

## VICTORIA TOWER GARDENS London N1

City of Westminster

Historic environment assessment

August 2013



# Victoria Tower Gardens City of Westminster SW1

An historic environment assessment

**NGR 530260 179317**

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

## Executive summary

*The Parliamentary Estates Directorate has commissioned Museum of London Archaeology to carry out a historic environment assessment (also known as a 'heritage statement') in advance of proposed development at the northern end of the Grade II registered 19th-century Victoria Tower Gardens in the City of Westminster, London SW1. The scheme comprises the construction of a new single-storey education centre. Foundations would be piled. No basement is proposed.*

*The site lies just within the south-eastern boundary of the Lundenwic and Thorney Island Archaeological Priority Area (APA).*

*This desk-based study assesses the impact on buried heritage assets (archaeological remains). It does not cover possible built heritage issues (eg historic character and setting), except where buried parts of historic fabric are likely to be affected. Buried heritage assets that may be affected by the proposals comprise:*

- *The Grade II registered **Victoria Tower Gardens**. Buried remains affected might include earlier planting beds and path layouts, of low heritage significance.*
- *The remains of the **later medieval Abbot's Mill** which, based on cartographic sources, probably lay within the site boundary, on land reclaimed from the banks of the River Thames and the Tyburn. Such remains would potentially be well preserved due to waterlogged conditions and of high significance. Other riverfront development may be represent including river walls, wharfs, jetties and buildings, potentially of medium significance, along with reclamation deposits, of low significance.*
- ***Post-medieval buried remains** related to the construction of the Thames embankment including the 16th century river wall and possible riverfront structures (wharves, jetties, buildings), of medium significance.*
- ***Palaeoenvironmental remains** within the alluvial and peat deposits on the site, of low to medium significance.*

*There is a low potential for possible buried heritage assets of other periods. The location of the site at the confluence of the Tyburn with the Thames suggests that prehistoric and Roman remains have been scoured away by the fluvial action. The site was probably submerged during these early periods.*

*Buried elements of the gardens would be affected by topsoil stripping and subsequent construction activities. Piling would remove any archaeological remains within the footprint of each pile down to the underlying gravels. Considering the size and nature of the structure the piles are likely to be neither large nor dense; there would be small and highly localised impacts on the assets noted above.*

*It is recommended that archaeological monitoring of any geotechnical boreholes and trial pits is carried out in order to confirm the level of natural deposits, along with the presence, nature and depth of any archaeological remains. Based on the results, and depending on the foundation details, it is possible that further site-specific investigation would be required prior to development in order to clarify archaeological potential and the nature, date and significance of any remains which would be affected. The results would allow an informed mitigation strategy to be drawn up in advance of development, if required, in consultation with Westminster's archaeological advisor.*

# 1 Introduction

## 1.1 Origin and scope of the report

- 1.1.1 The Parliamentary Estates Directorate has commissioned Museum of London Archaeology (MOLA) to carry out a historic environment assessment (also known as a 'heritage statement') in advance of proposed development at Victoria Tower Gardens in the City of Westminster (National Grid Reference 530260 179317: Fig 1). The scheme comprises the construction of a new single-storey education centre which would not have a basement but would have piled foundations.
- 1.1.2 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 may be 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 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. These might comprise below and above ground archaeological remains, buildings, structures, monuments or heritage landscape within or immediately around the site. This report deals solely with the archaeological implications of the development proposals and does not cover possible built heritage issues (eg setting), except where buried parts of historic fabric are likely to be affected.
- 1.1.3 The assessment has been carried out in accordance with the requirements of the National Planning Policy Framework (NPPF) (DCLG 2012; see section 10 of this report) and to standards specified by the Institute for Archaeologists (IfA Oct 2012/Nov 2012), English Heritage (2008), and the Greater London Archaeological Advisory Service (GLAAS 2009). Under the 'Copyright, Designs and Patents Act' 1988 MOLA retains the copyright to this document.
- 1.1.4 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, and/or more detailed proposals for redevelopment may require changes to all or parts of the document.

## 1.2 Designated heritage assets

- 1.2.1 The northern edge of the site lies within the southern boundary of the Palace of Westminster, Westminster Abbey and St. Margaret's Church World Heritage Site (WHS) (**HEA 32**). The WHS Statement of Significance describes the site as encapsulating 'the history of one of the most ancient of parliamentary monarchies of present times and the growth of parliamentary and constitutional institutions.' Westminster Abbey, the Palace and St. Margaret's 'illustrate in a concrete way the specificities of parliamentary monarchy over nine centuries' (<http://whc.unesco.org/en/list/426>; accessed 24/05/2013).
- 1.2.2 A number of nationally designated (protected) heritage assets, including scheduled monuments, listed buildings and registered parks and gardens also lie either within the site or in the immediate vicinity, as detailed below.
- 1.2.3 The site lies within the northern part of Victoria Tower Gardens (**HEA 1A**); a Grade II registered park and garden. The gardens were constructed in the area to the south of Victoria Tower, which, in the 1860s, had not yet been embanked and was occupied by wharves and industrial buildings. The original 1879 design applied only to the northern portion of the present gardens, (including the site), and comprised a simple, formal design of four grass lawns around a central circular lawn divided by paths. In 1913, the gardens were expanded to the south and, at the same time, the

northern end of the gardens was redesigned. The circular feature was repositioned to the south, with the statuary group of the Burghers of Calais (**HEA 38**) positioned in the north-western part of the gardens. The gardens were altered to their present appearance in the 1950s.

- 1.2.4 The site lies c 75m to the south-east of the Jewel Tower, which is a scheduled monument (**HEA 48**). The boundaries of the monument contain two Grade I listed buildings: these are the Jewel Tower (**HEA 47**) and the former dock retaining walls to the moat around the Jewel House (**HEA 46**). The Chapter House and Pyx Chamber of Westminster Abbey (a scheduled monument) is located c 160m to the north-west of the site (outside the study area).
- 1.2.5 Two listed statues are situated to the immediate west and south of the site; the Grade II listed statue of Mrs Emmeline Pankhurst (**HEA 37**) and the Grade I listed statuary group of the Burghers of Calais (**HEA 38**). The site also lies c 30m to the south-east of the Grade I listed Victoria Tower Lodge and gates to the Black Rod Garden (**HEA 36**) and c 10m to the west of the Grade II listed river embankment wall from the Houses of Parliament to Lambeth Bridge (**HEA 39**).
- 1.2.6 The site lies within the Westminster Abbey and Parliament Square Conservation Area. The origins of the area – now the political and religious heart of Britain – date to the 10th century, when a small monastery was established on Thorney Island near the site of the current Abbey. The original Westminster Abbey was demolished in 1245 and re-built by Henry III. As well as the Abbey, the conservation area contains the Houses of Parliament (Palace of Westminster), established by Edward the Confessor in the 11th century. The Jewel Tower (**HEA 47**), located in the extreme south-west of the palace complex, was built in 1366. The present Houses of Parliament buildings were designed by Sir Charles Barry and officially opened in 1852. In 1860, Victoria Tower, c 25m to the north of the site, was built to house the records of Parliament. The conservation area includes a number of open spaces which provide ‘quiet havens’ from the flow of traffic within Parliament Square, including Victoria Tower Gardens (**HEA 1A**).
- 1.2.7 The site lies just within the south-eastern boundary of the Lundenwic and Thorney Island Archaeological Priority Area (APA), established by the City of Westminster. This part of London has been designated an APA as it lies within the area of the 7th–9th century Saxon trading settlement of *Lundenwic*, with associated archaeological remains recorded during a number of recent excavations of sites within the *Lundenwic* area (City of Westminster 2004; 3).

### 1.3 Aims and objectives

- 1.3.1 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 national planning policy (see section 9 for planning framework and section 10 for methodology used to determine significance);
  - assess the likely impacts upon the significance of the assets arising from the proposals; and
  - provide recommendations to 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 and 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 150m-radius study area around the area of proposed development, as held by the primary repositories of such information within Greater London. These comprise the Greater London Historic Environment Record (HER) and the London Archaeological Archive and Research Centre (LAARC). The HER is managed by English Heritage and includes information from past investigations, local knowledge; find spots, and documentary and cartographic sources. LAARC 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. 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 – Geographical Information System, the deposit survival archive, published historic maps and archaeological publications, including a MOLA monograph of the royal place, abbey and town of Westminster on Thorney Island (Thomas *et al.*, 2006);
  - English Heritage – information on statutory designations including scheduled monuments and listed buildings;
  - Landmark – 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;
  - WSP Group – architectural drawings (Feilden and Mawson/June 2013);
  - Internet - web-published material including LPA local plan, and information on conservation areas and locally listed buildings.
- 2.1.4 Luca Ferrari of WSP Group was consulted regarding the existing site and proposed development and kindly provided plans and additional details.
- 2.1.5 The assessment included a site visit carried out on the 16th of May 2013 in order to determine the topography of the site and existing land use, and to provide further information on areas of possible past ground disturbance and general historic environment potential. Observations made on the site visit have been incorporated into this report.
- 2.1.6 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 (**HEA 1, 2**, etc), which is listed in a gazetteer at the back of this report and is referred to in the text. Where there are a considerable number of listed buildings in the study area, only those within the vicinity of the site (i.e. within 100m) are included, unless their inclusion is considered relevant to the study. Conservation areas and Archaeological Priority Zones are not shown. All distances quoted in the text are approximate (within 5m).
- 2.1.7 Section 10 sets out the criteria used to determine the significance of heritage

assets. This is based on four values set out in English Heritage's *Conservation principles, policies and guidance* (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.

- 2.1.8 Section 11 contains a glossary of technical terms. A full bibliography and list of sources consulted may be found in section 13. This section includes non-archaeological constraints and a list of existing site survey data obtained as part of the assessment.

## 3 Site location, topography and geology

### 3.1 Site location

3.1.1 The site lies immediately to the south of the Palace of Westminster adjacent to the Thames Embankment/river wall. The majority of the site is situated in the northern part of Victoria Tower Gardens and extends into Black Rod's Garden to the north. The site lies between Abingdon Street to the west and the Thames to the east (NGR 530260 179317: Fig 1). The site falls within the historic parish of St. John the Evangelist Westminster (formed out of the southern portion of St. Margaret Westminster Parish in 1728) and lay within the county of Middlesex prior to being absorbed into the administration of the City of Westminster.

### 3.2 Topography and geology

- 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). Geology can provide an indication of suitability for early settlement, and potential depth of remains.
- 3.2.2 The site is on a gentle slope down to the south. Ground levels adjacent to the site along Abingdon Street lie at between 4.9m Ordnance Datum/OD (c 50m to the north of the site) and 4.6m OD (c 30m to the south). Whilst the site is located on possibly around 4.0–6.0m of reclaimed and consolidated ground built out to extend the riverfront in the later medieval/early post-medieval period, the slope down to the south reflects the underlying natural topography of an ancient channel, the River Tyburn.
- 3.2.3 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 (Fig 3). The western edge of the gravel eyot lies immediately to the north-west of the site. The Island has been estimated (Thomas *et al.*, 2006) as measuring c 400m north-south and c 200m east-west, although this would have varied depending on sea and river levels. 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 100m to the north of the site). The west side was approximately on the line of Broad Sanctuary and Great Smith Street c 280m to the north-west of the site.
- 3.2.4 The branch of the Tyburn on the south side of Thorney Island was culverted by the later medieval period and extended along Great College Street, to the west of the site (Fig 4). The site was roughly on the northern slopes of the channel, at its confluence with the River Thames. The slope of the modern terrain, from north to south, reflects the underlying topography sloping down into the palaeochannel off the edge of the island.
- 3.2.5 The geology of the area comprises alluvium according to the British Geological Survey. The alluvial sequence within the channels is complex and may include phases with organic preservation and prehistoric landscape remains, including environmental evidence. The Thames and Tyburn channels changed, migrated and silted up over time as mean sea and river levels changed after the end of the last glaciation, roughly 10,000 years ago. The Thames regime throughout prehistoric and historic times has thus had a major influence on the Tyburn tributary system and the topographic development of the environs of Thorney Island. It may be anticipated that there were periods when river level fell (regressions), leading to silting and the formation of shallow-water organic sediments including peat, possibly subsequently inundated by later rising flood (transgression) phases depositing deeper water clays.
- 3.2.6 Levels of underlying natural gravels and the alluvium within the site are not currently

known. The highest point recorded on the gravel in the vicinity is beneath Westminster Abbey, at c 2.1m OD. A past archaeological investigation at the Chancellor's Court (**HEA 6**) c 65m to the north of the site, which lies at a similar ground level to the site, of c 4.9m OD, were recorded in two test pits undertaken as part of basement underpinning works. The basement foundations had truncated alluvial deposits at -0.1m OD (c 1.3m below ground level (bgl)). The top of natural gravels lay c 0.9–1.0m beneath the basement slab at between -0.9 and -1.0m OD (c 2.1–2.2mbgl). A reconstruction of the contours of the terrace deposits in the area of Thorney Island (Fig 4), based on borehole data, predicts that the top of natural gravels in the site are likely to occur at between -1.0 and -2.0m OD (c 5.6–5.9m to 6.6–6.9mbgl), sloping down from west to east towards the Thames.

- 3.2.7 Depth of alluvium and overlying made ground used to consolidate and reclaim the riverfront within the site is uncertain. Taking into account the difference between the current ground levels (c 4.6–4.9m OD) and the predicted depth of the top of natural gravels at -1.0 and -2.0m OD (c 5.6–5.9m to 6.6–6.9mbgl) the surface of alluvium might be encountered at between -2.0 and 0.0m OD (c 4.6–6.9mbgl).

## 4 Archaeological and historical background

### 4.1 Overview of past investigations

- 4.1.1 No previous archaeological investigations have been carried out in the site in the past. Six have been carried out within the 150m radius study area, although three of these are concentrated around the Jewel Tower (**HEA 48**), a scheduled monument c 75m to the north-west of the site. The closest past investigation to the site was carried out in 1963 on Abingdon Street (**HEA 2**) c 20m to the west of the site. The excavations indicated that the Thames foreshore lay to the east of the Jewel Tower and that the later medieval waterfront at that point was erected approximately along the line of Abingdon Street, immediately to the west of the site. The site therefore lay within the Thames Channel throughout the prehistoric, Roman and much or all of the later medieval period. The riverfront in the area of the site had been reclaimed by the mid-16th century, as shown on early maps of the site (Fig 5 and Fig 6), although the exact line of the riverwall is uncertain. The current riverfront was established immediately to the east of the site around 1879–80.
- 4.1.2 A more recent archaeological watching brief was carried out at the Chancellor's Court in the Palace of Westminster (**HEA 6**), c 65m to the north of the site, which involved the recording of four test pits undertaken as part of underpinning works in the basement of the Palace of Westminster. All four pits revealed a similar stratigraphic sequence of natural sands overlaid by waterlain deposits of clay/silt alluvium. The alluvial deposits had been truncated by concrete basement foundations. All the remaining deposits revealed in the pits were related to the 19th century rebuilding of the Palace of Westminster or subsequent works.
- 4.1.3 Details 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 Chronological summary

#### *Prehistoric period (800,000 BC–AD 43)*

- 4.2.1 There is a direct relationship between the topography of the area and occupation by prehistoric populations. The rise and fall of water levels of the Thames, and the subsequent changing extent of Thorney Island (the eyot) all influenced prehistoric settlement and exploitation. The site lay south-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).
- 4.2.2 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 south of Thorney Island was dry during the Neolithic and Bronze Age periods. At this time the site may have straddled the edge of the dry land and the intertidal zone (Fig 3).
- 4.2.3 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 south of the island (Thomas *et. al* 2006, 29). During this period the site was likely to have been submerged in an area at the confluence of the southern branch of the Tyburn and the Thames (Fig 3). Archaeological remains from earlier prehistoric periods would have been subject scouring by the flow of the Thames.

- 4.2.4 A number of investigations on and around the island have located prehistoric features and produced finds of prehistoric date.
- 4.2.5 There are no known early prehistoric finds within the site or study area, other than an unspecified/undated prehistoric foreshore deposit discovered c 25m to the east of the site and noted on the GLHER (**HEA 8**). There is not further information on this on the GLHER. Within the wider area, a Mesolithic flint axe was recovered from New Scotland Yard (Lacaille 1961, 135), c 550m to the north-west of the site. Recently, Mesolithic wood has been exposed on the foreshore beside the eastern end of Vauxhall Bridge, 1.2km to the south of the site. It is uncertain whether this is worked timber or one or more trees. If it is worked then it would be a highly significant find and might indicate a wharf or jetty.
- 4.2.6 A Neolithic axe was also recovered from Westminster Bridge (Lacaille 1961, 135) c 320m to the north of the site (outside the study area).
- 4.2.7 No finds or features dated to this period have been discovered within the site or study area, two pits and a posthole cutting the natural sand were found at 37 Parliament Square, c 375m to the north of the site (outside the study area), one of which contained a sherd of pottery of probable Iron Age date (Thomas *et al.*, 1993, 15).
- 4.2.8 Although very little evidence of prehistoric activity has been discovered from the immediate area of the site, which has been developed since the later post-medieval period, prehistoric finds and features discovered to the north and north-west of the study area indicate that later prehistoric settlements were located on Thorney Island. There are also suggestions of earlier presence on the island from less well provenanced prehistoric finds. Generally, the finds and features described above were discovered as part of small-scale excavations and were mainly limited to the fringes of the gravel island, away from the highest ground and close to the river.

#### *Roman period (AD 43–410)*

- 4.2.9 Throughout this period the site would have been submerged within the channel of the River Thames and no Roman finds or features have been recorded within the site or study area.
- 4.2.10 There is, however, considerable but inconclusive evidence to suggest a Roman settlement on Thorney Island, to the north/north-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 recently been found under Parliament Square (Thomas *et al.*, 1993a, 15).

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

- 4.2.11 Following the withdrawal of the Roman army from England in the early 5th century AD the whole country fell into an extended period of socio-economic decline. The trading port of Lundenwic developed in the area now occupied by Aldwych, the Strand and Covent Garden, c 1.5km to the north of the site (Cowie and Blackmore 2008, xv).
- 4.2.12 The site fell within the extensive estate (manor) of Westminster, which is first mentioned in a charter dated to c AD 785, referring to the founding of a religious community on Thorney Island, c 235m to the north-west of the site. Westminster Abbey is thought to have been founded by Sebert, king of the East Saxons (Weinreb and Hibbert 1995, 971). After the completion of the building, it is said that St Peter was ferried over the broad marshes which surrounded the abbey and performed the rites of consecration. Hence, its full name is the Collegiate Church of

St Peter in Westminster. This church became known as the 'West Minster' to distinguish it from St Paul's Cathedral (VCH *London* i, 433–57).

- 4.2.13 Archaeological investigations further south have revealed occupation in the late 8th to mid-9th century in the area of Downing Street, on a low-lying spur at the confluence of the Thames and Tyburn rivers, c 635m to the north-west of the site. A succession of timber buildings included a substantial hall. Its position midway between *Lundenwic* to the north-east and Westminster Abbey, suggest high status. Its abandonment may be connected with Viking activity in the area (Cowie and Blackmore 2008, 90–100).
- 4.2.14 In the 9th century, *Lundenwic* declined and *Londinium* was reoccupied and its walls repaired as part of the defensive system established by King Alfred against the Danes. This settlement, named *Lundenburh*, formed the basis of the medieval city.
- 4.2.15 In the early 11th century, King Cnut constructed the Royal Palace of Westminster on the eastern side of Thorney Island, c 200m to the north of the site. Although the island was still marshy the palace was well located for river access, had good views towards London, and was next to the Abbey. The palace burnt down in 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 on the site of the earlier Abbey. It was the first cruciform church in England and was consecrated in 1065.
- 4.2.16 Despite the importance of Thorney Island as the location of the Royal Palace, little evidence of Saxon occupation has been found in the area. One of the rare finds dated to this period was discovered within the site, and comprised an 8th century sword (**HEA 1C**). The deposition context of this find is not known – it may have been recovered in the 1870s as part of the embankment construction. As the site continued to lie submerged within the Thames channel in this period, it is likely that the sword was deposited by river action and was discovered away from its original context. Other than this, no finds or features dated to this period have been discovered within the site or study area.

#### *Later medieval period (AD 1066–1485)*

- 4.2.17 The Domesday Book (1086) entry for the manor of Westminster includes St Peter's Church and the surrounding village, meadow, pasture and woodland. Westminster Palace was the main residence of the English Monarchy throughout this period (Weinreb and Hibbert 1995, 970). Much of Thorney Island was still prone to flooding and occasionally boats were used to move across the island (Thomas *et al.*, 1993, 12). Evidence of this flooding was found during investigations in the Parliament Square. On lower-lying ground, such as New Palace Yard and further north along Parliament Street, successive attempts were made to reclaim the land by digging drainage ditches and dumping soil (*ibid*).
- 4.2.18 As population grew around the Abbey walls, a new church dedicated to St. Margaret was built to the north of the Abbey in the latter part of the 11th century, c 235m to the north-west of the site. The church was largely rebuilt in the 15th century (Old and New London 1878, 567–576).
- 4.2.19 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. 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 is not known. The site lay just outside the precinct to the south-east (Fig 4). 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). 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 Palace (Bradley and Pevsner 1994, 229–32).

- 4.2.20 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).
- 4.2.21 To the south-east of the precinct was a mill, known as the "Abbot's Mill" (**HEA 1B**). The mill, which may have been a tidal mill or situated on an island which was later reclaimed, was reached by a bridge and the Abbey's kitchen garden. The monks dug a channel from the Tyburn to feed water to the mill (Thomas *et al* 2006, 71, 154). The mill is shown in a later map by Norden of 1593 (Fig 6). From this evidence it seems likely that the mill was located within the boundaries of the site. 'Site of Abbey mill' is shown within the site on the Ordnance Survey maps of 1916 (Fig 12) and 1950–2 (Fig 13).
- 4.2.22 Archaeological finds and features dated to this period are concentrated around Westminster Abbey and the Palace precincts and mainly comprise building materials, floors and levelling dumps and the remains of the precinct wall (**HEA 15**), which ran along Broad Sanctuary and Great Smith Street, c 320m to the west of the site. Remains of a former dock dating to the 13th century (**HEA 19**) and the Great Drain (**HEA 20**) have also been discovered c 60m and 120m to the west of the site respectively.

#### *Post-medieval period (AD 1485–present)*

- 4.2.23 The earliest map consulted is Braun and Hogenburg's map of 1572 (Fig 5). This pictorial map shows the site straddling the Thames channel and open reclaimed ground and gardens adjacent to the Thames riverbank to the west. By this period much of the riverbank to the north of the site was lined with buildings; however, beyond this, to the west, Westminster was still largely rural in character and dominated by gardens and open fields. In common with other suburban areas of London, Westminster expanded during the 17th and 18th centuries and much of the marshland on the fringes was drained and built upon. The River Tyburn had by this time become known as the 'Long Ditch' along the west side of the former island and was probably remained as little more than a stream, along the approximate line of what is now Great College Street.
- 4.2.24 Norden's map of Westminster of 1593 (Fig 6) shows details of buildings that may lie within the site. The Abbot's Mill is marked as 'The Myll', on the banks of the Thames to the west of the precinct wall. Another building marked as the 'The Q. Slaughterhouse' was situated to the north of the mill, also on the riverbank. The mill is mentioned in the rate-books of 1565 and stood opposite the eastern end of Great College Street (Bradley and Pevsner 1997, 706). It was demolished around 1736 (Westminster City Council 2005, 6)
- 4.2.25 The land to the south of the Jewel Tower had been reclaimed and was used as gardens. The exact date of this reclamation is not certain. Archaeological evidence indicates that the Jewel House moat was infilled in the 17th century (Green 1976, 59), but the cartographic evidence indicates from Braun and Hogenburg's map of 1572 and Norden's map of Westminster of 1593 seem to show that this area had been reclaimed by the late 16th century. The line of the river wall of this reclamation is likely to have run north-south through the eastern half of the site. There may have been wharves along the riverfront and possibly jetties.
- 4.2.26 Faithorne and Newcourt's map of 1658 (Fig 7) shows the site continuing to straddle the river wall, with the eastern half within the Thames channel and the western part

on reclaimed land. The map shows the extent to which the riverbank had begun to be developed, with rows of densely packed buildings and gardens. Although the riverbank itself was becoming increasingly developed, the land further to the west and south is still dominated by formal gardens, orchards and market gardens.

- 4.2.27 From the 18th century onwards a progressively increasing number of houses were constructed along Abingdon Street, which was widened to allow greater access into the Palace of Westminster. Rocque's map of 1746 (Fig 8) shows the extent of this development. Landward of the river wall the site lies within a commercial yard called 'Barnetts Yard'; by this time the old mill on the site had been demolished. Rocque's map shows the entire stretch of the riverbank along this part of the river now occupied by wharves and yards dealing with building materials including stone, bricks, wood and coal, as well as numerous brew houses. Rocque's map also shows the present-day street layout beginning to take shape, with the construction of Abingdon Street and Mill Bank, to the west of the site.
- 4.2.28 Faden's 1813 revision of Horwood's map of 1799 (Fig 9) shows the majority of the site lying landward of the river wall following further reclamation of the riverbank. The majority of the site is occupied by the 'Western Wharf' building. Terrace houses are also located within the eastern boundary of the site.
- 4.2.29 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. Part of the works involved the construction of the Victoria Embankment between Westminster Bridge (320m to the north of the site) and Blackfriars, c 2km to the north-east of the site, which housed sewer outfall tunnels. The line of the sewer runs c 25m to the west of the site, along the route of Abingdon Street.
- 4.2.30 The Ordnance Survey 1st edition 25" scale map of 1878–79 (Fig 10) shows the south-western part of the site occupied by 'Abingdon Wharf' and associated warehouse buildings. The north-western part is either an open area or a riverside factory or warehouse building that is not indicated by shading on the map. The eastern part of the site extends across the edge of the Thames foreshore.
- 4.2.31 In 1879, a gift of £1000 from the Rt Hon W H Smith was supplemented by £1400, voted by Parliament, towards 'enclosing and laying out for the use of the public the ground to the south of the Houses of Parliament which has recently been embanked' (Works file 11/63). (Victoria Tower Gardens English Heritage listing description.). The English Heritage entry for the gardens, which is Grade II registered, is as follows:

Public garden laid out in 1879 and extended in 1914, with the layout revised in 1955-6.

#### HISTORIC DEVELOPMENT

The Houses of Parliament were built by Charles Barry (1795-1860) and Augustus Welby Pugin (1812-52) between 1837 and 1858, and in 1867 an Act was passed allowing land to be obtained to construct an embankment to the south. The OS 1st edition map (surveyed 1872) shows the new Houses of Parliament with the Victoria Tower in the south-west corner and a small area of ground to the south which had been embanked to provide a vehicular entrance to the south side of the buildings. The remaining ground to the south had not been embanked and was occupied by wharves, a cement works, an oil factory, and flour mills. In 1879 a gift of £1000 from the Rt Hon W H Smith was supplemented by £1400, voted by Parliament, towards 'enclosing and laying out for the use of the public the ground to the south of the Houses of Parliament which has recently been embanked' (Works file 11/63). A design for the garden dated November 1879 (Works file 11/63) shows a simple formal design of four grass lawns around a central circular lawn, all divided by paths. There were shrubberies with a grass verge around the south, west, and north sides, and a row of trees along the embanked east side. The gardens occupied the square northern end of the present gardens. This scheme is shown on the OS 2nd edition map (revised 1894-6), with regularly placed trees on the grass plats. These trees (plane, lime, Pyrus, elm, and thorn) were shown on early

C20 plans (Works file 16/826), symmetrically positioned on each lawn. The land to the south of the gardens was still unembanked and occupied by wharves.

In 1909 there were proposals under the London County Council (Improvements) Act 1900 to extend the embankment and continue the gardens along the line of it. The plans were approved in 1912, the gardens laid out in 1913, and opened in 1914. The northern end of the gardens were redesigned at the same time with the circular feature positioned further south and the Burghers of Calais statuary group by Auguste Rodin positioned near the north-west corner. The revised layout is shown in the 3rd edition OS map (revised 1914).

In the 1920s the southern end of the gardens was redesigned as a children's play area (Works file 16/1214) and was partially altered by the building of the new Lambeth Bridge, completed in 1932. In 1933 the gardens were simplified in order to give clear views to the Houses of Parliament and trees (remaining from the 1870s scheme) and some of the shrubberies (from the 1890s scheme) were removed. The north lawn was also kept clear of people, the middle lawn was open but ball games were forbidden except in the summer holiday, and the south lawn was for children (Works file 16/1510).

The gardens were altered to their present appearance in the 1950s. In 1952 there were proposals for resiting the statues and for the incorporation of the Buxton Memorial Fountain from Parliament Square. A scheme for altering the gardens was finally agreed in 1955 and carried out in 1956, with the resiting of the Burghers of Calais and the Pankhurst statue, the installation of the Buxton Memorial Fountain, the planting of new shrubberies at the northern and southern ends of the gardens, the removal of the circular feature, and alterations to some of the paths and entrances (all references Works file 16/1940-1). The shrubbery at the northern end was designed to mask a new boiler house in Black Rod Garden and a fence which was realigned around it.

#### DESCRIPTION

**LOCATION, AREA, BOUNDARIES, LANDFORM, SETTING** Victoria Tower Gardens, c 2.5ha, lie within the London Borough of Westminster, immediately south of the Houses of Parliament (listed grade I), and c 150m south-east of Westminster Abbey (listed grade I). The gardens are bounded by Abingdon Street and Millbank to the west, the Thames to the east, Lambeth Bridge to the south, and Black Rod Garden with the Houses of Parliament to the north. The entrance to Black Rod Garden from Abingdon Street lies immediately north of the gardens (outside the area here registered), and is marked by a small octagonal lodge with iron gates (Barry and Pugin c 1850-60, listed grade I). The approximately triangular gardens are laid out on level ground with excellent views looking north to Victoria Tower (on the south-west corner of the Houses of Parliament) and east over the River Thames. The boundaries to the west and north are marked by iron railings, to the south by the retaining wall of Lambeth Bridge, and to the east by the granite embankment wall (northern section 1870s, southern section 1913, listed grade II).

**ENTRANCES AND APPROACHES** The gardens are entered from four gateways along the west side. The northernmost entrance leads from Abingdon Street and was made in 1955-6, replacing the original late C19 entrance, which was aligned on Great College Street. The middle two entrances, aligned on Wood Street and Great Stanley Street on the far side of Millbank, were made when the gardens were extended in 1914. The southernmost entrance on the west side was formed in the 1930s, and replaced the 1914 entrance which was c 20m to the south. A fifth entrance is from Lambeth Bridge to the south and was formed when Lambeth Bridge was rebuilt in 1929-32. The gate is on the bridge, beside an obelisk, and to the north of the gate a flight of steps leads down to the gardens.

**GARDENS AND PLEASURE GROUNDS** Just inside the northernmost entrance to the gardens there is a circular area of asphalt with a bronze statue of Mrs Emmeline Pankhurst (A G Walker, listed grade II) on the eastern edge, facing west and backed by a shrubbery. The statue was commissioned in 1929 and was unveiled in 1930, and was positioned on the western edge of a circular shrubbery in the centre of the gardens, facing west along the line of Wood Street. It was moved to its present position in 1956 as part of the revised layout of the gardens (all references Works file 20/188). The shrubbery which backs the statue is on a

slight bank, and runs east from this point along the northern boundary of the gardens, masking a fence and boiler house which were installed in 1955-6.

A shrubbery runs along the northern end of the west boundary (between the two northern entrances) but the central area of the gardens is laid out as open lawn, kept clear of planting to preserve the views. The areas of lawn are divided at the northern end by arching paths, which cross just east of the centre, with the northern branches leading to the north-west and north-east corners of the gardens, and the southern arms joining onto straight paths which run south along the west and east boundaries. At the point where the paths cross, c 60m south-east of the northern entrance, there is a large bronze statuary group of six figures by Auguste Rodin (1840-1917), known as the Burghers of Calais (first version 1895, listed grade I). The group was donated by the National Arts Collection Fund and erected in the gardens in 1914. Because of the outbreak of the First World War and anxiety of offending the French Allies, the statuary group was not formally unveiled but the tarpaulin was removed informally in 1915. It was sited approximately on the present position of the Pankhurst statue, on the west end of a path which ran west/east across the north end of the garden. This path was removed and the Burghers of Calais were resited as part of the alterations to the gardens in 1955-6. The original position had been chosen by Rodin, who had also requested that the piece was placed on a high plinth (the versions in Calais and Copenhagen had been placed on lower plinths). Objections to the high plinth were made from the start on the basis that it was difficult to view the piece properly and the piece was therefore placed on a lower pedestal when it was resited in 1955-6 (all references Works file 20/124 and 20/243).

The open lawns in the centre of the gardens are lined by rows of planes along the perimeter paths on the west and east sides. The east path, which forms a terrace walk along the embankment wall, has a row of benches set on high pedestals looking out over the river. A path crosses the gardens from west to east, aligned on the entrance opposite Dean Stanley Street. At the east end of this path, dominating the southern end of the gardens, is the Buxton Memorial Fountain (S S Teulon 1865, listed grade II) c 200m south-east of the northernmost entrance. The octagonal gothic fountain has a limestone and granite pavilion which supports a pyramidal spire roof decorated with enamelled metal. The fountain was erected in Parliament Square (qv) in 1865/6 but was removed in 1950, following the Parliament Square Improvements Act 1949. It was finally resited in Victoria Tower Gardens in 1955-6 (Works file 20/266 and 20/301-2).

A path runs west/east from the southernmost entrance across to the terrace walk, with a shrubbery (planted in 1955-6) on the south side dividing a children's playground from the rest of the gardens. The southern end of the playground is terminated by a curving screen wall incorporating a seat, three wall drinking fountains, and carved animals at each end of the wall (all references Works file 16/1214). The wall and seat were part of a scheme laid out in 1923 to the designs of Philip Tilden. The playground now has play features on asphalt, surrounded by the 1920s paving. The centre of the 1920s scheme was taken up by a sandpit, which was extended in 1927, and filled in with asphalt in the late C20. The area to the south and east of the playground was altered in 1932 following the building of Lambeth Bridge (Works file 16/1216). To the south of the curving fountain wall is a works area with shrub planting surrounding rose beds and storage within the wall of Lambeth Bridge. The southern end of the eastern perimeter path terminates at the flight of steps up to Lambeth Bridge.

- 4.2.32 The Ordnance Survey 2nd edition 25" mile scale map of 1896 (Fig 11) shows the site lying within the new Victoria Tower Gardens. This is shown as semi-open with many trees and a number of formal pathways. The creation of the gardens resulted in the construction of a new river wall further eastwards to its present position, bringing it in line with the river wall immediately to the north, alongside the Houses of Parliament.
- 4.2.33 In 1909, the London County Council (Improvements) Act 1900 submitted a proposal to extend the new river wall alignment southwards and continue the Victoria Tower Gardens along the line of it. The plans were approved in 1912, and the gardens to the south of the site laid out in 1913 and opened in 1914. The northern end of the

gardens, within the site, were redesigned at the same time with the circular feature positioned further south and the Burghers of Calais statuary group by Auguste Rodin (**HEA 38**) positioned near the north-west corner. The revised layout is shown on the Ordnance Survey 3rd edition 25": mile scale map of 1916 (Fig 12) although details such as the positioning of the Burghers of Calais statue group are not included (Victoria Tower Gardens English Heritage listing description.). The map also marks the site of the later medieval "Abbot's Mill" within the site boundary.

- 4.2.34 The London County Council Bomb Damage maps of 1939–1945 (not reproduced) shows no damage to the park area, although some damage had occurred to the houses on the western side of Abingdon Street, c 50m to the west of the site.
- 4.2.35 The Ordnance Survey 1:1,250 scale map of 1950–52 (Fig 13) shows the site immediately prior to conversion to its present layout in the mid-1950s. The Burghers of Calais statuary group at this time was situated immediately to the north of the site.
- 4.2.36 The Ordnance Survey 1:1,250 scale map of 1951–69 (Fig 14) shows the site largely as it remains today, its shape defined by a semi-circular path running from a park entrance at Abingdon Street towards the embankment wall. An exception is the positioning of the Burghers of Calais statuary which remains to the north of the site boundary.
- 4.2.37 Later Ordnance Survey maps show no changes to the site. The site currently comprises a semi-circular open lawn area in the southern part. The northern part of the site extends in Black Rod's Garden.

## 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, eg, building foundations, 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 Based on current knowledge, the predicted level of natural geology within the site is as follows:
- Current ground level lies at 4.6m–4.9m OD.
  - The top of truncated alluvium is predicted to lie at between –2.0 and 0.0m OD (c 4.6–6.9mbgl).
  - The top of natural Gravel is predicted to lie at between –1.0 and –2.0m OD (c 5.6–5.9m to 6.6–6.9mbgl)
- 5.2.2 The depth of any made ground deposits within the site is not currently known, however, taking into account the works for the construction of the embankment in the 1860s–70s, this is likely to extend to a considerable depth, assumed to be c 5.0–6.0mbgl, and is likely to comprise 16th century and later consolidation deposits, with late 19th century reclamation behind the river wall along the eastern edge of the site.

#### *Past impacts*

- 5.2.3 Archaeological survival potential within the site is expected to be high.
- 5.2.4 The site is located on ground entirely reclaimed from the Thames channel and foreshore. The majority of the site was reclaimed and built out by the mid-16th century, possibly earlier, as there was originally a medieval mill here. The eastern edge was reclaimed when the river wall was extended eastwards in the late 19th century.
- 5.2.5 Reclamation would have entailed dumping a substantial amount of consolidation material behind the riverwall, probably directly on top of any alluvial/channel deposits. Any remains within and beneath the alluvium, including any peat horizons (if present) potentially survive intact, albeit compressed under up to 6m of dumped material. However, the site was located at the confluence of the Tyburn with the Thames and although the fluvial regime prior to reclamation is not known the area of the site was probably subject to fluvial scouring action, which will have removed any early deposits of archaeological interest.
- 5.2.6 As part of the mid-1950s revision of the garden layout a boiler house was constructed in Black Rod's Garden. This extends underground into the north-western part of the site (see Fig 15 and Fig 16). The excavations for the boiler house will have entirely removed or severely truncated any archaeological remains within their footprint.
- 5.2.7 The vehicle entrance to Black Rod's Garden, just to the north of the site, underwent alteration in the mid-1990s when a southern exit gate was added. This will have had a superficial impact on any archaeological remains present, extending to a

maximum depth of 1.0–1.5m below ground level.

- 5.2.8 Landscaping and planting for the Victoria Tower Gardens will have had a superficial impact on any archaeological remains present, extending to a maximum depth of 1.0–1.5m below ground level.

*Likely depth/thickness of archaeological remains*

- 5.2.9 Surviving archaeological remains would be located within any surviving alluvial deposits, and possibly cut into the natural gravels at predicted depths of between – 2.0 and 0.0m OD (c 4.6–6.9mbgl). The made ground within the site has potential to contain archaeological remains, including the medieval mill, former river walls, jetties and riverfront structures.

### 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 moderate potential to contain palaeoenvironmental remains within surviving alluvial deposits.* Any alluvial deposits within the site 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 low potential for archaeological remains dating to the prehistoric period within surviving alluvial deposits.* Although there is some evidence for prehistoric activity immediately to the north and north-west of the site, on Thorney Island, no evidence of prehistoric activity has been discovered within the site or study area, with the exception of a prehistoric deposit discovered on the Thames foreshore. The site lay at the confluence of the Tyburn with the Thames and it is likely that this area was subject to fluvial scouring. There is potential for isolated prehistoric finds, residually deposited outside their original context, within alluvial deposits. Such assets would be of **low** significance, based on their evidential value.
- 5.3.4 *The site has a low potential for archaeological remains dating to the Roman period within surviving alluvial deposits.* No evidence of Roman activity or occupation has been recorded within the site or study area. 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. There is some possibility of residual Roman finds of **low** significance within the alluvial deposits on the site.
- 5.3.5 *The site has a low potential for archaeological remains dating to the early medieval period within surviving alluvial deposits.* It was located to the south of the known settlements of *Lundenwic* c 1.5km to the north, and the religious community on Thorney Island, c 235m to the north-west. The site would have been located within the River Thames channel and would have been submerged during this period. There is potential for residual early medieval finds within the site such as the 8th century sword discovered within the site, perhaps during works carried out for the construction of the embankment wall. Such redeposited finds would be of **low** significance which would be derived from their evidential and historical value.
- 5.3.6 *The site has high potential for later medieval structures or remains within surviving*

*alluvial deposits*. During this period there was continued development along the western bank of the Thames, including medieval houses, wharfs and at Westminster Palace. The Abbott's Mill may have been a tidal mill and possibly either on a small island or land which had been reclaimed. Any evidence relating to the mill would be of **high** significance with evidential and historical value. Riverfront buildings, along with one or more riverwalls, jetties and wharves, would be of **medium to high** significance depending on the nature and extent of the remains. Remains might potentially be waterlogged and thus timber and organic remains could be well preserved. Reclamation/consolidation deposits would be of **low** significance.

- 5.3.7 *The site has a high potential for buried archaeological remains dating to the post-medieval period.* There is potential for buried remains associated with the embankment, including ground consolidation and evidence of its construction (**low** significance). There is also potential for remains of the 16th century river wall, the line of which probably ran through the site (**medium** significance). Beneath ground consolidation, previously unrecorded buried heritage assets of this date might include remains of warehouses and other riverfront structures, and evidence for earlier piled structures, barge beds or jetties and piers not shown on historic maps and pre-dating the embankment. Such remains are considered to be of **low to medium** significance and would be derived from their evidential and historical value.
- 5.3.8 The site is located in a Grade II registered garden dating to 1879 with the layout revised in 1955–6. There is potential for previous pathways and planting beds below ground, of **low** significance.

## 6 Impact of proposals

### 6.1 Proposals

- 6.1.1 The proposed scheme comprises the construction of a single storey education centre. The proposed building would not have a basement. At the time of writing the preferred option for the development was Option 1C (see Fig 15). (Feilden and Mawson, job 7572, Option 1C Level 0 Proposed floor plan, rev 01, date 10/06/13).
- 6.1.2 Details of the foundations of the proposed buildings were not known at the time of writing, but they are most likely to be piled foundations (see Fig 16) (ABA Sketch dated 27/06/13; Luca Ferrari, WSP Group. pers. comm.).

### 6.2 Implications

- 6.2.1 It is outside the scope of this archaeological report to assess the impact on the historic character and setting of above ground assets, although a number of sensitive designated assets in the vicinity has been noted (see section 1.2).

#### *Site preparation – topsoil stripping and vegetation removal*

- 6.2.2 The site is located at the northern end of the grade II registered Victoria Tower Gardens. Preliminary topsoil removal (and possibly ‘overstripping’) would be a potential impact as it would expose any remains that may be present immediately beneath the topsoil, which might then be truncated by subsequent movement of vehicles and plant involved in construction activities (ie through rutting and compaction). This would potentially have an impact upon any buried remains associated with landscaping of the park in the late 19th and early 20th century, of low significance. It is unlikely to have an impact on any earlier remains.

#### *Foundations*

- 6.2.3 Piled foundations are likely to be used. Considering the size and nature of the structure is assumed here that the piles would be neither large nor numerous/dense. Piling would remove any archaeology within the footprint of each pile down to the base of the alluvium and into the underlying gravels, as the pile is driven downwards. The severity of the impact would depend on the pile type, pile size and pile density. Remains affected would potentially be of later medieval and post-medieval, including the possible medieval mill, wharves, warehouses, riverfront structures and former river walls.
- 6.2.4 Augured piles/continuous flight augur (CFA) piles would minimise the impact upon possible archaeological remains whereas vibro-compacted piles are believed to cause additional impact through vibration and deformation of fragile surrounding deposits in particular at the level of the water table. Where the piling layout is particularly dense (this is unlikely to be the case), the surviving archaeological resource potentially preserved between each pile, would be effectively inaccessible in terms of any archaeological investigation in the future.
- 6.2.5 Regardless of which construction method is employed, it is possible that insertion of piles will affect subsurface water flow and this may cause drying out of peat and other organic remains within the vicinity of each pile.
- 6.2.6 The insertion of pile caps, along with non-piled footings (ground beams, raft/pad foundations) would typically extend no more than c 1.0–1.5m below the ground level. Depending on the depth of any 20th century made ground, this might potentially have a localised impact on post-medieval remains beneath.

## 7 Conclusion and recommendations

- 7.1.1 The site is located at the northern end of a Grade II registered garden dating to the late 19th century. Prior to reclamation and the construction of river walls from the later medieval period, the site was located at the confluence of the River Tyburn and the Thames. There is potential for remains of the 'Abbot's Mill, a later medieval mill, along with later medieval and post-medieval riverfront buildings, wharves, jetties, and river walls. There is also potential for buried elements of the registered garden (eg planting beds etc). The potential for prehistoric and Roman remains is likely to be low as fluvial action is likely to have scoured out any remains, and during these periods the site would have been submerged.
- 7.1.2 The scheme comprises the construction of a new single-storey education centre. Foundations would be piled. No basement is proposed. It is assumed that some of the border vegetation but not mature trees would be removed. Although the details of the foundation design is not currently known, considering the size and nature of the structure the piles are likely to be neither large nor dense; there would be small and highly localised impacts.
- 7.1.3 Table 1 summarises the known or likely buried assets within the site, their significance, and the impact of the proposed scheme on asset significance.

*Table 1: Impact upon heritage assets (prior to mitigation)*

Asset	Asset Significance	Impact of proposed scheme
Victoria Tower Gardens Grade II registered gardens.	Low (buried elements)	Topsoil and vegetation removal, and to a less extent localised piling would have an impact upon any buried elements, reducing asset significance.
Later medieval remains including the Abbot's Mill and of riverfront development, including river walls, wharves, jetties and reclamation deposits (high potential)	High (mill) Medium (riverfront structures) Low (reclamation deposits)	Piled foundations would partially remove or truncate any archaeological remains  <b>Significance of asset reduced to low or negligible</b>
Post-medieval riverfront development, including river walls, wharves, jetties and reclamation deposits (high potential)	Medium (riverfront structures) Low (reclamation deposits)	Piled foundations and possibly pile caps/strip footings and services would partially remove or truncate any archaeological remains  <b>Significance of asset reduced to low or negligible</b>
Palaeoenvironmental remains within alluvial deposits (Moderate potential)	Low to medium	Piled foundations would partially remove or truncate any archaeological remains
Previously unrecorded remains from the prehistoric to the early medieval period (Low potential)	Uncertain	<b>Significance of asset reduced locally to low or negligible</b>

- 7.1.4 Although the impacts are likely to be highly localised, significant heritage assets may be affected. It is therefore recommended that archaeological monitoring of any geotechnical boreholes and trial pits is carried out in order to confirm the level of natural deposits, along with the presence, nature and depth of any archaeological remains. Based on the results, and depending on the nature of the final design, including the foundation details, it is possible that further site-specific investigation would be required prior to development in order to clarify archaeological potential

and the nature, date and significance of any remains which would be affected. The results would allow an informed mitigation strategy to be drawn up in advance of development, if required, in consultation with Westminster's archaeological advisor.

## 8 Gazetteer of known historic environment assets

- 8.1.1 The table below represents a gazetteer of known historic environment sites and finds within the 150m-radius study area around the site. The gazetteer should be read in conjunction with Fig 2.
- 8.1.2 The GLHER data contained within this gazetteer was obtained on 16/05/2013 and is the copyright of English Heritage 2013.

### Abbreviations

GLHER – Greater London Historic Environment Record

LAARC – London Archaeological Archives and Research Centre

MoLAS – Museum of London Archaeology Service (now named MOLA)

HEA No.	Description	Site code/ GLHER / LB / SAM No.
1A	<b>Victoria Tower Gardens SW1</b> A Grade II listed park and garden, originally laid out in the late-19th century. The gardens were constructed in the area to the south of Victoria Tower, which, in the 1870s, had not yet been embanked and were occupied by wharves and industrial buildings. The original 1879 design applied only to the northern portion of the present gardens, and comprised a simple, formal design of four grass lawns around a central circular lawn, divided by paths. The land to the south remained unembanked and occupied by riverside buildings and wharves. In 1913, the gardens were expanded to the south and, at the same time, the northern end of the gardens was redesigned. The circular feature was repositioned to the south, with the statuary group of the Burghers of Calais positioned in the north-western part of the gardens. The gardens were altered to their present appearance in the 1950s.	1000845
1B	<b>Victoria Tower Gardens, Houses of Parliament SW1</b> The location of a former medieval and post-medieval mill, as listed on the GLHER.	MLO23201
1C	<b>Victoria Tower Gardens, Houses of Parliament SW1</b> The findspot of an early medieval sword, dated to the 8th century.	MLO1691
2	<b>Abingdon Street SW1</b> No information on this past investigation is currently held by the LAARC.	AO63
3	<b>Jewel Tower, College Mews, Westminster SW1</b> No information on this past investigation is currently held by the LAARC. Location of the Jewel Tower/Jewel House and the moat around it, dated to the late-14th century.	JWL10 08124503 08124503001
4	<b>6–7 Old Palace Yard, Westminster SW1</b> An archaeological watching brief was carried out by MoLAS in 2006. A section of medieval wall and several 18th century brick walls were recorded in an area behind the listed building and within the Scheduled Monument.	ODY06
5	<b>6–7 Old Palace Yard, Westminster SW1</b> <b>JT54:</b> No information on this past investigation is currently held by the LAARC. <b>OPY94:</b> An archaeological watching brief was carried out by MoLAS in 1994–95. <b>1994:</b> This work also included the examination of a test pit to the south of the Jewel Tower, against the precinct wall of Westminster Abbey. Medieval garden soil from the Jewel Tower garden was noted at the base of the sequence, sealed by levelling dumps on the eastern side of the site. At the northern end of the site a medieval ragstone wall possibly formed the south-eastern corner of a building. A series of floors and occupation deposits, recorded on the western side of the site within a 17th century building, was probably part of the Parliament Office, demolished in the	JT54 OPY94

HEA No.	Description	Site code/ GLHER / LB / SAM No.
	<p>1750s. The top of the Westminster Abbey drain was revealed in the test pit to the south of the Jewel Tower.</p> <p><b>1995:</b> A watching brief was carried out on a cable trench through the Scheduled Ancient Monument of the former Palace of Westminster. The walls and floor of a late medieval building were uncovered in the south-eastern corner of the area, below which were the extant remains of the Westminster Abbey great drain. The backfill of the construction trench for the moat wall of the Jewel Tower was also recorded. Various post-medieval layers and the foundations of the 18th century 5 Old Palace Yard (now demolished) were recorded. A small area to the south of the Abbey precinct wall revealed medieval deposits and features.</p>	
<b>6</b>	<p><b>Palace of Westminster SW1</b></p> <p>An archaeological watching brief was carried out by MoLAS in 1994 which revealed natural sand sealed by waterlaid sediments of the River Thames, truncated on the southern side by the concrete foundations of the mid-19th century Victoria Tower.</p>	PWV94
<b>7</b>	<p><b>Peer's Court, Palace of Westminster SW1</b></p> <p>An archaeological watching brief and standing structure recording were carried out by MoLAS in 2003–4.</p> <p><b>2003</b> (watching brief): Natural gravels were cut by a brick-lined well dated to the late–18th to 19th century. Residual medieval and early post-medieval pottery was recovered from the backfill of the well. Features associated with the Grade I standing buildings were recorded and included a disused coalhole and light wells. Information on the construction of the buildings was also recorded.</p> <p><b>2004</b> (standing structure recording): Post-medieval reclamation dumps were recorded, overlying alluvial clay and silts, and contained a late-18th century or early-19th century brick-lined well, later backfilled and then truncated. The foundations of the 1840 parliament buildings, reinforced with buttresses to the east, nearer the Thames, but not to the west, were constructed of brick on a concrete base within trenches probably cut from this level, and a large drain which was lined with white tiles was built running across the site from north to south. The construction trenches were then backfilled and the foundations continued upwards for another 2m, while the drain was enclosed by an arched roof, and light wells and a coalhole were constructed against the walls of the Court to serve surrounding basement rooms. The remaining space between the foundations in the Court was then backfilled to provide a higher ground level on the site. Slight mismatches in the layout of the two successive builds of walls and buttresses indicate probable small errors in surveying, corrected as the work progressed.</p>	PCP03 MLO76232 MLO77473
<b>8</b>	<p><b>Thames foreshore, Westminster SW1</b></p> <p>An unclassified post-medieval deposit.</p>	MLO70281
<b>9</b>	<p><b>Thames foreshore, Westminster SW1</b></p> <p>An unclassified prehistoric deposit.</p>	MLO70279
<b>10</b>	<p><b>Thames foreshore, Westminster SW1</b></p> <p>An unclassified post-medieval deposit.</p>	MLO70276
<b>11</b>	<p><b>Abingdon Street, Victoria Tower Gardens SW1</b></p> <p>Unspecified 19th century remains – possibly referring to the Victoria Tower Gardens (<b>HEA 1A</b>).</p>	224423
<b>12</b>	<p><b>Thames foreshore, Westminster SW1</b></p> <p>Post-medieval flood defences – the embankment.</p>	MLO70283
<b>13</b>	<p><b>Abingdon Street, Westminster SW1</b></p> <p>The site of the medieval/post-medieval Mill Bridge.</p>	MLO9182
<b>14</b>	<p><b>Great College Street, Westminster SW1</b></p> <p>The approximate line of the medieval to 19th century Long Ditch.</p>	MLO9183
<b>15</b>	<p><b>Broad Sanctuary, Westminster SW1</b></p> <p>Remains of the medieval Precinct Wall.</p>	MLO53142
<b>16</b>	<p><b>Abingdon Street/Great College Street, Westminster SW1</b></p>	MLO56814

HEA No.	Description	Site code/ GLHER / LB / SAM No.
	Location of the line of the medieval Precinct Wall and the site of the Corner Tower.	
17	<b>Abingdon Street, Westminster SW1</b> The location of a former medieval to 19th century breakwater.	MLO56064
18	<b>Abingdon Street, Westminster SW1</b> Watercourse, flood deposit and land surfaces associated with the medieval Thorney Island foreshore.	MLO9180
19	<b>Abingdon Street, Westminster SW1</b> Site of a medieval (13th century) dock.	MLO48873
20	<b>Abingdon Street, Westminster SW1</b> Part of the medieval (13th century) Great Drain and 16th century remains were discovered here.	08124421 MLO56909
21	<b>Abingdon Street, Westminster SW1</b> The site of a medieval to 16th century quay.	MLO56813
22	<b>Old Palace Yard, Westminster SW1</b> Location of part of the medieval (14th century) Precinct Wall.	08124401007
23	<b>Abingdon Street, Westminster SW1</b> Site of a medieval former timber bridge.	MLO57045
24	<b>Abingdon Street, Westminster SW1</b> Site of a medieval former landing stage in the moat of the Palace of Westminster.	MLO56842
25	<b>Abingdon Street, Westminster SW1</b> Site of a medieval (15th century) wall.	08124525
26	<b>Jewel Tower, Westminster SW1</b> The location of the former late-14th century to 16th century dock retaining walls to the moat. The GLHER states that a significant wall was recorded inside and parallel to the Jewel Tower Moat. This record may refer to the walls which are now uncovered in the garden and are thought to be the remains of a dock.	MLO48816
27	<b>Abingdon Street, Westminster SW1</b> Site of the medieval to 16th century gateway.	MLO56157
28	<b>Houses of Parliament, Westminster SW1</b> The site of the former medieval to 16th century chapel.	MLO38501
29	<b>Palace of Westminster SW1</b> The site of the medieval former Queen's Bridge landing steps.	MLO29957
30	<b>Houses of Parliament, Westminster SW1</b> The site of the former Queen's Chapel, dated to the mid-13th century.	MLO56845
31	<b>Houses of Parliament, Westminster SW1</b> The location of former medieval Chambers.	08124529
32	<b>The Palace of Westminster, Westminster Abbey and St. Margaret's Church World Heritage Site (WHS)</b> The boundaries of the Westminster Abbey World Heritage Site. <b>English Heritage Statement of Significance:</b> Westminster Palace, Westminster Abbey, and St Margaret's Church together encapsulate the history of one of the most ancient of parliamentary monarchies of present times and the growth of parliamentary and constitutional institutions. In tangible form Westminster Abbey is a striking succession of the successive phases of English Gothic art and the inspiration of the work of Barry and Pugin on the Palace of Westminster. The Palace of Westminster illustrates in colossal form the grandeur of constitutional monarchy and the principle of the bicameral parliamentary system, as envisaged in the 19th century, constructed by English architectural reference to show the national character of the monument. The Palace is one of the most significant monuments of neo-Gothic architecture, as an outstanding, coherent and complete example of neo-Gothic style. Westminster Hall is a key monument of the Perpendicular style and its admirable oak roof is one of the greatest achievements of medieval construction in wood. Westminster is a place in which great historical	DLO33114

HEA No.	Description	Site code/ GLHER / LB / SAM No.
	events have taken place which have shaped the English and British nation. The church of St Margaret, a charming perpendicular style construction, continues to be the parish church of the House of Commons and is an integral part of the complex. Criterion (i): Westminster Abbey is a unique artistic construction representing a striking sequence of the successive phases of English Gothic art. Criterion (ii): Other than its influence on English architecture during the Middle Ages, the Abbey has played another leading role by influencing the work of Charles Barry and Augustus Welby Pugin in Westminster Palace, in the "Gothic Revival" of the 19th century. Criterion (iv): The Abbey, the Palace, and St Margaret's illustrate in a concrete way the specificities of parliamentary monarchy over a period of time as long as nine centuries. Whether one looks at the royal tombs of the Chapterhouse, the remarkable vastness of Westminster Hall, of the House of Lords, or of the House of Commons, art is everywhere present and harmonious, making a veritable museum of the history of the United Kingdom.	
33	<b>Houses of Parliament, Westminster SW1</b> The location of the former medieval Queen's Chamber.	MLO38503
34	<b>Palace of Westminster, Westminster SW1</b> The location of the former Painted Chamber, dated to the 12th century.	MLO49084
35	<b>Palace of Westminster, Westminster SW1</b> The location of a chapel adjacent to the former Painted Chamber ( <b>HEA 34</b> above), dated to the 12th century.	MLO56134
36	<b>Victoria Tower Gardens SW1</b> Victoria Tower Lodge and gates to Black Rod Garden. Grade I listed.	1066149
37	<b>Victoria Tower Gardens SW1</b> Statue of Mrs. Emmeline Pankhurst. Grade II listed.	1357336
38	<b>Millbank SW1</b> Statuary group of the Burghers of Calais. Grade I listed.	1066150
39	<b>Millbank SW1</b> River Embankment from the Houses of Parliament to Lambeth Bridge. Grade II listed.	1357335
40	<b>Broad Sanctuary SW1</b> Westminster Abbey precinct wall. Grade I listed.	1357235
41	<b>Broad Sanctuary SW1</b> Abbey Canons' Garden. Grade II listed.	1219484
42	<b>10-12 Little College Street SW1</b> Grade II listed.	1222204
43	<b>Little College Street SW1</b> Grade II listed lamp standard.	1222203
44	<b>Millbank SW1</b> The Church Commissioners' Offices. Grade II* listed.	1267603
45	<b>No. 7 (including the former no. 6) Old Palace Yard SW1</b> Grade II* listed.	1266309
46	<b>Old Palace Yard SW1</b> The former dock retaining walls to the moat around the Jewel House. Grade I listed.	1266310
47	<b>Old Palace Yard SW1</b> The Jewel House (or Tower) of the Palace of Westminster. Grade I listed.	1225529
48	<b>The Jewel Tower SW1</b> The Jewel Tower is a Scheduled Ancient Monument (SAM). It is a surviving element of the former 14th century Palace of Westminster. It is thought to have been designed by Henry Yevele. On three storeys and surrounded by a moat, it was used to contain the King's valuables including his jewels, clothes, furs and gold vessels. It was used for this purpose until the reign of Henry VII. In the 17th century Parliamentary records were there. It was then used until 1938 by the Weights and Measures Office and is now maintained by English Heritage.	1003580

HEA No.	Description	Site code/ GLHER / LB / SAM No.
49	<b>Abingdon Street/Great College Street/Broad Sanctuary SW1</b> Remains of the medieval to 19th century boundary wall to Westminster Abbey.	MLO53142
50	<b>Victoria Tower Gardens SW1</b> The findspot of an unspecified flood deposit – the location may not be accurate as the name given is the 'Old Palace Yard' – which lies to the north-west of the site rather than within the park.	MLO67164
51	<b>Abingdon Street (Black Rod's Garden) SW1</b> The location of a medieval to post-medieval riverside wall.	MLO48585
52	<b>Abingdon Street (Black Rod's Garden) SW1</b> The location of a medieval to post-medieval quay/waterfront.	MLO56813

## 9 Planning framework

### 9.1 Statutory protection

#### *Scheduled Monuments*

- 9.1.1 Nationally important archaeological sites (both above and below-ground remains) may be identified and protected under the *Ancient Monuments and Archaeological Areas Act 1979*. An application to the Secretary of State is required for any works affecting a Scheduled Monument or its setting.

#### *Planning (Listed Buildings and Conservation Areas) Act 1990*

- 9.1.2 The Act 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.

### 9.2 World Heritage Sites

- 9.2.1 In July 2009 the Secretaries of State for Communities and Local Government and for Culture Media and Sport issued CLG Circular 07/2009 Protection of World Heritage Sites (DCLG 2009). This states that "World Heritage Sites are places of outstanding universal value to the whole of humanity" and that "the UK government is committed to the identification, protection, conservation, presentation and transmission of its World Heritage Sites to future generations".

- 9.2.2 The Circular sets out a number of principles that LPA's should seek to satisfy:

World Heritage Site status is a key material consideration and in developing such policies to protect and enhance World Heritage Sites local planning authorities should aim to satisfy the following principles:

- protecting the World Heritage Site and its setting, including any buffer zone, from inappropriate development
- striking a balance between the needs of conservation, biodiversity, access, the interests of the local community and the sustainable economic use of the World Heritage Site in its setting
- protecting a World Heritage Site from the effect of changes which are relatively minor but which, on a cumulative basis, could have a significant effect
- enhancing the World Heritage Site where appropriate and possible through positive management
- protecting World Heritage Sites from climate change but ensuring that mitigation is not at the expense of authenticity or integrity.

### 9.3 Registered Parks and Gardens

- 9.3.1 The Historic Buildings and Ancient Monuments Act 1953 authorises English Heritage to compile a register of "gardens and other land" situated in England that appear to be of special historic interest. The Register was established in 1980 and there are currently around 1,610 sites included. The Register is held by English Heritage and can be accessed through the National Heritage List for England.

- 9.3.2 The decision as to whether a park or garden merits registration is based on an assessment by English Heritage as to whether it can be said to be of "special historic interest". English Heritage has published criteria against which sites are judged.

- 9.3.3 Sites are graded I, II\* or II along the same lines as listed buildings. 62% are graded as II, 27% are considered of more than special interest and graded II\*, 9% are of exceptional interest and are classified as Grade I.
- 9.3.4 A registered park or garden is not protected by a separate consent regime, but applications for planning permission will give great weight to their conservation. The NPPF defines them as designated heritage assets and as such their conservation should be an objective of all sustainable development. Substantial harm to or total loss of a Grade II registered park or garden should be exceptional and for a Grade II\* or I registered park or garden such loss or harm should be wholly exceptional.
- 9.3.5 Local planning authorities are required to consult English Heritage when considering an application which affects a Grade I or II\* registered site and the Garden History Society on all applications affecting registered sites of all grades.

## 9.4 National Planning Policy Framework

- 9.4.1 The Government issued the National Planning Policy Framework (NPPF) in March 2012 (DCLG 2012). One of the 12 core principles that underpin both plan-making and decision-taking within the framework is to 'conserve heritage assets in a manner appropriate to their significance, so that they can be enjoyed for their contribution to the quality of life of this and future generations' (DCLG 2012 para 17). It recognises that heritage assets are an irreplaceable resource (para 126), and requires the significance of heritage assets to be considered in the planning process, whether designated or not. The contribution of setting to asset significance needs to be taken into account (para 128). The NPPF encourages early engagement (i.e. pre-application) as this has significant potential to improve the efficiency and effectiveness of a planning application and can lead to better outcomes for the local community (para 188).
- 9.4.2 World Heritage sites are designated heritage assets under the NPPF and are specifically mentioned in paras 132, 137 and 138.
- 9.4.3 NPPF Section 12: Conserving and enhancing the historic environment, is produced in full below:

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

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

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

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

archaeological interest, local planning authorities should require developers to submit an appropriate desk-based assessment and, where necessary, a field evaluation.

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

## 9.5 Greater London regional policy

### *The London Plan*

9.5.1 The overarching strategies and policies for the whole of the Greater London area are contained within the London Plan of the Greater London Authority (GLA July 2011). Policy 7.8 relates to Heritage Assets and Archaeology:

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

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

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

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

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

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

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

## 9.6 Local planning policy

9.6.1 Westminster's Unitary Development Plan (UDP) was approved in January 2007. It sets out the local policies for developing land, improving transport and protecting the environment in Westminster. Following the Planning and Compulsory Purchase Act 2004, the UDP will eventually be replaced by a Local Development Framework (LDF). The relevant policy in relation to archaeology is set out below:

**Policy DES 11:** Scheduled Ancient Monuments, Areas and Sites of Archaeological Priority and Potential

**Aim:** To identify archaeological remains of national and local importance, conserve them in their settings, and provide public access to them. Where new development is proposed on sites of archaeological potential, to ensure adequate archaeological impact assessment, followed by appropriate provision for preservation or investigation, recording, and publication.

(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 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 recorded, 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.

9.6.2 The Core Strategy (adopted in January 2011) is the main Development Planning Document (DPD) prepared by the City of Westminster council. It sets out the key elements of the planning framework for Westminster, for the next 15-20 years. The Core Strategy includes a spatial vision and strategic objectives for the area, a spatial strategy, and a monitoring and implementation framework for achieving the spatial vision. It is being produced in a number of stages. The relevant policy to archaeology and heritage within the Core Strategy are:

### **POLICY CS24 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.

## 10 Determining significance

10.1.1 '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.

10.1.2 Table 2 gives examples of the significance of designated and non-designated heritage assets.

Table 2: Significance of heritage assets

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

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

## 11 Non-archaeological constraints

- 11.1.1 It is anticipated that live services may 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.
- 11.1.2 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 section 14.4, 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.

## 12 Glossary

<i>Alluvium</i>	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 (eg peat).
<i>Archaeological Priority Area/Zone</i>	Areas of archaeological priority, significance, potential or other title, often designated by the local authority.
<i>Brickearth</i>	A fine-grained silt believed to have accumulated by a mixture of processes (eg wind, slope and freeze-thaw) mostly since the Last Glacial Maximum around 17,000BP.
<i>B.P.</i>	Before Present, conventionally taken to be 1950
<i>Bronze Age</i>	2,000–600 BC
<i>Building recording</i>	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 English Heritage. Level 1 (basic visual record); Level 2 (descriptive record), Level 3 (analytical record), and Level 4 (comprehensive analytical record)
<i>Built heritage</i>	Upstanding structure of historic interest.
<i>Colluvium</i>	A natural deposit accumulated through the action of rainwash or gravity at the base of a slope.
<i>Conservation area</i>	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.
<i>Cropmarks</i>	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).
<i>Cut-and-cover [trench]</i>	Method of construction in which a trench is excavated down from existing ground level and which is subsequently covered over and/or backfilled.
<i>Cut feature</i>	Archaeological feature such as a pit, ditch or well, which has been cut into the then-existing ground surface.
<i>Devensian</i>	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.
<i>Early medieval</i>	AD 410 – 1066. Also referred to as the Saxon period.
<i>Evaluation (archaeological)</i>	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.
<i>Excavation (archaeological)</i>	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.
<i>Findspot</i>	Chance find/antiquarian discovery of artefact. The artefact has no known context, is either residual or indicates an area of archaeological activity.
<i>Geotechnical</i>	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.
<i>Head</i>	Weathered/soliflucted periglacial deposit (ie moved downslope through natural processes).
<i>Heritage asset</i>	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).
<i>Historic environment assessment</i>	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.
<i>Historic Environment Record (HER)</i>	Archaeological and built heritage database held and maintained by the County authority. Previously known as the Sites and Monuments Record
<i>Holocene</i>	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'.

<i>Iron Age</i>	600 BC – AD 43
<i>Later medieval</i>	AD 1066 – 1500
<i>Last Glacial Maximum</i>	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.
<i>Locally listed building</i>	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
<i>Listed building</i>	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).
<i>Made Ground</i>	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.
<i>Mesolithic</i>	12,000 – 4,000 BC
<i>National Monuments Record (NMR)</i>	National database of archaeological sites, finds and events as maintained by English Heritage in Swindon. Generally not as comprehensive as the country SMR/HER.
<i>Neolithic</i>	4,000 – 2,000 BC
<i>Ordnance Datum (OD)</i>	A vertical datum used by Ordnance Survey as the basis for deriving altitudes on maps.
<i>Palaeo-environmental</i>	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.
<i>Palaeolithic</i>	700,000–12,000 BC
<i>Palaeochannel</i>	A former/ancient watercourse
<i>Peat</i>	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.
<i>Pleistocene</i>	Geological period pre-dating the Holocene.
<i>Post-medieval</i>	AD 1500 – present
<i>Preservation by record</i>	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.
<i>Preservation in situ</i>	Archaeological mitigation strategy where nationally important (whether Scheduled or not) archaeological remains are preserved <i>in situ</i> for future generations, typically through modifications to design proposals to avoid damage or destruction of such remains.
<i>Registered Historic Parks and Gardens</i>	A site may lie within or contain a registered historic park or garden. The register of these in England is compiled and maintained by English Heritage.
<i>Residual</i>	When used to describe archaeological artefacts, this means not <i>in situ</i> , ie Found outside the context in which it was originally deposited.
<i>Roman</i>	AD 43 – 410
<i>Scheduled Monument</i>	An ancient monument or archaeological deposits designated by the Secretary of State as a 'Scheduled Ancient Monument' and protected under the Ancient Monuments Act.
<i>Site</i>	The area of proposed development
<i>Site codes</i>	Unique identifying codes allocated to archaeological fieldwork sites, eg evaluation, excavation, or watching brief sites.
<i>Study area</i>	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.
<i>Solifluction, Soliflucted</i>	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.
<i>Stratigraphy</i>	A term used to define a sequence of visually distinct horizontal layers (strata), one above another, which form the material remains of past cultures.
<i>Truncate</i>	Partially or wholly remove. In archaeological terms remains may have been truncated by previous construction activity.
<i>Watching brief (archaeological)</i>	An archaeological watching brief is 'a formal programme of observation and investigation conducted during any operation carried out for non-archaeological reasons.'

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### 13.2 Other Sources

- Landmark historic Ordnance Survey mapping
- British Geological Survey online geology borehole data
- Greater London Historic Environment Record
- Internet – web-published sources
- London Archaeological Archive and Research Centre
- MOLA Deposit Survival Archive

### 13.3 Cartographic sources

- Braun and Hogenberg, 1572 'A map of London, Westminster and Southwark', reproduced in Margary, 1981 *A collection of early maps of London*, Margary in assoc Guildhall Library, Kent
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#### *Ordnance Survey maps*

- Ordnance Survey 1st edition 25": mile scale map of 1878–79
- Ordnance Survey 2nd edition 25": mile scale map of 1896
- Ordnance Survey 3rd edition 25": mile scale map of 1916
- Ordnance Survey 1:1,250 scale map of 1950–52
- Ordnance Survey 1:2,500 scale map of 1951–69

#### *Geology map*

- British Geological Survey map sheet 256

#### *Engineering/Architects drawings*

- Feilden and Mawson job 7572, Option 1C Level 0 Proposed floor plan, rev 01, date 10/06/13
- ABA sketch, dated 27/06/13

### 13.4 Available site survey information checklist

Information from client	Available	Format	Obtained
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Plan of existing site services (overhead/buried)	not known	---	N
Levelled site survey as existing (ground and buildings)	Y	---	Y
Contamination survey data ground and buildings (inc. asbestos)	not known	---	N
Geotechnical report	N	---	N
<b>Information obtained from non-client source</b>		<b>Carried out</b>	<b>Internal inspection of buildings</b>
Site inspection		Y	N/A

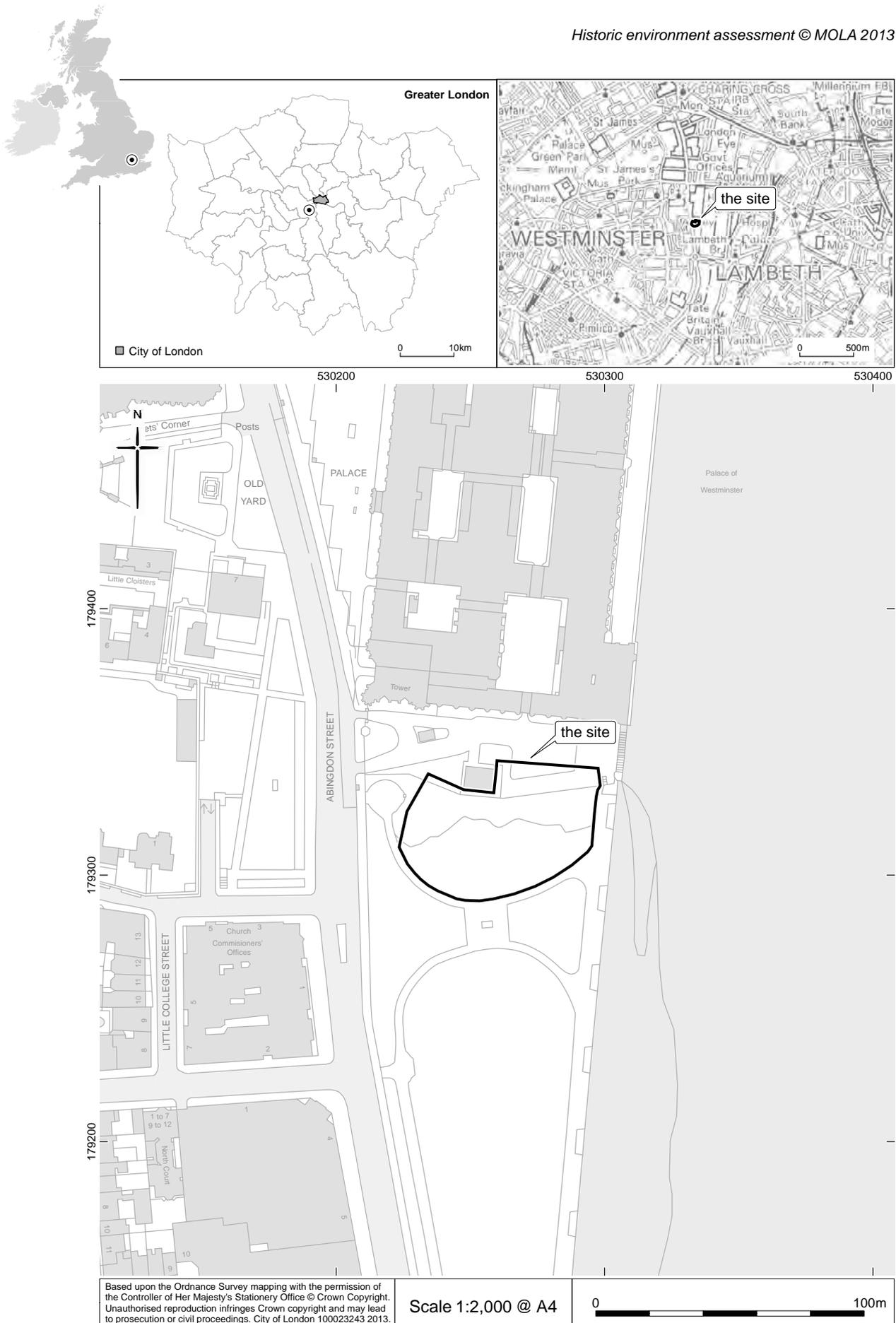


Fig 1 Site location

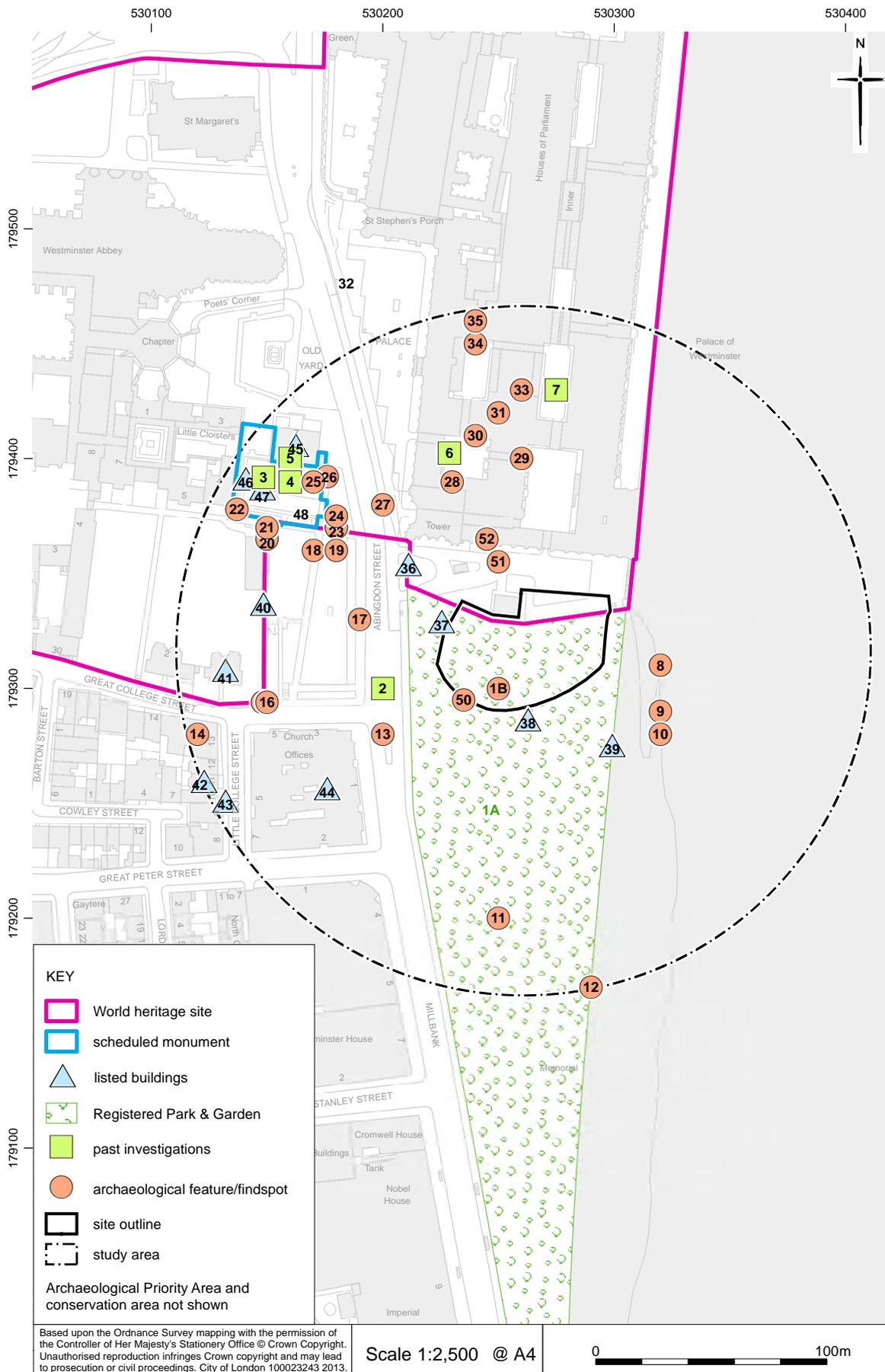


Fig 2 Historic environment features map



Fig 3 Contour survey showing historic extent of Thorney Island (Thomas et al 2006, Fig 4)



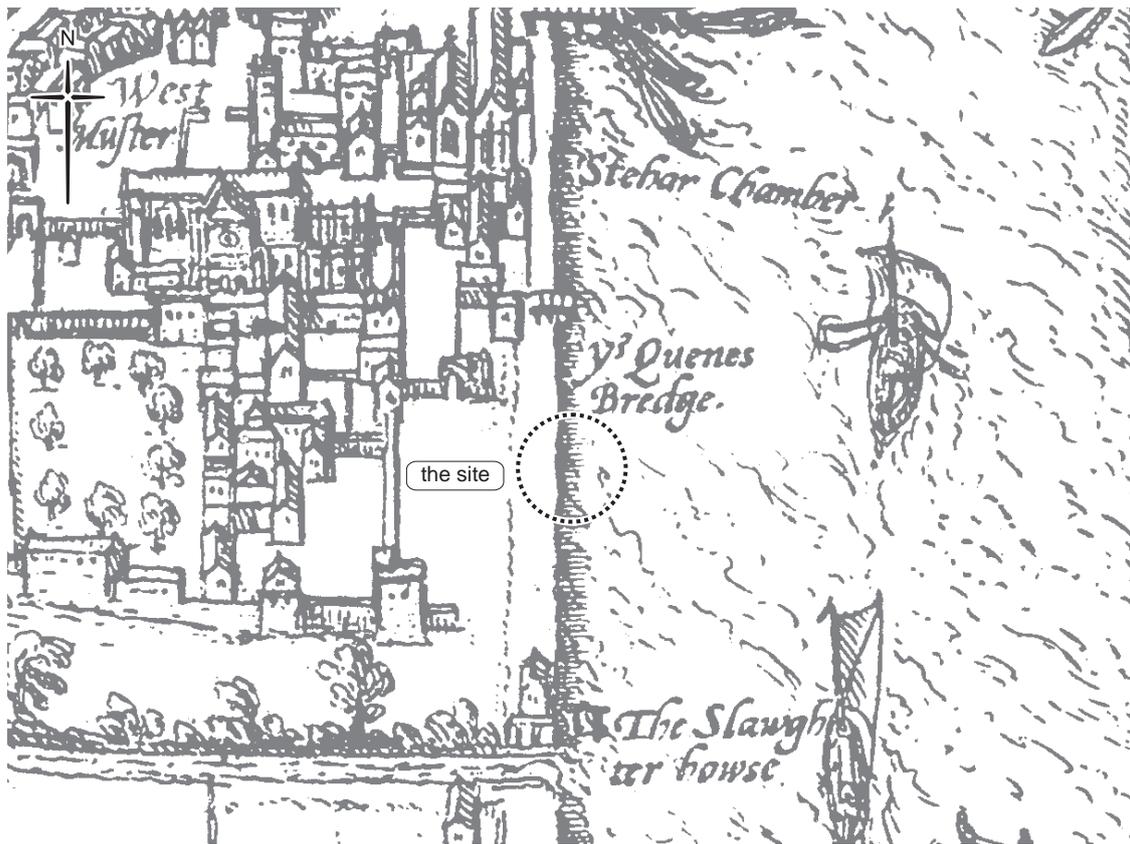


Fig 5 Braun and Hogenburg's map of 1572



Fig 6 Norden's map of Westminster of 1593 (© The British Library Board Shelfmark: Maps Crace Port. 1.22)

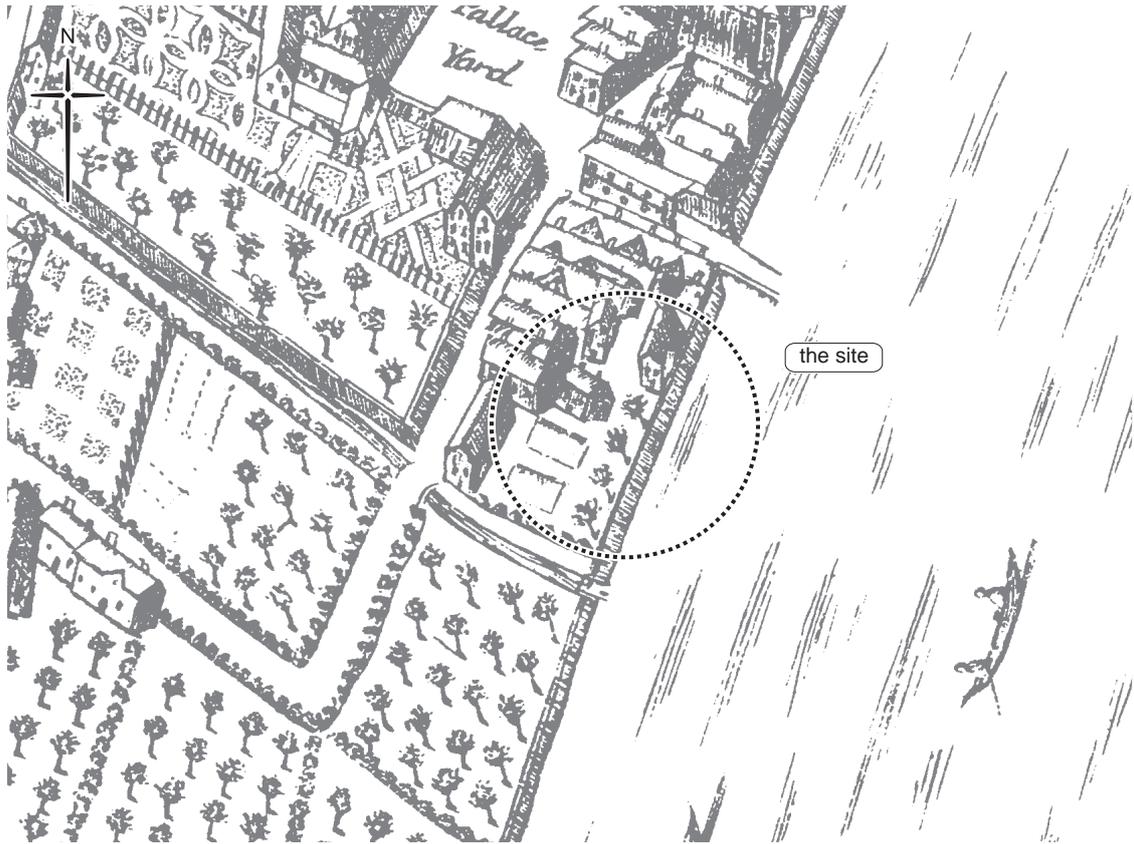


Fig 7 Faithorne and Newcourt's map of 1658

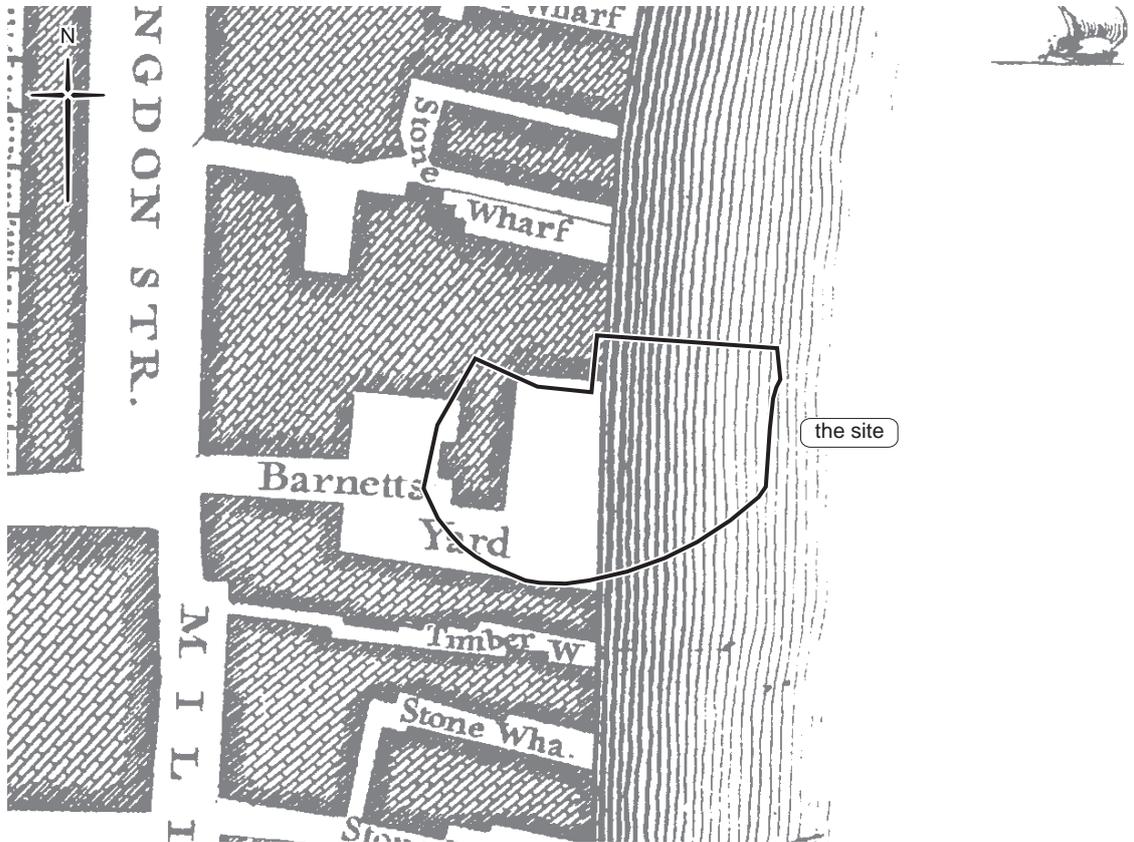


Fig 8 Rocque's map of 1746

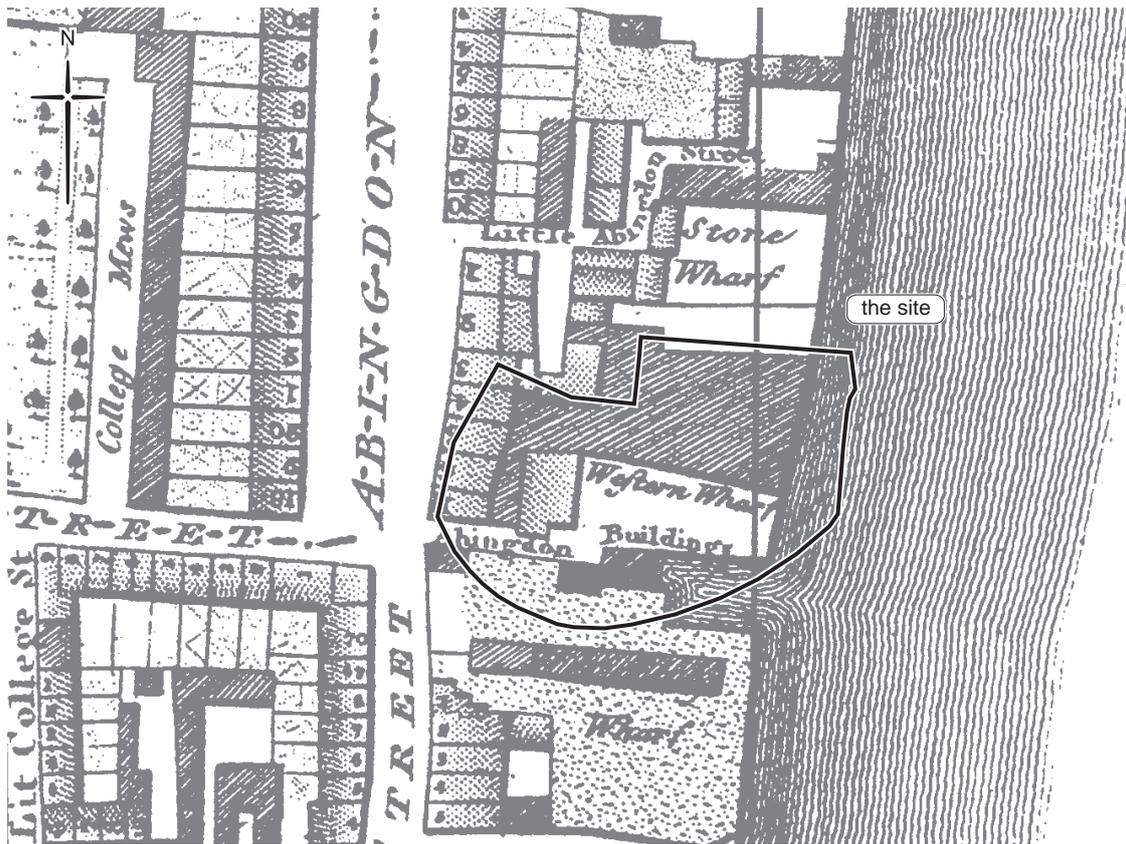


Fig 9 Faden's 1813 revision of Horwood's map of 1799



Fig 10 Ordnance Survey 1st edition 25 inch scale map of 1878-79



Fig 11 Ordnance Survey 2nd edition 25": mile scale map of 1896

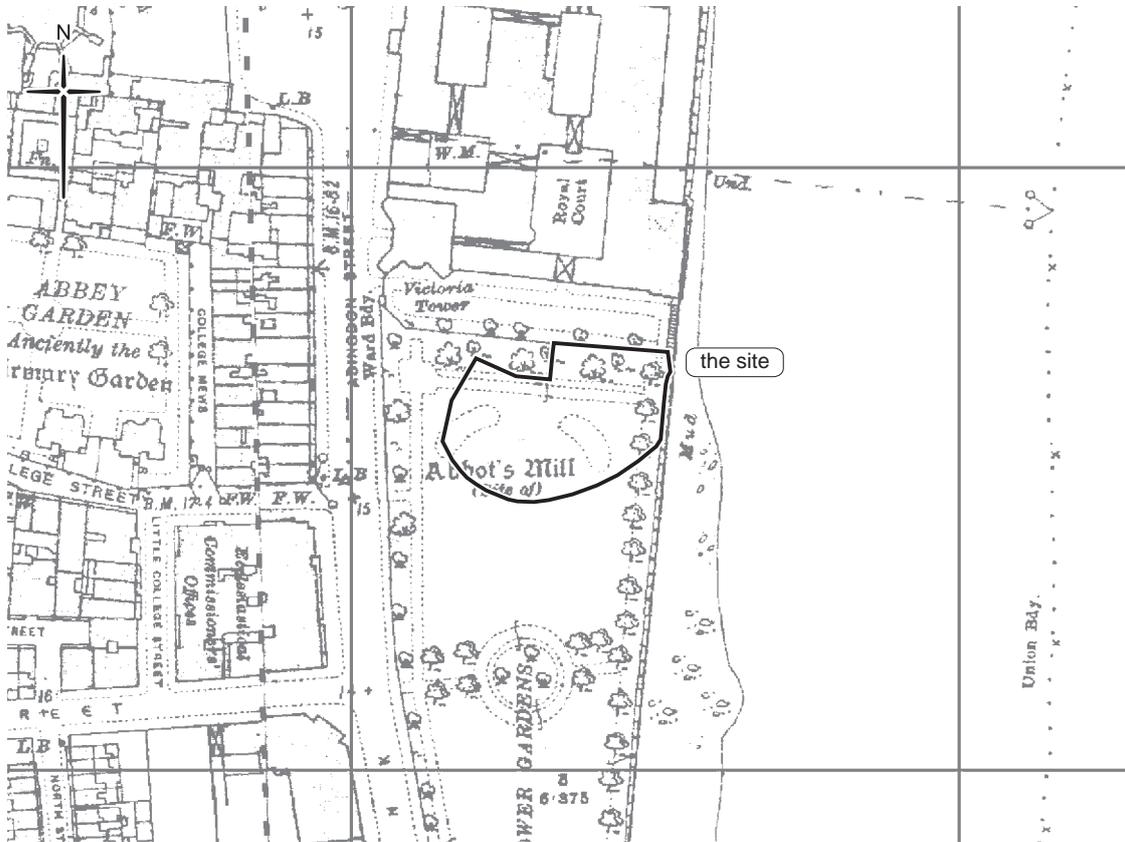


Fig 12 Ordnance Survey 3rd edition 25": mile scale map of 1916

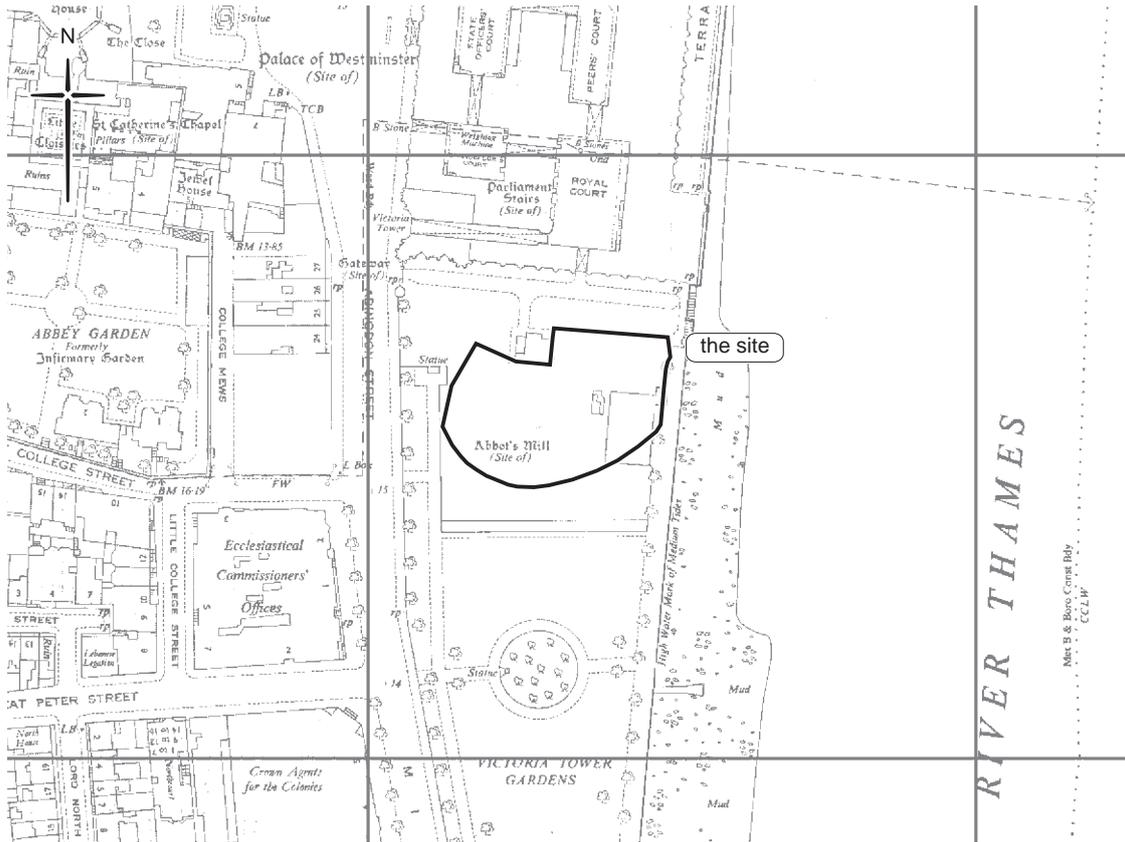
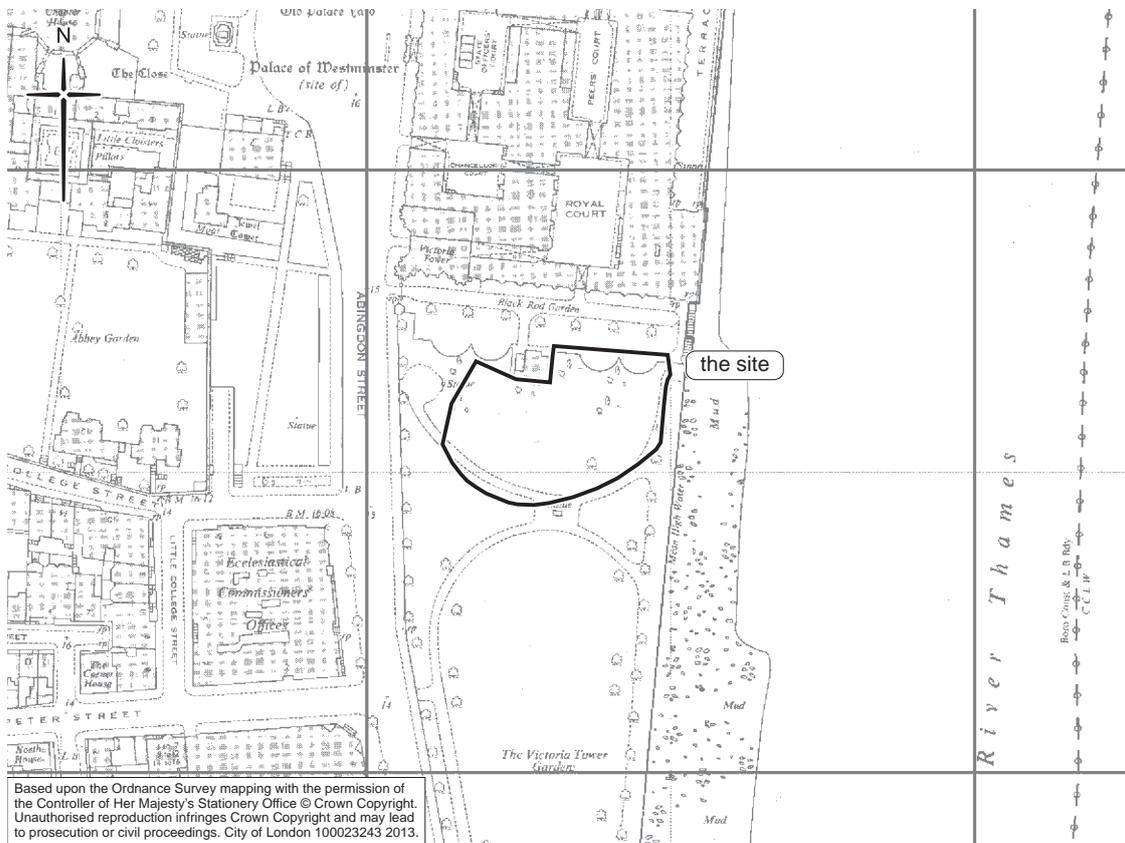


Fig 13 Ordnance Survey 1:1,250 scale map of 1950–52



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Fig 14 Ordnance Survey 1:2,500 scale map of 1951–69



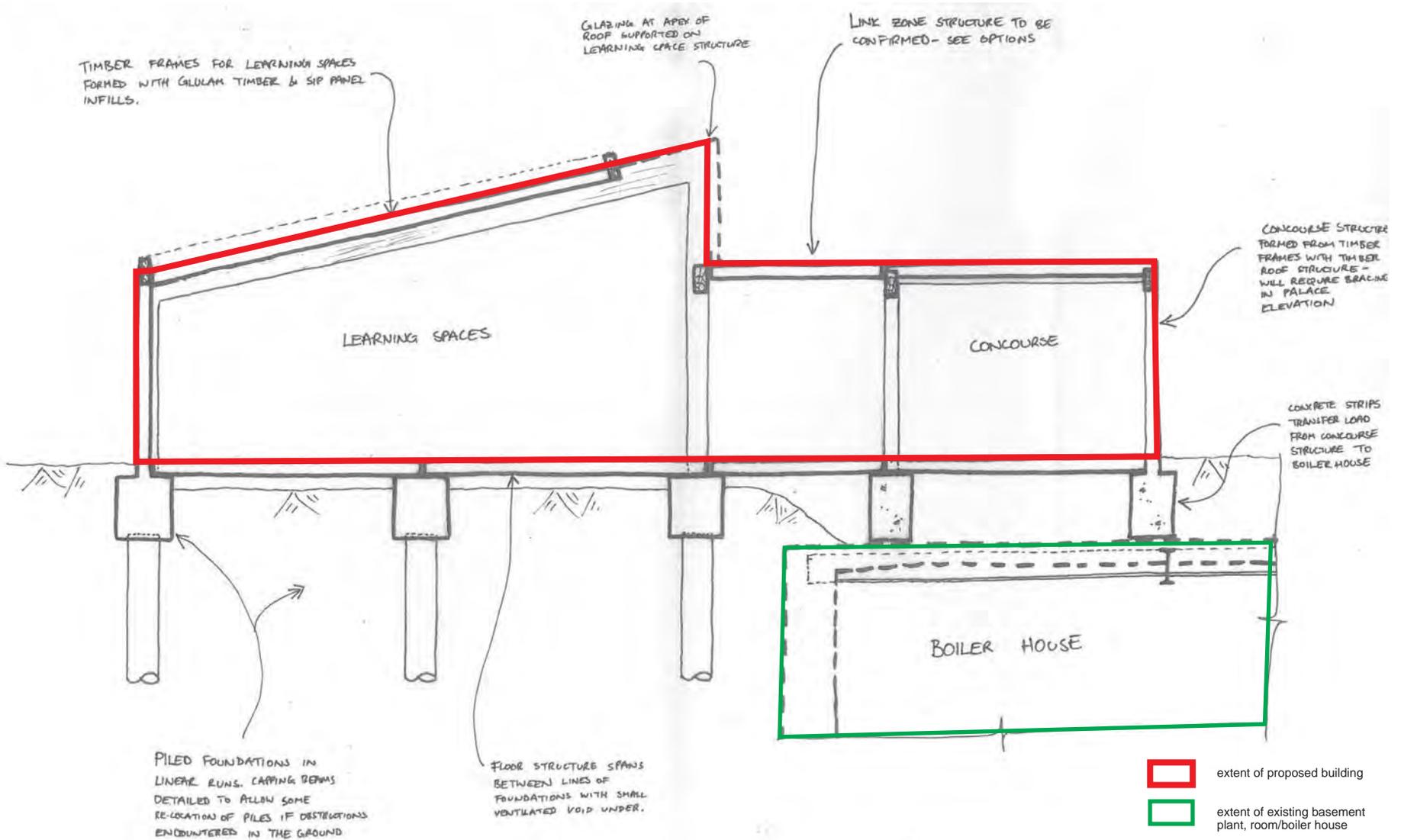




Fig 17 The centre of the site with the Palace of Westminster in the background, looking north (MOLA photo taken 16/05/13)



Fig 18 The site, looking east, showing the Grade II listed river embankment wall and River Thames (MOLA photo taken 16/05/13)



Fig 19 The site, looking west, showing a slight slope down towards the river wall (MOLA photo taken 16/05/13)



Fig 20 The northern boundary of the site, showing the boundary fence with the Black Rod Garden (MOLA photo taken 16/05/13)



Fig 21 The pedestal for the Grade I listed statuary group of the Burghers of Calais (now removed) to the south of the site, with the site and Palace of Westminster in the background, looking north-west (MOLA photo taken 16/05/13)



Fig 22 The Grade II listed statue of Mrs. Emmeline Pankhurst, to the north-west of the site, with Victoria Tower and the Palace of Westminster in the background, looking north-east (MOLA photo taken 16/05/13)