

THAMES WATER MAINS REPLACEMENT

BOROUGH HIGH STREET

LONDON BOROUGH OF SOUTHWARK

AN ARCHAEOLOGICAL WATCHING BRIEF



December 2010



COMPASS



ARCHAEOLOGY

THAMES WATER MAINS REPLACEMENT
BOROUGH HIGH STREET
LONDON BOROUGH OF SOUTHWARK SE1
AN ARCHAEOLOGICAL WATCHING BRIEF

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Abstract

The watching brief was proposed by the LB of Southwark following consultation by Thames Water, and reflected the archaeological potential of this area for a range of prehistoric to post-medieval remains. In particular, both records and previous archaeological investigation indicate the existence of a significant later medieval and early post-medieval settlement, developing along the Roman road.

An archaeological watching brief was undertaken during Thames Water mains replacement works between 12th December 2009 and 6th August 2010. The works were located on both carriageways of Borough High Street, and into some of the yards and side streets leading off Borough High Street. Most of the work on the eastern side of the road involved open cut trenching, generally to a depth of about 1.0m to 1.5m, on the western side of Borough High Street the work was mainly in the form of insertion.

Relatively little of archaeological significance was exposed during the course of the watching brief. Trenching on Borough High Street, White Hart Yard, Talbot Yard, Mermaid Court and Chapel Court exposed existing road layers overlying mixed deposits of modern service intrusions and earlier road consolidation layers. The latter deposits consisted of banded layers of gravels and sand of varying colour and consistency. Deposits to the south of the study area, around the church of St George the Martyr produced a small amount of residual Roman material including pottery and ceramic building material, although no in situ material was recorded. To the north, around the area of Counter Court and the former site of St Margaret's Church, a small assemblage of human bone was recorded from redeposited material in road consolidation layers

In most areas the groundworks revealed heavy modern disturbance and backfill, mainly from existing services that ran within or adjacent to the current works. No significant archaeological finds or features were recorded during the course of the archaeological watching brief.



Frontispiece: General view of mains replacement works outside St George's Church looking south at the junction of Tabard Street.

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1. Introduction

- 1.1 This report describes the results of an archaeological watching brief carried out during Thames Water water mains replacement works in the area of Borough High Street, London Borough of Southwark, SE1 between 11th December 2009 and 6th August 2010 (*cf.* Figure 1).
- 1.2 This area falls within an Archaeological Priority Zone (APZ) 'Borough, Bermondsey and Rivers' as defined in the Southwark Unitary Development Plan (Policy 3.19). Previous archaeological investigation in the locality has revealed considerable evidence for prehistoric to post-medieval activity, and it is well recorded that there was a thriving Roman settlement in the Borough area.
- 1.3 Monitoring was undertaken of contractors trenching between the Borough High Street and Southwark Street junction in the north (NGR TQ 3267 8017) and St George the Martyr with St Jude's Church at the junction of Borough High Street and Marshalsea Road/Great Dover Street (NGR TQ 3246 7976) (*cf.* Figure 1 below).

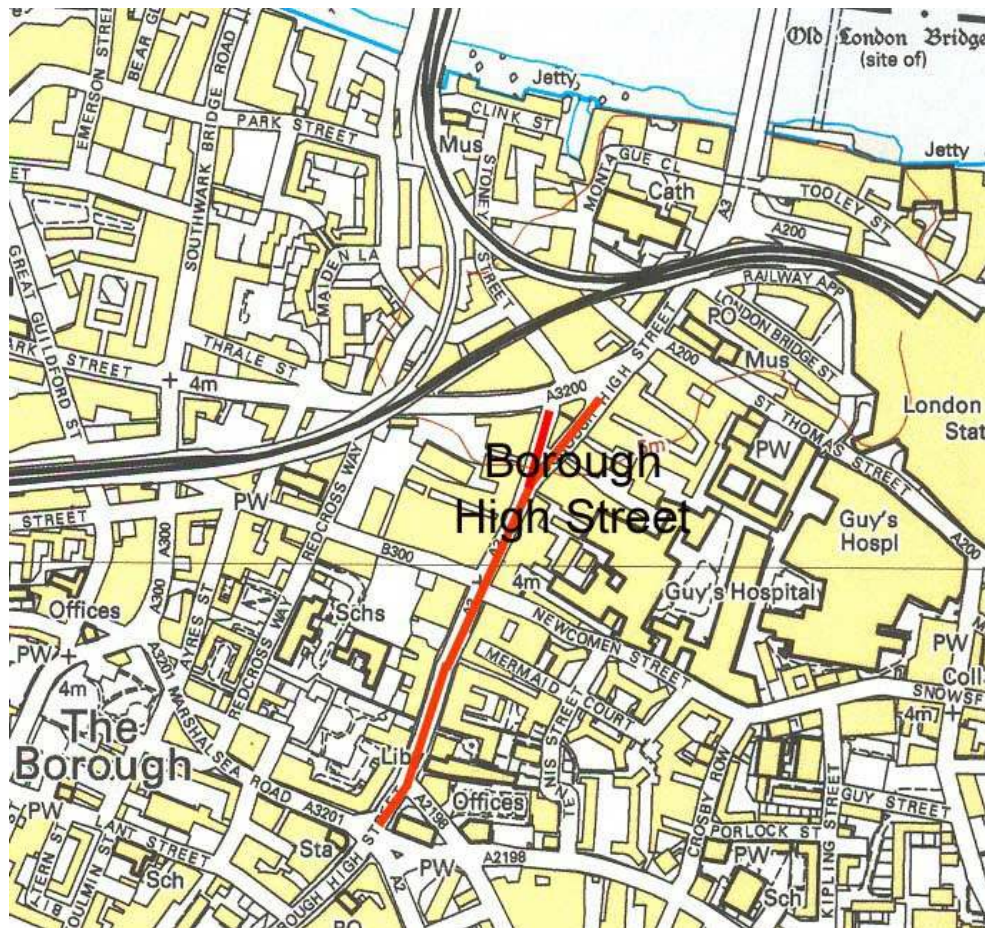


Figure 1: Location of the watching brief works in relation to the current Ordnance Survey map.

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- 1.4 The archaeological monitoring included an on-site photographic and written record. At a minimum a series of Trench Record sheets were completed for individual excavations or sections of open-cut trench, recording the nature of exposed deposits and details on any archaeological finds and features (including collection of datable finds/ samples). The groundworks were related to local Ordnance Survey grid and level data.
- 1.5 The archaeological work followed consultation by Thames Water Utilities and recommendations from Dr Chris Constable, Senior Archaeology Officer of the London Borough of Southwark.

The watching brief was commissioned by Claire Hallybone, Asset Planner – Archaeologist, Thames Water Utilities. Further assistance during the fieldwork was given by Tobie MacWilliam, the representative of the main contractor, Morrison Utility Services.

Paul Blinkhorn (Archaeological Consultant) provided fabric and dating information on the pot and CBM samples and finds. Jon Cotton (Senior Curator (Prehistory) Early London History and Collections Department Museum of London) kindly examined the worked flint fragment.

2. Site Location and Geology

- 2.1 The British Geological Survey (*Sheet 270*, 1998) shows that much of this area of Southwark is covered by comparatively recent alluvium which overlies a series of River Terrace gravel islands or eyots (up to *c* +2.0m OD) separated by very low-lying areas intersected by tidal channels and wetlands – an area especially susceptible to flooding. The recent geology of this area, with its low-lying topography and close proximity to the Thames, has been formed through the wider effects of fluctuating sea levels upon the fluvial regime.
- 2.2 Geoarchaeological research and fieldwork in the 1990s, much of it in association with the Jubilee Line Extension Project, has created a base model for the drift geology and topography of this area in relation to the Holocene evolution of the Thames. This has also allowed the prehistoric and Roman landscape to be mapped and understood more clearly than in many parts of London (*cf.* MoLAS 2000, Map 8; Sidell *et al* 2002 & 2004). Other smaller projects, such as that carried out by Compass Archaeology at 120–126 Tooley Street (Miles 2002), have further defined the lithostratigraphy for these early deposits, and have been valuable in understanding the later medieval and post-medieval archaeology of the area.

3. Archaeological and Historical Background

3.1 Prehistoric and Roman

Previous investigation in this area has produced evidence for prehistoric and Roman activity, with the High Street located in the centre of the Roman settlement that grew up around London Bridge. In Roman times the Thames valley looked very different from today. The river was wider and shallower. The main Roman city of Londinium

(present day City of London) was built on the higher northern side of the river. The Southwark side consisted of low-lying marshes and mudflats with a number of higher sand and gravel islands. The Romans settled on the banks of the Thames just after AD43. They built a bridge across from Londinium to the largest of the gravel islands, which corresponds to the Borough area of Southwark today (*cf.* Fig 2). Major roads were built to other Roman cities in the south of England, including Stane Street to Chichester (Borough High Street, Newington Causeway and Kennington Park Road) and Watling Street to Canterbury (meeting Borough High Street near Borough Tube Station and following the route of the present Great Dover Street/Tabard Street and continuing as the Old Kent Road)¹.

It was originally thought that Roman Southwark was a small settlement around the approach to London Bridge (present day Borough High Street), but excavations from the 1970s onwards² and especially the recent Jubilee Line extension excavations have revealed remains of a large settlement that was probably viewed as an extension of Roman London³.

Some of the buildings located in the north part of Southwark were large and prestigious stone buildings with mosaic floors, hypocaust heating systems and in one case, elaborately painted wall frescos. Marble inscriptions and other finds indicate a connection with the government and the military.

Wooden jetties, warehouses and other remains of waterfront activities show that the Southwark riverside was a centre of trade. Remains of goods, such as fish sauce from Spain, show close links with the rest of the Roman Empire.

An important find at Tabard Place in 2002 at the site of a Romano-Celtic temple also shows the strong links between Southwark and the rest of the Roman Empire. It is a marble tablet with part of an inscription that mentions a deity known to originate in the Rheims area of France. The traders dedicating the tablet may have been involved in the importation of wine to England. The tablet is also significant as it is one of only two to mention London in the word *Londoniensi*. Cemeteries, mausolea and temple remains also show that Roman Southwark was an important settlement. Under today's Southwark Cathedral a number of religious sculptures were found that had been deliberately broken and thrown into a well. This indicates that the site of the cathedral may well have been chosen to replace an earlier Roman temple.

Archaeological excavations have also uncovered remains that were affected by fire, probably occurring during the Boudican rebellion of AD 60. While most of the Roman archaeology is concentrated in the north part of Southwark, some finds and remains show that there were farms and other buildings south of the borough and extending along the Old Kent Road.

¹ Some of the data in this section is sourced from the LB of Southwark 'Archaeology in Southwark' website, but has been added to for this report please refer to the original text before quoting from this material

² Sidell, J. *et al* 2002 The prehistory and topography of Southwark and Lambeth. *MoLAS Monograph*

³ Sidell, J. *et al* 2004 The Holocene Evolution of the London Thames *MoLAS Monograph* 5.

3.2 Saxon, Medieval and Post-medieval

The famous Borough area and Borough High Street has a complex history and there is also much evidence for medieval and early post-medieval activity, for this reason only those sites along the watermain replacement area are discussed here (*cf.* Hinton, P (Ed) 1988; Sidell, J. *et al* 2002). The stretch of Borough High Street south of the junction with Long Lane, Marshalsea Road and Tabard Street, near the church of St George the Martyr, was formerly called 'Blackman Street' after a long resident family there. The famous Borough Market was once held on the street, but was moved to the west with its main entrance on Southwark Street. The earliest recorded name for the street is simply 'The Borough', which was the part between the fork of the street and London Bridge. South of the fork it was previously called 'St Margaret's Hill'. These names were subsumed in the Tudor period as '*Longe Southwark*' (differentiated from 'Short Southwark' now Tooley Street) and by the late Georgian era as simply 'High Street' and the northern section from the junction with Duke Street Hill was renamed 'Wellington Street' to commemorate the Duke of Wellington. From the 1890s the London County Council started to rationalise all metropolitan street names and 'Borough High Street' became the name for the current route.

Before the building of Westminster Bridge, Borough High Street was the only connection to London from the south. In medieval times as many as twenty-three large, courtyard and multi-tiered galleried coaching inns grew up along this major communications route, mainly on the east side and these included the Bear, the Queen's Head, the King's Head, the Catherine Wheel, the Tabard, the White Hart and still extant the George. The Tabard Inn, probably the oldest, just south of the George, was a popular starting point for pilgrims to Canterbury and was featured by Chaucer in his *Canterbury Tales*. Many of the sites along Borough High Street have similarly complex histories, for example the church of St George the Martyr is famous for its connections with Dickens' *Little Dorrit*. The area to the west of the High Street has also always been dominated by prestigious religious institutions such as Winchester Palace and the church of St Mary Overie – later St Saviour and then Southwark Cathedral and to the east of the High Street the area is characterised by hospitals, with from the twelfth century St Thomas' Hospital to the east until the 1850s and Guy's Hospital adjacent.

At 180 Borough High Street (opposite Borough Tube Station) is the site of a mansion called Suffolk Place, demolished in 1557. It is depicted in Wyngaerde's sixteenth century *Panorama of London*, which features Borough High Street prominently in the foreground of the picture. After demolition the site of the mansion and the area to the west of Borough High Street in this area became notorious as the criminal enclave of The Mint, described by Defoe in his novel *Moll Flanders* 1722. The infamous Marshalsea and King's Bench Prisons were also located on Borough High Street, with the Clink prison (1509 until 1745) on the river just to the west. King's Bench Prison was partly on the site marked '*Borough Goal*' just above St George's Church on Figure 2 above (an extract from Horwood's map of 1799) but by *circa* 1760 it had moved to Borough Road to the west. The most notorious prison of the three was the Marshalsea debtors' prison, which is still shown on Horwood just below King Street, but had stood on a number of sites and had by this time virtually closed. The last location of the Marshalsea was in the area that is now Southwark's Local Studies Library at 211 Borough High Street, before it moved to the modern sessions House,

Newington Causeway. It was at this latter site that Bishop Bonner spent many years and also Charles Dickens' father was imprisoned for debt in 1824.

In the 1820s Borough High Street was widened and realigned to the west for the construction of John Rennie's London Bridge. The new bridge was built 100 feet (30 m) west (upstream) from the original site by Rennie's son (of the same name). Work began in 1824 and the foundation stone was laid, in the southern cofferdam, on 15 June 1825. The old bridge (approximately 600 years old) continued in use as the new bridge was being built, and was demolished after the latter opened in 1831. The scheme necessitated the building of major new approach roads, which cost three times that of the bridge itself. The total construction cost of around £2.5 million and was met by the Corporation of London and the government. In 1864/5 Southwark Street was created to improve east to west communication from London Bridge to Blackfriars Bridge, and to provide a route for a new main sewer and this formed the 'fork' at the junction with Borough High Street. Southwark Street and the new properties built along it enhanced the industrial focus of the area, but its construction and the building of the railway extensions from London Bridge to Cannon Street and Charing Cross made many thousands homeless. This new route cut across Stoney Street and isolated its southern end. The small alleyway connecting the two branches of the 'fork' is named 'Counter Court'. The railway viaduct across the street was also erected in 1864/5 and this cut across a quadrant of both the main streets. These changes are principally responsible for the very erratic numbering system for properties along Borough High Street⁴.

From 1967 to 1972 the current and wider London Bridge was constructed and opened by Queen Elizabeth II on 17 March 1973. The current bridge was built in the same location as Rennie's bridge, although wider to the west, with the previous bridge remaining in use while the first two girders were constructed upstream and downstream. Traffic was then transferred onto the two new girders, and the previous bridge demolished to allow the final two central girders to be added.

⁴ Sir Howard Roberts and Walter H. Godfrey (editors) 1950 *Survey of London: volume 22: Bankside (the parishes of St. Saviour and Christchurch Southwark)* (1950), pp. 9.

3.3 Historic Map Regression



Figure 2: Extract from the Faithorne and Newcourt map of 1658 (reproduced by the London Topographical Society 1905) showing the Borough area and Bankside, with London Bridge further to the east than its present location. The area was made up of five main roads: Borough High Street running south from London Bridge; Kent Street running south east from Borough High Street; Tooley Street heading east from London Bridge; Bermondsey Street running off Tooley Street; and finally, Bankside heading west along the riverside and ending in the marsh.



Figure 3: Extract from John Rocque's map of 1746 showing the whole area built up by this time and many of the garden plots shown on the Faithorne and Newcourt map of 1658 infilled with buildings. The locations of the Clink, Marshalsea and King's Bench prisons are all shown on the map.

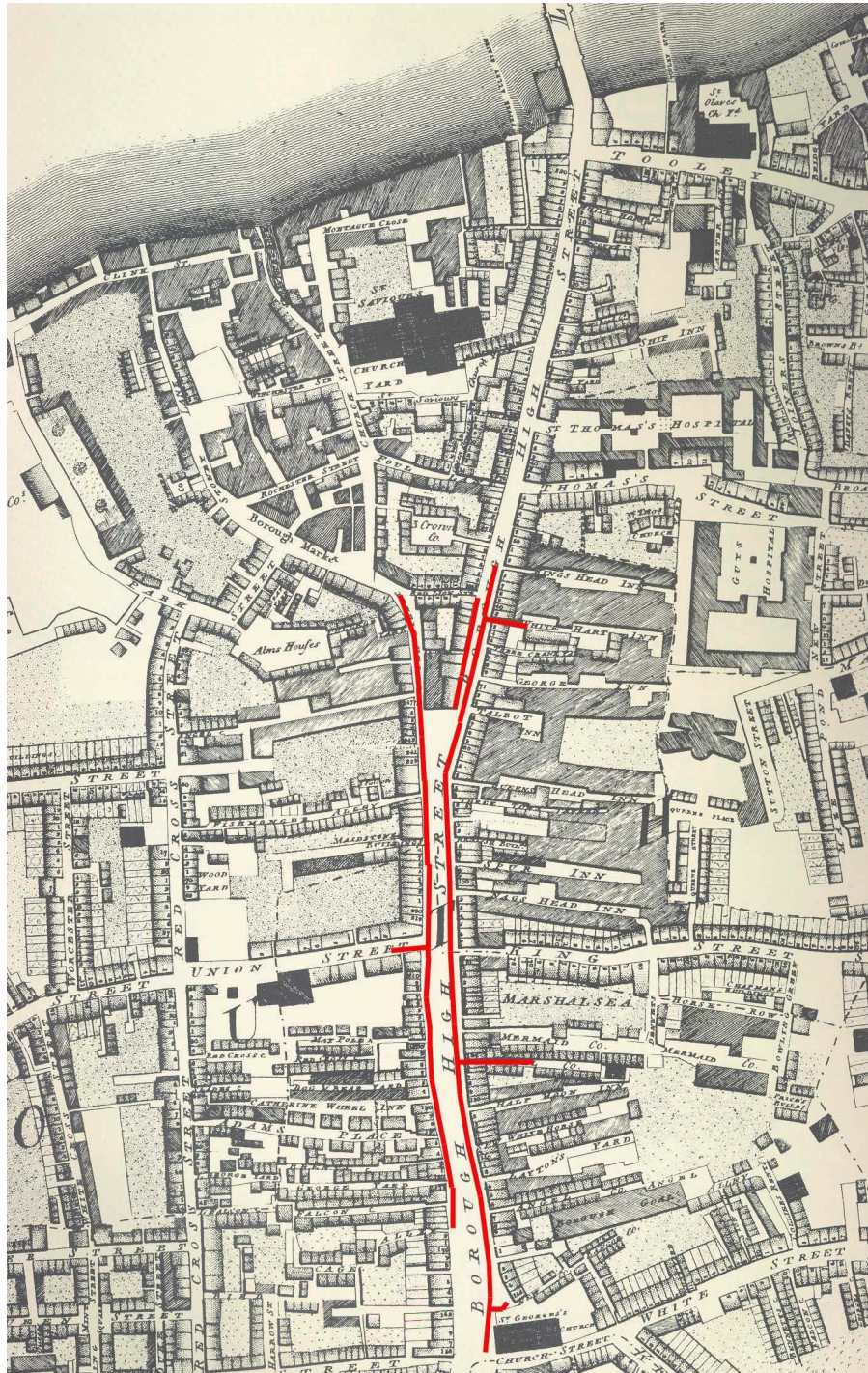


Figure 4: Extract from Horwood's map of circa 1799 (with re-issues up to 1819), showing Borough High Street still broadly following the same alignment as shown on the Faithorne and Newcourt map of 1658, although St Thomas' Hospital and Guy's Hospital (and 'Mad House') and the coaching inns are now more clearly shown. The two Marshalsea Debtors' Prisons are also shown in more detail. The earlier site is noted *Marshalsea* above *Mermaid Court* and the later *Borough Goal* [sic] below *Layton's Yard*. The major routes of the works are shown in red.



Figure 5: Extract from Cruchley's *New Map of London* 1835. By 1835 virtually all of north Southwark had been developed, this was made possible by the construction of new bridges over the Thames and the draining of St George's Fields twenty-five years earlier. Rennie's New London Bridge was completed in 1831, located 100 feet (30 m) west (upstream) of the earlier bridge, and the High Street (Wellington Street) was also widened to the west.

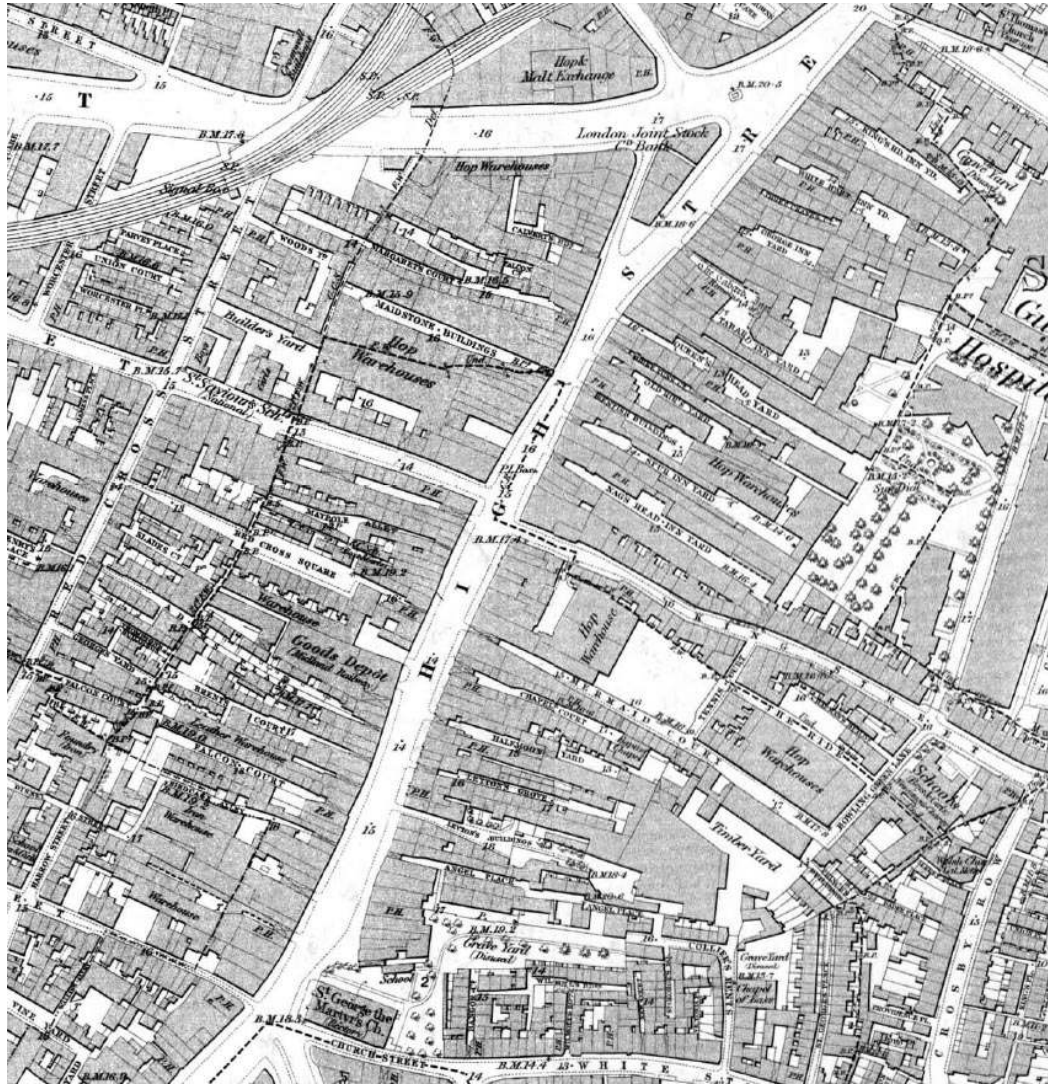


Figure 6: Plan of the central Watching Brief area of Borough High Street area from the Ordnance Survey 25 inch First Edition map, surveyed 1872, after the formation of Southwark Street and the railway 1864/5.

4. Archaeological Research Questions

The research objectives of the archaeological watching brief as set out in the preliminary *Specification* (Compass Archaeology Sept. 2009, Section 6), were as follows:

- Is there any evidence for prehistoric to post-medieval activity, and what is the nature of this?
- What can this project contribute to current research concerning the topographical and geological models for this area?
- Does the historic street frontage shown on early maps survive under the roadway in this area?
- What is the nature, form, date and extent of these deposits?

- Can the remains of specific historic buildings be pinpointed in the mains work?
- What can this project contribute to our knowledge of the social, commercial, residential and industrial heritage of the area?
- At what level do archaeological deposits survive in the highways across the area?
- At what level do natural deposits and flood deposits survive across the area?
- Can the watching brief works inform on the site-specific research questions of local archaeological sites and archaeological priority areas or inform on London wide research frameworks?

5. The Archaeological Programme

5.1 Standards

The field and post-excavation work was carried out in accordance with current English Heritage guidelines (in particular, *Standards and Practice in Archaeological Fieldwork, Guidance Paper 3*) and to the standards of the Institute for Archaeologists (*Standard and Guidance for Archaeological Watching Briefs*). Overall management of the project was undertaken by a full member of the Institute.

The recording system followed the procedures set out in the Museum of London recording manual. By agreement with MoLA the recording and drawing sheets used were directly compatible with those developed by the museum.

5.2 Fieldwork

The archaeological watching brief took place during contractors' groundworks, and involved generally two archaeologists on site as required monitoring works and investigating and recording any archaeological remains. Close liaison was maintained with the groundworks team to ensure a presence on site as and when necessary.

Where archaeological remains were exposed adequate time was allowed for investigation and recording, although every effort was made not to disrupt the contractor's programme.

The Client and the representatives of the London Borough of Southwark were kept advised of the progress of the fieldwork.

5.3 Methodology

Archaeological deposits and features were investigated and recorded in stratigraphic sequence, and where appropriate finds dating and environmental evidence recovered.

Archaeological deposits and features were recorded as appropriate on *pro-forma* context or trench sheets, and/or drawn in plan or section generally at scales of 1:10 or 1:20. The investigations were recorded on a general site plan and related to the Ordnance Survey grid. The fieldwork record was supplemented as appropriate by photographic images (35mm monochrome print/ digital).

6. Post-excavation Work

The fieldwork was followed by off-site assessment and compilation of this report, and by ordering and deposition of the site archive.

6.1 Finds and samples

Finds and samples were treated in accordance with the appropriate guidelines, including the Museum of London's *'Standards for the Preparation of Finds to be permanently retained by the Museum of London'*. Finds and artefacts were retained and bagged with unique numbers related to the context record. Assessment of finds and samples was undertaken by appropriately qualified staff.

6.2 Report Procedure

Copies of this report will be supplied to the Client, and the London Borough of Southwark and the relevant local studies libraries.

A short summary of the fieldwork is appended using the OASIS Data Collection Form, and in paragraph form suitable for publication within the 'excavation round-up' of the *London Archaeologist*.

7. The Site Archive

The records from the archaeological project will be ordered in line with MoL *Guidelines for the Preparation of Archaeological Archives* and will be deposited in the Museum of London Archaeological Archive. The integrity of the site archive should be maintained, and the landowner will be urged to donate any archaeological finds to the Museum.

8. The Archaeological Watching Brief

The archaeological watching brief was undertaken during contractors groundworks along a section of Borough High Street between St George the Martyr's Church to the south and the junction with Southwark Street to the north. The groundworks took place as part of a Thames Water Utilities Ltd scheme of Victorian water mains replacement. Contractor methods included open cut trenching, directional drilling, pipe-bursting and insertion. Archaeological monitoring was undertaken on areas of open-cut trenching, trial pits and in launch pit areas, access pits and exit points of other methods. Approximately 500m of trenching was observed within the study area; trenching was located in both the east and west carriageways of the main road and along several side streets to the east. The results of the archaeological watching brief are discussed below, beginning in the north at the junction with Southwark Street and working south to the area of St George the Martyr's Church.

8.1 Southwark Street to Union Street

Approximately 210m of trenching was observed in the northern part of the study area, between Southwark Street running south to Union Street, including White Hart Yard, George Inn Yard and Talbot Yard on the east side of Borough High Street. The

approximate time of year of the watching brief visits, along with the locations and dimensions of observed works are shown in Table 1 below; this should be read in conjunction with Figure 7 showing the location of monitored works in relation to the current Ordnance Survey map.

Date	Location	Dimensions		
		Length	Width	Depth
Dec 2009	East carriageway between White Hart Yard and the north side of George Inn Yard.	10.5	1.3	1.2
Jan 2010	East carriageway outside George Inn Yard.	24.35	1.33	1.2
Jan 2010	East carriageway between George Inn Yard and Talbot Yard.	43	1.4	1.38
Feb 2010	White Hart Yard.	9	0.4	0.9
Apr 2010	Running east from the centre of Borough High Street into Talbot Yard.	18	0.5	1.1
May 2010	West carriageway running south from Maidstone Buildings to the north side of Union Street.	43	0.6	1.5
Jun 2010	West carriageway running north from Maidstone Buildings.	20	0.5	1
Jun 2010	West carriageway running north from the War Memorial to north of Counter Court.	37	0.28	1.2
Jul 2010	Western fork of Borough High Street between Calvert's Buildings and Southwark Street.	55	0.5	1.4

Table 1: Trenching on Borough High Street between Southwark Street and Union Street and adjacent side streets.

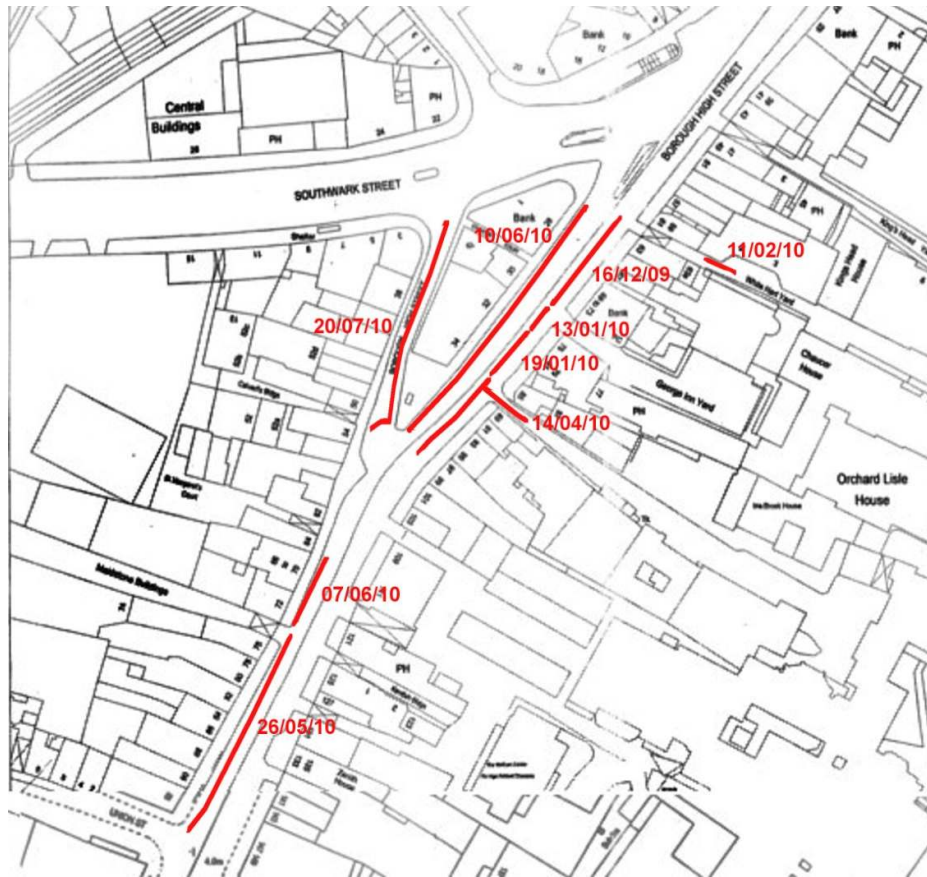


Figure 7 Top: Trenching on Borough High Street between Southwark Street and Union Street and adjacent side streets, in relation to the current Ordnance Survey 1:1250 map. Figures in red refer to principal photo reference numbers. **Below:** Left trenching by ‘The George’ Inn, showing imported road makeup layers and right, deep concrete on the eastern carriageway by the War Memorial.



8.1.1 With the exception of White Hart Yard, all trenching exposed the existing tarmac road surface with an average thickness of 0.2m, overlying concrete hardcore (in places reinforced with steel rods) to a depth of between 0.4m and 0.9m below the current ground level. The concrete hardcore deposits were considerably thicker in the southern extents of this area, towards Union Street and south of Maidstone Buildings (cf. Figure 8 below).

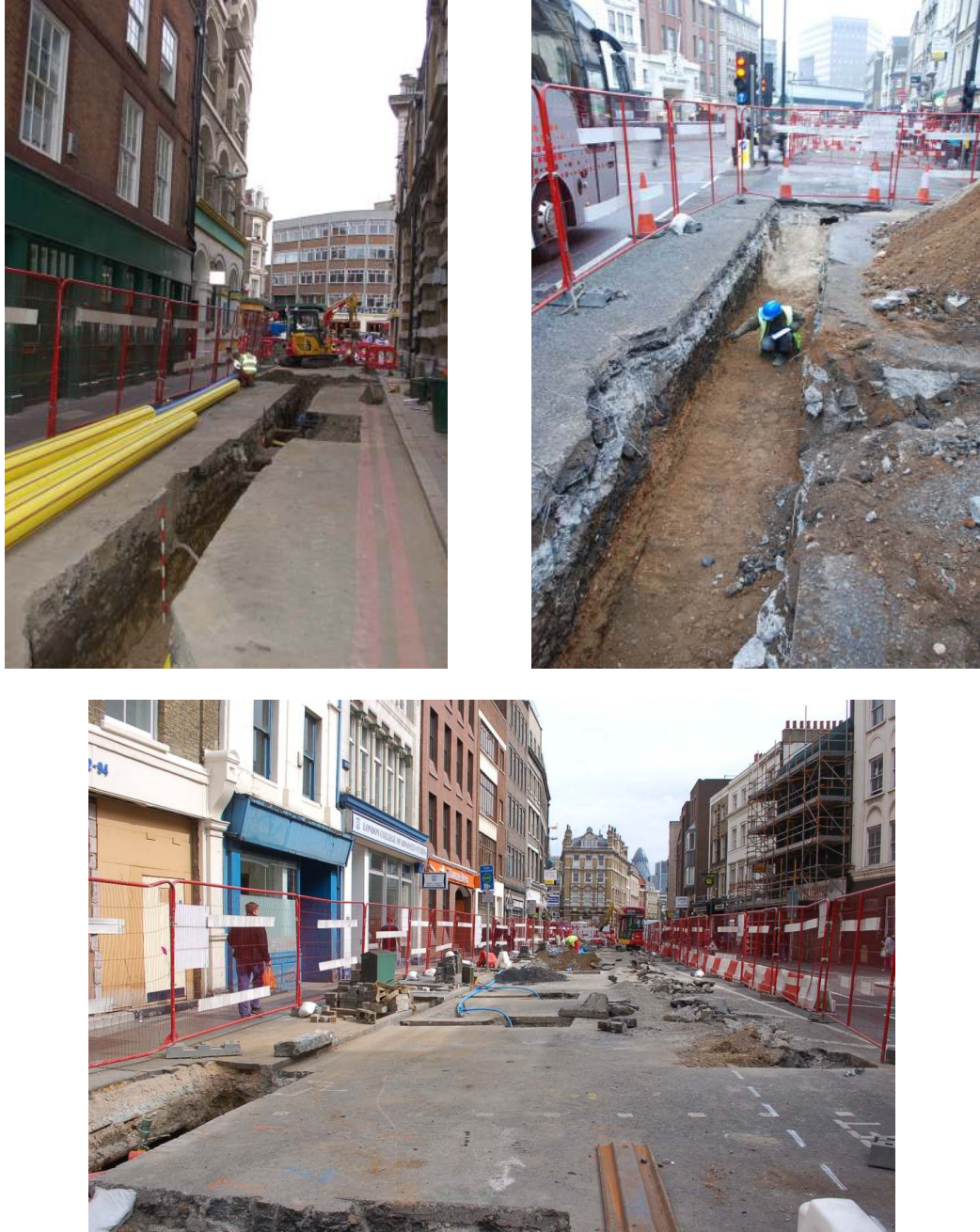


Figure 8: General views of trenching at the northern end Borough High Street between Maidstone Buildings and Union Street, looking north. **Top left:** the western fork of the road by No 40 and the junction with Southwark Street. **Top Right:** the eastern fork by nos. 65-73 showing imported ballast materials. **Below:** looking north from Union Street junction.

8.1.2 Underlying the existing road surface and hardcore, all trenches exposed modern service cuts and associated backfill deposits. These modern intrusions cut into earlier road consolidation layers and ground makeup deposits. These deposits generally consisted of imported ballast or sandy gravel fills, mixed soil deposits and banded layers of sand and gravels. Trenching monitored immediately south of the Southwark Street junction in the eastern carriageway of Borough High Street (16/12/09) exposed a dark-brown makeup deposit with frequent modern inclusions of brick and concrete at a thickness of 0.4m. This deposit overlay an imported clean, orange coarse gravel/ballast deposit with lenses of sand to the remaining limit of excavation, *c.*1.2m below the existing road surface (*cf.* Figure 9 below). No datable material was recovered from this lower deposit, which is of fairly recent deposition.

A similar profile was exposed in continued trenching to the south. Monitoring visits in January 2010 recorded tarmac and reinforced concrete overlying a similar dark-brown mixed made-ground deposit of sandy silt with scattered pebbles and brick inclusions. This deposit became thicker to the south, extending to a depth of 1.18m below the existing ground surface, and more differentiated with increasing bands of darker material towards the base. Underlying the imported sandy gravels continued in the extended trenching, although to the south an intermediate layer mottled mid-grey brown sandy silt with gravel and lenses of lighter sand and clay was observed in section (*cf.* Figure 10 below).



Figure 9: General views in the area of 175 to 191 Borough High Street, outside the Blue Eyed Maid PH and near Chapel Court, showing imported ballast materials, which were encountered in several locations on Borough High Street. This is the historic area of the Marshalsea Prison (to the north) and the King's Bench Prison (to the south), but no archaeological finds or features were present.

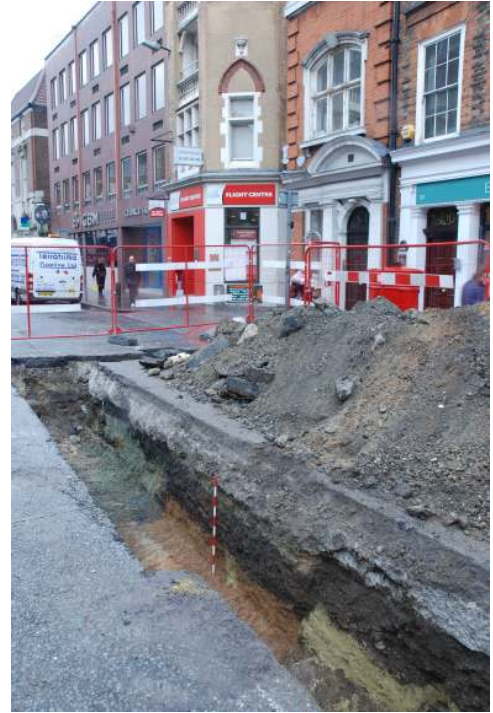


Figure 10: Top Right Trenching outside Nos 91-95 looking northeast, interestingly here the earlier road makeup layers survived as just a 20 to 30mm thick slither of *in situ* deposits, cut to the east and west by large later service trenches. The brown and yellow deposits (visible by the scale, top right) peel off to reveal the modern green sand service fills immediately behind. **Below and Top Left:** Slightly further south showing the west facing section of trenching between George Yard and Talbot Yard, looking south below and northeast above (19/01/10).

8.1.3 Trenching in streets to the east of Borough High Street, White Hart Yard and Talbot Yard exposed differing sequences of deposits to those observed in the main excavations. Monitoring in February 2010 at White Hart Yard recorded an existing cobbled road surface in concrete bedding to a depth of 0.45m. Below this depth a mixed trench backfill of probable 20th century date cut by modern services and related backfills was observed. No archaeological finds or features were recorded (*cf.* Figure 11 below). Trenching in Talbot Yard in April 2010 exposed tarmac and concrete to a depth of 0.46m below the existing ground surface. A homogenous, well-sorted mid-brown soil was observed to the remaining depth of 1.10m, representing mixed service fills and cellar excavation deposits. Again, no archaeological finds or features were recorded.



Figure 11: Trenching on Talbot Yard (left) and White Hart Yard (right). Trench works in the yards were generally very shallow and were above the anticipated height of survival of archaeological deposits.

8.1.4 Trenching along the western fork of Borough High Street (*cf.* Fig 7 20/07/10) and along the western carriageway of the main stretch of Borough High Street (east of the war memorial, 10/6/10), exposed similar profiles of existing road layers overlying made-ground deposits but produced residual material of some interest. This is the approximate location of St Margaret's Church, in existence from as early as the 12th century but sold in the mid-16th century at the time of the Reformation when the parish was subsumed into that of St Mary Overy. The site of the church was used for the construction of various tenements following its sale, and part of the building and grounds was turned into a courthouse and Counter Prison, or Compter (for which Counter Court connecting the two forks of Borough High Street is named). The old church and courthouse burnt down in the Southwark fire of 1676; a new prison was built and remained in existence until 1855 when it was eventually demolished (Malden: 1912, Roberts and Godfrey: 1950).

Although no *in-situ* remains relating to either St Margaret's Church or the prison were recorded, residual material was recovered from the made-ground deposits and included an element of redeposited graveyard deposits, disturbed during road construction works. A few pieces of human bone were recovered from trenching on both the western fork of Borough High Street (20/7/10 – Figure 12) and the west carriageway of Borough High Street (10/6/10 – Figure 8 (top left) and 13).



Figure 12: Trenching on the western fork of Borough High Street in the vicinity of Calverts Buildings, June 2010 (*cf.* Fig 8 top left image).

In both areas of trenching the tarmac road surface was exposed to a depth of between 0.2m and 0.3m, overlying reinforced concrete hardcore at a thickness of up to 0.5m. The underlying made-ground deposits, presumably trench backfill and road consolidation, were generally mid-dark brown gravely and sandy clay with frequent pebble and brick inclusions. The deposits were cut in numerous places by modern services and associated backfills. The human remains were recovered from these made-ground deposits, which clearly contain redeposited material from historical contexts disturbed during road consolidation (possibly during the widening of Borough High Street *c.* 1820's) and subsequent service excavations.



Figure 13: Trenching on Borough High Street, west carriageway, west facing section reworked strata which contained fragments of human bone (10/06/10).

The recovered remains constituted a single adult left femur 445mm in length (10/06/10 – see Figure 14), a partial adult right femur 280mm in length and split along its length, a complete right adult tibia 305mm in length, and the lower half of a left ulna 127mm in length (all 20/07/10 – see Figure 15).



Figure 14: Single left adult femur from Borough High Street (10/06/10) (20cm scale).



Figure 15: Human remains from Borough High Street (20/07/10). Partial adult right femur (top), partial left ulna (middle) and adult right tibia (bottom) (20cm scale).

8.2 Newcomen Street to Chapel Court

Approximately 110m of trenching was observed along Borough High Street (east carriageway) and along Mermaid Court and Chapel Court to the east. Several connection pits and feeders were monitored along the western carriageway. The approximate time of year of monitoring visits, along with locations and dimensions of works are shown in Table 2 below, and should be read in conjunction with Figure 16.

Date	Location	Dimensions		
		Length	Width	Depth
Jan 2010	Between Chapel Court and Mermaid Court.	32	0.95	1.25
Feb 2010	Albion House to Newcomen Street	53	1	1.2
Mar 2010	Chapel Court	10	0.5	0.5
Mar 2010	Mermaid Court	15	0.4	0.5
May 2010	Several connection pits and feeders along the western carriageway of Borough High Street.	-	-	-

Table 2: Trenching on Borough High Street between Newcomen Street and Chapel Court.



Figure 16: Trenching on Borough High Street, Mermaid Court and Chapel Court, based on the current Ordnance Survey 1:1250 map. **Top left:** trenching in front of 155-159 Borough High Street, looking northeast towards the junction with Newcomen Street. **Top Right:** Outside no. 125 Borough High Street, looking north

8.2.1 Trenching on Borough High Street, in the eastern carriageway in January and February 2010 exposed the existing tarmac road surface overlying reinforced concrete hardcore to an average depth of 0.5m below current ground level. Banded layers of road consolidation were observed beneath, presumably of post-medieval and fairly recent date. The layers consisted of mixed brown and orange gravels and sand

extending to the limits of excavation between 1.2m and 1.25m below the existing ground surface (cf. Figure 17 below). No archaeological finds or features were observed.



Figure 17: Above: Trenching on the eastern carriageway outside 167 Borough High Street (27/01/10). Below: trench section looking east outside John Harvard Library, 211 Borough High Street showing banded road makeup levels to 1.34m depth. This again is the historic area of the King's Bench and Marshalsea Prisons, but only a residual sherd of grey Roman pottery was recovered and there were no archaeological features.

- 8.2.2** Trenching on Mermaid Court in March of 2010 exposed the existing yard surface in concrete bedding overlying mixed service backfills for the full depth of excavation. No archaeological finds or features were observed.
- 8.2.3** Trenching on Chapel Court in March 2010 consisted of a series of irregular pits constituting *c.* 10m linear extent. Tarmac was exposed overlying concrete hardcore with mixed service fills beneath. Trenching was relatively shallow, and despite proximity to several historic buildings (including timber framed structures to the north), no archaeological finds or features were observed.
- 8.2.4** Several small connection pits and feeders were excavated along the western carriageway of Borough High Street. Exposed sequences consisted of tarmac overlying concrete hardcore with mixed service backfills beneath. No archaeological finds or features were observed.

8.3 Chapel Court to St George the Martyr’s Church

Approximately 130m of trenching was observed on Borough High Street from the south side of Chapel Court to the Church of St George the Martyr with St Jude.. The dates of monitoring visits are given in Table 3 below, along with locations and dimensions and should be read in conjunction with Figure 18.

Date	Location	Dimensions		
		Length	Width	Depth
Dec 2009	St George the Martyr heading north towards Tabard Street junction.	13	1	1.6
Dec 2009	Continuing north from 14/12/09 to middle of Tabard Street junction.	9	1	1.34
Dec 2009	Continuing north from 15/12/09 to south side of John Harvard Library.	18	1	1.3
Dec 2009	Continuing north from 16/12/09 outside John Harvard Library.	16	0.98	1.3
Jan 2010	Continuing north from 17/12/09 to Royal British Legion vehicle access.	6	1	1.43
Jan 2010	Trenching between 22/01/10 and 25/01/10 outside Kaplan Financial.	23	1.1	1.1
Jan 2010	Running south from Chapel Court to Delta House and 14/01/10.	19	1.08	1.3
Jan 2010	Connections within the pavement on the north side of Tabard Street at the junction with Borough High Street.	9.45	0.7	1.1
Jan-Feb 2010	Running north from British Legion between 11/01/10 and 14/01/10.	18	1	1.15
May 2010	Connections and feeders on the west carriageway.	-	-	-

Table 3: Trenching on Borough High Street between Chapel Court and St George the Martyr’s Church.

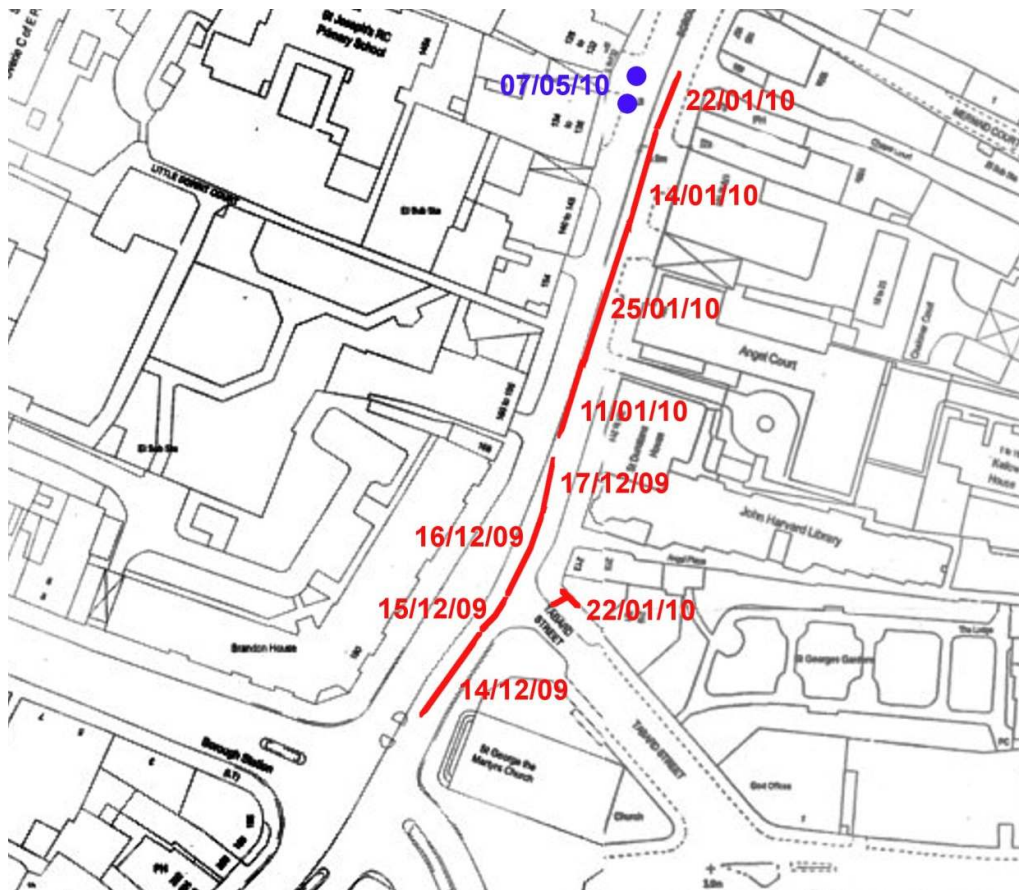


Figure 18: Top: Detail of trench sections in the vicinity of St George’s Church. **Below:** Trenching on Borough High Street between Chapel Court and St George the Martyr’s Church based on the current Ordnance Survey map 1:1250.

8.3.1 Trenching monitored immediately south of Chapel Court (22/01/10) exposed the existing tarmac road surface overlying concrete hardcore to an average depth of 0.5m below the current ground surface. Banded road makeup layers were recorded below this depth to the limit of excavation at 1.08m (*cf.* Figure 19). The banded layers consisted of varying shades of orange/brown and black sand and gravels with a thicker band of imported gravel fill to the base of excavation. No archaeological finds or features were observed, and although no datable material was recovered from these deposits they are likely to represent road consolidation deposits and may date from the widening of Borough High Street *c.* 1820. The same sequence continued south along stretches of trench monitored throughout January and early February 2010.



Figure 19: East facing section of trenching on Borough High Street (11/01/10 – 1m scale).



Figure 20: Trenching on Borough High Street, in the area of St George's Church. The bricks- to the left of the image - were discovered upon excavation to be within a quite modern context.

8.3.2 Trenching from the John Harvard Library running south to the church of St George the Martyr exposed a similar profile of road consolidation layers but the sequence was more variable and a number of deposits produced residual material (Fig 19). Trenching monitored in December 2009 recorded two distinctly different profiles in section. Similar sequences of banded orange and brown/black sands and gravels were recorded to the north while to the south a homogenous mid-brown soil with gravel extended to the full depth of excavation. It is likely that this latter deposit represents trench backfill, possibly contemporary with the original Victorian water mains which cuts into the earlier consolidation layers (*cf.* Figures 20 and 21). Several modern services and related deposits were also observed.



Figure 21: West facing section of trenching on Borough High Street (Detail of Fig 20).

Road consolidation layers in trenching observed in later December 2009 produced several finds including fragments of clay pipe, and residual material including a single waste flake of dressed flint from building construction, a sherd of Roman Samian ware, a sherd of Romano-British Grog-tempered ware and a fragment of Roman floor tile (*cf.* Pottery Report Appendix III and Figure 22 below). The pottery assemblage comprised a total of eight sherds with a total weight of 127g. It comprised a mixture of Romano-British, medieval and later wares, most of which was redeposited in later features. These sherds were found in trenching to the south in the immediate area of St George the Martyr Church (*cf.* Appendix III and Figure 23 below).



Figure 22: Residual finds from trenching on Borough High Street (16/12/09 – 20cm scale).



Figure 23: Finds from trenching on Borough High Street (14/12/09 – 20cm scale).

While no *in-situ* archaeological finds or features were recorded during trenching on Borough High Street, the presence of residual Roman material concentrated in the southern extent of trenching near to the church of St George the Martyr suggests that Roman archaeology was disturbed in this area, and it is possible that further evidence survives undisturbed.



Figure 24: Trenching in the area of St George the Martyr's Church, Borough High Street
(*cf.* Cover and frontispiece).

- 8.3.3** Connection trenching on the north side of Tabard Street at the junction with Borough High Street in January 2010 exposed the existing cobbled pavement overlying concrete bedding and service backfills. A single clay pipe bowl was recovered from disturbed trench backfill possibly relating to the original Victorian water mains. No further archaeological finds or features were recorded.

9. Summary and Conclusions

Archaeological monitoring undertaken during Victorian water mains replacement works in the area of Borough High Street, London Borough of Southwark recorded sequences of existing road surfaces and hardcore overlying mixed road makeup layers and service related deposits. It is possible that layers of banded gravel deposits are road consolidation layers dating to the widening of Borough High Street in the early 19th century. Finds from these layers included 19th century pottery and clay pipe, and residual Roman material including pottery and ceramic building material. In the northern part of the study area, along the western fork of Borough High Street and the west carriageway near the junction with Southwark Street, a small assemblage of residual human bone was recovered from road consolidation layers. It is likely that the remains were redeposited here from disturbed graveyard deposits relating to the churchyard of St Margaret's Church, known on the site from the 12th century but no longer in existence.

No *in situ* archaeological finds or features were recorded during the course of the watching brief. Trenches exposed road consolidation deposits and more recent services and intrusions only.

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APPENDIX I: Oasis Data Collection Form

OASIS ID: compassa1-82890

Project details

Project name	Thames Water Utilities Ltd Victorian Water Main Replacement Works in Borough High Street, London Borough of Southwark
Short description of the project	An archaeological watching brief carried out during water mains replacement works in the area of Borough High Street, London Borough of Southwark.
Project dates	Start: 14-12-2009 End: 20-07-2010
Previous/future work	No / No
Any associated project reference codes	TZQ09 - Sitecode
Type of project	Recording project
Site status	Local Authority Designated Archaeological Area
Current Land use	Transport and Utilities 1 - Highways and road transport
Monument type	N/A None
Significant Finds	HUMAN REMAINS Uncertain
Significant Finds	POTTERY Roman
Investigation type	'Watching Brief'
Prompt	Water Act 1989 and subsequent code of practice

Project location

Country	England
Site location	GREATER LONDON SOUTHWARK SOUTHWARK Thames Water Utilities Ltd Victorian Water Main Replacement Works in Borough High Street, London Borough of Southwark (SE1)
Postcode	SE1
Study area	0.50 Kilometres
Site coordinates	TQ 3267 8017 51.5043714187 -0.08823224406760 51 30 15 N 000 05 17 W Line
Site coordinates	TQ 3246 7976 51.5007359143 -0.091410519357 51 30 02 N 000 05 29 W Line

Project creators

Name of Organisation	Compass Archaeology
Project brief originator	Local Authority Archaeologist and/or Planning Authority/advisory body
Project design originator	Compass Archaeology
Project director/manager	Geoff Potter
Project supervisor	Rosie Cummings

Type of sponsor/funding body	Thames Water Utilities
Name of sponsor/funding body	Thames Water Utilities
Project archives	
Physical Archive recipient	Museum of London archaeological archive
Physical Contents	'Ceramics','Human Bones'
Digital Archive recipient	Museum of London archive
Digital Contents	'Ceramics','Human Bones'
Digital Media available	'Images raster / digital photography'
Paper Archive recipient	Museum of London Archive
Paper Contents	'none'
Paper Media available	'Miscellaneous Material','Report','Unpublished Text'

Project bibliography

1

Publication type	Grey literature (unpublished document/manuscript)
Title	Thames Water Utilities Ltd Victorian Water Main Replacement Works in Borough High Street, London Borough of Southwark (SE1): An Archaeological Watching Brief
Author(s)/Editor(s)	Cummings, R
Date	2010
Issuer or publisher	Compass Archaeology
Place of issue or publication	5-7 Southwark St
Description	42 page bound report

Entered by	Rosie Cummings (mail@compassarchaeology.co.uk)
Entered on	10 November 2010

APPENDIX II: London Archaeologist Summary

Site Address: Thames Water Utilities Ltd Victorian Water Main Replacement Works in Borough High Street, London Borough of Southwark (SE1)
Project type: Watching brief
Dates of Fieldwork: 12th December 2009 – 6th August 2010
Site Code: TZQ09
Supervisor: Rosie Cummings
NGR: TQ 3267 8017 to TQ 3246 7976
Funding Body: Thames Water Utilities Ltd

Trenching on Borough High Street, White Hart Yard, Talbot Yard, Mermaid Court and Chapel Court exposed existing road layers overlying mixed deposits of modern service intrusions and earlier road consolidation layers. The latter deposits consisted of banded layers of gravels and sand of varying colour and consistency. Deposits to the south of the study area, around the church of St George the Martyr produced residual Roman material including pottery and ceramic building material, although no *in situ* material was recorded. To the north, around the area of Counter Court and the former site St Margaret's Church, a small assemblage of human bone was recovered from redeposited material in road consolidation layers.

Appendix III: The Pottery (*Paul Blinkhorn*)

Pottery for Borough High St, London Borough of Southwark (Site TZQ09)

Paul Blinkhorn

The pottery assemblage comprised 8 sherds with a total weight of 127g. It comprised a mixture of Romano-British, medieval and later wares, most of which was redeposited in later features. The fabric codes utilized are those of the Museum of London type-series (Anon. 2000; Vince 1985), as follows:

- GROG: Misc. Romano-British Grog-tempered ware. 1 sherd, 25g.
- SAMLZ: Central Gaulish Samian Ware. 1 sherd, 2g.
- LONS: London stoneware, 1670-1900. 1 sherd, 43g.
- LLON: Late London ware, 1400-1500. 1 sherd, 17g.
- LOND: London-type ware, early/mid 12th – mid 14th century. 1 sherd, 14g.
- NOTS: Nottingham stoneware, 1700-1800. 1 sherd, 8g.
- PMR: Post-medieval redware, 1580 – 1900. 1 sherd, 2g.
- 19th: Miscellaneous mass-produced 19th and 20th century wares. 1 sherd, 16g.

The pottery occurrence by number and weight of sherds per context by fabric type is shown in Table 1. Each date should be regarded as a *terminus post quem*. The fabric types are all well-known in the area. The sherd of London ware (LOND) was heavily abraded and somewhat burnt. The assemblage comprised entirely body-sherds, other than the fragment of LLON, which appears to be part of a bung-hole from a cistern, a typical vessel type of the period, and a rim-sherd from a squat jar (fabric GROG). The fragment of SAMLZ is probably from the base of a vessel, as it had a truncated, illegible maker's-stamp. The finds were collected from the southern end of the watching brief area, close to the Church of St George the Martyr

Table 1: Pottery occurrence by number and weight (in g) of sherds per context by fabric type

Context	GROG		SAMLZ		LOND		LLON		PMR		LONS		NOTS		19th		Date
	No	Wt	No	Wt	No	Wt	No	Wt	No	Wt	No	Wt	No	Wt	No	Wt	
U/S*	1	25															U/S
1					1	14					1	43	1	8	1	16	19thC
2							1	17	1	2							17thC
3			1	2													RB
Total	1	25	1	2	1	14	1	17	1	2	1	43	1	8	1	16	

Bibliography

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