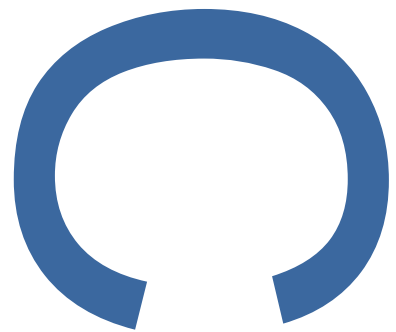


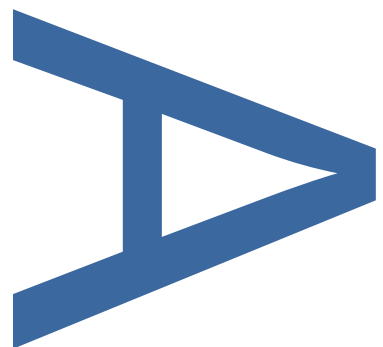
**153 – 169 BOROUGH HIGH STREET,
LONDON BOROUGH OF
SOUTHWARK, SE1 1HR:
AN ARCHAEOLOGICAL
EVALUATION AND GEOTECHNICAL
WATCHING BRIEF**



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

SITE CODE: BHG16

JULY 2017



DOCUMENT VERIFICATION
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**An Archaeological Evaluation and Geotechnical Watching Brief at 153-159
Borough High Street, London Borough of Southwark, London SE1 1HR**

Site Code: BHG16

Central National Grid Reference: TQ 3254 7995

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1 Non-Technical Summary

- 1.1 This report presents a summary of the results of an archaeological evaluation and geotechnical watching brief conducted by Pre-Construct Archaeology Ltd at 153-159 Borough High Street, London Borough of Southwark, London SE1 1BL. The site lies on the east side of Borough High Street and is bounded by 151 Borough High Street and 71 Newcomen Street to the north, 70 and 71 Newcomen Street to the east, 161 Borough High Street to the south and Borough High Street itself to the west. The geotechnical investigation was undertaken in December 2016 and the archaeological evaluation between January and April 2017.
- 1.2 The extremely high archaeological potential of the site had been demonstrated by numerous excavations undertaken nearby, not least the excavations conducted by Pre-Construct Archaeology Ltd at 127-143 Borough High Street. This site also lies immediately to the east of Borough High Street and is located slightly to the north of Newcomen Street. The excavation recorded extensive evidence of Roman, medieval and post-medieval occupation, archaeological remains were recorded at depths exceeding 4m below current ground level ¹.
- 1.3 The extent of archaeological survival of the site at 153-159 Borough High Street was clearly dependant on the degree to which post-war basements had impacted the archaeological remains which had once been present. The results of the evaluation demonstrated that excavation for post-war basements had had little or no impact on the archaeological resource. Although the post-war reconstruction of the site had impacted the archaeological remains present the disturbance appeared to be limited to the concrete strip foundations which supported the walls forming the boundaries between one property and another. However, the evaluation and watching brief did show possible pre-war cellars had existed within at least parts of the footprint of the current buildings.
- 1.4 The results of the evaluation demonstrated that significant archaeological remains, specifically walls built of chalk, stone, flint and in one case brick, are present less than a metre below the modern slab in all of the buildings investigated from 153 in the north to 159 in the south. A chalk wall recorded to the rear of 153 Borough High Street (Test Pit 1) was recorded 0.88m below slab level. In the same building a 17th century brick wall was recorded 0.94m below the surface in Trench 1. To the south, in 157 Borough High Street a chalk and stone wall was evident only 0.53m below slab level in Trench 2. In 159 Borough High Street a similar wall constructed principally of flint was recorded 0.73m below floor level. These results clearly demonstrate that none of the properties investigated had been subject to widespread basement excavations.

¹ Killock, D 2016 *Summary Assessment of An Archaeological Excavation at 127-143 Borough High Street, London Borough of Southwark, London SE1 1NP* Unpublished Pre-Construct Archaeology Report

- 1.5 The findings of the archaeological evaluation were in some areas amplified by observations made in the geotechnical watching brief which demonstrated that large sections of the party wall along the eastern boundary of site are built above significant archaeological structures dating from the early post-medieval period onward. In one instance, GTP 2 at the rear of 157 Borough High Street, red brick walls likely to date to the 17th century were extant at ground level.
- 1.6 The latest elements of the archaeological resource described above consisted of walls dating from the 16th to 17th centuries. Although none of the evaluation trenches was fully excavated to the top of natural deposits the trial work demonstrated that archaeological remains extend over 4.30m below modern ground level. Structures and features dated to the post-medieval, medieval and Roman periods were evident.
- 1.7 The stratigraphic sequence recorded in Trench 3 was particularly instructive when considering the nature of the archaeological resource present. The later Roman 'dark earth' horizons found throughout Southwark were evident, although they had been truncated in this trench. In Trench 2 the highest level recorded on the top of the 'dark earth' was recorded at 2.30m where it was c. 1.10m thick. Below the 'dark earth' horizons the earlier Roman remains consisted of an extremely complex series of waterfront developments principally represented by post built structures and a badly decayed plank revetment. These structures date from the late 1st to the mid 2nd century AD, a period in which the river frontage was constantly remodelled.
- 1.8 Although the site is today located a considerable distance from the Thames embankment this is largely the result of centuries of land reclamation. In the Roman period two large islands located to the north of what is today Borough Underground station projected northward into the main Thames channel². The site at 153-159 Borough High Street is located on the southern of these islands, close to an inlet that projected from it's eastern limit.
- 1.9 Apart from the complexity of the Roman sequence the quantity of finds contained within the waterfront reclamation dumps, particularly pottery, was truly exceptional. Amphorae, the ubiquitous Roman storage jars, were well represented possibly as a result of the waterfront being used to directly import goods. However, considerable quantities of domestic pottery showing signs of heavy use indicate that the waterfront was also adopted for widespread rubbish disposal. Notable quantities of metal objects were also recovered from these early waterfront deposits.
- 1.10 The waterfront developments documented in Trench 3 are analogous to those previously recorded to the south and east of the site at 175-191 Borough High Street. These earlier excavations recorded a very complex sequence of waterfront developments and management. The natural inlet located on the eastern side of the south island was used as a waterfront in the

² Graham, A. H. 1978 *The Geology of North Southwark and its Topographical Development in the Post-Pleistocene Period* in Bird et al (1978), 501-516

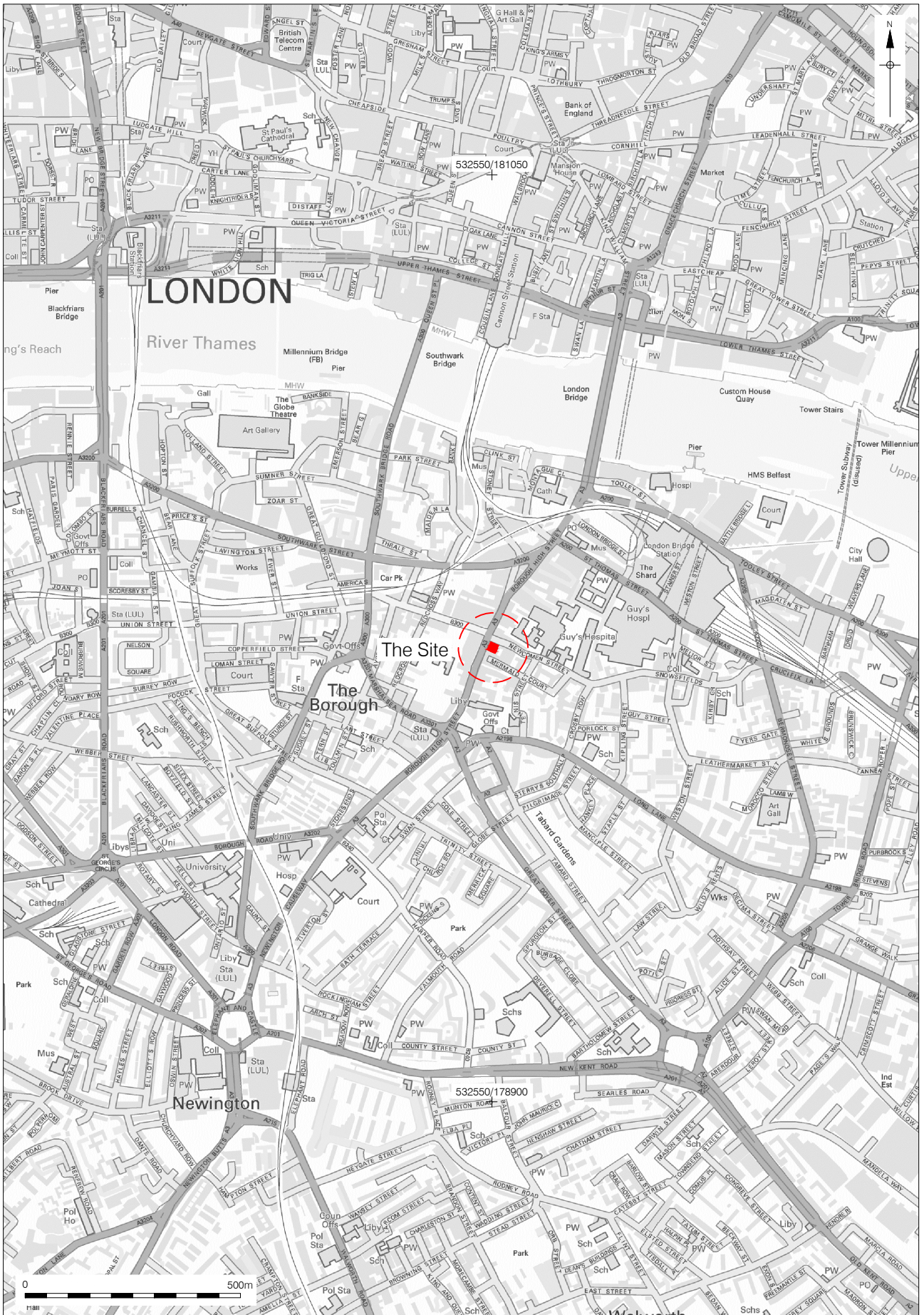
early Roman period with both a post and plank timber river wall on it's south side and a jetty projecting northward into the inlet³.

³ Cowan, C, Seely, F, Wardle A, Westman, A and Wheeler, L 2009 *Roman Southwark Settlement and Economy* MoLA Monograph 42 pp69-73, Figures 5, 49-53

2 Introduction

- 2.1 An archaeological evaluation was undertaken by Pre-Construct Archaeology Ltd at 153-159 Borough High Street, London Borough of Southwark, London SE1 1BL between January and April 2017. The detailed archaeological trial work was preceded by the monitoring of a geotechnical investigation which took place in December 2016.
- 2.2 The site lies on the east side of Borough High Street and is bounded by 151 Borough High Street and 71 Newcomen Street to the north, 70 and 71 Newcomen Street to the east, 161 Borough High Street to the south and Borough High Street itself to the west. The proposed development covers a footprint of 394.15m².
- 2.3 The central National Grid Reference for the area evaluated is TQ 3254 7995.
- 2.4 The site was given the unique Museum of London site code BHG16.
- 2.5 The evaluation was designed to consist of three trenches each measuring 2.45m square and up to 4m deep. However, constraints of site logistics and the potentially unstable state of the eastern party wall at the rear of 153 Borough High Street precluded the full implementation of the original plan.
- 2.6 A deep excavation could not be effected in the proposed location in the small courtyard located to the rear of 153 Borough High Street, the proposed location of Trench 1. However, observations made during the geotechnical investigation suggested that significant archaeological remains were located in this area and needed characterising. As a compromise a relatively shallow trial trench designated Test Pit 1 was excavated in northeast corner of the courtyard. Test Pit 1 measured 2m east-west by 2.30m north-south. The depth of this trench was limited to c 0.90m below slab level, a small sondage excavated on the west side reached 1.48m below slab level.
- 2.7 As it was not possible to effect a deep trial trench to the rear of the building as originally proposed, Trench 1 was re-located within the footprint of the standing building at 153 Borough High Street. Trench 1 measured 2.80m east-west by 2.00m north-south (though the effective working area was 1.60m due to the presence of a modern foundation). This trench was excavated to c. 2.40m below slab level. This was considerably less than the original proposed depth. However, Trench 1 was actually the final trial hole to be excavated and the nature and complexity of the archaeological resource had already been fully characterised during the excavation of Trenches 2 and 3. Although none of the earlier archaeological stratigraphy dating to the Roman period was excavated in this trench the trial work confirmed that no deep modern basement existed in this area and that features and deposits dating to the Roman period will undoubtedly be present in this area of the site.

- 2.8 Trench 2 was located in 157 Borough High Street and consisted of a trial trench with an effective working area once shored of 1.80m east-west by 1.60m north-south. This was the maximum available area in this location. The majority of Trench 2 was excavated to a depth of 3.65m below slab level; a small sondage excavated through alluvial deposits in the south side of the trench extended the depth of the excavation to 4.10m or -0.05m OD. The excavation was abandoned at this point as it was unsafe to continue further.
- 2.9 Trench 3 was located in 159 Borough High Street. The designed square shaped trench could not be effected as it would have extended into an area thought be a below-slab void located in the southern half of the building. The presence of this void was revealed during the geotechnical investigation. Initial breaking out of GTP 1 demonstrated the presence of the below slab void which was c. 2.50m deep. Trench 3 was therefore re-orientated so that it extended along the north wall of 159 Borough High Street. The re-modelled trench, after shoring, gave an effective working area of 4.22m east-west by 1.44m north south. The trench was excavated to a general depth of c. 3.65m below slab level. An early Roman linear cut feature extended along the western end of the trench, excavation of this feature extended the full depth of the trench to 4.04m or -0.06m OD. The excavation was abandoned at this point as it was unsafe to continue further.
- 2.10 The geo-technical investigation consisted of five small trenches and two boreholes. The trenches are referred to as GTP 1-5 in this report. These designations may not correspond to those used in the separate geotechnical report submitted for engineering information.
- 2.11 The project was monitored by Ms Gillian King, the Senior Archaeology Officer for the London Borough of Southwark; Peter Moore was project manager for Pre-Construct Archaeology Limited. The evaluation was supervised by the author.



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Figure 1
 Site Location
 1:12,500 at A4



Figure 2
 Trench location
 1:200

Figure 1: Site Location

Figure 2: Detailed Site Location

3 Planning Background

3.1 National Guidance

3.1.1 The Departments of Communities and Local Government (DCLG) issued a series of planning guidelines, the National Planning Policy Framework, in March 2012. This document superseded the previous guidance contained in Planning Policy Statement 5. The policies regarding archaeology set out in the NPPF are contained in **Section 12 Conserving and enhancing the historic environment**. These state:

126. Local planning authorities should set out in their Local Plan a positive strategy for the conservation and enjoyment of the historic environment⁴, including heritage assets most at risk through neglect, decay or other threats. In doing so, they should recognise that heritage assets are an irreplaceable resource and conserve them in a manner appropriate to their significance. In developing this strategy, local planning authorities should take into account:

- the desirability of sustaining and enhancing the significance of heritage assets and putting them to viable uses consistent with their conservation;
- the wider social, cultural, economic and environmental benefits that conservation of the historic environment can bring;
- the desirability of new development making a positive contribution to local character and distinctiveness; and
- opportunities to draw on the contribution made by the historic environment to the character of a place.

127. When considering the designation of conservation areas, local planning authorities should ensure that an area justifies such status because of its special architectural or historic interest, and that the concept of conservation is not devalued through the designation of areas that lack special interest.

128. In determining applications, local planning authorities should require an applicant to describe the significance of any heritage assets affected, including any contribution made by their setting. The level of detail should be proportionate to the assets' importance and no more than is sufficient to understand the potential impact of the proposal on their significance. As a minimum the relevant historic environment record should have been consulted and the heritage assets assessed using appropriate expertise where necessary. Where a site on which development is proposed includes or has the potential to include heritage assets with archaeological interest, local planning authorities should require developers to submit an appropriate desk-based assessment and, where necessary, a field evaluation.

129. Local planning authorities should identify and assess the particular significance of any heritage asset that may be affected by a proposal (including by development affecting the setting of a heritage asset) taking account of the available evidence and any necessary expertise. They should take this assessment into account when considering the impact of a proposal on a heritage asset, to avoid or minimise conflict between the heritage asset's conservation and any aspect of the proposal.

130. Where there is evidence of deliberate neglect of or damage to a heritage asset the deteriorated state of the heritage asset should not be taken into account in any decision.

⁴ The principles and policies set out in this section apply to the heritage-related consent regimes for which local planning authorities are responsible under the Planning (Listed Buildings and Conservation Areas) Act 1990, as well as to plan-making and decision-taking.

131. In determining planning applications, local planning authorities should take account of:

- the desirability of sustaining and enhancing the significance of heritage assets and putting them to viable uses consistent with their conservation;
- the positive contribution that conservation of heritage assets can make to sustainable communities including their economic vitality; and
- the desirability of new development making a positive contribution to local character and distinctiveness.

132. When considering the impact of a proposed development on the significance of a designated heritage asset, great weight should be given to the asset's conservation. The more important the asset, the greater the weight should be. Significance can be harmed or lost through alteration or destruction of the heritage asset or development within its setting. As heritage assets are irreplaceable, any harm or loss should require clear and convincing justification. Substantial harm to or loss of a grade II listed building, park or garden should be exceptional. Substantial harm to or loss of designated heritage assets of the highest significance, notably scheduled monuments, protected wreck sites, battlefields, grade I and II* listed buildings, grade I and II* registered parks and gardens, and World Heritage Sites, should be wholly exceptional.

133. Where a proposed development will lead to substantial harm to or total loss of significance of a designated heritage asset, local planning authorities should refuse consent, unless it can be demonstrated that the substantial harm or loss is necessary to achieve substantial public benefits that outweigh that harm or loss, or all of the following apply:

- the nature of the heritage asset prevents all reasonable uses of the site; and
- no viable use of the heritage asset itself can be found in the medium term through appropriate marketing that will enable its conservation; and
- conservation by grant-funding or some form of charitable or public ownership is demonstrably not possible; and
- the harm or loss is outweighed by the benefit of bringing the site back into use.

134. Where a development proposal will lead to less than substantial harm to the significance of a designated heritage asset, this harm should be weighed against the public benefits of the proposal, including securing its optimum viable use.

135. The effect of an application on the significance of a non-designated heritage asset should be taken into account in determining the application. In weighing applications that affect directly or indirectly non-designated heritage assets, a balanced judgement will be required having regard to the scale of any harm or loss and the significance of the heritage asset.

136. Local planning authorities should not permit loss of the whole or part of a heritage asset without taking all reasonable steps to ensure the new development will proceed after the loss has occurred.

137. Local planning authorities should look for opportunities for new development within Conservation Areas and World Heritage Sites and within the setting of heritage assets to enhance or better reveal their significance. Proposals that preserve those elements of the setting that make a positive contribution to or better reveal the significance of the asset should be treated favourably.

138. Not all elements of a World Heritage Site or Conservation Area will necessarily contribute to its significance. Loss of a building (or other element) which makes a positive contribution to the significance of the Conservation Area or World Heritage Site should be treated either as substantial harm under paragraph 133 or less than substantial harm under paragraph 134, as appropriate, taking into account the relative significance of the element affected and its contribution to the significance of the Conservation Area or World Heritage Site as a whole.

139. Non-designated heritage assets of archaeological interest that are demonstrably of equivalent significance to scheduled monuments, should be considered subject to the policies for designated heritage assets.

140. Local planning authorities should assess whether the benefits of a proposal for enabling development, which would otherwise conflict with planning policies but which would secure the future conservation of a heritage asset, outweigh the disbenefits of departing from those policies.

141. Local planning authorities should make information about the significance of the historic environment gathered as part of plan-making or development management publicly accessible. They should also require developers to record and advance understanding of the significance of any heritage assets to be lost (wholly or in part) in a manner proportionate to their importance and the impact, and to make this evidence (and any archive generated) publicly accessible⁵. However, the ability to record evidence of our past should not be a factor in deciding whether such loss should be permitted.

- 3.1.2 The provisions set out in the new guidelines superseded the policy framework set out in previous government guidance namely Planning Policy Statement 5 (PPS 5) 'Planning for the Historic Environment'. Planning Policy Statement 5 had itself replaced Planning Policy Guidance Note 16, PPG 16, which was issued in November 1990 by the Department of the Environment.
- 3.1.3 Although PPG 16 has been superseded the Unitary Development Plans of most local authorities, or Local Development Frameworks where these have been adopted, still contain sections dealing with archaeology that are based on the provisions set out in PPG 16. The key points in PPG16 can be summarised as follows:
- 3.1.4 Archaeological remains should be seen as a finite and non-renewable resource, and in many cases highly fragile and vulnerable to damage and destruction. Appropriate management is therefore essential to ensure that they survive in good condition. In particular, care must be taken to ensure that archaeological remains are not needlessly and thoughtlessly destroyed. They can contain irreplaceable information about our past and the potential for an increase in future knowledge. They are part of our sense of national identity and are valuable both for their own sake and for their role in education, leisure and tourism.
- 3.1.5 Where nationally important archaeological remains, whether scheduled or not, and their settings, are affected by a proposed development there should be a presumption in their physical preservation.
- 3.1.6 If physical preservation *in situ* is not feasible, an archaeological excavation for the purposes of 'preservation by record' may be an acceptable alternative. From an archaeological point of view, this should be as a second best option. Agreements should also provide for subsequent publication of the results of any excavation programme.
- 3.1.7 The key to informed and reasonable planning decisions is for consideration to be given early, before formal planning applications are made, to the question of whether archaeological remains

⁵ Copies of evidence should be deposited with the relevant Historic Environment Record, and any archives with a local museum or other public depository

are known to exist on a site where development is planned and the implications for the development proposal.

- 3.1.8 Planning authorities, when they propose to allow development which is damaging to archaeological remains, must ensure that the developer has satisfactorily provided for excavation and recording, either through voluntary agreement with archaeologists or, in the absence of agreement, by imposing an appropriate condition on the planning permission.

3.2 Regional Guidance: The London Plan

- 3.2.1 The over-arching strategies and policies for the whole of the Greater London area are contained within the Greater London Authority's London Plan (July 2011) which includes the following statement relating to archaeology:

Policy 7.8

Heritage assets and archaeology

Strategic

A. London's heritage assets and historic environment, including listed buildings, registered historic parks and gardens and other natural and historic landscapes, conservation areas, World Heritage Sites, registered battlefields, scheduled monuments, archaeological remains and memorials should be identified, so that the desirability of sustaining and enhancing their significance and of utilising their positive role in place shaping can be taken into account.

B. Development should incorporate measures that identify, record, interpret, protect and, where appropriate, present the site's archaeology.

Planning decisions

C. Development should identify, value, conserve, restore, re-use and incorporate heritage assets, where appropriate.

D. Development affecting heritage assets and their settings should conserve their significance, by being sympathetic to their form, scale, materials and architectural detail.

E. New development should make provision for the protection of archaeological resources, landscapes and significant memorials. The physical assets should, where possible, be made available to the public on-site. Where the archaeological asset or memorial cannot be preserved

or managed on-site, provision must be made for the investigation, understanding, recording, dissemination and archiving of that asset.

LDF preparation

F. Boroughs should, in LDF policies, seek to maintain and enhance the contribution of built, landscaped and buried heritage to London's environmental quality, cultural identity and economy as part of managing London's ability to accommodate change and regeneration.

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

3.3 Local Guidance: Archaeology in the Borough of Southwark

3.3.1 This 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. Relevant policy statements for the protection of the buried archaeological resource within the borough are contained within the Core Strategy (April 2011):

Strategic Policy 12 – Design and conservation

How we will achieve our vision to improve our places

SO 2F: Conserve and protect historic and natural places

Our approach is

Development will achieve the highest possible standards of design for buildings and public spaces to help create attractive and distinctive places which are safe, easy to get around and a pleasure to be in.

We will do this by

1. Expecting development to conserve or enhance the significance of Southwark's heritage assets, their settings and wider historic environment, including conservation areas, archaeological priority zones and sites, listed and locally listed buildings, registered parks and gardens, world heritage sites and scheduled monuments.

3.3.2 Also:

5.109 Throughout the borough there are many attractive and historic buildings, monuments and sites that reflect Southwark's rich history and add to the unique character and identity of places. We currently have 40 conservation areas covering 686ha (23% of the borough) and around 2,500 listed buildings and monuments. The Tower of London, a World Heritage Site, is located across the River from London Bridge. There are also archaeological remains that cannot be seen that provide important evidence of our past. We have identified 9 Archaeological Priority Zones (APZs) covering 679ha (23% of the borough).

3.3.3 The Southwark Plan, adopted in July 2007, contains policy statements in respect of protecting the buried archaeological resource. These statements are outlined below:

Policy 3.19 Archaeology

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

Reasons

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

PPG16 requires the council to include policies for the protection, enhancement and preservation of sites of archaeological interest and of their settings.

3.4 Site Specific Background

3.4.1 The study site falls within an Archaeological Priority Zone, as defined by the Southwark Unitary Development Plan:

5.1.2 Borough/Bermondsey/Riverside

This large zone incorporates the Roman and medieval settlement and the historic settlement areas of Bankside, Bermondsey and Rotherhithe. The archaeological potential of the Southwark riverside accounts for the inclusion of the strip of land parallel to the river outside of these known historical settlement areas.

3.4.2 The site also falls within Borough High Street Conservation Area as defined by the London Borough of Southwark Proposals Map.

3.4.3 The archaeological trial work was undertaken in relation to the planning application reference number 15/AP/4980

3.4.4 The results of the evaluation are summarised in this report.

4 Geology and Topography

4.1 Geology

- 4.1 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 glacial melt 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 generally have been found at c. 1.0m to 1.5m OD during the early Roman period⁶.
- 4.2 Two large islands located to the north of what is today Borough Underground station played a central role in the development of Roman London⁷. The northern island offered the possibility of constructing a bridge to the north bank over the shortest possible distance of any site found on 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 sea-going vessels.
- 4.3 The site is located on Borough High Street in a position that is close to the eastern limit of the southern island and close to the line of the main Roman road which extended northward toward the bridgehead⁸. The line of the main thoroughfare has shifted over time and the former Roman road in the vicinity of the site is may be below the buildings that now occupy the western side of Borough High Street⁹.

4.2 Topography

- 4.2.1 The present day south bank of the River Thames lies approximately 600m to the north of the site but during the majority of the later prehistoric and early Roman periods an estuarine channel, commonly referred to as the Southwark Street Channel, would have lain to the north of site. This waterway, linked to the main branch of the Thames, separated the northern and southern islands

⁶ 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* Trans London Middlesex Arch Soc 34 p19-30

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 Vol 56 27-44

⁷ Graham, A. H. 1978 *The Geology of North Southwark and its Topographical Development in the Post-Pleistocene Period* in Bird et al (1978), 501-516

⁸ Cowan, C, Seely, F, Wardle A, Westman, A and Wheeler, L 2009 *Roman Southwark Settlement and Economy* MoLA Monograph 42 Figure 2

⁹ Cowan, C, Seely, F, Wardle A, Westman, A and Wheeler, L 2009 *Roman Southwark Settlement and Economy* MoLA Monograph 42 Figure 2

which formed the core of Roman Southwark. To the south of the site the Borough Channel separated the south island from the 'mainland' of south London. Reconstructions of the early Roman topography also show that the area to the east of the site was dominated by a large inlet which extended westward from the eastern periphery of the island ¹⁰.

4.2.2 The level of the tides is crucial when determining the area available at the margins of the various waterfront spaces around Southwark. Mean high water levels have been estimated to have been between -0.50m OD at low tide and +1.25/1.50m in AD 50, which led to the formation of extensive mudflats in the intertidal zone¹¹. It is generally accepted that a period of marine regression, that is falling sea levels, began in the first century AD and continued throughout the later Roman period. Water levels fell consistently from the mid 1st century and by the mid 3rd century they are estimated to have been between 0.00m OD at high tide and -2.00m OD¹². However, water levels began to rise again in the early medieval period and by c.AD 1000 the height of the tide in London would have reached the same level as the peak suggested for the mid 1st century AD; tidal levels continued to rise and are still doing so today¹³.

4.2.3 The effects of these climatic changes were of course bound to impact on marginal areas such as Southwark and the medieval chronicles are replete with entries relating to flooding. Catastrophic flooding was recorded for the year 1014 in the Anglo-Saxon Chronicle and the same source notes severe damage to London Bridge in 1097, much of the bridge being swept away¹⁴. The construction of an effective river wall was essential to the development of the land to the south of the Thames, but even when this had been achieved the timber waterfronts would have needed constant renewal and the height of the ground surfaces behind them was raised as tidal levels increased. Although the general trend was one of marine transgression there does seem to have been a time in the later medieval period when tidal levels were relatively static. A mean high water level of c 1.2m OD has been suggested for the later medieval period, higher spring tides would have reached c 1.70m OD.

4.2.4 Rising river levels and the effects of embankment on the north side of the river contributed to massive erosion along the north Southwark waterfront in the 11th century and the effects of riverine erosion continued on the south bank into the thirteenth century¹⁵. There is little doubt that the threat of flooding was a perennial problem, failures of the river wall were frequent. Even after

¹⁰ Cowan, C, Seely, F, Wardle A, Westman, A and Wheeler, L 2009 *Roman Southwark Settlement and Economy* MoLA Monograph 42 Figures 5-11

¹¹ Brigham, T 2001 *The Thames and Southwark waterfront in the Roman period* in Watson et al 2001 pp12-27

¹² Brigham, T, Goodburn, D, and Tyres, I with Dillon, J 1996 *A Roman timber building on the Southwark waterfront*, *London Archaeological Journal* 152, pp1-72

¹³ Brigham 2001 in Watson et al 2001, Fig 14

¹⁴ Watson, B, Brigham, T and Dyson, T 2001 *London Bridge, 2000 years of a river crossing* MoLAS Monograph Series 8, London

¹⁵ Watson et al 2001 pp71-72

the embankments had been built and strengthened the land in this area still required extensive work to establish and maintain drainage¹⁶.

4.2.5 Prior to the redevelopment the site stood on relatively flat ground which has an elevation of c. 4.00m OD.

¹⁶ Carlin, M 1996 *Medieval Southwark* p36

5 Archaeological and Historical Background

5.1 Introduction

5.1.1 Much of the archaeological and historical background reproduced below was originally written for an the Archaeological Desk Based Assessment for 127-143 Borough High Street. The southern limit of this site lies only 30m to the north of the study site, the background information is equally as valid for 153-159 Borough High Street¹⁷. Additional material has been added by the author.

5.2 Prehistoric

5.2.1 Pottery and worked flints found in north Southwark indicate that the locale 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 region 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.

5.2.2 Whilst the GLHER search identified no evidence of material dating from the Palaeolithic period within the search area, other prehistoric eras are represented by artefactual material recovered during a number of investigations in the vicinity of the study site.

5.2.3 At 84-86 Borough High Street¹⁸, c. 50m to the northwest, eight struck flints were recorded in the top of the natural sand. Struck flints were also recovered c. 30m to the south at 175-177 Borough High Street¹⁹ and c. 100m to the north, at 107-115 Borough High Street²⁰. In all three instances the flints were considered to be of Mesolithic to Bronze Age date. Possible Neolithic flints were also found in sand deposits on Borough High Street²¹.

5.2.4 Limited occupational evidence has been observed in the form of a late Neolithic to early Bronze Age hearth at 124-126 Borough High Street²².

5.2.5 Prehistoric features of an unassigned date have been seen at 120-124 Borough High Street²³, c. 30m to the west, the evidence including post-pits and a substantial east-west orientated ditch. A

¹⁷ Barrowman, S 2013 *Archaeological Desk-Based Assessment of 127-143 Borough High Street, London Borough of Southwark, SE1* Unpublished Pre-Construct Archaeology Report

¹⁸ GLHER 090392

¹⁹ GLHER 090721

²⁰ GLHER MLO8806

²¹ GLHER 090916

²² GLHER 090846

²³ GLHER 091277

- further pit of unassigned date, along with flint flakes, an arrowhead, and a pottery sherd, was recorded at 179-191 Borough High Street²⁴.
- 5.2.6 The evidence that has been discovered to date is broadly suggestive of casual exploitation of the higher ground, with limited permanent occupation.
- 5.2.7 It is probable that permanent settlements were established in north Southwark during the late Neolithic and Bronze Age as indicated by 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 at sites such as Hopton Street²⁵, Three Oak Lane (where a very rare ard was discovered)²⁶, and Woolsey Street²⁷.
- 5.2.8 There is no direct evidence for palaeoagricultural activity of Bronze Age date in the vicinity of the study site. However at 106–114 Borough High Street, which lies on the west side of Borough High Street opposite the site, abraded pottery and flints of Bronze Age date were recovered, which broadly indicates activity of this period in the area²⁸. An occupation site of Bronze Age date probably remains to be located in the Borough High Street area and it would not be unreasonable to expect features or artefacts of this period to be encountered at the study site.
- 5.2.9 Evidence from the later prehistoric period is a little sparse. Isolated Iron Age burials are known from the vicinity but settlement sites have proved elusive though the quantity of Iron Age pottery found in residual contexts on the Bermondsey eyot clearly demonstrates that a farmstead or small settlement must once have existed there. This may reflect the marginal nature of the area as sea levels rose throughout the later Iron Age and then peaked in the early Roman period²⁹.
- 5.2.10 Excavations conducted by SLAEC in the 1980s at 15-23 Southwark Street revealed features indicative of activity from the Beaker period (2400-1800 BC) onward. The use of the locale was also shown in the later prehistoric period by a number of Iron Age or early Roman gullies³⁰. Overall the evidence for this period indicates small-scale farmstead settlements with the activity concentrated on Bermondsey eyot much further to the southeast of the study site, and to a lesser extent on the two main north Southwark islands³¹.

²⁴ GLHER 091243

²⁵ Ridgeway, V 1999 *Prehistoric Finds at Hopton Street* London Archaeologist Vol 9 No 3 72-76

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

²⁷ 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

²⁸ GLHER 090841

²⁹ Milne, G et al 1983

³⁰ GLHER ELO7863

³¹ Cowen, C et al 2009

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. The main road from the bridge, commonly referred to as Road 1, proceeded south roughly along the line of Borough High Street before splitting in two around the area of St. Georges Church. To the west Stane Street extended south toward Chichester whilst to the east Watling Street proceeded south and east following the same alignment as Tabard Street (formerly Kent Street) and Great Dover Street before joining the line of the Old Kent Road and linking London to Canterbury and the Kent coast.
- 5.3.2 Road 1 is not anticipated to extend onto the study site as it was recorded in detail to the west at 84-86 Borough High Street³². Other controlled excavations in the vicinity, which have encountered the road, were undertaken at 106-114 Borough High Street³³, 64-70 Borough High Street³⁴, 120-124 Borough High Street³⁵, and 124-126 Borough High Street³⁶.
- 5.3.3 Southwark developed into a major Roman waterfront town during the 1st century AD. A foundation date of AD 50-55 has been suggested for the suburb on the basis of pottery and coins recovered³⁷. At its peak Roman Southwark extended over an area up to 45 acres in size, approximately 15% of the size of the City³⁸. The rapid growth of Roman Southwark in the AD 50s supports the proposed early date of the bridge³⁹.
- 5.3.4 The excavations by Pre-Construct Archaeology at 127-143 Borough High Street, the southern periphery of which lies only 30m to the north of the subject site, revealed a complex Roman occupation sequence which included a revetted channel, fragmentary clay and timber buildings, gravel paths and surfaces, wells and evidence of ritual deposition. The pottery and coinage recovered from these features indicated that the site was occupied from around 70 AD until the late fourth century and possibly beyond⁴⁰.
- 5.3.5 The Roman occupation deposits were overlain by a c. 1.0m thick layer of 'dark earth'. Similar deposits are commonly found overlying earlier Roman occupation deposits in London although their true nature is still difficult to interpret. These deposits are often associated with the abandonment of

³² GLHER 090396/01

³³ GLHER 090334/03

³⁴ Graham, A 1988

³⁵ GLHER 091278

³⁶ GLHER 090848/03

³⁷ Sheldon, H 1978 *The 1972-74 excavations: their contributions to Southwark's history in Bird et al*

³⁸ Reilly, L 1998 *Southwark: An Illustrated History*

³⁹ Cowen, C *et al* 2009

⁴⁰ Killock, D 2016 *Summary Assessment of An Archaeological Excavation at 127-143 Borough High Street, London Borough of Southwark, London SE1 1NP* Unpublished Pre-Construct Archaeology Report

Roman urban activities but many of them produce purely Roman finds suggesting that they were initially deposited during the later Roman period and continued to accumulate during subsequent periods. The 'dark earth' is generally disturbed towards the top, containing pottery from later periods which may be the result of agricultural or horticultural activities. The dark earth horizons are often truncated by medieval pits before areas of open ground became covered by urban regeneration. Medieval occupation surfaces tend to directly overlie these deposits.

- 5.3.6 The study site lies close to the eastern margin of Road 1, and it is clear that significant remains are located in the vicinity. Little will be gained by working through all of the excavations, observations and isolated finds of Roman material recorded in the vicinity of the site. A selection of these are discussed in more detail below, in order to provide an insight into the type of Roman remains that could be encountered.
- 5.3.7 Given the location of the site there is clearly some potential for roadside ribbon development. Numerous investigations in the vicinity have yielded evidence for roadside domestic/light industrial buildings. Buildings of this type are generally regarded as the characteristic artisan type structure in Roman Britain. In such structures the day-to-day production and/or distribution of everyday goods, such as leatherwork, pottery, textiles and metalwork, was carried out. The front portion of the building is usually interpreted as a selling area, with goods displayed there for pedestrians passing along the street or road edge. The rear these buildings were probably sub-divided into various workshop, storage and dwelling areas.
- 5.3.8 Selected sites adjacent to Road 1 are described in detail below, in order to gain insight into the nature of archaeological stratigraphy which can be expected in the immediate vicinity of Roman Southwark's main road. At 106–114 Borough High Street⁴¹, which lies almost immediately to the west on the western side of Borough High Street, three phases of building were recorded. Following land consolidation two buildings were laid out; Building 1 to the east and Building 2 to the west of Road 1, respectively. Areas of scorched clay floor represented Building 1, although part of a south wall also survived. Building 2 was represented by at least two rooms with a yard to the east. These buildings were constructed with timber and clay, the later structure evidently dating to c. AD 80.
- 5.3.9 After Building 2 went out of use it was covered with a dump of sandy gravel. In the mid 2nd century a new building, Building 3, was erected but on a slightly different alignment. This too was built in a vernacular style. As well as the buildings a number of other occupation features were also present, especially refuse pits, a well and drainage ditches. Where later Roman stratigraphy survived, the buildings were overlain by 'black earth' containing 4th century pottery. Similar deposits, generally known as 'dark earth', are commonly found in north Southwark.

⁴¹ GLHER 090334

- 5.3.10 At 107-115 Borough High Street⁴², which lies c. 90m to the north of the site, a complex stratigraphic sequence covering the whole Roman period was recorded⁴³. A ditch, aligned at right angles to Road 1, represented the earliest Roman activity. This feature evidently drained into a natural channel which was orientated NE-SW. Cutting into the fills of the ditch were over seventy stake holes, thought to be of Roman date and probably relating to timber buildings fronting onto the road. The heavily truncated remains of clay and timber buildings, including clay floor surfaces of 2nd century date, were recorded. Late Roman activity included a timber-lined well, which contained a vast quantity of building material and was dated to the late 3rd century.
- 5.3.11 Investigations at a number of sites to the east of Road 1 have established that locations not directly adjacent to the road can also produce relatively deeply stratified occupation deposits of Roman date. Most notable in this respect have been sites at Newcomen Street⁴⁴, c. 90m to the south-west of the site, and at 4-26 St. Thomas Street⁴⁵, c. 140m to the north. At the latter site, archaeological investigations were carried out in 1982-83 prior to the redevelopment of Guy's Hospital Area 7. A timber structure at the eastern end of the site represented the earliest building of the Roman period to be encountered. To the west was a clay and timber building, of probable 1st century date, which was enlarged in the 2nd century. The north end of the cellar of a large ragstone building on pile foundations was also discovered and this contained a pillar base and possibly a flight of steps.
- 5.3.12 An observation at Talbot Yard⁴⁶, c. 130m to the north of the study site, and at a comparable distance from the edge of Road 1, is also worthy of note, given the findings at 4-26 St. Thomas Street. At Talbot Yard, a pavement of Kentish ragstone was recorded, at c. +1.20m OD, and this was overlain by a gravel spread, possibly representing resurfacing of a yard. An assortment of Roman artefacts are also recorded as having been found in the late 19th and early 20th century.
- 5.3.13 At the aforementioned Newcomen Street site, investigations during the 1940s revealed natural sand at c. +1.25m OD, cut by numerous ditches of 1st to 3rd century date. A large wooden structure, interpreted by the excavator as a possible storage tank for oysters, was also encountered. A thick layer of 'black earth' of 4th century date was the final element of the Roman stratigraphy.
- 5.3.14 An archaeological investigation on part of the Thameslink project in 2011, undertaken jointly by Pre-Construct Archaeology and Oxford Archaeology, at 11-15 Borough High Street has also revealed evidence that varied from the typical domestic or light industrial activity, with the remains of a substantial masonry building being uncovered⁴⁷.

⁴² GLHER 090532

⁴³ Yule, B 1982

⁴⁴ GLHER 090311, Kenyon 1959

⁴⁵ GLHER 092274

⁴⁶ GLHER 090358, 090570, 090797

⁴⁷ Comm Joanna Taylor, Pre-Construct Archaeology

- 5.3.15 Further to the east of the broad 'corridor' in which the sites described above lie, timber revetments and other structures of Roman date associated with the edges of the ancient marshland channels have been discovered by Pre-Construct Archaeology at sites in the Guy's Hospital complex⁴⁸. Such sites, within the low-lying margins of the main eyots, have great potential for producing important palaeoenvironmental evidence due to the anaerobic conditions, ensured by later submergence by alluvial clays, and the survival of structural timbers, artefacts such as leather, and plant macrofossils. Similar remains have been located within deeply cut features of Roman date in the vicinity of the study site, due to their survival in waterlogged deposits.
- 5.3.16 The precise status of Roman Southwark remains uncertain; we do not even know whether it was named separately from *Londinium* though the inscription found at Tabard Square suggests that Southwark was recognised as part of the main city⁴⁹. However, as the 'suburb' lay beyond the walls of *Londinium*, parts of it inevitably became utilised as a burial ground. No concentration of burials has, as yet, been encountered to the east of Road 1 in the Borough High Street area to mirror the cemetery activity recorded to the west and south, for example at 15-23 Southwark Street⁵⁰. The group of inhumation burials recorded at the latter site was evidently of late Roman date, probably 4th century. However, in addition to the burial at the Wolfson Wing site, c. 70m to the northwest of the study site, an inhumation burial was discovered, in association with other Roman remains, on Newcomen Street in the 19th century⁵¹. An enigmatic discovery was also recorded c. 20m to the south-west of the latter location, when sewer construction on Borough High Street in 1818 located, 'bones, utensils...cinerary and other urns...'⁵². Given these discoveries there is some possibility of Roman burials being encountered at the study site, particularly as it lies in a relatively unexplored part of a broad 'corridor' to the east of Road 1, which is known to have been intensively occupied throughout the Roman period.
- 5.4 The waterfront developments documented in Trench 3 are analogous to those previously recorded to the south and east of the site at 175-191 Borough High Street. These earlier excavations recorded a very complex sequence of waterfront developments and management. The natural inlet located on the eastern side of the south island was used as a waterfront in the early Roman period with both a post and plank timber river wall on its south side and a jetty projecting northward into the inlet⁵³.

⁴⁸ Taylor-Wilson 2002, Taylor-Wilson 1990 & Taylor-Wilson 1998

⁴⁹ Killock *et al* 2015

⁵⁰ Cowan 1992

⁵¹ GLHER 090258

⁵² GLHER 090589

⁵³ Cowan, C, Seely, F, Wardle A, Westman, A and Wheeler, L 2009 *Roman Southwark Settlement and Economy* MoLA Monograph 42 pp69-73, Figures 5, 49-53

5.3.17 The overall picture within the area of the site, and indeed the surrounding area of north Southwark, is one of high density Roman occupation and activity dated from AD 50 until the end of the Roman period.

5.5 Saxon

5.5.1 Following the collapse of the Western Empire the walled Roman city fell in to ruins and by the mid to late seventh century the focus of Saxon occupation had shifted westwards to the Strand and Covent Garden⁵⁴. A new system of beach markets was adopted where trading was conducted directly from boats pulled up on the foreshore rather than goods being landed at a quay or wharf. Even when these markets relocated eastward in to the old Roman city trading was still initially carried out from the beach itself, rather than from the quayside⁵⁵. Essentially Southwark had been a suburb of the main Roman city located north of the river and without the city, the bridge or traffic on the road network that approached it Southwark lacked the stimuli to support urban life. The area appears to have returned to being the marshy backwater that existed before the establishment of the Roman city. Very small quantities of early Saxon pottery have been recovered from Lant Street, Trinity Street and further east at Bermondsey Abbey. A Saxon minster that pre-dated the Cluniac Priory was founded there in AD 708-15⁵⁶. Recent excavations have recovered middle Saxon pottery but the extent of the activity related to this period is hard to judge and it may have had no impact on the area to the west.

5.5.2 The settlement around the Strand was almost certainly abandoned by the middle of the ninth century as the pressure of Viking raids increased. Direct attacks upon London were recorded for AD 842, 851 and 872. It is also probable that the trading networks which had helped Lundenwic flourish were themselves declining by the middle of the ninth century, partially at least as a result of the disruption to sea borne trade caused by piracy⁵⁷. From the late ninth century onwards Saxon settlement shifted to the old walled Roman city. A small ecclesiastical community had probably existed there following the establishment of St. Pauls in AD 604 and documentary evidence points to the existence of a Mercian palace within the City. The wholesale relocation of the Saxon settlement could have formed part of the planned Alfredian re-occupation and reorganisation of the old Roman city. The first market and harbour to be developed here was at Queenhithe, as mentioned in charters of AD 889 and 899. A large paved open area, possibly a market, was already developed at No 1 Poultry by the end of the ninth century and continued in

⁵⁴ Cowie, R and Whytehead, R 1989 *Lundenwic: The archaeological evidence for Middle Saxon London* Antiquity 63 pp706-18

⁵⁵ Milne, G and Goodburn, D 1990 *The Early Medieval Port of London AS 700-1200* Antiquity 64 pp629-630

⁵⁶ Cowie 2002, p195

⁵⁷ Hodges, R and Whitehouse, D 1983, Mohammed, Charlemagne and the origins of Europe p163

use throughout the late Saxon and early Norman period⁵⁸. Thus within the space of half a century *Lundenwic* had become *Lundenburgh*.

- 5.5.3 The re-occupation of London and Southwark has led some to conclude that a bridge must have been built after Alfred assumed control, or even earlier in the ninth century⁵⁹. Dual forts found on either bank of a river linked by a bridge proved to be powerful defensive positions against Viking attacks in both England and France and the reasoning behind the case for a bridge is compelling, but there is no archaeological evidence to demonstrate that a ninth century bridge was constructed⁶⁰. However, there is also no trace of a bridge dating to the tenth century and the suggested date for its reconstruction, some time between AD 994, when the Vikings attempted to burn London, and AD 1009 when the city repeatedly repulsed attacks, is based purely on documentary sources⁶¹. Whatever occurred in this period there is little doubt that the incorporation of London into Alfred's kingdom changed the fortunes of the city and probably that of Southwark. The suburb is referred to in the Burghal Hidage as *Suthringa Geweorche*, usually translated as the defensive work of the men of Surrey. There seems little doubt that a fortified area was set up on the south bank in the second half of the ninth century, although it has left virtually no trace in the archaeological record.
- 5.5.4 The history of Southwark in the tenth century also remains obscure although a mint of some importance was probably established in the period AD 991-997⁶². Fourteen moneys are known from the turn of the eleventh century, this number increased to twenty-two for the period AD 1017-1042⁶³. Apart from often colourful tales of attacks on the bridge or the settlements on either bank very little is known of developments in the tenth and eleventh centuries. The distribution of features containing Saxo-Norman pottery suggests that the settled area extended along the waterfront from Winchester Palace in the west to Battle Bridge Lane in the east and as far south as St. Georges church⁶⁴.
- 5.5.5 Few finds of late Saxon date have been recovered from Southwark, and the only recorded evidence from within the study area is a substantial amount of late Saxon pottery that was recovered during the excavation at 120-124 Borough High Street⁶⁵.

⁵⁸ Treveil, P and Burch, M 1999, *Number 1 Poultry and the development of medieval Cheapside* Trans of the London and Middlesex Archaeological Society 50 pp55-56

⁵⁹ Haslam, J 2010 *King Alfred and the development of London* in London Archaeologist Vol 12 No 8 pp210-211
Carlin, M 1996 pp10-12

⁶⁰ Watson et al 2001 p52

⁶¹ Watson, B 2001 p53

⁶² Watson, B 2009, *Saxo-Norman Southwark :a review of the archaeological and historical evidence in London* Archaeologist Vol 12 No 6 p150

⁶³ Carlin, M 1996 pp13-15

⁶⁴ Watson, B 2009, Fig 1

⁶⁵ GLHER 091281

5.6 Medieval

- 5.6.1 The Domesday Survey of AD 1086, which can be considered pertinent to the earlier 11th century, lists Southwark as a port settlement that lacks a manor and therefore does not come under the direct auspices of any particular lord. The majority of the settlement appears to have been largely confined to the high ground around the bridgehead with rights to the local tolls held by Edward the Confessor and the Earl of Godwin⁶⁶.
- 5.6.2 Although the river regime had altered considerably since the abandonment of the Roman settlement it was still a determining factor in the development of the medieval suburb. Even when the river was not directly responsible for flooding the low-lying nature of many areas that would naturally have been marshland adjacent to the river meant that they were of limited value before a river wall could be established and an effective system of drainage works developed to channel water into the Thames. The consolidation of the river frontage was hampered by rising river levels in the medieval period and the effects of quayside developments on the north bank which appear to have deflected the currents towards the Southwark foreshore, leading to widespread erosion⁶⁷. The bridge itself was almost destroyed by a flood in AD 1097⁶⁸. Excavations have demonstrated that scouring was a serious problem immediately upstream of the bridge even in the late eleventh century⁶⁹. The problem was probably amplified in the succeeding centuries as water levels rose and the river walls in the city advanced further southward. The river frontage was consolidated in Southwark during the thirteenth and early fourteenth centuries, but unlike the city the line of the river wall became static once this had been achieved⁷⁰.
- 5.6.3 During the medieval period, and in much the same way as witnessed during the Roman period, the development of Southwark was defined by both topographical limitations and the existence of important trade routes into London from the south and south-east⁷¹. The population developed an eclectic demographic with residents from all over Europe listed in medieval records⁷². Numerous occupational groups are enumerated within medieval Southwark including bakers, millers, cooks, traders, barbers, timber mongers, metalworkers, tailors, carpenters and sawyers amongst many other trades. Southwark was particularly famed, or more accurately notorious, for its inns, prisons and brothels many of which were alluded to by the authors of the day including Chaucer in the *Canterbury Tales*⁷³.

⁶⁶ Watson et al 2001

⁶⁷ Watson et al 2001 pp71-72

⁶⁸ Watson et al 2001 p61

⁶⁹ Watson et al 2001 pp62-71

⁷⁰ Carlin, M 1996 p19

⁷¹ Carlin, M 1996

⁷² Carlin, M 1996

⁷³ MoLAS 2000; Carlin, M 1996 & Knight, H 2002 *Aspects of medieval and later Southwark: archaeological excavations (1991-8) for the London Underground Limited Jubilee Line Extension Project* MoLAS Monograph 13

- 5.6.4 The earliest reference to an inn in Southwark dates from AD 1338. The 1381 Southwark poll tax records 12 innkeepers on the High Street as well as 13/14 sellers of ale and wine. By the 16th century the numbers had grown further still. The reason for this number of establishments in Southwark was due in large part to its geography. It was located close to London but on the other side of the bridge, which was locked at night. Travellers would rest overnight at an inn before travelling into London the next morning or would cross to Southwark in the evening from the north in order to make an early start to their travels the following morning. As well as offering food and sleeping accommodation for humans the majority also contained stables for horses and security for transport. It was from these provisions that the major profits of the innkeepers were made.
- 5.6.5 As outlined above, Borough High Street has been famous for its inns since the medieval period. Perhaps the most noteworthy of those not still in existence was The Tabard, demolished around 1875 and made famous by Chaucer's 'The Canterbury Tales'. It lay c. 100m to the north of the site and parts of the Post-Medieval building were located during an excavation at 85-87 Borough High Street in 1990⁷⁴. A crude map of Southwark, c. 1542, reproduced in many texts concerning the Borough's history, identifies three inns adjacent to the High Street in the vicinity of the study site: The Horse Head, The Spur and The Christopher⁷⁵. A slightly later plan, c. 1550, reproduced by Carlin, also shows these three inns⁷⁶. The origin of these establishments may well have been in the Medieval period.
- 5.6.6 The excavations at the Wolfson Wing site, located to the north-west of the study site, found two Medieval chalk walls, signs of probable kitchens, and ground surfaces at c. 1.9m OD. One of these walls was recorded at a height of 2.39m OD and was cut into probable 'dark earth' deposits at 2.31m OD, thus indicating Medieval ground level in that part of the site. Elsewhere in the excavations, medieval surfaces and cut features such as pits have been found. These were suggested to have been antecedents to the latter post-medieval inns and stables upon the site⁷⁷.
- 5.6.7 Medieval remains have been recorded at a number of the archaeological excavations in the vicinity of the study site, highlighting the potential for remains of this period being present. For example, pits have been recorded along Borough High Street at numbers 106-114⁷⁸, 107-115⁷⁹, 116-126⁸⁰, 134-138⁸¹, 175-177⁸², and 179-191⁸³.

⁷⁴ GLHER 090447

⁷⁵ For example in Bowers 1905

⁷⁶ *ibid.*, 34

⁷⁷ Pickard, C 2002, p 96

⁷⁸ GLHER 090842

⁷⁹ GLHER 090860

⁸⁰ GLHER MLO77369

⁸¹ GLHER 090844

⁸² GLHER 090346

⁸³ GLHER 091245

- 5.6.8 Building remains are also known to have survived later truncations, having been encountered at 175-177 Borough High Street⁸⁴, at 120-124 Borough High Street⁸⁵, and at 85–87 Borough High Street⁸⁶, the site of The Tabard, as mentioned above.
- 5.6.9 Additionally two medieval prisons, the Marshalsea⁸⁷ and the original site of the King's Bench prison⁸⁸, are known to have existed on Borough High Street. The original site of the Marshalsea, founded in the late 14th century, was almost immediately to the east of the study site. The eastern party walls of the site may indeed preserve the property boundary related to the prison which was demolished in the early 19th century before a new building was completed slightly further to the south. The new prison bounded St. George's churchyard on its southern side.
- 5.6.10 By the 12th and 13th centuries the settlement was one of growth and prosperity, a prosperity which was not unnoticed by the City of London and during the following centuries, through to the 1800s, there was a series of struggles to assert and retain control over the south bank settlement.

5.7 Post-Medieval

- 5.7.1 The post-medieval period saw some periods of rapid population expansion in Southwark. In 1547 the population numbered c.10,000, which had tripled by 1678, an increase that has been attributed to immigration⁸⁹.
- 5.7.2 In much the same way as the medieval period, post-medieval Southwark had something of a reputation both regarding the diversity of its population and also the colourful nature of its society. Crime in Southwark, facilitated by its numerous narrow streets and alleyways, is well documented and in 1723 an Act of Parliament was passed to clear the criminals from the area. Dickens described the residents of nearby Lant Street as "migratory, usually disappearing on the verge of quarter day (when the rent was due) and usually by night". Indeed, activities not tolerated on the north bank flourished in Southwark, notably pottery production and tanning, with immigrant communities from the Low Countries contributing "to the development of the area by bringing with them new ideas and new skills"⁹⁰.
- 5.7.3 Assessment of structural and artefactual evidence from Southwark indicates numerous industrial activities, including brush making, tenter-frame production, clay pipe, stoneware and delftware

⁸⁴ GLHER 090394

⁸⁵ GLHER 091282

⁸⁶ GLHER 091367

⁸⁷ GLHER 090275

⁸⁸ GLHER 090277

⁸⁹ Reilly, L 1998

⁹⁰ Knight, H 2002

manufacture, metalworking, glassmaking and tanning⁹¹. In many ways the location of industries, particularly during the 17th and 18th centuries was influenced by the large amount of available space with easy expansion facilitated by the proximity of open marshland and fields⁹².

- 5.7.4 Despite the strength of industry throughout the post-medieval period the presence of traded items, which feature heavily in the assemblages of post-medieval Southwark sites, attest to the continued importance of Southwark's location at the centre of trade routes in and out of London⁹³.
- 5.7.5 Even after the river embankments to the north had been built and strengthened the land in this area still required extensive work to establish and maintain drainage⁹⁴. Large areas could be flooded simply as the result of heavy rain and the area to the west of the site, known as Paris Garden, was largely uninhabited and occupied by a dense willow thicket up until the late 16th century⁹⁵.
- 5.7.6 Newcourt's illustration of 1658 illustrates the setting for the site as being adjacent to the main road. The entire site appears to be built upon. This map also shows the nature of the development of in this part of Southwark; in the vicinity of the study site settlement activity is restricted to the properties that line the major roads, with ornamental gardens to the rear of the properties and field systems beyond these.
- 5.7.7 On Rocque's map of 1746 it is noticeable that the entire area has become more densely occupied with plots of land divided by narrow alleyways that stretch both east and west from Borough High Street. The immediate vicinity of the site is dominated by the extensive enclosed courtyard of the Marshalsea prison and the sprawling array of buildings which surrounded it. The prison was accessed from Borough High Street along a narrow passageway which ran to the south of the site. Slightly to the north Axe and Bottle Yard ran east from Borough High Street before dog-legging to the south and passing eastward along the northern curtilage of the prison. Mermaid Alley, presumably the pre-cursor of modern Mermaid Court, had also been established by this time.
- 5.7.8 Horwood's map of 1799 shows rather more detail of the area, particularly sub-divisions within the street frontage properties. Most of the buildings have extremely narrow frontages and do not extend very far to the east, many have small gardens to the rear with the exception of the northernmost buildings which abutted directly with further buildings to the east. Axe and Bottle Yard has been replaced by a much larger road, King Street, which is modern Newcomen Street. Union Street has been established on the west side of Borough High Street.

⁹¹ MoLAS 2000

⁹² MoLAS 2000

⁹³ Knight, H 2002

⁹⁴ Carlin, M 1996 p36

⁹⁵ Carlin, M 1996, p32

- 5.7.9 The status of the Marshalsea Prison is rather unclear on Horwood's map. Although a large open area to the east of the street frontage is shown as Marshalsea it is unclear whether the buildings to the north which fronted on to King Street formed part of the prison; very few buildings are shown on the southern side of the courtyard. It is known that the reason the prison was rebuilt further to the south in 1811 was that the original site was in a ruinous condition, a fact perhaps reflected in Horwood's map.
- 5.7.10 The 1872 Ordnance Survey (OS) map, 1st edition, shows the study area was fully built upon though the properties shown appear somewhat larger than the extremely narrow frontages shown on Horwood's map.
- 5.7.11 The bomb damage maps compiled during and after World War II show that the site may not have been directly hit but was very probably suffered some damage as a result of the intense bombardment that afflicted Southwark. Buildings to the south of Mermaid Court are shown as seriously damaged or damaged beyond repair. Many of the buildings on the western side of Borough High Street immediately opposite the site were seriously damaged by bombing with properties rated from 'general blast damage' to 'total destruction'⁹⁶.
- 5.7.12 The standing buildings currently occupying the site were erected during post-war reconstruction.

⁹⁶ Ward. L 2015 *The London County Council Bomb Damage Maps 1939-1945*

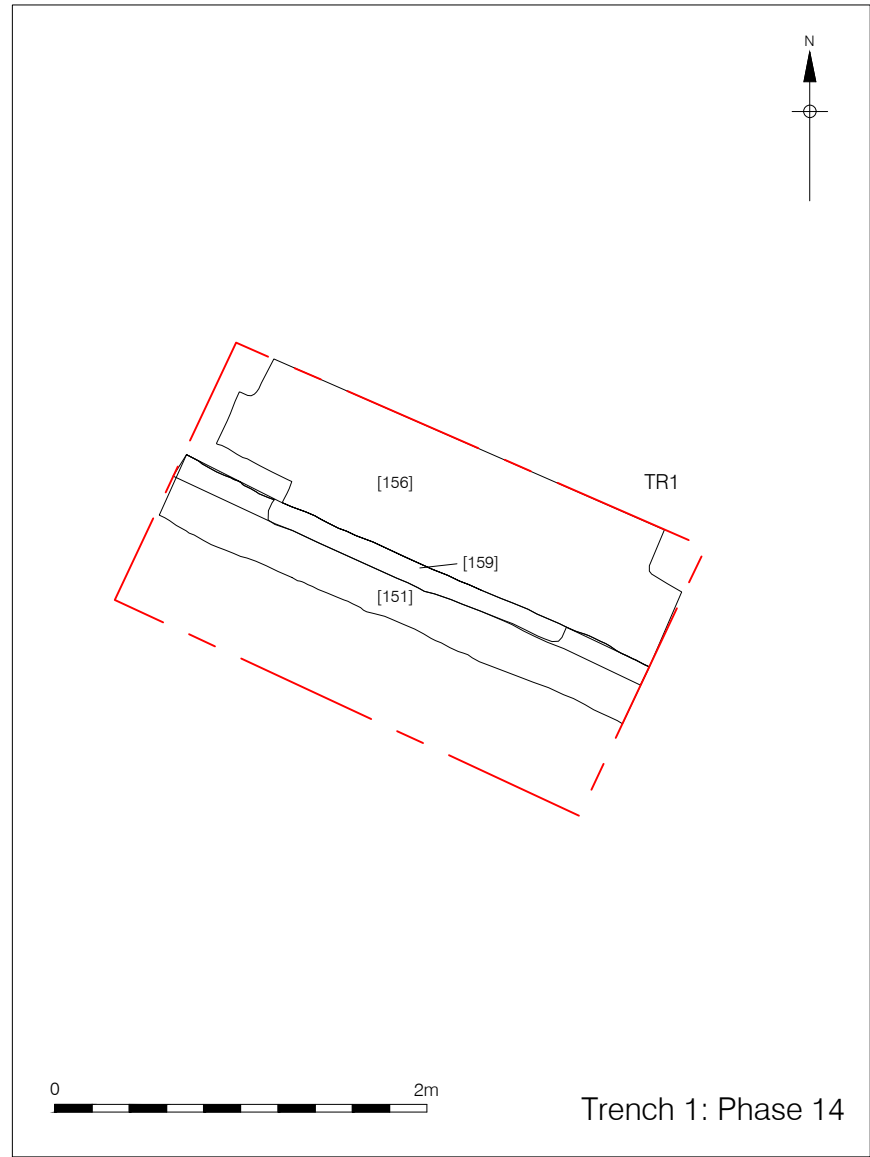
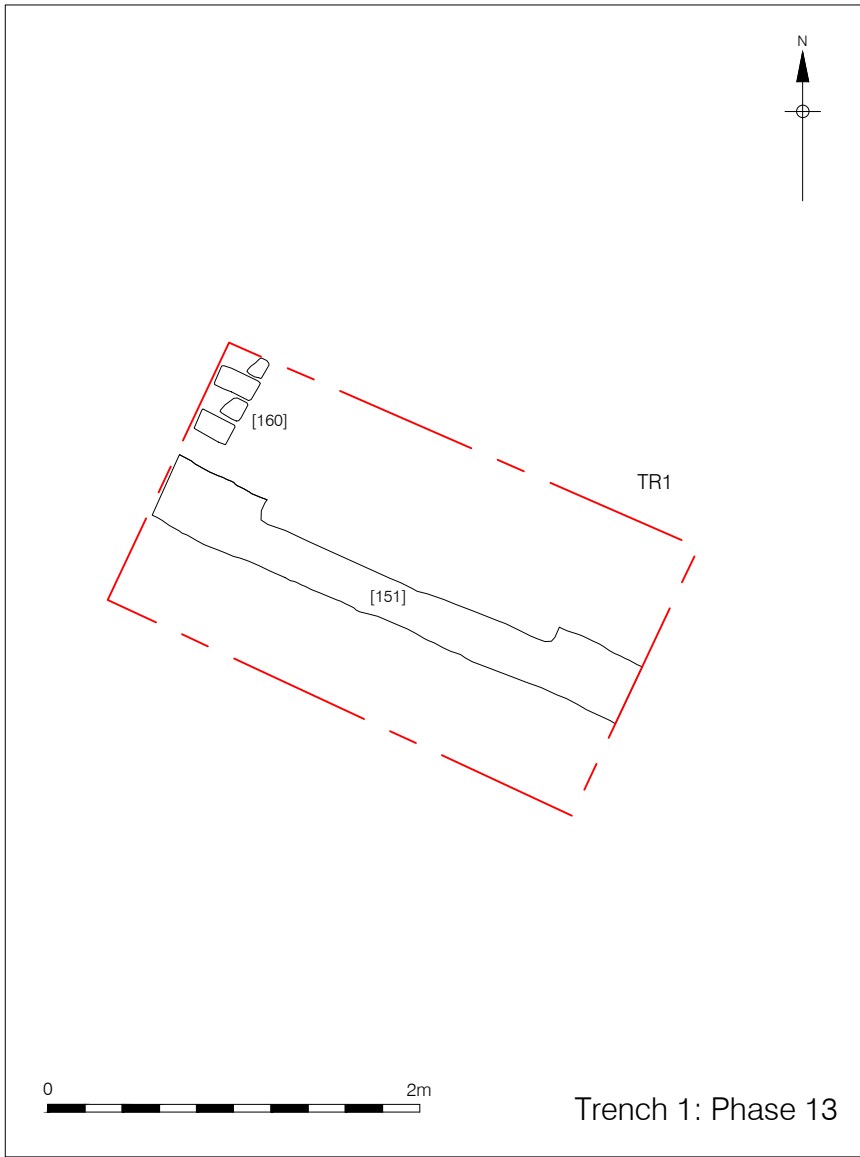


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Figure 3
 Location of geotechnical trial pits and boreholes
 1:200



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Figure 4
Trench 1 Phases 13 & 14
1:40

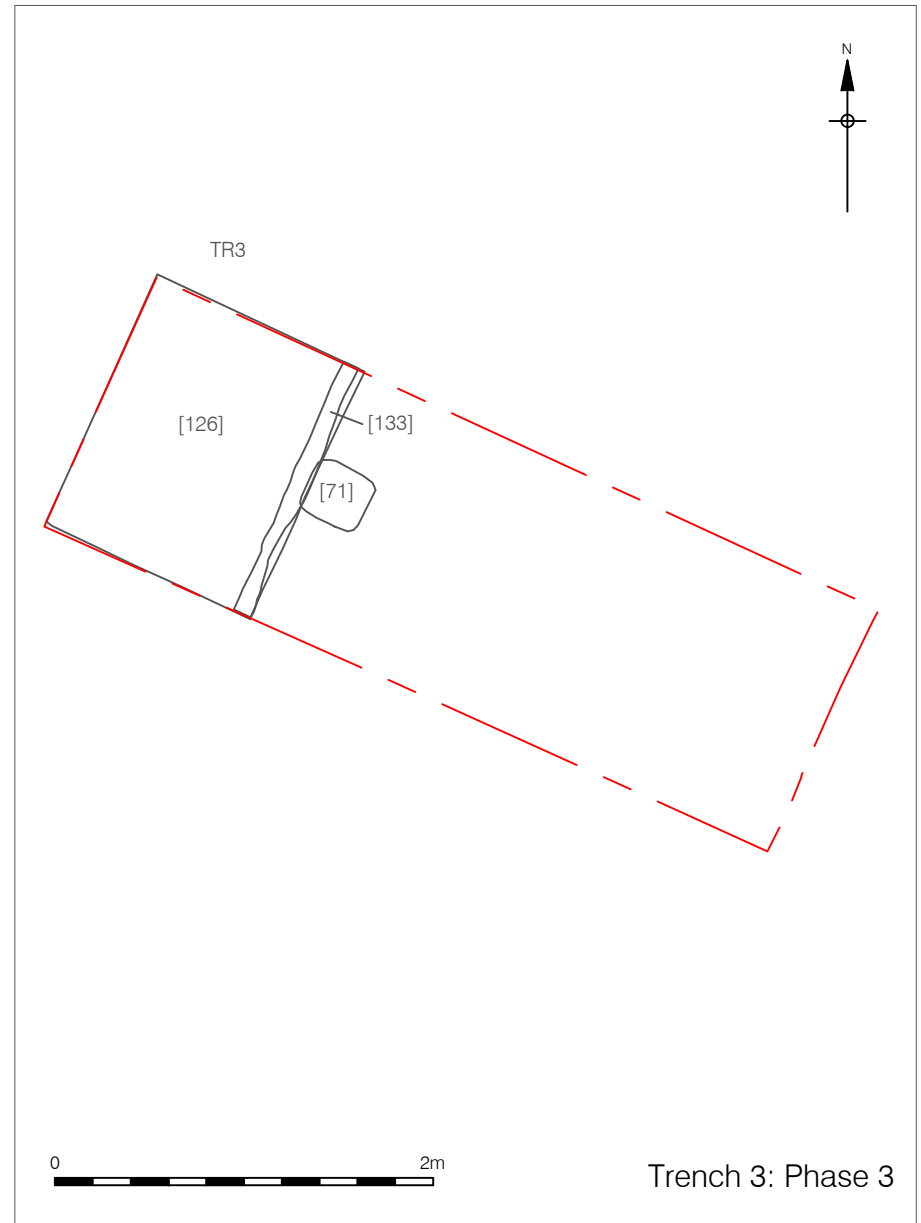
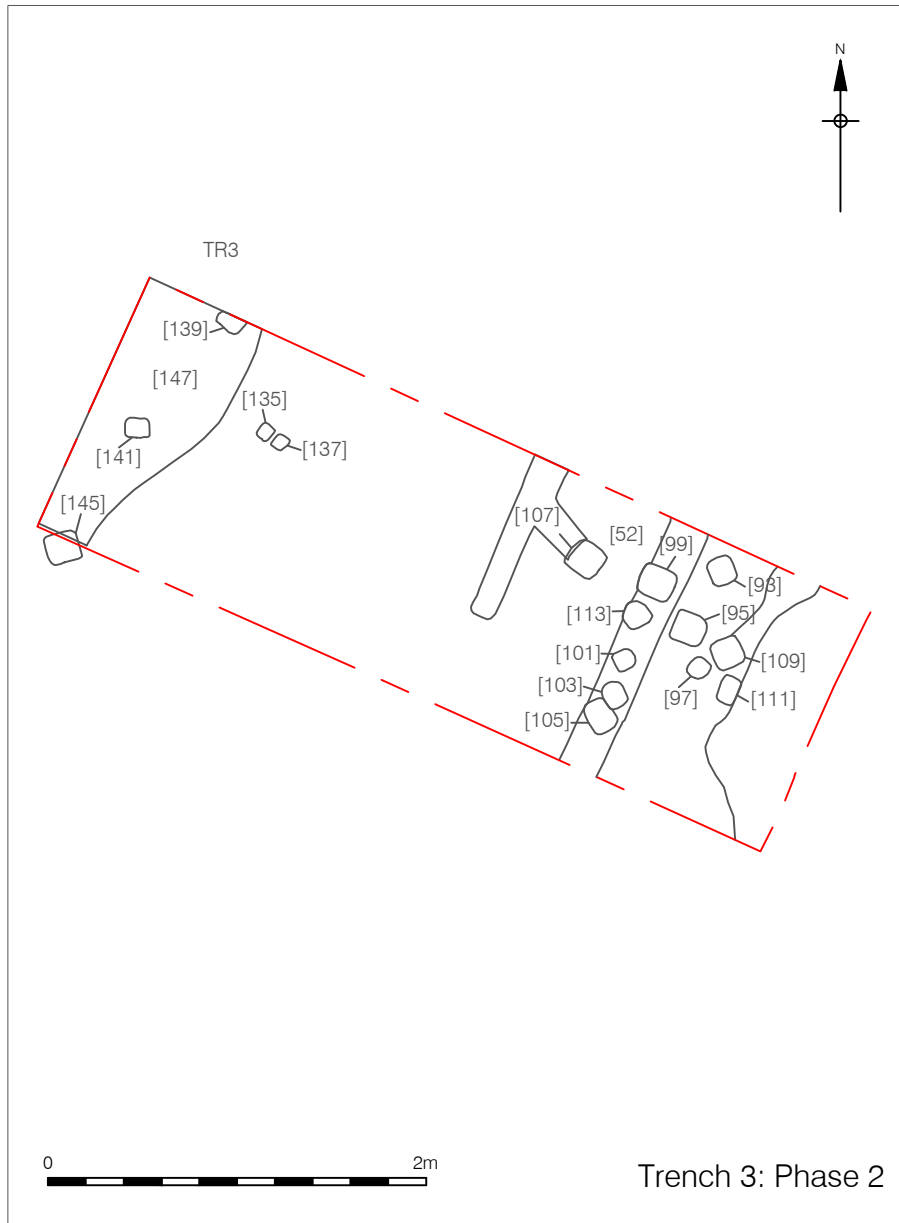


Figure 5
Trench 3: Phases 2 & 3
1:40

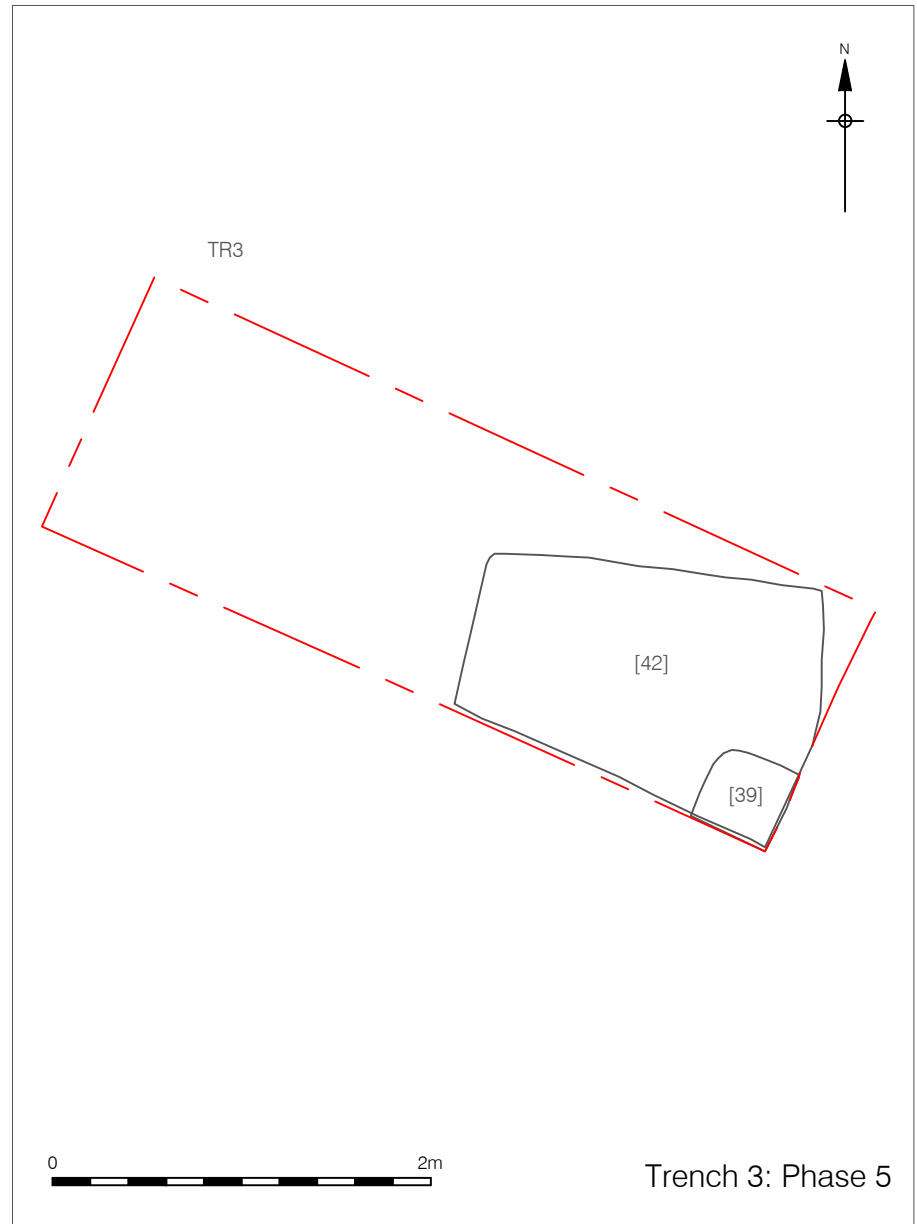
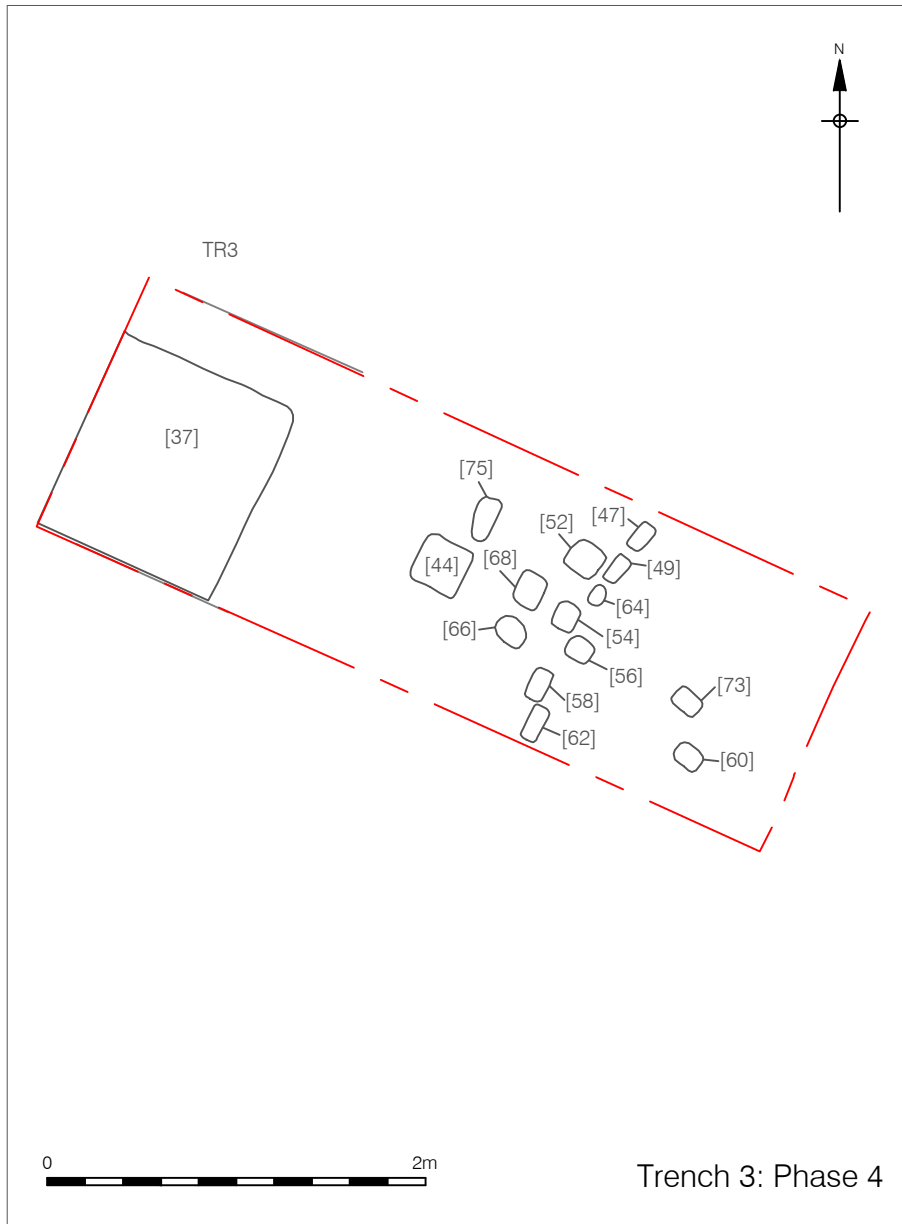
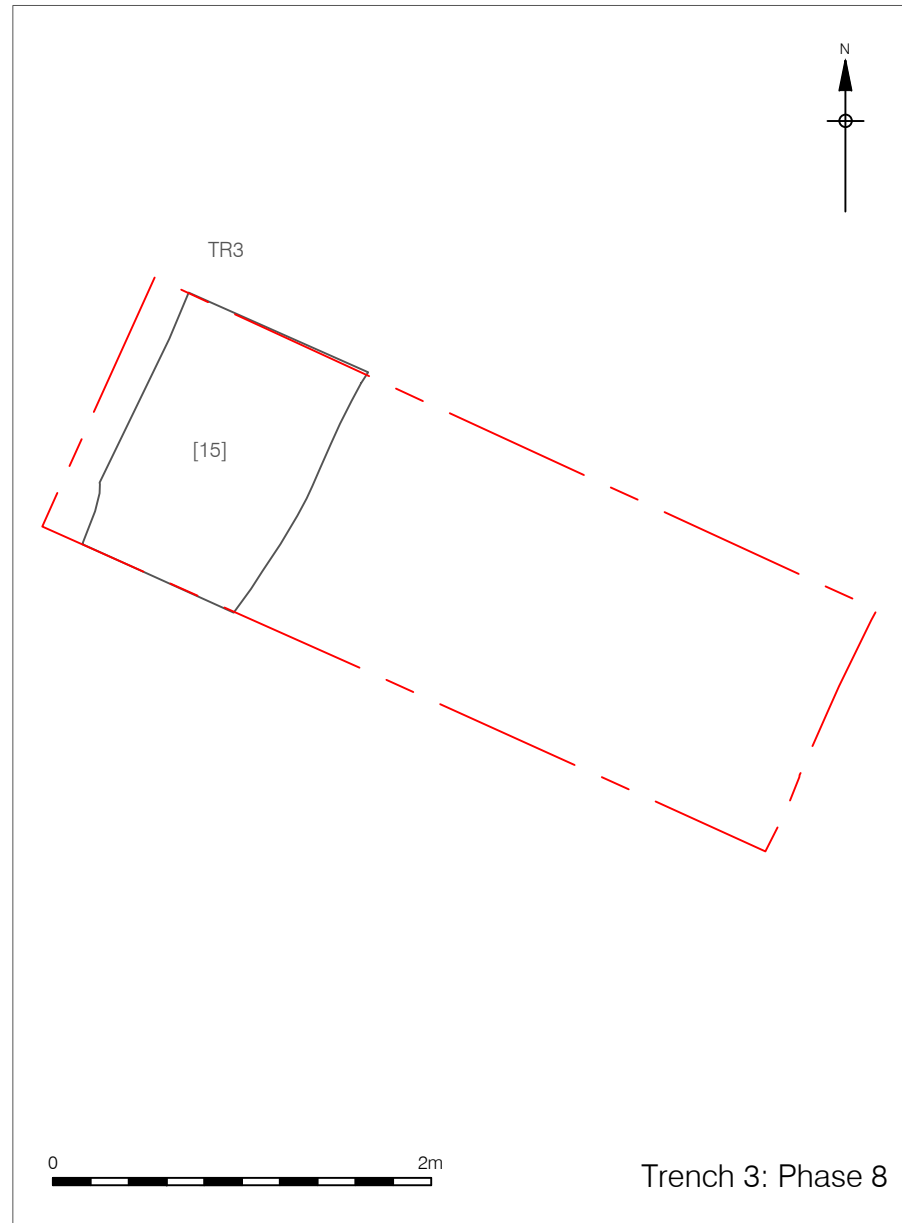


Figure 6
Trench 3: Phases 4 & 5
1:40



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Figure 7
Trench 3: Phase 8
1:40

Figure 3: Geotechnical Trial Pit and Borehole Location

Figure 4: Trench 1 Phases 13 and 14

Figure 5: Trench 3 Phases 2 and 3

Figure 6: Trench 3 Phases 4 and 5

Figure 7: Trench 3 Phase 8

6 Archaeological Methodology

- 6.1 As far as was practicable the excavation was carried out in accordance with the Written Scheme of Investigation submitted to and approved by the London Borough of Southwark before works commenced⁹⁷. The evaluation was designed to comprise three trial trenches each measuring 2.45m by 2.45 m square and up to 4m deep. A variety of factors precluded the implementation of this scheme, these are detailed in Section 2, Paragraphs 5-11. The evaluation eventually consisted of four trenches designated Test Pit 1 and Trenches 1-3. Test Pit 1 measured 2m by 2.30m and was a maximum of 1.48m deep. Trench 1 measured 2.80m by 2.00m and was 2.40m deep. Trench 2 measured 1.80m by 1.60m and was a maximum of 4.10m deep. Trench 3 measured 4.22m by 1.44m and was a maximum of 4.04m deep. All changes to the archaeological programme were discussed in advance with Ms Gillian King, the Senior Archaeology Officer for the London Borough of Southwark.
- 6.2 The excavated areas were reduced to the appropriate level by hand, or in the case of Trench using a small 360° mechanical excavator working under archaeological supervision. Trench 3 presented a very particular situation where the upper archaeological levels, to a depth of c. 2.00m, had been removed possibly during earlier archeologically work before the present buildings were constructed. However, a flint and stone wall which is probably of early medieval date was exposed in the southern section. Whatever the nature of the previous excavation may have been it appears that the wall was deliberately conserved.
- 6.3 Due to an unfortunate communication error the upper levels of Trench 2, some of which comprised features and deposits of early post-medieval and medieval date, were removed without archaeological monitoring. However, these levels were later recorded in section and finds gathered to date the features present. Though this loss was unfortunate the nature and significance of the upper part of the archaeological sequence in this area has been successfully reconstructed.
- 6.4 Once significant archaeological deposits of features were recognised clearance by groundwork contractors was stopped and subsequent archaeological investigation was carried out by hand.
- 6.5 A substantial 'dark earth' horizon covered large areas of the site capping the Roman horizons and forming the later medieval ground surface. These types of deposits are notoriously difficult to deal with as it is almost impossible to identify cut features such as pits and ditches which had been cut in to them. This has often led to the machine stripping of these horizons and the loss of valuable archaeological data, particularly concerning the latest period of Roman rule in Britain. The dark

⁹⁷ Moore, P 2016 *Land At 153-159 Borough High Street, London, SE1 1HR London Borough Of Southwark Written Scheme Of Investigation For An Archaeological Evaluation & Watching Brief On A Ground Investigation Survey* Unpublished Pre-Construct Archaeology Document

earth horizon was stripped by hand in spits in an attempt to produce a broad chronological sequence and systematically metal detected. Significant numbers of late Roman coins were recovered using this method. The division of the dark earth into spits combined with the pottery and coin dating evidence demonstrated diverse time brackets for the formation of the dark earth horizons.

- 6.6 All of the spoil excavated during the course of the evaluation was metal detected before being removed from the trench.
- 6.7 The fieldwork and reporting was carried out according to the relevant methodologies, as follows:
- The Written Scheme of Investigation
 - Historic England (GLAAS), Guidelines for Archaeological Projects in Greater London, 2015
 - Southwark Archaeology Policy and Supplementary Planning Guidance (Southwark Council undated, http://www.southwark.gov.uk/Uploads/FILE_4634.pdf);
 - Archaeological Guidance Paper 3: Standards and Practices in Archaeological Fieldwork In London (GLAAS 1998);
 - Archaeological Guidance Paper 4: Archaeological Reports (GLAAS 1998);
 - Management of Archaeological Projects (English Heritage, 1990)
 - The Chartered Institute for Archaeologists 'Standard and guidance for archaeological field evaluation' 2014).
 - Fieldwork In London and 5: Evaluations (GLAAS 2009)
 - The Institute for Archaeologists Code of Conduct (1999)
 - The Institute for Archaeologists Code of Approved Practice for the Regulation of Contractual Arrangements in Field Archaeology (1999).
 - The Institute for Archaeologists Standard and Guidance for Archaeological Watching Brief (1994, Revised 2001).
 - The Institute for Archaeologists Standard and Guidance for Archaeological Evaluation (1994, revised 2001)
 - The Treasure Act (1996)
 - The Burial Act (1857)
- 6.8 Pre-Construct Archaeology Limited is a Registered Archaeological Organisation (Number 23) with the Chartered Institute of Field Archaeologists and operates within the Institute's 'Code of Practice'.
- 6.9 All recording systems adopted during the investigations were fully compatible with those most widely used elsewhere in London; that is those developed out of the Department of Urban Archaeology Site Manual, now published by Museum of London Archaeology (MoLAS 1994). Individual descriptions of all archaeological and geological strata and features excavated and

exposed were entered onto pro-forma recording sheets. All plans and sections of archaeological deposits were recorded on polyester based drawing film, the plans being at scale of 1:20 and the sections at 1:10. The OD heights of all principle strata were calculated and indicated on the appropriate plans and sections.

- 6.10 A photographic record of the investigations was made using digital format only.
- 6.11 Levels were calculated from a series of Temporary Bench Mark established by transferring the values from the Benchmark located on the south side of the Slug and Lettuce public house. The value of the Benchmark is 4.97m OD.
- 6.12 The archaeological works were regularly visited and monitored by Ms Gillian King, the Senior Archaeology Officer for the London Borough of Southwark.
- 6.13 The complete site archive including site records, photographs and finds will be deposited at the London Archaeological Archive Research Centre, (LAARC) under the site code BHG 16.

7 Phased Archaeological Summary

7.1 Report Constraints

7.1.1 Prior to describing the broad sequence of developments recorded during the course of the evaluation it should be pointed out that this report cannot present a full analysis of the stratigraphy or finds assemblages present at 153-159 Borough High Street. The finds assemblages have been used primarily as a dating tool and full analysis of the very large assemblages, which combined constitute c.58 boxes, will take place once the site has been fully excavated. In addition it should be pointed out that the interpretations of the extremely complex series of waterfront developments seen in Trench 3 can only be provisional. The true functions of the multitude of the structures recorded in this trench, and their interaction with each other, will only become apparent when they are placed in the wider context of a full excavation of the surrounding area.

7.2 Phase 1 Roman Alluvial Deposits, Trenches 2 and 3

7.2.1 Alluvial layers dated to the late first or early second century were excavated in Trenches 2 and 3. The latest of these in Trench 2, layer [9], was recorded at a level of 0.71m OD; it contained a small pottery assemblage broadly dated 50-130 AD. Layer [9] consisted of mid greyish green clayey silt probably indicative of deposition by slow moving water. Two further alluvial layers, [10] and [11], were partially excavated in a small sondage located in the southern part of the trench. Layer [10] was quite mixed with mid-dark brown organic deposits interleaving with lenses of fine yellow sand. This deposit contained a small pottery assemblage dated 50-160 AD. Below layer [10] was a deposit that principally consisted of yellowish brown sand with some indurated bands of silt. Although no pottery was recovered from this layer large fragments of charcoal were recovered from near the base of the sondage which clearly indicated that this was not a natural deposit. Excavation ceased due to concerns regarding the safety of continued excavation at -0.05m OD.

7.2.2 The two earliest alluvial deposits recorded in Trench 3 were the largely unexcavated layers [149] and [150]. Layer [149] consisted of a dark greenish brown clayey silt located in the northern half of the trench. Very few finds were recovered from this layer as it remained unexcavated with the exception of one small area removed to retrieve an environmental sample. A small pottery assemblage dated 70-16 AD was recovered along with a coin of Titus dated AD 79-81. The coin might date this deposit to the late 1st century but it should be noted that coins dated to the 1st century were recovered from higher in the sequence in this trench.

7.2.3 Layer [150] consisted of a sandy deposit that might either be a waterfront dump or the result of deposition by fast flowing water, or possibly a combination of both. Though not fully excavated this layer contained a large quantity of pottery and surface cleaning for photography led to the

collection of a medium sized pottery assemblage dated 70-160 AD. This date range is very broad but it should be noted that layer [150] had been truncated by linear cut [147] which contained a substantial pottery assemblage dated 120-150 AD. Layer [150] should therefore pre-date the cut feature thus dating it to the late 1st or early 2nd centuries.

- 7.2.4 Layers [149] and [150] were recorded below 0.40 to 0.45m OD. The alluvial deposits recorded in Trench 2 cannot be directly related to those recorded further to the south in Trench 3 but are likely to form part of the same waterfront or channel sequence.



Plate 1 Alluvial sequence in base of Trench 2
Scale 0.50m

7.3 Phase 2 Roman Waterfront Development, Trench 3

- 7.3.1 The features and deposits assigned to this phase were recorded exclusively in Trench 3. They represent a period of rapid re-modelling of the Roman waterfront which took place in the first quarter of the 2nd century AD, though it is uncertain exactly how the developments in the eastern and western ends of Trench 3 relate to each other.

- 7.3.2 A substantial linear cut [147], possibly a ditch, was recorded in the western extremity of Trench 3. This feature extended across the entire width of the trench and continued beyond the limits of excavation to the north, south and west. The ditch was aligned southwest to northeast, the break of slope was sharp and though not fully excavated the ditch was a least 0.65m deep. The fill of the ditch contained a substantial pottery assemblage dated 120-150 AD.

- 7.3.3 The alignment of the ditch appeared to be significant as three substantial postholes, [139], [141] and [145] formed a clear line along the eastern side of the ditch (Figure 5). Although the ditch had probably been backfilled by the time this post alignment was established it appeared that the system of land division established by the excavation of ditch [147] was maintained in subsequent development of this area of the waterfront. As mentioned above the postholes were substantial, measuring up to c 0.20m in diameter and c 1.10m deep. The post alignment might have been used in a post and plank revetment that had later decayed or been demolished.
- 7.3.4 Ditch [147] was sealed by a series of layers recorded as contexts [114], [127], [142] and [143]. The earliest of these layers [127] contained a pottery assemblage dated 70-160 AD and a 1st century coin. The three remaining layers in this group all contained substantial pottery assemblages dated 120-150 AD. All of these deposits were recorded below 0.71m OD.
- 7.3.5 A substantial array of postholes and shallow linear cuts was recorded in the east end of Trench 3. These features had been cut into the surface of the alluvium [149]. The shallow linear cuts were aligned north-south and measured c. 0.15m wide by 0.15m deep. A line of five postholes [99], [101], [103], [105] and [113] followed the same alignment as one of the linear cuts; a further group of five postholes which did not form a discernible pattern was recorded to the east of this alignment.
- 7.3.6 It must be admitted that the function of this group of cut features is not immediately apparent. The narrow linear cuts presumably once held timber beams which were later removed or decayed. There can be little doubt that this group of features once constituted part of a timber structure but at present the nature of the structure is unclear. The level at which these features was found, and the fact that they are cut in to an alluvial horizon, precludes them being part of a dwelling. Numerous possibilities exist for the group of features. They might form part of a jetty that projected in to the river, a timber revetment or a consolidation structure associated with reclamation and remodelling of the waterfront. Only further excavation of the surrounding area would elucidate the development of the waterfront in this period.
- 7.3.7 At present it is unclear how the timber structure located in the east end of the trench relates to the ditch and postholes recorded to the west. The stratigraphic sequence does is not definitive in this regard. However, all of these features pre-date the subsequent remodelling of the waterfront when revetment [133] was built and the channel to the east filled by deposit [76].



Plate 2 Array of postholes and linear cuts, Trench 3
Scale 0.50m

7.4 Phase 3 Roman Waterfront Development, Trench 3

7.4.1 The waterfront evident in Trench 3 was substantially remodelled in Phase 3 when a post and plank revetment was constructed in the western half of the trench (Figure 5). The north-south aligned revetment [133] might be seen as a continuation of the land division established by the excavation of the earlier ditch [147] and the construction of the post alignment along its eastern side. The later revetment structure as found consisted of a very badly decayed single plank which

followed a north-south alignment immediately to the west of the substantial posthole [71]. The latter measured 0.34m square and was 0.74m deep. The ground surface formed by the dumping of layer [126] to the west of the revetment lay below 1.00m OD.

- 7.4.2 Although as found the revetment consisted of no more than a single plank it is possible that further planking once existed above this level. However, the level at which the revetment was found would have probably been on or above the limits of the tidal range in this period (c. 120-130 AD). It is possible that the revetment was designed to be used with shallow draught vessels such as barges that would have been beached at low tide.



Plate 3 Broken amphora found to west of revetment [133] Trench 3
Scale 0.50m

- 7.4.3 The possibility that a waterfront used directly for importation, rather than simply land consolidation, may have existed in this period is perhaps enhanced by a remarkable find made on the western periphery of the trench. Two very large pieces of an amphora comprising roughly half of the width of the vessel were exposed jutting out of the western section of the trench. The highly organic layer [132] which formed the surface on which the amphora was found may indicate the level at which the revetment was constructed. The organic element might be waste timber, brushwood or simply discarded straw. Given the position of the amphora there seems little doubt that it formed at least a temporary ground surface.

- 7.4.4 The ground surface formed by layer [126] and the amphora were buried when the ground surface was raised behind the planking [133] by the deposition of layer [126]. Layer [126] contained a large pottery assemblage dated 120-130 AD. The revetment plank [133] was presumably originally vertical but when excavated the plank clearly leaned to the east. This presumably reflects the fact that there was an open channel to the east and landfill which formed a ground surface, layer [126], to the west (Sections 4 and 10, Figure 9).
- 7.4.5 To the east of the plank the presumed channel had been filled with a loose silty sand layer [76] which might have been deposited by fast moving water or been dumped into the channel, possibly a combination of both. This layer contained a very large assemblage of pottery and other artefacts which might indicate rubbish disposal into an open channel. The pottery assemblage has been dated 120-130 AD a time bracket identical to that of the ground horizon [126] which lay to the west of the revetment. It would therefore appear that the channel began being backfilled almost as soon as the revetment was constructed. This pattern follows the rather frenetic pace of development established in Phase 2 and indeed the Phase 3 development was soon eclipsed by further remodelling of the waterfront.

7.5 Phase 4 Roman Waterfront Development, Trench 3

- 7.5.1 Further backfilling and consolidation of the channel area to the east of the revetment is reflected in the deposition of layer [69] the surface of which sloped from west to east into the channel. As might be expected the layer also became considerably thicker to the east (Sections 4 and 10, Figure 9). The surface of this layer was recorded between 0.85m and 0.61m OD. The frequency of domestic waste in this deposit was very high and it contained a very large pottery assemblage dated 150-160 AD.
- 7.5.2 The revetment structure [133] was clearly going out of use at this time and a later array of postholes found in the eastern half of the trench indicates further remodelling of the landscape. Although no single post line emerged in this area a cluster of postholes numbered [47], [49], [64], [54], [56], [58] and [62] appeared to represent a north-south alignment which traversed the trench and may have been sporadically renewed (Figure 6). It is unclear what this post alignment represented. No vertical planking similar to [133] was present and there was no real differentiation between the deposits found to east and west of the post alignment. It is possible that by this period that the remodelling of the landscape beyond the limits of the trench had moved the waterfront either to the north or east beyond the limits of the trench. If this was the case the cluster of posts might mark part of a domestic structure on reclaimed ground.
- 7.5.3 The deposition of layer [45] marked further levelling of the area and extended across the entire trench including the area of the disused revetment [133]. Layer [45] contained a medium sized pottery assemblage dated 120-130 AD which was clearly residual. A shallow rectangular pit [37]

was cut through layer [45] in the south-west corner of the trench. This feature could form part of a later phase but did not contain any later finds, the pottery recovered from its fill has been dated 120-140/150 AD. The stratigraphic sequence suggests that ground level had been raised to c. 1.19m OD by the second half of the 2nd century.

7.6 Phase 5 Late Roman Pitting, Trench 3

7.6.1 Two shallow pits [39] and [42] were excavated in the eastern half of Trench 3. These features contained pottery assemblages dated 250-400 AD and 250-275 AD respectively. The latter was a very large assemblage recovered from the large rectangular pit [42] which measured 1.84m east-west by over 1.40m north-south. The pit was apparently little more than 0.40m deep though the top may have been obscured by the processes leading to dark earth formation as these types of deposits sealed this horizon.

7.7 Phase 6 Late Roman 'Dark Earth' Horizons, Trenches 2 and 3

7.7.1 Homogenous 'dark earth' horizons were recorded in both Trenches 2 and 3. The formation processes leading to the development of these horizons is diverse, complex and a full discussion of them is beyond the remit of this document. They are generally associated with late Roman abandonment of the previously settled areas but though rather opaque to the field archaeologist when properly investigated they provide ample evidence of continued late Roman occupation, even if the nature of this occupation remains obscure.

7.7.2 In Trench 2 layers [4] and [5] produced late Roman pottery assemblages dated 250-400 AD and 250-275 AD. In addition layer [4] contained a coin Small Find <11>, dated 330-335 AD. The highest level recorded on layer [4] was 1.55m OD (Sections 7 and 8, Figures 8 and 9).

7.7.3 In Trench 3 the lower part of the part of the "dark earth" horizon was recorded as layers [17]-[21] and [34]. Five of the pottery assemblages recovered from these layers dated between 250 and 300 AD. The surface of the highest deposits in this group was recorded between 1.81m and 1.76m OD (Sections 4 and 10, Figure 9).

7.8 Phase 7 Very Late Roman 'Dark Earth' Horizons, Trenches 2 and 3

7.8.1 The division of the 'dark earth' horizon into artificial spits and systematic metal detecting helped to identify levels which date to the second half of the 4th century. In Trench 2 layer [3] contained pottery dated 270-300 and two 4th century coins. Small find <2> has been dated 335-341 AD whilst Small find <5> is later still, dated 367-375 AD. Layers [1] and [2] formed the upper part of the dark earth horizon excavated in plan in this trench. Both contained small pottery assemblages

dated after 270 AD. The top of the Roman dark earth horizon as recorded in Section 8 was at 2.30m OD (Figure 9).

7.8.2 In Trench 3 the 'dark earth horizon' had been truncated by a later ditch which divided it into two parts, layers [16] and [13] which had once formed a single horizon. Layer [13] contained a medium sized pottery assemblage dated 350-400 AD. The top of this layer was recorded at 1.93m OD.

7.9 Phase 8 Very Late Roman or Early Medieval Ditch, Trench 3.

7.9.1 As mentioned above the late Roman 'dark earth' horizon had been truncated in Trench 3 by a substantial ditch [15] that ran north-south through the west end of the excavation. The ditch would have been roughly aligned with the main Roman road in the area although this is thought to be located some distance to the west of the site. The ditch was 1.00m wide and 0.84m deep (Figure 7).



Plate 4 Very late Roman or early medieval ditch [15], Trench 3
Scale 0.50m

7.9.2 The date this feature is rather problematic. It must be, at the earliest, very late Roman as it truncated layer [16] which contained pottery dated to the second half of the 4th century. It may well date to a later period but it did not contain any artefacts that definitively date it to the post-Roman period. The pottery assemblage recovered from the ditch fill [14] has been dated AD 270-

300 and is clearly residual, probably derived from the earlier 'dark earth' horizons through which the ditch had been cut.

7.9.3 The paucity of dating material might suggest that the ditch was excavated in a period when artefacts were sparse which would be consistent with an early post-Roman date. However, this interpretation is speculative. The fill of the ditch was quite easily distinguishable as it consisted of a very moist clay and silt matrix which contained far fewer fragments of pottery, building material or oyster shell compared to the surrounding 'dark earth' deposits. It appeared that the ditch had stood open and gradually silted up rather than being deliberately backfilled.

7.10 Phase 9 Undated 'Dark earth' Deposits Trench 3

7.10.1 Two essentially undated 'deposits [7] and [12] complete the 'dark earth' sequence recorded in Trench 3. Layer [12] was the first spit of dark earth excavated in Trench 3; when excavation began the ditch [15] was not apparent but it was very soon identified once the spit began to be removed. In reality the ditch may have been cut through layer [12] but this could not be definitively proven and the stratigraphic sequence as excavated was retained. The pottery collected from the excavation of layer [12] dated AD 250-300 and was clearly residual. The surface of layer [12] was recorded at a maximum height of 2.11m OD although this is a reflection of the depth of modern truncation rather than a significant archaeological horizon.

7.10.2 Layer [7] was recorded only in Section 1 and appeared to be a 'dark earth' horizon which lay directly below the flint and stone wall [6]. The materials and style of building used in the wall, and the level at which it was found, suggest a late medieval or early post-medieval date though the absence of any datable materials within its build preclude closer dating. Layer [6] clearly pre-dates the construction of the wall but no artefacts were collected from it during the cleaning of the section and it is essentially an undated deposit though it was situated above the level of the late 4th century 'dark earth' horizon [13].

7.11 Phase 10 Medieval 'Dark earth' Deposits Trench 2

7.11.1 A homogenous greenish grey layer [90] extended across the entirety of Trench 2. This layer might represent a 'dark earth' type horizon, a level at which open ground was used for horticulture or agriculture or dumping. A small pottery assemblage dated 1240-1350 was recovered from this deposit the surface of which was recorded at 2.65m OD (Section 7 Figure 8).

7.12 Phase 11 Medieval Pitting Trench 2

7.12.1 The features and deposits assigned to this phase were recorded in section only. Pit [131] consisted of a small concave cut 0.40m wide and 0.21m deep. This feature was notable for the

high proportion of burnt daub included in the fill (see photograph below, centre of shot). A single sherd of pottery dated 1270-1500 was recovered from the fill [130]. The top of this feature was recorded at 2.49m OD.



Plate 5 Medieval and early post-Medieval features, Section 9 Trench 2
Scale 0.50m

7.12.2 A much larger pit [85] was recorded in Sections 7 and 8. Although truncated to both north and south the feature measured 1.23m long and was more than 0.73m wide and 0.84m deep. A small pottery assemblage dated 1240-1300 was recovered whilst the sections were cleaned for drawing. The highest level recorded on the top of the fill [84] was 3.40m OD.

7.12.3 A vertically sided flat-bottomed cut [89] was recorded in Section 7. This feature might represent a robbed foundation which could have been a masonry element or possibly a substantial timber beam. No dating evidence was recovered from the fill [88].

7.13 Phase 12 Early Post-Medieval Developments, Trenches 1, 2, 3 and Test Pit 1

7.13.1 Walls dating to the early post-medieval period were exposed in all four trial pits which extended from the northern periphery of the site in 153 Borough High Street (Test Pit 1) to the southern side of the site (Trench 3) in 159 Borough High Street. In Test Pit 1 part of a chalk foundation [26] extended below the sequence of foundations that support (rather precariously) the modern party

wall. Although very little of this foundation could be exposed as the party wall was potentially unstable it appeared that wall [26] had once been a substantial structure. The exposed section of wall measured 0.35m wide and it clearly continued to the east below the later brickwork. The chalk wall survived to a height of 3.12m OD.



Plate 6 Test Pit 1 showing chalk wall [26]
Scale 0.50m

7.13.2 A sondage excavated in the western half of Test Pit 1 exposed deposits that may be contemporary with the chalk wall. These consisted of layer [31] which had been truncated by a pit [33]. No dating material was recovered from the surface cleaning of these deposits which could not be excavated as they occurred at the maximum safe excavation depth established for this trench. The layer and pit are therefore essentially undated but they clearly had a very different composition from the 19th or 20th century ground raising and levelling layers that sealed them and the chalk wall [26]. The highest level recorded on layer [31] was 2.77m OD.

7.13.3 The remnant of another chalk wall or foundation [161] was exposed in Trench 1 directly below the base of a 17th century red brick wall [151] which ran east-west through the excavated area. Trench 2 was located within the standing building in 153 Borough High Street. The later wall [151] was not dismantled during the course of the evaluation and only a very small portion of the chalk foundation was exposed. The early foundation was found at roughly the same level as a remnant

of brick floor [160] which probably represents the original depth of the 17th century basement located on the north side of wall [151]. The floor was recorded at 1.52m OD.



Plate 7 Chalk foundation [161] exposed below later brick wall, Tr 1
Scale 0.50m

7.13.4 A north-south aligned wall made from chalk, ragstone and re-used blocks of Reigate stone [121] was recorded on the eastern periphery of Trench 2 which was located in 157 Borough High Street (Section 8 Figure 9). The wall had been truncated by modern foundations to the north but

extended beyond the limits of the trench to the south. This substantial foundation was 0.45m wide and 0.65m deep. The Reigate stone blocks included in the build are almost certainly medieval in date which in itself would suggest a late medieval or early post-medieval date for the construction of the wall. The construction cut for the wall [122] also appeared to have truncated a large post-medieval pit [124]. The fill of this feature contained a few sherds of pottery which dated to after 1580. If the relationship between the features was recorded correctly the foundation [121] is at the earliest late 16th and more probably dates to the 17th century. However, no brick was evident in it's build and it would appear to form part of an earlier phase of construction than the red brick wall [151] recorded in Trench 2. The top of wall [121] was recorded a mere 0.53m below the top of the slab at a level of 3.48m OD.



Plate 8 Chalk and stone wall [121] cutting though earlier intercutting pits. Section 8 Trench 2
Scale 0.50m

7.13.5 Two earlier cut features that probably represent a robbed out wall were recorded in Trench 2. Both of them consisted of near vertically sided flat-bottomed cuts. Robber cut [83] was recorded in the east facing Section 7; though truncated by the modern foundations to the north it measured 0.53m in diameter and was 0.40m deep. The fill [82] contained a high percentage of discarded building material, particularly roof tile, alternated with bands of yellow gravel. These materials were heavily compacted, much of the roof tile was crushed, and it appeared that the fills of the robber cut had been rammed to prevent later subsidence above the backfilled feature. The roof

tile probably derived from a medieval building, it has been dated 1240-1450+. The top of cut [82] was recorded at 3.20m OD. A nearly identical feature [129] was recorded in the west facing Section 9. This feature occupied essentially the same location as robber cut [89] in the opposing section, the top of the cut was recorded at 3.18m OD. It would therefore appear that a wall had passed across the northern periphery of Trench 2 on an east-west alignment. The robbing had occurred before the construction of wall [121] the base of which passed above robber cut [129]. If a wall had once stood in this area it would probably have been late medieval in date as robber cut [89] truncated the medieval pit [85]. The fill of the latter contained pottery dated 1240-1300.



Plate 9 Flint wall [6] as seen in Section 1, Trench 3
Scale 0.50m

A substantial and extensive stone foundation, almost exclusively built from dressed flint, was exposed in the southern section of Trench 3 which was located in 159 Borough High Street (Section 6 Figure 8). The wall extended along and beyond the entire southern periphery of the trench and measured over 4.20m long and 0.85m deep, the thickness of the foundation is unknown as the top could not be safely exposed. The date of this wall is unknown as all of the associated stratigraphy which had once lain to the north of it had been removed by previous excavations and it effectively formed the southern limit of the trench. The absence of brick and tile along with the use of lime mortar would suggest an early post-medieval date. The top of the foundation was recorded at 3.27m OD.

7.14 Phase 13 17th Century Basement, Trench 2



Plate 10 Floor remnant [160] to north of wall [151] Trench 3
Scale 0.50m

7.14.1 A substantial east-west aligned red brick wall [151] extended throughout the extent of Trench 1 and continued beyond its limits. As found the wall was 0.38m wide, though this included the north face which had been entirely rebuilt in a later period when the floor level was raised. The wall was c. 1.50m high and more than 2.78m long. The top of the wall was recorded at 3.06m OD, some 0.94m below ground level in 153 Borough High Street.

7.14.2 The brick fabric and original lime mortar used in the construction of wall [151] are indicative of a 17th century construction date. The remnant of what was possibly the original floor [160] was exposed in the western limit of the trench and appeared to extend further to the west. As stated above the north face of the wall had been rebuilt in a subsequent period and floor level was also raised. Most of the original floor [160] appears to have been lifted at this time, possibly to allow re-use of the bricks. The floor was recorded at 1.52m OD.

7.14.3 A layer and two small cut features recorded in Trench 2 have been included in Phase 13 as they post-date features and deposits assigned to Phase 12. However, none of the deposits produced any dating evidence and the cut features, only seen in section, are small and rather inconsequential. They are therefore not discussed in further detail.

7.15 Phase 14 18-19th Century Developments, Test Pit 1, Trenches 1 and 2



Plate 11 Chalk wall [26] below later brick structures [24] and [25] Test Pit 1
Scale 0.50m

7.15.1 The chalk foundation [26] recorded in the eastern limit of Test Pit 1, though possibly partially robbed out, effectively continued in use in use in later periods (as it does to this day) forming part of the rather precarious foundation structures which support the party wall of 153 Borough High Street with 70 Newcomen Street to the east. Later brick structures were added above the earlier chalk foundation. A very roughly lain foundation [25] sat directly above the chalk. This structure

was not formed from normal courses of brickwork but largely consisted of unworked chalk lumps and re-used blocks of brickwork robbed from earlier structures. A rather more regular but still very poorly laid wall [24] lies above the 'foundation' [25]. The top of the wall [24] was recorded at 4.02m OD; the yellow brick wall which forms the party wall may be constructed directly onto wall [24] but the base of the wall is obscured by modern render.

- 7.15.2 It is extremely difficult to place an accurate date on the brick foundation and wall [24] and [25] as the materials appeared to be largely re-used. Some unfrogged reddish purple bricks were included in the build of wall [24], these are likely to date to the 18th century. These structures pre-dated the 19th-20th century ground raising and levelling deposits [27] and [28] which lay to the west of them.
- 7.15.3 A rather higher quality of workmanship was evident in the rebuilding of the 17th century basement recorded in Trench 1. As mentioned above the north face of wall [151] was completely rebuilt with a skin of brickwork a single brick wide [159] added to the north face. The rebuild included some bricks that were unfrogged and had a yellow fabric. The mortar used in the rebuild was extremely hard and may have included a cement base as opposed to the lime mortar used in the original build of wall [151]. The earlier floor [160] was largely robbed out and a new brick floor [156] laid a higher level of 1.79m OD (Figure 4). When exposed the floor was covered with coal dust.
- 7.15.4 It is perhaps worth noting at this point that no floor level was found to the south of wall [151]. Although the area to the south of the wall was very restricted considerable effort was made to remove the modern rubble backfill in this area which was excavated to a depth of c. 1.50m OD but no floor became apparent. Presumably this area was also a basement but floor level was never reached in this area.
- 7.15.5 The dating evidence for the construction of the new floor was sparse and some probably derives from residual finds. The bricks used in the floor have been dated 1750-1850. This date bracket is identical to that assigned to the clay tobacco pipe recovered from the make-up layer [158] that lay below the floor. The pottery recovered from the floor and underlying layer is somewhat earlier being dated 1650-1750 and late 17th-mid 18th century respectively.
- 7.15.6 A mortar floor [80] was recorded in the south and west of Trench 2. This floor cannot be closely dated and though it would be very tempting to associate the floor with the early post-medieval wall [121] which lay to the south no stratigraphic link can be established between these structures. The floor was recorded at a maximum height of 3.46m OD.



Plate 12 Brick wall [151], rebuild [159] and floor [156], Trench 1
Scale 0.50m

7.16 Phase 15 19th Century Developments, Trench 2

7.16.1 The archaeological sequence in Trench 2 was completed by a levelling layer that extended across the entire trench in the areas that had not been subjected to later truncation. Layer [77] consisted of a compacted mix of silt, mortar and sand which produced a small pottery assemblage dated 1820-1900. This layer was sealed by make-up for the modern slab.

7.17 Phase 16 19th to 20th Century Developments, Test Pit 1 and Trench 1

- 7.17.1 The deposits pertaining to this phase excavated in Trench 1 all represent backfilling of cellar structures and consisted predominantly of brick rubble and other discarded building materials. These might related directly to the demolition of the bomb-damaged structures which stood on the site before the current standing buildings were erected. To the north of wall [151] layers [153] and [152] lay above the brick floor [156]. Layer [153] contained pottery dated to the late 19th century whilst layer [152] above it contained pottery dated to the late 19th or 20th centuries.
- 7.17.2 Layer [157], excavated to the south of wall [151] consisted of very loose unconsolidated brick rubble. As mentioned above no floor was found in this area though it must be presumed that a basement existed to the south off the wall. The pottery recovered from layer [157] has been dated to the late 19th to 20th centuries. The brick rubble also contained a number of complete glass bottles which undoubtedly date to the 20th century.
- 7.17.3 Hand excavation below the broken out slab in Test Pit 1 revealed levelling deposits [27] and [28] that were probably used to raise ground level in this open courtyard area. The lowest layer [28] contained pottery dated to late 19th or early 20th centuries.

8 Geotechnical Investigations

- 8.1 A series of five small geotechnical pits and two boreholes were monitored for features and deposits of archaeological significance prior to the commencement of the archaeological evaluation, the locations of these are shown on Figure 3. The pits have been numbered GTP 1-5 for the purposes of this report.



Plate 13 16th -17th brick structures Geotechnical Pit 2
Scale 0.50m

8.2 Geotechnical Pit 1 was located in the southeast corner of 159 Borough High Street. The excavation of this pit did not progress beyond the breaking out of a small section of the floor slab as a void measuring c. 2.50m was located directly below it. The nature of this void is unknown.



Plate 14 Brick walls and possible concrete foundation Geotechnical Pit 3
Scale 0.50m

8.3 Geotechnical Pit 2 was located on the eastern periphery of 157 Borough High Street adjacent to the party wall and a buttress which protrudes westward from it. A dense array of walls occupied much of the pit. The buttress protruding from the party wall might date to the 18th century. This

appeared to be an addition to the brickwork which formed the foundation of the party wall. The earlier brick wall and foundation was made using bricks that have a red sandy fabric and lime mortar. Structures built using similar materials usually date to the 16th or 17th centuries, for example wall [151] which was later recorded in Trench 1 of the archaeological evaluation. The red brick foundation extended c. 1.70m below slab level.

- 8.4 Geotechnical Pit 3 was located toward the rear of the standing building in 153 Borough High Street. This location marked the junction of the party wall with 151 Borough High Street with an internal wall within 153. The foundation within 153 Borough High Street appeared to have a concrete foundation which had been built abutting the earlier party wall. The fill of the pit consisted entirely of loose brick rubble which might indicate that a backfilled basement is located in this area. However, the results from Trench 1, located nearby in the same building, demonstrate that any basements which may be present could have considerable archaeological significance as they could originate from the 17th century onward. Geotechnical Pit 3 was excavated to a depth of 1.30m below slab level.



Plate 15 Rubble backfill Geotechnical Pit 4
Scale 0.50m

- 8.5 Geotechnical Pit 4 was excavated in the courtyard to the rear of 153 Borough High Street adjacent to the northern party wall with 71 Newcomen Street. The material excavated in the pit consisted exclusively of loose brick rubble through the full depth of the pit which was 1.60m below

slab level. No yellow stock brick was seen in the build of the brick wall which formed the foundation to the party wall in this area. The wall was built from bricks with a reddish purple fabric that probably date to the late 18th or early 19th centuries.



Plate 16 Geotechnical Pit 5
Scale 0.50m

- 8.6 Geotechnical Pit 5 was located in the courtyard to the rear of 153 Borough High Street adjacent to the eastern party wall with 71 Newcomen Street. This trial hole provided the first indication of the types and date of the early masonry structures located below the party wall which were later more fully investigated in Test Pit 1. Red brick foundations were evident below the modern party wall. These lay above what appeared to be a stone wall which was evident c. 1.00m below slab level. The stone wall was supported by a wider chalk foundation that lay at 1.30m below slab level and continued to at least 1.80m, the full depth of the trial hole. The chalk foundation can be equated with foundation [26] which was found at a similar depth slightly further to north in Test Pit 1.
- 8.7 Borehole 1 was drilled in the centre of the small courtyard to the rear of 153 Borough High Street. A horizon of possible brickearth mixed with a grey brown alluvial silt was evident 3.50m below slab level. This material may obviously indicate the presence of a tidal channel. A waterlogged sand deposit which showed no sign of human intervention was recorded at 4.00m below slab level.

- 8.8 Borehole 2 was located within the standing building in 157 Borough High Street, toward the street frontage. The results were somewhat at odds with some of the other findings from Trenches 2 and 3 as there seemed to be little variation in the deposits to a depth of c. 4m below slab level. These seemed to consist of a loose rubble backfill. However, below these lay a mix of dark to mid grey mixture of silt, sand and clay which contained Roman pottery. This deposit transitioned into mid grey laminated alluvial deposit which contained fragments of wood and organic lenses. The grey alluvial deposit transitioned into yellowish brown clay laminated with fine sand. This sequence extended to 5.20m below slab level, or -1.19m OD, where a possible natural alluvial deposit was evident. No sand and gravel was evident, as might be expected, but London clay was also notably absent from this sequence.
- 8.9 In addition to the boreholes which formed part of geotechnical investigation two hand auger holes were sunk in the base of Trench 3 from the level at which hand excavation ceased due to concerns regarding the safety of continued excavation. The auger hole located in the west end of the trench was not entirely successful as it encountered waterlogged loose sand which could not be extracted. However, the sequence recorded in the east end of the trench was more instructive. The upper part of the sequence consisted of material identical to layer [149], the level from which the auger hole was initiated. This continued for 0.60m below the start point and ceased at -0.17m OD. Below this lay a compact yellow and orange deposit consisting of silty clay laminated with sand which contained fragments of oyster shell. This deposit continued to a depth of -1.17m OD. Below this was a soft yellow mix of fine sand and silt. No signs of human activity, such as pottery or charcoal, were evident within this deposit which may represent a natural alluvial layer deposited prior to the Roman occupation of the area. This layer extended to the base of the auger hole at -1.67m OD.

9 Conclusions

- 9.1 The results of the evaluation demonstrate that a prime archaeological resource is located within the footprint of the site. This consists of a highly complex sequence dating from the post-medieval to early Roman periods; though the earliest Roman levels could not be fully investigated due to their depth below modern ground level, a minimum of 5m below ground level. It is currently not known what the final basement design and construction methodology will be and therefore what its impact on the deeper archaeological deposits will be.
- 9.2 Post-medieval structures were well represented in the documented remains. Red brick walls that date to the 16th or 17th centuries were evident in Trench 2 and Geotechnical Pit 2. In Trench 2 the wall survived to a height 0.94m below ground level in 153 Borough High Street, the brickwork seen below the party wall in Geotechnical Pit 2 was apparent at modern slab level. Archeologically significant brickwork was apparent at slab level in Test Pit 1, located on the eastern periphery of 153 Borough High Street below the party wall.
- 9.3 Chalk and stone walls formed a prominent element in the early post-medieval remains. All four archaeological trial trenches, which extended from 153 Borough High Street in the north to 159 Borough High Street in the south, contained foundations dating to this period. Some of these are located little more than 0.50m below slab level. The presence and frequency of these structures suggests that the site was densely occupied by 16th century and that any remaining areas of open ground were probably built over in this period. Given that all four trial trenches uncovered structures dated to this period it should be assumed that more foundations will be preserved wherever the relevant levels have not removed by later impacts.
- 9.4 Although no structures that can be definitely assigned to the medieval period were documented this was in part due to occurrence of later truncations which had removed stratigraphy associated with chalk or stone walls or the fact that some areas could not be excavated. A robber trench recorded in Trench 2 in 157 Borough High Street might represent a robbed out medieval wall. Medieval structures might be expected to cluster around the street frontage which was largely unexplored during the evaluation. Areas to the rear of the frontage are more likely to have remained open ground into the medieval period and the presence of intercutting pits dated to this period in Trench 2 confirms that some areas of the site were backyard lots in the 13th to 14th centuries.
- 9.5 Medieval developments across the site marked the re-urbanisation of south Southwark following the centuries of abandonment that followed the decline of the Roman administration in Britain. One feature that might date to early medieval was the north-south aligned ditch recorded in Trench 3. Although this feature did not contain any post-Roman finds it did truncate a horizon dated to the second half of the fourth century and is therefore, at the very earliest, very late

- Roman. The presence and nature of this feature is of intrinsic interest regardless of its date as it appears to reflect the line of the Roman road in this area even though this is assumed to lie some distance to the west. If this is the case the road was presumably still in use during the period when the ditch was excavated.
- 9.6 The decline in urban life toward the end of the Roman period and subsequent abandonment prior to medieval re-occupation is marked by the substantial 'dark earth' horizon that apparently extended across the entire site as it does over large areas of Southwark and the City. Although few features could be distinguished within this horizon substantial assemblages of late Roman pottery and coins were recovered from it which demonstrate continued occupation of the area into the late 4th century. The Roman 'dark earth' horizon was present in Trenches 2 and 3. The highest level recorded on the top of the 'dark earth' was 2.30m in Trench 2, 157 Borough High Street; it was c. 1.10m thick.
- 9.7 Shallow late Roman pits were recorded in Trench 3. These pits may have been considerably deeper when originally excavated but the tops were possibly obscured during the subsequent formation of 'dark earth' horizons.
- 9.8 Alluvial deposit dating to the 1st and 2nd centuries were recorded in Trenches 2 and 3. Those seen in Trench 2 probably formed part of the same sequence documented in Trench 3 but could not be directly related to them. It was clear from the result of the excavation that the site lay within the tidal margins of the Thames as it extended around the islands that formed the core of Southwark in the Roman period. The existence of a tidal inlet on the eastern side of the south island is well documented and previous excavations at 175-191 Borough High Street have demonstrated how this area was first exploited as a waterfront then rapidly and frequently re-modelled⁹⁸.
- 9.9 The stratigraphic sequence recorded in Trench 3 demonstrated the presence of multiple waterfront structures and though the function of some of these is unclear the post and plank revetments found throughout Southwark were clearly present. Details of the rapid and frequent re-modelling of the waterfront from the late 1st to mid 2nd centuries are given in the preceding Section 8 and will not be discussed here. The development of the waterfront was clearly rapid as the time brackets provided by the abundant pottery proved to be close one compared to another. It was also very complex and would require further excavation of the surrounding area to demonstrate how the succession of timber structures relate to each other.
- 9.10 The complexity of the archaeological sequence seen in Trench 3 was matched by the richness of the finds assemblages contained within the waterfront dumps. The frequency of pottery in particular was unmatched in the experience of the author who has over three decades of fieldwork

⁹⁸ Cowan, C, Seely, F, Wardle A, Westman, A and Wheeler, L 2009 *Roman Southwark Settlement and Economy* MoLA Monograph 42 pp69-73, Figures 5, 49-53

experience in London. Apart from the pottery high quality ceramic building material, animal bone and metal finds were abundant. Analysis of the environmental samples taken from the waterfront sequence has demonstrated that preservation was good and highlighted the presence of metalworking on or near the site.

- 9.11 The earliest levels excavated in Trench 3 during the evaluation date to late 1st to early 2nd centuries but did not form the base of the archaeological sequence which could not be safely accessed. Borehole and auger data suggest that natural alluvial deposits occur c. 5.20m below slab level in the southern half of the site.

10 Notes on Backfilling

- 10.1 As mentioned in various sections of this report the full archaeological sequence was not excavated in any of the trenches opened. Sheets of ply or chipboard were laid in the bases of trenches to provide a physical marker for the limits attained by the evaluation.
- 10.2 Special attention was given to Trench 3 where a considerable section of early Roman stratigraphy had been exposed and recorded but not fully excavated. A substantial linear cut had been excavated in the western periphery of the trench. This feature was backfilled with clearly modern material after plastic sheeting had been placed along the base and sides.



Plate 17 Backfilling of Roman cut feature, Trench 3

- 10.3 Once the cut feature had been backfilled sheets of chipboard were laid that covered the entire length and breadth of the trench. These will hopefully preserve the stratigraphy and postholes exposed and excavated during the course of the evaluation.
- 10.4 The final problem concerning the backfilling of Trench 3 regarded the very large fragments of amphora which were exposed in the western section during the evaluation. These could not be safely removed as they extended beyond the limits of excavation and were clearly parts of a very large vessel. They also effectively formed part of the unexcavated archaeological sequence which lay beyond the limits of the trench. It was decided, after prior consultation with Ms Gillian King of

Southwark Council, that the amphora fragments would be left *in situ* and await full excavation before being retrieved.

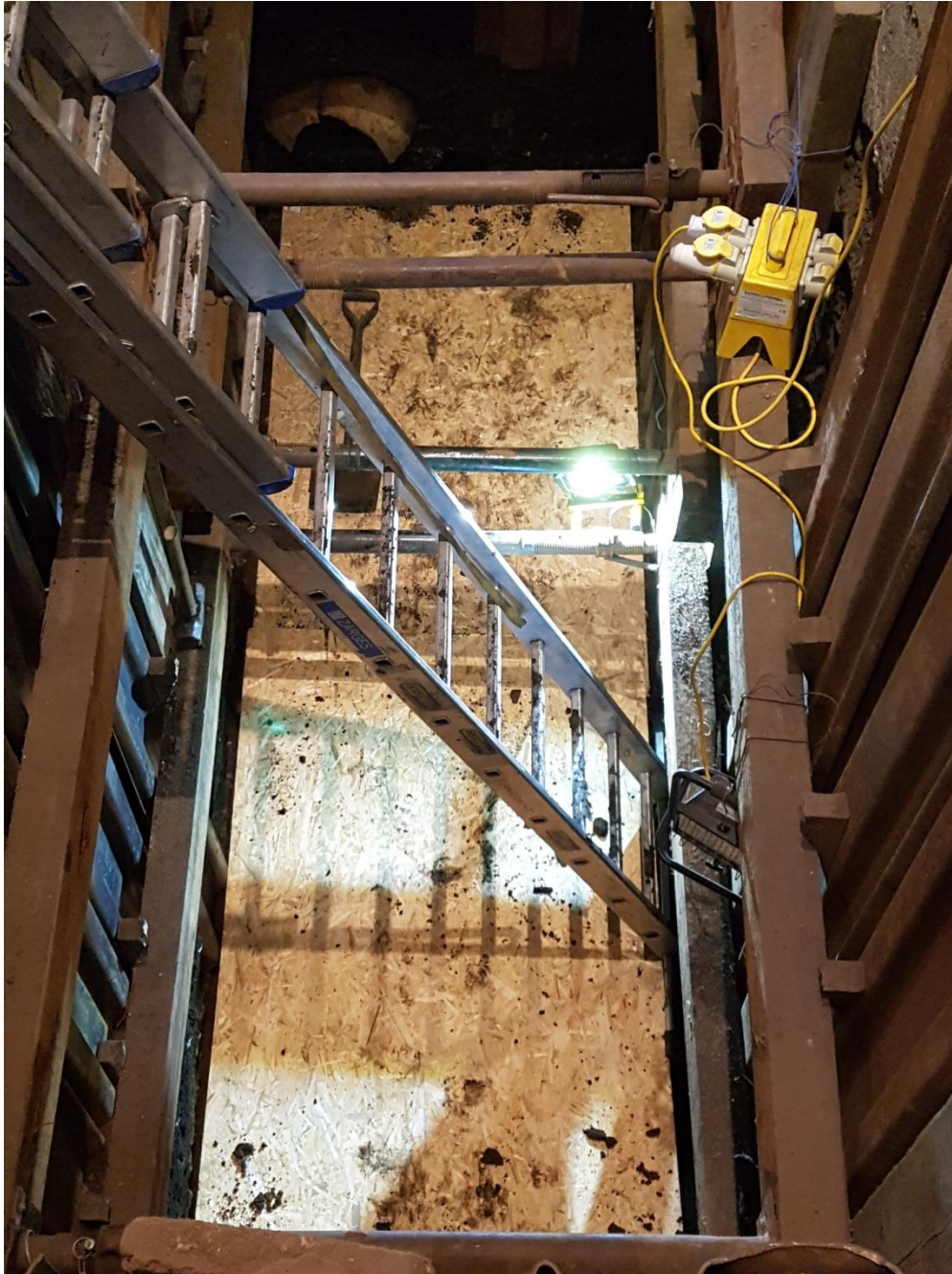


Plate 18 Sheets of chipboard laid in base of Trench 3

- 10.5 Some method of protection was required to ensure the amphora was not damaged during backfilling and to act a marker showing it's presence when the evaluation trench is eventually re-excavated. Following the backfilling of the cut feature below it and the laying of the chipboard panels a hollow timber box was placed around and above the amphora fragments; the box was held in place by steel pegs knocked into the sections and the area below the box around the

amphora carefully backfilled. All subsequent backfilling of this trench was effected by hand and great care taken not to disturb the box.



Plate 19 Timber box placed around amphora fragments and pegged in place

11 Research Review

11.1 Original Research Questions

11.1.1 All research is undertaken within the priorities established in the Museum of London's A Research Framework for London Archaeology, 2002. The general aims and objectives of the evaluation were as follows⁹⁹:

- The aim of the forthcoming archaeological work is to characterise and assess the archaeological resource within the site.
- Insofar as possible within the methodological constraints, the aims and objectives will be to explain any chronological, spatial or functional relationships between the structures/remains identified, and to link the archaeological results with the data already recovered in the wider area.
- To identify different levels of survival and truncation of archaeological deposits across the site.

11.1.2 The following specific research questions were posed in the Written Scheme of Investigation:

- What evidence is there for prehistoric occupation of the site?
- Can the results of the archaeological investigation contribute to our understanding of the ritual Roman landscape of the area, which includes ritual pits previously recorded at Swan Street (Beasley 2006), the Tabard Square temple and ritual landscape (Killock et al 2015)?
- Can the location of the Roman Road 1 be further defined in this location and does its location have any impact on the location of any other human burials away from the burial activity recorded at Southwark Bridge Road, Lant Street (Ridgeway, Leary and Sudds 2013), Great Dover Street and Trinity Street (Killock forthcoming)?
- Following on from the recent archaeological investigations at the Church of St George the Martyr by MoLA, can the results of the investigations further refine the location and/or extent of the east-west 'Borough Channel' thought to run to the south of the site?
- How does the site contribute to our understanding of the shifting settlement towards the bridgehead in the later Roman period?
- What evidence is there for the medieval development of the site? Is there any further evidence of the medieval origins of the coaching inns, ecclesiastical or commercial activity?
- Is there any evidence for the Marshalsea Prison on this site?

⁹⁹ Moore, P 2016

- What evidence is there for the development of the coaching inns on the site during post-medieval period? What other activities dating from the 16th to 19th centuries can be found on the site?

11.2 Research Questions: Evaluation Results Review

11.2.1 The general aims and objectives as set out in the Written Scheme of Investigation have been met by the evaluation of the site.

11.2.2 No evidence was recovered for prehistoric occupation of the site.

11.2.3 The site lies some distance to the north of the Tabard Square and Swan Street sites both of which are located on the 'mainland' of south London. The pottery assemblage contained some vessels which had holes made in them after firing, a practice generally associated with votive deposits. The presence of whole vessels, tazzae and an unguentarium also point to the importance placed on ritual.

11.2.4 No direct evidence was uncovered which demonstrated the line of the road. However, the very late Roman or early medieval ditch recorded in Trench 3 might have been excavated on an alignment that is parallel to the Roman road.

11.2.5 No human burials were recorded during the evaluation.

11.2.6 The Borough Channel, which separated the 'mainland' of south London from the southern island, should lie to the south of the site. However, the large inlet which extends westward from the eastern limit of the south island almost certainly does extend into the site. Alluvial sequences with a complex series of waterfront structures recorded in Trenches 2 and 3.

11.2.7 The apparent shrinking of the occupied area in Southwark toward the bridgehead has long been the subject of debate. There can be no doubt that some areas which had been built on in the early Roman period became open ground as they were used for burial in the 3rd and 4th centuries¹⁰⁰. However, recent excavation combined with the widespread use of metal detectors have demonstrated that a far more complex pattern of settlement existed in late Roman Southwark. The excavations at Tabard Square have shown a strong late Roman presence in the area which continued into the early fifth century¹⁰¹, as have cemetery studies conducted in the same area¹⁰². The late Roman settlement was not simply shrinking toward a small bridgehead in this period. The excavation at 127-143 Borough High Street once again demonstrated how difficult it is to identify late Roman buildings, with the exception of those made from stone. However, the vast majority of

¹⁰⁰ Cowan, C 2003 *Urban development in north-west Roman Southwark: excavations 1974-1990* MoLAS Monograph Series 164

¹⁰¹ Killock *et al* 2015 *Temples and Suburbs Excavations at Tabard Square, Southwark* PCA Monograph 17
Gerrard, J 2011 *New light on the end of Roman London* The Archaeological Journal 168, 181-94

¹⁰² Killock forthcoming

the coins recovered during that excavation date to the 4th century. The nature of the late Roman occupation is poorly understood but the coin evidence alone demonstrates continued occupation of the site¹⁰³. The evaluation at 153-159 Borough High Street mirrored that at 127-143 in this respect. Considerable numbers of late Roman coins were recovered from the 'dark earth' horizons as were late Roman pottery assemblages some of which date to the second half of the 4th century AD.

11.2.8 The medieval period appears to be well represented at 153-159 Borough High Street though unfortunately some of the medieval stratigraphy was removed by groundwork contractors and only recorded in section. However, even given these limitations the results from Trench 2 demonstrate that medieval pitting extended across some areas of the site indicating this area was open ground. Trench 2 was located a little to the east of the modern street frontage; the pitting might represent activity to the rear of what was already a developed streetscape. An early post-medieval robber cut extending east-west across the width of Trench 2 might represent the foundations of a medieval building. Some undated structures such as the chalk and stone walls seen below the party wall at the rear of 153 Borough High Street might date to the late medieval period. None of the medieval remains documented so far can be associated with any particular form of commercial or ecclesiastical activity.

11.2.9 The cartographic and documentary evidence clearly shows the Marshalsea prison to the east of the site. At the time of Rocque's map c. 1746 the street frontage on Borough High Street is fully developed and it appears that these buildings backed on the west end of the buildings that formed the prison perimeter. The earlier layout of the prison is not mapped but it is unlikely that the later boundaries altered significantly whilst the prison was in use. Structures of considerable antiquity, namely walls built variously of chalk, stone and brick, were recorded below the party walls of both 153 and 157 Borough High Street. The presence of these historic foundations demonstrates that the land division adopted along the eastern periphery of the site has remained unchanged for several hundred years. This might indicate the historic western limit of the Marshalsea.

11.2.10 No direct evidence of coaching inns dated to the 16th century or later was uncovered during the evaluation. Although early post-medieval buildings were very well represented and extended across the entire area evaluated very little of the stratigraphy associated with these buildings was investigated as in some case it had been removed by earlier excavations and in others it was not accessible during this phase of works. Although the site was continuously occupied from the late medieval period onwards the nature of this occupation has yet to be fully characterised.

¹⁰³ Killock, 2016

11.3 New Research Questions

- 11.3.1 No features or finds dating to any prehistoric period were recorded during the evaluation. Is this a true reflection of the development of the site?
- 11.3.2 How can the Roman sequence advance our understanding of how this area of the south island developed in the Roman period?
- 11.3.3 Does the waterfront sequence recorded in Trenches 2 and 3 represent the development of the western periphery of the large inlet that extended in to this part of the south island? How do the remains present at the site compare to those recorded to the south and east at 175-191 Borough High Street?
- 11.3.4 Does the metalworking residue recovered from layer [69] represent an isolated occurrence of discarded waste or was metalworking a long-lived local industry in the Roman period?
- 11.3.5 Does the finds assemblage, particularly the pottery, verify that the waterfront was used for direct importation of goods in the early Roman period?
- 11.3.6 If so how do the trade links compare with the evidence for long distance exchange observed at other Roman sites in the vicinity?
- 11.3.7 How does the Roman pottery assemblage compare to those of other excavations at Borough High Street, of Southwark, and of the City?
- 11.3.8 Is there any other artefactual or ecofactual evidence on the site for Roman ritual activity? How do these relate to the pottery assemblages?
- 11.3.9 Does the Roman pottery assemblage reflect on the function and any changes in function of the site over time?
- 11.3.10 What is the nature of the late Roman occupation of the site or is this impossible to establish due to the development of the 'dark earth' horizon.
- 11.3.11 At what date was the site re-occupied in the medieval period? What are the earliest features indicating that urban life had been re-established along the line of the main road?
- 11.3.12 How did the site develop in the medieval period as buildings spread to the east away from the main street frontage?
- 11.3.13 Can the functions of the buildings recorded during the evaluation be demonstrated from the finds assemblages?
- 11.3.14 Can documentary research help establish property boundaries, land use and ownership during the post-medieval period?

11.3.15 How did the site develop in the early post-medieval period? Can the functions of the recorded buildings be established from the associated finds assemblages and documentary data?

11.3.16 What are the activities represented in the archaeological record during the early post-medieval period?

11.3.17 Can the functions of the later post-medieval buildings be established?

11.3.18 Can the analysis of environmental remains demonstrate how the natural environment and food production/consumption altered over the extended arc of time represented in the archaeological record?

12 Acknowledgements

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 - Kate Turner for reporting on the environmental samples
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13 Bibliography

- Barrowman, S 2013 *Archaeological Desk-Based Assessment of 127-143 Borough High Street, London Borough of Southwark, SE1* Unpublished Pre-Construct Archaeology Report
- Beasley, M. 2006 *Roman Boundaries, Roads and Ritual. Excavations at the Old Sorting Office, Swan Street, Southwark* Transactions of the London and Middlesex Archaeological Society 57, 23-68
68
- Bird, J , Graham, A H, Sheldon H L and Townsend, P(Eds) 1978 *Southwark Excavations 1972-4* Joint Publication London and Middlesex Archaeological Society/Surrey Archaeological Society
- Brigham, T 2001 *The Thames and Southwark waterfront in the Roman period* in Watson et al 12-27
- Brigham, T, Goodburn, D, and Tyres, I with Dillon, J 1996 *A Roman timber building on the Southwark waterfront, London* Archaeological Journal 152, 1-72
- Carlin, M, 1996. *Medieval Southwark*
- Cowan, C. 1992 *A possible mansio in Roman Southwark: excavations at 15-23 Southwark Street, 1980-86'* Transactions of the London and Middlesex Archaeological Society, Vol. 43, 3-191
- Cowan, C. 2003 *Urban development in north-west Roman Southwark: excavations 1974-1990* MoLAS Monograph Series 16
- Cowan, C, Seely, F, Wardle A, Westman, A and Wheeler, L 2009 *Roman Southwark Settlement and Economy* MoLA Monograph 42
- Cowie, R and Whytehead, R 1989 *Lundenwic: The archaeological evidence for Middle Saxon London* Antiquity 63 pp706-18
- Cowie, R 2002 *Londinium to Lundenwic: Early and Middle Saxon Archaeology in the London region* in Haynes et al 2002
- Divers, D 2000 *An Archaeological Desk Top Assessment of 127-143 Borough High Street, London Borough of Southwark, SE1* Unpublished Pre-Construct Archaeology Report
- Douglas, A. 2007 *An excavation at 5-27 Long Lane, Southwark, London SE1* Transactions of the London and Middlesex Archaeological Society
- 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

- Gerrard, J 2011 *New light on the end of Roman London* The Archaeological Journal 168, 181-94
- Graham, A 1988 *64-70 Borough High Street, in Hinton, P. (ed.) 1988, 55-66*
- Greenwood, P. & Maloney, C. 1993 *Excavation Round-up 1992: part 3*, in London Archaeologist, Autumn 1993, Vol 7, No 3, pp 104-110
- Haslam, J 2010 *King Alfred and the development of London* in London Archaeologist Vol 12 No 8
- Haynes, I Sheldon, H and Hannigan, L 2000 *London Underground: The Archaeology of a City*
- Hinton, P (ed.), 1988 *Excavations in Southwark 1973-76 and Lambeth 1973-1979* London and Middlesex Archaeological Society and Surrey Archaeological Society, Joint Publication No. 3.
- Hodges, R and Whitehouse, D 1983 *Mohammed, Charlemagne and the origins of Europe*
- Killock, D. forthcoming *Roman cemetery at Trinity St, Southwark* Pre-Construct Archaeology monograph
- Killock, D. 2005 *Roman River bank use and changing water levels at 51-53 Southwark Street, Southwark London* Transactions of the London and Middlesex Archaeological Society 56, 27-44
- Killock, D, Shepherd, J, Gerrard, J, Hayward, K, Rielly, K and Ridgeway, V 2015 *Temples and Suburbs Excavations at Tabard Square, Southwark* PCA Monograph 17
- Killock, D 2016 *Summary Assessment of An Archaeological Excavation at 127-143 Borough High Street, London Borough of Southwark, London SE1 1NP* Unpublished Pre-Construct Archaeology Report
- Kenyon, K.M. 1959 *Excavations in Southwark 1945-47*
- Knight, H 2002 *Aspects of medieval and later Southwark: archaeological excavations (1991-8) for the London Underground Limited Jubilee Line Extension Project* MoLAS Monograph 13
- Milne, G Battarbee, R W Stalker, V & Yule, B 1983 *The river Thames in London in the mid 1st Century AD* Trans London Middlesex Arch Soc 34 p19-30
- Milne G and Goodburn, D 1990 *The Early Medieval Port of London AS 700-1200* Antiquity 64 pp629-636

- MoLAS 2000 *The archaeology of Greater London: An assessment of archaeological evidence for human presence in the area now covered by Greater London*
MoLAS Monograph
- Moore, P 2016 *Land At 153-159 Borough High Street, London, SE1 1HR London Borough Of Southwark Written Scheme Of Investigation For An Archaeological Evaluation & Watching Brief On A Ground Investigation Survey* Unpublished Pre-Construct Archaeology Document
- Pickard, C. 2002 *An Assessment Report of Archaeological Excavations at the New Wolfson Wing, King's College London, London Borough of Southwark, SE1*
Unpublished Pre-Construct Archaeology Limited report
- Proctor, J and Bishop, B
2002 *Prehistoric and environmental development on Horsleydown; excavations at 1-2 Three Oak Lane* Surrey Archaeological Collections Vol 89 1-26
- Reilly, L 1998 *Southwark: An Illustrated History*
- Rendle, W. and Norman
P. 1888 *Inns of Old Southwark*
- Ridgeway, V 1999 *Prehistoric Finds at Hopton Street* London Archaeologist Vol 9 No 3 72-76
- Ridgeway, V, Leary, K
and Sudds, B 2013 *Excavations at 52-56 Lant Street and 56 Southwark Bridge Road, London SE1* PCA Monograph 17
- Sidell, J, Cotton, J,
Rayner, L, and Wheeler,
L 2002 *The Prehistory and Topography of Southwark and Lambeth* MoLAS Monograph 14
- Sheldon, H. 1978 *The 1972-74 excavations: their contributions to Southwark's history* in Bird et al 1978 pp11-53
- Swanton, M (ed and
translated) 1996 *Anglo Saxon Chronicles*
- Taylor-Wilson, R.H.
1990 *Preliminary report on the excavations carried out in advance of the Guy's Hospital Phase III Development, SE1* Unpublished Museum of London, Department of Greater London Archaeology report
- Taylor-Wilson, R.H.
1998 *An Assessment of Archaeological Excavations at Hunt's House, Guy's Hospital, London Borough of Southwark* Unpublished Pre-Construct Archaeology Limited report
- Taylor-Wilson, R. 2002. *Excavations at Hunt's House, Guy's Hospital, London Borough of Southwark.* Pre-Construct Archaeology Limited, Monograph No. 1
- Treveil, P and Burch, M
1999 *Number 1 Poultry and the development of medieval Cheapside* Trans of the London and Middlesex Archaeological Society 50

- Watson, B 2009 *Saxo-Norman Southwark :a review of the archaeological and historical evidence* in London Archaeologist Vol 12 No 6
- Watson, B., Bringham, T. and Dyson, T. 2001 *London Bridge: 2000 years of a river crossing* MoLAS Monograph 8
- Yule, B. 1982 *A third century well group, and the late Roman settlement in Southwark* London Archaeologist, Vol. 4, 243-249

Internet resources:

Southwark Council, 1995. *London Borough of Southwark Unitary Development Plan*.
<http://www.southwark.gov.uk/YourServices/planningandbuildingcontrol/planpolpublications>.

Southwark Council undated, *Southwark Archaeology Policy and Supplementary Planning Guidance* (draft), http://www.southwark.gov.uk/Uploads/FILE_4634.pdf

APPENDIX 1: Oasis Data Entry Form

OASIS ID: preconst1-287904

Project details

Project name	153-159 Borough High Street
Short description of the project	Field evaluation consisting of four small trial trenches up to c. 4.00m deep. The evaluation revealed archaeological remains dated to the post-medieval, medieval and Roman periods. these consisted variously of walls made from brick, chalk and stone, medieval pitting, dark earth horizons and Roman timber waterfront structures
Project dates	Start: 08-12-2016 End: 13-04-2017
Previous/future work	No / Yes
Any associated project reference codes	BHG16 - Sitecode
Type of project	Field evaluation
Site status	Local Authority Designated Archaeological Area
Current Land use	Industry and Commerce 3 - Retailing
Monument type	WALL Post Medieval
Monument type	ROBBER TRENCH Post Medieval
Monument type	PIT Post Medieval
Monument type	PIT Medieval
Monument type	DITCH Uncertain
Monument type	PIT Roman
Monument type	REVETMENT Roman
Monument type	POSTHOLE Roman
Monument type	FLOOR Post Medieval
Significant Finds	POT Post Medieval
Significant Finds	POT Medieval
Significant Finds	POT Roman
Significant Finds	BRICK Post Medieval
Significant Finds	TILE Medieval
Significant Finds	TILE Roman
Significant Finds	COIN Roman
Significant Finds	RING Roman
Significant Finds	BRACELET Roman
Methods & techniques	"Test Pits"
Development type	Urban commercial (e.g. offices, shops, banks, etc.)
Prompt	National Planning Policy Framework - NPPF

Position in the planning process After full determination (eg. As a condition)

Project location

Country England
 Site location GREATER LONDON SOUTHWARK SOUTHWARK 153-159 Borough High Street
 Postcode SE1 1HR
 Study area 394.15 Square metres
 Site coordinates TQ 3254 7995 51.502424742143 -0.09018710214 51 30 08 N 000 05 24 W Point

Project creators

Name of Organisation Pre-Construct Archaeology Limited
 Project brief originator Southwark Council
 Project design originator Peter Moore
 Project director/manager Peter Moore
 Project supervisor Douglas Killock
 Type of sponsor/funding body Developer
 Name of sponsor/funding body RAYKOR JNJ LTD

Project archives

Physical Archive recipient LAARC
 Physical Contents "Animal Bones", "Ceramics", "Environmental", "Glass", "Industrial", "Leather", "Metal"
 Digital Archive recipient LAARC
 Digital Archive ID BHG16
 Digital Media available "Images raster / digital photography", "Survey", "Text"
 Paper Archive recipient LAARC
 Paper Archive ID BHG16
 Paper Media available "Context sheet", "Matrices", "Plan", "Report", "Section", "Survey", "Unpublished Text"

Project bibliography 1

Publication type Grey literature (unpublished document/manuscript)

Title	An Archaeological Evaluation and Geotechnical Watching Brief at 153-159 Borough High Street, London Borough of Southwark, London SE1 1HR
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APPENDIX 2: Romano-British Pottery Report

By Eniko Hudak

The evaluation at 153-159 Borough High Street, Southwark (BHG16) produced a very large assemblage of 24 MOLA archive boxes of Romano-British pottery. The assemblage was subjected to a rapid assessment including spotdating the results of which are shown in Table 1 below. The assemblage was recovered from 57 individually numbered contexts. Individual context assemblages ranged between single sherds to several boxes, and contained minute fragments to large amphora sherds, and complete and semi-complete vessels. There also seems to be a large amount of amphorae fragments, a wide variety of drinking vessels, and a range of vessels linked to the preparation as well as serving of foodstuffs showing signs of burning, limescale, and heavy usage.

There is a range of Romano-British and imported fabrics represented in the assemblage dating to both the early and late Roman period, all of which are well attested in Southwark and London pottery assemblages. There is a variety of late 1st and early 2nd century pottery including Verulamium region (VRW, VCWS), Highgate Wood (HWC), and Alice Holt products (AHSU), and North Kent Shell tempered wares (NKSH). Forms include a range of jars, flagons, flasks, beakers (including a complete example of HWC 3E), bowls, and mortaria (even a rare shell-tempered example), as well as a considerable amount of tazze, and a semi-complete but fragmented unguentarium. The presence of these forms as well as freshly broken vessels, complete vessels, and post-firing holes could indicate the presence of some form of ritual activity on the site.

There is a fair amount of Black-Burnished Wares (BB1, BB2, BBS) dated to after AD120 in forms of 2F everted rim jars, 4H triangular-rim and 4M flanged bowls and 5J plain dishes with lattice decoration. Late Roman fabrics are also well represented and include a variety of the Oxfordshire products (OXWW, OXRC, OXWC), some Nene Valley beakers and flanged bowls (NVCC), Portchester D ware (PORD), as well as the late Alice Holt wares (AHFA) in 2F and 2W jars with combed decoration and 4M flanged bowls.

There is also a variety of Terra Sigillata forms represented, mainly from the Central Gaulish potteries, including many cups and dishes bearing maker's marks. There are several highly decorated fragments, near complete cups, and about half of a Curle 21 type mortarium with the interior slip completely worn away indicating that the vessel was well used.

There are also some sherds with post-firing graffiti, including a Baetican Dressel 20 type olive oil amphora rim with the graffiti 'VIISIIIIII', which is likely to mean '7 ½ (modii)' referring to the volume of the contents of the vessel (R. Tomlin pers.comm.).

Overall, the assemblage is of great interest and of importance, and at first glance compares well to the assemblage of the nearby excavation at 127-143 Borough High Street (BOH13, Hudak 2016). Due to the

size and the nature to the assemblage and the site's proximity to Lant Street (Ridgeway et al. 2013), Swan Street (Beasley 2007), and Tabard Square (Killock 2015), it is highly recommended to study this material in more detail and produce a complete catalogue together with the excavation material at a later stage of the work.

Context	Size	Spotdate	Notes
+		-	
1	S	AD270-400	
2	S	AD270-300	
3	M	AD270-300	
4	M	AD250-275	
5	S	AD250-400	
8	M	AD120-160	
9	S	AD50-130	
10	S	AD50-160	
12	M	AD250-300	
13	M	AD350-400	
14	M	AD270-300	
17	S	AD120-250	
18	M	AD270-300	
19	L	AD250-275	
20	S	AD250-300	
21	M/L	AD270-300	
22	S	AD120-160	
34	M/L	AD270-300	
36	M	AD120-140/150	
38	S	AD250-400	
40	M	AD120-200	
41	VL	AD250-275	
43	S	AD70-160	
45	M	AD120-130	
51	S	AD70-160	
53	S	AD70-160	
55	S	AD120-160	
57	S	AD120-250	
59	S	AD120-250	
61	S	AD120-160	
63	S	AD70-160	
65	S	AD120-160	
67	S	AD120-160	
69	VL	AD150-160	

70	S	AD120-150	
72	S	AD120-160	
74	S	AD120-160	
76	VL	AD120-130	
91	S	AD50-400	single sherd
94	S	AD50-160	single sherd
106	S	AD70-140	
108	S	AD120-250	single sherd
112	S	AD70-200	single sherd
114	M/L	AD120-150	
125	S	AD50-160	
126	L	AD120-130	
127	M	AD70-160	
132	S	AD70-160	
134	M	AD250-400	
140	S	AD50-160	
142	L	AD120-150	
143	L	AD120-150	
144	S	AD50-160	
146	M/L	AD120-150	
149	S	AD50-100/120	
150	M	AD70-160	
152	S	AD50-250	single sherd

Table 1 – Spotdates

Bibliography

Beasley, M. (2007) 'Roman Boundaries, Roads and Ritual: Excavations at the Old Sorting Office, Swan Street, Southwark', Transactions of the London and Middlesex Archaeological Society Volume 57: 23-68.

Hudak, E. (2016) 'Interim Report on the Romano-British Pottery' in Killock, D. A Summary Assessment of an Archaeological Excavation at 127-143 Borough High Street, London Borough of Southwark, London SE1 1NP, unpublished Pre-Construct Archaeology Ltd. Post-Excavation assessment report

Killock, D. (2015) Temples and Suburbs: Excavations at Tabard Square, Southwark, Pre-Construct Archaeology Limited Monograph No. 18

Ridgeway, V., Leary, K. And Sudds, B. (2013) Excavations at 52-56 Lant Street and 56 Southwark Bridge Road, London SE1, Pre-Construct Archaeology Limited Monograph No. 17

APPENDIX 3: Post-Roman Pottery Report

By Chris Jarrett

Introduction

A small sized assemblage of pottery was recovered from the site (four boxes). The pottery dates to the medieval and post-medieval periods. Very little of the pottery demonstrates evidence for abrasion, although residual pottery was observed in the assemblage and resultant from deep stratigraphy and intercutting features. However, it appears that most of the ceramics were deposited soon after breakage. The assemblage comprises sherd material, although vessels with complete profiles were notable amongst the 19th-20th century dated ceramics. The pottery was quantified only by sherd count (SC) and the sizes of the groups of pottery are nearly all small (fewer than 30 sherds), except for one large group (30–100 sherds). The assemblage was recovered from thirteen contexts.

In total the assemblage consists of 123 sherds (of which nine sherds are unstratified). The assemblage was examined macroscopically and microscopically using a binocular microscope (x20), and entered into a database format. The classification of the pottery types follows the Museum of London Archaeology (2014) typology (form and fabric series). The pottery is discussed as a spot dating table.

Spot dating table

Context	No. of Sherds	Fabrics (and forms)	Context considered date
Unstratified	9	BONE (sauce boat), BONE PNTD (saucer candlestick, saucer), CONP (figurines), TPW3 (plate), TPW 3 (drainer), TPW4 (saucer)	
[27]	40	CBW LGR, BONE (tea cup), BONE PNTD (saucer candlestick, saucer), REFW (vase)m REFW CHROM (squat cylindrical jar), TPW (pedestal bowl, chamber pot, dinner plate, tea cups, tureen), TPW 3 (tureen lid), TPW 4 (chamber pot, large plates, saucers), WHST (rounded bowl), YELL (food mixing bowl)	Mid-late 19th century
[28]	20	BONE PNTD (bowl), BORDG (bowl or dish), BORDG CHP2, CBW BIF, PMRE (cauldron, jug), PMSRG (bowl or dish), PMSRY (bowl or dish), RAER (drinking jug), TGW (chamber pot), WEST (jug)	Late 19th century/early 20th century
[77]	1	YELL SLIP (water closet)	1820–1900+
[84]	3	KING HD (jug), LOND (jug)	1240–1300
[90]	3	KING (jug, cooking pot), SHER (cooking pot)	1240–1350
[115]	1	ENGS BRST (bottle or jar)	1830–1900
[123]	4	CBW (unidentified), KING HD (jug), PMRE (unidentified), PMR (jar or pipkin)	1580–1900
[130]	1	CBW (jug)	1270–1500
[152]	7	ENGS (rounded jug), REFW (chamber pot), REFW CHROM (rounded bowl), TPW (soup plate), TPW4 (deep rounded bowl, drainer, saucer), TPW6 (chamber pot)	Late 19th century/early 20th century

[153]	10	REFW (unidentified), SUND (deep rounded bowl), TPW FLOW (ewer), TPW4 (large plate, tureen lid), TPW6 (chamber pot)	Late 19th century
[156]	1	RBOR (chamber pot, type 2, flat-topped rim)	1650–1750
[157]	10	BONE PNTD (tea cups), REFW PNTD (unidentified), TPW2 (dinner plate), TPW4 (tea cup), TPW6 (chamber pot)	Late 19th century/early 20th century
[158]	13	MISC (butter pot), MPUR (butter pot), MORAN (butter pot), TGW (albarello)	Late 17th-mid 18th century

Table 1. BHG16. Pottery spot dating table showing for each context that contained pottery the number of sherds, the pottery types and forms present and a context considered (spot) date for the deposition of the material.

Significance, potential of the collection and recommendations for further work

The assemblage of post-Roman pottery recovered from BHG16 is of significance at a local level. All of the medieval and post-medieval pottery types are as those types typically found in Southwark, the City and the London area. The medieval pottery is of significance for demonstrating the development of Borough High Street and determining what activities were taking place during that period on the study area. The post-medieval pottery mostly dates to the late 19th-early 20th century and may be contemporaneous with the occupancy of one of the properties in 1882 (then numbered 153 Borough High Street) by a china dealer (Charles Saunders) (Kelly 1882, 193). Some of the assemblage may indeed be broken items of Charles Saunders's shop stock. However it is also quite possible that some of the earlier post-Roman ceramics relate to inns that were frequently located along Borough High Street. Other local comparable assemblages have been recovered from the Thameslink project (Jarrett and Cotter in prep), the Wolfson Wing (BHB00: Jarrett 2002), 127-143 Borough High Street (BOH13: Jarrett 2016) and Tabard Square (LSS02: Sudds and Jarrett 2009).

The pottery has the potential to date the features in which it was found and to provide a sequence for them. The pottery also has the potential to demonstrate what activities were occurring on the study area.

There are no recommendations for further work on the assemblage at this stage; although the material should be reviewed as to its importance should further archaeological work on the site produce more post-Roman pottery.

References

Jarrett, C. 2002. The medieval and post-medieval pottery in Pickard, C. An assessment of archaeological excavations at the new Wolfson Wing, King's College London, London Borough of Southwark, SE 1, PCA unpublished document.

- Jarrett, C. 2016. 'Post-Roman Pottery Report (Selected Contexts: BOH 13)', in. D. Killock, Summary Assessment of An Archaeological Excavation at 127-143 Borough High Street, London Borough of Southwark, London SE1 1NP. Pre-Construct Archaeology Ltd
- Jarrett, C and Cotter, J. in prep 'The post-Roman pottery', in. S. Teague and A., Fairman. Thameslink Excavation, Post-Roman. Oxford Archaeology and Pre-Construct Archaeology Monograph.
- Kelly, F. 1882. *Post Office London Directory, 1882. [Part 1: Official & Street Directories]. Kelly: London.*
- MOLA, 2014. Medieval and post-medieval pottery codes. Accessed May 8th, 2017.
<<http://www.mola.org.uk/resources/medieval-and-post-medieval-pottery-codes>>.
- Sudds, B. and Jarrett, C. 2009, 'Post Roman Pottery' in: D. Killock, Tabard Square, 34-70 Long Lane & 31-47 Tabard Street, London SE1, London Borough of Southwark. Excavation. Pre-Construct Archaeology Ltd unpublished report.

APPENDIX 4: Ceramic Building Material Report

By Kevin Hayward

Introduction and methodology

The purpose of this sizeable building material review from an evaluation at 153-159 Borough High Street BHG16 was twofold.

First, to establish, based on building material fabric, form, size and mortar type, the dating of many key contexts (see distribution below).

A second objective was to review its potential for further work. This was a sizeable (15 crates) building material assemblage that was rapidly scanned with items of artistic merit or form, highlighted and scanned.

Distribution

Context	Fabric	Form	Size	Date range of material		Latest dated material		Spot date	Spot date with mortar
1	2452; 2459a; 3006; 2454; 3023; 3013; 3022; 3102; 3015	Mixed broken up Roman dump mainly early sandy tile fragments, some imbrex and tegulae, rare broken brick, daub box flue tile Eccles, Radlett, and late Calcareous fabrics represented; Kentish ragstone rubble	35	1500 bc	1600	1500bc	1600	180-350+	No mortar
13	2452; 2459a; 3006; 3009; 3023; 3054; 2453; 3100; 3123R; 3105	Roman larger brick fragments mainly sandy Roman early, Also Hampshire Grog, some imbrex, rare tegulae Rare late calcareous, Hartfield, Radlett NO ECCLES; White Wall Plaster with opus signinum backing; German lavastone millstone and ragstone rubble	39	50	300	140	300	140-300+	No mortar
14	2452; 2459a; 3006; 3004; 3023; 2454; 3105; 3111	Roman large group of burnt brick in Sandy and Hampshire Grog as above, Heavily vitrified and warped tegulae occasional	54	50	160	50	160	70-160+	No mortar

Context	Fabric	Form	Size	Date range of material	Latest dated material	Spot date	Spot date with mortar		
		Radlett, and Eccles, rare imbrex one combed box flue tile – large group of Carrstone and Kentish ragstone rubble							
82	2271; 2274; 2586nr2271; 2587; 3013; 2452; 2457; 3013	Half assemblage medieval peg tile, late Roman calcareous tile rare early Roman tile	12	55	1800	1240	1450	1240-1450+	No mortar
151	3033	Thick, wide red unfrogged brick, dimensions more in accordance with Stuart red bricks, bonded in pale cream grey mortar with chalk lumps of a type seen at 17 th century Stoney Street brick/stone basement (Thameslink)	2	1450	1700	1450	1700	1550-1700	1600-1700
156	3032	Sizeable well-made post great fire bricks unfrogged bonded in a soft clinker grey mortar with large charcoal lumps	2	1664	1900	1664	1900	1700-1900	1750-1850

Review

A considerable proportion (90-95% by number and weight) of the assemblage was dominated by Roman ceramic building material mostly in a fragmentary condition. Inevitably this large group of material swamped some of the later medieval and post medieval layers, making spot dating difficult. However, small groups of medieval peg tile were encountered from the backfill [82] of a Robber Trench. Seventeenth century brick walls were encountered at [151], comparable by form and mortar type to the cellar walls from the Wheatsheaf site at Stoney Street, elsewhere in Southwark (Hayward 2013). A later floor [156] is dateable from the mid 18th to mid 19th century.

Large dumps of Roman tile, brick and stone are a theme encountered again and again in Southwark (Hayward 2013; Pringle 2009).

Amongst this large dumped assemblage at 153-159 Borough High Street are several items of interest or artistic merit that are indicative of high status heated building(s) in the vicinity

- Part of a white hard chalk mosaic containing 27 design tesserae from [34]

- Items of plain white wall plaster with opus signinum backing from [13] [41] [142] [143]
- Purbeck marble cornice from [12]
- Purbeck marble block from [21]
- Part of a lavastone quern or even millstone from [13]
- Tufa fragments [12] [143]
- Two sizeable fragments of roller stamped box flue – both in a chevron design (Betts & Black 1997) made from the Hampshire Grog Fabric 3054 (AD70-140) [146]
- Part of an extremely thick (80mm) sesquipedalis or pedalis brick [142] used a capping tile for a hypocaust.
- Large groups of Roman ragstone rubblestone and red Carrstone suggesting proximity of a masonry building in the vicinity

Recommendations

Other than the use of the Roman, medieval and post medieval building material in helping to establish the sequence of walls, dumps and dark earth layers, there is considerable potential for further excavation based on the number of high status items of Roman stonework and tile. Stone mosaic, Purbeck marble cornices, painted wall plaster, tufa for vaulting and some excellently preserved roller stamped boxed flue tile all point to the proximity of at least one high status late first to early second century heated private or public building in the vicinity. Large chunks of sesquipedalis bricks, ragstone rubble suggest that this cannot have been very far away at all.

Bibliography

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

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

Appendix 5: Clay Tobacco Pipe Assessment

By Chris Jarrett

Introduction

A small sized assemblage of clay tobacco pipes (one bag) was recovered from the archaeological work. Most fragments are in a good condition, indicating that they had been deposited soon after breakage. The clay tobacco pipes were recovered from a single context as a small (under 30 fragments) sized group.

All of the clay tobacco pipes (five fragments) were recorded in a database format and classified by Atkinson and Oswald's (1969) typology (AO); 18th-century examples are by Oswald's (1975) typology and prefixed OS and were quantified by fragment count.

Spot dating table

Table 1. BHG16. Pottery spot dating table showing for each context that contained pottery the number of sherds, the pottery types and forms present and a context considered (spot) date for the deposition of the material.

Context	No. of bowls/fragments	Bowl type (makers) and other parts	Context considered date
[158]	5	x1 OS10, 1700–40, (L B), x1 mid 18th-19th century dated bowl with its heel or spur missing, x3 stems: x1 thick, fine bore, x1 medium, medium bore. X1 thin, fine	Mid 18th-19th century

Table 1. BHG16: clay tobacco pipe spot dating showing the number of fragments, the range of bowl types and the maker marks if present, besides a considered deposition (spot) date.

Significance, potential of the collection and recommendations for further work

The clay tobacco pipes have little significance at a local level as they occur in a largely fragmentary state and without much meaning. The material does have some potential to date the context it was recovered from. There are no recommendations for further work on the assemblage,

References

- Atkinson, D. and Oswald, A. 1969. London clay tobacco pipes. *Journal of British Archaeological Association*. Series 3 Volume 32, p. 171-227.
- Oswald, A. 1975. *Clay pipes for the archaeologist*, British Archaeological Reports British series, 14.

APPENDIX 6: Glass Report

By Chris Jarrett

Introduction

A small sized assemblage of glass was recovered from the site (one box). The glass dates from the Roman and post-medieval periods. The glass is on the whole fragmentary (although four vessels are intact). None of the material demonstrates evidence of abrasion and appears to have been deposited under secondary and tertiary conditions, while some of the material was deposited fairly rapidly after breakage. The Roman and post-medieval soda glass fragments often show evidence of weathering and resultant from the burial conditions. The material was quantified by the number of fragments and was recovered from fifteen contexts and individual deposits produced only small (fewer than 30 shards) sized groups. All of the glass (52 fragments, of which two fragments are unstratified) was recorded in a database format. The assemblage is discussed as a spot dating table.

Spot dating Table

Context	No. of Sherds	Period, forms: (product manufacturer)	Context considered date
Unstratified	2	Roman: square section vessel glass; post-medieval: intact Cylindrical bottle (Atlas, Dalston,)	
[5]	1	Post-medieval: window pane	Post-medieval
[8]	1	Undated: external slag coating of either a furnace or a crucible	Undated
[9]	1	Roman: square section vessel glass	Roman
[12]	21	Post-medieval: window pane	Post-medieval
[13]	1	Roman: squat rounded jar	Roman
[21]	2	Roman: vessel glass	Roman
[27]	4	Post-medieval: flat octagonal section pharmaceutical bottle, ?electric light stand, oil lamp,	End of 19th-early20th century
[28]	1	Post-medieval: wine glass	19th-20th century
[38]	1	Roman: optically ?beaker or jar	Roman
[45]	4	Post-medieval: vessel glass	17th-19th century
[69]	3	Roman: square section vessel glass; vessel glass, post-medieval: vessel glass (?intrusive)	Roman
[76]	4	Post-medieval: cylindrical and oval section bottles	Mid-late 19th century
[100]	1	Roman: square section vessel glass	Roman
[126]	1	Post-medieval: vessel glass	19th century
[157]	3	Post-medieval: x2 cylindrical bottles (Atlas, Dalston, with hardened rubber screw thread stopper), shouldered cylindrical bottle (Saxlehners Bitterquelle Hunyadi Janos Bitters). Additionally a hardened rubber chisel stopper moulded with the name 'WHITE LTD'	20th century
[158]1	1	Post-medieval: cylindrical phial	18th-19th century

Table 1. BHG16: Spot dating the glass showing for each context it occurs in the number of fragments, the date of the forms and where applicable, the manufacturers of the contents, besides a considered deposition (spot) date

Significance and potential of the assemblage and recommendations for further work

The glass has significance at a local level. Both the Roman and post-medieval glass indicate occupation of the site during these periods and adds to an understanding of the material culture and the activities of the occupants of the site. Indeed, the Atlas soda and the Hunyadi Janos Bitters bottles recovered from context [157] may relate to the premises at 151 Borough High Street of Robert Henry Turner, who was a confectioner in 1882 and later additionally listed as a bakery in 1915 (Kelly 1882; Kelly 1915).

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

The glass has the potential to date the features it occurs in and inform upon activities associated with it.

At this stage there are no recommendations for further work, although its importance should be reviewed if new material is recovered from future archaeological work on the site.

References

- Cool, H. E. M. 2002. Roman glass. In, Pickard, C. An assessment of archaeological excavations at the new Wolfson Wing, King's College London, London Borough of Southwark, SE 1, PCA unpublished document
- Kelly, 1915. *Post Office London Directory, 1915. [Part 2: Street Directory]*. Kelly: London.
- Kelly, F. 1882. *Post Office London Directory, 1882. [Part 1: Official & Street Directories]*. Kelly: London
- Scott, I. R. 2014. Glass; Scheme-wide Assessment, in J. Taylor, Thameslink Archaeological Assessment: Updated Project Design - Archaeological Assessments 1, 2, 3, 4, 5, 6, 7 & 9. Oxford Archaeology, Pre-Construct Archaeology Ltd unpublished document
- Shepherd, J. 2009, Glass. In, D. Killock, Tabard Square, 34-70 Long Lane & 31-47 Tabard Street, London Se1, London Borough Of Southwark. Excavation. Pre-Construct Archaeology Ltd unpublished report
- Willmott, H. 2002. Medieval and post-medieval glass. In, Pickard, C. An assessment of archaeological excavations at the new Wolfson Wing, King's College London, London Borough of Southwark, SE 1, PCA unpublished document

Appendix 7: Small Finds Report

By Chris Faine

Introduction

Sixty objects that can be termed 'small finds' were recovered from the evaluation. The purpose of this statement is to characterise the assemblage prior to full analysis. Finds were scanned with reference to standard catalogues (Crummy 1983, Manning 1985), and considered by material category (see table 1). No conservation and/or x-raying was carried out so identification of iron objects was largely not possible. The majority of items come from Roman contexts (after ceramic analysis).

The Assemblage

Bone items consist of Roman pin fragments, including a single intact example (SF 50) from context [69]. This is a "Crummy type 2" dating from the 1st century AD. Only one other object of skeletal material was recovered in the form of an ivory handled iron knife (SF 61) of Post-Medieval date from context [158].

Lead artefacts consist largely of waste and fittings of indeterminate function. A cast weight (SF 59) was recovered from context [146] along with a perforated disc (SF 57), from context [127].

The copper alloy assemblage contains the largest number of identifiable objects. Two demonstratively Post-Medieval objects were recovered on the form a copper ally spoon from context [153], and fragment of frame from context [28]. Roman dress accessories consisted of a shouldered finger ring (SF 34, context [45]) most likely of 3rd Century date, and a possible Later Roman bracelet fragments from context [75] (SF 42). A possible Roman pin fragment was recovered from context [19] (SF 23). Context [19] also contained a Roman furniture fitting (SF 22). Four mounts/fittings were recovered including 2 possible Roman armour fittings from contexts [4] & [8], and a mount from context [76] (SF 41).

The remainder of the copper alloy assemblage consists of objects of indeterminate date, including a pin fragment from context [4] (SF 10), and portion of lining from context [28].

As mentioned above due to the lack of X-Rays few identifiable iron objects were observed, with the assemblage largely consisting of nails and larger fragments. A single Medieval horseshoe and patten were recovered from contexts [28] & [36] respectively.

Three glass tesserae were also recovered, all from context [143]. SF's 52 & 55 are of green frit, with SF 53 being a blue glass example. Two Kimmeridge shale objects were also recovered. SF 39 (context [69]) is fragment of tray, with SF 25 (context 19) being the base of a wheel turned plate. Shale trays are commonly found (notably in Southern Britain), with an example being found at Colchester (Crummy, 1983). Turned plates have been found in Thetford, (Johns & Potter, 1983) and Winchester (Cunliffe,

1964), and are often marked with personal names. Two leather fragments from contexts [114] & [146] were also recovered.

Discussion

As mentioned above the cursory nature of the assessment precludes any concrete observations being made. The assemblage shows all of the common finds categories of Roman small finds recovered archaeologically (dress accessories, fittings and waste materials) and most likely represents general settlement activity. Finds types are similar to those from nearby sites (Ridgeway et al, 2013 & Fairman, 2016). Conservation of all indicated finds is recommended.

References

- Crummy, N. 1983 *The Roman Small Finds from excavations in Colchester 1971-9*. Colchester, Colchester Archaeological Report 2
- Cunliffe, B 1964 *Winchester Excavations 1949-1960*. Winchester
- Fairman, A. 2016. *An archaeological evaluation at the proposed science gallery, Boland house, Guy's campus, London borough of Southwark*. PCA Report No. R12573
- Johns, C. 1996. *The Jewellery of Roman Britain*
- Johns, C and Potter, T 1983 *The Thetford treasure. Roman jewellery and silver*. London
- Ridgeway, V., K. Leary & B. Sudds. 2013. *Roman Burials in Southwark. Excavations at 52-56 Lant St & 56 London Bridge Road*. PCA Monograph 17.

APPENDIX 9: Roman Coin Report

By Chris Faine

Introduction/Methodology

Twenty five Roman coins were recovered from the evaluation. Coins were catalogued using criteria set out by English Heritage (Brickstock 2004), with identifications (where possible) being made using *Roman Imperial Coinage* and *Late Roman Bronze Coinage*.

The Assemblage

Nine coins were completely illegible, with reverse legends only surviving on 3 coins. The best preserved (SF 5 [3]), is a *Securitas Reipublicae* issue of the house of Valentinian dating from 367-375 AD, minted in Aquileia. The remaining two are both *Gloria Excercitus* types of the house of Constantine. SF 2 [3] is a “1 standard” type dating from 335-341 AD, with SF 11 [4] being a “2 standard” type dating from 330-335 AD. A further 5 coins, although illegible, are most likely of late 3rd/4th century date. These are SF’s 6, 7 & 9 [4], SF 13 [12] & SF 24 [19]. The latter is most likely a copy. Earlier issues are limited to a sestertius of Titus (79-81 AD), from context 149 (SF 60), along with number of illegible but clearly 1st/2nd century coins. These are SF’s 12 [8], 32 [36], 38 [69], 46 [127] & 58 [146].

Discussions & Recommendations

Given the small sample size it is difficult to place the assemblage within its wider context. Although small, the coin assemblage suggests activity concentrated in the 4th Century, with a number of 1st century issues also being recovered. All identifiable issues are commonly occurring types. Although many of the obverse portraits/inscriptions are illegible cleaning would aid in their exact identification, therefore conservation is recommended on some examples (in particular SF 60).

References

- Brickstock, R. 2004 *The Production, Analysis and Standardisation of Romano-British Coin Reports*. London, English Heritage
- Reece, R. 1991 *Roman Coins from 140 Sites in Britain*. Cirencester, Cotswold Studies 4
- Reece, R. 1995 ‘Site-finds in Roman Britain’. *Britannia* 26, 179-206

SF No	Context	Date	Mint	Obv	Rev	Notes
1	3	Post-Med		Illegible	Illegible	
2	3	335-341 AD		House of Constantine	GLORIA EXCERCITUS 3	
3	3	C3rd/4th		Illegible	Illegible	
5	3	367-375 AD	.SMAQP.	House of Valentinian	SECURITAS REIPUBLICAE	LRBC 1026-1027
6	4	C3rd/4th		Illegible	Illegible	
7	4	C3rd		Illegible	Illegible	
9	4	C4th		Illegible	Illegible	
11	4	330-335 AD		House of Constantine	GLORIA EXCERCITUS 2	
12	8	C1st/2nd		Illegible	Illegible	
13	12	C3rd/4th		Illegible	Illegible	
16	14	C4th		Illegible	Illegible	
17	14	???		Illegible	Illegible	poss c1/2nd
18	18	???		Illegible	Illegible	
19	18	???		Illegible	Illegible	
20	18	???		Illegible	Illegible	
24	19	C3rd/4th		Illegible	Illegible	Copy
27	19	???		Illegible	Illegible	
28	19	???		Illegible	Illegible	
29	21	???		Illegible	Illegible	
30	21	???		Illegible	Illegible	
31	34	???		Illegible	Illegible	
32	36	C1st		Illegible	Illegible	
38	69	C1st		Illegible	Illegible	
49	127	C1st		Illegible	Illegible	
58	146	C1st		Illegible	Illegible	
60	149	79-81 AD		Titus	Illegible	

Table 1: Roman coin

APPENDIX 9: Animal Bone Report

By Kevin Rielly

Introduction

The site, located at the junction of Borough High Street and Newcomen Street, consisted of three trial trenches and one test pit. These provided evidence for Roman as well as medieval through to Late Post-medieval occupation, essentially consisting of waterfront activities related to various structures during the earlier period and then medieval waste dumps and development fronting onto Borough High Street moving into the post-medieval era. Animal bones were recovered in particular from the Roman horizons, with a lesser though substantial proportion taken from the post-medieval occupation layers and features.

The bones were principally retrieved by hand; however, this process was augmented by a bulk sampling programme. A proportion of these samples have been sieved and sorted, the resulting environmental remains including some notable collections of animal bones, all from Roman deposits.

Methodology

The bone was recorded by context recording the weight and the number of bones, and listing the species identified. Other details noted included the most prevalent species, the presence of specific skeletal part biases and estimated quantities of age and size data (here referring to mandibles with teeth and limb bones with articular ends and then the presence of complete bones and specific limb bone parts with late fusing epiphyses respectively) as well as further information on the more unusual species and age classes. In addition each collection was categorised in terms of its preservation and fragmentation, from poor, moderate to good and high, moderate to low respectively. This information was recorded for both the hand collected and sieved collections, noting, regarding the latter assemblages, the presence and general quantity of small mammals and fish, rather than attempting any identification to species. Indeed none of the fish bones have been identified to species at this stage. The sample collections were washed through a modified Siraf tank using a 1mm mesh and the subsequent residues were air dried and sorted.

Description of faunal assemblage

The site provided a hand recovered total of 1,766 animal bones weighing 62,662g, contained within 22 boxes, plus 265 bones (2,242g and 0.5 boxes) taken from 3 bulk samples. All of the bone bearing deposits could be dated either by the associated finds and/or using the stratigraphic evidence, as shown in Table 1. Notably, the dating is well defined with minimal residuality, the two sub-periods highlighted in this table referring to the following date ranges:- Early Roman – AD50 to 200 (though mainly 2nd century), Late Roman – AD120 to 400 (mainly 3rd century), Early post-medieval – 17th to 18th centuries and Late

post-medieval – 19th century. Throughout these deposits the bones tended to be well preserved with no contexts showing more than a moderate level of fragmentation.

General date	Roman				PM		
Period	ER	LR	UD	All	EPM	LPM	All
Recovery							
Hand	828	777	119	1724	20	22	42
Sieved	265			265			
Grand Total	1093	777	119	1989	20	22	42

Table 1. Distribution of animal bones by Period and recovery, where ER and LR is early and later Roman; and EPM and LPM is early and late post-medieval. Period is essentially calculated using the spot dates, while UD undated, has been added to the general Roman period based on the stratigraphy.

Roman

As stated, this period provided the major part of the hand collected and all the sieved bones. Here it should be stated that a number of other samples remain to be washed and sorted (including some from post-Roman deposits). There would appear to be a roughly similar quantity of bones from the early (ER) and later Roman (LR) periods, each providing substantial individual collections as for example the ER deposits (76) and (126) with 200 and 240 bones and then dating to LR deposit (19) and (41) with 115 and 150 bones respectively. All of the Roman collections are dominated by cattle and cattle-size bones, with a notable bias towards cattle head and foot parts within the later deposits, perhaps suggestive of butchers waste. Other species present include a generally better representation of pig compared to sheep/goat, as well as some poultry (chicken and duck) and fish. The latter were taken singly from various deposits as well as a minor concentration – about 20 bones - from the sample derived from the LR deposit (114). Non-food species include a scattering of dog bones and the occasional equid fragment, here including a metacarpus from a foetal individual from (114). This is a clear indication of local breeding/horse keeping.

Post-medieval

This collection was taken from just 4 deposits, including (156) and (158) dating to the 17th/18th centuries and (27) and (28) dated to the 19th century. These provided a general range of major domesticates as well as rabbit, chicken and fish from (28).

Conclusion and recommendations for further work

The Roman collection is clearly substantial, well dated and well preserved, with a notable proportion of identifiable bones providing a major quantity of bones which could be aged and/or measured. This evidence is indicative of a high potential value as a stand-alone assemblage and obviously indicative of

an even greater potential if it can be assumed that this represents only a small part of what awaits further excavation in this area. There are a number of sizeable collections in this area for comparative purposes, here including that recovered from 120 and 175/179 Borough High Street (Sites 63 and 66 in Little et al 2009, 244) as well as the more recent PCA excavation at 127-143 Borough High Street (Rielly in prep). It was noted that there may be butchers waste collections from this site, thus indicative of some carcass preparation in this area. This could be compared to the evidence concerning similar waste (albeit sheep rather than cattle) from 175/179 Borough High Street and also the large dumps of cattle horncores from 127-143 Borough High Street, suggestive of butchers and/or industrial/craft activities (ibid). There are two other points of interest, concerning the clearly greater abundance of pig compared to sheep/goat which appears to be a Roman Southwark trait (Rielly 2015, 220-1) and the apparently rather minor collection of fish bones, here confirming the rather poor representation of this food commodity within Roman London, with some notable exceptions (Locker 2007, 150-153)

There is a lesser potential concerning the later period collections, although the attributes concerning dating and condition equally apply. The missing element is quantity and this could be added to the other attributes following further excavation.

Indeed, further investigations at this site are strongly recommended to enhance the Roman collection and hopefully add and then increase the potential value of the post-medieval assemblage. Notably, there is evidence of medieval activity at this site but as yet without any faunal input. It can be suggested on the basis of present results that a meaningful medieval inclusion into the faunal evidence from this site is perhaps unlikely. Finally, there is certainly a potential for the recovery of the smaller bones and thus any further work on this site should be accompanied by a thorough sampling programme.

References

Little, J , Ainsley, C and Rielly, K 2009 Animal bone, in Cowan, C. Roman Southwark settlement and economy: Excavations in Southwark 1973-91, MOLA Monograph 42, 244-248

Locker, A, 2007 In piscibus diversis; the Bone Evidence for Fish Consumption in Roman Britain, *Britannia* XXXVIII, 141-180

Rielly, K, 2015 Animal bone, in D, Killock, Temples and Suburbs: Excavations at Tabard Square, Southwark, Pre-Construct Archaeology Limited Monograph no.18, 206-224.

Rielly, K, in prep The animal bones in D, Killock, Assessment of the excavations at 127-143 Borough High Street, PCA unpublished report

APPENDIX 10: Environmental Archaeological Assessment Report

By Kate Turner

INTRODUCTION

This report summarises the findings of the rapid assessment of four bulk samples taken during the excavation of land at the site of 153-159 Borough High Street, Southwark. These samples were all taken from trench three; four from contexts spot dated to the 2nd century AD, and one dated to the mid 1st to early 2nd century AD. Provisional context information is given in table 1.

The aim of this assessment is to:

1. Give an overview of the contents of the assessed samples;
2. Determine the environmental potential of these samples;
3. Establish whether any further analysis is necessary.

Table 1: Provisional context information and spot dates for environmental samples, BHG 16

Context No.	Cut	Context type	Area	Pottery Spot Date
69		Layer	Trench 3	AD150-160
114		Layer	Trench 3	AD120-150
146		Fill	Trench 3	AD120-150
149		Layer	Trench 3	AD50-100/120

METHODOLOGY

Four bulk samples, ranging in volume from twenty to twenty-seven litres, were processed using the flotation method; material was collected using a 300µm mesh for the light fraction and a 1mm mesh for the heavy residue. The heavy residue was then dried, sieved at 1, 2 and 4mm and sorted to extract artefacts and ecofacts. The abundance of each category of material was recorded using a non-linear scale where '1' indicates occasional occurrence (1-10 items), '2' indicates occurrence is fairly frequent (11-30 items), '3' indicates presence is frequent (31-100 items) and '4' indicates an abundance of material (>100 items).

The light residue (>300 µm), once dried, was scanned under a low-power binocular microscope to quantify the level of environmental material, such as seeds, chaff, charred grains, molluscs and charcoal. Abundance was recorded as above. A note was also made of any other significant inclusions, for example roots and modern plant material.

RESULTS AND DISCUSSION

Residues

Wood charcoal was present in all of the heavy residues. Samples <1> and <2> contained the greatest concentration, yielding over one-hundred discrete fragments, with more moderate amounts (30-100 pieces) being extracted from samples <3> and <4>. All of the assessed samples contained material of a suitable size for species identification (>4mm in length/width). Sample <1> additionally contained a small amount (<10 pieces) of preserved wood. Other archaeobotanical remains, in the form of seeds and grains were sparse, with only a minimal amount of fragmented nutshell reported in samples <2> and <4> and a single carbonised cereal grain in sample <4>.

Marine shell was identified throughout. Concentrations were generally low (<30 specimens) and shells were often heavily fragmented. Complete valves of *Ostrea edulis* (Colchester native oyster) were present in all of the assessed samples, as were partially intact valves of *Mytilus edulis* (common mussel), in all apart from sample <3>. None of the samples contained a statistically significant assemblage (>100 complete left/right valves).

Samples <1>, <3> and <4> contained small to moderate concentrations of large mammal bone; sample <1> contained the largest amount, between thirty and one hundred complete and/or fragmented specimens. Additionally, samples <1>, <2> and <3> contained both small mammal/amphibian bone, and fish bone. Fragmented material was also reported in samples <1>, <3> and <4>, and a small amount (<10 pieces) of fish scale was extracted from sample <3>.

Small amounts of building material, in the form of brick, mortar, plaster and CBM were present in all of the assessed samples. No one sample yielded a concentration of greater than thirty fragments for any one-fabric type. Pottery sherds were also reported throughout, with the greatest concentration being observed in sample <1>. Sample <1> additionally contained the greatest density of metalworking residue, including slag, iron fragments and hammer-scale, as well as a small amount of glass.

Flots

All of the processed samples produced flots, ranging in volume from nineteen to five-hundred and eighty millilitres. Initial observations suggest that the preservation of environmental remains is good across the assemblage; high concentrations of wood charcoal were reported in all four of the assessed flot samples, with each containing over one-hundred pieces. Large amounts of seeds were also recorded throughout, with frequently observed taxa including *Sambucus* sp. (elder), *Fragaria* sp. (strawberries), *Rubus* sp. (brambles), *Chenopodium album* (fat-hen) and *Ficus* sp. (fig), an imported species during the Roman period. Additionally, charred grains were identified in all of the light residues, though in universally low densities (<10 specimens per sample). In terms of other macrobotanical material, samples <2>, <3> and <4> all contained a large amount of desiccated plant matter and fragmented wood.

Fish bone was present in three samples (<1>, <2> and <4>) but in low concentrations, samples <2>, <3> and <4> also contained fish scales. Small animal/amphibian bone was additionally found in samples <2> and <3>, though neither contained more than thirty specimens. Mollusca were scarce, with only a small amount of broken oyster and/or mussel in samples <2> and <3>, and a single terrestrial snail shell in sample <1>. Samples <2> and <4> contained the greatest amount of insect remains, with lesser densities recorded in samples <1> and <3>; none contained an assemblage of suitable size to recommend specialist processing.

A full account of the material reported in the flots and residues is given in table 2.

Table 2: Assessment of environmental flots, BHG 16

Sample No.	1	2	3	4
Context No.	69	114	146	149
Volume of bulk (liters)	25	26	20	27
Volume of flot (milliliters)	19	360	580	450
Method of processing	F	F	F	F
HEAVY RESIDUE				
Charcoal				
Charcoal <2mm	4	4		
Charcoal 2-4mm	4	4	2	
Charcoal >4mm	4	3	2	3
Other plant macrofossils				
Wood	1			
Nut shell		1		1
Charred grains				1
Marine shell				
<i>Ostrea edulis</i>	2	1	2	1
<i>Mytilus edulis</i>	2	1		1
Fragments	3	2	1	
Bone				
Large animal bone	3		2	1
Small animal bone	2	3	2	
Fish bone	2	2	1	
Fish scales			1	
Bone fragments	2		2	1
Building material				
CBM	2			
Brick	1	1		1
Mortar			1	
Plaster			1	
Cultural artefacts				
Pot	3	1	2	1
Iron	1		1	
Copper	2			
Slag	3	1	2	1
Hammer-scale	1		2	

Sample No.	1	2	3	4
Context No.	69	114	146	149
Struck flint				1
Glass	1		1	
Residue saved for hammer-scale?	<input type="checkbox"/>			
Other remains				
Coprolite			1	
FLOT RESIDUE				
Charcoal				
Charcoal >1mm	3	4	4	4
Charcoal <1mm	4	4	4	4
Frag. of ID size	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Plant macrofossils				
Seeds	4	4	4	4
Charred seeds		1		
Charred grains	1	1	1	1
Glume fragments		1		
Wood		3	3	4
Desiccated plant material		4	4	4
Molluscs				
Land snails	1			
<i>Ostrea edulis</i> (frags)			2	
Broken		1		
Other remains				
Small animal bone		2	1	
Fish bone	1	1		1
Fish scales		2	2	2
Burnt bone		1		
Insect remains	1	3	2	3
Hammer-scale			1	

Key: 1- Occasional, 2- fairly frequent, 3- frequent, 4- abundant

CONCLUSIONS AND RECOMMENDATIONS FOR FURTHER WORK

To summarise, preservation of environmental remains in the samples from 153-159 Borough High Street was good; all of the assessed bulk samples contained large amounts of well-preserved wood charcoal, each with a high concentration of material sizeable enough for species to be identified. The abundance of charcoal recorded in these areas may indicate that this material is waste from domestic or industrial combustion, or perhaps residue from charcoal production. It is recommended that further specialist analysis of this material, as well as the wood from sample <4>, be carried out, both to ascertain the likely purpose of these large collections of charcoal, and to shed light on the environment of the site. It must however be considered that this assemblage may not provide a complete profile of the local flora, due to collection bias and species selectivity therefore, if suitable column samples are available it is suggested that an assessment of the pollen record be undertaken. Further assessment of the seed and plant macrofossil assemblage is also recommended, as all of the assessed samples contained a high density of

material, with several edible plant species present. Further analysis of this may provide information on diet and subsistence on the site during the roman occupation, as well as shed light on the trade of exotic species such as fig.

REFERENCES

Cappers, R.T., Bekker, R.M. and Jans, J.E., (2012). *Digitale Zadenatlas van Nederland/Digital seed atlas of the Netherlands (Vol. 4). Barkhuis.*

Stace, C, 1991. *New flora of the British Isles.* Cambridge: Cambridge University Press.

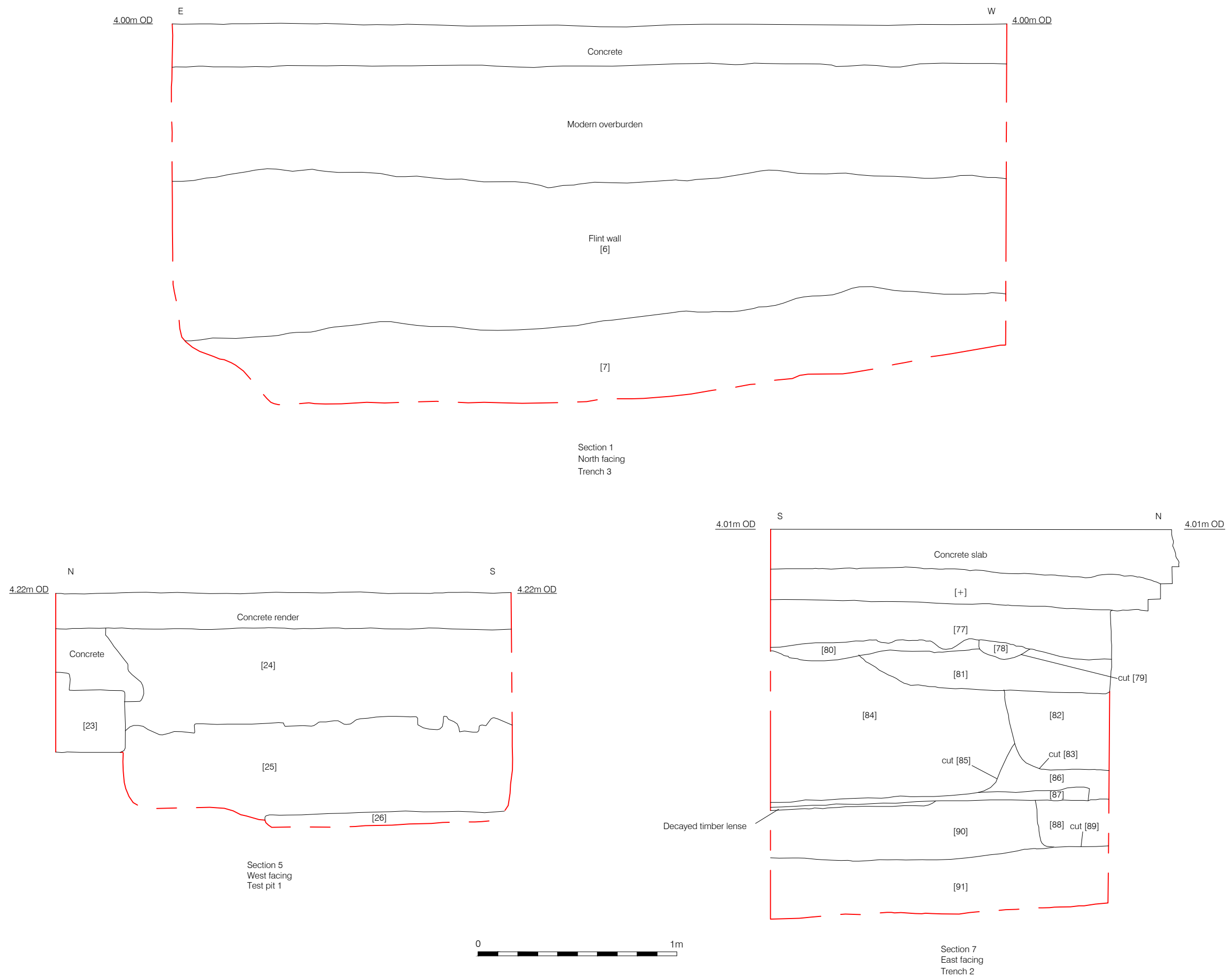


Figure 8: Sections 1, 5 and 7

Figure 9: Sections 4, 8 and 10

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