

Wessex Archaeology

Elizabeth House, York Road, Waterloo, SE1
London Borough of Lambeth

Archaeological Desk-based Assessment



Ref: 53568.01

July 2003

**Elizabeth House, York Road,
Waterloo SE1
London Borough of Lambeth**

Archaeological Desk-based Assessment

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OS 1:2,500 1916

OS 1:2,500 1952-53

OS 1:2,500 1964-65

OS 1:10,000 Series 1972/4/5

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Summary

Wessex Archaeology (London) were commissioned to undertake an Archaeological Desk-based Assessment on the site of Elizabeth House and associated land, centred on NGR 530900 179850, London Borough of Lambeth, SE1. P&O Developments are considering options to redevelop the Site following expiry of current leases for this property.

This Desk-based Assessment has utilised publicly accessible and archive sources to investigate, as far as is reasonable and practicable, the nature and extent of any known or potential archaeological resource within the Site and a surrounding Study Area. The synthesised results of the study are set-out below.

There is potential for the Site to contain important Mesolithic (c.10,000 – 4000 BC), and Neolithic (c.4000 – 2700 BC) remains, including possible evidence for settlement, within or below riverine and estuary alluvium.

Unexpected important discoveries (including waterlogged remains) of Later Prehistoric, Roman and post-Roman date cannot be ruled out. Particular attention should be taken of the discovery in 1910 of a Roman boat at County Hall, west of the Site.

Remains of mapped Post-medieval buildings, and deposits laid down for land-reclamation may also be present.

There are extensive modern structures and impacts within the Site which are likely to have removed all archaeological remains within their footprint (double-basements, cut and cover underground railway tunnel). However, there are also areas where archaeological remains may remain *in-situ*. These include un-basemented and single-basemented areas.

This report recommends that in the first instance geotechnical investigation of un-basemented and single-basemented areas be carried out by specialist contractors in order to assess the presence or absence, depth and extent of any potentially surviving archaeological strata. Such information would inform on the requirement, if any, for consideration of mitigation strategies prior to and/or during the envisaged redevelopment of the site.

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Research and compilation of this Assessment was undertaken by Mike Trevarthen (*Project Officer*), and Illustrations were prepared by Rob Goller and Marie Leverett. The project was managed for Wessex Archaeology (London) by Lawrence Pontin (*Senior Project Manager*).

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1 INTRODUCTION

1.1 Project background

- 1.1.1 Wessex Archaeology (London) was commissioned to undertake an Archaeological Desk-based Assessment on the site of Elizabeth House and associated yards (hereafter ‘the Site’) centred on NGR 530900 179850 and situated immediately west of Waterloo International Terminal (WIT), London Borough of Lambeth, SE1. (Fig.1)
- 1.1.2 P&O Developments are considering options to redevelop the Site following expiry of current leases in 2004 (Law Gibb Group 2001, vi).

2 PLANNING AND LEGISLATIVE BACKGROUND

2.1 National Planning Guidance

- 2.1.1 The Department of the Environment published its *Planning Policy Guidance Note 16* (PPG16) in 1990. This sets out the policy of the Secretary of State on archaeological remains on land, and provides many recommendations that have subsequently been integrated into Local Development Plans.
- 2.1.2 PPG16 acknowledges the potentially fragile and finite or irreplaceable nature of such remains (*para. 6*), and sets out the desirability of preservation of archaeological remains and their settings as a material consideration within the planning process (*para. 18*).

In addition, *Para. 19* states:

“ in their own interests... prospective developers should in all cases include as part of their research into the development potential of a site... an initial assessment of whether the site is known or likely to contain archaeological remains.”

Para. 25 adds:

“Where planning authorities decide that the physical preservation in-situ of archaeological remains is not justified in the circumstances of the case and that development resulting in the destruction of the remains should proceed, it would be entirely reasonable for the planning authority to satisfy itself, before granting planning permission, that the developer has made appropriate and satisfactory provision for the excavation and recording of

the remains. Such excavation and recording should be carried out before the development commences, working to a project brief prepared by the planning authority and taking advice from archaeological consultants."

2.2 Local Planning Guidance

- 2.2.1 Whilst the *London Borough of Lambeth Deposit Replacement Unitary Development Plan (2002-2017)* has not formally superseded the extant 1998 UDP, its policies are liable to be taken as a statement of Lambeth Borough Council's intent with regard to future determination of planning applications. *The Deposit Replacement UDP* contains policies and explanatory text relating to the management of archaeology.

Policy 43: Archaeology states:

"Where development proposals may affect the archaeological heritage, applicants should properly assess and plan for the archaeological implications. This may involve preliminary archaeological site evaluations before proposals are determined. Within Archaeological Priority Areas (as shown on the Proposals Map) the Council and English Heritage will advise where planning applications should be accompanied by an evaluation. This should be commissioned by the applicants from a professionally qualified archaeological organisation or archaeological consultant."

"Suitable design, land use and management should be adopted to safeguard archaeological sites."

"The most important archaeological remains and their settings are permanently preserved in situ, with public access and display where possible."

"In the case of sites of archaeological significance or potential, where permanent preservation in situ is not justified, provision shall be made by the developer for an appropriate level of archaeological investigation and excavation, which should be undertaken by a recognised archaeological organisation before development begins. Such provision shall also include the subsequent publication of the results of the excavation."

- 2.2.2 York Road, into which the new development will extend, is part of an Archaeological Priority Area as defined within the Lambeth UDP.

2.3 Statutory Designations

- 2.3.1 The Site does not contain any areas protected by Statute, and re-development is unlikely to have a prohibitively significant effect upon any areas designated as, or containing any of the following:

- Scheduled Monuments

- 2.3.2 Nine Listed Buildings or structures are noted by the GLSMR within the Study Area. These are illustrated on **Fig. 1** as **LB1-9**. All are of Grade 2 or 2* status (see **Appendix 2**). Redevelopment of the Site is unlikely to affect, or have a prohibitive impact upon the setting of any of these structures.
- 2.3.3 York Road, into which the new development will extend, is part of a Conservation Area (South Bank) as defined within the Lambeth UDP.

3 METHODS

3.1 Aims and Objectives

- 3.1.1 The aim of this Desk-based Assessment is to investigate, as far as is reasonable and practicable, the nature and extent of any known or potential archaeological resource within the Site boundaries. In order to assess the Site's potential in a wider context, a Study Area has been defined, comprising an area with a radius of 250 metres from Site centre (**Fig. 1**).

3.2 Research

- 3.2.1 A number of publicly accessible sources of primary and synthetic information were. These are detailed below and all sites referred to in the text are utilised in **Appendix 1**.

GLSMR

- 3.2.2 The Greater London Sites and Monuments Record (GLSMR) is compiled and maintained by English Heritage at Saville Row, London, and is a register of all known archaeological and historic sites and findspots within the Greater London Boroughs. The GLSMR was consulted for all information it holds regarding the Site and Study Area and this information has been synthesised in **Fig. 1**. A gazetteer of Archaeological sites and findspots is presented as **Appendix 1**.
- 3.2.3 Full GLSMR listings have not been reproduced here, but form part of the project archive.
- 3.2.4 It should be noted that the GLSMR reports a backlog in accessioning information (B.Taylor, pers. Comm) and that not all relevant archaeological data may yet be available. For the purposes of this Assessment, no attempt has been made to address any unaccessioned material.

Cartographic Sources

- 3.2.5 A map regression exercise has been conducted in order to establish the Site's historic land-use and development.
- 3.2.6 Reproductions of historic published and manuscript maps were consulted at the Lambeth Archive, at the London Metropolitan Archive and at Wessex Archaeology's own library. Map sources consulted are listed in **Appendix 3**.
- 3.2.7 Ordnance Survey 1:2,500, 6 inch/mile (6" or 1:10560)) and 1:10 000 Series mapping was obtained as a specialist search from Landmark Information Group. Maps which show significant site detail, and/or important structural changes are presented as **Appendix 4**.

Museum of London Archives

- 3.2.8 Deposited archives for archaeological investigations within the Study Area were consulted, and information gathered regarding the nature and disposition of deposits and archaeological remains.

Published and Unpublished sources

- 3.2.9 Published and unpublished material including interim excavation notes, previous Site Environmental Assessment (Law Gibb Group 2001) synthetic works and site entries in the Museum of London Archaeological Gazetteer (Thompson, Westman & Dyson 1998) were consulted.
- 3.2.10 Other unpublished data from relevant investigations was consulted at Wessex Archaeology's own library.

3.3 Site Visit

- 3.3.1 A Site walkover was carried out on 3rd July 2003. This visit was conducted in order to assess the general aspect, character, condition and setting of the Site and to identify any potential or impacts not evident from secondary sources. Access to basements and underground car parks was not possible at the time of the visit.
- 3.3.2 A digital photographic record of the Site and its setting was undertaken, and these images form part of the Site project archive. Select images are presented in **Fig. 2**.

4 SITE TOPOGRAPHY, GEOLOGY AND HYDROLOGY

4.1 The Site and Its Topography

4.1.1 The Site lies some 250 metres east of the River Thames and comprises an irregular NNE-SSW aligned strip immediately west of the WIT.

4.1.2 The Elizabeth House Site is bounded to the east by sheet-piling under the York Road pavement, although on instruction from Environ UK, this report has also assessed the adjacent portion of York Road.

4.1.3 Leake Street clearly defines the Site's southern extent, although precise definition of the Site's eastern boundary is made difficult by presence of the WIT cab road (Law Gibb Group 2001, vi, 9).

4.1.4 The Site presently contains a linear range of modern buildings (Elizabeth House) dating from the mid and late 1960's, fronting onto York Road and backed by service yards. The Site can be divided into five principal areas:

- **Block 1:** a seven-storey office building, with shops at ground level. A two-storey basement houses a car park.
- **Block 2:** a 10-storey office block south of Block 1. Shops and an entrance hall are present at ground level, and block 2 shares its two-storey basement with Block 1.
- **Tower Building:** A 16-storey office block abutting, but not internally linked to Block 1. A shop and entrance hall are present at ground-level, and a single storey basement underlies part of the building, the remainder being on a cantilevered foundation which bridges the Waterloo & City line underground tunnel.
- **Vacant plot** formerly occupied by No's. 67 and 69 York Road, now demolished.
- **Tarmac paved service area** to the rear, separating the Site from the WIT.

4.1.5 Modern ground levels at the southern end of the site are mapped as 3.7m above Ordnance Datum (aOD) rising slightly to c.4.5 maOD at the northern end. This rise to the north is believed to be artificial (Law Gibb Group 2001, 20-21).

4.2 Geology

4.2.1 The Site lies on a complex sequence of recent (Holocene) sandy and clay-alluvium. Immediately to the south this gives way to underlying 1st Terrace (Gerrards Cross) Gravels (Geological Survey of Great Britain (England & Wales) 1981). These are believed to have been deposited at about 750,000 BC by an 'ancestral' alignment of the River Thames which took a more northerly course than at present, probably through the Vale of St Albans (Bridgeland 1994 121).

- 4.2.2 Underlying solid geology comprises London Clay of Palaeocene and Eocene date.

4.3 Hydrology

- 4.3.1 The Thames is tidal at Westminster, although investigations in September 1989 (prior to works on the WIT) indicate that the local water-table sits within the terrace gravels at approximately -0.03 mOD, and that this groundwater is not hydraulically linked to tidal movement (Law Gibb Group 2001, 13).

5 ARCHAEOLOGICAL AND HISTORIC DEVELOPMENT

5.1 Palaeolithic (c.500 000 – c.10 000 BC)

- 5.1.1 The middle and Lower Thames Valley is well known for its Palaeolithic finds (Victoria County History 1971, 11). However, Siddell and Wilkinson note that *in-situ* material of this date is rare, most finds being recovered from fluvially re-worked river gravels (2000, 118).
- 5.1.2 There are no recorded finds of Palaeolithic date within the Study Area. The 1st Thames terrace gravels are believed to predate the earliest human (or pre-human) occupation of Britain. Although Palaeolithic material may later have been deposited on the surface of these gravels, it is unlikely that they will, in themselves, contain Palaeolithic remains.

5.2 Mesolithic (10 000 – 4000 BC)

- 5.2.1 At the start of the Holocene (c.10,000 BC) sea levels stood about -65mOD. At this time south-eastern Britain was linked by land with continental Europe.
- 5.2.2 Amelioration in climatic conditions after retreat of glacial ice sheets reduced the output of the Thames, and the river amalgamated slowly from a wide, braided, high-energy stream system, capable of carrying and depositing large sheets of coarse aggregate, into a single meandering channel. In the Early Holocene, this channel is believed to have run slightly south of its present course, perhaps aligned through Westminster, Waterloo and Bermondsey.
- 5.2.3 Subsequent migration of the Thames channel is thought to have destroyed any Mesolithic sites immediately south of the present river, although the potential for material to be present south of the old channel is considered to be high (Siddell & Wilkinson 2000, 119). Here, transient groups may have occupied drier gravel islands or ‘eyots’ at the River’s edge in order to exploit its resources.
- 5.2.4 Sea-level rises throughout the Holocene severed the link with mainland Europe, drowning the lower Thames valley. From circa 6000 BC, complex sea level changes have occurred, in the order of circa 4 m above or below modern OD (BGS 1992, 77).
- 5.2.5 Investigations at County Hall (**WA1**), Addington Street Waterloo Site ‘C’ (**WA2**), Addington Street Annexe Site (**WA3**) and Waterloo Road (**WA4**) have all produced struck flint or other artefacts of Mesolithic (or possible Mesolithic) date. These finds have been recovered either as fluvially re-worked objects within sands and silts, or within cut features possibly representing habitation or occupation sites.

5.3 Neolithic (c.4000 – 2400 BC)

- 5.3.1 Evidence for the Neolithic period is extremely rare in Central London and any remains of this date should be regarded as important. In part, this paucity

of remains may result from blanketing of evidence by later alluvium (Sidell & Wilkinson 2000, 120) and previous academic bias.

5.3.2 The northward shift of the Thames to its present course is thought to have been substantially complete at this time, and the potential for *in-situ* Neolithic evidence to survive intact extends over a greater area than for the Mesolithic period (*ibid.*).

5.3.3 Within the Study Area, Neolithic remains have been noted at County Hall (WA5), Addington Street Annex site (WA6), Addington Street Waterloo Site 'B' (WA7), and, most notably at Addington Street Waterloo Site 'C' (WA8). Here, worked flint, Neolithic pottery and charred plant remains, were discovered in irregular pit-like features, possibly indicating a settlement site (McDonald 1990, 7-8).

5.4 Bronze Age (circa 2600 – 700 BC)

5.4.1 Sea level rises during the Bronze Age saw brought tidal influence to a formerly riverine environment, and this regime saw deposition of silts, clays, organic muds and, in places, peat.

5.4.2 Arable marks are noted in the area, indicating that some agriculture was practised on sandy areas above the intertidal zone and, by association, there are likely to be settlement sites connected with this activity.

5.4.3 At Southwark, artificial trackways have been found linking dry gravel islands, although no evidence for this has yet been identified in northern Lambeth (Sidell & Wilkinson 2000, 121).

5.4.4 Only two Bronze Age artefacts have been found within the Study Area. A halberd and a sword were both recovered from County Hall (WA9).

5.5 Iron Age (c.700 BC – AD 43)

5.5.1 Few sites of Iron Age date have been recorded in central London and most of the evidence for this period has been dredged from the Thames channel (Sidell and Wilkinson 2000, 121). In part, this might reflect fluvial re-working of occupation sites, although deposition of items as votive offerings in liminal environments away from settlements or areas of agricultural value has also been inferred.

5.5.2 Iron Age discoveries within Study Area have also been restricted to 'stray' finds. Two sheaths, a sword and a spearhead were recovered from County Hall (WA10).

5.6 Roman (AD 43 – 410)

5.6.1 Whilst *Londinium* and its southern suburb at Southwark developed as major towns from the first to fourth centuries AD and are extensively documented elsewhere, there seems to have been little (if any) significant impact upon the Lambeth Marsh area.

- 5.6.2 Remains of Roman date have been discovered within the Study Area, most notably a Roman Boat and associated finds (**WA11**) discovered at County Hall. This was found at c.-2.00mOD, and was sealed by a substantial layer (c.2.10m) of silty alluvium (MoLAS 1998, 3). Further evidence of a locally marshy environment during the Roman period was discovered immediately to the north at Jubilee Gardens (**WA12**).

5.7 Anglo-Saxon (AD 410 – 1066)

- 5.7.1 Anglo-Saxon (Early Medieval) finds have been made at County Hall (**WA13**) where an axe, sword and bead are recorded. Evaluation at Jubilee Gardens (**WA14**) revealed blanket peat deposits, the lower member of which was dated AD 670-960 (MoLAS 1998, 7).

5.8 Medieval (AD 1066 – 1499)

- 5.8.1 Medieval and later settlement is known at Lower Marsh (**WA15**), and the wetland nature of the surrounding landscape can be inferred, not only from the place-name, but from peat layers at Jubilee Gardens (**WA16**) dated to AD 1020-1260.
- 5.8.2 The GLSMR notes a road, water channel and defensive dyke at Belvedere Road (**WA17**), and an iron cleaver of Medieval date was recovered from County Hall (**WA18**).

5.9 Sixteenth and Seventeenth Century

- 5.9.1 Throughout the sixteenth and seventeenth centuries Lambeth Marsh remained substantially undeveloped.
- 5.9.2 The Agas map of 1562 was consulted as the earliest known mapping. However, the area of the Site is unfortunately obscured by the map's title plate. Similarly, Wenceslaus Hollar's post 1666 plan of London before the Great Fire (not illustrated) adds little detail, although it is clear that a small settlement was present at Lambeth Marsh and some river-front development is indicated.
- 5.9.3 Land reclamation was undertaken along the south Thames bank during the Post-medieval period, and large dumping deposits resulting from this process have been recorded at Jubilee Gardens (**WA19**).
- 5.9.4 Although many sites within the Study area have produced Post-medieval evidence, many of these are not discussed further here, as they are of no direct relevance to the Site or its potential. The narrative of the Site's development has instead been drawn from the increasingly prolific historic and Ordnance Survey map sequence.

5.10 Eighteenth Century

- 5.10.1 John Rocque's map of 1745 (**Fig. 3**) illustrates the area of the Site, mapping it mainly as open ground. To the west, Rocque shows that the Thames frontage was extensively utilised as wharves and timber-yards at this time.

- 5.10.2 Westminster Bridge, begun in 1738 (Weinreb & Hibbert 1993, 975-76) is shown on Rocque's map but the bridge was not opened until 1750 (*ibid.*), and its effect upon development of Lambeth Marsh is yet apparent. Vine Street is shown, and a terrace of houses situated along its southern frontage formerly crossed the Site. South of these houses, a single building is accessed by a track from Vine Street. This is thought to have lain outside the Site.
- 5.10.3 Some other early industry is also known to have utilised Lambeth Marsh: Coade's Artificial Stone Company (**WA20**) stood from 1769 on the site now occupied by County Hall (Weinreb & Hibbert 1993, 455) and a glassworks (closed in 1712 but extant until at least 1733) is recorded at **WA21**.

5.11 Nineteenth Century

- 5.11.1 Horwood's map of 1819 (not illustrated) indicates that Lambeth Marsh remained essentially rural in character into the early Nineteenth century, although it does hint at some consolidation or re-organisation of land, and a number of new individual buildings and terraces are shown.
- 5.11.2 Waterloo Bridge opened in 1817, allowing access across the Thames from Victoria Embankment. By the mid-1830's the Lambeth Parish map (**Fig. 4**) shows urban expansion, with major new roads laid out, and housing across north Lambeth. The Site, however, remained mostly undeveloped as one of numerous open spaces.
- 5.11.3 Construction of Waterloo railway Station (serving the London & South Western Railway) provided a major impetus for further development of the area. The Station opened in 1848, being accessed by an extensive arched viaduct across Lambeth Marsh.
- 5.11.4 The London Necropolis Company's Necropolis Station was situated outside Waterloo station after 1854 providing a link with Brookwood cemetery, and another adjacent station serving the South Eastern Railway was opened in 1864 (Weinreb & Hibbert 1993, 959-60).
- 5.11.5 By 1879, the first edition OS 1:2,500 map (**Appendix 4**) shows that the former Lambeth Marsh area has been fully developed, with terraced housing interspersed with workshops and small factories. South of the Site, a General Lying-in Hospital is shown, and a Public House and Saw Mill are sited on the junction of York Road and York Street (south end of the Site). A second Public House is also present at the junction with Griffin Street.
- 5.11.6 The terrace of houses mapped along Vine Street by Rocque in 1745 have gone, replaced by an open area which includes part of a cab stand. North of Vine Street, more Victorian terraced housing is present.
- 5.11.7 By 1896, the second edition OS 1:2,500 map indicates that the northern portion of the Site was partially subsumed by expansion of Waterloo Station. Part of the former cabstand has been replaced by raised railway sidings and to the north, the eastern part of Vine Street has been replaced by extensions

to the Station buildings. A new main thoroughfare (Mephram Street) was created to the north from the former Cross Street.

5.12 Twentieth Century

- 5.12.1 Most Victorian (and possibly earlier) housing to the north and south of York Street was cleared prior to the publication of the OS 1:2,500 edition of 1916, allowing further westward sprawl of the Waterloo Station sidings. A small terrace fronting onto York Road was retained, as was a short 'stub' of Griffin Street.
- 5.12.2 The former Saw Mill at the corner of York Road and York Street was replaced by a larger Moulding Works and to the north, the Station extension previously built over the former alignment of Vine Street has disappeared.
- 5.12.3 Waterloo Station and the surrounding area suffered considerable bombing during the Second World War, and damage included destruction of the Necropolis Station by an aerial mine (Weinreb & Hibbert 1993, 959).
- 5.12.4 The LCC War Damage Map (**Fig. 5**) indicates heavy damage around the Waterloo area, and complete or irreparable destruction of structures in the centre and north of the Site. A V1 flying bomb is recorded as having struck the Site, possibly on the raised railway sidings in the central area.
- 5.12.5 By 1952, the 1:2,500 OS map shows York Street has been renamed as Leake Street. The layout of the Site is broadly unchanged from 1916, although the former moulding works is mapped as 'ruin' in 1953, and a Second World War air-raid shelter (above ground) is mapped on the old cab yard north of Griffin Street.
- 5.12.6 To the north, a new footbridge to Waterloo Station crosses over the Site, and a booking office (with statue) are shown. To the west of York Road, the South Bank Exhibition (Festival of Britain) is mapped.
- 5.12.7 After 1954 the Site was substantially cleared of buildings and there is reference to an unexploded bomb found in re-development work on the Site in 1959 (A.Jackson 1969, cited in Law Gibb Group 2001, 18). The Site is mapped as predominantly vacant in 1963, although some rail-siding termini impinge upon its eastern flank. 67 & 69 York Road survived at the junction with Leake Street at this time.
- 5.12.8 Elizabeth House was built c. 1964-5 (*ibid.*, 9) and is first shown on the 1:10,000 map of 1972 (not illustrated). Hereafter, although surrounding buildings have changed (construction of the WIT, creation of Jubilee Gardens and the Millennium Eye), OS Landplan mapping at 1:10 000 (30th June 2003) shows no significant change to the layout of the Site itself.

6 ARCHAEOLOGICAL POTENTIAL

6.1 Summary of archaeological potential

Prehistoric Potential

- 6.1.1 Features and artefacts of possible Mesolithic date have been noted locally. Important Neolithic material, including possible settlement and palaeo-environmental remains have been recovered from **WA5, 6, 7 & 8**.
- 6.1.2 There is unquantifiable potential for sites to be sealed beneath, or inter-bedded within the alluvial sequence. At Addington Street (Waterloo Site C **WA2**), prehistoric finds and features were identified at c.0.82mOD below alluvial clay, on the interface with a thin sand layer over river gravels (McDonald 1990, 5).
- 6.1.3 Isolated finds of Bronze Age and Iron Age date have been made locally. These may represent casual loss, or more probably deliberate deposition as votive offerings. The potential for such finds within the Site cannot be quantified, and the significance of any discoveries will depend wholly on their nature, date and context.

Roman potential

- 6.1.4 The potential for significant Roman remains is uncertain. Although the marshy environment of Lambeth at this time may well have precluded all but the most peripheral activities, and probably ruled out structural remains, unexpected important discoveries can by no means be ruled out.
- 6.1.5 A Roman boat and other associated finds (**WA11**) were excavated at County Hall, south east of the Site, in 1910. The boat was recovered at –2.00mOD and was sealed by c.2.1m of alluvial silt (MoLAS 1998, 3).
- 6.1.6 Elizabeth House is rather further from the Thames channel, and natural river-gravels might be expected to occur at a higher level than at County Hall. However, borehole data for on the Site suggests that there are alluvial deposits surviving as deep as –1.30+ mOD (Law Gibb Group 2001) and the potential for unforeseen waterlogged remains of local, regional or national importance must be borne in mind.
- 6.1.7 The potential for Roman finds within the Site cannot be quantified, and the significance of any discoveries will depend wholly on their nature, date and context.

Anglo-Saxon and Medieval potential

- 6.1.8 Anglo-Saxon and medieval artefacts have been discovered locally at County Hall (**WA13, WA18**). The wetland environment of Lambeth at this time is, however, illustrated by peat layers from Jubilee Gardens (**WA14, WA16** MoLAS 1998, 7). Medieval settlement is known at Lower Marsh (**WA15**) and a defensive flood bank is known at Belvedere Road (**WA17**).

Post-medieval and later potential

- 6.1.9 Evidence for Post-medieval land reclamation dumping and consolidation may be present (seen at **WA19**), and elements of the settlement noted along Vine Street by Rocque in 1745 but demolished prior to 1879 may survive.

6.2 Previous development

- 6.2.1 Development of housing along Vine Street is known from at least the mid-eighteenth century onwards, although their proximity to the water table perhaps makes it unlikely they would have possessed significant cellars.
- 6.2.2 The growth of housing and other building across the Site after the mid-nineteenth century is liable to have had a greater impact, although any cellars or vaults are likely to have been single-storey structures.
- 6.2.3 Construction of the Waterloo & City line was undertaken in a brick-lined 'cut and cover' tunnel now underlying the northern end of the Site. This will have resulted in removal of archaeological potential within the footprint of the construction cut.
- 6.2.4 Construction of rail approaches and sidings appears to have involved raising of ground levels, typically by circa 10 m. This work is unlikely to have impacted surviving archaeological remains. These banked deposits were removed from the Service Yard area during construction of the WIT, but it is not believed that original ground level was reduced at this time (Law Gibb Group 2001).
- 6.2.5 Construction of Elizabeth House in the mid-late 1960s has entailed creation of a double basement under Blocks 1 and 2, and a single story basement under that part of the Tower Block not overlying the Waterloo & City line.
- 6.2.6 The area of Service Yards behind Elizabeth House has been substantially modified during construction of the WIT, and modern ground levels are no longer believed to reflect former topography. Much of this area is underlain by underground car parking servicing the WIT.
- 6.2.7 The Northern Line, Bakerloo Line and Jubilee Line Extension all run below Elizabeth House. However, these were all constructed in bored tunnels, cresting at -12.5mOD, -7.1 mOD and -25mOD respectively (Law Gibb Group 2001, 9-10). These features will not have impacted archaeological remains.
- 6.2.8 A large oval structure presently sited in the northern part of the service yard area provides ventilation to underground rail services below the Site. This structure was moved from its original location during development of the WIT.

7 DEPOSIT SURVIVAL AND FURTHER RECOMMENDATIONS

7.1 Deposit Modelling

- 7.1.1 The Post-glacial topography of the Site's environs may, in summary, be characterised as comprising isolated drier gravel islands ('eyots') surrounded by water or marshland within which alluvial clays, silts and organic muds accumulated. As sea levels continued to rise, brackish marshland became more dominant, allowing localised or blanket-peats to build-up during the post-Roman period. Post-medieval land-reclamation dumps are known to have been emplaced locally, further raising ground levels.
- 7.1.2 Within the Site, it can be expected that where these strata have not been destroyed by previous belowground impacts, alluvial clays and silts potentially bearing remains of prehistoric to medieval date could be encountered at between c. -0.60 mOD (top) and c.-1.30 mOD (base). Localised alluvium may exceed this depth, possibly surviving as deep as c.-2.00 mOD (Law Gibb Group 2001, 11, borehole log).
- 7.1.3 Remains of Post-medieval date, including evidence for land reclamation, and for the former alignment of Vine Street and its pre 1745 terraced housing may be encountered at a shallower level.
- 7.1.4 From this potential must be subtracted known previous destructive impacts. It is clear that within the Site, two key areas are unlikely to retain any archaeological potential:
- Areas (including York Road) which have been subject to previous excavation for double-basements. These structures are known to have impacted to c.-5.00 mOD and it has been demonstrated by borehole investigation that they have removed all alluvial deposits as well as substantial depths of underlying river gravel (Law Gibb Group 2001).
 - The 'cut and cover' tunnel associated with the Waterloo and City line will similarly have removed any archaeological potential within its footprint. The precise location of this tunnel cannot be determined at the time of writing, other than that it underlies the northern tower block area of Elizabeth House (*ibid.*)
- 7.1.5 If an assumption is made that single-basement areas will have impacted to half the depth of double-basements then, within these areas, ground levels will have been truncated to c. -0.5mOD, and there is potential for *in-situ* archaeological remains to have survived.
- 7.1.6 Un-basemented areas may have been subject to destructive impacts that cannot presently be quantified in terms of their depth or extent. These include the possibility of cellars under the former No.s 67 and 69 York Road, entrance and exit ramps for basements, construction and re-positioning of ventilation shafts for underlying underground railways, and sub-surface structures associated with Waterloo Station itself.

7.2 Recommendations for further work

- 7.2.1 In light of the potential archaeological importance of the Site, it is recommended that a separate geotechnical assessment be commissioned from specialist contractors prior to any planning application for re-development. Such an assessment should not need to re-address double-basement areas, but should aim to provide data on survival of potentially important archaeological strata below single-basement and un-basemented areas. Such information would inform on the requirement, if any, for consideration of mitigation strategies prior to and/or during the envisaged redevelopment of the Site.

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Appendix 1: Gazetteer of sites and findspots listed by the GLSMR.

Dates are:

MESO	Mesolithic	SAX	Anglo Saxon (Early Medieval)
NEO	Neolithic	MED	Medieval
BA	Bronze Age	PMED	Post-medieval
IA	Iron Age	C18	Eighteenth century
ROM	Roman		

WA No.	Name	Easting	Northing	Date	Description
1	County Hall	530650	179800	MESO	Finds in disturbed context
2	Addington St. (Waterloo Site 'C')	530910	179660	MESO	Possible occupation evidence
3	Addington St. Annexe Site	530880	179740	MESO	Struck flint, could be Neolithic?
4	Waterloo Road	531050	179900	MESO	Axe
5	County Hall	530650	179800	NEO	Axe
6	Addington St. Annexe Site	530880	179740	NEO	Worked flint, burnt flint, charred grain, palaeochannel..
7	Addington St. Waterloo Site 'B'	530910	179700	NEO	300+ flint tools and waste flakes.
8	Addington St. Waterloo Site 'C'	530910	179660	NEO	Possible settlement evidence.
9	County Hall	530650	179800	BA	Sword and halberd.
10	County Hall	530650	179800	IA	Sword, two sheaths and spearhead.
11	County Hall	530650	179800	ROM	Roman Boat & associated finds.
12	Jubilee Gardens Millennium Wheel Site	530650	179940	ROM	Marsh deposits and sherd of Roman pottery.
13	County Hall	530650	179800	SAX	Find of axe, sword & bead
14	Jubilee Gardens	530670	179940	SAX	Peat horizon
15	Lower Marsh	531000	179600	MED	Village
16	Jubilee Gardens	530670	179940	MED	Peat horizon
17	Belvedere Road	530700	179600	MED	Defensive dyke
18	County Hall	530650	179800	MED	Iron cleaver
19	Jubilee Gardens	530670	179940	PMED	Reclamation dumps
20	County Hall	530650	179800	C18	Site of Coade's Artificial Stone Company
21	South Bank	530670	180080	C18	Site of Vauxhall Glasshouse

Appendix 2: Listed Buildings within the Study Area.

WA No.	Name	Easting	Northing	Grade
LB1	Telephone Box, Westminster Bridge Rd.	530680	179675	Grade 2
LB2	Hospital, York Rd.	530820	179760	Grade 2
LB3	House, 5 Whichcote St.	531050	180048	Grade 2
LB4	Church, Waterloo Rd.	531130	180090	Grade 2*
LB5-6	Gate, Wall, gate pier, Waterloo Rd.	531140	180046	Grade 2
LB7	Wall, Waterloo Rd.	531102	180090	
LB8	Ballustrade, Street lamp, Belvedere Rd	530734	179906	Grade 2
LB9	Telephone box, Waterloo Bridge Road.	530679	179673	Grade 2

Appendix 3: Non- Ordnance Survey cartographic sources Consulted

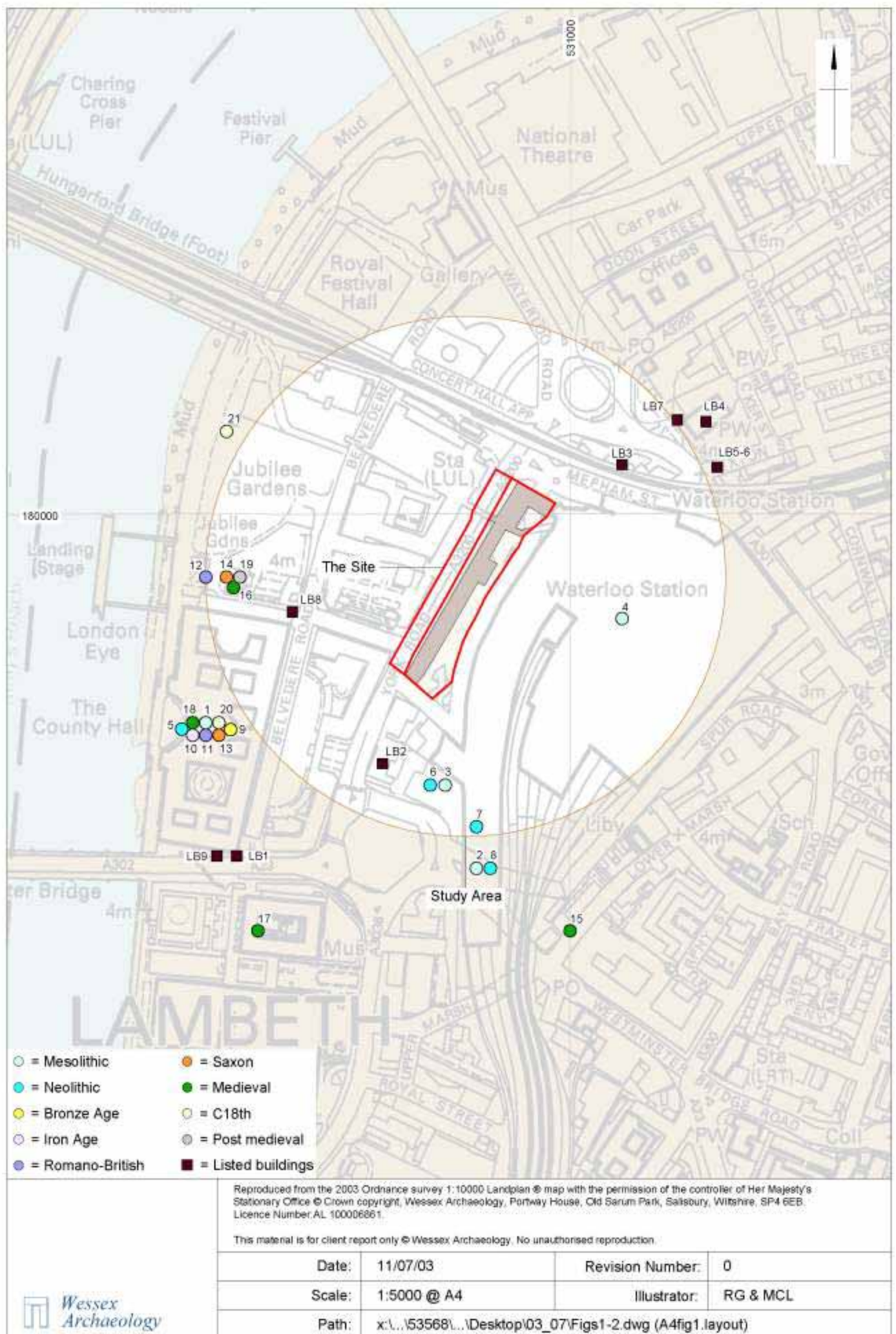
For Ordnance Survey mapping see **Appendix 4**

(Documents reproduced, as figures in this report are in bold, those not illustrated are in italics).

- 1562 *'Agas' map*
- 1572 *Brown & Hogenberg*
- 1658 *Faithorne & Newcourt*
- c.1666 *Wenceslaus Hollar. "Plan of London Before the Fire)*
- 1682 *William Morgan. "London & c Actually Survey'd"*
- **1745** **John Rocque. "A Plan of the Cities of London and Westminster, and of Southwark, with the contiguous buildings**
- 1800 *Thomas Milne. "Milne's Land Use Map" sheet 3*
- **1831** **Plan of the Northern Part of the Parish of Lambeth**
- 1835 *John Cross. "Cross's New Plan of London"*
- 1862 *Stanford's Library Map of London (sheet 10)*
- 1841 *Parish of St. Mary, Lambeth*
- 1876 -- "--
- 1886 -- "--
- 1888 -- "--
- 1897 -- "--
- 1905 *Plan of the Metropolitan Borough of Lambeth*
- 1953 -- "--
- **undated** **LCC War Damage Map (1:2,500) RM22/76**
- 1981 *Geological Survey of Great Britain (England & Wales) 1:50 000, solid & Drift, Sheet 270*
- 1991 *London Borough of Lambeth Conservation Areas and Ward Boundaries*

Appendix 4: Landmark Ordnance Survey map regression:

OS 1:2,500 Series 1879
OS 1:2,500 Series 1896
OS 1:2,500 Series 1916
OS 1:2,500 Series 1952-53
OS 1:2,500 Series 1964-65
OS 1:10,000 Series 1972/4/5



Site location plan showing study area and data synthesised from GLSMR.

Figure 1



A



B



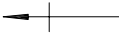
C



D



E



Date:	29/07/03	Revision Number:	0
Scale:	N/A	Illustrator:	RG & MCL
Path:	x:_553568\..._Desktop\03_07\Figs 1-2 (A3fig2.layout)		

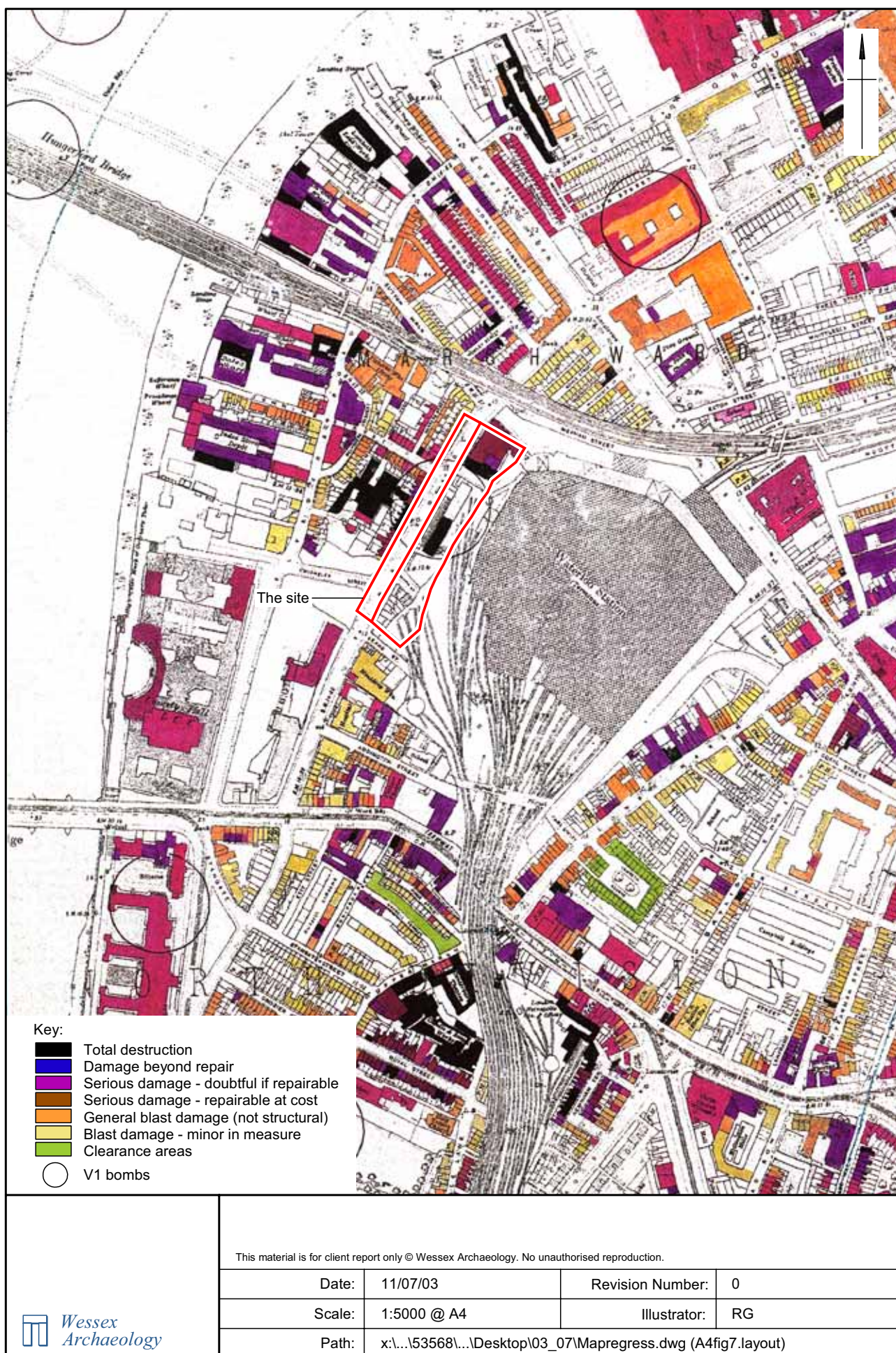


Approximate site location



Parish of Lambeth map 1835

Figure 4



LCC War Damage Map

Figure 5



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