BAITUL AZIZ MOSQUE
1 DICKENS SQUARE
LONDON BOROUGH OF SOUTHWARK

ASSESSMENT OF AN ARCHAEOLOGICAL EXCAVATION

DKN 11

JUNE 2014

PRE-CONSTRUCT ARCHAEOLOGY

DOCUMENT VERIFICATION

Baitul Aziz Mosque
1 DICKENS SQUARE
LONDON BOROUGH OF SOUTHWARK

EXCAVATION

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An Assessment of an Archaeological Excavation on Land at the Baitul Aziz Mosque, 1 Dickens Square, London Borough of Southwark, SE1 4JL

Site Code: DKN 11

Report No: R11775

Central National Grid Reference: TQ 3243 7935

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1 ABSTRACT

1.1 This report details the results and working methods of an archaeological excavation undertaken by Pre-Construct Archaeology Ltd on land at the Baitul Aziz Mosque, 1 Dickens Square, Southwark, London SE1 4JL. The excavation was commissioned by Frank Linden on behalf of the Baitul Aziz Mosque in advance of the construction of an extension to the mosque and a new Islamic Cultural Centre on the site. The site's central National Grid Reference is TQ 3243 7935. The field excavation was conducted between November 2013 and January 2014.

1.2 Located in the southwestern half of excavation area was a series of natural alluvial deposits, located within what appeared to be a natural depression within the Kempton Park Gravels in this area. This natural alluvium may possibly relate to, or be similar to, the Rockingham anomaly known to be located to the southwest.

1.3 No prehistoric features were encountered on the site and the only prehistoric finds, consisting of sherds of prehistoric pot and a few struck flints, were found residually in later deposits.

1.4 Four graves, three containing skeletons one of which lay within a timber coffin, were revealed on site together with a cremation. These burials form part of the Roman southern cemetery previously revealed at several sites in the immediate vicinity at 28-30 Trinity Street (Killock in prep), Symington House, Harper Road (AOC 2011) and Harper Road (Dean & Hammerson 1980; Cotton 2008). The graves and cremation lay immediately adjacent to the south side of a large ditch. Other Roman features consisted of a number of shallow pits which lay in a line parallel to and may be associated with the burials and a gully which may have provided drainage or acted as an internal division within the cemetery.

1.5 Three cattle skeletons of apparent 18th-century date were found within two separate cuts. A similar burial was found to the southwest in 2000 and all may be the result of a cattle epidemic such as rinderpest which was documented in the 18th century.

1.6 The remaining post-medieval features were dated to the 19th century and consisted largely of wells and rubbish pits, many of which contained assemblages of pottery, glass, clay tobacco pipes and animal bone representing the material culture and rubbish of the inhabitants of the area.

1.7 The results of the site are of local significance as they contribute to the growing corpus of inhumations and cremations forming the southern cemetery of Roman London. The survival of a Roman wooden coffin on the site is of some significance as only two adult wooden coffins have previously been found in London. It is proposed that the results of the archaeological excavation are published as an article in *London Archaeologist*.

2 INTRODUCTION

2.1 This report details the results and working methods of an archaeological excavation undertaken by Pre-Construct Archaeology Ltd on land at the Baitul Aziz Mosque, 1 Dickens Square, Southwark, London SE1 4JL. The excavation was commissioned by Frank Linden on behalf of the Baitul Aziz Mosque in advance of the construction of an extension to the mosque and a new Islamic Cultural Centre on the site. The site's central National Grid Reference is TQ 3243 7935. The field excavation was conducted between November 2013 and January 2014.

2.2 The site was located on land to the northeast of the Baitul Aziz Mosque which is bordered by Trinity Church Square to the north, Dickens Square to the east, the Baitul Aziz Mosque itself to the south and properties fronting Brockham Street to the west.

2.3 The site is located within an Archaeological Priority Zone (APZ) as defined by the London Borough of Southwark Unitary Development Plan (2007).

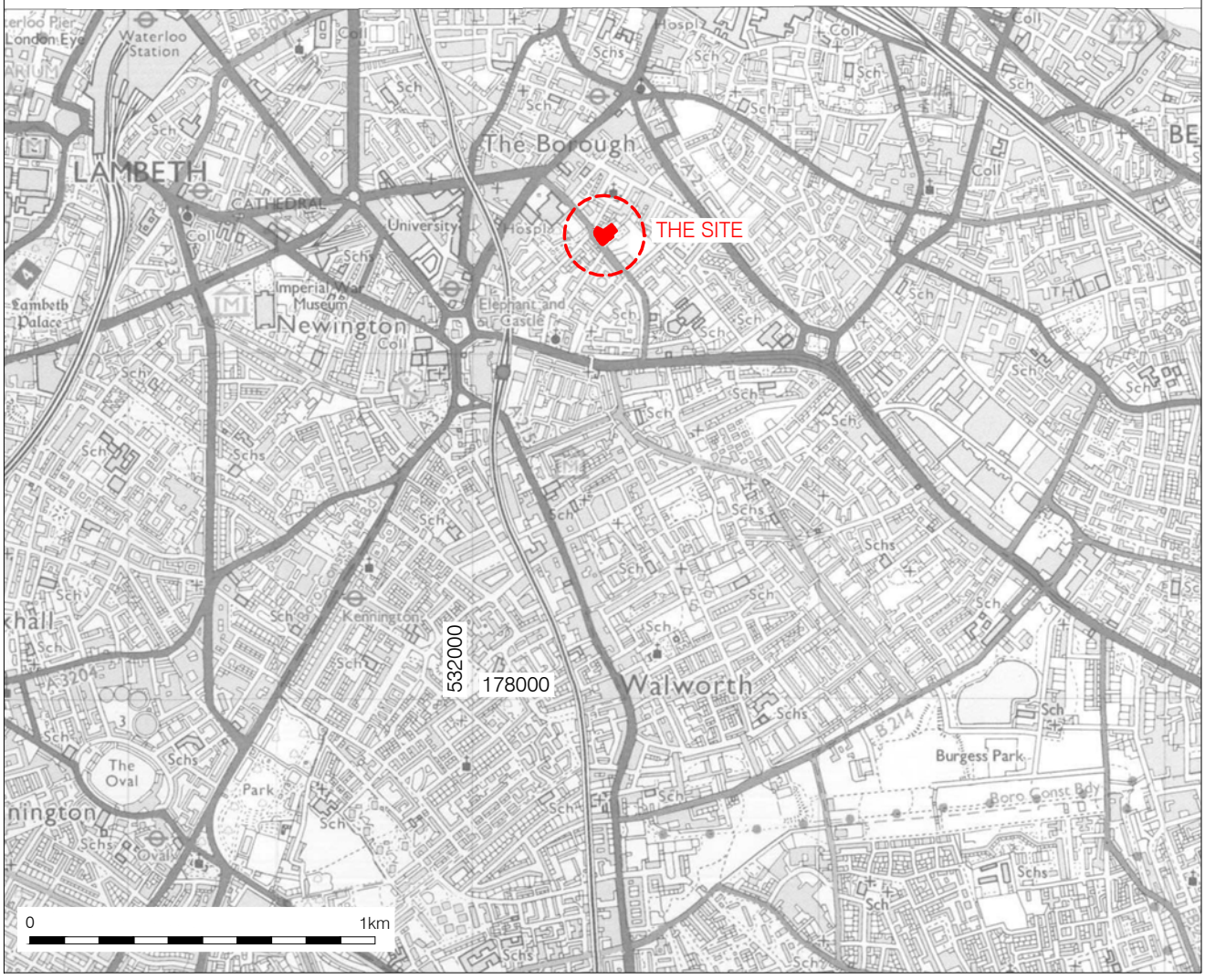
2.4 The site has previously been the subject of a number of archaeological investigations. In 1989 an excavation by the Museum of London (DGLA(S&L) on the site of the mosque revealed high sands bordered by a low peaty area together with two Roman ditches (Fig. 3 DIC89) (Thompson *et al*. 1998, 205; Heathcote 1990, 193; Jones 1989). In 2000 an excavation by MoLAS immediately to the northwest of the previous trench revealed sandy gravel covered by peat and sandy deposits (Fig. 3 DKA00). Roman features consisted of a northwest to southeast aligned ditch, a shallow pit and gully, whilst a cattle burial was thought to date to the post-medieval period (Taylor 2000). In 2010 a trench was dug across the site by contractors. PCA recorded the sections and later in 2011 the spoil arising from the trench was sieved for finds (Pooley 2010; Grosso 2011).

2.5 The project was commissioned by John Linden on behalf of the Islamic Cultural Centre, Baitul Aziz Mosque. The field excavation was undertaken by Pre-Construct Archaeology Ltd under the supervision of Neil Hawkins and the project management of Gary Brown. The work was additionally monitored for the local planning authority by Dr Christopher Constable, Senior Archaeology Officer for the London Borough of Southwark.

2.6 A Written Scheme of Investigation (Brown 2012) was prepared prior to the fieldwork commencing.

2.7 The completed archive comprising written, drawn and photographic records and artefacts will be deposited with the London Archaeological and Research Centre (LAARC), Mortimer Wheeler House, Eagle Wharf Road, London N1 7ED.

2.8 The site was allocated the site code DKN 11.



17/06/14 JB

Figure 1
Site Location
1:20,000 at A4

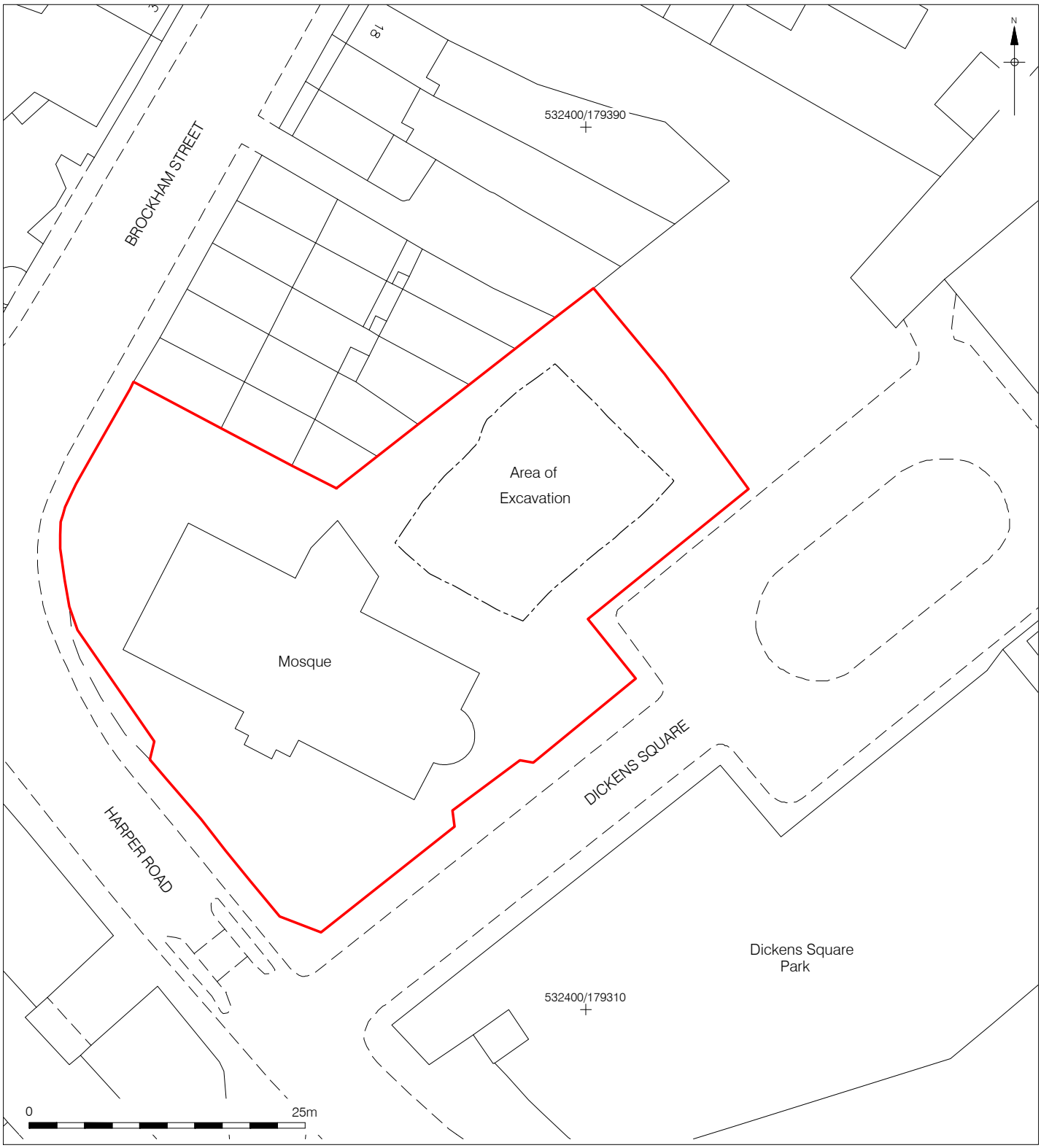


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Figure 2
Trench Location
1:500 at A4

3 PLANNING BACKGROUND

3.1 On the 27th of March 2012 the Department for Communities and Local Government issued the National Planning Policy Framework (NPPF). Section 12 of this policy framework is entitled 'Conserving and Enhancing the Historic Environment' and replaces Planning Policy Statement 5 (PPS5), which had previously been adopted in March 2010. PPS5 replaced the earlier Planning Policy Guidance Note 16 (PPG16). As such, Section 12 provides guidance for planning authorities, property owners, developers and others on the preservation and investigation of archaeological remains.

3.2 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 Section 12, by current Structure and Local Plan policy and by other material considerations.

3.3 **ARCHAEOLOGY IN THE LONDON BOROUGH OF SOUTHWARK AND THE SOUTHWARK PLAN**

3.4 The relevant Development Plan framework is provided by the Southwark Plan which was adopted on the 28th of July 2007. This plan contains policy statements in respect of protecting the buried archaeological resource. The site is subject to the Council's Archaeology Policy:

Policy 3.19 Archaeology

313 Planning applications affecting sites within Archaeological Priority Zones (APZ's), 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 of preservation in situ, to protect and safeguard remains of national importance, including scheduled monuments and their settings. The in situ preservation of 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.

3.5 `Reasons

314 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.

315 PPG16 (Now NPPF Section 12) requires the council to include policies for the protection, enhancement and preservation of sites of archaeological interest and of their settings.

3.6 The site is located within an Archaeological Priority Zone as defined by the London Borough of Southwark in the Southwark Plan (2007). The site does not contain, nor is adjacent to, any Scheduled Ancient Monuments.

4 GEOLOGY AND TOPOGRAPHY

4.1 The Geological Survey of Great Britain (South London – Sheet 270) shows the site as lying upon Eocene London Clay which overlies the Woolwich and Reading Beds. Sealing the London Clay are the Devensian Kempton Park Gravels, a sequence identified as sandy gravel with localised lenses of silt, clay and peat (BGS 2012).

4.2 Peat formations sealing the natural gravels that form the drift geology of this area have been reported on several sites including the southern part of the site in an excavation in 1989 (Fig. 3 DIC89) (Thompson *et al*. 1998, 205; Heathcote 1990, 193; Jones 1989) and Falmouth Road. The peat layer recorded at the latter contained Iron Age pottery. This deposit was found below waterlain deposits of Roman date which are thought to have formed in a local depression known as the Rockingham Street anomaly. The anomaly is situated to the south of the subject site.

4.3 The site occupies a plot of land bordered by Trinity Church Square to the north, Dickens Square to the east, and Harper Street to the west and south, approximately 1km south of the present day Thames embankment at London Bridge. Natural sands and gravels, which form the natural subsoils in this area, lie at approximately 3.20m from modern ground level.

4.4 The drift geology of the north Southwark area consists of natural sands and gravels deposited by the Thames and its forerunners. The modern river is considerably smaller than its predecessors, particularly those that were fed by vast quantities of water draining from ice-sheets located to the north of the Thames valley. The gravel terrace in north Southwark was eroded in prehistory leaving a series of islands within the river that were surrounded by tidal channels. Ground level on the islands would have been found at *c*. 1.0m to 1.5m OD during the early Roman period [1].

4.5 Two large islands located to the north of what is today Borough Underground station played a central role in the development of Roman London (Graham 1978, 501-16). The northern island offered the possibility of constructing a bridge to the north bank over the shortest possible distance of any site found in this stretch of the river. Sites further to the west such as Westminster may have offered similar opportunities but these areas lacked the deep water necessary for handling ocean-going ships.

4.6 Riverine channels that would have formed considerable obstacles at high tide separated the islands from each other and the 'mainland' of south London. The most southerly of these channels ran roughly east-west along the line of Long Lane and Marshalsea Road as far west as Ewer Street. To the east the channel joined the

[1] The exact height of water levels in the early Roman period is the subject of some debate. Some of the models suggested for early Roman sea levels, principally based on assessment from evidence gathered on the north bank of the river, do not fit well with the findings from the south bank. (See Milne *et al.* 1983; Killock 2005).

Guy's Channel which ran north-south and passed through the area of the modern hospital and London Bridge railway station (Heard *et al.* 1990).

5 ARCHAEOLOGICAL AND HISTORICAL BACKGROUND

5.1 Prehistoric

5.1.1 Pottery and worked flints found in north Southwark indicate that the area was frequented and later settled from the Mesolithic period onwards. What is now an intertidal zone would have varied in character depending on the periodic rising and falling of sea level due to climatic fluctuations. During periods with higher water levels the area would have presented many opportunities for the exploitation of natural resources such as fish, eels and game for food and reeds which would have served as building materials. In drier periods the light sandy soils would have proved attractive to early farmers. It is probable that permanent settlements were established in the area during the late Neolithic and Bronze Age as ard-marks recorded in the surface of the sands and gravels indicate the use of wooden ploughs to till the land. Numerous examples of this type of land-use have been found across north Southwark and Bermondsey from sites such as Hopton Street (Ridgeway & Butler 1999), Three Oak Lane (where a very rare ard was discovered) (Proctor & Bishop 2002), and Wolseley Street (Drummond-Murray *et al.* 1994). Evidence from the later prehistoric period is a little sparse. A few Iron Age burials are known from the area but no settlement sites are known. This may reflect the marginal nature of the area as sea levels rose throughout the later Iron Age then peaked in the early Roman period (Milne *et al.* 1983).

5.1.2 Flint flakes were found in the southern part of the site in 1989 (Fig. 3 DIC89) (Thompson *et al.* 1998, 205). To the southeast at Symington House, Harper Road (Fig. 3 HPZ10) residual worked flint and prehistoric pottery including a complete Late Bronze Age/Early Iron Age vessel was found (AOC 2011). At 28-30 Trinity Street (Fig. 3 TIY07) residual flint implements dating to the Mesolithic or Early Neolithic period were recovered from Roman contexts, as was a transverse arrowhead which is a diagnostic product of the Late Neolithic. Eleven sherds of prehistoric pottery were also recovered, covering the Late Bronze Age to Early Iron Age, together with a late Iron Age coin, struck by the Cantii. However, as with the flintwork, all of these artefacts were recovered as residual finds from Roman contexts (Killock 2010).

5.2 Roman

5.2.1 The Roman city of *Londinium* was located in what is today the City of London. The Roman city was connected to the south bank by a bridge that spanned the Thames from the north bank around Fish Street Hill to the more northerly of the two large islands that projected into the river at this point. The main road from the bridge proceeded south roughly along the line of Borough High Street before dividing in two around the area of St George's Church. To the west Stane Street extended south

toward Chichester whilst to the east Watling Street proceeded south and east following the same alignment as Tabard Street (formerly Kent Street) and Great Dover Street before joining the line of the Old Kent Road and linking London to Canterbury and the Kent coast. The site is situated slightly closer to Roman Watling Street.

5.3.1 The main Roman settlement in Southwark was concentrated on the two islands that projected northward into the main Thames channel and naturally developed around the main road and southern bridgehead. It has generally been held that the settlement in Southwark contracted in the late Roman period as some areas which had been built up became open ground and were used for burials. These developments have been recorded, for instance, at 15-23 Southwark Street (Cowan 1992) and the Courage Brewery Site (Dillon *et al*. 1991, 262). However, recent large-scale excavations at Tabard Square, located to the north and east of the site, have indicated that a Roman religious precinct remained in use well into the late fourth and possibly into the early fifth century. Some local place names such as Walworth, meaning farm of the Britons, indicate that a strong Romano-British presence may have survived in this area after the early Anglo-Saxon migrations.

5.3.2 Although the focus of the Roman suburb in Southwark undoubtedly lay some distance to the north of the site Roman clay and timber buildings dating to the 1st and 2nd century have been found locally at Arcadia Buildings on Silvester Street, Tabard Square (Killock 2009) and 5-27 Long Lane (Douglas 2007). These sites are clustered to the south and east of St George's Church. Suggestions that these buildings were peripheral to the main settlement simply because they were timber built and in some cases had industrial functions seem contradictory to the published evidence concerning the development of the bridgehead settlement (Hammer 2003). However, as yet there is no evidence for Roman buildings south of Sterry Street and the land found on either side of Watling Street to the south appears to have been set aside for use as a cemetery.

5.3.3 Burial within Roman towns was forbidden by law which meant that cemeteries flanking the main arterial routes into a town were a common feature of Roman urban centres. London was no exception to this and cemeteries are located to the north, east, west and south of the Roman city (Hall 1996). The exact southern limit of the Roman suburb in Southwark has yet to be established, no definitive threshold similar to the wall that surrounded the city on the north bank has been recorded. Sporadic finds of small groups of burials occurred throughout the 19th and 20th century along the line of Watling Street before the excavation of the major cemetery site at 103-167 Great Dover Street. The latter produced evidence of Roman funerary structures, *c*. 30 inhumation burials dating to the 2nd and 3rd centuries and five cremations(Mackinder 2000). Until recently this was the largest grave group known from Roman Southwark. Most of the burials were located either south of the crossroads of Stane Street and Watling Street, by modern St

George's Church, or on the north island in areas that had once been built up but had apparently been abandoned in the later Roman period (Barber & Hall 2000).

5.3.4 Evidence of a much denser and more extensive cemetery has been unearthed along the southwestern periphery of Southwark. This cemetery has been recorded at 1 America Square where 163 inhumations and four cremations were excavated between 2001 and 2002 (Maloney & Holroyd 2002, 22). This is by far the largest group of burials excavated in Southwark. The same cemetery may extend as far south as Lant Street where 89 inhumations and two cremations were unearthed in 2004 (Sayer & Sudds 2013). Lant Street is located *c.* 200m to the north-west of the subject site on the west side of Borough High Street.

5.3.5 A few direct references are available for early archaeological discoveries, principally burials, made on or near the site. Some are a little difficult to locate precisely as they were made in the first half of the 19th century. However, one of these reports an "Inhumation burial, from which only a plain, double finger ring of iron and two plain shale bracelets on the bones of a human forearm are preserved. Found in Trinity Street" (Wheeler 1930, 4325, pl. XIIIA, A11032-4). A cremation urn was found at Trinity Street in 1956 by 'workmen' who were very possibly involved in the construction of the standing buildings which have just been demolished (SMR 090256). Recent excavations at 28-30 Trinity Street (Fig. 3 TIY07) uncovered a total of 44 skeletons together with two cremation burials in urns. It is possible that the cemetery might have been established in the very late 2nd century but the vast majority of the burials dated to the 3rd and 4th centuries. Coins recovered from the graves or associated soil horizons demonstrate that some of the burials are among the latest Roman graves excavated in London. Other Roman features consisted of large shallow ditches ranging in date from the late 1st to the very late 4th centuries and a large early Roman structure uncovered in the southern part of the site (Killock 2010).

5.3.6 Some recently published or republished work has also drawn attention to the importance of the immediate area in the Roman period. A richly furnished female burial dating to *c.* AD 50-70 was found immediately to the east of the site adjacent to the most southerly building of the terrace that forms the west side of Merrick Square (Fig. 3 HR77, HR78, HR79)(Cotton 2008). The Harper Road Woman represented a very unusual early Roman inhumation, cremation was a much more common Roman burial rite at this time. A late Roman ditch was also found in the same area with a late inhumation laid out parallel to it. The burial demonstrated evidence of a wooden coffin and plaster surrounding the body. The young man found in the grave was buried between AD 250 and 370 (Cowan *et al.* 2009, 250, table 63).

5.3.7 Recent excavations at Symington House House, Harper Road (Fig. 3 HPZ10) to the southeast of the site revealed Roman activity dated from the 2nd century to the 4th

century, consisting of eleven burials, a series of large ditches and dispersed pits and postholes (AOC 2011).

5.3.8 Excavations at Tabard Square in 2002-2003 demonstrated unequivocally that the idea of a small settlement clustered around the Roman bridgehead in Southwark is no longer tenable. Among the structures recorded were a series of Roman clay and timber buildings laid out along a metalled side road in the first half of the second century. The foundation trenches of some of these buildings indicated that they were built using large wooden beams as foundations and could have supported more than a single storey structure. The clay and timber buildings were demolished in the second half of the second century when a large religious complex consisting of two Romano-Celtic temples and associated paving was constructed. One of the temples was demolished by the fourth century but the second formed the focus of a walled enclosure that continued in use well into the second half of the fourth century and probably later. The eastern side of the enclosure was dominated by a two-storey stone building measuring *c.* 25m north-south. The exact function of this building is unclear but a stone structure of this size was clearly of major importance. The overall frequency of late Roman ceramics and coins recovered from the site indicated that although the bridgehead settlement may have shrunk in the later Roman period the area to the south was not simply abandoned (Killock 2009).

5.4 Saxon

5.4.1 There is no archaeological evidence for early Saxon landuse in the vicinity of the subject site. In the Early and Middle Saxon periods the old Roman city was largely abandoned and the focus of the Saxon settlement shifted west to the area around The Strand, Aldwych and Covent Garden. Repeated Viking incursions in the middle of the ninth century led to the walled town being reoccupied and possibly the construction of a new bridge, which would have formed a defensive barrier against further incursions, and linked London with the south bank. The Southwark bridgehead may have become a Saxon 'burh' or fortified town in response to Viking attacks from the Thames. Southwark is listed as the *Suthringa geworche,* 'the defensive work of the men of Surrey' in the early tenth century Burghal Hidage, a document detailing the defensive system established by the kingdom of Wessex in the late ninth century (Carlin 1996). The almost total lack of evidence for the early post-Roman period renders any attempt to reconstruct this period as highly speculative (Carlin 1996, 12).

5.5 Medieval

5.5.1 The precise status of Southwark in the medieval period is difficult to establish from the documentary record as it did not constitute a town in its own right and was subdivided among a multitude of different authorities, both lay and ecclesiastical. This contributed to

the somewhat anarchic development of the City of London's southern suburb. 'Entertainments' such as prostitution and bear baiting could be enjoyed by the population of the City where such practices were strictly forbidden. Whatever the status of the settlement it is probable that it first developed along the main road leading south from the bridgehead and the entire street frontage may have been built up as far south as St George's church by as early as the late twelfth century (Carlin 1996, 22). Excavations at Tabard Square have demonstrated that the area of the late Roman walled enclosure was re-used in the twelfth century. The laying of external gravel surfaces may show that it had once again become a public outdoor meeting place (Killock 2009).

5.5.2 A major road junction existed just to the south of St George's where Long Lane extended eastward toward Bermondsey Abbey, Kent Street (now Tabard Street) proceeded south-east toward Rochester and the main road south continued as the 'causeway to Newington', or Blackman Street (Carlin 1996, 24). The site was located between Newington Causeway and Kent Street. The area consisted of open ground in the medieval period and continued to be undeveloped well into the 18th century.

5.6 Post-Medieval

5.6.1 Rocque's map of 1746 shows the site and the surrounding area as open fields. To the east a track flanked by rows of trees or hedges marks the line of modern Great Dover Street. The track lies to the rear of plots of land used for market gardening, buildings fronting onto Kent Street are found immediately to the east of these.

5.6.2 The entire area was dramatically transformed in the late 18th and early 19th centuries. New roads were established and the area surrounding the site urbanised with the construction of both Trinity Church Square and Merrick Square between 1824 and 1832.

5.6.3 By the time of the 1872 Ordnance Survey Map the site was densely occupied by housing. Dickens Square was originally known as Union Square and Harper Road was originally known as Union Road.

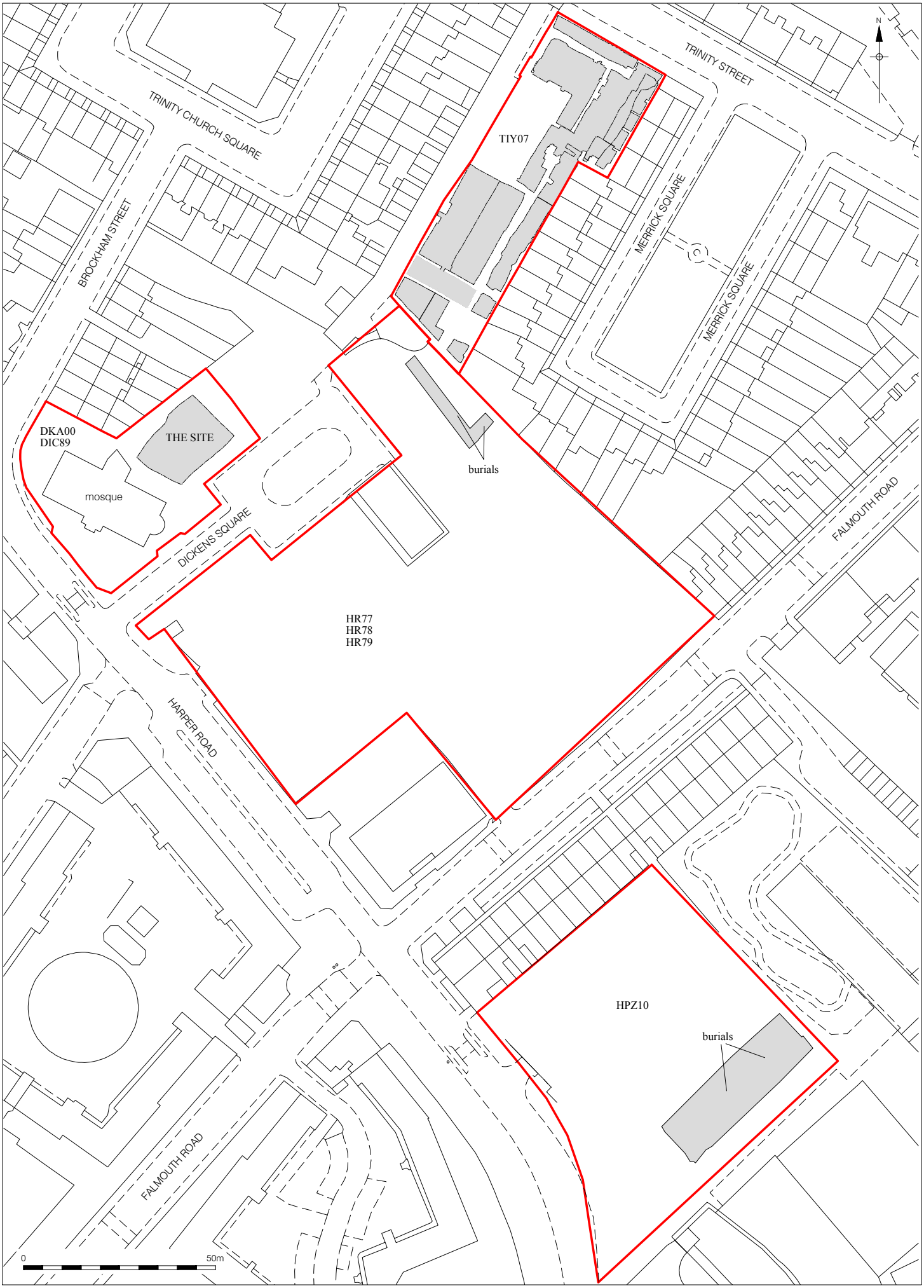

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Figure 3
Other sites in the area
1:1,250 at A4

6 ARCHAEOLOGICAL METHODOLOGY

6.1 The excavation followed an earlier investigation (Pooley 2010; Grosso 2011) which had identified the presence of Roman and post-Roman 'dark earth' deposits on the site. A Written Scheme of Investigation (Brown 2012) was prepared prior to the fieldwork commencing, detailing the methodology required for the excavation of the specified area. The Excavation area measured *c*. 21m by *c*. 15m.

6.2 The excavation was conceived of as partly a community excavation following discussions between PCA and Dr Chris Constable, Senior Archaeology Officer, Borough of Southwark. This would help to offset some of the costs of an archaeological excavation but also foster community archaeology and demonstrate how outreach can have a meaningful impact. The scheme would not only provide work experience but also an opportunity for a group of young men to gain insight into commercial archaeology and the local history of the area and to assist their own Muslim community. A number of outreach efforts were also undertaken, including information boards, a dedicated PCA blog for the project and an open day (Maloney 2014). Thus a group from the local Muslim community, following initial training at PCA offices, both worked on site together with professional archaeologists from PCA and helped off site to process the finds.

6.3 The methodology for the excavation of the mitigation area involved the site being undertaken in two halves sequentially each with a different methodology, particularly with regard to the excavation of the 'dark earth'. In both instances the modern concrete and hand standing was broken out and removed by a 360° mechanical excavator using a toothless ditching bucket under archaeological supervision. In the process of the removal of modern overburden the trench edges were stepped for safety reasons in anticipation of deeper excavation.

6.4 In the northern half of the excavation once modern overburden was removed to the top of the archaeological horizons hand excavation commenced. All archaeological features were excavated by hand and recorded in advance of the removal of the 'dark earth'. The original methodology for the removal of the 'dark earth' in this northern half involved excavation by hand of this deposit in spits of 50mm, with each spit being planned and given an individual context number. Prior to excavation of each spit the area would be metal detected and all metal 'small finds' would be located in three dimensions by GPS. Hand excavation would then continue with all finds from the spits being recovered by grid square. This method would then continue until the 'dark earth' was removed and either earlier archaeological features or natural deposits were encountered. During the excavation of the 'dark earth' however the removal of 50mm spits became too time consuming and the spits were subsequent enlarged.

6.5 The southern half of the excavation involved an identical methodology with the exception of the 50mm spits for the removal of the 'dark earth'. In this case they would be removed by 360° mechanical excavator using a flat bladed ditching bucket under archaeological supervision as oppose to by hand. The same finds retrieval policy involving three dimensional location of metal 'small finds' and recovery of other finds by grid square would again be utilised. Again due to time constraints the 50mm spits were enlarged.

6.6 The recording system used was the single context recording system, with individual descriptions of all archaeological features and strata excavated and exposed entered onto pro-forma recording sheets. All plans and sections of archaeological deposits and features were recorded on polyester based drawing film, the plans being drawn at a scale of 1:20 and the sections at 1:10. The OD height of all principal strata was calculated and indicated on the appropriate plans and sections. Features that were evidently modern were not given context numbers and were recorded as modern intrusions in plan.

6.7 A grid was established in the excavation area with the use of a Total Station. Throughout the excavation GPS surveying equipment was used to survey in the limits of excavation, locate the 'small finds', and locate the targets of the rectified photography process.

6.8 A total of two Temporary Bench Marks (TBM's) were established on the site with the use of the GPS surveying equipment. They had values of 3.86m OD and 3.08m OD.

6.9 Photographs in digital format were taken of the archaeological features and deposits where relevant. A professional archaeological photographer visited the site when required in order to take large format shots of areas or specific features.

6.10 Both the human skeletons and cattle burials were recorded by rectified photography. This system involves the use of a number of targets placed around the individual inhumation which is then photographed from directly above. The targets are then surveyed in with the use of the GPS equipment.

6.11 A total of 2 bulk samples and three column samples were taken during the excavation in order to recover environmental information. After processing these were transferred to Quaternary Scientific (QUEST), University of Reading, for sub-sampling and assessment.

6.12 In this report, contexts are shown by square brackets, e.g. [100]

7 PHASED ARCHAEOLOGICAL SEQUENCE

7.1 Phase 1 – Natural

7.1.1 The earliest deposits recorded across the excavation area were the natural sands and gravels, [561], [601] and [603]. These natural layers were recorded at 1.33m OD at the northeastern half of the site, sloping down to -0.18m OD to the southwest. This slope appeared to be notably steeper in comparison to the general topography of the area but may be a reflection of the natural depression filled with alluvium discussed below.

7.1.2 These deposits are consistent with the known underlying geology as described by the British Geological Survey and from previous investigations in the area; Kempton Park Gravels, identified as sandy gravel with localised lenses of silt, clay and peat.

7.1.3 Located in the southwestern half of excavation area was a series of natural alluvial deposits, group [602]. These deposits where located within what appeared to be a natural depression located within the Kempton Park Gravels in this area. This group of alluvial deposits were composed of a series of laminates of clays, silts and sands representing low-energy standing water. This deposit was recorded at 0.83m OD and was 1.01m thick. This natural alluvium may possibly relate to, or be similar to, the Rockingham anomaly known to be located to the southwest. It must also be noted however that the British Geological Survey describes the Kempton Park Gravel, as mentioned above, as having localised lenses of silt, clay and peat.

7.2 Phase 2: Roman (Fig. 4)

Ditch

7.2.1 Cutting through the natural sands and gravels in the northeastern area of the excavation was a Roman ditch, [541] (Plate 1). Aligned northwest-southeast this ditch ran for a length of 12.75m through the excavation but continued both northwest and southeast outside the trench limit. The ditch had a recorded width of 2.50m but this was not the original full width as it also continued outside the excavation limit. The ditch was recorded at 1.32m OD and had a maximum depth of 0.36m. The ditch was backfilled with a single uniform deposit along its length but was given a number of contexts representing individual excavated slots, contexts [540], [570], [571] and [572]. This fill of the ditch contained a large assemblage of Roman ceramics which provided a date range of AD 250/300-400+ (Appendix 2). A single sherd of PORD however was recovered from [540], a diagnostically late Roman fabric, which potentially provides a *terminus post quem* of AD 350 for the disuse of the ditch, albeit it based on a single sherd. The ditch also contained a considerable assemblage of Roman building material including imbrex, late Roman tile and tegula, early Roman

brick, sandy and Radlett ware and tesserae (Appendix 6). A large group of stone rubble and paving of a micaceous sandstone was also recovered from the ditch, fill [571], Also recovered was a fragment of plain box flue tile in a Late Roman Reigate fabric recovered from fill [540] which dates to AD 270-350, which is a rare fabric on Roman London (Appendix 6).

Burials

7.2.2 Located cutting the natural sands and gravels just to the southwest of the ditch was a cluster of three human inhumations and a fourth probable inhumation. All were on the same alignment as the ditch, northwest-southeast, and were all set approximately the same distance from the ditch, 0.30m. They were all also set in a linear arrangement effectively lain head to toe with each other.

7.2.3 The westernmost burial, [529] was a juvenile, *c*. 5 years old, in a good state of preservation with 60% skeletal completeness (Appendix 12). The skeleton was recorded in a supine position with the skull located at the northwestern end at 1.43m OD and the lower limbs at 1.30m OD. The skeleton was set within a sub-rectangular grave cut [530] which measured 1.30m in length by 0.65m wide. Recovered from the grave, fill [528], was an almost complete OXID small cornice rim beaker and an NVCC sherd with a barbotine cross in a circle decoration, both of which have been identified as being sherds of intrinsic interest (Appendix 2). This ceramic assemblage provided a date range of AD 150-300 however a sherd with a similar barbotine cross decoration in a Nene Valley or New Forest fabric recovered from a villa site in Orpington, Kent was dated to AD 270-300. This would therefore potentially date this burial to the end of the 3rd century.

7.2.4 Burial [567] consisted of the remains of a young adult (20-35 years old) (Plate 2), possibly male, in a good state of preservation with 80% skeletal completeness (Appendix 12). The skeleton was again in the supine position with the skull at the northwestern end at 0.89m OD and the lower limbs at 0.79m OD. The skeleton was within an oversized grave cut, [569], which measured 2.74m in length by 1.24m wide. Of particular note within this burial was the survival of elements of the timber coffin, [568] (Plate 3). Beneath the skeleton survived the basal plank of the coffin, which was 1.90m long by 0.56m wide and 50mm thick. The coffin elements were located between 0.89m OD and 0.79m OD. This plank was tangentially faced oak cut from a fast growing crooked parent log (Appendix 10). This type of conversion was almost always done by methods of manual sawing out of an axe squared baulk. This timber appears to have been re-used as relatively regular notches, which were eroded, were noted along each edge and are suggested to represent relict edge mortices from its previous use. This previous use has been tentatively suggested as being part of flat bottomed river barge or less likely part of a large piece of furniture or from a structure such as a tank. A fragment of one side of side planking also survived but was very

decayed. Again it was oak and had no traces of mortice joints or other methods of fastening it to the basal plank. Originally it was most likely fastened with small iron nails. This surviving timber coffin is thought to be only the third such example recovered from the London area (Appendix 10).

7.2.5 Located at the southeastern feet end of burial [567], and outside the area of the surviving coffin elements was a single pot representing an associated grave good (Plate 3). This pot, however, was in a bad condition being broken into over 200 small sherds. The pot was a BB1 everted rim jar with obtuse lattice decoration which is dated to AD 250-400 (Appendix 2). Backfill [566] of the grave yielded a ceramic assemblage of late Roman pottery including AHFA, NVCC and TSK. The backfill also contained a small assemblage of Roman building material which included early and late Roman tile and imbrex which provided a general date range of AD 140-300+ (Appendix 6).

7.2.6 Burial [532] (Plate 4) consisted of the remains of a mature adult (50+ years old) of indeterminate sex in moderate preservation with 75% skeletal completeness (Appendix 12). The skeleton was in a supine position with the skull at the northwestern end at 1.10m OD and the lower limbs at 0.95m OD. The skeleton was within an oversized grave cut, [533], which measured 2.50m in length by 1.10m wide. Skeleton [532] was the only burial to exhibit pathological traits; ante-mortem tooth loss, partial socket resorption and a degree of possible inflammatory pitting could indicate periodontal disease. Joint disease was also identified by the presence of osteophytic lipping and possible Schmorl's nodes on several of the vertebral bodies. Given the potential age of the individual both the dental conditions and joint disease within the spine are not unexpected. Located at the southeastern (feet) end of the burial was a single whole pot representing an associated grave good (Plate 5). This complete vessel was a BB1 everted rim jar with obtuse lattice decoration (Appendix 2). It has been noted that although the pot is intact a large hole is present in its wall which had soothing marks around it as if it had been burnt. The backfill of the grave, [531], provided a small assemblage of pottery including some residual HOO and HWC along with PORD which suggests a 4th-century date to this deposit and therefore the burial itself.

7.2.7 Cutting the southeastern end of grave cut [533] was a rectangular feature on the same northwest-southeast alignment, [544]. This feature was located at 1.36m OD and measured 0.70m in length by 0.60m wide and was 0.25m deep, although it continued southeast beyond the excavation limit. Although no skeletal remains were recovered from this feature its location, shape and dimensions suggests that this feature represented a fourth inhumation. This was further evidenced by the presence of a single complete pot within the base of the cut (Plate 5), reminiscent of the associated grave goods found within the other burials. This complete vessel was a

TSK jar with a swan's neck pendant-rolled rim, a parallel for which has been dated to the 3rd/4th century (Appendix 2). The backfill of this cut, [543], also provided a small ceramic assemblage which included the late Roman form PORD which provides *a terminus post quem* of AD 350 for the backfilling of this potential grave cut.

Group of four circular features

7.2.8 Located northwest of the inhumations and set just southwest of ditch [541] was a group of four circular features, [554], [556], [558] and [560]. These four circular features were all located at 1.34m OD and had similar dimensions of *c.* 0.45m in diameter and were between 0.20m and 0.30m deep. All four of the circular features had a similar deposit filling them and only one of which, fill [553] of cut [554], yielded material culture. This deposit contained a single sherd of Roman pottery which dated to AD 150-300 along with a fragment of building material which could only be dated as Roman and a Purbeck limestone paver (Appendices 2 & 6). This limited dating evidence suggests a 2nd- or 3rd-century date to this group of features. The location of this group and their position in the stratigraphic sequence suggests they may relate to the burials and ditch [541]. This group of features may represent some form of four-post structure although due to their general dimensions it cannot be ruled out that they represented a cluster of four cremations.

Two small pits/postholes

7.2.9 Located just to the southwest of burial [532] were two small circular features, [546] and [552], both of which cut the natural sands and gravels. Feature [546] was located at 1.38m OD and had a diameter of 0.45m by 0.11m deep. The backfill of this small feature, deposit [545], only yielded a single fragment of Roman tile which provided a date range of AD 55-160 (Appendix 6).

7.2.10 Feature [552] was located at 1.40m OD and had a diameter of *c.* 0.42m and was 0.16m deep. Recovered from the backfill of this feature, deposit [551], was a small ceramic assemblage which provided a date range of AD 120-250 (Appendix 2).

7.2.11 It is unclear what these two features represent or even if they relate to one another. Potentially they may relate to postholes from higher in the sequence. However, their proximity to the burials and their alignment may suggest a connection and it cannot be ruled out that they may indeed have been the location for cremation urns.

Gully

7.2.12 Cutting the natural sands and gravels in the northeastern half of the excavation was a gully, [563]. This gully ran on a northeast-southwest alignment for a length of 3.70m but appeared to terminate at the southwestern end. This gully was recorded at 1.25m OD and was 0.35m wide and 0.15m deep. Recovered from fill [562] of this gully was a single sherd of pottery which provided a date range of AD 150-400 (Appendix 2). A

single fragment of early Roman tile, dating to AD 50-80, was also recovered from this fill (Appendix 6).

Pit group

7.2.13 Located to the south of the ditch and burials was a range of possible Roman pits and postholes, all of which cut the natural sands and gravels, [574], [576], [565], [579], [548], [550] and [600]. Two of these were of a slightly different nature to the rest; small pits [565] and [600] were sub-circular in shape and measured 0.61m by 0.33m by 0.10m deep and 0.42m diameter by 0.20m deep respectively. Neither of these features yielded any dating evidence. These two features, particularly [600], were more akin in nature to features [552] and [546] located further northeast and discussed above. The remaining features, [574], [576], [579] [548] and [550], were ovoid in shape and ranged in size from 0.95m by 0.70m by 0.19m deep to 1.12m by 0.66m by 0.13m deep. They were recorded between 1.34m OD and 1.20m OD. Only pits [548] and [550] provided dateable material culture; fill [547] within [548] and fill [549] within [550] each contained a single fragment of Roman tile, both of which provided the general date range of AD 50-160+ (Appendix 6).

7.2.14 It is interesting to note that these features appeared to form a linear alignment running approximately northwest-southeast. This positioning was slightly different to the other Roman features, particularly the ditch and graves which all shared the same alignment. Potentially then these features represent an earlier phase of Roman activity; the limited dating evidence recovered possibly confirming this with first and second century material being present. However, the recovered artefactual assemblage is too small to conclusively determine this. It is also interesting to note that no other Roman features were recorded south beyond this alignment of features although as illustrated above this southern area of the site had a depression in the natural sands and gravels within which a series of natural alluvial deposits had formed. The linear arrangement of these features may therefore suggest that they represent some form of boundary such as a fence line although the general dimensions of these features may preclude this.

Layers

7.2.15 Sealing the Roman features through the northeastern area of the excavation was a sequence of Roman deposits, [525], [542] and [523]. These deposits were located at a highest level of 1.62 OD and had an overall thickness of 0.35m. These Roman soil deposits contained a vast array of artefacts which provided dating evidence for the layers. Deposit [525] was stratigraphically the earliest of the sequence from which was recovered a moderately sized assemblage of Roman pottery which dated to AD 200-400 (Appendix 2). An assemblage of Roman tile, tegula and imbrex was also recovered which provided a date of AD 100-160+ (Appendix 6). This, therefore, provides a *terminus post quem* of AD 200 for the deposition of this material.

7.2.16 Sealing [525] was layer [542] which yielded a small assemblage of pottery which again provided the date range of AD 200-400 along with earlier residual material (Appendix 2). This deposit also contained a very small assemblage of Roman tile dating to AD 55-160+ (Appendix 6). More pertinently however were three Roman coins recovered from this deposit; two of which dated to the fourth century including a nummus dating to AD 330-335 (Appendix 7). Deposit [523] also contained a large artefactual assemblage including late Roman pottery dated AD 300/350-400+, a single late Roman coin, and a large assemblage of Roman building material which includes tesserae, roller stamped, combed and half box flue tegulae, tile, brick and imbrex (Appendices 2, 6 & 7). Also of some interest was the presence of residual prehistoric pottery within deposit [523]. These various assemblages illustrate a late Roman date for these deposits but also provide information about general activity in the area, notably the very large assemblage of Roman building material.

7.2.17 Sealing the natural deposits in the southwestern half of the excavation were Roman deposits, [598] and [589], represented a similar sequence to the deposits in the northeastern half, described above. These deposits were recorded at a highest level of 1.33m OD. Recovered from these deposits was a small assemblage of Roman pot, dating to AD 300-400+ and a small assemblage of Roman building material including late and early Roman tile, brick and imbrex providing a date range of AD 140-300 (Appendices 2 & 6). This artefactual assemblage again illustrates a 4th-century date for these deposits.

Cremation

7.2.18 Cutting through Roman layer [523] was a complete Roman pot [524] (Plate 6). Set within cut [527] this pot was located at 1.58m OD. This whole Roman vessel represented a cremation urn, the only one encountered during the excavation and was a TSK jar with swan's neck pendant-rolled rim a parallel for which dates to the 3rd/4th century (Appendix 2). Recovered from the interior of the pot was an assemblage of cremated human bone from a single adult individual with a large proportion of identifiable skeletal elements including fragments originating from the skull, pelvis, long bones and the vertebrae (Appendix 13). Further analysis of these cremated remains may yield more detailed information about the individual contained within.

7.3 Phase 3: Soil Horizon ('Dark Earth')

7.3.1 Sealing the Roman deposits and cremation across the excavation area was a silty post-Roman soil horizon, 'dark earth', contexts [517], [522], [581] and [588]. This deposit was recorded at a highest level of 2.09m OD, in the northeastern half of the excavation, and had a general thickness of *c*. 0.40m across the entire area of the excavation. This deposit is a well recorded phenomenon in the local vicinity with a

notably very similar deposit being recorded at the Trinity Street excavations to the north (Killock 2010). This 'dark earth' deposit is also well known for containing a vast array of material culture from a variety of dates although late Roman artefacts, including coins, feature prominently. The soil horizon contexts [517], [522], [581] and [588] also yielded a large artefactual assemblage. Contexts [517] and [522] both contained very large assemblages of Roman pottery which dated to the late Roman period, AD 350-400+ (Appendix 2). As has been the case elsewhere the 'dark earth' also contained ceramics from other periods; the medieval wares included Surrey-Hampshire border ware, Earlswood-type, Hedingham-type, London- and Mill Green wares (Appendix 3). Later post-medieval forms included London-area post-medieval redware, Essex-type post-medieval fine redware with brown glaze and black-glazed redware and Surrey-Hampshire border whiteware. Some 19th-century ceramics were also recovered. It is thought that agricultural/horticultural activity over a prolonged period may explain the range of material recovered from these deposits. Residual prehistoric pottery recovered is also of note (Appendix 2).

7.3.2 The recovered building material assemblage was equally as eclectic as the ceramics. Early and late Roman tile, brick, imbrex and tegula, tessera and box flue tile along with stone rubble, including Kentish Ragstone and paving and roofing stone and a small quantity of *opus signinum* were present (Appendix 6). Of note amongst this material is a worked bath stone fragment from [522] of a type commonly used in funerary monuments and sculpture from the late first century onwards. This assemblage provides information regarding Roman buildings in the Southwark area with walling and roofing material probably sourced from demolished late Roman buildings in the general vicinity. Some medieval building material was also recovered from these deposits which are unsurprising giving the date ranges of the other artefactual assemblages recovered.

7.3.3 A number of Roman coins were also recovered from the dark earth deposits which included Antoninianus coins from the late 3rd century and a larger group of nummus from the 4th century (Appendix 7). A medieval half penny was also amongst the coin assemblage.

7.4 Phase 4: Post-Medieval (Fig. 5)

Cattle Burials

7.4.1 Apparently cutting post-medieval ploughsoil [500] were two irregularly shaped cut features which contained articulated cattle remains within them, [506] and [509]. Cut [506] contained the articulated remains of two separate cows, [504] and [505] (Plate 7), lain next to each other. The remains of cow skeleton [505] continued northeast outside the limit of the excavation. These cattle remains were recorded at 1.72m OD.

The remains of both of these skeletons were complete with both being fully adult, aged between about 5 and 9 years (Appendix 11). The size of the horncores suggests they are likely to be unimproved longhorns. Fill [503] within the cattle burial contained a quantity of 17th-century pottery including Surrey-Hampshire border whitewares, tin-glazed ware, German Frechen and Westerwald stonewares (Appendix 3). Also recovered from the same fill were later types such as glazed black basalt ware and pearl ware with under-glaze blue-painted decoration which suggests a late 18th century to early 19th-century date. [503] also contained a moderately sized assemblage of clay tobacco pipe dating to 1700-1710 (Appendix 4).

7.4.2 Cut [509] contained the remains of at least a single articulated cow, [508]. The entirety of this cow was not recorded however as the larger percentage of it was located northwest outside the limit of the excavation. These cattle remains were recorded at 2.02m OD. This skeleton was incomplete due to its position on the edge of the excavation with the skull, mandibles, vertebrae, pelves and femurs being recovered. Again the animal was fully adult, aged between 5 and 9 years, although this animal was a male, probably a castrate (Appendix 11).The fill, [507], of this burial contained two fragments of clay tobacco pipe which dated to 1700-1710 which, along with some residual Roman material, was the only dating evidence recovered (Appendices 2 & 4).

7.4.3 Both these animal burials shared similar traits. This included showing no signs of butchery, suggesting the burial of complete carcasses. The dating of the two burial is also similar, both being 18th century in date. It is thought that the presence of complete skeletons strongly suggests that these burials may represent the deposition of diseased carcasses. A pandemic of a disease called rinderpest is known from the late post-medieval and could well be the reason for their deposition. Similar burials have been identified from excavations at the British Museum although these are of a slightly different nature (Appendix 11).

7.5 Phase 5: 19th Century (Figs. 6)

Ploughsoil

7.5.1 Sealing the post-Roman soil horizon across the entire site was a post-medieval ploughsoil, [500]. This deposit was recorded at a highest level of 2.59m OD and had a thickness of 0.60m. This substantial deposit contained a considerable artefactual assemblage which included residual Roman pottery, building material and coins (Appendices 2, 6 & 7). More pertinently however was a large ceramic assemblage which dated to the mid to late 19th century (Appendix 3). A large assemblage of clay

tobacco pipes dating to 1820-1860 was also recovered (Appendix 4). This clearly illustrates the deposition of this layer in the second half of the 19th century.

Wells

7.5.2 Cutting the ploughsoil deposit [500] across the excavation area were four brick-lined wells, [513], [577], [502] and [536]. These four wells were all in close proximity to one another and appeared to date to a similar time period. Brick-lined well [513] was recorded at 1.91m OD measuring 1.35m in diameter by 1.04m deep. Bricks from the well structure consisted of narrow frogged and unfrogged post Great Fire bricks bonded with a grey lime mortar which provides a date range of 1750-1850 (Appendix 6). This well was backfilled with deposit [512] which contained a large assemblage of ceramics dating to the mid 19th century. This large group was of interest as it has been identified as a closed group as many of the vessels are intact or could be reconstructed to be whole. This has been suggested to illustrate that the well was backfilled as a single event or over a short period of time (Appendix 3). This assemblage also contained what is described as Nursery wares; indicating that children, particularly boys, were resident in the household from which the material derived. Cylindrical mugs have transfer-printed designs stating 'A TRIFLE/FOR/RICHARD' and 'A PRESENT FOR A GOOD BOY'. A large assemblage of clay tobacco pipes, the largest assemblage recovered during the excavation, were also recovered from this well which provided a more refined date range of 1840-1860 (Appendix 4).

7.5.3 Brick-lined well structure [577] was located at 2.10m OD measuring 1.40m in diameter with a recorded depth of 0.40m. This feature was not fully excavated however due to its location on the edge of the excavation area. Although now brick samples were recovered the brick structure appeared to be of an identical nature to well [513] described above.

7.5.4 Brick-lined well [502] was recorded at 0.87m OD measuring 1.60m in diameter by 0.50m deep. Bricks from the well structure consisted of narrow unfrogged post Great Fire bricks bonded in a grey lime mortar dating to 1750-1850 (Appendix 6). This well was backfilled with deposit [501] from which was recovered a moderate sized assemblage pottery dated to the mid 19th century (Appendix 3). Two AO28 type clay tobacco bowls were also recovered from the well; both initialled 'I W', which provided the date range of 1820-1860 (Appendix 4). This dating evidence of both the well structure and its backfill illustrate it to be contemporary with well [513].

7.5.5 Brick well structure [536] was of a different nature to the previous three wells. Brick-lined well structure [536] was located at 0.67m OD measuring approximately 1.55m in diameter by 0.60m deep. Bricks recovered from the structure consisted of narrow post Great Fire bricks bonded in a type 2 mortar, dating to 1750-1850 (Appendix 6). This brick structure was installed upon an earlier timber barrel well structure, [537],

set within a larger square cut [511]. The top of the barrel structure was located at 0.08m OD and had an excavated depth of 0.80m but was not fully excavated and therefore continued deeper. Although it would seem logical that the timber barrel may represent an earlier phase of well structure the deposits within contained assemblages of 19th-century material. These backfilled deposits, [538], [534] and [510] contained ceramic assemblages dating to 1830-1900, amongst which were a number of intact stoneware bottles and ink pots (Appendix 3). Clay tobacco pipes recovered from these deposits, notably [510], dated to the early 19th century (Appendix 4). The secondary brick structure therefore can be dated to the late 18th/early 19th century. The potentially earlier phase of the well represented by the timber barrel remains undated.

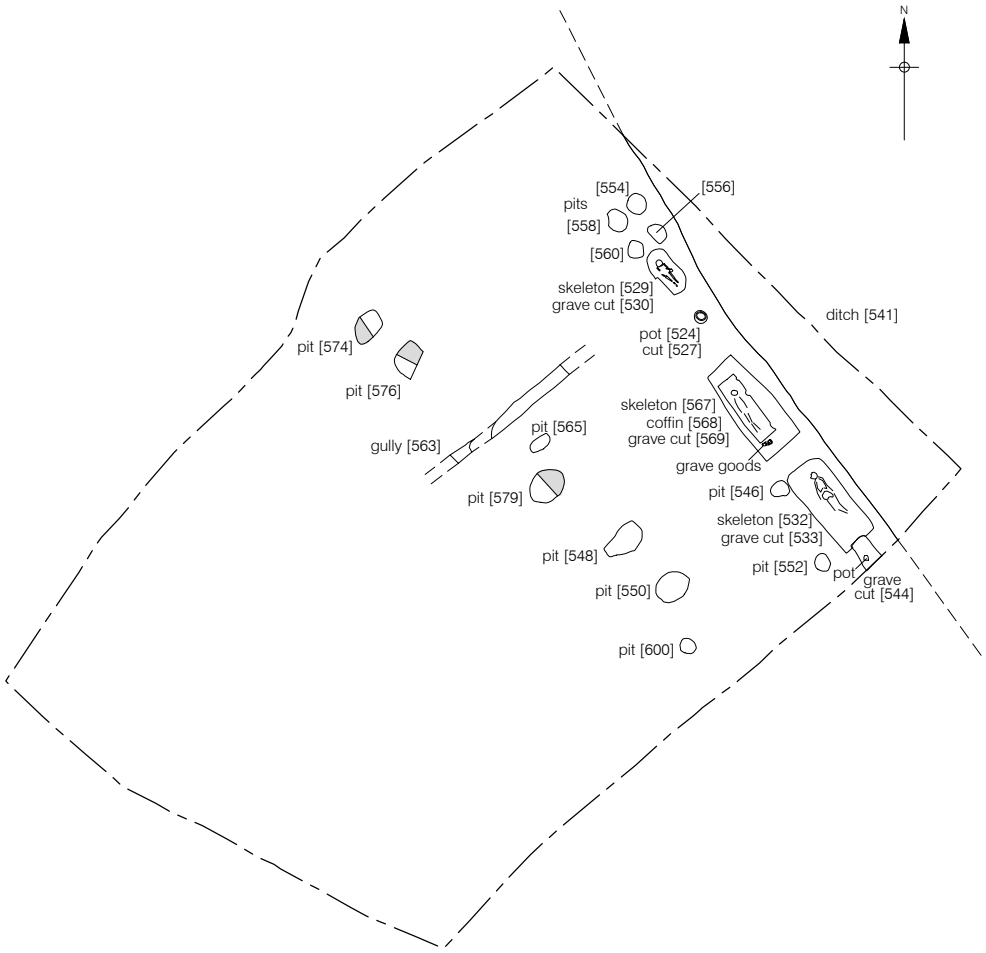
Pits

7.5.6 A number of pits were recorded across the area of the excavation, [593], [585], [583], [595], [597], [587], [515] and [591]. These varied in shape from sub-circular to square and in size ranging from 1.05m by 0.90m by 0.35m deep, pit [593], to 3.00m by 3.10m by 0.60m deep, pit [585]. These features were all recorded at a general height of *c.* 1.70m OD but were however most likely cut form higher up. This is illustrated by pit [515] where its highest level was recorded from the section at 2.73m OD. Of these pits [585], [583], [595], [597], [587], [519] and [515] all contained 19th-century artefacts predominantly pottery and building material (Appendices 3 & 6). Of note amongst these assemblages was fill [582] of pit [583] which contained two plates from a service with a purple transfer design (TPW4), the design being called Kew, found on the base. The second plate has a registration mark for 20th September 1866.

7.5.7 Also of interest amongst these features was sub-circular pit [591]. Recorded at 2.09m OD this feature was at least 2.60m in width but continued southwest outside the excavation limits and therefore its full dimensions were not recorded. Backfilled deposit [590] within the pit contained a very large assemblage of oyster shell representing the greater part of the matrix of this deposit. This feature was at least 1m deep but the feature was not fully excavated due to its location on the edge of excavation. No dating evidence was recovered from this pit however and so this considerable dump oyster shell remains undated.

7.6 Phase 6: Modern

7.6.1 Completing the archaeological sequence of the excavation was an extensive deposit of modern made ground sealed by concrete. The highest level of this concrete was *c.* 3.90m OD, the modern ground level.



unexcavated

0 10m

17/06/14 JB

Figure 4
Phase 2 Roman
1:200 at A4

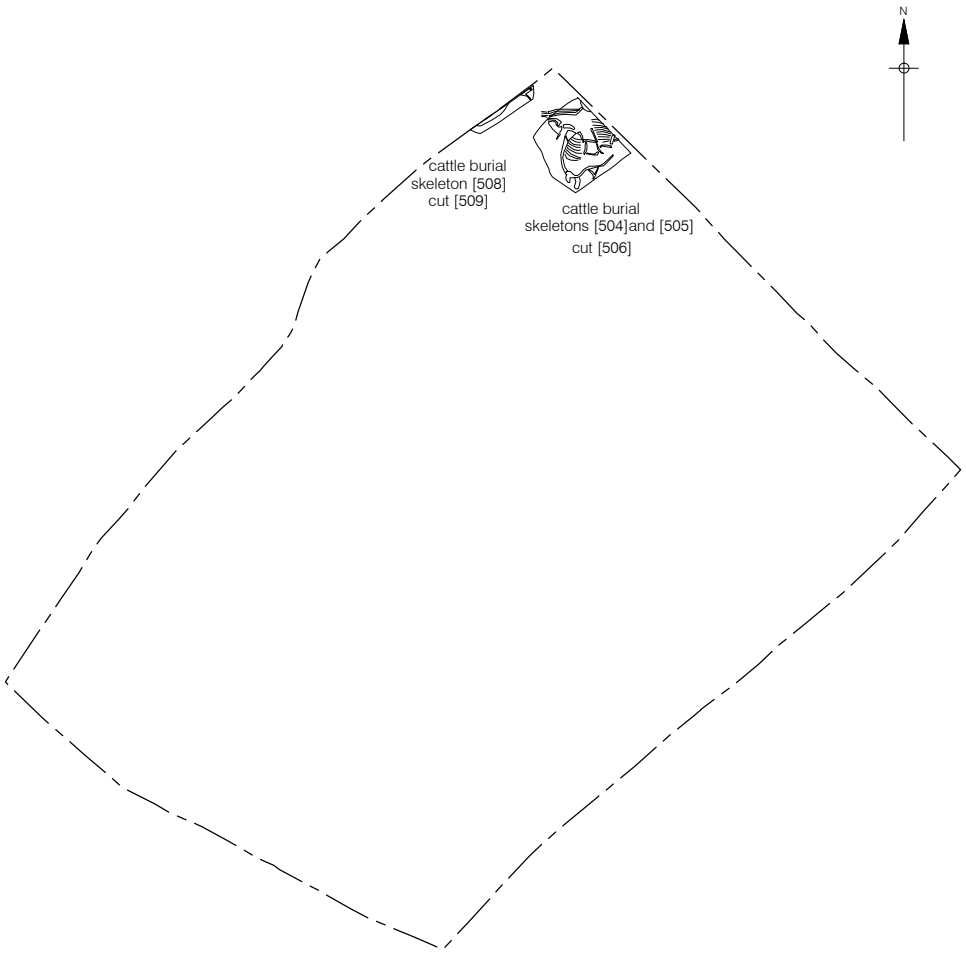


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Figure 5
Phase 4 Post medieval
1:200 at A4

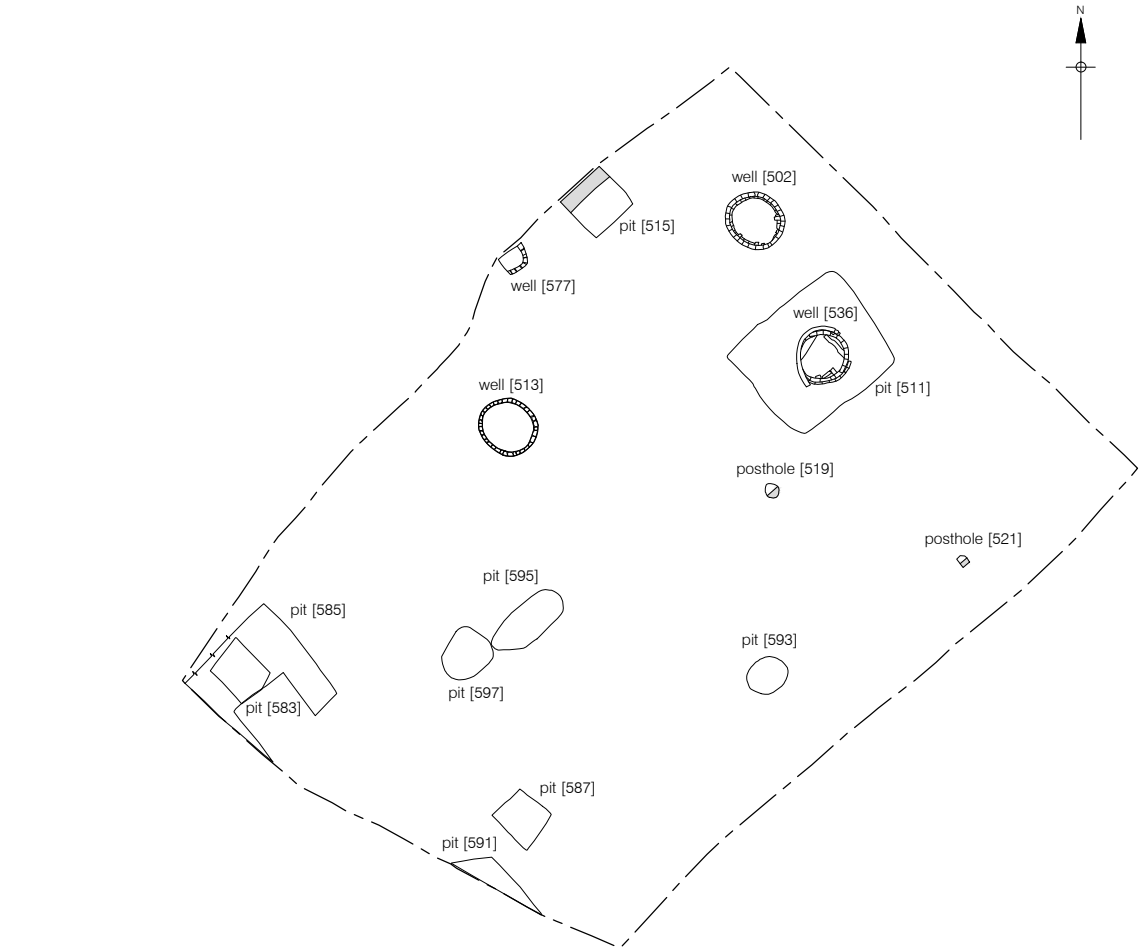

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Figure 6
Phase 5 19th Century
1:200 at A4

Plate 1: Aerial view of site showing ditch [541], looking northeast

Plate 2: Skeleton [567] and remains of coffin [568] within grave [569], looking southwest, 1m scale

Plate 3: Coffin [568] and grave goods within grave [569], looking northwest, 1m scale

Plate 4: Skeleton [532] in grave [533], looking southwest, 0.50m scale

Plate 5: Grave goods within graves [533] and [544], looking southeast

Plate 6: Cremation urn [524], looking northwest, 0.50m scale

Plate 7: Cattle skeletons [504] and [505], looking north

8 ARCHAEOLOGICAL PHASE DISCUSSION

8.1 Phase 1: Natural

8.1.1 The earliest deposits recorded across the excavation area were natural sands and gravels, which were recorded at 1.33m OD in the northeastern half of the site, sloping down to -0.18m OD to the southwest. This slope appeared to be notably steeper in comparison to the general topography of the area but may be a reflection of a natural depression within the Kempton Park Gravels. Within this depression were a series of natural alluvial deposits. During excavations to the southwest in 1989 and 2000 peat deposits were revealed (Jones 1989; Taylor 2000). It is possible that both this peat and the natural alluvium may relate to, or be similar to, the Rockingham anomaly known to be located to the southwest.

8.2 Phase 2: Roman

8.2.1 The Roman activity consisted of a series of late Roman inhumations and a cremation located on the edge of a large ditch. To the south and parallel to these burials were a series of pits also arranged in one long line. The burials were dated to the late 3rd-4th century and were possibly as late as the second half of the 4th century based on the presence of sherds of Portchester D ware. These graves and cremation were part of the southern Roman cemetery with other burials having been observed in the vicinity at 28-30 Trinity Street (Killock 2010; Killock in prep), Symington House, Harper Road (AOC 2011) and Harper Road (Dean & Hammerson 1980; Cotton 2008). The presence of both inhumations and a cremation in a long line would suggest that both burial practices were being conducted at the same time in the late Roman period in this part of Southwark.

8.2.2 Three of the inhumations had grave goods consisting of whole pots (one of which was smashed), whilst the fourth burial was badly truncated which may have removed any grave goods. One of the burials was placed in a wooden coffin which might suggest that it was a burial of some status.

8.2.3 The Roman cemetery and associated features would appear to occupy a very structured landscape. The inhumations and cremation were located on the southern edge of a large boundary ditch spread out in a long line. An association between burials and ditches has been noted on a number of sites in Southwark, such as 52-56 Lant Street (Ridgeway *et al.* 2013), 28-30 Trinity Street (Killock 2010; Killock in prep), Symington House, Harper Road (AOC 2011) and Harper Road (Cotton 2008). At the northwest end of the line of burials a possible four-post structure was located. This may have fulfilled some ritual or practical purpose, such as a raised platform, during burial of the dead. Running in a line to the southwest and parallel to the line of burials were a series of pits which would appear to be associated with the burials. They may

have been used for ritual or ceremonial purposes during the funeral rites, perhaps for the deposition of special objects or for the remains of funeral feasts. Further analysis of the finds from these features together with analysis of the 'dark earth' finds (since the tops of these pits are likely to have been lost to the processes that formed the deposit) may help to determine the use of these pits.

8.2.4 The depression/hollow further to the southwest is likely to have provided the southern boundary to the cemetery in this area. A small gully running northeast to southwest would most likely have provided drainage from the main ditch to the northeast to the depression/hollow to the southwest or may perhaps have represented an internal division within the cemetery.

8.3 Phase 3: Post-Roman 'dark earth'

8.3.1 A 'dark earth' deposit was observed covering the Roman deposits and features across the site. This contained a mixture of finds from the prehistoric, late Roman, medieval and post-medieval. This 'dark earth' deposit is often seen on sites in Southwark, including 28-30 Trinity Street to the northeast (Killock 2010), with the same mixture of finds. Much work has been done on the processes involved in its formation (Yule 1990; Killock 2010) and the complete mixing of finds would suggest that bioturbation caused by the growth of plants and crops has led to a loss of much of the late Roman deposits. An attempt was made on site to plot all coins and small finds in three co-ordinates using GPS and locating finds assemblages within grid squares to provide raw data for a distribution of finds within the deposit to be attempted. However, due to time constraints it was not possible to remove the deposit in the suggested 50mm spits and many of the metal objects recovered were badly corroded and undiagnostic. Once these finds have been x-rayed and coins cleaned it may be possible to attempt a limited distribution pattern of finds within the deposit to see if clusters of finds exist that may be the remnants of features lost during the bioturbation process.

8.4 Phase 4: Post-medieval cattle burials

8.4.1 The remains of three whole cattle burials were found within the post-medieval plough soil. The limited finds from the features would perhaps suggest an 18th-century date for their disposal. The lack of signs of butchery on the animals and their completeness would suggest that they were not used for food but were quickly buried because they had become unfit for human consumption because of disease. Such cattle diseases as rinderpest are documented in the 18th century and the burial of complete cattle carcasses has been recently observed on a site at the British Museum (Rielly 2011).

8.5 Phase 5: 19th-century activity

8.5.1 The latest archaeological remains observed on site were a series of brick-lined wells and rubbish pits that were dated to the mid 19th century. One particular well was filled with a large assemblage of pottery, glass and clay tobacco pipe that represent a closed group from one disposal of rubbish. These features are associated with the housing that was erected on the site with the construction of Union Square and Union Road (later known as Dickens Square and Harper Road) sometime between 1830 and 1870. The mid 19th-century date of the finds would suggest that they were disposed of shortly after the construction of the houses and associated wells. This may have been linked to a change of water provision for the houses. However, it is also possible that much of the pottery had been retained for many years and that was only disposed of many years later in the late 19th or 20th century.

9 RESEARCH QUESTIONS

9.1 The research design was set out in the Method Statement prepared for the archaeological excavation (Brown 2012).

9.2 Natural Geology

What is the nature of the natural geology and topography?

Can the natural topography of the site be determined?

9.2.1 The natural geology recorded on the site consisted of sandy gravels. These sloped down to the southwest where they were filled with a series of alluvial clays, silts and sands. During excavations to the southwest in 1989 and 2000 (Jones 1989; Taylor 2000) peat deposits were revealed. It is possible that both this peat and the natural alluvium may relate to, or be similar to, the Rockingham anomaly known to be located to the southwest.

9.3 Prehistoric

What is the earliest indication of activity on the site?

Is there evidence for early soil development directly above the natural sand and gravel?

Is this the same as the early Roman soil horizon recorded at nearby sites?

What is the nature of this soil's morphology – can this provide indications of early the environment?

Are there cut features or indications of early occupation at this level?

Are there indications of pre-Roman activity on the site?

9.3.1 There was no evidence of prehistoric features or deposits on the site. A few struck flints and sherds of prehistoric pottery found residually within later features were the only evidence of prehistoric activity on the site. There would also appear to be no evidence of an early Roman soil horizon with all the late Roman features apparently cut through the natural sands and gravels

9.4 Roman

What is the evidence for early Roman activity on the site?

9.4.1 There is little or no evidence of early Roman activity on the site.

What is the evidence for later Roman activity on the site?

9.4.2 Both the Roman pottery and coins suggest that all the activity on site is occurring in the late Roman period. This activity consisted of a Roman cemetery laid alongside a large boundary ditch, together with an associated series of pits and occasional postholes. Both the ditch and the burials would appear to be late 3rd to 4th century in date with two of the burials possibly being as late as AD 350-400+ based on the presence of sherds of Portchester D ware (PORD).

What is the function of the any late Roman ditches?

9.4.3 A large late Roman ditch was observed running across the northern part of the site. A number of similar ditches have been observed on sites in the vicinity at Harper Road (Cotton 2008), Symington House, Harper Road (AOC 2011) and 28-30 Trinity Street (Killock 2010). It is probable that these represent field or boundary ditches although the close association of the ditch and the burials might suggest that they are closely linked perhaps even as boundaries to or enclosures within the cemetery.

Is there any evidence for differing landuse to the north or south of the ditch?

9.4.4 Only the area to the south of the large Roman ditch was located within the site as the northern edge of the feature was situated beyond the northern limit of excavation

Are there any indications of a cemetery and if there is, how is it laid out?

9.4.5 Evidence of a Roman cemetery was observed in the northern part of the site. Four graves, three of which contained skeletons and a cremation were found immediately adjacent to the south side of a large Roman ditch. The inhumations and cremation lay in a single line along the side of the ditch and would appear to be closely associated with the feature.

Is the cemetery only inhumation, or cremation, or a combination of both?

9.4.6 The cemetery was a mixture of inhumations and cremations with four probable graves containing three skeletons and one cremation found. Thus it would appear that both forms of cemetery practice were being carried out at the same time most probably in the late 4th century.

Is there any evidence for a ritualistic landscape?

9.4.7 It has become apparent from the results of a number of excavations in this part of Southwark that this area was part of a widespread ritual landscape, consisting of temples, ritual shafts and a large cemetery. As such the cemetery forms an intrinsic part of this ritual landscape. Examples of ritual behaviour can be found by the presence of whole pots placed within the graves, one of which was smashed into 200 pieces and another which had a hole in its side with evidence of burning. The four postholes/pits which lay to the northwest of the burials may represent some form of four-post structure associated with funerary practices. It is also interesting to note a series of pits lay parallel to the burials to the south and it is possible to speculate that

they may be associated in some way perhaps being dug to receive offerings for the dead.

9.5 Medieval and Post Medieval

Are there any boundary ditches cut through the medieval plough soil?

9.5.1 There were no post-Roman boundary ditches revealed on the site.

Is there any secure dating for the post-medieval horticultural soils?

9.5.2 The post-medieval horticultural soils contained a considerable artefactual assemblage which included residual Roman pottery, building material and coins. However, a large ceramic assemblage which dated to the mid to late 19th century together with a large assemblage of clay tobacco pipes dating to 1820-1860 clearly indicates that the deposition of this layer occurred in the second half of the 19th century.

9.6 New Research Questions

9.6.1 The results of the archaeological excavation have led to the following new research questions being posed:

Does the slope of the natural gravels to the southwest and the presence of alluvial deposits suggest that site is on the edge of the Rockingham anomaly?

How do the inhumations and cremation compare to other burials within the Southern cemetery and indeed other Roman London cemeteries?

The cemetery was associated with a large ditch, can other examples be found in Southwark or Roman London of this occurrence?

Can the presence of a Roman timber coffin be compared to those surviving at Atlantic House?

What is the function of the line of pits located to the southwest of the burials?

Can further analysis of the finds from and distribution within the ‘dark earth’ deposit contribute to an understanding of the processes involved in its formation but also reveal possible features destroyed by the factors that led to its formation?

Can the date of the cattle burials be refined and linked to a documented epidemic of rinderpest?

10 CONTENTS OF THE ARCHIVE

10.1 Paper Records

• Contexts		104 sheets
• Plans	49 Plans	133 sheets
• Sections	1 Section	1 sheet
• Environmental Sheets		5 sheets

10.2 Finds

• Roman Pottery	12 boxes
• Post Roman Pottery	16 boxes
• Clay Tobacco Pipe	2 boxes
• Glass	2 boxes
• Animal Bone	3 crates, 15 boxes
• Human Bone	2 large boxes
• Ceramic Building Material	9 crates
• Small Finds / Metal	7 boxes
• Coins	72
• Timber	2 pieces

10.3 Samples

• Environmental Bulk Samples	2 samples

10.4 Photographs

• Digital Shots	168

11 IMPORTANCE OF THE RESULTS, FURTHER WORK AND PUBLICATION PROPOSAL

11.1 Importance of the Results

11.1.1 The Roman cemetery is of local and perhaps regional significance as it provides further evidence of burial practices in Roman Southwark and London. Whilst the presence of burials adjacent to and in the vicinity of large ditches has been observed before in Southwark, this part of the cemetery seems to be highly ordered, with the burials immediately adjacent to a large ditch and on the same alignment, with no evidence of intercutting or later burials. The presence of a possible four-post structure is of major interest as are the line of associated pits to the southwest. There seems to an order and structure to the layout with each pit perhaps intimately associated with each burial. This is a rare occurrence if not previously unknown from London. The site therefore makes an important contribution to the knowledge of the Roman southern cemetery in Southwark.

11.1.2 The presence of 'dark earth' is well attested on sites in Southwark with much work having been done to determine the processes at work in its formation (Yule 1990; Killock 2010). However, an attempt will be made to plot a distribution pattern for the finds to see if possible lost features can be found. This work if it succeeds will be of major significance in the debate on the 'dark earth' deposits.

11.1.3 The cattle burials are of some significance and would appear to be the result of disposal of diseased animals. Examples of such burials have been found recently at the British Museum and these present findings can make a contribution to the debate.

11.1.4 The other post-medieval finds associated with the 19th-century housing on the site are of less significance and it is not proposed to undertake further work on these assemblages.

11.2 Further Work

11.2.1 The Roman activity on the site will be compared with that on other sites in the vicinity and the Roman inhumations and cremation will be compared with other burials both within the Roman southern cemetery and the other cemeteries of Roman London. The finds from the line of pits and the 'dark earth' will be subject to further analysis in an attempt to determine a function for the features. Further analysis of the 'dark earth' deposit may be attempted following the results of the x-raying of the iron small finds from it and conservation of the coins. Depending on the results of this work a distribution of finds within the 'dark earth' may be plotted in order to determine if lost features can be reconstructed within the deposit. Evidence from other post-medieval cattle burial sites will be compared to those from the present site.

Roman Pottery

11.2.2 The pottery should be considered in a site wide context. Spatial and functional analysis of the assemblage from Phase 3 contexts is recommended, since it can contribute to our understanding of the formation and composition of 'dark earth' deposits. It is recommended to include a Romano-British pottery report in the publication of the excavation.

11.2.3 The majority of pottery can be described with reference to known typology and corpora, which should minimise the need for pottery illustrations. Sherds of intrinsic interest (see above), the rim in MAYEN fabric (context [522]), and the three complete vessels, however, should be illustrated.

Post Roman Pottery

11.2.4 A small publication report is recommended on the pottery concentrating on the medieval pottery and particularly the LCOAR SHEL pipkin which requires illustrating.

Clay Tobacco Pipe

11.2.5 The clay tobacco pipe assemblage from DKN11 contains some interesting items, although they are mostly typical for the Southwark area. The main potential of the clay tobacco pipes are to date the deposits they were recovered from. There are no recommendations for further work.

Glass

11.2.6 A short publication report is required for the glass from this site. It is recommended that John Shepherd further analyses the Roman glass at publication stage and produces the text. Two glass items requires illustrating to complement the text.

Ceramic Building Material

11.2.7 This moderately sized group of building materials contains few items of individual merit that warrant further analysis, comment or illustration. The strength of the assemblage lies largely in dating the 'dark-earth' layers as well as dating the Roman ditch/cremation/plough soil to the later Roman period. Comment should however be made at publication stage of the late Roman character of the assemblage and evident comparison with some of the material from Tabard Square including material associated with the Courtyard Winged Villa and tombstone fragments close to the adjacent to the roadside cemetery. Passing comparison too should be made with the building material from adjoining Trinity Street. Items that require illustration and further comment at are limited to a rare roller stamped die 9 and part of a tombstone fragment.

Roman Small Finds

11.2.8 The iron objects should be x-rayed and the objects should be reassessed following x-ray. Distributional studies could be carried out if time and resources permit. The penannular brooch, seal box <801> [588] and iron ?nail from the cremation burial should be illustrated.

Post Roman Small Finds

11.2.9 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 this purpose, a number of objects will require more extensive study, in particular the post-medieval lead tokens. Some metal objects need to be x-rayed to aid identification. Following x-ray and final evaluation, the post-medieval nails may be discarded.

Timber

11.2.10 No further work is recommended.

Animal Bone

11.2.11 It is recommended that further work on the Roman collections is worthwhile but heavily dependent on the forthcoming dating review, while the 'dark earth' assemblages are perhaps unlikely to be of further use. In contrast, there is clear potential concerning further study of the 18th-century cattle skeletons and the 19th-century food waste deposits. The publication of these collections should incorporate the information given in this assessment report with additional information regarding their age and size with comparisons to contemporary London collections were appropriate.

Human Bone

11.2.12 The articulated remains should be fully analysed, to include full analysis of age, sex, metric and non-metric data and pathologies and report written to include the results of this assessment and the cremated bone assessment. Despite the small size of the assemblage demographic trends for the cemetery may be further enhanced when dating and the provisional phasing of the inhumations and deposits containing disarticulated human bone has been completed and the results compared with the burials found during the archaeological investigations at Trinity Street.

11.2.13 It is also proposed to undertake the analysis of oxygen and strontium isotopes from the two adult skeletons to provide information on origin. Additionally analysis of dietary isotopes (carbon and nitrogen) would also be carried out.

Cremated Human Bone

11.2.14 Due to the preservation of several identifiable elements of the skeleton further work could include a compilation of an inventory and potentially the definition or refinement of the age at death, pathological manifestations and possibly the sex of the individual.

The results of this would form part of a report written to include the results of this assessment and the inhumation and disarticulated bone assessment and analysis. A comparison of this cremation with the cremated bone found at Trinity Street may also be worthwhile.

Environmental Samples

11.2.15 No further work is recommended.

Shell

11.2.16 Fill [590] was the only context from Dickens Square that produced a quantity of oyster shell that was sufficiently large enough to warrant further analysis, however its significance is limited since it dates to the recent past. Further work is therefore not recommended, however a brief summary of the results and conclusions that are presented in this report should form part of the publication.

Lithics

11.2.17 Due to the size of the assemblages no further analytical work is warranted. As they have some potential in contributing to a wider appreciation of landscape use in the area they should be recorded in the Historic Environment Record and a brief description included in any published account of the fieldwork.

11.3 Publication Proposal

11.3.1 It is proposed that the results of the archaeological investigation will be published as an article in *London Archaeologist*. The publication will include the following sections:

- Introduction
- Geological and topographical background
- Archaeological background
- Archaeological evidence, by phase, concentrating on the Roman activity, especially the cemetery, the 'dark earth' deposit and the 18th-century cattle burials
- Discussion

The illustrations will include:

- Location plans
- Phase plans
- Photographs
- Finds illustrations

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13 BIBLIOGRAPHY

AOC, 2011. *Harper Road (Symington House), London Borough of Southwark. A Post-Excavation Assessment Report*. AOC Unpublished Report

Barber, B. and Hall, J., 2000. 'Digging up the people of Roman London; interpreting evidence from Roman London's cemeteries,' in I. Haynes, H. Sheldon and L. Hannigan (eds.), *London Under Ground: The archaeology of a city*, 102-120.

Brown, G., 2012. *Method Statement for an Archaeological Excavation at 1 Dickens Square, London SE1, London Borough of Southwark*. Pre-Construct Archaeology Ltd Unpublished Report.

Carlin, M., 1996. *Medieval Southwark.*

Clark, J., Cotton, J. and Hall, J. (eds.), 2008. *Londinium and Beyond* CBA Research Report 156.

Cotton, J., 2008. 'Harper Road, Southwark: an early Roman burial revisited,' in J. Clark, J. Cotton, J. Hall, R. Sherris & H. Swain (eds.), *Londinium and Beyond: Essays on Roman London and its Hinterland for Harvey Sheldon.* CBA Research Report 156, 151-161.

Cowan, C., 1992. 'A possible Mansio in Roman Southwark: Excavations at 15-23 Southwark Street,' *Transactions of the London and Middlesex Archaeological Society*, 3-191.

Cowan, C., Seeley, F., Wardle, A., Westman, A. and Wheeler, L., 2009. *Roman Southwark settlement and economy: excavations in Southwark 1973-91* MoLA Monograph 42.

Dean, M. & Hammerson, M., 1980. 'Three inhumation burials from Southwark,' *London Archaeologist* Vol 4 No 1, 17-22.

Dillon, J., Jackson, S. & Jones, H., 1991. 'Excavations at the Courage Brewery Site and Park Street 1984-1990,' *London Archaeologist* Vol 6 No 10, 255-262.

Douglas, A., 2007. 'An excavation at 5-27 Long Lane, Southwark, London SE1,' *Transactions of the London and Middlesex Archaeological Society* 58, 15-52.

Drummond-Murray, J., Saxby, D. & Watson, B., 1994. 'Recent archaeological work in the Bermondsey district of Southwark,' *London Archaeologist,'* Vol 7 No 10, 251-257.

Graham, A.H., 1978. 'The Geology of North Southwark and its Topographical Development in the Post-Pleistocene Period,' in J. Bird, A.H. Graham, H. Sheldon and P. Townsend, *Southwark Excavations 1972-74* London & Middlesex Archaeological Society and Surrey Archaeological Society Joint Publication No. 1, 501-516.

Grosso, I., 2011. An Archaeological Recording Exercise on Land at 1 Dickens Square, London Borough of Southwark, SE1 4JL. Pre-Construct Archaeology Ltd Unpublished Report.

Hall, J. 1996. 'The Cemeteries or Roman London,' in J. Bird, M. Hassall and H. Sheldon (eds.), *Interpreting Roman London: Papers in Memory of Hugh Chapman*, 57-84.

Hammer, F., 2003. *Industry in north-west Roman Southwark* MoLAS Monograph 17.

Heard, K., Sheldon, H. & Thompson, P., 1990. 'Mapping Roman Southwark,' *Antiquity* 64, 608-19.

Heathcote, J., 1990. 'Excavation Round-up: part 2, London Boroughs,' *London Archaeologist* Vol 6 No 7, 188-195.

Jones, H., 1989. Mosque, 1 Dickens Square, SE1, Museum of London (Dept. of Greater London Archaeology) Unpublished Post Excavation Assessment Report.

Killock, D., 2005. 'Roman River bank use and changing water levels at 51-53 Southwark Street, Southwark London,' *Transactions of the London and Middlesex Archaeological Society* 56, 27-44.

Killock, D., 2009. *An Assessment of an Archaeological Excavation at Tabard Square, 34-70 Long Lane and 31-47 Tabard Street, London SE1, London Borough of Southwark,* Pre-Construct Archaeology Ltd Unpublished Report.

Killock, D., 2010. *An Assessment of an Archaeological Excavation at 28-30 Trinity Street, London SE1, London Borough of Southwark*. Pre-Construct Archaeology Ltd Unpublished Report.

Killock, D., in prep. *Excavations at 28-30 Trinity Street.* Pre-Construct Archaeology Monograph.

Mackinder, A., 2000. *A Romano-British Cemetery on Watling Street: excavations at 165 Great Dover Street, Southwark, London* MoLAS Archaeology Studies Series 4.

Maloney, J., 2014. 'Archaeology with an Islamic community,' *London Archaeologist,'* Vol 13 No 12, 331-332.

Milne, G., Battarbee, R.W., Stalker, V. & Yule, B., 1983. 'The river Thames in London in the mid 1st Century AD,' *Transactions of the London and Middlesex Archaeological Society* 34, 19-30.

Pooley, A., 2010. *Archaeological Recording Exercise at 1 Dickens Square, Southwark.* Pre-Construct Archaeology Ltd Unpublished Report.

Proctor, J. and Bishop, B., 2002. 'Prehistoric and environmental development on Horsleydown; excavations at 1-2 Three Oak Lane,' *Surrey Archaeological Collections* 89, 1-26.

Ridgeway, V. and Butler, J., 1999. 'Prehistoric Finds at Hopton Street,' *London Archaeologist,'* Vol 9 No 3, 72-76.

Rielly, K., 2011. *Assessment of animal bone recovered from The British Museum North West Development, Bloomsbury, London, WC1 (MPB09)*, Unpublished Pre-Construct Archaeology Report.

Ridgeway, V., Leary, K. and Sudds, B., 2013. *Roman burials in Southwark: Excavations at 52-56 Lant Street and 56 Southwark Bridge Road* Pre-Construct Archaeology Monograph 17.

Taylor, J., 2000. *Mosque and Community Centre, 1 Dickens Square, London EC1, London Borough of Southwark*, Museum of London Archaeology Unpublished Interim Excavation Report.

Thompson, A., Westman, A. & Dyson, T. (eds.), 1998. *Archaeology in Greater London 1965-90: A guide to records of excavations by the Museum of London*. The Archaeological Gazetteer Series Volume 2, Museum of London.

Wheeler, M., 1930. *London in Roman Times,* London Museum Catalogues No. 3.

Yule, B., 1990. 'The 'dark earth' and late Roman London,*' Antiquity* 64, 620-628.

APPENDIX 1: CONTEXT INDEX

Context No	Plan No	Section No	Gd Sq	Phase	Type	Description	N-S	E-W	Depth	High	Low	Prov date
500	500	-	105/220 110/220	5	Layer	Plough soil	-	-	-	1.94	1.81	P.Med
501	-	-	105/220	5	Fill	Backfill of well [502]	-	-	0.50	0.87	-	P.Med
502	502	-	105/220	5	Masonry	Brick lining	1.60	1.60	0.50	0.87	0.37	P.Med
503	-	-	105/220	4	Fill	Fill of [506]	1.95	1.28	0.27	1.72	-	P.Med
504	-	-	105/220	4	Skeleton	Cattle skeleton	-	-	-	-	-	P.Med
505	-	-	105/220	4	Skeleton	Cattle skeleton	-	-	-	-	-	P.Med
506	506	-	105/220	4	Cut	Cattle burial	1.95	1.28	0.27	1.72	1.45	P.Med
507	-	-	100/220	4	Fill	Fill of [509]	1.99	0.28	0.28	2.02	-	P.Med
508	-	-	100/220	4	Skeleton	Cattle skeleton	-	-	-	2.02	1.62	P.Med
509	509	-	100/220	4	Cut	Cattle burial	1.99	0.28	0.28	2.02	1.56	P.Med
510	-	-	110/215 110/220	5	Fill	Fill of [536]	-	-	1.20	1.83	-	P.Med
511	511	-	110/215 110/220	5	Cut	Cut for well	-	-	-	1.78	-	P.Med
512	-	-	105/210	5	Fill	Fill of [513]	1.20	1.20	1.04	1.91	-	P.Med
513	513	-	105/210	5	Masonry	brick well lining	1.35	1.35	1.04	1.91	0.87	P.Med
514	515	-	100/215 105/215	5	Fill	Fill of [515]	1.45	1.48	2	2.73	-	P.Med
515	515	-	100/215 105/215	5	Cut	Pit	1.45	1.48	2	2.73	0.67	P.Med
516	-	-	-	-	VOID	VOID	-	-	-	-	-	-
517	517	-	-	3	Layer	Post-Roman soil horizon	-	-	-	2.09	1.75	L.Roman/E.Med
518	-	-	110/215	5	Fill	Fill of [519]	0.38	0.42	0.22	1.85	-	P.Med
519	519	-	110/215	5	Cut	?Posthole	0.38	0.42	0.22	1.85	1.63	P.Med
520	-	-	115/215	5	Fill	Fill of [521]	0.24	0.28	0.16	1.73	-	P.Med
521	521	-	115/215	5	Cut	?Posthole	0.24	0.28	0.16	1.73	1.57	P.Med
522	522	-	-	3	Layer	Post-Roman soil horizon	-	-	-	1.79	1.68	L.Roman/E.Med
523	523	-	105/215 110/215 115/215 105/220 110/220 115/220	2	Layer	Roman Layer	11	6.50	0.25	1.62	1.49	L.Roman
524	524	-	110/220	2	Pot	Whole ceramic pot	-	-	-	1.58	-	Roman

525	525	-	105/215 110/215 115/215	2	Layer	Roman layer	-	-	-	1.48	1.43	Roman
526	-	-	110/220	2	Fill	Fill of [527]	0.34	0.36	0.26	1.58	-	Roman
527	527	-	110/220	2	Cut	Cremation Cut	0.34	0.36	0.26	1.58	1.32	Roman
528	-	-	110/220	2	Fill	Fill of [530]	0.65	1.35	0.15	1.4	-	Roman
529	529	-	110/220	2	Skeleton	Human Skeleton	-	-	-	1.43	1.3	Roman
530	530	-	110/220	2	Cut	Grave cut	0.65	1.35	0.15	1.4	1.24	Roman
531	-	-	115/220	2	Fill	Fill of [533]	1.10	2.50	0.44	1.41	0	Roman
532	-	-	115/220	2	Skeleton	Human skeleton	-	-	-	1.1	0.95	Roman
533	533	-	115/220	2	Cut	Grave Cut	1.10	2.50	0.44	1.41	0.97	Roman
534	-	-	110/215 110/220	5	Fill	Fill of [536]	1.24	1.10	-	-	-	P.Med
535	-	-	110/215 110/220	5	Fill	Fill of [511]	-	-	-	-	-	P.Med
536	536	-	110/215 110/220	5	Masonry	Brick lining	1.58	1.50	0.60	0.67	0.64	P.Med
537	536	-	110/215 110/220	5	Timber	Timber well lining	-	-	-	0.08	0.06	P.Med
538	-	-	110/215 110/220	5	Fill	Fill of [536]	0.90	0.80	-	-	-	P.Med
539	-	-	-	-	VOID	VOID	-	-	-	-	-	-
540	-	500	115/220	2	Fill	Fill of [541]	2.50	3.76	0.27	1.29	-	Roman
541	541	-	105/220 110/220 115/220	2	Cut	Ditch cut	-	-	-	1.36	1	Roman
542	542	-	100/215 105/215 100/220 105/220	2	Layer	Roman layer	-	-	-	1.67	1.37	Roman
543	-	-	115/220	2	Fill	Fill of [544]	0.60	0.70	0.25	1.36	-	Roman
544	544	-	115/220	2	Cut	?Grave cut	0.60	0.70	0.25	1.36	1.07	Roman
545	-	-	115/220	2	Fill	Fill of [546]	0.46	0.44	0.11	1.38	-	Roman
546	546	-	115/220	2	Cut	?Roman pit	0.46	0.44	0.11	1.38	1.27	Roman
547	-	-	110/215 115/215	2	Fill	Fill of [548]	1.12	0.66	0.13	1.34	-	Roman
548	548	-	110/215 115/215	2	Cut	?Roman pit	1.12	0.66	0.13	1.34	1.21	Roman
549	-	-	115/215	2	Fill	Fill of [550]	0.91	0.74	0.08	1.33	-	Roman
550	550	-	115/215	2	Cut	?Roman pit	0.91	0.74	0.08	1.33	1.25	Roman
551	-	-	115/215 115/220	2	Fill	Fill of [552]	0.4	0.44	0.16	1.4	-	Roman
552	552	-	115/215 115/220	2	Cut	?Roman pit	0.4	0.44	0.16	1.4	1.24	Roman
553	-	-	105/220	2	Fill	Fill of [554]	0.44	0.55	0.22	1.34	-	Roman

554	554	-	105/220	2	Cut	?Roman posthole	0.44	0.55	0.22	1.34	1.08	Roman
555	-	-	105/220	2	Fill	Fill of [556]	0.42	0.47	0.15	1.34	-	Roman
556	556	-	105/220	2	Cut	?Roman posthole	0.42	0.47	0.15	1.34	1.12	Roman
557	-	-	105/220	2	Fill	Fill of [558]	0.63	0.48	0.25	1.35	-	Roman
558	558	-	105/220	2	Cut	?Roman posthole	0.63	0.48	0.25	1.34	1.07	Roman
559	-	-	105/220	2	Fill	Fill of [560]	0.50	0.55	0.30	1.32	-	Roman
560	560	-	105/220	2	Cut	?Roman posthole	0.50	0.55	0.30	1.32	1.05	Roman
561	561	-	-	1	Layer	Natural sands	-	-	-	-	-	Natural
562	-	-	110/215	2	Fill	Fill of [563]	3.70	0.34	0.15	1.25	1.18	Roman
563	563	-	110/215	2	Cut	?Roman gully	3.70	0.35	0.15	1.25	1.05	Roman
564	-	-	110/215	2	Fill	Fill of [565]	0.61	0.33	0.1	1.29	-	Roman
565	565	-	110/215	2	Cut	?Roman pit	0.61	0.33	0.1	1.29	1.19	Roman
566	-	-	110/220 115/220	2	Fill	Fill of [569]	1.24	2.74	0.61	1.33	-	Roman
567	-	-	110/220 115/220	2	Skeleton	Roman human remains	-	-	-	0.89	0.79	Roman
568	568	-	110/220 115/220	2	Timber	Timber coffin	-	-	-	-	-	Roman
569	569	-	110/220 115/220	2	Cut	Grave cut	1.24	2.74	0.61	1.33	0.72	Roman
570	-	-	105/220 110/220	2	Fill	Fill of [541]	-	-	0.25	1.35	-	Roman
571	-	-	110/220	2	Fill	Fill of [541]	-	-	0.36	1.36	-	Roman
572	-	-	110/220 115/220	2	Fill	Fill of [541]	-	-	0.26	1.3	-	Roman
573	-	-	105/215	2	Fill	Fill of [574]	0.95	0.70	0.19	1.2	-	Roman
574	574	-	105/215	2	Cut	?roman pit	0.95	0.70	0.19	1.2	1.01	Roman
575	-	-	105/215	2	Fill	Fill of [576]	0.80	0.60	0.17	1.2	-	Roman
576	576	-	105/215	2	Cut	?Roman pit	0.80	0.60	0.17	1.2	1.03	Roman
577	577	-	100/215	5	Masonry	Brick lining	0.78	0.60	-	2.1	1.7	P.Med
578	-	-	110/215	2	Fill	Fill of [579]	1.06	0.80	0.20	1.24	-	Roman
579	579	-	110/215	2	Cut	?Roman pit	1.06	0.80	0.20	1.24	1.04	Roman
580	-	-	100/215	5	Fill	Fill of [577]	0.56	0.50	0.40	2.1	-	P.Med
581	581	-	100/205 105/205 110/205 115/205 100/210 105/210 110/210 115/210	3	Layer	Post-Roman soil horizon	10.80	13.70	0.10	1.81	1.56	L.Roman/E.Med

582	-	-	105/200	5	Fill	Fill of [583]	1.10	1.40	0.82	1.78	-	P.Med
583	583	-	105/200	5	Cut	Rubbish pit	1.10	1.40	0.80	1.78	0.98	P.Med
584	-	-	105/200 105/205	5	Fill	Fill of [585]	3.00	3.10	0.60	1.7	-	P.Med
585	585	-	105/200 105/205	5	Cut	Rubbish pit	3.00	3.10	0.60	1.7	1.09	P.Med
586	-	-	110/205 115/205	5	Fill	Fill of [587]	1.20	1.20	1.00	1.69	-	P.Med
587	587	-	110/205 115/205	5	Cut	Rubbish pit	1.20	1.20	1.00	1.69	0.61	P.Med
588	588	-	-	3	Layer	Post-Roman soil horizon	-	-	-	1.6	1.46	L.Roman/E.Med
589	589	-	105/205 110/205 105/210 110/210	2	Layer	Roman layer	6.80	9.10	-	1.33	1.26	Roman
590	-	-	110/200 115/200	5	Fill	Fill of [591]	0.60	2.60	1.00	2.09	-	P.Med
591	591	-	110/200 115/200	5	Cut	Rubbish pit	0.60	2.60	1.00	2.09	0.87	P.Med
592	-	-	115/210	5	Fill	Fill of [593]	1.05	0.90	0.35	1.36	-	P.Med
593	593	-	115/210	5	Cut	Rubbish pit	1.05	0.90	0.35	1.36	0.97	P.Med
594	-	-	110/205 110/210	5	Fill	Fill of [595]	2.20	1.00	0.50	1.33	-	P.Med
595	595	-	110/205 110/210	5	Cut	Rubbish pit	2.20	1.00	0.50	1.33	0.87	P.Med
596	-	-	110/205	5	Fill	Fill of [597]	1.40	1.20	0.55	1.29	-	P.Med
597	597	-	110/205	5	Cut	Rubbish pit	1.40	1.20	0.55	1.29	0.74	P.Med
598	-	-	-	2	Layer	Roman soil horizon	-	-	-	-	-	Roman
599	-	-	115/215	2	Fill	Fill of [600]	0.40	0.44	0.20	1.16	-	Roman
600	600	-	115/215	2	Cut	?Roman pit	0.40	0.44	0.20	1.16	0.95	Roman
601	601	-	-	1	Layer	Natural sand	-	-	-	-	-	Natural
602	601	-	-	1	Layer	Natural deposits	-	-	-	-	-	Natural
603	601	-	-	1	Natural	Natural gravel	-	-	-	-	-	Natural

APPENDIX 2: ROMAN POTTERY ASSESSMENT

Eniko Hudak and Dr James Gerrard

Introduction

Excavations at 1 Dickens Square, Southwark (DKN11) produced 1670 sherds of Romano-British pottery weighing 48.929kg (33.70 EVE) from 29 individually numbered contexts. The condition of the assemblage is mixed. The average sherd size is 29.30g, although, it ranges from 1g fragments to complete vessels. The pottery survived in a variety of states from abraded to fresh. Individual assemblages were small (1-30 sherds) in general, but there were two very large (several boxes) assemblages.

Methodology

The pottery was fully quantified using the standard measures of sherd count, weight and Estimated Vessel Equivalents (EVEs). The assemblage was recorded using standard Museum of London form and fabric codes (Symonds 2002) and the data was entered into an Access database, which is based on standards established by the Museum of London Archaeology and Specialist Services (*ibid.*).

The Assemblage

Contexts phased as 'Roman' (Phase 2, contexts [523], [524], [525], [526], [528], [531], [532], [540], [524], [543], [551], [552], [553], [562], [566], [570], [571], [572], and [598]) yielded 836 sherds weighing 29.897kg (17.77 EVE). From contexts phased 'post-Roman: dark earth' (Phase 3, contexts [517], [522], and [581]) 875 sherds weighing 19.008kg (15.13 EVE) were recovered.

Only 35 sherds (1.183kg, 0.78 EVE) came from the 'post-medieval' phase (Phase 4, contexts [500], [503], [505], [507], [508], [510], and [592]) consisting of a post-medieval ploughsoil sealing the post-Roman soil horizon. The ploughing has probably disturbed the underlying 'dark earth' deposit, hence the small number of Roman pottery in the post-medieval contexts.

Overall the assemblage is dominated by coarse wares, such as AHFA, BB1, BB2 and TSK pottery (see Table 1), which corresponds with the general composition of late Roman pottery assemblages as discussed by Symonds and Tomber (1991). The late Roman date of the assemblage is further reinforced by the presence of PORD sherds, which are dated to AD 350-400+ (Tyers 1996, 194-195), and of the MAYEN sherds, especially of form 5GOSE474, which is also dated to this period (Gose 1950, 41). The lack of CALC in the assemblage (represented by a single sherd), however, has to be noted, since it is considered to be more common in late Roman pottery assemblages in London (Gerrard 2011), and is also present in greater quantities in the pottery assemblage of the later phases of the nearby Trinity Street excavations (Gerrard forthcoming).

Fine wares are mainly NVCC and OXRC beakers. The absence of OXRC tablewares and low number of Terra Sigillata imitations is notable. Early fine wares such as HOO, HWC and HWC+ are present, but in very small quantities, and are probably residual.

The most common forms in the assemblage are the Black-burnished ware forms: jars, especially form 2F, followed by bowls (4M, 4H) and dishes (5J). For relative form proportions in the assemblage by EVEs see Figure 1 below.

The pottery assemblage from Dickens Square is a small and average late Roman assemblage. When compared to the later phases of the Trinity Street assemblage (Gerrard forthcoming) there are similarities in the proportions and presence of late Roman wares, but the extent of residuality is considerably lower in the Dickens Square assemblage.

Grave goods and cremation urn

Grave cut [530], infant skeleton [529], fill [528]

The fill of the infant burial contained an almost complete OXID small cornice rim beaker and an NVCC sherd with barbotine cross in a circle decoration (see both below).

Grave cut [533], adult skeleton [532], fill [531]

The complete vessel from [531] is a BB1 everted rim jar with obtuse lattice decoration (479g). The pot is intact, but there is a large hole in its wall with soothing marks around as if it had been burnt.

A small bag from the same context was labelled as ‘contents of complete pot’, which included two very small sherds of pottery, one OXID and one possibly PREHIST.

Other pottery from the same context included small fragments of HOO and HWC, which are probably residual, and a sherd of PORD, which can be dated to AD 350-400+.

?Grave cut [544], fill [543](no skeleton)

The complete pot from [543] is a TSK jar (840g) with swan’s neck pendant-rolled rim (parallel: Pollard 1988, fig. 50.203 dated to the 3rd-4th century).

Other pottery from the same context includes a PORD sherd (AD 350-400+).

Grave cut [569], adult skeleton [567], fill [566]

The complete pot from [566] was in a bad condition, broken into very small sherds (200+ sherds weighing 423g). It is a BB1 everted rim jar with obtuse lattice decoration, dated to AD 250-400.

Other pottery from the same context includes a range of late Roman pottery, such as AHFA, NVCC, and TSK, and a possible post-Roman sherd.

Cremation burial [524]

The cremation urn [524] is a TSK jar (1697g) with swan's neck pendant-rolled rim (parallel: Pollard 1988, fig. 50.203 dated to the 3rd-4th century).

Sherds of intrinsic interest

The following sherds are recommended for further research and illustration.

[517] OXRC facemask flagon

It is the rim of an Oxfordshire facemask flagon (Young 1977 Type C11) showing an oval shaped female face (front facing) flanked by two circular impressions on one side – the other side is broken. The features of the face, eyes, eyebrows, nose and mouth are distinct. The sherd is burnt, no slip remains. According to Young (1977, 150) the face mask was made separately in a mould and applied to the rim of the flagon.

[528] OXID small cornice rim beaker

An almost complete cornice rim beaker consisting of 8 sherds: 4 sherds of the rim and 4 of the body. It is in a yellow-orange fabric with self-coloured slip and grey core in the thicker parts of the vessel, with moderate, fine to medium sized inclusions, which are dark brown and red in colour. Very few larger (up to 2mm) quartz inclusions are also visible in the breaks.

[528] NVCC sherd with barbotine cross in a circle decoration

A small brown colour-coated sherd, probably from a beaker, was found with barbotine decoration depicting a cross in a circle. A sherd with similar decoration in Nene Valley or New Forest fabric was recovered the Roman villa site at Orpington, Kent (Keller 1996, 78 & fig 26.164), and it was dated to AD 270-300. The cross in a circle might be a solar symbol, which can link the sherd to the range of vessels produced in the Nene Valley potteries (Going 1981) and the Oxford region (Young 1977, 152, Type C21) with religious or mythological scenes, especially those depicting Sol (e.g. Young 1984, fig. 11a; Going 1981, fig. 18.3).

Recommendations

General

The pottery should be considered in a site wide context. Spatial and functional analysis of the assemblage from Phase 3 contexts is recommended, since it can contribute to our understanding of the formation and composition of 'dark earth' deposits.

It is recommended to include a Romano-British pottery report in the publication of the excavation.

Specialist wares

There is a small quantity of decorated Samian. It is recommended that a specialist examines this material.

The majority of *mortaria* present in the assemblage are OXWW, however, there are a small number of unidentified sherds (especially those in contexts [522], [571] and [581]), which are recommended for further research.

The amphora assemblage is dominated by fairly well known fabrics, such as BAET, although, there are unsourced amphorae fabrics, which are recommended for further examination.

Illustration

The majority of pottery can be described with reference to known typology and corpora, which should minimise the need for pottery illustrations. Sherds of intrinsic interest (see above), the rim in MAYEN fabric (context [522]), and the three complete vessels, however, should be illustrated.

Bibliography

Gerrard, J., 2011. 'New Light on the End of Roman London', *The Archaeological Journal* 168, 181-194.

Gerrard, J., forthcoming. 'The Romano-British pottery' in *Excavations at Trinity Street*. PCA Monograph.

Going, C., 1981. 'Some Nene Valley Folded Beakers with Anthropomorphic Decoration' in A. C. Anderson and A. S. Anderson (eds.), *Roman Pottery Research in Britain and North-West Europe: Papers presented to Graham Webster,* BAR 123(ii), 313-319.

Gose, E., 1950. *Gefäßtypen der römischen Keramik im Rheinland,* Bonner Jahrbücher Beiheft 1*,* Rheinisches Landesmuseum, Bonn: Verlag Butzon & Becker.

Keller, P., 1996. 'The Coarse Pottery' in B. Philp, *The Roman Villa Site at Orpington, Kent,* Research Report in the Kent Monograph Series 7, Dover: The Kent Archaeological Rescue Unit, 71-80.

Pollard, R. J., 1988. *The Roman Pottery of Kent,* Monograph Series of the Kent Archaeological Society 5, Maidstone: Kent Archaeological Society.

Symonds, R., 2002. *Recording Roman Pottery: a description of the methodology used at Museum of London Specialist Services (MoLSS) and Museum of London Archaeology Service (MoLAS),* unpublished document available from MoLAS.

Symonds, R. and Tomber, R., 1991. 'Late Roman London: an assessment of the ceramic evidence from the City of London', *Transactions of the London and Middlesex Archaeological Society* 42, 59-99.

Tyers, P., 1996. *Roman Pottery in Britain,* London: B T Batsford Ltd.

Young, C., 1977. *Oxfordshire Roman Pottery,* BAR 43.

Young, C., 1984. 'A Late Roman Colour-Coated beaker with Moulded Decoration' in P. Ellis, *Catsgore 1979, Further Excavation of The Romano-British Village,* Western Archaeological

Trust Monograph No. 7, Gloucester : Alan Sutton for the Western Archaeological Trust, 26-28.

FABRIC	Sherd Count	Weight (g)	EVE%
AHFA	168	3371	355
AHSU	70	1853	73
AMPH	8	696	
BAET	171	18278	
BB1	331	3085	454
BB2	174	2866	435
CALC	1	6	
CAMP	5	316	
CBM	1	32	
CC	1	3	
CGBL	2	3	
COLCC	1	49	
COLWW	1	54	
ERS	7	343	54
FINE	3	25	
FMIC	3	59	
GAUL	46	1082	
GROG	17	323	24
HOO	11	75	11
HWB	1	12	9
HWC	4	44	13
HWC+	1	21	
KOLN	2	12	12
LOEG	1	4	
LOMI	1	8	12
LOXI	2	81	26
LRMA	1	12	
MAYEN	2	64	10
MICA	5	18	
MISC	9	124	32
MORT	10	1022	29
MOSL	1	3	
NAFR	3	140	
NKFW	6	175	16
NKSH	5	210	12
NVCC	69	901	155
NVWW	1	18	
OXID	64	455	168
OXRC	24	388	54
OXWC	2	27	3
OXWW	23	1388	144
PATCH	2	84	
PORD	19	364	56
RHMO	1	185	13
SAM	65	1119	170
SAND	184	2960	313

SHEL	3	118	4
SOLL	2	472	10
TSK	75	3829	525
VCWS	17	296	79
VRW	42	1798	94
XX	2	58	5
Total	**1670**	**48929**	**3370**

Table 1: Quantification of the total site assemblage

Context	Size	Spot date	Comments
500	S	120-250	1x very small sherd AHFA could be post-250
503	S	350-400+	
505	S	50-400+	1x SAND and 1x PMED sherd
507	S	150-400+	2x postmed. sherds
508	S	150-400+	based on a single sherd only
510	S	180-400	1x AHFA
517	VL	350-400+	medieval, post-medieval and prehistoric sherds
522	VL	350-400+	medieval, post-Roman and prehistoric sherds
523	L	300/350-400+	medieval and prehistoric sherds
524	S	200-400	1x complete vessel, see Pollard (1988) Fig. 50.203
525	M	200-400	much residual and 1x medieval sherd
526	S	50-300	based on a single sherd only
528	S	150-300	
531	S	250-400	residual HOO, HWC and NKSH and imports, and 1x prehistoric sherd, probably C4
532	S	120-250	based on a single sherd only
540	M	250/300-400+	includes 1x PORD (350-400+)
542	S	200-400	much residual
543	S	350-400+	1x TSK earlier
551	S	120-250	includes 1x very small VRW sherd (50-160)
552	S	120-250	based on a single sherd only
553	S	150-300	based on a single sherd only
562	S	150-400	based on a single sherd only
566	L	180-300	2 complete pots broken into very small sherds
570	M	200-300	
571	L	270-350/400	
572	S	200-350/400	
581	M	250-300	medieval and postmedieval sherds
592	S	250-400	based on a single sherd only
598	S	300-400+	1x ERS and 1x very small AHSU are earlier

Table 2: Spotdating of assemblages by context

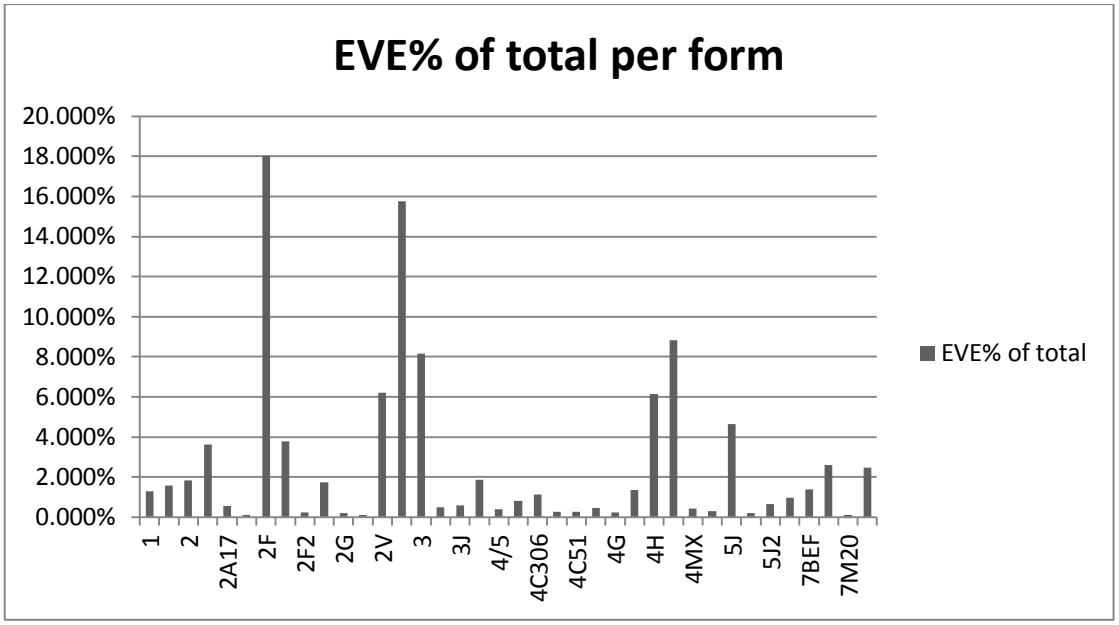

Figure 1: EVE% of total per form (excluding complete vessels, amphorae, and Samian forms)

APPENDIX 3: POST ROMAN POTTERY ASSESSMENT

Chris Jarrett

Introduction

A medium sized assemblage of pottery was recovered from the site (16 boxes). The pottery dates from the Saxon, medieval and post-medieval periods. Very few sherds show evidence for abrasion and the majority of the pottery was probably deposited fairly rapidly after breakage. The fragmentation of the pottery ranges from sherd material to a notable number of vessels with complete profiles, while a number of 19th-century vessels are intact. Pottery was recovered from fifteen contexts and individual deposits produced small (fewer than 30 sherds), medium (31-100 fragments) and two large (over 101 sherds) groups of pottery.

All the pottery (1139 sherds/461 ENV/47.017kg, of which one sherd, 1 ENV, 10g are unstratified) was examined macroscopically and microscopically using a binocular microscope (x20), and entered on a database, by fabric, form, decoration, sherd count and estimated number of vessels (ENV's) and weight. The classification of the pottery types follows the standard Museum of London Archaeology (2013). The pottery is discussed by types and distribution.

The Pottery Types

The breakdown of the quantification of the pottery types by period is as follows:

Saxon: one sherd, 1 ENV, 15g

Medieval: 23 sherds, 23 ENV, 352g

Post-medieval: 1114 sherds, 436 ENV, 46.635kg

Saxon

A single sherd of residual Early Saxon fine sandy, non-specific calcareous inclusions/voids (ESCALC), dated AD 400-850 was recovered from the dark earth layer [522]. The form is uncertain, although likely to be derived from a closed form. The occurrence of a sherd of early Saxon pottery on the site reflects the emerging evidence for activity dating to this period in this area of Southwark (see Significance, potential and recommendations for further work below).

Medieval

All of the medieval pottery recovered from the excavation is residual in post-medieval dated deposits except for possibly that recovered from the dark earth [581]. There are a few occurrences on the study area of pottery types that are rare for Southwark, such as a Surrey orange sandy ware and a sherd of Heddingham ware from Essex. Jugs were identified in Coarse Surrey-Hampshire border ware, Earlsfield-type ware, Heddingham ware, Kingston type ware, Mill Green ware and London-type ware (LOND; WSD), besides a drinking jug in LOND and a pipkin in Coarse London-type ware with shell inclusions (LCOAR SHEL). The range of medieval forms found in the different pottery types (see Table 1) is typical for that found in the London/Southwark area, although the LCOAR SHELL pipkin, probably dating to the end of the 12th century, is an unusual find.

Pottery type	Fabric code	Date range	SC	ENV	Weight (g)
Coarse Surrey-Hampshire border ware	CBW	1270-1500	6	6	72
Cheam whiteware	CHEA	1350-1500	1	1	8
Earlswood-type ware	EARL	1200-1400	1	1	7
Hedingham-type ware	HEDI	1150-1250	1	1	8
Kingston-type ware	KING	1240-1400	2	2	6
Coarse London-type ware	LCOAR	1080-1200	1	1	22
Coarse London-type ware with shell inclusions	LCOAR SHEL	1080-1200	1	1	70
London-type ware	LOND	1080-1350	5	5	78
London-type ware drinking jug	LOND DJ	1270-1350	1	1	20
London-type ware with white slip decoration	LOND WSD	1240-1350	1	1	4
Mill Green ware	MG	1270-1350	1	1	22
Shelly-sandy ware	SSW	1140-1220	1	1	28
Surrey orange sandy ware	SOSW	1150-1500	1	1	7

Table 1. DKN11: Medieval pottery types quantified by sherd count (SC), estimated number of vessels (ENV) and weight.

Post-medieval

The post-medieval pottery component of the assemblage largely consists of industrial finewares, made in the Midlands (The Potteries) and elsewhere and date from the mid 18th century although most items are of a 19th-century date. These were mostly derived from fill [512] of the masonry well [513]. The 16th-17th-century dated wares are generally in a fragmentary state and were mainly recovered from the dark earth layers: [517] and [522]. The range of forms found in the basic post-medieval pottery types are shown in Table 3 and these forms are what would be expected for this period. There are a small number of sherds derived from industrial forms, such as a London area post-medieval redware sugar cone mould and

kiln furniture (a girder and a saggar) both derived from the local Southwark tin-glazed earthenware pot houses located to the north of the site and at locations close to the Thames. Both the sugar cone mould and the kiln furniture are typical finds found on Southwark sites and were derived from offsite sources and represent dumped waste.

Pottery type	Fabric code	Date range	SC	ENV	Weight (g)
Black basalt ware	BBAS	1770- 1900	1	1	50
Glazed black basalt ware	BBASG	1770- 1880	1	1	14
Blue stoneware	BLUE	1800- 1900	1	1	4
Bone china	BONE	1794- 1900	61	24	1584
Bone china with lustre decoration	BONE LUST	1794- 1900	5	1	50
Bone china with under-glaze painted decoration	BONE PNTD	1794- 1900	8	3	489
Bone china with under-glaze blue transfer-printed decoration	BONE TR	1794- 1900	12	2	264
Bone china with under-glaze blue transfer-printed stipple and line decoration	BONE TR2	1807- 1900	3	1	145
Surrey-Hampshire border whiteware with brown glaze	BORDB	1600- 1700	1	1	2
Surrey-Hampshire border whiteware with green glaze	BORDG	1550- 1700	17	13	77
Surrey-Hampshire border whiteware with olive glaze	BORDO	1550- 1700	2	2	24
Surrey-Hampshire border whiteware with clear (yellow) glaze	BORDY	1550- 1700	16	13	204
Chinese porcelain	CHPO	1580- 1900	3	1	19
Creamware	CREA	1740- 1830	8	6	87
Derbyshire stoneware	DERBS	1700- 1900	2	2	26
Dutch bichrome red earthenware	DUTR BICR	1480- 1650	1	1	4
English brown salt-glazed stoneware	ENGS	1700- 1900	10	10	1682
English stoneware with Bristol glaze	ENGS BRST	1830- 1900	20	13	2044
English porcelain	ENPO	1745- 1900	1	1	6
Frechen stoneware	FREC	1550- 1700	20	19	267
London stoneware	LONS	1670- 1926	21	20	582
Lustreware	LUST	1805- 1900	15	3	380
Majolica	MAJO	1850- 1900	4	2	87
Metropolitan slipware	METS	1630- 1700	4	3	48
Miscellaneous unsourced medieval/post-medieval pottery	MISC	900- 1500	2	2	10

Midlands purple ware	MPUR	1400- 1750	3	2	58
North Italian marbled slipware	NIMS	1600- 1750	1	1	15
Nottingham stoneware	NOTS	1700- 1800	1	1	10
Pearlware	PEAR	1770- 1840	29	7	2099
Pearlware with under-glaze blue-painted decoration	PEAR BW	1770- 1820	1	1	5
Pearlware with under-glaze painted decoration	PEAR PNTD	1770- 1840	2	2	152
Pearlware with under-glaze polychrome-painted decoration	PEAR POLY	1790- 1820	8	2	109
Pearlware with slip decoration	PEAR SLIP	1775- 1840	4	3	107
Pearlware with transfer-printed decoration	PEAR TR	1770- 1840	131	25	7323
Pearlware with under-glaze brown or black transfer-printed decoration	PEAR TR3	1810- 1840	3	2	864
Pearlware with under-glaze colour transfer-printed decoration (green, mulberry, grey etc)	PEAR TR4	1825- 1840	1	1	11
Pearlware with under-glaze transfer-printed and over-glaze painted decoration	PEAR TR6	1810- 1840	6	1	174
Essex-type post-medieval black-glazed redware	PMBL	1580- 1700	7	7	56
Essex-type post-medieval fine redware	PMFR	1580- 1700	4	4	87
Essex-type post-medieval fine redware with brown glaze	PMFRB	1580- 1700	1	1	25
Essex-type post-medieval fine redware with green glaze	PMFRG	1580- 1700	2	2	8
London-area post-medieval redware	PMR	1580- 1900	55	42	3099
Slipped redware	PMR SLIP	1800- 1900	2	1	446
London-area early post-medieval redware	PMRE	1480- 1600	1	1	4
London-area post-medieval slipped redware with green glaze	PMSRG	1480- 1650	4	4	61
London-area post-medieval slipped redware with clear (yellow) glaze	PMSRY	1480- 1650	1	1	54
Surrey-Hampshire border redware	RBOR	1550- 1900	15	10	416
Surrey-Hampshire border redware with slip-trailed decoration	RBOR SLTR	1580- 1800	2	2	63
Surrey-Hampshire border redware with green glaze	RBORG	1580- 1800	1	1	12
Refined white earthenware	REFW	1805- 1900	57	15	1770
Refined white earthenware with under-glaze polychrome-painted decoration in 'chrome' colours	REFW CHROM	1830- 1900	1	1	9
Refined white earthenware with sponged or spattered decoration	REFW SPON	1805- 1900	1	1	11
Refined white earthenware with cut-out sponged decoration	REFW SPON1	1830- 1900	5	3	141
Staffordshire-type slip-trailed redware	SLRE	1650- 1900	2	2	30

South Midlands post-medieval redware	SMPMR	1600- 1900	1	1	1
Spanish green-glazed ware	SPGR	1250- 1650	1	1	4
Spanish unsourced ware	SPOW	1250- 1900	1	1	5
Staffordshire-type mottled brown-glazed ware	STMO	1650- 1800	1	1	61
Sunderland-type coarseware	SUND	1800- 1900	22	3	1241
Sunderland-type coarseware with mottled glaze	SUND MOT	1775- 1850	1	1	72
White salt-glazed stoneware	SWSG	1720- 1780	3	3	29
English tin-glazed ware	TGW	1570- 1846	6	6	88
London tin-glazed ware with blue- or polychrome-painted decoration and external lead glaze (Orton style A)	TGW A	1570- 1650	14	6	157
London biscuit-fired tin-glazed ware	TGW BISC	1570- 1846	1	1	104
London tin-glazed ware with plain white glaze (Orton style C)	TGW C	1630- 1846	4	3	17
London tin-glazed ware with blue- or polychrome-painted decoration and external lead glaze (Orton style D)	TGW D	1630- 1680	13	13	133
London tin-glazed ware with 'Chinaman among grasses' decoration (Orton style F)	TGW F	1670- 1690	1	1	4
London tin-glazed ware with pale blue glaze and dark blue decoration (Orton and Pearce style H)	TGW H	1680- 1800	1	1	6
London late tin-glazed ware	TGW LATE	1745- 1846	1	1	46
Refined whiteware with under-glaze transfer-printed decoration	TPW	1780- 1900	260	42	10796
Refined whiteware with under-glaze transfer-printed 'flow blue' decoration	TPW FLOW	1830- 1900	34	15	909
Refined whiteware with under-glaze blue transfer-printed stipple and line decoration	TPW2	1807- 1900	2	1	17
Refined whiteware with under-glaze brown or black transfer-printed decoration	TPW3	1810- 1900	41	8	1344
Refined whiteware with under-glaze colour transfer-printed decoration (green, mulberry, grey etc)	TPW4	1825- 1900	37	13	954
Refined whiteware with under-glaze transfer-printed and over-glaze painted decoration	TPW6	1810- 1900	7	2	390
Wealden buff ware	WEAL	1480- 1900	2	2	30
Westerwald stoneware	WEST	1590- 1900	2	2	10
Yellow ware	YELL	1820- 1900	13	4	1684
Yellow ware with slip decoration	YELL SLIP	1820- 1900	55	12	3165

Table 2. DKN11: Post-medieval pottery types quantified by sherd count (SC), estimated number of vessels (ENV) and weight. ED.

Fabric basic	Chimney pot	Albarello	Washing basin	Blacking paste	Bottle	Bowl	Butter pot	Candle stick	Chamber pot	Coffee can	Cup	Dish	Flower pot	Girder (kiln fu	Ink bottle	Jar	Jug	Lid	Mug	Ointment pot	Plate	Saggar	Sauce boat	Saucer	Sugar cone mould	Tankard	Tea CADDY	Tea cup	Teapot	Tripod pipkin
BBAS																		1											1	
BLUE																								1						
BONE						17		3		5									1				1	13				44		
BORDB/G /O/Y						1						1							1											3
CHPO																														
CREA																					3									
DERBS																1														
DUTR BICR																														
EARL																	1													
ENGS				2	4										3	1														
ENGS BRST					3										1	3	10													
ENPO																														
FREC																	19													
LONS					2											1	7									3				
LUST											3																11			
MAJO						4																								
METS						1						3																		
MISC						1																								
MPUR							1																							
NIMS												2																		
NOTS																														
PEAR			2			10			20	9						1	2	10	11	1	11 0			4						
PMBL																			2											
PMFR						1																								1
PMR	1					12						6	9			1									1					
PMR SLIP												2																		
PMRE																														
PMSRG/Y						1																								
RBOR						7						5				1														
REFW						2						17				3		1		2	25			1				3		
SLRE						1						1																		
SMPMR																														
SPGR					1																									
SPOW																														

Fabric basic	Chimney pot	Albarello	Washing basin	Blacking paste	Bottle	Bowl	Butter pot	Candle stick	Chamber pot	Coffee can	Cup	Dish	Flower pot	Girder (kiln fu	Ink bottle	Jar	Jug	Lid	Mug	Ointment pot	Plate	Saggar	Sauce boat	Saucer	Sugar cone mould	Tankard	Tea CADDY	Tea cup	Teapot	Tripod pipkin
STMO																										1				
SUND						23																								
SWSG						1			1																	1				
TGW		1				3						19		1		3				3	1	1								
TPW						48			6			2					33	1	21		21 8			7				16		
WEAL																														
WEST																	1													
YELL						44			9			8							5												

Table 3. DKN11: Post-medieval pottery types and their forms quantified by sherd count (SC)

Distribution

Pottery was recorded in Phases 3 and 4 and its distribution is show in Table 4. A summary of the distribution of the pottery for each phase is presented below.

Context	Phase	Assemblage size	SC	ENV	Weight (g)	Context ED	Context LD	Context considered date
500	5	L	108	91	1412	1850	1900	1850-1900
501	5	M	43	23	3536	1830	1900	Mid 19th century
503	4	M	48	44	595	1830	1900	1830-1900
510	5	M	75	50	3693	1820	1900	1820-1900
512	5	L	696	143	31469	1830	1900	Mid 19th century
514	5	S	13	10	845	1850	1900	1850-1900
517	3	M	50	40	633	1830	1900	1830-1900
518	5	S	1	1	49	1670	1926	19th century
522	3	S	13	13	242	1580	1700	1580-1700
534	5	S	4	2	178	1830	1900	1830-1900
581	3	S	2	2	8	1240	1350	1240-1350
582	5	M	67	24	3619	1830	1900	Late 19th century
584	5	S	2	2	117	1825	1900	1825-1864
586	5	S	10	10	483	1830	1900	1830-1900
596	5	S	3	3	113	1775	1850	1775-1850

Table 4. DKN11: Distribution of the post-Roman pottery showing the phase, size of the assemblage, the number of sherds (SC), Estimated number of vessels (ENV), weight, the earliest and latest date for the latest pottery type present (context ED and LD) and a spot date (context considered date) for each context pottery was recovered from.

Phase 3

The pottery recovered in this phase was found as a total of 65 sherds/55 ENV/883g and this was recovered from three contexts, all of which were dark earths: [517], [522] and [588]. Layer [581] only produced post-Roman medieval pottery as single sherds of Kingston-type ware and London-type ware, indicating deposition dated *c*.1240-1350. The dark earth [522] produced a wide range of post-Roman pottery types which include the sherd of Early Saxon calcareous tempered ware (ESCALC), medieval wares as jug sherds in coarse Surrey-Hampshire border ware, Earlswood-type, Hedingham-type, London-type and Mill Green wares, besides the pipkin made in coarse London-type ware with shell inclusions. The latest pottery types are London-area post-medieval redware, Essex-type post-medieval fine redware with brown glaze and black-glazed redware, besides Surrey-Hampshire border whiteware, all of which were contemporaneous during 1580-1700. The latest dark earth layer [517] also produced medieval and post-medieval pottery types as found in layer [522], although local tin-glazed wares were more frequent, while three sherds date to the 19th century, as Pearl ware and English stoneware, one of which has a post 1830 dated Bristol-glazed. The wide date range of pottery types recorded in layers [517] and [522] may reflect difficult to detect features cut into these layers (although all of the sherds are small and probably do not represent rubbish dumping), or agricultural/horticultural working of the soil over a prolonged period of time.

Phase 4

From this phase was recovered a total of 47 sherds/43 ENV/580g of pottery and this was recovered from a single context.

The cattle burial pit [506] produced in its fill [503] a notable quantity of 17th-century pottery types as Surrey-Hampshire border whitewares, tin-glazed ware, German Frechen and Westerwald stonewares and a sherd of North Italian marbled slipware dish. The latest pottery types recorded in the fill are a glazed black basalt ware teapot lid and pearl ware with under-glaze blue-painted decoration, which may indicate this event is dated to the late 18th-early 19th century, although a sherd of post 1830 dated English stoneware with Bristol glaze may be intrusive.

Phase 5

From this phase was recovered a total of 1022 sherds/359 ENV/45.514kg of pottery and this was recovered from eleven contexts.

Sealing the cattle burial pit [503], the plough soil [500] produced a diverse range of pottery types dating to after *c*. 1580, although the latest wares belong to 19th century.

A number of features cut the plough soil, such as fill [514] of pit [515] and masonry well [536] and its fills [534] below [510], the latter being notable for containing a number of intact stoneware bottles and ink pots. Two other masonry wells produced groups of mid 19th-century pottery (well [502]: fill [501]) and a very large group of ceramics was recovered from well [513] and its fill [512], dated to the late 19th century. The latter probably represents a closed group as many of the vessels are either intact or could be reconstructed to be whole. Therefore the assemblage would appear to have been mostly backfilled in either a single event or over a very short period of time. A number of services are represented, with Willow pattern transfer-printed ware being more frequent, besides an unusual pink/buff coloured glazed refined whiteware. A small number of items in fill [512] can be classified as Nursery wares and indicate that children, particularly boys, were resident in the household the rubbish was derived from. Cylindrical mugs have transfer-printed designs stating 'A TRIFLE/FOR/RICHARD' and 'A PRESENT FOR A GOOD BOY'. The rubbish pit [583] was notable for containing two plates from a service with a purple transfer design (TPW4), the design being call Kew and found on the underside of the base, while another plate has a registration mark for 20th September 1866.

Significance of the collection

The pottery has some significance at a local level. The occurrence of a sherd of Early Saxon pottery is of interest and reflects activity of this date in the area: five sherds were recovered nearby at Lant Street (LNT99: Jarrett 2013), while at Trinity Street (site code: TIY07) twenty sherds of pottery dating to this period are recorded (Sudds forthcoming). The other notable assemblages of Early-Middle Saxon pottery assemblages in the locality are 1150m to the southeast at Bermondsey Square and from the site of the Abbey, where some 130 sherds are recorded and dated to the 5th and early 6th century (Jarrett and Sudds in prep).

The medieval pottery is fragmentary and except for one or two rare occurrences of pottery types for Southwark, the ceramic profile largely follows that for Southwark. Of interest is the occurrence of the late 12th-century dated pipkin, recorded in coarse London-type ware with shell inclusions. This pottery type is rare north of the Thames, i.e. The City, although it is recognised more so in Southwark and Bermondsey (Pearce 2010).

The post-medieval pottery has limited significance, although the pottery from fill [512] of the masonry well [513] could be of interest for understanding the material culture associated with the residents of the household it was derived from and from documentary evidence, perhaps linking it to an individual – a boy named Richard.

Potential

The pottery has the potential to date the features in which it was found and to provide a sequence for them. One item of pottery merits illustration. The medieval pottery has little potential to further an understanding of this material, although the LCOAR SHEL pipkin adds to the corpus of forms made in this ware, which is poorly understood.

Recommendations for further work

A small publication report is recommended on the pottery concentrating on the medieval pottery and particularly the LCOAR SHEL pipkin which requires illustrating.

Bibliography

Jarrett, C., 2013. 'The Saxon pottery', in V. Ridgeway, K. Leary and B. Sudds. *Roman burials in Southwark. Excavations at 52-56 Lant Street and 56 Southwark Bridge Road, London SE1*. Pre-Construct Archaeology Monograph 17, 48-50.

Jarrett, C. and Sudds, B., in prep. 'The Saxon pottery', in A. Douglas and A. Haslam. *Excavations at Bermondsey Abbey and Stevens Street, London Borough of Southwark, London SE1*. Pre-Construct Archaeology Monograph.

Museum of London 2013, Medieval and post-medieval pottery codes. http://www.museumoflondonarchaeology.org.uk/Publications/Online-Resources/MOLA-ceramic-codes.htm

Pearce, J., 2010. 'The Pottery' in T. Dyson, M. Samuel, A. Steel and S. N. Wright, *The Cluniac priory and abbey of St Saviour Bermondsey, Surrey, Excavations 1984-95.* Museum of London Archaeology Monograph 50.

Sudds, B., in prep. 'The Saxon pottery', in D. Killock, J Gerrard and J. Langthorne, *Excavations at 28-30 Trinity Street*. Pre-Construct Archaeology Monograph.

APPENDIX 4: CLAY TOBACCO PIPE ASSESSMENT

Chris Jarrett

Introduction

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

All the clay tobacco pipes (348 fragments, of which only one stem is unstratified) were recorded in an ACCESS database and classified by Atkinson and Oswald's (1969) typology (AO); 18th-century examples are by Oswald's (1975) typology and prefixed OS. All decorated and maker marked pipes were given a unique registered find number. The pipes are further coded by decoration and quantified by fragment count. The degree of milling on 17th-century examples has been noted and recorded in quarters (see Table 1), besides their quality of finish (see Table 2). 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 90 bowls, 246 stems and twelve nibs (mouth parts). The clay tobacco pipe bowls range in date between 1640 and 1910. All of the bowls show evidence for being smoked. On 17th-century bowls the degree of milling of the rim is shown in Table 1, which shows a trend for the early to mid 17th-century dated examples to be mostly three-quarters or fully milled, while the trend is for the later dated bowls to have less milling. Table 2 demonstrates how well the clay tobacco pipes are finished or burnished: the majority of these bowls have a fair or good extent of burnish which possibly indicates that the bowls were the possessions derived from a middling socio-economic group.

Bowl type	Earliest date	Latest date	Not calculated (damaged)	None	Quarter	Half	Three quarters	Full	Total
AO5	1610	1640						1	1
AO6	1610	1640						1	1
AO10	1640	1660						1	1
AO9	1640	1660					1		1
AO11	1640	1670					1		1
AO13	1660	1680					1		1
AO14	1660	1680	1						1

Bowl type	Earliest date	Latest date	Not calculated (damaged)	None	Quarter	Half	Three quarters	Full	Total
AO15	1660	1680	2	1				1	4
AO18	1660	1680	1						1
AO19	1680	1660						1	1
AO19	1680	1710	1					1	2
AO20	1680	1710			1		1		2
AO21	1680	1710	1	1	1				3
AO22	1680	1710	2		1				3

Table 1. DKN11: Extent of milling found on 17th-century bowls

Bowl type	ED	LD	Fair	Good	Very good	Total
AO5	1610	1640		1		1
AO6	1610	1640	1			1
AO10	1640	1660	1			1
AO9	1640	1660	1			1
AO11	1640	1670		1		1
AO13	1660	1680		1		1
AO14	1660	1680		1		1
AO15	1660	1680	4			4
AO18	1660	1680		1		1
AO19	1680	1660			1	1
AO19	1680	1710	1	1		2
AO20	1680	1710	1	1		2
AO21	1680	1710		3		3
AO22	1680	1710	2	1		3

Table 2. DKN11: Quality of burnishing found on 17th-century bowls

The bowl types represented in the assemblage are as follows:

AO5, heeled, 1610-1640, one bowl, context [503]. The bowl (SF994) is notable for having an incuse S V stamp found on the top of the stem at the base of the bowl. The S V mark is believed to be a sign of quality and derived from silver hall marks and these are occasionally found in London. One other AO5 bowl in London is recorded with an SV stamp, impressed with a die and found at 90-94 Old Broad Street, Boston House, 63-64 New Broad Street, EC2 (site code: BRO96), while the stamp is found more frequently on later 1640-60 and 1660-80

bowl shapes, including unusually two AO15 bowls at The New Wolfson Wing, Borough High Street (Site code: BHB00) (Museum of London n.d. http://archive.museumoflondon.org.uk/claypipes/pages/mark.asp?mark_name=SV; Jarrett 2002)

AO6, spurred, 1610-1640, one bowl, context [510]

AO9, spurred, 1640-1660, one bowl, context [510]

AO10, heeled, 1640-1660, one bowl, context [500]

AO11, heeled, 1640-1670, one bowl, context [512]

AO13, heeled, 1660-1680, one bowl, context [517]

AO15, spurred, 1660-1680, five bowls, contexts [503] and [510]

AO18, heeled, 1660-1680, one bowl, context [503]

AO19, spurred, 1680-1710, three bowls, contexts [500] and [510]

AO20, heeled, 1680-1710, two bowls, context [510]

AO21, heeled, 1680-1710, three bowls, contexts [500] and [503]. A single bowl has a sunburst type mark in relief surviving on the left side of the heel, context [500], SF939.

AO22, heeled, 1680-1710, three bowls, contexts [503], [507] and [517]

OS10, heeled, 1700-1740, eleven bowls, contexts [503], [507], [500] and [510]. Four bowls are initialled:

W B: context [510], SF1005

B C: context [500], SF932

S P: context [507], SF941

I W, with a raised oval above each initial

OS12, heeled, 1730-1780, one bowl, context [510] and it is initialled M L on the heel (SF995).

AO26, spurred, 1730-1800, one bowl, context [510], surviving as a spur with only the first name W legible (SF1007).

AO27, heeled, 1770-1845, five bowls, context [510], [586] and [512]. A number are decorated or maker marked:

* *: with stars on each side of the heel, oak leaf borders and fluting of different sizes, context [512], SF964

O O: with wreaths on each side of the heel and leaf borders, context [586], SF97

M? B: plain with the first initial uncertain, context [510], SF943

W W: one bowl with an oak leaf and grass border on front of bowl and a circular incuse stamp consisting of a shamrock/four leaf flower at centre with written around it '[WILLIA]MS LONDON', context [510], SF1006

Another damaged bowl has oak leaf borders and its spur is largely missing, Context [586], SF975

AO28, spurred, 1820-1860, 35 bowls, context [500], [584], [501], [586] and [512] and the majority are initialled and or decorated.

O O: one bowl with circles on each side of the spur and oak leaf borders, context [512], SF973

W ?, one bowl where the family initial is missing and decorated with oak leaf borders, context [501], SF938.

W B: fourteen bowls and two additional bowls where the first name is not so clear and all were recovered from context [512], SF945, SF947, SF949, SF950, SF951, SF952, SF953, SF954, SF956, SF958, SF966, SF969, SF970 and SF976, except for one example from context [584], SF999 and all of these bowls are decorated with oak leaf borders. An exception was a plain bowl found in context [512], SF944.

J C: two bowls, although one example has the first name missing: context [512], SF981 and it has oak leaf borders. The second bowl survives mostly as the spur and the stem decorated with relief moulded stem and leaf decoration: context [500], SF934.

W L: two damaged bowls with the front of the bowl missing and an oak leaf border surviving on the back of the bowl, context [512], SF963 and SF965.

C S: one bowl with an oak leaf border only on the front of the bowl, context [512], SF942

G S: three bowls with acorn and oak leaf borders, context [512], SF957 and SF959 and context [586], SF979

H T: surviving mostly as a spur, context [586], SF980

W W: three bowls with poorly impressed stamps. Two bowls have initials on the spur and oak leaf borders on the front of the bowl and the name 'WILLIAMS/LONDON' as a circular incuse stamp on the bowl, except one has at the centre of the stamp a four petal floral device (context [586], SF955), while the other has a cross (context [584], SF1003). The third bowl has circles on the spur and a grass and leaf border on the front of the bowl and only the name '[WILLIA]MS [LON]DON' appears on the back of the bowl, context [501], SF937.

Four other damaged bowls, which were solely found in context [512], are decorated with oak leaf borders, one with the border on the front of the bowl (SF968) and the other three with borders on the front and back of the bowl (SF960, SF971 and 972).

AO29, heeled, 1840-1880, one bowl, context [582], SF1002, which is plain although very nicely burnished and initialled on the spur M T.

AO30, heelless 1840-1910, five bowls, context [518], [582] and [512]. All of the bowls are decorated to varying extents and none are maker marked. The plainest bowl (context [582]) shows evidence for uneven ribs on each side of the stem and these may have contained a maker's name. Two bowls have feint, beaded ribs on the front and back of the bowl, the least elaborate (SF1008) being found in context [518] while the other example has a scroll on each side of the stem which terminate at the base of the bowl and at the end of a bar, which creates a foot stand (context [512], SF967). There are also from context [512] two fragmentary bowls moulded in the shape of a bird's claw grasping an egg, the latter forming the largely missing bowl (SF946 and SF982).

Fragmentary bowls

Thirteen bowl fragments are in such a condition that they could not be confidently assigned to a type although a number could be broadly dated. The sloping heel of a bowl with a thick stem and wide bore may possibly be derived from an AO4 bowl, dated 1610-40 and this was recovered from context [500]. The spurs from late 17th-century dated bowls, either as AO15 or AO19 bowl types were found as four items and found in contexts [503] as two examples, besides single items from [512] and [517]. The spur of a mid-late 18th-century dated bowl (SF933) has the forename I surviving and was found in context [500]. Single fragmentary bowls with 19th-century decoration were noted in contexts [512] (SF974), [586] (SF978 and SF990).

Distribution

The distribution of the clay tobacco pipes is shown in Table 3, which demonstrates the 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 3 and 4. A brief summary of the clay tobacco pipes by phase is provided.

Context	Phase	No. of fragments	Assemblage size	Context ED	Context LD	Context considered date
500	5	123	L	1820	1860	1820-1860
501	5	2	S	1820	1860	1820-1860
503	4	32	M	1700	1740	1700-1710
507	4	2	S	1700	1740	1700-1710
510	5	39	M	1770	1845	Early 19th century
512	5	102	L	1840	1910	1840-1860
517	3	25	S	1680	1710	1680-1710
518	5	1	S	1840	1910	1840-1910
522	3	2	S	1580	1910	17th-18th century
534	5	1	S	1580	1910	17th-18th century
582	5	2	S	1840	1910	1840-1880
584	5	4	S	1820	1860	1820-1860
586	5	9	S	1820	1860	1820-1860
594	5	1	S	1580	1910	Mid 18th-19th century
596	5	2	S	1580	1910	17th-18th century

Table 3. DKN11: distribution of the clay tobacco pipes showing for each context clay tobacco pipes occurred in the 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 3

Twenty-seven fragments of clay tobacco pipes were found in two contexts in this phase. The dark earth layer [522] produced two fragments of clay tobacco pipes, recorded only as stems broadly dated 1580-1910. The later dark earth layer [517] contained 25 fragments of clay tobacco pipes and this consisted of mostly stems, except for four, often fragmentary bowls, which included a spur form an AO15 or AO19 bowl, an AO13 bowl and the latest bowl is the heel of a 1660-80 dated AO22 type.

Phase 4

This phase produced a total of 34 clay tobacco pipe fragments found in two contexts. Clay tobacco pipes are associated with the cattle burials. Fill [503] associated with the cattle skeletons [504] and [505] produced mostly 17th-century bowls, including the S V stamped AO5 bowl (SF994), although the latest bowl is a 1700-1740 dated OS10 type, maker marked I W (SF940). Fill [507] backfilling pit [509] containing the cattle skeleton [508] produced two bowls as an AO22 and the latest bowl is an OS10, initialled S P (SF941).

Phase 5

This phase produced a total of 286 clay tobacco pipe fragments found in eleven contexts. The plough soil [500] produced twelve bowls mostly with a date range of 1640-1740, although the latest bowl is a J C marked AO28 bowl (SF934), dated 1820-60. Truncating the plough soil, the masonry well [536] contained only a stem in its earliest fill [534], while its latest fill [510] produced 39 fragments of clay tobacco pipes, including a number of 17th- and 18th-century bowls, although the latest examples are two early 19th-century AO27 bowls: one stamped '[WILLIA]MS LONDON' (SF1006) and the other marked ?M B (SF943). Pit [587] produced seven 19th-century bowls, with two AO27 bowls (SF975 and SF977) and three AO28 bowls (SF955, SF979 and SF980) identified. The brick well [502] had recovered from its fill [501] only two bowls, both found as AO28 types and initialled I W (SF937 and SF938). The largest group of clay tobacco pipes were recovered from fill [512] of the masonry well [513] and it produced 34 bowls, of which one was an AO27, 27 were of the AO28 type and the W B maker was the most frequent and present as fifteen examples, besides three AO30 bowls, which included a ribbed example (SF403) and two damaged bird claw types (SF382 and SF418). Together the bowls indicate a deposition date of *c.* 1840-60.

Significance and potential of the assemblage and recommendations for further work

The clay tobacco pipe assemblage from DKN11 contains some interesting items, although they are mostly typical for the Southwark area. The main potential of the clay tobacco pipes are to date the deposits they were recovered from. There are no recommendations for further work.

Bibliography

Atkinson, D. and Oswald, A., 1969. 'London clay tobacco pipes'. *Journal of British Archaeological Association*. Series 3 Volume 32, 171-227.

Jarrett, C., 2002. 'Clay tobacco pipe', in C. Pickard, *An assessment report of archaeological excavations at the New Wolfson Wing, King's College London, London Borough of Southwark, SE1*. Pre-Construct Archaeology Ltd unpublished report.

Museum of London, n.d. Clay tobacco pipe makers' marks from London. http://archive.museumoflondon.org.uk/claypipes/index.asp

Oswald, A., 1975. *Clay pipes for the archaeologist*, British Archaeological Reports British series 14.

APPENDIX 5: GLASS ASSESSMENT

Chris Jarrett

Introduction

A small sized assemblage of glass was recovered from the site (two boxes). The glass dates to the Roman and post-medieval period. Most of the fragments show no or little evidence for abrasion and were probably deposited fairly rapidly after breakage. Some of the post-medieval glass fragments have natural weathering deposits resulting from burial conditions. The glass assemblage is in a very fragmentary state except for one intact item and a small number of vessels with complete profiles, otherwise most of the forms could be readily identified. A small quantity of glass production waste also occurs. The glass was quantified by the number of fragments and was recovered from fifteen contexts and individual deposits produced small (fewer than 30 fragments) groups, except for one context with a medium (31-100 fragments) sized group.

All of the glass (84 fragments, of which none were unstratified) was recorded in an ACCESS database, by type, colour and form. The assemblage is discussed by period, function and the vessel shapes, *etc.* and its distribution.

The forms

Roman

There are five fragments of Roman glass and all occur in a natron type and unless otherwise stated, in a pale blue colour.

Rounded jars

The everted rim, with a rolled collar and diameter of 90mm was recovered from context [523]. Another vessel has an upright rim (110mm in diameter) with a fine, externally beaded finish and short neck and it was made in clear glass. These items may represent grave goods.

Vessel glass

A rounded basal fragment was noted in context [517] and a wall fragment with sparse fine bubbles was derived from context [525]. A very small fragment of glass was found in context [508] and from the same deposit was a pale green fragment with a possible vertical rib.

Post-medieval

A total of 78 fragments of post-medieval glass are recorded. All of the identifiable forms are discussed according to their functions and by the number of fragments. A breakdown of the basic shapes is as follows:

Ashtray: three fragments

Bottle, generic: one fragment

Bottle: case; one fragment

Bottle: cylindrical: three fragments

Bottle: English wine; seven fragments

Bottle: English wine; cylindrical: four fragments

Bottle: English wine, late cylindrical type; two fragments

Bottle: octagonal section; two fragments

Bottle: octagonal, flat section; two fragments

Bottle: oval section; two fragments

Bottle: square section; two fragments

Bottle or jar: square section; one fragment

Bottle or phial: one fragments

Bowl: one fragment

Bowl: flared; six fragments

Bowl: small rounded: one fragment

Custard: one fragment

Glass making waste: one fragment

Indeterminate: one fragment

Jar: rounded: one fragment

Lampshade: four fragments

Phial: cylindrical; seven fragments

Rummer: one fragment

Syringe: one fragment

Tumbler: four fragments

Vase?: four fragments

Vessel glass: three fragments

Window pane: six fragments

Wine glass: seven fragments

The forms by function

Alcohol consumption forms

Form	Glass type	Colour	Technique	Comments	Rim dia. (mm)	No frags.	Weathered	Date	Context
Rummer	Lead	Clear	Free-blown	Base of bowl, thick stem with a disc knob, merese above foot ring. Thick walled		1	N	Mid 19th c	512
Tumbler	Soda	Clear	Moulded	Rim sherd and wall with rounded facets around the base.	75	4	Y	1830+	512
Wine glass	Lead	Clear	Free-blown	Foot and merese and start of a stem		1	N	19th c	512
Wine glass	Soda	Clear	Free-blown	Foot and merese and start of a stem		1	N	19th c	512
Wine glass	Soda	Clear	Free-blown	Foot and merese and start of a stem		1	N	19th c	512
Wine glass	Lead	Clear	Free-blown	Base of bowl, true baluster stem type with a merese and a foot ring		1	N	18th c	582
Wine glass: conical	Soda	Clear	Free-blown	Rim, nine petal-shaped fluting, cordon around its base and start of the stem	60	1	N	Early 19th c	512
Wine glass: funnel	Soda	Clear	Free-blown	1 of 2. Base of bowl with six wide facets, merese at the top of a plain stem		1	N	Mid 19th c	512
Wine glass: funnel	Soda	Clear	Free-blown	2 of 2. Base of bowl with six wide facets, merese at the top		1	N	Mid 19th c	512

Form	Glass type	Colour	Technique	Comments	Rim dia. (mm)	No frags.	Weathered	Date	Context
				and bottom of a plain stem, foot ring					

Table 1. DNK11. Alcohol consumption forms

Alcohol storage

Form	Glass type	Colour	Technique	Comments	Rim dia. (mm)	no frags	Weathered	Date	Context
Bottle: case	Natural	Olive green	Optic	Wall and corner fragment		1	N	18th-19th c	538
Bottle: oval section	Soda	Aquamarine	Moulded	Base, oval section, two vertical, recessed panels with '...PALMER/[SPI]RIT MERCHANT' embossed on one side and '[D]OVERST./[BO]OUGH' on the other side		1	N	1830+	512
English wine bottle	Natural	Pale olive green	Free-blown	Body sherd		2	Y	1640+	500
English wine bottle	Natural	Pale olive green	Free-blown	Body sherd		1	Y	1640+	500
English wine bottle	Natural	Pale olive green	Free-blown	Body sherd		1	Y	1640+	507
English wine bottle	Natural	Pale olive green	Free-blown	Neck, wide shoulder		1	Y	1640+	510
English wine bottle	Natural	Olive green	Free-blown	Body sherd		1	Y	Mid17th-19th c	517
English wine bottle	Natural	Olive green	Free-blown	Body sherd		1	Y	Mid 17th-19th c	517
English wine bottle: cylindrical	Natural	Dark olive green	Free-blown	Applied bevelled string finish above a deep. Slightly bevelled cordon. Cigar shaped neck	38	1	N	1780-90	501
English	Natural	Olive	Unknown	Wall fragments		3	N	Mid 18th-	512

Form	Glass type	Colour	Technique	Comments	Rim dia. (mm)	no frags	Weathered	Date	Context
wine bottle: cylindrical		green						19th c	
English wine bottle: cylindrical, late	Natural	Dark olive green	Moulded	Cigar shaped neck, kicked base, straight sided wall		2	N	Mid-late 19th c	510

Table 2. DNK11. Alcohol storage forms

Architectural (window panes)

Glass type	Colour	Technique	Comments	No frags.	Date	Weathered	Context
Clear	Soda	Uncertain	Flat pane, fairly thick walled	2	18th-19th c	N	500
Soda`	Very pale green	Uncertain	Small flat fragment	1	Post-medieval	Slightly	503
Soda	Clear	Uncertain	Edge, thin walled	1	19th c	N	512
Soda	Clear	Uncertain	Edge, thick walled	1	19th c	Slightly	512
Natural	Olive green	Uncertain	Flat sherd	1	Mid 17th-19th c	Y	517

Table 3. DNK11. Architectural (window panes)

Display

Form	Context	Glass type	Colour	Technique	Comments	Rim dia. (mm)	no frags.	Date	Weathered
Vase?	512	Soda	Dark blue	Free-blown	Rim sherd, simple, everted with wide scallops, flaring wall, rounded cordon, splayed base with pontil scar. ?Optically blown.	90	4	19th c	Very slightly

Table 4. DNK11. Architectural (window panes)

Food consumption

Form	Glass type	Colour	Technique	Comments	Rim dia (mm)	no frags	Date	Context	Weathered
Bowl; small rounded	Natural	Clear	Free-blown	Narrow, curved horizontal rim, straight sided wall, rounded towards the base. Heavily weathered. ?Custard *etc*.	95	1	18th-19th c	584	Y
Custard	Lead	Clear	Moulded	Complete profile, thick walled, 'scalloped' rim ending as alternating narrow and wide ribs which continue on to the very short stem and foot ring.		1	1830+	512	N

Table 5. DNK11. Food consumption forms

Food storage

Form	Glass type	Colour	Technique	Comments	Rim dia	no frags	Date	Weathered	Context
Bottle or jar: square section	Soda	Aquamarine	Optic	Nearly intact. Applied rounded rim, fairly deep conical neck with cordons in the middle and a larger one above the shoulder. Square section with rounded corners, three sides have three vertical ribs and one concave one. Flat base with a rounded kick and pontil scar.	48	1	19th c	S	512
Bottle: square section	Soda	Very pale aquamarine	Moulded	Complete profile, fairly crude applied rounded rim, slightly conical neck. Rounded shoulder, square sectioned wall with oval panels, rounded, splayed base. Diamond registration mark	40	2	1830+	Y	501

Form	Glass type	Colour	Technique	Comments	Rim dia	no frags	Date	Weathered	Context
				on the base of the underside with M in top loop and 4 in the bottom corner legible					

Table 6. DNK11. Food storage forms

Glass production

A fragment of glass slag is recorded and consists of a dense, opaque olive green material with possible rounded calcareous inclusions and a slaggy surface. Context [510]. The item is probably waste from a local Southwark glasshouse, their location being to the north of the site and located on the Thames.

Lighting (possible lampshades)

Glass type	Colour	Technique	Comments	Rim dia.	No frags.	Date	Context	Weathered
Soda	Clear	Free-blown	Wall, thin white surface		1	19th c	512	N
Soda	Clear	Free-blown	Simple rim. Conical wall	55	3	19th c	512	N

Table 7. DNK11. Lighting forms

Multi-purpose

A moulded bowl fragment, possibly of a globular shape and made in clear soda glass survives as a curving wall shard and decorated with a diamond grid border and an incised line above and discrete incised dashes above oval facets. 1830 onwards. Context [531]. Another moulded (six fragments) bowl is of a flared shape and it is also made in clear soda glass. It has thick walls and a scalloped rim above a rounded, wide cordon over raised rectangles above vertical fluting. The vessel is weathered and recovered from context [512]. Both the bowls date to after c. 1830.

Liquid storage

Form	Glass type	Colour	Technique	Comments	Rim dia	No frags	Date	Weathered	Context
Bottle	Soda	Aquamarine	Moulded	Splayed base with a boss on the underside		1	1830+	Very slightly	512
Bot cyl	Natural	Dark olive green	Free-blown	Base, convex with a kick and pontil scar		1	Post-medieval	Y	522
Bottle: oval section	Soda	Clear, green tint	Moulded	Shoulder with a seam mark		1	1830+	N	512
Bottle: octagonal section	Soda	Pale blue	Moulded	Applied, preparation rim, short conical neck, slightly rounded shoulder, base, wall has a measure mark and 'III' survives, off centre recessed base. Toxic substance storage	20	2	1830+	Very slightly	512
Bottle: flat, octagonal section	Soda	Pale blue	Moulded	Applied, short squat, straight-sided rim, short conical neck, slightly rounded shoulder, flat, octagonal cross-section and a concave arcaded panel Toxic substance storage	18	1	1830+	Very slightly	512
Bottle: flat, octagonal section	Soda	Pale blue	Moulded	Complete profile, applied, short squat, straight-sided rim, short conical neck, slightly rounded shoulder, flat, octagonal cross-section with one wide panel embossed with three raised horizontal dosage marks. Flat base with a recess. Toxic substance storage	20	1	1830+	Very slightly	512
Bottle; cylindrical	Soda	Pale blue	Uncertain	Cylindrical wall		2	Post-medieval	N	512
Bottle or	Natural	Pale grey	Free-	Rim sherd, flat	35	1	18th-19th	N	500

Form	Glass type	Colour	Technique	Comments	Rim dia	No frags	Date	Weathered	Context
phial		green	blown	preparation rim and short cylindrical neck			c		

Table 8. DNK11. Liquid storage forms

Pharmaceutical forms

Form	Glass type	Colour	Technique	Comments	Rim dia. (mm)	No. frags	Date	Weathered	Context
Cylindrical phial	Soda	Clear	Moulded	Base. Rounded and a straight sided wall. Pontil scar.		1	1830+	Y	512
Cylindrical phial	Soda	Clear	Free-blown	Base. Straight sided wall, pontil scar on the underside of the base		1	1830+	Y	512
Cylindrical phial	Soda	Clear	Moulded	Base. Straight sided wall, small boss on the underside of the kicked base. Black 'weathering'.		1	1830+	Y	512
Cylindrical phial	Soda	Clear	Free-blown	Preparation rim. Short neck, straight sided wall	26	1	1830+	Y	512
Cylindrical phial	Soda	Clear	Moulded	Preparation rim. Short neck, straight sided wall, recessed base	23	2	1830+	Y	512
Cylindrical phial	Soda	Clear	Moulded	Complete profile, nearly intact, preparation rim. Short neck, straight sided wall, small boss on the underside of the recessed base	23	1	1830+	Y	512
Syringe	Soda	Clear	Free-blown	Fragment of a tube with a		1	19th c	Y	512

Form	Glass type	Colour	Technique	Comments	Rim dia. (mm)	No. frags	Date	Weathered	Context
				rounded end and spike					

Table 9. DNK11. Pharmaceutical forms

Smoking

An ashtray occurs in moulded clear soda glass with a complete profile and appears to be rectangular in shape (135mm in length with a surviving width of 90mm). The rim is scalloped and formed from the moulded decoration, which covers the entire external surface and this consists of alternating thin and wide ribs, the latter containing 'square' star type motifs.

Vessel Glass

Glass type	Colour	Technique	Comments	No frags	Date	Weathered	Context
Clear	Soda	Uncertain	Flat panel, flaring wall, external white patina	1	18th-19th c	Y	500
Soda	Clear	Uncertain	Body sherd	1	Undated	N	512
Soda	Clear	Uncertain	Body sherd, thick walled. ?Window glass	1	Undated	N	512

Table 10. DNK11. Vessel glass

Distribution

The distribution of the glass is shown in Table 1. For each context containing glass, then the phase, number of fragments, the forms and a spot date is shown. The glass assemblage was recovered from Phases 3-6 and a summary of the material for each phase is presented.

Context	Phase	No. Frags	Vessel forms	Spot date
500	5	7	Bottle or phial, English wine bottle, vessel glass, window pane	18th-19th century
501	5	3	Bottle, square section, English wine bottle: cylindrical	1830 +
503	4	1	Window pane	Post-medieval
507	4	1	English wine bottle	1640 +

Context	Phase	No. Frags	Vessel forms	Spot date
508	4	2	Vessel	Roman
510	5	3	English wine bottle and late cylindrical type, glass slag	mid-late 19th century
512	5	54	Ash tray, bottle, bottle cylindrical, bottle octagonal, Bottle octagonal, flat section, bottle oval section, Bottle or jar, square section, bowl: flared, custard, English wine bottle: cylindrical, lampshade?, phial: cylindrical, rummer, syringe, tumbler, ?vase, vessel glass, window pane, wine glass, wine glass: conical type, wine glass: funnel type	1830+
517	3	4	English wine bottle, vessel glass (Roman), window pane	mid-late 19th century
522	3	1	Bottle; cylindrical, jar: rounded	Post-medieval
523	2	1	Jar: rounded	Roman
525	2	1	Vessel glass	Roman
531	2	2	Jar: rounded, bowl; rounded	Roman
538	5	1	Bottle: case	late 16th century onwards
582	5	1	Wine glass	18th century
584	5	1	Bowl; small rounded	18th-19th century

Table 11. DKN11: distribution of the glass

Phase 2

Four fragments of glass were found in this phase and recovered from three contexts which occur in a stratified sequence. The earliest feature to contain glass was fill [531] of grave cut [533] which contained the inhumation [532]. The glass finds from this feature consist of the rim of a small rounded jar made in clear glass and of a Roman date and a fragment of a 'globular' decorated jar with a diamond grid border, oval facets and incised lines and dashes. The latter vessel is believed to be 19th century in date, although it may require further research to confirm this. The layer [525] produced a wall fragment of pale blue Roman vessel glass. Sealing layer [525] and the grave fill [531], the Roman layer [523] produced a Roman jar with a rolled and collared rim in pale blue glass.

Phase 3

Five fragments of glass were recovered from this phase and it was noted in two contexts: [517] and [522], both dark earths. Layer [522] only produced the kicked base of a cylindrical bottle made in dark olive green glass and broadly dated to the post-medieval period. Sealing the later, layer [517] produced four fragments of glass as the possible basal shard from a

Roman vessel, besides later material as two fragments of a post-medieval wine bottle and a fragment of a window pane.

Phase 4

A small quantity of glass was found in this phase as four fragments and found in three contexts. Glass finds are associated with the cattle burials. Two fragments of Roman glass were found with the cow skeleton [508], while a single fragment of a post-medieval English wine bottle occurred in the backfill [507] of the burial. Only a very small fragment of a post-medieval window pane was noted in fill [503] associated with the cow skeletons [504] and [505].

Phase 5

The largest quantity of glass in the assemblage was found in this phase and found as 71 fragments derived from seven contexts, most of which produced only single fragments of glass. Sealing the cattle burial, the plough soil [500] produced seven fragments of post-medieval glass, the most dateable being broadly assigned to a 18th-19th-century date and found as a phial or bottle and a piece of soda vessel glass.

Truncating that layer the masonry well [536] contained in its earliest fill [538] only a fragment of a case bottle, while the material found in the later fill [510] included the lump of glass slag and a moulded cylindrical wine bottle dated to the mid to late 19th century. The largest quantity of glass (54 fragments) recovered from any one feature on the site was excavated from fill [512] of the masonry well [513]. This group of glass was quite diverse in its range of forms and consisted of six wine glasses ranging in date from the early to mid 19th century, a rummer and tumbler, various types of bottles, including one for a spirit merchant on nearby Dover Street, six phials and a syringe, besides the blue glass possible vase and two lampshade fragments. The latest items date from the mid-late 19th century and include moulded items such as the ashtray, the possible octagonal blue glass poison bottles and the custard.

Significance of the assemblage

Of significance is the small quantity of Roman glass recovered from the excavation, which probably originated as grave goods associated with the Romano-British cemetery reveal on the study area. Glass vessels were also used as grave goods at the nearby Lant Street excavation (Shepherd 2013). The post-medieval glass is of less significance, although the group of glass ware from fill [512] of the brick well [513] certainly complements the functions

provided by the associated pottery, clay tobacco pipes and other finds and gives an insight into the household from which the rubbish was derived.

Potential of the assemblage

The glass has the potential to broadly date the features it was found in. Two vessels requires illustration: the small rounded jar found in grave fill [531] and the collared rim jar from layer [523] which gives an insight into the burial practices of this area of the Southwark cemeteries.

Recommendations for further work

A short publication report is required for the glass from this site. It is recommended that John Shepherd further analyses the Roman glass at publication stage and produces the text. Two glass items requires illustrating to complement the text.

Bibliography

Shepherd, J., 2013. 'Glass', in V. Ridgeway, K. Leary and B. Sudds, *Roman burials in Southwark. Excavations at 52-56 Lant Street and 56 Southwark Bridge Rod, London SE1*. Pre-Construct Archaeology Monograph 17, 36-43.

APPENDIX 6: CERAMIC BUILDING MATERIAL ASSESSMENT

Kevin Hayward

Introduction and Aims

Nine crates and two bags of ceramic building material, stone and mortar were retained from the excavations at1 Dickens Square, London Borough of Southwark NGR TQ 3243 7935.

This moderate sized assemblage (1179 examples 147.2kg), 1156 examples, 125.1kg of which came from Roman and 'dark-earth' layers was assessed in order to:

- Identify (under binocular microscope) the fabric and forms of the Roman ceramic building material and any later materials from the Roman and dark earth layers.
- Identify the geological character and source of the worked and unworked stone objects recovered from the Roman and 'dark earth' layers.
- Provide spot dates for the whole bricks used in a handful of post-medieval well structures and for all the post 'dark earth' structures. Table 4 summarises the brick fabric, form and date of the post-medieval structures.
- Compilation of a database (DKN11.mdb)
- Made recommendations for further study.

Methodology

For the material retained from the Roman and 'dark earth' layers of the excavation, 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). Matches then made with the London fabric collection.

All the material recovered from the post 'dark earth' layers was scanned to provide spot dates, including two whole brick samples from each of the three well structures [502] [513] [536].

Roman Ceramic Building Material (Tile and Brick) Daub and Opus Signinum 986 examples 110kg

Condition and distribution

Very large quantities of Roman brick and roofing tile supplemented by the occasional tesserae and example of cavity walling were recovered especially from the 'dark earth' layers in the northern half of the excavation including the upper [517] (59 examples 2.8kg) and lower

[522] (569 examples 51kg) spits and the Roman ditch from this area too [523] (151 examples 29.4kg).

Most of the Roman materials recovered from these 'dark earth' layers are intermixed with a very small quantity of medieval peg tile (see below) although their proportion does vary vertically and horizontally (see below). However, the overall impression is that the 'dark earth' layers have accumulated slowly into the medieval period.

The Roman material recovered from the 'dark earth' Layers is in a more fragmentary state than the largely fresher examples from the earlier late Roman ditch [523]. This ditch has fresher definable tegulae profiles and box flue dies which had been re-deposited maybe on just the one occasion.

Fabric review

The usual groups of Roman tile and brick fabrics for London are represented (Table 1). As expected the common first century to early second century red sandy group 2815 dominates (83% by weight) with small quantities of other early fabric groups. However, the later Roman fabrics including the calcareous (AD 140-350), Late Radlett (AD 170-230); Late sandy (AD 120-250) and Reigate (AD 275-350) groups are very well represented, constituting together 5.4kg (5%) much higher than for many sites in Southwark and more comparable to figures from Tabard Square where there was a later Roman courtyard building (Hayward in prep). An example of a very rare sandy calcareous fabric unique to Tabard Square was also uncovered from a late Roman grave fill [566].

To summarise, the imprint of later calcareous fabrics in the Roman and 'dark earth' layers would indicate that much of the Roman sequence is later mid-2nd to 4th century in date.

MoL fabric group Name	Quantity	Codes	Description
Early London sandy fabric group 2815 (AD 50-160)	794 examples 90.6kg	2452; 2459a; 3004; 3006	Fine and coarse local sandy fabric coarse moulding sand
Eccles fabric group (AD 50-80)	63 examples 4.2kg	2454; 3022	Fine cream-yellow-pink sandy fabric with occasional rose quartz
Radlett group (AD 50-120)	39 examples 4.4kg	3023; 3060	Black and red iron oxide clay pellets
Wealden silty fabric Group (AD 71-100)	6 examples 0.8kg	3238	Very silty laminae coarse quartz and red iron oxide
Red silty Group (AD 50-200)	1 example <0.1kg	3500	Very fine red silt cavernous texture
Hartfield (AD 100-120)	17 examples 1.3kg	3009; 3018	Cream Silt lumps set within a fine yellow silty matrix
Hampshire Grog (AD 70-140)	1 example 0.2kg	3054	Cavernous red sandy texture with red and yellow grog inclusions
Late sandy group	16 examples 1.7kg	2459b	Fine red micaceous fabric very fine moulding sand
Late Radlett Group	4 examples 1.2kg	3023b 3060b	Red iron oxide with coarse quartz

(AD 170-230)			inclusions
Late Calcareous Group (AD 140-350)	17 examples 2.4kg	2453; 2457; 3013; 3500 (Coarse Tabard like fabric)	Pale cream-yellow-grey calcareous fabric with shell and clay inclusions
Reigate Fabric 3014 (AD 275-350)	3 examples 0.1kg	3014	Busy fabric with rock inclusions

Table 1: Summary of main Roman brick and tile fabrics from DOR13, their quantity and use

Form

A review of the building material type by form follows.

Brick 116 examples 26.4kg (24%)

There are no complete bricks from the assemblage and proportions (<25%) are lower than expected for Southwark. This would suggest that some of flat brick had been removed and selectively stockpiled elsewhere for reuse in later Roman and medieval structures in Southwark.

Tegulae 86 examples 17kg (15%)

Flanged tegulae are dominated by the common flat-topped profile 1. The only other profiles are 2 and 6. One example from [523] has a tally X mark.

Imbrex 104 examples 8.4kg (8%)

Curved imbrex are common and can be divided up into the earlier fabrics of greatest thickness (18-23mm) and the later mid-2nd-mid 3rd-century fine sandy and calcareous materials which are thin (14-17mm).

Box Flue tile 21 examples 2.8kg (3%)

This was a small though varied group of cavity wall materials (see Table 2). Of interest is an early knife cut form typical of the late first century (Brodribb 1987), an intricate florid roller stamped design comparable to Die 9 (Betts *et al*. 1997) only previously seen in Southwark in second to third-century deposits from Winchester Palace and finally an intricate intersecting comb design, somewhat coarser and in a sandy fabric unlike the Radlett examples seen throughout Southwark.

None of the material comes from the ‘dark earth’ layer on the southern half of the site or the upper spit layer on the north side. Rather most is found spread in the ‘dark earth’ layer on the northern side [522] and in late Roman layers [523] [542]. However, in view of the enormous size of the ceramic building material assemblage from these layers it was inevitable that some box flue would turn up.

What appears to be an example of plain box flue tile in a late Roman Reigate type fabric 3014 (AD 270-350) from a Roman ditch [540] was a surprising find in view of the rarity of the fabric in London.

Rather like the tesserae, this small "background" group merely attests to the presence of a heated public or private building somewhere in the vicinity rather than evidence of a structure adjacent to the site.

Type of Die	Context	Description	Fabric	Date
Knife Scored	[522] 110/220 'dark earth' Northern half of site	Score marks	Fine sandy 2459a	AD 50-100
Roller Stamp	[523] Fill of large late Roman ditch	Rare Roller Die Florid design Type 9 (Betts *et al.* 1997) Seen at Winchester Palace	Possibly very fine 2459b	AD 120-250
Combed	[522] 105/220 'dark earth' Northern half of site	Intricate intersecting straight comb	Fine 2452	AD 55-160
	[522] 110/220 'dark earth' Northern half of site [523] Fill of large late Roman ditch 3 examples	Very narrow straight comb	Fine 2452 and 2459a	AD 50-160
	[542] Roman Layer 2 examples	Very narrow straight comb	3023 Iron oxide	AD 50-120
	[522] 115/215 'dark earth' Northern half of site [522] 115/2220 'dark earth' Northern half of site [523] Fill of large late Roman ditch 2 examples	Angled narrow comb design	Fine 2452 and 2459a	AD 50-160

Table 2: listing of scored, combed and roller stamped box flue tiles from DKN11

Tessera 10 examples 0.3 kg (0.3%)

All the loose tesserae recovered are large (25mm x 20mm x 20mm) sub-rectangular border examples. Six were spread over a large area of 'dark-earth' from the northern side of the site

[522] with a further three from the late Roman ditch [523]. Rather like the small but varied box-flue tile assemblage attest to demolition of a heated building somewhere in the vicinity.

Undiagnostic tile 631 examples 54.3kg (50%)
In view of the broken up nature of the assemblage it is perhaps not surprising that undiagnostic tile is by far most common form, accounting for 50% by weight of all Roman building material. These proportions greatly exceed those further north (typically 25%) towards the main settlement and Bridgehead in Southwark (Hayward 2013a; 2013b) It is common in Roman and 'dark earth' layers throughout the site in the complete range of early and late fabrics perhaps reflecting the intermixed nature of many of these features.

Daub 5 examples 0.1kg
It is not clear whether the small quantity of daub from the 'dark earth' layers [517] [522] relates to timber framed wattle and daub structures from the Roman or medieval period.

Opus signinum 6 examples 0.1kg
Pink Roman concrete or *opus signinum* was identified in small quantity from 'dark earth' layer [522] including one brick adhered with it from the fill of the Roman ditch [572]

Medieval Ceramic Building Material 130 examples 4.3kg

Distribution

Brief comment follows on the spread of medieval ceramic building material included within the 'dark earth' layers [517] [522] [581] [588] in order to help identify these features. The entire spread of the upper spit [517] of the northern 'dark earth' layer is undoubtedly medieval in character as 48% (2.8kg) of it is dominated by medieval peg tile. The upper spit [581] of the southern 'dark earth' layer has a much smaller medieval imprint with (5-10%) of it containing peg tile and all of it in area 115/205.

As expected proportions of medieval peg tile fall off dramatically (1.9% by weight 1.1kg out of 59kg) in the lower spit [522]; this figure remaining consistent in 100/220; 105/215; 105/220; 110/215 115/220. No medieval ceramic material was recorded in 110/220 and 115/210.

Roofing Tile 130 examples 4.3kg
All of the material contained within the 'dark earth' layers consists of thin, often abraded and glazed medieval peg tile and in one instance curved tile. They range in date from the organic rich 2274 (1080-1350) up to the coarser sandy 2816 (1200-1800). The most common fabric is the reduced core sandy 2271 (1180-1450)
Peg tile fabrics *2271* (1180-1450); *2274* (1080-1350); *2587* (1240-1450); *2816* (1200-1800)

Stone 42 examples 10kg

A small group of worked stone fragments and rubble were identified from the 'dark earth' and Roman layers. In all ten rock types have been identified, all of which have been identified in Roman Southwark before.

Kentish ragstone/Hassock stone *3105/3106* hard dark grey calcareous sandstone (Kent Ragstone); – coarse grained glauconitic sandstone (Hassock stone) - Hythe Beds. Lower Cretaceous (Lower Greensand) Maidstone area, North Downs. 18 examples 5.4kg.

By far the most common material as loose rubble and paving slabs identified throughout the lower spit of the 'dark earth' layer in the northern part of the trench and the underlying late Roman layer [523]. These hard Wealden materials provided ideal stone masonry foundation materials for public and private housing throughout Roman Southwark and the City. Fissile examples from [522] 110/215 and [523] were used for paving.

Banded calcareous micaceous sandstone *3108* Probable Wealden source or even Elland Flags, Upper Carboniferous (Namurian) South Yorkshire 9 examples 1.6kg

The second most common material type given the generic name Banded calcareous micaceous sandstone, is a rock commonly associated with late Roman roofing and paving material in London. Stone became the preferred material choice for roofing in southern Britain during the late Roman period (Boon 1974). It was identified in 'dark earth' layers [517] [522] and late Roman features [523] including ditch fill [571], providing another line of material evidence (along with the calcareous imbrex and tegula) for the late Roman date of many of the layers at Dickens Square.

Bath-stone *3109* Banded shelly oolitic limestone Middle Jurassic (Bathonian) South Cotswolds Cirencester-Bath 1 example 0.5kg

The most important stone find is undoubtedly a 26mm thick worked bath-stone fragment from the principal 'dark earth' layer [522] 100/220 This freestone, an open porous banded shelly oolitic limestone was the most common material type to be used in funerary and sculptural objects from the late first century onwards in Roman London (Hayward 2009; in prep d). It is a corner of what appears to be a funerary stele, although it noticeably thickens which may suggest that it is sculptural. It could be associated with the late Roman cemetery. Incisions were noted on the stone but these are unlikely to be lettering.

Carrstone *3111* Loose ferruginous red sandstone – Lower Cretaceous, (Folkestone Beds) Weald 2 examples 0.2kg

A fairly common building construction material for Roman London lumps of these red-brown sandstones form a common constituent of late Roman London and Southwark. As with a

majority of the assemblage these were identified from the principal 'dark earth' layer along the northern half of the site [522] 105/215 but also the late Roman layer [523]

Purbeck marble *3112R* dark grey freshwater shelly limestone*,* Purbeckian Lower Cretaceous (Isle of Purbeck) Dorset. 2 examples 0.7kg.

Purbeck marble rubble from the same part of the 'dark earth' layer as the Bath-stone slab [522] 100/220 along with a paving slab from nearby at [522] 115/215 may be funerary in origin, especially given their widespread use for this purpose including nearby Tabard Square (Hayward in prep a). It is possible of course that this could represent flooring especially the thicker (45mm) example from [522] 115/215 which probably comes from the Purbeck Marble Grey Beds

Septarian nodule *3122* Condensed fine calcareous mudstone*.* Tertiary (London Clay) London Basin 2 examples 0.3kg These locally acquired calcareous materials, along with flint, chalk, Kentish ragstone and Carrstone form part of the Roman package of stone construction building materials for the capital. Two examples come from the 'dark earth' layer [522] 110/215.

Neidermendig Lavastone *3123R* Hard dark-grey vesicular lavastone with inclusions of white mineral leucite Tertiary, Andernach region of the Rhineland 2 examples 0.3kg.

Although fragments of lava stone from 'dark earth' layer [522] 115/220 do not have a defined profile, these pieces are almost certainly parts of degraded rotary quern. German lavastone is the most common quernstone and millstone material in Roman London.

Purbeck limestone (Thornback) 3126 dark shelly oyster fragments set in a fine dark micritic limestone matrix Upper Jurassic (Purbeckian) Isle of Purbeck e.g. Winspit Quarry/St Aldheim's Head. 1 example 0.2kg.

Part of a worn, 25mm thick Purbeck limestone paving slab were recovered from the fill of a Roman posthole [553]. Although Purbeck marble, also from the Upper Jurassic of the Isle of Purbeck was more commonly used as a paving/funerary material – different types of Purbeck limestone are occasionally used as mortars (broken shell bed) and paving in Roman London. It is possible that it could be part of grave stele.

Millstone Grit *3130.* Coarse angular sugary quartz sandstone – Upper Carboniferous (Namurian) Yorkshire-South Derbyshire or South Wales 4 examples 0.4kg.

This second quern-stone material from Dickens Square was identified from the same 'dark earth' layers [522] 105/220 and 115/215 as the German Lavastone. Although not as commonly used as the lavastone in Roman London it has been utilised as whetstone and quern material south of the Thames e.g. Bermondsey Square (Hayward in prep c). The quern has a thin (25mm) flat profile reflecting the stones durability in grinding corn into coarse flour.

Summary

This is a small but important assemblage of Roman stone materials from Southwark. Examples of walling construction (Kent Rag; Carrstone; Septarian Nodule), paving and roofing (banded micaceous sandstone), quernstone (German Lavastone; Millstone Grit) inlay and/or funerary slabs (Bath-stone; Purbeck marble; Purbeck Limestone) are represented , nearly all of it from the main 'dark earth' layer [522]

The walling and roofing construction material most probably belonged to demolished late Roman housing. The mere fact that there is so much slabby roofing material is in itself diagnostic of the late Roman, given that stone was the material of choice in the late Roman period in southern England (Boon 1974).

The more exotic condensed and freestone Jurassic materials may relate to discarded funerary monuments from the late cemetery. These materials were also associated with the cemetery from nearby Trinity Street (Hayward in prep b; Killock in prep) and slightly further afield alongside the Roman Road at Tabard Square (Killock & Shepherd in prep).

Distribution

Structures in bold; All contexts

Fabric	Form	Size	Date range of material		Latest dated material		Spot date	Spot date with mortar
2271; 2816; 2459a; 2586; 2279; 3023	Some med peg tile glazed removed; Roman imbrex; pan tile; post-med chimney fragments; Early Roman tegula	16	50	1900	1480	1900	1700-1900	No mortar
3032; 3101	**Narrow unfrogged post Great Fire bricks grey lime mortar**	**6**	**1664**	**1900**	**1780**	**1900**	**1780-1900**	**1750-1850**
3022; 2271; 2452;2459a; 3023; 2586; 3102; 2453	Roman Eccles tile; worn glazed medieval peg tile; sandy Roman tile and brick; tegula; curved med peg tile; daub	28	1500 bc	1800	1180	1800	1180-1600	No mortar
2459a	Abraded Roman tile	1	50	160	50	160	50-160+	No mortar
2276; 3036; 2279; 2271; 3023; 3101	Chimney fragment; Dutch paving brick; early post-medieval peg tile; worn tegula; moulded concrete cornice	10	50	1950	1850	1950	1850-1950	1850-1950
2279	Pan tile	13	1630	1850	1630	1850	1700-1850	No mortar
3032; 3101	**Narrow frogged and**	**7**	**1664**	**1900**	**1780**	**1900**	**1800-1900**	**1750-1850**

Fabric	Form	Size	Date range of material		Latest dated material		Spot date	Spot date with mortar
	unfrogged post Great Fire bricks grey lime mortar							
2274; 2587; 2816;; 2271; 2453	Tile; medieval glazed and unglazed peg tile; late Roman Calc tile	18	140	1950	1850	1950	1850-1950 NB if Wall Tile Intrusive then 1240-1600	No mortar
2587; 2271; 2452; 3023	Medieval peg tile glazed and unglazed early Roman tile fragments	9	50	1800	1180	1800	1240-1600	No mortar
2815; 2457; 2274; 2271; 3023; 2587	Early and late Roman tile fragments; medieval peg tile glazed and unglazed	36	50	1800	1180	1800	1240-1600	No mortar
3032; 2587; 2271; 2276; 2274; 2816; 3102; 2453; 2452; 3023; 3022; 2459a	Early and late Roman tile fragments, daub; medieval and post-medieval peg tile; post Great Fire brick	53	1500 bc	1900	1664	1900	1664-1800	No mortar
2452; 2459a; 2815;; 2453; 3022; 2271; 2816; 3032; 3108; 3023	Early Roman tile, brick, imbrex; medieval peg tile, daub; post Great Fire brick; banded laminated calc sandstone paving	36	1500 bc	1900	1664	1900	1664-1800	No mortar
2459a	Abraded Roman tile	1	50	160	50	160	50-160	No mortar
3105; 3106; 3108; 2271; 2587; 2816; 2452; 2815; 2459b; 3101	Lots of stone rubble in Kent Rag and paving/roofing banded laminated sandstone; medieval peg tile; late Roman sandy imbrex and early sandy tile hard dark grey mortar	34	50	1800	1180	1800	1240-1600	1800-1950 Intrusive
3109; 3112R; 2454; 2452; 3006; 2587	Roman funerary corner lettering?? banded shelly oolitic limestone; Possible Purbeck Roman paving; early Roman tile medieval peg tile	17	50	1900	50	1900	1240-1450+	No mortar
3104	Opus signinum fragment	1						100-400+
2271; 2274; 2587; 3111; 3108; 3023b; 3060; 2459a; 2459b; 2815; 3006; 3022; 3023; 3238	Very small quantity of medieval peg tile; Roman Carrstone fragment and banded micacious sandstone paver; Very large group of broken tile, tegula, imbrex brick Roman	111	50	1800	1180	1800	1240-1600	No mortar

Fabric	Form	Size	Date range of material		Latest dated material		Spot date	Spot date with mortar
2587; 2816; 2271; 3105; 3106; 3130; 2452; 2459b; 3022	Small quantity of medieval peg tile; a lot of Kent Ragstone, Hassock; Millstone Grit Quern fragments; combed box flue tile; early and late Roman tile tesserae; imbrex, brick and tegulae	76	50	1800	1180	1800	1240-1600	No mortar
2271; 2816; 2452; 2453; 2815; 3018; 2459a; 3009; 3104; 2459b; 2454; 3102; 3023; 3105; 3108; 3122;	Medieval peg tile very little; early and late Roman tile, tessera, lots of silty and Eccles and Hartfiled. Kentish ragstone and Banded micaceous sandstone roofing; Septarian Nodule; opus sigininum; Box combed; daub	119	1500 bc	1800	1200	1800	1200-1600	100-400+
2452; 2459a; 2815; 3004; 3006; 3009; 2454; 3238; 3023; 2459b; 2453; 3022	Large group of Roman ceramic building materials of many early and late fabrics Box flue score; Tegula; imbrex, tile and brick	47	50	300	140	300	140-300+	No mortar
2815; 3060	Group of sandy tegula, imbrex, brick and tile	18	50	160	50	160	50-160+	No mortar
2815; 3054; 2453; 2454; 3018; 3022; 3105; 3112R; 3130; 3102; 2459A	Roman tess, box flue combed; late and early fabrics of imbrex, tegula, brick and tile; Daub	116	1500 bc	1600	50	1600	140-400+	No mortar
2274; 2816; 2271; 2452; 2459a; 2459b; 2453; 3023; 2454; 3123R; 3105; 3108; 3238; 3102	Small quantity of medieval peg and curved tile; Roman early and late fabrics tegula, imbrex, brick and tile, paving rubble, quern lavastone, combed box flue tile	97	1500 bc	1800	1200	1800	1200-1600+	No mortar
3111; 3108; 3105; 3106; 2815; 2452; 2459a; 2454; 3009; 2453; 3004; 3006; Rare silty fabric; 2459b; 3023; 3060b; 2271; 3014; 3018 3013	Enormous group of Roman cbm and stone extremely rare med peg tile some exotics tesserae; roller stamped, combed and half box flue tegulae, tile, brick and imbrex	159	50	1800	1180	1800	1180-1600 (If intrusive peg tile then 275-350	No mortar
2452;2459a; 3018	Roman brick, tegula and imbrex	10	50	160	100	160	100-160+	No mortar

Fabric	Form	Size	Date range of material		Latest dated material		Spot date	Spot date with mortar
3009; 2453; 2452	Roman tile early and late	3	55	300	140	300	140-300	No mortar
2459a; 2452	Roman tile and flat tessera	6	50	160	55	160	55-160+	No mortar
3032	**Narrow post Great Fire brick; T2 mortar**	**2**	**1664**	**1900**	**1664**	**1900**	**1780-1900**	**1750-1850**
Late Calc Fabric; 2453; 3104; 3023; 2452;	Imbrex; late Roman tile and tegula; Lots of early Roman brick sandy and radlett ware; Tesserae and box angled	33	50	350	275	350	275-350	No mortar
2452; 2459a; 3023; 2454	Box flue tile combed; Roman brick, tile and tegula and imbrex	17	50	160	55	160	55-160+	No mortar
3032	Post Great Fire brick intrusive?	2	1664	1900	1664	1900	1664-1900? Intrusive	No mortar
2452`	Roman tile	3	55	160	55	160	55-160+	No mortar
3500	Red silty fabric tile	1	50	200	50	200	50-200	No mortar
2452	Roman tile	1	55	160	55	160	55-160	No mortar
2459a	Roman tile	1	50	160	50	160	50-160+	No mortar
2459a	Roman tile	1	50	160	50	160	50-160+	No mortar
3126; 2459a	Purbeck limestone paver and Roman tile	2	50	1900	50	1900	50-400+	No mortar
2454	Early Roman tile	1	50	80	50	80	50-80	No mortar
2452; Late Calc fabric found at Tabard; 3023	Early and late Roman tile and imbrex	9	50	300	140	300	140-300+	No mortar
2452	Roman sandy tile, brick, imbrex and tegula	16	55	160	55	160	55-160+	No mortar
2276; 2452; 2815; 3023; 3022; 3054; 2459a; 3105; 3108	Large group of stone rubble and paving micaceous sandstone; Range of early fabrics in tile, imbrex and brick	67	50	1900	1480	1900	1480-1700 (if peg tile intrusive then) 70-160+	No mortar
2452; 2459a; 3006; 2453	Roman sandy tile. Tegula and imbrex	7	50	300	140	300	140-300+	No mortar
2452	Roman tile	2	55	160	55	160	55-160	No mortar
2452; 3023	Sandy and iron oxide tile	2	50	160	55	160	55-160+	No mortar
2271; 2816; 2587; 2815; 3014; 3023	Medieval peg tile early Roman tile	9	50	1800	1200	1800	1240-1600	No mortar
2815; 3006; 3018	Roman tile and imbrex	11	50	160	50	160	100-160	No mortar
2459a; 3023b	Early and late Roman tile	3	50	230	170	230	170-230+	No mortar
3114PM	Carrara marble mouldings fireplace/stairwell	2	1700	1950	1700	1950	1800-1959	No mortar

Fabric	Form	Size	Date range of material		Latest dated material		Spot date	Spot date with mortar
3032; 2453; 2276; 2816	Post Great Fire Brick Hard 19th century mortar; Late Roman tile; late medieval post-medieval peg tile	4	140	1900	1664	1900	1700-1900	1800-1900
2271, 3039	Late medieval early post medieval peg tile early post-medieval brick	2	1180	1800	1400	1800	1600-1800	No mortar
2815; 2459a; 3060	Roman tile , brick and imbrex	7	50	160	50	160	50-160_	No mortar
2453; 2815	Late and early Roman tile	4	50	300	140	300	140-300	No mortar

Table 3: Brick fabrics and spotdates

Phase Summary

Origin of the Roman Dumped Material

The intermixing of so many different Roman tile and brick fabrics has not made it possible to sub-divide up the Roman sequence at Dickens Square. However, some general comments can be made on the overall date of the boundary of field ditch, plough soils and cemetery and the possible origin of the Roman ceramic building material and stone.

What is clear is that the dumped material in the fill of the early main ditch contains 2nd- and 3rd-century calcareous tile (AD 140-350) with most of the grave fills, plough soils and later 'dark earth' layers. They contain proportions (5%) of 2nd to 3rd-century sandy, Radlett, Reigate and calcareous fabrics greater than for most other sites in Southwark, typically 2-3%. This later Roman tile imprint is also present in the nearby excavations at Tabard Square (7%) particularly in the late Roman Phase 9 area associated with the Courtyard Villa (Hayward in prep a). The presence of so much banded calcareous sandstone roofing and paving slate not only in 'dark earth' layers [517] [522] and late Roman features [523] as well as the earlier ditch fill [572] provides further indication of later Roman building material/buildings in this area. Stone was the preferred option as a roofing material in the later Roman period for southern England (Boon 1974) and there is a small group of banded calcareous sandstone roofing slabs including pentagonal shaped tile associated with the later Roman Courtyard building at nearby Tabard Square (Hayward in prep a).

Other than the occasional box flue tile and tesserae, the tile and brick dumped in this area is in a highly broken up state with a notable dearth of brick (25% by weight) including no complete examples. This would suggest that some of flat brick had been removed and selectively stockpiled elsewhere for reuse in later Roman and medieval structures in Southwark.

Amongst the ten stone types identified (all of which have been seen in Roman Southwark before) is a worked corner slab (25mm) thick of Bath-stone and examples of worked Purbeck marble mainly from discrete dumps in the 'dark earth' e.g. [522] 100/220. The size and form of the Bath-stone corner resembles a grave marker, and it is of a rock type associated with extensive religious and funerary use in Roman London and Southwark from the late first century onwards (Hayward in prep d). Not only does this site contain inhumation and cremation burials but lies close to the cemetery at Trinity Street (Hayward in prep b), and Great Dover Street/Tabard Square (Hayward in prep a; Mackinder 2000) both of which contain examples of worked (funerary) Bath-stone.

'Dark Earth' Layers

Brief comment follows on the dating of the 'dark earth' layers. A small quantity of medieval ceramic building material was included within 'dark earth' layers [517] [522] [581] [588], which are in the main dominated by Roman ceramic building material and stone. For example, the lower spit [522] contains upwards of 50kg; just 1kg of which is post-Roman.

The entire spread of the upper spit [517] of the northern dark earth layer is undoubtedly medieval in character as 48% (2.8kg) of it is dominated by medieval peg tile. The upper spit [581] of the southern dark earth layer has a much smaller medieval imprint with (5-10%) of it containing peg tile and all of it in area 115/205.

As expected proportions of medieval peg tile fall off dramatically (1.9% by weight 1.1kg out of 59kg) in the lower spit [522]; this figure remaining consistent in 100/220; 105/215; 105/220; 110/215 115/220. No medieval ceramic material was recorded in 110/220 and 115/210.

The Brick Well Structures

Brief comment follows on the fabric, form and date of the whole brick and mortar retained from the well linings at Dickens Square, summarised in below.

Context	Structure	Fabric	Form	Size	Spot date	Spot date with mortar
502	Brick well lining north half of the trench	3032 3101	Narrow unfrogged post Great Fire brick and grey soft clinker mortar	1	1780-1850	1750-1900
513	Brick well lining south half of the trench	3032 3101	Narrow unfrogged post Great Fire brick and grey soft clinker mortar	1	1780-1850	1750-1900
536	Brick well lining north half of the trench	3032 3101	Narrow unfrogged post Great Fire brick and grey soft clinker mortar	1	1780-1850	1750-1900

Table 4: Listing of the Brick Well Structures from DKN11 from where whole brick and mortar were retained

All three brick lined wells are contemporary in date as they use the same type of grey clinker mortar to bond narrow (98-101mm), thick (62mm) unfrogged purple post Great Fire bricks. These dimensions conform with the guidelines set out by the brick legislation tax to reduce and standardise brick size from the final decades of the 18th century to the mid-19th century.

Recommendations/Potential

This moderately sized group of building materials contains few items of individual merit that warrant further analysis, comment or illustration. The strength of the assemblage lies largely in dating the 'dark-earth' layers as well as dating the Roman ditch/cremation/plough soil to the later Roman period. Comment should however be made at publication stage of the late Roman character of the assemblage and evident comparison with some of the material from Tabard Square including material associated with the Courtyard Winged Villa and tombstone fragments close to the adjacent to the roadside cemetery. Passing comparison too should be made with the building material from adjoining Trinity Street.

Items that require illustration and further comment at are limited to a rare roller stamped die 9 and part of a tombstone fragment.

Bibliography

Betts, I., Black, E.W. and Gower, J., 1997. 'A corpus of Roman relief-patterned tiles in Roman Britain', *Journal Roman Pottery Studies* 7, 1994.

Boon, G.C., 1974. *Silchester: The Roman Town of Calleva*, Newton Abbott.

Brodribb, G., 1987. *Roman Brick and Tile.* Alan Sutton Gloucester.

Hayward, K.M.J., 2009. *Roman Quarrying and Stone Supply on the periphery – southern England. A geological study of first century funerary monuments and monumental architecture.* BAR Series 500, Archaeopress, Oxford.

Hayward, K., 2013a. 'Building materials assessment' in J. Langthorne and J. Taylor, *Thameslink Archaeological Assessment 4: Archaeological Excavations at 2-4 Bedale Street, London Borough of Southwark*. Oxford Archaeology - Pre-Construct Archaeology unpublished document.

Hayward, K., 2013b. 'Building materials assessment' in J. Taylor, *Thameslink Archaeological Assessment 6: Archaeological Excavations at 6-7 Stoney Street, London Borough of Southwark*. Oxford Archaeology - Pre-Construct Archaeology unpublished document.

Hayward, K.M.J., in prep a. 'The building materials', in D. Killock and J. Shepherd, *Excavations at Tabard Square*. Pre-Construct Archaeology Monograph.

Hayward, K.M.J., in prep b. 'The building materials', in D. Killock, *Excavations at 28-30 Trinity Square.* Pre-Construct Archaeology Monograph.

Hayward, K.M.J., in prep c. 'The Roman stone', in A. Douglas and A. Alexis, *Excavations at Bermondsey Square*. Pre-Construct Archaeology Monograph.

Hayward, K.M.J., in prep d. 'Types and sources of stone', in P.C. Coombe, F. Grew, K.M.J. Hayward & M. Henig, *Corpus Signorum Imperii Romani. Great Britain 1.10 Roman Sculpture from London and the South-East.* Oxford, Oxford University Press.

Killock, D., in prep. *Excavations at 28-30 Trinity Street.* Pre-Construct Archaeology Monograph.

Killock, D. & Shepherd, J., in prep. *Excavations at Tabard Square*. Pre-Construct Archaeology Monograph.

APPENDIX 7: COIN ASSESSMENT

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Introduction

The excavations recovered 72 coins by hand and with the aid of a metal detector. Six coins are of post-Roman date (including a medieval halved penny) and are not considered further here. The remaining coins are all Roman and date from the first or second century until the late fourth century. As is typical of British sites the majority of the coins date to the third and fourth centuries and exist in a variety of states. Some are extremely worn or heavily corroded and others are in a state of fine preservation.

The coins were recorded in an Excel spreadsheet in accordance with the guidance provided by English Heritage (Brickstock 2004). The coins have been assigned to their dates of minting or issue period following the scheme proposed by Reece (1991), which is now a *de facto* standard (Table 1).

Discussion

The number of coins is relatively small and the fact that some require cleaning (below) precludes detailed analysis of their significance. However, examination of Figure 1 clearly indicates that there is next to no early Roman coin loss at the site. From the late third century (Periods 13 and 14) coin loss picks up, drops in typical British fashion in the early fourth century (Period 15 and 16) and picks up again in Periods 17 and 18. The lack of coinage from Periods 19-21 (The House of Valentinian and Theodosius) in interesting and runs against the general trend of many recently excavated assemblages in Southwark. Some of the late *nummi* may, of course, be hiding amongst the illegible coins but it is still striking that there were no readily identifiable coins of the House of Valentinian (Gerrard 2011).

Recommendations

- The post-Roman coinage should be examined by an appropriate specialist.
- It is suggested that 22 coins be cleaned (listed in Table 1).
- Any publication should include a coin list and a discussion of the coins against the wider patterns of coin loss in Southwark, London and Britain.

Acknowledgements

Jak Katterfield, Oliver Dempsey, Tom Willis and Alisdair Hall all assisted in the cataloguing of the coins.

Bibliography

Brickstock, R., 2004. *The Production, Analysis and Standardisation of Romano-British Coin Reports*. London, English Heritage

Gerrard, J., 2011. 'New light on the end of Roman London', *The Archaeological Journal* 168, 181-194.

Reece, R., 1991. *Roman Coins from 140 Sites in Britain*. Cirencester, Cotswold Studies 4.

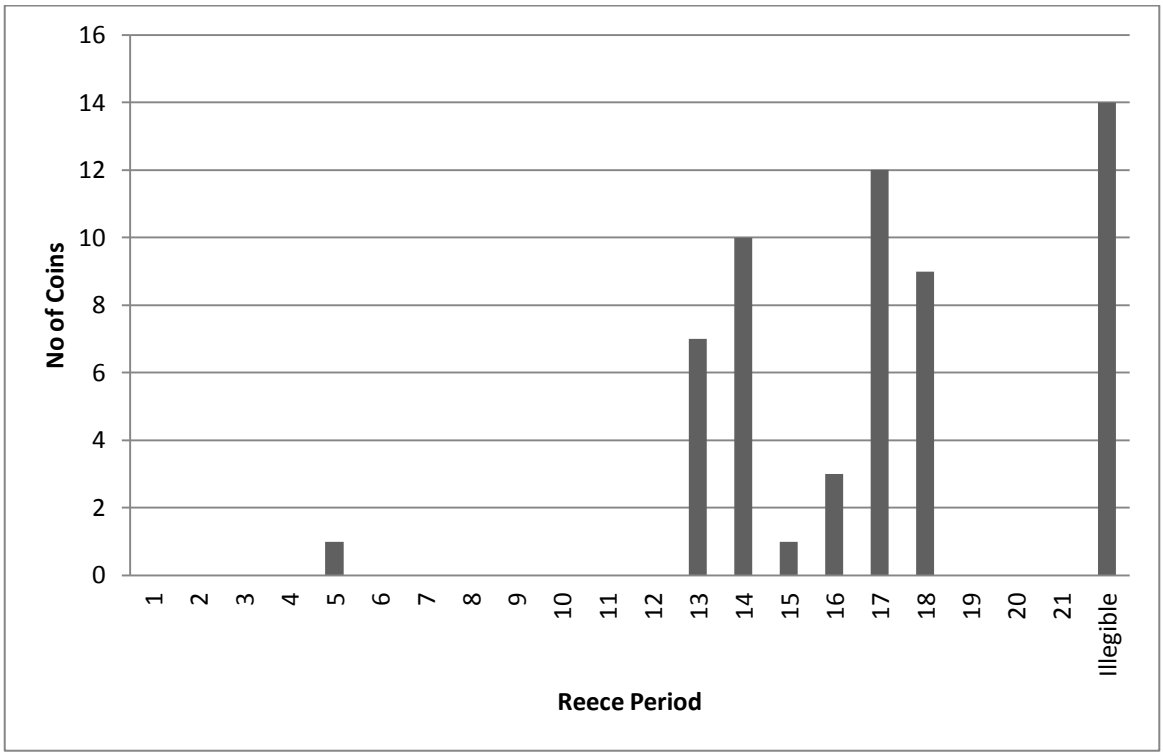

Figure 1: The coins by Reece's (1991) periods

Table 1

Context No.	SF No.	Denom.	Date	Mint	OBV Wear	REV Wear	OBV Legend	Rev Legend	Comments	Diameter (mm)	XRAY/ Conserve?	Reece Period	Copy?
500	535	Nummus	C3/C4		VW	VW	Illegible	Illegible	Traces -	15.5	Clean		Yes
500	537				C	C	Illegible	Illegible		21	Clean		
500	577				VW	C	Radiate			19	Clean		
500	531	Nummus	350	TRS	SW	SW	DNMAGNENTIUS P F AUG	FELICITAS REIPUBLICE		20		18	
500	536	Nummus	330-335	Lyon	SW	SW	CONSTANTINVS [IVN NOB C]	GL[ORIA EXERCITVS] 2 Standards	Parts of legend worn	15		17	No
500	533	Nummus	335-341	TRP	SW	SW	[…] CONSTAN […]	GLORIA EXERC ITUS 1 standard		13		17	Yes
500	534	Nummus	343-348	Lyon	W	SW	House of Constantine	[VICTORIAE D D AVGG QNN]		15		17	No
500	532		C3/C4	?	C	C	Illegible	Illegible		12			Yes
510	929		C3/C4	?	C	C	Illegible	Illegible		18	Clean		?
514	545	Nummus	268-270		W	W	IMP C VICTORIN [VS AVG-----]	VERIT[AS…]		19		14	
514	544	Antoninianus	270-290		EW	EW	Irregular radiate			13		14	No
517	549	Nummus	330-335	?	VW	VW	House of Constantine	Gloria Exercitus 2 standards		15		17	No
517	548	Nummus	348-350	Trier	SW	W	[DN Constans PF AVG]	[FE]L TEMP RER[EPARATIO], phoenix	Just over a quarter surviving	15		18	No
517	561	Nummus	330-335	Lyon	UW	UW	[CONSTANTI]NVS MAX AUG	GLOR[IA] [EXERCITVS] 2 standards	Slightly mis struck	16		17	No
517	570		330-335		EW	C	House of Constantine	Gloria Exercitus 1 standard		15		17	Yes
517	575	Nummus	335-7	Trier	C	VW	House of Constantine	Gloria Exercitus 1 standard		12		17	Yes
522	707	Nummus	C4		C	C	Illegible	Illegible		15.5	Clean		Yes
522	610				C	C	Diademed head		Possibly Valentinianic	16	Clean		

522	691	Half Penny	Medieval		W	W			Cut down the middle, following the cross	18			No
522	611	Antoninianus	270-290		EW	EW	Irregular radiate	Illegible		12.5		14	Yes
522	690	Nummus	326-328	STRŮ	VW	SW	[FL]AVM[AXF]AVSTAAVG	SALVSREI[P]VBLICAE		19.5		16	Yes
522	597	Nummus	335-341	?	SW	W	House of Constantine	Gloria Exercitus 1 standard		7		17	Yes
522	667		268		SW	W	Clauidus Gothicus	Priestly implements		14			
522	656	Antoninianus	260-268		VW	VW	GA[LLIENUS] [AVG]	Illegible		20		13	No
522	668	Antoninianus	270-290		SW	EW	Irregular radiate			14		18	Yes
522	607		270-290		W	W	Irregular radiate			15		14	
522	616		270-290		VW	VW	Irregular radiate			14		14	
522	600	Nummus	330-335	TRS	W	W	[…]CONSTANSNOBCAES	GLORIA EXERC ITUS 2 standards		16		17	
522	608		354-361		VW	VW	House of Constantine	FTR FH		10		18	Yes
523	936		C3/C4	?	C	C	Illegible	Illegible		18	Clean		?
542	729	Nummus	C4		EW	EW	Blundered legend.		Irregular nummus	13	Clean		
542	735	Antoninianus	270-290		EW	EW	Illegible	Illegible		9	Clean	14	Yes
542	731	Nummus	330-335		SW	SW	House of Constantine	GLORIA EXERC ITUS 2 standards		18		17	
566	739	Unknown	Post Medieval	?	C	C	Illegible	Illegible		24			No
581	751				C	C	Illegible	Illegible		12	Clean		
581	778				C	C	Illegible	Illegible		12	Clean		N/A
581	749	Antoninianus	270-273		SW	W	IMPCTETRICVSP[FAVG]	PAX[AVG]		16.5		13	Yes
581	788		354-361		C	VW	House of Constantine	FTR FH		11		18	Yes
581	786	Antoninianus	286-293		EW	SW	Carausius	PAX AVG		18		14	No
581	752	Nummus	324-325	Trier	SW	W	CRISPVS NOB CAE	P[ROVIDENTIAE CAESS]		17		16	No

581	769	Nummus	354-61		VW	VW	ILLEGIBLE	FTR FH		14		18	Yes
588	840	Antoninianus	270-290	?	C	C	Irregular radiate	Illegible		18		14	Yes
588	811	Follis	307	London	SW	SW	IMP CONSTANTINUS AVG	SOLI INVICTO COM[ITI] S/F//PLN		20		15	No
588	847	Antoninianus	270-290		C	C	Irregular radiate	Illegible		16		14	Yes
588	876	Antoninianus	268		SW	W	GA[LLIENV]S AVG			19		13	Yes
588	803	Antoninianus	260-268	?	SW	SW	[GA]LLIENUS A[VG]	Illegible		19		Jan-00	No
588	825	Nummus	268-270		W	W	[IM]P [VI]CT[ORINUS]	[SALUS AVG]		17		13	No
588	841		354-361		VW	VW	House of Constantine	FTR FH		7		18	Yes
588	830				C	C	Illegible	Illegible	frag	15			
588	831				EW	EW	Illegible	Illegible		14			
+	541	Antoninianus	266-267		W	W	[SAL]ONIN[A]AVG	[…] AVG, Doe		21	Clean	13	Yes
+	521		C1/C2		C	C	Illegible	Illegible		27	Clean		
+	501	Denarius	C1/C2	?	C	C	Trajan?	Illegible		17	Clean	5	No
+	524	As	C1/C2	?	C	C	Illegible	Illegible		23	Clean		No
+	510		PMED		C	C	Illegible	Illegible	Post Medieval	27			No
+	522				C	C	Illegible	Illegible		20	Clean		
+	503				C	C	Illegible	Illegible		23	Clean		No
+	539				C	C	Illegible	Illegible		15	Clean		N/A
+	538	Antoninianus	270-290	?	C	C	Illegible	Illegible		19	Clean	14	Yes
+	542	Halfpenny	1744		W	SW	GEORGIANUS II REX	BRI[TANNIA]		28			No
+	525	Halfpenny	1776		VW	VW	[GEORG]IVS.[III].[REX]	B[RITANNIA]		26.5			No
+	526	Nummus	348-350		SW	SW	DNCONSTAN[SPF]AVG	FEL TEMP REPARA[TIO]. Phoenix on globe		19		18	No
+	518	Nummus	350-353		W	SW	[DN]MAG[NENTIVSPFAVG]	[VICTORIAEDDNNAVGETCAE]	Possible copy as size and weight	17.5		18	Yes

									do not match. (vol 8, p 121, 162, 186, 331). Obv. 131 Rev. 129				
+	502		268-270		VW	EW	[IMP VICTORINUS]	[INVICTUS]		17		13	Yes
+	527	Nummus	330-335		EW	VW	VRBS ROMA	Wolf and Twins		16		17	
	506				C	C				19	Clean		
	517				C	C	Illegible	Illegible		23	Clean		
	528		PMED?		C	C	Illegible	Illegible		25			
	540				C	C				11	Clean		
	516	Antoninianus	270-290		W	W	Irregular radiate			14			
	514		324-330		EW	W	Helena?	Pietas		12		16	Yes
	1		330-335		W	W	VRBS ROMA	Victory on a prow		14		17	

APPENDIX 8: ROMAN SMALL FINDS ASSESSMENT

James Gerrard

Introduction

The excavations produced a large number of objects, which were largely recovered by metal detector. Most of these objects are lead and copper-alloy waste. The majority of the remaining objects are poorly preserved and heavily corroded iron artefacts. These have been recorded on the PCA finds database and rapidly assessed for this assessment. Most of the iron objects are corroded nails the remaining objects are too corroded for identification and require x-radiography.

Identifiable objects

Personal adornment

There are three fragments of hairpin or needle shaft sf 702 [522]; sf 720 [523]; sf 928 [598] of typical Roman form (Crummy 1983, 19-27).

sf 719 [523] Copper-alloy penannular brooch of Fowler's (1969) Type D4 with folded over terminals (Mackreth 2011, pl. 144). This is a long-lived type and can be dated no more accurately than to the Roman period.

Fixtures and fittings

sf 848 [588] Small copper-alloy pin (Crummy 1983, 115).
sf 733 [542] Double-spiked loop (Manning 1985)
sf 822 [589] Iron ring (Manning 1985)
sf 669 [522] Iron ring with a link (Manning 1985)
sf 960 [524] Iron nail, badly corroded from cremation burial.

Transport and Communications

sf 738 [540] An iron hipposandal frag? (Manning 1985).
sf 801 [588] Copper-alloy seal box.

Unknown Function

sf 793 [581] Small copper-alloy buckle plate. An unusual form that may not be Roman.
sf 730 [540] NVCC beaker base cut down to form a small disc.

The Iron Nails

A large collection of iron nails was recovered. The majority of these are in a poor state of preservation and are heavily corroded. One hundred of these nails were examined and all

were found to be of standard Romano-British types. The spatial and contextual distribution of these nails might be worthy of more detailed analysis.

A single nail sf 960 [525] comes from the fill of a cremation urn. If this is not an accidental inclusion then it may have served some function in funerary ritual.

The Lead Waste

There are 114 bags of lead waste. This sort of material is typical of metal-detected Romano-British assemblages. Most of the material is non-descript and should be counted and weighed. The distribution of the material may be worthy of more detailed analysis.

Recommendations

- Iron objects should be x-rayed
- The objects should be reassessed following x-ray
- Distributional studies could be carried out if time and resources permit
- The penannular brooch, seal box <801> [588] and iron ?nail from the cremation burial should be illustrated.

Bibliography

Crummy, N., 1983. *The Roman Small Finds from excavations in Colchester 1971-9*. Colchester, Colchester Archaeological Report 2.

Fowler, E., 1960. 'The Origins and Development of the Penannular Brooch in Europe' *Proceedings of the Prehistoric Society* 26, 149-77.

Mackreth, D., 2011. *Brooches in Late Iron Age and Roman Britain.* (2 Vols) Oxford, Oxbow.

Manning, W., 1985. *Catalogue of the Romano-British Iron Tools, Fittings and Weapons in the British Museum.* London, British Museum Press.

APPENDIX 9: POST ROMAN SMALL FINDS ASSESSMENT

Märit Gaimster

Introduction

Around 50 metal and small finds may be identified as post-Roman; they are listed in Table 1. The assemblage includes twenty unstratified objects, with the remainder predominantly from Phase 5 contexts. Finds from this 19th-century phase include a range of bone and ivory objects, in particular toothbrushes, but also dress accessories, cutlery handles and other house furnishings. Finds dating from the earlier post-medieval Phase 4 are particularly coins, lead tokens and a lead cloth seal. The earliest securely dated post-Roman object is a medieval silver coin.

Phase 3: 'dark earth'

Two finds were retrieved from this phase, both associated with pottery from 1240-1350. A copper-alloy pin has remnants of a wound-wire head (sf 775), one of several characteristic forms in the late medieval period (cf. Egan and Pritchard 1991, 299-301). A small copper-alloy buckle plate (sf 798) was listed as Roman but is more likely to be medieval. Finally, a cut silver halfpennny retrieved from a Phase 2 context, is likely to date from the 12th to 14th centuries, before the more regular minting of halpennies and farthings as round coins.

Phase 4: post-medieval

The only metal find produced by a Phase 4 context is an iron nail (along with a lump of slag). However, a group of unstratified finds, chiefly of the 18th century, also belong to this phase. The group includes two halfpennies, of George II (sf 542) and George III (sf 525), while three crudely struck and uniface lead tokens may date from the 17th to 18th centuries (sf 508, 512 and 523; cf. Mitchiner and Skinner 1985, 138–39). An interesting find is an incomplete alnage seal, the official stamp of quality necessary to sell cloth, with the bust of George I (sf 543; cf. Egan 1995, cat. nos 159-64 and fig. 28 nos. 161 and 164); the alnage system was abolished in 1724 (*Ibid.*, 2). Part of a button made of tombac, an alloy of zink and copper, also dates from the 18th century (sf 529; cf. Bailey 2004, 40; Noël Hume 1969, 90 and fig. 23 type 8).

Phase 5: 19th century

Phase 5 contexts produced the largest group of finds, with around 28 individual objects. The finds are dominated by a mid-19th-century assemblage of bone and ivory objects, including five toothbrushes (sf 964-66, 974 and 980) and two brush plates, likely for clothes brushes (sf 970 and 982) along with five handles, mostly for cutlery (sf 967-68, 975, 977 and 983) and a

double-sided ivory comb (sf 973). Finds from this phase also included buttons of copper alloy (sf 930) and bone (sf 971–72), with a further probable dress accessory in an unstratified openwork fitting embellished with cut-glass settings (sf 979). Playthings are reflected in a stone alley or marble (sf 969) and household belongings in parts of a ceramic figurine in the form of a house (sf 978).

Significance of the finds

The small group of 18th-century objects include interesting objects such as the lead cloth seal and possible tokens, finds that may be informative about occupants and businesses in the area at this time. Also the 19th-century domestic assemblage is a significant representation of Victorian everyday material culture.

Recommendations for further work

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 this purpose, a number of objects will require more extensive study, in particular the post-medieval lead tokens. Some metal objects need to be x-rayed to aid identification; these are all marked in Table 1. Following x-ray and final evaluation, the post-medieval nails may be discarded.

Bibliography

Bailey, G., 2004. *Buttons & Fasteners 500BC-AD1840*, Greenlight Publishing.

Egan, G., 1995. *Lead Cloth Seals and Related Items in the British Museum*. British Museum Occasional Paper 93.

Egan G. and Pritchard F., 1991. *Dress Accessories c.1150 – c.1450*. Medieval finds from excavations in London: 3. HMSO London.

Mitchiner, M. and Skinner, A., 1985. 'English Tokens *c*. 1425 to 1672', *The British Numismatic Journal* 54 (1984), 86-163.

Noël Hume, I., 1969. *A Guide to Artifacts of Colonial America*. University of Pennsylvania Press, Philadelphia.

Table 1: Catalogue of post-Roman small finds

SITE CODE	PHASE	CONTEXT	SF NO	MATERIAL	OBJECT NAME	DESCRIPTION	POT DATE	ACTION
DKN11		0	500	copper	handle	solid cast copper-alloy handle; square-section tapering from base and end; pointed finial and circular opening at collared base; L 115mm; W 6mm		further ident
DKN11		0	504	copper	?waste	copper-alloy sheet ?waste; triangular piece with small square recess in one side; L 80mm		
DKN11		0	505	copper	?waste	copper-alloy sheet ?waste; tapering strip, folded over; L 80mm		
DKN11		0	507	copper	?button	heavily corroded copper-alloy ?button; possibly composite with parts of iron; diam. 25mm		x-ray
DKN11		0	508	lead	token	lead token; uniface with ?double-stranded cross; diam. 14mm		further ident
DKN11		0	509	copper	button	copper-alloy button; domed with eye loop for fixing; diam. 18mm		
DKN11		0	510	copper	coin	copper-alloy coin; corroded; ?post-medieval		x-ray
DKN11		0	511	lead	?weight	lead ?weight; cylindrical; diam. 15mm; ht. 10mm		
DKN11		0	512	lead	token	lead token; uniface with ?letter 'C'; diam. 20mm		further ident

DKN11		0	513	copper	handle	solid cast copper-alloy drawer handle; conical body with knop finial above double collars; traces of ?iron screw for fixinght. 25mm		
DKN11		0	519	copper	button	copper-alloy livery/blazer button with eye loop for fixing; heavily corroded; diam. 17mm		x-ray
DKN11		0	520	lead	?weight	lead ?weight; roughly pyramidal; diam. 20mm; ht. 15mm		
DKN11		0	523	lead	token	lead token; uniface with pair of ?cartwheels; diam. 17mm		further ident
DKN11		0	525	copper	coin	George III halfpenny, 1776		
DKN11		0	528	copper	coin	copper-alloy coin; corroded; ?post-medieval		x-ray
DKN11		0	529	copper	button	?tombac base of composite button; cast with eye loop in raised boss; diam. 22mm; late 18th century		
DKN11		0	542	copper	coin	George II halfpenny, 1744		
DKN11		0	543	lead	cloth seal	lead cloth seal; two discs of ?four-part alnage seal; head of George I, FIDEI DEFEN around// unicorn ducally gorged, rampart, I 1/2 to left and below; diam 16mm		
DKN11		0	976	bone	container	tapering narrow bone container with narrowed threaded end; fragment only; diam 11mm; L 40mm+; ?needle case		further ident

DKN11		0	979	compos	fitting	shield-shaped openwork fitting/dress accessory of copper-alloy wire, with 20+ small cut-glass settings along edge and at centre; small rectangular loop at top; ht. 35mm; W 30mm		further ident
DKN11	Phase 5	500	530	copper	?weight	copper-alloy ?weight; incomplete with lead core and irregular flat base; diam. *c.* 25mm	1850-1900	
DKN11	Phase 5	500	578	lead	waste	lead waste	1850-1900	
DKN11	Phase 5	500	579	iron	nail	iron nail	1850-1900	
DKN11	Phase 5	500	580	iron	nail	iron nail	1850-1900	
DKN11	Phase 5	500	581	lead	waste	lead waste	1850-1900	
DKN11	Phase 5	500	592	iron	nail	iron nail	1850-1900	
DKN11	Phase 5	501	974	bone	toothbrush	bone toothbrush; complete with oval handle and trepanned head on waisted neck; three rows for bristle; L 167mm; W 12mm	mid-19th century	
DKN11	Phase 5	501	975	bone	handle	bone cylinder handle; plain and straight round-section body with straight ends; drilled through; L 78mm; diam. 11mm; ?for rope handle/skipping rope	mid-19th century	further ident
DKN11	Phase 4	503	bulk	iron	nail	iron nail	1830-1900	
DKN11	Phase 4	503	bulk	slag		slag	1830-1900	
DKN11	Phase 5	510	930	copper	button	copper-alloy livery/blazer button with eye loop for fixing;; diam. 13mm	1820-1900	

DKN11	Phase 5	510	931	copper	fitting	copper-alloy fitting; triangular backplate with single hole for fixing and transverse loop; ht. 35mm	1820-1900	further ident
DKN11	Phase 5	511	bulk	iron	nails	iron nails	n/a	
DKN11	Phase 5	512	964	bone	toothbrush	bone toothbrush; complete with oval trepanned head on faintly waisted neck; four rows for bristles; L 160mm; W 14mm	mid-19th century	
DKN11	Phase 5	512	965	bone	toothbrush	bone toothbrush; complete with oval head on waisted neck with some wire-drawn bristle present; three rows for bristle; L 158mm; W 13mm	mid-19th century	
DKN11	Phase 5	512	966	bone	toothbrush	bone toothbrush; oval head and part of waisted neck only with some wire-drawn bristle present; four rows for bristle; L 55mm; W 10mm	mid-19th century	
DKN11	Phase 5	512	967	bone	handle	bone cutlery handle; tapering with flat rectangular and straight end; circular hole for iron tang at working end; L 80mm; W 15mm	mid-19th century	
DKN11	Phase 5	512	968	bone	handle	bone cutlery handle; tapering with flattened slightly triangular/semi-circular section and straight end; remnants of iron tang at working end; L 95mm; W 20mm	mid-19th century	
DKN11	Phase 5	512	969	stone	alley	stone alley with traces of red paint; diam. 15mm	mid-19th century	

DKN11	Phase 5	512	970	bone	brush plate	bone brush plate; rectangular trepanned head with eight rows of bristles; waist below head formed by semi-circular drilled openings on either side; rectangular handle with parts of circular drilled hole for suspension; L 155mm+; W 25mm	mid-19th century	
DKN11	Phase 5	512	971	bone	button	bone button; dished with four eyes; fragment fits with sf 972; diam. 17mm	mid-19th century	
DKN11	Phase 5	512	972	bone	button	bone button; dished with four eyes; fragment fits with sf 971; diam. 17mm	mid-19th century	
DKN11	Phase 5	512	973	ivory	comb	ivory comb; double-sided; L 75mm; W 42mm	mid-19th century	
DKN11	Phase 5	512	977	ivory	handle	ivory cutlery handle; flat rectangular body with straight end and traces of ?iron ferrule at working end; L 95mm	mid-19th century	
DKN11	Phase 5	512	980	bone	toothbrush	bone toothbrush; octagonal-section tapering handle with part of fine waisted neck only; L 110mm; W 12mm	mid-19th century	
DKN11	Phase 5	512	981	bone	ring	lathe-turned bone ring with beaded edges; both faces with incised concentric lines; two opposing drilled holes through body; W 11mm; diam. 38mm	mid-19th century	further ident

DKN11	Phase 5	512	982	bone	brush plate	bone brush plate; rectangular with rounded ends and eight rows for wire-drawn bristle, some bristle present; composite plate with pairs of copper-alloy rivets at ends and in centre; L 102mm; W 30mm	mid-19th century	
DKN11	Phase 5	512	983	ivory	handle	ivory cutlery handle; fragment only of flat rectangular body with corroded iron at working end	mid-19th century	
DKN11	Phase 5	514	978	ceramic	figurine	ceramic figurine of house with tiled roof and pedimented nine-glass windows; three fragments only	1850-1900	further ident
DKN11	Phase 2	522	691	silver	coin	cut halfpenny	1580-1700	further ident
DKN11	Phase 2	566	739	copper	coin	copper-alloy coin; corroded; ?post-medieval	n/a	x-ray
DKN11	Phase 3	581	775	copper	pin	copper-alloy pin with remnants of wound-wire head; L 53mm; gauge 1mm	1240-1350	
DKN11	Phase 3	581	793	copper	buckle plate	small copper-alloy buckle plate; listed as Roman but may be medieval	1240-1350	further ident
DKN11	Phase 5	592	bulk	iron	?structural fitting	iron ?structural fitting; corroded	n/a	x-ray
DKN11	Phase 5	592	bulk	iron	?object	iron ?object; corroded	n/a	x-ray

APPENDIX 10: TIMBER ASSESSMENT

Damian Goodburn, Archaeological Woodwork Specialist MOLA

Introduction

Two decayed coffin timbers were briefly examined. The excavated associated finds clearly show that the burial is of Roman date. Questions such as what was the timber used for, could it be used for tree-ring dating, and was there any surviving evidence of how the coffin planks were made and joined together were posed. The decayed coffin planks had been recorded *in situ* with plans and photography and then carefully lifted on a supporting board. They had also be washed and wrapped in polythene to keep them in good condition for more detailed off-site examination, and possibly sampling. It was realised on-site that the edges of the thick bottom plank might have traces of rather decayed joints cut into it. The base plank and surviving fragments of one side plank was examined at PCA stores in Brockley.

The surviving Roman coffin planks, a brief description

The basal plank, context [568], was *c.* 1.9m long by *c.* 0.56m wide and survived to a thickness of *c*. 50mm. It was rather decayed with none of the original surfaces surviving and several rot voids, so there were no surviving toolmark traces. The plank was clearly of oak, having all the classic diagnostic features of our two very similar native species and their hybrids. The timber was tangentially faced, that is cut through the middle of a whole log including the pith. In the Roman period the very extensive evidence from London shows that this type of conversion was almost always done by methods of manual sawing out of an axe squared baulk. Indeed, the grain of the plank shows that it would have been difficult to produce it by any other method as it was cut from a fast growing, rather crooked parent log. The most interesting features of the basal coffin plank were the relatively regular eroded notches along each edge. Though the degree of decay makes very definite interpretation difficult it seems most likely that the very eroded notches were actually relict edge mortices from an earlier use of the plank. Two main possibilities for the nature of this first use seem apparent. Perhaps the first is that the plank was salvaged during the breaking up of a flat bottomed river barge. This might have taken place in one of the nearby tidal creeks of the Roman period. One documented system of Roman flat bottomed, river barge building in the northern part of the empire involved the used of sawn oak planking edge joined with free tenons set in opposing edge mortices. Although this system is better known in round hulled more complex vessel finds, such as the late Roman County Hall Ship, it was found recently in one of the Roman barges partially excavated at DeMeern near Utrecht (A project which TimeTeam and this author were involved with alongside the Netherlands national nautical archaeology service NISA). If any traces of tar, or tarred hair or moss were found in contact with the plank as excavated that might support such an interpretation of its origin, though it may have been

removed when reused. Any plank to frame fastening holes that we might expect in barge planking could well have been removed by the rot voids. In oak timber rot often starts around old fastening holes and drying splits. The other possible interpretation is that the plank was originally part of a large, heavy piece of furniture or possibly something like a tank of some type, but this is probably less likely.

As the plank was clearly reused, had no surviving sapwood from the outside of the parent log, and was rather fast grown with relatively few annual rings, it was suggested that it was not a good candidate for close tree-ring dating. That is the associated Roman finds would be likely to provide a closer and more representative date for the burial than tree-ring matching which could at best only provide a very broad '*terminus post quem* date range' for its initial working.

The fragment of the side plank lifted was even more decayed and amounted to just a small strip of the lower edge of a very decayed oak plank. It had no traces of mortice joints or any other fastenings that could be seen, though it was probably originally fastened to the edges of the thick basal plank with small iron nails in typical Roman fashion. The fact that there were no traces of mortices for free tenons shows that the basal plank was second hand, reused from another wooden structure.

In sum this coffin would have been heavy and moderately solid but as it was partially made of second hand material it is likely that someone was saving money. Also, if the buried body occupied the whole length of the coffin he or she would have been very tall by Roman London standards.

Other Roman wooden coffin elements found in the London area

Only two other Roman burials with surviving coffin plank elements are known to the author from the London area, those found at Atlantic House (Site code ATC97). In those two cases there was also evidence of the previous use of oak bottom planks in the form of relict joints. Those coffins have been published (Watson 2007). One of the coffins was conserved and last time I looked, was on display in the MoL Roman Gallery.

Bibliography

Watson, S., 2007. An excavation in the western cemetery of Roman London: Atlantic House, City of London. MOLAS Archaeology Study Series 7.

APPENDIX 11: ANIMAL BONE ASSESSMENT

Kevin Rielly

Introduction

Animal bones were found throughout the archaeological sequence, their condition tending to vary with context rather than phase, though generally in a state of good to excellent preservation and without any obvious indications of heavy fragmentation. The best preserved collections were limited to those recovered from a 19th-century well. All of the bones described in this report were excavated by hand.

It should be mentioned that there was a previous excavation adjacent to this incursion dating to the construction of the mosque (see Taylor 2000). This also provided some Roman features, though no graves, followed by evidence for 19th-century usage. Significantly this excavation also provided an intact adult cattle skeleton, presumably post-medieval and probably contemporary with those recovered from the latest incursion.

Methodology

It was decided that the material from this site should be prioritized according to their date and perceived importance. This had an effect on the recording of the bones, such that the Roman, 'dark earth' and cattle skeletons were fully recorded, while the remainder were subject to a more limited recording method. In the former method, each bone was recorded to species/taxonomic category where possible and to size class in the case of unidentifiable bones such as ribs, fragments of longbone shaft and the majority of vertebra fragments. Recording follows the established techniques whereby details of the element, species, bone portion, state of fusion, wear of the dentition, anatomical measurements and taphonomic including natural and anthropogenic modifications to the bone were registered. The more limited method involves species counts, age descriptions and brief notes on element distributions and the various bone modifications, all undertaken using context collections rather than on a bone by bone basis.

Description of faunal assemblage

The site provided a grand total of 1,956 bone fragments. These are divided between the following phases i.e. Phase 2 – Roman, Phase 3 – Post-Roman dark earth, Phase 4 – 18th century cattle skeletons and Phase 5 - post-medieval (19th century) features.

Phase:	**2**	**3**	**4**	**5**
Species				
Cattle	229	187	266	26

Equid	12	8		1
Cattle-size	165	252		111
Sheep/Goat	28	64		166
Pig	29	36		36
Sheep-size	9	24		193
Red deer	2	1		
Deer species		1		1
Dog	2	1		1
Cat				16
Rabbit				16
Chicken	4	4		43
Goose				16
Mallard	1			2
Turkey				1
Haddock				2
Grand Total	**481**	**578**	**266**	**631**

Table 1. Species abundance of hand collected bones.

Phase 2: Roman

The Roman occupation at the site principally featured a large ditch [51] possibly associated with 4 inhumation burials, beneath or at least predating a late Roman soil horizon. Most of the Roman bone assemblage, amounting to 481 fragments, was taken from the fills of the aforementioned ditch (145 fragments) and the late soil horizon i.e. [523] and [525] with 293 fragments. A major part of the remainder was uncovered from the fills of the four inhumations, i.e. [528] (grave [530]), [531] (grave [533]), [543] (grave [544]) and [566] (grave [569]), these providing 2, 6, 4 and 14 bones respectively. Both the ditch and soil horizon collections were largely composed of cattle and cattle-size fragments with lesser quantities of sheep/goat and pig and including a notable component of equid remains. A single red deer bone (a metapodial) from a large individual, possibly a stag, may suggest a high status component to the local meat diet. As well as consumers, there may also be a producer element, as shown by the recovery of a few bones belonging to a very young calf (from soil layer [525]), this possibly representing an infant mortality and therefore evidence of 'local' cattle rearing.

The equid bones tend to be either complete or nearly so, here including the fragmentary remains of a nearly complete skull from fill [570] within the ditch. In addition, without any signs of butchery, these bones no doubt represent the disarticulated remains of equid carcasses casually disposed of in this general area. This conclusion follows previous discussion of the relatively common incidence of equid bones within those areas just beyond the developed parts of the City and Roman Southwark, areas which were subsequently used for human burials. Disarticulated human bones were found within the ditch and covering deposit, the latter probably redeposited from burials contemporary with those found at this site, while those from the ditch may relate to an earlier phase of cemetery usage. It should be mentioned

that while this evidence clearly points to a level of redeposition, the animal bones, as previously mentioned, were noticeably in a good level of preservation.

Finally, the few bones from the graves do appear to be somewhat different from the general Roman assemblage. There is a greater proportion of sheep/goat (2 bones) and pig (4 bones) compared to cattle (5 bones), plus a single grave [531], provided 2 out of the 4 chicken bones found within the Roman levels.

Phase 3: Post Roman dark earth

This extensive deposit covered a large part of the site. It was divided into four separate deposits, with three out of the four, i.e. [517], [522] and [581], providing some bones, the majority (556 fragments) taken from the first two deposits. The dating was rather mixed with [517] and [522] appearing to largely date to the later post-medieval era, while [581] contained Roman dateable materials only. The later date of the major part of this collection is perhaps confirmed by the presence of a sawn large sheep femur as well as a few large cattle bones from [517]. The bones of notably large domesticates as well as the use of the saw for butchery purposes have both been identified as late post-medieval traits (and see Conclusions).

However, there is a far greater similarity concerning major domesticate abundance to the earlier (Phase 2) compared to the later (Phase 4) collection, suggesting that the bones, or at least a large proportion, in contrast to the dateable artefacts, may relate to somewhat earlier deposition events. An abundance of cattle in relation to the smaller domesticates continues in Southwark sites well into the medieval era (see Rielly in prep a). Notably, the single deer bone, from [522], is similar in size and shape to a fallow deer, which would then suggest a likely deposition post-dating the 11th/12th centuries (see Sykes 2010, 53 for evidence concerning the date of introduction of this species). Some credence concerning a medieval date of deposition may be applicable with reference to another dark earth assemblage, from Winchester Palace, where the bone collections were found to be closely comparable to the later Saxo-Norman rather than the underlying Late Roman assemblages (see Rielly 2005, 167).

Phases 4: Post-medieval cattle skeletons

The three skeletons were found in two irregular cuts, [506] and [509], these containing 2 and one skeleton respectively, the latter noticeably less complete due to truncation (see Table 2). These features were cut into plough soil [500], which is undoubtedly earlier than the skeletons, however, the dating evidence and indeed the animal bones, clearly date to a later period. For this reason, the bones from this level will be described with the 19th-century collections (see Phase 5).

Cut	Context	Skeleton	Parts	Age	Sex	Size	N bones
506	504	1	All	A	F	1272.6	123
	505	2	All	A	F	1266.1	120
509	508	3	H,V,HL	A	M	1211.2	23

Table 2. Description of the cattle skeletons where in Parts, All is complete, H is head, V is vertebrae and HL is hindleg; in Age, A is adult (in excess of 3 to 4 years); in Sex, F is female and M is male: and in Size, shoulder heights in millimetres.

As mentioned, the [509] articulation (Skeleton 3) is incomplete, this featuring the skull, mandibles, vertebrae, pelves and femurs. Each of the others (Skeletons 1 and 2) are complete. The age of these animals could be assessed with reference to their toothrows and state of fusion of the limb bones (after Schmid 1972, 75 and 77, and Maltby 1981, 182) while their sex was interpreted from the shape of their horncores and their pelves (after Armitage 1982 and Grigson 1982). Thus it can be seen that each animal is fully adult, aged between about 5 and 9 years, as suggested by the toothwear and the state of fusion of the vertebrae respectively. The two individuals in [506] are clearly cows, while the third is male, probably a castrate. The size of the horncores would suggest they are all likely to be unimproved longhorns (Armitage 1982), while their size at the shoulder varies between 1211.2mm and 1272.6mm (based on factors described in von den Driesch and Boessneck 1974). Notably, all three animals displayed different nuchal profiles, i.e. the shape of the posterior part of the skull between the horncores, indicative perhaps of different 'types' or perhaps the level of variation shown by a rather ill-defined 'type'. Finally, none of these bones showed any signs of butchery, suggesting the deposition ('burial') of complete carcasses.

Phase 5: Post-medieval features

The other parts of the post-medieval collection were essentially taken from the 19th-century fills [510] and [512] of the brick-lined wells [536] and [513], with lesser amounts from a similarly dated pit [515] and the aforementioned plough soil [500]. The great majority of bones from these features can be interpreted as food waste, with quantities of mutton and lamb being especially prevalent. These amount to the remains of at least 18 animals (15 in [510]) of which at least 12, including 10 adults and one juvenile, were male. This clearly suggests a reliance/preference for mutton, with a notable proportion taken from wether flocks. The great majority of the sheep/goat bones were both sawn and large, i.e. taken from 'improved' breeds. Of particular interest is the absence of head parts, signifying the presence of meat cuts or portions. There is a relatively good representation of cattle and pig, the former including some veal-aged animals, while all the pigs were culled in their first year. These two species feature a variety of skeletal parts which may suggest the presence of some butchers

waste or, in the case of pig, the culinary use of most parts of the carcass. There are large cattle present in these collections as well as large pigs.

Poultry is also well represented, especially chicken and goose, with some duck and the well-known celebratory bird of the period – turkey. Chicken forms the sole component of the bone collection from pit fill [514], this representing a single large bird, presumably a capon. The other major food item is rabbit, which would have been available at the London meat markets either as game or hutch-bred. It is known that there were at least two major rabbit-keeping establishments in early 19th-century London each with some 1,500 to 2,000 breeding does (Beeton 1869, 222). All of the rabbit bones were derived from well fill [512], these representing at last two adult individuals. The absence of foot bones may suggest the purchase of dressed/skinned carcasses. The single 'true' game species recovered from these collections is deer (possibly red deer), represented by the right side of a skull including an antler bud (so obviously a young stag taken from fill [512] in well [513].

The non-food items include the major part of an adult cat skeleton, this from well fill [510] as well as a single equid pelvis, also from [510].

Conclusion and recommendations for further work

The Roman collections are well preserved and moderately large, with sufficient age and size data to provide some information on the general usage of animal products in this part of Roman Southwark. This conclusion, however, assumes that the bones are similarly dated and a division, for example, of the data into early (the ditch) and late Roman (the soil horizon), will drastically reduce the potential value of this phase collection. Nevertheless, the great abundance of cattle bones in these deposits is of interest, relative to the minor proportions of sheep/goat and in particular, pig. There is a general pattern within Roman Southwark where pig very often exceeds 25-30% of the domesticate collections (see Rielly in prep b) and exceptions to this 'rule' deserve further examination. A final point concerning the Roman bones is the apparent absence of any obvious ritual connotations, in respect of the associated inhumation burials. There was a notably better representation of the smaller domesticates and chicken within the grave fills, but the quantities of bones are generally too small to warrant any firm conclusions.

Preservation and quantity can again be cited as positives regarding the 'dark earth' collections but there is obviously a major problem concerning the dating of these horizons. The general species abundance pattern appears to follow that shown by the Roman levels but there are clear indications of later material, some clearly dating to the 18th or 19th centuries. The two major late post-medieval traits referred to in the previous text refer to the greater size of the bones representing 'improved' stock, essentially dating from the latter part of the 18th century (after Rixson 2000, 215); and the use of the saw for butchery processes

which can be seen in archaeological assemblages dating from the late 18th/early 19th centuries (Albarella 2003, 74).

The latest phase collections clearly carry the greatest potential concerning an understanding of animal usage within a specified time period. The well dated cattle articulations, including the similar skeleton found in the previous Dickens Square excavation (Taylor 2000, 19), can be compared to those found, also dated to the 18th century, from the British Museum (Rielly 2011). The incidence of complete skeletons strongly suggests the deposition of diseased carcasses, with the rinderpest pandemics dating to the late post-medieval era the most likely cause of their deposition (Rielly 2011; Broad 1983). The British Museum skeletons were entirely female, several associated with young calves, presumably representing culled dairy animals. A similar mix of sex and age has been shown by contemporary collections from elsewhere in Britain, as at Cambridge (Cessford and Dickens in prep). The lack of such youngsters and indeed the presence of a male individual amongst the slaughtered carcasses at this site may suggest either a different pandemic (there were three major rinderpest outbreaks in 18th-century England, see Broad 1983, 104) or of course animals from farms incorporating both dairy and arable components. A notable and worthy aspect of these articulations is the information they can impart concerning sexual dimorphism. Sex can be interpreted from the pelves (after Grigson 1982), which will then act as a guide to the interpretation of other potentially sexually dimorphic features as the horncores and the metacarpals (following Armitage 1982 and Thomas 1988). There is also potential for determining 'type' (again following Armitage 1982) as well as the shape of the nuchal profile.

The bones from the 19th-century levels and in particular from the two wells, provide very useful information on food usage in this area, referring to preferences and/or availability of certain food items as well, as well as important data concerning the 'types' of domesticates entering the London meat markets at this time. This period is often overlooked, which is clearly a mistake, especially as the 19th century witnessed major innovations in husbandry practises. There is also a far greater potential, at this time, regarding the recovery of various exotics, as shown for example with the finding of both guinea pigs and parrot bones in an early 19th-century well at Stockwell Street, Greenwich (Rielly 2013, 281).

Following these conclusions it is recommended that further work on the Roman collections is worthwhile but heavily dependent on the forthcoming dating review, while the 'dark earth' assemblages are perhaps unlikely to be of further use. In contrast, there is clear potential concerning further study of the 18th-century cattle skeletons and the 19th-century food waste deposits. The publication of these collections should incorporate the information given in this assessment report with additional information regarding their age and size with comparisons to contemporary London collections were appropriate.

Bibliography

Albarella, U., 2003. 'Tawyers, tanners, horn trade and the mystery of the missing goat', in P. Murphy and E.J. Wiltshire. *The Environmental Archaeology of Industry.* Symposia of the Association for Environmental Archaeology No.20, Oxbow Books, 71-86.

Armitage, P. L., 1982. 'A system for ageing and sexing the horn cores of cattle from British post-medieval sites (17th to early 18th century) with special reference to unimproved British Longhorn cattle', in B. Wilson, C. Grigson & S. Payne (eds), *Ageing and sexing animal bones from archaeological sites*, BAR Brit ser 109, Oxford, 37-54.

Mrs Beeton, I., 1869. *The Book of Household Management*.

Broad, J., 1983. 'Cattle Plague in Eighteenth-Century England', *The Agricultural History Society, 31*(2), 104-115.

Cessford, C. & Dickens, A., in prep. *Grand Arcade, Cambridge: the Excavation of a Medieval Suburb*, East Anglian Archaeology Monograph.

Driesch, A., von den and Boessneck, J. A, 1974. 'Kritische Anmerkungen zur Widerristhöhenberechnung aus Längenmaßen vor- und frühgeschichtlicher Tierknochen', *Saugetierkundliche Mitteilungen* 22, 325-348.

Grigson, C., 1982. 'Sex and age determination of some bones and teeth of domestic cattle: a review of the literature', in B. Wilson, C. Grigson and S. Payne (eds.), *Ageing and sexing animal bones from archaeological sites*, BAR Brit ser 109, Oxford, 7-24.

Maltby, M., 1981. 'Iron Age, Romano-British and Anglo-Saxon animal husbandry - a review of the faunal evidence', in M. Jones and G. Dimbleby (eds.), *The environment of man: the Iron Age to the Anglo-Saxon period,* B.A.R. British Series 87, 155-203.

Rielly, K., 2005. 'The animal remains', in B. Yule, *A prestigious Roman building complex on the Southwark waterfront, Excavations at Winchester Palace, London, 1983–90*, MoLAS Monograph 23, 158-167.

Rielly, K., 2011. *Assessment of animal bone recovered from The British Museum North West Development, Bloomsbury, London, WC1 (MPB09)*, Unpublished Pre-Construct Archaeology Report.

Rielly, K., 2013. 'Domestic menagerie in Greenwich?' *London Archaeologist* 13 (10), 281-2.

Rielly, K., in prep a. 'The animal bones', in D. Killock, *Excavations at Bermondsey Abbey*, Pre-Construct Archaeology Monograph.

Rielly, K., in prep b. 'The Roman animal bones', in D. Killock and J. Shepherd, *Excavations at Tabard Square, Southwark*, Pre Construct Archaeology Monograph.

Rixson, D., 2000 *The History of Meat Trading,* Nottingham University Press.

Schmid, E., 1972, *Atlas of Animal Bones*.

Sykes, N., 2010. 'European Fallow Deer', in N. Sykes and T. P. O'Connor (eds.), *Extinctions and Invasions: A social history of British fauna*, Exeter: Windgather Press for Oxbow Books, 51-58.

Taylor, J., 2000. Mosque and Community Centre, 1 Dickens Square, London EC1, London Borough of Southwark, Unpublished Museum of London Archaeology Interim Excavation Report.

Thomas, R. N. W., 1988. 'A statistical evaluation of criteria used in sexing cattle metapodials', *Archaezoologia* 2, 1.2, 83-92.

APPENDIX 12: HUMAN BONE ASSESSMENT

James Young Langthorne

Introduction

The following report details the results of an assessment of the human remains from 3 inhumation burials, [529], [532] and [567], and the disarticulated bone from 4 contexts, [522], [523], [531] and [571], from Dickens Square, DKN11.

Inhumations

The table below summarises the data collected during the assessment of the articulated skeletal material:

Context No.	Completeness	Preservation	Age	Sex	Pathology
529	60%	Good-Moderate	Juvenile (c. 5 years)	N/A	Possible heavy wear on incisors.
532	75%	Moderate	Old Adult	?	Osteophytic lipping and possible Schmorl's nodes on vertebral bodies. Periodontal disease. A-M tooth loss and partial socket resorption.
567	80%	Good-Moderate	Young Adult	Male?	Not visible.

Completeness

The completeness of each skeleton was given as a percentage calculated from a complete skeleton as follows:

- Skull 20%
- Torso 40%
- Arms 20%
- Legs 20%

The table below shows the distribution of burials within each completeness percentage group:

Completeness	<25%	<50%	<75%	>75%
No. of burials (% of assemblage)	0 (0.0%)	0 (0.0%)	2 (66.67%)	1 (33.33%)

All of the burials have 60% or more of the skeleton remaining which demonstrates the excellent preservation within untruncated areas of the site as well as providing opportunities for further study of metrical and non-metrical traits during a potential full analysis of the inhumations.

The degree to which the skeletons can be analysed is further increased being that none of the skeletons are in a poor state of preservation.

Age and Sex

The age ranges used in this assessment are as follows;

Early Juvenile	1 - 5 years
Middle Juvenile	5 - 12 years
Adolescent	12 - 19 years
Young Adult	20 – 35 years
Middle Adult	35 – 50 years
Mature Adult	50+ years
Juvenile	<20 years
Adult	20+ years

The initial assessment of the age range of the assemblage gave the following results:

Age	**Early Juvenile**	**Mid Juvenile**	**Adolescent**	**Young Adult**	**Mid Adult**	**Mature Adult**	**Unspecified Juvenile**	**Unspecified Adult**
No**. of burials (% of assemblage**)	0 (0.0%)	1 (33.33%)	0 (0.0%)	1 (33.33%)	0 (0.0%)	1 (33.33%)	0 (0.0%)	0 (0.0%)

Juvenile skeletons do not exhibit sexually dimorphic characteristics and so from the 2 adult skeletons the initial assessment gave the following results:

Sex	Male	Female	Indeterminate
No. of burials (% of adult assemblage)	1 (50.0%)	0 (0.0%)	1 (50.0%)

Due to the small size of the assemblage no conclusions with regard to the demography of the cemetery can be drawn at this point.

Pathology

Only one skeleton [532] exhibited pathological traits. The mandible of [532] showed ante-mortem tooth loss and partial socket resorption in the vicinity of the third molars and a degree of possible inflammatory pitting could indicate periodontal disease. Pathologies were also noted in the extant portion of the post-cranial skeleton specifically osteophytic lipping and possible Schmorl's nodes could be seen on several of the vertebral bodies. Both the dental conditions and on-set of joint disease in the spine are not unexpected in an older adult such as [532].

Disarticulated Bone

Disarticulated bone was recovered from 4 contexts; [522] a soil layer, [523], a post-Roman deposit, [571], a ditch fill and [531] from the grave fill of [533] which contained skeleton [532].

The following table details the elements found in each context:

Context no.	Skeletal Element	No. of fragments	Condition	MNI for each context	Sex	Age	Comments/Pathology
522	Radius (proximal head and shaft left)	1	Good-Moderate	1	?	?	Porosity and remodelling of radial tuberosity (Joint disease).

522	Foot (talus right x 1, MT I right x 1, MT III right x 1, MT IV right x 1 and MT V right x 1)	5	Good-Moderate	1	?	Adult	Twisted profile of MT IV well healed fracture (trauma)
522	Pelvis (ilium and ischuim fragment x 1)	1	Moderate	1	?	Adult	None visible.
522	Foot (talus left x 1)	1	Good-Moderate	1	?	?	None visible.
522	Radius (proximal shaft-distal end right x 1)	3	Moderate	1	?	?	None visible.
522	Tibia (proximal epiphysis fragment)	1	Moderate	1	?	?	None visible.
523	Clavicle (shaft right)	1	Moderate	1	?	?	None visible.
523	Skull (temporal fragment)	1	Moderate-Poor	1	?	?	None visible.
523	Foot (MT IV left x 1)	1	Good-Moderate	1	?	Adult?	Twisted profile of MT IV well healed fracture (trauma)
523	Ulna (right)	1	Good	1	?	Adult?	None visible.
531	Long bone (shaft fragments)	5	Poor	1	?	?	None visible.
531	Ribs (shaft fragments)	10	Poor	1	?	?	None visible.
531	Pelvis (ilium? Fragment)	1	Poor	1	?	?	None visible.
531	Pelvis (pubis fragment)	1	Moderate-Poor	1	?	?	None visible.
531	Vertebrae (neural arch fragment)	1	Poor	1	?	?	None visible.
531	Unidentifiable fragments	11	Poor	1	?	?	None visible.
531	Ulna (shaft)	1	Moderate	1	?	?	None visible.

531	Clavicle (shaft fragment)	1	Poor	1	?	?	None visible.
531	Foot (calcaneus fragment)	1	Moderate-Poor	1	?	?	None visible.
571	Foot (MT I right x 1)	1	Good-Moderate	1	?	?	None visible.

A minimum number of one individual was represented in each of the four contexts and the disarticulated bone from [531] is liable to have originated from skeleton [532]. No notable pathologies were evident within the disarticulated assemblage with a single incidence of joint disease on the radial tuberosity of an ulna head from [522] and two potential cases of well healed trauma, both affecting fourth metatarsals from contexts [522] and [523] respectively.

Recommendations for further work

The articulated remains should be fully analysed, to include full analysis of age, sex, metric and non-metric data and pathologies and report written to include the results of this assessment and the cremated bone assessment.

Despite the small size of the assemblage demographic trends for the cemetery may be further enhanced when dating and the provisional phasing of the inhumations and deposits containing disarticulated human bone has been completed and the results compared with the burials found during the archaeological investigations at Trinity Street,.

APPENDIX 13: CREMATED HUMAN BONE ASSESSMENT

James Young Langthorne

Introduction

A cremation [524] within a complete pot was found during the archaeological investigations at Dickens Square. The following report constitutes an assessment of this cremated human bone not a full osteological analysis of the remains.

Methodology

The material recovered from both cremations was sieved through a stack of 9.5, 4, and 2mm mesh sieves. The cremated bone was separated from the remaining organic material, pot and gravel in the ≥10mm and ≥4mm fraction and as far as was possible in the ≥2mm fraction. The bone from the ≥2mm, ≥4mm and ≥10mm fraction sizes were weighed giving the percentage of each fragment size within the total weight of the cremation. The total weight excludes the <2mm fragment size as it is not possible to separate the bone from extraneous material.

A note was made of any identifiable bone fragments, the level of oxidisation illustrated by variations in colour from the normal buff/white colour of a fully oxidised cremation, sexually dimorphic traits and any characteristics that revealed the age of the cremated individual, such as epiphyseal fusion and dental development.

Results

The total weight of the cremated bone from Cremation [524] was 2154g, with 14.35% within the ≥2mm fraction, 21.22% in the ≥4mm fraction and 64.43% in the ≥10mm fraction. A large proportion of the skeletal elements were identifiable, including sizeable fragments originating from the skull, pelvis, long bones (notably the epiphyses), and the vertebrae. The bones appear to be those of an adult. The majority of the bone is well oxidised but not highly fragmented as shown by the percentage within the ≥4mm and ≥9mm fractions.

Discussion

Studies from modern crematoria suggest that the average weight of a modern adult cremation, with the <2mm fraction removed is 1625.9g, with a range of 1001.5-2422.5g (McKinley 1993). The weight to an extent depends on the sex and age of the individual although there is an area of overlap (McKinley 1993). Archaeological cremations tend to have lower total weights than modern cremations due to the more controlled conditions that modern cremated remains are collected in; despite this the results from the studies of modern cremations can give an idea of the proportion of remains that were finally buried from

archaeological cremations. The total weight of the cremated bone, without the <2mm fraction, from [524] was 1837.19g which lies well within the range of an adult cremation and there was no evidence for more than one individual.

Studies on modern cremations have also provided data on the fragment size that can be expected from an adult cremation. As with weight the fragment size from archaeological cremations is usually less than those found with modern studies, often caused by damage such as ploughing. The majority of fragments from modern cremations are over 10mm (McKinley 1994); the large number of bone fragments over 9mm within cremation [524] indicates that the cremation was undisturbed and that further work could identify the proportion of the skeleton present.

No obvious indications of pathology were observed on the remains.

Recommendations for further work

Due to the preservation of several identifiable elements of the skeleton further work could include a compilation of an inventory and potentially the definition or refinement of the age at death, pathological manifestations and possibly the sex of the individual. The results of this would form part of a report written to include the results of this assessment and the inhumation and disarticulated bone assessment and analysis.

A comparison of this cremation with the cremated bone found at Trinity Street may also be worthwhile.

Bibliography

McKinley, J.I., 1994. 'Bone fragment size in British cremation burials and its implications for pyre technology and ritual', *Journal of Archaeological Science* 21, 339-342.

McKinley, J.I., 1993. 'Bone fragment size and weights of bone from modern British cremations and the implications for the interpretation of archaeological cremations'. *International Journal of Osteoarchaeology* 3, 283-287.

APPENDIX 14: ENVIRONMENTAL ASSESSMENT

Phil Austin

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Introduction

This report summarises the findings arising out of the charcoal assessment undertaken by Quaternary Scientific (University of Reading) of a single sample taken from a Roman ditch, excavated at Dickens Square, London Borough of Southwark (site code: DKN11).

Methods

Charcoal assessment

One sample was processed by flotation by Pre-Construct Archaeology Ltd using 1mm and 300-micron mesh sizes, producing a flot and residue from each sample. These were rapidly assessed for macrofossil remains using a low power zoom-stereo microscope at x7-45 magnification, and the quantities and preservation of each class of macrofossil in each sample recorded (Table 1). The single sample comprised of *c*.30 wood charcoal fragments. These were examined to determine the identity of the woods present. Examination followed standard procedures for the microscopic analysis of wood charcoal macro-remains, as described in Hather (2000). The results of this examination are listed below in Table 1.

Results of the Charcoal Assessment

Of the 29 fragments examined 3 were identified as Birch and 26 were identified as Oak. Both taxa are hardwoods native to the British Isles. Neither taxon could be identified to species. Preservation of all fragments was poor. Thermal degradation was typically high, though no fragments exhibited characteristics indicative of 'vitrification'. Mineral deposits were present in many of the fragments, obscuring features and contributing to the friability of the charcoal. Ring curvature and gross dimensions suggests that a few of the Oak fragments probably derived from twig wood or small branch wood. However, the majority of the wood of both taxa derived from mature stem/branch wood. In most instances it was not possible to determine the nature and quantity of seasonal rings because of poor preservation and the fragmented nature of the remains. When ring characteristics could be observed, it was noted that ring width varied within and between fragments. A couple of fragments appeared to exhibit characteristics indicating rapid initial growth (i.e. wide rings) followed by slow growth in later years (narrow rings). This pattern suggests that conditions for the optimum growth of the

wood, though favourable initially, deteriorated over time. In general, however, the tendency was more towards narrow ring width (slow grown) rather than wide rings (fast grown).

Table 1: Results of the charcoal assessment

Context number	Sample number	Taxon ID	Quantity	Weight (g)	Comments
500	572	*Betula* sp. (Birch) *Quercus* sp. (Oak)	3 26	0.480 2.981	Suitable for ^{14}C dating. -

Recommendations

No further work is recommended.

Bibliography

Hather, J. G., 2000. *The Identification of Northern European Woods*. London: Archetype.

APPENDIX 15: SHELL ASSESSMENT

Rebecca Haslam

Introduction

The marine *Mollusca* that were recovered from the excavations at Dickens Square amounted to 303 fully complete and partially complete shells. A total of 286 examples were retrieved from [590], a 19th-century deposit (Phase 5), the remainder having been recovered from [512], a 19th-century pit fill (Phase 5) and [522], a post-Roman soil horizon (Phase 3).

Aims and Objectives

The marine shells from Dickens Square were examined in order to establish the species that were present and to quantify the number of shells of each species per context. The nature of the features from which the shells were retrieved has also been considered in order to determine the circumstances that surrounded their deposition. In the case of the oysters, a brief, qualitative assessment of their size, shape and health has been made so that their possible origins (i.e. from “wild” or “natural” beds) can be speculated upon.

A consideration of the statistical viability of the sample sizes was undertaken in order to evaluate whether further quantitative work should be carried out at the publication stage in accordance with Winder 2011. This would entail measuring the maximum width, length, thickness and weight of complete oyster shells and noting other descriptive characteristics such as the presence or absence of chalky deposits, parasitic infestations, wear, flakiness, irregularity of shape, traces of ligaments and evidence for notches and cuts. This information could be used to better assess the growing conditions and the general health of the oysters that were retrieved from Dickens Square. Such an assessment could also provide evidence concerning the techniques that were used to gather and process the shellfish by past populations.

Methodology

Marine shell was extracted by bulk sieving soil samples and hand-picking during excavation. The resulting assemblage was then subjected to a rapid assessment that identified the molluscs to species level and, in the case of bivalves, quantified the number of left and right valves through an inspection of the umboes. An assessment of the importance of contexts that yielded statistically viable samples of oyster shells (amounting to a minimum of 100 left and 100 right valves in accordance with Winder 2011) was then made in order to determine whether the oyster assemblage from Dickens Square should be subjected to further analysis at the publication stage.

Results

The processed bulk samples from Dickens Square were devoid of marine molluscs. Consequently, the shellfish that are discussed here were all recovered by handpicking during the excavation. Only one species, *Ostrea edulis*, was represented. The number of left and right valves per context were counted and recorded in Table 1 (ordered by phase).

Table 1: Total number of left and right valves and total number of oyster shells per context

Phase	Context	Oyster (left valve)	Oyster (right valve)	Total
3	522	2	5	7
5	512	7	3	10
5	590	160	126	286

A brief, qualitative inspection demonstrated that the shells ranged from well to poorly preserved (i.e. flaky and worn). A wide range of shapes and sizes were present within all three contexts. Many of the larger examples exhibited round, shallow, concave valves that are typical of managed beds, which suggests that some were grown on large rocks, clay tiles or other surfaces that had plenty of space for growth and could be easily accessed. A lesser number of smaller, irregular oysters were also identified, their uneven shells likely having developed from growth in cramped environments such as rocky reef beds (Campbell 2009).

Discussion And Conclusions

The marine mollusc assemblage from Dickens Square consists exclusively of oysters. A cursory examination of these shells suggested that a wide range of sizes were present, which in turn indicates that both 'wild' and managed oyster populations might have been exploited. Further analysis using the methods outlined by Winder 2011 are required in order to verify this statement however only one context, 19th-century pit fill [590], provided a sample that was large enough to enable a viable statistical analysis to be carried out. The late date of the context mitigates the value of such an undertaking.

Oysters grow in a wide range of marine and estuarine habitats. As such, it would have been easy to transport the commodity into the London area from oyster farms and natural beds via the Thames. The large number of oysters that were retrieved from [590] suggests that they were deliberately dumped into that feature whilst it was being used as a midden. The smaller number of shells that were recovered from [512] and [522] are suggestive of more *ad-hoc* dumping episodes.

Recommendations for Further Work

Fill [590] was the only context from Dickens Square that produced a quantity of oyster shell that was sufficiently large enough to warrant further analysis, however its significance is limited since it dates to the recent past. Further work is therefore not recommended, however a brief summary of the results and conclusions that are presented in this report should form part of the publication.

Bibliography

Campbell, G., 2009. 'Southampton French Quarter 1382 Specialist Report Download E3: Marine Shell', in R. Brown (ed.), *Southampton French Quarter 1382 Specialist Report Downloads* (Oxford: Oxford Archaeology OA Library EPrints)

http://library.thehumanjourney.net/42/1/SOU_1382_Specialist_report_download_E3.pdf

Winder, J., 2011. Oyster Shells from Archaeological Sites: a brief illustrated guide to basic processing
http://oystersetcetera.files.wordpress.com/2011/03/oystershellmethodsmanualversion11.pdf

APPENDIX 16: LITHIC ASSESSMENT

Barry John Bishop

Introduction

The archaeological investigations at the above site resulted in the recovery of three struck flint flakes and a small quantity of unworked burnt flint. This report describes the material and assesses its archaeological significance. All metrical descriptions follow the methodology established by Saville (1980).

Burnt Flint

Context	Ref.	Context Type	No. Frags	Weight (g)
517	110/215	Post-RB 'Dark Earth'	2	62
517	110/220	Post-RB 'Dark Earth'	3	114
517	115/215	Post-RB 'Dark Earth'	1	20
517	115/220	Post-RB 'Dark Earth'	1	9
522	115/215	Post-RB 'Dark Earth'	2	74
522	115/220	Post-RB 'Dark Earth'	7	138
523		Late RB Soil	3	126
543		Grave fill	5	33

Table 1: Quantification of Burnt Flint by Context

Twenty-four pieces of unworked but heavily burnt fragments of flint weighing 576g were recovered. These mostly came from a post-Roman 'dark earth' accumulation (72.4%), which may been reworked from a preceding late Roman soil horizon which also produced smaller quantities of burnt flint (21.9%), with the remainder (5.7%) recovered as smaller fragments from the fill of Grave cut [544]. Surviving cortex indicates that they comprised alluvial pebbles and small cobbles, such as constitute the gravel terrace surface geology of the site. They had all been heated to a high degree and have changed colour and become 'fire crazed', consistent with them having been in a hearth or, given the funerary nature of the site, cremation pyres. The quantities recovered are relatively small and scattered across the excavated areas, with no evidence for actual hearths or *in situ* burning. Instead it appeared to have become residually incorporated into the deposits, perhaps from a general 'background' spread of waste material or from the dumping of hearth waste.

Struck Flint

Description

Context [517] Post-Roman 'dark earth'

Flake in a chipped condition made from a fine-grained translucent black flint. It has a plain 4mm deep striking platform, a pronounced bulb of percussion with accentuated stress marks, and a feathered distal termination. Its dorsal surface is formed almost entirely from a thermal scar which may have been present prior to flaking or may have developed during flaking from a pre-existing thermal flaw. Around 10% of the dorsal is covered by a weathered but thick and rough cortex. It measures 34mm wide by 31mm wide and is 5mm thick.

Context [542] Late Roman soil

Flake in a good sharp condition made from a fine-grained reddish brown semi-translucent flint. It has a 13mm deep edge-trimmed striking platform which also exhibits a few undeveloped Hertzian cones from previous but unsuccessful attempts at detachment. It has a pronounced bulb of percussion and a feathered distal termination. Its dorsal face is formed by four flake scars, all detached in the same direction as this flake, and *c*. 20% consists of a pre-flaking thermal scar. It measures 51mm long by 32mm wide and is 13mm thick.

Context [553] fill of pit / posthole [554]

Flake fragment in a slightly chipped condition made from a fine-grained translucent brown flint. It appears to have split laterally along a pre-existing thermal flaw. The remnant of its striking consists of a thermal facet and is 7mm deep. It has a pronounced bulb of percussion and a feathered distal termination. Its dorsal face is formed from a single flake scar, aligned at right angles to the main axis. It measures 22mm long by >21mm wide and is 8mm thick.

Discussion of the Struck Flint

The three struck pieces are in a variable condition and are have been redeposited from their original depositional context, although they have not necessarily moved far from where originally discarded. They are all made from flint of a variety of colours and textures which is of good knapping quality to prone to thermal flawing, and is likely to have been gathered as cobbles from the local gravel terraces. None of the pieces is particularly diagnostic; the flakes are broad but reasonably well struck and overall would perhaps best fit within Later Neolithic or Bronze Age industries, although it is entirely possible that they are not contemporary.

Significance

The unworked burnt flint indicates hearth use in the area although in itself it is undateable. Its presence within the ‘dark earth’ deposits suggests that at least some of their component derives from hearths, or perhaps in this case pyres, and it may therefore help with understandings of site formation processes.

The struck flints indicate prehistoric activity at the site, most probably during the Later Neolithic or Bronze Age, although the assemblage is too small to indicate the precise chronology or nature of the occupations. It does complement our understandings of the

extensive prehistoric activity documented at many sites within north Southwark, and, in a small way, can contribute to a wider appreciation of prehistoric landscape use in the area.

Recommendations

Due to the size of the assemblages no further analytical work is warranted. As they have some potential in contributing to a wider appreciation of landscape use in the area they should be recorded in the Historic Environment Record and a brief description included in any published account of the fieldwork.

Bibliography

Saville, A., 1980. 'On the Measurement of Struck Flakes and Flake Tools,' *Lithics* 1, 16-20.

APPENDIX 17: OASIS FORM

OASIS ID: preconst1-181887

Project details	
Project name	An Archaeological Excavation on Land at the Baitul Aziz Mosque, 1 Dickens Square, London Borough of Southwark, SE1 4JL
Short description of the project	Located in the southwestern half of excavation area was a series of natural alluvial deposits, located within what appeared to be a natural depression within the Kempton Park Gravels in this area. This natural alluvium may possibly relate to, or be similar to, the Rockingham anomaly known to be located to the southwest. No prehistoric features were encountered on the site and the only prehistoric finds, consisting of sherds of prehistoric pot and a few struck flints, were found residually in later deposits. Four graves, three containing skeletons one of which lay within a timber coffin, were revealed on site together with a cremation. These burials form part of the Roman southern cemetery previously revealed at several sites in the immediate vicinity. The graves and cremation lay immediately adjacent to the south side of a large ditch. Other Roman features consisted of a number of shallow pits and a gully. Three cattle skeletons of apparent 18th-century date were found within two separate cuts. A similar burial was found to the southwest in 2000 and all may be the results of a cattle epidemic such as rinderpest which was documented in the 18th century. The remaining post-medieval features were dated to the 19th century and consisted largely of wells and rubbish pits, many of which contained assemblages of pottery, glass, clay tobacco pipes and animal bone representing the material culture and rubbish of the inhabitants of the area.
Project dates	Start: 19-11-2013 End: 24-01-2014
Previous/future work	Yes / No
Any associated project reference codes	DKN11 - Sitecode
Type of project	Recording project
Site status	Area of Archaeological Importance (AAI)
Current Land use	Other 15 - Other
Monument type	CEMETERY Roman
Monument type	DITCH Roman
Monument type	PITS Roman

Monument type	WELLS Post Medieval
Monument type	PITS Post Medieval
Significant Finds	HUMAN BONE Roman
Significant Finds	POTTERY Roman
Significant Finds	CBM Roman
Significant Finds	COINS Roman
Significant Finds	SMALL FINDS Roman
Significant Finds	ANIMAL BONE Roman
Significant Finds	POTTERY Late Prehistoric
Significant Finds	FLINT Late Prehistoric
Significant Finds	POTTERY Early Medieval
Significant Finds	POTTERY Post Medieval
Significant Finds	GLASS Roman
Significant Finds	CTP Post Medieval
Significant Finds	GLASS Post Medieval
Significant Finds	ANIMAL BONE Post Medieval
Significant Finds	CBM Post Medieval
Significant Finds	COINS Post Medieval
Significant Finds	SMALL FINDS Post Medieval
Investigation type	"Open-area excavation"

Prompt	National Planning Policy Framework - NPPF
Project location	
Country	England
Site location	GREATER LONDON SOUTHWARK SOUTHWARK 1 Dickens Square
Postcode	SE1 4JL
Study area	315.00 Square metres
Site coordinates	TQ 3243 7935 51.4970580835 -0.0919964503223 51 29 49 N 000 05 31 W Point
Height OD / Depth	Min: -0.18m Max: 1.33m
Project creators	
Name of Organisation	Pre-Construct Archaeology Limited
Project brief originator	Gary Brown
Project design originator	Gary Brown
Project director/manager	Gary Brown
Project supervisor	Neil Hawkins
Type of sponsor/funding body	Mosque
Name of sponsor/funding body	Baitul Aziz Mosque
Project archives	
Physical Archive recipient	LAARC
Physical Contents	''Animal Bones'',''Ceramics'',''Environmental'',''Human Bones'',''Metal'',''Worked stone/lithics'',''Glass''
Digital Archive recipient	LAARC

Digital Contents	"Animal Bones","Ceramics","Environmental","Glass","Human Bones","Metal","Stratigraphic","Survey","Worked stone/lithics"
Digital Media available	"Database","Images raster / digital photography","Spreadsheets","Survey","Text"
Paper Archive recipient	LAARC
Paper Contents	"Animal Bones","Ceramics","Environmental","Glass","Human Bones","Metal","Stratigraphic","Survey","Worked stone/lithics"
Paper Media available	"Context sheet","Drawing","Map","Matrices","Photograph","Plan","Report","Section","Survey "

Project bibliography 1

Publication type	Grey literature (unpublished document/manuscript)
Title	An Archaeological Excavation on Land at the Baitul Aziz Mosque, 1 Dickens Square, London Borough of Southwark, SE1 4JL
Author(s)/Editor(s)	Hawkins, N. and Butler, J.
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