AN ARCHAEOLOGICAL WATCHING BRIEF AND EVALUATION AT 161-171 ABBEY STREET, LONDON BOROUGH OF SOUTHWARK, SE16 3NS

PCA

ABS 12

May 2013

PRE-CONSTRUCT ARCHAEOLOGY

DOCUMENT VERIFICATION

Site Name: An archaeological watching brief and evaluation at 161-171 Abbey street, London Borough of Southwark, SE16 3NS

Type of project: Watching brief & evaluation

Quality Control

Pre-Construct Archaeology Limited Project Code			
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Revision No.	Date	Checked	Approved

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Site Code:	**ABS 12**
Central NGR:	**TQ 3380 7945**
Local Planning Authority:	**London Borough of Southwark**
Planning Reference:	**App No: 10-AP-0406**
Commissioning Client:	**FQ Contractors Limited**
Written/Researched by:	**Ireneo Grosso and Guy Seddon** **Pre-Construct Archaeology Limited**
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May 2013

PCA REPORT NO. R11418

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1 ABSTRACT

1.1 This report details the results of an archaeological watching brief and evaluation undertaken by Pre-Construct Archaeology Ltd on behalf of FQ Contractors Limited at 161-171 Abbey Street, London Borough of Southwark SE16 3NS (Figure 1). The archaeological investigation was conducted between the 10th and 15th of November 2012 in accordance with the Standards and Guidance documentation specified by the Institute of Archaeologists (http://www.archaeologists.net/sites/default/files/node-files/ifa_standards_field_eval.pdf; http://www.archaeologists.net/sites/default/files/node-files/ifa_standards_watching.pdf) and following the (draft) guidelines issued by English Heritage (http://www.english-heritage.org.uk/content/publications/publicationsNew/glaas-standards-for-archaeological-work/glaasstandardspapersexternalconsultationdraft.pdf).

1.2 The archaeological watching brief, undertaken on the location and extraction of petrol tanks from the site, allowed assessing the extent and conditions of the surviving archaeological deposits. The evaluation of the site comprised a single evaluation trench (Trench 1) (Plate 1) excavated to the east of two underground petrol tanks (Plate 2) associated with the petrol station recently demolished at site. The results of a borehole survey at the site are also incorporated into this report.

1.3 The archaeological investigations have provided evidence determining the palaeotopography of the site. The archaeological evaluation demonstrated that natural sand and gravel deposits slope downwards from the south to the north across the area, possibly representing an edge of the Bermondsey eyot (island). The results of the archaeological evaluation support the conclusions reached during the monitoring of archaeological work at Abbey Street and in the documentary research detailed in the DTA (Douglas 2010).

1.4 The evidence from evaluation Trench 1 suggests that there was a possible encroachment by the Romans from the sandy gravel eyot to the south of the site into the alluvial fill of the channel to the north which was represented by a 0.10m thick layer of silty sand clayey gravel that contained two sherds of Roman pottery.

1.5 Medieval and post-medieval alluvial deposits, approximately 2.40m thick, were observed across Trench 1. The alluvial deposits were sealed by modern demolition rubble/modern make up associated with the demolition debris of the post World War II petrol station which originally occupied the study site.

2 INTRODUCTION

2.1 An archaeological watching brief and evaluation, in advance of the redevelopment of the site, was undertaken at 161-171 Abbey Street, London Borough of Southwark by Pre-Construct Archaeology Limited between the 10th and 15th of November 2012. The Written Scheme of Investigation (Moore, 2012) detailed the methodology by which the archaeological watching brief and evaluation were undertaken. The WSI followed the English Heritage guidelines (GLAAS 2009; URL in 1.1) and the Institute of Field Archaeologist (IFA, 1993; URL in 1.1).

2.2 The site covers a total area of 260.30 square metres and is located at National Grid Reference TQ 3380 7945.

2.3 The site of the proposed development lies in the margin of a Southwark Council defined 'Archaeological Priority Zone', and comprises a triangular plot of land bounded to the south by Abbey Street, to the northwest by Gedling Place and to the northeast by the forecourt of garages built underneath the railway arches.

2.4 The archaeological evaluation, commissioned by FQ Contractors Limited, was conducted by Pre-Construct Archaeology Limited, under the supervision of Guy Seddon. The watching brief and the post-excavation work were conducted by Ireneo Grosso. The project management by Peter Moore and the post-excavation management by Dr Frank Meddens. The project was monitored by Dr Christopher Constable on behalf of London Borough of Southwark.

2.5 The site was given the Museum of London site code ABS 12. The completed archive comprising written, drawn and photographic records will be deposited with the London Archaeological Archive and Research Centre (LAARC).

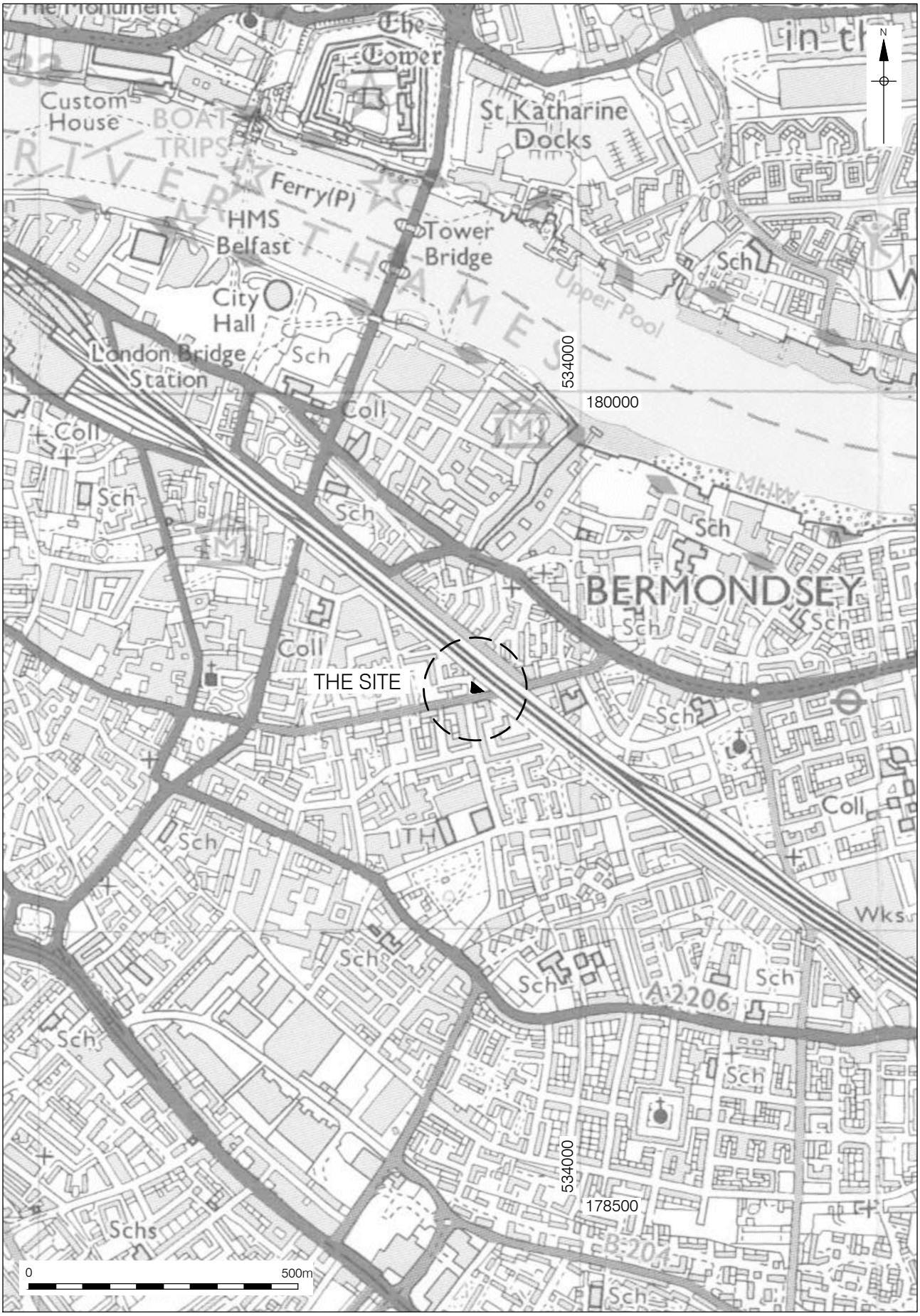

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Figure 1
Site Location
1:12,500 at A4

3 PLANNING BACKGROUND

3.1 National Planning Policy Framework (NPPF)

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

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

3.2 Regional Guidance: The London Plan

3.2.1 The over-arching strategies and policies for the 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 Archaeology in Southwark and the Unitary Development Plan

3.3.1 The study aims to satisfy the objectives of the London Borough of Southwark, which fully recognises the importance of the buried heritage for which they are the custodians. The Borough's 'Southwark Plan' (adopted in July 2007), and the draft Archaeology Policy, contains policy statements in respect of protecting the buried archaeological resource.

Policy 3.19 Archaeology
Planning applications affecting sites within Archaeological Priority Zones (APZs), as identified in Appendix 8, shall be accompanied by an archaeological assessment and evaluation of the site, including the impact of the proposed development. There is a presumption in favour of preservation in situ, to protect and safeguard archaeological remains of national importance, including scheduled monuments and their settings. The in situ preservation of archaeological remains of local importance will also be sought, unless the importance of the development outweighs the local value of the remains. If planning permission is granted to develop any site where there are archaeological remains or there is good reason to believe that such remains exist, conditions will be attached to secure the excavation and recording or preservation in whole or in part, if justified, before development begins.

Reasons:

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

3.3.2 The study site is located on the margin of an Archaeological Priority Zone as defined by the London Borough of Southwark Plan (2007). There are no Scheduled Ancient Monuments located within or close to the site.

3.3.3 Three archaeological planning conditions have been attached to the planning permission (10-AP-2849) for the site:

10 Before any work hereby authorised begins, the applicant shall secure the implementation of a programme of archaeological evaluation works in accordance with a written scheme of investigation shall be submitted to and approved in writing by the Local Planning Authority.

Reasons:
In order that the applicants supply the necessary archaeological information to ensure suitable mitigation measures and/or foundation design proposals be presented in accordance with policy 3.19 of the Southwark Plan 2007.

11 Before any work hereby authorised begins, the applicant shall secure the implementation of a programme of archaeological mitigation works in accordance with a written scheme of investigation, which shall be submitted to and approved in writing by the Local Planning Authority.

Reasons:
In order that the details of the programme of works for the archaeological mitigation are suitable with regard to the impacts of the proposed development and the nature and extent of archaeological remains on the site in accordance with policy 3.19 of the Southwark Plan 2007.

12 Within six months of the completion of archaeological site works, an assessment report detailing the proposals for post-excavation works, publication of the site and preparation of the archive shall be submitted to and approved in writing by the Local Planning Authority and that the works detailed in this assessment report shall not be carried out otherwise than in accordance with any such approval given.

Reason:
In order that the archaeological interests of the site are secured with regard to the details of the post-excavation works, publication and archiving to ensure the preservation of archaeological remains by record in accordance with policy 3.19 of the Southwark Plan (July 2007).

3.3.4 In accordance with the condition laid down by Southwark Council a Written Scheme of Investigation (WSI) was prepared by Pre-Construct Archaeology Limited and submitted for approval prior to the commencement of works on the site. The Scheme was approved by Dr Christopher Constable, Senior Archaeology Officer for Southwark Council.

4 GEOLOGY AND TOPOGRAPHY

4.1 Geology

4.1.1 The British Geological Survey (Sheet 270 South London) shows the drift geology underlying the site as River Terrace Deposits of Kempton Park Gravel overlying London Clay.

4.1.2 A borehole investigation at the site encountered sand and gravel at 4.5m below ground level, overlain by alluvial clay at between 1.6 to 2.17 and 3.3 to 4.6m below ground, in turn covered by made ground. The three boreholes were located around the perimeter of the site and showed that at least some in situ deposits still existed at this site.

4.1.3 Natural deposits were encountered during the archaeological evaluation conducted at the site. Natural alluvial clay was encountered at between -0.90m OD and -1m OD and approximately 0.05m thick, this was overlain by at least 2.10m of organic fibrous and amorphous peat deposit.

4.2 Topography

4.2.1 The site lies approximately 1km the south of the River Thames.

4.2.2 The natural topography of the Bermondsey area is one of low-lying sand eyots surrounded by mudflats and dissected by wide braided channels. The site lies towards the northern edge of a large sand island known as the Bermondsey eyot. To the northwest of the site, a water channel, the Neckinger River, separated the Bermondsey eyot from the Horselydown eyot. The Neckinger River seems to have been a braided channel creating a number of small eyots rather than a true tributary of the Thames. Fluctuations in river levels during the Holocene period led to episodes of transgression and regression of the Thames and the deposition of alluvial silts and clays interspersed with localised peat formations, particularly along channel edges and margins of the sand eyots.

5 ARCHAEOLOGICAL AND HISTORICAL BACKGROUND

5.1 Introduction

5.1.1 Unless referenced otherwise, the archaeological and historical background cited below was obtained from the desk-based assessment prepared by PCA Limited in April 2010 (Douglas 2010).

5.2 Prehistoric period

5.2.1 During the prehistory the area of north Southwark was characterised by a series of low-lying sand and gravel eyots surrounded by marsh and mud flats and dissected by braided channels. The site is located on the northern margin of a large island known as the Bermondsey eyot.

5.2.2 Bermondsey eyot is orientated west to east widening out from a narrow west end to a bulbous east end. A ridge of higher ground runs along its central axis, the surface of the sand and gravel is generally at +1.20m OD and rises to a recorded maximum of c. 2.20m OD.

5.2.3 Recent archaeological work has demonstrated that wherever sufficiently high and dry, even if only seasonally, the sand islands of north Southwark began to be exploited by prehistoric peoples from the Mesolithic onwards. Although there has been no evidence of Mesolithic or Neolithic activity in the immediate proximity of the site, further afield, on Horselydown, Mesolithic flints have been found at 283 Tooley Street, Three Oak Lane, Butler's Wharf and 53-65 Tanner Street. Isolated Mesolithic flints have also been found on the mainland to the south of Bermondsey eyot at 283 Marlborough Grove. The archaeological evidence is suggestive of mobile hunter-gather bands exploiting if only on a seasonal basis, a region rich in resources such as fish and wild-fowl but perhaps also to collect plants for food, medicinal assets as well as the raw materials for craft production such as basket making.

5.2.4 Archaeological evidence for permanent settlement on the eyots probably began as early as the late Neolithic or early Bronze Age. The excavations at Long Walk/Abbey Street produced a quantity of Late Neolithic/Bronze age lithics including three arrowheads of leaf, transverse and barbed and tagged form as well as cores, scrapers, serrates, and several flake knives, all recovered from later contexts. Excavations at Phoenix Wharf, downstream from Tower Bridge revealed an Early Bronze Age cooking pit and evidence of cereal cultivation has been found on Horseydown at Phoenix Wharf, Wolseley Street and Lafone Street with ard marks scored into the natural sand. Ard marks appear as a criss-cross pattern of dark lines in the sand created by the tip of a primitive 'plough'. Also on Horselydown eyot at Three Oak Lane the rare discovery was made of the actual tip of a wooden ard. Evidence of actual settlement at Three Oak Lane was suggested by postholes and a quantity of daub that indicated a post-built structure together with a

fragment of a rubber stone from a saddle quern and a single sherd of Grooved Ware pottery.

5.2.5 In closer proximity to the site, a prehistoric cooking pit, Bronze Age ard marks scored into the natural sand and spade marks and a posthole found in the overlying archaic soil, have been found at 4 Jamaica Road. Late Bronze Age pottery was also found on an excavation at 150-156 Abbey Street only 60m to the west of the site.

5.2.6 The environmental evidence from 211 Long Lane suggested a landscape during the Neolithic period of a flood plain dominated by alder carr and sedge fen with open oak and hazel woodland dominating on the higher and drier ground. The natural development of a wetter floodplain and clearance of the alder carr in the later Bronze Age provided ideal grazing grounds particularly in the spring and autumn and this was accompanied by development of tillage and defined fields systems.

5.2.7 Evidence for rising sea levels and flooding from the Iron Age onwards led to the increased seasonal of grazing pasture use of the flood-plain. Late Iron Age pottery has been found at Bermondsey Abbey during excavations carried out along Abbey Street and Long Walk during the 1980's and at Bermondsey Square an Iron Age cauldron chain was unearthed. The cauldron chain is an unusual find of some importance which is suggestive of pre-Roman settlement of some importance. Overall the archaeological finds from north Southwark suggests small scale late Iron Age farming settlements with activity concentrated off the Bermondsey eyot.

5.2.8 Closer to the site, at Abbey Street shallow pits and ditches thought to date to the Iron Age were unearthed that indicate that the surrounding land continued to be cultivated.

5.2.9 Large water channels were reported at Abbey Street and 4 Jamaica Road which may be part of the prehistoric Neckinger or related waterways. Given the proximity of these sites and the course of the Neckinger as shown on Rocques's map of 1749, it might be expected that the former course of earlier channels, particularly the Neckinger are extant in proximity to the site.

5.3 Roman period

5.3.1 Roman Southwark developed as a suburb of Londinium concentrated around the southern bridge head. The Roman bridge across the Thames may have been built as early as AD50 and an equally possibly directly related early date of AD 50-5 has been suggested for the foundation of Southwark on the basis of finds of pottery and coins.

5.3.2 Two Roman roads that connected Londinium to the Sussex and Kent coasts, Stane Street and Watling Street converged on Southwark, linking up at a point roughly where Borough Tube Station stands today. The conjectured course of Watling Street is on the higher ground of the 'mainland', along the line of the Old Kent Road some 900m to the southwest of the site.

5.3.3 By the Roman period Bermondsey eyot may have become a peninsula, connected to the mainland at the west end with a spine of higher ground running across the eyot. It has

been suggested that an as yet unconfirmed Roman road ran along the higher ground which could have connected a settlement on the Bermondsey eyot with the suburb of Southwark.

5.3.4 Evidence for Roman occupation has been found on Bermondsey eyot with such features as pits, postholes and ditches cutting the natural sands and gravels. The ditches indicate an extensive network of field boundaries.

5.3.5 Excavations at and around the location of the site of the medieval Bermondsey Abbey at the west end of Abbey Street/Long Walk have unearthed Roman pottery from pits and a ditch, an indication that there was a permanent human presence here during the 1st and 2nd centuries. Coin evidence (81 Roman coins were found) suggest an intensification of activity from the mid 3rd century until the end of the Roman period. Archaeological evidence recovered from excavations at Bermondsey Square suggests settlement throughout the Roman period and includes traces of clay and timber buildings, timber lined wells, postholes, pits and ditches as well as finds that include pottery, animal bone,, a large quantity of Roman brick and tile, household items like knives and personal items of jewellery including broaches and rings.

5.3.6 Closer to the site at 41 Maltby Street animal bone and Roman pottery was found in the fill of an unidentified feature. In the immediate vicinity at 150-156 Abbey Street a shallow ditch with a parallel line of stake holes was recorded. The fill of the ditch contained ironworking waste that was evidence for smelting and smithing, as well as including fragments of box flue hypocaust tile suggestive of a high status building somewhere in the locality.

5.3.7 Overall the archaeological evidence for the Bermondsey area appears to indicate, for the Roman era, an ordered and settled agricultural landscape with the foci of settlement on Bermondsey Square but possibly with other centres of occupation or activity across the eyot.

5.4 Saxon

5.4.1 There are no entries highlighted by the GLHER search for the Saxon period. However that does not mean that Bermondsey eyot was devoid of settlement at this time. In deed the name ‘Beoumund’s ey’ is thought to be of Saxon origin. The Liber Niger of Peterborough of circa AD 1130, in which Pope Constantine addresses Haedda as abbot of Vermundsei (Bermondsey) suggests that a minster church had been established probably on the site of the later Bermondsey Abbey by this time.

5.4.2 Significant quantities of Middle Saxon pottery, 3 sceatta coins, copper-alloy strap ends, ceramic loom weights, bone pin, and antler comb were all recovered during the abbey excavations of 1984-88. These findings suggest that there was a significant and prosperous Middle to Late Saxon settlement at Bermondsey. The pottery assemblage from excavations at Bermondsey Square confirms continuity of settlement throughout the

Saxon period. Interestingly some of the masonry foundations unearthed at Bermondsey Square may relate to a late Saxon Royal Manor.

5.5 Medieval period

5.5.1 In the middle ages the Bermondsey area was dominated by the monastery of St Saviour's founded as a Cluniac priory (later Benedictine abbey) in circa 1089. The presence of the monastery centred on Bermondsey Square, led to the formation of a network of roads in the vicinity; Long Lane heading west from Bermondsey Square to Borough, Grange Road leading east, Bermondsey Street (established in the late 12th or early 13th century) ran from Tooley Street to the precinct of the priory and Tanner street originally known as Five Foot Lane, was in existence by 1514.

5.5.2 The precinct of the priory / abbey at Bermondsey was far larger than just the Inner Court with the conventual church and claustral buildings. Beyond this area was the Outer Precinct which enclosed the agricultural and industrial buildings essential to the economic management of the monastic estates, including the abbey farm and grange. The precinct was bounded by the River Thames to the north, to the south and east by the River Neckinger (the river had probably been diverted by the monks to flow through the priory, channelled by the conduit of the 'great drain' and on the west side by the raised causeway (later Bermondsey Street). The precinct at Bermondsey was approximately 60 acres in size including 20 acres of meadow land.

5.5.3 The site lies on the eastern margins of the monastic precinct, 529m to the east of St Saviour's priory / abbey and 250m to the south of St. Saviours dock which was probably built by the monks to handle the building stone required for the construction of the monastery.

5.5.4 The low-lying land at Bermondsey was repeatedly subjected to flooding events particularly in the 14th century, as the river defences failed. Conditions in the 15th century appear to be just as severe and it is documented that Bermondsey flooded in 1416, 1448 and 1463-64.

5.6 Post-Medieval and Modern

5.6.1 The monasteries were dissolved by Henry VIII in circa 1540 and the former monastic buildings were demolished or converted to secular use and the lands sold off to the laity. Bermondsey Abbey was acquired by Sir Thomas Pope, Treasurer of Court of Augmentations who built a large 'mansion' style house on the foundations of the main cloisters. From 1556 to circa 1610 the house was the residence of the Radcliffe family, the Earls of Sussex. The land that formed the former outer court of the abbey appears to have continued to be used for agriculture. Archaeological features and deposits relating to this agricultural landscape have been recorded at Spa Road / Enid Street to the southeast of the site where a substantial field boundary ditch, drainage gullies and a

horticultural soil of up to 0.90m thick have been recorded. Agricultural soils have also been noted to the east of the site at Old Jamaica Road.

5.6.2 Flood deposits containing 15th and 16th century pottery found at Druid Street to the northeast of the site constitute material evidence that periodic flooding was still a problem in some part of Bermondsey during the early post-medieval period.

5.6.3 To the north of the site, at 4 Jamaica Road a water channel running southwest / northeast (probably the Neckinger) was recorded along with evidence for a 17th century timber revetment.

5.6.4 Rocque's map of 1749 shows the site as agricultural land and lying on the north bank of the Neckinger River with Neckinger Road on the south bank. Rocque's map also shows that by the mid 18th century there was development extending back from the Thames waterfront towards the north of the site.

5.6.5 The 18th century seems to see the gradual filling in of the remaining back channels of Bermondsey. The river channel to the east of the site recorded at Abbey Street is filled in by the 18th century and at Druid Street dumped deposits containing 17th and 18th century pottery have been recorded.

5.6.6 Horwood's map of 1819 continues to show a narrow stream on the south side of the site but more importantly for the development of this part of Bermondsey is the extension of the road network. By 1819 the east / west thoroughfare of Long Lane had been extended eastwards from its junction with Bermondsey Street, by the construction of Abbey Street / Great George Street to link up with the Neckinger Road. This road building will have greatly improved travel for east / west traffic and it coincided with and perhaps was part of the reason for an acceleration in development of the area. On the Horwood, a paper manufactory can be seen to the south of the site, and another paper works is located in Maltby Street.

5.6.7 Greenwoods map of 1930 shows the transformation that had taken place by then. The northwest frontage of the site had been developed and buildings immediately to the east front south onto the Neckinger Road. To the south the paper manufactory has been replaced by a leather and glue factory.

5.6.8 During the late medieval period tanning developed into a major industry in the Bermondsey area. This industry probably took advantage of the numerous tidal streams here, as tanning requires large quantities of water. Noxious smell from the tanning pits always encouraged a location at the margins of urban settlement. By 1850 it is estimated that one third of the leather produced in Britain was manufactured in Surrey and the vast majority of that was in Bermondsey.

5.6.9 At 150-156 Abbey Street a pit dated to circa 1760-1830 was characterised by a fill of cattle horn cores. The horn cores are a waste by product of the slaughter and processing of cattle. The GLHER search lists numerous tanneries operating in close proximity to the site, in the 19th century, at Grange Walk, Grange Yard and in Maltby Street.

5.6.10 The development of the site in the early 19th century is expected to have left the remains of brick lined cellars, cess pits, wells and soakaways, which are frequently found to the rear of properties. The GLHER search lists a cess pit that contained pottery dated to the 1820's on Abbey Street, and a brick basement and a brick lined soakaway located at 2A-4 Jamaica Way.

5.6.11 London's first railway, the London and Greenwich ran through Bermondsey with a London terminus at London Bridge. The line was operated in 1836 but the first station buildings didn't appear until 1841. The line through Bermondsey ran on a viaduct of 878 arches and passed immediately to the northeast of the site.

5.6.12 The Ordnance Survey map of 1878 shows the railway viaduct and along the northwest frontage there is a short terraced row facing onto Wellington Street.

5.6.13 The location of Bermondsey close to the docks, with easy access to imported raw materials and transport to foreign markets, and near to the large market of London made it particularly favourable for a whole range of industries. The increasing pressure of a rapidly expanding population meant that space for development in Bermondsey was at a premium and factories were squeezed in as and when land became available. The GLHER search lists a brewery on Abbey Street, a stone mason's yard, a glazing works, and a metal box factory all in Maltby Street.

5.6.14 The population of Bermondsey continued to increase throughout the 19th century. By 1831 the population of Bermondsey was 30,000, and it had nearly doubled by 1861 when it was 58,000 and by 1901 it was 82,000. Even more revealing are the figures for population density; the number of people per acre in 1831 was 47, it was 93 in 1861 and by 1901 it had reached 131. The OS 1897 shows, that the site had been fully developed with terraced houses facing on to both the northwest and southern frontage.

5.6.15 The site remained unchanged probably until World War II. However the Ordnance Survey map of 1937 does shows that the street formerly known as Wellington Street is by then called Gedling Place and opposite the site the long standing leather works had been replaced by the residential development of the Neckinger Estate.

5.6.16 After World War II the site was developed as a petrol filling station and the Goad's insurance map of circa 1950 shows the site as such. The site appears to have remained a fuel service station throughout the rest of the 20th century and the first decade of the 21th century.

6 ARCHAEOLOGICAL METHODOLOGY

6.1 An archaeological watching brief on the removal of the petrol tanks was undertaken in order to record the location and extent of their construction trenches and to allow the evaluation trench (Figure 2) to be positioned most advantageously for the testing for any surviving archaeology.

6.2 Once the removal of the petrol tanks was carried out, a single evaluation trench (Trench 1, Figure 2) was excavated using a 360° mechanical excavator. The archaeological evaluation consisted of a single square trench (Trench 1) located in a part of the site unaffected by the construction trenches for the petrol tanks. Trench 1, excavated to a maximum depth of 4.05m from ground level, had 4 steps, measured 9.30m north-south at the top and 10.87m east-west and 1.80m southeast/northwest by 1.05m wide at the base. The palaeoenvironmental sequence of alluvial deposits and natural sandy gravel at the base of Trench 1 were sampled (monolith and bulk samples were taken).

6.3 The purpose of the evaluation was to determine the presence or absence of surviving features and remains, and if present, to assist in the formulation of an appropriate archaeological mitigation strategy. As a consequence, the watching brief monitored the further excavation of each trench. All works were undertaken in accordance with the guidelines set out by English Heritage and the Institute of Field Archaeology.

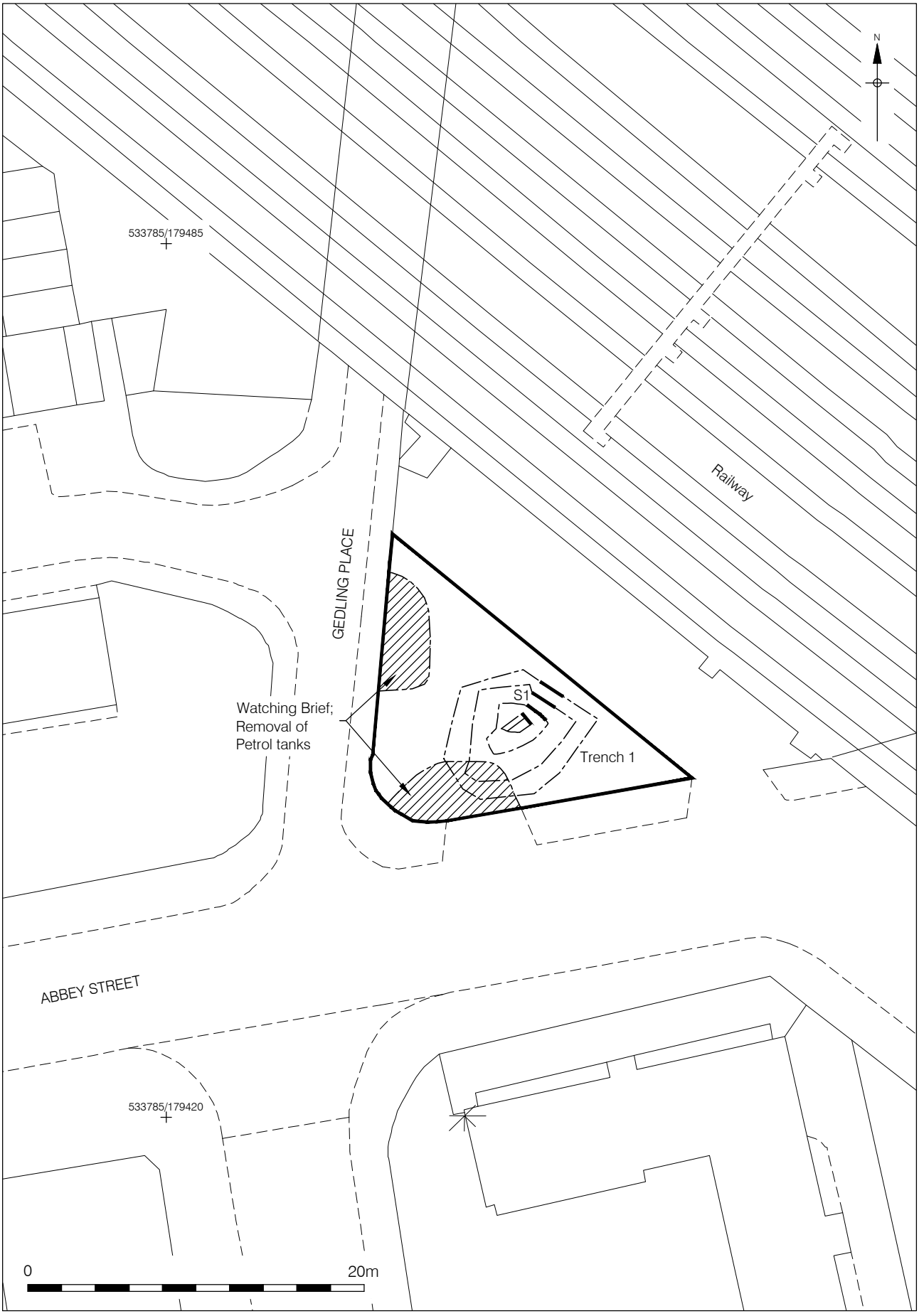
6.4 The research design set out in the Written Scheme of Investigation aimed to address the following objectives:

- To determine the palaeotopography of the site;
- To determine the presence or absence of prehistoric activity;
- To determine the presence or absence of Roman activity and how it relates to the emerging model of landscape usage, as well as industrial and settlement activity;
- To establish the presence or absence of post-medieval activity;
- To establish the extent of past post-depositional impacts on the archaeological resource.

6.5 The recording systems used during the investigations were fully compatible with those most widely used elsewhere in London that is those outlined in the Department of Urban Archaeology Site Manual. The site archive will be organised to be compatible with the guidelines issued by the LAARC.

6.6 All contexts, sections and plans were recorded on pro-forma sheets. Plans were drawn at a scale of 1:20 and sections were recorded at scales of 1:10 and 1:20 as applicable and fabric samples were taken from brickwork structures.

6.7 A full photographic recorded was made during the evaluation comprising black and white film, colour slide and digital formats. A digital photographic archive was maintained during the course of the watching brief.



08/11/12 JS

Figure 2
Trench Location
1:500 at A4

6.8 The completed archive generated during the evaluation and watching brief, comprising written, drawn and photographic records, will be deposited with the London Archaeological Archive and Research Centre (LAARC). The site was given the Museum of London site code ABS 12.

7 ARCHAEOLOGICAL SEQUENCE

7.1 Introduction

7.1.1 The following text is an overview of the archaeological sequence recorded during the evaluation. Full individual context descriptions, dimensions and Ordnance Datum levels are detailed in Appendix 1 and stratigraphic relationships are shown in Appendix 2. Figure 2 shows the trench location and plan, Figure 3 the section, and Appendix 4 Plates 1 and 2 are photographic illustration of Trench 1 and petrol tank.

7.2 Phase 1: Natural sands and gravels

7.2.1 The earliest natural geological horizon recorded on site consisted of 0.07m thick deposit (not fully excavated) of mid reddish grey sandy gravel [10] found at 0.17m OD and at -0.77m OD in the southern and north halves of Trench 1 respectively. The dimensions of the natural sandy gravel [10] were 2.90m southeast / northwest by 2m southwest / northeast and it sloped sharply from the south downwards to the north. It was on an east / west orientation and was interpreted as part of the northern edge of a large island known as Bermondsey eyot.

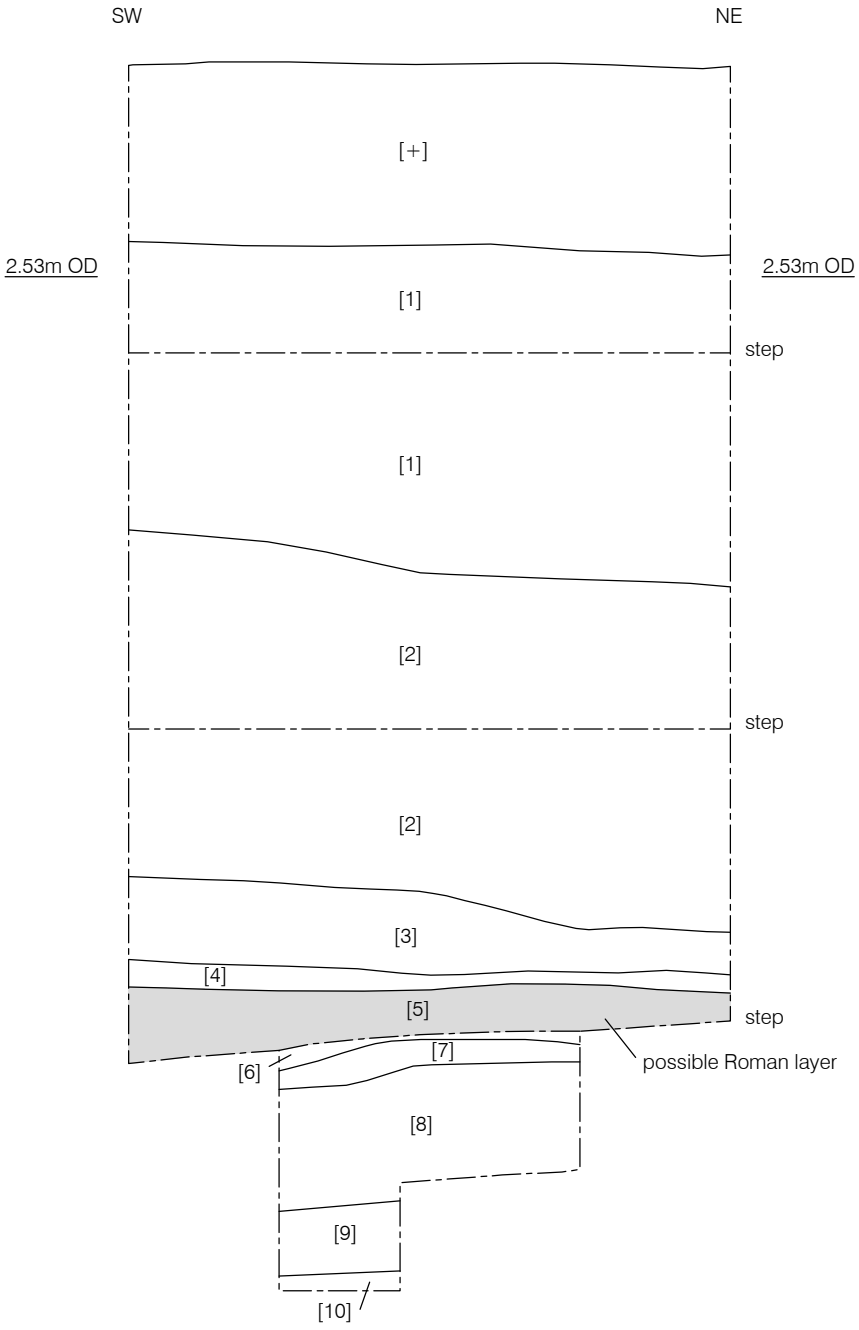
7.2.2 The findings regarding the palaeotopography of the site were supported by the existing boreholes data (Southern Testing 2010) which shows that natural sand and gravel deposits lie at 3.3m and 3.4m below ground level at the southern limit of the site and at 4.6m below ground level at the northern end of the site.

7.3 Phase 2: Undated alluvial deposits

7.3.1 Natural sandy gravel [10] was overlain to the north at 0.08m OD by a 0.69m thick sequence of layers which comprised contexts [9], [8], [7] and [6]. These layers, varying in composition and colour, had increasingly higher clay component towards the top and an increasing element of sand and gravel towards the base. No dating evidence was found in these layers which were all interpreted as alluvial layers associated with the deposition of silts and clays in the late pre-Roman period that affected all the sand eyots in Southwark and differentiated the prehistoric from the Roman period.

7.4 Phase 3: Roman

7.4.1 Layer [6] was sealed at 0.20m OD by mid brownish grey sandy clayey gravel layer [5] (see Figure 3). Context [5] was observed and recorded in section only (Figure 3), it measured 2m northeast / southwest by 0.25m thick and contained two pottery sherds, burnt flints and a few fragments of animal bone. The pottery dated to the Roman period. One sherd was identified as being a fragment of a Gaulish amphora dating to AD 50-250 and the second sherd was from a Cologne colour-coated vessel, dating to AD100-140.



Section 1
Trench 1
Southeast Facing

0 1m

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Figure 3
Section 1
1:25 at A4

7.4.2 A total of 4 animal bones came recovered from context [5]. The collection was largely composed of equid remains, potentially from the same adult individual (see Appendix 7). There is ample evidence for the dumping of equid carcasses at the fringes of the Roman settlement, in this case possibly related to the potential satellite community based on this eyot, as demonstrated by the structural and artefactual evidence recovered from the Bermondsey Abbey sites (see Douglas in prep and Dyson et al 2011).

7.4.3 Because of the limited area excavated and the very limited quantity of dating evidence uncovered (only two fragments of pottery were found) it is very difficult to speculate on the nature and date of layer [5]. However, layer [5] has been provisionally interpreted as representing a Roman consolidation / reclamation layer located on the northern edge of the large Bermondsey eyot.

7.5 Phase 4: ?Medieval

7.5.1 Layer [5] was overlain at 0.28m OD by a firm dark blackish grey sandy organic silty clay layer [4] with occasional small rounded flint pebble inclusions. This layer did not contain dating material and was recorded in section only (Figure 3). It measured 2m northeast / southwest by 0.10m in thickness and was interpreted as a possible alluvial deposit of medieval date.

7.5.2 Layer [4] was sealed in turn by a light bluish grey sandy silt clay layer [3] at 0.55m OD. This undated deposit was observed and recorded in section only (Figure 3) and measured 2m northeast / southwest by 0.29m in thickness and similarly to context [4] was interpreted as an alluvial layer possibly dating to the medieval period.

7.6 Phase 5: Post-medieval and modern

7.6.1 Firm dark grey sandy clay layer [2] sealed, at 1.69m OD, by context [3]. Context [2] was observed and recorded in section only (Figure 3) and measured 2m northeast / southwest by 1.15m in thickness and produced fragments of roof tile dated to circa AD 1400-1700 with one sherd of a Surrey / Hampshire white Border ware rounded bowl with green glaze dated to AD 1550 – 1700. Context [2] was interpreted as an alluvial later of post-medieval date.

7.6.2 Layer [2] was sealed at 2.65m OD by firm mid bluish grey sandy clay layer [1]. This layer had occasional to moderate charcoal and CBM flecks and was observed and recorded in section (Figure 3). Its dimensions were 2m northeast / southwest and it was 1.10m in thick. It was interpreted as an alluvial layer of post-medieval date.

7.6.3 Context [1] was overlain by a 0.60m thick layer of modern make up at 3.23m OD that represents the modern ground level on site at the time of the evaluation.

8 INTERPRETATIONS AND CONCLUSIONS

8.1 Interpretation

8.1.1 A Written Scheme of Investigation (Moore 2012) for an Archaeological Evaluation was prepared in advance of the archaeological work to be carried out at 161-171 Abbey Street, London Borough of Southwark, and highlighted specific research objectives to be addressed by the evaluation.

8.2 To determine the palaeotopography of the site.

8.2.1 The archaeological evaluation has provided further evidence to support the topographic modelling of the underlying strata known as Bermondsey eyot. The difference in level between the natural sandy gravel encountered in Trench 1 suggests that the site was located along the water margin of the island with the southern part of the site situated across the northern margin of it.

8.2.2 The findings regarding the palaeotopography of the site were supported by the existing boreholes data which demonstrate that natural sand and gravel deposits lie at 3.3m and 3.4m below ground level at the southern extent of the site and at 4.6m below ground level at the northern boundary.

8.2.3 Large water channels were reported at Abbey Street and 4 Jamaica Road which may be part of the prehistoric Neckinger or related waterways. Given the proximity of these sites and the course of the Neckinger as shown on Rocques's map of 1749, it seems that the former course of earlier channels, particularly the Neckinger exist to the north side of the site where the natural sandy gravels slope downward to the north.

8.3 To determine the presence or absence of prehistoric activity.

8.3.1 With the exception of a number of burn flints contained in layer [5] there was no evidence of prehistoric activity. This may be due to the low lying nature of the site during the prehistoric period.

8.4 To determine the presence or absence of Roman activity and how it relates to the emerging model of landscape usage, as well as industrial and settlement activities.

8.4.1 One possible Roman layer containing two sherds of Roman pottery was indentified. Due to the limited area excavated and its marginal location in relation to the island it is difficult to speculate on the nature and date of this layer. However, it seems to be of different composition from most of the deposits / layers encountered in Trench 1, which were interpreted as being of alluvial origin. No evidence for industrial activity dating to the Roman period was identified at the site.

8.4.2 Excavations on Bermondsey Abbey at the west end of Abbey Street / Long Walk unearthed Roman pottery from pits and a ditches, and closer to the site at 41 Maltby Street animal bones and Roman pottery were found in the fill of an unidentified feature.

In the immediate vicinity of the site at 150-156 Abbey Street a shallow ditch with a parallel line of stake holes was recorded. The fill of this ditch contained ironworking waste that included evidence for smelting and smithing, as well as fragments of box flue hypocaust tile suggestive of a high status building somewhere in the vicinity.

8.5 To establish the presence or absence of medieval and post-medieval activity.

8.5.1 No evidence for medieval activity was found in the archaeological evaluation except for two undated alluvial layers which were interpreted as of medieval date because of their stratigraphic relationship with other dated layers / deposits. This is not surprising considering that during the medieval period the low lying land at Bermondsey was repeatedly subjected to inundation as documented for the 14th and 15th centuries.

8.5.2 Post-medieval activity on site was represented by two alluvial deposits with an overall thickness of approximately 2.20m. There is evidence that periodic flooding was still a problem in some parts of Bermondsey during the early post-medieval period. Until the early 19th century map sources continue to show a narrow stream on an east / west orientation across the site.

8.6 To establish the extent of past post-depositional impacts on the archaeological resource.

8.6.1 The 0.10m thick Roman layer observed in Trench 1 was sealed by a considerable number of approximately 2.40m thick, medieval to post-medieval alluvial deposits that effectively acted as a buffer protecting the earlier deposits from further impact. The construction of the petrol station with the installation of the petrol tanks, after World War II, caused some very deep truncation of the underlying strata, although it seems that this was mostly limited to the western and southern areas of the site.

8.6.2 At the time of the evaluation the top of the archaeological sequence showed

8.6.3 0.60m of demolition rubble/modern make up associated with the demolition of the petrol station.

8.7 Conclusions

8.7.1 The result of the archaeological evaluation have supported the conclusions reached as a result of the monitoring of the deeper borehole survey at the site and those of the findings of the DTA (Douglas 2010) in that the site appears to be situated partially in a palaeo-channel and partially on the foreshore of an eyot.

8.7.2 The evidence from evaluation Trench 1 suggests that within the site there was some impact resulting from Roman / Romano British activity along the sandy gravel foreshore of the Bermondsey eyot on the south side of the site into the alluvial fill of the channel to the north. This was represented by a 0.10m thick layer of silt sand clayey gravel that containing two sherds of Roman pottery.

8.7.3 Medieval and post-medieval alluvial deposits, approximately 2.40m thick, were observed across Trench 1. The alluvial deposits were sealed by modern demolition rubble / and make-up associated with the demolition of the post World War II petrol station which had occupied the site.

8.7.4 It is recommended that the results of this watching brief and evaluation be included in the London Archaeologist yearly round-up summaries.

9 BIBLIOGRAPHY

9.1 Printed Sources

Allen, M, J, Scaife, R, Cameron, N, and Stevens, C, J, 2005, 'Excavations at 211 Long Lane Southwark Part 1: prehistoric Neckinger-side environment in Southwark and its implications for prehistoric communities', *London Archaeologist* Vol. 11, No 3.

Cowan, C, Seeley, F, Wardle, A, Westman, A, Wheeler, L, 2009, Roman Southwark settlement and economy, Excavation in Southwark 1972-91, Museum of London Monograph 42.

Dyson, T, Samuel, M, Steele, A, and Wright, S, M, 2011 The Cluniac priory and abbey of St Saviour Bermondsey, Surrey, Excavations 1984-95, MOLA Monograph 50, Museum of London Archaeology.

Douglas, A., 2010, '*An Archaeological Desktop Assessment of a Site at 161-171 Abbey Street, London Borough of Southwark, SE1'*. Pre-Construct Archaeology Limited: Unpublished Report.

Douglas, A, in prep The Bermondsey Square Project, PCA monograph series.
Greater London Archaeological Advisory Service, 2009. *Archaeological Guidance Papers 3: Standards and Practices in Archaeological Fieldwork in London.*
Institute of Field Archaeologists 1993. *Standards in Archaeological Practice.*

Moore, P 2012, 'Written Scheme of Investigation for an Archaeological Watching Brief & Evaluation at 161-171 Abbey Street, London Borough of Southwark SE16 3NS'. Pre-Construct Archaeology Limited: Unpublished Report.

Sidell, J, Cotton, J, Rayner, L, and Wheeler, L, 2002, The prehistory and topography of Southwark and Lambeth, Museum of London, Monograph 14.

Southwark Council, 2007 Southwark Plan.

Southern Testing Environmental & Geotechnical, 2010, '*Desk Top, Preliminary Site Investigation & Risk Assessment Report'.*

10 AKNOWLEDGEMENTS

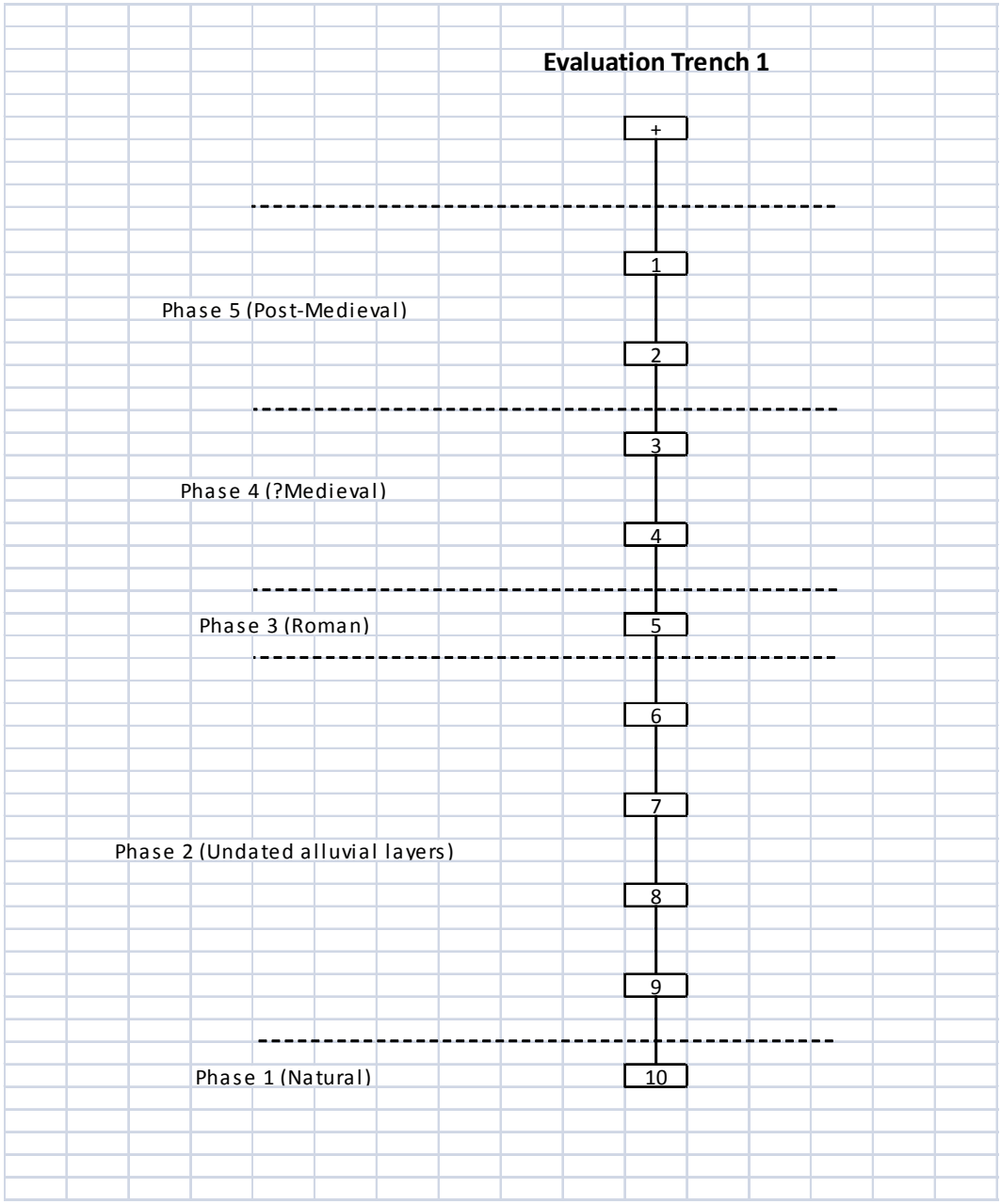
10.1 Pre-Construct Archaeology Ltd would like to thank FQ Contractor Limited for commissioning the archaeological work. Thanks also to Dr Christopher Constable, Senior Archaeologist for the Planning and Regeneration Department, who monitored the project on behalf of the London Borough of Southwark.

10.2 Furthermore the author would also like to thank: Peter Moore for project managing and Frank Meddens as post-excavation manager and for the editing of this report; Guy Seddon for supervising the evaluation; Matt Edmonds for the field work; Mark Roughley for the illustrations; Berni Seddon for her assessment of the post-medieval pottery and CBM; Katie Anderson for the assessment of the Roman pottery; Kevin Rielly for the animal bone assessment; Lisa Snape for the environmental assessment; Rick Archer for the surveying and Chris Cooper for his help with project logistics.

11 APPENDIX 1: CONTEX INDEX

Context No	Trench No	Phase	Plan	Section	Type	Description	Highest Level	Lowest Level	Pottery	CBM	Burnt Flint	Animal bones	Environmental samples
1	1	5		1	Layer	Post-medieval alluvial layer	2.65m OD	2.60m OD					
2	1	5		1	Layer	Dark grey alluvial layer	1.69m OD	1.51m OD	Yes	Yes			1
3	1	4		1	Layer	Light grey alluvial layer	0.55m OD	0.36m OD					1, 4
4	1	4		1	Layer	Dark grey alluvial layer	0.28m OD	0.23m OD					1, 3
5	1	3		1	Layer	Mid grey silty sandy clayey gravel layer	0.20m OD	0.17m OD	Yes		Yes	Yes	1, 2
6	1	2	Eval. Trench 1	1	Layer	Dark grey gravelly sand layer	0.08m OD	-0.06m OD					1, 5
7	1	2		1	Layer	Light grey sandy gravel layer	0.02m OD	-0.09m OD					1
8	1	2	Eval. Trench 1	1	Layer	Dark grey silty gravelly sand layer	-0.06m OD	-0.15m OD					1
9	1	2		1	Layer	Mixed sandy gravel layer	-0.52m OD	-0.55m OD					1
10	1	1	Eval. Trench 1	1	Layer	Natural sandy gravel	0.17m OD	-0.77m OD					

12 APPENDIX 2: SITE MATRIX



13 APPENDIX 3: OASIS REPORT FORM

OASIS DATA COLLECTION FORM: England

List of Projects | Manage Projects | Search Projects | New project | Change your details | HER coverage | Change country | Log out

Printable version

OASIS ID: preconst1-136953

Project details

Project name	An Archaeological Watching Brief and Evaluation at 161-171 Abbey Street, London Borough of Southwark, SE16 3NS
Short description of the project	The archaeological watching brief, undertaken on the location and removal of the petrol tanks, allowed assessing the extent and conditions of the surviving archaeological deposits. The evaluation of the site comprised a single evaluation trench (Trench 1) excavated to the east of two underground petrol tanks associated with the footprint of the petrol station recently demolished on site. The results of the deeper borehole survey at the site are also incorporated into this report. The archaeological investigations have provided evidence to determine the palaeotopography of the study site. The archaeological evaluation demonstrated that natural sand and gravel deposits slope downwards from the south to the north of the study site, possibly representing an edge of the Bermondsey eyot (island). The results of the archaeological evaluation have supported the conclusions reached during the monitoring of archaeological work at Abbey Street and with the research of the DTA. The evidence from evaluation Trench 1 suggest that within the site there was a possible encroachment by the Romans from the sandy gravel eyot to the south of the site into the alluvial fill of the channel to the north of the site which was represented by a 0.10m thick layer of silt sand clayey gravel that contained two shard of roman pottery.
Project dates	Start: 10-10-2012 End: 15-10-2012
Previous/future	No / Not known

work	
Any associated project reference codes	ABS12 - Sitecode
Type of project	Field evaluation
Site status (other)	Marginal to Southwark Archaeological Priority Zone
Current Land use	Vacant Land 1 - Vacant land previously developed
Monument type	OCCUPATION LAYER Roman
Significant Finds	POTTERY Roman
Methods & techniques	""Sample Trenches""
Development type	Urban residential (e.g. flats, houses, etc.)
Prompt	Direction from Local Planning Authority - PPG16
Position in the planning process	Not known / Not recorded

Project location

Country	England
Site location	GREATER LONDON SOUTHWARK SOUTHWARK 161-171 Abbey Street, London Borough of Southwark
Postcode	SE16 3NS
Study area	260.30 Square metres
Site coordinates	TQ 3080 7945 51 0 51 29 54 N 000 06 55 W Point
Height OD / Depth	Min: -0.77m Max: 0.17m

Project creators

Name of Organisation	Pre-Construct Archaeology Limited
Project brief originator	PCA
Project design originator	Peter Moore
Project director/manager	Peter Moore
Project supervisor	Ireneo Grosso and Guy Seddon
Type of sponsor/funding body	Property Developers
Name of sponsor/funding body	FQ Contractors Limited

Project archives

Physical Archive recipient	LAARC
Physical Contents	''Animal Bones'',''Ceramics'',''Worked stone/lithics''
Digital Archive recipient	LAARC
Digital Media available	''Images raster / digital photography'',''Spreadsheets'',''Survey'',''Text''
Paper Archive recipient	LAARC
Paper Media available	''Context sheet'',''Matrices'',''Miscellaneous Material'',''Photograph'',''Plan'',''Report'',''Section''

Project bibliography 1

Publication type	Grey literature (unpublished document/manuscript)
Title	An Archaeological Watching Brief and Evaluation at 161-171 Abbey Street, London Borough of Southwark, SE16 3NS
Author(s)/Editor(s)	Grosso, I.
Date	2012
Issuer or publisher	Pre-Construct Archaeology Limited
Place of issue or publication	London
Entered by	Ireneo Grosso (igrosso@pre-construct.com)
Entered on	6 November 2012

OASIS:

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14 APPENDIX 4: PLATES

Plate 1: Trench 1 looking north.

Plate 2: Petrol tank located west of site, looking north.

15 APPENDIX 5: ROMAN POTTERY ASSESSMENT

By Katie Anderson

Two sherds of Roman pottery were recovered from the excavations, weighing 48g, from a single context (5). This comprised a Gaulish amphora sherd (30g), dating AD50-250, which had use-wear residue on the interior. The second sherd comprised a Cologne colour-coated sherd (18g), dating to AD100-140. The sherd had evidence of post-breakage burning and also some sort of tar use-wear on the interior. The very small quantity of Roman pottery recovered suggests minimal activity on this site during the Roman period.

16 APPENDIX 6: POST-ROMAN POTTERY ASSESSMENT

By Chris Jarrett

A single sherd of Post-medieval pottery (37g) was recovered from the site which was found in layer [2], Phase 5. The pottery consists of a Surrey-Hampshire border whiteware with green glaze (BORDG). It derives from a medium rounded bowl with a narrow, squared rim. The vessel exterior is rilled and glazed internally. This fragment dates to between AD 1550-1700, and so dates the context. The pottery is of no particular significance, being a common pottery type found in the London area. Its potential is limited to dating the context it was found in and there are no recommendations for further work.

17 APPENDIX 7: CERAMIC BUILDING MATERIAL ASSESSMENT

By Berni Sudds

Two fragments of peg roofing tile were recovered from layer [2], Phase 5. Both are in fabrics well-paralleled in the London region, namely fabrics 2586 and 2587. The larger of the two has very fine moulding sand and part of a square or diamond shaped peg hole. A date to post c.AD 1500 / 1600 is most likely for this tile given the fine, even forming and firing. The smaller fragment is abraded and likely to be of slightly earlier date, perhaps even late medieval or transitional. As commonly occurring types no further analysis or discussion of the tiles is recommended.

18 APPENDIX 8: ANIMAL BONE ASSESSMENT

By Kevin Rielly

A total of 4 animal bones were recovered from context [5], interpreted as a probable consolidation/ reclamation layer dated to the Roman period (2 Roman potsherds were found in the same deposit). The bone collection includes three equid fragments, the first two from adult individuals (at least 2 years old), a complete right radius and a loose right mandibular third adult molar, and a probably adult right pelvic fragment from the posterior (ischial) end of the bone. In addition there was one cattle bone, a right distal humerus featuring most of the shaft, this with a just fused distal end and thus from a juvenile (1st year) individual. All the bones are in good condition, although the humerus has suffered some dog gnawing at the articular end. The completeness of the equid radius allows for a calculation of shoulder height. It had a greatest length of 332mm and a lateral length of 314mm, the latter dimension being used (following von den Driesch and Boessneck 1974) to extrapolate a height of 1362.7mm. This radius could then have belonged to a medium sized pony.

This collection has limited value, perhaps of some use concerning ongoing studies of the type(s) of equids used in the capital during the Roman period. It is also perhaps of interest that the collection was largely composed of equid remains, potentially from the same adult individual. There is ample evidence for the dumping of equid carcasses at the fringes of the Roman settlement (see Barber and Bowsher 2000, 80), in this case possibly related to the potential satellite community based on this eyot, as demonstrated by the structural and artefactual evidence recovered from the Bermondsey Abbey sites (see Douglas in prep and Dyson et al 2011). However, there is always the possibility that this animal may represent the remains of a beached carcass which had been originally disposed of somewhere upstream.

References

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

Dyson, T, Samuel, M, Steele, A, and Wright, S, M, 2011 The Cluniac priory and abbey of St Saviour Bermondsey, Surrey, Excavations 1984-95, MOLA Monograph 50, Museum of London Archaeology

Douglas, A, in prep The Bermondsey Square Project, PCA monograph series.

19 APPENDIX 9: ENVIRONMETAL ASSESSMENT

By Lisa Snape

INTRODUCTION

This report summarises the findings arising from the rapid assessment of samples obtained from various contexts and deposits excavated at an archaeological watching brief and evaluation at 161-171 Abbey Street, London Borough of Southwark, (SE16 3NS).

AIMS AND OBJECTIVES

Samples were taken in order to provide an overview of the contents of the bulk samples and determine the potential of the samples for understanding the general environmental and geoarchaeological context of the site.

METHODOLOGY

Four bulk samples were processed by flotation following Kenward *et al*., 1980. The flot (light fraction) was captured under the flume using a 300micron mesh and the remaining residue (heavy fraction) was collected using a 1mm mesh placed within the tank. One sample <2> was moderately organic and was wet-sieved through 1 and 300micron sieves. The processed samples were dried at room temperature, and sorted through a 4, 2 and 1mm sieve stack to aid the sorting of residues. The residues were scanned 'by-eye' to extract artefacts such as pottery, animal bone and unfloated organic remains such as charcoal and hazelnuts. The abundance of each was recorded from 1-4 on *pro-forma* sheets (1: occasional, 2: fairly frequent, 3: frequent and 4: abundant) and then entered into the database. Four columns were taken (sample <1>) from section 1 through contexts [2] – [9]. The sedimentary sequence was logged noting percentage and frequency of inclusions, sorting, texture and sediment colour using standard Munsell colour charts.

RESULTS

The results from the bulk samples are presented in table 1 and sedimentary descriptions of column sample <1> are presented in table 2.

Sample number	Context number	Volume of sediment processed (L)	Flot				Residue					
			Charcoal	Charred seeds	Uncharred seeds	Wood	Burnt flint	Struck flint	Large animal bone	Small animal bone	Pot	Seeds
<2>	[5]	18 L	2	1	4	4	4	1	1	-	-	-
<3>	[4]	18 L	1	1	1	-	1	-	1	1	1	-
<4>	[3]	19 L	-	-	2	4	-	-	-	-	-	1
<5>	[6]	22 L	1	-	1	4	-	-	-	-	-	-

Table 1.

Context number	Stratigraphy	Sedimentary description
2	Alluvium (Upper)	10YR4/2 Dark grayish brown. Clay. Occasional shell fragments (5% frequency). Bands of detrital organic matter. Vivianite present.
3	Alluvium	10YR3/1 Very dark grey. Silty clay. Occasional shell fragments and flecks of charcoal (5% frequency).
4	Alluvium	10YR3/1 Very dark grey. Silty clay. Occasional shell fragments and flecks of charcoal (5% frequency).
4	Organic alluvium	10YR2/1 Black. Clay. Well sorted. Occasional gravel inclusions (<5% frequency), <1cm in size.
5	Alluvium (Lower)	10YR2/1 Black. Silty clay. Well sorted, Flecks of charcoal (5% frequency) and vivianite.
6	Fluvial grave8ls	10YR4/3 Brown. Coarse sands and gravels. Moderately sorted. Gravel 1-4cm in size and sub-rounded in shape.
7	Coarse fluvial sands	10YR4/3 Brown. Coarse moderately sorted sands. Occasional gravel inclusions (5% frequency), 2-4cm in size, subrounded in shape. Patches/lenses of coarse sand.
8	Coarse fluvial sands and gravels	10YR4/4 Dark yellowish brown. Coarse poorly sorted sands and gravels. Frequent gravel inclusions (10% frequency), 1-4cm in size.
9	Coarse fluvial sands	10YR4/4 Dark yellowish brown. Coarse well sorted sands. Occasional gravel inclusions (<5% frequency), 1cm in size.

Table 2

DISCUSSION AND CONCLUSION

Archaeological material (occasional pot, animal bone, and burnt / struck flint) was obtained from samples <2> [5] and <3> [context 4], all other samples were devoid of artefacts. Context [5] was later spot dated to the Roman period. Contexts [3] and [6] remain undated, these alluvial layers produced no significant archaeological material, mainly degraded wood, some charred hazelnuts, uncharred seeds and charcoal was retrieved from the samples. This organic material is likely to have built up due to natural processes.

The column sample shows a graded sequence, from coarse fluvial sands and gravels at the base through to fine-grained alluvium deposited above. This shows high energy fluvial energy which then decreases in strength before the deposition of fine sediments indicative of low energy currents.

RECOMMENDATIONS

Due to the small number of samples taken from the Roman and Medieval alluvial deposits, the samples mainly yielded detrital organic material. No further work is recommended on the samples. Column samples <1> should be retained for further detail assessment if further fieldwork is planned.

BIBLIOGRAPHY

Kenward, H, K., Hall, A,R., and Jones, A, K, G (1980). A tested set of techniques for the extraction of plant and animal macrofossils from waterlogged archaeological deposits. *Science and Archaeology* 22, 3-15.

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