Northern Estate Programme

Norman Shaw North Standalone - Archaeological Statement

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ContentsContents 2
Figure List 3
1 Introduction 4
2 Methodology and sources consulted 8
3 Site location, topography and geology 10
4 Archaeological and historical background 14
5 Statement of significance 23
6 Impact of proposals 26
7 Conclusion and recommendations 28
Appendix A – Gazetteer of known historic environment assets 30
Appendix B – Planning framework 51
Appendix C – Determining significance 62
Appendix D – Non-archaeological constraints 64
Appendix E – Glossary 65
Appendix F – Bibliography 69

Figure List

Fig 1 Site location

Fig 2 Historic environment features map

Fig 3 Geology map with locations of historic boreholes (BGS 2019)

Fig 4 Thorney Island and the confluence of the Tyburn and Thames Rivers

Fig 5 Sketch map showing Westminster in 1529 (Green and Thurley 1987, 65; fig 4)

Fig 6 Braun and Hogenberg's map of 1572

Fig 7 Norden's map of Westminster of 1593

Fig 8 Faithorne and Newcourt's map of 1658

Fig 9 Morgan's map of 1682

Fig 10 Rocque's map of 1746

Fig 11 Horwood's map of 1799

Fig 12 Ordnance Survey 1st edition 25": mile map of 1875–9 (not to scale)

Fig 13 Ordnance Survey 2nd edition 25":mile map of 1896 (not to scale)

Fig 14 Ordnance Survey 3rd edition 25":mile map of 1916 (not to scale)

Note: Site outlines may appear differently on some figures owing to distortions in historic maps. North is approximate on early maps.

1 Introduction

1.1.1 This Archaeological Statement has been produced as part of an application for the Norman Shaw North Standalone works Full Planning and Listed Building Consent. The Archaeological Statement has been prepared by Museum of London Archaeology (MOLA) on behalf of the Corporate Officer of the House of Commons.

1.2 Description of the Norman Shaw North Standalone Proposals

1.2.1 The description of development (the Proposed Development) relating to the Norman Shaw North Standalone proposals is set out below:

"Full planning consent for the refurbishment of Norman Shaw North including the installation of a glazed roof covering to the internal courtyard, to provide further accommodation for parliamentary uses (Sui Generis); installation of chillers at ground level adjacent to the northern elevation; basement piling; alterations to the courtyard eaves to create a roof access gallery; alteration of the northern elevation; alteration of north western corner stepped plinth; alteration to Laundry Road landscape and levels to provide accessibility improvements; and crane gantry screw piling located in Commissioners' Yard.

Listed Building Consent for the internal and external refurbishment, including installation of new building services and rooftop repairs and reconfiguration including rooftop louvres and reconstruction of chimneys; courtyard roof fixings; secondary glazing; and interiors; alterations to existing openings and basement vaults; and associated works including temporary construction works."

1.3 Need for the development

1.3.1 The NSN standalone planning and listed building consent proposals form a standalone application for both internal and external works, submitted following the submission of the October 2019 NEP2 NSN planning (19/08243/FULL) and LBC (19/08251/LBC) applications, and approval of the NSN envelope works full planning (20/06649/FULL) and LBC (20/06650/LBC) applications. The majority of the works proposed in the new standalone application replicate the envelope works that were included in the NSN envelope applications, and the internal works included in the October 2019 NEP2 applications, with the exception of: addition of 72 mini piles at the basement slab; external chillers with associated enclosure; additional roof louvre included; development of the north elevation design; and piling to the lift pits, southern vaults and north east pavilion foundations.

1.3.2 In May 2020 the Sponsor Body announced a Strategic Review of the Northern Estate Programme, including how the requirements for a temporary House of Commons decant may have developed in response to Covid-19. As a result, determination of the October 2019 masterplan suite of applications is on hold, pending the outcome of the Strategic Review.

1.3.3 In order to progress urgent repair works to NSN, a full planning (20/06649/FULL) and LBC (20/06650/LBC) application was submitted for works to the external envelope of the building on the 16th of October 2020, and was granted consent on the 3rd of February 2021. The envelope application was designed to work with the October 2019 NEP2 application as part of a wider masterplan, or a standalone proposal for NSN.

1.3.4 The NSN Envelope application decoupled the critical works from the October 2019 masterplan suite of applications to allow urgent works to the external of NSN to begin without delay, and ensure no further deterioration of the building occurs.

1.3.5 The NSN standalone application comprises a comprehensive package of internal refurbishment works and critical repair works to the external envelope, and in effect will supersede the NSN Envelope consent (20/06649/FULL and 20/06650/LBC).

1.3.6 The NSN standalone proposals will overall preserve the significance of the listed building and enhance the character and appearance of the conservation area, and ensure that the building and its special interest is preserved for generations to come. Any harm resulting from the proposals has been minimised to the smallest degree possible, and is considered to be outweighed by the significant public benefits delivered through the proposals, including:

- New interior design which is sympathetic in approach to the historic character of the building, to be determined in further detail in later design stages;
- Repair and redecoration/refurbishment of special features internally, for example, the war memorial lamp, chimneypieces, doors, joinery and staircases, details to be determined in further detail in later design stages;
- Removal of 1970s suspended ceilings to reveal original ceiling heights and cornices;
- Removal of unsightly modern fire-doors and screens and replacement with better designed modern alternatives;
- Removal of later alterations to the floor plan;
- Reinstatement of the oculus and railings in the courtyard, which restores natural light to the basement areas;
- A well-designed terrazzo floor finish within the courtyard;
- The comprehensive cleaning, repair and refurbishment of the exterior of the building, including the principal elevations and roofs;
- The improvement of safe access at roof level;
- The rationalisation and improvements to the lower-ground-floor level of the north elevation;
- The removal of the modern portacabins, bins and cycle storage facilities from the courtyard, which detract from significance;
- The removal of the modern portacabins from the northern elevation;
- The removal of later louvres and rooflights from the roof and replacement with well-designed louvres on the inner-facing slopes;
- Rationalisation of mechanical, electrical and plumbing services, removing unsightly service runs and plant areas and replacing these with better designed modern alternatives. The reconstruction of the five chimneys to accommodate necessary modern building services contributing to Parliament's 2050 zero carbon target; and
- Improvements to the setting of the building, by removing the granite 'skirt' added in the 1980s, restoring the original ground level, and implementing new paving and a new well defined entrance.

1.3.7 The NSN standalone proposals have been developed to be delivered as an independent package of internal and external works to the building, or as a constituent part of a wider masterplan for the Northern Estate. As such the standalone proposals are compatible with and do not preclude the determination of the October 2019 NEP2 applications. The NSN standalone application is intended to supersede the NSN Envelope consent (20/06649/FULL and 20/06650/LBC).

1.4 Origin and scope of the report

1.4.1 This desk-based study assesses the impact of the scheme on buried heritage assets (archaeological remains). It forms an initial stage of investigation of the area of proposed development (hereafter referred to as the 'site') and is required in relation to the planning process in order that the local planning authority (LPA) can formulate an appropriate response in the light of the impact upon any known or possible buried heritage assets. These are parts of the historic environment which are considered to be significant because of their historic, evidential, aesthetic and/or communal interest.

1.4.2 This report deals solely with the archaeological implications of the development and does not cover possible built heritage issues, except where buried parts of historic fabric are likely to be affected. Above ground assets (i.e. designated and undesignated historic structures and conservation areas) on the site or in the vicinity that are relevant to the archaeological interpretation of the site are discussed. Whilst the significance of above ground assets is not assessed in this archaeological report, direct physical impacts upon such assets arising from the development proposals are noted. The report does not assess issues in relation to the setting of above ground assets (e.g. visible changes to historic character and views).

1.4.3 The assessment has been carried out in accordance with the requirements of the National Planning Policy Framework (NPPF) (MHCLG 2019; see Appendix B of this report) and to standards specified by the Chartered Institute for Archaeologists (CIfA 2020), Historic England (EH 2008, HE 2015, 2017, 2019), and the Greater London Archaeological Advisory Service (GLAAS 2015).

1.4.4 Note: within the limitations imposed by dealing with historical material and maps, the information in this document is, to the best knowledge of the author and MOLA, correct at the time of writing. Further archaeological investigation, more information about the nature of the present buildings, may require changes to all parts of the document.

1.5 Designated heritage assets

1.5.1 Historic England's National Heritage List for England (NHL) is a register of all nationally designated (protected) historic buildings and sites in England, such as scheduled monuments, listed buildings and registered parks and gardens. The List includes one nationally designated heritage asset within the site comprising the Grade I listed Norman Shaw North Building (NHL 1274511).

1.5.2 The site is located within the Whitehall Conservation Area. The Conservation Area Audit describes the character of the surrounding area as "a grand and impressive processional route with strong solid built frontages [that] forms the core of the conservation area… and collectively they provide some of the most important and well known views in London" (WCC , 2003).

1.5.3 The site lies within the Lundenwic and Thorney Island Area of Special Archaeological Priority, revised as the Tier 1 Archaeological Priority Area of Westminster and Whitehall in Westminster City Council's forthcoming draft Westminster City Plan. This is designated for its potential for the prehistoric and Roman occupation of Thorney Island and the development of the area from the Saxon period through modern day as the centre of political and religious activity and power.

1.6 Aims and objectives

1.6.1 The aim of the assessment is to:

- identify the presence of any known or potential buried heritage assets that may be affected by the proposals;
- describe the significance of such assets, as required by planning policy (see Appendix B for planning framework and Appendix C for methodology used to determine significance);
- assess the likely impacts upon the significance of the assets arising from the proposals; and provide recommendations for further assessment where necessary of the historic assets affected, and/or mitigation aimed at reducing or removing completely any adverse impacts upon buried heritage assets and/or their setting.

2 Methodology and sources consulted

2.1.1 For the purposes of this report the documentary and cartographic sources, including results from any archaeological investigations in the site and a study area around it were examined in order to determine the likely nature, extent, preservation and significance of any buried heritage assets that may be present within the site or its immediate vicinity. This information has been used to determine the potential for previously unrecorded heritage assets of any specific chronological period to be present within the site.

2.1.2 In order to set the site into its full archaeological and historical context, information was collected on the known historic environment features within a 250m-radius study area around it, as held by the primary repositories of such information within Greater London. These comprise the Greater London Historic Environment Record (GLHER) and the Museum of London Archaeological Archive (MoL Archaeological Archive). The GLHER is managed by Historic England and includes information from past investigations, local knowledge, find spots, and documentary and cartographic sources. The MoL Archaeological Archive includes a public archive of past investigations and is managed by the Museum of London. The study area was considered through professional judgement to be appropriate to characterise the historic environment of the site, and agreed in consultation with GLAAS in February 2021. Occasionally there may be reference to assets beyond this study area, where appropriate, e.g. where such assets are particularly significant and/or where they contribute to current understanding of the historic environment.

2.1.3 In addition, the following sources were consulted:

- MOLA – in-house Geographical Information System (GIS) with statutory designations GIS data, the locations of all 'key indicators' of known prehistoric and Roman activity across Greater London, past investigation locations, projected Roman roads; burial grounds from the Holmes burial ground survey of 1896; georeferenced published historic maps; Defence of Britain survey data, in-house archaeological deposit survival archive and archaeological publications.
- Historic England – information on statutory designations including scheduled monuments and listed buildings, along with identified Heritage at Risk;
- The London Society Library – published histories and journals;
- Groundsure historic Ordnance Survey maps from the first edition (1860–70s) to the present day;
- British Geological Survey (BGS) – solid and drift geology digital map; online BGS geological borehole record data;
- Parliamentary Estates Directorate – architectural drawings (AECOM, February 2020);
- WCC City Plan (November 2016);
- Draft WCC City Plan (July 2019).

2.1.4 Diane Abrams, GLAAS archaeological advisor for the City of Westminster reviewed the draft of the Norman Shaw North Archaeological Statement on 03 July 2019. Her comments were used to update the subsequent versions of the report.

2.1.5 The project team had a Microsoft Teams meeting on the 02 March 2021 with Diane Abrams, GLAAS archaeological advisor for the City of Westminster to discuss and agree on scope of archaeological works.

2.1.6 Rosalind Morris, Project Manager at MOLA, prepared a Written Scheme of Investigation (WSI) to inform the methodology for the forthcoming archaeological monitoring of proposed geotechnical works within the site. The interim results have been added to Section 4 of this report and the final reports of this work will be available following completion of the investigation. Diane Abrams, GLAAS archaeological advisor for the City of Westminster, has been consulted on the WSIs for the archaeological watching briefs and has approved them.

2.1.7 Fig 2 shows the location of known historic environment features within the study area. These have been allocated a unique historic environment assessment reference number (DBA 1, 2, etc.), which is listed in a gazetteer (Appendix A) and is referred to in the text. Where there are a considerable number of listed buildings in the study area, only those within the site are included, unless their inclusion is considered relevant to the study. Conservation areas and archaeological priority areas are not shown. All distances quoted in the text are approximate (within 5m).

2.1.8 Appendix C sets out the criteria used to determine the significance of heritage assets. This is based on four values set out in Historic England's Conservation principles, policies and guidance (EH 2008), and comprise evidential, historical, aesthetic and communal value. The report assesses the likely presence of such assets within (and beyond) the site, factors which may have compromised buried asset survival (i.e. present and previous land use), as well as possible significance.

2.1.9 Appendix D includes non-archaeological constraints. Appendix E contains a glossary of technical terms. A full bibliography and list of sources consulted may be found in Appendix F with a list of existing site survey data obtained as part of the assessment.

2.2 Assumptions and limitations

2.2.1 A levelled site survey and was not available during the assessment. The topography of the site was extrapolated from Ordnance Survey Legacy benchmarks and spot heights as well as past archaeological investigations within the site.

3 Site location, topography and geology

3.1 Site Location

3.1.1 The site can be seen on Fig 1, comprising the late 19th century Grade I listed Norman Shaw North , access to the Whitehall Police Station building to the north and a portion of Derby Gate to the south (NGR: 530266 179810). The site is bounded to the north by the Curtis Green Building, to the east by Laundry Road, to the south by Derby Gate and Norman Shaw South and to the west by Richmond House.

3.1.2 The site falls within the historic parish of St Margaret, Westminster, and lay within the county of Middlesex prior to being absorbed into the administration of the City of Westminster.

3.1.3 The site's eastern boundary is 40m west of the current bank of the River Thames at the Victoria Embankment.

3.2 Topography

3.2.1 Topography can provide an indication of suitability for settlement, and ground levels can indicate whether the ground has been built up or truncated, which can have implications for archaeological survival (see section 5.2).

3.2.2 Westminster is built on an eyot known as Thorney Island, which was formed by the division of the River Tyburn into two channels as it flowed towards the Thames. The north-eastern edge of the gravel eyot lies immediately to the south-west of the site. The Island has been estimated as measuring *c* 400m north-south and *c* 200m east-west, although this would have varied depending on sea and river levels (Thomas *et al.,* 2006). Its northernmost edge lay to the south of Downing Street, in the region of Derby Gate, with its southernmost edge immediately to the south of Westminster Abbey (*c* 350m to the south of the site). The west side was approximately on the line of Broad Sanctuary and Great Smith Street *c* 400m to the south-west of the Northern Estate site.

3.2.3 Substantial reclamation and ground consolidation in the later medieval and post-medieval periods has deeply buried and entirely obscured the original low-lying topography of the edge of the island, foreshore and channel on which the site is located. This will have got progressively lower towards the north-western part of the site, which is best shown on Fig 4. Based on archaeological investigations in the area, the ground levels may have been at around 0.0m Ordnance Datum (OD) at the south-western tip of the site, on the edge of the Island, dropping to –2.0m OD in the centre of the site and –5.5m OD in the north-western part of the site (Thomas *et al* 2006, fig 4).

3.2.4 Current ground level is generally flat across the wider Northern Estate site with small localised changes in ground level. However, these changes of ground level are a consequence of modern building rather that a reflection of the natural topography. The ground level is recorded at 5.4m OD on Parliament Street bordering the west of the site; 4.5m OD on Canon Row in the south-western part of the site; 6.5m OD on Bridge Street to the south (a rise reflecting the approach up to Westminster Bridge to the south-east) and 7.4m OD on Victoria Embankment (Fielden and Mawson section drawings). The latter is a mid-19th century riverfront extension out into the river, constructed as part of the extensive sewage improvements of Sir Joseph Bazalgette along this side of the River Thames.

3.3 Geology

3.3.1 Geology can provide an indication of suitability for early settlement, and potential depth of remains.

3.3.2 Across London, a series of gravel terraces represent former floodplains of the River Thames, which subsequently became incised and left high and dry as the river down-cut to lower levels. The present floodplain represents the most recent stage in this sequence, as a result of the very low sea-level and large flux of meltwater at the end of the last glacial stage (c 15,000–10,000 BC) with the river subsequently depositing coarse gravel sediments across the valley floor.

3.3.3 Fig 4 shows the geology of the site and local area, based on BGS digital data. Although the site appears to directly overlie London Clay, geotechnical and archaeological investigations in the vicinity have found river alluvium of the Thames and Tyburn, above terrace gravel, indicating that fluvial action of the ancient Tyburn has not entirely eroded out the gravels down to the underlying Clay, as suggested by the BGS data. Flowing from the north-west and west, before it joined the Thames the Tyburn divided (430m south-west of the site) to form two channels round the north and south sides of a small gravel island (eyot) known as Thorney Island, where Westminster Abbey and the Houses of Parliament now stand. The edge of the island lies 190m to the south. The site is over the likely route of the northernmost channel; the southernmost probably ran in the vicinity of Great Peter Street and Smith Square, 570m south of the site. The edge of the Gravel terrace on the opposite side of the Tyburn channel lies around 150m to the north of the site.

3.3.4 Archaeological investigation in the early 1980s within the Richmond Terrace area (**DBA 2a**) included an area close to the north-western edge of the site where fine Gravels were encountered at –2.6m OD (6.8m below ground level (mbgl). These had been deposited in riverine conditions and were apparently typical of the Thames foreshore. Above the gravels outside the north-western edge of the Richmond Terrace site was a thick layer of dark gleyed (waterlain or waterlogged) silt relatively rich in organic matter, overlain by a band of laminated sands and bluish clays up to –1.8m OD (6.0m below ground level), probably representing a seasonal cycle of alternating rapid and slow silting, perhaps deposited in a channel. This was succeeded by another layer of gleyed silt containing less organic material, above which there was dark peaty silt up to –1.4m OD (5.6mbgl) containing relatively large pieces of wood. A late Bronze Age/early Iron Age timber structure had been built, resting on this layer and surviving to –0.7m OD (4.9mbgl) (Andrews and Merriman 1986, 17–18).

3.3.5 Elsewhere in the Richmond Terrace investigation, silty clays were recorded, with deposits of peat of varying thickness up to *c* 0.5m, dated to the Bronze Age to Iron Age, at levels ranging from –2.0 to –0.5m OD (4.7mbgl). A layer of peat *c* 0.3m thick along much of the east and south sides of that development area was at 0.2m OD (4.0mbgl) and gave radiocarbon dates ranging from the 3rd century BC to the early 5th century AD (Andrews and Merriman 1986, 19).

3.3.6 Ground level when the timber structure was constructed may have corresponded with the peat layers, at about 0.0m OD (4.2mbgl in the site), and the laminated sand and clay deposits beneath it could indicate that it was situated at the edge of a creek or inlet, and formed part of a waterside revetment or quay (Andrews and Merriman 1986, 20).

3.3.7 A watching brief was conducted within Norman Shaw North (**DBA 1a,** MOLA 2007) and recorded only modern made ground. The test pit was dug within a light well, at a level of

1.5m OD, which would be approximately 4.9mbgl, thus this must represent an existing basement level.

3.3.8 An evaluation at Westminster Underground Station (**DBA 8**), 30m to the south of the site beneath Portcullis House, revealed the potential for alluvial deposits to survive below the existing basement layer. Deposits were first encountered directly below the basement make-up at -0.1 to 0.8m OD (MOLA 1992).

3.3.9 Six BGS historic boreholes are included in Table 3.1 below. As was the case with TP1 in Table 1 some of the boreholes have been drilled at an existing basement level (specifically no. 1298 and 1287). These were dug between 1962 and 1992. The records did not differentiate between modern made ground, containing identifiably modern inclusion such as concrete and plastic (but not brick or tile), and undated made ground, which may potentially contain deposits of archaeological interest. In all likelihood, the undated made ground comprises reclamation deposits from the 16th century onwards, dumped behind the successive river walls to consolidate the ground.

Table 3.1: Summary of geotechnical data (BGS historic boreholes)
Levels are in metres below ground level (mbgl)

BGS ref.	Ground level	Modern made ground	Undated made ground	Top of natural (alluvium)	Top of natural (Gravel)
TQ37NW1286 (10m depth)	Recorded as working datum (unknown m OD)	<1.5	1.5–4.0	4.0	8.2
TQ37NW1282 (10m depth)	Recorded as working datum (unknown m OD)	<8.2	–	–	8.2
TQ37NW1299	6.3m OD	<9.8	–	9.8	–
TQ37NW1300	6.2m OD	<9.1		9.1	–
TQ37NW1298	3.4m OD (likely from basement level)	–	–	5.5	7.0
TQ37NW1287	Recorded as working datum (unknown m OD)	<11.0	–	–	–

TP1 (NNS07)	1.5m OD (lightwell)	<6.3 (terminated)	–	Not reached	Not reached

3.3.10 The data from archaeological investigations and historic boreholes suggests that where alluvial deposits have not been truncated away by post-medieval development, they have been found as high as 4.0mbgl directly underlying undated made ground and are possible at higher levels.

4 Archaeological and historical background

4.1 Overview of past investigations

4.1.1 One archaeological investigation has been carried out within the site, a watching brief within the Norman Shaw Building North (MOLAS 2007) (**DBA 1d**). The watching brief was carried out at basement floor level, and only modern made ground was observed.

4.1.2 Three archaeological investigations have been carried out within the direct vicinity of the site:

- An archaeological investigation has been carried out at Richmond Terrace (**DBA 2a**). This comprised limited trial trenching in the 1960s by English Heritage, and a further phase in the early 1980s by ILAU (Inner London Archaeology Unit). These investigations showed the site was prone to flooding for much of its history, but was later used for dumping in the medieval period, before being built up in the 17th and 18th centuries. Within the flood deposits, evidence of an Iron Age timber structure was noted.
- An evaluation and geoarchaeological evaluation carried out at the Whitehall Police Station in 2014 (**DBA 3**) recorded alluvial deposits relating to the mouth of the Tyburn, underlying thick made ground deposits and evidence of later Post-medieval development.
- An archaeological investigation was undertaken at the River Wall in the 1960s (**DBA 5**). However, there is no further information contained in the MOL Archaeological Archive regarding this investigation.

4.1.3 Within the rest of the study area there are a further 45 investigations, comprising watching briefs, evaluations and excavations. The results of these investigations, along with other known sites and finds within the study area, are discussed by period, below. The date ranges below are approximate.

4.2 Recent archaeological investigations in response to the NEP development

4.2.1 A watching brief (site code PIA18) on the excavation of 12 geotechnical trial pits taken in Laundry Road and Commissioner's Yard was undertaken by MOLA in 2018 (see Appendix G). Investigators identified the remains of Victorian foundations, thought to belong to the abandoned National Opera House in two of the trenches, TT7 and the Gate Foundation Trench. The rest of the observed test pits and trial trenches encountered only 20th century made ground and modern services. The base of these foundations was not seen in either trench (MOLA 2018).

4.2.2 The monitoring of an additional 22 geotechnical trial pits was undertaken in the basement levels of Norman Shaw North and 1 Derby Gate by MOLA between 19 February and 23 May 2019 (site code PIA18; see Appendix G). Investigators identified the foundations of late 19th century buildings thought to belong to the National Opera Building in six of the trial pits in Norman Shaw North and in one trench at 1 Derby Gate. The base of these foundations was not reached and natural ground was not encountered in any of the trial trenches (MOLA 2019).

4.2.3 The excavation of a utility trench located on the access road between Norman Shaw Building North and Norman Shaw Building South was monitored as part of the ongoing watching brief (site code PIA18) 2–25th February 2021. The majority of the trench lay within the

construction cut for the sewer, and was occupied by backfill deposits comprising compacted layers of silty clay and crushed brick and mortar. An area of grey clay alluvium located at the northern section of the trench contained a number of timber piles which were recovered. The top of the deposit lay at 0.3m OD (4.7mbgl). It was not certain whether the alluvium and timbers were redeposited or part of the waterfront. The timbers were found with a small amount of 16th–17th century pottery sherds and may have been part of piled structure related to the 16th century river wall (MOLA 2021).

4.3 Chronological summary

Prehistoric period (800,000 BC–AD 43)

4.3.1 The Lower (800,000–250,000 BC) and Middle (250,000–40,000 BC) Palaeolithic saw alternating warm and cold phases and intermittent perhaps seasonal occupation. During the Upper Palaeolithic (40,000–10,000 BC), after the last glacial maximum, and in particular after around 13,000 BC, further climate warming took place and the environments changed from steppe-tundra to birch and pine woodland. It is probably at this time that England saw continuous occupation. Erosion has removed much of the Palaeolithic land surfaces and finds are typically residual. There are no known finds dated to this period within the study area.

4.3.2 The Mesolithic hunter-gatherer communities of the postglacial period (10,000-4000 BC) inhabited a still largely wooded environment. The river valleys and coast would have been favoured in providing a predictable source of food (from hunting and fishing) and water, as well as a means of transport and communication. Evidence of activity is characterised by flint tools rather than structural remains. There have been three chance finds dated to this period within the study area: a flint tool from Parliament Street, 80m west of the site (**DBA 23**), a deer antler pick from within a former channel 4m east of the site (**DBA 26**) and a tranchet axe found within the River Thames within the foundations of a building near Westminster Bridge 190m north-east of the site (**DBA 72**).

4.3.3 There is a direct relationship between the topography of the area and occupation by later prehistoric populations. The rise and fall of water levels of the Thames, and the subsequent changing extent of Thorney Island (an area of higher Gravels known as an 'eyot') all influenced prehistoric settlement and exploitation. The site lay north-east of Thorney Island, an area of higher ground which was formed by the Thames, which deposited sands some time before 3100BC which suggests that the sand was accreting on the mid to later Neolithic. The accretion at this location was probably influenced by the bend in the river and the proximity of the mouth of the Tyburn (Thomas et. al 2006, 13–14).

4.3.4 The island would have been suitable for occupation and other activity. The area of dry land would have changed throughout the prehistoric period due to continued accretion of sand deposits and changing river levels. Reconstruction of the prehistoric topography based on contour data and predicted river levels suggests that the channel to the north of Thorney Island was dry during the Neolithic and early Bronze Age periods. At this time the site may have straddled the edge of the dry land at the north-eastern edge of the eyot and the intertidal zone (Fig 4).

4.3.5 The Neolithic (40001–2000 BC), Bronze Age (2000–600 BC) and Iron Age (600 BC–AD 43) are traditionally seen as the time of technological change, settled communities and the

construction of communal monuments. Farming was established and forest cleared for cultivation. An expanding population put pressure on available resources and necessitated the utilisation of previously marginal land. Sand and gravel 'high' areas such as Thorney would have remained as drier land when the surrounding area became waterlogged due to rising river levels, and together with their marshy margins are key for the recovery of evidence of prehistoric activity. Reeds or willow would be gathered for fuel or basket-making, and fowling and fishing would have taken place along the riverside; timber walkways or platforms would be constructed in places to give better access to the marshy areas, and wicker fish traps may have been used to catch fish on the tide.

4.3.6 At the end of the Bronze Age there was a general rise of sea levels in southern England which caused the extent of Thorney Island to shrink and the water of the Tyburn to flow to the north and south of the island (Thomas et. al 2006, 29). During this period much of the site was likely to have been permanently submerged in an area at the confluence of the northern branch of the Tyburn and the Thames. It is possible that the southern edge of the site was intertidal wetland that was regularly inundated. It is uncertain whether there was a depositional environment here where alluvial silts built up or whether it was subject to fluvial scouring by the flow of the Thames and Tyburn, which will have affected archaeological remains from earlier prehistoric periods.

4.3.7 Part of a Late Bronze Age to Early Iron Age timber structure was recorded during the archaeological watching brief at Richmond Terrace, 10m west of the site (**DBA 2a**). It survived to around -0.7m OD (5.2mbgl). The laminated sand and clay deposits beneath it could indicate that it was situated at the edge of a creek or inlet and was therefore possibly part of a riverside revetment or quay. A base-plate of alder rested on a peat deposit at -1.4m OD; it was aligned north-south and about 0.2m wide, tapering to the south. Set vertically into it was a 0.6m length of a post c 0.1m wide made from an unsquared piece of wood, the bottom of which was wedge-shaped. About 0.8m from this the base plate was briefly interrupted, as if for the seating of another post which had been removed. The structure was buried beneath a deep deposit of gleyed silty clay (Andrews and Merriman 1986, 18-20).

4.3.8 Some isolated later prehistoric remains have also been recorded in the study area. In the 1960s, excavations at the Treasury Building, 150m north-west of the site (**DBA 30**) found a polished Neolithic flint axe head on the remains of the floor of a Saxon building. The GLHER notes the chance find of a Neolithic stone axe (**DBA 24**), in Richmond Terrace, 80m north-west of the site, but states that it may be referring to the axe found in the 1960s excavation at the Treasury. Excavation in Parliament Street, 115m to the south-west of the site, and Parliament Square, 200m south-west of the site, identified one sherd of Iron Age pottery within a layer sealed by a gravel surface (**DBA 42**).

4.3.9 The site was probably in the path of the Tyburn, waterlogged and probably permanently submerged, and unsuitable for settlement, but a timber structure has been recorded to the north-west, and jetties, revetments or other features may have been nearby, possibly extending into the site. Its location at the confluence with the Thames may have been significant - in addition to its natural resources - as a place of ritual. A large number of metal artefacts and stone axes have been recovered during dredging of the Thames, and many may have been deliberately deposited as votive offerings.

Roman period (AD 43-410)

4.3.10 Within approximately a decade of the arrival of the Romans in AD 43, the settlement of Londinium had been established on the north bank of the Thames where the City of London

now stands, 2.5km north-east of the site. It quickly became a major commercial centre and port; it also formed the hub of the Roman road system in Britain which was key for both military and commercial traffic. Small settlements, typically located along the major roads, acted as both producers and markets for the town (MoLAS 2000, 150).

4.3.11 It is probable that the Roman road from the Kent coast via Canterbury and Rochester at one time crossed the Thames via a ford at what is now Lambeth to connect with another on the line of Edgware Road. There may therefore have been a crossing at or near Thorney Island, with a Roman road passing *c* 230m to the south of the site, although this has not been determined archaeologically.

4.3.12 There is considerable but inconclusive evidence to suggest a Roman settlement on Thorney Island, to the south-west of the site. It has been suggested that the alignment of roads on both sides of the Thames indicates Westminster to be the site of a ford. Antiquarian discoveries of Roman material (immediately outside the study area) have been reported, all in the vicinity of Westminster Abbey. These include a Roman coffin found on the green to the north of Westminster Abbey (Stanley 1870), a Roman wall and part of a hypocaust beneath the nave (Westlake 1923), and Roman 'dwellings' to the south of the cloister (Spurrell 1885, 274). The remains of a robbed out wall containing Roman tile has more recently been found under Parliament Square (Thomas et al., 1993a, 15).

4.3.13 Evidence of Roman presence within the study area is limited to worked ragstone with Roman tile found within a robbed out wall cut into a gravel surface identified during excavation in Parliament Square 200m south-west of the site (**DBA 42**), a chance find of a bronze Late Iron Age to Roman bowl was found on Whitehall 110m north-west of the site (**DBA 39**) and a bronze coin of Antonius Pius found in the River Thames near Westminster Bridge in 1740 135m south-east of the site (**DBA 73**). No additional evidence of Roman activity or occupation has been noted within the study area. The site would not have been suitable for settlement; however, it is possible that evidence of water management, land reclamation or resource exploitation activities including revetments, jetties, riverfront or drainage management features are present within the site that would be associated with occupation of Thorney Island or the use of the marshy interface.

Early medieval (Saxon) period (AD 410–1066)

4.3.14 Following the withdrawal of the Roman administration from England in the early 5th century AD, Conidium was apparently abandoned. Germanic ('Saxon') settlers arrived from mainland Europe, with occupation in the form of small villages and an economy initially based on agriculture. By the end of the 6th century a number of Anglo-Saxon kingdoms had emerged, and as the ruling families adopted Christianity, endowments of land were made to the church. Landed estates (manors) can be identified from the 7th century onwards; some, as Christianity was widely adopted, with a main 'minster' church and other subsidiary churches or chapels. In the 9th and 10th centuries, the Saxon Minster system began to be replaced by local parochial organisation, with formal areas of land centred on settlements served by a parish church. The trading port of Lundenwic flourished in the area now occupied by Aldwych, the Strand and Covent Garden, 800m north-east of the site (Cowie and Blackmore 2008, xv).

4.3.15 In the 7th to 9th centuries, Christianity was widely adopted, alongside the development of royal estates and the endowment of Minsters (religious centres). Westminster is first mentioned in a charter dated to *c* AD 785, referring to the founding of a religious community dedicated to St Peter on the edge of the Thames, 400m to the south-west of the site: the

church became known as the 'West Minster' to distinguish it from St Paul's Cathedral (VCH London i, 433-57). The site lay within the endowment of the community.

4.3.16 In the early 11th century, King Cnut constructed the Royal Palace of Westminster on the eastern side of Thorney Island, 300m to the south of the site. The palace burnt down *c* 1030 and was rebuilt by King Edward the Confessor (1042–66), who also constructed a large stone church in honour of St Peter the Apostle, consecrated in 1065 (Thomas et al., 2006).

4.3.17 Archaeological investigations in 1961–63, *c* 150m north-west of the site (**DBA 30**) revealed evidence of occupation in the late 8th to mid-9th century, on a spur of high ground to the north of Thorney Island. A succession of timber buildings included a substantial hall, its position midway between Lundenwic to the north and the possibly contemporary monastery on Thorney Island to the south, suggest high or even royal status, and its abandonment may be connected with Danish raids of the late 9th century (Cowie and Blackmore 2008, 90–100). The remains were overlaid by later Saxon period alluvial deposits suggesting that the water level had risen by this time (Green 1987).

4.3.18 An archaeological evaluation and excavation during the Jubilee Line Extension (**DBA 8**), 35m to the south of the site, revealed a sequence of alluvial deposits, one including a sherd of Saxo-Norman pottery. Alluvial deposits dated to the mid-late Saxon period and cut by a ditch, posthole and small pit were identified during excavation in Parliament Street, 115m south-west of the site, and Parliament Square, 200m south-west of the site, in 1993 (**DBA 42**).

4.3.19 Throughout this period the site would have probably still been in the channel of the Tyburn or in increasingly marshy ground. It is possible that fish traps were placed in the channel as these have been found elsewhere along this stretch of the Thames, typically associated with a tributary, for example at the mouth of Chelsea Creek 4.6km to the south-west, and on the opposite side of the Thames at the mouth of what was the Battersea Channel 2.4km to the south.

Later medieval period (AD 1066–1485)

4.3.20 The Domesday Book (1086) entry for the manor of Westminster includes St Peter's Church and the surrounding village, meadow, pasture and woodland.

4.3.21 Westminster Palace, *c* 140m to the south of the site, became the main residence of the English monarchy and the seat of the Court during this period (Weinreb and Hibbert 2008, 617). In 1099, Westminster Hall was added at the northern end of the Palace (Thomas et al 2006, 49) and was subsequently used to administer royal justice. Ecclesiastical organisation had by this period generally formalised into parishes, areas of land centred on settlements served by a minister and a parish church. The presence of both the abbey and palace would have encouraged a growth of population in the area, and the parish church of St Margaret was built to the north of the Abbey in the mid-11th century to provide a place of public worship (Weinreb and Hibbert, 2008, 783).

4.3.22 Much of Thorney Island, 100m to the south of the site, and the surrounding low-lying ground would in the early part of the period still have been prone to flooding and occasionally boats were used to move across the island. Evidence of this flooding was found during investigations 200m south-west of the site, outside the study area, in the Parliament Square (**DBA 45** and PSQ94). On lower-lying ground, successive attempts were made to reclaim the land by digging drainage ditches and dumping soil (Thomas 1993, 12).

4.3.23 By 1180, the abbey precinct had been enclosed by boundary walls and a ditch. The precinct covered an area of 14 acres and was divided into private areas of the abbey to the south and the public space to the north. The abbey precinct came to be known as the Sanctuary, after the abbey's privilege of sanctuary, and included the Parish Church of St Margaret to the south of Parliament Square, the belfry to the west, and the houses for the sanctuary men (Honeybourne 1932 quoted in Thomas 1993, 71). There were probably a number of ancillary buildings in this part of the precinct, although the location and extent of these are not known.

4.3.24 The GLHER notes the first reference to Whitehall, 230m north of the site, in 1305 when Joan, 'wife of the late William Charles' held a house set back from the riverfront, 175m to the north-west of the site, along with 32 acres (GLHER ref: 081384).

4.3.25 Parliament began to meet regularly at Westminster from the reign of Edward I (1272–1307). Edward I began the two-storeyed St Stephen's Chapel, which was completed in the reign of Edward III (1312–77). Following the completion of St Stephen's Chapel, Edward III founded a college to support and serve it which included a dean and 12 secular canons in addition to vicars, clerks and choristers (Thomas et al 2006, 98). The College staff were provided an income and granted the land in the north of the palace precinct between King Street and the riverbank which was developed with terraced housing (Canon Row) centred by the GLHER 35m south of the site (**DBA 20**). Edward III also built a high clock tower in the courtyard to the north of the Great Hall and the Jewel Tower at the south-west corner of the Westminster Palace (Bradley and Pevsner 1994, 229–32).

4.3.26 Land reclamation in the 14th century extended the grounds occupied by the royal residence, which by now occupied an area of 13.5 acres. The palace included an outer court (or New Palace Yard), a middle court (or Green Yard), and St Stephen's Court. By the 15th century, the area was crowded with businesses, with residential properties and shops even within the precinct of Westminster Abbey (Thomas et al 2006). Archaeological investigations to the south of the study area have found evidence of continued silting at the edge of the Thames, 85m south-east of the site (**DBA 18**) and 125m south-west of the site (**DBA 14**), where reclamation took place at the end of the period by drainage and the use of consolidation deposits.

4.3.27 The extent of riverfront reclamation in this period is uncertain. The site was possibly partly on land and partly in the Thames. There is a possibility that structures such as jetties or fish traps may have extended into the site, and there may have also been early revetments constructed. The archaeological watching brief on Richmond Terrace 10m west of the site (**DBA 2a**), noted evidence that the area of the site was marginal land at the edge of Thorney Island; until the construction of a riverside wall in the later 16th century it was frequently flooded despite late-medieval attempts at reclamation, and used for dumping rubbish. In the west of the area investigated, close to Whitehall, made ground was recorded to c -1.0m OD (5.5m below street level), where natural clays and peats were overlain by a mixed layer of clay and organic material including large quantities of leather scraps, and also household refuse such as bone, and mussel and other shells, dated to the 15th or 16th century (Andrews and Merriman 1986, 19).

Post-medieval period (AD 1485–present)

4.3.28 The Thames riverbank adjacent to the site became developed as part of the expanding royal and government centre of Westminster during the early post-medieval period including the

establishment of Whitehall Palace, which was the main residence of the English monarchs in London from 1530 until 1698 when most of its structures were destroyed by fire (see below).

4.3.29 Just outside the study area to the north, York Place, the Archbishop of York's London residence since the 13th century, was much extended and developed in the 1520s by Cardinal Wolsey, Archbishop of York 1514–29 (Fig 5). The site would have been located partially within reclaimed land on the riverbank of the Thames.

4.3.30 On Wolsey's fall from power, York Place was taken by King Henry VIII and renamed Whitehall Palace. An extensive rebuilding programme was carried out, with new gardens and orchards laid out and additional land acquired to the west, and two new sets of stairs were constructed to provide access to the river. Henry VIII died at Whitehall in 1547 but Whitehall Palace continued as a royal residence until the end of the 17th century, when William and Mary moved to Kensington Palace (Weinreb et al 2008, 1020, 1036). Whitehall Palace extended across much of the northern part of the study area, approximately as far south as the site and Richmond Terrace. The north extent of the site lay in an open area, the Bowling Green, just to the south of the extensive complex of palace buildings. The southern part of Whitehall Palace included the Stone Gallery, a ground floor gallery which linked the Privy Gallery to the Bowling Green. (Survey of London, Vol 13, 41–115).

4.3.31 The GLHER includes a number of entries for the palace and its associated features, including gardens and a bastioned river wall. The King's Street Gate, the main road entrance to the Palace from the south, was 130m north-west of the site (**DBA 40**).

4.3.32 The Thames would have been an important means of transport for the Court, and the private ('Privy') river stairs for the palace (**DBA 29**) were 80m north of the site. A Grade I listed fragment of reconstructed Tudor riverside terrace wall is 200m north of the site (List entry: 1066636). The projected line of this south towards the site would probably take it through the western part of the site.

4.3.33 A trial pit, dug at Richmond Terrace Mews 10m west of the site (**DBA 2a**), recorded the south-east corner of the orchard where it met the waterfront, with possible Tudor masonry at the base of a river wall. The GLHER and post-medieval maps indicate the site of the mid-16th century Garden Stairs (**DBA 2d**) would have been located immediately to the north of the site, on Richmond Terrace.

4.3.34 Braun and Hogenberg's map of 1572 (Fig 6) shows roughly half the site within the Thames embankment, marked as ‘Chanoy Row’ (possibly a precursor to the modern Canon Row), and the other half with the Thames itself. The buildings along the embankment appear to be organised around central courtyards and may represent mews buildings. The map itself is isometric in nature, and does not show accurately conditions on the site.

4.3.35 A watching brief undertaken within the access road between the site and Norman Shaw South found possible evidence of 16th century timber waterfront at 0.3m OD (4.7mbgl) (site code PIA18). The trench was not able to be entered and it was not possible to determine if the timber and surrounding alluvial clays represented an in situ deposit or had been redeposited as part of land reclamation activities later (MOLA 2021). Sherds of 16th–17th century pottery were found associated with worked timbers.

4.3.36 Norden's map of Westminster of 1593 (Fig 7), although more in plan than isometric, does not show much more detail than the earlier Braun and Hogenberg map in relation to the site. As shown previously, the eastern extent of the site was within the Thames whilst the

western half was occupied by a possible wall along the Thames embankment in the north-west and residential structures with a landing stair in the south-west.

4.3.37 In the mid-17th century the general environment became increasingly developed. Faithorne and Newcourt's map of 1658 (Fig 8) shows the west of the site occupied by several buildings to the south of Whitehall Palace gardens. These buildings are arranged broadly east-west around central courtyard areas. This level of development appears to be short lived, as following the Restoration of the Monarchy in 1660, the land to the south of the privy garden at Whitehall was converted into a bowling green (Survey of London, Vol 13, 41–115).

4.3.38 Morgan's map of 1682 (Fig 9) is the first non-pictorial map of the site. Several of the smaller houses previously seen on the riverfront had been demolished. The west of the site has been redeveloped with the garden of Derby house fronted onto the river. The remainder of the site was occupied by small buildings and open yard areas. Derby House was owned by the Earl of Derby (Old and New London iii 1878, 376-82). William, Earl of Derby, built Derby House in the 1590s in an area that had been granted to his family by Edward VI in 1552. The house was taken over by Parliament in the reign of Charles I and used for committee meeting and State affairs. During the reign of Charles I, Derby House was used as the office of the Lord High Admiral (Wheatley and Cunningham 1891, 496).

4.3.39 The area around the site was substantially redeveloped in the early to mid-18th century. Whitehall Palace was almost destroyed by fire in 1698 and the area became increasingly governmental in nature. Truncated and fragmentary remains of the palace have been recorded in a number of archaeological investigations to the west of the site (**DBA 4** and **17**).

4.3.40 Rocque's map of 1746 (Fig 10) shows that the site is predominantly occupied by buildings at this time but given the nature of Rocque's drawings it is difficult to ascertain their nature or extent, replacing the bowling green. Norman Shaw North is partly occupied by two rectangular blocks of buildings, "Tod's Wharf" and "Sand Wharf". The east of the site remains within the channel of the River Thames.

4.3.41 Faden's 1813 revision of Horwood's map of 1799 (Fig 11) shows the site is still occupied by wharf buildings. The west side of Cannon Row is occupied by terraced houses. The site is occupied with the 'White Hall Timber Yard' and an unidentified wharf probably associated with the yard activities. Just south of the site a large building is noted as the Transport Office. In 1816 the office building and garden of the Transport Office of the Board of Ordnance were constructed on the area now occupied by Norman Shaw South (**DBA 1d**)(NEP3). The building was subsequently used for the Control Board (or Commission for Indian Affairs) then the Civil Service Commission (HCIO 2015).

4.3.42 Stanford's map of 1862 (not reproduced) shows some changes in the site. The timber yard had closed and new buildings constructed, forming part of 'Cannon Wharf'.

4.3.43 In 1864–70, Sir Joseph Bazalgette implemented a scheme to upgrade and increase the capacity of London's existing sewer infrastructure which involved reclaiming large parts of the northern Thames riverbank. The works involved major work with the construction of the Victoria Embankment between Westminster Bridge and Blackfriars (Weinreb et al 2008, 974). This extended the riverfront eastwards by around 30m along the stretch beside the site, to its present position.

4.3.44 The Metropolitan District Railway Company was set up in 1864 to complete an extension to the Metropolitan underground line. The section of line from South Kensington to

Westminster Bridge was completed in 1868 (Weinreb et al 2008, 239). It was a cut-and-cover construction in an open cut, which extended across the very south-eastern tip of the site. Westminster Bridge Station was built at ground level just south of the site.

4.3.45 Following the construction of the Victoria Embankment the site was allocated to be the site of a National Opera Theatre. The construction of the opera house was overseen by the impresario James Mapleson. Excavation for the foundations of the opera house took place in 1875 (HCIO 2015). Mapleson (1888) recalled the excavation for the foundations in his memoirs,

> *"The digging proceeded to a depth of some 40 or 50 feet without discovering anything but running springs and quicksands, covered by a large overlying mass of rubbish, being the accumulation of several ages in the history of Westminster. Many relics of olden times came to light, including the skulls and bones of wild elks and other primitive animals that once roamed about the Thames Valley and were hunted by ancient Britons in the days of the Druids. Various swords, gold and inlaid, often richly-fashioned, told of the feuds of York and Lancaster; while many other objects, concealed for centuries, now came forth to throw a light on the faded scroll of the past. As the builders had got considerably below the depth of the Thames and consequently that of the District Railway, the water began to pour in, which necessitated some fifteen or twenty steam-pumping machines being kept at work for several months. At length the London Clay was reached, which necessitated various cuttings, some 16ft. wide, down which had to be placed some 40ft. of concrete."*

4.3.46 The Ordnance Survey 1st edition 25":mile scale map of 1878–79 (Fig 12) shows the site following the construction of the Victoria Embankment. The site is shown as open ground. Richmond Terrace has been constructed to the north-west of the site and no changes are apparent in the terraced buildings along the line of Parliament Street to the west of the site. The H-shaped Civil Service Commission building previously noted on Stanford's map of 1862 (not reproduced) can be seen immediately south of the site.

4.3.47 The superstructure of the opera house was completed by September 1876 but the roof was never added and the project abandoned due to lack of funds. The opera house was bought by the Government in 1880. The opera house was demolished but the foundations and below ground tunnels were retained for later re-use. The existing Grade I listed Norman Shaw North building (**DBA 1b**) was completed in 1890. It was designed by the architect Richard Norman Shaw in 1887 as the replacement offices of the Metropolitan Police and occupied by the Metropolitan Police following completion.

4.3.48 The Ordnance Survey 2nd edition 25":mile map of 1896 (Fig 13) is the earliest to show the completed Norman Shaw North and the site now as existing. Norman Shaw North proved to be too small for the expanding police force so an extension, the Norman Shaw South Building (**DBA 1d**), was constructed in 1902–06, within the footprint of the headquarters of Civil Service Commission. A high bridge was constructed over Derby Gate to connect the two buildings (HCIO 2015). The construction of a web of girders was required over the underground railway that cuts across the NEP3 site in order to build Norman Shaw South. This building can be seen in the Ordnance Survey 3rd edition 25":mile map of 1916 (Fig 14).

4.3.49 The site has remained in essentially the same form since the early 20th century. Norman Shaw North was given over to the House of Common's use in 1972.

5 Statement of significance

5.1 Introduction

5.1.1 The following section discusses past impacts on the site: generally from late 19th and 20th century developments which may have compromised archaeological survival, e.g., building foundations or quarrying, identified primarily from historic maps, the site walkover survey, and information on the likely depth of deposits. It goes on to consider factors which are likely to have compromised asset survival.

5.1.2 In accordance with the NPPF, this is followed by a statement on the likely potential and significance of buried heritage assets within the site, derived from current understanding of the baseline conditions, past impacts, and professional judgement.

5.2 Factors affecting archaeological survival

Natural geology

5.2.1 There is no geotechnical data for the site. Based on BGS boreholes and the information from archaeological investigations in the vicinity, the predicted level of natural geology within the site is as follows:

- Current ground level is at 4.5 to 6.5m OD
- The top of truncated alluvium varies between -5.3 to 0.8m OD (1.2–11.7m below ground level/mbgl)
- The top of truncated gavel varies between -6.9.m to 3.9m OD (2.5–13.3mbgl)

5.2.2 Between the top of the natural and the current ground level is modern made ground and undated made ground. The latter may potentially contain remains of archaeological interest.

Past impacts

5.2.3 The current building has a basement which extends under the whole footprint on the building. The finished floor level (FFL) is at 0.1–2.9.m OD (3.6–5.4m below ground level of c 5.5m on Laundry Road)(BDP, Existing Basement Plan, Drawing No. 00NSN- 2131- BDP- 90- B1- T- AR- PL- 20100, Rev. P01, 24/07/19). Assuming a 0.5m thick slab, there is expected to be perhaps 1.2–7.7m of ground consolidation (later medieval and mid-19th century) beneath this, above earlier foreshore deposits, based on the predicted level of sub-surface topography as shown on the predictive model. However, the 1870s report on the construction of this building record that excavations for the foundations were down to London Clay (i.e. below the potential maximum depth of archaeological remains; certainly such remains were removed during the excavation). It is unclear whether this refers to the localised excavation for deeper substantial pad foundations which would have supported the building, or the general truncation for foundation slab across the whole building footprint. The latter suggests that the predictive model has over-estimated the depth of the Gravels and that all archaeological remains have been entirely removed within the building footprint, rather than localised removal within the footprints of the pads.

Likely depth/thickness of archaeological remains

5.2.4 If archaeological remains were not entirely removed in the 1870s by the excavations for the National Opera Theatre (see above), up to 1.4–7.7m of later medieval and mid-19th century ground consolidation may survive beneath the slab, between deeper footings, and above earlier foreshore deposits.

5.3 Archaeological potential and significance

5.3.1 The nature of possible archaeological survival in the area of the proposed development is summarised here, taking into account the levels of natural geology and the level and nature of later disturbance and truncation discussed above.

5.3.2 *The site has a high potential to contain palaeoenvironmental remains within surviving alluvial deposits*. Alluvial deposits are expected to exemplify the well-known floodplain sequence of this part of the Thames, which have been shown, elsewhere, to hold a record of environmental change and evolving floodplain geomorphology stretching back to the Late Glacial period. Peat deposits have the potential to provide information which can be used to reconstruct the past ecology of the floodplain and environments within which prehistoric occupation occurred. Any fluvial or estuarine deposits also have the potential to preserve palaeoenvironmental remains, which can be used to reconstruct past fluvial regimes and indicate the onset of tidal inundations and the transition to an estuarine river environment. The significance of any such remains would be **low** to **medium** and would be derived from their evidential value.

5.3.3 *The site has moderate to high potential for archaeological remains dating to the prehistoric period*. Prehistoric cut features have been recorded during three investigations in the south-western and south-central parts of the site and it is possible that further cut features survive. There is also a reference in 1870 of the apparent discovery of 'the skulls and bones of wild elks and other primitive animals' during the excavation in the site. It is likely that this was entirely removed during the excavation. Prehistoric remains, likely associated with wetland exploitation, would be deeply buried beneath ground consolidation, but well preserved due to waterlogged conditions where they do survive. Such would be of **medium** or **high** significance, depending on nature and extent, based on their evidential value.

5.3.4 *The site has a low potential for archaeological remains dating to the Roman period*. There is a possible Roman road crossing Thorney Island and occupation evidence has been found to the south-west of the site. The majority of the site would have been located within the River Thames channel, and so would have been largely submerged during this period. The adjacent riverbank would have been frequently flooded and unsuitable for occupation. Whilst evidence of resource exploitation and water management along the waterfront and intertidal area is possible, no evidence of Roman activity or occupation has been recorded during archaeological investigations within the site previously.

5.3.5 *The site has a low to moderate potential for archaeological remains dating to the early medieval (Saxon) period*. The site was located to the south of the known settlements of Lundenwic and to the north-east of the religious community on Thorney Island. The site would have been largely located within the River Thames channel and would have been submerged during this period. The south-western edge may have been intertidal foreshore as it is on slightly higher ground. Wattle fish traps of this period have been found along the Thames, often at the confluence of one of its tributaries to facilitate the catching of fish, and whilst no evidence of Saxon activity has been recorded previously on the site, such remains

are possible. Fishtraps and revetments, well preserved due to waterlogged conditions, would potentially be of **medium** or **high** significance, depending on nature and extent, based on their evidential value.

5.3.6 *The site has moderate to high potential for archaeological remains dating later medieval period.* The western two-thirds of the site was reclaimed and built up to create the riverfront by the 14th or 15th century. There is therefore potential for remains of earlier river embankments/walls, river stairs providing access down to the foreshore, jetties, wharves, revetments and foreshore structures. Timber remains are likely to be well preserved due to waterlogging. Two investigations in the south-western and south central part of the site found evidence from the later medieval period, including drainage ditches, a fish trap and pottery, along with two sections of river wall revetment. Remains of this period would be of medium significance, or possibly high if well preserved and extensive, with historical and evidential value. Residual remains, such as pottery, within and beneath what is likely to be a substantial thickness of medieval consolidation material, would be of **low** significance.

5.3.7 *The site has a high potential for post-medieval remains*. Post-medieval remains were found at four investigations including pits and stake holes, brick building footings and brick culverts. There is also potential for previously unrecorded remains relating to the 16th century river wall, remains associated with two substantial riverfront mansion houses, Derby House and Manchester House, as well as evidence of warehouses, wharves and riverfront structures such as piled structures, barge beds or jetties and piers not shown on historic maps. Remains of this period could be of **low** or **medium** significance, depending on their nature and state of preservation, with their evidential and historical value.

6 Impact of proposals

6.1 Proposals

6.1.1 The proposals for NSN involve the lowering of the basement slab to varying levels, the installation of new service trenches within the basement, the construction of a new lift shaft in the west of the site and the lowering of a lift pit in the north-east of the site. The new basement slab would be supported by the installation of a series of minipiles. The works would require the temporary installation of crane gantry with a piled foundation.

6.2 Implications

6.2.1 The identification of physical impacts on buried heritage assets within a site takes into account any construction activity which would entail ground disturbance, for example site set up works, remediation, landscaping and the construction of new basements and foundations.

6.2.2 As it is assumed that the decant (completed development) phase and residual operational phase will not entail any ground disturbance there will be no additional archaeological impact, and this is not considered further.

6.2.3 The site has a high potential for archaeological remains outside the existing basement footprint.

Crane Gantry

6.2.4 The gantry is required to be supported by 16 helical or 'screw' piles. On completion of the works, the piles will be unscrewed and removed, leaving no permanent structure below ground. The installation of the piled foundation would remove all archaeological remains within the footprint of each pile, likely cutting into the top of alluvial deposits. The plant gantry would have a capping beam of 0.9m thickness which would cut into made ground the composition of which is currently unclear.

Reconstructed basement slab

6.2.5 The existing basement slab will be broken out and lowered to varying depths between 0.4m below the existing slab to 1.9m below the existing slab (AECOM, Proposed Basement Slab Lowering, Drawing No. 00NSN- 2131- ACM- 90- B1- S- XX- SK- 00301, Rev. P01, 27/02/20). This will impact any deposits beneath the existing basement slab.

Service trenches

6.2.6 There are expected to be additional service trenches excavated below the proposed basement level to a depth of 0.5m below the slab level. The excavation of these trenches would truncated or remove alluvial deposits.

New lift shaft

6.2.7 A new lift core is proposed to the west, with the existing east core retained and modified to support the upgrade of lifts to NSN. A new lift shaft will be installed at the western extent of the site, with an overall formation level of 1.2m below the existing basement level (AECOM, Proposed Basement Slab Lowering, Drawing No. 00NSN- 2131- ACM- 90- B1- S- XX- SK-

00301, Rev. P01, 27/02/20). This could potentially cut into alluvial deposits and would remove all archaeological remains within its footprint.

Piling

6.2.8 Piling is proposed to lift pits to limit settlement of the proposed lift structure and any differential movement which may adversely affect the new lift shaft and associated framing. It is also proposed at the southern vaults to target settlement and leaning away of the vaults, which may cause cracking and water ingress, as witnessed at NSS.

6.2.9 Piling is proposed at the north east pavilion foundations where additional support is required for a new concrete frame and heavy HV, UKPN and sprinkler tanks. Similarly, 72 minipiles are proposed in the basement to support heavy heating and hot water storage plant. The installation of the piled foundation would remove all archaeological remains within the footprint of each pile, likely cutting into the alluvial or gravel deposits.

7 Conclusion and recommendations

7.1.1 The site comprises the late 19th century Grade I listed Norman Shaw North. It is within the Whitehall Conservation Area and the Tier 1 Westminster and Whitehall Archaeological Priority Area.

7.1.2 Archaeological survival potential will be variable across the site. The eastern half of the site overlies a considerable thickness of made ground; however, the excavation notes for the construction of the Opera House suggest that everything was removed to a depth of 40' (12.2m) below ground level. Therefore, it is likely that there is no archaeological potential within the footprint of the existing foundations and tunnels. Outside of the existing foundations and below ground features, archaeological survival potential is likely to be moderate to high as in the eastern third the made ground might be 10.0–12.0m deep, being associated with the creation of mid-19th century Victoria Embankment, and in the western two-thirds the made ground is likely to comprise 13th–14th century ground consolidation from reclamation, infilling of the Tyburn and the establishment of the riverfront, perhaps around 5.0-7.0m thick. Beneath the undated made ground is the potential for earlier remains on what would have been the intertidal foreshore of the Thames and in the north and east, the permanently submerged channel.

7.1.3 Table 3.1 summarises the known or likely buried assets within the site, their significance, and the impact of the proposed scheme on asset significance.

Table 3.1: Impact on heritage assets prior to mitigation

Asset	Asset Significance	Impact of proposed scheme
Palaeoenvironmental remains within alluvial deposits (High potential)	Low or Medium	Plant gantry and lift shaft **Significance of asset reduced to negligible locally** Reconstructed basement slab, service trench and fabric removal **Negligible effect**
Post-medieval remains, including river walls, wharves, jetties, building footings and reclamation deposits. (High potential)	Low or Medium (riverfront structures, building footings) Low (reclamation deposits)	Plant gantry, reconstructed basement slab, service trench, lift shaft and fabric removal **Significance of asset reduced to negligible locally**
Later medieval remains, including river walls, wharves, jetties, building footings, fish traps and reclamation deposits. (High potential)	Medium or High (riverfront structures, building footings) Low (reclamation deposits)	Plant gantry, reconstructed basement slab, service trench, lift shaft and fabric removal **Significance of asset reduced to negligible locally**
Early medieval remains, possibly fish traps and revetments and riverfront remains (Low to moderate potential)	Medium or High	Plant gantry and lift shaft **Significance of asset reduced to negligible locally** Reconstructed basement slab, service trench and fabric removal **Negligible effect**

7.1.4 Given the uncertainty in the makeup of the made ground a programme of archaeological investigations will be undertaken to aid in clarifying the nature, depth and extent of any deposits and the results will be used to inform the mitigation strategy. A Written Scheme of Investigation (WSI) that details the scope of the archaeological investigations is being submitted concurrently with this Desk- Based Assessment (MOLA 2021). The works will be undertaken in consultation with the local authority's archaeological advisor.

7.1.5 The Archaeological Assessment concludes the impact of the proposed scheme will likely have a negligible effect on heritage assets.

Appendix A – Gazetteer of known historic environment assets

The gazetteer lists known historic environment sites and finds within the 250m-radius study area around the site. The gazetteer should be read in conjunction with Fig 2.

The GLHER data contained within this gazetteer was obtained on 11/03/2021 and is the copyright of Historic England 2021.

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Abbreviations

DGLA – Department of Greater London Archaeology (Museum of London)

DOE – Department of Excavation

EH – English Heritage

ELO – GLHER unique event identifier

GLHER – Greater London Historic Environment Record

ILAU – Inner London Archaeology Unit

LM – London Museum

MLO – GLHER unique monument identifier

MoE – Ministry of Environment

MOLA – Museum of London Archaeology (formerly MOLAS)

MoW – Ministry of Works

NHLE – National Heritage List for England (Historic England)

PCA – Pre-Construct Archaeology Ltd

WA – Wessex Archaeology

Table A.1: Gazetteer of known historic environment assets		
DBA No.	**Description**	**Site code/ HER/ NHL No.**
1a	**Norman Shaw Building North** *Watching brief, MoLAS, 2007* Modern made-ground was recorded beneath the floor. Natural strata were not observed.	NNS07 ELO15093
1b	**Former New Scotland Yard Norman Shaw North Building** *Grade I listed building* Metropolitan Police old headquarters. 1887-90 by Richard Norman Shaw with R. Dixon Butler.	1274511
1c	**Gates and piers between Norman Shaw North and South** *Grade II* listed structure* Erected 1904 in association with Shaw's Scotland Yard south building, the gates proper by Reginald Blomfield. Granite gate piers, wrought iron gates.	1066173
1d	**Former New Scotland Yard Norman Shaw South Building** *Grade II* listed building*	1357349
2a	**Richmond Terrace, SW1, Westminster** *Evaluation, ILAU, 1980* Limited trial trenching in 1980 indicated that the site, frequently flooded by the Thames, was possibly used as a refuse dump in the late medieval period. Watching brief by CEU in 1983 during building construction revealed part of a timber structure at -1.4m od immediately overlying a peaty deposit, itself resting on alluvial clays. Radiocarbon dating of the timber gave a result of 2540 +/- 70 bp, 590 +/- 70 BC (uncalibrated).	RCH80 RCH85 ELO4394 MLO63539 CEU259 MLO21964 MLO21966
2b	**Richmond House, Incorporating 1–8 Richmond Terrace** Grade II* Listed government offices, designed as town houses in the early 19th century	1235174
2c	**Boundary wall of Whitehall Palace** The boundary wall of Whitehall Palace followed an irregular line around the palace buildings. Excavations by Green in 1961 found remains of the wall west of the road and it was found to survive to its full height beneath the 17th century structures of 10 Downing Street.	MLO38554
2d	**Victoria Embankment flood defences** A wall with 6 bastions 5–6ft beyond the earlier river line and 300ft behind the present embankment. Bastions may have been designed to hold many-windowed turrets, similar to Richmond and Greenwich.	MLO36479

Table A.1: Gazetteer of known historic environment assets		
2e	**Site of Mansion for Richard, 1st Earl of Cornwall** Later medieval mansion house built on the edge of the Mersflete and had gardens that came down to a landing stage on the Thames. Richard's son Henry gave the land to Westminster Abbey.	MLO11179
2f	**Site of Whitehall Palace Orchard** An area of land acquired in 1538 for use as an orchard, a banqueting house was constructed in 1545, from 1561 much work carried out in the area including a "bridge" of 1563–1565 with a brick wall built around it. A fountain marked on Norden's map. The area was converted to a bowling green following the Restoration. In 1573–1575 it merged with the Privy Garden and a fountain built in line with the central walk, supplied by the new river. In 1715, a terrace was built on the river side, a grotto to the south and the basin of the fountain was filled in.	MLO36478 MLO56871
3	**Curtis Green Building, Metropolitan Police Service Headquarters, SW1** *Evaluation, geoarchaeological evaluation and watching brief, MOLA, 2014–15.* 2014 archaeological evaluation**.** Above the possible historic foreshore, 18th-19th century reclamation deposits were truncated to the west by a linear cut feature. This was subsequently truncated to the south by a brick lined pit. The western side of the structure was stepped to the base and a circular breach found within the south facing section, suggests that the brick line pit could be part of a late 18th/early 19th century drainage system. This was filled with two mid-greyish brown sandy silt deposits of very similar composition containing fragments of tobacco pipes dated to the late 18th century/early 19th century. Above these, was a layer of modern made ground below the concrete slab. 2014 geoarchaeological evaluation. Six geotechnical cable percussion boreholes were monitored and four geoarchaeological window samples were carried out. The site lies at the confluence of the river Tyburn and the river Thames. The sedimentary sequence showed the silting up of tributary paleochannel (River Tyburn) after passing around the eyot (Thorney Island) outside of the site to the south-west. The sampled deposits showed a possible marginal location on the edge of the channel with varying periods of course grained higher energy deposition (sands), fine grained slack water silting up (clays) and periods of vegetation (organics). These deposits likely cover the prehistoric up to the historic period. The basal floodplain gravels rise towards the north west of site. This may represent a gravel bar or erosion spit forming in the mouth of the Tyburn at its confluence with the Thames. 2015 watching brief. Four pile location trenches were monitored. Demolition deposits from the 18th to 20th centuries were recorded.	VRE14 ELO14892

Table A.1: Gazetteer of known historic environment assets		
4	**Great George Street/Parliament Street/King Charles Street/Derby Gate/Whitehall/Horse Guards Avenue/Whitehall Place, Westminster** *Watching brief, PCA, 2007–10* A paleochannel with finds dated to the Middle Saxon period was excavated along with several pits also of Saxon date. Dumped deposits and pits dating to the medieval period indicate activity at this time. Structural remains relating to the buildings within York Place and later Whitehall Palace were recorded, predominantly located to the west of Whitehall in the vicinity of the Ministry of Defence Main Building, The Old War Office Building and Scotland Yard although the remains of the King Street Gate were also recorded near the corner of Downing Street and Whitehall. The walls that were revealed formed part of the kitchen and Chapel Royal of York Place and several parts of Whitehall Palace including parts of the Privy Gallery range, the Court Gate, the Privy Garden, King Street Gate and parts of a Gun Platform and Gun Battery. Later features recorded included parts of Pelham House, Taylor House and Vanbrugh House.	WQH07 ELO12384
5	**River Wall, Whitehall** A site code is assigned to this location but no further information is available, either through MOLA's in-house data or the GLHER.	RWW68
6	**Richmond Terrace (Bollards)** *Watching brief, MOLA, 2016* The single trench measured 8m by 3m, and was 2m deep. Only demolition/ground raising deposits were found, and these may relate to the demolition of the early 18th century Montagu House and its rebuilding in the mid-19th century to the north of the site. Ground level was at 4.2m OD. Natural deposits were not observed.	RDT16 ELO17660
7	**Bridge Street (Subway in Road)** *Watching brief, MoLAS, 1997* A large east/west wall, at least 2.5m wide, mainly constructed from chalk and sandstone, formed the 16th or 17th century river wall. To its west and parallel to it lay another large ragstone and chalk wall with brick arches inserted behind it. Between the walls and above river laid deposits, the south wall of a 17th century building with mortar floor was recorded. The building went out of use between 1750 and 1754 when Bridge Street was laid out; delft pottery, clay pipes and building material of late 17th or early 18th century date were dumped into it.	BGS97 ELO14655

Table A.1: Gazetteer of known historic environment assets		
8	**Bridge Street (St Margaret's)** *Watching Brief, MoLAS, 1992* Three chalk walls, which may relate to the 18th century river wall and the original Westminster Bridge, were located. **Westminster Underground Station, St Stephen's House (Former) – Jubilee Line Extension** *Evaluation and excavation, MoLAS, 1992–95* 1992: Riverine silts over the earlier medieval and post-medieval river were revealed and various organic/timber fragments of post-medieval date were located. 1995: Natural terrace sand was cut by a hollow, from which two prehistoric flints were recovered, and by number of small channels. Above lay a sequence of alluvial deposits associated with rising river levels and which contained prehistoric flints. Within the alluvium were peat deposits dated to the Late Bronze Age and from the alluvium above Saxo-Norman and medieval pottery was recovered. Late medieval pits towards the west of the site suggests that this area had been reclaimed from the river during the mid-late 14th century, probably when the college of St Stephen's Chapel was created. The east of the site appears to have been reclaimed during the mid-16th to mid-17th century; an undated timber structure may have been part of a waterfront revetment of about this period. Most of the reclaimed area seems to have been open ground, possibly gardens, during the Tudor period: features include rubbish pits, a barrel-lined well and a stone wall. Several 17th-20th century features were also recorded.	BSM92 ELO14687 MLO63720 WUS92 ELO4968 ELO10472 ELO11066 MLO94085 MLO67498– MLO67507 MLO63760
9	**Canon Row, Ventilation Shaft** *Excavation, MoLAS, 1997* Natural sand was cut by a palaeochannel and sealed by alluvial sand. It was succeeded by a shallow prehistoric gully which was covered by peat and river deposits. Early medieval drainage ditches were cut into the river deposits before being sealed by late 13th century reclamation dumps. A robber cut was found cut into these dumps, overlaid by make-up for road surfaces. To the west of the road was evidence of pitting, sealed by further dumping. An 18th- or 19th-century brick culvert cut he road and dumping.	CNW97 ELO14701
10	**Cannon Row, JLE Staircase** *Excavation, MoLAS, 1997* A possible channel and two pits cut a layer of probable water laid sand containing prehistoric flints. The pits were sealed by thick deposits of water laid silts and clays which were cut by a channel. At the north end of the site these continued to be depo sited against a stone wall probably dating to the 12th century. To the south of this wall were three large stone ovens containing some burnt material. These also seem to date to the late 12th and 13th century. Two of the ovens were sealed by levelling layers and a smaller hearth was laid. Over much of the site was evidence for road surfaces associated with Cannon Row, dating to the 14th century and later. A large brick culvert and two post-medieval pits cut through the road surfaces, and some of the earlier deposits.	CWW97 ELO14704

Table A.1: Gazetteer of known historic environment assets		
11	**Security Bollards, King Charles Street** *Watching brief, MoLAS, 2005* Two trenches recorded archaeological remains. in all trenches beneath the present footpath and· road c 4.4m OD. At the western end of King Charles Street at the top of Clive Steps a fourth trench was excavated down to 4.7m OD. This trench revealed the remains of three 18th-19th-century cellar walls with associated cellar backfills and made ground beneath then modem footpath at 5.7m OD. Horse Guards Road test pit produced a metalled surface at 1.7m OD probable previous gravelled pathway in St James' Park beneath made ground and modern paving at 2.7m OD.	KCS05 ELO14765
12	**37–46 Parliament Street** *Excavation, DGLA, 1987* Excavation in 1987 on the north edge of the former Thorney Island revealed three features predating a flood layer thought to be Roman in date. After subsequent flooding two drainage channels had been dug, one of them recut twice and revetted with wooden stakes. Silting of the area apparently continued until the 13th and 14th century; two 15th century stake and wattle fences up to 10m long and joining at their west ends, perhaps fish traps, were encountered at the west end of the site. The area seems to have remained marshy until the end of the medieval period, when drainage and consolidation by dumping took place. A wall of reused sandstone and Reigate stone was constructed upon one of these deposits.	PAR87 ELO4246 MLO20127 MLO20130 MLO20160 MLO20161 MLO4906 MLO6985 MLO7128 MLO7557
13	**Parliament Hill, Bridge Street** *Watching brief, PCA, 2010* Modern made ground was recorded during the monitoring of the excavation of a trench on the Whitehall side of the site. Natural strata were not reached.	PBV10 ELO15788
14	**Parliament Street – Stairs and Subway** *Watching brief, MOLAS, 1997* Existing 19th century vaults had destroyed the later archaeological deposits and the new subway was founded at the same level as the old; however, a mortar floor was recorded overlying a levelling deposit.	PMS97 ELO15186

Table A.1: Gazetteer of known historic environment assets		
15	**Westminster Underground Station (Site 4)** *Excavation, MoLAS, 1994* Excavation followed an evaluation in 1992. Natural gravels were overlain by alluvial clays in the surface of which were three hollows containing undated peaty material. A sequence of alluvium and cut features, dated to 13th - 14th century, then followed, with further alluvial clays and sands above. One of these produced a substantial portion of a 15th century cooking pot. Above the alluvium was a thick dump of sand for reclamation, dated - by reference to a corresponding layer in the evaluation - to mid-16th - 17th century. Several post and stake holes which cut into the alluvium are apparently post-medieval in date.	SSE94 ELO10967 ELO4619 MLO94085 MLO62878 MLO62881
16	**Korean War Memorial, Victoria Embankment Gardens, SW1** *Watching brief, MOLA, 2014* A geotechnical borehole was monitored. The monitoring exercise involved the recording of one borehole cored through made ground and alluvial deposits by contractors using a Cable percussion rig. The borehole recorded 2.5m of natural alluvium lying over gravels at –4.0m OD under 3.5m of made ground.	VTE14
17	**Ministry of Defence, Whitehall, Horseguards Avenue, SW1** *Watching Brief, MoLAS, 2001* A watching brief in 2001 was followed by groundworks on either side of Horse Guards Avenue which revealed fragments of brick wall thought to have been part of the Royal Palace of Whitehall. These comprised a wall of Tudor-style brick, possibly dating to works by Cardinal Wolsey or Henry VII, and a slightly later wall of thicker, narrower brick. Comparison with previous excavations and historic maps places them between the Great Hall and the Chapel Royal. A large fragment of floor tile was found in a secondary context, considered to have been from one of the central panels in a maiolica mosaic featuring animal designs surrounded by friezes. It may be dated to the 1520's, and if so, places the laying of the tiles and possibly construction of a chapel during the tenure of Cardinal Wolsey before the building's sequester and remodelling by Henry VIII and Anne Boleyn as the 'Whitehall Palace'. Walls exposed W of these palace walls are thought to be from Pelham House, a private residence on the site in c. 1800 and subsequently 19th-c office buildings. A fragment of external surface with brick paviours exposed outside the entrance to the War Office is undated. Originally this area was part of the Great Court, succeeded in the 1680s by a pavement outside the Quarter Waiters accommodation. A fragment of human skull was found within 19th century fill, probably imported with it.	WIH01 ELO1152 ELO15199

Table A.1: Gazetteer of known historic environment assets		
18	**Westminster Underground Station (areas 1, 2, 6 – Jubilee Line Extension)** ***E**xcavation, MoLAS, 1994–95* 1994: Deposits survived in only one area, towards the south end of the site. Natural sand was cut by five postholes, possibly forming part of a structure, and a large pit. Sealing them was an alluvial sand which contained pottery, probably of Late Bronze Age/Early Iron Age date, and struck flints, including a Neolithic axe. Further layers of alluvial silt sealed the sand, the upper parts of which contained pottery of 12th–14th century date. The silt was cut by a medieval pit and a 16th century ditch. 1995: Natural gravel was overlaid by alluvial sands and gravels and organic sediments. On the west of the site extensive dumping of greensand chippings was sealed by three phases of a medieval stone pathway. There was also evidence of extensive reclamation dumping, cut by a number of isolated pits and postholes. Cutting the reclamation dumping was a late medieval vaulted chalk and ragstone drain which was aligned north to south at the west end of the site, and then turned east towards the Thames. A buttress in the south-west corner suggests that it may have lain underneath a building. To the south of the former Victorian frontage of the site, the end of a north to south river wall, approximately 3m wide, was located; to its west was found an oak box structure which may have been the north edge of a quay at least 11.5m in length.	WSS94 ELO4950 MLO66027 MLO66028 MLO66029 MLO66030 MLO66031 MLO66032 MLO66033 MLO66034 MLO66035
19	**Raleigh Green, Ministry of Defence. Whitehall** *Watching brief, MoLAS, 2001* Garden soil, probably of 20th century date, was overlaid by make-up and topsoil.	RLG16 ELO17677
20	**Canon Row** Row of houses for Canons and Dean of St Stephen's College, later favoured by nobility	MLO9181 MLO9247
21	**Findspot – flint tranchet axe** **Findspot – polished flint axe**	MLO11014 MLO2824
22	**Site of bridge** This bridge was at the east end of Gardiners Lane, over long ditch. It joined King Street to the south of Charles Street. By 1500, this was one of the four major bridges to Thorney by the Derby gate.	MLO9184
23	**Findspot – prehistoric flint tool** A later prehistoric flint tool/blade, recorded by the GLHER.	MLO9127
24	**Findspot – greenstone axe** Believed to have been recovered during the 1950s excavation of Whitehall Palace.	MLO3240
25	**Post-medieval inns known as "Le Rede Lyon" & "Rose", 1531 consisted of 22 tenements and gardens, Rose and Rose Alley**	MLO9202
26	**Deer Antler pick, Mesolithic, found 1937**	MLO2825
27	**Findspot – medieval spur**	MLO9194

Table A.1: Gazetteer of known historic environment assets		
28	**St Stephen's Club, Bridge Street** A former club built in 1874, later converted to offices. The building was demolished in 1994.	MLO94085
29	**Richmond Terrace** Landing steps, built 1563–5 with ornamental gate added 1600–01 (referenced by Norden and Rocque as 'Privy Garden Stairs')	MLO56347
30	**Downing Street, SW1** *Excavation, MoW and LM, 1960–62* A Neolithic axe head and struck flint of Mesolithic/early Neolithic date were recorded in early medieval contexts, abraded Roman pottery and tile fragments were recorded in early medieval and later medieval contexts. 'Middle Saxon' (8th–9th century) occupation was characterised by a succession of timber buildings included a substantial hall, its position midway between Lundenwic to the north and the possibly contemporary monastery on Thorney Island to the south, suggest high or even royal status, and its abandonment may be connected with Danish raids of the late 9th century. Later Saxon flood deposits were followed by late 12th century drainage ditches, evidence for later medieval tenements on the west side of King street included traces of timber framed buildings with pits and ditches behind. Extensive remains of the palace of Whitehall were recorded (MLO6974).	WPA61 TRG60 ELO14720 MLO6974 MLO27836 MLO1694 MLO11033 MLO1697 MLO9186 MLO48306 MLO38554 MLO56349 MLO48347 MLO53679 MLO48348 MLO38552 MLO36490 MLO46966
31	**The Foreign and Commonwealth Office** *Watching brief, PCA, 2018* Animal bone fragments were found. The watching brief revealed two made ground layers, which comprised four archaeological contexts. The earliest of the two horizons dated to the 16th century and may relate to construction activity in the close vicinity of Whitehall Palace or a build-up of the ground with material brought in from other locations during work on the existing building. The second horizon was a later 19th century deposit and reflects the construction phase of the Foreign Office building.	KCH18 ELO18583

Table A.1: Gazetteer of known historic environment assets		
32	**Parliament Street** *Watching brief, PCA, 2008–12* Post-medieval floors, walls, foundations and drains relating to the previous occupation of the area were observed, and works here were continuously monitored.	ELO17655
33	**Derby Gate and 1 Canon Row** *2017* Nothing further within the public record.	DBY17
34	**1 Canon Row, Westminster** *Watching brief, MOLA, 2017* All work was undertaken in Canon Row- a thoroughfare to the west of 1 Canon Row, and in Derby Gate just to the north of Canon Row. Ground raising deposits containing pottery dating from the 18th century were seen in the two test pits, covered by later 19th century ground-raising deposits. In the other trenches, all of which were located in the roadway in Canon Row, deposits likely dating from the 19th century were seen below modern made ground and tarmac. In the northernmost trench in Canon Row- where it meets Derby Gate, the top of an 18th or 19th century arched brick drain or sewer was partially exposed, crossing the trench from west to east- parallel with Derby Gate. Natural deposits were not encountered.	CNO17
35	**Gates and piers to entrance to Derby Gate** *Grade II listed* Gates, gate piers and pedestrian gate abutting Cannon Row Police Station constructed c 1904 by J. Dixon Butler with Norman Shaw as consultant, designed with the Police Station and the Norman Shaw South building. Granite ashlar and cast iron. Screen wall with weathered coping containing pedestrian gate and carriage gates with channelled and tapered gate pier surmounted by scroll supported lantern.	1066344
36	**4 lamp standards numbered 1 to 4** *Grade II listed* Lamp standards installed c 1890–1900 of cast iron. Bradshaw column type of lamp standard with decorated shaft and Nico lanterns.	1292533
37	**Canon Row Police Station** *Grade II* listed* Police station constructed 1898–1902 by J. Dixon Butler with R. Norman Shaw as consultant, as part of the New Scotland Yard extension (1896–1906. Amalgam of Flemish and English Baroque sources continuing Shaw's original New Scotland Yard theme.	1357244

Table A.1: Gazetteer of known historic environment assets		
38	**Palace of Westminster** World Heritage Site Westminster Palace, rebuilt from the year 1840 on the site of important medieval remains, is a fine example of neo-Gothic architecture. The site - which also comprises the small medieval Church of Saint Margaret, built in Perpendicular Gothic style, and Westminster Abbey, where all the sovereigns since the 11th century have been crowned - is of great historic and symbolic significance.	1000095
39	**Whitehall / Parliament Street** The find of a bronze Roman/Late Iron Age bowl is recorded by the GLHER.	MLO9029
40	**Whitehall** Kings Street gate, along with the Holbein gate (MLO38550) was the showpiece of the palace. It lay across the south end of Kings Street, decorated with busts, pediments, signs of the zodiac and ionic pilasters, in a more classical style than the Holbein gate and probably later. First ref 1548. Demolished in the 18th century to make way for road widening.	MLO55660
41	**Richmond House, 79 Whitehall, Westminster, SW1A 2ER** Nothing further within the public record.	RHW19
42	**Parliament Square/Parliament Street, London SW1** *Excavation, MoLAS, 1993* Two trenches were dug in advance of gas main diversion in connection with the Jubilee Line Extension Project: one in Parliament Square and one in Parliament Street. In Parliament Square, natural gravel was cut by a c.6.6m-wide feature filled with sand, which may have been a quarry pit, ditch or channel. It contained one sherd of pottery identified as of possible Iron Age date, and was sealed by a gravel surface. Other features had cut the gravel including a (robbed-out) east-west aligned wall where ragstone and pieces of Roman tile were found. Sealing these features were alluvial clays of probable mid-late Saxon date, cut by a ditch, posthole and small pit. Further waterlain clays were followed by 13th-century and later building construction associated with Westminster Abbey, and various later-medieval pits and postholes. Evidence of rebuilding continued until clearance of the area in the 18th century. In Parliament Street, an alluvial yellow sand at 0.41m OD was overlaid by a sandy clay. This was cut by a number of pits, which included waterlogged organic materials surviving (including 11th or 12th century wooden planks), and other cut features in what was marshy ground. Alluvial clay at the northern end of the trench was cut by a ditch to the south of which was a ragstone wall. Reclamation dumps of sand, clay and stone were cut a late medieval chalk and brick well. Remains of 17th and 18th century brick buildings were recorded.	PSW93 ELO4335 MLO62787 MLO62788 MLO62816 MLO62818 MLO62781 MLO62782 MLO62783 MLO62786 MLO62787 MLO62788 MLO62791 MLO62792 MLO62793

Table A.1: Gazetteer of known historic environment assets		
43	**Parliament Square [Churchill's Statue], London SW1** *Excavation, MoLAS, 1994* The shaft was circular and 4.57m in diameter. A series of alluvial sands and clays at the base of the trench was cut by a number of features (including a gully and two postholes) and sealed by waterlain silts. Ditches and other features containing early medieval pottery were cut into the silts. An east-west wall, forming the southern wall of a building in the north-west corner of New Palace Yard, was cut into the clays and survived to more than 1.0m above construction level. To its south was added a ragstone wall which may have formed part of the late 13th century gatehouse, and a number of predominantly gravel surfaces were laid over the silts. Inside the building was a cesspit which was lined with wooden planks, some of which were found to have been reused from a Hanseatic ship known as a cog: the pit contained leather shoes and the bases of barrels and wooden vessels. Over the cesspit were internal surfaces and a cobbled stone hearth surrounded by bricks. In the 18th century a drain was built from reused medieval masonry and bricks and buildings were constructed over it.	PLS94 ELO4301 MLO66103 MLO66105 MLO66106 MLO66107 MLO66109 MLO66110 MLO66111
44	**New Palace Yard (north-west gateway), London SW1** *Excavation, MoLAS, 1994* Late-18th to 20th century deposits (c.3.7m deep) were removed by machine, and the underlying deposits excavated by hand. In the natural sand (river terrace deposits) had been disturbed by tree roots: the remains of one root yielded a radiocarbon date of 1745–1510 BC. From the foreshore sand above were recovered prehistoric struck flints and pottery, possibly of Bronze Age date. This was sealed by undated alluvial deposits which were cut by a medieval channel or ditch; residual Roman building material was recovered from the ditch. More deposition of alluvium occurred before and after dumping took place, the latter dated by pottery to the 2nd half of the 11th century. Above lay a sequence of medieval deposits, including the possible remnants of a metalled surface, presumably representing New Palace Yard when it was first enclosed in 1287; it was also at a similar level to a series of 14th-century surfaces found during excavations to the east in 1972-74 (ELO4158, site code NPY73). A number of medieval postholes or small pits was also found: these probably represent temporary timber structures such as the halls that were erected in the Yard for Edward II's coronation in 1307. The basement walls of post-medieval houses built on the north side of the Yard when Bridge Street was laid out in the 1740s were recorded, as was the building debris from their demolition in 1854.	NPE94 ELO4153 MLO62884 MLO62891 MLO62892 MLO62898 MLO62910 MLO62911 MLO62912 MLO62915

Table A.1: Gazetteer of known historic environment assets		
45	**Parliament Square (south-east corner), London SW1** *Excavation and watching brief, MoLAS, 1995* Excavation in the shaft found an east-west aligned post and plank revetment dating to the late Saxon period where the natural sand dropped from 1.00m OD to 0.80m OD. To its east lay a timber structure jutting out into an area where the sand dropped to below 0.60m OD. These features seemed to relate to a revetted channel. To the south an area of mortar had been truncated by robber cuts filled with ragstone, reused Roman brick, tile and opus signinum which seemed to relate to a 12th century building. Alluvium sealed large areas of the site, cut by numerous 11th-12th century pits and other features. Cutting across the southern end of the site was a 13th century ragstone wall, which formed the southern boundary to New Palace Yard and the northern boundary to the Green Yard, both within the Palace of Westminster. One pit and a very compacted layer of greensand were excavated to the north of the wall; to the south lay a floor consisting of greensand slabs with a step at the west end. The only post-medieval feature of note was a 17th century brick and tile drain in New Palace Yard. A watching brief on a tunnel (2.32m in diameter and 15.25m long) from the shaft in Parliament Square to the sewer under St Margaret Street to the east found that the Saxon timber structure and revetment recorded in the shaft continued for some distance and were sealed by alluvial clays. Cutting the alluvial clays were a large number of substantial timber piles supporting a stone wall. This was possibly the late 13th century gatehouse into the inner court of Westminster Palace. Cutting the stone wall was a 17th century brick well containing a complete delftware vessel.	PLQ95 ELO11512 MLO67872 MLO67873 MLO67874 MLO67875 MLO67876 MLO67878 MLO67879 MLO67880
46	**St Margeret Street [Westminster Hall] London, SW1** *Watching brief, MoLAS, 1995–96* Three test pits were excavated outside Westminster Hall, two of which were excavated against a base to one of the flying buttresses of Westminster Hall, and one against a building constructed towards the end of the 19th century. The excavation revealed that the buttress had been refaced in brick and underpinned with concrete but could not establish whether it had been entirely rebuilt at the end of the nineteenth century. Two pits were excavated inside Westminster Hall, one was dug against the west wall, the other was located under the stairs at the south end of the hall. The excavation confirmed that the medieval stratigraphy associated with the hall had been removed during the 1830s. *Standing building survey, excavation, MOLA, 2006* Investigations followed the discovery of fragments of the medieval King's Table (used for coronations and other ceremonial occasions from the 13th to the 17th centuries) beneath the South Steps in 2005 (ELO14581, site code WMQ05). A total of 12 pieces were excavated. The table comprised a series of vertical Purbeck marble trestles which would have supported a stone top (not found); each trestle was delicately carved with a gothic arch and a round column at the front. A small area of in situ medieval stone floor and the foundation for a 17th-century wall to support a raised dais at the south end of the hall (into which the fragments of the broken up table had been incorporated) were also revealed. Geoarchaeological core-sampling and fabric recording was also undertaken (see ELO14583).	WEH95 ELO17038 ELO17040 WME06 ELO14583 ELO14582

Table A.1: Gazetteer of known historic environment assets		
47	**Cromwell Green [Palace of Westminster], London SW1** *Evaluation, MoLAS, 2005* Three test pits provided evidence for prehistoric sands sealed by probable 11th century flood deposits. No prehistoric finds or features were recorded at this time although work carried out in 1978 (site code WCG78, ELO4848) provided possibly Late Neolithic/Early Bronze Age material. Part of a substantial 16th century wall foundation was recorded, probably the site of the Tudor Palace of Westminster and the Court of Surveyors built in 1542.	CGW05 ELO6585
48	**Whitehall [Women of World War II Memorial], London SW1** *Watching brief, MoLAS, 2005* Groundworks were monitored consisting of excavation for two gas mains running along the centre of Whitehall and the removal and replacement of one of the pipes prior to the construction of the Women of World War II Memorial monument. Archaeological deposits and features were recorded in four trenches. Natural ground was not encountered. The watching brief recorded medieval and post medieval dump deposits and three foundations possibly part of structures associated with a gatehouse of Whitehall Palace.	WWM05 ELO6431 MLO98078 MLO98079 MLO98080
49	**70 Whitehall, SW1** *Excavation, MOLA, 2008* No additional information available. **Downing Street [Treasury Green] London** *Watching brief, ILAU, 1976* Observation indicated no surviving archaeological features. **Treasury Green, Whitehall, SW1** *Watching brief, MoLAS, 1999* Observations of the replacement of a wall in the car park of Treasury Green revealed a section through part of the yard and outbuildings of Tudor Whitehall Palace.	WHX08 ELO17018 WHP76 ELO4894 MLO39078 TGR99 ELO15201
50	**70 Whitehall (South Wing), Westminster, SW1A 2AS** Nothing further within the public record.	WSO20
51	**10 Downing Street, SW1** Nothing further within the public record.	DNG07
52	**Sir Walter Raleigh's Statue, Whitehall** *Watching brief, MoLAS, 2001* Garden soil, probably of 20th century date, was overlaid by make-up and topsoil.	WTI01 ELO15193

Table A.1: Gazetteer of known historic environment assets		
53	**H.M. Treasury Government Offices, Great George Street, London SW1** *Evaluation, MoLAS, 2000* There were a series of deposits that demonstrated the silted up remains of an ancient water course or palaeochannel, these being truncated by post-medieval cellars. The evaluation also demonstrated the remains of the post-medieval cellared buildings in the courtyard. One 18th century residential building was revealed by the trench and along with documentary evidence it can be seen that this was a residential area. Therefore it is possible that other phases of construction relating to this period or earlier may be present.	GGG00 ELO1182 MLO75565 MLO77646
54	**Victoria Embankment, Westminster** *Evaluation, WA, 2014* No additional information available.	TTQ14 ELO17108
55	**Raleigh Green [Ministry of Defence] Whitehall City of Westminster SW1A 2AL** *Watching brief, PCA, 2016* No archaeology was encountered on site and there was no evidence of human occupation prior to the 20th century. The earliest deposit related to the construction of the MoD buildings between 1938 and 1959.	RLG16 ELO17677
56	**New Palace Yard, Parliament Square, SW1** *Excavation, DoE, 1973* The Tudor Augmentation Office, demolished in 1793, lay to the south-west of the Yard. Traces of its foundations were located, measured and photographed in the autumn of 1971. During excavation prior to the construction of a new underground car park in February 1973, the remains were located of the 'Great Conduit' or fountain of possible 14th century origin that stood opposite Westminster Hall. The structure had been destroyed down to the top course of stone which were over ground surface level. This top course was faced with dressed stone over a layer of red tile with stone core work of haphazardly laid rubble. The fountain was octagonal in shape (over 8.0m in diameter), and constructed mainly of Kentish ragstone. At the bottom of the fountain was a mass of curved moulded Purbeck slabs, and also channels of Purbeck marble. There was a culvert running under and through the fountain which was of ashlars and ragstone, and this was arched over under the fountain by a brick relieving arch. The excavation of a trench around the perimeter of the car park for the piled diaphragm wall allowed successive layers of levelling material and road surfaces to be recorded, providing evidence that the area had been an open space since the end of the 11th century. Various minor domestic buildings, including taverns, encroached on the Yard in the Stuart period: the foundations of some of them were discovered, recorded and photographed.	NPY73 ELO4158 MLO18876 MLO24691 MLO29357 MLO9137 MLO56438

Table A.1: Gazetteer of known historic environment assets		
57	**Speakers Green / New Parliament Yard, Bridge Street, Houses Of Parliament, SW1** *Watching brief, MOLA, 2017* A watching was maintained on works associated with the installation of mini piles for a scaffold structure which forms part of the Elizabeth Tower Remedial Works. Monitoring of the auguring for the piles recorded the surface of the London Clay 13–15m below ground level at a maximum height of -9m OD. The natural was overlain by a deep alluvial sequence comprising sands and gravels, overlain by up to 4m of alluvial clay. This was sealed by c 2m of undated made ground, interpreted as land reclamation deposits, which may reflect the expansion of the Palace in the 13th and 14th centuries. A compacted gravel surface was uncovered, perhaps the 13th century yard surface of New Palace Yard, which was overlain by number of stone and brick wall foundations. These may be associated with the former Stationery Office which formed part of the Palace buildings and is depicted in this location on historic maps. These structures were sealed under 19th century make-up deposits which can be associated with the rebuilding of the Houses of Parliament in the mid-19th century. The trenches in Speaker's Green revealed a number of garden features, including a possible drain and two cast iron bases for oil lamps which appear to date to the creation of the Green, designed by the architect Sir Charles Barry.	NPT17
58	**New Palace Yard, Houses Of Parliament, Parliament Square SW1A 0AA** *Watching brief, MOLA, 2018* A watching brief was carried out on the site, to monitor seven geotechnical trial pits, between 0.5sqm and 1sqm in size, by *c* 1m depth. None of the test pits penetrated 19th and 20th century made ground layers. The 19th century made ground is thought to be related to the remodelling of New Palace Yard in the 1860s under architect Edward Barry. The remodelling involved the reduction of the ground at the east end of site by *c* 3m, as well as the erection of the cloisters at the east end of the site and the gates around the north and west sides. Natural ground was not encountered.	NPA18
59	**Palace Of Westminster: Speakers Green and Cromwell Green, Bridge Street, St Margaret's Street, SW1A 0AA** *Watching brief, WA, 2012* Five trial pits were excavated at Speakers Green, made ground being recorded to a depth of 1m. At Cromwell Green a total of 27 test pits were excavated along the inside of the existing boundary wall. The depth varied due to the foundations of the existing wall, but did not exceed 1m below the existing ground level. Made ground, probably the result of the construction of the visitors' centre footbridge in 2005, was recorded. The natural geology was not located in any of the test pits and no finds or features were found.	PAW12 ELO15791
60	**David Lloyd George Memorial Statue, Parliament Square, SW1** No further information available.	DLG07

Table A.1: Gazetteer of known historic environment assets		
61	**Parliament Square, Millbank, Abingdon Street and Parliament Street, SW1P 3BD** *Watching brief, PCA, 2016* Contractors' excavation of 37 trial-pits was monitored. Evidence of post-medieval and Victorian activity was seen along the north–south route from Parliament Street to Abingdon Street, including surfaces and possible structures, dumping (possibly for land reclamation purposes), and service runs. A cobbled surface recorded just to the east of St Margaret's church could be a former street surface or an entrance to the church. Two abutting timbers along the western edge of the external wall to the Palace of Westminster may represent a postmedieval structure, later truncated by the insertion of a Victorian cast iron water pipe. A series of deposits to the south of the church are believed to denote a late postmedieval or Victorian construction layer and grounds around Old Palace Yard. Natural strata were not reached.	PTS16
62	**Parliament Square** *Grade II listed park* A ceremonial public square, re-designed by George Grey Wornum in 1949–50 to improve traffic flow and pedestrian access in a highly significant setting, completed for the Festival of Britain Year, 1951.	1001342 MLO56078
63	**Abingdon Street, [Westminster Cathedral], Westminster** Approximate area of the medieval precinct of Westminster Abbey and the site of St Dunstan's Monastery which preceded it.	MLO22403
64	**Whitehall** *Aspects of the historic palace of Whitehall* Tennis court Manor house House demolished to develop Downing Street. Kitchen Gatehouse Privy Garden Covered walkway	MLO36477 MLO18780 MLO9201 MLO36490 MLO53680 MLO9186 MLO56349 MLO55660 MLO48343 MLO48344 MLO53618
65	**Whitehall** *Historic features prior to the development of Whitehall Palace* 'The Axe' later the 'Kings Head' Brewery	MLO9197
66	**Whitehall, at junction with Downing Street, Westminster** *WWII pillbox*	MLO105799

Table A.1: Gazetteer of known historic environment assets		
67	**Board of Trade** Aviary in Volary Garden moved to St James's Park in 1667 and site developed for kings lodgings	MLO56346
68	**Victoria Embankment** The privy stairs were private stairs for the use of the royal family. A two storey structure with a shield gallery on the upper floor and balustraded roof from which water pageants could be watched. 17th century maps show they were parallel to Wolseys river wall and so were possibly started as part of York Place and completed 1531 under Henry VIII.	MLO36476
69	**7 Whitehall Gardens** Pembroke House was a 1756 rebuilding by William Chambers of an earlier house of 1729 by Colen Campbell. The second Pembroke House was demolished in 1913 to make way for government offices. Several historic rooms from this building have been preserved in the new building, and these include reception rooms and a dining room by William Chambers.	MLO21967
70	**Victoria Embankment (Westminster End)** Horse bit/cheek piece, highly decorated, found 15' deep.	MLO24616
71	**Whitehall (Off)** 9th century iron axe of Peterson Type E.	MLO27006
72	**Westminster** Tranchet axe from 'foundations of building near Westminster Bridge' described as flint pick.	MLO9125
73	**Westminster Bridge (Near)** 8th century 'binding strip' (for sheath?) with animal head terminal inlaid with blue glass eyes. Runic inscription. 3 ball-headed rivets. In British Museum (confirmed 1990). Bronze coin of Antonius Pius (AD 138–161), found in the River Thames near Westminster Bridge in 1740.	MLO26774 MLO3410
74	**Bridge Street, by Westminster underground station.** *WWII pillbox*	MLO105797
75	**Tothill Street** This was a road to the abbey. It is possibly named from toot hill (barrow).it is shown on Nordens map of Westminster from 1593, along the south side of St James to Westminster Abbey Gate.	MLO9195
76	**Parliament Square** Smith places weigh house 366ft in from river	MLO56844

Table A.1: Gazetteer of known historic environment assets		
77	**Bridge Street** Edward III ordered that a 'staple' of wool and other materials should be' perpetually holden' at ten places in England, of which Westminster was one. This institution was a fixed place where the export of wool was directed and controlled by a group of merchants. New buildings were built at Westminster funded by the king and directed by the clerk of works. These included a hall and chambers for the mayor and constable of the staple, kitchen and a weigh-house which seem to be timber-framed and a stone watergate. They were located on the north side of the palace between King Street and the river. A bridge or landing stage was built to enable loading of the wool from the staple. A carpenter named Henry Wheeler was sent down to Cranleigh in Surrey to select timber for this purpose. At first the woolstaple was considered to be within the Palace of Westminster, but in 1355 a ragstone wall was built to exclude it from the palace. Colvin suggests that this was the wall running east and west on either side of Edward III's bell tower.	MLO49058
78	**Parliament Square, SW1** Great outer gate was first built by Edward I, no architectural details are recorded but both carpenters and masons were involved in its construction. The gate was rebuilt by Richard II 1397-99. The design was probably by Henry Yevele with John Godmaston as the Clerk of Works. It was a stone gateway with polygonal towers approached by a narrow path from king street. It is illustrated on 'Agas' (x96) and also on Norden's map of Westminster of 1593. Fragments of the south wall were still in evidence in the 19th century according to Honeybourne. A section was seen in 1807, 43ft south of Union Street by Capon (view no 1) and more was found in December 1838, in a sewer excavation, by Walcott.	MLO56821
79	**Abingdon Street** East side of palace (medieval bank just east of St Stephen's Chapel). Date of wall unknown on other sides. Fitzstephen refers to land defence included under the work of Henry III (1216-72), but he may be speaking of the Tower Of London. In History Of The Kings Works Colvin states that the palace was in need of extensive repairs when Henry III came to the throne in 1216 and within two years of his accession Master Odo the goldsmith and his craftsmen were engaged in repairing the hall and other buildings, the riverside quay and the wall around the palace (p494). In the Abingdon Street excavation in 1963 part of a waterfront wall was found just south of the Jewel Tower and moat. It has been suggested that this is part of the riverside wall and quay built in the reign of Henry III. The wall was 6ft wide, up to 12 ft high at the west end and traced for 130ft. It was ashlar faced and was of similar construction to the abbey precinct wall, into which it bonded. 1355 ragstone wall separated the palace from the newly built Woolstaple to the north.	MLO48585

Table A.1: Gazetteer of known historic environment assets		
80	**St Margaret Street** The palace yard gate, or inner gateway, was probably the original timber main gate. 1245 the gate was dismantled on the orders of Henry III and was sent down to Kempton to be rebuilt there. A stone gateway with turrets was built in its place. Colvin states that this gate is clearly the inner gate, because at the same time the offices on the west side of the great hall were taken down in order to make way for the new knights' chamber. They were rebuilt 'between the exchequer and the gateway' so that a continuous range of buildings now connected the gateway with the northwest corner of the hall. The gateway contained a chamber which was referred to as the 'counting house' or 'the bondehous'. It survived mainly unaltered until the 16th century and was finally demolished in 1731. (History of the Kings Works vol 1 Middle Ages p 547-8).	MLO56819
81	**St Margaret Street** Located between exchange and gate from New Palace Yard was the Office of Auditors of Foreign Accounts. 1536, Henry VIII established Court of Augmentations and office. Built 1537-8 on this site. Consisted of a three storey building of diapered brick with rows of 4 mullioned windows & a projecting octagonal staircase. Largely demolished in 1793, when the road was widened. Foundations were found in 1971, on the New Palace Yard excavations.	MLO29356
82	**Houses of Parliament** 1235 Henry III established Exchequer of Jewry west side of hall mirroring building on east side with 'Solar, celler & chimney'. By 1244 the Exchequer was here *c* 80 ft long, with 'thalmus secretorum' in the south east corner. There was much rebuilding under Elizabeth I. In 1563, there was a new record house for the Exchequer, possibly in this area. 1565-7, the Exchequer chamber was rebuilt on the medieval foundations, in brick and stone. (see capons view from 1806). This is often called Queen Elizabeth's chamber. 1569-70, Court of the Exchequer was extended. South and west walls are 13th century, but the north wall was further out into the New Palace Yard and was built of stone, with fenestration, like the Augmentation Office. It was demolished in 1823. Foundations to this structure were seen in 1884, when the west side of the hall was cleared. 1913 footing found Star Chamber Court show *c* 12th building. May have been original exchequer building, with Henry III moving receipt there after 1263 fire possibly from its original position near the kings chambers (Colvin). The back wall was still surviving in the early 19th century. This was the new meeting chamber that was built in the 14th century, near the Water Gate. Under Henry VIII and Elizabeth I, it was elaborated & extended to form part of a range along the east side of the yard. (On the Agas map, it is called 'starre chamber'.) The name of the chamber comes from the stars on the ceiling. The Star Chamber Court was abolished in 1641. The north end of the range was demolished 1808, the rest was demolished in 1834.	MLO48323 MLO48321 MLO29881

Table A.1: Gazetteer of known historic environment assets		
83	**Houses of Parliament** These houses were located along the river bank immediately north of the chapel and parallel to the great hall. They were designed to provide accommodation for the clergy belonging to the College of St Stephen and were built at royal expense. William Hanney was appointed as Clerk of works in 1384 to supervise the building of the vicars houses and the cloister to rebuilt between the chapel and the receipt of the exchequer. Three doorways are still visible on the east walk of the cloister on smiths view of the Star Chamber Court in 1804.	MLO48620
84	**Houses of Parliament** Gate to Kings Bridge, 15th structure known in 19th Century (see Smith 1804). Medieval river stairs to New Palace Yard, continued in use to early 19th century as 'Westminster Stairs/bridge'. Stone piers seen 1839 in digging work for new Houses of Parliament, east corner of Speakers Garden, probably from 1568. There was rebuilding when the bridge was constructed, consisting of a wooden platform on 13 stone piers.	MLO56843
85	**Bridge Street** Possibly the Woolstaple Gate.	MLO56823
86	**St Margaret Street** 24ft–17ft 6in tower used to sound time for courts	MLO29372
87	**In Bridge Street, Westminster - at foot of Clock Tower [Big Ben]** *WWII pillbox*	MLO105802

Appendix B – Planning framework

Statutory protection

Listed Buildings and Conservation Areas

The Planning (Listed Buildings and Conservation Areas) Act 1990 sets out the legal requirements for the control of development and alterations which affect buildings, including those which are listed or in conservation areas. Buildings which are listed or which lie within a conservation area are protected by law. Grade I are buildings of exceptional interest. Grade II* are particularly significant buildings of more than special interest. Grade II are buildings of special interest, which warrant every effort being made to preserve them.

National Planning Policy Framework

The Government issued the National Planning Policy Framework (NPPF) in March 2012 (DCLG 2012) and supporting National Planning Practice Guidance (NPPG) in 2014 (DCLG 2014). The 2012 NPPF was revised and a new NPPF published in July 2018, with minor revisions in February 2019 (MHCLG 2019).

Conserving and enhancing the historic environment

The NPPF section concerning "Conserving and enhancing the historic environment" (section 12 of the NPPF 2012) has been replaced by NPPF 201 9Section 16, reproduced in full below:

> **Para 184**. Heritage assets range from sites and buildings of local historic value to those of the highest significance, such as World Heritage Sites which are internationally recognised to be of Outstanding Universal Value. These assets are an irreplaceable resource, and should be conserved in a manner appropriate to their significance, so that they can be enjoyed for their contribution to the quality of life of existing and future generations.
>
> **Para 185.** Plans should set out a positive strategy for the conservation and enjoyment of the historic environment, including heritage assets most at risk through neglect, decay or other threats. This strategy should take into account:
>
> - a) the desirability of sustaining and enhancing the significance of heritage assets, and putting them to viable uses consistent with their conservation;
> - b) the wider social, cultural, economic and environmental benefits that conservation of the historic environment can bring;
> - c) the desirability of new development making a positive contribution to local character and distinctiveness; and
> - d) opportunities to draw on the contribution made by the historic environment to the character of a place.
>
> **Para 186.** When considering the designation of conservation areas, local planning authorities should ensure that an area justifies such status because of its special architectural or historic interest, and that the concept of conservation is not devalued through the designation of areas that lack special interest.
>
> **Para 187.** Local planning authorities should maintain or have access to a historic environment record. This should contain up-to-date evidence about the historic environment in their area and be used to:
>
> - a) assess the significance of heritage assets and the contribution they make to their environment; and
> - b) predict the likelihood that currently unidentified heritage assets, particularly sites of historic and archaeological interest, will be discovered in the future.

Para 188. Local planning authorities should make information about the historic environment, gathered as part of policy-making or development management, publicly accessible.

Proposals affecting heritage assets

Para 189. In determining applications, local planning authorities should require an applicant to describe the significance of any heritage assets affected, including any contribution made by their setting. The level of detail should be proportionate to the assets' importance and no more than is sufficient to understand the potential impact of the proposal on their significance. As a minimum the relevant historic environment record should have been consulted and the heritage assets assessed using appropriate expertise where necessary. Where a site on which development is proposed includes, or has the potential to include, heritage assets with archaeological interest, local planning authorities should require developers to submit an appropriate desk-based assessment and, where necessary, a field evaluation.

Para 190. Local planning authorities should identify and assess the particular significance of any heritage asset that may be affected by a proposal (including by development affecting the setting of a heritage asset) taking account of the available evidence and any necessary expertise. They should take this into account when considering the impact of a proposal on a heritage asset, to avoid or minimise any conflict between the heritage asset's conservation and any aspect of the proposal.

Para 191. Where there is evidence of deliberate neglect of, or damage to, a heritage asset, the deteriorated state of the heritage asset should not be taken into account in any decision.

Para 192. In determining applications, local planning authorities should take account of:

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

Considering potential impacts

Para 193. When considering the impact of a proposed development on the significance of a designated heritage asset, great weight should be given to the asset's conservation (and the more important the asset, the greater the weight should be). This is irrespective of whether any potential harm amounts to substantial harm, total loss or less than substantial harm to its significance.

Para 194. Any harm to, or loss of, the significance of a designated heritage asset (from its alteration or destruction, or from development within its setting), should require clear and convincing justification. Substantial harm to or loss of:

- a) grade II listed buildings, or grade II registered parks or gardens, should be exceptional;
- b) assets of the highest significance, notably scheduled monuments, protected wreck sites, registered battlefields, grade I and II* listed buildings, grade I and II* registered parks and gardens, and World Heritage sites, should be wholly exceptional.

Para 195. Where a proposed development will lead to substantial harm to (or total loss of significance of) a designated heritage asset, local planning authorities should refuse consent, unless it can be demonstrated that the substantial harm or total loss is necessary to achieve substantial public benefits that outweigh that harm or loss, or all of the following apply:

- a) the nature of the heritage asset prevents all reasonable uses of the site; and

- b) no viable use of the heritage asset itself can be found in the medium term through appropriate marketing that will enable its conservation; and
- c) conservation by grant-funding or some form of not for profit, charitable or public ownership is demonstrably not possible; and
- d) the harm or loss is outweighed by the benefit of bringing the site back into use.

Para 196. Where a development proposal will lead to less than substantial harm to the significance of a designated heritage asset, this harm should be weighed against the public benefits of the proposal including, where appropriate, securing its optimum viable use.

Para 197. The effect of an application on the significance of a non-designated heritage asset should be taken into account in determining the application. In weighing applications that directly or indirectly affect non-designated heritage assets, a balanced judgement will be required having regard to the scale of any harm or loss and the significance of the heritage asset.

Para 198. Local planning authorities should not permit the loss of the whole or part of a heritage asset without taking all reasonable steps to ensure the new development will proceed after the loss has occurred.

Para 199. Local planning authorities should require developers to record and advance understanding of the significance of any heritage assets to be lost (wholly or in part) in a manner proportionate to their importance and the impact, and to make this evidence (and any archive generated) publicly accessible. However, the ability to record evidence of our past should not be a factor in deciding whether such loss should be permitted.

Para 200. Local planning authorities should look for opportunities for new development within Conservation Areas and World Heritage sites, and within the setting of heritage assets, to enhance or better reveal their significance. Proposals that preserve those elements of the setting that make a positive contribution to the asset (or which better reveal its significance) should be treated favourably.

Para 201. Not all elements of a Conservation Area or World Heritage site will necessarily contribute to its significance. Loss of a building (or other element) which makes a positive contribution to the significance of the Conservation Area or World Heritage site should be treated either as substantial harm under paragraph 195 or less than substantial harm under paragraph 196, as appropriate, taking into account the relative significance of the element affected and its contribution to the significance of the Conservation Area or World Heritage site as a whole.

Para 202. Local planning authorities should assess whether the benefits of a proposal for enabling development, which would otherwise conflict with planning policies but which would secure the future conservation of a heritage asset, outweigh the disbenefits of departing from those policies.

Greater London regional policy

The London Plan

The overarching strategies and policies for the whole of the Greater London area are contained within *The London Plan: The Spatial Development Strategy for Greater London* (GLA 2021), formally published on 2nd March 2021.

Policy HC1 "Heritage conservation and growth" of the *Publication London Plan* relates to London's historic environment.

> A Boroughs should, in consultation with Historic England, local communities and other statutory and relevant organisations, develop evidence that demonstrates a clear understanding of London's historic environment. This evidence should be used for identifying, understanding, conserving, and

enhancing the historic environment and heritage assets, and improving access to, and interpretation of, the heritage assets, landscapes and archaeology within their area.

B Development Plans and strategies should demonstrate a clear understanding of the historic environment and the heritage values of sites or areas and their relationship with their surroundings. This knowledge should be used to inform the effective integration of London's heritage in regenerative change by:

- 1) setting out a clear vision that recognises and embeds the role of heritage in place-making
- 2) utilising the heritage significance of a site or area in the planning and design process
- 3) integrating the conservation and enhancement of heritage assets and their settings with innovative and creative contextual architectural responses that contribute to their significance and sense of place
- 4) delivering positive benefits that conserve and enhance the historic environment, as well as contributing to the economic viability, accessibility and environmental quality of a place, and to social wellbeing.

C Development proposals affecting heritage assets, and their settings, should conserve their significance, by being sympathetic to the assets' significance and appreciation within their surroundings. The cumulative impacts of incremental change from development on heritage assets and their settings, should also be actively managed. Development proposals should avoid harm and identify enhancement opportunities by integrating heritage considerations early on in the design process.

D Development proposals should identify assets of archaeological significance and use this information to avoid harm or minimise it through design and appropriate mitigation. Where applicable, development should make provision for the protection of significant archaeological assets and landscapes. The protection of undesignated heritage assets of archaeological interest equivalent to a scheduled monument should be given equivalent weight to designated heritage assets.

E Where heritage assets have been identified as being At Risk, boroughs should identify specific opportunities for them to contribute to regeneration and place-making, and they should set out strategies for their repair and re-use.

Para. 7.1.8 adds 'Where there is evidence of **deliberate neglect** of and/or damage to a heritage asset to help justify a development proposal, the deteriorated state of that asset should not be taken into account when making a decision on a development proposal'.

Para 7.1.11 adds 'Developments will be expected to avoid or minimise harm to significant archaeological assets. In some cases, remains can be incorporated into and/or interpreted in new development. The physical assets should, where possible, be made available to the public on-site and opportunities taken to actively present the site's archaeology. Where the archaeological asset cannot be preserved or managed on-site, appropriate provision must be made for the investigation, understanding, recording, dissemination and archiving of that asset, and must be undertaken by suitably-qualified individuals or organisations.

Policy HC2, "World Heritage Sites" is as follows:

A. Boroughs with World Heritage Sites and those that are neighbours to authorities with World Heritage Sites should include policies in their Development Plans that conserve, promote, actively protect and interpret the Outstanding Universal Value of World Heritage Sites, which includes the authenticity and integrity of their attributes and their management.

B. Development proposals in World Heritage Sites and their settings, including any buffer zones, should conserve, promote and enhance their Outstanding Universal Value, including the authenticity, integrity and significance of their attributes, and support their management and protection. In particular, they should not compromise the ability to appreciate their Outstanding Universal Value, or the authenticity and integrity of their attributes.

C. Development Proposals with the potential to affect World Heritage Sites or their settings should be supported by Heritage Impact Assessments. Where development proposals may contribute to a cumulative impact on a World Heritage Site or its setting, this should be clearly illustrated and assessed in the Heritage Impact Assessment.

D. Up-to-date World Heritage Site Management Plans should be used to inform the plan-making process, and when considering planning applications, appropriate weight should be given to implementing the provisions of the World Heritage Site Management Plan.

Local planning policy

Following the Planning and Compulsory Purchase Act 2004, Planning Authorities have replaced their Unitary Development Plans, Local Plans and Supplementary Planning Guidance with a new system of Local Development Frameworks (LDFs). UDP policies are either 'saved' or 'deleted'. In most cases archaeology policies are likely to be 'saved' because there have been no significant changes in legislation or advice at a national level.

The London Borough City of Westminster formally adopted the latest version of Westminster's City Plan (November 2016) on 9 November 2016 which includes the Special Policy Area and Policies Map Revision. Westminster's City Plan is the key policy document for determining planning applications in Westminster. As the most local and up-to-date policies, these should be looked at first, and take priority over Unitary Development Policies.

Policy S25 in the City Plan covers the borough's historic environment and is supported by policies DES 9, 10 and 11 in the Westminster's Unitary Development Plan which was formally approved in January 2007 and sections 'saved' in January 2010 in addition to Policy CM28.1 in the City Plan, formally approved in July 2016.

City of Westminster

POLICY S25 Heritage

Recognising Westminster's wider historic environment, its extensive heritage assets will be conserved, including its listed buildings, conservation areas, Westminster's World Heritage Site, its historic parks including five Royal Parks, squares, gardens and other open spaces, their settings, and its archaeological heritage. Historic and other important buildings should be upgraded sensitively, to improve their environmental performance and make them easily accessible.

POLICY DES 9: CONSERVATION AREAS

Applications for outline planning permission in conservation areas

In the case of outline planning applications within designated conservation areas it may be necessary to require additional details to be produced in order that the physical impact of the proposed development may be fully assessed.

(B) Planning applications involving demolition in conservation areas

1) Buildings identified as of local architectural, historical or topographical interest in adopted conservation area audits will enjoy a general presumption against demolition

2) Development proposals within conservation areas, involving the demolition of unlisted buildings, may be permitted

a) If the building makes either a negative or insignificant contribution to the character or appearance of the area, and/or

b) If the design quality of the proposed development is considered to result in an enhancement of the conservation area's overall character or appearance, having regard to issues of economic viability, including the viability of retaining and repairing the existing building

3) In any such case, there should also be firm and appropriately detailed proposals for the future viable redevelopment of the application site that have been approved and their implementation assured by planning condition or agreement.

(C) Planning application for alteration or extension of unlisted buildings

Planning permission will be granted for proposals which

1) Serve to reinstate missing traditional features, such as doors, windows, shop fronts, front porches and other decorative features

2) Use traditional and, where appropriate, reclaimed or recycled building materials

3) Use prevalent facing, roofing and paving materials, having regard to the content of relevant conservation area audits or other adopted supplementary guidance

4) In locally appropriate situations, use modern or other atypical facing materials or detailing or innovative forms of building design and construction

(D) Conservation area audits

The existence, character and contribution to the local scene of buildings or features of architectural, historical or topographical interest, recognised as such in supplementary planning guidance, such as conservation area audits, will be of relevance to the application of policies DES 4 to DES 7, and DES 10.

(E) Changes of use within conservation areas

Permission will only be granted for development, involving a material change of use, which would serve either to preserve or enhance the character and appearance of the conservation area, bearing in mind the detailed viability of the development.

(F) Setting of conservation areas

Development will not be permitted which, although not wholly or partly located within a designated conservation area, might nevertheless have a visibly adverse effect upon the area's recognised special character or appearance, including intrusiveness with respect to any recognised and recorded familiar local views into, out of, within or across the area.

(G) Restrictions on permitted development in conservation areas

1) In order to give additional protection to the character and appearance of conservation areas, directions may be made under article 4(2) of the Town and Country Planning (General Permitted Development) Order 1995. Types of generally permitted development to which such directions may apply will include:

a) painting, cladding or rendering of building facades

b) insertion or replacement of doors and windows

c) removal or replacement of boundary walls and fences

d) alteration of roof profiles and replacement of roofing materials.

2) Such added powers of planning control may be applied to designated conservation areas the subject of adopted conservation area audits or to buildings or groups of buildings therein identified as being of architectural, historical or topographical interest.

3) The existence of such directions will be taken into account in the authorisation of development that may itself be made subject to the removal of permitted development rights, in appropriate individual cases.

POLICY DES 10: LISTED BUILDINGS

(A) Applications for planning permission

Applications for development involving the extension or alteration of listed buildings will where relevant need to include full details of means of access, siting, design and external appearance of the proposed development in order to demonstrate that it would respect the listed building's character and appearance and serve to preserve, restore or complement its features of special architectural or historic interest.

(B) Demolition of listed buildings

1) Development involving the total demolition of a listed building (or any building listed by virtue of being within its curtilage) will only be permitted if, where relevant, the following criteria are met:

a) it is not possible to continue to use the listed building for its existing, previous or original purpose or function, and

b) every effort has been made to continue the present use or to find another economically viable use and obtain planning permission, with or without physical alteration, and

c) the historic character or appearance of the main building would be restored or improved by the demolition of curtilage building(s), or

d) substantial benefits to the community would derive from the nature, form and function of the proposed development, and (in all cases)

e) demolition would not result in the creation of a long-term cleared site to the detriment of adjacent listed buildings

2) If development is authorised in conformity with any of the above criteria, it may be made subject to a condition, agreement or undertaking that any consequential demolition shall not be carried out until all the relevant details of the proposed development have been approved and a contract has been entered into for its subsequent execution.

(C) Changes of use of listed buildings

Development involving the change of use of a listed building (and any works of alteration associated with it, including external illumination) may be permitted where it would contribute economically towards the restoration, retention or maintenance of the listed building (or group of buildings) without such development adversely affecting the special architectural or historic interest of the building (or its setting) or its spatial or structural integrity.

(D) Setting of listed buildings

Planning permission will not be granted where it would adversely affect:

a) the immediate or wider setting of a listed building, or

b) recognised and recorded views of a listed building or a group of listed buildings, or

c) the spatial integrity or historic unity of the curtilage of a listed building.

(E) Theft or removal of architectural items of interest

In order to reduce the risk of theft or removal of architectural items of interest or value from historic buildings during the course of development, the City Council may require additional security arrangements to be made while buildings are empty or during the course of building works.

POLICY DES 11: SCHEDULED ANCIENT MONUMENTS, AREAS

AND SITES OF ARCHAEOLOGICAL PRIORITY AND POTENTIAL

(A) Scheduled Ancient Monuments

Permission for proposals affecting the following Scheduled Ancient Monuments, or their settings, will be granted providing that their archaeological value and interest is preserved:

1) the Chapter House and Pyx Chamber in the

Cloisters, Westminster Abbey

2) the Jewel Tower.

(B) Areas and sites of Special Archaeological Priority and Potential

Permission will be granted for developments where, in order of priority:

1) all archaeological remains of national importance

are preserved in situ

2) remains of local archaeological value are properly, evaluated and, where practicable, preserved in situ

3) if the preservation of archaeological remains in situ is inappropriate, provision is made for full investigation, recording and an appropriate level of publication by a reputable investigating body.

Policy CM28.1 Basement Development

A. All applications for basement development will:

1. demonstrate that they have taken into account the site-specific ground conditions, drainage and water environment(s) in the area of the development;

2. be accompanied by:

a) A detailed structural methodology statement and appropriate self-certification by a suitably qualified engineer with separate flood risk assessment where required. In cases where the council considers there is a high potential risk that the development will have significant impacts on the matters covered by this policy or where work will affect a particularly significant and/or sensitive heritage asset, the council will have reports independently assessed at the applicant's expense.

b) A signed proforma Appendix A which demonstrates that the applicant will comply with the relevant parts of the council's Code of Construction Practice and awareness of the need to comply with other public and private law requirements governing development of this kind.

3. safeguard the structural stability of the existing building, nearby buildings and other infrastructure including the highway and railway lines/tunnels;

4. not increase or otherwise exacerbate flood risk on the site or beyond;

5. be designed and constructed so as to minimise the impact at construction and occupation stages on neighbouring uses; the amenity of those living or working in the area; on users of the highway; and traffic and highways function; and

6. safeguard significant archaeological deposits.

B. Basement development to:

a) existing residential buildings;

b) buildings originally built for residential purposes where there is a garden and adjoining residential properties where there is potential for an impact on those adjoining properties;

c) non-residential development adjoining residential properties where there is potential for an impact on those adjoining properties; and

d) new build residential incorporating basements adjoining residential properties where there is potential for an impact on those adjoining properties;

will:

1. provide a satisfactory landscaping scheme, incorporating soft landscaping, planting and permeable surfacing as appropriate;

2. not result in the loss of trees of townscape, ecological or amenity value and, where trees are affected, provide an arboriculture report setting out in particular the steps to be taken to protect existing trees;

3. use the most energy efficient means of ventilation, and lighting, involving the lowest carbon emissions. Wherever practicable natural ventilation and lighting should be used where habitable accommodation is being provided;

4. incorporate sustainable urban drainage measures to reduce peak rate of runoff or any other mitigation measures recommended in the structural statement or flood risk assessment;

5. protect the character and appearance of the existing building, garden setting or the surrounding area, ensuring lightwells, plant, vents, skylights and means of escape are sensitively designed and discreetly located;

6. protect heritage assets, and in the case of listed buildings, not unbalance the buildings' original hierarchy of spaces, where this contributes to significance;

7. be protected from sewer flooding through the installation of a suitable pumped device.

C. Basement development to:

a) existing residential buildings;

b) buildings originally built for residential purposes where there is a garden and adjoining residential properties where there is potential for an impact on those adjoining properties;

c) non-residential development adjoining residential properties where there is potential for an impact on those adjoining properties outside Core CAZ, the Opportunity Areas and the Named Streets; and

d) new build residential incorporating basements adjoining residential properties where there is potential for an impact on those adjoining properties outside Core CAZ, the Opportunity Areas and the Named Streets; will:

1. either:

a) not extend beneath more than 50% of the garden land; or

b) on small sites, where the longest distance between the existing building and any site boundary is less than 8m, the basement may extend up to 4m from the building in that direction. On all other sides of the building, the basement will not extend beneath more than half of any other garden area; and

c) leave a margin of undeveloped garden land proportionate to the scale of development and the size of the affected garden around the entire site boundary except beneath the existing building. Where D below applies, the boundary with the highway is excluded from this requirement.

2. provide a minimum of 1m soil depth (plus minimum 200mm drainage layer) and adequate overall soil volume above the top cover of the basement;

3. not involve the excavation of more than one storey below the lowest original floor level, unless the following exceptional circumstances have been demonstrated;

a) that the proposal relates to a large site with high levels of accessibility such that it can be constructed and used without adverse impact on neighbouring uses or the amenity of neighbouring occupiers; and

b) that no heritage assets will be adversely affected.

D. Basement development under the adjacent highway will:

1. retain a minimum vertical depth below the footway or carriageway of 900mm;

2. not encroach more than 1.8m under any part of the adjacent highway; and

3. where extending or strengthening/improving existing basements horizontally under the highway;

a) maintain the existing depth below the footway or carriageway to ensure no loss of existing cover level above a vault; and

b) will not be permitted where the existing basement already extends 1.8m or more under the highway.

The City of Westminster is submitted the new City Plan which would replace the City's Core Strategy following its adoption to the Secretary of State on 19 November 2019 to begin the 'Examination in Public' phase. Consultation on the draft City Plan started on Monday 12 November 2018 and closed

on Friday 21 December 2018 (City of Westminster 2019), with the Regulation 19 draft issued in June-July 2019. Archaeology and heritage will be covered under the following Policies following the City Plan's adoption.

40. Westminster's heritage

A. Westminster's unique historic environment will be valued and celebrated for its contribution to the quality of life and character of the city. Public enjoyment of, access to and awareness of the city's heritage will be promoted.

B. Development must optimise the positive role of the historic environment in Westminster's townscape, economy and character and will:

1. ensure heritage assets and their settings are conserved and enhanced, as appropriate to their significance;

2. secure the conservation and continued beneficial use of heritage assets through their retention and sensitive adaptation which will avoid harm to their significance, while allowing them to meet changing needs;

3. place heritage at the heart of place making and good growth, maintaining the unique character of our heritage assets and delivering high quality new buildings and spaces which enhance their settings.

WESTMINSTER WORLD HERITAGE SITE

C. The Outstanding Universal Value (OUV), authenticity and integrity of the Westminster World Heritage Site will be conserved and enhanced. The setting of the site will be protected and managed to support and enhance its OUV.

D. Development will protect the silhouettes of the Palace of Westminster and Westminster Abbey and will protect and enhance significant views out of, across and towards the World Heritage Site.

E. The council will work with partners to promote the use, management and interpretation of the site in ways that protect, enhance and better communicate its OUV.

F. Applicants will be required to demonstrate that any impacts of their proposals on the World Heritage Site or its setting have been fully assessed using Heritage Impact Assessment methodology.

LISTED BUILDINGS

G. Works to listed buildings will preserve their special interest, relating sensitively to the period and architectural detail of the original building and protecting or, where appropriate, restoring original detail and significant historic fabric.

H. Changes of use to listed buildings will be consistent with their long-term conservation and help to restore, retain and maintain buildings, particularly those which have been identified as at risk.

I. Development within the settings or affecting views of listed buildings will take opportunities to enhance or better reveal their significance.

J. Demolition of listed buildings will be regarded as substantial harm and will be resisted in all but exceptional circumstances.

CONSERVATION AREAS

K. Development will preserve or enhance the character and appearance of conservation areas and protect their settings. Features that contribute positively to the significance of conservation areas will be retained and opportunities taken to enhance them and their settings, wherever possible.

L. There will be a presumption that unlisted buildings that make a positive contribution to a conservation area will be conserved, unless it has been demonstrated that the relevant tests in national policy have been met. Buildings which make a negative or neutral contribution may be replaced or refurbished where this will result in a high quality building which will improve their appearance in the context of the conservation area and their environmental performance.

M. The contribution of existing uses to the character, function and appearance of conservation areas will be considered and changes of use supported where they make a positive contribution to conservation areas and their settings.

ARCHAEOLOGY

N. Westminster's Scheduled Monuments and their settings will be preserved, and opportunities taken to enhance and communicate their significance, where appropriate.

O. Applicants for development which involves excavation or ground works in Westminster's Archaeological Priority Areas or other areas suspected of having archaeological potential will demonstrate that they have properly evaluated the archaeological potential and significance of the site and assessed and planned for any archaeological implications of proposals.

P. Archaeological deposits will be preserved in situ wherever possible. Where it has been demonstrated that the conservation of archaeological remains in situ is impossible or deposits are considered to be of lesser significance, full investigation, recording and an appropriate level of publication and archiving will be required, including public display and interpretation, where appropriate.

HISTORIC PARKS AND GARDENS

Q. Proposals affecting Westminster's historic parks, gardens and open spaces will safeguard their historic integrity, character and appearance, and protect their settings and significant views from and towards these spaces.

NON-DESIGNATED HERITAGE ASSETS

R. Non-designated heritage assets (including local buildings of merit, archaeology and open spaces of interest within and outside conservation areas) will be conserved. When assessing proposals affecting non-designated heritage assets, a balanced judgement will be made regarding the scale of any harm or loss of the asset and the benefit of the proposed development.

Appendix C – Determining significance

'Significance' lies in the value of a heritage asset to this and future generations because of its heritage interest, which may be archaeological, architectural, artistic or historic. Archaeological interest includes an interest in carrying out an expert investigation at some point in the future into the evidence a heritage asset may hold of past human activity, and may apply to standing buildings or structures as well as buried remains. Known and potential heritage assets within the site and its vicinity have been identified from national and local designations, HER data and expert opinion. The determination of the significance of these assets is based on statutory designation and/or professional judgement against four values (EH 2008):

- Evidential value: the potential of the physical remains to yield evidence of past human activity. This might take into account date; rarity; state of preservation; diversity/complexity; contribution to published priorities; supporting documentation; collective value and comparative potential.
- Aesthetic value: this derives from the ways in which people draw sensory and intellectual stimulation from the heritage asset, taking into account what other people have said or written;
- Historical value: the ways in which past people, events and aspects of life can be connected through heritage asset to the present, such a connection often being illustrative or associative;
- Communal value: this derives from the meanings of a heritage asset for the people who know about it, or for whom it figures in their collective experience or memory; communal values are closely bound up with historical, particularly associative, and aesthetic values, along with and educational, social or economic values.

Table C.1: Significance of heritage assets

Heritage asset description	Significance
World heritage sites Scheduled monuments Grade I and II* listed buildings Historic England Grade I and II* registered parks and gardens Protected Wrecks Heritage assets of national importance	Very high (International/ national)

Table C.1: Significance of heritage assets	
Heritage asset description	**Significance**
Historic England Grade II registered parks and gardens Conservation areas Designated historic battlefields Grade II listed buildings Burial grounds Protected heritage landscapes (e.g. ancient woodland or historic hedgerows) Heritage assets of regional or county importance	High (national/ regional/ county)
Heritage assets with a district value or interest for education or cultural appreciation Locally listed buildings	Medium (District)
Heritage assets with a local (i.e. parish) value or interest for education or cultural appreciation	Low (Local)
Historic environment resource with no significant value or interest	Negligible
Heritage assets that have a clear potential, but for which current knowledge is insufficient to allow significance to be determined	Uncertain

Unless the nature and exact extent of buried archaeological remains within any given area has been determined through prior investigation, significance is often uncertain.

Appendix D – Non-archaeological constraints

It is anticipated that live services will be present on the site, the locations of which have not been identified by this archaeological report. Other than this, no other non-archaeological constraints to any archaeological fieldwork have been identified within the site.

Note: the purpose of this section is to highlight to decision makers any relevant non-archaeological constraints identified during the study, that might affect future archaeological field investigation on the site (should this be recommended). The information has been assembled using only those sources as identified in section 2 and Appendix F, in order to assist forward planning for the project designs, working schemes of investigation and risk assessments that would be needed prior to any such field work. MOLA has used its best endeavours to ensure that the sources used are appropriate for this task but has not independently verified any details. Under the Health & Safety at Work Act 1974 and subsequent regulations, all organisations are required to protect their employees as far as is reasonably practicable by addressing health and safety risks. The contents of this section are intended only to support organisations operating on this site in fulfilling this obligation and do not comprise a comprehensive risk assessment.

Appendix E – Glossary

Alluvium	Sediment laid down by a river. Can range from sands and gravels deposited by fast flowing water and clays that settle out of suspension during overbank flooding. Other deposits found on a valley floor are usually included in the term alluvium (e.g. peat).
Archaeological Priority Area/Zone	Areas of archaeological priority, significance, potential or other title, often designated by the local authority.
Brickearth	A fine-grained silt believed to have accumulated by a mixture of processes (e.g. wind, slope and freeze-thaw) mostly since the Last Glacial Maximum around 17,000BP.
B.P.	Before Present, conventionally taken to be 1950
Bronze Age	2,000–600 BC
Building recording	Recording of historic buildings (by a competent archaeological organisation) is undertaken *'to document buildings, or parts of buildings, which may be lost as a result of demolition, alteration or neglect',* amongst other reasons. Four levels of recording are defined by Royal Commission on the Historical Monuments of England (RCHME) and Historic England. Level 1 (basic visual record); Level 2 (descriptive record), Level 3 (analytical record), and Level 4 (comprehensive analytical record)
Built heritage	Upstanding structure of historic interest.
Colluvium	A natural deposit accumulated through the action of rainwash or gravity at the base of a slope.
Conservation area	An area of special architectural or historic interest the character or appearance of which it is desirable to preserve or enhance. Designation by the local authority often includes controls over the demolition of buildings; strengthened controls over minor development; and special provision for the protection of trees.
Cropmarks	Marks visible from the air in growing crops, caused by moisture variation due to subsurface features of possible archaeological origin (i.e. ditches or buried walls).
Cut-and-cover [trench]	Method of construction in which a trench is excavated down from existing ground level and which is subsequently covered over and/or backfilled.
Cut feature	Archaeological feature such as a pit, ditch or well, which has been cut into the then-existing ground surface.
Devensian	The most recent cold stage (glacial) of the Pleistocene. Spanning the period from *c* 70,000 years ago until the start of the Holocene (10,000 years ago). Climate fluctuated within the Devensian, as it did in other glacials and interglacials. It is associated with the demise of the Neanderthals and the expansion of modern humans.
Early medieval	AD 410–1066. Also referred to as the Saxon period.
Evaluation (archaeological)	A limited programme of non–intrusive and/or intrusive fieldwork which determines the presence or absence of archaeological features, structures, deposits, artefacts or ecofacts within a specified area.

Excavation (archaeological)	A programme of controlled, intrusive fieldwork with defined research objectives which examines, records and interprets archaeological remains, retrieves artefacts, ecofacts and other remains within a specified area. The records made and objects gathered are studied and the results published in detail appropriate to the project design.
Findspot	Chance find/antiquarian discovery of artefact. The artefact has no known context, is either residual or indicates an area of archaeological activity.
Geotechnical	Ground investigation, typically in the form of boreholes and/or trial/test pits, carried out for engineering purposes to determine the nature of the subsurface deposits.
Head	Weathered/soliflucted periglacial deposit (i.e. moved downslope through natural processes).
Heritage asset	A building, monument, site, place, area or landscape positively identified as having a degree of significance meriting consideration in planning decisions. Heritage assets are the valued components of the historic environment. They include designated heritage assets and assets identified by the local planning authority (including local listing).
Historic environment assessment	A written document whose purpose is to determine, as far as is reasonably possible from existing records, the nature of the historic environment resource/heritage assets within a specified area.
Historic Environment Record (HER)	Archaeological and built heritage database held and maintained by the County authority. Previously known as the sites and Monuments Record
Holocene	The most recent epoch (part) of the Quaternary, covering the past 10,000 years during which time a warm interglacial climate has existed. Also referred to as the 'Postglacial' and (in Britain) as the 'Flandrian'.
Iron Age	600 BC–AD 43
Later medieval	AD 1066 – 1500
Last Glacial Maximum	Characterised by the expansion of the last ice sheet to affect the British Isles (around 18,000 years ago), which at its maximum extent covered over two-thirds of the present land area of the country.
Locally listed building	A structure of local architectural and/or historical interest. These are structures that are not included in the Secretary of State's Listing but are considered by the local authority to have architectural and/or historical merit
Listed building	A structure of architectural and/or historical interest. These are included on the Secretary of State's list, which affords statutory protection. These are subdivided into Grades I, II* and II (in descending importance).
Made Ground	Artificial deposit. An archaeologist would differentiate between modern made ground, containing identifiably modern inclusion such as concrete (but not brick or tile), and undated made ground, which may potentially contain deposits of archaeological interest.
Mesolithic	12,000 – 4,000 BC

National Record for the Historic Environment (NRHE)	National database of archaeological sites, finds and events as maintained by Historic England in Swindon. Generally not as comprehensive as the country HER.
Neolithic	4,000 – 2,000 BC
Ordnance Datum (OD)	A vertical datum used by Ordnance Survey as the basis for deriving altitudes on maps.
Palaeo-environmental	Related to past environments, i.e. during the prehistoric and later periods. Such remains can be of archaeological interest, and often consist of organic remains such as pollen and plant macro fossils which can be used to reconstruct the past environment.
Palaeolithic	700,000–12,000 BC
Palaeochannel	A former/ancient watercourse
Peat	A build-up of organic material in waterlogged areas, producing marshes, fens, mires, blanket and raised bogs. Accumulation is due to inhibited decay in anaerobic conditions.
Pleistocene	Geological period pre-dating the Holocene.
Post-medieval	AD 1500–present
Preservation by record	Archaeological mitigation strategy where archaeological remains are fully excavated and recorded archaeologically and the results published. For remains of lesser significance, preservation by record might comprise an archaeological watching brief.
Preservation in situ	Archaeological mitigation strategy where nationally important (whether Scheduled or not) archaeological remains are preserved *in situ* for future generations, typically through modifications to design proposals to avoid damage or destruction of such remains.
Registered Historic Parks and Gardens	A site may lie within or contain a registered historic park or garden. The register of these in England is compiled and maintained by Historic England.
Residual	When used to describe archaeological artefacts, this means not *in situ,* i.e. Found outside the context in which it was originally deposited.
Roman	AD 43–410
Scheduled Monument	An ancient monument or archaeological deposits designated by the Secretary of State as a 'Scheduled Ancient Monument' and protected under the Ancient Monuments Act.
Site	The area of proposed development
Site codes	Unique identifying codes allocated to archaeological fieldwork sites, e.g. evaluation, excavation, or watching brief sites.
Study area	Defined area surrounding the proposed development in which archaeological data is collected and analysed in order to set the site into its archaeological and historical context.

Solifluction, Soliflucted	Creeping of soil down a slope during periods of freeze and thaw in periglacial environments. Such material can seal and protect earlier landsurfaces and archaeological deposits which might otherwise not survive later erosion.
Stratigraphy	A term used to define a sequence of visually distinct horizontal layers (strata), one above another, which form the material remains of past cultures.
Truncate	Partially or wholly remove. In archaeological terms remains may have been truncated by previous construction activity.
Watching brief (archaeological)	A formal programme of observation and investigation conducted during any operation carried out for non-archaeological reasons.

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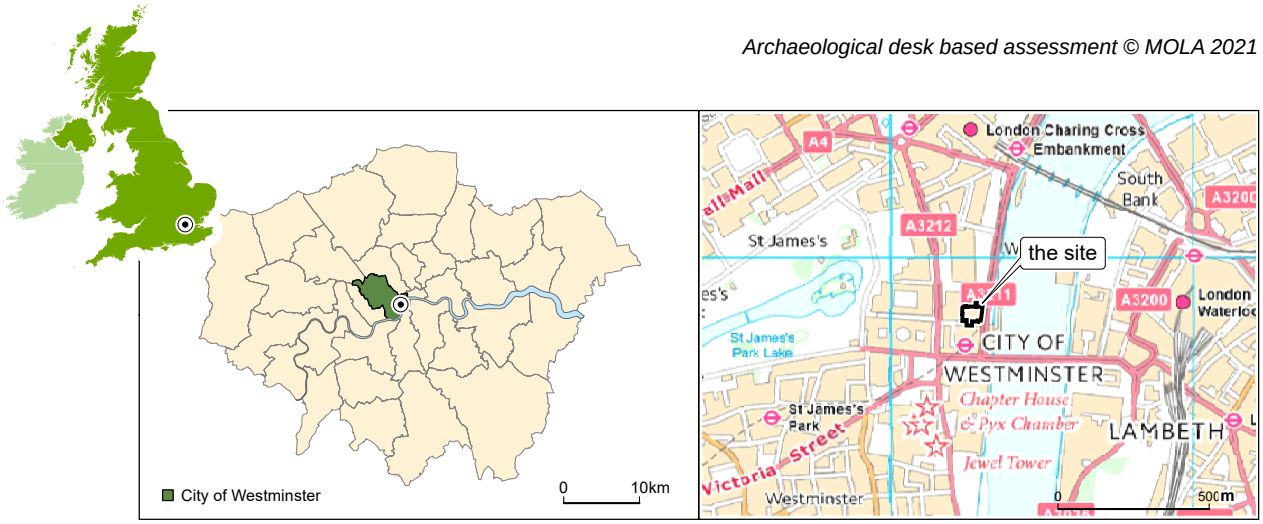
Available site survey information checklist

Table F.1: NEP3 site survey information checklist			
Information from client	**Available**	**Format**	**Obtained**
Plan of existing site services (overhead/buried)	not known	-	-

Levelled Site survey as existing (ground and buildings)	Y (buildings)	PDF	Y
Contamination survey data ground and buildings (inc. asbestos)	not known	-	-
Geotechnical report	not known	-	-
Envirocheck report	not known	-	-
Information obtained from non-client source	**Carried out**	**Internal inspection of buildings**	
Site inspection	N	N	



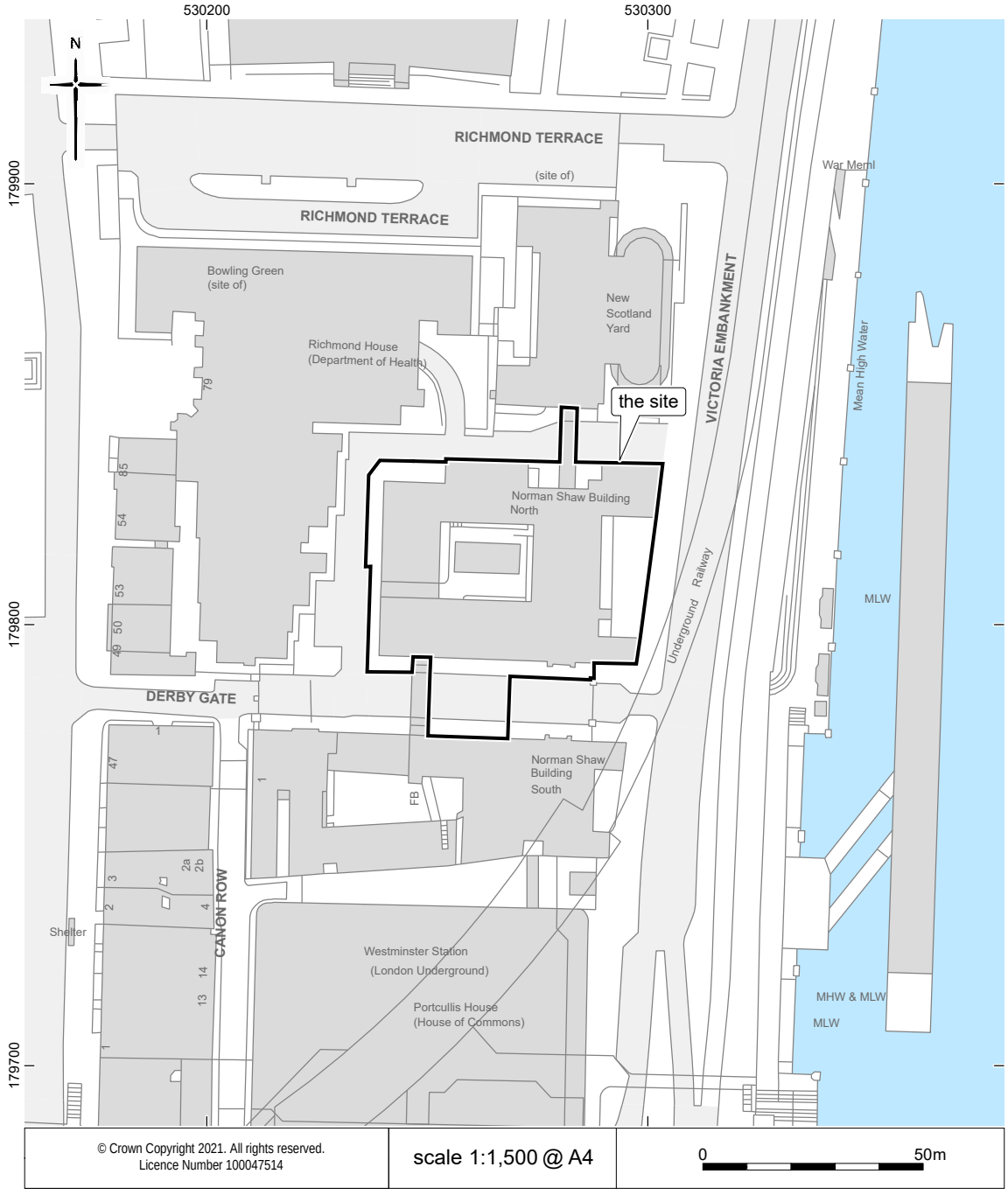


Fig 1 Site location

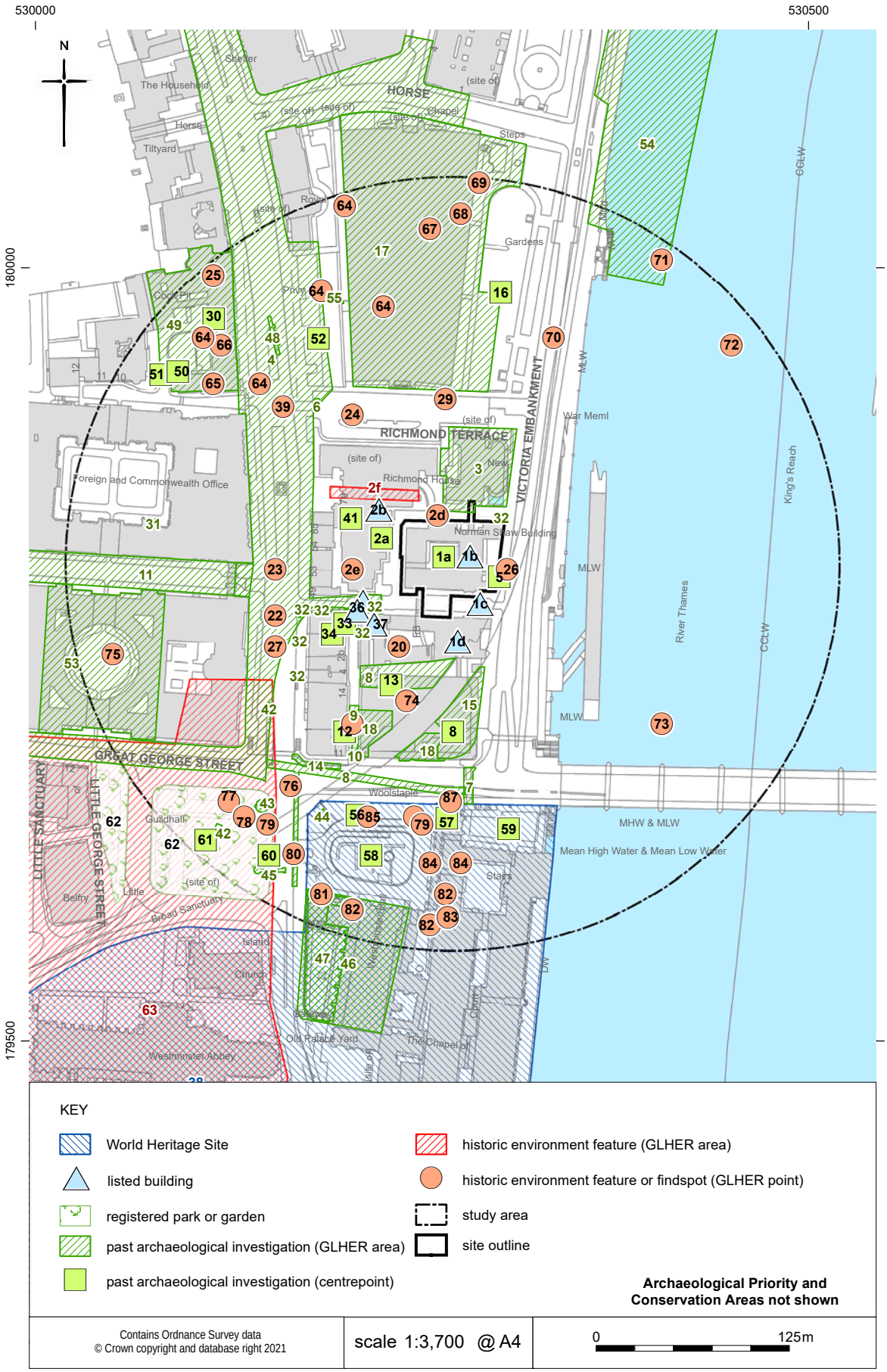


Fig 2 Historic environment features map

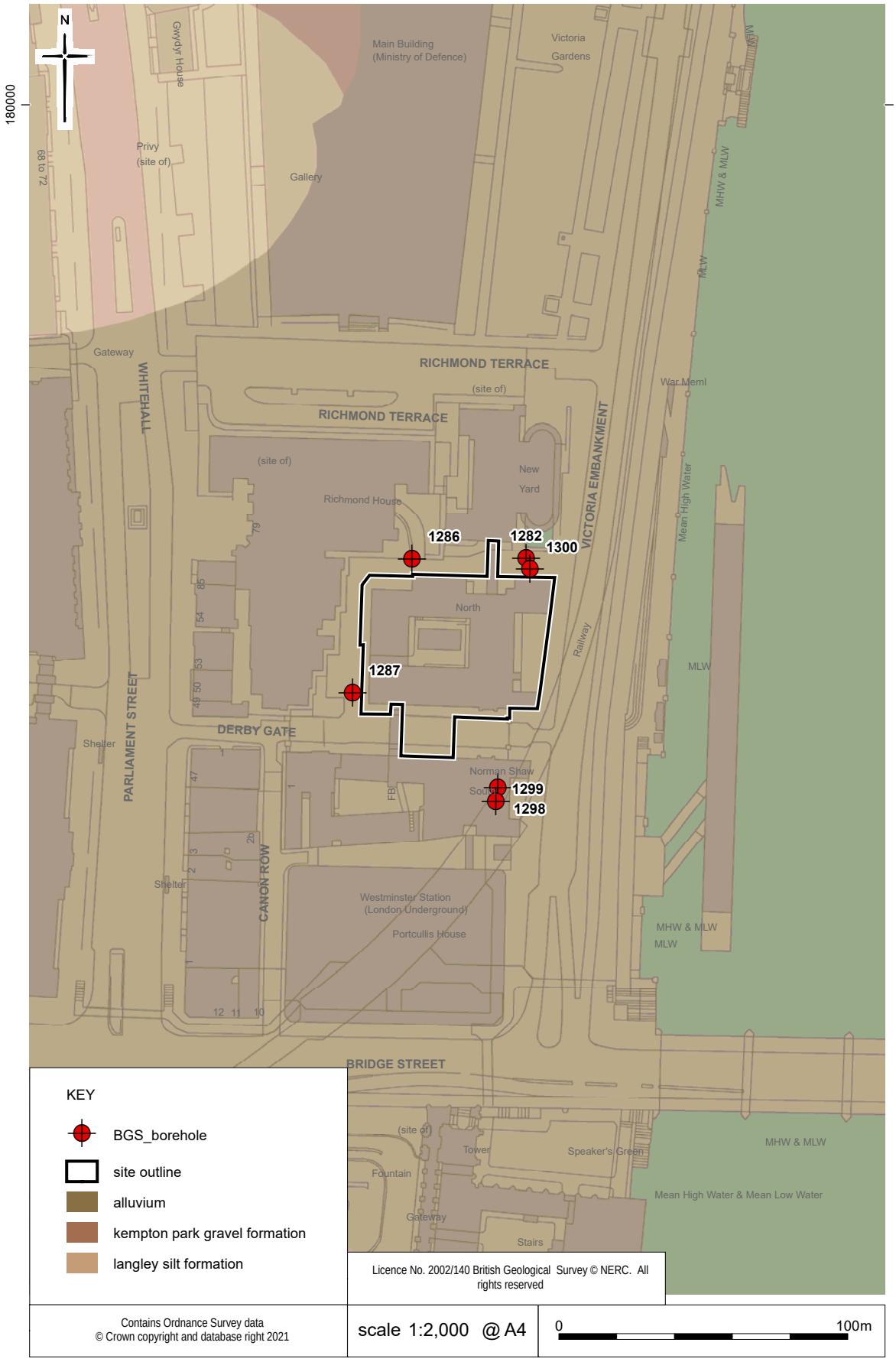


Fig 3 Geology map with locations of historic boreholes (BGS 2021)

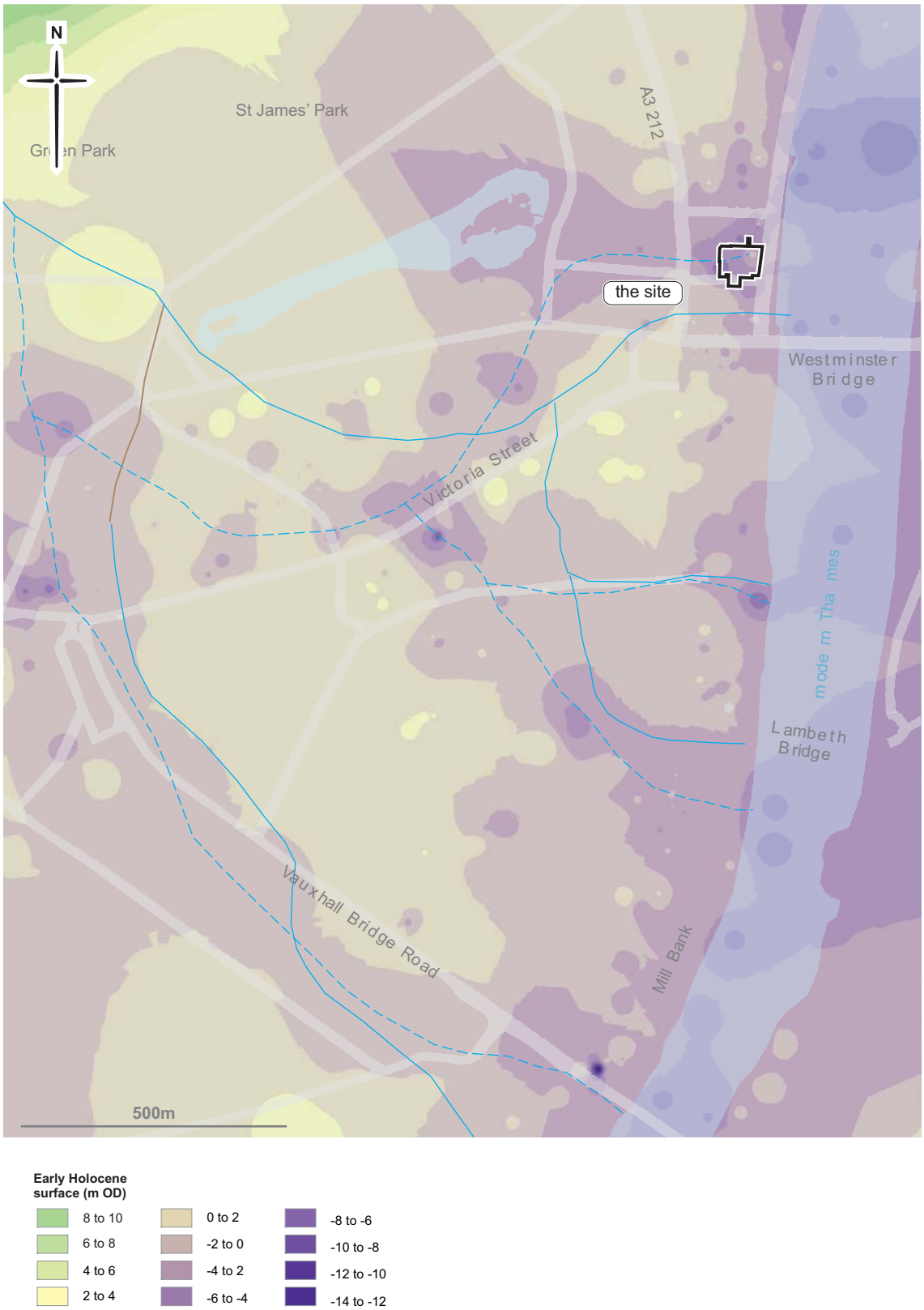


Fig 4 Thorney Island and the confluence of the Tyburn and Thames Rivers

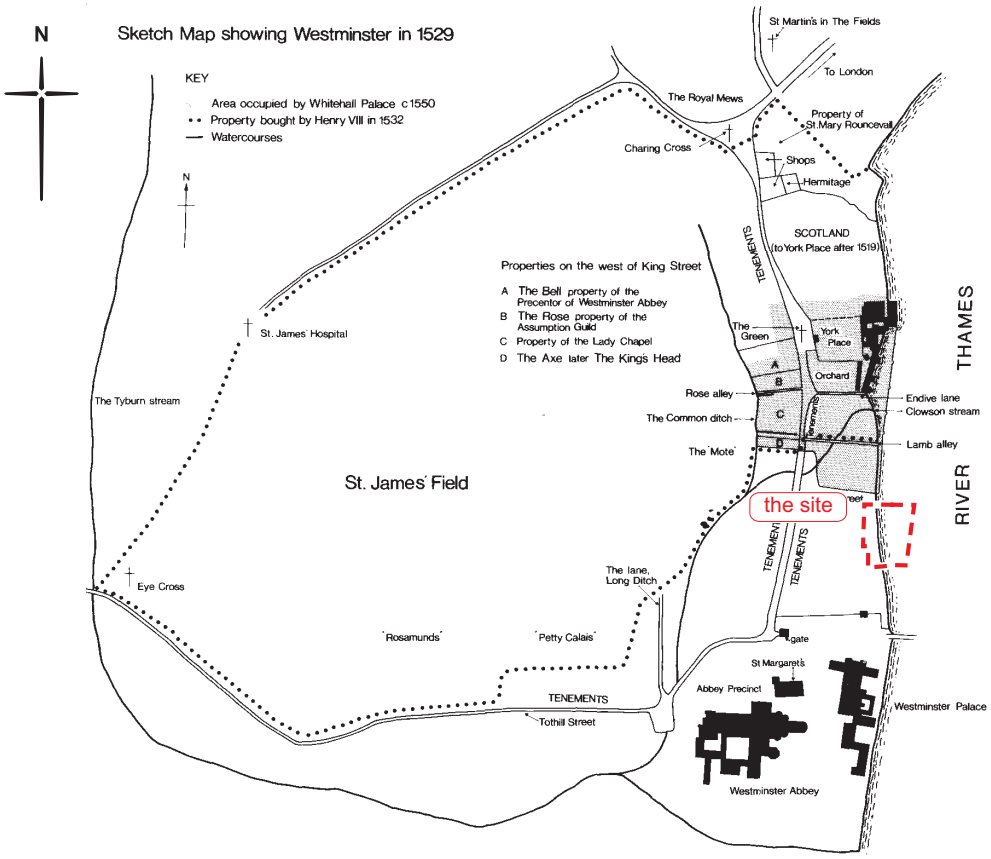


Fig 5 Sketch map showing Westminster in 1529 (Green and Thurley 1987, 65; fig 4)

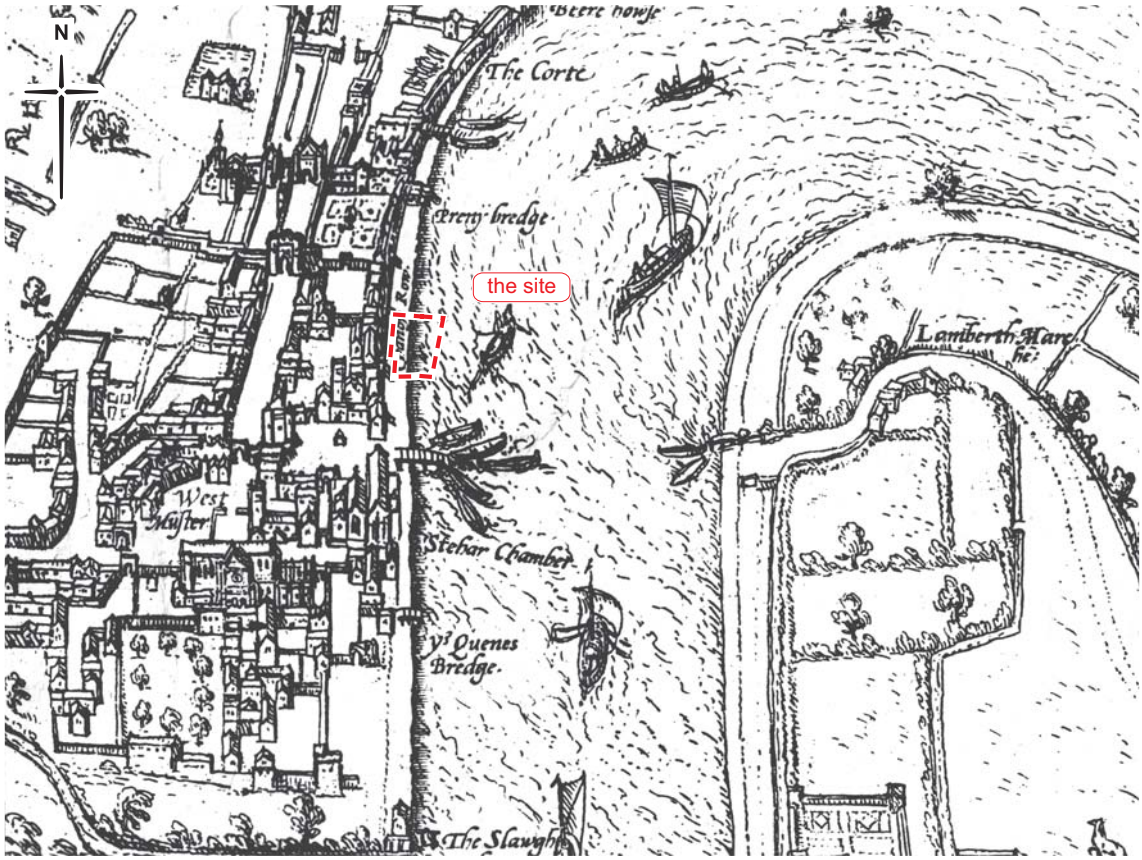


Fig 6 Braun and Hogenberg's map of 1572

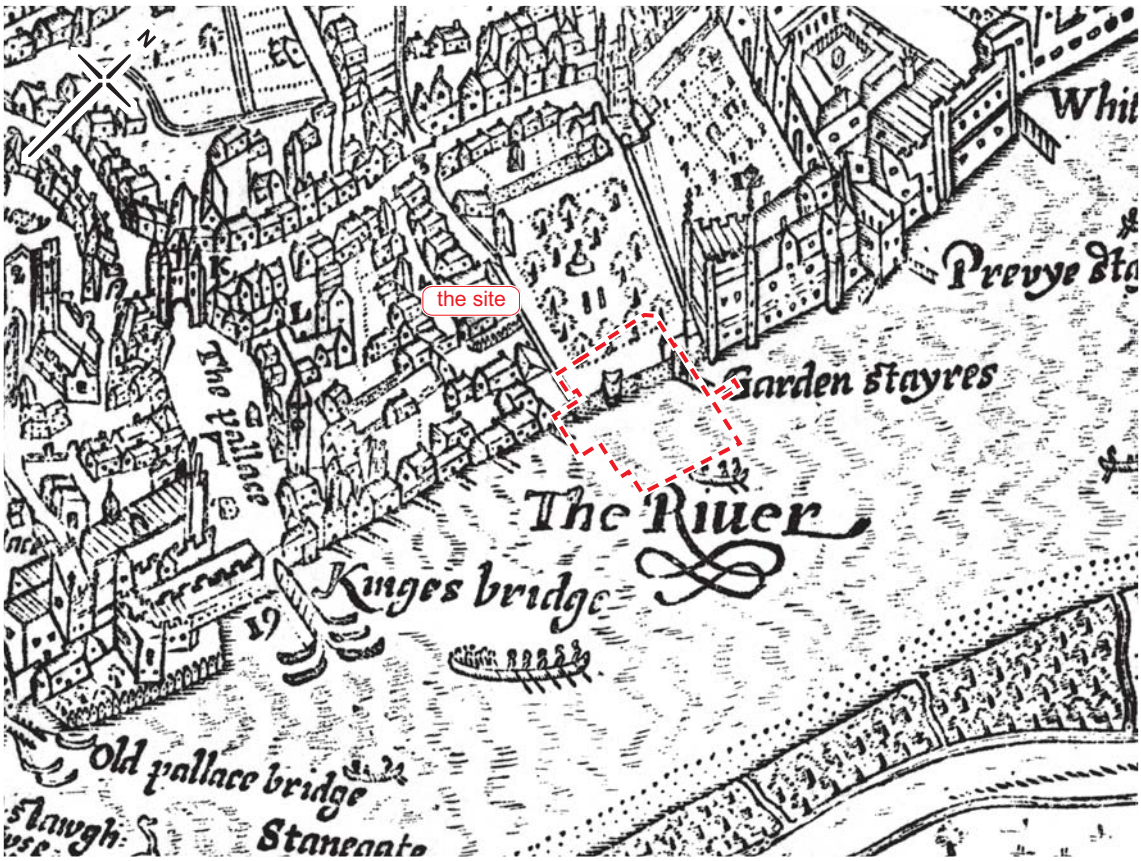


Fig 7 Norden's map of Westminster of 1593

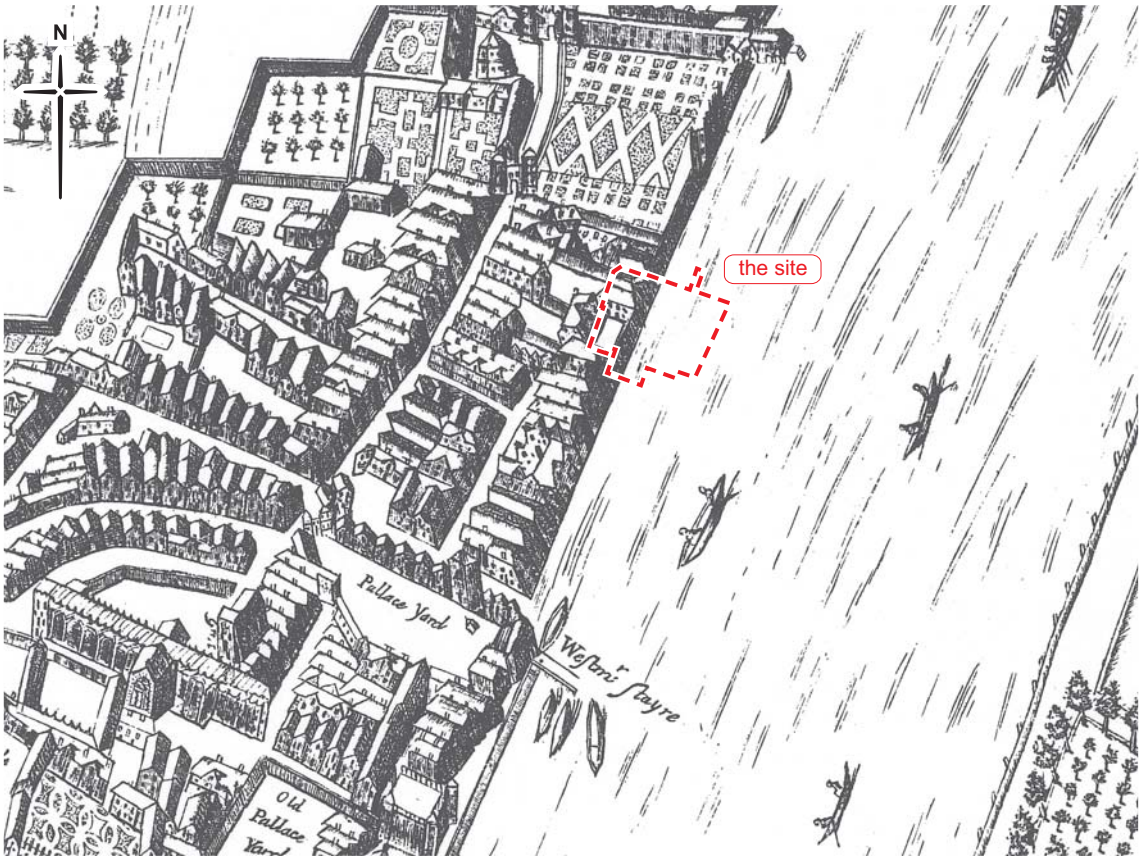


Fig 8 Faithorne and Newcourt's map of 1658

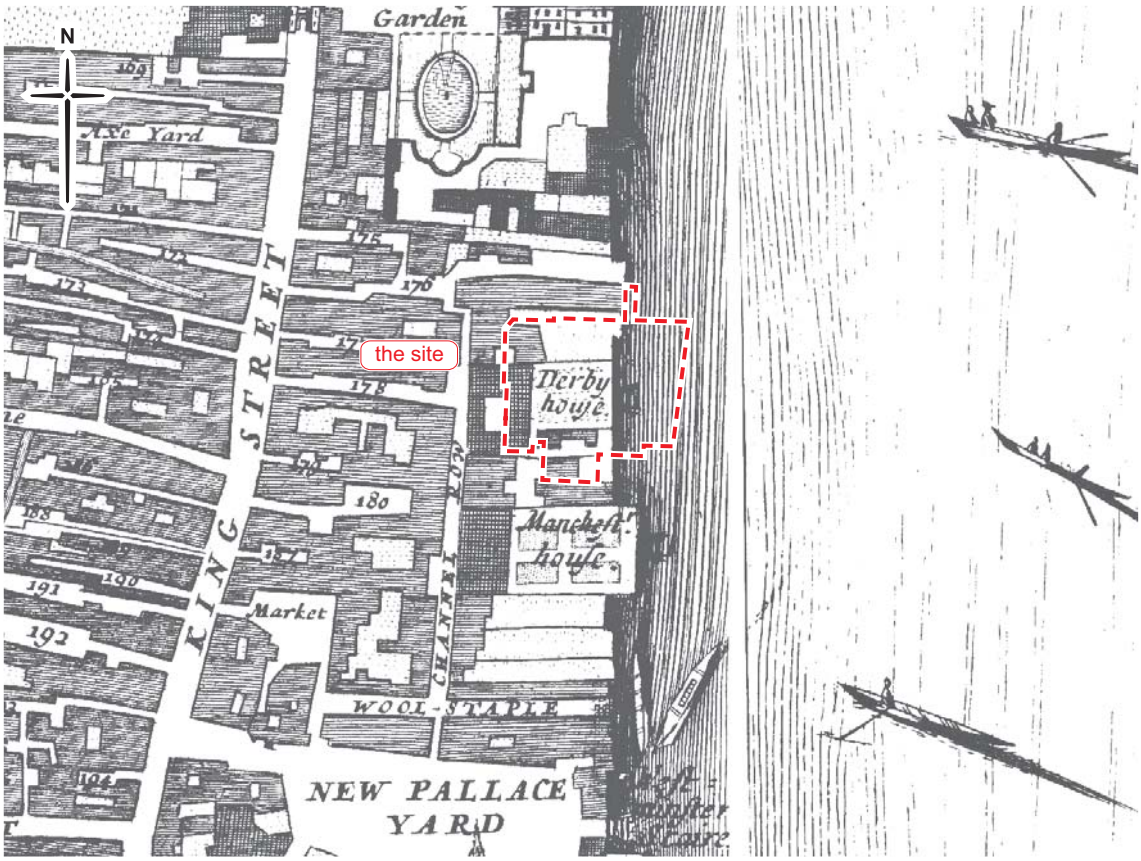


Fig 9 Morgan's map of 1682

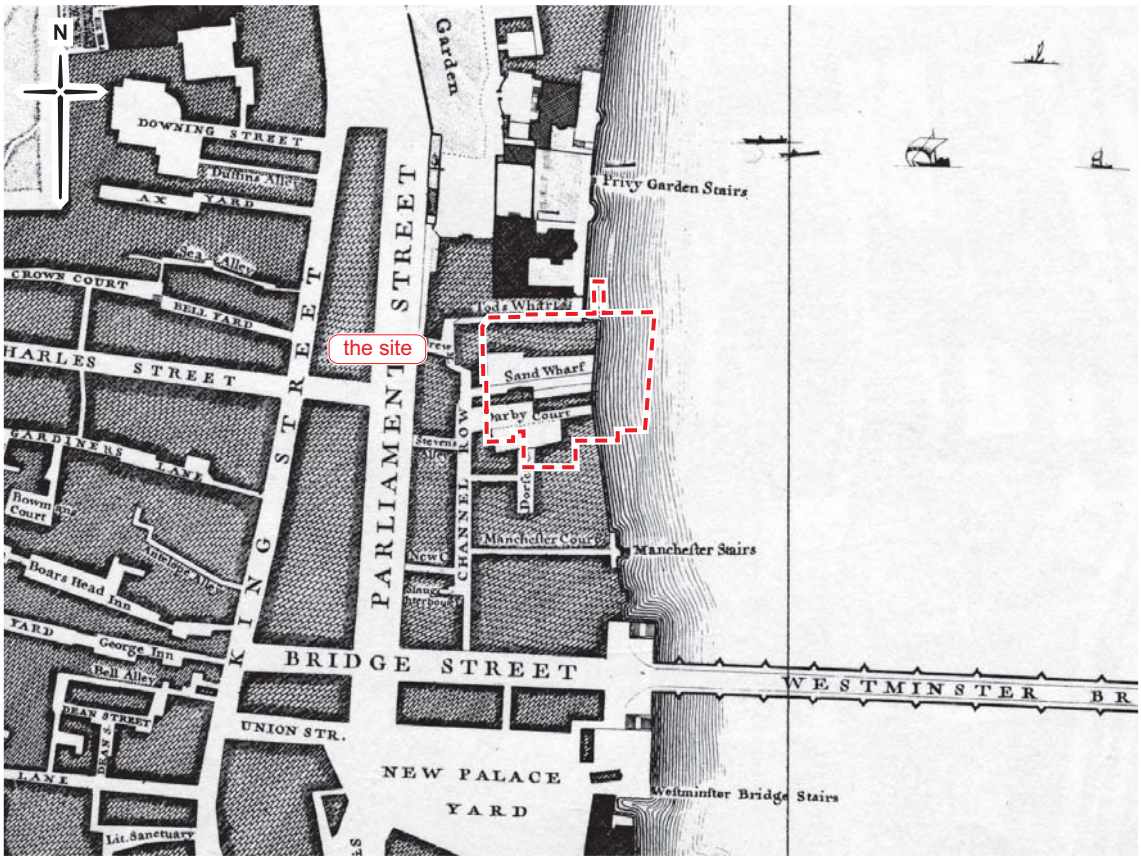


Fig 10 Rocque's map of 1746

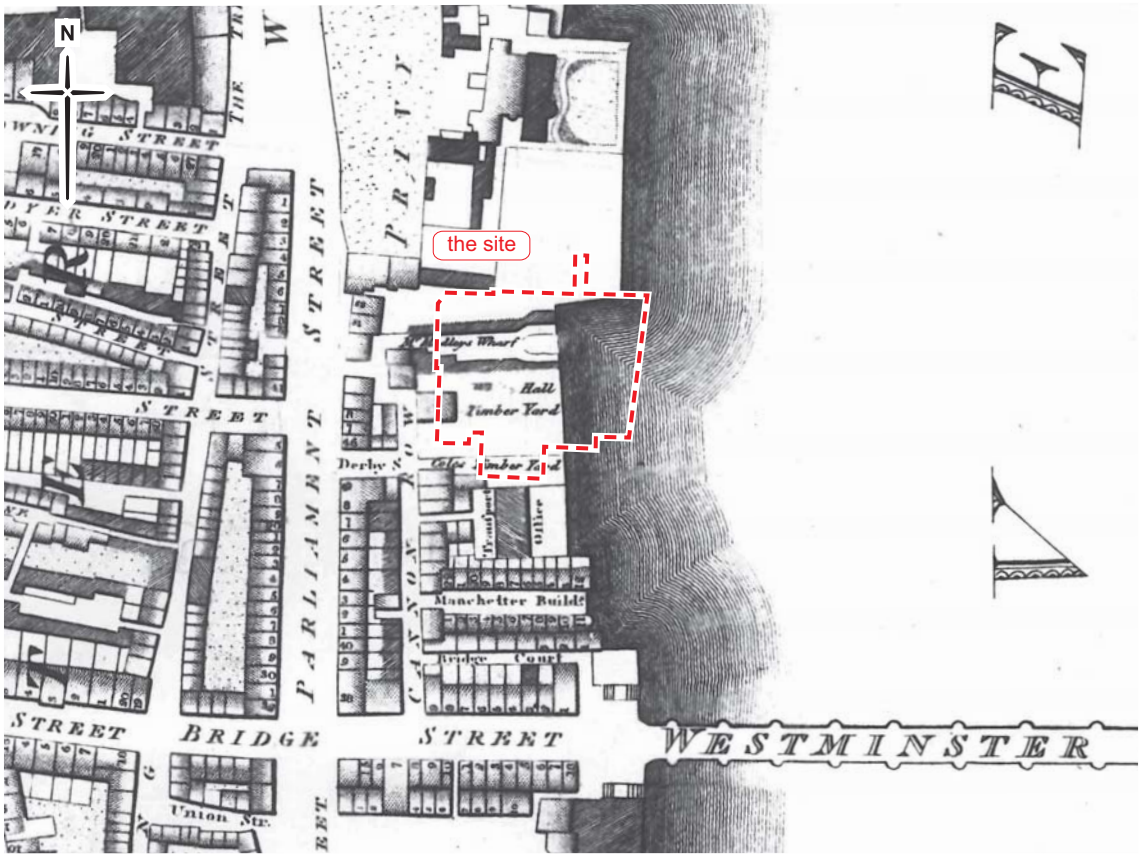


Fig 11 Horwood's map of 1799

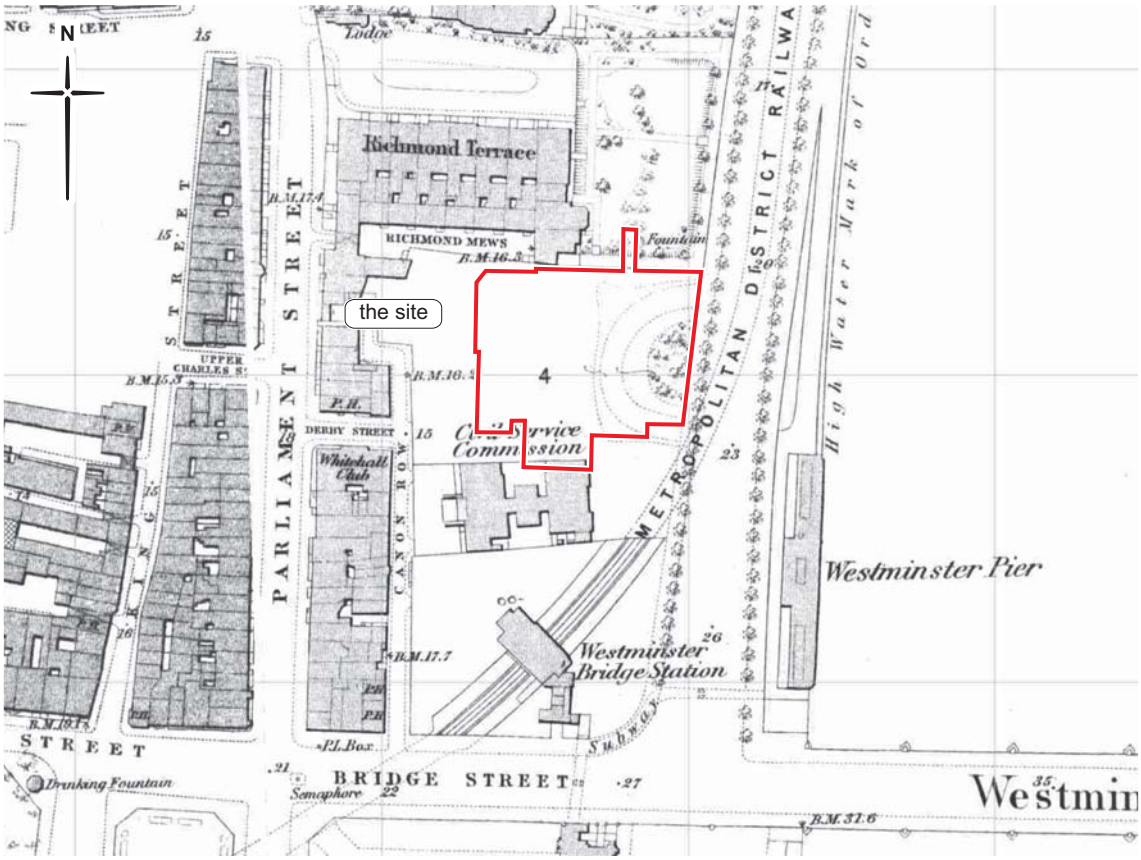


Fig 12 Ordnance Survey 1st edition 25": mile map of 1875–9 (not to scale)

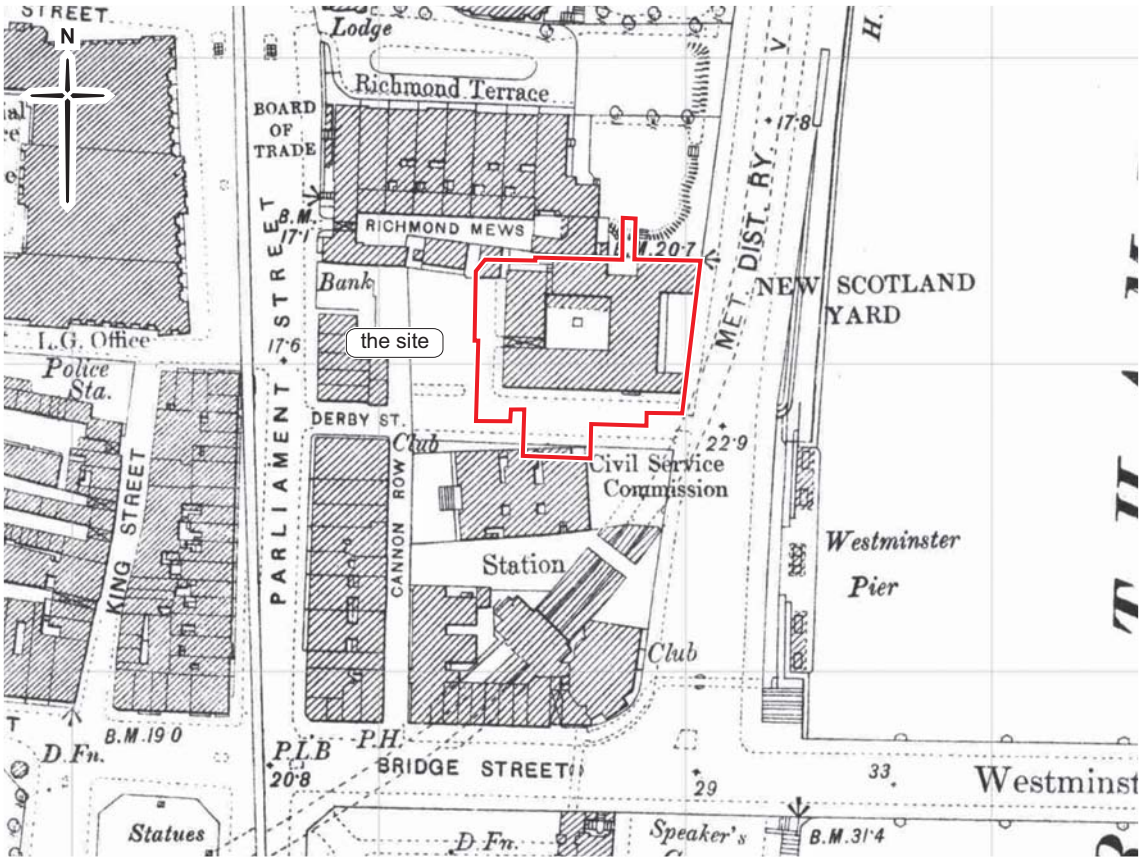


Fig 13 Ordnance Survey 2nd edition 25":mile map of 1896 (not to scale)

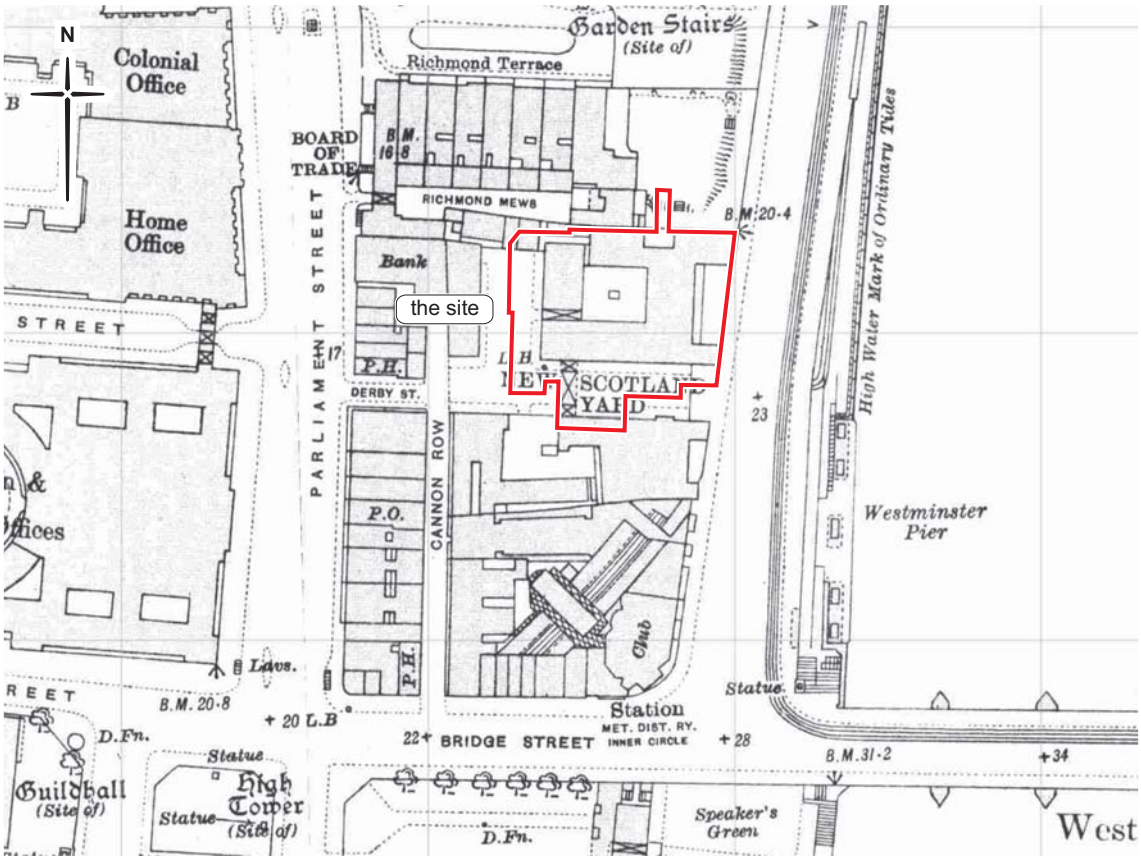


Fig 14 Ordnance Survey 3rd edition 25":mile map of 1916 (not to scale)