudor period chests and troughs, such as those found on the Mary Rose.

The significance of the assemblage

The significance of the Roman assemblage is principally of local interest as the timber structures were part of the Roman management and occupation of, the far from solid edges, of the southern Southwark island. This must have been particularly important very close to the point where the main 'Watling Street' road crossed over the small channel either on a causeway of the revetted and then infilled channel or a bridge(s). Indeed, should the cleft alder logs [2099] and [2138] prove to be of early

Roman date then they may even be debris left over from making the cleft timber corduroy surface used in the early Roman road as was found *in situ* at site BOH93 along the road to the north.

The tree-ring provenancing and dating of the 13th-century imported cask makes it another addition to what we are learning about the medieval wine trade to London from the continent. The find is preceded by Saxon examples but they differ significantly in terms of the cooperage technology.

The post-medieval flooring timbers reflect the local availability of cheap off-cut and left over material from the timber trade and probably also the proximity of shipyards in NE Southwark which greatly expanded in the early post-medieval period.

The trough or large chest end is a relatively rare find from this period, containers made of elm bards rarely survive in buildings from this period as the elm is particularly prone to woodworm and rarely survives.

Method Statement

When further dating work is carried out and the provisional phasing is checked and revised, (possibly including the C14 dating of the possible late prehistoric cleft logs etc) it would be possible to prepare an updated fully reference version of this report with c. 4-5 explanatory draft figures, depending on the format required. It would also be important to see a selection of the relevant plan, section and site photographic records made.

Acknowledgements

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APPENDIX 15: TREE RING DATING AND WOOD SPECIES ID

Ian Tyers

Seven oak timbers from Brandon House, 170-194 Borough High St, Southwark (site code BBO10, NGR c.TQ 3241 7982) were submitted for dendrochronological assessment and analysis, and 4 samples of timbers were submitted for wood identification. Three of the oak timbers were successfully dated. These 3 staves were identified as from a barrel of 13th-century date, with the timber originating from northern France or south-western Germany.

Methodology

Each dendrochronological sample was supplied as a complete cross-section; it is assumed in the absence of other information that these were obtained from the optimum location for outermost rings or sapwood survival from these timbers.

Each dendrochronological sample was assessed for the wood type, the number of rings it contained, and whether the sequence of ring widths could be reliably resolved. For dendrochronological analysis samples usually need to be oak (*Quercus* spp.), to contain 50 or more annual rings, and the sequence needs to be free of aberrant anatomical features such as those caused by physical damage to the tree whilst it was still alive. Standard dendrochronological analysis methods (see e.g. English Heritage 1998) were applied to each suitable sample. The sequence of ring widths in each sample were revealed by preparing a surface equivalent to the original horizontal plane of the parent tree with a variety of bladed tools. The width of each successive annual growth ring was revealed by this preparation method. The complete sequence of the annual growth rings in the suitable samples were then measured to an accuracy of 0.01mm using a micro-computer based travelling stage. The sequence of ring widths were then plotted onto semi-log graph paper to enable visual comparisons to be made between the sequences and reference data. In addition cross-correlation algorithms (e.g. Baillie & Pilcher 1973) were employed to search for positions where the ring sequences were highly correlated. Highly correlated positions were checked using the graphs and where these were satisfactory, these locations were used to identify the calendar dates of the measured series.

The *t*-values reported below were derived from the original CROS algorithm (Baillie & Pilcher 1973). A *t*-value of 3.5 or over is usually indicative of a good match, although this is with the proviso that high *t*-values at the same relative or absolute position needs to have been obtained from a range of independent sequences, and that these positions were supported by satisfactory visual matching.

The tree-ring analysis initially dates the rings present in the timber. The interpretation of these dates relies upon the nature of the final rings in the sequence. Oak timber contains 2 types of wood, heartwood and sapwood, the latter is on the outside of the tree and thus contains the most recent growth rings, this material is softer and is not always preserved under archaeological conditions. If the sample ends in the heartwood of the original tree, a *terminus post quem* (*tpq*) date for the felling of the tree is indicated by the date of the last ring plus the addition of the minimum expected number of

sapwood rings which are missing. This *tpq* may be many decades prior to the actual date that a tree was felled, particularly where poor preservation or other loss of outer heartwood has occurred. Where some of the outer sapwood or the heartwood/sapwood boundary survives on the sample, a date range for the felling of a tree can be calculated by using the maximum and minimum number of sapwood rings likely to have been present. For all the material reported here, which is locally sourced, the sapwood estimates used are a minimum of 10 and maximum of 46 annual rings, where these figures indicate the 95% confidence limits of the range. None of this material retained sapwood or bark, and only one retained the heartwood/sapwood boundary.

Identifications of wood type are based on the taking of microscopic thin sections of each timber in three planes (radial, transverse and tangential sections). The comparison of these sections with reference slides, or by identification keys, enables secure identification to be made.

Archaeological wood may have problems of degradation during burial, or during their storage prior to identification, this may lead to the loss of one or more critical features that prevent any identification being made.

Hand cut thin sections were obtained from each of the samples. These sections were placed on glass slides and examined at between 40x and 1000x magnification. Comparison with permanent reference slides confirmed the identifications given below. The temporary slides & samples were then discarded.

Results

The submitted material comprised 7 oak (*Quercus* spp.) samples. Each of these timbers contained measurable tree-ring sequences. These timbers were each measured successfully (Table 1), this rather diverse group comprised a mixture of short lived and long lived, and fast grown and slow grown oaks. Cross-matching was found between 3 long lived and slow grown barrel timbers (Table 2), and these were found to match to a variety of northern French and south-western German reference series and some other barrel sequences which appear to be derived from the same general area (Table 3). Barrel timber 540 B retained some sapwood, and thus this can be given a *felling date range* interpretation of 1219-1249. This dating evidence suggests the first use of this barrel is towards the middle of the 13th century (Figure 1). Barrels can be re-used after a significant amount of time, so the depositional date may be considerably after this. None of the rest of this material was dated.

The 4 wood identifications samples comprise a range of timber types (Table 4).

Acknowledgements

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Figure 1: Bar diagram showing the dating position of the 3 dated medieval oak tree-ring sample from 170-194 Borough High St (site code BBO10). Interpretations are shown for each timber based on the minimum and where appropriate also the maximum typical amounts of sapwood for continental sourced oaks, using an 8-38 ring sapwood estimate. KEY; heartwood (white bars), sapwood (hatched bar).

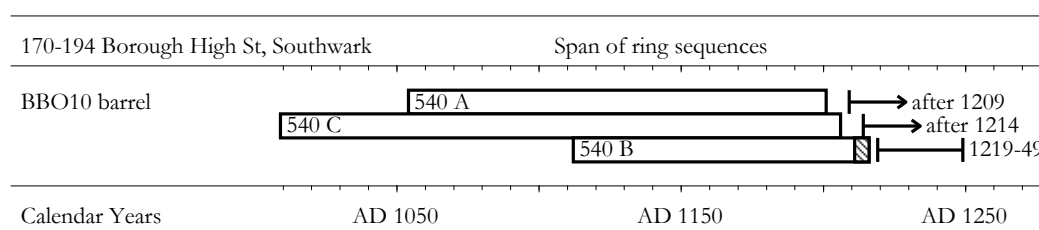


Table 1: Details of the 7 oak (*Quercus* spp.) dendrochronological samples from 170-194 Borough High St (site code BBO10). Interpretations are given using a continental sapwood estimate of 8-38 rings.

Context	Size (mm)	Rings	Sap	Date of measured sequence	Interpreted result
500	290 x 90	81	11	not dated	-
540 A	175 x 15	148	-	AD1054-1201	after 1209
540 B	175 x 20	105	5	AD1112-1216	1219-49
540 C	170 x 10	198	-	AD1009-1206	after 1214
2104	115 x 45	82	-	not dated	-
2146	210 x 200	112	-	not dated	-
2769	125 x 40	63	12	not dated	-

Table 2: Showing *t* values (Baillie & Pilcher 1973) between 3 cross-matched timbers from 170-194 Borough High St (site code BBO10). These were combined to form the composite used in Table 3.

	540 B	540 C
540 A	6.22	5.05
540 B		7.46

Table 3: Showing example *t* values (Baillie & Pilcher 1973) between a composite sequence constructed from 3 matched medieval series from 170-194 Borough High St (site code BBO10), and oak reference series from western Europe, and other barrel material from the same area.

	540 A+B+C
	AD1109-1216
France, Eastern region (Trenard 1994)	8.58
France, Paris Basin (Trenard 1994)	6.62
Germany, Trier region (Hollstein 1980)	7.24
Denmark, Ribe Præstegade barrel (Daly pers comm.)	6.76
London, Guildhall GYE92 barrel (Tyers 2008)	5.25

Table 4: Wood identifications from 170-194 Borough High St (site code BBO10), these are native types.

Context	Identification	English Name
540 band	<i>Fraxinus</i>	ash
1447	<i>Salicaceae</i>	willow/poplar
2099	<i>Alnus</i>	alder
2106	<i>Quercus</i>	oak

APPENDIX 16: ANIMAL BONE ASSESSMENT

Karen Deighton

Introduction

Over 3000 animal bones and bone fragments were collected by hand during the course of excavation. Bone from sample residues is also included (2mm and 10mm mesh) Activity on the site is divided into 10 phases from Early Roman to the Modern period and animal bone was recovered from all phases.

Method

The material was firstly sorted into recordable and non-recordable fragments and bones with fresh breaks were reassembled. Identification was aided by Schmid (1972); Prummel (1987) was consulted for neonates of the major domesticates, Lawrence and Brown (1974) for small mammals and Cohen and Serjeantson (1996) for birds. Sheep/goat distinction follows Boesneck (1969).

The following were recorded for each element: context, anatomical element, taxa, proximal fusion, distal fusion, side, burning, butchery, pathology and erosion. Ribs and Vertebra were recorded as horse, pig, dog, sheep size or cattle size but not included in quantification as their multiple numbers introduce bias. Recording of fusion follows Silver (1969). Cattle and pig teeth were aged after Grant (1982) and sheep teeth after Payne (1973). The ageing of horse teeth follows Goody (1983). Recognition and recording of butchery is after Binford (1981). Recording of sexing data for pig canines follows von den Driesch (1976) and for dog skulls is after The and Troth (1976). Pathology is described after Baker and Bothwell (1980). Measurements were taken after von den Driesch. The material was recorded onto an access database

The assemblage

Preservation

Fragmentation was heavy with only 154 long bones whole, 15.5% of bone fell into the shaft category and 19.2% fell into the fragment category. Surface erosion was only noted in five contexts. 31.3% of bone was butchered; this was largely the result of chopping. Only three pieces of bone were worked. Only one burned fragment was noted, possibly suggesting this was not a preferred method of disposal. Evidence for canid gnawing was noted on ninety-three bone fragments only.

Table1: taxa by phase

Phase/Taxa	Unphased	2	3	4	5	6	7	8	9	10	Total
Cattle	38	332	85	38	33	1	105	23	1	21	677
Cattle size	18	135	27	10	5	1	16	9	1	6	228
Sheep	3	4	3				23			5	38
Goat		1									1
Sheep/goat	31	254	52	42	16		46	25	1	10	477
Sheep size	16	61	14	3	6	1	5	2		6	114
pig	19	197	41	25	10	2	18	9	6	6	333
horse	5	40	4			2		2	3	1	57

Dog	11	66	14	5	3		10	1	10	1	121
Cat	8	7			1		5	11		16	48
Red Deer	1	1									2
Roe Deer		3		1							4
Fallow der	1										1
Hare			1								1
rabbit	2	9		2				4		2	19
Rat species	1		1								2
Small mammal		14	1		2		4			4	25
Chicken	6	33	11	4	2		4	4	1	5	70
Chicken size		2							2	3	7
Goose		2		1				1			4
Goose size		1	1								2
Duck		1									1
Small corvid		1									1
Small perching bird		2								1	3
Bird	7	9	1	3	3		1		1		25
Frog/Toad		2					2				4
Fish		1		1			2				4
Total	167	1178	256	135	83	5	243	92	23	87	2269

Phase 2

This was the largest phase, containing 52% of the bone assemblage, with bone recovered from a range of contexts including flood deposits, made ground and pit fills and floor surfaces associated with Buildings 1-4. It is dominated by cattle, followed by ovicaprid then pig and has the only goat for the site. A predominance of cattle bone is typical for the Roman period in Southwark (Cowan *et al.* 2009). Chicken was also well represented, along with very small quantities of goose and duck. Rabbit here is probably intrusive due to the taxon's burrowing habits. A similar range of species is seen at Tabard Square (Rielly 2015).

Dog in this phase is largely attributable to a partial skeleton [1290] in gully [1248] this could represent carcass disposal in a convenient place, although a ritual significance cannot be ruled out as the remains appeared to have been carefully placed. A dog skull was also noted in flood layer [1135]. A horse skull with articulating mandibles and a lower hind limb was recovered from peat layer [2342]. Neonatal pig, and juvenile cattle were noted in this phase, again typical of the Roman period.

No large concentrations of bone were noted in any particular context. The assemblage appears to represent occupation debris such as, kitchen and butchery waste as it is heavy butchered (only 20% of bones were whole), consists largely of domestic taxa and exhibits a wide range of body parts. Material recovered from samples suggests fish appeared to form a small part of the diet which fits a pattern for other Roman sites in Southwark.

Phase 3

Bone was recovered largely from made ground, garden soil, abandonment layers and pit fills. A concentration was seen in [2369] a post Roman abandonment/pre-medieval occupation layer. As with the previous phase cattle appears to be the dominant taxa.

Phase 4

A concentration (81% of the bone for the phase) was seen in Dark earth layer [2000] with the rest of the bone from made ground and pit fills. Again cattle appears to be the dominant taxa, although this statement is tentative with a small amount of material.

Phase 5

A small assemblage recovered largely from made ground and the fills of timber barrel well [516] was noted.

Phase 6

Only 5 bones were noted from this phase and all were recovered from pit fills.

Phase 7

It is more usual for assemblages of this date to be dominated by Sheep/goat, rather than the dominance of cattle seen here, however a similar pattern is seen at Stoney Street (Rielly 2013a) and at London Bridge Station (Rielly 2014) where a similar order of major domesticates and similar portions of taxa were also noted. Interestingly context [4019] the internal fill of soak away [4017], [4020] consisted entirely of cattle horncores. This was possibly waste from craft working or tanning, which arrived in Southwark in the 14th century. Concentrations of bone are seen in [361] and [456] which are backfills between walls in a Palace drain. The butchery style seen in [456] (e.g. butchery of lumbar vertebra along the medial axis) is typical of the early post-medieval period. Three complete sheep skulls were also seen in this context, plus a further skull from [362], these could be seen as evidence for primary butchery. Both neonatal pigs and evidence for veal were noted, the latter is common for the period.

Phase 8

A small assemblage, largely from pit fills, which included the partial skeleton of a juvenile cat from pit [219] was observed.

Phase 9

A small assemblage recovered mostly from pit fills and Victorian topsoil. Nearly half the assemblage was taken up with a partial dog skeleton from the fill of robber cut [716]. Samples show fish to have been concentrated in one context [183] backfill of a brick well, chicken bones were also recovered from this context suggesting its origin to be food waste.

Phase 10

A small assemblage which was largely recovered from demolition material, including the partial skeleton of a kitten from [1010] was seen in this phase.

Samples

Table 2: taxa by phase (mammals)

Phase	Cattle	Cattle size	Sheep	Sheep/goat	Sheep size	pig	dog	cat	rabbit	rat	Small mammal
-------	--------	-------------	-------	------------	------------	-----	-----	-----	--------	-----	--------------

2	3	6	1	11	9	15	3	2	6		14
3						2				1	1
5	3			1							1
7	4			2		6	6				4
9	1										
10	3				1	11			1		4

Table 3: birds, amphibians and fish from samples

Phase	chicken	Chicken size	Goose	Small corvid	Small bird	Indet bird	Frog/toad	fish
2	4		1	1	2	4	2	92
3						1		6
5	1							39
7						1		39
9		2				1		104+
10		1						66

Significance and Potential

Phase 3 has the potential to provide information on taxonomic distribution, age range and butchery practices. Phase 4 although smaller would still offer evidence on the range and abundance of taxa present.

At site level these 2 phases are significant in that they provide an insight into animal economy of Roman period and possible evidence of foundation ritual in case of the dog burial from Phase 2. At local level the Roman Phases 2 and 3 will provide comparisons for other assemblages from sites in Roman Southwark (e.g. Cowan *et al.* 2009) and add to the corpus of work for the area.

Phase 4 is problematic because of dating issues with the dark earth in London.

Phase 7 would provide useful data in terms of taxa present and butchery evidence. It is significant locally due to the lack of bone assemblages from post-medieval contexts in Southwark. Material is currently largely limited to sites from the Thameslink project (Rielly 2013a; 2013b; 2014).

Phases 5, 6 and 8-10 have limited value due to the paucity of material.

Recommendations

Further analysis should concentrate on Roman Phases 2 and 3 and possibly Phase 7 from the late medieval/early post-medieval period. Fish bone should be identified by the relevant specialist to confirm the taxa present and to add information of diet and possible environment.

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APPENDIX 17: ENVIRONMENTAL ASSESSMENT

Kate Turner

Introduction

This report summarises the findings of the rapid assessment of one hundred and eleven bulk samples taken during excavations on land at Brandon House, 170-194 Borough High Street, Southwark. These samples were taken from a series of features dating from the early Roman period onwards, the context information for which is given in Table 1.

The aim of this assessment is to:

1. Give an overview of the contents of the assessed samples;
2. Determine the environmental potential of these samples;
3. Establish whether any further analysis is necessary.

Methodology

Ninety-five bulk samples, between one and thirty-six litres in volume, were processed using the flotation method; material was collected using a 300µm mesh for the light fraction and a 1mm mesh for the heavy residue. The heavy residue was then dried, sieved at 1, 2 and 4mm and sorted to extract artefacts and ecofacts. The abundance of each category of material was recorded using a non-linear scale where '1' indicates occasional occurrence (1-10 items), '2' indicates occurrence is fairly frequent (11-30 items), '3' indicates presence is frequent (31-100 items) and '4' indicates an abundance of material (>100 items).

The light residue (>300 µm), once dried, was scanned under a low-power binocular microscope to quantify the level of environmental material, such as seeds, chaff, charred grains, molluscs and charcoal. Abundance was recorded as above. A note was also made of any other significant inclusions, for example roots and modern plant material. The results of this assessment are shown in Tables 2 & 3.

Additionally, sixteen bulk samples, between one and twenty-seven litres in volume were processed by wet sieving rather than tank flotation. Samples were gently washed between 10mm, 5mm and 2mm metal sieves, and the clean residue then dried and sorted as described above.

Results

For the purpose of this report, the results will be presented by phase. With the exception of <111>, <150>, <153> and <120> all of the samples produced flots as well as heavy residues. The flot residues from samples <252>, <254>, <255> and <261> were not assessed due to suspected contamination. All the material collected from the heavy residues has been catalogued and passed to the relevant specialists for further assessment.

Phase 1: Natural

Residues

Two bulk samples, <246> and <267>, were taken from natural accumulations on the site. The heavy residues contain very little in the way of artefacts of environmental material, indeed this fraction of sample <267> was sterile. Sample <246> contained only small amounts of fragmented wood, struck flint and slag.

Flots

The flots were similarly barren; only a few, highly fragmented pieces of wood charcoal were reported in sample <267>, along with a low concentration (<10 specimens) of seeds, of the genera *Sambucus* (elder) and *Carex* (sedges). Indeterminate fragments of heavily compacted plant material were abundant in the soil matrix, which was also the case in sample <246>. A low concentration of vitreous material was additionally identified in <246>, as well as a small number (between ten and thirty) of buttercup seeds (*Ranunculus sp.*).

Phase 2: Early Roman (AD 43-AD 250)

Residues

In total fifty-five samples were taken from contexts thought to date to the early Roman period, six of which were wet sieved. Seeds, charcoal and/or pieces of wood were found in all of the heavy residues, with the exception of those from contexts [1363], [1395] and [2985]. Wood charcoal was the most abundant, being discovered in all apart from six samples, fifty-two of which contained fragments of a suitable size for species to be determined. The highest density of material was observed in samples <152> and <265>, the fills of an early Roman pit and ditch. In addition, preserved wood pieces were reported in twelve of the heavy residues, though only samples <247> and <266> contained an assemblage of significant size (>100 pieces).

Eleven samples contained seeds, largely of pear (*Pyrus sp.*), stone fruit (*Prunus sp.*), grape vine (*Vitis sp.*) and crab apple (*Malus sp.*). Concentrations were generally low (<30 seeds), with the exception of samples <250> and <266> which yielded between thirty and fifty specimens each. Charred fragments of hazelnut shell (*Corylus sp.*) were found in these samples along with a small amount of fruit stones, the majority of specimens identified were however thought to be the remains of preserved catkins, rather than seeds. A small number (<5) of charred wheat (*Triticum sp.*) grains were also discovered in sample <151>. Sample <250> also contained an abundance of root material, which may be indicative of bioturbation within this deposit.

Human bone was sparse in the samples taken from early Roman contexts, being found only in three out of fifty-five samples. Animal bone, both from large and small mammals was, in contrast, widespread, occurring in around 85% of the assemblage. Material densities of both types of mammalian bone were low, generally less than thirty specimens per sample, though sample <152> contained a greater amount of large mammal bone, and <203> and <206> a higher density of small mammal/amphibian specimens (30-100 pieces). Fish bone was less prevalent, present in only seventeen samples, and in minimal numbers (commonly less than ten fragments), perhaps indicating that fish was not an important dietary component during this period. Fragmented bone, all of which was too broken to identify, was additionally reported in over 50% of the assessed samples.

Marine shell was reported throughout the assemblage, the majority of which consisted of heavily fragmented oyster (*Ostrea edulis*) and mussel (*Mytilus edulis*), with a small amount of cockle shell (*Cerastoderma edule*) being identified in several samples, including <131>. Some complete oyster valves were present, though none of the samples contained a large enough concentration to provide a statistically viable sample set (>100 left and right valves). Samples <203> and <204> contained the greatest abundance of material, with over one-hundred individual pieces per sample. Terrestrial and freshwater molluscs were poorly preserved in these deposits, with only a single specimen of the air-breathing species *Discus rotundatus* being identified in sample <206>, and a low frequency of freshwater specimens being present in samples <132>, <134> and <208>.

Low concentrations (<100 pieces) of building material, in the form of brick, daub, mortar, roofing material, tile and masonry stone, were identified in forty samples. Brick was the most widely reported, found in a total of twenty-two residues. Burnt, struck and/or worked flint was additionally reported in eighteen samples.

Cultural artefacts of note include an abundance of hammerscale, reported in twelve samples. Sample <203> also contained a substantial amount of slag, which may be indicative of small-scale metalworking industry being carried out at the site during this phase of occupation. Scattered concentrations of pottery were further observed in thirty-eight samples, ranging in density from one to one hundred fragments per deposit.

Flots

Preservation of environmental material in the flot fraction was generally good; wood charcoal was present in all samples with the exception of <136>, <156>, <158>, <230>, <250> and <266>, and arboreal and/or herbaceous seeds were reported in all apart from <226>. In terms of the charcoal, only fourteen of the assessed residues contained pieces of significant size, although material densities were universally high (>30 specimens). Though significant amounts (>100 specimens) of seeds were widespread in this sample set, samples <126> and <208> contained the greatest total concentration, with sample <126> also featuring the greatest diversity of material with over twenty species reported. The most commonly represented genera during this period were *Carex sp.* (sedges), *Chenopodium sp.* (goosefoots), *Lamium sp.* (dead nettle), *Persicaria sp.* (knotweed), *Sambucus sp.* (elder) and *Urtica sp.* (nettles). Elder was most frequent, being identified in all but three of the assessed samples. Samples <124>, <126>, <132>, <136>, <143> and <203> also contained small amount of charred seed remains, including specimens of *Fabaceae sp.*, which contains several edible species.

Cereals, including wheat (*Triticum sp.*), barley (*Hordeum sp.*) and oat (*Avena sativa*) were found in around 50% of the sample set, with wheat being the most abundant. None of the assessed samples contained a significantly sized assemblage (>100 specimens), though samples <124> and <132> did contain a small amount of charred rachis fragments. A proportion of the identified material was too heavily fragmented and bloated to identify, which signifies that it has been subject to prolonged, high temperature combustion. Other plant macrofossils, in the form of heavily fragmented wood and plant matter, were scattered throughout.

Freshwater molluscs were present in fourteen samples, with the greatest concentration being found in samples <132> and <136>, both of which contained over one hundred shells. A wide range of species was reported, including specimens of *Bithynia sp.*, *Planorbis sp.* and *Valvata sp.* Terrestrial shells were less common, though sample <216> did contain a moderate amount of *Cecilioides acicula*, or blind snail, which is commonly interpreted as evidence of modern burrowing.

Small animal and fish bone was present in the sample set, though occurrences were scattered and concentrations universally low. Three samples also contained a small number of fish scales. Insect remains were identified in thirty-two out of the fifty-five samples, with peak densities occurring in samples <123>, <124>, <143>, <161>, <208> and <250>.

Phase 3: Late Roman (AD 250-AD 400)

Residues

Five samples were taken from contexts provisionally dated to the late Roman period. Recovery of environmental remains from the heavy residues was good, with sizeable pieces of wood charcoal identified in all of the samples. Samples <213> and <215> also contained charred seeds, of the genus *Fabaceae* (legumes) and *Prunus sp.* (stone fruit), along with a small amount of charred barley in sample <213>, and a moderate abundance (30-100 specimens) of oat and barley in sample <215>. Sample <215> also contained preserved wood fragments.

Bone was identified throughout the late Roman contexts, with sample <213> containing over thirty pieces of small mammal material, and <214> the same amount of large mammal bone. Fragmented bone was also widely present, though fish bone was only present in three out of five samples, and in universally low abundances (<10 pieces).

As with the early Roman samples, marine shell was reported in all of the heavy residues with, as before, oyster and mussel being the most common species. Sample <222> contained the greatest density of material, with over one hundred fragmented shells.

Cultural material was sparse during this period, with only moderate to low concentrations of fragmented pottery identified in four out of five samples, and low concentrations of building material, including brick and mortar. Of note is a moderate amount of painted plaster, found in sample <222>, and an abundance of hammerscale in samples <201> and <222>.

Flots

Unlike the early Roman contexts, preservation of environmental material in these flots was poor, with only small fragments of charcoal and scattered weed seeds in the majority of samples. Samples <201> and <215> did however both contain over one hundred seeds, with the former yielding a large amount of elder, and the latter a great abundance of *Chenopodium sp.* (goosefoots) and *Urtica sp.* (nettles). Generally, species diversity was low, with only twenty-one genera being represented during this period.

Of note are samples <213> and <215>, both of which contained an abundance of charred grain, including specimens of oat, barley and wheat as well as numerous fragments of chaff. This may

indicate an intensification of local arable agriculture during this period, with the presence of rachis and glume additionally suggesting that processing of cereals may be being carried out in the vicinity.

Snails were infrequent in these deposits, with only a sparse scattering of terrestrial and freshwater examples being reported in samples <214> and <222>. Other remains of note include a moderate amount of globular, vitrified material in sample <215>, which, considering the abundance of cereals in this deposit is likely to be a by-product of cereal combustion.

Phase 5: Medieval (1150-1350)

Residues

A total of thirteen samples were taken from deposits thought to date to the Medieval occupation of the site, of these four were processed by wet sieving. Preservation of environmental remains in the heavy fraction was mixed; wood charcoal was found in eleven samples, with all apart from sample <111> containing pieces of a suitable size to determine species, though concentrations were commonly low (<30 pieces). Seeds were similarly scarce in all except sample <111>, which yielded a moderate amount of fruit stones and grape seeds (*Vitis sp.*). Cereal grains including wheat were present in samples <109> and <165>, again, only in minimal amounts.

Animal and/or fish bone was reported in ten samples, no one of which contained over thirty fragments of any one type, with the majority containing less than ten. A small amount of human skeletal material was additionally found in sample <125>.

Scattered marine shell was present in low densities, with sample <166> yielding the greatest abundance. Samples <164> and <165> also contained moderate to abundant amounts of freshwater molluscs, including specimens of *Planorbis sp.*, *Bithynia sp.*, *Lymnaea sp.*, *Valvata sp.* and *Potamopyrgus antipodarum*.

Cultural material was scattered, with small amounts of building material, mostly brick and CBM, identified in ten samples. Low concentrations of pottery were also observed in all of the samples apart from <128>, <130>, <135>, <164> and <165>.

Flots

Wood charcoal was reported in all of the flots with the exception of those from samples <130> and <164>; only two these contained significantly size fragments, <125> and <168>. Significant abundances (>100 specimens) of seeds were identified in ten of the flot residues, the most commonly represented species being *Chenopodium sp.* (goosefoots), *Lamium sp.* (deadnettles) and *Sambucus sp.* (elder). Sample <164> contained the greatest species diversity. Three samples, <125>, <135> and <166> also contained a small number of charred specimens, including legumes.

Charred grain was found in nine samples, with the highest frequency being observed in sample <109>, which contained over thirty hulled and naked specimens of wheat, along with a moderate amount of heavily carbonised grains that could not be identified. The remaining samples contained largely wheat with a small amount of barley and oat, none of which was of a concentration to be

deemed significant. In terms of other plant macrofossils, fragmented plant matter and small amounts of wood were discovered in six samples.

Around forty percent of the sample set was found to contain terrestrial and/or freshwater mollusc shells. Air-breathing specimens were scarce, present in only five samples and in small numbers. Samples <164> and <166> yielded an abundance of freshwater specimens, including large numbers of species from the genus *Planorbis*, which were present to a less extent in the remaining samples.

In terms of other remains, animal and fish bone was scarce, as was industrial residue such as hammerscale and coal. Insect remains were present in ten samples, with the highest concentration observed in <110> and <111>.

Phase 7: Post-medieval (1480-1600)

Residues

Eight samples were taken from post-medieval contexts, one of which was processed by wet sieving. Low frequencies of wood charcoal were identified in all of the samples apart from <224>, with the majority containing pieces of a significant size (>2mm). Seeds were scarce, only being found in sample <248>, which contained a small number of charred nut fragments.

Bone was identified in all of the samples with the exception of sample <221>. Small animal bone was the most common, present in six residues, with four samples containing large animal bone and three fish bone. The greatest concentration was found in sample <220> which contained moderate amount of both large and small animal bone, and fish bone.

Seven of the eight assessed samples contained whole and fragmented marine shell, largely of oyster, concentrations were low, with the exception of sample <220> which yielded between thirty and one hundred fragments.

Masonry material, including brick and mortar, was found in six samples, with the most common material being brick, which was present in moderate to abundant concentrations in four samples. Other artefacts of note include a large amount of hammerscale in samples <220>, <221> and <248>, with sample <220> also containing fragments of iron and slag could suggest an increase in metalworking on the site during this period.

Flots

Preservation of environmental material is mixed in the flots produced from post-medieval deposits; wood charcoal is abundant in the majority of samples but, with the exception of sample <220>, fragment size is small rendering identification difficult. Weed seeds are present throughout, though concentrations are variable; as before sample <220> contains not only the greatest abundance, but also the greatest diversity of material, with specimens of strawberry, buttercup, brambles, elder and goosefoot all being identified, amongst others. Charred grain is scarce, only occurring in three samples, each with less than ten grains being identified.

Snails are similarly scarce, both terrestrial and freshwater; whilst being identified in around 50% of the sample set, concentrations are low, with none producing an assemblage of significant size (>100 shells). Insect remains were more common, being present in all of the assessed samples, though only sample <248> contained over thirty specimens.

Industrial residue, in the form of highly fragmented coal and hammerscale, was discovered in five samples, with only <220> yielding a significant amount.

Phase 8: Post-medieval (1600-1700)

Residues

Three samples were taken from phase 8, all of which were processed using tank floatation. With the exception of sample <107> the heavy residues were poor in environmental remains; wood charcoal was sparse and seeds and chaff were not reported. Sample <107> however contained, along with a moderate amount of wood charcoal, specimens of *Malus/Pyrus* (apple/pear), *Prunus sp.* (stone fruits) and *Vitis sp.* (grape-vine).

As with the majority of the sample set, marine shell was identified in all three samples, with sample <238> containing the largest amount. As before, the majority of material can be attributed to *Ostrea edulis* (oyster) and *Mytilus edulis* (mussel).

In addition to an abundance of seeds, sample <107> also contained the largest amount of bone, both high densities of both small mammal and fish bone being discovered, as well as a small amount of larger mammalian material.

Cultural artefacts are scattered during this period, with the only remains of note being a moderate amount of brick in sample <107>, and an abundance of coal and hammerscale in sample <101>. Low concentrations of pottery and fragmented iron were found throughout.

Flots

Environmental material was similarly sparse in the flot residues; wood charcoal was present but highly fragmented, and, with the exception of sample <107> seeds were present only in small amounts. Sample <107> was however found to contain a large amount of seeds, including an abundance of fig (*Ficus sp.*) and strawberry (*Fragaria sp.*), which may have been an important part of the local diet during this period. Snails are scarce, and where present largely too broken to be identified to species.

Other environmental material, in the form of animal bone and fish bone, and insect remains, was found in samples <107> and <238>, though as before <107> was found to contain the greatest density of material in each category.

Sample <101> contained an abundance of coal and vitreous material, which may be waste material from industrial activity.

Phase 9: Post-medieval (1700-1820)

Residues

A total of three samples were taken from deposits thought to span the period 1700 to 1820. Environmental preservation in these deposits was poor; as observed previously wood charcoal was present, though in low frequencies. No seeds or other archaeobotanical material was identified in the heavy residues, with the exception of a small amount of fragmented wood in sample <103>. Small amounts (<10 fragments) of marine shell were present in all of the assessed samples.

Bone was found in all three samples, though sample <102> was found to contain the greatest abundance, with between thirty and one-hundred fish bones, as well as a small amount of large and small animal bone.

Building material was common in low frequencies, and largely consisted of highly fragmented mortar and brick. Other cultural artefacts, in the form of pottery, glass and clay pipe were scattered throughout. Industrial debris, including slag, copper fragments coal and hammerscale was also identified, with the largest amount being observed in sample <102>.

Flots

Preservation of environmental remains was moderate to good in the flot residues; wood charcoal was present in all three, with samples <102> and <103> both containing significantly sized fragments. Fig seeds were observed throughout the assemblage, as were bramble seeds, likely to be blackberry, and elder. A moderate of fragmented wood was also found in sample <102>. Samples <102> and <103> also contained fish bone and/or scales.

As with the heavy fraction, industrial residue in the form of clinker, slag and vitreous material was identified in sample <102>, with an abundance of similar material also being reported in sample <103>, along with coal and hammerscale.

Phase 10: Modern (1820-Present)

Residues

Five samples were taken from phase 10 contexts. Wood charcoal was abundant throughout the modern deposits, with all of the assessed samples yielding sizeable fragments. Animal bone, both large and small was present in the majority of the residues, as was fish bone, though concentrations were low (<30 pieces). Marine shell, as before of the species *Mytilus edulis* and *Ostrea edulis*, was also identified across the sample set, with the largest amount found in sample <149>.

Masonry fabric, including brick and mortar was reported in all five of the heavy residues, though abundances were scattered. Other artefacts of note include a large amount (>100 pieces) of plaster in sample <106> and a moderate amount of pottery in sample <149>. Sample <105> also contained combustion by-products, perhaps related to metal working activity.

Flots

As with the heavy fraction, the light residues contained an abundance of wood charcoal, with the bulk of samples containing material from which species could be determined. With the exception of sample

<106> all of the samples also contained over one hundred seeds each, with sample <122> containing both the largest abundance and the greatest species diversity. Common species include *Ranunculus sp.* (buttercups), fig and elder. A small amount of charred wheat was also found in sample <122>.

Other remains of note include a moderate to significant amount of insect remains in samples <106> and <122>, and industrial residue such as clinker, slag, coal and hammerscale in samples <105>, <106> and <122>.

Un-phased samples

Residues

Eighteen additional samples were taken from contexts for which phasing has not been finalised. As expected, due to the diverse nature of the material, environmental reservation across this sample set is variable. Wood charcoal was reported in all samples but two, however sample <262> was the only one to contain a significant assemblage (>100 pieces). Seeds were scarce, as was other macrobotanical material with the exception of a small amount of wood in samples <270>, <257> and <207>. Sample <207> additionally contained an abundance of root material, suggesting a high likelihood that the deposits have been disturbed.

With the exception of samples <112>, <120> and <270> bone was found throughout, in universally low abundances (<30 specimens). Small animal bone is the most common, though ten samples also contained small to moderate amounts of highly fragmented bone that could not be identified to species.

Marine shell was present in the majority of samples, commonly oyster, with samples <252> and <262> yielding the largest density, each containing over one hundred fragments. None of the samples was however found to contain an assemblage of statistical significance (over one hundred complete left and right valves).

Building material was also common, occurring in over 50% of the assessed samples; brick was the most frequent, with moderate to large concentrations being identified in four samples. Other cultural artefacts of note include small to moderate amounts of pottery, identified in all of the samples except for <120>, <131> and <270> and an abundance of hammerscale in samples <153>, <252> and <262>.

Flots

Four of the un-phased samples were not assessed, due to suspected contamination. As expected from the heavy residues the preservation of environmental material in this part of the assemblage is mixed; wood charcoal is present in nine samples, in high abundances, though only three of these contained pieces greater than 2mm in length. Seeds were identified in all of the flot residues, in moderate to abundant amounts. Sample <131> contained the largest density of seeds, as well as the greatest diversity of species, with fifteen genera represented. *Ranunculus sp.* (buttercup) and *Sambucus sp.* (elder) were the most common species, with elder being identified in all of the

assessed samples. Small amounts of charred specimens were also identified in samples <131>, <236> and <249>.

Charred cereals, including wheat, oat and barley were found in low concentrations in around 60% of the assemblage, along with a large amount of heavily charred and broken material that could not be identified. Fragments of wood and plant material were also identified in six samples.

Other remains of note include a large amount of *Daphne* and *Alona ehippia* (egg sacs) in six samples, which could indicate these features were waterlogged for extended periods.

Recommendations For Further Work

Based on the preservation of environmental material observed in the assessed samples, the following work is recommended:

- In samples where the concentrations of seeds and/or charred cereals is significant (>100 specimens) it is recommended that a complete assessment is carried out prior to publication. This material could provide valuable information regarding the changing environment of both the site and the local area over the various periods of occupation, as well as the level to which cereal cultivation is being carried out. In addition we may be able to gain an insight into local diet, and any arable industry and associated processing that could be being undertaken in the vicinity.
- Where pieces are of a suitable size (>2mm in length and width) are available, species identification should be carried out on selected charcoal samples. This could inform as to the local landscape and ground cover, and the extent to which local resources are being used for both domestic and large-scale combustion by the sites residents. This may also provide a valuable material for radiocarbon dating in features where suitable cultural material is absent.
- Where suitable column samples are available, target sampling and analysis should be carried on the malacological record, as this could provide further information on the changing hydrology of both the site and the local environment.
- During excavation bulk peat columns were taken for insect and macrobotanical analysis; it is recommended that a complete assessment of this sequence be undertaken, as the assessment has suggested that the preservation of insect remains on the site is good. A similar assessment should be carried out on similar deposits where suitable material has been retained.
- Nineteen column samples were taken from features across the site; an assessment and subsequent high-resolution analysis of targeted column samples from the site should be carried out where possible, for both pollen and diatom remains. This proxy data, along with the macrobotanical data from the bulk samples, is essential to building our understanding of the local environment and landscape-human interactions in the area.

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Table 1: Context information for environmental samples, Brandon House

Context number	Context type	Category	Phase
2626	Fill	infilling/use	1
3147	Natural	Natural	1
209	Fill	backfill/disuse	10
210	Fill	backfill/disuse	10
1133	Fill	infilling/use	10
1309	Fill	infilling/use	10
1029	Layer	surface/floor (external)	2
1082	Layer	dump	2
1083	Fill	infilling/use	2
1084	Layer	bedding/make-up/levelling	2
1135	Layer	flood	2
1141	Layer	other	2
1160	Layer	other	2
1168	Fill	backfill/disuse	2
1176	Fill	infilling/use	2
1182	Fill	backfill/disuse	2
1204	Fill	backfill/disuse	2
1232	Layer	other	2
1238	Fill	infilling/use	2
1246	Fill	infilling/use	2
1248	Fill	infilling/use	2
1270	Fill	infilling/use	2
1273	Fill	infilling/use	2
1322	Fill	Alluvial deposit	2
1323	Fill	Alluvial deposit	2
1324	Fill	Alluvial deposit	2
1355	Fill	pit	2
1363	Natural	flood	2
1368	Layer	other	2
1391	Fill	infilling/use	2
1395	Fill	infilling/use	2
1576	Fill	backfill/disuse	2
2001	Layer	dump	2
2078	Fill	infilling/use	2
2096	Fill	infilling/use	2
2113	Layer	Natural	2
2114	Layer	flood	2
2116	Fill	infilling/use	2
2126	Fill	infilling/use	2
2176	Layer	dump	2
2183	Fill	infilling/use	2
2185	Fill	infilling/use	2
2331	Layer	surface/floor (internal)	2
2365	Layer	dump	2
2418	Fill	backfill/disuse	2
2424	Fill	infilling/use	2
2460	Fill	backfill/disuse	2
2462	Fill	infilling/use	2
2471	Layer	dump	2
2482	Fill	infilling/use	2
2484	Fill	infilling/use	2

Context number	Context type	Category	Phase
2553	Fill	infilling/use	2
2555	Fill	infilling/use	2
2580	Fill	infilling/use	2
2586	Fill	infilling/use	2
2610	Layer	dump	2
2720	Layer	dump	2
2812	Fill	infilling/use	2
2883	Fill	infilling/use	2
2891	Layer	other	2
2923	Fill	infilling/use	2
2936	Fill	infilling/use	2
2976	Fill	infilling/use	2
2985	Layer		2
3111	Natural	Natural	2
3139	Fill	infilling/use	2
3140	Fill	infilling/use	2
2012	Fill	infilling/use	3
2143	Fill		3
2150	Layer	Made ground	3
2152	Layer		3
2333	Fill	infilling/use	3
535	Fill	infilling/use	5
536	Fill	infilling/use	5
537	Fill	infilling/use	5
538	Fill	infilling/use	5
1146	Layer	other	5
1149	Fill	infilling/use	5
1151	Fill	lining	5
1153	Fill	infilling/use	5
1312	Fill	infilling/use	5
1340	Fill	infilling/use	5
1342	Fill	infilling/use	5
1447	Layer	flood	5
1482	Layer	flood	5
1516	Timber	planking	5
1520	Fill	backfill/disuse	5
456	Fill	backfill/disuse	7
708	Fill	infilling/use	7
1305	Layer	other	7
2226	Fill	bedding/make-up/levelling	7
2322	Masonry	floor/surface	7
2323	Fill	dump	7
2363	Layer	bedding/make-up/levelling	7
2726	Layer	dump	7
2927	Layer	bedding/make-up/levelling	7
4018	Fill	backfill/disuse	7
177	Layer	dump	8
218	Fill	backfill/disuse	8
2253	Masonry	wall	8
183	Fill	backfill/disuse	9
186	Fill	backfill/disuse	9
195	Fill	lining	9
1126	Fill	infilling/use	

Context number	Context type	Category	Phase
1148	Layer	other	
1167	Layer	flood	
1251	Fill	backfill/disuse	
2133	Void		
2512	Layer	other	
2526	Fill		
2622	Layer	other	
2824	Fill	infilling/use	
2838	Fill	infilling/use	
2986	Fill	infilling/use	
3050	Void		
3148	Natural	Natural	

Table 2: Assessment of environmental residues, Brandon House

Sample No.	246	123	124	126	127	132	133	134	136	137	138	139	140	142	143	145	151	152	154	155	156	158	159	161	162	167	202	203	204	205	206	208	216	217	218	223		
Context No.	2626	1135	1082	1141	1160	1168	1084	1168	1182	1204	1232	1238	1248	1270	1273	1246	1029	1355	1322	1363	1323	1368	1324	1391	1395	1576	2001	2078	2096	2114	2116	2126	2176	2183	2185	2331		
Phase	1	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	
Bulk weight (litres)	23	23	16	15	23	25	24	?	25	21	12	24	24	2	24	23	27	27	23	26	22	19	19	24	6	34	26	25	17	25	25	23	27	23	15	24		
Method of processing	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	W	F	F	W	F	F	W	F	F	F	F	F	W		
Charcoal																																						
Charcoal <2mm											2		1		2																			2				
Charcoal 2-4mm		1	1		1	1		1		1	2	2				1			1		1		1		1									1		2	2	
Charcoal >4mm		1	1	2	1		2				2	2				1		1	4			1		1		1	3	3	3	3	3		3			2		
Macrobotanical remains																																						
Seeds		2			2	2		1	1																										1	1	1	
Wood	2	1							2											1																2	3	
Plant material																					1																	
Cereal Grains/Chaff																	1																					
Root																																						
Bone																																						
Human bone			2									2				2																						
Large animal bone		1		1	1		2										2	1	1					1		2	2	3	2	2	3	1	1			1	1	
Small animal bone		1	1	1	1	1	2	1	1			1	1	1		1	1	3	1			1			1	1	2	2	1	2	1			1		1	1	
Fish bone		1		1	1	1		1										1				1				1		1		2		1	1	1	1	1	1	
Bone fragments				1	2	1	1			1	1			1	1		2	3	1		1		1			2	2	2	1	2	1		1	2	1			
Building material																																						
Brick		2		1	2		2		1					1		1	2								1	2	1								2		2	
CBM			1	1	1	1	1				1					1								1				2	1				2	1				
Daub																																						
Mortar			1		1		1				2						1							1				1	1	2							2	
Roofing material			1																																			
Tile																																					1	
Stone																																					1	
Flint																																						
Burnt flint						1	1				2	1	1					1				1					1	1	1								1	
Struck flint	1																																					
Worked flint										1																												
Shell																																						
Marine		1	1	1	2	1	3		1			1				1	2	3	1							3	4	4	3	3	3	3	1	3	3	3	1	
Fresh-water						2			3																												1	
Land																																					1	
Snail - uncatagorised			1																																			
Egg																																					1	
Other artefacts																																						
Bead																											1											
Bone pin																																						
Cess deposits																																						
Clay pipe																																						
Clinker																																						
Coal																1																						
Coin																																					1	
Cu							1											1																			1	
Fabric impressed soil																																						
Glass		1					1											1								1	1	1	1	1	1				1		1	
Gold leaf																																						
Hammerscale					1		1											1										3	3									
Insects																																						
Iron (Fe) fragments							1											1								1	1	1	1					1		1		
Leather																																						
Mineralised feces																																						
Mineralised plant material																						1																
Painted Plaster								1										1																			3	
Pb		1																																				
Plaster											1																										1	
Pottery		1	1	1	2	1	2			1	1					1	2	2	1					1		2	3	3	2	3	3	1	3	1	2	1	1	
Slag	1			1						1	1</																											

Sample No.	225	226	227	230	233	234	235	237	239	240	242	247	250	251	253	256	258	265	266	271	201	213	214	215	222	109	110	111	125	128	129	130	135	157	164	165	166		
Context No.	2365	2418	2424	2460	2484	2471	2512	2555	2580	2586	2610	2720	2891	2883	2923	2976	2985	3139	3111	3140	2012	2143	2150	2152	2333	535	536	537	1146	1149	1151	1153	1176	1342	1447	1482	1520		
Phase	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	3	3	3	3	3	5	5	5	5	5	5	5	5	5	5	5	5	5	
Bulk weight (litres)	27	25	22	24	21	27	27	7	17	20	32	15	24	6	8	21	6	24	27	22	23	23	22	19	5	24	24	19	16	1	1	1	1	21	28	27	24		
Method of processing	W	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	W	F	F	F	F	F	F	F	F	F	W	F	W	W	F	F	F	W			
Charcoal																																							
Charcoal <2mm						1				2					2	1					2	1			3			1									1		
Charcoal 2-4mm		1					2	1			2	1	1			2					2	1			3	2			2						1	1	1	3	
Charcoal >4mm	3	2	2		3	1			3	2	3				2	2		4		3	1	1	1		3		2		1	1							1		
Macrobotanical remains																																							
Seeds													3						3			1		2		1	1	3				1				1	1		
Wood				2			1	1				4							4					2			2		2	1	2					3	1		
Plant material																																							
Cereal Grains/Chaff																						2		3		1												1	
Root													3																									1	
Bone																																							
Human bone																																						2	
Large animal bone	2	1	1	1	2	1	1		2	1	2		1	1	1	1		2	1	1	1	1	3	1	2	1	1									1		1	
Small animal bone	1	1	1			2	1	1	1	1	1		1	1		1					1	1	3	2	1	2	1	1	2	1		1	1			1		1	
Fish bone																																						1	1
Bone fragments	1	1	1	1			1		3		1	1	1	1	1					2	3	1	1	1	3	1	1	1								1	1	1	
Building material																																							
Brick	1	1	2	1		1			1						1					1	2	1	2	3		1	1	1	1							2		1	
CBM	1	1			3		1				3	1	1					2							1	1	1	3		1							1		
Daub																						1																	
Mortar	2		2		3						3				1			1		2	1		1												1	1			
Roofing material																																							
Tile																																							
Stone									1																														
Flint																																							
Burnt flint	1		1	1			1									1		1				1		1	1	1										1			
Struck flint							1																																
Worked flint																																							
Shell																																							
Marine	3	2	2		2	3	1		3	1	2		1	2	1	2		2	1	2	3	2	3	1	4	1	1	1	1						2	1		3	
Fresh-water																										1												3	4
Land																																							
Snail - uncatagorised																																							
Egg							1																													1			
Other artefacts																																							
Bead																					1																		
Bone pin																																							
Cess deposits																													3										
Clay pipe																																							
Clinker																																							
Coal																																							2
Coin																																							
Cu											1															1													
Fabric impressed soil																																							
Glass		1			1	1	1		1	1	1				1						1		1	1	1	1											1		
Gold leaf																																							
Hammerscale		1				2					1				1		2		3																			1	
Insects																																						2	1
Iron (Fe) fragments	1		1		1	1			1		1				1	1		1			1				1												1		
Leather																																							
Mineralised feces																																							
Mineralised plant material																																							
Painted Plaster	2										1														3												1		
Pb																																							
Plaster		1																																					
Pottery	2	2	1		2	2	2		3	1	3				1	1	2		2		2	3	2	3	2		2	1	2	1		1			2		1		
Slag	1		1			1		1	1	1	1							1						1				1	1	1									
Tessarae	1				1													1		1																			
Wood rivets																																							
Unidentified artifact																																							
Residue retained for hammerscale	Y	N	N	N	N	Y	N	N	Y	Y	N	N	N	N	Y	Y	N	N	N	N	Y	N	N	N	Y	N	N	N	N	N	N	N	N	N	Y	N	N	N	
Residue retained for small animal bone	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N
Residue retained for snail remains	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N
<5mm bagged for enviro	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N

Key: 1- Occasional, 2- fairly frequent, 3- frequent, 4- abundant

Sample No.	225	226	227	230	233	234	235	237	239	240	242	247	250	251	253	256	258	265	266	271	201	213	214	215	222	109	110	111	125	128	129	130		
Context No.	2365	2418	2424	2460	2484	2471	2512	2555	2580	2586	2610	2720	2891	2883	2923	2976	2985	3139	3111	3140	2012	2143	2150	2152	2333	535	536	537	1146	1149	1151	1153		
Phase	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	3	3	3	3	3	5	5	5	5	5	5	5		
Bulk weight (litres)	27	25	22	24	21	27	27	7	17	20	32	15	24	6	8	21	6	24	27	22	23	23	22	19	5	24	24	19	16	1	1	1		
Method of processing	W	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	W	F	F	F	F	F	F	F	F	F	W	F	W			
Charcoal																																		
Charcoal <2mm						1				2					2	1					2	1		3			1							
Charcoal 2-4mm		1					2	1		2	1	1	1			2					2	1		1	3	2			2		2			
Charcoal >4mm	3	2	2		3	1			3	2	3				2	2		4		3	1	1	1	3		2		1	1					
Macrobotanical remains																																		
Seeds													3						3			1		2		1	1	3			1			
Wood				2			1	1				4							4					2			2			2	1	2		
Plant material																																		
Cereal Grains/Chaff																						2		3		1								
Root													3																					
Bone																																		
Human bone																																		2
Large animal bone	2	1	1	1	2	1	1		2	1	2		1	1	1	1		2	1	1	1	1	3	1	2	1	1							
Small animal bone	1	1	1			2	1	1	1	1	1		1	1		1					1	1	3	2	1	2	1	1	2	1		1	1	
Fish bone																																		
Bone fragments	1	1	1	1			1		3		1	1	1	1	1					2	3	1	1	1	3	1	1							
Building material																																		
Brick	1	1	2	1		1			1						1					1	2	1	2		3		1	1	1	1				
CBM	1	1			3		1				3	1	1					2						1		1	1			3			1	
Daub																						1												
Mortar	2		2		3						3				1			1		2	1		1										1	
Roofing material																																		
Tile																																		
Stone									1																									
Flint																																		
Burnt flint	1		1	1			1										1		1				1		1	1	1							
Struck flint							1																											
Worked flint																																		
Shell																																		
Marine	3	2	2		2	3	1		3	1	2		1	2	1	2		2	1	2	3	2	3	1	4	1	1	1	1	1				
Fresh-water																																		
Land																																		
Snail - uncatagorised																																		
Egg							1																											
Other artefacts																																		
Bead																						1												
Bone pin																								1										
Cess deposits																											3							
Clay pipe																																		
Clinker																																		
Coal																																		
Coin																																		
Cu											1															1								
Fabric impressed soil																																		
Glass		1			1	1	1		1	1	1										1			1	1	1							1	
Gold leaf																																		
Hammerscale		1				2					1				1		2		3															1
Insects																													2					
Iron (Fe) fragments	1		1		1	1			1		1				1	1		1			1	1		1		1								
Leather																																		
Mineralised feces																																		
Mineralised plant material																																		
Painted Plaster	2										1														3								1	
Pb																																		
Plaster		1																																
Pottery	2	2	1		2	2	2		3	1	3				1	1	2		2		2	3	2	3	2		2	1	2	1		1		
Slag	1		1			1		1	1	1	1													1				1	1	1	1			
Tessarae	1				1															1		1												
Wood rivets																																		
Unidentified artifact																																		
Residue retained for hammerscale	Y	N	N	N	N	Y	N	N	Y	Y	N	N	N	N	Y	Y	N	N	N	N	Y	N	N	N	Y	N	N	N	N	N	N	N	N	
Residue retained for small animal bone	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N
Residue retained for snail remains	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N
<5mm bagged for enviro	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N

Key: 1- Occasional, 2- fairly frequent, 3- frequent, 4- abundant

Sample No.	135	157	164	165	166	168	108	114	148	220	221	224	248	272	101	107	238	102	103	104	105	106	122	149	270	121	
Context No.	1176	1342	1447	1482	1520	1516	456	708	1305	2226	2323	2363	2726	4018	177	218	2253	183	186	195	210	209	1133	1309	3148	1126	
Phase	5	5	5	5	5	5	7	7	7	7	7	7	7	7	8	8	8	9	9	9	10	10	10	10	10	Natural	None
Bulk weight (litres)	1	21	28	27	24	8	25	24	24	24	1	27	15	8	12	17	27	15	15	6	18	18	26	24	25	2	
Method of processing	W	F	F	F	W	F	F	F	W	F	F	F	F	F	F	F	F	W	F	F	F	W	F	F	F	F	
Charcoal																											
Charcoal <2mm					1				1		1				1								2				
Charcoal 2-4mm		1	1	1	3	2	1	2	2					1	1		2	2		2			2				1
Charcoal >4mm					1	1	2	2					1			3	2	2			4	4	1	2			1
Macrobotanical remains																											
Seeds			1	1									1			3										1	
Wood			3	1									1							1							2
Plant material																											
Cereal Grains/Chaff				1																							
Root																											
Bone																											
Human bone																											1
Large animal bone		1			1	1		2	1	1	3					2	1	1	2		1		1	1			
Small animal bone		1		1		1	2	1		2		1	3	1		4	1	1	1		2	1	2	2			
Fish bone		1		1	1			1		1				1		4		3			2		1	1			
Bone fragments		1		1	1	1	3	3	3	1		1	1		2			1		2		2	2				
Building material																											
Brick		2			1	1	4	3	3	2			3		2	3	1	2		2		1	1	2			
CBM			1											1					3	1	1			1			1
Daub																											
Mortar	1	1						1	1				1			2		2	2	1	3		1	1			
Roofing material																											
Tile																											
Stone							1																				
Flint																											
Burnt flint		1						1						1			1		1						1	1	
Struck flint									1																		
Worked flint																											
Shell																											
Marine		2	1		3	1	2	2	2	3	1	1	1		1	1	3	1	1	1	1	2	1	3			1
Fresh-water			3	4																		1					
Land													1														
Snail - uncategorised																											
Egg	1							1	1							3											
Other artefacts																											
Bead															2												
Bone pin																											
Cess deposits																											
Clay pipe														1						1							
Clinker															1												
Coal														1	3					3	2	3					
Coin																											
Cu															1				2	1		1	1				
Fabric impressed soil																1											
Glass				1									1	1		1	1	2	1	1	1	1			1		
Gold leaf																											1
Hammerscale								1		3			1		2								1				
Insects																2											
Iron (Fe) fragments		1						1		2		1			1	1	1	1		1	2	1		1			
Leather																											
Mineralised feces																1											
Mineralised plant material																											
Painted Plaster		1						1														2		1			
Pb																1				1		1	1				
Plaster																											4
Pottery		2			1	1		1	1	2			1	1	2	1	2	1	1	1	1	2		1	3		1
Slag								1		3	1				1	1			3	1	1	1	1	1			1
Tesserae																											1
Wood rivets																											
Unidentified artifact																											
Residue retained for hammerscale	N	Y	N	N	N	N	N	N	N	Y	Y	N	Y	N	Y	N	N	N	N	N	Y	N	N	Y	N	N	N
Residue retained for small animal bone	N	N	N	N	N	N	Y	N	N	N	N	N	N	N	N	Y	N	N	N	N	N	N	N	N	N	N	N
Residue retained for snail remains	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N
<5mm bagged for enviro	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N

Key: 1- Occasional, 2- fairly frequent, 3- frequent, 4- abundant

Sample No.	131	141	236	243	249	257	207	262	112	120	150	153	252	254	255	261
Context No.	1161	1251	2526	2622	2824	2986	2113	3050	538	1083	1312	1340	2936	2838	2922	2962
Phase	None	None	None	None	None	None	Void	Void								
Bulk weight (litres)	16	18	18	35	8	16	36	17	2	1	23	26	25	25	25	21
Method of processing	F	F	W	F	W	F	F	F	F	W	F	F	F	F	F	F
Charcoal																
Charcoal <2mm		1	2											1		3
Charcoal 2-4mm			2			2		4						1		3
Charcoal >4mm	1		3	2	1			4		1	3	2	3	1	1	3
Macrobotanical remains																
Seeds									1				1			
Wood						2	3									
Plant material																
Cereal Grains/Chaff																
Root							4		1							
Bone																
Human bone																1
Large animal bone			1	1		1		2			1	1	2	1	1	2
Small animal bone	1	1	2	1		1	1	2			1	1	2	1	1	2
Fish bone		1		1				1				1				
Bone fragments			3	1	1			3			1	3	3	2	1	2
Building material																
Brick			1	4	1			1			1	3	2	3	2	3
CBM												1				
Daub								2								
Mortar			1	2				1			1					
Roofing material																
Tile																
Stone																
Flint																
Burnt flint						1	1					1	1		1	1
Struck flint																
Worked flint																
Shell																
Marine	1	1	2	1	1		1	4			3	3	4	1	2	3
Fresh-water																
Land																
Snail - uncategorised																
Egg																
Other artefacts																
Bead														1		
Bone pin																
Cess deposits																
Clay pipe																
Clinker																
Coal																
Coin																
Cu																
Fabric impressed soil																
Glass		1		1			1	1			1	1		1	1	
Gold leaf																
Hammerscale													1			
Insects																
Iron (Fe) fragments			1									1	1			1
Leather						1										
Mineralised feces																
Mineralised plant material																
Painted Plaster			1	1												1
Pb																
Plaster																
Pottery		1	2	2	1	1	1	3	1		1	3	3	3	1	2
Slag			1	1					1							
Tesserae																
Wood rivets		1														
Unidentified artifact																
Residue retained for hammerscale	N	N	N	N	N	N	N	Y	N	N	N	Y	Y	N	N	N
Residue retained for small animal bone	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N
Residue retained for snail remains	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N
<5mm bagged for enviro	N	N	N	N	N	N	N	N	N	Y	N	N	N	N	N	N

Key: 1- Occasional, 2- fairly frequent, 3- frequent, 4- abundant

Sample No.		246	267	123	124	126	127	132	133	134	136	137	138	139	140	142	143	145	151	152	154	155	156	158
Context No.		2626	3147	1135	1082	1141	1160	1168	1084	1168	1182	1204	1232	1238	1248	1270	1273	1246	1029	1355	1322	1363	1323	1368
Phase		1	1	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2
Percentage assessed		100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
Volume (ml)		200	25	96	110	76	23	42	102	50	100	10	14	6	23	10	44	20	4	80	84	66	53	36
<i>Bithynia sp.</i>	Freshwater			1	2			3			4													
<i>Candidula sp.</i>	Land				1			1																
<i>Carychium tridentatum</i>	Land							1																
<i>Cecilioides acicula</i>	Land																							
<i>Cepaea nemoralis</i>	Land																							
<i>Cochlicopa lubrica</i>	Land							1																
<i>Discus rotundatus</i>	Land				1																			
<i>Hygromia cinctella</i>	Land																							
<i>Lauria cylindracea</i>	Land																		1					
<i>Lymnaea sp.</i>	Freshwater			1	2			2			3													
<i>Oxychilus sp.</i>	Land																							
<i>Pisidium sp.</i>	Freshwater				2					1	1													
<i>Planorbis sp.</i>	Freshwater			1	3	1		3			3											1		
<i>Potamopyrgus antipodarum</i>	Freshwater				3	1		3			2				1									
<i>Pupilla muscorum</i>	Land																							
<i>Succinea sp.</i>	Freshwater				1			1			1													
<i>Vallonia sp.</i>	Land									1														
<i>Valvata sp.</i>	Freshwater				2			3			3													
<i>Vertigo sp.</i>	Land																							
<i>Vitrina sp.</i>	Freshwater																							
Misc. Juveniles					4			4																
Snail eggs					3			2																
Snail operculum					2			1			1													
Fragments (no ID)					4			3	1		4			2					2					
Marine molluscs																								
Fragments (no ID)																					3			
Other remains																								
Small animal bone (frags.)				1	1	1			1									2				1		
Large animal bone																								
Fish bone						1																		
Fish scales																								
Misc. Bone fragments																1								
Insect remains				4	3	4		3		1	2	3		1	1	2	4		1			3		3
Insect eggs						3												2						
<i>Alona cf. ehippia</i>				2								1			3							4	3	
<i>Daphne ehippia</i>						2		1		1					1							4		
Coal					1	1						1					1							
Clinker																								
Slag																								
Hammer-scale				1		3																		
Vitreous globules		1																						
Soil concretions																								
Ferrous soil concretions																								

Key: 1- Occasional, 2- fairly frequent, 3- frequent, 4- abundant

Sample No.	159	161	162	167	202	203	204	205	206	208	216	217	218	223	225	226	227	230	233	234	235	237	239
Context No.	1324	1391	1395	1576	2001	2078	2096	2114	2116	2126	2176	2183	2185	2331	2365	2418	2424	2460	2484	2471	2812	2555	2580
Phase	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2
Percentage assessed	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
Volume (ml)	14	32	20	42	86	39	16	41	110	200	24	27	82	82	10	72	19	80	54	43	44	25	86
Charcoal																							
Charcoal >1mm	2	4	2	3	4	4	3	4	4	4	3	4	4	4	4	4	4		4	4	4	3	4
Charcoal <1mm	3	4	3	4	4	4	4	4	4	4	4	3	4	4	4	4	4		4	4	4	4	4
Frag. of ID size	X	X	X	X	X	✓	X	X	X	✓	X	X	X	X	<5	X	X		✓	X	X	X	✓
Seeds																							
<i>Adoxa moschatellina</i>	five-faced bishop																						
<i>Aethusa cynapium</i>	fool's parsley																						
<i>Agrostemma sp.</i>	corncockles																						
<i>Alliaria cf.</i>	mustards																						
<i>Alnus glutinosa</i>	common alder																						
<i>Apiaceae indet.</i>	celery/carrot/parsley																						
<i>Apium sp.</i>	celery																						
<i>Betula sp.</i>	birch																						
<i>Brassicaceae indet.</i>	mustards																						
<i>Bromus sp.</i>	brome grasses																						
<i>Carduus cf.</i>	plumeless thistles																						
<i>Carex sp.</i>	sedges																						
<i>Centaurea sp.</i>	knapweeds																						
<i>Chenopodium sp.</i>	goosefoots																						
<i>Coriandrum cf.</i>	coriander																						
<i>Corylus sp.</i>	hazel																						
<i>Crepis cf.</i>	hawk's-beard																						
<i>Cuminum cf.</i>	cumin																						
<i>Drosera cf.</i>	sundews																						
<i>Erucastrum sp.</i>	dogmustards																						
<i>Euphorbia sp.</i>	spurge																						
<i>Euphrasia cf.</i>	eyebright																						
<i>Fagus cf.</i>	beech																						
<i>Fallopia sp.</i>	buckwheat																						
<i>Ficus sp.</i>	fig																						
<i>Fragaria sp.</i>	strawberries																						
<i>Fumaria sp.</i>	fumewort																						
<i>Glebionis cf.</i>	crown daisy/corn marigold																						
<i>Hyoscyamus niger</i>	henbane																						
<i>Lamiaceae undiff.</i>	deadnettles																						
<i>Lamium sp.</i>	dead nettle																						
<i>Leontodon cf.</i>	hawkbits																						
<i>Lithospermum cf.</i>	gromwells																						
<i>Malus cf.</i>	crabapples																						
<i>Malus/pyrus sp.</i>	crabapple/pears																						
<i>Malva cf.</i>	mallow																						
<i>Mercurialis cf.</i>	mercuries																						
<i>Nuphar cf.</i>	water-lily																						

Sample No.	159	161	162	167	202	203	204	205	206	208	216	217	218	223	225	226	227	230	233	234	235	237	239
Context No.	1324	1391	1395	1576	2001	2078	2096	2114	2116	2126	2176	2183	2185	2331	2365	2418	2424	2460	2484	2471	2812	2555	2580
Phase	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2
Percentage assessed	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
Volume (ml)	14	32	20	42	86	39	16	41	110	200	24	27	82	82	10	72	19	80	54	43	44	25	86
<i>Origanum cf.</i>															1								
<i>Papaver sp.</i>				1																			
<i>Persicaria sp.</i>			2	1						4					1								
<i>Pimpinella cf.</i>																							
<i>Potentilla sp.</i>	1									1													
<i>Potamogeton sp.</i>				1																			
<i>Prunus sp.</i>										1		1											
<i>Pyrus sp.</i>																							
<i>Ranunculus repens/bulbosus</i>			1	2					2	3			1						1				3
<i>Ranunculus sp.</i>	2	4	4	2				1	4	4	1	4	4		4			4	4		2	2	4
<i>Rubus sp.</i>			1	2				1	2	3		3	1		1			2					2
<i>Rumex/polygonum sp.</i>			2	3						3									1				1
<i>Salvia cf.</i>																							
<i>Sambucus sp.</i>	1	4	2	4	3	1	3	3	3	2	2		2	2	3		1	3	3	2	2	1	1
<i>Sanguisorba cf.</i>																							
<i>Saponaria sp.</i>																							
<i>Silene sp.</i>				1																			2
<i>Solanaceae undiff.</i>																							
<i>Solanum cf.</i>																							
<i>Sonchus sp.</i>										1								1					
<i>Sorbus sp.</i>																							1
<i>Sparganium sp.</i>																							1
<i>Stachys cf.</i>																							
<i>Stellaria sp.</i>																							
<i>Thlaspi cf.</i>										2			1										1
<i>Thymus cf.</i>																							
<i>Trifolium cf.</i>																							
<i>Urtica sp.</i>				4		1			1	3											3	1	1
<i>Valerianella cf.</i>																							
<i>Vicia cf.</i>																							
<i>Viola sp.</i>																							
<i>Vitis sp.</i>																							
Broken seeds		4																					
Unknown			1					1												1			1
Charred seeds																							
<i>Agrostemma cf.</i>																							
<i>Chenopodium sp.</i>																							
<i>Crepis cf.</i>																							
<i>Euphorbia sp.</i>						1																	
<i>Fabaceae</i> indet.																							
<i>Galium sp.</i>																							
<i>Persicaria sp.</i>																							
<i>Poaceae</i> indet. (small)																							
<i>Rumex/polygonum sp.</i>						1																	
<i>Scrophulariaceae undiff.</i>																							
<i>Viola cf.</i>																							

Sample No.	159	161	162	167	202	203	204	205	206	208	216	217	218	223	225	226	227	230	233	234	235	237	239
Context No.	1324	1391	1395	1576	2001	2078	2096	2114	2116	2126	2176	2183	2185	2331	2365	2418	2424	2460	2484	2471	2812	2555	2580
Phase	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2
Percentage assessed	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
Volume (ml)	14	32	20	42	86	39	16	41	110	200	24	27	82	82	10	72	19	80	54	43	44	25	86
<i>Vitis sp.</i>	grape-vine																						
Unknown																							
Grain																							
<i>Avena sativa</i>	oat																						
<i>Hordeum sp.</i>	barley																						
<i>Panicum sp.</i>	millets																						
<i>Secale cereale</i>	rye																						
<i>Triticum sp.</i>	wheat																						
Hulled specimens																							
Broken/unidentifiable																							
Rachis																							
Glume bases																							
Indet. Chaff																							
Other plant macrofossils																							
Aquatic weed																							
Fragmented wood																							
Fragmented plant matter																							
<i>Raphanus raphanistrum</i> (silica frags)	wild radish																						
Modern plant material																							
Indet. Roots																							
Terrestrial/freshwater molluscs																							
<i>Bithynia sp.</i>	Freshwater																						
<i>Candidula sp.</i>	Land																						
<i>Carychium tridentatum</i>	Land																						
<i>Cecilioides acicula</i>	Land																						
<i>Cepaea nemoralis</i>	Land																						
<i>Cochlicopa lubrica</i>	Land																						
<i>Discus rotundatus</i>	Land																						
<i>Hygromia cinctella</i>	Land																						
<i>Lauria cylindracea</i>	Land																						
<i>Lymnaea sp.</i>	Freshwater																						
<i>Oxychilus sp.</i>	Land																						
<i>Pisidium sp.</i>	Freshwater																						
<i>Planorbis sp.</i>	Freshwater																						
<i>Potamopyrgus antipodarum</i>	Freshwater																						
<i>Pupilla muscorum</i>	Land																						
<i>Succinea sp.</i>	Freshwater																						
<i>Vallonia sp.</i>	Land																						
<i>Valvata sp.</i>	Freshwater																						
<i>Vertigo sp.</i>	Land																						
<i>Vitrina sp.</i>	Freshwater																						
Misc. Juveniles																							
Snail eggs																							
Snail operculum																							
Fragments (no ID)																							

Sample No.	159	161	162	167	202	203	204	205	206	208	216	217	218	223	225	226	227	230	233	234	235	237	239
Context No.	1324	1391	1395	1576	2001	2078	2096	2114	2116	2126	2176	2183	2185	2331	2365	2418	2424	2460	2484	2471	2812	2555	2580
Phase	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2
Percentage assessed	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
Volume (ml)	14	32	20	42	86	39	16	41	110	200	24	27	82	82	10	72	19	80	54	43	44	25	86
Marine molluscs																							
Fragments (no ID)						4		2								4	3	4	3				
Other remains																							
Small animal bone (frags.)					1		1	1					1				1	1		1	1		
Large animal bone																							
Fish bone					1			2		1										1			
Fish scales					2			1					1										
Misc. Bone fragments																1							
Insect remains		4	2	3		1		1	3	4		2	2	2				3	2				3
Insect eggs	1		3																				
Alona cf. ehippia		4	2																				
Daphne ehippia				1				1		3		2			1			2	1				1
Coal						1											1						
Clinker						2																	
Slag																							
Hammer-scale						3																	
Vitreous globules						1																	
Soil concretions														3		4							
Ferrous soil concretions																	3						

Key: 1- Occasional, 2- fairly frequent, 3- frequent, 4- abundant

Sample No.	240	242	247	250	251	253	256	258	265	266	271	201	213	214	215	222	109	110	111	125	128	129	130
Context No.	2586	2610	2720	2891	2883	2923	2976	2985	3139	3111	3140	2012	2143	2150	2152	2333	535	536	537	1146	1149	1151	1153
Phase	2	2	2	2	2	2	2	2	2	2	2	3	3	3	3	3	5	5	5	5	5	5	5
Percentage assessed	100%	100%	100%	100%	100%	100%	100%	100%	100%	25%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
Volume (ml)	76	21	100	147	12	1	45	43	54	430	64	10	82	21	170	11	9	142	104	45	0.1	0.1	4
Charcoal																							
Charcoal >1mm	4	3	4		3	1	4	1	4		4	4	4	4	3	3	2	1	4	4	1		
Charcoal <1mm	4	4	4		4	3	4	3	4		4	4	4	4	4	4	4	2	4	4	1	2	
Frag. of ID size	X	X	X		✓	X	X	X	✓		<5	X	X	X	X	X	X	X	X	✓	X	X	
Seeds																							
<i>Adoxa moschatellina</i>	five-faced bishop												1										
<i>Aethusa cynapium</i>	fool's parsley												1										
<i>Agrostemma sp.</i>	corncockles																						
<i>Alliaria cf.</i>	mustards											1			1		4		2				
<i>Alnus glutinosa</i>	common alder			4						4													
<i>Apiaceae indet.</i>	celery/carrot/parsley			4						2			1				1						
<i>Apium sp.</i>	celery												1										
<i>Betula sp.</i>	birch						1																
<i>Brassicaceae indet.</i>	mustards																	1	1	1			
<i>Bromus sp.</i>	brome grasses																						
<i>Carduus cf.</i>	plumeless thistles																	1					
<i>Carex sp.</i>	sedges	1		4							1			1	1		1		3				
<i>Centaurea sp.</i>	knapweeds																						
<i>Chenopodium sp.</i>	goosefoots			4	1					3		2		4		4	3	4	3				
<i>Coriandrum cf.</i>	coriander																						
<i>Corylus sp.</i>	hazel																						
<i>Crepis cf.</i>	hawk's-beard																	1					
<i>Cuminum cf.</i>	cumin																	1					
<i>Drosera cf.</i>	sundews						1																
<i>Erucastrum sp.</i>	dogmustards																						
<i>Euphorbia sp.</i>	spurge														1		1						
<i>Euphrasia cf.</i>	eyebright					2																1	
<i>Fagus cf.</i>	beech																1						
<i>Fallopia sp.</i>	buckwheat			1																1			
<i>Ficus sp.</i>	fig												1					4	4	1			
<i>Fragaria sp.</i>	strawberries												1				1	4	4	2			
<i>Fumaria sp.</i>	fumewort																1		1				
<i>Glebionis cf.</i>	crown daisy/corn marigold																						
<i>Hyoscyamus niger</i>	henbane																3		1				
<i>Lamiaceae undiff.</i>	deadnettles		1										1							2			
<i>Lamium sp.</i>	dead nettle		2								1	1	1		1	1	1	3	2				
<i>Leontodon cf.</i>	hawkbits												1										
<i>Lithospermum cf.</i>	gromwells														3								
<i>Malus cf.</i>	crabapples																						
<i>Malus/pyrus sp.</i>	crabapple/pears																	1					
<i>Malva cf.</i>	mallow																						
<i>Mercurialis cf.</i>	mercuries																			1			
<i>Nuphar cf.</i>	water-lily																						

Sample No.	240	242	247	250	251	253	256	258	265	266	271	201	213	214	215	222	109	110	111	125	128	129	130
Context No.	2586	2610	2720	2891	2883	2923	2976	2985	3139	3111	3140	2012	2143	2150	2152	2333	535	536	537	1146	1149	1151	1153
Phase	2	2	2	2	2	2	2	2	2	2	2	3	3	3	3	3	5	5	5	5	5	5	5
Percentage assessed	100%	100%	100%	100%	100%	100%	100%	100%	100%	25%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
Volume (ml)	76	21	100	147	12	1	45	43	54	430	64	10	82	21	170	11	9	142	104	45	0.1	0.1	4
<i>Origanum cf.</i>																							
<i>Papaver sp.</i>																							1
<i>Persicaria sp.</i>			1	4						2			1									2	1
<i>Pimpinella cf.</i>																	1						
<i>Potentilla sp.</i>			1																				
<i>Potamogeton sp.</i>										1													
<i>Prunus sp.</i>																	1	2	3				
<i>Pyrus sp.</i>																							
<i>Ranunculus repens/bulbosus</i>			1							2			2										1
<i>Ranunculus sp.</i>			3	4				3		4	1	2	1			2	2						
<i>Rubus sp.</i>		1		2	1			1		2			1				2	1	1				
<i>Rumex/polygonum sp.</i>				2	3					1							1		2	1			
<i>Salvia cf.</i>													1										
<i>Sambucus sp.</i>	1	2		2	2	1	2	1	2	3	3	4	3	2	2	2	3		2	3			1
<i>Sanguisorba cf.</i>			1																				
<i>Saponaria sp.</i>																	2						
<i>Silene sp.</i>										2			1										1
<i>Solanaceae undiff.</i>										1													3
<i>Solanum cf.</i>																	1	1					
<i>Sonchus sp.</i>																							
<i>Sorbus sp.</i>																							
<i>Sparganium sp.</i>																							
<i>Stachys cf.</i>																							
<i>Stellaria sp.</i>				1						2													1
<i>Thlaspi cf.</i>																							
<i>Thymus cf.</i>																							
<i>Trifolium cf.</i>																							
<i>Urtica sp.</i>				4			1						1		4		3		3	1			
<i>Valerianella cf.</i>											1												
<i>Vicia cf.</i>																							
<i>Viola sp.</i>																							
<i>Vitis sp.</i>																	1	2	1				
Broken seeds																							2
Unknown											1		1				1	2	1				
Charred seeds																							
<i>Agrostemma cf.</i>													2										
<i>Chenopodium sp.</i>																							
<i>Crepis cf.</i>																							
<i>Euphorbia sp.</i>																							
<i>Fabaceae indet.</i>													2		3								1
<i>Galium sp.</i>																							
<i>Persicaria sp.</i>																							
<i>Poaceae indet. (small)</i>																							
<i>Rumex/polygonum sp.</i>													1										
<i>Scrophulariaceae undiff.</i>																2							
<i>Viola cf.</i>																							

Sample No.	240	242	247	250	251	253	256	258	265	266	271	201	213	214	215	222	109	110	111	125	128	129	130	
Context No.	2586	2610	2720	2891	2883	2923	2976	2985	3139	3111	3140	2012	2143	2150	2152	2333	535	536	537	1146	1149	1151	1153	
Phase	2	2	2	2	2	2	2	2	2	2	2	3	3	3	3	3	5	5	5	5	5	5	5	
Percentage assessed	100%	100%	100%	100%	100%	100%	100%	100%	100%	25%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	
Volume (ml)	76	21	100	147	12	1	45	43	54	430	64	10	82	21	170	11	9	142	104	45	0.1	0.1	4	
<i>Vitis</i> sp.	grape-vine																							
Unknown																								
Grain																								
<i>Avena sativa</i>	oat																							
<i>Hordeum</i> sp.	barley																							
<i>Panicum</i> sp.	millets																							
<i>Secale cereale</i>	rye																							
<i>Triticum</i> sp.	wheat																							
Hulled specimens																								
Broken/unidentifiable	2	1					1	1			1	1	3		✓	✓	✓	3	1	1		1		
Rachis													3		3									
Glume bases													1											
Indet. Chaff																								
Other plant macrofossils																								
Aquatic weed						1	1									1								
Fragmented wood				4						4								2	4					
Fragmented plant matter				4				4		4								4		4				
<i>Raphanus raphanistrum</i> (silica frags)	wild radish																							
Modern plant material																								
Indet. Roots		1																					1	
Terrestrial/freshwater molluscs																								
<i>Bithynia</i> sp.	Freshwater																							
<i>Candidula</i> sp.	Land																							
<i>Carychium tridentatum</i>	Land																							
<i>Cecilioides acicula</i>	Land																							
<i>Cepaea nemoralis</i>	Land																							
<i>Cochlicopa lubrica</i>	Land																							
<i>Discus rotundatus</i>	Land																							
<i>Hygromia cinctella</i>	Land																							
<i>Lauria cylindracea</i>	Land																							
<i>Lymnaea</i> sp.	Freshwater																							
<i>Oxychilus</i> sp.	Land																							
<i>Pisidium</i> sp.	Freshwater																							
<i>Planorbis</i> sp.	Freshwater																							
<i>Potamopyrgus antipodarum</i>	Freshwater																							
<i>Pupilla muscorum</i>	Land																							
<i>Succinea</i> sp.	Freshwater																							
<i>Vallonia</i> sp.	Land																							
<i>Valvata</i> sp.	Freshwater																							
<i>Vertigo</i> sp.	Land																							
<i>Vitrina</i> sp.	Freshwater																							
Misc. Juveniles																								
Snail eggs																								
Snail operculum																								
Fragments (no ID)						1								3		2			1					

Sample No.	240	242	247	250	251	253	256	258	265	266	271	201	213	214	215	222	109	110	111	125	128	129	130
Context No.	2586	2610	2720	2891	2883	2923	2976	2985	3139	3111	3140	2012	2143	2150	2152	2333	535	536	537	1146	1149	1151	1153
Phase	2	2	2	2	2	2	2	2	2	2	2	3	3	3	3	3	5	5	5	5	5	5	5
Percentage assessed	100%	100%	100%	100%	100%	100%	100%	100%	100%	25%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
Volume (ml)	76	21	100	147	12	1	45	43	54	430	64	10	82	21	170	11	9	142	104	45	0.1	0.1	4
Marine molluscs																							
Fragments (no ID)							3		4			2											
Other remains																							
Small animal bone (frags.)				1	1								1	1		1	1	2					
Large animal bone																							
Fish bone					2		2		1			1						1					
Fish scales														1									
Misc. Bone fragments									1											1			
Insect remains			2	4						2	2		1				2	4	4	3	1		
Insect eggs		2											1										
Alona cf. ehippia													2	1		1							
Daphne ehippia		1	2	3				2			1							2		1			
Coal							1							1						2			
Clinker																							
Slag																							
Hammer-scale																							
Vitreous globules													2		3								
Soil concretions																							
Ferrous soil concretions																							

Key: 1- Occasional, 2- fairly frequent, 3- frequent, 4- abundant

Sample No.	135	157	164	165	166	168	108	114	148	220	221	224	248	272	101	107	238	102	103	104	105	106	122
Context No.	1340	1342	1447	1482	1520	1516	456	708	1305	2226	2323	2363	2726	4018	177	218	2253	183	186	195	210	209	1133
Phase	5	5	5	5	5	5	7	7	7	7	7	7	7	7	8	8	8	9	9	9	10	10	10
Percentage assessed	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
Volume (ml)	28	21	250	38	150	22	65	11	10	140	4	5	35	53	21	42	21	350	160	14	460	125	210
Charcoal																							
Charcoal >1mm	1	3		2	4	2	2	3	3	4		2	3	2	2	3	4	4	3	4	4	4	4
Charcoal <1mm	3	4		3	4	3	3	4	4	4		3	3	3	4	4	4	4	4	4	4	4	4
Fragms. of ID size	X	X		X	X	<5	X	X	X	✓		X	X	X	X	X	X	✓	✓	X	✓	✓	✓
Seeds																							
<i>Adoxa moschatellina</i>	five-faced bishop												1										
<i>Aethusa cynapium</i>	fool's parsley		1		2		1		1														2
<i>Agrostemma sp.</i>	corncockles																						
<i>Alliaria cf.</i>	mustards	1	2			1				2													
<i>Alnus glutinosa</i>	common alder																						
<i>Apiaceae indet.</i>	celery/carrot/parsley		3	1			1			1			1										
<i>Apium sp.</i>	celery																						
<i>Betula sp.</i>	birch						1									1						1	
<i>Brassicaceae indet.</i>	mustards		2		1					1				1									2
<i>Bromus sp.</i>	brome grasses																		1				
<i>Carduus cf.</i>	plumeless thistles		1	1																			
<i>Carex sp.</i>	sedges		4	1	2	1	2			2					2	1							2
<i>Centaurea sp.</i>	knapweeds		1																				
<i>Chenopodium sp.</i>	goosefoots	4	2		2	3	2	3	2	3			3										4
<i>Coriandrum cf.</i>	coriander																						
<i>Corylus sp.</i>	hazel									1													
<i>Crepis cf.</i>	hawk's-beard		1																				
<i>Cuminum cf.</i>	cumin																						
<i>Drosera cf.</i>	sundews																						
<i>Erucastrum sp.</i>	dogmustards																						
<i>Euphorbia sp.</i>	spurge			1				1															3
<i>Euphrasia cf.</i>	eyebright	4									2	1					1						
<i>Fagus cf.</i>	beech																						
<i>Fallopia sp.</i>	buckwheat									1													2
<i>Ficus sp.</i>	fig							2		2				2	1	4		3	3	2	2	3	4
<i>Fragaria sp.</i>	strawberries				3			2		3		1	2			3		2		1	1		4
<i>Fumaria sp.</i>	fumewort		1																				1
<i>Glebionis cf.</i>	crown daisy/corn marigold		1																				
<i>Hyoscyamus niger</i>	henbane	1		1				1															
<i>Lamiaceae undiff.</i>	deadnettles				1	1																	
<i>Lamium sp.</i>	dead nettle	1		3	1	2	1		1	2			1										2
<i>Leontodon cf.</i>	hawkbits																						
<i>Lithospermum cf.</i>	gromwells																						
<i>Malus cf.</i>	crabapples															1							2
<i>Malus/pyrus sp.</i>	crabapple/pears																	1					
<i>Malva cf.</i>	mallow																						
<i>Mercurialis cf.</i>	mercuries																						
<i>Nuphar cf.</i>	water-lily																						
<i>Origanum cf.</i>	wild majoram																						
<i>Papaver sp.</i>	poppy																						
<i>Persicaria sp.</i>	knotweeds	1		4	2								1										3

Sample No.		135	157	164	165	166	168	108	114	148	220	221	224	248	272	101	107	238	102	103	104	105	106	122	
Context No.		1340	1342	1447	1482	1520	1516	456	708	1305	2226	2323	2363	2726	4018	177	218	2253	183	186	195	210	209	1133	
Phase		5	5	5	5	5	5	7	7	7	7	7	7	7	7	8	8	8	9	9	9	10	10	10	
Percentage assessed		100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	
Volume (ml)		28	21	250	38	150	22	65	11	10	140	4	5	35	53	21	42	21	350	160	14	460	125	210	
<i>Pimpinella cf.</i>	burnet-saxifrages																								
<i>Potentilla sp.</i>	cinquefoils													1											
<i>Potamogeton sp.</i>	pondweed			3																					
<i>Prunus sp.</i>	stone fruit				1												2		1					1	
<i>Pyrus sp.</i>	pear																2								
<i>Ranunculus repens/bulbosus</i>	creeping/bulbous buttercup			2	1								1												
<i>Ranunculus sp.</i>	buttercups	2		4				3	2	2	3			3	1								3		
<i>Rubus sp.</i>	brambles		1	3	1	3		1	2		3					2	2		4	3	2	4	3	4	
<i>Rumex/polygonum sp.</i>	docks/sorrels/knotweed			2	1	3	1				3			1											3
<i>Salvia cf.</i>	sage																								
<i>Sambucus sp.</i>	elder	4	4	4		3	2	1	1	3	3	1		1		2	2	2	1	3	2	1		4	
<i>Sanguisorba cf.</i>	burnet																								
<i>Saponaria sp.</i>	soapworts																								
<i>Silene sp.</i>	campion			2		2	1				1														2
<i>Solanaceae undiff.</i>	nightshades																								
<i>Solanum cf.</i>	nightshades																								
<i>Sonchus sp.</i>	sow-thistles			1				1																	
<i>Sorbus sp.</i>	whitebeams																								
<i>Sparganium sp.</i>	bur-reeds			1																					
<i>Stachys cf.</i>	woundworts																								
<i>Stellaria sp.</i>	stitchworts			2																					2
<i>Thlaspi cf.</i>	penny-cresses																								
<i>Thymus cf.</i>	thymes																								
<i>Trifolium cf.</i>	clovers																								
<i>Urtica sp.</i>	nettles	4							2	1				1											3
<i>Valerianella cf.</i>	cornsalads			1																					
<i>Vicia cf.</i>	vetches			1																					
<i>Viola sp.</i>	violets								3																
<i>Vitis sp.</i>	grape-vine																2				1		1	1	
Broken seeds																									
Unknown				2			1	1			1		1	1			1								
Charred seeds																									
<i>Agrostemma cf.</i>	corncockle																								
<i>Chenopodium sp.</i>	goosefoots																								
<i>Crepis cf.</i>	hawk's-beard	1																							
<i>Euphorbia sp.</i>	spurge																								
<i>Fabaceae indet.</i>	legumes	1				2																			
<i>Galium sp.</i>	bedstraws																								
<i>Persicaria sp.</i>	knotweeds	1																							
<i>Poaceae indet. (small)</i>	grasses																								
<i>Rumex/polygonum sp.</i>	docks/sorrels/knotweed	1																							
<i>Scrophulariaceae undiff.</i>	figworts																								
<i>Viola cf.</i>	violets	1																							
<i>Vitis sp.</i>	grape-vine																								
Unknown																									1
Grain																									

Sample No.	135	157	164	165	166	168	108	114	148	220	221	224	248	272	101	107	238	102	103	104	105	106	122
Context No.	1340	1342	1447	1482	1520	1516	456	708	1305	2226	2323	2363	2726	4018	177	218	2253	183	186	195	210	209	1133
Phase	5	5	5	5	5	5	7	7	7	7	7	7	7	7	8	8	8	9	9	9	10	10	10
Percentage assessed	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
Volume (ml)	28	21	250	38	150	22	65	11	10	140	4	5	35	53	21	42	21	350	160	14	460	125	210
<i>Avena sativa</i>	oat	1																					
<i>Hordeum sp.</i>	barley				1				1														
<i>Panicum sp.</i>	millets																						
<i>Secale cereale</i>	rye																						
<i>Triticum sp.</i>	wheat	2	1	1	1					1													1
Hulled specimens																							
Broken/unidentifiable		2	1	1			1		1	1													1
Rachis				1	1																		
Glume bases																							
Indet. Chaff																							
Other plant macrofossils																							
Aquatic weed	1											1					1						
Fragmented wood				4	3	4		3		4			4		2			3					4
Fragmented plant matter				4	4		3						4										
<i>Raphanus raphanistrum</i> (silica frags)	wild radish			1																			
Modern plant material																							
Indet. Roots																							
Terrestrial/freshwater molluscs																							
<i>Bithynia sp.</i>	Freshwater			3	3	1		1															
<i>Candidula sp.</i>	Land	2			1		1																
<i>Carychium tridentatum</i>	Land				1			1															
<i>Ceciliooides acicula</i>	Land							1	1														
<i>Cepaea nemoralis</i>	Land							1															
<i>Cochlicopa lubrica</i>	Land	1						1															
<i>Discus rotundatus</i>	Land	1	1					1	1				1										
<i>Hygromia cinctella</i>	Land																						1
<i>Lauria cylindracea</i>	Land																						
<i>Lymnaea sp.</i>	Freshwater			3	2	3		2	1														
<i>Oxychilus sp.</i>	Land		1																				1
<i>Pisidium sp.</i>	Freshwater			1																			
<i>Planorbis sp.</i>	Freshwater	1		3	1	4	1			1					1								
<i>Potamopyrgus antipodarum</i>	Freshwater			2	1	4		1															1
<i>Pupilla muscorum</i>	Land																						
<i>Succinea sp.</i>	Freshwater				1								1										
<i>Vallonia sp.</i>	Land					2		1															
<i>Valvata sp.</i>	Freshwater			3	2	2	1							1				1					
<i>Vertigo sp.</i>	Land																						
<i>Vitrina sp.</i>	Freshwater							1															
Misc. Juveniles		1						2	1														1
Snail eggs								2		1				1									
Snail operculum				2	1																		
Fragments (no ID)		2	3	3									2		3		2				4		
Marine molluscs																							
Fragments (no ID)																							
Other remains																							

Sample No.	135	157	164	165	166	168	108	114	148	220	221	224	248	272	101	107	238	102	103	104	105	106	122
Context No.	1340	1342	1447	1482	1520	1516	456	708	1305	2226	2323	2363	2726	4018	177	218	2253	183	186	195	210	209	1133
Phase	5	5	5	5	5	5	7	7	7	7	7	7	7	7	8	8	8	9	9	9	10	10	10
Percentage assessed	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
Volume (ml)	28	21	250	38	150	22	65	11	10	140	4	5	35	53	21	42	21	350	160	14	460	125	210
Small animal bone (frags.)	1	1					3			2			1	1		3	1						2
Large animal bone				1																			
Fish bone														2		3		2	3		2		1
Fish scales														2		1			2				
Misc. Bone fragments																						1	
Insect remains	2		2	3	3	2	2	1	1	2	1	1	4	1		4			1	1	1	3	4
Insect eggs																						1	
Alona cf. ephippia				1									2										
Daphne ephippia				1			1																
Coal	1					1		1		3	2	1		3	4		1		3	4			3
Clinker											3							3	4		4	2	
Slag														2				2	4		3	3	
Hammer-scale								1		4									1			1	3
Vitreous globules						1		2	2					3	4			3	4		4	1	3
Soil concretions																							
Ferrous soil concretions											3												

Key: 1- Occasional, 2- fairly frequent, 3- frequent, 4- abundant

Sample No.	149	270	121	131	141	236	243	249	257	207	262	252	254	255	261	
Context No.	1309	3148	1126	1167	1251	2526	2622	2824	2986	2133	3050	2936	2838	2322	2962	
Phase	10	Natural	None	None	None	None	None	None	None	Void	Void					
Percentage assessed	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%					
Volume (ml)	6	150	1	100	10	44	24	62	120	210	26					
Charcoal																
Charcoal >1mm	3	4	2		3	4	3	4	2	3	4					
Charcoal <1mm	4	4	3		4	4	4	4	4	3	4					
Frag. of ID size	X	X	<5		X	✓	X	X	X	X	✓					
Seeds																
<i>Adoxa moschatellina</i>	five-faced bishop											C	C	C	C	
<i>Aethusa cynapium</i>	fool's parsley					1						O	O	O	O	
<i>Agrostemma sp.</i>	corncockles											N	N	N	N	
<i>Alliaria cf.</i>	mustards						1				1	T	T	T	T	
<i>Alnus glutinosa</i>	common alder		3									A	A	A	A	
<i>Apiaceae indet.</i>	celery/carrot/parsley	1			1				2	3		M	M	M	M	
<i>Apium sp.</i>	celery											I	I	I	I	
<i>Betula sp.</i>	birch											N	N	N	N	
<i>Brassicaceae indet.</i>	mustards				1							A	A	A	A	
<i>Bromus sp.</i>	brome grasses											T	T	T	T	
<i>Carduus cf.</i>	plumeless thistles											E	E	E	E	
<i>Carex sp.</i>	sedges	2			1				1			D	D	D	D	
<i>Centaurea sp.</i>	knapweeds								1							
<i>Chenopodium sp.</i>	goosefoots		2	2	4	1		2								
<i>Coriandrum cf.</i>	coriander															
<i>Corylus sp.</i>	hazel															
<i>Crepis cf.</i>	hawk's-beard															
<i>Cuminum cf.</i>	cumin															
<i>Drosera cf.</i>	sundews															
<i>Erucastrum sp.</i>	dogmustards															
<i>Euphorbia sp.</i>	spurge															
<i>Euphrasia cf.</i>	eyebright	4		2							1					
<i>Fagus cf.</i>	beech															
<i>Fallopia sp.</i>	buckwheat															
<i>Ficus sp.</i>	fig				2											
<i>Fragaria sp.</i>	strawberries				2	1	1									
<i>Fumaria sp.</i>	fumewort															
<i>Glebionis cf.</i>	crown daisy/corn marigold															
<i>Hyoscyamus niger</i>	henbane					1										
<i>Lamiaceae undiff.</i>	deadnettles	1				2				1						
<i>Lamium sp.</i>	dead nettle			1	3											
<i>Leontodon cf.</i>	hawkbits															
<i>Lithospermum cf.</i>	gromwells															
<i>Malus cf.</i>	crabapples															
<i>Malus/pyrus sp.</i>	crabapple/pears															
<i>Malva cf.</i>	mallow															
<i>Mercurialis cf.</i>	mercuries															
<i>Nuphar cf.</i>	water-lily															
<i>Origanum cf.</i>	wild majoram															
<i>Papaver sp.</i>	poppy															
<i>Persicaria sp.</i>	knotweeds		1	1	2					2						

Sample No.	149	270	121	131	141	236	243	249	257	207	262	252	254	255	261
Context No.	1309	3148	1126	1167	1251	2526	2622	2824	2986	2133	3050	2936	2838	2322	2962
Phase	10	Natural	None	None	None	None	None	None	None	Void	Void				
Percentage assessed	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%				
Volume (ml)	6	150	1	100	10	44	24	62	120	210	26				
<i>Pimpinella cf.</i>															
<i>Potentilla sp.</i>															
<i>Potamogeton sp.</i>															
<i>Prunus sp.</i>		1						1		1					
<i>Pyrus sp.</i>															
<i>Ranunculus repens/bulbosus</i>									2	2					
<i>Ranunculus sp.</i>	1	4		2		3			4	4	1				
<i>Rubus sp.</i>		2				1		4	2	3	1				
<i>Rumex/polygonum sp.</i>		1	1	2			1								
<i>Salvia cf.</i>															
<i>Sambucus sp.</i>	2	3	3	4	3	2	2	2	3	2	2				
<i>Sanguisorba cf.</i>															
<i>Saponaria sp.</i>															
<i>Silene sp.</i>				1											
<i>Solanaceae undiff.</i>															
<i>Solanum cf.</i>				1											
<i>Sanchus sp.</i>															
<i>Sorbus sp.</i>															
<i>Sparganium sp.</i>															
<i>Stachys cf.</i>															
<i>Stellaria sp.</i>				1											
<i>Thlaspi cf.</i>															
<i>Thymus cf.</i>				1											
<i>Trifolium cf.</i>															
<i>Urtica sp.</i>				4						1					
<i>Valerianella cf.</i>															
<i>Vicia cf.</i>															
<i>Viola sp.</i>															
<i>Vitis sp.</i>															
Broken seeds															
Unknown				1				1			1				
Charred seeds															
<i>Agrostemma cf.</i>															
<i>Chenopodium sp.</i>						1									
<i>Crepis cf.</i>															
<i>Euphorbia sp.</i>															
<i>Fabaceae indet.</i>				1				1							
<i>Galium sp.</i>															
<i>Persicaria sp.</i>															
<i>Poaceae indet. (small)</i>								1							
<i>Rumex/polygonum sp.</i>															
<i>Scrophulariaceae undiff.</i>															
<i>Viola cf.</i>															
<i>Vitis sp.</i>															
Unknown															
Grain															

Sample No.	149	270	121	131	141	236	243	249	257	207	262	252	254	255	261
Context No.	1309	3148	1126	1167	1251	2526	2622	2824	2986	2133	3050	2936	2838	2322	2962
Phase	10	Natural	None	None	None	None	None	None	None	Void	Void				
Percentage assessed	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%				
Volume (ml)	6	150	1	100	10	44	24	62	120	210	26				
<i>Avena sativa</i>	oat						1								
<i>Hordeum sp.</i>	barley					1									
<i>Panicum sp.</i>	millet														
<i>Secale cereale</i>	rye		1					1							
<i>Triticum sp.</i>	wheat		1	1			1	1	1						
Hulled specimens															
Broken/unidentifiable			1	1		1	1	1	1						
Rachis			1												
Glume bases															
Indet. Chaff								2							
Other plant macrofossils															
Aquatic weed				2				1							
Fragmented wood		4		3						4					
Fragmented plant matter				3	4				4						
<i>Raphanus raphanistrum</i> (silica frags)	wild radish														
Modern plant material															
Indet. Roots															
Terrestrial/freshwater molluscs															
<i>Bithynia sp.</i>	Freshwater														
<i>Candidula sp.</i>	Land														
<i>Carychium tridentatum</i>	Land			1											
<i>Cecilioides acicula</i>	Land														
<i>Cepaea nemoralis</i>	Land														
<i>Cochlicopa lubrica</i>	Land														
<i>Discus rotundatus</i>	Land														
<i>Hygromia cinctella</i>	Land														
<i>Lauria cylindracea</i>	Land														
<i>Lymnaea sp.</i>	Freshwater														
<i>Oxychilus sp.</i>	Land														
<i>Pisidium sp.</i>	Freshwater														
<i>Planorbis sp.</i>	Freshwater														
<i>Potamopyrgus antipodarum</i>	Freshwater														
<i>Pupilla muscorum</i>	Land														
<i>Succinea sp.</i>	Freshwater														
<i>Vallonia sp.</i>	Land														
<i>Valvata sp.</i>	Freshwater														
<i>Vertigo sp.</i>	Land														
<i>Vitriina sp.</i>	Freshwater														
Misc. Juveniles															
Snail eggs															
Snail operculum															
Fragments (no ID)	1		1												
Marine molluscs															
Fragments (no ID)															
Other remains															

Sample No.	149	270	121	131	141	236	243	249	257	207	262	252	254	255	261
Context No.	1309	3148	1126	1167	1251	2526	2622	2824	2986	2133	3050	2936	2838	2322	2962
Phase	10	Natural	None	None	None	None	None	None	None	Void	Void				
Percentage assessed	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%				
Volume (ml)	6	150	1	100	10	44	24	62	120	210	26				
Small animal bone (frags.)						1	1	1			2				
Large animal bone															
Fish bone															
Fish scales															
Misc. Bone fragments															
Insect remains	1	2			2	1		1		2					
Insect eggs							2								
Alona cf. ephippia		3		3	3				3	3					
Daphne ephippia		3		3		1			2						
Coal						1									
Clinker															
Slag															
Hammer-scale	1														
Vitreous globules															
Soil concretions															
Ferrous soil concretions															

Key: 1- Occasional, 2- fairly frequent, 3- frequent, 4- abundant

APPENDIX 18: OASIS FORM

OASIS ID: preconst1-277533

Project details

Project name	Brandon House
Short description of the project	An archaeological excavation was undertaken by Pre-Construct Archaeology at Brandon House, Southwark, between November of 2014 and December of 2015. The site was multi-phase, dating from the Roman through to the post-medieval period. The site appears to have been situated on an eyot or a peninsular heading out into the Borough Channel. Early Roman activity comprised ground raising, pitting and a number of clay and timber buildings. The site went into decline during the later Roman period and dark earth formed. Later activity comprised the footings of medieval Brandon Place, the establishment of Suffolk Place by Charles Brandon on the site and a late post-medieval industrial building.
Project dates	Start: 03-11-2014 End: 05-12-2015
Previous/future work	Yes / Not known
Any associated project reference codes	BBO10 - Sitecode
Type of project	Recording project
Site status	Area of Archaeological Importance (AAI)
Current Land use	Other 3 - Built over
Monument type	BUILDINGS Post Medieval
Monument type	LAYERS Roman
Monument type	BARREL WELLS Medieval
Monument type	PITS Medieval
Monument type	BUILDINGS Roman
Monument type	PITS Roman
Monument type	BUILDING Medieval
Significant Finds	POTTERY Roman
Significant Finds	COINS Roman
Significant Finds	ANIMAL BONE Early Medieval
Significant Finds	POTTERY Medieval

Significant Finds	POTTERY Post Medieval
Significant Finds	POTTERY Early Medieval
Significant Finds	TERRACOTTA Post Medieval
Significant Finds	SMALL FINDS Roman
Significant Finds	SMALL FINDS Medieval
Significant Finds	SMALL FINDS Post Medieval
Significant Finds	LAY TOBACCO PIPE Post Medieval
Significant Finds	GLASS Roman
Significant Finds	GLASS Post Medieval
Significant Finds	BUILDING MATERIALS Roman
Significant Finds	BUILDING MATERIALS Medieval
Significant Finds	BUILDING MATERIALS Post Medieval
Significant Finds	LITHICS Late Prehistoric
Investigation type	""Full excavation""
Prompt	Direction from Local Planning Authority - PPS

Project location

Country	England
Site location	GREATER LONDON SOUTHWARK BERMONDSEY ROTHERHITHE AND SOUTHWARK Brandon House
Postcode	SE1 1LH
Study area	2350 Square metres
Site coordinates	TQ 2341 7982 51.503327965345 -0.22171919164 51 30 11 N 000 13 18 W Point
Height OD /	Min: -0.03m Max: 0.83m

Depth

Project creators

Name of Organisation	Pre-Construct Archaeology Ltd.
Project brief originator	Chris Mayo
Project design originator	CgMs Consulting Ltd.
Project director/manager	Chris Mayo
Project supervisor	Richard Humphrey
Type of sponsor/funding body	Crest Nicholson

Project archives

Physical Archive recipient	LAARC
Physical Contents	"Animal Bones","Ceramics","Environmental","Glass","Metal","Wood","Worked stone/lithics"
Digital Archive recipient	LAARC
Digital Contents	"Animal Bones","Ceramics","Environmental","Glass","Metal","Stratigraphic","Survey","Wood","Worked stone/lithics"
Digital Media available	"Database","Spreadsheets","Survey","Text"
Paper Archive recipient	LAARC
Paper Contents	"Environmental"
Paper Media available	"Context sheet","Correspondence","Diary","Photograph","Plan","Report","Section","Survey","Unpublished Text"

Project bibliography 1

Publication type	Grey literature (unpublished document/manuscript)
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Title An archaeological excavation on land at Brandon House, 170-194 Borough High Street, Southwark, London SE1 1LH

Author(s)/Editor (s) Haslam, A.

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