28-30 TRINITY STREET

LONDON SE1

LONDON BOROUGH OF SOUTHWARK

ASSESSMENT OF AN

ARCHAEOLOGICAL EXCAVATION

TIY 07

OCTOBER 2010

PRE-CONSTRUCT ARCHAEOLOGY

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An Assessment Of An Archaeological Excavation At 28-30 Trinity Street, London SE1, London Borough of Southwark

Site Code: TIY 07

Central National Grid Reference: TQ 3245 7940

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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 Limited at 28-30 Trinity Street, London Borough of Southwark, SE1 4JE. The site is centred at National Grid Reference TQ 3245 7940 (Fig.1). The excavation was undertaken in three phases. The first of these preceded demolition of the standing buildings and was carried out in September and November 2008. The second phase was conducted in January and February 2009 after most of the standing buildings had been demolished. A further break in the archaeological programme ensued whilst the perimeter of the site was secured using interlocking sheet piling. Excavation work recommenced in the first week of April 2009 and continued through to the 31st of July. The work was organised by Mills Whipp Projects Limited on behalf of London Realty Limited.

1.2 The excavation consisted of fifteen trenches of varying dimensions that covered the entire footprint of the redevelopment, which amounted to roughly 3,300m^2.

1.3 The archaeological potential of the site had been demonstrated by an evaluation carried out by PCA in October and November 2007[1]. The trial work demonstrated that features and deposits dating to the Roman period were present on the site. An inhumation burial dated 180-300 was found below the basement slab, the grave was thought to be part of a larger cemetery.

1.4 The excavation confirmed that the inhumation recorded during the trial work was not an isolated burial but part of a more extensive cemetery. The graveyard would have covered the entire northern half of the site. Although some areas were devoid of burials, which in part reflected the severe truncation caused by modern basements, inhumations were discovered on or close to the site boundaries on the north, west and east sides. A total of 44 skeletons were recorded. Two cremation burials in urns were also recovered, one of which was found with an inhumation. 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.

1.5 Large shallow ditches formed another prominent feature of the Roman landscape exposed during the excavation. These ranged in date from the late 1st to the very late 4th centuries. All of the ditches were based on very similar, if not identical, alignments. This demonstrated that the system of land division established after the Roman conquest continued in use for at least three centuries.

1.6 Evidence of a large early Roman structure was uncovered in the southern part of the site. No masonry or timber survived but the construction trenches and pits defining the structure

[1] Killock, D., 2007. *An Archaeological Evaluation at 28-30 Trinity Street, London SE1 4JE, London Borough of Southwark* Unpublished PCA document

formed a very clear pattern. The structure did not appear to be a building but was more probably an open colonnade that once defined an area with a central focus such as a shrine. The structure was located within a ditch system that also dated to the late 1st or early 2nd century.

1.7 A small assemblage of residual struck flints dating to between the Mesolithic and the Early Bronze Age were recovered as residual finds from the site. Together with eleven residual sherds of Late Bronze Age to Early/Middle Iron Age pottery and an Iron Age coin, the prehistoric material hints at occasional activity in the vicinity of the site.

1.8 Part of the pottery assemblage has been provisionally dated to the early Saxon period. Although no clear signs of Saxon occupation were recorded the presence of this form of pottery demonstrated that the site was frequented between AD 400 and 600. This in itself is such a rare occurrence that it is important in a regional context. Although the nature of the early Saxon activity on the site is unlikely to become clearer even with further study evidence of a Saxon presence in Southwark that pre-dates the establishment of the Middle Saxon settlement in Covent Garden and the Strand is highly significant.

2 INTRODUCTION

2.1 An archaeological excavation was conducted by Pre-Construct Archaeology Ltd at 28-30 Trinity Street. The site was formerly occupied by office and residential buildings on the street frontage with warehouse/workshop buildings to the rear of these. These buildings had been erected and modified from the late 1950s onward to replace a pickle factory established in the later Victorian period which had been seriously damaged by World War II bombing. The excavation was conducted in three phases between September 2008 and July 2009. The work was commissioned by Mills Whipp Projects Limited on behalf of London Realty Limited.

2.2 The site address gives little idea of the scale of the excavation as the plot extends some 100m to the south of Trinity Street to the northern periphery of Dickens Square (Fig. 1). The site occupies a position between Trinity Church Square to the west and Merrick Square to the east.

2.3 The excavation consisted of fifteen trenches spread over three distinct phases of work. Trenches 10-13 covered a five metre wide strip adjacent to the eastern perimeter of the site. The basement wall in this area also retains the gardens at the rear of properties fronting onto Merrick Square. As a consequence the party wall required support from steel raking braces anchored in concrete thrust blocks. These blocks were to be located in the five metre wide strip but their exact locations had not been finalised when the first phase of archaeological work was carried out. It was therefore decided to excavate all of the archaeological remains located within the strip to avoid any impact on sensitive deposits or features such as burials. The only exception to this was Trench 11 where logistical constraints prevented excavation of a large deep ditch which was left *in situ* to be excavated at a later stage.

2.4 A hiatus in the archaeological programme then occurred as demolition work began. The excavation of Trench 14 was carried out following the completion of the first major phase of demolition. The trench covered most of the northern half of the site with the exception of two strips adjacent to the northern and eastern peripheries. Trench 14 was located within the area of the basement that covered the vast majority of the northern half of the site. A second hiatus in the archaeological programme then occurred as demolition work was completed and the north, west and southern sides of the site were secured by the insertion of interlocking sheet piles that formed a secure retaining wall.

2.5 Excavation work resumed once the demolition and engineering works were largely complete. The remaining archaeological works formed part of a rolling programme that covered areas as they became available. Trench 15 covered a strip adjacent to the Trinity Street frontage which lay to the north of the modern basements. Trench 18 covered the northeastern area of the site including some areas previously examined in Trenches 11 to 13; this area was within the former basement. Trenches 16, 17 and 19-24 covered the southern part of the site outside of the area impacted by modern basements. The fifteen trenches covered the entire

footprint of the site with the exception of areas that had deeper basements where no archaeological remains survived.

2.6 A Written Scheme of Investigation (WSI) was prepared prior to the beginning of the excavation and approved by Southwark Council.[2]. A method statement for the conduct of archaeological works was then prepared[3]. The archaeological excavation largely followed the methodology laid out in the WSI. Some variations in the programme and methodology were required either to facilitate essential temporary engineering works and variations in the demolition programme or to maximise the potential of the archaeological remains encountered. Dr Christopher Constable, Senior Archaeologist for the Planning and Regeneration Department, London Borough of Southwark, approved any variations to the WSI in advance.

2.7 The site had previously been the subject of an archaeological Desk Based Assessment[4] and a field evaluation carried out by PCA in October-November 2007[5]. The evaluation had demonstrated the archaeological potential of the redevelopment area with Roman deposits and features present on site and most notably an inhumation thought to be part of a larger cemetery.

2.8 The excavation was project managed for Pre-Construct Archaeology Ltd by Helen Hawkins and supervised by the author. The work was monitored by Dr Christopher Constable, Senior Archaeologist for the Planning and Regeneration Department, London Borough of Southwark. Mr Mike Hutchinson of Mills Whipp Projects Ltd acted as archaeological consultant for the developer London Realty Ltd.

[2] Mills Whipp Projects Ltd, 2008. *28-30 Trinity Street, Southwark, London SE1 Written Scheme of investigation for Archaeological Excavation* Unpublished Mills Whipp document
[3] Hawkins, H., 2008. *28-30 Trinity Street, London Borough Of Southwark, Method Statement For Archaeological Excavation* Unpublished PCA document
[4] Mills Whipp Projects Ltd, 2006. *28–30 Trinity Street, Southwark, London SE1, Archaeological Desktop Assessment* Unpublished Mills Whipp document
[5] Killock 2007

Figure 1
Site Location
1:20,000 at A4

Figure 2
Trench Location
1:400 at A4

3 PLANNING BACKGROUND

3.1 Planning background

3.1.1 In November 1990 the Department of the Environment issued Planning Policy Guidance Note 16 (PPG16) 'Archaeology and Planning'. It provided guidance for planning authorities, property owners, developers and others on the preservation and investigation of archaeological remains.

3.1.2 The advice states 'the desirability of preserving an ancient monument and its setting is a material consideration in determining planning applications whether that monument is scheduled or unscheduled. Developers and local authorities should take into account archaeological considerations and deal with them from the beginning of the development control process' (paragraph 18).

3.1.3 It also states 'where nationally important archaeological remains, whether scheduled or not, are affected by proposed development there should be a presumption in favour of their physical preservation' (paragraph 8).

3.1 Archaeology in London Borough of Southwark

3.2.1 The study aims to satisfy the objectives of the London Borough of Southwark, which fully recognises the importance of the buried heritage for which they are the custodians.

3.2.2 The site is located within an Archaeological Priority Zone, as defined in Unitary Development Plan adopted in 1995 and as updated in the 'Southwark Plan' adopted in 2007.

3.2.3 The Council's Archaeology Policies as laid out in the 'Southwark Plan' as adopted in 2007 are as follows:

Policy 3.19 Archaeology

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

Reasons

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.

3.2.4 The proposed development is also covered by policy 4B.15 from the London Development Plan (consolidated with alterations since 2004):

Policy 4B.15 Archaeology

'The Mayor, in partnership with English Heritage, the Museum of London and boroughs, will support the identification, protection, interpretation and presentation of London's archaeological resources. Boroughs in consultation with English Heritage and other relevant statutory organisations should include appropriate policies in their DPDs for protecting scheduled ancient monuments and archaeological assets within their area.

4.125 Two thousand years of building have left layers of history, illuminating London's social, political and economic heritage. Today London has agreat wealth of fine historic buildings, spaces and archaeology, including four World Heritage Sites and many buildings and sites of national importance that add to the capital's identity, attractiveness and cultural richness. The historic environment also helps to attract tourists, and provides valuable leisure opportunities and commercial and residential space, and is an important part of London's economy. The Mayor wishes to see the sensitive management of London's extraordinary historic assets planned in tandem with the promotion of the very best modern architecture and urban design. Designation of historic buildings is not enough. Sensitive management requires clear details of what needs to be protected, how and why. The Mayor expects boroughs and others to use appropriate tools to manage the historic environment, including character appraisals and conservation plans.

4.126 Much of London's historic inheritance is inaccessible, badly maintained or not viewed as relevant to local communities. The sensitive and innovative use of historic assets within local regeneration should be encouraged. Schemes such as Townscape Heritage Initiatives, Heritage Economic Regenerations Schemes and Buildings at Risk Grants and their successors, can play an important role in fostering the regeneration of historic areas (see Policy 4B.13).

4.127 Part of the city's unique character is the juxtaposition of many different types of buildings and spaces and this should be reflected in the way the historic environment is

managed. Buildings and places should not be seen in isolation, and the settings of historic assets are often important to their character and should be appropriately protected.

4.128 Many of London's best loved and historically important buildings and places are situated along the banks of the Thames and London's waterways, including cranes and waterway infrastructure. Rivers are also the focus of much of London's archaeological resources.

4.129 Conservation areas should relate to the quality of the waterside and how it relates either to the historical functions or appearance of the area. Where conservation areas do cover the water or waterside areas, their management plans should ensure that they do not prohibit water-dependent development. Chapter 4C contains policies on water as they relate to the Blue Ribbon Network.'

3.3 No Scheduled Ancient Monuments exist within the development site.

3.4 Following the production of a Desk Based Assessment which outlined the archaeological potential of the site Dr Christopher Constable, Senior Archaeologist for the Planning and Regeneration Department, determined that an evaluation should be carried out to establish the extent of archaeological survival[6]. The field evaluation, carried out by PCA in October and November 2007, demonstrated that extensive archaeological remains were present on the site and that the redevelopment would impact on these[7].

3.5 Mills Whipp Projects Ltd prepared a written scheme of investigation (WSI) for the excavation of the entire site which was approved by Southwark Council prior to the commencement of the excavation[8]. A site specific method statement was also prepared by PCA which was approved by Southwark Council before the works began[9]. Chris Constable, Senior Archaeological Officer for London Borough of Southwark inspected the works.

[6] Mills Whipp Projects Ltd 2006
[7] Killock 2007
[8] Mills Whipp Projects Ltd 2008
[9] Hawkins 2008

4 GEOLOGY AND TOPOGRAPHY

4.1 The site is located on Trinity Street, immediately to the east of Trinity Church Square, approximately 1km south of the present day Thames embankment at London Bridge. Modern ground level on Trinity Street lies between 3.80m and c. 4.00m OD. Natural sands and gravels, which form the natural subsoils in this area, lie at approximately 1.50m OD.

4.2 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[10].

4.3 Two large islands located to the north of what is today Borough Underground station played a central role in the development of Roman London[11]. 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.

4.4 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 Guy's Channel which ran north-south and passed through the area of the modern hospital and London Bridge railway station[12].

4.5 Extensive excavations at Tabard Square demonstrated that natural sand and gravels lay at 1.22m OD in the south-west corner of the site. There was no evidence that this area of the site was ever inundated and reports of flooding dating to the Roman period found at Pilgrimage Street, to the south of Tabard Square, should almost certainly be viewed as the result of an exceptional or localised event.

4.6 Peat formations sealing the natural gravels that form the drift geology of this area have been reported on several sites including Dickens Square and Falmouth Road. The peat layer recorded at the latter contained Iron Age pottery. This deposit was found below waterlain deposits of

[10] 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, 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
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
[11] Graham, A.H., 1978. The Geology of North Southwark and its Topographical Development in the Post-Pleistocene Period in J. Bird, A.H Graham and P. Townsend, *Southwark Excavations 1972-74* London & Middlesex Archaeological Society and Surrey Archaeological Society Joint Publication No. 1, 501-516
[12] Heard, K., Sheldon, H. & Thompson, P., 1990. Mapping Roman Southwark *Antiquity* 64, 608-19

Roman date which are thought to have formed in a local depression known as the Rockingham Street anomaly[13]. The anomaly is situated to the south of the subject site.

[13] Greenwood, P. and Maloney, C., 1996. London Fieldwork and Publication Round-up 1995 *London Archaeologist* Vol 8, supplement I

5 ARCHAEOLOGICAL AND HISTORICAL BACKGROUND

5.1 Previous Work

5.1.1 The archaeological background was covered in the desk based assessment produced by Mills Whipp Projects[14] and expanded upon in the evaluation report produced following the initial trial work carried out by PCA in 2007[15]. Most of the details produced below summarise those findings and are taken from those documents.

5.2 Prehistoric

5.2.1 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[16], Three Oak Lane (where a very rare ard was discovered)[17], and Wolseley Street[18]. 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[19].

5.3 Roman

5.3.1 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 (see 4.3 above). 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

[14] Mills Whipp 2006
[15] Killock 2007
[16] Ridgeway, V., 1999. Prehistoric Finds at Hopton Street *London Archaeologist* Vol 9 No 3, 72-76
[17] Proctor, J. and Bishop, B., 2002. Prehistoric and environmental development on Horsleydown; excavations at 1-2 Three Oak Lane *Surrey Archaeological Collections*, 1-26
[18] 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
[19] Milne et al 1983

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.

5.3.2 The main Roman settlement in Southwark was concentrated on the two islands that projected northward into the main Thames channel (see section 4.3 to 4.4 above) 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[20] and the Courage Brewery Site[21]. 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.

5.3.3 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 and 5-27 Long Lane[22]. 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[23]. 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.

5.3.4 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[24]. 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[25]. The latter produced evidence of Roman funerary structures, c. 30

[20] Cowan, C., 1992. A possible Mansio in Roman Southwark: Excavations at 15-23 Southwark Street *Transactions of the London and Middlesex Archaeological Society* 43, 3-191

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

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

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

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

[25] See the Sites and Monuments Records information contained in Mills Whipp 2006

inhumation burials dating to the 2nd and 3rd centuries and five cremations[26]. 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[27].

5.3.5 Evidence of a much denser and more extensive cemetery has been unearthed along the south-western periphery of Southwark. This cemetery has been recorded at 1 America Square where 163 inhumations and four cremations were excavated between 2001 and 2002[28]. 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[29]. Lant Street is located c .200m to the north-west of the subject site on the west side of Borough High Street.

5.3.6 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"[30]. A cremation urn was found on the subject site in 1956 by 'workmen' who were very possibly involved in the construction of the standing buildings which have just been demolished[31].

5.3.7 Some recently published or republished work has also drawn attention to the importance of the site in the Roman period. A richly furnished female burial dating to c. AD 50-70 was found immediately to the southeast of the site adjacent to the most southerly building of the terrace that forms the west side of Merrick Square[32]. 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[33].

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

[27] 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, *London Under Ground: The Archaeology of a city*

[28] Maloney, C. and Holroyd, I., 2002. Lodon Fieldwork and Publication Round-up *London Archaeologist* Vol 10 supplement 1

[29] Sayer, K. and Sudds, B., forthcoming. *Two Roman cemeteries in Southwark: Excavations at Lant Street and Southwark Bridge Road*. PCA Monograph Series

[30] London Museum Catalogues No3 *'London in Roman Times'* p4325. Pl XIIIA, 5 (A 11032-4)

[31] Mills Whipp 2006 SMR no. 090256

[32] Cotton, J., 2008. Harper Road, Southwark: an early Roman burial revisited in: J. Clark, J. Cotton and J. Hall, *Londinium and Beyond* CBA Research Report 156, 151-161

[33] Cowan, C., Seeley F., Wardle A., Westman A. and Wheeler, L., 2009. *Roman Southwark settlement and economy* MoLA Monograph 42 Table 63, 250

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[34].

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[35]. However, convincing archaeological evidence for a ditch and rampart is very sparse. The almost total lack of evidence for the early post-Roman period renders any attempt to reconstruct this period as highly speculative[36].

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

[34] 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
[35] Carlin, M., 1996. *Medieval Southwark*, 9
[36] Carlin 1996, 12

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[37]. 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.

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[38]. 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. The centrepiece of Trinity Church Square is of course the church, now the Henry Wood Hall, designed by Francis Octavius Bedford. Bedford's churches are celebrated pieces of architecture; his other commissions included the well known St. John the Evangelist in Waterloo, St. Luke's in West Norwood and St. George's in Camberwell.

5.6.3 The 1872 Ordnance Survey Map shows the site to be a 'pickle manufactory'. Bombing destroyed the northern part of this structure during World War II, although the building is still shown with the same ground plan in 1952. The current building was probably constructed in the late 1950s as all of the steel safety doors incorporated into it have manufacturing dates shown on them that range from 1958 to 1960.

[37] Carlin 1996, 22
[38] Carlin 1996, 24

6 ARCHAEOLOGICAL METHODOLOGY

6.1 All hard–standing was broken out using mechanical excavators of various sizes and modern overburden removed under archaeological supervision until archaeologically sensitive levels were reached. The 'overburden' in this case included all post-medieval and medieval soil horizons. Subsequent investigation of trenches used hand tools only.

6.2 Trenches 10-13 were located within the basement of the standing building and covered a 5m wide strip adjacent to the eastern party wall (Fig. 2). These trenches were excavated prior to demolition of the standing buildings under artificial light, which inevitably compromised the recognition of some archaeological deposits. However, subsequent re-examination of these areas demonstrated that the initial interpretations were largely correct and that the vast majority of the archaeological remains had been successfully identified and excavated. The only deposits that had not been fully excavated consisted of sandy gravelly ditch fills that were very similar to the natural deposits and difficult to distinguish from the latter even in daylight. These deposits were excavated and recorded in a later phase of work when the full significance of all of the features became clearer with the overview available from open area excavation once the standing buildings had been demolished.

6.3 Excavation work was suspended after the completion of Trenches 10-13 as the demolition of the standing buildings began.

6.4 Trench 14 covered most of the basement area in the north of the site. It should have covered the entire basement but variations to the demolition and engineering programme meant that parts of the modern buildings were still standing when Trench 14 was excavated. Some areas were machine stripped at this time but could not be excavated as they were too close to half-demolished buildings that posed a potential health and safety hazard. These areas were covered with plastic and buried below c. 0.40m of spoil to protect them from further damage during demolition and clearance work. The areas that could not be accessed at this time were later covered as Trench 18. Dr Christopher Constable, Senior Archaeologist for the Planning and Regeneration Department, approved all the variations to the WSI in advance.

6.5 Excavation work was again suspended after the completion of Trench 14. This was necessary to allow the installation of the interlocking sheet piling that formed the perimeter retaining wall on the north, west and south sides of the site.

6.6 Trench 15 was located adjacent to the Trinity St frontage and had been a garden area located outside of the basement that had previously occupied most of the northern part of the site. The late Roman soil horizon first recorded in Trenches 8 and 9 during the evaluation work also survived in this trench. This horizon contained a wealth of archaeological information in the form of late Roman coins, other metalwork and not least 10 inhumations that had been cut into it in the east end of Trench 15. Saxon pottery was also recovered from these layers, especially those excavated in Trench 15.

6.7 Trenches 16 and 17 covered small areas located in the south-east corner of the site; they were excavated whilst Trench 15 was under way. Both areas would have formed part of a later phase of works but required excavation at this time to facilitate temporary engineering works that had not formed part of the original demolition programme.

6.8 Once Trenches 15-17 had been completed the excavation moved on to Trench 18. As described above this Trench in part comprised areas that had previously been exposed but could not be safely accessed after the machine clearance of Trench 14. The remaining areas were composed of remnants of the basement strip adjacent to the party wall that had not been covered by Trenches 10-13 and a small part of Trench 11 where logistical limitations precluded full excavation. Trench 18 was located entirely within the basement area.

6.9 Trenches 19-24 covered the southern part of the site outside of the northern basement. The soil horizon that was first systematically excavated in Trench 15 extended across the entire southern half of the site. It was excavated by hand in Trenches 19-22 and reduced by machine spits in Trenches 23 and 24.

6.10 The late Roman soil horizon could not be separated into separate stratigraphic units on the basis of composition or colour. This is often the case with these types of homogenous deposits that are commonly described as 'dark earth' closer to urban centres and often fall under the term 'ploughsoil' on the periphery of settlements and beyond. The presence of articulated inhumations within this horizon demonstrated categorically that it was not ploughsoil, at least in the Roman period. The processes leading to the formation of these horizons are not well understood; indeed it may be that there are many diverse modes of formation[39]. Environmental column samples were therefore taken from the soil horizon and examined by a recognised specialist. The soil horizon was reduced in spits in order to attempt to proceed chronologically even where no clear divisions within the deposit were apparent. In some areas finds recovery numbers were used in an attempt to define the areas from which finds originated.

6.11 Spoil began to be systematically scanned with a metal detector during the excavation of Trench 14. There had been limited opportunities to employ this method when working in Trenches 10-13 as they were located in a basement with reinforced concrete floors. Although the metal detecting did not produce immediate results it gave excellent returns when the late Roman soil horizon was first excavated in Trench 15. The excavation recovered over 150 Roman coins most of which were securely stratified. The vast majority of the coins were found by scanning the spoil as it was produced, none had been found prior to the utilisation of the metal detector. The subsequent success of the excavation in recovering metal objects and the precision that this allows in dating the sequence was almost entirely due to the use of metal detectors.

6.12 Where relevant phased 'Harris Matrix' stratification diagrams have been produced for individual trenches.

[39] See, for example; MacPhail, R.I., Galinié, H. and Verhaeghe, F., 2003. A future for dark earth? *Antiquity* 77 No 296, 349-358

6.13 A grid was established to locate features within the footprint of the site. The site grid was tied into the National Grid by a professional surveyor.

6.14 Recording on site was undertaken using the single context recording system as specified in the Museum of London Site Manual. Representative plans and sections were drawn at a scale of 1:10 or 1:20 as appropriate. Contexts were numbered sequentially and recorded on pro-forma context sheets. Where referred to in the text context numbers are given in square brackets, i.e. pit [36]. Notable individual finds such as coins or objects placed with burials as grave goods were given small find numbers; these are referred to in the text these numbers are bracketed by greater than and less than symbols, i.e. coin <45>.

6.15 Where appropriate individual features were photographed using black and white print, colour slide and digital formats.

6.16 A series of temporary bench marks (TBMs) was established on the site. All of the values were established by transferring a level from the bench mark located on the frontage of Becket House on Tabard Street, the value of which is 4.71m OD.

6.17 The information recorded on the context sheets used on site has been entered into an Access database which also collates the results of specialist study such as dates derived from coins, pottery and building materials. Individual contexts (stratigraphic units) were then grouped together and the groups ordered in chronological phases of activity.

6.18 Chronological phases of activity are described in the text below (Section 7). The principal features charactering each phase are described in detail and where appropriate discussed as groups, i.e. Group 26. Individual contexts may not form part of these discussions and although the Archaeological Discussion is designed to thoroughly describe the development of the site it is not an exhaustive description of every context recorded.

6.19 The complete site archive comprising the written, drawn and photographic records will be stored by PCA until its eventual deposition in the London Archaeological Archive and Resource Centre (LAARC).

6.20 The site was given the unique code TIY 07

7 PHASED ARCHAEOLOGICAL DISCUSSION

7.1 Phase 1 Natural Deposits

7.1.1 Natural sands and gravels extended across the entire area excavated although patches of brickearth were also evident in Trenches 1, 12, 13 and 16. Although the first three of these trenches were located in the northern basement there was no evidence that the localised outcrops of brickearth were the result a general truncation caused by excavation for underground structures. Large areas of natural deposits located outside of the basement were also exposed during the archaeological excavation but none showed any evidence that an extensive brickearth horizon had once capped the sand and gravel.

7.1.2 The Desk Based Assessment produced by Mills Whipp suggested that the level of natural sands and gravels in the area of the site lay at approximately 1.50m OD[40]. The results of the excavation corroborated this initial analysis although some undulations in the surface of the sand and gravel were also apparent. However, the diffused interface between the base of the Roman soil horizon and the surface of the natural sand could easily have led to variations in the levels at which excavation ceased, especially during the very dry weather which characterised the later part of the excavation.

7.1.3 The surface of natural sand and gravel was recorded between 1.51 and 1.54m OD in Trench 15, which was located adjacent to the northern limit of the site. This trench covered an area that had not been subject to truncation by modern basements. Natural gravel was recorded at 1.25m OD in the northern part of Trench 19, which covered an area to the south of the modern basements. This slightly lower level may in part have been the result of over-excavation as this part of the Trench was vigorously stripped in order to make absolutely certain that the baked ground had not masked any burials. The levels recorded on the surface of layer [522] also rose to the south and east to a maximum of 1.37m OD. Similar results were obtained from Trench 22 which was located immediately to the west of Trench 19. A representative level of 1.35m OD is valid for the undulating surface of layer [539] in both the north and south of this Trench. The highest level recorded on the surface of the natural sand in the southern part of the site was 1.56m OD in Trench 21. The boundary between the developed soil horizon and natural sand was especially diffuse in this area due to the density of root action.

7.1.4 A sandy brickearth deposit [255] was recorded in Trench 16 which was located in the extreme southeast corner of the site. The highest level recorded on this deposit was 1.68m OD, which was considerably higher than the levels taken on the nearby sand and gravel. A diffuse boundary with a mass of root disturbance was again evident in this area but the results from this trench are comparable with those reported for the Harper Road burial which was located very nearby just beyond the southern limit of the site. The top of the grave cut for that burial was recorded at 1.69m OD; it is reported as truncating Langley Silts (brickearth). A very high level of root

[40] Mills Whipp Projects Ltd 2006

disturbance was also recorded for that burial which made interpretation and precise recording very difficult[41].

7.2 Phase 2 Roman Activity Pre-dating AD 180 (Fig. 3)

7.2.1 A major feature of the archaeological landscape in Trench 14 was a wide shallow ditch which traversed the entire area of excavation from southeast to northwest and extended beyond the trench limits to both east and west. Modern truncations had divided this feature into numerous parts which were recorded as cuts [183], [134], [187], [119] and [122], these form Group 16. As seen within Trench 14 the ditch measured c. 5m wide, c. 0.70m deep and c. 20m long. The sides rose at a shallow angle, which was a function of the loose sand and gravel that formed the natural deposits into which the ditch had been cut, the base of the cut was flat. The later burials excavated in this area were not confined to either the north or south of the ditch which did not appear to define the cemetery in any way.

7.2.2 The relationship of the ditch to the burials was difficult to demonstrate as only one grave, skeleton [162], had a direct stratigraphic relationship with the ditch. As recorded the grave had been cut by the edge of the ditch but the dating evidence recovered from the two features demonstrated that the reverse was the true sequence. The grave fill [161] contained two Nene Valley beakers dated AD 250-400. Although very sparse the pottery collected from ditch fills [115] and [132] suggested that it had been backfilled in the second half of the 2nd century, possibly as late as AD 160. The sequence established in Trench 12, located to the southeast, suggested that the ditch had been backfilled by the end of the 2nd century prior to the area being used as a cemetery. The details of this part of the sequence are discussed below.

7.2.3 Some of the later ditches that traversed the site contained large quantities of disarticulated human bone, some of which were undoubtedly placed deposits which had ritual significance. These were not evident in the Group 16 ditch fills which supports the theory that this ditch went out of use before the northern half of the site was used as a cemetery.

7.2.4 The course of the ditch to the east of Trench 14 was not easily defined. This was largely due to the effects of later cut features which included a later Roman ditch but also comprised a mass of modern foundations. The identification of the ditch in the area originally excavated as Trench 12 was also compromised by carrying out the works prior to demolition working with artificial light. However, later re-examination of this area and post-excavation analysis of the stratigraphy recorded in Trench 12 demonstrated conclusively that the ditch recorded as Group 16 in Trench 14 had continued through Trenches 18 and 12 before passing beyond the limits of the site to the east.

7.2.5 A small fragment of the ditch was extant in Trench 18 where it was recorded as cut [350], Group 54. This Group also comprises a large steep-sided pit [343]. The relationship between the pit and ditch was not clear but dating evidence recovered from the pit fills suggested that it was one of

[41] Cotton 2008, 151-158

the earliest features recorded. The very small pottery assemblage from the primary fill of the pit [342] dates from the Late Iron Age to AD 70. This suggests that the pit was dug in either the very late Iron Age or early Roman period. A later fill [341] contained another very small pottery assemblage dated AD 50-300. This very broad date is too imprecise to help establish the true relationship between the two features.

7.2.6 A tiny fragment of a steep-sided feature [373] was excavated to the south of the modern foundation that had truncated [343]. This may have been the southern limit of the pit, if so it would have measured at c. 2.20m north-south and exceeded 1.87m east-west. The pit was truncated to both east and west by modern foundations so its full extent could not be demonstrated, it was 0.85m deep.

7.2.7 The east end of ditch cut [350] had been truncated by modern foundations and the course of the ditch could not be traced to the east of these as the area had been truncated by the later ditch [403], part of Group 17. The stratigraphic relationship between the two ditches could not be established as the modern foundations cutting through this area had unfortunately destroyed the points at which the two features would once have intersected.

7.2.8 Further to the east of the putative intersection of the ditches clear evidence of the relationship between the two was obtained during the recording of Trenches 12 and 18. A very small fragment of the later Group 17 ditch, recorded as context [66] (see Fig. 4), passed through the northwest corner of Trench 12. Ditch [66] was quite clearly defined but the fills of the earlier Group 16 ditch were composed mainly of sand and gravel in this area and very difficult to distinguish from the natural deposit into which the ditch had been cut. The eastward continuation of the earlier ditch was recorded as ditch [393], Group 55. No useful dating evidence was recovered from the fills of the ditch which only contained a single sherd of residual prehistoric pottery. The fill of the later ditch [66] contained pottery dated AD 250-400 indicating that the earlier ditch must have gone out of use some time before the mid 3rd century.

7.2.9 The course of the ditch to the east of the small area described above was difficult to demonstrate unequivocally, principally due to the presence of the large post-medieval pits [54] and [56] which had removed most of the stratigraphy in the central and eastern parts of Trench 12 (see Fig. 20). However, some evidence of the ditch was present in the southeast corner of the Trench where a series of horizontal deposits had been truncated by the later Phase 3 inhumations recorded as Group 14. A sequence of homogenous layers located below the burials, Group 15, were thought at the time of excavation to represent a cemetery soil formed by the frequent reworking of natural subsoils caused by the intense use of this area for closely spaced burials. However, the surfaces of these layers appeared to slope to the north, as if the deposits were in a depression. This depression was later demonstrated to be the northwest to southeast aligned ditch which traversed the entire northern part of the site and was such a prominent feature of Trench 14.

7.2.10 The southern limit of the horizontal deposits recorded in this area corresponds very well to the south side of the ditch as recorded further to the west. The ‘cemetery soils’, Group 15, form part of Phase 3 as they contained considerable quantities of pottery that dated to after AD 180.

However, there can be no doubt that the horizontal deposits in this area originated as ditch fills and had been impacted by the later cemetery landuse. The pottery dating demonstrated that the burials in this area could have begun as early as 180 AD, with the obvious conclusion that the ditch must have gone out of use by this time. This confirmed the general assumptions regarding the relative dates of the ditch and burials excavated in Trench 14.

7.2.11 No features dating to the early Roman period were found in the northern half of the site, defined here as Trenches 12-15 and 18, apart from those described above. Two small groups of early soil horizons, Groups 15 and 23, were recorded in Trenches 14 and 15. These deposits consisted mainly of reworked natural sands and were transitional layers found below the developed soil horizons, where these were extant, but above natural sands and gravels. No pottery was recovered from the layers excavated in Trench 14. In Trench 15 small pottery assemblages were recovered from layers [222] and [272]. These dated to AD 150-400 and AD 50-120 respectively. The comparatively late date obtained from layer [222] was very much in keeping with the sequence excavated in Trench 15 where the soil horizon, which must have once simply been topsoil, contained artefacts dating to the 4th century from its lowest levels upwards. The evidence from the northern half of the site suggests that there was very little Roman activity in this area before the late 2nd century, even the fills of the large ditch, Group 16, that traversed the entire breadth of the site contained very few artefacts. One very early pottery assemblage was recovered from pit [343] but this consisted of only two sherds.

7.2.12 Far more evidence of early Roman occupation was obtained from the southern half of the site, defined as Trenches 16, 17 and 19-24. Two ditches, one perpendicular to the other, were the most prominent features of the archaeological landscape in the northern part of Trenches 19 and 22. Group 89 consisted of a northeast to southwest aligned ditch recorded as cuts [551] and [613]. The ditch had been divided into two parts by a very large concrete base and extended beyond the limit of excavation to the west. The profile was 'V' shaped with a flat central base, possibly a result of clearance in the base with a spade. The northern terminus of the ditch had been truncated by a later Roman ditch [517] but the original extent of it was still evident and there was no evidence that it had ever extended to the north of the later ditch. The total length of the ditch as seen was c. 12m, it was up to 1.65m wide and 0.80m deep. The top of the cut was recorded at 1.38m OD to the north and 1.25m OD to the south.

7.2.13 Pottery was recovered from five of the ditch fills. Three of the assemblages dated to AD 50-120, one to AD 50-250 and one to AD 120-400. The bulk of this evidence clearly suggests that the ditch was probably backfilled by AD 120. The soil horizon sealing the south end of the ditch, consisting of layers [592]-[594] Group 88, contained pottery dated AD 120-160, which supported the theory that the ditch had gone out of use in the early 2nd century.

7.2.14 A northwest to southeast aligned ditch passed through Trenches 19 and 22 around 5m to the north of the ditch described above as Group 89. The feature was divided into three parts by a modern intrusion and the artificial division caused by excavating Trenches sequentially. The three parts were recorded as cuts [618], [444] and [503], these form Group 67. The full extent of the

ditch as seen was c. 11.5m northeast-southwest, it continued beyond the limits of excavation to both the north and east. The ditch measured c. 1.50m wide and 0.50m deep. The top of the cut was recorded at 1.36m OD in the east and 1.25m OD in the west, no noticeable slope was evident from the levels taken on the base of the cut. The ditch had a 'V' shaped profile throughout the area excavated.

7.2.15 The pottery recovered from the fills of ditch [618] dated to AD 50-120 and AD 50-160, a coin of Domitian, SF<309>, dated AD 81-96 was also recovered from the upper fill [616]. To the east fill [443] contained pottery dated AD 50-250 whilst fills [500] and [490] produced assemblages dated AD 70-250 and AD 120-250. Fill [500] also contained a coin of Claudius, SF<210>, dated AD 41-54. The bulk of this dating evidence would suggest the ditch was backfilled in the late 1st or early 2nd century. In Trench 22 the ditch apparently truncated layer [540] which contained pottery dated AD 120-250, which would indicate a later date for the cutting of the ditch. However, very little evidence was recovered from the fills off the ditch itself that would show a date after AD 120 for its inception. A few sherds recovered from an upper fill [490] did date to after AD 120 but these show the period in which the ditch was being backfilled, not when it was first excavated.

7.2.16 A large quantity of disarticulated human bone was recovered from the fills of the ditch. This material occurred as very large pieces such as longbone shafts and large fragments of pelvis, most appeared to have been randomly deposited in the ditch. However, a line of three skulls was found in the base of the eastern part of the ditch recorded as [503]. There is little doubt that these were deliberately placed in the feature for reasons relating to ritual practices which were significant at the time of deposition, although of course there is no way of knowing precisely what these may have been. This group of disarticulated bone is curious in two ways. Firstly it apparently pre-dated the establishment of the inhumation cemetery which dominated the later landuse of the northern part of the site. Secondly the predominant burial rite in the earlier Roman period was cremation and there were no signs that the human bone had ever been fired.

7.2.17 The ditch also contained a near complete pottery vessel [625] which had been partially truncated by the modern concrete base that separated the feature into segments. The fill of the vessel contained cremated human bone of a young adult, age 20-35, or someone slightly younger. The pot in which the cremation had been placed is dated AD 50-160. Another near complete pottery vessel, small find <309>, was found to the west of the cremation in the base of ditch [618]. No cremated bones were evident in this vessel but it may well have represented another placed deposit.

7.2.18 It appears that ditch Group 67 was contemporary with ditch Group 89. The alignment of ditch Group 89 was very similar to that of the much larger ditch Group 16 found further to the north. Ditch Group 67 was perpendicular to Group 89 although the gap between the two would have allowed access from west to east. All three of the early ditches formed part of a regularly laid out system of land division.

7.2.19 A very badly truncated pit which contained a probable inhumation, [511], was found below ditch [503], part of Group 67. The burial only survived as two longbones, principally because it had

been truncated by a 19th century well. No dating evidence was recovered from the grave fill [510]. Apart from the position of this feature in the archaeological sequence there is therefore nothing to demonstrate when the burial may have taken place. If the sequence is correct the burial pre-dated the establishment of the cemetery by at least a century, if not more. Inhumations from the early Roman period are unusual, cremation being the principal burial rite at that time. However, the nearby Harper Road burial demonstrated that inhumation was also practiced at the time in this area[42].

7.2.20 Another notable group of features in the southern half of the site consisted of a series of shallow flat-bottomed linear cuts and a line of four associated pits, recorded as Group 7. These features may represent a structure, possibly an open colonnade which enclosed a rectangular cloister with a focus to the southeast of Trench 19, possibly in the basement covered by Trench 10 or beyond the bounds of the site to the east.

7.2.21 The largest single feature that formed part of Group 7 was a shallow linear cut recorded as contexts [597], [602], and [488]. This northeast to southeast aligned cut measured c. 10m long, 1.80m wide and 0.24m deep. The flat base had been cut down through the developed topsoil horizon to the surface of the sand and gravel, very possibly to provide a solid base for a structure. The top of the cut was recorded at a maximum of 1.34m OD to the east and 1.32m OD to the west. This feature formed the western limit of the structure.

7.2.22 A narrower linear cut [461] was recorded running parallel to the feature described above, located around 3m to the east. The feature measured 0.80m wide, 5.40m long and was 0.11m wide, the full extent of this feature was not seen as it extended beyond the limit of excavation to the east and would have passed into the basemented area of Trench 10. The base of this feature was again flat and founded on the sand and gravel.

7.2.23 A third linear cut [615] was found to the south of those mentioned above. It was aligned northwest to southeast, perpendicular to the two linear cuts found to the north. This very shallow feature would have formed the southern limit of the enclosure. It measured 3m long by 1m wide and 0.22m deep, the feature had been truncated by a modern intrusion to the north and could not be traced beyond the limit of Trench 23 to the east. No trace of this shallow feature was found in Trench 20, which had been excavated prior to Trench 23. However, a shallow pit or depression had impacted the area immediately to the east of cut [615] which may account for its apparent absence in this area.

7.2.24 A line of four pits occupied the area between the two parallel northeast to southwest aligned linear cuts described above. This seemed very unlikely to be a coincidence, especially as there were very few pits on the site. These pits may have held foundations for columns or large timber uprights. Together the features represented a structure that measured 15m northeast to southwest and was 7m wide. The shape of the northeast corner is unclear due to later truncations but a cut parallel to [615] could have existed in this area and closed off the north side of the

[42] Cotton 2008

enclosure. If so the structure would have measured c. 20m northeast to southwest. No real idea can be gained of the extent of the structure to the south and east as this area had been truncated by modern basements.

7.2.25 The longest axis of the structure recorded as Group 7 ran parallel to ditch Group 89. The structure would have fitted into the zone defined by ditch groups 89 to the north and 67 to the east; the gap between the two ditches would have allowed access from the northwest.

Context No	Description	Trench	Pot From	Pot To
33	Fill of [35]	Trench 8	50	160
37	Fill of [38]	Trench 8	180	300
454	Fill of [455]	Trench 19	50	400
460	Fill of [461]	Trench 19	70	120
470	Fill of [471]	Trench 19	50	120
480	Fill of [481]	Trench 19	120	250
484	Fill of [485]	Trench 19	50	400
486	Fill of [488]	Trench 19	70	120
491	Fill of [481]	Trench 19	70	200
492	Fill of [501]	Trench 19	70	120
496	Fill of [501]	Trench 19	70	200
569	Fill of [570]	Trench 22	50	120
595	Fill of [597]	Trench 22	50	120
600	Fill of [602]	Trench 22	50	400
603	Fill of [609]	Trench 23	50	120
614	Fill of [615]	Trench 23	70	120

Table 1 Structure Group 7 pottery dating

7.2.26 The pottery dating evidence recovered from the fills of the features that formed the structure suggested that it had been in use during the later 1st century and probably went out of use around AD120 to AD 150. 16 of the fills contained pottery, only two of these produced dates that suggested deposition after AD 120. The late AD 180-300 date was obtained during the evaluation when it is possible that some later material became mixed with the fills of the linear cut later recorded as [488] as the sides of the feature were very poorly defined. Table 1 below summarises the dating evidence obtained from the fills of the cut features. The only other piece of dating evidence relating to the structure came from layer [502] which had been truncated by several of the cuts that formed the enclosure. This layer contained a small assemblage dated AD 120-160 which might suggest that the structure was established in the 2nd century. However, if the cuts represent robber trenches rather than construction cuts this might reflect the date at which the structure went out of use or was abandoned.

7.2.27 Very little evidence was available to demonstrate that a masonry structure may once have stood in this area. If the features recorded as Group 7 had ever held stone foundations they had been so thoroughly robbed that no evidence of masonry was left *in situ* and the normal debris consisting of chipped stone and mortar fragments associated with stone robbing was also entirely

absent. It seems unlikely that anyone interested in reusing the stone would have been so considerate as to tidy up that thoroughly. If the features that make up Group 7 were foundation/robber cuts it is far more likely that they once held timber elements such as ground beams that supported above-ground elements.

7.3 Phase 3 Roman Activity c. AD 180-300 (Fig. 4)

7.3.1 Very little evidence was recovered from the southern half of the site which demonstrated any 3rd century activity with the exception of the excavation of a large ditch which traversed the northern part of Trenches 19 and 22. The ditch was recorded as cuts [452] and [517], Group 65. The feature had a 'V'-shaped profile with a flat central area in the base, it measured c. 15.5m east-west and was 3m wide and 0.75m deep. The ditch extended beyond the limits of excavation to the west and had been truncated by a very deep Roman pit to the east. It was not traced further to the east of the pit as this area was occupied but the modern basement seen in Trench 10. The top of the cut was recorded at 1.52m OD in the west and 1.35m OD in the east, this reflected the extra horizontal excavation that took place to the east in order to make sure that all the graves in Trench 19 had been found. The levels on the base of the ditch sloped very slightly to the east.

7.3.2 The ditch was probably first excavated at some time in the 3rd century although it is difficult to establish a more precise date. Two of the later fills [453] and [567] contained pottery dated AD 250-400 and AD 180-250 respectively The latest dated fill [518], which forms part of Phase 5, produced three coins one of which dated to AD 350-353 and pottery dated AD 350-400. This indicated that the top of the ditch was still being backfilled in this period although it may have been little more that a gently contoured hollow by this time.

7.3.3 The ditch truncated layer [530] which contained pottery dated AD 200-300. A coin, SF<247>, dated AD 353-361 was also given this layer number but this seem impossible given the sequence and it is almost certain that the coin was actually recovered from the later ditch fill [518] and wrongly assigned to the layer. The ditch would therefore appear to date to some point in the 3rd century and continued in use into the later 4th century.

7.3.4 The ditch followed a very similar alignment to the earlier feature recorded as Group 67 which was located a few metres to the north. The later ditch was probably a direct replacement of the smaller early feature and appeared to mark the southern limit of the cemetery. Only one burial was found to the south of the ditch and although very poorly dated the position of skeleton [520] (see Fig. 15) high in the soil horizon suggested that it was a late feature, dating to the late 4th or early 5th century. The ditch may have been completely backfilled by the time the burial was deposited.

7.3.5 The southern half of the site was devoid of features dating to this Phase apart from the ditch. Some horizontal deposits dating to the period were evident throughout the trenches excavated in this area but the ditch was the only feature that penetrated the sand and gravel. Indications of some later 3rd century activity were also hinted at by the presence of coins dating to this period. These were generally recovered from later contexts as residual finds but 30 of the 33 stratified

coins identified as 3rd century were recovered from the southern half of the site. This in part reflects the absence of the soil horizon in the north of the excavation, a result of modern basement construction. However, the presence of these coins clearly must represent a renewal of activity on the site as coins dated to the 2nd century are almost completely absent and, as is usual, very few issues dating to the earlier 3rd century are present. The coin evidence demonstrates the site was being frequented in the second half of the 3rd century but the activities taking place had left little tangible impact on the southern part of the site.

7.3.6 The focus of the cemetery established in this period was located in the northern part of the site; burials were recorded in Trenches 12 and 14. Both of these areas had been subject to truncation caused by the excavation of modern basements and only the most deeply buried inhumations survived. The true distribution of the graves was clearly not represented by the burials recorded but it seemed apparent that some areas had been intensely used, such as the southeast corner of Trench 12, whilst others were completely devoid of inhumations. This suggested that zoning had existed within the cemetery but no signs of walls or fences were evident.

7.3.7 A group of four east-west aligned burials, [59], [62], [68] and [81], were found in Trench 12 (Fig. 5). All four of these burials would have had the head to the west, although only two of them survived modern truncations well enough to actually have the head in place. The small group comprised two middle adult males aged 35-50 and a younger adult aged 20-35, possibly a woman. The fourth burial was not complete enough to allow analysis of gender or age. The burials all followed the same basic alignment and were laid one adjacent to the other but did not form a neat row. This showed that the positions of the graves must have been known when the dead were being interred but that the burials were probably not precisely contemporary.

7.3.8 Three of the four burials contained pottery dated AD 180-300 and one pottery dated from AD 250-400. The entire group may belong to this slightly later date bracket but the deposits which the graves had been cut into also contained pottery dated AD 180-300.

7.3.9 Only one placed deposit that could be unequivocally demonstrated to be a grave good was found with this group of burials. A pottery vessel, SF<1>, had been placed between the knees of skeleton [62]. The vessel was incomplete as it had been subject to horizontal truncation, as had the skeleton. However, the pot survived well enough for some of the contents to be analysed and this proved, quite remarkably, to consist of cremated human bone. The cremated individual was identified as an older sub-adult or adult but no more precise information could be gleaned from the bone fragments. This grave is truly remarkable as burials with a mixed rite of inhumation and cremation are very, very rare if not unknown.

7.3.10 The four burials described above clearly formed a group, possibly originally laid out in a defined space belonging to a family or other group. A fifth burial, skeleton [84], was found less than two metres to the west of the group. Very little of this burial survived due to modern truncation but the north-south alignment of the burial, with the head to the north, suggested that it did not form part of the group. No dating evidence was recovered from the very small part of the grave which was extant. Therefore it is not possible to say whether the north-south aligned burial was

contemporary with the east-west aligned inhumations. It was, however, cut into layer [89] which contained pottery dated AD 180-300, as were the other graves. It clearly did not pre-date the group of burials located to the east.

7.3.11 The burials described above had been cut into a series of deposits that consisted principally of homogenous grey sandy silts, layers [89], [90] and [95], which formed part of Group 15. All three of these layers contained pottery dated AD 180-300. Layer [90] contained two near complete pottery vessels, SF<3> and <4> which may have been associated with skeleton [81] although this is far from certain as the grave cuts were not clearly defined. Later in the excavation, following demolition and during initial post-excavation analysis, it became clear that these deposits were initially deposited as the upper fills of the large ditch, Group 16, which had once extended from the southeast corner of Trench 12 to the northwest of Trench 14. The deposits that form Group 15 and their relationship to the ditch have already been discussed in Paras 7.2.9 and 7.2.10.

7.3.12 The burials found in Trench 12 formed an isolated group. In part this was probably due to the lottery of survival caused by the truncation associated with the basement. Some very large and deep post-medieval pits, Group 13, were also present in this area and might have impacted further burials if they had existed. However, areas such as the southern part of Trench 13, situated immediately to the north of Trench 12, were free of later intrusive features but were also devoid of burials.

7.3.13 The major topographical feature which separated the burials recorded as Group 15 from the remainder of the Phase 3 burials located to the west was a large northeast to southwest aligned ditch which passed through the central and northern part of Trench 13, clipped the northwest corner of Trench 12 and passed to the south into the northern part of Trench 11 (Figs. 4 & 6). Parts of the ditch were also excavated later in Trench 18. This feature, recorded as Group 17, was traced over a distance of c. 34m and was a maximum of 5.30m wide and 0.86m deep. The profile of the ditch was very distinctive, the eastern part had a normal 'V' profile c. 1.5m wide whist the western side consisted of an almost imperceptible slope from the lip of the 'V' upward to a very poorly defined edge some 3m further to the west. The ditch had been heavily truncated in the northern part of Trench 18 but continued beyond the limit of excavation to the north and east. To the south it stopped suddenly at a point where modern intrusions were particularly deep in the southern part of Trench 18 and could not be traced beyond that point. The excavation of the Trenches in the southern half of the site did however demonstrate that it had never extended as far south as ditch Group 67 (see Paras 7.2.14 to 7.2.18 above).

Context No	Description	Trench	Pot From	Pot To
381	Fill of [374]	Trench 18	50	250
285	Fill of [286]	Trench 18	50	400
364	Fill of [369]	Trench 18	150	250
87	Fill of [88]	Trench 13	180	300
97	Fill of [88]	Trench 13	180	300
326	Fill of [295]	Trench 18	180	300
365	Fill of [369]	Trench 18	180	300

368	Fill of [369]	Trench 18	180	300
390	Fill of [407]	Trench 18	180	300
379	Fill of [374]	Trench 18	200	400
396	Fill of [403]	Trench 18	200	400
65	Fill of [66]	Trench 12	250	400
367	Fill of [369]	Trench 18	250	400
371	Fill of [374]	Trench 18	250	400
398	Fill of [407]	Trench 18	250	400
399	Fill of [403]	Trench 18	250	400

Table 2 Ditch Group 17, pottery dates

7.3.14 Establishing a date for the original excavation of the ditch is difficult as none of the horizontal deposits that it had been cut through were extant due to modern truncations. However, the Group 17 ditch undoubtedly truncated the earlier northwest to southeast aligned Group 16 ditch, which had almost certainly gone out of use in the second half of the 2nd century. The pottery dating recovered from the various fills of the ditch indicated that it was in use throughout the 3rd century and continued in use into the 4th century and possibly later. Later fills form parts of separate Groups and Phases and are discussed later in this document. The pottery dates relating to the Phase 3 fills are shown in Table 2.

7.3.15 One of the most striking features of the ditch was the very large quantities of disarticulated, or semi-articulated, human bone and near complete pottery vessels found within it. This was true from the more northern parts first excavated in Trench 13 through to the southern areas excavated in Trench 18. In the area where the ditch was recorded as cut [88] a group of three skulls had been arranged in a triangle and a near complete vessel, SF<5>, placed in the centre. A second concentration of pottery was found in a part of the ditch recorded as context [295] slightly further to the south of the skulls recorded as contexts [92]-[94]. The near complete vessels, SF<91> and <104>-<107>, were found close to a human femur. Human longbones formed a notable part of the assemblage throughout the length of the ditch. Another noticeable feature of the placed deposits was that many of them were situated on the lip of the ditch on the west side, that is at the base of the very gentle slope that passed gently from the pronounced break of slope of the V up toward the actual edge of the feature. It appeared that not only was the ditch set aside for the performance of rituals associated with the cemetery but that particular parts of the ditch were favoured for deposition.

7.3.16 The purpose of the ditch, apart from its clear cult status, was difficult to define. It was almost perpendicular to the earlier Group 16 ditch which it passed through, if not aligned exactly to it. It clearly formed part of a system of land division that was already established but the fast draining sands and gravels of the area hardly require ditches for extra drainage. The ditch could have defined an area that was originally designated as a cemetery but if it did this was soon ignored as the burials on the east side of it in Trench 12 showed. Whatever the original purpose the feature was quickly adopted for the ritual deposition of pottery and human body parts, although it appears

that these must have been either defleshed or buried as they exhibited very few signs of gnawing from animals like rats or dogs[43].

7.3.17 A north to south aligned grave cut [148] was found to the west of the Group 17 ditch in the extreme south of Trench 14 (Fig. 7). The alignment of the cut is actually skewed a little to a NNE-SSW axis which makes the alignment of this feature virtually perpendicular to the earlier Group 16 ditch that passed through this area. This could suggest either that the ditch was still visible, if only as a shallow hollow, or that the area was zoned in some way following the earlier system of land division. A very shallow gully, [160], was located immediately to the west of the burial and followed the same axis as the grave cut. Although this feature forms part of Phase 2 there is very little dating material to demonstrate when it was in use and it could conceivably have been some form of boundary that was contemporary with the grave. No trace of a structure was found within the gully but this very shallow feature could have held a biodegradable barrier of some sort, it might even mark a hedge line.

7.3.18 The head of the skeleton [146] would have been to the north but was no longer extant due to modern truncations. The skeleton was of a young adult aged 20-35 years but no gender could be established. The burial was supine with some evidence of disturbance to the lower right leg, which was not simply extended from the knee in the normal way but displaced to the east. Some notable grave goods had been deposited in this burial. A pottery vessel, SF<19>, had been placed in the southeast corner of the grave cut. The jar has been dated AD 180-300/400, it held carbonised seeds most of which have yet to be identified, although the environmental assessment has shown that whatever type of fruit was placed in the pot also found it's way into several other graves. The one definite identification made from the seed remains demonstrates that grapes were part of this group of carbonised remains. The position of the nails that formed the corners of a coffin left no doubt that the pot had been placed in the space between the foot of the coffin and the end of the grave cut. A complete glass bottle with an elongated neck and square body, SF<7>, was found to the east of the left leg by the knee. This form of bottle is often referred to as a Mercury flask due to its association with the Roman god. Some images show Mercury carrying flasks of this sort[44] and depictions of the god are sometimes stamped into the base of the flasks themselves[45]. Among Mercury's many duties was that of accompanying the dead on their trip to the underworld. This may have made this form of glass vessel particularly appropriate for use in a burial. Mercury flasks are a relatively common type in the northwest provinces of the Roman Empire but a relatively rare in Britain. Their frequent occurrence in graves suggests that they were deliberately selected[46]. This may have been either for their association with a deity or for the contents of the phials. The pottery recovered from this burial was dated AD 180-400. The Mercury flask has been dated to the second half of the 2nd

[43]Pers. comm. J. Langthorne
[44] Shepherd, Appendix 4
[45] Fleming, S 1999 Roman Glass: Reflections On Cultural Change p77
[46] Barber, B and Bowsher, D 2000 The Eastern Cemetery of Roman London Excavations 1983-1990 MoLAS Monograph Series 4 p 225-226

century[47], which would broadly fit with the pottery dates, although the form continued in use into the 4th century[48]. The grave can therefore be assigned with some confidence to the 3rd century, it might be later but there is no pressing evidence to suggest a 4th century date.

7.3.19 The grave described above was very isolated. This in part reflected the modern topography as the basement had removed nearly all of the archaeological features in the area and even the grave cut [148] only survived to a depth of 0.14m. The area to the west of the grave was occupied by a deeper basement which had removed all of the stratigraphy including the deep-cut features such as ditches. None of the burials seen in Trench 14 was located directly above the Group 16 ditch, which passed immediately to the north of the grave. If there had been further burials associated with skeleton [146] it is unlikely that they would have been found in that area. The later Group 17 ditch, which would have been contemporary with the burial, was located 3m to the east of the grave which potentially left some space for further burials but none was evident. The closest contemporary burial appears to be that of skeleton [144] which was c. 12m to the north.

7.3.20 Skeleton [144] had been buried in a timber coffin which was reinforced with lead angle strips, the burial was aligned NNE-SSW with the head at the south (Fig. 8). The lead reinforcing strips were the defining feature of this grave. They were found in the upright angles that would have formed the corners of the coffin and along the base where the bottom of the coffin would have met the sides. The lead angle strips were a purely practical addition to the coffin build; they would have been internal and not visible at the time of burial if the coffin were closed. Coffins of this sort have previously been found at West Tenter Street in the east of the City of London[49] and nearby Mansell Street[50]. A further example is reported from Spital Square. The example found at Trinity Street is of particular importance because it is the first located outside of Roman London's 'eastern cemetery'. Coffins of this sort are unknown outside of London and the very localised distribution and restricted date range had previously led to suggestions that all of the coffins built in this way were the work of a single individual[51].

7.3.21 Both of the examples of this type of coffin found at West Tenter Street, graves 626 and 964, were dated AD 120-180. This dating bracket is quoted in Barber and Bowsher's discussion of this form of coffin but the original catalogue of burials contains no dating evidence recovered from the graves themselves that places them in this time zone[52]. The burials appear to have been dated through their position in the stratigraphic sequence and although the dating is not called into question here it should be noted that the accepted orthodoxy regarding the dating of these coffins is far from unequivocal.

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[47] Shepherd, Appendix 4
[48] Fleming, S 1999 pp76-77
[49] Whytehead, R., 1986. The excavation of an area within a Roman cemetery at West Tenter Street, London E1, *Transactions of the London and Middlesex Archaeological Society* 37, 58-60, Plate 12 and fig 20
[50] Collingwood, R,.G. and Taylor, M.V., 1932. Roman Britain in 1931 *Journal of Roman Studies* 1932, 198-229
[51] Barber, B. and Bowsher, D., 2000. *The Eastern Cemetery of Roman London Excavations 1983-1990* MoLAS Monograph Series 4, 95
[52] Whytehead 1986, Fig 6

7.3.22 The pottery recovered from grave fill [135] was dated AD 120-250. A small quantity of 4th century pottery was also found but this material is likely to derive from contamination caused by the cutting of a modern pipe trench through the centre of the burial. Although the AD 120-250 date bracket is a broad one it is roughly consistent with that established at West Tenter Street.

7.3.23 A complete glass bottle, SF<13>was found in the north of grave fill [136] between the foot of the coffin and the limit of the grave cut. It was remarkable that this vessel survived intact as the blown glass is extremely thin and the vessel had remained empty; there was no equalising of the pressure caused by the weight of earth on the bottle. Pear-shaped bottles of this type date to the late 2nd and early 3rd centuries. The rim of the vessel has a legend stamped into it although sadly it is illegible. Legends found on similar bottled dated to the same period have been linked to products made on Imperial estates, such as perfumed oils, that might once have filled them (see Shepherd, Appendix 4).

7.3.24 Examples of bottles similar to SF<13> being placed in graves, probably as containers for a liquid commodity, can be found very close to Trinity Street. Burial 26 at the Great Dover Street cemetery contained a very similar vessel <G3>, dated to the late 2nd or 3rd century. The bottle had also been placed by the feet between the coffin and the end of the grave cut[53].

7.3.25 Both of the coffins with lead strips known from Tenter Street were adult males. Otherwise nothing in particular connects the two.

7.3.26 A tiny fragment of a grave cut, [151], was found to the west of grave [136] (Fig. 8). The feature had been truncated by a modern pipe trench to the west and the skeleton [150] only survived as the lower part of the right leg and the right foot. However, a fine array of jewellery was recovered from this fragmentary burial. This comprised two shale bracelets, SF<8> and <9>, glass beads recorded as SF<10> and a flat bronze band that might be another bracelet SF<11>. These items were found in very close proximity to each other but clearly had not been worn by the deceased at the time of burial. It is probable that they had been placed in a bag or box made from an organic substance which had since decayed and were placed with the deceased in a coffin. Although no coffin nails were recorded a dark organic brown stain was noted on the edge of the grave fill. The pottery recovered from the fill was dated AD 50-400, which is of little help in phasing the grave. However, the shale bracelets were probably items imported to London after AD 120 as they are associated with the trade in Dorsetshire black burnished[54] ware and are commonly associated with later Roman graves.

7.3.27 The remnants of two intercutting graves, skeletons [176] and [164], were found to the west of the burials described above (Fig. 8). Both burials had been impacted by modern foundations and service trenches and skeleton [176] survived as little more than a skull protruding from the concrete foundations located to the east of it. Skeleton [164] was far more complete, the head of the burial was to the south but the rest of the body was a jumble of bones and it was very difficult

[53] Mackinder 2000
[54] Pers comm. James Gerrard

to determine how this burial had been laid out. A brown stain around the periphery of the fill suggested that this burial had been in a coffin. No particularly useful dating evidence was recovered from the grave fill [127] which contained two small sherds of pottery dated AD 50-250. This could place these burials in a period before AD 180 when the cemetery is thought to have been established, but the size of the assemblage is very limited.

7.3.28 The truncated remains of an east-west aligned skeleton [184] were found to the north of the burial containing coffin [153] (Fig. 8). The skeleton only survived as parts of the pelvis, the legs, and the lower left arm; the head would have been to the west. The skeleton was that of a young adult aged 20-35, probably a female. A large fragment of flat roof tile was found in the area of the left elbow, it may well have been placed there deliberately. A single sherd of Roman pottery dated AD 50-400 was recovered from the grave fill [184]. Little more can be added regarding this burial which is almost certainly Roman but essentially undated. It has been phased with the remainder of the burials from Trench 14, the only two exceptions being skeletons [162] and [376] both of which were associated with grave goods that place them in a later phase.

7.3.29 The grave described above was an isolated example of an east-west aligned burial; the remaining burials excavated to the north of ditch Group 16 were all orientated north-south (Fig. 9). The exception to this might have been skeleton [176] but this survived in such fragmentary form that it was hardly diagnostic. A group of five east-west aligned burials were found to the south of the ditch on the west side of Trench 14. One of these was the grave containing skeleton [43] which had been excavated during the evaluation in Test Pit 1. The skeleton was that of a very small woman, probably in her early twenties. Large iron nails evident in the corners of the grave cut [44] showed that the individual had been buried in a coffin. Apart from the nails no other traces of the coffin were extant; the wood had decayed along with the other organic elements of the burial. The pottery recovered from this feature was dated AD 180-300 and was probably manufactured in the third century. The highest level recorded on the grave cut was 1.51m OD.

7.3.30 Another east to west aligned burial, skeleton [141], was found almost immediately to the north of skeleton [42] (Fig. 9). The alignments of the two burials differed slightly; skeleton [42] had been buried on a slightly more northeast to southwest axis whereas skeleton [141] was orientated more east to west. However, even skeleton [141] was still laid on more of a northeast to southwest axis than a true east-west one.

7.3.31 Skeleton [141] was supine with the head to the west and the hands placed over the pelvis. The skeleton was that of an adult aged 35-50, possibly a woman. No evidence of a coffin was evident but the skeleton was surrounded by plaster or chalk, especially the upper part of the body from the pelvis to the head although the chalk extended almost down to the ankles. The top of the grave cut [143] was recorded at 1.48m OD. The upper fill of the burial [129] contained pottery dated AD 120-350. This date range might suggest a date in the second half of the 2nd century but the grave cut into an earlier pit [155] which contained pottery dated AD 180-400. The earliest possible date for skeleton [141] is therefore the late second century.

7.3.32 Skeletons surrounded by chalk, plaster or lime were once associated with Christian burial, especially if dated to the 4th century when Christianity became a much more widely diffused religion and was adopted by the Roman state[55]. This has been disputed[56] and examples of plaster or chalk burials are now not only widespread but some dated to as early as the late 2nd or early 3rd century[57]. It is unlikely that Christian rites were openly displayed during the earlier period and Philpott associates chalk or plaster with status rather than religious belief[58]. No trace of a coffin was evident within the grave cut [143] which is notable as the majority of the chalk burials recorded in London's eastern cemetery were associated with coffins[59].

7.3.33 The pit [155] found below the grave cut [143] was curious as it contained a line of four stones that appeared to be reminiscent of a cist. However, the pit was only 1.21m long and although large enough to contain a child burial no evidence of a skeleton was present. This feature might be associated with pit [41] which was excavated during the evaluation, the two may have been parts of the same feature. The fill of pit [41] contained pottery dated AD 180-300, this date is consistent with the pottery recovered from pit [155].

7.3.34 A third inhumation burial, skeleton [165], was found slightly to the east of skeleton [141] (Fig. 9). The alignment of this burial was more similar to that of [43] than [141] but essentially the skeleton was laid out in similar fashion, supine with head to the west. The burial had been heavily impacted by a modern concrete base to the north which meant that much of the left side of the body was absent. The skeleton was of a young adult aged 20-35, probably a male. No grave goods were found with the body but a pair of leather sandals with hobnails, SF<16>, survived as a stain and concretion at the feet. The position of the sandals showed that they had been worn by the deceased at burial rather than being a placed deposit in the grave. The presence of nails at the corners of the grave cut [167] demonstrated that the burial had been furnished with a coffin. The highest level recorded on the top of the cut was 1.43m OD. The grave fill contained pottery dated AD 150-400.

7.3.35 The remnants of a very heavily truncated east-west aligned burial [173] were evident to the south of skeleton [165] (Fig. 9). The burial had been bisected by a modern foundation which left it in two sections. The eastern part of the grave cut [171] did not contain any elements of the skeleton but the shape of the grave cut with the lower fill and a few coffin nails were evident. The burial was apparently laid supine with the head to the west but the level of disturbance precluded any further comment on the attitude of the body. The burial was of an adult aged 35-50 but the gender could not be established from the fragmented remains of the skeleton. A shattered but probably near complete pottery vessel, SF<14>, was found by the left shoulder. This Verulamium white ware jar dated AD 70-200/250. This might suggest a burial that had taken earlier than the 3rd century but

[55] Green C.J.S., 1977. The significance of plaster burials for the recognition of Christian cemeteries in: R. Reece (Ed.) *Burial in the Roman World* CBA Res Rep 22, 46-53
[56] Philpott, R., 1991. *Burial practices in Roman Britain* BAR Brit Series 219, 93-5
[57] Barber and Bowsher 2000, 103-104
[58] Philpott 1991, 93-95
[59] Barber and Bowsher 2000, 103-104

the wide date range also covers the Phase 3 period AD 180-300 and the burial has therefore been grouped with the other graves excavated in this area. The top of the grave cut [171] was recorded at 1.43m OD.

7.3.36 A tiny fragment of a skeleton, [158], survived to the south of the grave described above (Fig. 9). Modern truncations had removed virtually the entire skeleton with the exception of the lower jaw and a few skull fragments. The burial appeared to have been laid supine with the head to the west. A thin layer of chalk c. 60mm thick was evident in the base.

7.3.37 The sixteen graves described above comprise the earliest evidence for the establishment of an organised cemetery on the site. The one very early fragmentary burial [511] that formed part of Phase 2 was located c. 20m further south than any of the Phase 3 burials and was itself an isolated example of an inhumation. A large quantity of disarticulated human bone was recovered from the ditch [503], Group 67, which sealed or passed above the early inhumation. Cremation [625] was also found within the ditch. There appears to have been an early focus for burial and possibly ritual activity regarding human remains in the area of the ditch but it did not become more widespread in the early period. Although the evidence for the establishment of a cemetery in the late 2nd and early 3rd century is still somewhat sporadic this was probably largely due to the truncation of the northern area by modern basements. The group of burials found in Trench 12, for example, were found 30-40cm below the levels of some of the graves excavated further to the west. This small densely packed group might be more representative of the original layout of the cemetery. Similarly, the most complete skeletons in the cluster of east-west aligned burials found in the southwest corner of Trench 14 survived principally because they had been placed in deep grave cuts.

7.3.38 A group of intercutting pits, recorded as contexts [289], [334] and [336], was recorded in Trench 18 to the south of the burials excavated in Trench 14 (Fig. 4). The largest of these consisted of a sub-rectangular northwest to southeast aligned cut [289]. The pit measured 2.47m long by 0.66m wide by 0.45m deep; the top of the cut was recorded at 0.83m OD. The pit fill [288] contained the highest concentration of disarticulated human bone found in any single feature during the course of the excavation, most of which consisted of skull fragments. The pit could be viewed as grave shaped, although somewhat larger than the grave cuts identified elsewhere on the site. However, no trace of an articulated skeleton was evident and the level at which the top of the pit was found was at least 0.30m deeper than the most deeply cut skeleton. This feature might represent a well marked and furnished grave that had subsequently been robbed out and the skeletal material tossed back into the robber cut. However, give the isolation of this feature when compared to the recorded graves this interpretation could be regarded as highly speculative. The pottery recovered from the fill [288] was dated AD 250-400. The feature might easily belong to a later phase but there is no specific reason to designate it as 4th century.

7.3.39 The large pit [289] was associated with two much smaller pits [334] and [336]. Of these only the truncated pit [334] contained any dating evidence which consisted of a small pottery assemblage dated AD 50-160.

7.4 Phase 4 Early to Mid Fourth Century Activity (Fig. 10)

7.4.1 The large northwest to southeast aligned ditch recorded as Group 17 continued in use beyond the end of the third century and the upper parts at least were still being backfilled throughout the fourth century. Fill [296] contained pottery dating AD 300-400 and three coins. Two of the coins, SF<102> and <103>, were dated AD 341-348 and AD 330-335. This fill might date to slightly later than the mid 4th century but this part of the ditch was clearly still being backfilled in the Ad 340s if not later. Further to the south a sequence of late fills and layers sealing the top of the ditch was excavated in the section of the ditch recorded as cut [374]. Fill [366] contained pottery dated AD 250-400, a broad date which could cover Phases 3-5. Fill [370] sealed [366] and contained pottery dated AD 300-400. Above these later fills were two deposits recorded as layers [363] and [346]. Both layers had been truncated by modern foundations and the edges of the ditch were not evident but these deposits might once have formed upper fills of the ditch or the base of a soil horizon established once the ditch had been backfilled. Layer [363] contained a single sherd of pottery dated AD 50-400. The relatively small pottery assemblage from layer [346] was dated AD 300-400, a near complete vessel SF<95> might have been a placed deposit in the upper part of the ditch. Earlier excavation in Trench 13 had recorded three layers, [103], [106] and [86], which might have been horizontal deposits sealing the top of the ditch. Only one of these, layer [86], contained any pottery and the assemblage dated AD 180-300. This material might be residual but the 'soil horizon' appears to be largely confined to the area of the ditch and layer [86] might be reclassified as a Phase 3 ditch fill.

7.4.2 Although the ditch continued in use in this period there was no evidence of continued use of the area to the east of it as a cemetery and very limited evidence that the area to the west, excavated as Trench 14, was widely used as a graveyard in the first half of the 4th century. A burial aligned southwest to northeast containing skeleton [162] was recorded in the central part of Trench 14 (Fig. 12), but this was a very isolated example. The skeleton had been laid in a supine position with the head to the south. The bones in the thoracic area were rather scrambled and this seemed to be a clear case of bone tumble occurring within a coffin. The latter was evident through the presence of coffin nails. The true position of the legs was also difficult to establish as a modern stanchion base had impacted the western side of the grave. The skeleton was poorly preserved but it was established that it belonged to an adult aged over 20. Two Nene Valley ware beakers, SF<17> and <18>, had been placed in the grave. One of these, SF<17>, appeared to have been placed in the grave between the foot of the coffin and the end of the grave cut. The second beaker had been placed to the west of the body by the knee; this was also probably located outside of the coffin. The pottery was dated AD 250-400. The burial could therefore belong to Phases 3 or 5 rather than Phase 4.

7.4.3 A second north-south aligned burial was found on the extreme northern periphery of Trench 14 (Fig. 11). In fact skeleton [376] survived below a foundation that defined the northern limit of the Trench and it was pure chance that this area of the foundation was not as deep as some in this

area, the northern half of the skeleton had actually been removed by a second foundation that passed east-west immediately to the north of the masonry above the burial. The skeleton therefore survived as the upper part of the body from the head to the lower thorax just above the pelvis. The body had been laid supine with the head to the south. The skeleton was that of an adult aged 35-50. A very thick bed of chalk [380] was evident below the skeleton. This was particularly noticeable in the area below the head where the chalk formed a solid layer 7cm thick. The thickness of the chalk lessened to the north but the deposit was still present below the ribs at the point where the body had been truncated by the modern foundation. No coffin nails were recovered during the excavation of this area of the grave but the edges of the chalk deposit were very well defined and it seemed certain that the deposit had once been held within a coffin that had since decayed leaving no trace. The significance of plaster burials has been discussed in Para 7.3.32. The top of the grave cut [377] was recorded at 1.65m OD; the level on the base was 1.17m OD. It is highly probable that the fragment of a grave cut [318] later excavated in Trench 15 was the northern part of cut [377]. The base of that cut was recorded at 1.16m OD which is clearly compatible with that recorded for [377]. The fill of cut [318] contained pottery dated AD 120-400 and a coin, SF<86>, dated AD 330-335 AD. Grave cut [318] was sealed by layer [219] which contained pottery dated AD 250-400 and coins, SF<50>, <63> and <94>, dated AD 353-361, AD 353-364 and AD 388-402. The latter is probably intrusive but there is no doubt that layer [219] was deposited in the mid or late 4th century. This suggests that the burial took place in the first half of the century.

7.4.4 The grave described above can be seen as part of a densely packed group of burials that was excavated in the eastern half of Trench 15 (Fig. 11). The ten graves found in this area all date from the 4th or early 5th century and although more than one phase of burial was represented in this group it was difficult to separate them chronologically. Many of the burials could have taken place in a relatively short time frame and apart from the obvious evidence of one burial physically impacting or overlying another it was extremely difficult to establish a sequence from the archaeological evidence alone. This was due in no small part to the nature of the homogenous soil horizon into which the graves had been cut. The soil horizon almost certainly originated as topsoil, which in itself would have formed a homogenous deposit where cut features are difficult to identify or define. Frequent turning of the soil when the area was used as a cemetery would have exasperated this problem and grave cuts could not be identified within the soil horizon, burials were uncovered by spitting off levels of the soil horizon or because they became evident either in section or in the bases of later cut features such as pits. The difficulty encountered in identifying cut features may also have led to some smaller cut features not having been identified at all; this in turn could have lead to intrusive material being excavated with earlier deposits. However, the methodology employed should have ensured that a broad chronological sequence was established as successive spits eliminated later material whether it was intrusive or not.

7.4.5 The chalk burial containing skeleton [376] was almost certainly one of the earlier burials in the group. The depth at which it was found would suggest this, the base of the grave cut having been recorded at 1.17m OD. This alone would not place it in an earlier group; it is of course possible to

excavate a particularly deep grave for an individual burial. However, the grave was cut deeper than all the others recorded in this group and the stratigraphic evidence from Trench 15 supports the theory that this was an early burial. Another burial that was undoubtedly early contained skeleton [287]. The grave had been truncated to the south by the same east-west aligned concrete foundation that had removed the northern part of skeleton [376]. The burial had been laid on a similar northeast to southwest axis, the body was supine but with the head to the north. The skeleton was extant from around the base of the rib cage, the upper right arm was present; the left arm was truncated below the shoulder. The burial was of a young adult male aged 20-35. The presence of nails suggested that the burial had taken place in a coffin. This was of interest for two reasons. The first was that the grave goods present appeared to have been placed between the head end of the coffin and the end of the grave cut. Two ceramic drinking vessels, SF<87> and <88>, were found in this area. The small indented beaker SF<87> was complete; the larger beaker <88> had collapsed in on itself. Both were products of the Oxfordshire red colour coat industry and dated AD 270-400. The second reason for the coffin being of particular interest was the presence of a large flat roof tile fragment, SF<89>, that was found adjacent to the head on the east side. It seemed too unlikely a coincidence that this piece of building material had simply been lying on the base of the grave cut at this point but if the tile was associated with the burial it must have been placed inside the coffin. The pottery recovered from the grave fill [283] was dated AD 300-400. The layer into which the grave had been cut, [263], contained five coins, SF<70> to <74>, dated between AD 330 and 341. Four of the coins dated to after AD 335 which presents a very consistent group. It would appear that skeleton [287] dated to after AD 335. The two earliest coins recovered from the spit of the soil horizon which sealed the burial, layer [219], dated after AD 353. The evidence suggested that skeleton [287] probably dated to the late AD 330s or AD 340s, possibly the early AD 350s.

7.4.6 A line of three east-west aligned burials was found to the west of skeleton [287]. Of these the grave containing skeleton [267] might have been cut above or into that containing [287] but this would have been a marginal relationship. The lowest level recorded on the base of the grave cut [268] was 1.61m OD. This was 0.19m above the highest level recorded on skeleton [287]. No grave goods were associated with skeleton [267] and no unequivocal evidence of a coffin was recovered. Two nails were recorded but both were located by the waist of the skeleton and none were evident at the head end of the grave cut [268]. The foot of the grave had been partially truncated by the same foundation that had cut through skeletons [376] and [287] but no nails were evident in this area. The body had been laid supine with the head to the west, the right arm had been bent back on itself at the elbow. The skeleton was of an adolescent aged 12-19. The grave cut [268] truncated layer [219] which, as discussed above, dated to after AD 353.

7.4.7 Another grave laid out on the same alignment, skeleton [274], was found immediately to the south of skeleton [267]. Skeleton [274] was laid supine with the lower arms crossed just above the pelvis. The grave had been truncated by modern intrusions to the east and west which could have removed any putative coffin nails that had once been deposited in these areas. However, two nails were found one of which was by the right shoulder and these might suggest the

presence of a coffin. The skeleton was of a young adult male aged 20-35. No useful dating evidence was recovered from the grave which was devoid of grave goods. The grave cut [275] was also cut into layer [219] which suggested that this burial was roughly contemporary with skeleton [267]. This might also have been suggested by the proximity of the two graves which were so close to each other that it would have been difficult to excavate one of them without disturbing the other had the presence of the other grave not been known. Some form of grave marker could be speculated on but no obvious sign of one was evident in either grave. However, a simple marker such as a post might have left no trace within the soil horizon where even large grave cuts were virtually impossible to identify.

7.4.8 A third burial laid on the same axis was found to the north of the pair of graves discussed above. Skeleton [251] was of an adult female aged 35-50; the body had been laid supine with the head to the west. The lower right arm had been laid crossed over the lower thoracic area just above the pelvis, the lower left arm was crossed over the chest. The positions of the left femur and the right half of the pelvis did not appear to be consistent with the other elements of the skeleton and there is no doubt that this area of the grave have been impacted by the later north-south aligned grave cut [213]. Although two nails were found within the area excavated as the grave cut no convincing evidence was recovered for the presence of a coffin. The difficulty of identifying grave cuts was highlighted with this burial where a collapsed but near complete beaker, SF<55>, was found to the north of the head beyond the area excavated as the grave. This vessel was unlikely to have been deposited alone within the soil horizon and detailed reconstruction work has demonstrated that some of the sherds recovered from the grave fill [252] are parts of the beaker, SF<55>. The vessel must be regarded as a grave good associated with skeleton [251]. Comparison of the graves excavated at Trinity Square with others that form parts of the southern cemetery show that oversized grave cuts which were much larger than the area needed simply to deposit a coffin or body were relatively common. For example, burials 8 and 26 from 165 Great Dover Street both allowed ample space for the deposition of grave goods around the body[60]. The burial containing skeleton [251] had also been cut into layer [219] and was almost certainly contemporary with the two burials found to the south of it.

7.4.9 A northwest-southeast aligned burial was found c. 0.50m to the east of the group of three east-west aligned burials described above. This burial had been truncated to the south by the modern foundation mentioned so often in this section; the head of skeleton [241] would have been to the south but had been removed by the foundation trench. The skeleton was that of a male adult aged 35-50. The body had been laid supine with the lower left arm crossed over the lower thoracic area. The lower right arm was extended with the hand lying above the pelvis. No grave good were recovered; the body may have been placed in a coffin as some nails were evident in positions consistent with a coffin construction. The grave cut [242] had truncated layer [219] and although no useful dating evidence was recovered from the grave it appeared that this burial was in the same position in the stratigraphic sequence as the three east-west aligned graves

[60] Mackinder 2000, 29-34, figs 28 and 34,

described above. The burial also passed above the earlier north-south aligned burial that held skeleton [287]. The lowest level recorded on the base of grave the grave cut [242] was 1.67m OD, the earlier skeleton was found below 1.42m OD.

7.4.10 The heavily disturbed remains of a northwest-southeast aligned burial were evident c. 1m to the east of skeleton [241]. This burial was found in two parts, a group of semi-articulated leg bones were recorded as skeleton [221]. To the south of these a skull and a collection of rib bones were recorded as skeleton [227]. These two groups of bones were almost certainly parts of one burial. A post-medieval pit [196] had been excavated above what would have been the pelvic area of the burial but the true limits of the pit may not have been recognised. As excavated the base of the pit was recorded at 1.95m OD which was only 4cm above the highest level recorded on the skull of skeleton [227].

7.4.11 Although the preservation of the burial recorded as [221] and [227] was very poor it appeared to fall into a stratigraphic position analogous to the other burials in Group 31 which consists of skeletons [267], [241], [251] and [274]. If the positions of these burials in the sequence are correct they all post-date AD 353. However, they have all been placed in Phase 4 as they were sealed by the later soil horizon [199]. This contained a later coin, SF<45>, dated AD 388-402. It was also truncated by grave cuts [213] and [204]. The pottery recovered from the fill of [213] was dated AD 350-400 and a second coin dated AD 388-402, SF<26>, was recovered from the fill of [204]. The balance of the evidence suggests that the burials recorded as Group 31 predated the very latest phase of the graveyard which can be seen as late 4th or early 5th century.

7.4.12 Two further burials were found in this area but they had both been very heavily truncated both by a modern drainage trench that passed east-west through the eastern part of Trench 15 and by the interlocking sheet piling which had been inserted to support the perimeter of the site. Skeleton [248] had been laid east-west with the head to the west. The skeleton was of a young adult aged 20-35. Little more can be added regarding this grave due to the poor state of preservation. A near complete pot, SF<51>, was found by the right shoulder. The pottery was dated AD 250-400. This burial could have formed part of a line with the east-west aligned burials found further to the south.

7.4.13 A fragment of a north-south aligned skeleton [277] was found to the west of skeleton [248]. The skeleton survived as little more than the lower legs and a few ankle bones. The burial was of an adult aged over 20. A large iron object, SF<82>, covered part of the lower left leg. This proved to be a barrel padlock. Part of a glass vessel, SF<81>, was also found in the lower part of the grave. This vessel was a beaker made in the late 1st or 2nd century. Due to the later truncations it will never be known whether or not this was a complete vessel placed in the grave. If it were the glass beaker would clearly have been an antique at the time it was buried.

7.4.14 The discussion of the archaeological sequence found in Trench 15 has so far concentrated on the eastern end of the Trench which contained the burials. A group of sewerage outflows that converged in the area adjacent to the street frontage had severely truncated the archaeological remains in Trench 15 and divided the area into three distinct blocks of stratigraphy. One of these

held the burials described above, with the exceptions of skeletons [248] and [277] which were isolated by one of the drainage trenches and the sheet piling on the perimeter of the site. Of the three main blocks only the area to the east contained burials. This was a very particular distribution, neither of the two areas devoid of burials was actually wide enough to have contained a complete grave but no trace of one was evident. This demonstrated that the areas being used as a cemetery were almost certainly demarcated in some way. The modern truncations that had impacted the area had sadly removed the area which was the most likely location of a western boundary to the burial group but excavation in other parts of the site suggested that whatever form of boundary may have been used, such as a wooden fence, it had left no trace in the natural sand and gravel. Any timber structure that only penetrated into the soil horizon is unlikely to have left any trace that could be seen during excavation.

7.4.15 The block of stratigraphy found along the south side of Trench 15 was excavated as a series of spits, three of which dated to the 4th century. The very earliest of these, layer [279], contained a small pottery assemblage dated AD 300-400 and two coins, SF<84> and <85>, dated AD 330-335. This in itself was something of a surprising result as this early layer, which was only c. 10cm thick, sealed the natural sand and gravel but still dated to the third decade of the 4th century. The spit above this, layer [271], contained a considerably larger pottery assemblage dated AD 300-400 and six coins, SF<75>-<80>, five of which dated from AD 330-348, the latest coin dated to after AD 341. The latest spit, layer [254], again contained a pottery assemblage dated AD 300-400 and four coins the latest two of which, SF<65> and <69>, date to AD 341-348. This group of layers obviously shows a gradual progression towards later coin dates although the pottery cannot be more precisely dated than the 4th century. Layer [254] was sealed by the Phase 5 layers [239] and [247]. The pottery recovered from layer [239] was dated AD 350-400 and the deposit also contained two coins, SF<53> and <54>, which were dated AD 353-364. The combination of later pottery and coins suggested a deposition date in the second half of the 4th century. The material recovered from the layers below was clearly earlier but still dated to the 4th century.

7.4.16 A small assemblage of Saxon pottery was recovered from Trench 15. The majority of this material came an area located adjacent to the sheet piling on the northern side of the Trench, modern drainage trenches had truncated this material on the south and east sides. Before entering into a discussion of the Saxon pottery the stratigraphic sequence will be described using only the Roman material as dating evidence. Broadly speaking the sequence mirrored that found to the south and east. The earliest layer [220] contained pottery dated AD 120-250 and a coin, SF<48>, which dated AD 335-341. Some evidence of earlier Roman activity was evident but the coin showed that late Roman activity had reached the earliest levels that sealed the natural sand and gravel.

7.4.17 Layer [220] had been truncated to the south by an extensive linear cut [210]. This feature had itself been truncated to the south by a modern sewer trench and to the west by the machine clearance cut for the shoring. The sand and gravel fills of the feature suggested it might have

been a robbed out structure, it certainly did not appear to be a silted up ditch. Six fills were recorded in this feature, of these fill [217] contained two sherds of pottery dated AD 300-400 and fill [257] produced a coin, SF<41> dated AD 335-341. This rather sparse return was still consistent with a feature excavated in the first half of the 4th century.

7.4.18 The linear cut [210] was apparently sealed by layer [208] which contained Roman pottery dated AD 300-400 and eleven coins, SF<30>-<40>. The latest of these dated to AD 354-361 but seven of the coins were minted in the AD 330s, one in the AD 340s and the remainder were earlier or could not be more precisely dated. The balance of this dating evidence would suggest a layer deposited in the late AD 330s or AD 340s. The later coin might show that the layer is a little later, or that excavation of arbitrary spits through a soil horizon is not a precise science.

7.4.19 Layer [208] marked the highest point in the soil horizon excavated in this block which did not contain material that consistently dated to the later 4th century. The spit which sealed it, layer [201], contained pottery dated Ad 350-400 and among four coins was one example, SF<22>, which dated AD 364-367. The combination of the pottery and coin dates suggested a later 4th century context which belonged to Phase 5.

7.4.20 The Saxon pottery recovered from the site is of great importance at a regional level as there are virtually no occurrences of pottery dated to the early Saxon period in central London[61]. The distribution of this material in Trench 15 is somewhat perplexing, however. In the block of stratigraphy described above Saxon sherds were recorded from the very earliest deposit, layer [220], fill [209] from the linear cut [210], layer [208] and from fill [206] which was from a posthole [207] that truncated layer [208]. Clearly it is most unfortunate that this material was spread from the base of the sequence upwards. This could be due to a number of factors, the difficulty of identifying cut features, finds contamination caused by later intrusive features or an inability to differentiate a later layer from an earlier one. The removal of the soil horizon in arbitrary spits should have meant that earlier time brackets were isolated as the spits were taken from deposits found progressively lower in the sequence. Generally speaking this was successful in all of the three blocks of stratigraphy excavated in Trench 15.

7.4.21 An alternative explanation to those given above was that all of the stratigraphy dated to the Saxon period. This seems most unlikely, generally speaking the finds recovered from the spits of the soil horizon became progressively later as they were located higher in the sequence, as they naturally should do. No Saxon pottery was discovered in the block of stratigraphy found on the south side of Trench 15 and this area is therefore of no help in the discussion, other than to confirm that a perfectly functional sequence was recorded in the area. To the east, however, sherds of Saxon pottery were recovered from layer [263], which was at the bottom of the late Roman sequence. If the six sherds recovered from that layer dated all of the stratigraphy and the eleven burials that lay above layer [263] the entire sequence would date to the Saxon period. This is simply not possible; the quantity of Roman material recovered, including whole pottery

[61] Cowie, R., 2008. Descent into darkness: London in the 5th and 6th centuries in: J. Clark, J. Cotton and J. Hall *Londinium and Beyond* CBA Research Report 156, 49-53

and glass vessels placed in graves, could not have survived into the sixth century. Even it had the possibility that none of the later burials or layers contained any Saxon material at all does not seem tenable. There seems little doubt that as found in the Trench 15 sequence most of this material is intrusive. The large posthole [207] might hold the answer to this apparent rebus. This large circular feature was recognised at the surface of layer [208]. It measured up to 0.50m in diameter and as excavated was 0.38m deep. A sherd of Saxon pottery was found in one of the fills, [206]. As mentioned on numerous occasions the recognition of cut features in the soil horizon was very difficult. This example of a large cut feature recognised quite high up in the sequence might explain how the Saxon pottery came to be mixed into the lower levels. The posthole could easily have been part of a group and the remaining features not recognised in the soil horizon.

7.4.22 The quantities of Saxon material are all small, consisting of a few sherds. However, some of the sherds are large diagnostic fragments and are most unlikely to have been misidentified. The complete catalogue of the contexts that contained Saxon pottery, with quantities, is shown in Table 3. The distribution shows a very strong bias toward the northern part of the site, particularly Trench 15. Another occurrence of Saxon pottery from the northern part of the site came from one of the upper fills of the Group 17 ditch in Trench 18, context [370]. This deposit was well sealed by later ditch fills and layers, three of the deposits in the sequence contained pottery assemblages falling into the AD 250-400 bracket, two of these post-dated AD 300. The latest layer in this sequence contained a near-complete vessel, SF<95>, which is unlikely to be residual. It would appear that the sherd found in fill [370] was intrusive. Two further occurrences of Saxon pottery were identified, both in the southern half of the site. Trenches 8 and 22 both produced Saxon sherds from the Phase 5 soil horizon levels; these layers represent very late Roman and early medieval activity. The two finds locations, although not precise, were relatively close to each other and may highlight a second small focus.

Context No	Phase	Group	Type	Description	Trench	Sherds
31	Prov 5	4	Layer	Dump/levelling layer	Trench 8	1
206	Prov 4	30	Fill	Fill of [207]	Trench 15	2
208	Prov 4	30	Layer	Soil horizon	Trench 15	6
209	Prov 4	34	Fill	Fill of [210]	Trench 15	1
220	Prov 4	35	Layer	Soil horizon	Trench 15	1
248	Prov 4	32	Skeleton	Skeleton	Trench 15	4
263	Prov 4	37	Layer	Soil horizon	Trench 15	6
370	Prov 4	18	Fill	Fill of [374]	Trench 18	1
549	Prov 5	82	Layer	Soil horizon	Trench 22	2

Table 3 Occurrences of Saxon pottery

7.4.23 A second group of burials was found c. 40m to the south of those located in the eastern part of Trench 15 (Figs. 13 & 14). The second cluster of graves was located above, or to the north of, the ditch recorded as Group 67 (see Para 7.2.14-7.2.18). The ditch had been the focus of early burial on the southern half of the site. It sealed an early inhumation [511], contained a large quantity of

disarticulated human bone and the cremation [625]. Rather oddly this area of the cemetery seems to have been abandoned for around a century and a half before becoming a focus for a very densely used area of the cemetery, although some of the burials from this area are undated and there might be graves covering the period of the disuse that were not identified as such. Survival in the area was also a lottery among the modern foundations and intrusive features had impacted all of the burials described below. Many more burials were no doubt completely obliterated by modern building so burials representing the period from the late 1st or early 2nd century through to the 4th century may once have existed in the area but had not survived into the present day.

7.4.24 Skeleton [415], which was located in the northeast corner of Trench 19, consisted of little more than a lower leg and a few ankle bones, the burial was of an adult aged over 20. A modern foundation had truncated the burial to the north and west, it had also been impacted by machine probing of the foundations. Very faint traces of a possible chalk bed were recorded, a near complete pottery vessel, SF<154>, was found to the east of the grave beyond the feet. The vessel dated AD 250-400.

7.4.25 The burial described above was found above a far more complete skeleton [422]. Modern foundations had truncated the grave to the north and west. The skeleton survived above the knees, the body had been laid supine with the head to the east. The lower arms had been crossed over the pelvis. The skeleton was of an adult aged around 50. Two metal objects, SF<174> and <182>, were found with the grave. One was located above the right femur, the other above the mouth. Neither object has so far been identified. The burial has not been closely dated, the pottery assemblage recovered from the grave fill consisted of only three sherds dated AD 70-250 but these are almost certainly residual.

7.4.26 A more complete burial, skeleton [457], was found to the south of the graves described above. Modern foundations had also impacted the burial and disturbed the skull, which was to the west. The skeleton was found supine with the lower arms extended above the pelvis, the skeleton was of an adult aged 35-50. The body had been placed in a coffin, which was evident as nails and iron plates found on either side of the body. The body had been buried wearing hobnail sandals or shoes and with a Kimmeridge shale cosmetic palette, SF<200>, placed below the left side of the pelvis. A bronze finger ring, SF<199>, was found very close to the cosmetics palette. The pottery recovered from the grave fill was dated AD 250-400.

7.4.27 The heavily truncated remains of skeleton [476] were found immediately to the west of the grave described above. The burial had also been truncated to the north and west by modern foundations. The skeleton survived as little more than the right leg and lower left leg, the body had been laid supine with the head to the west. The burial, which was of a juvenile aged less than 20 years old, had taken place within a coffin which was evident as a timber stain and metal plate and fittings by the feet. A small pottery assemblage dated AD 120-200 was recovered from the fill. No grave goods were evident in this truncated grave fragment.

7.4.28 A second group of burials was found to the north of the large rectangular concrete base that had truncated skeletons [415], [422], [457] and [467]. Demarcating the west of the group were two intercutting burials for skeletons [472] and [478]. Skeleton [472] had been heavily impacted by modern intrusions and survived as a few bones of the right arm, shoulder blade and ribs. The remains were of an adult aged over 20. The head of this burial would have been to the south. This very fragmentary burial sealed a better preserved but still heavily truncated skeleton [478]. The skeleton survived only as a skull and parts of the upper left portion of the thorax and left arm, which was truncated just below the elbow. The head of the burial was to the south, the individual was probably a young adult aged 20-35, possibly a male. No dating evidence was recovered from either of these fragmentary burials.

7.4.29 To the east of the intercutting burials described above was a very dense sequence of graves (Figs. 13 & 14). Four of these, skeletons [544], [533], [509] and [499], appeared to be part of a mass burial where one body had been placed above the other in the same grave cut, a fragmentary fifth burial may have been part of this sequence but this is unclear. The burials had been placed on an alignment close to NNW to SSE.

7.4.30 The earliest grave in the 'stack' was skeleton [544] which had been laid supine with the head to the north, although it was twisted to the left but his could have occurred after deposition. The arms were extended with the lower right arm crossed over the pelvis. The legs only survived as the right femur; the skeleton and been truncated to the south and east by modern foundations. A near complete jug, SF<252>, had been placed to the east of the body just below the left shoulder. This vessel has been dated AD 300-400. This burial was of an adult, probably a male, aged around 50.

7.4.31 Skeleton [533] was found directly above skeleton [544]. This burial was again laid supine but with the head to the south and the arms extended. The right arm had been placed to the right of the body, the lower left arm rested on the pelvis. The skeleton was probably of a young adult female aged 20-35; it had been truncated to the north at the left knee and around halfway down the femur on the right leg. Two small finds were recorded with the grave; a glass melon bead, SF<244> and a copper alloy object, SF<245>, which were both found in close proximity to the skull but neither object can definitely be described as a grave good.

7.4.32 Skeleton [509] had been laid above skeleton [533] but the disposition of the body had reverted to having the head to the north. The upper part of the body had been truncated by a modern foundation; the burial was extant from just above the pelvis downward. The terminus of the lower right arm and right hand were extant, but the left arm was wholly absent. No dating evidence was recovered from the grave fill associated with this body.

7.4.33 The latest burial in this group was skeleton [499]. This burial was notable for the position of the body which had been laid in a half crouched position on its left-hand side. The arms were flexed at the elbow so the lower arm extended away from the thorax. The legs were also flexed at the hip so that the upper legs extended away from the pelvis almost parallel to the forearms. The knees were bent taking the lower legs to the north on roughly the same alignment as the spine.

The burial had been of an adult aged around 50, possibly a male. A copper alloy brooch, SF<211>, was found to the west of the body close to the right hand. This item could have been a grave good but if worn at the time of death would more probably have been found closer to the chest as its most likely function was a dress fastener. However, if worn on a cloak or similarly loose overgarment the brooch could conceivably have been interred as part of the deceased clothing. Alternatively it might have simple been placed in the grave or occurred as a chance find.

7.4.34 With the exception of the flagon, SF<252>, found associated with the earliest skeleton only one sherd of pottery dated AD 50-400 was recovered from this group of burials. The flagon, dated AD 300-400 thus provides the only useful dating evidence for this group. As stated above the four skeletons [544], [533], [509] and [499] appeared to have been interred at one time. Although separate grave cuts were recorded the validity of these beyond their being a hole large enough to fit a body in is highly debatable given the extreme difficulty that was encountered with identifying grave cuts anywhere on the site. The proximity of one skeleton to another is also a determining factor in this discussion, as is the completeness of the skeletons apart from areas lost to modern truncations. The highest and lowest levels on each skeleton in this group are shown in Table 4. It is most unlikely that these burials could have been made at separate times without one disturbing another, even if the graves were marked.

Skeleton Number	Highest Level Metres OD	Lowest Level Metres OD
499	1.30	1.12
509	1.23	1.06
533	1.16	1.00
544	0.97	0.82

Table 4, Levels recorded on Group 64 skeletons

7.4.35 Evidence of two further inhumations was found in close proximity to the group described above. Skeleton [515] consisted of an inhumation that had been truncated below the knees to the north and at the pelvis to the south leaving only the femurs and a small fragment of pelvis *in situ.* The head of the body would have been to the south. The relationship of this skeleton with the remainder of the group is not clear. It could have been an earlier burial but was found in very close proximity to the main group, in particular with skeleton [533]. Whatever the true sequence may have been no dating evidence was recovered from the grave.

7.4.36 The final burial recorded in this area was skeleton [561] which was located to the west of the group described above (Fig. 13). This burial had been truncated to the north, west and south by modern foundations. The burial was aligned northwest to southeast; the head would have been to the north. The skeleton survived as parts of the lower thorax, the lower right arm, lower left arm and part of the upper left arm, most of the pelvis and the left femur. No evidence was found of a coffin and no grave goods or other datable artefacts were recovered from the grave fill.

7.4.37 Apart from the sequence recorded in Trench 15 horizontal deposits dating to this phase were found in the southern half of Trench 22 and in Trenches 20 and 23. A soil horizon consisting of

layers [577], [578] and [574] was recorded on the west side of Trench 22. Although most of the soil horizons are not precisely dated to the 4th century, layer [578] contained pottery dated AD 200-250 and two coins, SF<286> and <287>, dated AD 270-273 and AD 330-331 respectively. Layer [574] contained a coin, SF<281>, dated AD 270-290. No more precise dating evidence was recovered from this small group of layers. The highest levels taken on this part of the sequence were 1.78-1.85m OD.

7.4.38 Immediately to the east of the group described above were two layers from the same period. Each of these had been split into three separate contexts in order to aid potential finds distribution analysis. The layers were recorded as contexts [555]-[557] and [562]-[564]. Most of the pottery recovered proved to be residual. Four of the contexts contained pottery assemblages, all of which dated to after AD 120. Layers [557] and [555] both contained pottery dated AD 120-250; the quantity recovered from layer [557] in particular was sizeable enough to suggest that some form of activity had taken part in this area of site in that time bracket. However, structures or features dating to the late 2nd or 3rd centuries were noticeably absent in the southern part of the site. A smaller but still far from inconsequential pottery assemblage dated AD 120-160 was recovered from the earlier layer [564].

7.4.39 However, the coins recovered from metal detecting the spoil from these layers produced considerably later dates. Layer [564] contained a coin, SF<274>, dated AD 337-341. Layer [577] had two coins, SF<272> and <273>, the former dated to the 3rd or 4th centuries and the latter to AD 286-293. Layer [555] contained a coin, SF<268>, dated to the 4th century. Two rather separate dates are suggested by the pottery and coins, the latter appearing to be at least 50 years later than former. The highest levels recorded on this horizon were consistent at 1.64m OD.

7.4.40 In Trench 23, located immediately to the south of Trench 22, part of the soil horizon was recorded as context [585]. This layer contained another early pottery assemblage dated AD 160-300 and two coins, SF<293> and<294> both of which dated from AD 353 to 361. This could place this deposit in Phase 5 but this layer fits quite well with the 4th century soil horizon found to the north. The surface of this layer was recorded between 1.84m and1.66m OD.

7.4.41 Layer [432], found to the east of layer [585] in Trench 20, contained a moderately sized pottery assemblage dated AD 300-400. Two coins, SF<183> and <184> were also recovered from this layer. One has been dated to the 3rd or 4th centuries and the other to the period AD 270-290. The highest levels recorded on this layer were 1.58 to 1.68m OD.

7.5 Phase 5 Late Fourth and Early Fifth Century Activity (Fig. 15)

7.5.1 Two very late Roman burials were found in the highest levels of the stratigraphic sequence in Trench 15 (Fig. 16). Skeletons [212] and [203] had both been buried in northwest to southeast aligned graves which followed the same orientation as the majority of the roughly north-south aligned burials found in Trenches 14 and 15. Both burials had truncated layer [199], the highest spit of the soil horizon, which contained Roman pottery dated AD 250-400 and four coins, SF<43>-<45> and <47>. The earliest coin dated AD 351-364, two of the coins dated AD 354-361 and the latest coin was dated AD 388-402. The latter is particularly important as issues of this

date are among the latest dated bronze coins that can be found in Roman Britain. A coin of the same date, SF<50>, was found in a lower spit [219] and although thought to be intrusive at that level the presence of this coin again highlights the very late date of these burials. A third coin of this date, SF<26>, was recovered from the grave fill [202] which sealed skeleton [203]. The burials would appear to date to the very late 4th or early 5th centuries.

7.5.2 In the case of skeleton [212] there is absolutely no doubt that this was a later grave than the group of east-west aligned burials described above under Phase 4 (Paras 7.4.6-7). Grave cut [213] had impacted the earlier east-west aligned skeleton [251]. The burial containing skeleton [212] had been truncated to the north by the large modern sewer trench that ran parallel to the limit of excavation in the northeast of Trench 15. This had removed the upper part of the skull. Most of the right femur was also missing, probably the result of post-medieval pit digging as pit [199] had impacted this area. Some of the rib bones were found below the pelvis which gave further indications that this part of the body had been disturbed. Apart from the areas described above the skeleton appeared to be as originally buried; the body had been laid supine with the head to the north. The arms were extended with the lower arms and hands lain over the pelvis. Skeleton [211] was of an adolescent aged 12-19, possibly a female. The body appears to have been placed in a coffin as nails were found on either side of the skeleton in the shoulder area and one large one at the foot of the grave cut. No grave goods were found with the body. The pottery recovered from the grave fill [211] was dated AD 350-400. A coin dated AD 341-348, SF<42>, was also found but was almost certainly a residual object contained within the soil used to backfill the grave. This coin was found by metal detecting spoil and the exact location of the object cannot be demonstrated.

7.5.3 Skeleton [203] was located c. 1.5m to the east of [212] and orientated on the same alignment. The body had been laid supine with the head of the burial to the south. The grave had been truncated to the north by the modern sewer trench which had removed the lower half of the skeleton from just above the pelvis. The left lower arm had been lost, part of the lower right arm was extant and if this was *in situ* the right hand would have been over the centre of the pelvis. The skeleton was of a young adult female aged 20-35. The burial appeared to have been in a coffin as two nails were found at the head end of the cut. Two placed objects were found to the east of the skeleton. A near complete glass bottle, SF<29>, was found in the southeast corner of the grave. This pear-shaped bottle had lost the rim but was otherwise complete. To the north of this was a pottery vessel <28> which had probably been complete; the rim had become detached and was found immediately to the south of the main part of the vessel. Part of a bone pin, SF<27>, was found by the right shoulder. This object might have been used as a hair fastening, although it was rather short for that purpose, or possibly to close a shroud that covered the body. It might simply have been a chance find mixed with the grave fill. The pottery recovered from the grave fill [202] was dated AD 250-400. The very late coin dated AD 388-402, SF<26>, was also recovered from the grave fill although again this was a metal detector find and so its original position is unknown. It may not, of course, have been a placed object. The glass bottle found in this grave is of particular interest as it appears to have been an antique at the time

of burial. The bottle dates from the late second or early third century[62]. It had been kept for nearly two centuries before being placed in this very late 4th or early 5th century grave.

7.5.4 The two burials described above completed the sequence found in the eastern part of Trench 15, with the exception of a few post-medieval pits which had penetrated to the late Roman level. The burials packed into this small plot were remarkable for many reasons. Firstly they demonstrated just how intensively used much of the northern part of the cemetery would have been and how many burials were likely to have been lost as a result of modern excavation for basements. Secondly the results from Trench 15 demonstrated without doubt that areas within the cemetery must have been zoned for use as no burials were found to the west. Finally the group can make a small contribution to the discussion of Roman systems of belief. Burials aligned roughly north-south, skeletons [376] and [287], provided the earliest elements to the sequence. These were followed by east-west aligned burials, skeletons [251], [267] and [274]. A north-south aligned skeleton [241] is also included in this second phase, this could have been a later burial but the stratigraphic record was not clear enough to demonstrate this conclusively. The two 'layers' of the graveyard described above both date from after AD 330, the second group date to the middle of the 4th century but are not associated with later pottery fabrics dated to after AD 350 or later 4th century coins. The final use of this area as a graveyard saw a reversion to the use of north-south alignments, although of course this is only based on two examples. However, the area is sufficiently mixed to demonstrate that if the differing alignments of the graves is indicative of differing religious beliefs these in no way formed a barrier that resulted in the need for differing areas of the cemetery to be used by different religious groups. Areas clearly had been zoned within the cemetery but the evidence does not support any suggestion that the zoning was base on faith. The alignment of the grave may have had limited or no significance at all.

7.5.5 To the west of the area described above both the blocks of stratigraphy left intact by the modern sewer trenches contained levels within the soil horizon that dated to the late 4th or 5th centuries. In the southern half of the trench the latest spits taken from the soil horizon were recorded as layers [239] and [247]. Layer [239] contained pottery dated AD 350-400 and coins, SF<53>-<57>, dated as late as AD 353-364. The highest level recorded on layer [239] was 2.12m OD. Layer [247] contained residual pottery dated AD 50-250 and a coin, SF<62>, dated AD 348-350. The highest level recorded on layer [247] was 2.11m OD. To the north a spit of the soil horizon [201] contained evidence of very late Roman activity. Among the four coins recovered, SF<22>-<25>, was an issue dated AD 364-367. The layer also contained pottery dated AD 350-400. This spit was excavated below 2.01m OD. Medieval pottery was recovered from layer [200], the spit that sealed layer [201]. The dating evidence for the highest spit taken from the soil horizon in the eastern part of Trench 15, layer [199], has already been discussed above in Para 7.5.1. This late 4th or early 5th century deposit was found below 2.10m OD. Although the level recorded on layer [201] was a little lower than the others the late Roman ground surface on the north side of the site can be shown to have been at least as high as 2.10m OD. Given that burials were found

[62] Shepherd, Appendix 4

almost directly below this level it was probably somewhat higher as a grave cut at least 0.50m deep could be envisaged, quite possibly something a little deeper. This would suggest a ground level closer to 2.50m OD in the late 4th or early 5th century.

7.5.6 The second focus for 4th century burials was located some 40m to the south of Trench 15 in the environs of the early Phase 2 ditch recorded as Group 67. Although long backfilled by this later period the location of the ditch still seemed influential, even after the much larger ditch recorded as Group 65 had superseded it. Two very later burials, skeleton [419] and [427], were found close to the backfilled ditch (see Fig. 17). Skeleton [419] had been heavily impacted by modern intrusions and consisted of fragments of the skeleton from the area of the lower thorax, pelvis and the femurs. The body had apparently been laid supine with the head to the west; the burial was aligned roughly northwest to southeast. Little could be gleaned from analysis of the skeleton given the poor survival but the burial was of an adult aged over 20. The very small pottery assemblages assigned to both the grave fill and skeleton numbers both consisted of residual sherds. However, the grave truncated layer [440] which contained pottery dated AD 250-400. This wide date range could have allowed the grave to have been part of Phases 3, 4 or 5. However, layer [440] was the same as layer [412] which contained one coin, SF<155>, dated AD 350-353 and another, SF<163>, dated AD 364-378. The coins place this burial in the mid-late 4th century or later. Skeleton [419] was found directly above, and aligned to, the southern side of the earlier backfilled ditch.

7.5.7 The fragmentary burial of a child, skeleton [427], was evident c. 1.5m to the northwest of the burial described above. The skeleton survived as the collapsed skull, right arm and some of the bones in the thorax, possibly some of the vertebrae, the head had been laid to the west. The pottery recovered from the grave fill [428] was dated AD 300-400. This burial had also been cut into layer [440]. No grave goods were found associated with the skeleton which was the only child burial found during the excavation, the individual was less than five years old when interred. The grave was located less than a metre south of the backfilled ditch.

7.5.8 A completely isolated burial, skeleton [520], was found on the western periphery of Trench 22 to the south of the large ditch recorded as Group 65, although the ditch was backfilled by the time the burial took place (see Fig. 18). The skeleton was orientated northwest to southeast with the head to the west. The body had been laid supine but appeared to have turned slightly toward its left side, especially in the torso region. The right arm was laid above the thorax with the right hand above the middle of the pelvis. The left arm was laid by and slightly below the left side of the body. The legs were extended with the feet turned to the left. The burial was of a mature adult male aged over 50 years. No grave goods were found with the burial which had been furnished with a coffin. Nails were found at both ends of the grave and at points along either side of the skeleton. The burial contained two sherds of pottery dated AD 350-400. However, the grave is likely to date to the very late 4th century, or later. Its position in the archaeological sequence suggests that it was a late feature, the burial having penetrated only as far as the base of the soil horizon rather than into the natural sand and gravel. The grave cut [521] had truncated

layer [505], the highest spit of the soil horizon which was excavated in the north end of Trench 22. The pottery recovered from the layer dated to AD 250-400, it also contained eight coins the latest of which were SF<209> dated AD 367-375 and SF<220> dated AD 367-378. The burial cannot therefore have been any earlier than AD 367 and is quite possible somewhat later. Layer [408], the equivalent soil horizon in Trench 19, contained a coin, SF<126>, dated to AD 395-402. The very isolated burial might be viewed as belonging to the very latest decades of Roman rule in Britain, if not later. The base of the grave cut [521] was recorded at 1.54m OD. If a minimum depth for the grave cut of 0.50m is envisaged the late 4th and early 5th century ground surface in this part of the site would have been at c. 2.05-2.10m OD. This is considerably lower than the projected level for the northern part of the site and probably reflects the lower levels recorded on the natural deposits in the central part of the site when compared to the northern or southern peripheries (See Section 7.5).

7.5.9 As mentioned above the large ditch recorded as Group 65, the most prominent feature in the landscape in the northern part of Trenches 19 and 22 had been backfilled by the time the burial took place. The latest fill of the ditch [518] contained a substantial pottery assemblage dated AD 350-400. Three coins, SF<249>-<251>, were also recovered the latest of which dated AD 350-353.

7.5.10 An extremely large square pit [424] (Fig. 15) had truncated the east end of the ditch. In fact the shape of the feature was not definitively established because it had been truncated by a massive modern well cut to the north and by modern foundations to the east. However, the one corner extant formed a right angle at ground level; the sides of the feature were poorly defined and irregular. As found the feature measured 3.40m wide and was 1.58m deep, the highest level recorded on the cut was 1.40m OD. Obviously the original dimensions would once have been bigger before the feature had been truncated and it would have been cut from Roman ground level rather than the level at which it became apparent in the opaque soil horizon that covered the area, therefore the feature would have been deeper. One of the lower fills of the pit, context [437], contained three sherds of pottery dated AD 300-400. The latest fill, [425], contained a slightly larger assemblage dated AD 350-400 and five coins, SF<173> and <176>-<179>. Three of these were dated AD 353-361. The large pit appeared to have been backfilled in the second half of the 4th century.

7.5.11 Although the function of the feature was not clear it was interpreted as a well due to the extreme depth attained. It was also difficult to imagine what other function it might have fulfilled. No sign of a well lining to support the sides of the feature was evident but clearly one must have existed if the feature had stood open for any length of time. No evidence of a timber structure was found with the exception of two small post-holes, [448] and [450], which were found around half way down the cut on the west side. These features could not have held posts large enough to have supported a well lining and the two postholes observed could only have had a very localised function. A more substantial stone lining that had since been robbed out appeared to be a stronger possibility. A parallel for this feature could be found at West Tenter Street. Feature 169

consisted of a very large deep pit with a square base supported by a timber lining and masonry rubble. This was thought to have been a remnant of a more complete masonry lining that had been robbed out. The pit measured 4.2m in diameter at the top, was c. 2.5m deep and 1.65m x 1.75m wide at the roughly square base, which was flat. The base of the pit had been lined with clay which contained a coin dated AD 340-347. The pottery dating suggested that the pit had been backfilled around AD 375[63]. A great deal of discussion surrounded the function of this feature and its possible connection to plaster burials. Little of that is relevant to a comparison of the two features but the West Tenter Street pit provides a strong parallel to that found at Trinity Street, the shape, size, date and context within a cemetery are very similar. The example from West Tenter Street was re-interpreted by Barber and Bowsher as a well[64].

7.5.12 With the exception of the burials and the well [424] there were very few features dating to the very late Roman period in the southern half of the site. Conversely a plethora of evidence for late Roman frequentation of the site was recovered from hand excavation and metal detecting spits through the soil horizon that covered the area. In Trench 19 the lower part of the soil horizon was excavated as layers [412], [440] and [435]. The surface of this horizon was uniform as it was recorded at 1.64m, 1.64m and 1.67m OD respectively. The pottery assemblages recovered from these layers dated AD 180-250, AD 250-400 and AD 160-200. Six coins were recovered from layer [412] the latest of which were SF<155> dated AD 350-353 and SF<163> which was dated AD 364-378. More extensive evidence of very late Roman occupation was recovered from the latest spits of the soil horizon excavated in Trench 19. Layer [408] contained a very large pottery assemblage dated AD 350-400 and 26 late Roman coins seven of which dated between AD 348 and AD 364. The latest coin, SF<126>, was dated AD 395-402. This might seem to be unrepresentative but coins covering the apparent lacuna between the late AD 360s and the AD 390s were recovered from equivalent levels of the soil horizon in Trench 22. The later levels of the soil horizon in Trenches 19 and 22 can therefore be shown to represent continuation frequentation of the site during the entire second half of the 4th century and probably the early 5th century. The surface of layer [408], which covered virtually the entire length of Trench 19, was recorded between 1.85 and 1.69m OD.

7.5.13 A much wider range of coins was collected from layer [408] than might be inferred from the information given above. The date range represented begins in AD 207 with a single coin of Caracalla. A second coin dating to the first half of the 3rd century was SF<152>, dated AD 235-238. Evidence from the third quarter of the century is provided by a coin, SF<142> dated AD 253-268 and a single coin, SF<116> dated AD 260-269. These early examples are followed by six coins dating to the AD 270s and a single example, SF<123>, dated AD 286-293. The four dated coins not mentioned so far dated from AD 335-341. The coin group suggests frequentation of the site in the first half of the 3rd century with a renewal of activity in the late 3rd century. A continued presence throughout the 4th century, and very probably the early 5th century too, is

[63] Whytehead 1986, 65-66
[64] Barber and Bowsher 2000, 321

also evident. The apparent gap in the coin record represented by the absence of issues dated from the end of the 3rd century to c. AD 330 is not a feature peculiar to the site but a more general phenomenon connected to the supply and reform of the Roman coinage system. This early 4th century lacuna can be observed on most late Roman sites in Britain[65].

7.5.14 The late Roman sequence recorded in the northern part of Trench 22 has been touched on above regarding the late inhumation [520] and the final infilling of the ditch, Group 65. The latest ditch fill [518] undoubtedly dated to the second half of the 4th century. The fill was sealed by layer [516] which contained a substantial pottery assemblage dated AD 250-400. Two very small sherds of medieval pottery dated 1270-1500 were also recovered from this layer but these are intrusive. Three coins came from this layer, SF<237> dated AD 353-361 and SF<236> dated AD 367-375, which demonstrated that the layer perhaps spanned the third and fourth quarters of the 4th century. The surface of layer [516] was found between 1.86m and 1.59m OD.

7.5.15 Three residual coins recovered from fill [518] and layer [516] are particularly noteworthy as they form part of a very marked and localised late 1st century cluster. Layer [516] contained SF<238>, dated AD 62-68, fill [518] produced SF<250> and <251> dated AD 69-79 and AD 117 respectively. The coins were recovered from deposits located close to the early ditch recorded as Group 67. Two further 1st century coins, SF<309>, dated AD 81-96 and SF<210>, dated AD 41-54 were recovered from the fills of the early ditch and the presence of four coins of that date and a fifth dated slightly later in the area reinforces the impression that a strong late 1st century focus existed in this area. Only six Roman coins dating before AD 120 were found during the excavation, five of them form the group discussed above.

7.5.16 Three small pits, [529], [535] and [538], had been cut into layer [516], these were located in the northwest corner or Trench 22 (Fig. 15). The pits were poorly defined but outlined by brown staining, possibly delayed organic matter, in the greyish brown soil horizon. The pits did not contain any useful dating evidence; the pottery assemblages appeared to be largely residual.

7.5.17 The pits and layer [516] were sealed by layer [505], the latest spit of the soil horizon found in the north end of Trench 22. The pottery recovered from the layer dated to AD 250-400, the latest coins of which were SF<209> dated AD 367-375 and SF<220> dated AD 367-378. The surface of the layer was recorded between 1.91m and 1.64m OD.

7.5.18 In the southern part of Trench 22 the highest spit of the soil horizon was excavated as layer [548]. The surface of this layer was recorded at 1.80m and 1.70m OD. Three small sherds of medieval pottery dated 1080-1150 were recovered from this layer but these are considered to be intrusive. The late Roman pottery assemblage consisted of 42 sherds and was dated AD 300-400.

7.5.19 The spit removed as [548] sealed layers [549] and [550] which were identical, the differing context numbers referred to different areas. A moderately sized pottery assemblage consisting of 136 sherds was recovered from layer [549], it was dated to AD 350-400. A smaller assemblage

[65] Pers Comm. J. Gerrard

dated AD 300-400 was recovered from layer [550]. The surface of these layers was recorded between 1.69m and 1.55m OD.

7.5.20 Two sherds of pottery tentatively identified as dating to the early Saxon period were recovered from layer [549]. If this identification is confirmed it is entirely in keeping with the dating of this phase which represents the latest decades of Roman rule in Britain and the period that followed, whatever labels might be applied to it. Another sherd of Saxon pottery was recovered from layer [31], part of the soil horizon excavated during the evaluation in Trench 8. Although the precise location of this sherd cannot be demonstrated the trial Trench 8 was located within the area later opened as Trench 19, situated in the southwest corner of it close to the position of layer [549].

7.5.21 The fragmentary remains of a possible foundation [345] were found in the central area of Trench 18 above the backfilled ditch recorded as Group 17. This structure was aligned northeast to southwest; it measured 0.50m wide and 1.20m long, although modern concrete foundations had truncated it so the length was not representative of the original structure. As seen the structure did not form a solid wall foundation but was more of a linear arrangement of stones with some mortar laid into a trench. The materials used consisted of roughly hewn blocks of ragstone, greensand and occasional chalk blocks. The structure may never have been designed to support a masonry superstructure but could simply have been a rough foundation for a timber ground beam. This could have provided stability and aided in damp proofing a timber beam laid over a sequence of soft poorly drained ditch fills. The top of the structure was recorded at 1.41m OD.

7.5.22 A second smaller fragment of this possible foundation, context [397], was found to the north of the modern foundation that had truncated structure [345]. The alignment of this feature was less clear due to the extreme level of truncation but it may have represented a northwest to southeast aligned return to [345]. The top of structure [397] was recorded at 1.34m OD.

7.6 Phase 6 Medieval Features and Deposits (Fig. 19)

7.6.1 A small quantity of Early Saxon pottery was recovered from apparent Roman features and layers. No features of this date were observed and the presence of the pottery is discussed above (Para 7.4.16, 7.4.20-22). The vast majority of the features and deposits dated to the medieval period consist of layers of the homogenous soil horizon that were identical in colour and composition to the layers of late Roman material that were found below them. In the northern half of the site traces of these deposits only survived in Trench 15 which was the only part of the area not to have been subjected to the large-scale horizontal truncation that resulted from the excavation of extensive basements. The deposits presently phased as medieval layers in the southern extremity of the site, Trenches 16, 20 21 and 24, almost certainly originated as layers of the soil horizon deposited in the late Roman period that had later been impacted by medieval horticultural activity that led to the localised deposition of medieval artefacts in the form of pottery and a coin. The levels at which these deposits were found, their positions in the base of the stratigraphic sequence and the extremely small sizes of the medieval assemblages recovered all strongly suggest that extensive medieval deposition did not occur and that these

layers represent Roman levels that contain intrusive medieval material. The details of individual cases are described below.

7.6.2 In the southern part of the site layer [426] was excavated in Trench 20 and represented the latest deposit in the soil horizon. Four sherds of medieval pottery dated 1240-1400 were recovered from this layer. However, 103 sherds of Roman pottery dated AD 300-400 were also retrieved, as were six Roman coins, SF<168>-<172> and <175>. The coins dated from AD 259-268 to AD 353-361. The bulk of the dating evidence would suggest that this deposit was formed in the 4th century. The surface of the layer was recorded between 1.68m and 1.79m OD. This is also relevant as the deposits excavated at these levels in the adjoining Trenches 19 and 22 all dated to the late Roman period. The medieval material probably derived from a planting hole or similar intrusion that was not recognised in the homogenous soil horizon. A large ovoid pit [431] truncated layer [426]. This feature appeared to be defined by a dark brown stain around the edge but the definition of the edge was extremely difficult to follow, the colour and composition of the fill [430] was very to that of the surrounding layer. No medieval pottery was recovered from the pit.

7.6.3 Two layers containing single sherds of medieval pottery were excavated as machine spits in Trench 24, located in the southwest corner of the site. A sherd dated 1050-1150 was retrieved from layer [591] which also contained 11 sherds dated AD 350-400 and a coin, SF<297>, dated AD 353-361. Layer [591] sealed the machine spit recorded as layer [604] which contained a sherd dated 1080-1350. An assemblage of Roman pottery dated AD 200-275 was also recovered; the Roman group consisted of 37 sherds. Five Roman coins, SF<299>-<303>, were also retrieved from layer [604]. The earliest coin dated AD 259-268, the two latest coins dated between AD 353 and AD 361. Although somewhat mixed the later Roman material was generally retrieved from the higher levels of the sequence. The levels recorded on the latest layer [591] were between 1.71m and 1.59m OD. These were again consistent with the height of the late Roman levels recorded in the extensive excavations of the soil horizon seen in Trenches 19 and 22.

7.6.4 Another spit of the soil horizon containing medieval pottery was excavated in Trench 16, located in the southeast corner of the site. A single sherd dated 1270-1500 was recovered from layer [250] which also contained a small assemblage of Roman dated AD 250-400. The surface of this layer was recorded between 1.81m OD and 1.72m OD.

7.6.5 Two layers currently classed as medieval were excavated in Trench 21, which was located on the southern periphery of the site between Trenches 16 and 24. Neither layer [451] or [459] contained any medieval pottery but these layers were phased as medieval because all of the surrounding deposits found at the same level contained very small quantities of medieval material and are currently classed accordingly. Layer [459] contained a moderately sized Roman pottery assemblage dated AD 160-300 and a coin, SF<201> dated AD 353-361. This in itself appears to be a mixed assemblage with a later intrusive coin. However, layer [459] sealed the spit of the soil horizon recorded as [451] which contained a pottery assemblage AD 300-400. It

also produced three coins, SF<192>, <193> and <196>. Two of these, SF<192> and <196>, dated between AD 270 and AD 276, the third dated AD 335-341. The surface of layer [459] was recorded between 1.69m OD and 1.55m OD.

7.6.6 The status of all the deposits located in the southern half of the site which currently phased as medieval is questionable. Clearly the level of medieval activity in this part of the site was more intense than elsewhere on the site. Medieval features were not apparent but if these had consisted of planting holes or similar localised disturbances there is every possibility that they were not recognised in the homogenous soil horizon.

7.6.7 Although individual features were not apparent the occurrence of medieval pottery in many areas of the site demonstrated that low level medieval activity extended across the entire area. No deep-cut medieval features such as ditches had truncated the late Roman soil horizon.

7.7 Phase 7 Post-Medieval Features and Deposits (Fig. 20)

7.7.1 Although the excavation focused on the Roman remains some elements of later periods were also recorded. In Trench 15 a large number of small cut features cut into the upper levels of the Roman soil horizon were evident. The true size and nature of these features was not apparent as they had been truncated by machine clearance of the area but most of the cuts appeared to be the bases of small pits, possibly planting holes representing horticultural activity.

7.7.2 Very few of the pits contained any datable artefacts but the majority of those that did dated to the late 16th and 17th centuries. One pit, [196], contained pottery dated 1810-1900.

7.7.3 A single horizontal deposit, [188], was excavated in the northern part of Trench 15. Layer [188] contained three sherds dated 1550-1700. The highest level recorded on the surface of the layers was 2.16m OD.

7.7.4 Two extensive horizontal deposits, which consisted principally of redeposited sand and gravel, were excavated to the south of Trench 15 in Trenches 14 and 18. Layers [114] and [117] might have been levelling layers associated with the modern basements but with the exception of tiny undated brick fragments of ceramic building material they did not contain any artefacts. A small number of square postholes, cuts [292], [294], [320] [322] and [324] were recorded in the northern part of Trench 18. None of these contained any datable artefacts with the exception of posthole [292] which contained a fragment of clay tobacco pipe. The postholes did not form a discernible pattern and their function was not clear.

7.7.5 A group of very large rectangular post-medieval pits was recorded on the eastern side of the site in Trenches 12 and 13. Two very large pits, cuts [54] and [56], were evident in Trench 12. The largest of these, pit [56], measured 3.30m north-south by 2.68m east-west. The full depth of the feature was not recorded, as it was not fully excavated. However, partial excavation of these vertically sided pits demonstrated that they exceeded 0.70m deep. It was apparent that the sides of these features, which had been cut deep into the natural sand and gravel, must have been supported if the pits had been left open. However, no timber or masonry lining was apparent in

any of the pits seen in this area. No staining that might have indicated the existence of a decayed timber lining was evident in any of the pits.

7.7.6 Pit [54] contained pottery dated 1770-1830 whilst the assemblage retrieved from pit [56] dated 1780-1840. It appeared that the pits had been deliberately backfilled in the late 18th or early 19th centuries, possibly after the linings supporting the sides had been dismantled.

7.7.7 Five similar pits, cut [70], [72], [74], [76] and [78], were recorded in Trench 13, located to the north of Trench 12. The largest of these, pit [78], was of similar dimensions to those found in Trench 12. Only two of the pits recorded in Trench 13 contained any datable artefacts. A pottery assemblage dated 1830-1840 was recovered from pit [74] and ceramics dated 1805-1830 were retrieved from pit [76]. The assemblages from Trench 13 suggested that the pits in this area had been backfilled in the 19th century. The purpose of this pit complex documented in Trenches 12 and 13 was not clear. Large steep-sided pits are commonly associated with the tanning industry in the Southwark and Bermondsey area. However, these features are invariably surrounded by yellow and green staining which resulted from tanning liquor leaching into the sand and gravel which the pits penetrated. No staining was evident around the pits described above.

7.7.8 A group of circular cut features, very probably dismantled wells, was evident in the northern part of Trenches 19 and 22. Pit [414] was located in Trench 19, this circular feature measured 1.30m in diameter and more than 0.60m deep; it was not fully excavated. The fill [413] contained a small pottery assemblage dated 1805-1900. No lining was found but the vertical sides of the feature would have required support if it had stood open. Two further circular pits, cut [524] and [526], were found to the west of cut [414] in Trench [22]. Pit [524] measured a maximum of 1.67m in diameter and was 0.68m deep. It was also steep sided and was again interpreted as a robbed out well. The fill [523] contained pottery dated 1820-1840. A third circular cut [526] was found to the north of [524]. The feature measured a maximum of 1.44m in diameter and was 0.47m deep. The fill [525] contained pottery dated 1800-1830. It would appear that the three cuts had very possibly been backfilled in the same period.

7.7.9 A small concentration of features and deposits dated to the post-medieval period was found in the south of the site in Trench 17. Two small rectangular features, [259] and [261], had been cut into the surface of layer [262]. Pit [259] contained pottery dated 1670-1800 and clay tobacco pipe fragments. Pit [261] also contained clay pipe fragments and pottery dated 1760-1800. The pits, and a posthole [257], truncated layer [262] which contained clay tobacco pipe fragments and pottery dated 1580-1630. The surface of layer [262] was recorded between 1.91m and 2.01m OD, although this level was simply that at which machine clearance of the area ceased.

7.7.10 Another layer, [249], containing post-medieval pottery was found in Trench 16, located to the south of Trench 17. A single sherd dated 1550-1700 was recovered from this deposit, as was a moderately sized assemblage of Roman pottery dated AD 300-400. Three coins, SF<58>-<60>, were also retrieved from layer [249]. The Roman coins were dated AD 270-290 and AD 353-361. However, the third coin, SF<58>, was a medieval penny. This mixture of finds confirmed once again that the horizontal deposits that had had formed the late Roman ground surface in the

southern part of the site had been impacted by later activity. The surface of layer [249] was recorded between 1.94m and 1.84m OD.

7.8 Phase 8 Modern features

7.8.1 Modern features were not systematically recorded and although some do form part of the archaeological record, mainly those recorded in section drawings as intrusive features, they are not discussed in detail in this report.

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N

Trench 15
Trench 14
Trench 18
Trench 13
Trench 12
Trench 11
Trench 19
Trench 22
Trench 10
Trench 23
Trench 20
Trench 24
Trench 21
Trench 17
Trench 16
TP1

[222]
[226]
[223]
cut [119]
base of cut [119]
cut [122]
[272]
[181]
[179]
[180]
cut [134]
cut [183]
cut [187]
cut [160]
cut [350]
cut [343]
cut [373]
cut [102]
cut [393]
cut [393]
[96]
[540]
cut [618]
cut [495]
cut [434]
cut [623]
<190>
[625]
cut [444]
cut [547]
cut [566]
cut [314]
skull
skull
jaw bone
pot
skull
cut [503]
cut [512]
[511]
[592]
cut [613]
cut [551]
[593]
cut [607]
[593]
[592]
[594]
cut [488]
cut [602]
cut [488]
cut [597]
cut [455]
[594]
[502]
cut [471]
cut [485]
cut [501]
cut [481]
cut [461]
cut [570]
[599]
cut [615]
cut [609]
cut [442]
[269]

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0 20m

Figure 3
Phase 2
1:250 at A3

532480/179470

N

Trench 15

TP1

[154]
cut [155]
[141]
cut [143]
cut [41]
[43]
cut [44]
[165]
cut [167]
[173]
cut [171]
[168]
[158]
cut [156]
cut [171]

Fig 9: detail 4

[130]
cut [175]
[184]
cut [186]
[164]
cut [128]
[176]
cut [178]
[144]
cut [135]
[153]
[150]
cut [151]
cut [170]
[144]
cut [135]

Fig 8: detail 3

Trench 14

Trench 18

cut [286]
cut [108]
cut [88]
cut [88]
[93]
[92]
[94]

Fig 7: detail 2

cut [331]
cut [403]
Fig 6
S8
[146]
cut [148]
cut [374]
cut [295]
cut [369]
cut [66]
[99]
[98]
cut [407]
cut [369]
[89]
[89]
[95]
[90]
[84]
cut [85]
cut [111]
[59]
cut [60]
[68]
cut [69]
[62]
cut [63]
[81]
cut [82]

Fig 5: detail 1

Trench 13

Trench 12

Trench 11

cut [289]
cut [334]
cut [336]

cut [517]
[530]
[446]
cut [452]
[579]
[580]
[580]
[580]
[584]
[584]
[579]
[473]
[446]

Trench 22

Trench 19

Trench 10

Trench 23
[598]

[438]

Trench 20

[610]

Trench 24

Trench 21

[265]
[264]

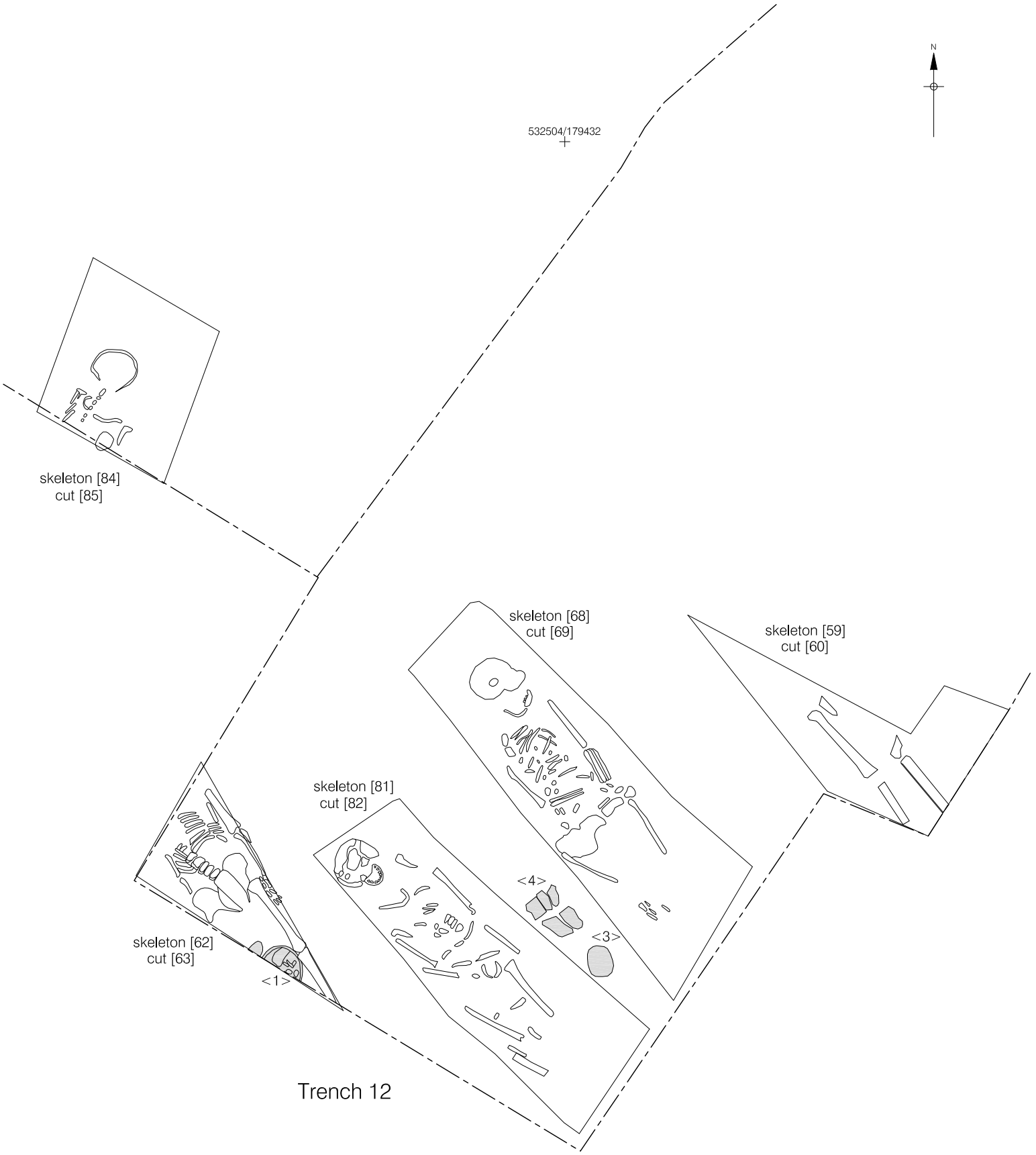
Trench 17

Trench 16

532480/179380

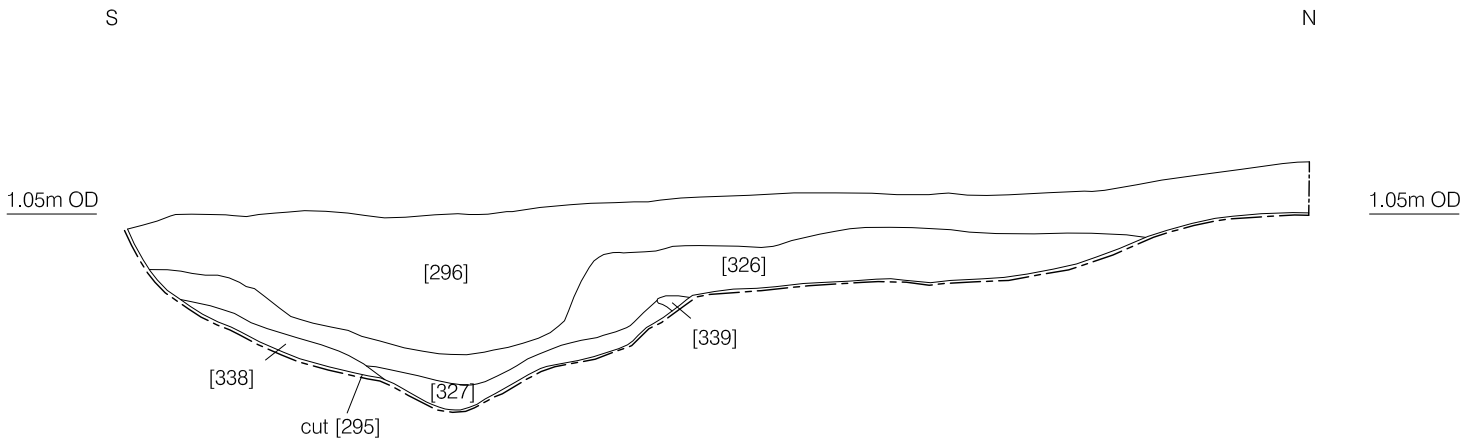
0 20m

Figure 4
Phase 3
1:250 at A3



532504/179426

Figure 5
Phase 3: detail 1 of burials
1:25 at A4



Section 8

Trench 18, East facing section through ditch [295]

0 1m

Figure 6
Section 8
1:25 at A4

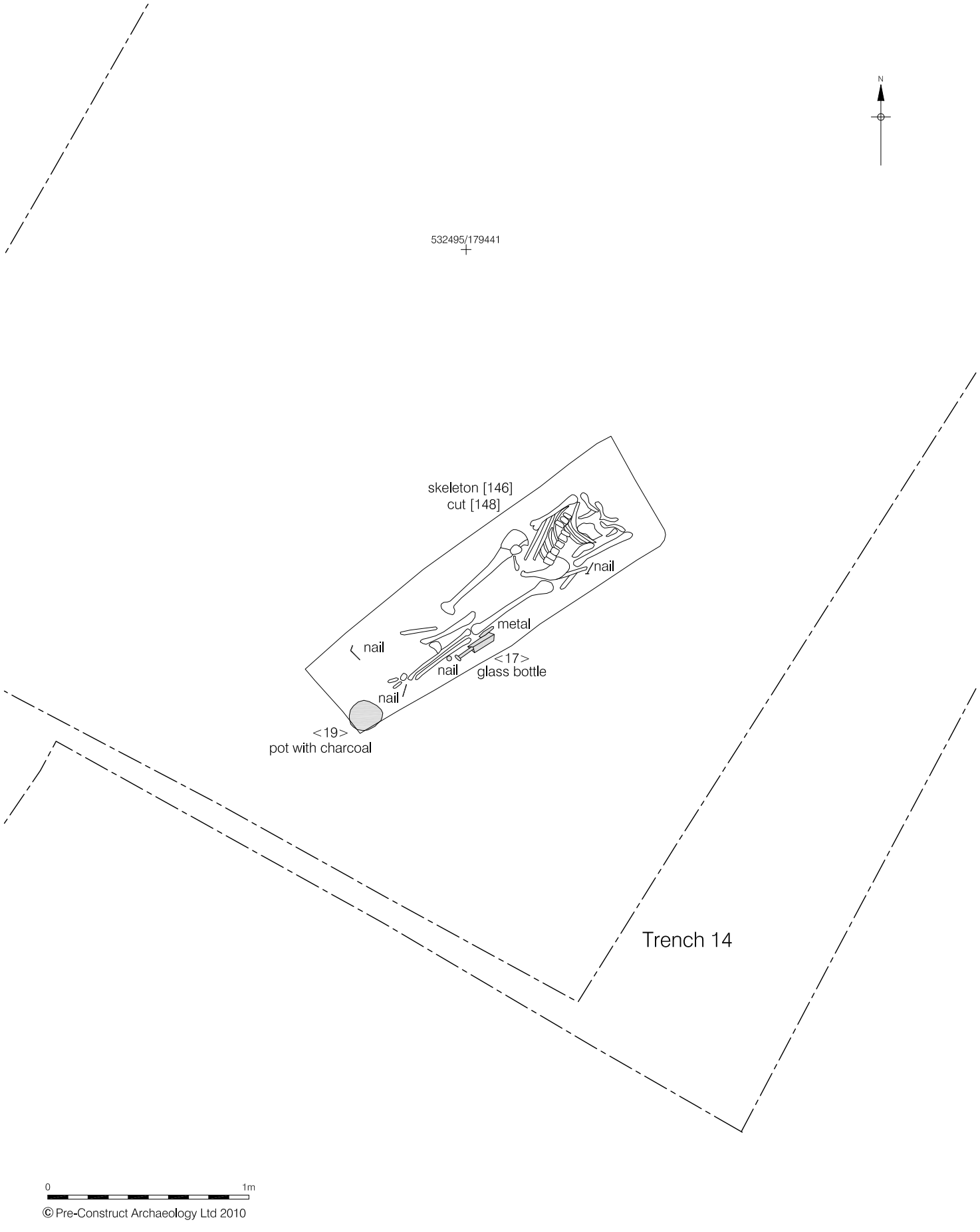
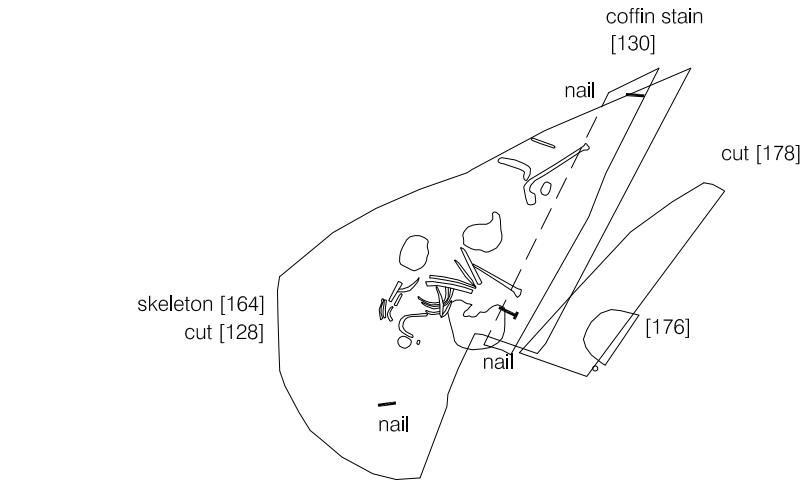
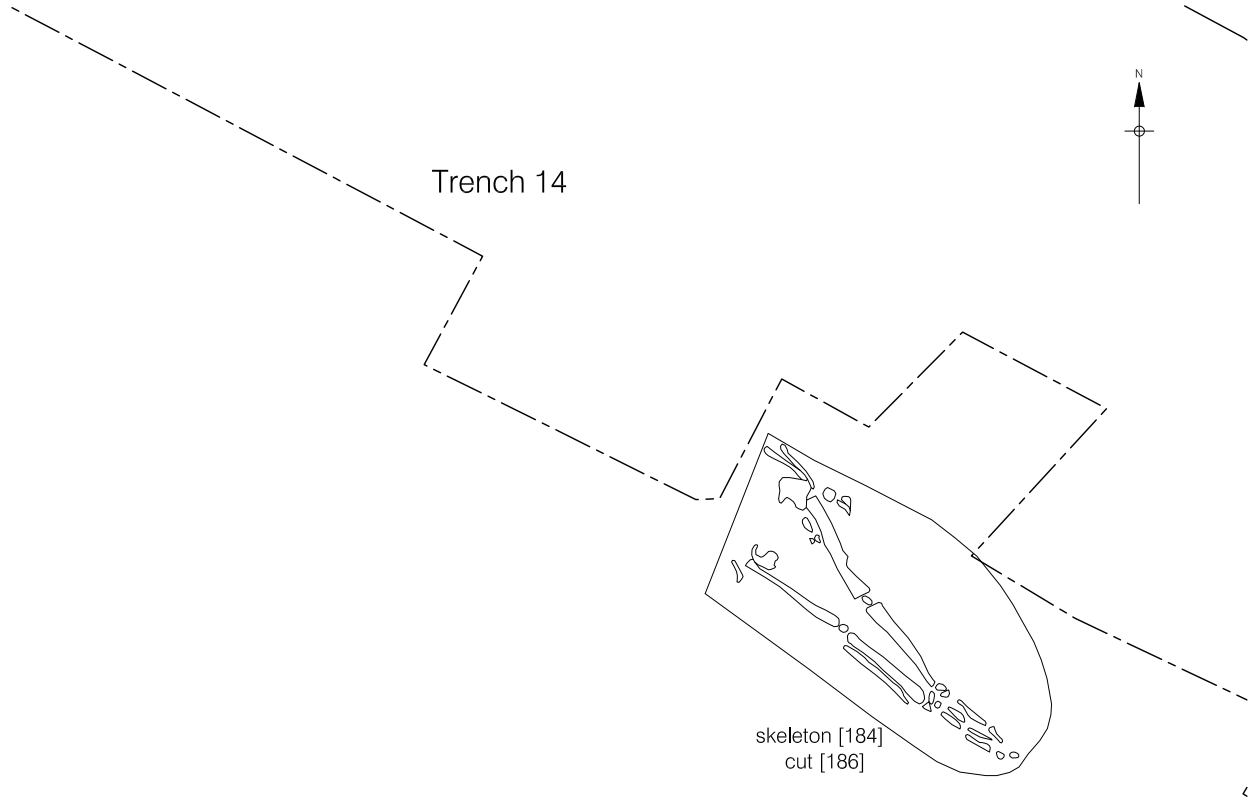
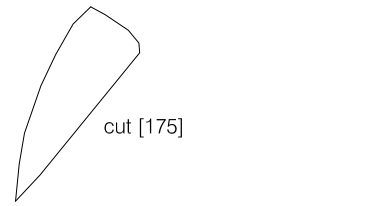
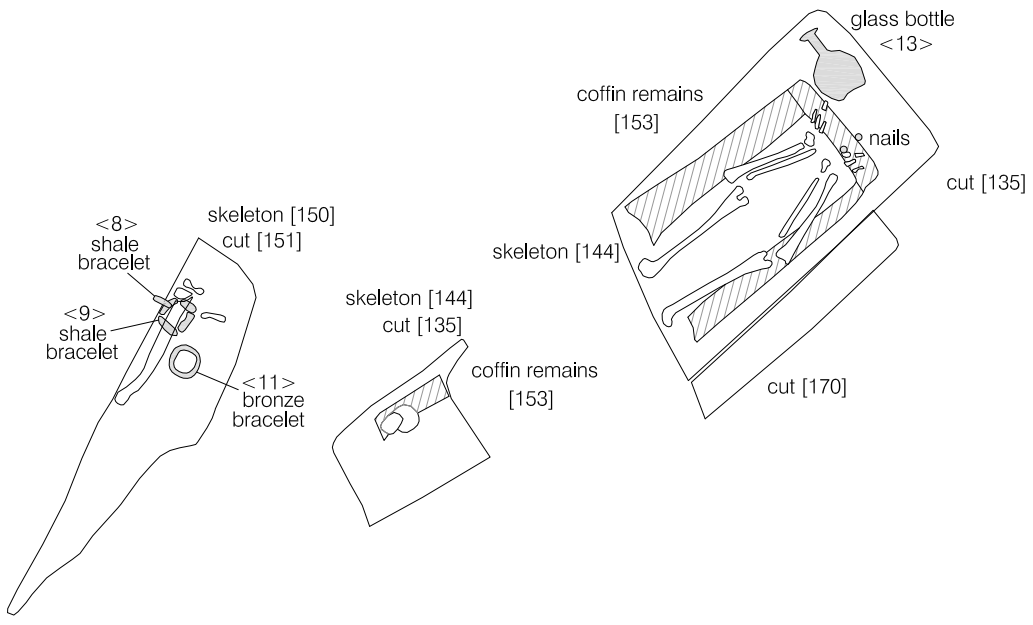


Figure 7
Phase 3: detail 2 of burials
1:25 at A4



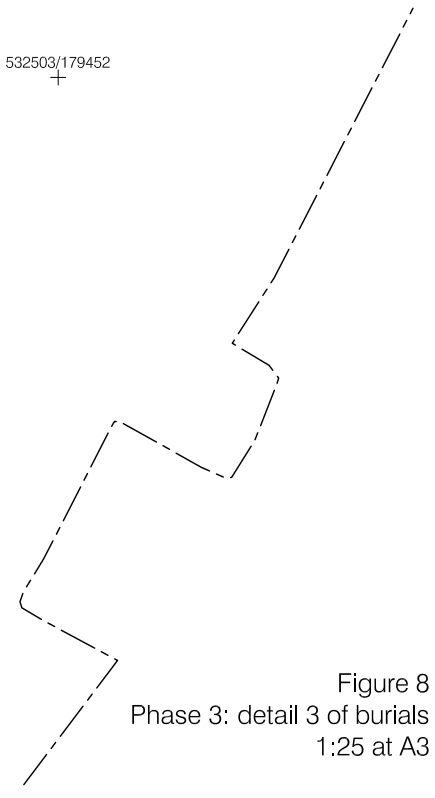






532495/179452

532503/179452



0 1m

Figure 8
Phase 3: detail 3 of burials
1:25 at A3

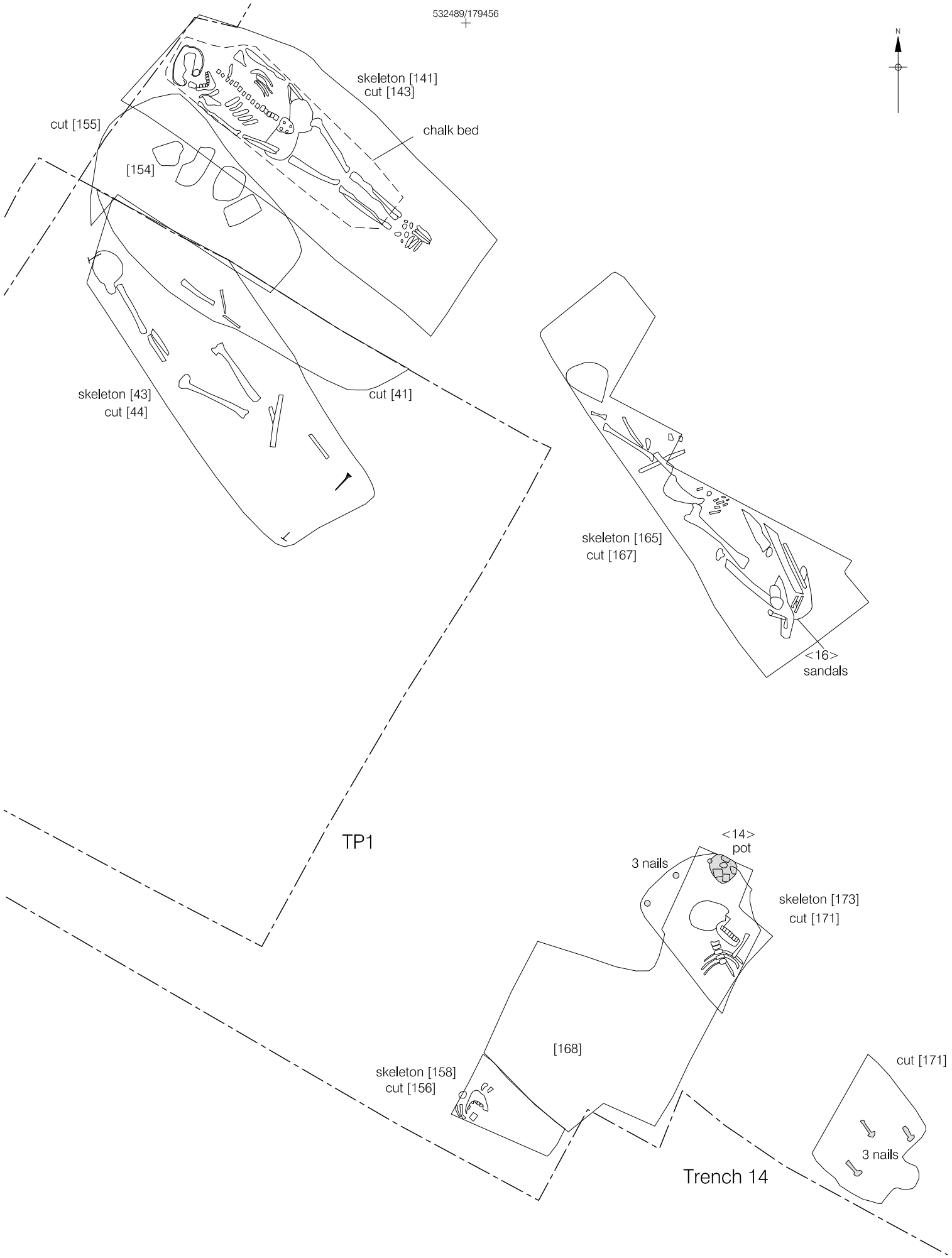


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Figure 9
Phase 3: detail 4 of burials
1:25 at A4

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N

Trench 15

Fig 11: detail 1

cut [210]
[220]
[208]
cut [207]
[254]
[271]
[279]
[277]
cut [278]
[248]
cut [337]
[274]
[219]
cut [275]
[263]
[251]
cut [253]
[219]
cut [318]
[376]
cut [377]
[267]
cut [268]
[241]
cut [242]
[221]
[263]
[227]
[287]
cut [284]

Trench 14

TP1

cut [126]

[162]
cut [163]

Fig 12: detail 2

Trench 18

[106]
[103]
[86]

Trench 13

skull
[366]
[346]
bone

Trench 12

Trench 18

Trench 11

[472]
cut [465]
[478]
cut [479]
[504]
[489]
[561]
cut [560]
[499]
cut [498]
[415]
cut [420]
[422]
cut [423]
[476]
cut [475]
[411]
[457]
cut [458]
cut [483]

Fig 13: detail 3

Trench 22

[577]
[577]
[577]
[555]
[562]
[556]
[563]
[578]
[574]
[557]
[564]
[578]
[574]

Trench 19

Trench 10

Trench 23

[585]

[555]
[562]

[432]

Trench 20

Trench 24

Trench 21

Trench 17

Trench 16

532480/179380

0 20m

Figure 10
Phase 4
1:250 at A3

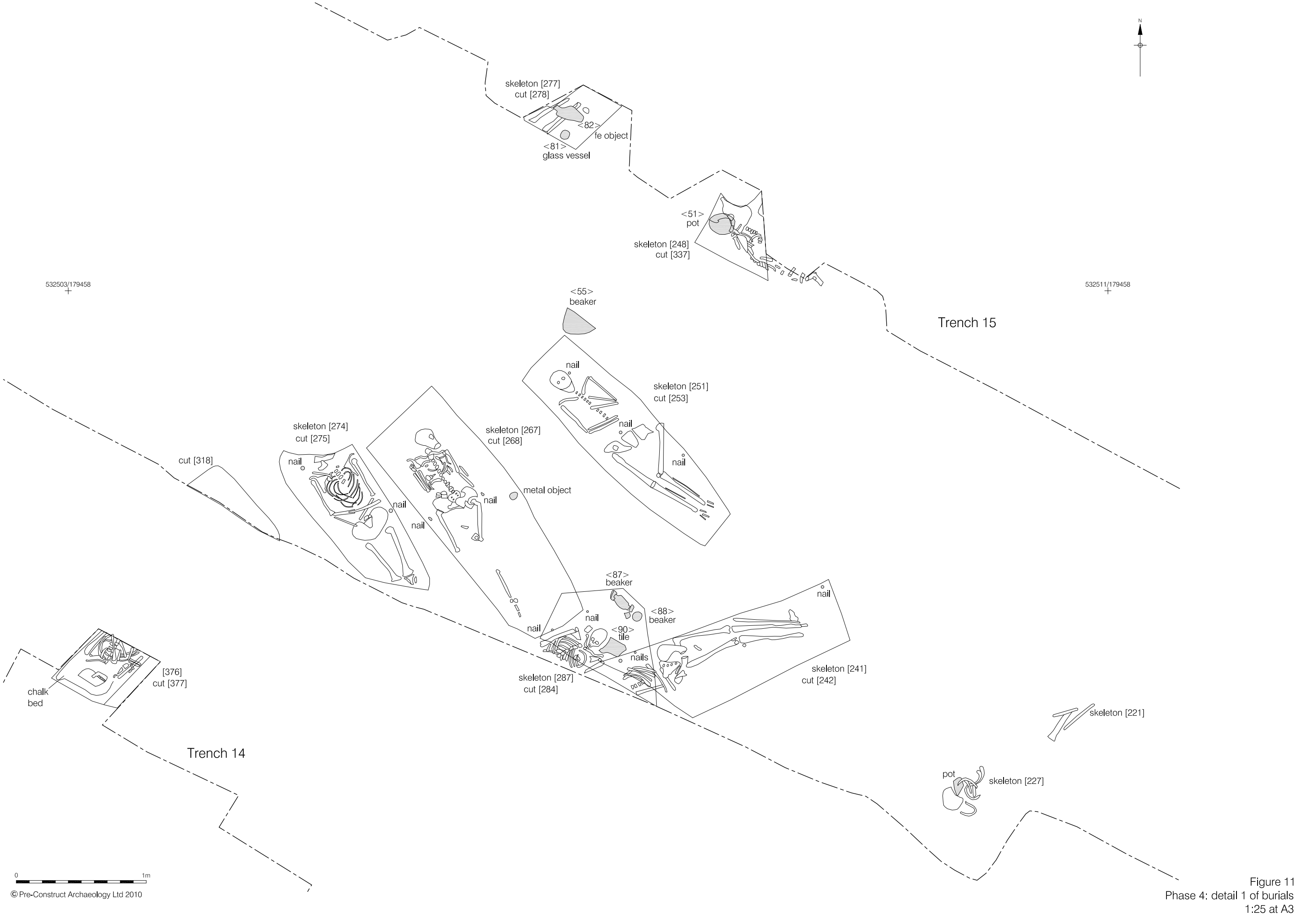

Figure 11
Phase 4: detail 1 of burials
1:25 at A3

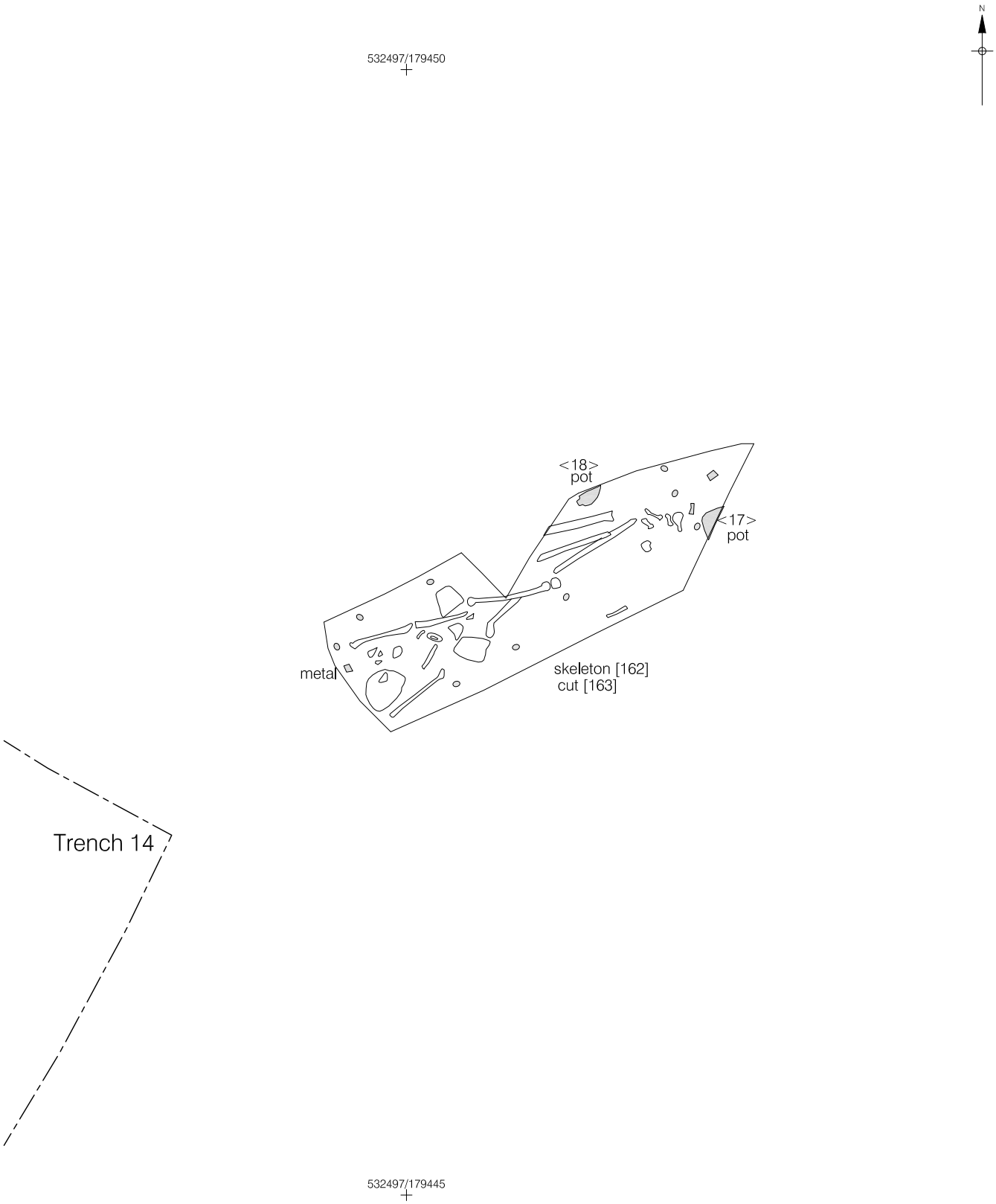

Figure 12
Phase 4: detail 2 of burials
1:25 at A4

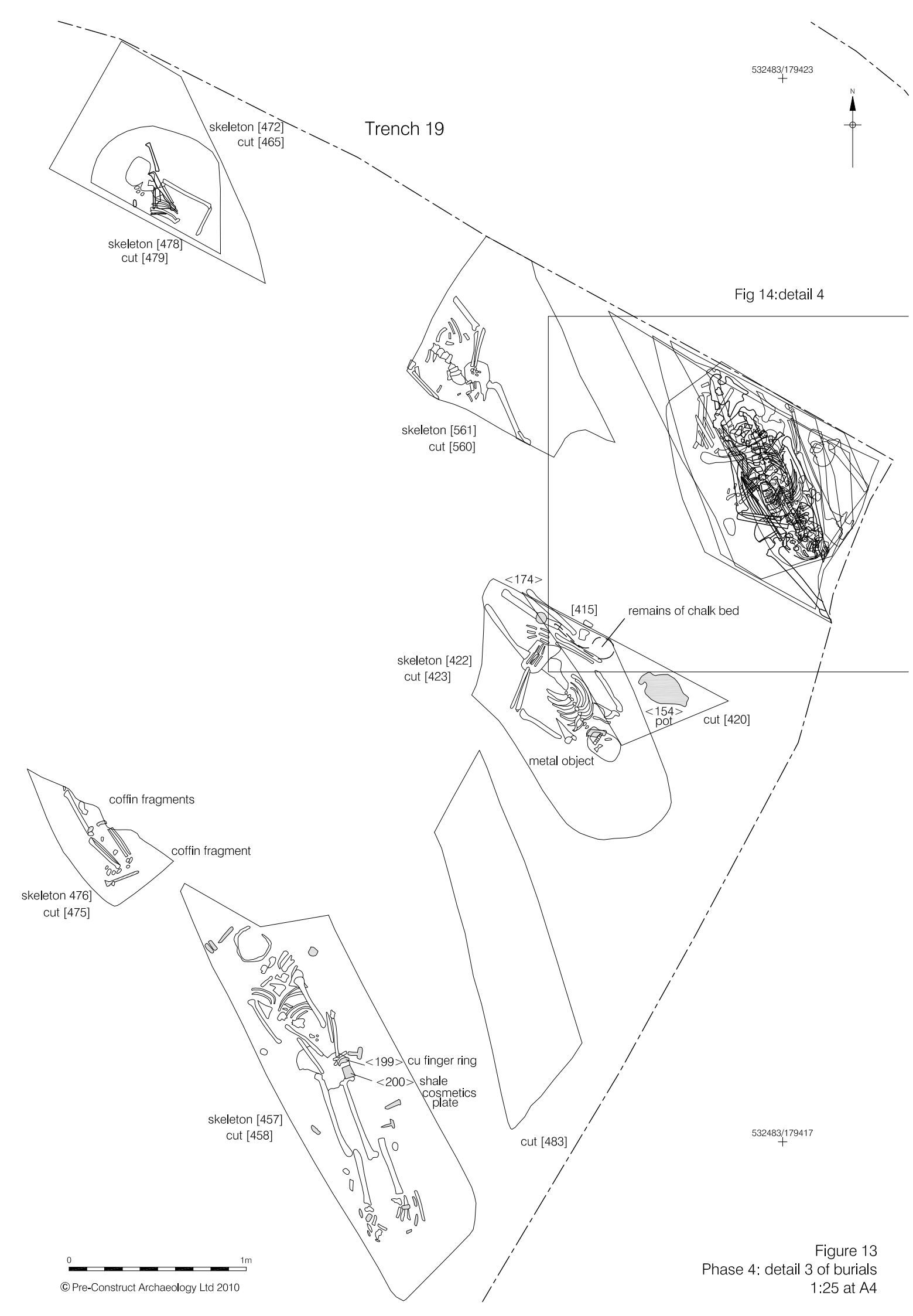

Figure 13
Phase 4: detail 3 of burials
1:25 at A4

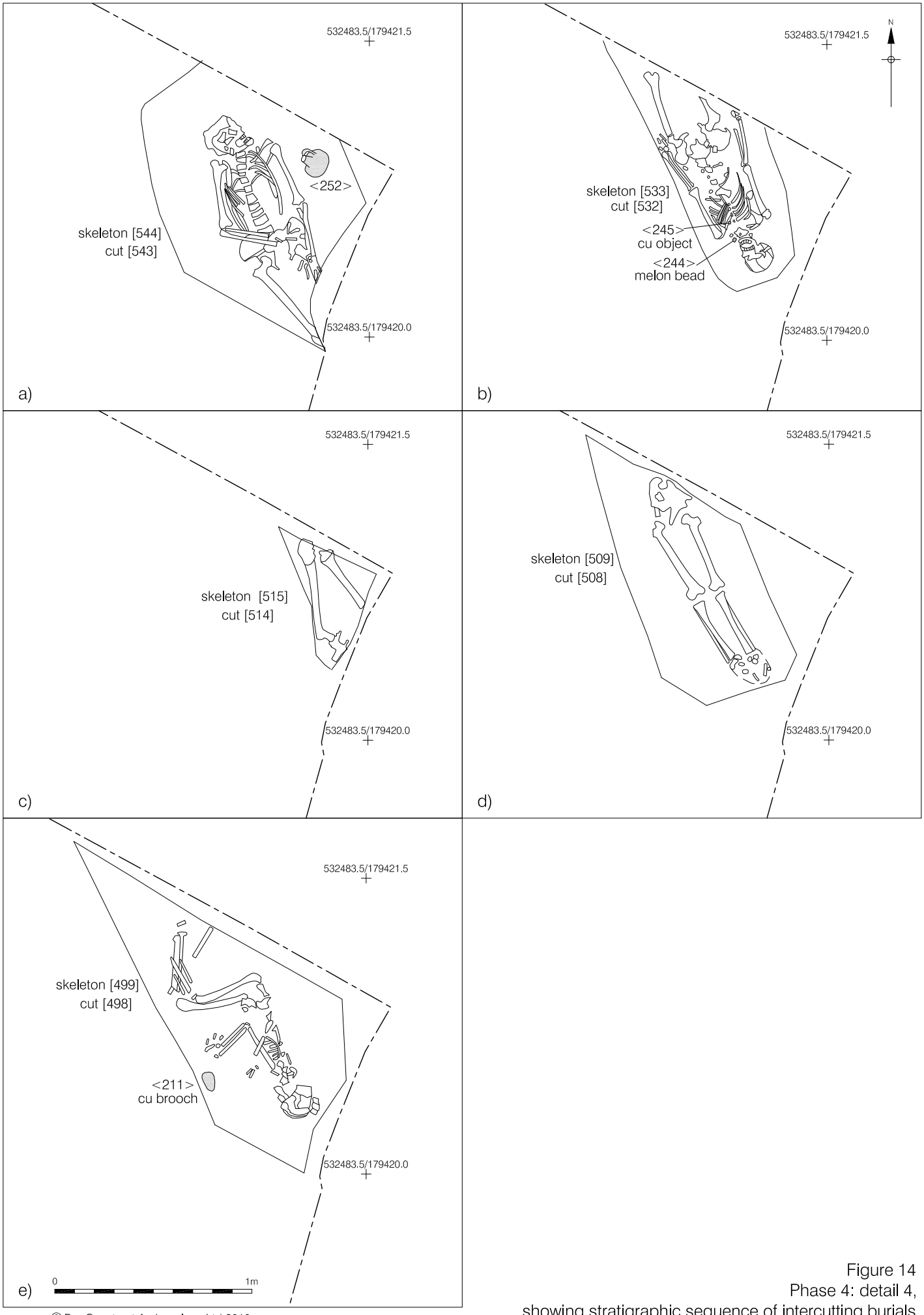

Figure 14
Phase 4: detail 4,
showing stratigraphic sequence of intercutting burials
1:25 at A4

N

532480/179470

Trench 15

Fig 16: detail 1

[201]

[247]

[239]

[199]

[212]
cut [213]

[203]
cut [204]

TP1

Trench 14

Trench 18

Trench 13

[397]

[345]

cut [348]

Trench 12

Trench 11

Trench 10

Fig 17: detail 2

Fig 18: detail 3

cut [529]

cut [535]

cut [538]

[427]
cut [429]

[435]

[466]

[516]
[505]

[520]
cut [521]

[440]

[419]

Trench 22

[409]

[516]
[505]

cut
[448]

cut
[450]

cut [424]

[549]

Trench 19

[408]

[412]

[548]

[550]

Trench 23

Trench 20

Trench 24

Trench 21

Trench 17

Trench 16

532480/179380

0 20m

Figure 15
Phase 5
1:250 at A3

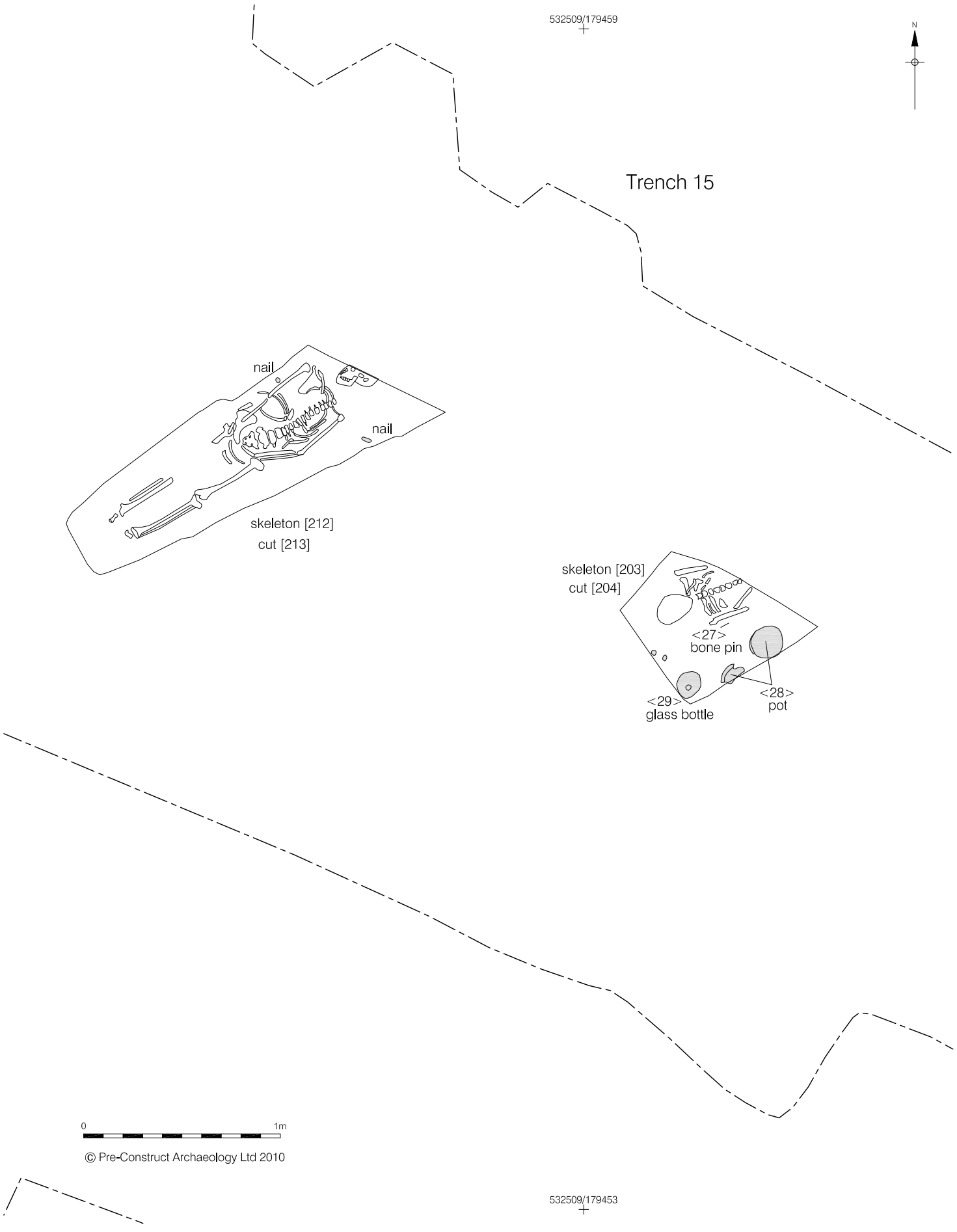

Figure 16
Phase 5: detail 1 of burials
1:25 at A4

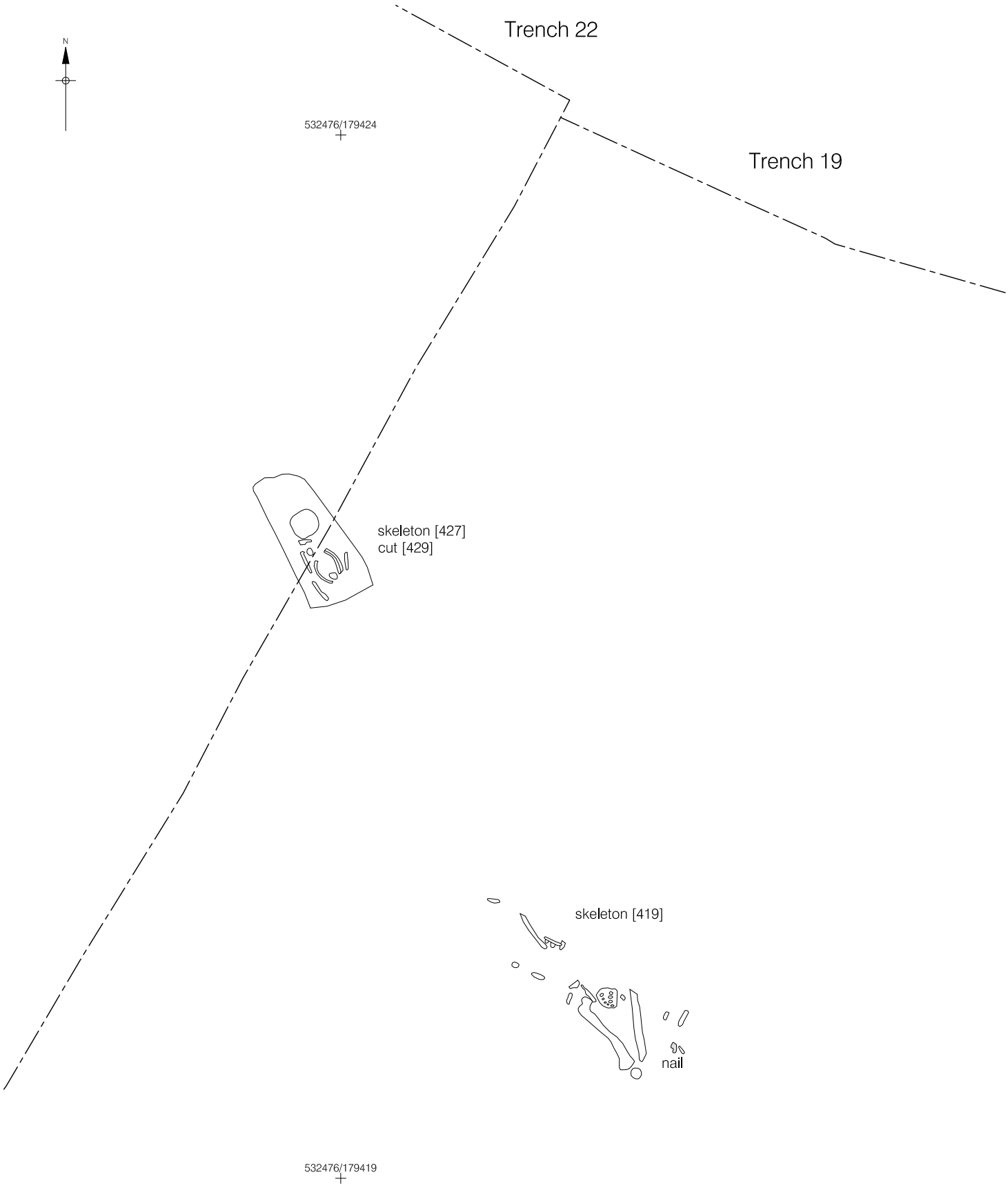

Figure 17
Phase 5: detail 2 of burials
1:25 at A4

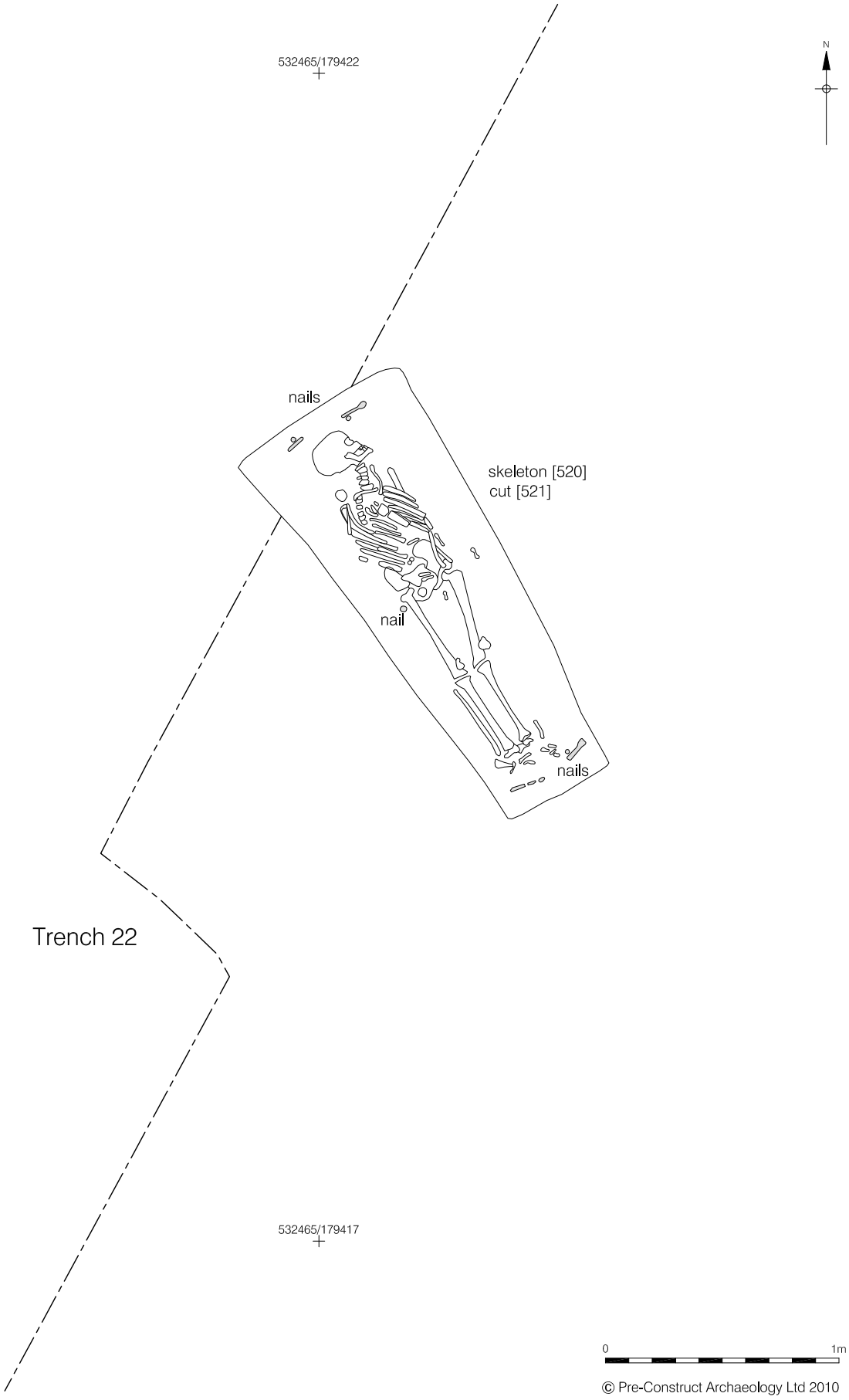

Figure 18
Phase 5: detail 3 of burials
1:25 at A4

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N

[220]

Trench 15

TP1

Trench 14

Trench 18

Trench 13

Trench 12

Trench 18

Trench 11

Trench 22

Trench 19

Trench 10

Trench 23

Trench 20

[426]

cut [431]

[591]

[604]

Trench 24

[451]

[459]

Trench 17

Trench 21

[459]

[451]

Trench 16

[250]

532480/179380

0 20m

Figure 19
Phase 6
1:250 at A3

532480/179470

N

[188]
cut [190]
cut [244]
cut [246]
cut [232]
cut [230]
cut [234]
cut [238]
cut [236]
Trench 15
[117]
cut [198]
cut [192]
cut [194]
cut [196]
TP1
cut [121]
Trench 14
cut [320]
cut [70]
[114]
cut [322]
cut [324]
cut [72]
cut [76]
cut [294]
cut [74]
cut [292]
Trench 13
cut [406]
cut [78]
cut [362]
Trench 18
cut [54]
cut [56]
Trench 12
Trench 18
Trench 11
cut [527]
cut [526]
cut [524]
cut [414]
Trench 22
Trench 19
Trench 10
Trench 23
Trench 20
Trench 24
Trench 21
cut [261]
cut [259]
cut [257]
[262]
Trench 17
Trench 16
[249]

532480/179380

0 20m

Figure 20
Phase 7
1:250 at A3

8 RESEARCH QUESTIONS

8.1 Original Research Questions

8.1.1 Following the evaluation conducted in 2007[66] an extensive series of research questions was posed in the Written Scheme of Investigation which was approved before the excavation began[67]. These are reproduced below, grouped into sections with the answers obtained from the excavation results and brief phase discussions summarising the findings by period.

8.2 Research Question: Natural Geology

- What is the nature of the natural geology and topography?
- Does the brickearth recorded in Test Pit 1 cover the northern part of the site?
- If not why not – has it been truncated or eroded naturally?
- Can the natural topography of the site be determined?

8.3 Natural Deposits and Topography (Phase 1)

8.3.1 The natural deposits that extended across the site consisted predominantly of sands and gravels. The surface of these natural deposits was recorded between 1.51m and 1.54m OD in Trench 15, which was located adjacent to the northern limit of the site on Trinity Street. Natural gravel was recorded at 1.25m OD in the northern part of Trench 19, which covered an area to the south of the modern basements. This slightly lower level may in part have been the result of over-excavation as this part of the Trench was vigorously stripped in order to make absolutely certain that the baked ground had not masked any burials. The levels recorded on the surface of the sand and gravel rose to the south and east to a maximum of 1.37m OD. Similar results were obtained from Trench 22 which was located immediately to the west of Trench 19. A representative level of 1.35m OD is valid for the undulating surface of the natural deposits in both the north and south of this Trench. The highest level recorded on the surface of the natural sand in the southern part of the site was 1.56m OD in Trench 21. The boundary between the developed soil horizon and natural sand was especially diffuse in this area due to the density of root action.

8.3.2 A sandy brickearth deposit was recorded in Trench 16, located in the extreme southeast corner of the site. The highest level recorded on this deposit was 1.68m OD, which was considerably higher than the levels taken on the nearby sand and gravel. A diffuse boundary with a mass of root disturbance was again evident in this area but the results from this Trench are comparable with those reported for the Harper Road burial which was located very nearby

[66] Killock 2007
[67] Mills Whipp 2008

just beyond the southern limit of the site[68]. The top of the grave cut for that burial was recorded at 1.69m OD; it is reported as truncating Langley Silts (brickearth). A very high level of root disturbance was also recorded for that burial which made interpretation and precise recording very difficult.

8.3.3 The excavation results demonstrated that the site was essentially flat, possibly with a slight rise in the natural levels toward the south. The central part of the site was approximately 20-30cm lower than the northern and southern sides, which may explain why an early Roman ditch ran through this area. However, it should be noted that the free-draining sands and gravels were unlikely to have required drainage ditches and these early Roman features were more probably excavated as part of system of land demarcation than a requirement for drainage.

8.3.4 An extensive brickearth horizon was not recorded during the excavation. Apart from the small area of sandy brickearth recorded in Trench 1 during the evaluation patches of brickearth were also evident in Trenches 12, 13 and 16. Trenches 12 and 13 were located in the northeast of the basement area; Trench 1 was located in the northwest of the basement; Trench 16 was located in the southeast corner of the site.

8.3.5 There was no evidence that the localised outcrops of brickearth had once formed part of a more extensive horizon that covered the site or that these patches were remnants left *in situ* as the result a general truncation caused by excavation for underground structures. Large areas of natural deposits located outside of the basement were exposed during the excavation but none showed any evidence that an extensive brickearth horizon had once capped the sand and gravel. However, it is possible that a thin capping of brickearth had been reworked into a topsoil horizon as a result of agricultural/horticultural landuse. Detailed study of the soil formation processes evident on the site refer to two periods of 'dark earth' formation. The earliest of these represented the modification of an 'argillic brown sand' by human interventions, most probably manuring[69]. The deposit being referred to here may have been a sandy brickearth horizon.

8.4 Research Question: 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 during the evaluation?
- What is the nature of this soil's morphology – can this provide indications of the early environment?
- Are there cut features or indications of early occupation at this level?
- Are there indications of pre-Roman activity on the site?

[68] Cotton, J., 2008. Harper Road, Southwark: an early Roman burial revisited in: J. Clark, J. Cotton and J. Hall *Londinium and Beyond* CBA Research Report 156,151-161
[69] See MacPhail, Appendix 9 of this report

8.5 Negative Evidence for Prehistoric Occupation

8.5.1 No features or deposits dating to any prehistoric period were evident. The earliest indications of activity on the site as represented by distinct archaeological features and deposits all date to the early Roman period and are dealt with below.

8.5.2 No direct evidence for prehistoric occupation of the site was evident, at least in terms of discrete features or deposits that contained exclusively prehistoric artefacts. 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[70]. Eleven sherds of prehistoric pottery were also recovered, covering the Late Bronze Age to Early Iron Age[71.] However, as with the flintwork, all of these artefacts were recovered as residual finds from Roman contexts. A late Iron Age coin, struck by the Cantii, was also recovered from a much later Roman context.

8.5.3 A soil horizon undoubtedly did develop above the natural sands and gravels. This would have occurred naturally without any human intervention. No evidence was evident demonstrating that this soil horizon was developed or modified prior to the Roman period. The nature of the early Roman horizon is discussed below.

8.6 Research Questions: Roman

- What is the evidence for early Roman activity on the site?
- What is the interpretation for the small post holes in Test Pit 9?
- Is there more evidence for early pits and associated features that were recorded in Test Pit 8?
- Is there any secure dating evidence for the suggested early Roman soil horizon recorded during the evaluation?
- What is the nature of this soil's morphology – can this provide indications of the early environment?
- What is the evidence for later Roman activity on the site?
- What was the function of the wide flat bottomed ditch recorded in evaluation Test Pit 8?
- Is there any evidence for differing landuse to the north or south of the ditch
- Is the ditch associated with Roman burials or a cemetery?
- Is there any indication for Roman structures associated with the domestic waste including pottery, oyster shell and building material that was retrieved during the evaluation from Test Pit 8?
- Could this waste be associated with a funerary monument?
- Are there any indications of a cemetery?
- Is the burial recorded in Test Pit 1 part of a cemetery?

[70] See Bishop, Appendix 8
[71] See Seager Thomas, Appendix 10

- What is the significance of the cremation discovered in this area in the 1950s – is it associated with a different cemetery?
- What is the significance of the late Roman cut feature in Test Pit 1?
- Is there any evidence for a ritualistic landscape?

8.7 Early Roman Development AD 43-180 (Phase 2)

8.7.1 Some evidence of an early Roman soil horizon was evident but it was poorly defined and there was no clear interface between this deposit and the later Roman 'dark earth' deposits. This in some cases let to the collection of conflicting data when the pottery dates from these deposits were compared to those of pits and ditches that had apparently truncated them. This topic is discussed more extensively below.

8.7.2 In some areas, especially those located in the southern part of the excavation, a very diffuse boundary was also evident between the developed soil horizon and the natural sands, silts and gravels. This phenomenon was particularly apparent in Trenches 16, 21 and 24 which was in large part due to the dense tree rooting that was prevalent in this area of the site and to some extent the softness of the sandier silt deposits found in the southern part of the site. The composition of these deposits contrasted with the more heavily cemented sands and gravels evident further to the north. The methodology employed in the excavation of Trenches 23 and 24, which consisted of machine reduction of these areas in spits, also precluded examination of the soil horizons in detail. The group of features recorded as small post-holes in the evaluation Trench 8 were almost certainly misinterpreted and were actually part of the dense tree rooting mentioned above.

8.7.3 Distinct units were evident in the micromorpholocigal column samples that included the sequences from the natural deposits up through the later soil horizons. An early 'dark earth' unit showing signs of human intervention, probably the result of manuring, was found above the natural sands and gravels[72.] To some extent the existence of an earlier soil horizon was evident during hand excavation of the 'dark earth' deposits as the frequency of finds decreased quite dramatically as the base of the soil horizon was reached. However, it should be noted a distinct interface between the early and late Roman soil horizons was virtually impossible to detect through hand excavation and that late Roman material was recovered from levels less than 0.30m above the natural deposits. A very good example of this comes from Trench 15 where 4th century coins were found in the lowest spits of the dark earth horizon. This would appear to indicate that whatever soil horizon had developed above the natural sands and gravels was extremely thin and the upper parts of it were probably reworked in the 4th century.

[72] See Macphail, Appendix 9 of this report

8.7.4 Following a period of early activity where organic matter was introduced to the soil the level of activity appeared to drop away and the surface of the early soil horizon shows signs of weathering[73].

8.7.5 The morphology of the early soil horizon has been discussed above in Para 8.2.2. Essentially the soil developed from poorly sorted silty sands with gravel, further details can be examined in Appendix 9. Examination of the environmental samples proved to be rather disappointing and these are unlikely to elucidate the nature of the vegetational environment, agricultural practice or food supply[74.]

8.7.6 Trench 15 represented the only area in the northern half of the site where the early soil horizon had escaped the ravages of modern truncations caused by excavations for forming basements. Of the five layers that formed Group 38, which represented the early soil horizon, only two produced dating evidence. A spot date of AD 50-120 was obtained from the pottery contained in layer [272] and a date of AD 150-400 from layer [222]. The latter may well be unrepresentative. Relatively late dates starting in AD 120 were also given by some of the pottery recovered from the early soils horizons in Trenches 19 and 22 but these were shown to be unrealistic by the pottery and assemblages obtained from cut features that had apparently truncated them. For example, elements of a ditch, [503], [444] and [618] Group 67, apparently truncated layer [540] which contained pottery dated AD 120-250. However, the pottery recovered from the ditch, along with the two first century coins it contained, demonstrated that the ditch was probably in use in the later 1st century and was itself being backfilled between AD 120-250, most probably in the earlier part of this time bracket.

8.7.7 All of the pottery assemblages recovered from the early soil horizons were very small, the largest consisted of nine sherds. Given that there was no obvious interface between the early soil horizon and the later 'dark earth' assemblages a few sherds of later pottery could very easily have been mixed with earlier material. One obvious fact that does emerge from a discussion of the early Roman soil horizon was that early material was scarce and although undoubtedly frequented in the 1st and 2nd centuries there are few signs of domestic occupation.

8.7.8 The site can essentially be divided into two halves when discussing early Roman landuse. The most imposing early Roman feature found in the northern half consisted of a large southeast-northwest aligned ditch, [119], [134], [180] etc Group 16, which traversed the entire area of the excavation and continued beyond its limits to both east and west. Very little dating evidence was recovered from the fills of this feature; a single sherd from an upper fill was dated AD 160-250. However, the east end of the ditch lay below a cluster of inhumations, [62], [84] etc Group 14, which contained pottery which consistently dated to AD 180-300. This showed that the ditch had probably gone out of use by the later 2nd or early 3rd centuries. This was confirmed by the relationship of the Group 17 ditch, [88], [331] etc, with a later ditch,

[73] See Macphail, Appendix 9
[74] See Allot and Batchelor, Appendix 7

Group 16, which had truncated it. The earlier fills of the Group 16 ditch contained pottery dated AD 250-400, this clearly demonstrated that the early ditch had gone out of use by this time.

8.7.9 The frequency of pottery and other domestic waste such as bone and shellfish within the ditch fills was very low. This suggested that the northern half of the site was not close to an occupied area and was only occasionally frequented before the later Roman inhumation cemetery was established.

8.7.10 Far more evidence of early Roman occupations was evident in the southern half of the site. A relatively small narrow ditch, Group 67, followed exactly the same alignment as the much larger ditch, Group 16, described above. This shows that even though the area may have been something of a backwater in the earlier Roman period the land had been surveyed and subdivided on a regular grid. The Group 67 ditch produced some very interesting finds. A large quantity of disarticulated human bone was recovered from the fills and a row of three skulls laid in the base of the eastern half demonstrated that the disposal of the human remains had not been done on a casual basis. The arrangement of the skulls can undoubtedly be classed as structured deposition. The presence of these human remains might also be seen as somewhat unusual in a period when cremation was a far more usual burial rite, whatever their true meaning might be it was not simply interment.

8.7.11 Further to the west an urned cremation had been placed in the ditch. The cremated bone had been placed in a vessel dated AD 50-160. No evidence of further cremations was recovered during the excavation but the occurrence of this single example might give some context to the report of a Roman cremation found on or near the site in the 1950s.

8.7.12 The pottery recovered from the fills of the ditch suggested that it was in use during the second half of the first century and was backfilled in the late 1st or early 2nd centuries. Two coins, one of Domitian dated AD 81-96 and another of Claudius dated AD 41-54, were also recovered from the fills, which confirmed the pottery dating. One of the upper fills of the ditch contained pottery dated AD 120-250, which show the period in which the ditch was being backfilled.

8.7.13 A second early Roman ditch, [551], [593] Group 89, was evident to the west of the feature described under Group 67. This Group 89 ditch had been laid out perpendicular to the Group 67 feature, but there was no intersection between the two. The fills of the Group 89 ditch produced five pottery assemblages four of which dated to AD 50-120 and one of which dated AD 120-400. These pottery dates, and the alignment of the ditch, suggest that the two features were contemporary.

8.7.14 A group of features consisting of three shallow, flat-bottomed linear cuts, [488], [461], [615] and a line of four pits, [570], [481], [471], [455], was evident to the south and east of the ditch system formed by Groups 67 and 89. These features, Group 7, almost certainly represent a structure, possibly an open colonnade which enclosed a rectangular cloister with a focus to

the southeast of Trench 19. No evidence was recovered that would support a hypothesis proposing the existence of a stone structure in this area. The fills of these features did not contain the chipped stone and mortar fragments that are characteristic of robber trenches. This suggests that the structure was made from timber. The flat-bottomed trenches had been cut down to the surface of the sand and gravel and would have held ground beams that supported the above-ground structure.

8.7.15 The largest single feature that formed part of Group 7 was a shallow linear cut, [488] etc, aligned northeast to southwest which measured c. 10m long, 1.80m wide and 0.24m deep. This feature was originally recorded as a ditch in Trench 8 of the evaluation. One of the post-pits that formed the alignment to the east of this feature was also first seen in Trench 8.

8.7.16 The dating of this structure is slightly problematic. The pottery recovered from the fills of the cut features commonly dates to the AD 70-120 period, with one group dated AD 120-250. The latter might derive from the disuse of the structure rather than its inception. The largest linear cut was originally dated AD 350-400 in the evaluation but this was due to the mistaken identification of a sherd in very small group. The revised date for this assemblage is now AD 180-300, which is clearly considerably later than those from the other elements of Group 7. However, the upper levels of these cut features were never clearly defined during the evaluation and this small assemblage may contain later material derived from the 'dark earth' soil horizon.

8.7.17 The alignments of the Group 7 structure is clearly related to those of the ditch system and formed by the Groups 67 and 89, which could be interpreted as an enclosure around the structure, although as previously discussed the alignments of the ditches undoubtedly formed part of a larger pattern of land division laid out on a grid system. The ditch system undoubtedly dated to the 1st or early 2nd centuries and it would appear that the Group 7 structure must logically be placed in this wider context and also dates to this time.

8.7.18 During the course of the excavation 152 Roman coins were recovered, the vast majority of which dated to the mid 3rd century or later. However, a small group of six 1st or early 2nd century coins was found in the southern half of the excavation. All of these coins were found in or to the south of the Group 67 ditch. The spatial distribution of these coins would suggest a focus of early activity in the area of the Group 7 structure.

8.7.19 An extremely fragmentary inhumation burial was found below the Group 67 ditch. No datable artefacts were recovered from this grave but the depth of the burial did suggest that there was little doubt that it pre-dated the Roman ditch, although the fills of these features were very similar.

8.8 The Establishment Of The Inhumation Cemetery AD 180-300

8.8.1 Some limited evidence for human burial was apparent in Phase 1. This was represented by a single fragmentary inhumation below the Group 67 ditch and the urned cremation which had

been placed in the ditch. A large quantity of disarticulated human bone was also found in the ditch and it appeared that the feature was a focus of burial and the ritual deposition of human remains in the early Roman period. However, there was no evidence that a more extensive cemetery existed in the late 1st or early 2nd centuries and this phase of activity had probably ceased by the second quarter of the 2nd century.

8.8.2 A larger inhumation cemetery was established on the northern half of the site in the late 2nd or early 3rd centuries. The original density and distribution of the graves is almost impossible to establish as the entire area that held burials dating to this period had been truncated by excavation for modern basements. The extant burials therefore represent only those that had been buried deeply enough to survive.

8.8.3 A distinct group of burials was found in the southeast corner of Trench 12. Of the five burials in Group 14 four were laid adjacent to each other, all were aligned northwest-southeast with the head to the northwest. This group of four burials may have been placed together in a family plot, although no signs of an enclosure were found. However, burials were noticeably absent to the north of Group 14, the only area to the east of the large Group 17 ditch that lay within the excavated area.

8.8.4 A second group of burials was found in the western part of Trench 14. The burial found during the evaluation in Trench 1, skeleton [39], forms part of this group. All three inhumations had been laid roughly east-west with the head to the west. Differing burial rites were evident even in this small group. Skeleton [141] was surrounded by chalk which had probably been placed in a coffin, although no evidence for the coffin was extant.

8.8.5 A very small part of a Roman cut feature dating to this period was found along the northern periphery of Trench 1 during the evaluation. This feature did not fit well with any of the features subsequently investigated during the area excavation of Trench 14. In part this was due to the area being frequently flooded during the early stages of demolition when water from broken pipe systems cascaded through the ceiling above it. The face of the evaluation trench was eroded and at least some of the stratigraphy in this area was lost. However, the fragment of the pit excavated during the evaluation might have been part of pit [155] which was found below skeleton [141].

8.8.6 Full details of the Phase 3 burials are contained in the Phased Archaeological Discussion, Section 7. In all sixteen graves have provisionally been dated to this period.

8.8.7 The most imposing feature dating to this period was a large northeast to southwest aligned ditch, [88], [331] etc Group 17, which passed through Trenches 11, 12, 13 and 18. The ditch was traced over a distance of c. 34m and was a maximum of 5.30m wide and 0.86m deep. This major topographical feature separated the burials recorded as Group 14 ([62] etc) in Trench 12 from the remainder of the Phase 3 burials located to the west. It continued in use throughout the period in which the cemetery was in use but did not apparently define it or form its eastern limit. The pottery dating recovered from the various fills of the ditch indicated

that it was in use throughout the 3rd century and continued in use into the 4th century and possibly later.

8.8.8 Establishing a date for the original excavation of the ditch is difficult as none of the horizontal deposits that it had been cut through were extant due to modern truncations. However, the Group 17 ditch undoubtedly truncated the earlier northwest to southeast aligned Group 16 ditch, which had almost certainly gone out of use in the second half of the 2nd century.

8.8.9 A very large quantity of disarticulated, or semi-articulated, human bone and near complete pottery vessels were found within the ditch fills. In one area a group of three skulls had been arranged in a triangle and a near complete vessel placed in the centre. A second concentration of pottery was found in a part of the ditch located slightly further to the south of the skulls. Human longbones also formed a notable part of the finds assemblage throughout the length of the ditch. Another noticeable feature of the placed deposits was that many of them were situated on the lip of the ditch on the west side at the base of the very gentle slope that passed from the pronounced break of slope of the 'V' up toward the actual edge of the feature. It appeared that not only was the ditch set aside for the performance of rituals associated with the cemetery but that particular parts of the ditch were favoured for deposition.

8.8.10 The purpose of the ditch, apart from its clear cult status, was difficult to define. It was almost perpendicular to the earlier Group 16 ditch which it truncated, if not aligned exactly to it. It clearly formed part of a system of land division that was already established. The ditch could have defined an area that was originally designated as a cemetery but if it did this was soon ignored as the burials on the east side of it in Trench 12 showed. Whatever the original purpose the feature was adopted for the ritual deposition of pottery and human body parts.

8.9 Continued Use Of The Inhumation Cemetery AD 300-400+ (Phase 4 and 5)

8.9.1 Although the later use of the cemetery is discussed here as a single linear event it should be noted that the later use of the cemetery has been divided into two phases, Phase 4 and 5, the last of which represents the very late 4th and early 5th centuries. These burials are particularly important as very few securely dated examples from this period have been recorded. However, the continued use of the cemetery can simply be described as a single phenomenon.

8.9.2 Two distinct clusters of burials provided evidence that the cemetery continued in use up to the very latest decades of Roman rule in Britain. One of these lay adjacent to the northern periphery of the site in Trench 15. Eleven burials were recorded in this area, all of them located in the eastern part of the Trench. This was a point of interest in its own right as no burials were evident outside of a clearly defined area. This implies that there were differing plots demarcated within the cemetery, although how this was achieved is unclear. No walls were found and timber fencing is perhaps the most likely solution, although hedges could have demarcated areas and left virtually no trace in the 'dark earth' horizon into which the burials had been cut. The 'dark earth' was a truly opaque horizon in which it was virtually

impossible to detect cut features, even the presence of burials only became obvious once skeletal remains were encountered.

8.9.3 One exception to this was an extensive linear cut recorded in the western part of Trench 15. This feature had been truncated by modern intrusions and its true extent and nature are difficult to judge but it might represent a robber cut for a stone structure, although no associated features were found that might have allowed a ground plan to be established. The edges of the feature were difficult to define precisely but it appeared to be very steep sided with a flat base; this suggested a structural cut rather than a ditch. The fills also appeared to represent backfilling rather than silting. Although the true nature of this feature cannot be established the presence of a structure of any sort in this area might explain why no burials were recorded in this part of the trench. The pottery assemblages recovered from the fills were very small. One of the lower fills contained pottery dated AD 300-400 and a later fill produced a coin dated AD 335-341.

8.9.4 The sequence of burials recorded in the eastern part of Trench 15 demonstrated some very interesting developments regarding the alignments of the graves and possible interpretations concerning religious beliefs. The earliest burials, none of which date to before the second quarter of the 4th century, were aligned northeast to southwest. The second group had been buried aligned northwest to southeast with the head to the west. These might traditionally have been interpreted as Christian burials, although there is no definitive evidence that east-west burial was an exclusively Christian rite. By the mid 4th century Christianity was becoming a more widespread belief, particularly among the urban communities, and had of course been adopted as the state religion of the Empire. However, the latest two burials reverted to a northeast to southwest alignment. Coins recovered from the soil horizon into which the late burials were cut, and the fill of one of the burials, date to after AD 388. Although the interpretation of differing grave alignments as being diagnostic of religious belief may be entirely specious the sequence in Trench 15 is still of interest in this respect as it demonstrates that differing burial rites were adopted within a defined plot and that if differing beliefs were held either by the deceased or their families this did not apparently debar them from burial in the same area.

8.9.5 With the exception of a single burial that extended below the modern foundations that separated Trench 14 from Trench 15 no burials dating to Phases 4 or 5 were found in the basemented area to the south of Trench 15. This was undoubtedly due to modern truncation. The later burials found in Trench 15 had all been cut into the ‘dark earth’ soil horizon and only the earliest examples penetrated the surface of the natural sands and gravels. Even where this had occurred the impact on the natural deposits was negligible. As the ‘dark earth’ was totally truncated in the basement areas it is not surprising that burials that can be securely dated to this period were also absent. The dating evidence for the Phase 4 and 5 burials in Trench 15 was mainly derived from the coins recovered from the soil horizon into which the burials had been cut rather than the artefacts found in the graves.

8.9.6 A second cluster of Phase 4 and 5 burials was found in the southern half of the site immediately to the south of the basemented area. This group of burials had been heavily impacted by modern intrusions, particularly a large oil tank set into a concrete surround. Many of the burials were fragmentary but it appeared that the area of the Phase 2 ditch, Group 67, formed a focus for them. The earlier ditch had been replaced in the 3rd century by a larger feature, [452], [530] etc Group 65, which apparently formed the southern limit of the cemetery. Only one burial was found to the south of this feature, in Trench 22, and it is doubtful whether the ditch was a prominent landmark when this interment took place.

8.9.7 Fourteen inhumations formed the cluster in the northern half of Trench 19. They were invariably aligned northeast to southwest although the head was not by any means placed in a predominant position. Good dating evidence was not available for all of the burials but where present it invariably suggested a date between AD 250 and 400 or later.

8.9.8 One group of particularly noteworthy burials consisted of a series of four inhumations that apparently been buried in the same grave cut. Group 64 consisted of skeletons [544], [533], [509] and [499]. The proximity of one skeleton above another is the determining factor in this discussion, as is the completeness of the skeletons apart from areas lost to modern truncations. It is most unlikely that these burials could have been made at separate times without one disturbing another, even if the graves were marked. The earliest grave in the sequence contained a flagon dated AD 300-400.

8.9.9 The continued use of the cemetery in the very late Roman period, defined as features or deposits dated to after AD 350, was attested by burials found both in the north of the site, in Trench 15, and in the south by three burials found in the northern parts of Trenches 19 and 22. In Trench 15 skeleton [203] was buried with a pottery vessel, glass bottle and a bone pin. The latter could have been a dress fitting or worn in the hair, although it may perhaps have been too short for this. A coin recovered from the fill is dated AD 388-402, as was a coin produced by layer [199] into which the burial had been cut. Skeleton [212] had also been cut into the same layer and the fill of this grave contained pottery dated AD 350-400.

8.9.10 Two fragmentary skeletons were located in the north of Trench 19. Skeleton [419] had been heavily impacted by modern intrusions and only fragments of the skeleton survived. The very small pottery assemblage associated with the skeleton consisted of residual sherds. However, the grave truncated layer [440] which contained pottery dated AD 250-400. This wide date range could have allowed the grave to have been part of Phases 3, 4 or 5. However, layer [440] was the same as layer [412] which contained coins dated AD 350-353 and AD 364-378. The coins place this burial in the mid-late 4th century or later.

8.9.11 The fragmentary burial of a child, skeleton [427], was evident c. 1.5m to the northwest of the burial described above. The pottery recovered from the grave fill [428] was dated AD 300-400. This burial had also been cut into layer [440].

8.9.12 The burial found to the south of the Group 65 boundary ditch in Trench 22 could not be securely dated. No grave goods had been placed in or around the coffin. However, the soil horizon into which it had been cut contained coins dated after AD 367 and this formed part of a sequence that sealed the upper fills of the boundary ditch. This burial had not penetrated the natural sands and gravels; the base of the cut was still within the 'dark earth' horizon. This would suggest that the grave had been cut from a considerably higher level than the other burials in this area, possibly at a slightly later period.

8.9.13 An extremely large square pit had truncated the east end of the Group 65 ditch which marked the southern limit of the cemetery. The full extent of the feature was not recorded as it had been truncated by modern intrusions, as seen the feature measured 3.40 wide and was 1.58m deep. One of the lower fills of the pit contained pottery dated AD 300-400. The latest fill, contained a slightly larger assemblage dated AD 350-400 and five coins, three of which were dated AD 353-361. The backfilling of this pit can be dated to the second half of the 4th century.

8.9.14 Although the function of the feature was not clear it was interpreted as a well due to the extreme depth attained. It is also difficult to imagine what other function it might have fulfilled. No sign of a well lining to support the sides of the feature was evident but clearly one must have existed if the feature had stood open for any length of time. A substantial stone lining that had since been robbed out is one possibility. A parallel for this feature could be found at West Tenter Street. Feature 169 consisted of a very large deep pit with a square base supported by a timber lining and masonry rubble. This was thought to have been a remnant of a more complete masonry lining that had been robbed out. A great deal of discussion surrounded the function of this feature, the latest interpreted by Barber and Bowsher was a well[75]. This also seems the most likely interpretation for the large square cut found at Trinity Street.

8.9.15 A considerable quantity of domestic waste and building material was recovered from a soil horizon recorded as layers [31] and [32] in Trench 8 of the evaluation. These deposits can be equated with deposits [408] and [412] which were excavated in Trench 19 and a series of deposits excavated in Trench 22. No direct evidence of structures that might be the source of this material was found on site. Some high status building material such as marble inlay, boxed flue tile and ceramic water pipes formed notable parts of the building material assemblage. The fragments of water pipe may have originated from a bath-house, although not necessarily, and are few in number. The assemblage of flue tiles is also relatively small and fragmented. These elements are very unlikely to have formed parts of a funerary monument and must have come from domestic structures. It is unlikely that material found so far to the south of the Southwark settlement derived from high-status structures situated further to the north such as the Winchester Palace, a local source is far more probable.

[75] Barber and Bowsher 2000 p 321

8.9.16 Large fresh assemblages of brick, tile and high status stone paving, inlay, mosaic fragments and stone and tile tesserae were recovered from the later phases of deposition on site[76]. This material may originate from well appointed funerary monuments or religious buildings, both of which are well-paralleled in Southwark and on sites in the immediate vicinity such as 165 Great Dover Street[77] and Tabard Square[78]. No funerary monuments were identified at 28-30 Trinity Street but the cemetery clearly extended beyond the bounds of the site and there is a high probability that such structures existed in the immediate environs of the site.

8.10 Research Questions: Medieval and Post Medieval

- Are there any boundary ditches cut through the medieval ploughsoil?
- Is there any secure dating for the post-medieval horticultural soils?

8.11 Medieval and Post-Medieval Developments (Phases 6 and 7)

8.11.1 The methodology set out in the Written Scheme of Investigation called for the machine reduction of all medieval and post-medieval deposits until the late Roman horizons were reached[79.] Given that these horizons were stripped by machine no opportunity presented itself for these research questions to be addressed.

8.11.2 If medieval ditch systems had traversed the area they had not truncated the late Roman soil horizons where they were extant.

8.11.3 Machine excavation is of course something of a blunt instrument when dealing with archaeological deposits. Fragments of medieval soil horizons remained after machine clearance and were excavated by hand.

8.11.4 The vast majority of the features and deposits dated to the medieval period consist of layers of the homogenous soil horizon that were identical in colour and composition to the layers of late Roman material that were found below them. In the northern half of the site traces of these deposits only survived in Trench 15 which was the only part of the area not to have been subjected to the large-scale horizontal truncation that resulted from the excavation of extensive basements. The deposits presently phased as medieval layers in the southern extremity of the site, Trenches 16, 20 21 and 24, almost certainly originated as layers of the soil horizon deposited in the late Roman period that had later been impacted by medieval horticultural activity that led to the localised deposition of medieval artefacts in the form of pottery and a coin. The levels at which these deposits were found, their positions in the base of the stratigraphic sequence and the extremely small sizes of the medieval assemblages recovered all strongly

[76] Sudds and Hayward 2009
[77] Mackinder 2000
[78] Killock 2009
[79] Mills Whipp Projects Ltd 2008

suggest that extensive medieval deposition did not occur and that these layers represent Roman levels that contain intrusive medieval material.

8.11.5 Where medieval pottery was recovered it dated from 1080 onward throughout the medieval period.

8.11.6 Some fragmentary layers of later horticultural soil horizons survived as remnants after the bulk machine reduction and were excavated by hand. These contained pottery dated from 1550/1580 and later.

8.12 New Research Questions

8.12.1 Can the dating of the timber structure found in the southern half of the excavation be refined?

8.12.2 Can parallels for this structure be found? Is this building likely to represent an example of an 'imported' Roman type or, given the early date and timber construction, can this building be seen as part of a Late Iron Age tradition that continued into the Roman period?

8.12.3 Is there any link between this structure, the early Roman ditch system that surrounds it and the transitional Late Iron Age-Early Roman inhumations found immediately to the south of the site boundary?

8.12.4 What is the significance of the system of land division established in the early Roman period? Can this system be linked to the alignments of the major Roman roads in the area.

8.12.5 Can the cremation burial found in one of the early ditches be more precisely dated?

8.12.6 Is there further evidence for cremation being used as a burial rite at the site, or the site being used as an area to perform the act of cremation itself?

8.12.7 How does the cemetery found at Trinity Street relate to other known cemetery sites in the area? In particular, what are the similarities and differences to the cemetery at 165 Great Dover Street?

8.12.8 A very broad spectrum of burial rites was apparent within the cemetery. Can these be paralleled in other Roman cemeteries in Southwark and London?

8.12.9 A large number of Roman coins were collected from the site. What can this assemblage tell us about the development and continued occupation of Southwark in the Roman period?

8.12.10 A small but very significant assemblage of early Saxon pottery was recovered. What is the significance of this assemblage for Southwark in the Saxon period?

9 IMPORTANCE OF THE RESULTS, FURTHER WORK AND PUBLICATION PROPOSAL

9.1 Importance Of The Results

9.1.1 The results from the excavation highlight the growing understanding of the extent and landuse of the hinterland of Roman Southwark south of the Borough Channel. Relatively little excavation work has taken place in this area and around Trinity Square the retention of the fine 19th century buildings has precluded recent excavation work. The results are important in merely demonstrating the extent of Roman landuse, particularly as the cemetery did not enjoy a roadside location.

9.1.1 The existence of a possible shrine in the southern half of the site places the apparently isolated Harper Road burial into a completely different context. One of the previously unexplained aspects of this burial was why it had been placed is such an area so far from the major roads or other foci, especially given that the deceased appeared to be a person of some standing. Whatever the significance of the structure may be the early Roman ditch system to which it is aligned may date to the same period as the burial.

9.1.2 The presence of a relatively early cremation burial and an early, although undated, inhumation place the Harper Road burial into a more significant and wider landscape.

9.1.3 A period of abandonment is apparent from the around the second quarter of the 2nd century until the late 2nd or early 3rd centuries. This can be shown both by the features present and pottery dating for them but also from the coin assemblage which was obtained from systematic metal detecting of the spoil. The abandonment of the site in this period has wider implications for occupation is this area of Southwark in this period, as has its revival around a century later.

9.1.4 The sequence of burials, dated by a wealth of coin evidence, especially those in Trench 15, may provide valuable and precise data when assessing similar burials and the grave goods placed in them.

9.1.5 The Trinity Street cemetery is just one of a series of recent excavations that have thrown new light on the cemeteries of Roman Southwark. The results should be compared to those of other cemeteries in the Southwark area and those of Roman London on the north bank. Some of the burial types discovered can only be paralleled in London and in one instance, the use of the lead reinforced timber coffin, Trinity Street represents the only example found in the Southern Cemetery.

9.1.6 The frequent placing of human remains, particularly skulls and longbones, in ditches of all periods demonstrates clear evidence of ritual activity on the site. The full significance of these occurrences will almost certainly never be known as they pertain to belief systems that were not documented in the Roman period. However, the results of the excavation can contribute to studies of this phenomenon as a part of Roman, or perhaps more precisely Romano-Celtic, life.

9.1.7 The coin retrieval and dating has also provided unequivocal evidence that burial on the site continued into the very last decades of Roman rule in Britain. The data retrieved from this excavation, and that from the nearby temple complex at Tabard Square, suggests that a strong Roman focus continued around the crossroads of Stane Street and Watling Street into the 5th century. This evidence contrasts with the traditionally held view that the late Roman settlement in Southwark contracted toward the bridgehead and the area to the south was abandoned. The combined results of these excavations have demonstrated that a more complex model of late Roman demography is emerging.

9.1.8 The Roman pottery is of importance regionally as an assemblage from a cemetery and as a sample of material from 'dark earth' deposits.

9.1.9 The Roman coins from Trinity Street represent an extremely important body of data for Southwark and London. A rare late Iron Age coin struck by the Cantii is of national significance. A coin of a previously unknown type of the British usurper Allectus is of international significance to numismatists.

9.1.10 The small finds represent an important group of material from a cemetery site and from 'dark earth' deposits. As such they have local and regional significance and can also contribute to national research agendas.

9.1.11 Given the rarity of Early Saxon material in the region, the presence of a small but fresh pottery assemblage of this date on site is of particular interest. A total of 20 sherds were identified indicating some form of activity in the near vicinity during the 5th or early 6th century. The only other material of this date in the immediate area has been recovered fairly recently through excavations at Lant Street and in Bermondsey.

9.1.12 Apart from the overall significance of the animal bone assemblage, which produced recommendations detailed below, skeletal remains of a donkey have been recognised. This is a highly significant find and represents one of only two donkeys so far identified in Roman London and one of only four such animals from Roman Britain[80]. The other Roman London donkey was discovered in a late 2nd century deposit at Hunt's House, part of Guy's Hospital, also within Roman Southwark. Donkeys, and mules, were clearly heavily exploited in the Roman world but it is little known if they were equally important within the northern empire provinces.

9.2 Further Work

9.2.1 Comparisons should be sought for the large timber structure found in the southern half of the site. The paucity of early domestic waste, combined with the ground plan, suggests this is not a domestic building. Comparisons might best be sought in religious structures such as those known from Danebury or Uley[81]. The structural elements recorded at Trinity Street suggest an

[80] Baxter 2002, 93

[81] Drury, P.J., 1980. Non Classical Religious Buildings in Iron Age and Roman Britain: A Review Fig 3.2 in: W. Rodwell (Ed.) *Temples, Churches and Religion in Roman Britain*

enclosed cloister with a form of colonnade around a focal point ,which might have been a cult object or shrine. The structure and surrounding ditches could be viewed as an early Romano-British continuation of a Celtic tradition seen in northern Gaul at sites such as Gournay and Ribemont sur Ancre[82].

9.2.2 If this interpretation is correct the early ditch system which surrounds the structure might be viewed in a slightly different light. The finds recovered from the ditches should be analysed with this in mind. Votive objects placed into ditches around Gallic or Gallo-Roman cult sites often included human bones, animal bones, martial objects, coins, fibulae or objects of personal adornment[83]. With the exception of weaponry, which the civilian population was presumably forced to surrender after the conquest, all of these object types occur within the ditch system surrounding the Group 7 structure. The spatial distribution of object types around the building should also be examined.

9.2.3 The southern part of the excavation lies in close proximity to the well known early Roman burial known as the Harper Road woman. The results should be correlated and discussed together. At least one late Roman burial is also known from the area immediately to the south of the site, as is a late Roman ditch that that appears to follow the same alignments as those recorded at Trinity Street. These results should also be mapped and discussed together with the Trinity Street material.

9.2.4 The cemetery should be compared and contrasted to cemetery sites in Southwark, London and Roman Britain. One of the burial types represented, the lead reinforced coffin, has so far only been recorded in London's Eastern Cemetery[84]. One of the best published examples was recorded at West Tenter Street. A large square well was also found at that site, a feature that can be paralleled at Trinity Street[85]. Further research may show this to be coincidence; wells may prove to be a more common feature of 4th century burial grounds.

9.2.5 Some scope exists for radiocarbon dating of materials from the site. The carbonised seeds found in association with skeleton [146], could potentially provide a very precise date for the burial as they are the product of a single season's growth. However, this burial is an isolated feature and even a precise date would have no bearing on the other elements of the archaeological sequence. Other sources such as large animal bones could be used to obtain radiocarbon dates. These might be more informative, for instance horse bones were recovered from the upper fills of the large Group 17 ditch that traversed the northeast of the site. This feature continued in use in the very late Roman period and the use of this technique could help calibrate dates obtained from pottery and coins. This might also be informative with regard to possible Early Saxon frequentation of the site.

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[82] Brunaux, J.L., 1987. *The Celtic Gauls, Gods, Rites and Sanctuaries*

[83] Smith, A., 2001. *The Differential Use of Constructed Sacred Urban Space in Southern Britain, from the Late Iron Age to the 4th Century AD* BAR British Series 318, 75

[84] Barber and Bowsher 2000, 225-226

[85] Whytehead 1986, 23-127

9.2.6 The following recommendations are made for the small finds assemblage:

- It is recommended that the small finds form a major illustrated section of any published report. This should discuss the grave goods separately from the other finds and both groups of material should be compared to other groups of small finds from cemeteries, settlement sites and dark earth deposits in London and Southwark.
- The spatial and stratigraphic distribution of the finds from the dark earth should be examined in detail and compared with that for other classes of artefactual and ecofactual material.
- The grave groups should be illustrated.
- Other objects of intrinsic interest should be illustrated
- Any evidence for ritual or other activities should be identified and discussed.
- The brooch assemblage is particularly interesting and it is recommended that a brooch specialist be consulted prior to publication.
- The nail assemblage needs to be examined in greater detail and a discussion of the coffins produced.
- The flint object should be examined by a lithics specialist.

9.2.7 The following recommendations relate to the Roman pottery:

- It is recommended that a full report on the pottery be published with quantification, illustration and discussion.
- All grave goods should be illustrated.
- The pottery should be discussed by phase.
- Distinctions should be made between pottery from features, graves and dark earth.
- The pottery from the dark earth should be quantified and studied to assess breakage and wear.
- The assemblage should be examined to see if there is any unusual functional patterns present.
- Key groups should be illustrated.
- A sub-sample of the amphora and mortaria requires specialist analysis.

9.2.8 The following recommendations are made in relation to the animal bone:

- It is recommended that the Roman level assemblages be further studied in order to deduce:
- The exploitation trends, particularly amongst the food animals;

- To describe the ritual elements of these collections including any evidence concerning graveside feasting;
- Finally to fully describe the donkey skeleton and its significance to Roman London.

9.2.9 The excavation produced a small assemblage of Roman glass. However, the glass assemblage was notable for three complete vessels found in graves. The following recommendations are made in relation to the Roman glass:

- The Roman assemblage in total, and not just the complete grave accessories, should be published in full. More detailed research should be completed for the complete vessels, in order to do them justice.
- The three complete vessels should be drawn and photographed, including a detailed photograph of the rim of SF<13>, context [136].

9.2.10 The following recommendations are made in relation to the post-Roman pottery:

- Whilst a publication report should be produced for all of the material represented the focus of further analysis should be the small but important Early Saxon assemblage.
- This should include consultation with Lyn Blackmore (MoLSS) to confirm the provisional identification of this material.
- Comparison will also be required with the assemblages from Lant Street and Bermondsey. A brief initial scan has revealed differences between all three assemblages but whether this reflects separate areas of occupation needs to be considered further.

9.2.11 The following recommendations are made in relation to the building materials:

- The fragment of Kentish rag hone stone and the fragments of German lavastone quern may have been re-used as building stone although neither showed obvious signs of re-use. These objects should be analysed for publication by a small finds specialist.
- A small group of low-fired clay objects was recorded. These take a number of different forms, with cylindrical, sub-rectangular and sub-triangular profiles, and may have had a number of different functions. These are not structural items but may represent weights or have some other specialised industrial or craft related purpose. Similarly to the worked stone objects these will require further analysis by a small finds specialist.
- As a minimum any further work on the assemblage should include a closer analysis of distribution and comparison with local assemblages, namely Tabard Square and Great Dover Street.

9.2.12 The following recommendations are made for the environmental samples:

- On the whole samples from Trinity Street have produced infrequent macrobotanical remains that are too poorly preserved to merit further analysis or to provide evidence for the vegetation environment, agriculture or other food resources.
- Flots from samples <14>, (context [136]) and <19>, (context [149]) from 3rd century deposits, and samples <21>, (context [241]), <22>, (context [252]) and <24> context [273], are exceptions to this as they contain a recurring, although unidentified, fruit/seed. It is interesting to note that these samples were all taken from the fills of graves in Groups 22 and 31 and it is possible that the botanical remains are associated with the burials.
- Any further work undertaken should aim to provide identifications for the macrobotanical remains in samples <14>, <19>, <21>, <22>, and <24> and should establish through reference to contextual information whether these are associated and whether they are likely to represent deliberate deposits that can be associated with the burials such as offerings.
- The scarcity of remains from these late Roman contexts is in itself interesting and therefore it is recommended that a small note documenting this should be prepared as part of any publication. One explanation for the lack of charred botanical remains is that plant remains were not subject to deliberate or accidental charring that would have facilitated their preservation.
- Charcoal assemblages in soil horizon contexts [549], [594] and pit context [569] consist of round wood which could derive either from small branches or coppiced rods. Several of these fragments are of hazel which was often coppiced to produce rods suitable for wattle. Two of these contexts, [549] and [594] contain sufficient charcoal for some further work which should aim to provide further identifications and characterise the growth patterns in the roundwood fragments. It remains possible that the assemblage will be too limited to provide conclusive evidence for whether these assemblages derive from managed woodland sources. Analytical work should also draw on further context information to interpret the presence of assemblages dominated by roundwood.

9.2.13 The following recommendations are made for the lithics assemblage:

- The assemblage is too small to illuminate the precise nature or significance of the prehistoric activities at that particular site and by itself has only limited interpretative potential. No further analytical work is therefore recommended but it does have the ability to contribute to the wider understanding of prehistoric landscape use and chronology in north Southwark, and a brief description of the assemblage should be deposited with the local Historic Environment Record and included as part of any published account of the fieldwork. The published account should also include illustrations of the arrowhead and the core tool.

9.2.14 The following recommendations were made for the human bone:

- The articulated remains should be fully analysed, to include full analysis of age, sex, metric data and pathologies and report written to include the results of this analysis. The possible infection within the right femur of [62] requires an x-ray to determine the nature of the infection and whether there is an underlying fracture present.
- Demographic trends may also be further enhanced when dating and the provisional phasing of the inhumations and deposits containing disarticulated human bone has been completed.

9.2.15 The following recommendations were made for the Roman coin assemblage:

- The coins from Trinity St represent an extremely important body of data for Southwark and London.
- The coins should be published with a full list and some photography.
- Further statistical work needs to be undertaken on the coin loss profile.
- Further work should be undertaken on the distribution of the coins spatially and stratigraphically and their relationship with the distribution of other finds. This work will aid in the interpretation of individual features and the 'dark earth' deposits.

9.2.16 The following recommendations were made for the clay tobacco pipe assemblage:

- One research aim is suggested as a further avenue of research. Which Low Countries town was the Dutch clay tobacco pipe made in, who manufactured it and can it be dated more precisely. It is recommended that a short publication report is produced and an illustration of the Dutch clay tobacco pipe is used to supplement the text.

9.3 Publication Proposal

9.3.1 The full integrated report will be published either as an independent paper by Pre-Construct Archaeology Limited or as an article in the Transactions of the London and Middlesex Archaeological Society. The format of the publication will be as follows:

Romano-British Cemetery at Trinity Street, Southwark

Contributors
Contents
Summary

Introduction

Circumstances of the Investigations

Geology and Topography

Archaeological Background

The Archaeological Sequence

Natural Deposits

Prehistoric Activity

Pre-Cemetery Roman Activity

The Roman Cemetery

Early Saxon Activity

Medieval and Later Activity

Contributions will be made by the following:

Human Bone	James Langthorne
Roman Pottery	James Gerrard
Roman Small Finds	James Gerrard
Roman Coins	James Gerrard
Glass	John Shepherd
Building Materials	Berni Sudds & Kevin Hayward
Prehistoric Pottery	Mike Seager Thomas
Iron Slag	Lynne Keys
Lithics	Barry Bishop
Post Roman Pottery	Berni Sudds
Clay Tobacco Pipe	Chris Jarrett
Bone	Kevin Rielly
Environmental Analysis	QUEST

Illustrations

The report will be fully illustrated with AutoCAD phased figures and drawings of the most important finds.

Discussion

The results of the archaeological investigation will be put in a local and where appropriate national context and be compared and contrasted especially with other Roman cemetery sites in both Southwark and London. The site will be discussed as being part of a possible ritual landscape in this part of Southwark. The Early Saxon pottery will be placed in context.

Acknowledgements

Bibliography

10 CONTENTS OF THE ARCHIVE

10.1 The written archive consists of:

- 353 plans drawn on 899 sheets.
- 15 sections drawn on 32 sheets.
- 617 context sheets.

10.2 The photographic archive consists of:

- 657 digital photographs. Of these 136 are shots taken with a digital SLR by a specialist photographer and 521 are site shots taken using a low specifications digital camera.
- 598 colour slides.
- 595 black and white contact prints.
- 101 medium format photographs, 52 colour and 49 black and white.

10.3 The finds archive consists of a total of 215 boxes. These comprise:

- Pottery: 49 Boxes
- Human Bone: 51 Boxes
- Animal Bone: 31 Boxes
- CBM: 69 Boxes
- Mixed finds: 4 boxes
- Small Finds: 11 Boxes

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- Berni Sudds and Dr Kevin Hayward who studied the building materials;
- Kevin Rielly who assessed the animal bone;
- Lynne Keys who assessed the evidence for metalworking:
- John Shepherd who assessed the glass;
- Barry Bishop who examined the lithics;
- Mike Seager Thomas who assessed the prehistoric pottery;
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APPENDIX 1

Roman Small Finds Assessment

James Gerrard

Introduction

The excavations produced 210 objects that can be termed 'small finds'. This figure excludes coins, complete vessels and nails. Within this total eight objects appear to be post-Roman and intrusive into Roman (pre-Phase 6) contexts. Ten objects were recovered from the post-medieval phase (Phase 7) and some of this material is likely to be of post-medieval date rather than residual Roman material culture. These post-Roman items are the subject of a separate assessment (see Gaimster Appendix 15).

Methodology

All contexts were carefully searched by eye for metal small finds and this was augmented in many instances by the use of controlled metal-detecting. This procedure has greatly increased the number of small finds from the site and particularly from the so-called 'dark earth' deposits.

The finds have been recorded in the Pre-Construct Archaeology *Roman Small Finds Database* (*Access* 2000), which was originally developed for recording finds from this site. A copy of the database is held in the archive. Unidentifiable items were x-rayed for this assessment but no other conservation beyond basic cleaning has yet been undertaken.

Finds have been identified using standard catalogues (Crummy 1983; Manning 1985) and functional categories have been assigned to each find using the scheme developed by Crummy (1983, v) (Table 1). This scheme is not without its difficulties (Cool and Baxter 2002; Crummy 2007). However, it is widely used and thus useful for inter-site comparisons of assemblages.

Phase 2

Phase 2 produced seventeen objects. This included the broken head from a Colchester type brooch of Hattatt's (1989) Type 156 and the catchplate from another Colchester brooch (SF<376>, [608]; (SF<280> [569]. Both examples are of early Roman date and not out of place early in the sequence. More interestingly there is also what appears to be a broken *knotenfibeln* (SF<15>, [132]). This brooch has a knotted spring and a swelling in mid shaft decorated with cross hatches. It is very close to Hattatt's (1989, Fig 151) Type 750 and is likely to be a continental import of the first century AD. The only other personal adornment is a copper-alloy finger-ring with a 'D'-shaped section (SF<92>, [310]),

Other finds from this phase include fragments of lead waste, miscellaneous other unidentifiable objects and three items that are likely to be of post-medieval date and are best considered intrusive (SF<205>, [486]; SF<349>, [599]; SF<296>, [594]).

Phase 3

Phase 3 produced forty one objects including four personal adornments: a silver finger-ring in three fragments (SF<276>, <277> and <278>, [567]), a copper-alloy finger-ring with a red paste intaglio (cracked) showing a standing figure (SF<246>, [530]); a copper-alloy 'dolphin brooch (Hattatt 1989, Fig 158) (SF<288>, [580]); the tip from a copper-alloy hairpin (SF<305>, [610]) (Cool 1990) and a copper-alloy bracelet (SF<11>, [149]) with a flat section. The last is of interest as metal bracelets are generally considered to be a feature of the later Roman period (although they do occur earlier). There is also a bone hairpin of Crummy's (1983) Type 3 (SF<248>, [530]). In addition there are two shale bracelets (SF<8 >and SF<9>, [149]), a necklace of 13 green hexagonal beads, 8 blue globular beads and one white globular bead (SF<10>, [149]).

Other items include an iron ferrule (SF<330>, [367]), a copper-alloy stud (SF<279>, [567]) and a small copper-alloy nail (SF<306>, [610]). The last two items are likely to be derived from furniture. There are also fragments of lead waste and other unidentifiable objects. One unusual item is a perforated flint (SF <12>, [166]), which needs to be examined by a lithics specialist.

Phase 4

Phase 4 produced fifty-one objects. This included the head from a Nauheim type brooch (SF<98>, [366]) and part of a Colchester brooch (Hattatt 1989, Fig 159) (SF<211>, [497]). The only other personal adornments were bone hairpin (SF<284>, [577]), a copper-alloy finger-ring (SF<199>, [457]), a blue glass melon bead (SF<244>, [531]) and a cylindrical jet bead with lateral perforations (Allason Jones 1996, No 13). Other objects include a stone cosmetic palette (SF<200>, [457]), two possible fragments of iron vessels (SF<325>, [254] and SF<346>, [578]), a bone gaming piece (SF<2>, [86]), an iron barrel padlock (SF<82>, [276]) (Furger 1990), a double-spiked loop (SF<377>, [271]), an iron lever lock key (SF<328>, [271]) (Manning 1985, Type O62). The remaining objects are unidentifiable and include lead waste. There is also an intrusive lead shot ([263]).

Phase 5

Phase 5 produced sixty-nine objects. The personal adornments include a Nauheim derivative brooch (SF<240>, [516]), a dolphin brooch (Hattatt 1989, Fig 157.335) (SF<265>, [549]), fragments from two Colchester brooches (SF<262>, [548], and SF<241>, [516]) and what might be a La Tene III 'Nauheim progenitor' (Hattatt 1989, Fig 149) SF<243>, [518]. Other brooches include a trumpet headed example (SF<266>, [550]) and a small penannular brooch (SF<180>, [425). There is also a bronze hairpin of Cool's (1990) Class D – a type of greatest popularity in the second century (SF<124>, [408]). Other hairpins include bone examples of Crummy's (1983) types 1 (SF<128>, [408]) and 3 (SF<27>, [202] and SF<162>, [418]). Further personal adornments include an octagonal copper-alloy finger-ring (SF<157>, [412]). A single toilet implement is represented by some tweezers (SF<129>, [409]).

Other objects include two stone hones (SF<215>, [505] and SF<379>, [31]), a fragment of a zoomorphic pottery lamp in the form of a bull (SF<353, [408]), a copper-alloy die (SF<115>, [408]), two lead weights (SF<158> and SF<164>, both from [408] and what may be a lead seal (SF<139>, [408]). Also present are a key (SF<337>, [408]), a strap hinge (SF<335>, [408] a double spiked loop (SF<314>, [549]) and a number of studs and fittings. A small bell (SF<214>, [505]) could have been used in religious ceremonies or animal husbandry. The remaining objects are unidentifiable or lead waste and there are also two intrusive objects: an intrusive iron tenterhook (SF<313>, [549]) and a copper alloy pin (SF<234>, [546]).

Phase 6

Phase 6 produced twenty-one objects. The vast majority of these are lead waste or unidentifiable. However, a piece of what appears to be an openwork buckle plate is probably derived from a Hawkes and Dunning (1961) belt set (SF<191>, [451]). Such objects begin in the late Roman period and cross into the early Middle Ages (Böhme 1986). There is also a small penannular brooch (SF<194>, [451]). The remaining objects include unidentifiable artefacts, lead waste and a number of intrusive objects. These include a door handle (SF<347>, [591]) and a button (SF<298>, [591]).

Phase 7

All of the twelve objects from this phase are residual if Roman in date. Some like a small stud (SF<61>, [249]) and a hone (SF<380>, [413]) are Roman, others like an iron pintle (SF<327>, [260]) may be Roman or later in date.

Nails

Iron nails were examined in only a cursory fashion and it is recommended that they be subject to a more detailed analysis prior to publication. Nails were recovered from 102 contexts and hobnails from 5 contexts. Where these finds occur in graves they are discussed in the catalogue of grave goods.

Catalogue of grave goods

This section details all of the small finds from each grave.

Phase 2

[510], fill of grave [512]

Phase 3

[42], fill of grave [44]:

[58], fill of grave [60]:

[61], fill of grave [63]: SF<1> base of TSK jar AD 180-300/400. Contained cremated bone, some at least human

[67], fill of grave [69]:

[80], fill of grave [82]:

[83], fill of grave [85]: Nails

[127], fill of grave [128]:

[129], fill of grave [143]:

[136], fill of grave [135]: SF<13> Glass vessel

[140], fill of grave [143]:

[145], fill of grave [148]: SF<7> Glass vessel
SF<19> most of a TSK jar with multiple AL dec, containing burnt seeds. AD 180-300/400
Nails

[149], fill of grave [151]: SF<9> Shale bracelet
SF<8> Shale bracelet
SF<10> Necklace of green, blue and white glass beads
SF<11> Copper-alloy bracelet

[157], fill of grave [156]:

[166], fill of grave [167]: SF<12> Perforated flint
SF<16> Hobnailed shoes/sandals

[172], fill of grave [171]: SF<14> VRW necked jar, AD 70-200/250
Nails

[177], fill of grave [178]:

[185], fill of grave [186]:

Phase 4

[161], fill of grave [163]: SF<17> NVCC beaker, AD 250-400
SF<18> NVCC beaker, AD 250-400
Nails

[224], fill for body [248]: SF<51> TSK hooked rim jar, AD 180-300/400

[228], fill for body [227]:

[240], fill of grave [242]: Nails

[252]. fill of grave [253]: SF<55> Near complete pottery beaker. Recovered from layer [219] but a sherd match with this fill proves this was a grave good

[266], fill of grave [268]: SF<67> Unidentified iron object
Nails

[273], fill of grave [275]: Nails

[276], fill of grave [278]: SF<81> Glass vessel
SF<82> Barrel padlock

[283], fill of grave [284]: SF<90> Bone hairpin or needle shaft

SF<87> OXRC indented beaker, AD 270-400
SF<88> OXRC indented beaker, AD 270-400
Nails

[317], fill of grave [318]: SF<86> Coin AD 330-335
Nails

[375], fill of grave [377]:

[416], fill of grave [420]: SF<154> TSK jar AD 180-300/400

[421], fill of grave [423]: SF<174> Unidentified iron object
SF<182> Unidentified iron object
Nails

[456], fill of grave [458]: SF<199> Copper-alloy finger-ring
SF<200> Kimmeridge shale cosmetic palette with use wear

[464], fill of grave [465]:

[474], fill of grave [475]: Nails

[477], fill of grave [479]:

[497], fill of grave [498]: SF<211> 'Colchester type' one piece brooch, first-second century

[507], fill of grave [508]:

[513], fill of grave [514]: SF<222> Bone hairpin or needle shaft fragment
Nails

[531], fill of grave [532]: SF<244> Blue glass melon bead, early Roman
SF<245> Copper alloy fragments

[542], fill of grave [543]: SF<252> OXPA flagon AD 300-400

[558], fill of [560]:

[559], fill of [560]:

Phase 5

[202], fill of grave [204]: SF<27> Bone hairpin Crummy (1983) type 3 AD 250-400
SF<29> Glass vessel
SF<26> Coin AD 388-402
SF<28> TSK, hooked rim jar AD 180-300/400
Nails

[211], fill of grave [213]: SF<355> Unidentified copper alloy object
SF<0> Unidentified copper alloy object
SF<42> Coin AD 341-348
Nails

[418], fill of grave [419]:

[428], fill of grave [429]:

[519], fill of grave [521]: SF<0>Bone hairpin or needle shaft
Nails

Discussion

The assemblage is an extremely interesting group of objects. In the main a distinction should be made between objects found in grave fills or as grave goods and those derived from other types of context. In this assessment this has not been done (although grave goods are listed separately). The following discussion can thus be taken as only a general overview of assemblage. A more detailed discussion is recommended for the publication (below).

Phases 4 and 5 produced the most objects and once metal working waste and unidentifiable objects are excluded the most common objects are fittings and personal adornments. Both of these categories are fairly broad but fittings is especially wide ranging – it includes, locks, keys, structural fittings and furniture studs among other things (it would also include nails but they have been deliberately excluded from this analysis). The personal adornments are interesting in that they contain a high number of brooches (14). Virtually all of these are of early Roman date and the *knotenfibeln* should be a very early Roman import. Hairpins, which are usually heavily represented, are virtually non-existent and toilet instruments (another common category of find) are also under-represented.

The site has also produced a bell and a zoomorphic lamp. Both of these objects may be associated with ritual /funerary activities. Bells can be used in religious ceremonies and the iconography of the lamp (a bull) could be related to fertility cults and (extremely speculatively) Mithraism. Lamps are a common feature of ritual assemblages. The bronze die and gaming piece suggests games of chance. Gaming equipment is relatively rare but bone dice are more common finds than bronze examples. Two lead weights ought to suggest commercial activities.

The assemblage can be seen as exhibiting some unusual compositional features. A more detailed analysis of the stratigraphic and spatial distribution of the finds is likely to throw these compositional issues into sharper relief.

Recommendations

The small finds represent an important group of material from a cemetery site and from ‘dark earth’ deposits. As such they have local and regional significance and can also contribute to national research agendas. Therefore it is recommended that the small finds form a major illustrated section of any published report. This should discuss the grave goods separately from the other finds and both groups of material should be compared to other groups of small finds from cemeteries, settlement sites and dark earth deposits in London and Southwark.

The spatial and stratigraphic distribution of the finds from the dark earth should be examined in detail and compared with that for other classes of artefactual and ecofactual material.

The grave groups should be illustrated.

Other objects of intrinsic interest should be illustrated

Any evidence for ritual or other activities should be identified and discussed.

The brooch assemblage is particularly interesting and it is recommended that a brooch specialist be consulted prior to publication.

The nail assemblage needs to be examined in greater detail and a discussion of the coffins produced.

The flint object should be examined by a lithics specialist.

A present the objects look largely stable. However, their conservation should be kept under review.

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Category Number	Description
1	Objects of personal adornment or dress
2	Toilet, surgical or pharmaceutical instruments
3	Objects used in the manufacture or working of textiles
4	Household utensils and furniture
5	Objects used for recreational purposes
6	Objects employed in weighing and measuring
7	Objects used for or associated with written communications
8	Objects associated with transport
9	Buildings and services
10	Tools
11	Fasteners and fittings
12	Objects associated with agriculture, horticulture and animal husbandry
13	Military equipment
14	Objects associated with religious beliefs and practices
15	Objects and waste material associated with metalworking
16	Objects and waste material associated with horn and bone working
17	Objects and waste material associated with pottery working
18	Objects of unknown function

Table 1: Crummy's (1983, v) functional categories for the analysis of small finds.

Phase	2	3	4	5	6	7
Function/Category						
1	5	8	6	14	4	1
2			1	1	1	
3			2			
4			2	1		1
5			1	1		
6				2		
7				1		
8						
9						
10		1		2		1
11	1	5	7	13	1	3
12				1		
13						
14						
15	4	11	10	10	7	1
16						
17						
18	7	16	21	23	8	5
Total	17	41	50	69	21	12

Table 2 Analyse of small finds by stratigraghic phase and function

APPENDIX 2

Romano-British Pottery Assessment

James Gerrard & Jo Mills (Samian)

Introduction

The excavations produced a substantial assemblage of 4681 sherds weighing 104.603kg (75.53 EVEs). This material survived in a variety of states from very abraded to fresh with a spread in assemblage size from very small (1-30 sherds) to large (100+ sherds) and very large (several boxes). There were a number of groups and examples of intact or semi-complete vessels as well as a variety of amphora, samian, mortaria and other exotica.

Methodology and recording

The methodology used for recording this ceramic assemblage is based on the scheme proposed by the Museum of London Specialist Services and widely used in London and its immediate hinterland (Symonds 2002; Rayner and Seeley 2008). The pottery types and fabrics have been recorded using Museum of London form and fabric codes except where reference to other typologies allows greater precision of description or dating (for instance Young 1977, Lyne and Jefferies 1979). The pottery has been quantified using the standard measures of sherd count, weight and Estimated Vessel Equivalents (EVEs) and all data has been recorded directly into an *Access 2000* database. The database design is that used by medieval and post-medieval pottery specialists within Pre-Construct Archaeology (with some variation) and is ultimately based on standards established by the Museum of London's Archaeology and Specialist Services (Symonds 2002). A copy of this database is available for consultation in the archive.

Once the pottery was quantified, 'specialist wares' (samian, amphora) were extracted for further analysis. In the samian's case much of this analysis has been undertaken by Jo Mills and her report is provided below. The amphorae and mortaria assemblages have been summarised and await specialist comment. Further discussion of this can be found below.

Fabrics present

Fabric	Common Name	Sherd count	Weight (g)	EVE
AHFA	Alice Holt / Farnham ware	167	3920	2.48
AHSU	Alice Holt / Surrey ware	171	3718	4.22
AMPH	Unsourced amphorae	107	5493	0.24
BAET	Baetican amphorae	182	18437	0.52
BB1	Black Burnished 1	327	5259	6.95
BB2	Black Burnished 2	685	9408	11.58
BBS	Black Burnished style	1	46	0.17
BIV?	BIV amphora?	1	26	
CALC	Calcite tempered ware	11	112	0.12

CAMP?	Campanian amphora?	1	43	
CCGW	Copthall Close Greyware	6	99	0.22
CGWH	Central Gaulish White ware	1	3	
COAR	Unsourced Coarse ware	3	227	
COLCC	Colchester Colour Coated ware	12	6	0.17
EIFL	Eiflkeramik	2	5	
ERSA	Early Roman Sandy A	16	283	
ERSB	Early Roman sandy B	25	342	0.37
FINE	Unsource fine ware	14	137	0.42
FINEGY	Fine Grey ware	18	136	0.15
FMIC	Fine micaceous	11	130	0.59
GAUL	Gauloise amphorae	115	4374	1.00
GROG	Grog tempered wares	46	829	1.11
HOO	Hoo ware	32	289	1.00
HWB	Highgate Wood B	11	319	0.62
HWC	Highate Wood C	149	1759	2.96
HWC+	Highgate Wood C with added sand	2	27	0.20
KOLN	Cologne colour coated	2	25	
LCWS	Local coarse white slipped	2	14	
LOEG	Local Eggshell	1	11	
LOMI	Local micaeous	13	301	0.74
LONW	London ware	1	33	0.07
LOXI	Local oxidized	19	414	0.87
MAYEN	Mayen ware	4	176	0.12
MHAD	Much Hadham Ware	2	23	
MISC	Miscellaneous	133	1705	
MORT	Unsourced mortaria	29	2329	0.94
MOSL	Moslkeramik	18	117	
NAFR	North African amphorae	1	67	
NFCC	New Forest Colour Coated ware	2	23	
NKFW	North Kent fine ware	17	474	0.52
NKSH	North Kent Shell tempered ware	33	890	
NVCC	Nene Valley Colour Caoted ware	242	2053	4.07
NVPA	Nene Valley Parchment ware	1	38	1.00
NVWW	Nene Valley white ware	1	37	
OXID	Oxidised ware	162	2262	1.78
OXPA	Oxfordshire parchment ware	3	536	0.08
OXRC	Oxfordshire red colour-caoted ware	70	1314	2.01
OXWS	Oxfordshire white slipped ware	2	44	
OXWW	Oxfordshire white ware	15	1046	0.88
PATCH	Patchgrove ware	47	2321	0.38
PORD	Portchester D ware	9	80	0.05
PREPOT	Prehistoric pottery	7	67	
RWS	Roman White Slipped ware	2	9	

SAM	Samian	247	3697	2.35
SAND	Unsourced sand tempered wares	528	7857	7.38
SESH	South Essex Shell Tempered wares	3	340	
SHEL	Shell tempered wares	12	141	
SLOW	Sugar Loaf Court Ware	2	26	0.07
SOLL	Soller mortaria	1	76	0.05
TSK	Thameside Kent grey ware	667	13298	9.71
VCWS	Verulamium Coarse White Slipped ware	51	946	
VRG	Verulamium Region grey ware	4	111	1.31
VRW	Verulamium Region white ware	202	6297	6.07

Discussion by phase

Phase 2 Roman up to AD 180

The pottery from this phase amounts to some 6.44 EVEs. Virtually all of the pottery is of early Roman date. There are some difficulties in interpreting the assemblage. The main fabrics present are HWC (23%) and VRW (29%). A number of minor fabrics (GROG, HWB, ?SLOW and ERSB) reinforce the first-century 'feel' of the group but the presence of BB1 and BB2 (accounting for 3% and 12 % respectively) indicates a second century date for some of the assemblage, as does some SAMCG. The absence of other samian fabrics is noticeable.

In general terms it is difficult to advance any firm conclusions about the Phase 2 material. It could be a mixture of pottery from a variety of features of different early Roman dates or a second-century group with much residuality. Further analysis is needed to address this question (Fig 1).

Phase 3 Third century

Phase 3 produced a group of pottery totalling 17.25EVEs. Early Roman fabrics are under-represented and the dominance of TSK, along with the presence of NVCC are suggestive of a third-century date. The AHFA may be intrusive but can be present from c. AD 250. Samian is poorly represented at a mere 1.27% (Fig 2).

Phase 4 Fourth century

Phase 4 produced 13.67EVEs of pottery. The composition of the assemblage is of some interest. True fourth century fabrics are present but in relatively small quantities. AHFA, CALC, OXRC, OXPA, OXWW account for a mere 10% of the assemblage. The remainder is dominated by NVCC and TSK. The former is not a problem in a fourth century group but the latter is often seen as ending c. AD 300. There are some indications that this end date may not be entirely accurate for TSK but we may also be dealing with residual material (as evidenced by the SAM and VRW). Alternatively, some of these pots may have been heirlooms. The use of old pots as grave goods has, for instance, been suggested

in the Eastern Cemetery (Barber and Bowsher 2000, 122). The samian accounts for 4% in this phase – the second highest total from any phase (Fig 3).

Phase 5 Fifth century

This phase produced 32.58EVEs, which is almost half of the total pottery recovered from the site. Much of the material is clearly residual. Our understanding of the end of Roman pottery production and its supply to London and Southwark is poor and unfortunately this group can do little (at present) to help this situation. AHFA and OXRC account for less than 6% of the group and other fabrics typical of the latest Roman groups are not present as EVES (PORD and CALC). Interestingly MAYEN ware, an import from Germany and typically present in the latest Roman assemblages from London, is present.

Phases 6,7 and 8 Post Roman

All of the Romano-British pottery in these phases is residual. It is of a similar character to that in Phase 5.

Religious and ritual items

The assemblage contains a variety of evidence for ritual activity. The most obvious evidence is the presence of pottery vessels as grave goods. However, there are other indicators. These include a zoomorphic lamp (9LA) fragment in LOMI from [408], and sherds of *tazza* (9C) from [249], [408], [440], [516] and [608]. Interestingly, there are no fragments of triple vases (9E) but CAM 306 (4C306) (Haynes 2008) bowls are present in a number of contexts (Table 1),

CONTEXT	FABRIC	FORM
379	SAND	4C306
426	SAND	4C306
451	SAND	4C306
451	SAND	4C306
505	SAND	4C306
505	SAND	4C306
516	SAND	4C306
516	SAND	4C306
549	SAND	4C306
549	SAND	4C306
549	BB2	4C306
549	SAND	4C306
550	SAND	4C306
557	SAND	4C306
578	SAND	4C306
578	SAND	4C306
584	SAND	4C306

584	SAND	4C306
591	SAND	4C306
598	SAND	4C306

Table 1. The presence of CAM 306 bowls

Amphorae

The amphorae assemblages total 405 sherds weighing 28.371kg (1.76EVES) (Table 2). This is 8.65% of the total assemblage by sherd count and 27.12% by weight. As is usual for amphorae assemblages the figures for weight are over-represented and the EVEs total is depressed. The bulk of the pottery is derived from Baetican olive oil jars (BAET) and Gaulish wine amphorae (GAUL). Some amphorae remains unsourced and includes vessels in a variety of fabrics. There is a single sherd of NAFR and a single sherd of what might be BIV - a rare eastern Mediterranean import.

The amphorae assemblage is fairly typical of London and Southwark sites. That said, it would be useful to send the diagnostic and unsourced amphorae sherds to an amphorae specialist. This would enable the more unusual (and possibly later fabrics) to be sourced.

Fabric	Sherd count	Weight (g)
AMPH	41	5439
BAET	182	18437
BIV?	1	26
CAMP	1	43
GAUL	47	4374
NAFR	1	67

Table 2. Quantification of amphorae fabrics

Mortaria

Mortara sherds were present in the usual fabrics that might be expected in London. In the early Roman period VRW, VCWS and SAM mortaria were common but in the later period producers in Oxfordshire (OXWW) had largely taken over. Twenty-nine sherds (2329g, 0.94EVEs) remain unsourced and may include imports and unusual fabrics and the one sherd of SOLL is certainly an import from the Rhineland. Given the nature of the site it is not essential that this material be examined by a mortaria specialist. However, if any unsourced sherds are selected for illustration it would be useful to have them identified.

Recommendations

The pottery is of importance regionally as an assemblage from a cemetery and as a sample of material from ‘dark earth’ deposits. It is recommended that a full report on the pottery be published with quantification, illustration and discussion.

- All grave goods should be illustrated
- The pottery should be discussed by phase
- Distinctions should be made between pottery from features, graves and dark earth

- The pottery from the dark earth should be quantified and studied to assess breakage and wear
- The assemblage should be examined to see if there is any unusual functional patterns present
- Key groups should be illustrated
- A sub-sample of the amphora and mortaria requires specialist analysis

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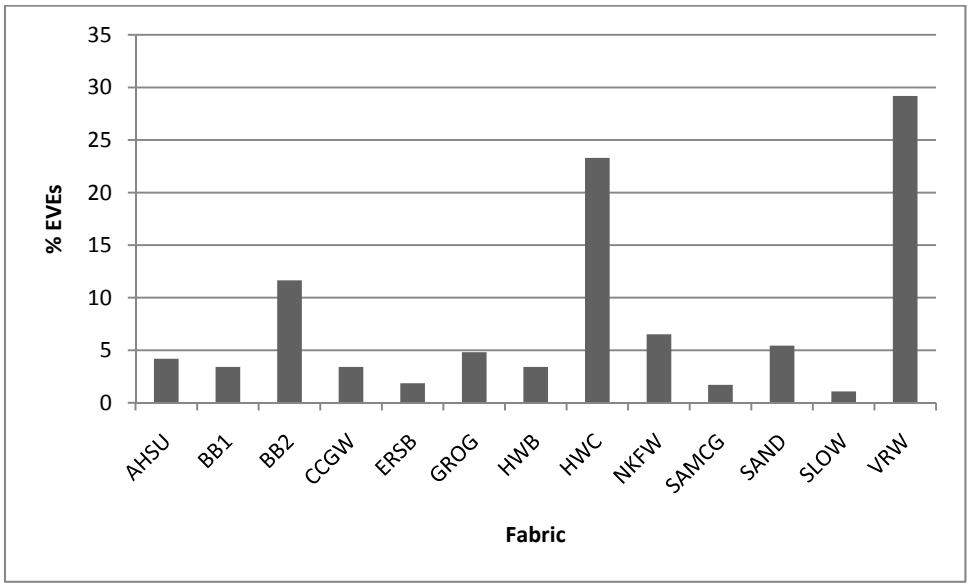


Fig 1 Fabrics from Phase 2 quantified by EVE

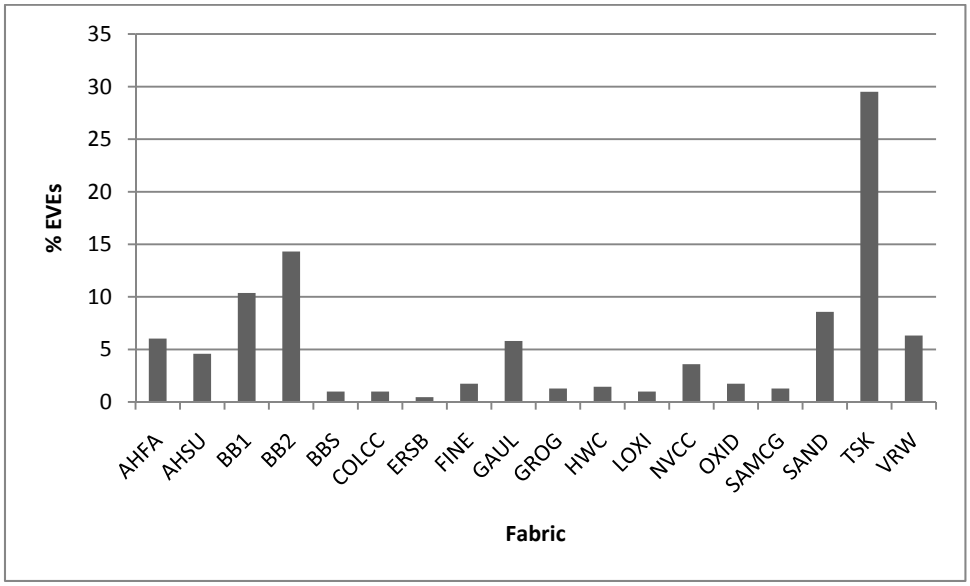


Fig 2 Fabrics from Phase 3 quantified by EVE

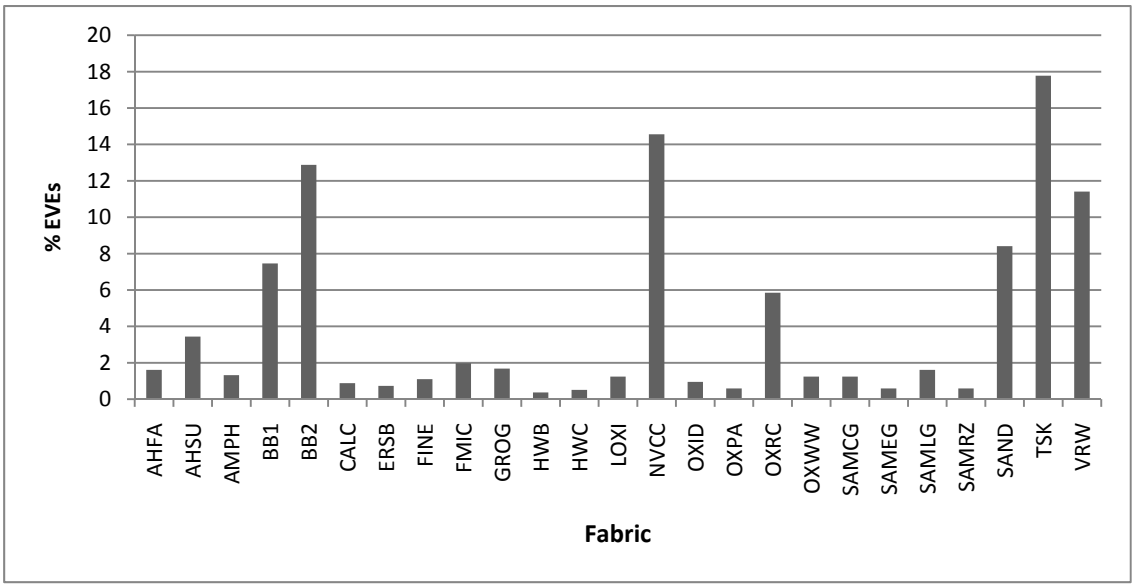


Fig 3 Fabrics from Phase 4 quantified by EVE

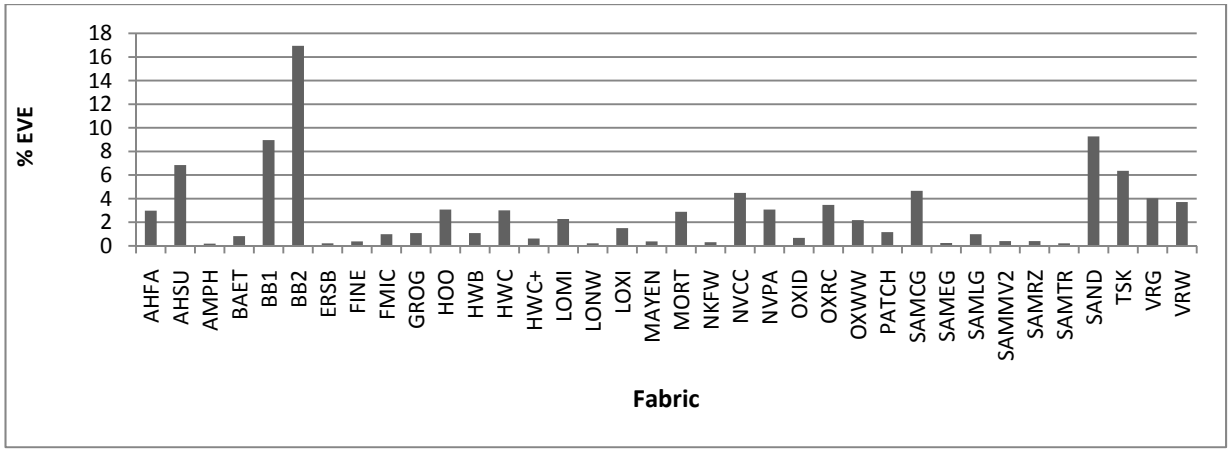


Fig 4 Fabrics from Phase 5 quantified by EVE

Samian Assessment

J.M. Mills

Introduction

Despite the small quantity recovered (247 sherds, weighing 3697g), samian from a wide range of production centres was identified, including La Graufesenque in South Gaul; Les Martres-de-Veyre and Lezoux in Central Gaul; and Lavoye (Argonne), Rheinzabern and Trier in East Gaul. The majority of the pottery is in good condition, with a few sherds being notably battered or abraded, few (six sherds) showing evidence of burning, and, unusually, no signs of repair evident.

The date range is wide, from the earliest sherds in the assemblage of Claudian or Neronian date, through to the latest, from East Gaul, which were produced in the mid-third century. The make-up of the assemblage is atypical. It is usual for the majority of samian assemblages from excavations in London to be dominated by first century material (Marsh 1981, 184-5) much of which may be residual. Here, however, two thirds of the pottery (by count and weight) is Central Gaulish, with a further 20% from East Gaul. Over 80% of the assemblage is second or third century in date, a similar situation was observed in the samian assemblage from Drapers' Gardens, Throgmorton Street in the City (Monteil 2009). Monteil points out that London waterfront sites such as Billingsgate Market Lorry Park and Three Quays House, where single dumps of large quantities of imported wares were deposited (Symonds 1995), are the best comparative sites for Drapers' Gardens and will be for Trinity Street too.

Methodology and records:

Each sherd was weighed and a fresh fracture, where necessary, was examined with a X10 hand lens in order to identify the fabric and hence the kiln or production centre. The data was record on an Excel

file using Museum of London fabric (and form?) codes. Moulded decoration and potters' stamps were recorded using graphite rubbings copies of which may be found in the archive. The database records context number, fabric code, presence of cross-context joins, vessel form, sherd type, number, weight, rim diameter and EVE, presence of decoration and potters' stamps and spot dates (early-late date). Some sherds have additional comments and a note was made of use-wear, abrasion and post-depositional burning.

Joanna Bird kindly assisted with the identification of some of the East Gaulish wares and decorated wares. Brenda Dickinson kindly identified the Iulianus stamp

First Century Samian

This includes the 34 sherds from South Gaul, most probably La Graufesenque and a single sherd of micaecous Lezoux. The earliest sherds are a base sherd from a Dr 18 in a micaceous Lezoux fabric [518] and from La Graufesenque sherds from a Dr 30 [408], a Dr 27 with an early rim profile [474], a Dr 15/17 rim [412] and a Dr 18 [516] all of Neronian date. There are no sherds of the early decorated bowl Dr 29 which was current until around AD 85, nor were there any pre-Flavian potters' stamps. There are four Dr 37 bowls ([462], [516], [594], [678]). This form was introduced around AD 70 as was Dr 35 of which there is one example. The single stamped vessel (Dr 18R, [505]) probably of Secundus iii is Flavian in date.

Apart from the small group of Neronian vessels there is little else of note within this first century material.

Second Century Samian

The decline in samian supply at the end of the first century has been well-documented (Marsh 1981). For the first decades of the second century late products from La Graufesenque and pots from Les Martres-de-Veyre supplied the market, but at a much reduced rate. A single late La Graufesenque Dr 37 (AD 80-110) has been identified in this assemblage and a Dr18/31 is the only example from Les Martres [408].

The bulk of the assemblage is second century ware from Lezoux in Central Gaul, the majority of which dates from the second half of the century. This can been seen in the lower frequency of forms such as cup Dr 27 and Dr 18/31 and Dr 18/31R dishes compared with their later counter-parts Dr 33, Dr 31 and 31R. None of the Dr 37 decorated bowls were datable to the Hadrianic or early Antonine periods. Additionally, late forms, introduced in the second half of the century, such as Déchelette 72, the mortaria-like bowl Curle 21, the later gritted mortaria Dr 45, and the cup and dish set Walters 79/80 are all present in sufficient numbers to confirm a late second century bias to the assemblage. The decorated bowls are in the style of later second century potters and include bowls attributed to Doeccus [578], and Cinnamus [610]. A base from [451] attributed to Cintinus (c. AD 180-220) is likely to be amongst the latest Central Gaulish vessels to be brought to Britain.

Of note are four Déchelette 72 beakers ([432], [555] – cut glass foliate motifs with the larger sherd from [555] showing the edge of a medallion; [567] barbotine grapes; [408] – appliqué). Those decorated with cut glass and barbotine decoration are not uncommon, but to have three examples as well as one with applied decoration within one small assemblage is noteworthy.

The sherd from [408] with an appliqué figure is very fine. These vessels, with applied decoration may have been produced to order, or for special purposes; duplicate motifs are rare (and may be unknown). Martin Henig has suggested that the figure, wearing a Phrygian cap with ear-flaps and holding a pine-sceptre (cf Vermaseren 1977, pl. 42 for the sort of pine) is likely to be Attis (ibid. fig. 29). A further possibility is that this sherd, containing almost only the figure of Attis, may have been deliberately broken in such a way that the image of Attis could be used as a votive (my thanks to Francis Grew for this suggestion).

These later Antonine vessels are complimented by a group of similar pots from East Gaul. Not all of the East Gaulish wares could be identified down to a production site, but it is likely that those recorded simply as EG are products of either Rheinzabern or Trier. Amongst them is the work of potters such as Gestatus [31), Dexter/Censor group [408], and Cerialis of Rheinzabern [366] along with some of the mortaria and other plain wares.

Third Century Samian

Many of the East Gaulish products are dated from the end of the second century into the first quarter or first half of the third. A small group of sherds has been identified as third century products (contexts [208], [365], [396], [408], [426], [432], [451], [453], [505], [516], and [518]). These include two Dr 37's attributed to After of Trier and one to the Primanus group also of Trier; and two sherds from a large Déchelette 54 ([453] and [505]) from Rheinzabern with fragments of barbotine decoration including scrolls, the feet of a bird and part of a tree (for similar vessels see Bird 1993, fig. 1).

A stamped Dr 31 (context [408]): Iulianus iii of Rheinzabern causes some questions to be asked. The stamp is clearly that of Iulianus iii (identification confirmed by Brenda Dickinson) and dated AD 220-255. The bowl appears, however to be made in a standard, slightly miceceous, Lezoux fabric which, in association with this form would be dated to the mid-late second century. Joanna Bird has seen the bowl and agrees the fabric to be Central Gaulish and thus of a second century date. There are no other records of this stamp die appearing on Central Gaulish bowls. The date of the stamp is not out of place in this assemblage.

Other sherds of note

Two vessels have notches cut across the footring – perhaps an ownership mark (context [516] CG 18/31; context [451], CG Dr 37)

Bases trimmed - ?for re use as lids or palettes (cf Marsh 1981) (context [451] unstamped Dr 33 or 46 CG; context [505] stamped Dr 18 SG)

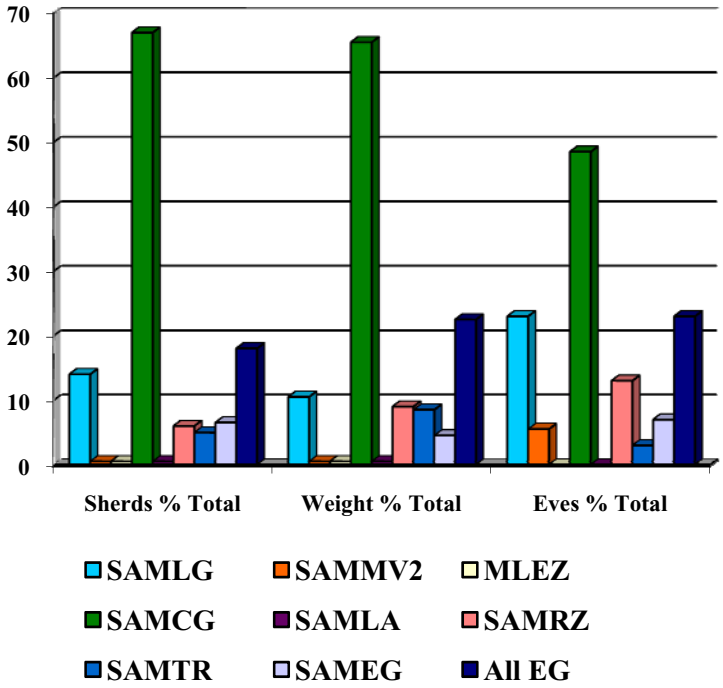
Variations from standard procedure! [451] – base not stamped – this form is usually stamped by the potter. [516] – a bowl, possibly an undecorated Dr 37.

Graffiti: X on wall of Trier mortaria context [453]

Conclusions

This assemblage is heavily biased to the latter end of the period when samian was exported to Britain. Although a small assemblage there are notable vessels including the Cintinus bowl and the appliqué decorated Déchelette 72.

TIY 07 Percentage of samian by fabric (production centre) by sherds, weight and EVEs



Numbers of Sherds by Vessel Type and Production Centre

FORM	FABRICS/PRODUCTION CENTRES							
	SG	Les M	Lez	EG	Lavoye	Rheinz	Trier	EVES
BEAKERS (3)								
72 – cut glass			2					
72 - applied			1					
72 – barbo			1					
Lud VMg/54						1		
beaker			1	1				
Beaker/jar				1				

BOWLS (4)								
30 or 37	1							
30	1		3					
37	4		10	2	1	5	7	24
31R (Sb)			8			1	1	14
Sa/Sb			1				1	
38			3	3		3		6
Flanged bowl			4					
Bowl			6			2		
DISHES (5)								
Ritt 1			1 (mic)					
18	4							6
15/17	1							8
15/17 or 18	5							
18R	2							
18/31		1	2					13
18/31R			4					7
31			4			1		18
18/31 or 31			3					6
18/31R or 31R			7					15
32				1				8
Curle 15			1			1		10
79			2					17
36			1	1				
Dish	2		4					5
Dish/bowl			2					12
CUPS (6)								
35	1							
27	5		8					22
33			17					124
33 or 46			3				1	
80 or Tf'			1					
40 or Tx				1				
cup	2		3	1				16
MORTARIA * (7)								
Curle 21			2					13
45			5					
Mort			8	2			3	
Curle 21 or 45			2					
- (no form)	8		45	1				

*Mortaria and Mortaria-like bowls (mic) = C1st Micaceous Lezoux

FABRIC	Sherds	% Total	Weight	% Total	Eves	% Total
SAMLG	34	14	392	10.5	54	23
SAMMV2	1	0.5	16	0.5	13	5.5
MLEZ	1	0.5	22	0.5	0	0
SAMCG	166	67	2431	65.5	114	48.5
SAMLA	1	0.5	23	0.5	0	0
SAMRZ	15	6	337	9	31	13
SAMTR	13	5	311	8.5	7	3
SAMEG	16	6.5	165	4.5	16	7
All EG	45	18	836	22.5	54	23
Totals	247		3697		235	

Table 1 Samian Fabrics (Production Centres) present in the assemblage– sherds, weight in grammes and rim EVEs - and each as a percentage of the entire assemblage

Catalogue of decorated and stamped wares

Abreviations:

figure type in Oswald, F., 1936-1937. Index of Figure-Types on Terra Sigillata ("Samian Ware").

Rogers: motif in Rogers, G.B., 1974. Poteries Sigillées de la Gaule Centrale I. – Les motifs non figurés (Gallia Supplement XXVIII)

South Gaul (La Graufesenque)

Dr 30. Lower part of bowl with wavy line at limit of decoration of foliate scrollery with a broad loopy leaf (similar to Knorr 1919, textbild 12, 16), several buds and a distinctive bud with three florets (Knorr 1919, textbild 10, 26). Knorr attributed this bud to Aquitanus, Felix and Masclus. For both buds in a scroll, but with a different leaf see a signed Dr 30 of Masclus (Mees 1995, taf 105, 5). c. AD 50-70 [408]

Dr 37 rim. The ovolo has a trident tongue, below it is a wreath of leaves between wavy lines. The decoration is panelled with only the tail of a lion extant. Early Flavian in style. c. AD 70-90. [516]

Dr 37 body sherd with fragment of decoration only, including a large triangular leaf and a panel filled with leaf tips. Flavian. [594]

Dr 37, body sherd with smudged ovolo and a fragment of a triple-bordered festoon. c. AD 80-110 [678]

Central Gaul (Lezoux)

Dr 30. Body sherd. Medallion with plain, double border containing the front part of a lion – infilling with ?leaf tips behind the mane gives the impression of a bigger mane. Potter not identified. Mid-late Antonine. [516]

Dr 37, body sherd. Lower part of panelled decoration, the panels divided by neat bead rows with small open rings at the terminals. The figure types are Hercules O.748, caryatid O.1205 and Tyrannacide O.188. All used by the Cinnamus Group. c. AD 150-80. [610]

Dr 30, lower part of panelled decoration with Doeccus' small medallion (Rogers E28) containing a small leaf at the base of the next panel are pair leaves (Rogers J86) with a beaded(?) ring below. Doeccus. c.AD 165-200. [578]

Dr 37, poorly moulded body sherd with faint head of a ?dog. Antonine [430]

Dr 37 body sherd with ovolo most of which has been trimmed off making it unidentifiable, decorative elements include an unidentified ?pile of cups and a rosette. Antonine. [412]

Dr 37, body sherd with unidentifiable scrap of ovolo. Cupid O.444 in a double festoon. Potter not identified. Mid-late Antonine. [608]

Dr 37 Base with short, wide footring. The surviving decoration is simple comprising panels divided by bead rows with 11-petalled rosettes (Rogers C231) and a beaded circle, but not Rogers E69. These are further separated by cabled spindle (Rogers U287) . The cabled spindle and the rosette appear to be unique to Cintinus. There are 2, possibly 3 notches cut into the footring which is worn although the inside of the bowl is not especially worn. c. AD 180-200 (or 220) [451] DRAW include profile and notches on footring and rubbing of dec.

East Gaul

Argonne, Dr 37 body. Gestatus of Lavoye, probably quite a shallow bowl with a hunting scene with leaves (Ricken 1934 taf XIII, 11) and rosettes (ibid., 1) in the ground. The figures are a dog running right (Ricken 1934, taf XIII, 36) and a horseman running left bearing a long spear. No parallel has been found for the horseman, it may be a new figure type for this potter. Antonine. [31] DRAW/Illustrate

Rheinzabern, Dr 37, rim sherd. Decoration in the style B F Attoni, and the motifs are all in the same arrangement on Ludowici & Ricken 1948, Taf 39, 15. The motifs are Ricken & Fischer 1963, E26 (ovolo), T250 (bird), M9 (Pan mask, in the festoon), KB136 (festoon) and O207 (beads from which the festoon is hanging). There was a crack in the mould across the ovolo. Late 2nd -early 3rd century. [549]

Rheinzabern, Dr 37, body sherd with leaf (LRF B144), medallion (LRF K48) basket-carrier (LRF M58). Within the medallion is an animal, probably a leopard and a stamp, although not readable this is almost certainly a Cerialis stamp. The figure, leaf and medallion were all used by Cerialis of Rheinzabern. Later 2nd – early 3rd century. [366]

Rheinzabern, Dr 37 body sherd with flapping crane (possibly Ricken Fischer T217, although the angle of the beak is not quite the same). Late 2nd-early 3rd century. [540]

Rheinzabern Dr 37, body sherd with ovolo Ricken & Fischer 1963, E25, medallion K20 and small circle with a notch O.142. All three motifs were used by several potters. Late 2nd – first half of 3rd century. [578]

Trier Dr 37. Ovolo scrap only. The ovolo is similar to Fölzer 946 used by the Dexter/Censor group of potters. Mid-late Antonine. [408]

Trier Dr 37 body sherd in the style of Afer, the ovolo (Gard 1937, R19) and cogged medallion (Fölzer 954) were both used by him. There is also the tail and foot of a bird used by Afer (Gard 1937, T129). The medallion is on a bowl from New Fresh Wharf attributed to Afer (Bird 1986, 2.78). First quarter 3rd century. [451]

Trier, Dr 37, body sherd with ovolo Fölzer 941 which was used by several potters. Late 2nd – first half of 3rd century [518]

Trier, Dr 37, body. Fragment of decoration with long narrow leaf used by Afer (Gard 1937, P28) and the head of a goat with long beard and bent horn. No parallel found for the goat. First quarter 3rd century. [516]. DRAW

Trier, Dr 37, body. Base of decoration with two asymmetrical flowers (probably Gard 1937, V53). This flower was used by the Primanus group of potters. c. AD 235-250. [516]

Incised decoration

Déchelette 72, Lezoux, body sherd. Edge of a medallion similar to one from New Fresh Wharf (Bird 1986, 2.128) with leaf-type ornaments to the right of the medallion. Antonine [555]

Déchelette 72, Lezoux, body sherd. Parallel wheat-like patterns only remain. Antonine. [435]

Applied decoration

Déchelette 72, Lezoux. Body sherd with most of an appliqué motif extant, a small part has broken off the body. Traces of barbotine scrolls also survive. Of the figure Dr Martin Henig writes 'The figure is wearing a Phrygian cap with ear-flaps and is holding what may be a pine-sceptre (cf Vermaseren 1977, pl.42 for the sort of pine; fig.29 for Attis). Interestingly Cybele too holds a branch on the coin illustrated in fig.28 (ibid.)'. Antonine [408]. DRAW

Déchelette 72, Lezoux; body sherd with traces of scrolls and tendrils and a bunch of grapes en barbotine. Antonine. [567]

Déchelette 54, body, Rheinzabern. Decorated en barbotine with a bird (feet only extant), a tree (base of trunk) and scrolls or leaves. The lower limit of the decoration is marked by three grooves (Bird 1993, fig 1 top right) although the jar would have been more rounded (ibid., fig 1, central vessel) DRAW. 1st half 3rd century. [453]

Potters' Stamps

1. Iulianus iii of Rheinzabern, die 3b, Dr 31. [IV]LIANVSf . This is one of the dies used by Iulianus of Rheinzabern, the fabric of this vessel, however, appears to be a Lezoux fabric. There are no other records of this die being found on Central Gaulish pots. On form and fabric this pot would be dated to the mid-late Antonine period. The stamp is dated c. AD 220-255. [408]

2. [ ]\EDOF, CG Dr 31. Unidentified. Antonine [435]

3. [OFSECV]NDI Possibly Secundus iii, (Vechten S88). SG, Dr 18R . c. AD 70-95 Frame end shaped '3' . [505]

4. Cerialis v – stamp in decoration Dr 37. EG, Rheinzabern. Not readable, might have slipped during stamping. c. AD 160-80 [366]

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APPENDIX 3

Animal Bone Assessment

Kevin Rielly

Introduction

This site provided a Roman sequence followed by medieval and post-medieval stratigraphy. The Roman levels include some 1st/2nd century features, predating its 3rd/4th century usage as a cemetery. Several other Roman sites in this general area, south and east of Borough Underground Station, reflect this ritual aspect, including 1-5 Swan Street, 165 Great Dover Street and Chaucer House on Tabard Street (Cowan et al 2009, 263-4). In the Roman period, these sites were on the mainland and at the southern extremity of the Roman Southwark settlement, alongside or in the vicinity of Watling Street (ibid, 12-13). There are areas of truncation, cutting down through the cemetery levels, however there is sufficient preservation in other parts of the site to estimate the extent of the area used for burials. The cemetery appears to be divided by a number of elongated ditches, while in the southern part there may be the remains of an enclosure. These ditches provided the greater part of the animal bone collection, although a large quantity was also found in various dumps and/or soil horizons. Later occupation is shown by a series of layers as well as a small concentration of rather large post-medieval pits. The dating of these levels has yet to be clarified although the latest occupation is likely to date to the 18th/19th centuries.

The bones described in this report are essentially those recovered by hand, with the exception of a few bones from a grave sample. Several more samples were taken and their bone content will be described in the published report.

Methodology

The 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.

Description of faunal assemblage by phase

The site stratigraphy has been provisionally divided into 7 phases, as follows: - 1 - natural, 2 – Early Roman, 3 – 3rd century, 4 – 4th century, 5 – late 4th/5th century, 6 – medieval and 7 – post-medieval. The animal bone assemblage, amounting to 1764 fragments, including three from a single sample, where divided throughout the site sequence with particular concentrations in the Roman phases 3 to 5 (see Table 1, 2 and 3). The sample bones are from a phase 3 grave.

Phase:	2	3	4	5	6	7	Total
Trench							
1		2					2
8	9		6	23			38
9	1		7		2		10
12		4				34	38
13		26	5			1	32
14	19	18					37
15	2		62	4	18	15	101
16					1	6	7
17		15				61	76
18	4	150	50	6		2	212
19	61	31	21	420		6	539
20			6		31		37
21					34		34
22	41	58	96	314			509
23		2	5				7
24					15		15
Total	**137**	**306**	**258**	**767**	**101**	**125**	**1694**

Table 1. Distribution of hand collected bones by phase and trench

Phase:	2	3	4	5	6	7
Feature type						
Ditch	106	196	40	74		6
Pit	12	25	4	16	2	90
Pit/ditch	1					
Posthole			4			
Well				21		
Tree throw						1
Layer	17	78	206	651	99	28
Grave		5	4	5		
Skeleton		2				
Cremation	1					
Total	**137**	**306**	**258**	**767**	**101**	**125**

Table 2. Distribution of hand collected bones by phase and feature type

The site was set out, as circumstances dictated, into 23 trenches (Table 1). These units will be used to describe the location of the various structures and levels described in this report as well as to denote the concentration of bones throughout the site. A comparison of individual structures or particular levels will use the group numbers. These are particularly useful as a number of these structures transcend the trench boundaries.

Redeposition is clearly a major consideration in a cemetery site and this undoubtedly occurred here, as shown by the general mix of human and animal bones throughout the Roman levels. However, the vast majority of the bones are well preserved and only minimally fragmented. Exceptions include a small number of poorly preserved bones and some highly fragmented horse skulls, all in the Roman levels. The good condition of the bones would suggest that the majority were buried soon after deposition or at least that, at any time in their history, they were not left for any substantial period of

time open to the elements. An obvious indication of this conclusion is the small proportion of gnawed bones, with just 85 from the phased collections (5.0%) ranging from 3.9 to 5.2% in the Roman phases and a maximum of 11.9% in the medieval collection.

Phase 2 (Early Roman)

A major part of the phase 2 bones derived from ditches (see Table 2), especially, from north to south, the large NW-SE aligned ditch (Group 16) in Trench 14, with 19 bones; the similarly aligned narrow ditch (Group 67), situated centrally, in Trench 22, with 35 bones; and two features towards the southern part of the site, both aligned SW-NE, a narrow ditch (Group 89) in Trench 22, with 18 bones, and two parallel ditches and associated pits interpreted as an enclosure (Group 7) in Trenches 19 and 22, with 38 bones.

Phase:	2	3	4	5	6	7
Species						
Cattle	27	68	78	271	43	17
Equid	22	53	14	28		2
Cattle-size	51	98	99	294	31	40
Sheep/Goat	9	11	18	41	5	26
Sheep	1	1	2	6	2	3
Goat	1	2		1		
Pig	18	14(1)	19	72	12	1
Sheep-size	4	7	15	29	7	33
Red deer				1		
Roe deer			1	1		
Dog	2	29	7	9		
Cat						1
Hare		1		2		
Small mammal	1	2(1)		1		1
Chicken	1	20	4	7		
Goose				3	1	
Goose-size						1
Mallard				1		
Amphibian		(1)				
Total	**137**	**306(3)**	**257**	**767**	**101**	**125**

Table 3. Counts of animal bones with sieved quantities in brackets

Most of the phase 2 collection is composed of the typical food domesticates i.e. cattle, sheep/goat and pig, while also featuring a good representation of equids (see table 3). Individual features include the same general mix of the first three species, each of which are represented by all parts of the carcass, signifying combined dumps of food and processing waste. Cut marks were discovered on a horse calcaneus (ankle bone) that may suggest the use of horseflesh, or otherwise these cuts could be interpreted as skinning marks. Butchery marks have been observed on other horse bones recovered from London sites dated to this period and it can perhaps be assumed that horseflesh was

utilised, although very sparingly, as for example shown by the single specimen with cut marks (out of a total of 171 equid bones) from the Roman levels at Drapers' Gardens (Rielly 2009) and the complete lack of such bones (out of 501 fragments) within similarly dated levels at the nearby site of Tabard Square (Rielly 2008). Whether this flesh was meant for the consumption of humans or for kept animals as dogs, is a matter for conjecture. The majority of horse bones found at this site, as elsewhere, tend to be complete or nearly so, which is clearly very different to normal food use, where bones are broken for their marrow content. In addition, unlike the food animals, a large proportion of the horse bone collections clearly represent partial articulations or at least groups of bones that can be assumed to have derived from the same individual.

While predating the cemetery, several phase 2 deposits contained human bones, maybe indicating the presence of earlier graves or maybe the deliberate deposition of human parts into these features. Notably, the central ditch (Group 67) provided one of the two cremations discovered at this site. The fill [625] provided a few calcined human and animal remains, including a pig radius. It is notable that other cremations in Roman London tend to feature either chicken or pig grave goods with the latter invariably composed of a partial forelimb articulation (Barber and Bowsher 2000, 73; Sidell and Rielly 1998, 97). This same feature also provided a small collection of equid remains including a rather small pelvis, femur and metatarsus, possibly from the same individual. This was clearly one of the smallest equids found in London, it stood 102cm (about 10 hands) at the shoulder, and after a close study of various dimensions of the metatarsus (after Eisenmann and Bekouche 1986; Baxter 1998) this was confirmed as a donkey (Baxter pers comm.). This find will be discussed in greater detail in the Conclusions (see later). Several other measurable horse bones were found in phase 2 deposits, but each of these tends towards small to medium-sized ponies in stature. These include two partial articulations, a forelimb and a hindlimb from the Group 89 and 16 ditches respectively, both about 12 hands in height.

Phase 3 (3rd century)

This phase dates to the onset of the cemetery, with several inhumations in the northern and central parts of the site, in Trenches 14 and 12 respectively. Disarticulated remains continue to be found, mixed in with concentrations of animal bones. The great majority of these, following the phase 2 pattern, were found in ditch fills although a large proportion was also derived from various layers. The major concentrations were found in the NE-SW aligned ditch (Group 17) in Trenches 13 and 18, which clearly truncates the eastern part of the phase 2 ditch (Group 16), with 165 bones; the NW-SE aligned ditch in the central area (Group 65), Trenches 19 and 22, with 30 bones; and then from soil horizons mainly located in the southern half of the site within Trenches 19 and 22 (Groups 66, 86 and 87) with 59 bones.

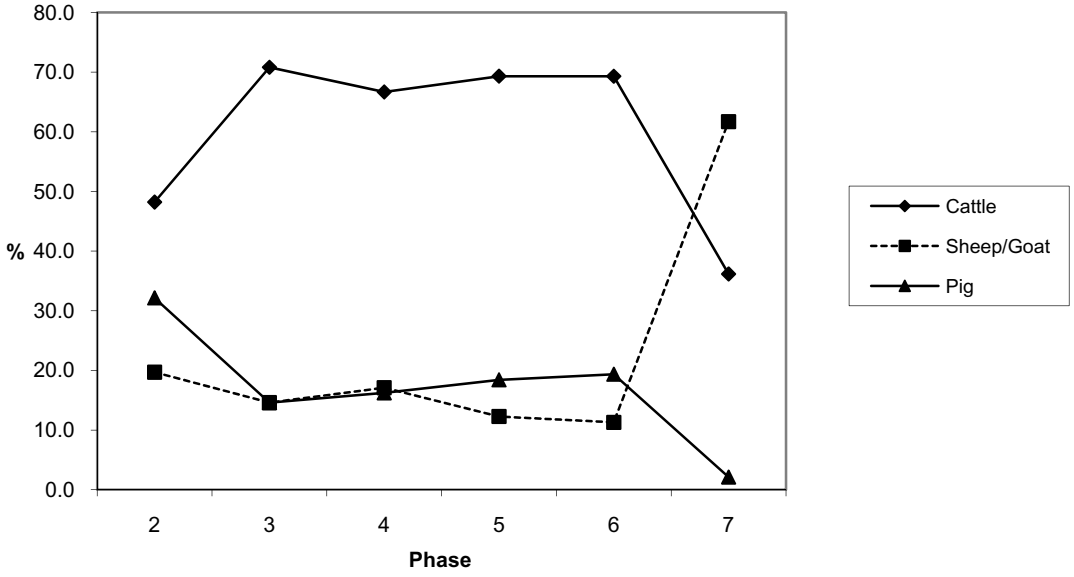

Figure 1. Percentage representation of hand collected cattle, sheep/goat and pig (data taken from Table 3).

The species representation is approximately similar to that shown by the previous phase except that cattle is clearly more abundant (see Figure 1) relative to sheep and pig. There are no notable differences in this pattern throughout the site and each of these species is represented by a general mix of skeletal parts. Of interest is the increased quantity of horse bones (53 fragments), most of which are concentrated in ditch Group 17 (41 bones) and pit [155] (7 bones). Otherwise there was a complete though heavily fragmented skull in one of the soil horizon deposits [530] in Trench 22. The stature of these animals reflects the general size range described for phase 2.

This phase also provided an abundance of dog bones, which were also concentrated in ditch group 17. The 27 dog bones from this feature represent at least three animals, all adult, including two large individuals, one represented by a pair of mandibles and the other by a complete tibia, with an extrapolated shoulder height of 60cm (after von den Driesch and Boessneck 1974). This last bone is remarkably slender, with a slenderness index (minimum shaft width/greatest length x100) of 15.1, compared to a maximum value of 12.7 given for Roman dogs in Harcourt (1974). Its size and build is perhaps not dissimilar to the modern greyhound.

The better representation of chicken in this phase is related to the recovery of a partial skeleton (13 bones) within pit [155] in Trench 14, abutting grave [141]. It can perhaps be assumed that the pit fill may have become confused with the grave fill, this suggesting it represents a grave good. A few more chicken bones were found within grave [171], a little to the east (all of these features were in Group 6, trench 14), which may also represent a ritual deposit. The bones from [155] were identified as part of one bird during excavation but it is not known if the bones were articulated. This will obviously have a bearing on whether the grave good represents a complete carcass or a collection of bones following its consumption. The latter type appear to be more common (see Mackinder 2000, 45; Barber and Bowsher 2000, 131-2), but it should be pointed out that in all these cases, insufficient care was taken to categorically state the level of articulation of these birds.

A few bones were found in other grave fills, namely [151] and [135] in Trench 14, and [82] in Trench 12. All of these bones can be interpreted as residual. The second cremation at this site, recovered from the backfill of grave [63] in Trench 12 did not provide any recognisable animal remains.

Phase 4 (4th century)

The bones from this phase were almost entirely derived from various layers and in particular from soil horizons in Trench 15 (Group 30) with 33 bones and Trench 22 from Groups 84 and 85 with 50 and 46 bones respectively. Much of the remainder were recovered from Group 18 deposits, including the later fills of the phase 3 ditch (Group 17) and the overlying soil horizon, with 55 bones. Noticeably, this phase accounts for the majority of the Trench 15 bone assemblage, this located at the northern extremity of the site.

There is a continuing dominance of cattle compared to sheep and pig, with similar mixed skeletal part assemblages throughout. The food waste includes the earliest indication of large game, represented by a roe deer humerus from a dump level [32] in Trench 8. Otherwise there are fewer horse and dog bones, the former with another highly fragmented skull. This was discovered in the fill [482] of pit [483] Group 62 adjacent to the inhumations in the northeastern part of Trench 19. There were a further two grave fills with animal bones, from [423] (Group 62) and [498] (Group 64), in the northeastern extremity of Trench 19, but again they can be interpreted as residual.

Phase 5 (late 4th/5th century)

This large assemblage was mainly recovered from various layers located in Trenches 19 and 22, principally Groups 57 (269 bones) and 59 (124 bones) in Trench 19, Groups 80 (52 bones) and 82 (178 bones) in Trench 22. Most of the bones taken from fills were derived from Group 83 in Trenches 19 and 22, marking the continued use of the phase 3 ditch (Group 65), this situated towards the southern part of the site.

There is little change regarding the two previous phases concerning the dominance of cattle bones but there does now appear to be a greater proportion of pig bones. Again, there is no obvious difference in the representation of these species throughout the major features, however, the cattle bones in Group 57 clearly show an over representation of head and foot parts i.e. butchers waste. This is largely related to deposit [408], where the 51 cattle bones are entirely composed of this type of waste, which was undoubtedly derived from a local butcher's shop or market. The number of individuals represented suggests this is unlikely to represent waste from a domestic kitchen.

As well as the major domesticates there is the slight presence of both red and roe deer as well as hare plus the inclusion of goose and duck to the ubiquitous chicken. The red deer bones consist of the base of an undropped antler (Group 59) and a distal humerus from a large animal (Group 82). The game produce may also include wild boar, as shown by a particularly large radius from [549], a Group

82 soil horizon, which had a proximal breadth of 39.2mm compared to two others from the same deposit measuring 30.7mm and 29.8mm.

Equids are relatively well represented, with a notable concentration (19 bones) in the Trench 22 soil horizons, and in particular in Group 59 (15 bones). The size range is again amongst the small to medium pony range. In addition, these animals are invariably adult, as shown by both the dentition and the fused state of the limb bones. This is clearly a common feature of the horses at this site as elsewhere in Roman London. However, there is one exception, a femur from one of the well fills [424] (Group 61) that has an unfused proximal end. While certainly not a foal, this animal is certainly aged no older than 3 to 4 years.

Finally, there were a few more bones from grave fills, namely the fills of grave cut [213] Trench 15 (Group 27) and of [429] Trench 19 (Group 58). The few bones recovered are clearly general food/processing waste rather than items of any ritual significance.

Phase 6 (medieval)

The medieval bones were essentially taken from soil horizons located at the site extremities and in particular in the northernmost Trench 15 and the three southernmost Trenches 20, 21 and 24. Taken as a whole the collection features a great majority of cattle bones, with somewhat more pig than cattle with other species limited to just one goose bone. Each of these species is represented by a wide variety of parts.

Phase 7 (post-medieval)

Most of the animal bones dating to this phase were taken from pits and associated soil horizons located in the northeastern part of the site (Trenches 12 and 13) and towards the southeast in Trench 17. These include Groups 13 (35 bones) and 39 (61 bones) respectively. The former area features pits, [45], [56] and [76], all of which are large square structures and could have had some industrial function, as for example tanning. Those in the south, [259] and [261] are elongated structures with uneven sides. There is a notable majority of sheep and sheep-size bones within and adjacent to these structures, these displaying a general mix of skeletal parts.

It can be assumed that these features are relatively late in the post-medieval period due to the recovery of rather large cattle bones, probably denoting the presence of ‘improved breeds’, as well as a sawn cattle pelvis, all from [258], one of the pit [259] fills. The use of the saw for butchery purposes and the presence of such large cattle tend to date from the late 18th and early 19th centuries (Rixson 2000, 215; Albarella 2003, 74).

Conclusions and recommendations for further work

The potential value of an assemblage clearly depends on a number of factors, not least the ability to place the bones within a precise phasing sequence. This is an obvious concern with cemetery sites, which often feature high levels of redeposition. However, though there are numerous disarticulated human remains scattered amongst the Roman levels, it was possible to phase the pre-cemetery and cemetery levels within five relatively narrow time periods. The post-Roman levels may well be established within similar or even finer time limits. Other concerns include the state and the quantity of bones. There are a small number of poorly preserved bones but in general the bones are very little abraded and minimally fragmented, suggesting that the perceived disturbance had little effect on the condition of the archaeological collections. Quantities vary between phases, with the largest assemblage from the latest Roman levels. However, in most phases there is potential for investigating the level of exploitation of the major food animals, with a description of husbandry practises (the relative importance of meat and ante-mortem products as milk and wool) perhaps best left to the Roman cemetery phase collections. At this point it should be stressed that the major priority concerning this site are the Roman levels which would tend to preclude the post-Roman deposits from any further study.

The interpretation of the bone assemblages must consider the possibility of ritual connotations. There are the obvious examples, including the calcined pig bone from the 2nd century cremation and the chicken skeleton from the 3rd century grave. It has been noted that pig and chicken tend to be the choice items deposited either in Roman cremations and graves, the former invariably represented by relatively complete skeletons and the latter by parts of the foreleg (Barber and Bowsher 2000). Local examples found in graves include chicken skeletons at Lant Street dated to the 4th century and late 2nd/early 3rd century at 165 Great Dover Street, and a pig forleg dated to the 1st century at Harper Road (Rielly in prep; Mackinder 2000, 45; Cotton 2008, 154). However, another possibility is that a proportion of the bones scattered amongst the ditches and soil horizons may represent food waste from graveside feasting. It was recognised, for example, that a very large proportion of the chicken bones from the Lant Street cemetery (Rielly in prep) were taken from grave fills, strongly suggesting some connection. One of the other 3rd century graves at Trinity Street did provide a few chicken bones, although this may represent a grave good rather than feasting activity. Unfortunately, very few bones were recovered from the grave fills at this site, which therefore cannot be adequately compared to those from the other features. The food waste collections found throughout the features contemporary with the cemetery do not appear to be anything other than general waste and in fact a deposit from phase 5 was clearly taken from a local butchers or butchers market. Nonetheless, it would be worthwhile taking a detailed look at the bones from these features, comparing them to typical food waste collections found in other parts of Roman Southwark.

The abundant presence of equid remains amongst the Roman levels is very typical of peripheral sites, where it is generally understood that horse carcasses were dumped and occasionally buried. The action of scavengers and then of reuse of these areas as cemeteries resulted in the admixture of partial horse skeletons with human remains and general food refuse (Barber and Bowsher 2000, 79). Examples in this general area include the cemetery sites at 165 Great Dover Street, 52-56 Lant Street and 56 Southwark Street (Rielly 2000; Rielly in prep). There is obviously great potential amongst this

large corpus of material for the study of the various types of equid used in Roman London. The equid bones from this site appear to be relatively typical, mainly adult and of short stature (in comparison to those recovered from the previously described sites). However, this site has also produced a particularly short and gracile equid, which is almost certainly a donkey (following the description given in Eisenmann and Beckouche 1986 and also the use of discriminant analyses by Baxter, pers comm.). This is a highly significant find and represents one of only two donkeys so far identified in Roman London and one of only four such animals from Roman Britain (Baxter 2002, 93). The other Roman London donkey was discovered in a late 2nd century deposit at Hunt's House, part of Guy's Hospital, also within Roman Southwark (Bendrey 2002, 59). Donkeys, and mules, were clearly heavily exploited in the Roman world (Toynbee 1973, 193-7) but it is little known if they were equally important within the northern empire provinces. The lack of finds could suggest they were little used but problems concerning the identification of this species may have played a part in their poor representation on archaeological sites.

Following on from these conclusions it is recommended that the Roman level assemblages be further studied in order to deduce the exploitation trends, particularly amongst the food animals; to describe the ritual elements of these collections including any evidence concerning graveside feasting; and finally to fully describe the donkey skeleton and its significance to Roman London.

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APPENDIX 4

Glass Assessment

John Shepherd

This assessment comprises this MS Word document and also an MS Excel spreadsheet (TIY07 glass.xls).

Summary

A total of sixty items of glass were submitted for identification and assessment, including four complete vessels, three Roman in date ([145] <7>, [202] <29> and [136] <13>) and one nineteenth century ([525]. Apart from two large fragments from bases of nineteenth century bottles (both unstratified) all the remaining fragments are very fragmentary.

Assessment

Nineteen fragments, including the near complete gradated pharmaceutical bottle ([525]) are post-medieval in date. Seven of these are indeterminate fragments, six are window glass. There is nothing in the diagnostic post-medieval assemblage that is worthy of further comment.

Forty-one items in the assemblage are Roman in date. Nineteen of these are indeterminate body fragments in natural green blue colours, one is a blue fragment ([220]), probably of 1st century date. It is so small, however, that it is likely to be residual in its context.

The diagnostic Roman vessel glass contains vessel types from the mid to late first century, such as ribbed bowl fragments ([412] and [516]), bottles of late first to second century ([199]; [273]; [408]; [556]) and drinking vessels of the late second and third century ([451]; [516]; [556]).

Of particular interest are three complete vessels that came from graves. These are:-

TIY07 [145] <7>

A complete ‘Mercury’ flask, so named after the bottles carried by the God. The vessel has been mould-blown to create the square-sectioned body. The base has four small pellets, one in each corner. Note the very narrow mouth for sprinkling the contents. This is only the second example from London, the other being a broken and much burnt vessel from the eastern cemetery of Londinium. These vessels were in use during the second half of the second century and was probably imported – although it was likely that it was the contents, perhaps a fine perfume, was originally the commodity of interest.

TIY07 [202] <29>

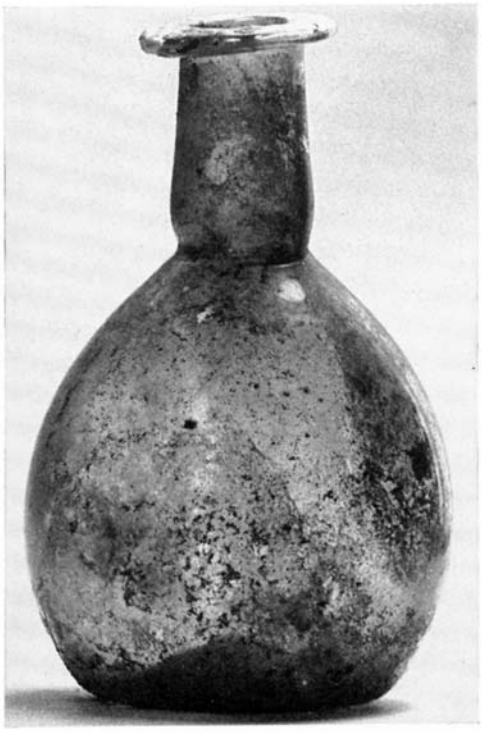
A pear-shaped bottle, intact apart from a missing rim. This bottle dates form the late second or early third century. It would have been placed in the grave as a container for a liquid commodity – perhaps a perfume or foodstuff.

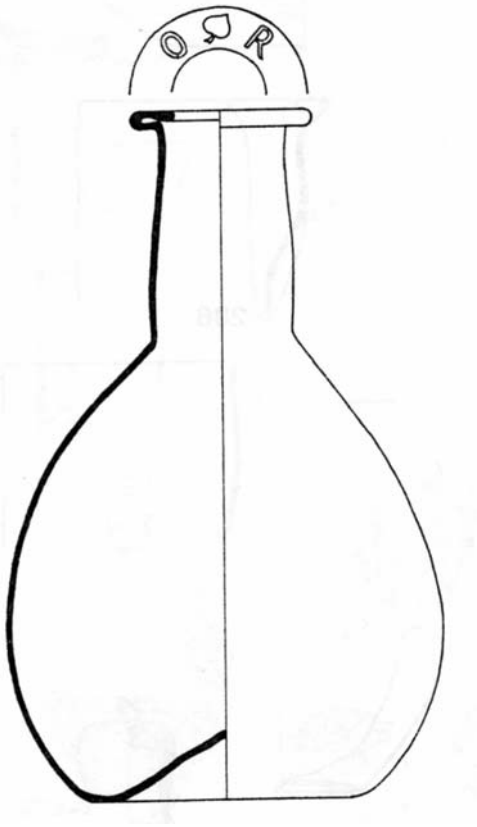
TIY07 [136] <13>
A complete pear-shaped bottle in a dull colourless glass. This bottle also dates form the late second or early third century and would also have been placed in the grave as a container for a liquid commodity – perhaps a perfume or foodstuff. The rim of the vessel has been stamped with a legend, sadly illegible – only parts of what appears to be six characters are visible.

Sketch of rim of TIY07 [136] <13>

Bottles with such lettering are known. The example illustrated here comes from Heddernheim, Germany and is also dated to the late second or early third century. Its legend too is incomplete. It is suggested that such bottles and associated phials with marks of this sort originally contained liquids – perhaps perfumes or cosmetics – that came from land that was part of Imperial Estates.

1





Bottle TIY07 [136] <13>

Recommendations

It is recommended that nothing further is done with the post-medieval assemblage.

The Roman assemblage in total, and not just the complete grave accessories, should be published in full. It is, however, a small assemblage. More detailed research of the complete vessels, a full catalogue and interpretation of the assemblage will be rquired.

Illustration requirements

The three complete vessels should be drawn and photographed, including a detailed photograph of the rim of [136] <13>.

Eight other small fragments of glass are worthy of illustration for the published catalogue.

APPENDIX 5

Post-Roman Pottery Assessment

Berni Sudds

Quantity

Total number of boxes: 6.
Total sherd count: 327 sherds (279 vessels).
Total number or contexts producing pottery: 48 contexts.

Methodology

The Museum of London Specialist Service's (MOLSS) pottery type codes have been used to classify the ceramics. The coding of the Saxon pottery types is also according to the Museum of London system and these have recently been published in some detail (Cowie and Blackmore 2008). The latter classifies the Saxon pottery under 'umbrella' groups that allow for site to site variation. The material was quantified for each context by fabric, vessel form and decoration using sherd count (with fresh breaks discounted) and estimated vessel numbers. Examples of the fabrics can be found in the archives of PCA and/or the Museum of London. A ceramic database cataloguing these attributes has been generated using Microsoft Access.

Introduction and condition

The assemblage of pottery includes material of Early Saxon, medieval and post-medieval date. The majority dates to the post-medieval period and is well paralleled in London both in terms of fabric and form (Table 1). The presence of a small medieval assemblage is of regional interest in further demonstrating the presence of activity of this date further to the south than previously supposed. Of the greatest interest, however, is the small but significant group of Early Saxon pottery. Material of this date is relatively scarce in the London region, with only a handful of assemblages having been identified in the whole greater London region (Cowie and Blackmore 2008). The pottery of this date recovered from Trinity Street includes some large fresh fragments that would indicate contemporary activity in the immediate vicinity.

Period	Total sherd count	Total MNV
Early Saxon pottery	20	17
Medieval pottery	23	23
Post-medieval pottery	281	236
Miscellaneous/ undated	3	3

Table 1: Total sherd count and MNV (Minimum number of vessels) by period.

The pottery of all periods is in relatively good condition although the feature assemblages are generally quite small. The pottery is discussed below by period followed by a short consideration of distribution.

The Early Saxon pottery

The local handmade nature of pottery production that characterises both the prehistoric period, particularly the Iron Age, and Early Saxon period can cause problems with identification and dating. Similar local clay sources were often exploited and common methods of manufacture and levigation used, precisely because they worked so well. The products were also fired in same way in a clamp or bonfire. Taken together with the use of similar forms that lend themselves easily to hand production means that it can be difficult to distinguish between Iron Age and Early Saxon material, even more so in absence of diagnostic sherds or decoration. Pottery of prehistoric date has been identified at Trinity Street and the danger remains that some material has been misidentified, particularly when dealing with single body sherds. For this reason the spot dates given at this stage must remain provisional. It is clear, however, that there is a convincing, if small, Early Saxon assemblage represented.

Of the 20 sherds the majority are sand-tempered (ESAN) with various smaller inclusions, including quartz, flint, iron ore, organics and calcareous material, dividing them into a number of sub-categories. Few diagnostic sherds were recovered but include a slightly everted, internally bevelled jar rim. In terms of surface finish the sherds are either smoothed wiped or burnished. The ESAN fabric is dated from c. AD 400 to 600 (Blackmore 2008, 169) although a single burnished body sherd is decorated with incised horizontal lines that might suggest a date early in that range, perhaps during the 5th or early 6th century.

The other fabric group identified is chaff-tempered ware (CHAF; CHSF). Just three sherds were recovered, some also containing shell inclusions, and include a jar form with a beaded rim. Chaff-tempered wares are also dated from c. AD 400 but were still being made into the 8th century. Although present in 5th century contexts, however, they do not represent a dominant fabric until the late 6th century (ibid. 179). That so few sherds were recovered in comparison to the sand-tempered wares corroborates an early date for the group.

The medieval pottery

The small medieval assemblage is largely comprised of well paralleled fabric and form types including early medieval shell-tempered ware (EMSH) bowls and jars and London-type ware (LOND), Kingston-type ware (KING; FKING) and Mill Green (MG) jugs. Other Surrey whitewares identified include Coarse Border Ware (CBW) and Cheam Whiteware (CHEA). A single sherd of the ubiquitous South-Hertfordshire greyware industry was also recovered in addition to three as yet unsourced jar and jug sherds.

The post-medieval pottery

The larger assemblage of post-medieval pottery can be similarly well paralleled in the London region but also includes an interesting industrial vessel.

Material of late 16th and 17th century date includes a variety of green, olive, yellow and brown-glazed Border ware (BORDG/O/Y/B) vessels from the Surrey/ Hampshire borders and post-medieval black-glazed redware (PMBL), post-medieval fine redware (PMFR) and Metropolitan slipware (METS) from Essex. Local London products are represented by tin-glaze (TGW/B/BISC) and early, slipped and developed redwares (PMRE; PMSR; PMR). Imported vessels include the ubiquitous Frechen Bartman jugs (FREC) but also a sherd of a Weser slipware (WESE) bowl or dish from Germany dating from c. 1580 to 1630. Forms identified reflect a typical split in supply during this period with decorative and serving vessels, such as dishes, commonly occurring in Border ware, Metropolitan slipware and tin-glazed ware and food preparation and cooking vessels, such as bowls, cauldrons and colanders, represented in the local coarse redware. This is not to say that no functional Border ware products were found there being at least one tripod pipkin and saucer candlestick in the assemblage.

The 18th and 19th century ceramics also include local and regional utilitarian redware products (RBOR; PMR) but are characterised by the industrial finewares, primarily from Staffordshire. Just a single sherd of the white salt-glazed stoneware (SWSG) was identified, dating from c. 1720 to 1780 with the remaining material dating to the late 18th or 19th century. Both Creamware (CREA/DEV) and Pearlware (PEAR/SPON/TR) services are present including serving bowls, dishes, plates and a single caster. Chinese and English porcelain (CHPO BW; ENPO HP/PNTD/UTR) serving vessels were also recovered comprising a bowl, plate, cup, saucer and jug.

Later 19th century services are represented by refined white earthenwares (REFW/ CHROM/ PNTD) and transfer-printed wares (TPW/FLOW/3) with a similar range of forms incorporating varying plate sizes for dinner and tea and even a toy plate. Other 19th century products include slipped and plain Yellow ware bowls (YELL/SLIP), Sunderland-type ware (SUND) bowls and a slipped redware (PMR SLIP) rectangular dish. A small number of English stoneware (ENGS) bottles were also recovered including a flat bottle and three for ginger beer.

Of interest is the recovery of a small triangular crucible in a sandy, near stoneware fabric. Prior to their widespread manufacture in Britain in the 19th century crucibles had to be imported on a large scale to meet the needs of rapidly growing industry. The majority of these came from Germany, namely from Hesse. The crucible from site was recovered from a ploughsoil dated to the medieval period. The earliest triangular crucibles were imported into Britain in the late 16th century (Cotter 1992) so the example from Trinity Street is likely to be intrusive in this layer. The lack of primary dating also means a provenance is hard to establish. In order not to be so heavily dependent on imports the English began experimenting with crucible production during the late 16th, 17th and 18th century but with relatively limited success (Green 1999, 95-7; Cotter 2000, 290). Unfortunately, although rare these products are difficult to distinguish from imported examples. Generally speaking, if sandy and pre-dating the 19th century the likelihood is that they derive from Hesse. Without a date for the Trinity Street example it is not possible to be certain of source however (Cotter 1992; 2000).

Triangular crucibles were particularly associated with gold and silver metallurgy although they were used for a wide variety of purposes, including enamelling (Douglas forthcoming). No residue was detectable on the crucible from site so little can be concluded from the vessel with regard to use.

Date and distribution

The table below depicts the breakdown of the post-Roman assemblage by phase. A small proportion, but including the majority of the Saxon assemblage, is intrusive. Reasons for this are discussed elsewhere. Although disturbed, however, the combination of fabric and what limited decoration is present would suggest the Saxon pottery is early in date, most likely 5th or early 6th century.

Phase	Period of pottery	Total sherd count	Total MNV
2: Roman	Post-medieval	1	1
3: 3rd century	Post-medieval	1	1
4: 4th century	Saxon	15	15
	Medieval	1	1
	Post-medieval	3	3
	Undated	3	3
5: Late 4th – 5th century	Saxon	5	2
	Medieval	3	3
6: Medieval	Medieval	9	9
	Post-medieval	15	13
7: Post-medieval	Medieval	7	7
	Post-medieval	209	168

Table 2: Total sherd count and MNV (Minimum number of vessels) by phase and period.

As with the Saxon material some of the medieval pottery is intrusive in phase 4 and 5 deposits although the majority was recovered from a series of soil and ploughsoil horizons. Although small the assemblage includes material dating from the mid 11th to 15th century.

The post-medieval assemblage on site appears to date predominantly to two periods, the 17th century and the late 18th to 19th century. Larger feature assemblages were identified than with the previous two periods but they are still relatively small, retrieved mostly from the fill of pits and robber cuts.

Discussion

Given the rarity of material of Early Saxon date in the region, the presence of a small but fresh assemblage of this on site is of particular interest. A total of 20 sherds were identified indicating some form of activity in the near vicinity during the 5th or early 6th century. With the exception of one sherd, the general absence of decoration and presence of some chaff-tempered material might be suggestive of domestic rather than funerary activity but with so small a group it would be dangerous to draw any firm conclusion, particularly as there can be some overlap in the fabrics and forms utilised in each setting.

The only other material of this date in the immediate area has been recovered fairly recently through excavations at Lant Street and in Bermondsey (Jarrett forthcoming), amounting to 4 and 20 sherds respectively. These small assemblages, including Trinity Street, appear to tie in well with the evidence for other activity for this period in the London area, representing small scale, temporary dispersed rural settlement (Cowie and Blackmore 2008; Jarrett forthcoming).

Although small the medieval assemblage includes material of early, high and late medieval date. As with the larger medieval assemblage excavated from nearby Tabard Square (Killock 2009) this material provides important evidence for focused and long-lived medieval settlement activity further to south than previously identified.

The post-medieval assemblage is typical of the region, comprised of domestic assemblages dating to 17th, 18th and 19th century. The exception to this is the single triangular crucible, indicative of some form of industrial activity. With just one vessel and no residue from use, however, it is not possible to identify the form this may have taken.

Potential and recommendations

Whilst a publication report should be produced for all of the material represented the focus of further analysis should be the small but important Early Saxon assemblage. This should include a half days consultation with Lyn Blackmore (MoLSS) to confirm the provisional identification of this material. Comparison will also be required with the assemblages from Lant Street and Bermondsey. A brief initial scan has revealed differences between all three assemblages but whether this reflects separate areas of occupation needs to be considered further.

Appendix 1: Dating table

Context	Phase	Sherd count	Date range of the pottery		Latest dated ware		Suggested date of deposition
0		50	1240	1926	1800	1900	Includes 17th century pottery
1	7	30	1270	1900	1630	1700	1630 – 1680
2	7	13	1080	1900	1630	1700	1630 – 1650
3	6	1	1240	1400	1240	1400	1240 – 1400
4	4	1	1580	1900	1580	1900	1580 – 1900
29	6	14	1480	1926	1820	1900	1820 – 1840
31	5	1	400	1900	400	1900	400 – 600?
45	7	3	1550	1700	1550	1700	1550 – 1700
55	7	15	900	1900	1770	1840	1770 – 1830
56	7	7	1350	1900	1780	1900	1780 – 1840
74	7	21	1550	1926	1830	1900	1830 – 1840
77	7	12	1400	1900	1805	1900	1805 – 1830
80	3	1	1580	1900	1580	1900	1700 – 1900
133	2	1	1805	1900	1805	1900	1805 – 1900
162	4	1	1550	1700	1550	1700	1550 – 1700
188	7	3	1320	1700	1550	1700	1550 – 1600/1700
189	7	1	1550	1700	1550	1700	1550 – 1700
195	7	2	1550	1900	1810	1900	1810 – 1900
200	6	2	900	1900	1080	1350	1080 – 1350
206	4	2	400	750	400	750	400 – 600

Context	Phase	Sherd count	Date range of the pottery		Latest dated ware		Suggested date of deposition
208	4	6	400	750	400	750	400 – 600
209	4	1	400	600	400	600	400 – 600
220	4	1	400	750	400	750	400 – 750
233	7	1	1550	1700	1550	1700	1550 – 1700
235	7	1	1550	1700	1550	1700	1550 – 1700
237	7	1	1580	1700	1580	1700	1580 – 1700
248	4	1	400	600	400	600	400 – 600
249	7	1	1550	1700	1550	1700	1550 – 1700
250	6	1	1270	1500	1270	1500	1270 – 1500
258	7	16	1480	1926	1670	1926	1670 – 1800
260	7	5	1550	1900	1760	1830	1760 – 1800
262	7	10	1270	1700	1580	1700	1580 – 1630
263	4	6	400	600	400	600	400 – 600
370	4	1	400	600	400	600	400 – 600
413	7	9	1550	1900	1805	1900	1805 – 1900
426	6	4	900	1900	1240	1400	1240 – 1400
516	5	2	400	1500	1270	1500	1270 – 1500
523	7	32	1580	1900	1820	1900	1820 – 1840
525	7	33	1550	1926	1800	1900	1800 – 1830
548	5	3	900	1900	1080	1350	1080 – 1150
549	5	2	400	1900	400	1900	400 – 600?
574	4	1	1580	1900	1580	1900	1580 – 1900
578	4	1	1270	1500	1270	1500	1270 – 1500
591	6	1	1050	1150	1050	1150	1050 – 1150
604	6	1	1080	1350	1080	1350	1080 – 1350

Table 3. List of contexts containing pottery, size of context assemblage, date range of pottery, date range of the latest fabric and suggested deposition date

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APPENDIX 6

Ceramic And Stone Building Material Assessment

By Berni Sudds and Kevin Hayward

Quantity

Number of boxes: 81

Sampled fragment count: 797

Sampled weight: 137407g

Introduction

A relatively large group of ceramic and stone building material was recovered from the excavation at Trinity Street. The sample recorded (two thirds of the collected assemblage) amounts to 797 fragments, weighing 137.407kg. Although a small quantity of medieval and post-medieval material has been identified, the majority is of Roman date.

Methodology

Conforming with the Museum of London system of classification the material was examined under magnification (x20) and quantified by context, fabric, form, number, weight and measurement. A database cataloguing these attributes has been generated using Microsoft Access and appears with the archive. Samples of the fabrics can be found at the Museum of London and published descriptions appear in Pringle (2002) and Betts (2003). Forms were classified using Brodribb (1987). After analysis the common fabric types were discarded, with a type sample retained. Any unusual pieces, or fragments requiring further identification or analysis, were also retained.

The material

A breakdown of the assemblage by form type reveals that the majority is comprised of stone and Roman brick and roof tile (Table 1). Although present smaller quantities of daub and specialised forms, including flue tile, tesserae and water pipe, also were identified. The water pipe, in particular, is a relatively rare find and likely originated from a structure of some status. The smaller medieval and post-medieval assemblage is comprised of well-paralleled forms found on sites across London.

Type	% by number	% by weight
Stone	17%	24%
Daub	6%	2%
Roman unidentified	3%	1%
Roman brick	16%	25%
Roman tile	11%	7%
Tegula	15%	19%
Imbex	17%	10%
Flue tile	2%	2%
Water pipe	>1%	1%
Tessera	5%	1%

Medieval and post-medieval roof tile (peg)	4%	1%
Post-medieval roof tile (pan tile)	1%	1%
Post-medieval brick	2%	5%
Post-medieval floor tile	>1%	2%
Post-medieval mortar	1%	>1%

Table 1: Breakdown of the assemblage by type

The stone

The assemblage of stone is comprised primarily of building rubble used in masonry construction (Table 2). The nodules and at least some of the part worked fragments are also likely to have been used as general building stone. This material is all from local or regional British sources commonly paralleled in London and includes Kentish rag, Hassock and Reigate stone, chalk, flint, septaria, and oolitic limestone. Two fragments of roofing stone were also recovered comprising a fragment of fine laminated sandstone and a piece of North Wales slate. Both were recovered from layer [591], Provisional Phase 6, where the sandstone, likely to be of Roman date, is likely to be residual and the slate, of post-medieval date, intrusive.

The presence of individual tessera, a small fragment of mosaic and decorative paving and inlay is of considerable interest, however, and similarly to the water pipes are likely to have originated from a building of some status. The mosaic and tesserae were made from indurated chalk, a material often selected for producing tesserae, given the ease with which it could be carved. The slate, sandstone and Forest Marble paving stones are all indigenous and well paralleled in London as is the Purbeck marble inlay from Dorset. A fragment of green and white Campan vert inlay from layer [557] is more unusual, however, originating from the French Pyrenees.

Form	Fabric	Total number	Total weight
Rubble	Kentish rag; Hassock sandstone; Reigate stone; Oolitic limestone; Chalk; Flint; Brown Carrstone	71	15885
Nodule	Flint	2	1380
Part worked	Kentish rag; Oolitic limestone; Septaria	8	6412
Roofing	Slate; Fine laminated sandstone	2	104
Inlay	Purbeck marble (Roman); Campan Vert	2	358
Paving	Cornish slate?; Fine laminated sandstone; Forest Marble (Oxfordshire)	8	1876
Mosaic	Indurated chalk	5	20
Tessera	Indurated chalk	3	24
Hone	Kentish rag	1	72
Quern	German lavastone	1	76

Table 2: Breakdown of the stone assemblage by type

The fragment of Kentish rag hone stone from fill [518] and the fragments of German lavastone quern from layer [516], both Provisional Phase 5, may have been re-used as building stone although showed no obvious signs of re-use and should be analysed for publication by a small finds specialist.

Roman daub and tile

Typically for London, and more specifically Southwark, the ceramic assemblage is dominated by early Roman brick and tile of local manufacture, with smaller but significant quantities of material deriving from Hertfordshire and Kent (Table 3). Material from north-west Kent or the Weald, north-west London or Essex was also identified in addition to a small amount of late Roman calcareous tile dating from the mid 2nd to 3rd century. Other sources are represented in small quantity but all are well-paralleled.

The range of forms, presented above in Table 1, is also relatively typical, dominated by brick and roof tile. Flue tile is also represented but in relatively small quantity (2% by number) of which the majority is fragmented and abraded. More interesting is the fairly significant quantity of cut tile tesserae (5% by number) and the occurrence of three fragments of ceramic water pipe. The fragments are all in the local 2815 fabric group, are sanded to both sides and have socketed ends to enable them to be linked together. Ceramic water pipes are not common and are usually associated with early high status buildings. They have been found on other sites in Southwark, including at Winchester Palace and on Union Street and Borough High Street (Pringle 2004). The examples from Trinity Street are likely to be re-deposited in the 4th to 5th century layers ([86] & [408]) from which they were recovered but are in good condition and may not have travelled far.

Fabric	Source	% number	% weight
2815; 2452; 2459a; 2459c; 3004; 3006	London	56%	60%
3023; 3060; 3060b	Radlett, Hertfordshire	17%	24%
3102	Daub	8%	2%
2454; 3022	Eccles area, Kent	5%	5%
3018; 3238	North-west Kent/ Weald	3%	1%
2459b	North-west London/ Essex	3%	2%
2453; 3026	Non-local late calcareous	3%	2%
3500; CALC AND RED SILT	Unsourced	3%	3%
3019	Hampshire	1%	>1%
3054	Sussex?	1%	2%
3101	Mortar	1%	>1%
Fired clay		>1%	>1%

Table 3: Breakdown of the Roman ceramic assemblage.

Daub accounted for less than 10% of the assemblage by number and 2% by weight. The small assemblage is widely dispersed, fragmented and exhibits few withy impressions or diagnostic features. There are no significant dumps which might have attested to the proximity of clay and timber structures, although this cannot be taken to suggest that none existed.

Finally, a small group of low-fired clay objects were also recorded. These take a number of different forms, with cylindrical, sub-rectangular and sub-triangular profiles, and may have had a number of different functions. Three were recovered from Provisional phase 4 layers ([219] & [220]) and one from Provisional phase 5 layer [199]. The example from layer [220] has a sub-rectangular profile with a width of 35x40mm and the cylindrical example from layer [199] has a central aperture. These are

not structural items but may represent weights or have some other specialised industrial or craft related purpose. Similarly to the worked stone objects these will require further analysis by a small finds specialist.

Medieval and post-medieval brick and tile

The medieval and post-medieval assemblage is typical of the period and region. Medieval and post-medieval roof tile accounts for the majority of the assemblage. This primarily takes the form of peg tile but also includes pan tile in local fabrics common to London. The brick recovered is largely fragmented but is again comprised of locally produced types typically found across the region.

Fabric	Source	% number	% weight
3032nr3033, 3039; 3065	Local Tudor red brick	6%	19%
3032; 3034	Local post Great Fire brick	12%	35%
2271; 2586; 3090; 3094	Medieval / post-medieval roof tile	25%	8%
2276	Post-medieval roof tile	37%	11%
2279	Pan tile (post-medieval)	12%	5%
2850	Flemish silty floor tile (post-medieval)	7%	21%
3036	Dutch paving brick	>1%	<1%

Table 4: Breakdown of the post-medieval ceramic assemblage.

A small number of Flemish silty floor tiles and a Dutch paving brick were also recovered. These can again be well-paralleled in London assemblages and are dated to the 17th or 18th century. A few of the Flemish silty tiles were recovered from layer [548] where they are likely to be intrusive. The remaining examples came from fills [237] and [260] attributed to phase 7.

Distribution

A distribution of the assemblage by phase is presented below in Table 5. The bulk of the material was recovered from phase 5 deposits, primarily from soil horizons and dump or levelling layers. This is also the case for phases 3, 4 and 6 with the majority of material also derived from soil horizons. Indeed, a relatively small proportion of the assemblage was recovered from the fill or discrete features and none can be related directly to any structural remains. In this respect the material can give us little more than background information about activity taking place in the vicinity and as much is re-deposited it is not even possible to know if the material originated from structures nearby. Having said this a few large fresh groups were recorded, including the material from layers [408], [412], [516], [518], that may be primary.

Phase	% number	% weight
Prov 2: Roman	11%	9%
Prov 3: 3rd century	13%	20%
Prov 4: 4th century	18%	15%
Prov 5: Late 4th – 5th century	40%	43%

Phase	% number	% weight
Prov 6: Medieval	10%	6%
Prov 7: Post-medieval	5%	7%
Unstratified	2%	1%

Table 5: Distribution of the assemblage by phase.

A closer analysis of the distribution of material across the site should be undertaken as part of any further research but a cursory analysis of the distribution of form shows a fairly even spread of all types from phases 2 to 6. There appears to be no evident clustering of any particular form type during any one phase nor any notable increase or decrease in relative proportion.

Form	Prov 2	Prov 3	Prov 4	Prov 5	Prov 6	Prov 7	Unstrat
Unidentified	2%		1%				
Flue tile	5%	3%		2%	3%		
Daub	21%	4%	8%	4%	12%		10%
Imbrex	22%	26%	24%	20%	17%		20%
Mortar		5%	1%				
Water pipe			1%	1%			
Roman unidentifed	7%	4%	6%	2%			10%
Roman brick	19%	30%	19%	20%	14%		20%
Roman tile	9%	1%	14%	17%	22%		
Tegula	10%	25%	14%	21%	20%		10%
Tessera	3%	3%	4%	9%	7%		
Clay object			6%	1%			
Brick				1%		27%	
Floor tile				1%			
Tile (peg & pan)	2%			1%	5%	73%	30%

Table 6: Breakdown of forms by phase.

Stone building rubble is also represented fairly consistently from phase 2 to 6 as background noise (Table 7). The more interesting fragments of inlay, paving and evidence for tessellated surfacing are however, if not residual, restricted to phases 4 and 5.

Type	Prov 2	Prov 3	Prov 4	Prov 5	Prov 6	Prov 7	Total
					1		1
Hone				1			1
Inlay			1		1		2
Mosaic				5			5
Nodule	1			1			2
Part worked		2	2	4			8
Paving	1		2	2		3	8
Quern				1			1
Roofing					1		1
Rubble	11	5	26	26	3		71
Tessera			3				3

Table 7: Stone type by phase.

A distribution of fabric reveals little of use as the majority of the assemblage is early in date but was deposited within in the late Roman period. The heavy re-use of building material generally makes it a poor chronological indicator and most of the fabric types identified crop up in all phases. The small assemblage of late Roman tile dating from the mid 2nd to 3rd century does not, however, appear until phase 3.

Discussion

Although the large assemblage recovered from Trinity Street cannot be tied to any known structures it does, to some extent at least, offer background information about the type of activity taking place within the vicinity. Alongside the more run of the mill Roman brick and roof tile some more interesting and even exceptional fragments were recovered that must have originated from opulently appointed masonry structures.

To what extent the range and relative proportion of the fabrics represented is reflected in assemblages recovered elsewhere in Southwark and the City needs closer analysis. High status assemblages producing functionally specialised types, including water pipes and flues in addition to marble veneer, stone and glass tesserae and painted wall plaster, were recovered from Winchester Palace and a number of sites on Borough High Street and Union Street. These assemblages have been noted as unusual and although their origin remains unclear it has been speculated that, if not tied to a building in Southwark, they may result from a policy of organised landfill using demolition material from high status public buildings in the City (Gerrard 2009).

These deposits, however, are early in date (2nd century) and evidently contain a greater range and proportion of high status materials than observed at Trinity Street. Indeed, located further from the bridgehead and on less marshy ground organised landfill provides an unlikely explanation for the existence of the relatively large assemblage of building material recovered. Instead, the assemblage is more likely to reflect more localised activity and has closer parallels to the nearby assemblage from Tabard Square.

The fragments of water pipe may have originated from a bath-house, although not necessarily, and are few in number. The assemblage of flue tiles is also relatively small and fragmented, as is the daub. There is a need for caution as an absence of evidence does not provide evidence of absence. Nonetheless, evidence for the existence of clay and timber buildings and heated structures in the vicinity is minimal. The presence of some large fresh assemblages of brick and tile and the identification of high status stone paving, inlay, mosaic fragments and stone and tile tesserae from the later phases of deposition on site is, however, of considerable interest. This material may originate from well appointed funerary monuments or religious buildings, both of which are well-paralleled in Southwark and on sites in the immediate vicinity (Great Dover Street, Mackinder 2000; Tabard Square, Killock 2009).

As a minimum any further work on the assemblage should include a closer analysis of distribution and comparison with local assemblages, namely Tabard Square (Hayward 2009) and Great Dover Street (Pringle 2000).

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Dating table

Context	Phase	Size	Date range		Latest dated type	
2	Prov 7	S	1480	1900	1480	1900
3	Prov 6	S	50	160	50	160
4	Prov 4	S	50	160	55	160
5	Prov 4	S	50	1666	140	300
9	Prov 2	S	1480	1900	1480	1900
29	Prov 6	S	1480	1900	1630	1850
31	Prov 5	S	50	300	140	300
32	Prov 4	S	50	160	55	160
33	Prov 2	S	170	230	170	230

Context	Phase	Size	Date range		Latest dated type	
37	Prov 2	S	50	160	55	160
40	Prov 3	S	50	120	50	120
55	Prov 7	S	1480	1900	1480	1900
56	Prov 7	S	1450	1900	1700	1900
77	Prov 7	S	1480	1900	1480	1900
86	Prov 4	S	50	300	140	300
87	Prov 3	S	50	160	55	160
97	Prov 3	S	50	160	50	160
100	Prov 3	S	50	160	50	160
115	Prov 2	S	-50	1666	-50	1666
125	Prov 4	S	-50	1950	50	1950
129	Prov 3	S	50	120	50	120
133	Prov 2	S	-50	1666	50	160
137	Prov 2	S	-50	1666	55	160
139	Prov 2	S	50	160	50	160
149	Prov 3	S	50	1950	50	160
159	Prov 2	S	50	160	50	160
161	Prov 4	S	Roman	Roman	Roman	Roman
165	Prov 3	S	50	120	50	120
177	Prov 3	S	-50	1666	-50	1666
188	Prov 7	S	1180	1800	1480	1800
189	Prov 7	S	1180	1900	1630	1850
191	Prov 7	S	1480	1900	1664	1725
195	Prov 7	S	1180	1800	1180	1500
197	Prov 7	S	1480	1900	1480	1900
199	Prov 5	S	50	1800	1180	1500
200	Prov 6	S	50	1800	1180	1500
201	Prov 5	S	-50	1666	170	230
203	Prov 5	S	50	160	50	160
208	Prov 4	S			140	300
209	Prov 4	S	50	160	50	160
211	Prov 5	S	50	1800	1180	1500
215	Prov 4	S	71	100	71	100
216	Prov 4	S	50	120	50	120
219	Prov 4	S			50	160
220	Prov 4	S			71	100
222	Prov 2	S	50	250	50	250
223	Prov 2	S	-50	1666	-50	1666
228	Prov 4	S			50	160
229	Prov 7	S			1450	1800
231	Prov 7	S			1480	1800
233	Prov 7	S			1664	1800
235	Prov 7	S			1666	1900
237	Prov 7	S			1666	1800
239	Prov 5	S			1480	1800
247	Prov 5	S			1180	1500
249	Prov 7	S			140	300
250	Prov 6	S			100	160
254	Prov 4	S			1180	1500
256	Prov 7	S			1480	1800
258	Prov 7	S			1664	1800
260	Prov 7	S			1666	1800
262	Prov 7	S			1480	1800

Context	Phase	Size	Date range		Latest dated type	
263	Prov 4	S			50	160
264	Prov 3	M			50	160
265	Prov 3	S			50	160
271	Prov 4	S			50	160
272	Prov 2	S			50	160
279	Prov 4	S	55	160	55	160
283	Prov 4	S	50	120	50	120
293	Prov 7	S	1666	1900	1666	1900
296	Prov 4	S			50	160
309	Prov 2	S			50	160
310	Prov 2	S			50	160
313	Prov 2	S	55	160	55	160
319	Prov 7	S	1666	1900	1666	1850
326	Prov 3	S	50	400	50	160
327	Prov 3	S	50	160	50	160
341	Prov 2	S	50	250	50	250
342	Prov 2	S	Roman	Roman	Roman	Roman
345	Prov 5	S	50	120	50	120
346	Prov 4	S			50	160
347	Prov 2	S	-50	1666	-50	1666
363	Prov 4	S	50	160	100	120
364	Prov 3	S	50	160	55	160
365	Prov 3	S	50	160	55	160
366	Prov 4	S	-50	1666	50	160
367	Prov 3	S	50	250	55	160
370	Prov 4	S	50	160	55	160
375	Prov 4	S	50	120	50	120
379	Prov 3	S	50	250	50	250
388	Prov 5	S	-50	1666	50	160
390	Prov 3	S	50	160	55	160
398	Prov 3	S	50	250	55	160
408	Prov 5	L	-50	1666	140	300
409	Prov 5	S	50	160	50	160
411	Prov 4	S			50	160
412	Prov 5	L			50	160
413	Prov 7	S	1200	1900	1780	1900
418	Prov 5	S	50	160	55	160
425	Prov 5	S	50	400	55	160
426	Prov 6	S	-50	1666	140	300
428	Prov 5	S	55	160	55	160
430	Prov 6	S	50	250	55	160
432	Prov 4	S	50	120	50	120
433	Prov 2	S	71	250	120	250
435	Prov 5	S	50	250	70	140
436	Prov 5	S	50	160	55	160
440	Prov 5	S	120	300	140	300
441	Prov 2	S	55	160	55	160
446	Prov 3	S	120	250	120	250
451	Prov 6	S	-50	1666	120	250
453	Prov 3	S	50	300	140	300
454	Prov 2	S	50	160	50	160
456	Prov 4	S	50	160	50	160
459	Prov 6	S	-50	1666	55	160

Context	Phase	Size	Date range		Latest dated type	
460	Prov 2	S	50	160	50	160
462	Prov 3	S	-50	1666	55	160
466	Prov 5	S	55	160	55	160
470	Prov 2	S	50	250	50	250
473	Prov 3	S	50	80	50	80
474	Prov 4	S	50	400	50	400
482	Prov 4	S	50	160	50	160
484	Prov 2	S	55	160	55	160
486	Prov 2	S	50	120	50	120
489	Prov 4	S	50	300	140	300
502	Prov 2	S	50	400	50	400
505	Prov 5	S	50	250	120	250
516	Prov 5	L			50	160
518	Prov 5	L			50	160
519	Prov 5	S			50	160
528	Prov 5	S	50	160	70	140
530	Prov 3	S	50	160	55	160
531	Prov 4	S	50	400	50	400
534	Prov 5	S	50	160	55	160
540	Prov 2	S	50	160	50	160
548	Prov 5	S	120	1850	1630	1850
549	Prov 5	S	-50	1666	140	300
550	Prov 5	S	50	300	140	300
552	Prov 2	S	50	160	50	160
553	Prov 2	S	50	160	50	160
554	Prov 2	S	50	160	55	160
555	Prov 4	S	50	160	50	160
556	Prov 4	S	50	160	55	160
557	Prov 4	M			50	160
563	Prov 4	S	50	160	50	160
564	Prov 4	S			50	160
567	Prov 3	S	50	300	140	300
568	Prov 3	S	50	160	50	160
569	Prov 2	S	50	250	50	250
572	Prov 3	S			50	160
573		S			50	160
574	Prov 4	S			50	160
577	Prov 4	S			50	160
578	Prov 4	S	-50	1666	140	300
579	Prov 3	S			50	160
580	Prov 3	S			50	160
584	Prov 3	S	-50	1666	55	160
585	Prov 4	M			50	160
586	Prov 2	S	50	250	50	250
591	Prov 6	S	50	300	140	300
592	Prov 2	S			50	160
593	Prov 2	S	50	80	50	80
594	Prov 2	S			50	160
595	Prov 2	S			50	160
598	Prov 3	S	55	250	140	250
599	Prov 3	S			50	160
600	Prov 2	S	55	160	55	160
604	Prov 6	S			1180	1500

Context	Phase	Size	Date range		Latest dated type	
608	Prov 2	S			70	140
610	Prov 3	S	55	160	55	160

Table 8: Date of material by context. Size: Small = 30 fragments or less, Medium = 30 – 50 fragments, Large = 50+ fragments.

APPENDIX 7

Environmental Archaeological Assessment

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Introduction

This report summarises the findings arising out of the detailed environmental archaeological assessment undertaken by Quaternary Scientific (University of Reading) in connection with the proposed development at 28-30 Trinity Street, London Borough of Southwark (Site Code: TIY07). During an archaeological excavation at the site, undertaken by Pre-Construct Archaeology Ltd (PCA), archaeological features mainly dating to the 3rd, 4th and 5th centuries AD were recovered. PCA obtained column and bulk samples from a variety of features for environmental archaeological assessment. The overall aims of the assessment were to evaluate the potential of the samples for reconstructing the general environmental context of the site, and for providing information on the economy and diet of the past inhabitants. In order to achieve this aim, the environmental archaeological assessment consisted of:

1. Recording the lithostratigraphy of column samples (<39> and <42> 1 and 2) taken through ditches exposed in Trenches 18 and 22
2. Assessment of the preservation and concentration of macroscopic plant remains (seeds and wood) from the sampled archaeological features to provide a preliminary reconstruction of the exploitation of resources

Methods

Lithostratigraphic descriptions

The lithostratigraphy of column samples <39> and <42> were described in the laboratory using standard procedures for recording unconsolidated sediment and organic sediments, noting the physical properties (colour), composition (gravel, sand, clay, silt and organic matter) and inclusions (e.g. artefacts) (Troels-Smith 1955). The procedure involved: (1) cleaning the samples with a spatula or scalpel blade and distilled water to remove surface contaminants; (2) recording the physical properties, most notably colour using a Munsell Soil Colour Chart; (3) recording the composition; gravel (Grana glareosa; Gg), fine sand (Grana arenosa; Ga), silt (Argilla granosa; Ag) and clay (Argilla steatoides); (4) recording the degree of peat humification and (5) recording the unit boundaries e.g. sharp or diffuse. The results are displayed in Tables 2 to 4.

Macroscopic plant remains

The bulk samples were processed by Pre-Construct Archaeology Ltd in a flotation tank (see Table 1). The flots and residues were retained for assessment. The flots were dried and bagged intact while the charcoal fragments were sorted from the residues and submitted for assessment. Charcoal fragments

from 21 contexts and ‘burnt material’ from 5 contexts were also submitted for assessment. Preliminary observations on the frequency and preservation of the remains present have been made (Tables 5 and 6).

Flots from the 28 contexts were measured, weighed and scanned under a stereozoom microscope at magnifications of x7-45. Table 5 documents the contents of each and preliminary identifications were made by comparing the macroplant remains with modern reference specimens held at the Institute of Archaeology, University College London and with specimens documented in reference manuals (Cappers *et al* 2006; Jacomet 2006; NIAB 2004).

Table 6 records the abundance of charcoal recovered from the residues. Where sufficient charcoal fragments were present to warrant identification, up to 10 fragments from each context were fractured along three planes (TS – transverse, TLS – tangential longitudinal and RLS – radial longitudinal sections) following standardised methodology (Gale and Cutler 2000). The fractured surfaces were viewed using both a stereozoom Leica EZ4D microscope at 8-45x magnifications (for preliminary sorting) and an incident light Olympus BHMJ microscope at 50, 100, 200 and 400x magnifications (for taxonomic identifications). The presence of roundwood fragments and vitrified charcoal are recorded where relevant. Identifications have been made through comparison with modern reference material at University College London, Institute of Archaeology, and with taxa documented in identification manuals (Hather 2000; Schweingruber 1990; Schoch et al 2004).

Table 1: Bulk sample details

Sample number	Context number	Phase	Description	Volume collected	Percentage of whole context	Volume processed	Volume remaining
1	68	3rd Century	Skeleton	10	<5%	10	0
3	81	3rd Century	Skeleton	10	<5%	9	1
4	91	2nd Century	Fill of pottery vessel, SF<3>	10	100%	10	0
5	87	3rd Century	Fill of [88]	15	5-25%	15	0
6	87	3rd Century	Fill of [88]	15	5-25%	15	0
10	87	4th Century	Fill of [88]	10	5-25%	9	1
11	87	5th Century	Fill of [88]	10	5-25%	9	1
14	136	3rd Century	Backfill of [135]	30	5-25%	30	0
16	141	3rd Century	Skeleton (area of stomach)	<10	<5%	9	1
17	141	3rd Century	Skeleton	10	<5%	9	1
18	142	3rd Century	Fill of [143]	10	5-25%	9	1
19	149	3rd Century	Fill of [151]	10	25-50%	9	1
20	164	3rd Century	Skeleton	<2	100%	2	0
21	241	3rd Century	Skeleton	10	<5%	9	1
22	252	4th Century	Fill of [253]	10	5-25%	9	1
23	252	5th Century	Fill of [253]	10	5-25%	9	1
24	273	4th Century	Fill of [275]	10	<5%	9	1
26	288	3rd Century	Fill of [289]	10	<5%	9	1
27	290	3rd Century	Fill of [289]	10	<5%	9	1
28	272	4th Century	Soil horizon	10	<5%	9	1
29	296	3rd Century	Fill of [295]	30	<5%	29	1
30	326	3rd Century	Fill of [295]	20	<5%	20	0
31	327	3rd Century	Fill of [295]	20	<5%	20	0
32	341	1st/2nd Century	Fill of [343]	30	<5%	29	1
33	342	1st/2nd Century	Fill of [343]	20	<5%	20	0
34	347	1st/2nd Century	Fill of [343]	20	<5%	20	0

35	378	3rd Century	Fill of [369]	20	5-25%	19	1
36	376	4th Century	Skeleton	30	100%	29	1
37	374/379?	3rd Century	Fill of [374]	20	5-25%	20	0
38	394	3rd Century	Fill of [369]	10	5-25%	10	0
41	568	3rd Century	Fill of [517]	30	<5%	29	1
	224	4th Century	Contents of pot <51> For burial [248]	2	100%	2	0
	371	3rd Century	Contents of pot <108> Fill of pot [374]	3	100%	3	0
	569	1st/2nd Century	Fill of [570] (wood sample)	-	-	-	-
	594	1st/2nd Century	Soil horizon (wood sample)	-	-	-	-
	549	L.C4th/C5th	Soil horizon (wood sample)	-	-	-	-
	202	L.C4th/C5th	Contents of pot <28>	2	100%	2	0
	202	L.C4th/C5th	Contents of pot <29>	<2	100%	<2	0

Results And Interpretation Of The Lithostratigraphic Descriptions

Trench 18

Column sample <39>; Fill of Ditch [369]; Table 2

This column sample was taken to examine the sediments from a major northeast-southwest aligned, late Roman ditch. The sequence commences at 1.08m OD with a dark yellowish brown silty sandy gravel (unit 3; context [364]) that passes sharply down into a dark greyish brown clayey gravelly silt with sand and charcoal inclusions (unit 2; contexts [365] and [394]) at 0.85m OD. Occasional charcoal fragments were recorded in context [365], but the pot, metal, modern CBM, shell fragments and bone occasionally recorded during the archaeological excavation were not noted. Contexts [364], [365] and [394] represent the fill of the ditch [369], which is cut into a strong brown silty sandy gravel (unit 1). This unit was barren of archaeological material in the column sample, and is suspected to reflect the natural underlying sediments.

Table 2: Lithostratigraphic description of Column Sample <39>; Fill of Ditch [369]

Depth (m OD)	Context	Phase	Unit	Description
1.08 to 0.85	[364]	3	3	10YR 4/4; Ga3, Gg1, Ag+; Dark yellowish brown silty gravelly sand; sharp contact into:
0.85 to 0.67	[365]/ [394]	3	2	10YR 4/2; Ag2, As1, Gg1, Ga+, charcoal+; Dark greyish brown clayey gravelly silt with sand and charcoal inclusions; sharp contact into:
0.67 to 0.58	Natural?	-	1	7.5YR 4/6; Gg2, Ga1, As1; Strong brown silty, sandy gravel.

Trench 22

Column samples <42> 1 and 2; Fill of Ditch [517]; Tables 3 and 4

This sequence of column samples was taken to examine the sediments from a major east-west aligned, late Roman ditch (4th century). The sequence commences at 1.72m OD with a brown silty sand with fine gravel and charcoal inclusions (unit 6; context [505]). This passes down into a light yellowish brown gravelly sand with charcoal inclusions (unit 5; context [516]) both units are described as soil horizons. The lower column sample represents four fills of ditch [519]. The pale brown silty gravelly sand (unit 4; context [518]) has provisionally been assigned to the 4th century AD. The pale brown, slightly sandier unit below (unit 3; context [567]) assigned to the 3rd century AD then passes sharply into a dark greyish brown silty sandy clay with gravel (unit 2; context [568]) changing to a pale brown sandy gravel (unit 1; context [572]). The ditch fills are void of charcoal, bone or pot.

Table 3: Lithostratigraphic description of Column Sample <42> 1 (upper); Fill of Ditch [517]

Depth (m OD)	Context	Phase	Unit	Description
1.72 to 1.55	[505]	5	6	10YR 5/3; Ag2, Ga2, Gg(fine)+, As+, charcoal+; Brown silty sand with fine gravel, silt and charcoal inclusions; diffuse contact into:
1.55 to 1.22	[516]	5	5	10YR 6/4; Ga2, Gg(fine)1, Ag1, charcoal+; Light yellowish brown silty gravelly sand with charcoal inclusions. Gravel fragments become larger towards the base of the sample.

Table 4: Lithostratigraphic description of Column Sample <42> 2 (lower); Fill of Ditch [517]

Depth (m OD)	Context	Phase	Unit	Description
1.32 to 1.24	[518]	5	4	10YR 6/3; Ga2, Ag1, Gg1; Pale brown silty gravelly sand; diffuse contact into:
1.24 to 0.91	[567]	3	3	10YR 6/3; Ga3, Ag1, Gg+; Pale brown silty gravelly sand; sharp contact into:
0.91 to 0.85	[568]	3	2	10YR 4/2; As2, Ag1, Ga1, Gg+; Dark greyish brown silty sandy clay with gravel inclusions; sharp contact into:
0.85 to 0.82	[572]	3	1	10YR 6/3; Ga3, Gg1; Pale brown sandy gravel

Results And Interpretation Of The Macroscopic Plant Remains Assessment

Flots from the samples were small, all measuring <5ml in volume and contained very few charred macrobotanical remains (Table 5). Several samples, such as <31>, (context [327]), were dominated by uncharred seeds and other vegetation and unless from waterlogged contexts these remains must be considered to be of modern origin. Charred macrobotanical remains include poorly preserved cereal grains of wheat (Triticum sp.) and oat (Avena sp.) as well as occasional Polygonum/Rumex sp. (knotweed/dock) and a hazel (Corylus avellana) nut shell fragment. The majority of charred plant remains were fragmentary and poorly preserved which has restricted potential identification. A recurring but as yet unidentified charred fruit/seed type was recorded in five samples from grave fill deposits (two from 3rd century deposits <14> (context [136]) and <19> (context [149]; and three from 4th century deposits <21>, (context [241], <22>, (context [252]), <24> (context [273]). Although surface morphological features are absent on some of these there are probably sufficient individual specimens across these samples to obtain an identification for this type. A charred and fragmented grape (Vitis vinifera sp.) seed was also recorded in sample <19> (context [149])

Table 5: Flot Quantification

Sample number	Context number	Material type	Flot volume (ml)	Flot weight (g)	Uncharred %	Sediment %	Seeds uncharred	Charcoal >4mm	Charcoal 2-4mm	Charcoal <2mm	Crop seeds charred	Weed seeds charred	Other botanical charred	Identifications	Preservation
Unknown Date															
87	?	flot	<1	<1	70					*	*			*Avena* sp. frag (1), cerealia indet frag (1)	
Roman AD 43-180															
28	272	flot	1	<1	30	30	**	*	*	*				indet 'puffed' cereal frags	+
32	341	flot	<1	<1	40	50	*			*					
33	342	flot	2	2	15	80	*		*	*	*			*Triticum* sp. (1), cerealia indet. frag (1)	+
34	347	flot	2	3	<5	70			*	***					
3rd Century															
1	68	flot	<1	<1	60	38									
3	81	flot	2	1	<5	20		*	**	**			*	indet 'puffed' cpr, *Quercus* sp. (1) charcoal, frag large cf bark (1)	
5	87	flot	<1	<1	10	9				*				indet. cpr frags	+
6	87	flot	<1	<1	<5	45	*			*	1		*	indet cerealia frag, indet cpr frags 'puffed'	+
14	136	flot	2	1	5	60		*	*	*	*		*	indet. cerealia frags, 1 cpr to id same as <21>, <22> & <24>	+/++
16	141	flot	<1	<1	100		2							*Sambucus nigra*	++
17	141	flot	<1	<1	30	60	*			*					
18	142	flot	<1	<1	50	40	*			*					
19	149	flot	5	4		60		*	*	**	*		*	indet. cerealia 'puffed', cf. *Vitis vinifera* (1 ch.), several ?fruits see also <21, 22, 24>	+
20	164	flot	<1	<1	50	50				*					
21	241	flot	2	1	30	10		*	*	**	*		*	cerealia frags, including *Triticum* sp., 1 round seed/fruit see <22>, <24>	++

26	288	flot	1	1	85	15	**							*Sambucus nigra* uncharred seeds common	
27	290	flot	5	4	80	15	***			*				unch. *Sambucus nigra* seeds abundant	
29	296	flot	2	3	<5	80	*	*	*	**	*		*	1 cf. *Corylus avellana* frag, cf. *Avena* sp. (1)	+
30	326	flot	2	4	85	5	*	*	*	**					
31	327	flot	5	4	80	15	***	*	**	***		*		Chenopodium sp. (poss charred), Polygonum /Rumex sp. (1) (charred), lots of uncharred Sambucus seeds & other uncharred cpr	+
35	378	flot	<1	<1	30	70	*			*					
37	379	flot	<1	1	30	50	*		*	*			*	indet fragments of charred and vitrified possible cpr?	+
38	394	flot	2	2	<5	98									
41	568	flot	1	<1	<5	90	*		*	*				vitrified charcoal	
4th Century															
22	252	flot	1	1	55	15			*	*			*	ch. Fruits and frags cf. indet cpr (see <24>)	+
24	273	flot	1	1	65	<5	*		*	**			*	ch. Fruits, including indet type but morph features prob not well enough preserved to id, 'puffed' indet cpr present	+
36	376	flot	<1	<1	70	30				*					
Late 4th/5th Century															
29	202	seed					*1							Uncharred indeterminate	

Key:
*Estimated number of individuals: *=1-10, ** = 11-50, *** = 51-250, **** = >250*
State of preservation: + = poor, ++ = moderate, +++ = good

Charcoal fragments were present in small to moderate quantities in the majority of flots and residues. In several instances there were too few charcoal fragments to merit identification (Table 6), however, where sufficient fragments were noted these were identified and on the whole they were moderately well preserved.

The following taxa were identified:

Latin name		**Common name**
Fagaceae	*Quercus* sp.	deciduous oak
Tiliaceae	*Tilia* sp.	lime
Oleaceae	*Fraxinus excelsior*	ash
Pinaceae	cf. *Pinus* sp.	pine
Corylaceae	*Corylus avellana*	hazel
	Corylus/*Alnus* sp.	hazel/alder
Salicaceae	*Salix* sp. (willow) /*Populus* sp.	poplar
Araliaceae	cf. *Hedera helix*	ivy
Betulaceae	*Betula* sp.	birch

Taxa identified are recorded in detail in Table 6. Vitrified charcoal was recorded in samples <41>, (context [568]) and <4>, (context [91]) from 3rd century deposits and in charcoal from undated context [651]. A large fragment of *Betula* sp. (birch) roundwood (measuring at least 8cm in diameter) was recorded in a sample from Roman context [569], the fill of pit [570]. Further round wood fragments of oak and hazel were recorded in samples from soil horizon contexts [549] and [594]. All of these were well preserved and the approximate sizes of the original pieces could be measured.

Table 6: Burnt Material and Charcoal

Sample number	Context number	Material type	Charcoal >4mm	Charcoal 2-4mm	Charcoal <2mm	Crop seeds charred	Weed seeds charred	Other botanical charred	Identifications	Preservation
Early Roman 43-180										
32	341	Charcoal	*						cf *Alnus glutinosa* (4)	+
33	342	Charcoal	*	*					too few to id	+
34	347	Charcoal	4	2				*	*Salix*/*Populus* sp. (1), cf *Hedera helix* (1), *Quercus* sp. (1), & indet seeds	+

?	569	Charcoal	1						*Betula* sp. (1), Roundwood branch at least 8cm in diameter (no more to id)	+++
?	594	Charcoal	*	**	*				*Corylus*/*Alnus* sp. (4) rw frags up to 5cm diameter, cf. *Quercus* sp. (1) wet fragments of rw up to 3cm in diameter	++
3rd Century										
5	87	Burnt material		*					*Quercus* sp. 4 & distorted indeterminate	+
6	87	Burnt material	* (1)						no id given	
10	87	Charcoal	*	*	*				*Quercus* sp. (4)	+
11	87	Burnt material			*	*			too few, too small to id	+
4	91	Charcoal		*	*				Vitrified charcoal common, too few, too small to id	+
14	136	Charcoal	** <20	*					too few, too small to id	
19	149	Charcoal	**	**					*Quercus* sp. (4), cf. *Salix*/*Populus* sp. (1)	++
26	288	Charcoal (labelled wood)	1						no id given	
27	290	Burnt material	**	*					*Quercus* sp. (8), cf. *Tilia* sp. (1), *Fraxinus excellsior* (1)	++
30	326	Charcoal	*	*					*Quercus* sp. (9) with lots of sediment through, *Corylus*/*Alnus* sp.(1)	++
31	327	Charcoal	*	*					*Quercus* sp. (6), cf. *Pinus* sp. (8)	++
108	371	Charcoal	*						*Quercus* sp. (3)	+
37	379	Charcoal	*	*					*Quercus* sp. (4), cf. *Tilia* sp. (1), *Corylus avellana* (1)	+

41	568	Charcoal	*	*					*Quercus* sp. (10) & vitrified charcoal	+
4th Century										
51	224	Charcoal	*	*					*Quercus* sp. (3) quick grown, cf. *Betula* sp.(1), & vitrified indet (4)	+
23	252	Burnt material		*	**				too small, too few to id	+
24	273	Burnt material			*				too small, too few to id	+
29	296	Charcoal	*	*					*Quercus* sp. (3), cf. *Betula* sp. (1), cf. *Fraxinus* sp. (1), *Corylus*/*Alnus* sp. (2)	+
36	376	Burnt material	4						*Quercus* sp. (4) slow grown	++
Late 4th/5th Century										
28	202	Charcoal	2	7	3				too small, too few to id	+
29	202	Charcoal		*	*				too small, too few to id	+
?	549	Charcoal	*	*					*Quercus* sp. (9) rw, *Corylus*/*Alnus* sp. (1) rw, & other rw to id.	+++

Key:
*Estimated number of individuals: *=1-10, ** = 11-50, *** = 51-250, **** = >250*
State of preservation: + = poor, ++ = moderate, +++ = good

Potential And Further Work

On the whole samples from Trinity Street have produced infrequent macrobotanical remains that are too poorly preserved to merit further analysis or to provide evidence for the vegetation environment, agriculture or other food resources. Flots from samples <14>, (context [136]) and <19>, (context [149]) from 3rd century deposits, and samples <21>, (context [241]), <22>, (context [252]) and <24> context [273], from 4th century deposits are exceptions to this as they contain a recurring, although unidentified, fruit/seed. It is interesting to note that these samples were all taken from the fills of graves in Groups 22 and 31 and it is possible that the botanical remains are associated with the burials. The scarcity of remains from these late Roman contexts is in itself interesting and therefore it is recommended that a small note documenting this should be prepared as part of any publication. One explanation for the lack of charred botanical remains is that plant remains were not subject to deliberate or accidental charring that would have facilitated their preservation. Any further work undertaken

should aim to provide identifications for the macrobotanical remains in samples <14>, <19>, <21>, <22>, and <24> and should establish through reference to contextual information whether these are associated and whether they are likely to represent deliberate deposits that can be associated with the burials such as offerings.

As noted above several contexts produced moderate charcoal assemblages and the range of taxa identified across all the samples is fairly broad. Of the taxa noted many could have been collected for fuel or for structural purposes. Oak was noted in many of the charcoal assemblages however; there are too few fragments to indicate whether this wood was predominant within the woody assemblage at the site. Charcoal assemblages in soil horizon contexts [549], [594] and pit context [569] consist of round wood which could derive either from small branches or coppiced rods. Several of these fragments are of hazel which was often coppiced to produce rods suitable for wattle. Two of these contexts, [549] and [594] contain sufficient charcoal for some further work which should aim to provide further identifications and characterise the growth patterns in the roundwood fragments. It remains possible that the assemblage will be too limited to provide conclusive evidence for whether these assemblages derive from managed woodland sources. Analytical work should also draw on further context information to interpret the presence of assemblages dominated by roundwood.

No further work is recommended on sedimentary sequences recorded in column samples <39> and <42>.

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APPENDIX 8

Lithic Assessment

Barry Bishop

Introduction

The investigations at the site resulted in the recovery of 14 struck flints and slightly over 2kg of burnt stone fragments. This report quantifies and describes the material, comments on its significance and recommends any further work needed for it to attain its full research potential. Each piece of struck flint was examined by eye and X10 magnification and catalogued by context according to a basic typological/technological scheme, along with details of raw material, condition and, where possible, dating (see Appendix 1). All metrical descriptions follow the methodology of Saville (1980).

Quantification

Type	Decortication Flake	Flake	Flake fragment	Blade	Blade-like flake	Conchoidal Chunk	Core Tool	Retouched	Burnt Stone (No.)	Burnt Stone (wt:g)
Number	2	6	1	1	1	1	1	1	75	2006

Table 1: Quantification of Lithic Material

Burnt stone

A total of 75 pieces of burnt stone weighing 2006g was recovered during the excavations (Table 1: Appendix 1). This all consisted of flint that had been variably but mostly heavily burnt. Where identifiable, the flint appears to consists of large gravel pebbles, as would be available at the site and similar to the raw materials used for the struck flint industry at the site. The majority of the burnt flint, 1760g, was recovered from two slots excavated through a Roman period gully, contexts [133] and [137]. It suggests that the feature contained relatively substantial quantities of burnt flint that are unlikely to have originated from residual deposition. The material could have accrued through persistent dumping of hearth residues or, perhaps more plausibly, the dumping of debris from industrial or craft working activities. Context [137] also contained a heavily burnt flint flake that had presumably been accidentally incorporated into the material that had been burnt. The remainder of the burnt flint was present in small quantities within a number of separate contexts and may represent the incidental incorporation of 'background' waste from hearth use or other activities.

Struck Flint

The assemblage may be regarded as small and consisted of flakes, blades, a core tool and a single retouched implement (see Table 1; Appendix 1). No cores were present. All of the material was recovered from Roman period or later contexts and can be considered residually deposited.

Raw Materials

All of the struck assemblage is manufactured from flint but this varied considerably. Principally used was translucent honey, brown, grey and black coloured flint, the black flint often incorporating frequent opaque light grey cherty patches. One flake, from context [32] was opaque grey and coarse grained, appearing 'sugary' in texture. Cortex, which is present on 12 of the 14 struck pieces, consists of rough cortex, some of which is glauconitically stained, along with smooth worn cortical surfaces. Such raw materials could be found in the local alluvial gravel-terraces, although it is possible that some pieces were imported from further upstream of the Thames' tributaries, closer to the derived but relatively unweathered flint deposits exposed along the northern slopes of the North Downs.

Condition

The assemblage is in a variable condition although nearly all of the pieces exhibit some degree of chipping and abrasion. This suggests that, despite being redeposited, the material was probably recovered from close to where it was originally discarded. Only one piece, a broken blade or blade-like flake from context [599], exhibited traces of recortication.

Technology/Typology and Dating

The assemblage is clearly of mixed date. The earliest pieces include systematically produced blades from context [599] and [604] that can be dated by their technological traits to the Mesolithic or Early Neolithic period

The only typologically diagnostic implement is the transverse arrowhead from context [595], which is diagnostic of Later Neolithic industries. This was manufactured from translucent brown flint that retains a small patch of glauconitic cortex. Its dorsal-scar patterning suggests that it may have been struck from a discoidal core and it had been carefully crafted, involving transversely truncating a large flake to form a trapezoidal implement. This was then bifacially blunted along both of its transverse sides but leaving its cutting edge unmodified, forming a classic chisel-shaped arrowhead (Green 1980) of Clark's type C1 (Clark 1935). It weighs 6.0g, measures 36mm by 33mm and is 5mm thick. The implement is in a good condition despite being redeposited into a Roman period ditch. They are often associated with Peterborough Ware and woodlands-style Grooved Ware pottery (Green 1980, 235-236) and are frequently, although not invariably, associated with associated with ceremonial locations and activities (Green 1980 235-6; Healy 1984, 13). Transverse arrowheads are not commonly found in the lower Thames valley although a few examples have been recovered from north Southwark (Cotton 2000; Proctor and Bishop 2002).

The remaining pieces are less technologically or typologically diagnostic and can only be broadly dated to between the Mesolithic and the Early Bronze Age. A few may even date to later than this, such as the core tool from context [516] that had been made by 'retouching' a thermally shattered gravel pebble, forming a crude scraping type implement. Such expedient use of flint is most characteristic of later 2nd and 1st millennium BC industries.

Significance and Recommendations

The dumps of burnt flint in the Roman period gully may indicate the presence of industrial activity in their vicinity but can contribute little to the nature of any such activities. The struck flint comprises a small assemblage and is of mixed date but indicates persistent although low-key prehistoric activity at the site. The multi-period dating of the assemblage, its technological characteristics and the use of raw materials is consistent with others lithic assemblages found close-by and which indicate an intensive use of the north Southwark islands throughout the Holocene. The assemblage, however, is too small to illuminate the precise nature or significance of the prehistoric activities at that particular site and by itself has only limited interpretative potential. No further analytical work is therefore recommended but It does have the ability to contribute to the wider understanding of prehistoric landscape use and chronology in north Southwark, and a brief description of the assemblage should be deposited with the local Historic Environment Record and included as part of any published account of the fieldwork. The published account should also include illustrations of the arrowhead and the core tool.

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APPENDIX 9

Soil Micromorphology of Samples 25 and 40

Richard I Macphail

Introduction

Two monolith samples (25 and 40) from Roman dark earth contexts at 28-30 Trinity Street, Southwark, London were received from PCA during 2009. The two monoliths were taken from an area of late Roman graves. Soil micromorphology was applied to the study of dark earth here in the same way as it had been employed previously in Roman Southwark (Macphail 2003) and other Late Roman contexts in England and Europe. (Cammas 2004; Cammas et al 1996; Devos et al 2007; Macphail 1994; Macphail and Linderholm 2004)

Samples and methods

Monolith 25 and 40 were subsampled and impregnated with a clear polyester resin-acetone mixture; samples were then topped up with resin, ahead of curing and slabbing for 75x50 mm-size thin section manufacture by Spectrum Petrographics, Vancouver, Washington, USA (Goldberg and Macphail 2006; Murphy 1986). Thin sections were further polished with 1,000 grit papers and analysed using a petrological microscope under plane polarised light (PPL), crossed polarised light (XPL), oblique incident light (OIL) and using fluorescent microscopy (blue light – BL), at magnifications ranging from x1 to x200/400. Thin sections were described, ascribed soil microfabric types (MFTs) and microfacies types (MFTs), and counted according to established methods (Bullock et al 1985; Courty 2001; Courty et al 1989; Goldberg and Macphail 2006; Macphail and Cruise 2001; Stoops 2003). Previous studies of dark earth were consulted (see Introduction).

Results

Results are presented below, and supported by Tables 1 and 2, and Figures 1-18. These and additional images are held in the archive.

Monolith 40

Dark earth – subsoil transition (M40B): This is a poorly sorted coarse silty sand with few gravel and a large (42+mm) pot fragment. There are occasional charcoal (concentrated in burrows), and charcoal fragments embedded in once-ashy, now iron-stained, fine material. These occur with rare decalcifying biogenic calcite (mainly earthworm granules), (Armour-Chelu and Andrews, 1994; Canti, 1998) traces of coprolitic bone, burned flint, rubefied mineral material and building materials (burned clay daub, mortar), and examples of shell, iron and a clay nodule. Some mineral grains are clay coated, but are not part of an *in situ* Bt (argillic) horizon. Rare thin very dusty clay void coatings and probable Fe-P void coatings and infills, and many very broad burrows are present as pedofeatures.

The original soil was an argillic brown sand, composed of moderately poorly sorted coarse silt and sand of probable River Thames terrace drift origin (see Discussion). The soil then became mixed with fine to very coarse anthropogenic materials, including pottery, building materials, coprolitic bone (latrine waste?), shell, burned flint, fine burned mineral material, charcoal and charcoal embedded in what was probably ashy fine material, but which is now iron-stained. Burrow mixing and earthworm granules that now show evidence of decalcification, testify to a short-lived period of likely raised pH. Dusty clay coatings and mixing may also be evidence of disturbance, possibly cultivation. Very broad burrows and channels that are very rich in charcoal and the presence of probable iron-phosphate staining are evidence of a second phase of activity on the site.

Dark earth (M40A): This is also a poorly sorted coarse silty sand with very few gravel and fine to large (40mm) shell fragments. There are many charcoal (much concentrated in burrows) and charcoal fragments embedded in once-ashy fine material. In addition, there is an example of vesicular (iron?) slag, with rare traces of coprolitic bone (3-10mm), brickearth clay ('floor'?), burned flint, burned bone, burned shell, decalcifying biogenic calcite – mainly earthworm granules, and rubefied mineral material. Rare traces of very thin clay coated mineral grains occur. Rare thin very dusty clay void coatings and probable Fe-P void coatings and infills/nodules – one with embedded vivianite, occur, alongside many very broad burrows.

The micromorphology is similar to that in M40B below, but M40A contains higher concentrations of anthropogenic inclusions such as vesicular (iron?) slag, large shell, burned bone and shell and a probable fragment of clay 'floor' made from brickearth. Very broad burrowing is in evidence and amorphous, presumed iron-phosphate sometimes occurs in association with embedded neoformed vivianite crystals (e.g., Fe3(PO4)2 8H2O).

Dark earth – subsoil transition (M25A): Similar to M40B this is a poorly sorted coarse silty sand with few gravel with rare traces of charcoal, although many occur in broad burrows). In addition, other anthropogenic inclusions are: rare iron fragments embedded in once-ashy fine material (rare calcitic probable ash crystals present), rare traces of coprolitic bone, burned flint, decalcifying biogenic calcite and rubefied mineral material, a possible example of iron, and fragments of mortar and burned brickearth clay. Rare traces of very thin clay coated mineral grains and thin very dusty clay void coatings are present. Biological activity is represented by abundant thin burrows, and abundant thin organo-mineral excrements, and many very broad burrows.

This context is similar to that in M40B, but with examples of iron fragments embedded in once-ashy fine material, rare examples of building debris (mortar, burned brickearth), and again with ubiquitous occurrence of burned flint and coprolitic bone. Here both thin burrows and organo-mineral excrements occur alongside (and prior to) very dusty clay coatings that can be indicative of disturbance activities such as cultivation. Broad burrows rich in charcoal are secondary features.

Dark earth (M25A): Similar to below, the *in situ* sandy soil shows much thin and broad burrowing and many thin organo-mineral excrements. Anthropogenic inclusions are rare burned flint and quartzite, and rare traces of shell, coprolitic bone/coprolites, decalcifying biogenic calcite, and reddish brown matrix-embedded charcoal. Major, very broad burrows have introduced abundant charcoal, with rare coprolitic bone, earthworm granules, and trace amounts of strongly burned calcined bone, decalcifying plaster and 'brick' fragments.

This bioworked soil, as in M25B, includes strongly decalcifying earthworm granules (biogenic calcite) and moderate amounts of anthropogenic inclusions. In contrast post-depositional very broad burrow fills are very charcoal rich, and contain earthworm granules that are less decalcified; rare coprolitic bone and trace amounts of strongly burned calcined bone, 'brick' and decalcifying plaster (Macphail 2003) fragments are also present. Again, this is evidence of a second phase of anthropogenic land use.

Discussion

Local soils

Despite mixing with anthropogenic materials it is possible to suggest that, although this area of Southwark is unmapped by the Soil Survey of England and Wales, the natural soil approximates to an argillic brown sand (~Ebstree soil series within the Hucklesbrook soil association formed on river terrace drift; Jarvis et al 1983). This is suggested both by the grain size (poorly sorted silty sands with gravel) and relict sand grains showing thin clay grain coatings. In contrast, the natural soils at the nearer river side sites of Courages Brewery and Park St, Southwark (~400 m north) and Phoenix Wharf, Bermondsey, are formed of well sorted medium-size alluvial sands (Macphail 2003; Macphail et al 1990; Sidell 2003)

Anthropogenic activity at 28-30 Trinity St can be broadly divided into two phases, here designated as 'early' and 'later' dark earth.

Early dark earth

Although there are some minor differences between the soils at sample locations 25 and 40, for example sample 25 shows greater amounts of working by meso-fauna and sample 40 shows greater mixing with 'later' dark earth, these soils show a first anthropogenic phase of mixing-in and homogenization of a weakly humic soil that is enriched in anthropogenic inclusions. The latter include ubiquitous burned flint and latrine waste (human coprolites and coprolitic stained and partially 'digested' bone), charcoal and (rarely) iron fragments embedded in a brownish fine fabric which may include probable ash crystals; pottery, food remains (oyster? shell) and building debris (mortar, brick, 'clay floor' material) also occur. These deposits can be interpreted in a number of ways: a) as non-intensive middening deposits, b) as manure for agriculture and c) as traces of unknown activity.

Although non-intensive middening/manuring is the most probable (see below), the common presence of fine burned (rubefied) material, and embedded fragments of charcoal and rarely iron, and an example of slag suggest inputs of 'industrial' materials. This may simply indicate one constituent type of middening/manuring material, or that 'industrial' activities, perhaps even cremations were carried out here where inhumations are recorded (James Gerrard, PCA, pers. comm.); these materials then became incorporated into a soil that was later cultivated (see below). In the context of cremations, fine burned materials that are sometimes metallic were found in Roman soils located in an area of cremations in Winchester; enhanced magnetic susceptibility was also recorded (Macphail and Crowther 2008).

Likely causes of natural and anthropogenic soil mixing at 28-30 Trinity St, are biological activity working the 'occupation' deposits and possible cultivation (e.g., as consistent with the presence of very dusty clay coatings (Lewis 1998; Macphail 1992; Macphail et al 1990; Usai 2001). The natural argillic brown sand soils were probably acidic (a modern Ap of the Ebstree soil series has pH of 6.0) (Jarvis et al 1983, 377) and manuring could have been carried out to both improve fertility (e.g., with latrine waste to add phosphate)/raise pH (shell, charcoal and iron embedded in ashes).The chemistry of a late 3rd C Roman buried cultivated soil with moderate levels of manuring was studied at Canterbury by John Crowther, University of Wales, Lampeter (Goldberg and Macphail 2006, table 9,1a). This amelioration using 'foreign' inclusions (Carter and Davidson, 1998) encouraged biological activity, including earthworm activity, as evidenced by their burrows and granules. The natural acidity of the soil, however, seems to have re-established itself leading to the decalcification of this biogenic calcite, thus indicating a period of weathering (abandonment/reduced populations?) prior to the formation of the later dark earth (see below).

Later dark earth

The later dark earth is mainly represented by broad to very broad burrow and channel fills that are much richer in charcoal, and sometimes also much richer in anthropogenic inclusions. The earthworm granules in these burrows appear to be less weathered compared to earthworm granules in the surrounding soil. This dark earth appears more likely to represent renewed activity locally, with middening of a particularly charcoal-rich kind. Strongly burned (calcined) bone was also noted. As the later dark earth is only present in these secondary features little can be said concerning the activities locally that gave rise to this dumping activity and minor phosphate contamination; some of the very dusty clay coatings could relate to this activity as they post date some of the biological working. This activity did, however, revive activity by earthworms.

The occurrence of two phases of dark earth formation, firstly recorded as anthropogenic inputs and characterised by weathered earthworm granules, and secondly by a different kind of anthropogenic input and featuring less weathered earthworm granules, is now a common observation (as recorded at the London Guildhall, Staple Gardens, Winchester and

Whitefriars, Canterbury, etc). These findings may suggest a change in/revival of, activity/increase in population during Late Roman times at these sites (Macphail forthcoming). Equally, at St Julien, Tours, France, Late Antique dark earth underwent periods of soil formation and minor weathering, whereas overlying little weathered 5th-7th century dark earth seems to result from a major increase in population and activity as also indicated by small artifact studies (Fondrillon 2007; Galinié et al 2007). As this proposed two phase period of dark earth formation at Trinity St seems to be consistent with coins grouping into two periods (early-Late Roman and Late Roman; James Gerrard, PCA, pers. comm.), this may provide a rare time scale in which to place early dark earth formation, prior to renewed activity and the formation of the late dark earth.

Conclusions

The dark earth at Trinity St seems to record two phases of activity, with a weathering/soil formation period in between. The exact nature of the first period of activity is problematic, but includes the following possibilities: a) low intensity middening, b) low intensity 'industrial' activity or highly speculatively, some similar activity but associated with cremations, and c) low intensity manuring for edge of settlement cultivation (cf. Canterbury). This dark earth soil became weathered – in a timescale that may now be calculated from the coins that have been recovered. Renewed Late Roman activity is characterised by charcoal-rich dumping and minor phosphate contamination. Two phases of dark earth formation have been recorded elsewhere, both in England and France.

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APPENDIX 10

Prehistoric Pottery Assessment

Mike Seager Thomas

The prehistoric pottery assemblage from Trinity Road, Southwark, comprises 11 sherds weighing 167 grams. One or possibly two period groups are represented. The first, comprising a suite of eight flint and shell-tempered post Deverel-Rimbury pottery fabrics, dates to the early first millennium BC. The large number of fabrics represented would indicate either a mixed assemblage, spanning this period (LBA–LBA/EIA), or a wholly late group (LBA/EIA). Typologically diagnostic sherds include a heavily-gritted base from context [263], a form associated with the post Deverel-Rimbury pottery tradition throughout its currency, and a body sherd decorated with a band of three tooled groves from context [392], which although possibly early, is more likely to belong to a later phase of the tradition. The second group, which comes from context [228], comprises a single upright rim sherd from a round-shouldered jar in a sandy fabric, a combination that occurs both in late Post Deverel-Rimbury (LBA/EIA) assemblages locally and in much later first millennium BC (EIA–EIA/MIA) groups. Intuitively, I would suggest the later date; but on the available evidence, it is impossible to come to a firm conclusion either way.

Context	No of sherds	Weight in grams	Fabrics	Other diagnostic features	Likely pottery date
39	1	23	medium flint	none	EFM BC
228	1	50	medium quartz sand	upright rim of shouldered jar	E–MFM BC
263	1	8	coarse flint	heavily-gritted base	EFM BC
266	1	2	fine–medium flint	burnished	EFM BC
392	2	24	medium–coarse flint with shell	horizontal band comprising 3 tooled groves	EFM BC
456	2	7	fine–medium flint with shell & fine–medium flint	none	EFM BC
493	1	32	fine flint	pinched base	EFM BC
504	1	6	decalcified shell	none	EFM BC
606	1	15	medium–coarse flint	none	EFM BC

APPENDIX 11

Iron Slag And Other High-Temperature Debris Assessment

Lynne Keys

Introduction and methodology

A small assemblage (3.8kg) of material - initially characterised as slag - was examined for this report. It consisted of bulk (larger) slags and other debris that had been recovered by hand on site. No micro-slag residues were presented for examination.

Examined by eye and categorised on the basis of morphology, each slag or other material type in each context was weighed; smithing hearth bottoms were individually weighed and measured to obtain statistical information. Quantification data and details are given in the table below in which weight (wt.) is shown in grams, and length (len.), breadth (br.) and depth (dp.) in millimetres.

cxt	slag identification	wt	len	br	depth	comment
5	undiagnostic	148				
5	vitrified hearth lining	21				
133	undiagnostic	185				
208	undiagnostic	23				
216	smithing hearth bottom	222	70	70	30	
249	undiagnostic	68				
260	burnt coal	22				
260	slagged coal	13				
260	undiagnostic	35				pmed in appearance
271	undiagnostic	20				
296	undiagnostic	254				
370	ferruginous concretion	6				
370	fuel ash slag	6				
408	iron	33				lump
408	pot?	19				
426	iron	12				
426	undiagnostic	66				
516	iron-rich undiagnostic	130				part of smithing hearth bottom?: vessel-like in profile
549	iron	48				
549	litharge fragment?	211				extremely heavy for size
549	smithing hearth bottom	265				fragment
549	undiagnostic	549				
557	smithing hearth bottom	626	100	90	60	
564	undiagnostic	65				
569	ferruginous concretion	404				natural iron pan?

585	fuel ash slag	14				
585	iron	76				
585	undiagnostic	125				
591	undiagnostic	84				
604	undiagnostic	68				
	total weight = 3818g					

Table 1: Slag quantification data:

Explanation of terms

The Trinity Street slag was produced by secondary iron smithing. This is the hot working (using a hammer) of one or more pieces of iron to create or repair an object. As well as bulk slags, including the smithing hearth bottom (a plano-convex slag cake which builds up in the hearth base), smithing generates tiny micro-slags. These can be hammerscale flakes from ordinary hot working of a piece of iron (making or repairing an object) and/or tiny spheres from high temperature welding used to join or fuse two pieces of iron.

Hammerscale (not visible to the naked eye when it is in soil) usually remains in greatest quantity in the immediate area of smithing activity (around the anvil and between it and the hearth) when larger (bulk) slags are cleared out. The further away from the focus of smithing or the more re-distributed the deposits containing bulk slags, the less of it there is likely to be. Its presence can only be detected on site by using a magnet or by soil sampling. No hammerscale from soil samples was presented at assessment so it is not known whether any was recovered with the Trinity Street bulk slags; if none was present it indicates the slag was subject to secondary deposition and not near a focus of smithing.

Many pieces of slag in the assemblage are described as undiagnostic, i.e. they cannot be assigned to smelting or smithing either because of morphology or because they have been broken up during deposition, re-deposition or excavation. Other types of debris in the assemblage may derive from variety of high temperature activities - including domestic fires - and cannot be taken on their own to indicate iron-working was taking place. These include vitrified hearth lining and fuel ash slag.

Key groups

The key groups for slag at the present time are Groups 82 and 85. These each contained waste from iron smithing. Layer [549] also contained what could be a fragment of litharge, the heavy waste cake produced during the extraction of precious metals (particularly silver) from base metals such as lead or bronze.

Discussion of the assemblage

The current view, based on previous excavations in Southwark, is that Roman iron smithing was focused near the river. Although there is the likelihood the Trinity Street material is re-deposited from that area, the later date of some layers in which it was found suggest it may represent later Roman activity. If there is a Roman road nearby the slag may have been brought here from elsewhere as metalling - a common occurrence in Roman Britain - and then been subject to disturbance and re-deposition. There is evidence from the Jubilee Line Ticket Hall excavations in Southwark (Drummond Murray & Thompson 2002) that smithies there were stockpiling bulk slags on the street side of the site, probably for collection and recycling.

Significance of assemblage

At present the slag is of significance only if it indicates later Roman smithing activity in the area. Should further analysis show the slag is unlikely to represent re-deposited material from elsewhere, it be necessary to explore why later Roman activity shifted south to the Trinity Street area.

Importance of the assemblage

If the slag is likely to have been produced in the vicinity, it is of local and regional (i.e. London) importance. If it is re-deposited from elsewhere it is of no particular importance.

Recommendations for further work

- Any slag from soil samples not processed by time of assessment will have to be examined and quantified before further analysis takes place.
- The residuality or otherwise of material in Trench 22 and 23 layers needs to be examined. That is, if the rest of the finds' assemblage is likely to be later Roman, the assemblage requires some further analysis.
- It may be possible to locate a focus of smithing or indicate (for future excavation) in which direction it might lie. Detailed contextual information, dating and plans of features will be required to carry this out.
- If the assemblage is not re-deposited, some limited analysis should be carried out on the possible litharge fragment to securely identify it.

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APPENDIX 12

Human Bone And Cremated Bone Assessment

James Young Langthorne

The following report details the results of an assessment of the human remains from 44 inhumation burials and the disarticulated bone from 68 contexts from Trinity Street, TIY07. Two previous assessments, performed by Kathelen Sayer, have already examined the skeletal remains from inhumation burials [43], [59], [62], [68], [81] and [84] as well as the disarticulated material from contexts [45], [55], [65]/[66], [86], [87], [89] and [90]. The results and conclusions of those assessments are reiterated here principally in order to create as complete a demographic profile for the site as is possible.

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

Inhumations

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

Con. No.	Completeness (%)	Condition	Age	Sex	Pathology/Other Comments	Group	Phase
43	75	Moderate-Good	Young Adult	Female	Slight vertebral degeneration	6	3
59	20	Poor	?	?	N/A	14	3
62	40	Poor-Moderate	Mid Adult	Male	Osteomylelitis of proximal femur. 4 fragments of cremated bone also found including fragments of femoral or humeral head and a fragment of vertebrae.	14	3
68	60	Poor	Young Adult	Female?	Cervical vertebrae degenerative changes	14	3
81	65	Moderate	Mid Adult	Male	Dental calculus and caries. Vertebrae degenerative changes.	14	3
84	15	Poor	?	?	N/A	14	3
141	80	Moderate	Mid Adult	Female?	Grave fill [142] also contained 2 rib fragments, 1 metacarpal shaft, 1 fragment of humeral or femoral head, 3 long bone shaft fragments and c. 30 unidentifed bone fragments.	6	3
144	35	Poor	Adult	?	Grave fill [136] also contained 3 cervical vertebrae and a fragment of unidentifed vertebrae, 5 skull fragments, 2 maxillary molars and c. 20 fragments of unidentifed bone	22	3
146	80	Moderate	Young Adult	?	Dental calculus; Lamellar bone on arms and legs	22	3

150	10	Poor	Young Adult?	?	Grave fill [149] also contained 2 long bone shaft fragments, 1 skull fragment, an unfused humeral head and c. 27 unidentfiable bone fragments	22	3
158	<10	Moderate	Juvenile	?	N/A	6	3
162	75	Poor	Adult	?	Lamellar bone on femurs; Dental calculus, Schmorls nodes and slight lipping on vertebrae. Grave fill [161] also contained a humeral head.	20	4
164	50	Moderate	Juvenile	?	N/A	22	3
165	70	Moderate	Young Adult	Male?	Possible lamellar bone on left leg	6	3
173	20	Poor	Mid Adult?	?	N/A	6	3
176	10	Poor	Adult	?	N/A	22	3
184	50	Moderate	Young Adult?	Female?	Lamellar bone on left leg	22	3
203	50	Good	Young Adult	Female	Grave fill [202] also contained 1 mandibular incisor and c. 25 fragments of unidentifed bone fragments.	27	5
212	80	Moderate-Good	Adolescent	Female?	Grave fill [211] also contained 5 pelvic fragments, 8 rib fragments, a right calcaneus, a right 4th metatarsal, a long bone shaft fragment, a right hamate, 2 skull fragments and 8 unidentified bone fragments.	27	5
221/ 227	30	Poor-Moderate	Young Adult	Male?	Enamel Hypoplasia	31	4
241	80	Good	Mid Adult	Male	Schmorls nodes and lipping on vertebrae and sacrum; lamellar bone on legs	31	4
248	40	Poor	Young Adult	?	Dental calculus. Grave fill [224] also contained 8 unidentifed bone fragments.	32	4
251	90	Good	Mid Adult	Female	Traces of lamellar bone on both legs. Grave fill [252] also contained 3 rib shaft fragments and c. 30 unidentifed bone fragments.	31	4
267	85	Good	Adolescent	?	Healed fracture right forearm	31	4
274	85	Good	Young Adult	Male	Enamel Hypoplasia	31	4
277	10	Poor	Adult	?	Lamellar bone on tibiae	32	4
287	40	Moderate	Young Adult	Male	N/A	36	4
376	40	Poor	Mid Adult	?	Schmorls nodes and dental calculus. Grave fill [380] contained 2 distal hand phalanges and fill [317], whose cut [318] is probably the northeastern end of this truncated grave, contained 1 vertebral body fragment and 7 rib fragments.	20	4
415	5	Good	Adult	?	N/A	62	4
419	35	Poor-Moderate	Adult	?	N/A	58	5
422	40	Moderate	Mid-Mature Adult	?	Possible lamellar bone on left arm and both legs. Dental calculus	62	4
427	60	Moderate	Young Juvenile	?	N/A	58	5
457	80	Moderate	Mid adult	Male?	Healed fracture on left arm. Possible osteophytosis of vertebrae. Slight dental calculus.Wormian bones	62	4
472	12	Poor	Adult	?	Grave fill [464] also contained a fragment of the ischium and a fragment of humerus shaft	63	4
476	40	Moderate	Juvenile	?	Grave fill [474] also contained the distal shaft of the right humerus	62	4
478	25	Poor-Moderate	Young adult?	Male?	N/A	63	4
499	75	Moderate	Mid-Mature Adult	Male?	Possible trace of lamellar bone on right arm	64	4

509	45	Moderate	Adult	?	Grave fill [507] also contained 2 skull fragments.	64	4
511	<10	Moderate-Good	Adult	?	N/A	69	2
515	20	Poor	Adult	?	N/A	64	4
520	95	Good	Mature Adult	Male	Osteophytosis of vertebral bodies and processes (especially lumbar vertebrae). Schmorls nodes. Remodelling of articular suraces of sacrum. Degree of calcification of cartilage seen at rib ends and posterior surface of sacrum. Possible rickets (esp. Right fibula) Traces of dental calculus and ante-mortem tooth loss resulting in the sealing of mandibular and maxilliary sockets.	79	5
533	70	Poor	Young Adult?	Female?	N/A	64	4
544	70	Poor	Mid-Mature Adult	Male?	Ante-Mortem tooth loss	64	4
561	45	Poor	Adult	Female?	N/A	64	4

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 tables below shows the distribution of burials for each phase within each completeness percentage group:

Phase 2

Completeness	<25%	<50%	<75%	>75%
Burials	1	0	0	0
% of total	100%	0.0%	0.0%	0.0%

Phase 3

Completeness	<25%	<50%	<75%	>75%
Burials	6	4	3	3
% of total	37.5%	25%	18.75%	18.75%

Phase 4

Completeness	<25%	<50%	<75%	>75%
Burials	6	8	4	5
% of total	26.09%	34.78%	17.39%	21.74%

Phase 5

Completeness	<25%	<50%	<75%	>75%
Burials	0	2	1	2
% of total	0.0%	40%	20%	40%

The majority of burials had 50% or less of the skeleton remaining; this is undoubtedly due to modern truncation of the site. However, almost a quarter of the individuals excavated retained over 75% of their respective elements 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.

Age

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

Phase 2

Age	Early Juvenile	Mid Juvenile	Adolescent	Young Adult	Mid Adult	Mature Adult	Unspecified Juvenile	Unspecified Adult
Burials	0	0	0	0	0	0	0	1
% of total	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	100%

Phase 3

Age	Early Juvenile	Mid Juvenile	Adolescent	Young Adult	Mid Adult	Mature Adult	Unspecified Juvenile	Unspecified Adult
Burials	0	0	0	6	4	0	2	2
% of total	0.0%	0.0%	0.0%	37.5%	25.0%	0.0%	12.5%	12.5%

Phase 3 also contained 2 skeletons (12.5%) of indeterminate age

Phase 4

Age	Early Juvenile	Mid Juvenile	Adolescent	Young Adult	Mid Adult	Mature Adult	Unspecified Juvenile	Unspecified Adult
Burials	0	0	1	6	4	3	1	7
% of total	0.0%	0.0%	4.55%	27.27%	18.18	13.64%	4.55%	31.81%

Phase 5

Age	Early Juvenile	Mid Juvenile	Adolescent	Young Adult	Mid Adult	Mature Adult	Unspecified Juvenile	Unspecified Adult
Burials	1	0	1	1	0	1	0	1
% of total	20.0%	0.0%	20.0	20.0%	0.0%	20.0%	0.0%	20.0%

The bulk of the assemblage was composed of adult individuals with the majority, most notably in phases 3 and 4, within the age range 20-50 years (Young-Mid Adult). Only 6 juveniles made up the remaining fraction of the inhumations.

Sex

Juvenile skeletons do not exhibit sexually dimorphic characteristics and so from the 36 adult skeletons the initial assessment for each phase gave the following results:

Phase 2

Sex	Male	Female	Indeterminate
Burials	0	0	1
% of total	0.0%	0.0%	100.0%

Phase 3

Sex	Male	Female	Indeterminate
Burials	3	4	5
% of total	25.0%	33.33%	41.67%

Phase 4

Sex	Male	Female	Indeterminate
Burials	10	2	8
% of total	50.0%	10.0%	40.0%

Phase 5

Sex	Male	Female	Indeterminate
Burials	1	1	1
% of total	33.33%	33.33%	33.33%

The assessment would appear to indicate that there was no emphasis on a particular sex during any particular phase of the cemetery's development, the bias towards skeletons with male characteristics during phase 4 being offset by the large number of inhumations with indeterminate features and the small size of the assemblage.

Disarticulated Bone

Disarticulated human bone was recovered from 68 contexts, the largest quantity of which came from context [87] with c. 443 fragments of bone present. The condition of the bone throughout the contexts ranged from good to poor. The minimum number of individuals represented within 61 of the contexts is one but at least two individuals are represented within the remains from contexts [263], [326], [443] and [518] and the skulls from three individuals were encountered within context [500] also 3 individuals were represented in context [219]. Those fragments that could be allocated to an age group were all adults or probable adults with the exceptions of 8 juveniles found in contexts [263], [390], [408], [435], [466], [518] and [651]. Only 10 specimens from the disarticulated remains, 2 of the skulls from context [500] and elements of skeletons [296], [326], [490], [530] and [540], could be allotted a sex: both skulls from [500], two of the skulls from [87] and the assessable skeletal material from [490] and [540] was probably male while one of the skulls from [87] and the disarticulated bone from [296], [326] and [530] was female.

Recommendations for further work

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

infection within the right femur of [62] requires an x-ray to determine the nature of the infection and whether there is an underlying fracture present.
Demographic trends may also be further enhanced when dating and the provisional phasing of the inhumations and deposits containing disarticulated human bone has been completed.

Cremated Bone

Introduction

Two contexts contained disturbed cremated human bone: [61] found in a horizontally truncated pottery vessel between the legs of burial [62] and [625] which was the fill of a burial urn.

The following report constitutes an assessment of the cremated human bone that was present in these contexts, not a full osteological analysis of the remains.

Methodology

The material recovered from both cremations was sieved through a stack of 9.5mm, 4mm, and 2mm mesh sieves. The cremated bone was separated from the remaining organic material, pot and gravel in the >9mm and >4mm fraction and as far as was possible in the >2mm fraction. The bone from the >2mm, >4mm and >9mm 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 disturbed cremation [61] was 586g, with 18.8% within the ≥2mm fraction, 38.7% in the ≥4mm and 42.5% in the ≥9mm. A large proportion of the skeletal elements were identifiable, including fragments of ribs, vertebrae, skull, long bone shaft and the proximal head of the tibia. The bones are those of an older subadult or young adult. The majority of the bone is well oxidised but not highly fragmented as shown by the percentage within the ≥4mm and ≥9mm fractions.

The total weight of the cremated bone [625] was 739g, of which 4.9% was within the >2mm fraction, 2.5% in the ≥4mm and 92.6% in the ≥9mm. As with [61] a large quantity of identifiable bone was present, including rib, long bone and vertebrae fragments and a small portion of acetabulum from the pelvis. As with [61] the cremated bone is that of an older subadult or adult. The majority of the bone is well oxidised although many fragments were still

grey at the cortex but and not very well fragmented as shown by the large percentage of bone in ≥9mm fractions bracket.

Neither cremation [61] or [625] exhibited any sexually dimorphic traits.

Discussion

Studies from modern crematoria suggest that the average weight of a modern adult cremation, with the <2mm fraction removed is 1625.9 g, 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; nevertheless the results from the studies of modern cremations can give an idea of the proportion of remains that were finally buried from undisturbed archaeological cremations. The total weight for [625] the undisturbed cremation [626] was 739g, which was within the range of a subadult cremation. Further age related information for both cremations was provided by basic analysis of the larger identifiable fragments of bone with the sizes of the vertebral bodies seen in both cremation indicating an older subadult, or even an adult, individual. Both sets of results indicated that these cremations are most likely to represent older subadults; the remains of which had been carefully collected from the pyre. There was no evidence for more than one individual being included within any of the cremations.

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 these cremations illustrates that there has been limited damage to either of the cremations and that further work on the cremated material could identify the proportion of the skeleton present

No sexually dimorphic or pathological traits were observed on the remains.

Context	Weight (g)	% > 2mm	% > 4mm	% > 9mm	Identifiable skeletal elements	Age	Sex	Oxidisation	Fragmentation	Phase
61	586	18.8	38.7	42.5	Rib fragments, skull fragments, long bone fragments, proximal head of tibia, vertebrae fragments	Older sub-adult	?	Good. Mostly fully oxidised with occasional grey patches	Moderate	3
625	739	4.9	2.5	92.6	Long bone fragments, rib fragments, vertebrae fragments, acetabulum fragment	Older sub-adult	?	Moderate, Mostly fully oxised although many fragments have a grey cortex	Low	2

Table 1 Summary of Cremated Bone Data.

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APPENDIX 13

Roman Coins Assessment

James Gerrard

Introduction

The excavations produced a substantial number (157) of well-preserved Roman coins. These coins have been catalogued in an Access 2000 database developed along the lines suggested by English Heritage (Brickstock 2004). Identifications have been made by reference to the standard works of *Roman Imperial Coinage* and *Late Roman Bronze Coinage*. Coin periods used are those suggested by Reece (1991) and in common usage in southern Britain (Table 1).

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

Table 1 Reece's coin periods

Coins of intrinsic interest

SF<109> Context [371]

This is a poorly preserved copper-alloy coin. It would appear to be a bronze unit struck by the Cantii of van Arsdell's (1990) Type 129.01. A similar example is illustrated on the Celtic Coin Index (http://web.arch.ox.ac.uk/coins/ccindex.htm) under reference number 02.018. Iron Age coins are relatively rare in London and Southwark. Hammerson (2005, 155) recorded five

from London and Southwark found before 1995. Three more are known from the nearby site at Tabard Square (LLS02).

SF<251>Context [518]

This is an ancient forgery of a *denarius* of Hadrian. The obverse reads: IMP CAES TRAIAN HADRIANO AVG DIVI TRA. The reverse reads: PARTH F DIVI NER NEP PM TRP COS // CONCORD. A genuine denarius of this type would have been struck in high quality silver in AD 117 (*RIC*II (Hadrian), 9). However, this example is clearly manufactured from copper-alloy.

SF<208> [505]

This is an extremely well-preserved '*antoninianus'* of Allectus (AD 293-296). The obverse legend reads: IMP ALLECTVS P F AVG. The reverse reads: PIETAS AVG S/P//C. This type is not recorded in *RICV(II)* for the 'C' mint but is recorded for the London mint. Dr Sam Moorhead (*pers. comm*.) (British Museum) has indicated that this coin is a new (though not unexpected) type. It does not occur in the large Elveden hoard of Allectan coins.

SF<219> [505]

This is an unworn *nummus* of the early AD 330s. The obverse legend reads VRBS ROMA and the reverse has Victory on a prow //TRP. The coin is, therefore, a mule of the Urbs Roma and Constantinopolis types (*RICVII* (Trier), 522-523). The obverse is struck in honour of the City of Rome with a reverse suitable for Constantinople. The coin is well executed, of a good size (17mm) and bears a mintmark appropriate to Trier in the year AD 330-331. It would appear to be a genuine mint error.

Discussion

The coins can be arranged as a histogram using Reece's (1991) coin periods (Fig 1). This demonstrates that there was seemingly low-level but significant activity in the mid- to late first century with a small peak in the Flavian period (AD 69-96). This can be linked to early activity in the area, which includes the Harper Road burial (Cotton 2008).

The second century sees little activity and this may suggest a hiatus until things begin to pick up in the early third. This is somewhat unusual as the early third century is generally considered a period in which very few coins are found in Britain. The late third century sees substantial coin loss but not on the massive scale seen on many sites. The early fourth century is usually poorly represented but the absence of any *folles* is striking. From AD 330 onwards coin loss picks up with a large peak that includes a variety of copied *nummi*. Valentinianic coinage (AD 364-378) is reasonably well represented and coin loss continues to the end of the Roman period (AD 388-402). In general terms this suggests that activity resumed during the third century but reached a zenith during the mid fourth century and

continued until the end of Roman coin use. The date at which this occurred is unknown but is likely to lie between AD 410 and AD 430.

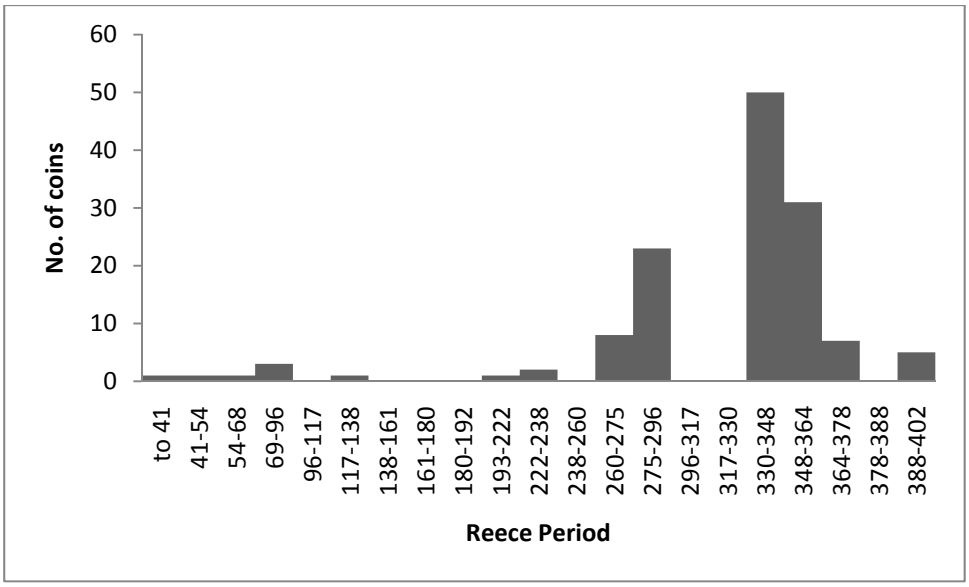

Fig 1. Coin histogram (excluding illegible coins)

To place these finds in a national context it seems relevant to apply Reece's (1995) statistical techniques to these coins. This approach has been criticised in some quarters (Lockyear 2007) but remains a valid means of gaining an overview of a site. The analysis shows that Trinity Street has average loss until AD 69 and then a long decline until the early third century, which sees slightly above average loss. This is followed by a sharp downwards movement and then upwards movement in the period AD 275-296. A small trough is followed by massive above average coin loss from AD 330-AD 364. Thereafter coin loss continues to the end of the Roman period. It is difficult to link this coin profile with any of those published by Reece (1995). The Trinity St diagram appears to share similarities elements of a number of the published profiles but does not completely fit a single profile.

Significance and Recommendations

The coins from Trinity St represent an extremely important body of data for Southwark and London. The Iron Age coin is of national significance and the Allectan coin is of international significance to numismatists.

- The coins should be published with a full list and some photography
- Further statistical work needs to be undertaken on the coin loss profile.
- Further work should be undertaken on the distribution of the coins spatially and stratigraphically and their relationship with the distribution of other finds. This work will aid in the interpretation of individual features and the 'dark earth' deposits.

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APPENDIX 14

Clay Tobacco Pipes Assesment

Chris Jarrett

Introduction

A small sized assemblage of clay tobacco pipes was recovered from the site (1 box). Most fragments are in a fairly good condition, indicating that they had not been subject to much redeposition or were deposited soon after breakage. Clay tobacco pipes occur in nine contexts as small groups (under 30 fragments) in fourteen contexts.

All the clay tobacco pipes (112 fragments, of which 29 are unstratified) were recorded in an ACCESS 2007 database and classified by Atkinson and Oswald's (1969) typology (AO) and 18th-century examples by Oswald's (1975) typology and prefixed OS. The pipes are further coded by decoration and quantified by fragment count. The degree of milling has been noted and recorded in quarters, besides the quality of finish. 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 ten bowls, 28 stems and two nibs or mouthpart. The clay tobacco pipe bowl types range in date between 1610 and 1860.

1610-40

AO4: one heeled bowl without milling but with good burnishing and finish.

AO6: one spurred bowl with full milling and a good finish.

1640-60

AO9: two spurred bowls, one with a quarter milling, the other with complete milling but both with a good quality of finish.

1660-80

AO13: a single rounded, heeled bowl with three quarters milling and of a fair finish.

AO15: seven spurred bowls with no to full rim milling but mostly of a good finish.

AO18: a single straight-sided, heeled bowl with three quarters milling and of a fair finish.

1700-1740

OS10: two heeled bowls are present but both have their rims missing, but one bowl is maker marked ? S, the forename being illegible.

1820-1860

AO28: two bowls, one is damaged but has oak leaf and grass borders on the front and back of the bowl. The second tobacco pipe is damaged but is of the Turks Head type and has relief writing on the stem with 'WILLIAMS...' on the left side and ‘LONDON' on the right side and probably refers to John Williams 3, 1828-42, Kent. St. Borough.

Imported bowl

There is a single Dutch type bowl (ATX) that could not be equated to Atkinson’s 1972 typology, but is of a 19th-century date. It has a fairly upright bowl, complete milling on the edge of the rim and is very nicely burnished. It has a small circular stamp on the back of the bowl depicting a windmill in relief. The stem is decorated with relief moulding as small W’s in two rows on each side of the stem.

Undetermined types

Six bowls are present but are fragmentary and dated to the 17th or 18th century.

Distribution

Table 1 shows the distribution of the clay tobacco pipes, showing the number of fragments, the date range of the types and the latest bowl, the types of bowls present, together with a spot date for each context tobacco pipes occur in. The clay tobacco pipes are all found in phase 7 deposits.

Context	Phase	No. Of fragments	Date range of bowl types	Latest dated bowl type	Bowl types (and makers)	Spot date
1	7	18	1660-1680	1660-1680	AO15	1660-1680
2	7	1	1610-1640	1610-1640	AO6	1610-1640
55	7	14	0	0	Unidentified	M17TH-M18TH
56	7	14	1610-1660	1640-1660	AO9	1640-1660
77	7	2			Dutch bowl (ATX)	19TH C
197	7	3	0	0	Unidentified	1580-1910
258	7	8	1700-1740	1700-1740	AO13, AO15, OS10 (? S)	1700-1740
260	7	14	0	0	Unidentified	18TH C?

262	7	1			Stem	1580-1910
291	7	1	1660-1680	1660-1680	AO18	1660-1680
361	7	2			Stem and nib	1580-1900
413	7	2			Stems	1580-1910
523	7	2	1820-1860	1820-1860	AO28 (Turks Head: Williams)	1820-1860

Table 1. TIY07. Distribution of clay tobacco pipes. A spot date of 1580-1910 indicates that only stems were present in the context

Significance Of The Collection

The clay tobacco pipes have some significance at a local level, but the presence of a Dutch bowl in the assemblage is unusual as their rare occurrences in London is usually to be found on Thames side sites and rarely as far inland as Trinity Street. Otherwise, the clay tobacco pipes follow the same profile for the rest of London but the high occurrence of 17th-century spurred bowls is also a trait of Southwark assemblages. Other, larger comparable clay tobacco pipes in the vicinity of the site are from the Former Sorting Office, Swan Street (site code: SWN98) and Tabard Square, 34-70 Long Lane, 31-47 Tabard Street (site code: LLS02) (Jarrett 2000; Jarrett 2009)

Potential

The clay tobacco pipes have the potential to date the contexts they were found in and one bowl merits publication.

Research Aims

One research aim is suggested as a further avenue of research.

- Which Low Countries town was the Dutch clay tobacco pipe made in, who manufactured it and can it be dated more precisely.

Recommendations For Further Work

It is recommended that a short publication report is produced and an illustration of the Dutch clay tobacco pipe is used to supplement the text. Time is required to research the Dutch clay tobacco pipe.

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APPENDIX 15

Post Roman Small Finds

Märit Gaimster

Eighteen post-Roman metal finds were retrieved from the excavation with the largest individual category comprising, mostly unstratified, coins. The coins are dominated by 17th-century issues, with two farthings of Charles I and two private farthing tokens. Dating from the second half of the 17th century, private tokens reflect the acute need for small change which was not satisfied by official coinage. The majority were struck for traders and keepers of shops, inns, taverns and alehouses (Dickinson 1986, 2-15). There is also a probable Victorian penny (SF<253>) and a medieval silver coin (SF< 58>).

Among the remaining finds, two folded sheet, or 'paper clip', rivets with rectangular heads are of particular interest (SF<368> and <375>); these were used to repair small cracks in copper-alloy sheet vessels. Such repairs are known from both medieval and early modern contexts (cf. Egan 1998, 176; Margeson 1993, 93). An iron tenterhook (SF<313>), intrusive in Phase 5, could also be late medieval or early modern. Tenterhooks were used in textile manufacture to stretch the wet cloth after fulling, to prevent shrinking; however, tenterhooks could also be used to fix wall hangings inside buildings (Margeson 1993, 182). A heavily corroded and fragmented embossed disc of copper alloy (SF<153>) may be a bridle boss (cf. Clark 1995, 53–5). Clearly post-medieval are lead bird shot (SF<378>) and a copper-alloy door handle (SF<370>), while an incomplete iron pintle (SF<327>), for hanging a door or shutter, along with the shaft of a copper-alloy pin (SF<234>) and a flat copper-alloy ring of unknown function (SF<296>) may be earlier.

Recommendations

With the exception of the 17th-century coins, where cleaning and further identification would be useful, no further work is recommended for this small and incongruent group of post-Roman finds.

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context	sf	description	date	recommendation
0	187	copper-alloy coin; private farthing token	17th century	clean for id
	207	copper-alloy coin; private farthing token	17th century	clean for id
	253	copper-alloy coin; heavily worn; ?19th-century penny	?19th-century	
	255	copper-alloy coin; ?Charles I rose farthing	17th century	clean for id
	261	lead two-piece cloth seal; no stamp or device; diam.22mm	med/pmed	further id
	310	copper-alloy coin; Charles I royal farthing	17th century	further id
249	58	silver penny; Phase 7	medieval	further id
260	327	iron pintle; incomplete; Phase 7	?med/pmed	
263	368	copper-alloy vessel sheet repair; folded rivet of rectangular head and triangular arms; L 12mm; ?unused; Phase 4 intrusive	med/pmed	
	378	lead bird shot; three minute; Phase 4 intrusive	pmed	
413	153	copper-alloy ?embossed disc; heavily corroded and fragmented; diam. 30mm; Phase 5 intrusive; ?bridle mount; Phase 7	med/pmed	
	370	copper-alloy door/cupboard handle; complete; diam. 28mm; Phase 5 intrusive	pmed	
516	234	copper-alloy pin with fine shank; incomplete; Phase 5 intrusive	med/pmed	
549	313	iron tenterhook; complete; L 30mm; Phase 5 intrusive	med/pmed	
591	375	copper-alloy vessel sheet repair; folded rivet of rectangular head and triangular arms; L 15mm; Phase 6; cf. <368> above	med/pmed	
594	296	flat copper-alloy ring with decorative oblique grooving on outside edge and one small hole for fixing; diam. 22mm; Phase 2 intrusive	pmed	further id
599	349	iron rove; complete; 25 x 28mm; Phase 2 intrusive	pmed	

APPENDIX 16

Oasis Data Collection Form

12.1 OASIS ID: preconst1-65630

Project details

Project name	28-30 Trinity Street
Short description of the project	Area excavation of entire site footprint. Principal finds constituted 44 inhumation burials, one cremation in an urn and extensive ditch systems. The inhumation cemetery was used from the late 2nd to late 4th/early 5th century. The cremation dates to the late 1st or early 2nd century. The sequence of ditch systems dated from late 1st or early 2nd century through to the late 4th/early 5th century, although none of the ditches remained in use through the entire Roman period. A colonnaded enclosure dating to the 1st or 2nd century, probably built in timber, was recorded in the southern part of the site beyond the bounds of the cemetery
Project dates	Start: 25-09-2008 End: 03-07-2009
Previous/future work	Yes / No
Any associated project reference codes	TIY 07 - Sitecode
Type of project	Recording project
Site status	Local Authority Designated Archaeological Area
Current Land use	Industry and Commerce 4 - Storage and warehousing
Monument type	INHUMATION CEMETERY Roman
Monument type	DITCH Roman
Monument type	PIT Roman
Significant Finds	POT Roman
Significant Finds	GLASS Roman
Significant Finds	COIN Roman
Significant Finds	TILE Roman
Significant Finds	POT Early Medieval
Significant Finds	POT Medieval
Significant Finds	POT Post Medieval
Significant Finds	TILE Medieval
Significant Finds	COIN Medieval
Significant Finds	PALETTE (COSMETIC) Roman

Significant Finds	JEWELLERY Roman
Significant Finds	BROOCH Roman
Significant Finds	LITHICS Early Prehistoric
Significant Finds	HUMAN BONE Roman
Investigation type	'Open-area excavation'
Prompt	Direction from Local Planning Authority - PPG16

Project location

Country	England
Site location	GREATER LONDON SOUTHWARK SOUTHWARK 28-30 Trinity Street
Postcode	SE 1 4JE
Study area	3300.00 Square metres
Site coordinates	TQ 3245 7940 51.4975027627 -0.091689696896 51 29 51 N 000 05 30 W Point
Height OD / Depth	Min: 1.30m Max: 1.54m

Project creators

Name of Organisation	PCA
Project brief originator	Mills Whipp
Project design originator	Mike Hutchinson
Project director/manager	Helen Hawkins
Project supervisor	Douglas Killock
Type of sponsor/funding body	Developer
Name of sponsor/funding body	London Realty Limited

Project archives

Physical Archive recipient	LAARC
Physical Contents	'Animal Bones','Ceramics','Environmental','Glass','Human Bones','Metal','Worked stone/lithics'
Digital Archive	LAARC

recipient	
Digital Media available	'Database','Images raster / digital photography','Survey','Text'
Paper Archive recipient	LAARC
Paper Media available	'Context sheet','Drawing','Matrices','Photograph','Plan','Report','Section','Survey','Unpublished Text'

Project bibliography 1

Publication type	Grey literature (unpublished document/manuscript)
Title	An Assessment Of An Archaeological Excavation At 28-30 Trinity Street, London SE1, London Borough of Southwark
Author(s)/Editor(s)	Douglas Killock
Date	2010
Issuer or publisher	PCA
Place of issue or publication	Brockley
Description	A4 blue cover

Entered by	Jon Butler (jbutler@pre-construct.com)
Entered on	16 June 2010

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