1-5 GROSVENOR PLACE, CITY OF WESTMINSTER

AN ARCHAEOLOGICAL WATCHING BRIEF (PHASE 2)

LOCAL PLANNING AUTHORITY: CITY OF WESTMINSTER

PCA REPORT NO: R12009

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1-5 GROSVENOR PLACE, CITY OF WESTMINSTER

AN ARCHAEOLOGICAL WATCHING BRIEF

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AN ARCHAEOLOGICAL WATCHING BRIEF ON BOREHOLE EXCAVATION AT 1-5 GROSVENOR PLACE, CITY OF WESTMINSTER (PHASE 2)

Local Planning Authority: Westminster City Council

Planning Ref: Pre-Planning

Central National Grid Reference: TQ 2835 7968

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1 ABSTRACT

1.1 Pre-Construct Archaeology Ltd conducted an archaeological watching brief on geo-environmental ground investigations at 1-5 Grosvenor Place, City of Westminster between 26th November 2014 and 13th January 2015. The watching brief monitored the removal of modern surface hardstanding and the subsequent coring of underlying deposits to the surface of natural London Clay. The work was carried out on a number of locations including external car parking areas, internal basement car parking areas, through the basement of a plant room, through pavements on Halkin Street, through a light well on Halkin Street and through an area of gravel landscaping on Pembroke Close.

1.2 A total of eleven boreholes were monitored in this phase of work in addition to the two boreholes observed in November 2013 (Boyer 2013). The boreholes (BHs) can be divided into two separate groupings. Those towards the south west of the site included BHs 209, 201A, and 204 in addition to the previously observed BH101. The second grouping was towards the centre and north east of the site and consisted of BHs 202, 203, 205A, 206, 207, 208, 210 and 211. A number of observation pits were also excavated along the south west perimeter of the site, although none of these encountered archaeological or naturally formed horizons, and so are not detailed within this report.

1.3 The group of boreholes towards the south west provided a sequence comprising a series of dumped deposits containing high amounts of building rubble which probably relate to infilling and levelling as a result of damage from wartime bombing. These overlay Quaternary Terrace Gravel deposits which in turn overlay London Clay.

1.4 The group of boreholes to the north east of the site revealed significant modern disturbance including rubble deposits relating to WW2 bomb damage and redevelopment. This overlay a series of silty clay and organic dumped deposits that directly overlay London Clay. There was a notable absence of the Quaternary Terrace Gravel deposits over this area of the site, suggesting that these deposits had been removed as a result of quarrying, probably in the 18th century. The overlying organic clay deposits are likely to be a result of deliberate backfilling in the late 18th century and 19th centuries.

1.5 All of the boreholes revealed a large amount of truncation of the upper horizons by the existing building construction, with a large number of boreholes in all locations encountering concrete slab obstructions at depths of up to 5m below ground level.

2 INTRODUCTION

2.1 Between 26th November 2014 and 13th January 2015 Pre-Construct Archaeology Ltd (PCA) carried out an archaeological watching brief at 1-5 Grosvenor Place, City of Westminster

2.2 It is proposed to redevelop the site for hotel and residential purposes, the intention being to submit a planning application for redevelopment to Westminster City Council in the near future. It is likely that if planning permission is approved, there will be archaeological conditions attached. The watching brief was the second phase of archaeological work on this site as PCA had previously carried out a watching brief on two boreholes to inform a desk-based assessment of the site (Boyer 2013).

2.3 The work was commissioned by Ramboll UK Ltd. and comprised the archaeological monitoring of the excavation of eleven boreholes; three in a basement carpark, two in an outdoor car parking area, one through the basement of a plant room, one in a landscaped gravel area on the corner of Pembroke Close, one in a light well on Halkin Street, three on the pavement of Halkin street and one on Pembroke Close (Figure 2).

2.4 The site is located at National Grid Reference (NGR) TQ 2835 7968.

3 GEOLOGY AND TOPOGRAPHY

3.1 The site lies in the heart of the Belgravia area of the City of Westminster, a short distance south of Hyde Park Corner and east of Knightsbridge.

3.2 Hyde Park lies a little more than 200m to the north, whilst Buckingham Palace Gardens extend to within 50m of the east of the site. A short distance to the south of the site is Belgrave square

3.3 According to the British Geological Survey (Sheet 256; North London) the underlying geology of the site comprises sand, silt and clay of the Palaeogene (Eocene) London Clay formation deposited between c. 34 and 55 million years ago. This is overlain by Quaternary Kempton Park Terrace gravels, which are capped by clay and silt brickearth of the Langley Silt Member.

3.4 The site lies at the corner of Grosvenor Crescent and Grosvenor Place, with access to carparking areas currently via a ramp from Grosvenor Crescent and Pembroke close, a small road also accessed from Grosvenor Crescent. The site lies on ground that slopes downwards to the west and south but has been significantly modified by previous developments.

3.5 The site is bounded to the north-west by Grosvenor Crescent, to the north-east by Grosvenor Place, to the south-east by Halkin Street and to the south-west by Forbes House and open land lying between Grosvenor crescent and Halkin Street. It is located approximately 2km west of the River Thames but between the former channels of the rivers Westbourne to the west and Tyburn to the east.

4 ARCHAEOLOGICAL AND HISTORICAL BACKGROUND

4.1 Research into the archaeological and historical background of the site has already been carried out as part of a desk-based assessment of the site (Gruszczynski 2013) and it is not necessary to repeat the detail here, though the main points should be highlighted:

4.2 The site lies on Pleistocene Terrace Gravel deposits laid down during late Wolstonian glacial stage, Ipswichian interglacial and early Devensian glacial stage. Palaeolithic material has been recovered from the gravels including flint tools and faunal remains. The majority of finds are recorded some distance north of the site, though a Palaeolithic side scraper found in 1933 at a depth of c. 3m below ground level (bgl) at 145 Piccadilly, lay just 230m to the north-east. Faunal remains from Buckingham Palace road to the south of the site indicate a wide range of animals occupying a tundra/steppe environment during the Ipswichian interglacial.

4.3 Mesolithic alluvial deposits are recorded south-east of the site but there is no evidence of human activity in the area at this time and the area probably remained as marginal marshland throughout the Mesolithic and Early Neolithic. The site was located been the Tyburn and Westbourne tributaries of the Thames and there is evidence of occupation at Park Lane to the north during the Late Neolithic/ Early Bronze Age. Further artefacts of Neolithic and Bronze Age date have also been found in the area. There is no evidence of Iron Age activity in the vicinity of the site, probably because the environment again became marginal for human habitation.

4.4 The study site lay some distance to the west of the Roman settlement of *Londinium* and consequently there is little evidence of activity in the vicinity at this time. However a section of Roman road was found to the north of the site beneath the A4 at Piccadilly.

4.5 A settlement at Westminster is linked with the foundation of Westminster Abbey on Thorney Island, wooden structures having been built there by the 10th century and replaced in stone during the 11th century. There is little evidence for early medieval activity in the vicinity of the study site, though there was a small hamlet at knightsbridge, south of Hyde Park and north-west of the study site.

4.6 In the medieval period the site lay in an area known as five fields, recorded in Domesday Book as part of the manor of Eia, later known as Ebury, which was centred on an area some 1km south of the site. Ebury Manor was given to Westminster Abbey in the medieval period but confiscated by Henry VIII at the Dissolution. The manor changed hands a number of times during the early post-medieval but was eventually acquired by the Grosvenor family in 1677 and remains in their possession today.

4.7 The area of the study site appears to have remained undeveloped throughout much of the post-medieval period, as indicated initially on a map of the Grosvenor Estate dated 1723. This map also indicates a number of quarry pits south of Hyde Park and a short distance north of

the site. John Rocque's map of 1747 still shows the site as undeveloped with further quarry pits to the south, one of which could have extended onto the site.

4.8 By the end of the 18th century there was a single row of houses on Grosvenor Place, with development encroaching further onto the site in the early 19th century. The site at this time was occupied by numbers 5-12 Grosvenor place. Significant development of the Grosvenor estate commenced in the 1820's, centred on Belgrave Square, and the area became known as Belgravia. Grosvenor crescent was created during a slightly later phase of development

4.9 The first edition Ordnance Survey map of 1870 shows the site occupied by five terraced mansions, the three central buildings having small internal courtyards. There were mews to the rear of the site, between the mansions and Forbes House. There was little change in the site layout in the later 19th century apart from the extension of 1 Grosvenor Place along Grosvenor Crescent, which also entailed modification of the mews layout.

4.10 There was little further development up until World War 2 but then the area was significantly impacted upon by wartime bombing, particularly during the Blitz of 1940 and 1941. Three high-explosive devices fell on the site; two of them on the mews buildings, which were largely destroyed and the third within the courtyard between 4 and 5 Grosvenor Place. Blast damage to the Grosvenor place buildings was relatively slight compared with that of the rear. The bomb between 4 and 5 Grosvenor Place may have caused some significant damage as these buildings were replaced in with the current structure in the early 1960's. The 19th century buildings at numbers 1-3 Grosvenor Place were demolished in 1967 and construction of the current building commenced the same year

4.11 In November 2013 an archaeological watching brief was carried out by PCA on two boreholes (BH101 and BH102). The findings of this watching brief suggested a significant impact from bombing. These boreholes also indicated that the study site had been heavily impacted by quarrying with the east of the site being noticeable for a lack of Pleistocene Gravels, suggesting that they had been removed through quarrying. The west of the site appeared to have been unaffected by quarrying as it was possible to record a sequence including the Pleistocene Gravel Terrace.

5 PLANNING BACKGROUND

5.1 The development of the site is subject to planning guidance and policies contained within the National Planning Policy Framework (NPPF), The London Plan and policies of the City of Westminster, which fully recognises the importance of the buried heritage for which it is the custodian.

5.2 In March 2012 the government published the National Planning Policy Framework (NPPF), which replaced existing national policy relating to heritage and archaeology (Planning Policy Statement 5: Planning for the Historic Environment (PPS5)).In summary, current national policy provides a framework which protects nationally important designated Heritage Assess and their settings, in appropriate circumstances seeks adequate information (from desk based assessment and field evaluations if necessary) to enable informed decisions regarding the historical environment and provides for the investigation by intrusive and non-intrusive means of sites not significant enough to merit in-situ preservation. Relevant paragraphs within the NPPF include the following:

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.*

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.*

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.*

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.*

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.*

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.*

5.3 The glossary contained within the NPPF includes the following definitions:

Heritage Asset: A building, monument, site, place, area or landscape identified as having a degree of significance meriting consideration in planning decisions, because of its heritage interest. Heritage asset includes designated heritage assets and assets identified by the local planning authority (including local listing)

Archaeological Interest: There will be archaeological interest in the heritage asset if it holds, or potentially may hold, evidence of past human activity worthy of expert investigation at some point. Heritage assets with archaeological interest are the primary source of evidence about the substance and evolution of places, and of the people and cultures that made them.

Historic Environment: All aspects of the environment resulting from the interaction between people and places through time, including all surviving physical remains of past human activity, whether visible, buried or submerged, and landscaped and planted or managed flora

Historic environment record: Information services that seek to provide access to comprehensive and dynamic resources relating to the historic environment of a defined geographic area for public benefit and use.

5.4 The London Plan, published July 2011, includes the following policy regarding the historic environment in central London, which should be implemented through the local development framework (LDF) being compiled at the Borough level:

POLICY 7.8 HERITAGE ASSETS AND ARCHAEOLOGY

Strategic

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

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

Planning decisions

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

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

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

LDF preparation

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

5.5 The local planning authority responsible for the study site is the City of Westminster whose Unitary Development plan (UDP) is to be shortly replaced with LDF Core Strategy adopted in January 2011. Meanwhile the majority of policies of the UDP have been saved pending the full introduction of the LDF, including most of those relating to the historic environment:

POLICY DES 9: CONSERVATION AREAS
Aim
10.108 To preserve or enhance the character or appearance of conservation areas and their settings.
POLICY DES 9: CONSERVATION AREAS
(A) Applications for outline planning permission in conservation areas
In the case of outline planning applications within designated conservation areas it may be necessary to require additional details to be produced in order that the physical impact of the proposed development may be fully assessed.
(B) Planning applications involving demolition in conservation areas
1) Buildings identified as of local architectural, historical or topographical interest in adopted conservation area audits will enjoy a general presumption against demolition
2) Development proposals within conservation areas, involving the demolition of unlisted buildings, may be permitted
a) If the building makes either a negative or insignificant contribution to the character or appearance of the area, and/or
b) If the design quality of the proposed development is considered to result in an enhancement of the conservation area's overall character or appearance, having regard to issues of economic viability, including the viability of retaining and repairing the existing building
3) In any such case, there should also be firm and appropriately detailed proposals for the future viable redevelopment of the application site that have been approved and their implementation assured by planning condition or agreement.
(C) Planning application for alteration or extension of unlisted buildings
Planning permission will be granted for proposals which
1) Serve to reinstate missing traditional features, such as doors, windows, shopfronts, front porches and other decorative features
2) Use traditional and, where appropriate, reclaimed or recycled building materials
3) Use prevalent facing, roofing and paving materials, having regard to the content of relevant conservation area audits or other adopted supplementary guidance
4) In locally appropriate situations, use modern or other atypical facing materials or detailing or innovative forms of building design and construction
(D) Conservation area audits
The existence, character and contribution to the local scene of buildings or features of architectural, historical or topographical interest, recognised as such in supplementary planning guidance, such as conservation area audits, will be of relevance to the application of policies DES 4 to DES 7, and DES 10.
(E) Changes of use within conservation areas
Permission will only be granted for development, involving a material change of use, which would serve either to preserve or enhance the character and appearance of the conservation area, bearing in mind the detailed viability of the development.
(F) Setting of conservation areas
Development will not be permitted which, although not wholly or partly located within a designated conservation area, might nevertheless have a visibly adverse effect upon the area's recognised special character or appearance, including intrusiveness with respect to any recognised and recorded familiar local views into, out of, within or across the area.
(G) Restrictions on permitted development in conservation areas
1) In order to give additional protection to the character and appearance of conservation areas, directions may be made under article 4(2) of the Town and Country Planning (General Permitted Development) Order 1995. Types of generally permitted development to which such directions may apply will include:
a) painting, cladding or rendering of building facades
b) insertion or replacement of doors and windows
c) removal or replacement of boundary walls and fences

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

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

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

Policy application

10.109 The successful integration of new developments, alterations or extensions depends on detailing as well as scale and massing. Therefore, applications for outline permission for development will not be considered. Applicants will be required to provide sufficient information about proposed development to enable its effect on the character and appearance of the conservation area to be properly assessed.

10.110 In all cases the City Council will expect applications to provide sufficient information about the proposed development and its immediate setting to enable the effect of the proposal on the character and appearance of the conservation area to be properly and fully assessed. The City Council will consult local amenity societies and, when appropriate, national amenity societies, English Heritage and the Commission for Architecture and the Built Environment when major development is proposed in conservation areas.

10.111 Many buildings, both listed and unlisted, contribute to the character or appearance of conservation areas. There are others, which make little or no contribution and which could be replaced with suitable new developments. The City Council will encourage the redevelopment of unattractive buildings that have a negative effect upon the character and appearance, and setting, of conservation areas. All proposals for new developments will be considered in the light of their effect on the character and appearance or setting of the conservation area. High quality modern architecture will be acceptable in conservation areas provided that it can be demonstrated that it is sensitively designed in response to its conservation area context and will preserve or enhance the character and appearance of the conservation area.

10.112 In assessing proposals for the demolition of a building which makes a positive contribution to the character and appearance of a conservation area (as identified in conservation area audits), the City Council will apply the tests set out in PPG 15: Planning and the Historic Environment, paragraphs 3.15 to 3.19. Where a conservation area audit has yet to be published, the City Council will assess the merits of an existing building and its contribution to the conservation area with respect to the advice set out in guidance produced by the Government and English Heritage. In particular the City Council will assess the economic viability of retaining and refurbishing the existing building, and the relative contribution of the existing building and the anticipated contribution of proposed building to the character and appearance of the conservation area. In making this assessment the contribution of the existing and proposed uses to the character or appearance of the conservation area will be considered.

10.113 In some cases complete demolition behind the facade may be acceptable, but it may be necessary to maintain the scale of the original rooms on the main floors of the principal facades in order to preserve the appearance and integrity of the building, particularly at night. The Council will also require applicants to demonstrate that the stability and architectural integrity of those parts of the building to be retained are adequately safeguarded both during the course of reconstruction work and afterwards. For this reason, the City Council considers that most traditional cellular buildings of the eighteenth and nineteenth centuries, originally built for domestic purposes, are unsuitable for major structural change or partial demolition. Commercial buildings with basic purpose-built framed structures, dating from the late nineteenth century onwards, are more adaptable in this respect.

10.114 When conservation area consent is granted for demolition it will normally be concurrent with planning permission for new development. Appropriate conditions will be attached to the conservation area consent so that demolition cannot proceed without development proceeding immediately afterwards, as part of a continuous process. This is to prevent vacant sites being created, which would adversely affect the character and appearance of conservation areas. Furthermore, the City Council may add conditions on a consent for demolition and redevelopment requiring the salvage and reuse of materials from the building to be demolished.

10.115 Alterations and extensions to buildings in conservation areas should preserve or enhance the character or appearance of the area. Views from surrounding buildings and other non street-level views may be important.

10.116 Shopfronts make an important contribution to the character and appearance of many conservation areas. The installation of new shopfronts may provide opportunities to enhance conservation areas and the City Council will expect new shopfronts to make a significant, positive contribution to the conservation area.

10.117 In almost all circumstances, the removal of original shopfronts will not be acceptable. The City Council may seek to protect non-original shopfronts which make a significant contribution to the conservation area.

10.118 The replacement of traditional windows with non-traditional materials such as aluminium or uPVC, or with inappropriate designs, will not normally be acceptable. The inappropriate use of modern roofing or recladding materials may also adversely affect the character and appearance of the conservation area. In general, all alterations and extensions should be carried out in materials to match existing or in keeping with the character and appearance of the conservation area. In some exceptional circumstances, modern or atypical materials, detailing or innovative design may be acceptable. However, such departures from normal policy will need to be fully justified in terms of their impact on the conservation area.

10.119 In addition to visual quality, the uses that are associated with particular buildings and conservation areas are vitally important to the character of those areas. In some cases the uses are important contributory factors to an area's character; in other cases they actually create that character or have long historic or functional relationships. In Covent Garden, for example, the character, scale and diversity of both buildings and uses are important to its economic success and its attractiveness to residents and visitors.

10.120 In considering applications involving change of use the City Council will consider the contribution of existing and proposed uses to the character or appearance of the conservation area.

10.121 The boundaries of some conservation areas may include areas of marginal architectural quality where new developments should be carefully controlled. Development outside but adjacent to conservation areas can have a significant impact on the setting of conservation areas. New development in such areas should take into account and respect the character and appearance of neighbouring conservation areas in order to safeguard their setting.

10.122 In line with its statutory duty, the City Council will from time to time, formulate and publish assessments and proposals for all fifty-four conservation areas in the City. Conservation area audits will be produced for each conservation area, giving a full and detailed assessment of the area's character and appearance. Appendix 10.3 gives details of the progress made in preparing these audits.

10.123 As work on the care and protection of conservation areas proceeds, it will be appropriate to initiate schemes for the improvement of parts of the areas. The enhancement of open spaces, and especially streets, by tree planting, schemes for painting facades, and other improvements, can all bring considerable benefit. Some of these schemes may be initiated by the City Council, as local planning and highway authority. Others may be at the instigation of local residents, owners or amenity societies.

10.124 The City Council may take other steps to secure the preservation and enhancement of its conservation areas. It may serve notices under s215 of the Town and Country Planning Act 1990 to require owners or occupiers to carry out works to repair buildings or improve neglected land which is adversely affecting amenity.

10.125 It may also issue Article 4 directions to remove permitted development rights from properties in areas threatened with insensitive alterations, which would normally be beyond the City Council's control. Appendix 10.2 provides a list of Article 4 directions in Westminster.

10.126 The City Council has published supplementary planning guidance with respect to its conservation area policies. This is set out in „Development and Demolition in Conservation Areas" (1996). Many of the City Council's other supplementary planning guidance leaflets referred to in this chapter contain advice relevant to the design of new development in conservation areas.

Reasons

10.127 National policy on aesthetic control is set out in paragraphs 33 to 39 of PPS 1: Delivering Sustainable Development. It expects local planning authorities should plan positively for the achievement of high quality and inclusive design for all development, including individual buildings, public and private spaces and wider area development schemes. Section 69 of the Planning (Listed Buildings and Conservation Areas) Act 1990 imposes a duty on local planning authorities to designate as conservation areas any 'areas of special architectural or historic interest the character or appearance of which it is desirable to preserve or enhance'.

10.128 The City Council considers that areas of Westminster of significant townscape quality or with a distinctive character are worthy of preservation and enhancement. They are individually important and collectively contribute to the character of the City. Not only are conservation areas important locally, but there are a number which are also valued for their metropolitan and national significance. The Palace of Westminster, St. Margaret's and Westminster Abbey comprise one of twenty-six sites in the United Kingdom inscribed by the World Heritage Committee as a „world heritage site". Other areas such as Whitehall, Trafalgar Square, the River Thames and the riverside area, the legal precinct around the Royal Courts of Justice, Westminster Abbey and Parliament Square are at the heart of London and their special character and importance will be preserved and enhanced for national as well as local reasons. Since the Civic Amenities Act 1967 first conferred powers requiring local authorities to designate conservation areas, many such areas of special architectural or historic interest and character have been designated in Westminster.

DES 11: SCHEDULED ANCIENT MONUMENTS, AREAS AND SITES OF ARCHAEOLOGICAL PRIORITY AND POTENTIAL

Aim

10.147 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.

POLICY DES 11: SCHEDULED ANCIENT MONUMENTS, AREAS AND SITES OF ARCHAEOLOGICAL PRIORITY AND POTENTIAL

(A) Scheduled Ancient Monuments

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

1) the Chapter House and Pyx Chamber in the Cloisters, Westminster Abbey

2) the Jewel Tower.

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

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

1) all archaeological remains of national importance are preserved in situ

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

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

Policy application

10.148 There are three categories of archaeological remains. In order of importance they are:

a) Scheduled Ancient Monuments: nationally important remains which are scheduled under the Ancient Monuments and Archaeological Areas Act 1979

b) Areas of Special Archaeological Priority: areas rich in archaeological remains, where ground works are likely to reveal archaeological remains

c) Sites of Archaeological Significance and Potential: areas where archaeological remains are known or thought likely to exist.

10.149 These locations are listed in the Sites and Monuments Record maintained by English Heritage. The Areas of Special Archaeological Priority are Lundenwic and Thorney Island; Paddington and Lillestone Villages; Marylebone Village; Tyburn Settlement and Ebury Village. The archaeological data produced by the Museum of London and English Heritage provide more detailed information, including further sites and areas of archaeological significance and potential within Westminster. Areas of Special Archaeological Priority are illustrated on Maps 10.3-10.7. Information on these and other sites of archaeological priority and potential are available from the Greater London sites and monuments record maintained by English Heritage.

10.150 In considering applications for development of land with archaeological potential, the City Council will require an archaeological assessment detailing the potential impact of development upon surviving archaeological remains. Should archaeological evaluation and investigations be required, it must be undertaken in accordance with a written scheme of investigation approved by the City Council. The Greater London Archaeology Advisory Service provides guidance papers detailing these procedures. With respect to policy DES 11 B (3), investigation may include a watching brief and, or, a full excavation.

10.151 The City Council will seek professional archaeological advice as appropriate and will encourage applicants proposing development to do the same. Where development may affect land of archaeological priority or potential, the City Council will expect applicants to have properly assessed and planned for the archaeological implications of their proposals. In this way the Council and the applicant will have sufficient information upon which an informed planning decision, incorporating appropriate archaeological safeguards, may be based. Such safeguards normally consist of design measures to ensure the permanent preservation of archaeological remains in situ or, where that is not appropriate, archaeological rescue investigations in advance of development. The results and finds from archaeological investigations also need to be analysed, interpreted, presented to the public and curated for future use. Attention is drawn to the advice contained within the code of practice prepared by the British Archaeologists' and Developers Liaison Group.

Reasons

10.152 Archaeological remains are important evidence of the City's past and are a valuable historical, educational and tourist resource. They are finite and fragile; once lost, they cannot be recovered. The City Council considers that the archaeology of Westminster is a national as well as a local asset and that its preservation is a legitimate objective, against which the needs of development must be carefully balanced and assessed. The destruction of such remains should be avoided wherever possible and should never take place without prior archaeological excavation and record.

10.153 The most important archaeological remains are scheduled and are protected under the Ancient Monuments and Archaeological Areas Act 1979. Where works to such sites and their setting are proposed, including repair, scheduled ancient monument consent is required.

10.154 The London Plan states at Policy 4.C.10 that boroughs "should give careful consideration to the relationship between new development and the historic environment including archaeological areas, including tidal foreshores…". National planning guidance is set out in PPG16: Archaeology and Planning, issued in November 1990.

10.155 The preservation of Westminster's archaeological heritage is a material planning consideration and applicants will need to show that proposed development is compatible with the objectives of the City Council's archaeological policy. The Council will wish to implement that policy under relevant legislation and statutory guidance and by means of legal agreements and planning conditions.

5.6 The relevant section of the LDF for the City is Core Strategy 24:

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.

Reasoned Justification
The intrinsic value of Westminster's high quality and significant historic environment is one of its greatest assets. To compete effectively with other major, world-class cities the built environment must be respected and refurbished sensitively as appropriate. Any change should not detract from the existing qualities of the environment, which makes the city such an attractive and valued location for residents, businesses and visitors.

Detailed policies for each type of heritage asset will be set out in the City Management Plan. Area-based characteristics and detailed measures required to protect and enhance heritage assets have been set out in Conservation Area Audit Supplementary Planning Documents and the Westminster World Heritage Site Management Plan

5.7 There are no Scheduled ancient monuments of statutorily listed buildings within the development site and neither does the site lie within a Conservation Area or Area of the special Archaeological Priority as defined by The City of Westminster. However the site borders the Belgravia Conservation Area to the north-west and south-west and the Royal parks conservation Area to the north-east. It also lies within 1km of the Ebury Village and Lundenwic and Thorney Island Areas of Special Archaeological Priorty. Furthermore there are sixteen listed buildings within 100m of the site and Buckingham Palace Gardens to the east is a Grade II Registered Park and Garden.

5.8 It is now proposed to redevelop the site for hotel residential purposes, the intention of the developer being to submit a planning application to the City of Westminster shortly.

6 ARCHAEOLOGICAL METHODOLOGY

6.1 The fieldwork comprised the archaeological monitoring of the excavation of eleven boreholes and all aspects of the work followed national (IFA 2008) and local (GLAAS 1998) guidelines and complied with PCA's own fieldwork manual (Taylor and Brown 2009).

6.2 Boreholes BH209, located in a landscaped gravel area on the corner of Grosvenor crescent and Pembroke Close, BH206 located on Pembroke Close, and BH203 located in the light well of the current building on the corner of Halkin Street and Grosvenor Place, were all excavated using the same methodology. The gravel/tarmac/paving was broken out in an area 0.5m x 0.50m and removed and then the underlying loose unconsolidated material was hand excavated to a depth of 1.20m bgl. Once this starter pit had been dug coring commenced using a mechanically operated, cable percussion coring rig with 150mm diameter coring heads. The material was removed in spits up to 0.5m in thickness and its composition was recorded both archaeologically and geo-environmentally as coring progressed, however archaeological recording ceased once natural London Clay was reached as this is an Eocene deposit that holds no archaeological potential. The coring continued to a depth of 40m.

6.3 Boreholes BH201A (relocated from the proposed BH201 location) and BH202, both located on the pavement of Halkin Street, were initially started in the same method as above, however both contained substantial slabs of concrete that the cable percussion coring rig could not penetrate, so a diamond concrete corer rig was used to break through the slab. Once this was completed it was possible to continue excavation using the cable percussion coring rig. As before, material was removed in 0.50m spits in thickness and its composition was recorded both archaeologically and geologically as coring progressed. Archaeological recording ceased once natural London clay was reached however geological coring continued down to a depth of 60m.

6.4 Borehole BH211, located below the plant room of the building, again had to adopt a different methodology. As the borehole had a proposed depth of 60m it was not practical to use a shorter rig, therefore it was necessary to first use the diamond corer to bore a hole through the ceiling of the plant room out to the pavement on Grosvenor Street above. It was then possible to use a plumb line to determine where to core through the basement floor again using the diamond corer. Once the concrete had been removed across a 0.30m diameter it was possible to use the cable percussion corer to core through the archaeological and geological deposits. The archaeological watching brief ceased once the natural London Clay had been reached. The geological coring continued to a depth of 60m

6.5 Boreholes BH204 and BH205A (relocated from proposed BH205 location), located in the external carpark, were designed to be undertaken using a rotary core triple barrel coring rig. The tarmac was broken out and removed in an area 0.5m x 0.5m and the underlying loose unconsolidated ground was hand excavated to a depth of 1.2m bgl. The corer was then used

to core through the soft archaeological deposits down to the London Clay. Once the London Clay was reached the rotary rig was used to core down to a total of 80m. In BH204 the cable percussion corer hit a concrete slab, so the rotary rig was used from this point and sealed cores were retained.

6.6 Boreholes BH207, 208 and 210 were located in the basement carpark below 3 Grosvenor Place, which was in a confined area with restricted headroom. Therefore the basement concrete floor was cored using a diamond corer. Once the concrete had been removed a shorter electrically operated cable percussion rig with 200mm diameter coring heads was used. Material was again removed in spits up to 0.5m thick and recorded archaeologically and geologically with recording ceasing once London Clay had been reached.

7 WATCHING BRIEF OBSERVATIONS AND INTERPRETATION OF SEQUENCES

7.1 This section records the stratigraphic sequences in each of the eleven boreholes and interprets the sequences observed. Ordnance Datum heights are taken from the survey drawings supplied by Concept Site Investigations.

7.2 **BH201A (**starting level 9.30m OD)

Depth (m bgl)	Description
0-0.2m	Tarmac
0.2-1.90m	Loose unconsolidated reddish brown silty sand with frequent building demolition and large concrete fragments (20th century bomb damage)
1.90-2.14m	Concrete slab (19th/20th century floor)
2.14 -2.50m	void
2.50-3.20m	Soft dark brownish grey silty clay containing frequent brick including yellow London stock (19th century ground levelling)
3.20-4m	Dark blackish grey silty clay with frequent charcoal, cbm, pot, brick and occasional small to medium gravels (18th/19th century groundraising)
4.00-4.20m	Light greyish brown silty clay with frequent brick (18th/19th century groundraising)
4.2-5.5m	Mid reddish brown silty sand with occasional small gravel inclusions (natural sand)
5.5-6.2m	Loose coarse yellowish brown sandy gravels (natural gravel)
6.2-7.50m	Stiff greyish brown clay with moderate small to medium rounded to sub rounded flint pebbles (transition between clay and gravels)
7.50-8m	Stiff mid grey clay with moderate small to medium sub rounded to sub angular flint pebbles (transition between clay and gravels)
8m +	Stiff mid to dark grey clay (London Clay)

7.2.1 The basal deposit recorded in this sequence is the natural London Clay at a depth common with this part of Westminster. It was overlain by 1.8m of banded gravelly clay that may represent reworking of the clay by Pleistocene alluvial activity. Overlaying this was around 2m of natural sand and gravel, which was directly overlain by 1.70m of 18th/19th century made ground, probably representing a period of ground levelling. Above this was a substantial concrete slab that is likely to represent a 19th century basement floor. Above this was a substantial deposit of nearly 2m thick, which consisted of loose unconsolidated building rubble and large concrete fragments. This is likely to be representative of either bomb damage from the blitz or related to the demolition of the wartime buildings in the 1960's.

7.3 **BH202** (starting level 9.92m OD)

Depth (m bgl)	Description
0-0.2m	Tarmac
0.2-0.4m	Yellow gravelly sand (modern engineering backfill)
0.4-0.7m	Concrete rubble
0.7m-2.80m	Loose greyish brown silty sand with frequent rubble 20th century brick occasional metal concrete and tile (demolition layer)
2.80-5m	Concrete slab (20th century basement?)
5.00-11.50m	Soft dark greyish black silty clay (organic) with frequent small to medium sub angular stones and occasional brick (quarry infilling)
11.50-15.00	Stiff light greyish brown silty clay redeposited alluvial material containing occasional animal bone and CBM fragments (quarry infilling)
15.00 +	London Clay

7.3.1 The basal deposit of London Clay was significantly deeper in this location than elsewhere on the site. This coupled with a lack of Pleistocene gravels may suggest that the gravels were removed and the London Clay was partially removed. Directly above the London Clay was 10m of silty clay deposits with brick and animal bone suggesting that a deep depression had been deliberately backfilled. Directly above this was a substantial concrete slab over 2m thick, which is likely to have represented a basement floor, the thickness possibly necessary to stabilise the building from the soft deposits below. Above the concrete floor was a substantial amount of brick rubble about 3m in thickness.

7.4 **BH203** (starting level 8.01m OD)

Depth (m bgl)	Description
0-0.2m	Concrete paving stone and bedding
0.2-3m	Loose yellow brown silty sand with frequent building rubble
3m-4.50m	Dark brownish grey/black organic silty clay with occasional CBM fragments and flecks
4.50-4.80m	Light brownish grey redeposited alluvial silty clay with occasional brick fragments and small sub rounded to sub angular gravels
4.8m +	London Clay

7.4.1 The London Clay was substantially higher here than elsewhere on the site it is not clear whether this is naturally higher ground or whether elsewhere the London Clay had been slightly truncated through quarrying. Above this was 1.80m of clay bands with an absence of Pleistocene gravels, suggesting the gravel has been quarried and the depression created by

this has been backfilled with clay material containing. This was overlain by demolition rubble that may be the result of WW2 bombing.

BH204 (starting height 7.99 mOD)

Depth (m bgl)	Description
0-0.2m	Tarmac
0.2-0.22m	Concrete
0.22m-3.2m	Loose greyish brown sandy gravel with frequent concrete fragments, occasional CBM and occasional coal (demolition rubble)
3.20m	Concrete slab

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7.4.2 This borehole was designed to be excavated using the triple barrel rotary core after being started by the cable percussion rig, however due to a large concrete slab at a depth of 3.20m bgl. the cable percussion rig could not proceed and the triple barrel rotary core took over. As this method produces sealed cores, the sequence below the concrete slab is awaited. Above the concrete slab was 3m of made ground consisting of demolition rubble.

7.5 **BH205A** (starting height 8.03m OD)

Depth (m bgl)	Description
0 – 0.16m	Tarmac
0.16-0.3m	Concrete
0.16-3.60m	Loose Light greyish brown sandy silt with frequent demolition rubble (bomb damage?)
3.60-5.50m	Very soft mid greyish brown silty clay with sandy bands frequent 19th century brick and porcelain (19th century levelling)
5.50-7.20m	Very soft unconsolidated mid greyish brown silty clay organic in nature containing possible 18th century CBMl, very wet towards base possibly indicating open for a while (18th century backfill)
7.20m +	London Clay

7.5.1 The sequence in this borehole again demonstrated the absence of Pleistocene gravels, suggesting that these had been quarried away. London Clay was immediately overlain by over 3m of 18thth/19th century organic. Overlying this was a rubble deposit that probably relates to bomb damage/ levelling of bomb damage.

7.6 **BH206** (starting height 8.05m OD)

Depth (m bgl)	Description
0-0.2m	Tarmac

0.2-2.00	Loose silt sand with frequent demolition rubble
2.00-2.50m	Possible concrete wall footing
2.50-9.10m	Dark grey to black bands of silty/sandy organic clay with frequent red brick and tile fragments, occasional sub angular to sub rounded small to medium stones
9.10m +	London Clay

7.6.1 BH206 demonstrated an absence of Pleistocene gravels. The London Clay was observed at a depth of 9.10m. Directly above this was nearly 7m of organic material with frequent 18th/19th century CBM. Above this was a concrete slab and 2.00 of made ground, most likely to be bomb damage from WW2 or demolition material.

7.7 **BH207** (starting height 8.21m OD)

Depth (m bgl)	Description
0-0.44m	Thick concrete slab
0.44-1.30m	Redeposited alluvial material
1.30-1.40m	Concrete slab
1.40-1.60m	Made ground
1.60-3.20m	Mid black grey alluvial silt-clay with occ wood fragments (pine splinters)
3.20-3.95m	Stiff mid brown silty clay (probably redeposited London Clay)
3.95-4.50m	Soft Black alluvial sandy silty clay
4.50-8.00m	Soft light grey clay silt with frequent small rounded gravels, frequent 19th century CBM and oyster shell
8.00m +	London Clay

7.7.1 BH207 was again noticeable for an absence of Pleistocene gravels. The London Clay was observed at 8.00m below ground level, a similar height seen in other boreholes. Above this was a series of clay deposits approximately 6.5m thick which are likely to represent backfilling of the quarried area. However, there was a noticeable difference between the backfill deposits within this borehole compared with the others as in BH207 they appeared more alluvial in nature and contained oyster shell. This probably just represents differential dumping over a large area. Above the clay backfill layers was a series of modern deposits likely to be associated with construction of the underground car park; these included two concrete slabs and bedding.

7.8 **BH208** (starting height 8.22m OD)

Depth (m bgl)	Description
0-1.45m	Concrete slab of car park floor

1.45-2.50m	Soft greyish brown clay, occasional small to medium sub rounded flint gravels
2.50-3.00m	Firm dark brownish grey clay
3.00-3.50m	Soft yellowish grey silty clay with stones and brick
3.50-7.00m	Mixed soft brownish grey silty clay containing frequent small to medium sub rounded stones and brick fragments
7.00-7.20m	Solid obstruction either brick or concrete rubble
7.20-7.30m	Mixed soft to firm brownish grey silty clay (interface between London Clay and clay backfills)
7.30m +	London Clay

7.8.1 BH208 was again noticeable for a lack of Pleistocene gravels suggesting it is within the area of the quarrying. Above this was a substantial sequence of various clay backfill bands, amounting to nearly 6m. Above this was a substantial concrete slab 1.45m relating to the basement floor, the thickness was probably to stabilise against the soft deposits below.

7.9 **BH209** (starting height 11.20m OD)

Depth (m bgl)	Description
0-0.1m	Gravel surface on terram mat
0.1-1.20m	Mixed mid yellowish grey rubble with clay, sand and silt gravels (20th century demolition layer)
1.20-3.00m	Mid grey silt sand containing occasional medium sub angular to sub rounded flint gravels and brick fragments
3.00-5.00m	Mid brown grey clay –silt sand rubble
6.10-6.60m	Loose yellow coarse sand that becomes more gravelly at depth (natural sands)
6.60-9.90m	Compact sandy coarse gravels (natural gravels)
9.90m +	London Clay

7.9.1 Within BH209 the Pleistocene Kempton Park Gravel terrace was present, suggesting that this borehole lies outside the confines of the quarry activity. The sequence in this borehole was Eocene London Clay observed at 9.90m below the ground level, overlain by 3m of terrace gravel and a further 0.5m of sand. Above the natural sands demolition material was recorded that may be a result of a series of demolition events between the 18th and 20th centuries.

7.10 **BH210** (starting height 8.18m OD)

Depth (m bgl)	Description
0-1.50m	Concrete carpark floor
1.50-2.80m	Firm Grey Clay fill with brick
2.80-6.80m	Firm to stiff black grey green clay fill with

	brick and stones
6.80-8.30m	Soft black clay fill with brick and stones
8.30-9.40m	Stiff brown clay with brick
9.40m +	London Clay

7.10.1 BH210 contained a very similar to the other two boreholes excavated in the carpark basement (BH207 and BH210). Again there was an absence of the Pleistocene gravels. The sequence was London Clay observed at 9.40m below ground level overlain by a series of 18th/19th century backfill deposits amounting to nearly 8m in thickness. This was overlain by the basement carpark floor of the current building with the slab being 1.50m thick, probably to provide structural support on the deposits below.

7.11 **BH211** (starting height 12.29m OD)

Depth (m bgl)	Description
0-0.4m	Concrete ceiling of plant room
0.4m-5.20m	Plant room
5.20-6.73m	Concrete foundations
6.73m -10.10m	Mid greyish brown silty clay with occasional brick and stones - highly contaminated
10.10m +	London Clay

7.11.1 BH211 differed from the majority of boreholes on the site, as very little of the sequence survived due to truncation from the current basement plant room. However it was possible to note an absence of the Pleistocene gravel terrace as the London Clay observed at 10.10m below ground level was overlain by a 18th/ 19th century clay backfill deposit approximately 3m thick. This deposit was highly contaminated with a very strong hydrocarbon odour, likely to originate from the overlying plant room. The sequence was truncated above 6.73m bgl by the concrete foundations of the plant room.

8 PHASED ARCHAEOLOGICAL SEQUENCE

8.1 Phase 1: Palaeogene Deposits

8.1.1 Natural Palaeogene (Eocene) London Clay was recorded in all eleven boreholes. In BH201A it was observed at a height of 1.30m OD. In BH202 it was observed at a height of -5.11 m OD. In BH203 it was observed at a height of 3.13m OD. It was not observed in BH204 due to the use of sealed cores. In BH205A it was observed at a depth of 0.85m OD. In BH206 this deposit was recorded at a depth of -1.08m OD. In BH207 it was observed at a depth of 0.22m OD. In BH208 the London clay appeared at a depth of 0.9m OD. In BH209 it was observed at a depth of 1.4m OD. In BH210 it was observed was -1.20m OD. In BH211 it was observed at a depth of 2.1m OD.

8.1.2 There was some localised variation between these heights, principally likely to result from natural erosion caused by glacial and peri-glacial activity. The exception to this was in BH202 where the London Clay was observed at such a low depth that it is unlikely to be a result of natural erosion and is far more likely to be the result of deliberate quarrying of the clay itself.

8.2 Phase 2: Quarternary Deposits

8.2.1 Quaternary (Pleistocene) Terrace gravel in the form of Kempton Park Gravels would be expected to be found across the site directly above the London Clay. However this was not the case, and gravels were only noted in two boreholes from phase two and one borehole from phase one. These boreholes were BH201A and BH209 from the second phase and BH101 from the first phase of archaeological investigation. In all three boreholes these gravels fined upwards into fine sand deposits. The top of this deposit was observed at 5.7m OD in BH101, 5.1m OD in BH202, and 5.2m OD in BH209. The gravels only survived in a narrow band running north west to south east across the south western end of the site. Elsewhere the gravel had been entirely removed by later activity (see below). Any Langley Silt brickearth deposits that may have been present had also been completely removed across the entire site.

8.3 Phase 3: 1^{8th}/1^{9th} Century Pit infilling

8.3.1 In a number of borehole locations including; BH101, BH202, BH203, BH205A, BH206, BH207, BH208, BH209, BH210 and BH211, thick mixed and often organic rich clay deposits were recorded directly overlying the London Clay, with no evidence of surviving *in situ* Pleistocene deposits. The most likely explanation for these deposits is that they represent a period of infilling of a large quarry area targeting the brickearth and gravel, an activity which is represented on early maps of the area. The artefactual evidence suggests the backfilling is likely to have taken place from the late 18th century through to the 19th century. The thickness of these deposits suggests that the quarrying extended to depths in excess of 7 or 8m in places, whilst the activity appears to have extended over a large proportion of the site.

8.4 **Phase 4:19th Century Consolidation/building work**

8.4.1 It is known from cartographic evidence that there were extensive mansions on the site as well as mews buildings in the 19th century, however it would have been very difficult to build directly on top of the soft unstable quarry infill. Evidence from the boreholes suggests that this was overcome in two ways. Firstly concrete foundations were substantial enough to support any building as seen in BH202 where the buried basement slab was over 2m thick. Secondly a significant amount of building rubble was used to consolidate the ground. This was observed in a number of boreholes, including BH205A, BH207, BH201A and BH209 as well as BH102 from the first phase.

8.5 **Phase 5: Mid 20th Century Bomb damage and Levelling Deposits.**

8.5.1 It is known that the sites of 3-5 Grosvenor Place and the mews buildings suffered heavy damage due to bombing during the WW2 bombing. It is interesting to note that the boreholes situated within this area of the site contained a deposit consisting of building rubble that may be related to the bombing or levelling of the damaged buildings. This activity was recorded in BH101, BH201A, BH202, BH203, BH204 and BH205A and BH206.

8.6 **Phase 6: Modern development**

8.6.1 Deposits associated with modern development were tarmac seen in BH204, BH205A, BH206, BH201A and BH202, Modern paving slab seen in BH203, the gravel landscaped area in BH209 and the basement slabs seen in BH207, BH208, BH210 and BH211.

9 DISCUSSION AND CONCLUSIONS

9.1 The monitoring of the ground investigations has revealed a sequence of activity from natural Palaeogene deposition and through to modern development of the site.

9.2 London Clay was recorded across the whole site, however the Ordnance Datum heights that this deposit was found at suggest that the surface had been subject to erosion by glacial and peri-glacial activity. It was also apparent that the London Clay was impacted by quarrying in places, particularly in the location of BH202 where the surviving London Clay was considerably lower than anywhere else on the site.

9.3 The extent of a surviving area of terrace gravel, previously identified during the first phase of borehole monitoring, has been further modelled during this extensive phase of ground investigation. The boreholes demonstrate that a band of terrace gravel survives throughout the south west end of the site, providing further information on the extent of truncation from later quarrying.

9.4 Although there has been no evidence of Palaeolithic activity recorded within the boreholes, the survival of Kempton Park Gravel demonstrates that there is potential for survival of evidence relating to this period along the south west of the site where the Pleistocene gravels survive. There may also be potential in this location for the survival of later prehistoric artefacts, as recovered from the wider vicinity, as well as evidence of exploitation of this well drained gravel terrace through cut features, particularly deeper cut features which may have survived any localised horizontal truncation during later development.

9.5 Based on the artefactual evidence found from the infilling of the quarry area itself it is likely that the gravel and brickearth were quarried in the 18th century for building, road building and other construction work. By the late 18th century this quarry had fallen out of use and had started to be backfilled, with backfilling continuing into the 19th century.

9.6 The spread of later demolition deposits is considered likely to be related to WW2 bombing, and it is possible to conclude that damage was suffered more extensively towards the east of the site, which supports the documentary evidence that shows house 3-5 Grosvenor Place suffered badly from bomb damage.

9.7 With regard to future archaeological work it is recommended that the Pleistocene terrace gravel identified towards the south of the site is evaluated in more detail, as there is a possibility for survival of Palaeolithic and later activity in this area of the site. This would be most appropriately achieved through the excavation of evaluation trial trenches to investigate the gravel terrace in plan. Given the depths of the gravel these trenches would need to be excavated to depths of between approximately 2.5m and 4.5m below ground level, depending on the agreed locations, so either shoring or larger stepped trenches would need to be implemented in order to safely access the trenches. It should be noted that should significant

archaeological remains be identified during the evaluation, then further archaeological mitigation measures may be required in this area.

9.8 With regard to the wider quarried area of the site, it is suggested that a more general archaeological watching brief be maintained during the bulk ground reduction over the site. This would serve both to map the extent of the quarry and any possible isolated areas of surviving terrace deposits in detail, as well as to allow inspection of the organic silt and clay dumps for well preserved artefactual evidence associated with the later post-medieval dumping in the area.

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10.2 The author would like to thank Tim Bradley for project management and editing this report and Aidan Turner for recording during the project.

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APPENDIX 1: CONTEXT INDEX

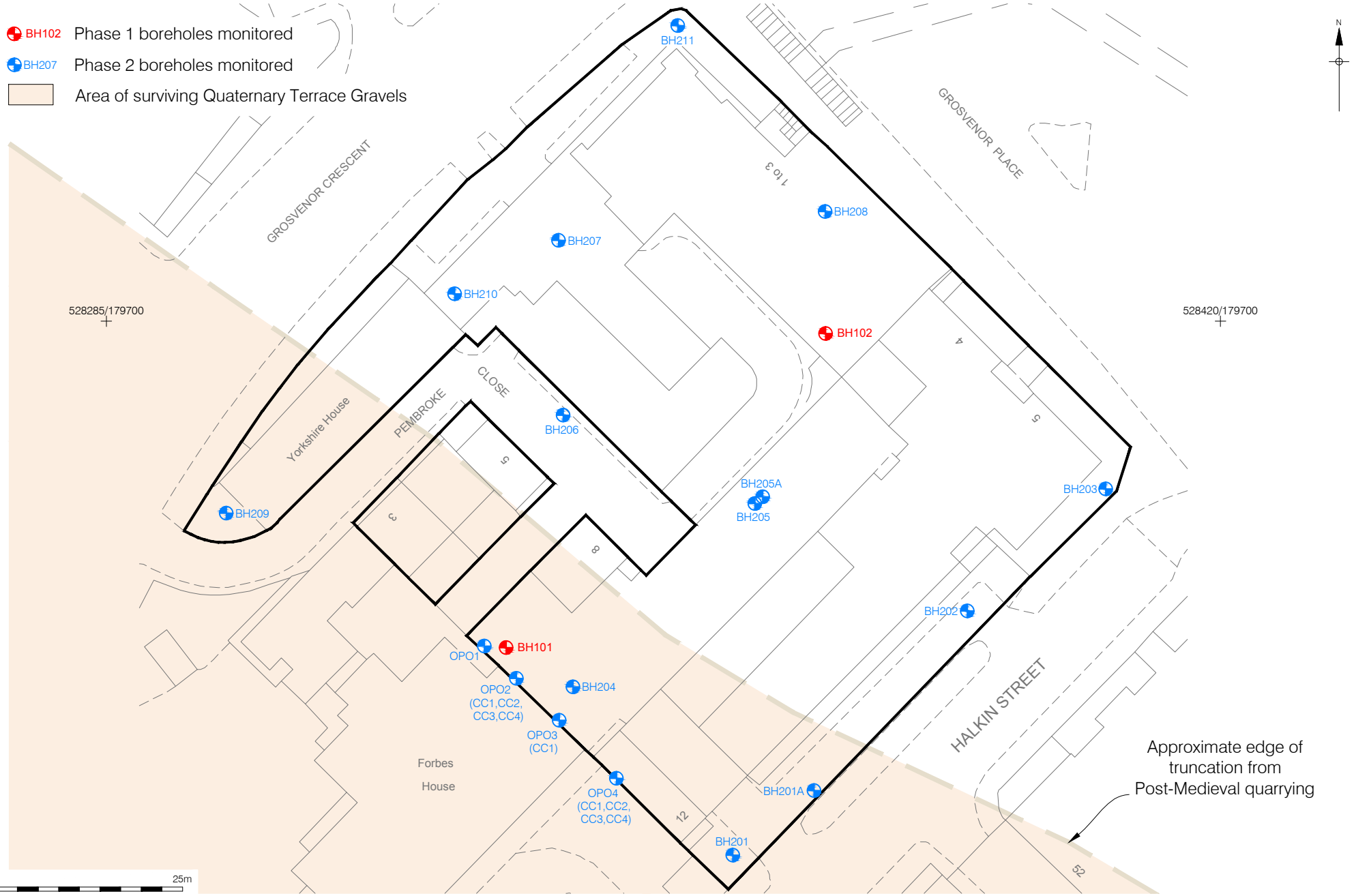
Site Code	Context	Type	Core	Description	Date	Phase
	22	Layer	BH 201A	Tarmac	Modern	6
	23	Layer	BH201A	Loose Rubble material	20th century	5
	24	Layer	BH201A	Concrete slab	19th	4
	25	Layer	BH201A	Soft dark brownish silty clay	19th	4
	26	Layer	BH201A	Dark blackish grey silty clay	19th	4
	27	Layer	BH201A	Light greyish brown silty clay	19th	4
	28	Layer	BH201A	Natural sand	natural	2
	29	Layer	BH201A	Natural gravel	natural	2
	30	Layer	BH201A	Transition between gravels and clay	natural	1/2
	31	Layer	BH201A	Transition between gravels and clay	Natural	1/2
	32	Layer	BH201A	London Clay	Natural	1
	33	Layer	BH202	Tarmac	Modern	6
	34	Layer	BH202	Engineering sand	Modern	6
	35	Layer	BH202	Concrete rubble	20th	5
	36	Layer	BH202	Loose greyish brown demolition rubble	20th	5
	37	Layer	BH202	Concrete slab	19th	4
	38	Layer	BH202	Organic silty clay	18th/19th	3
	39	Layer	BH202	Light brown silty clay	18th/19th	3
	40	Layer	BH202	London Clay	natural	1
	41	Layer	BH203	Paving stone	modern	6
	42	Layer	BH203	Yellowish brown silty clay	18th/19th	3
	43	Layer	BH203	Black organic silt	18th/19th	3
	44	Layer	BH203	Redeposited alluvial	18th/19th	3

Site Code	Context	Type	Core	Description	Date	Phase
				material		
	45	Layer	BH203	London clay	natural	1
	46	Layer	BH204	Tarmac	modern	6
	47	Layer	BH204	Concrete	modern	6
	48	Layer	BH204	Demolition rubble	20th	5
	49	Layer	BH204	Concrete slab	19th	4
	50	Layer	BH205A	Tarmac	Modern	6
	51	Layer	BH205A	Concrete	Modern	6
	52	Layer	BH205A	Sandy silt	20th	5
	53	Layer	BH205A	Silty clay	18/19th	3
	54	Layer	BH205A	Silty Clay	18/18th	3
	55	Layer	BH205A	London Clay	natural	1
	56	Layer	BH206	Tarmac	modern	6
	57	Layer	BH206	Loose silt sand	20th	5
	58	Layer	BH206	Concrete wall footing	20th	5
	59	Layer	BH206	Organic Clay	18/19th	3
	60	Layer	BH206	London Clay	natural	1
	61	Layer	BH207	Concrete Slab	Modern	6
	62	Layer	Bh207	Redeposited alluvium	Modern	6
	63	Layer	BH207	Concrete slab	Modern	6
	64	Layer	BH207	Made ground	19th	4
	65	Layer	BH207	Alluvial silty clay	18th/19th	3
	66	Layer	BH207	Redeposited London CLay	18/19th	3
	67	Layer	Bh207	Alluvial sandy silt	18th/19th	3
	68	Layer	Bh207	Clay silt	18th/19th	3
	69	Layer	Bh207	London Clay	natural	1
	70	Layer	BH208	Concrete Slab	modern	6
	71	layer	BH208	Silty clay	18th/19th	3
	72	Layer	BH208	Silty clay	18th/19th	3
	73	Layer	BH208	Silty Clay	18/19th	3
	74	Layer	BH208	Silty Clay	18/19th	3
	75	Layer	Bh208	Solid obstruction	18/19th	3
	76	Layer	Bh208	Interface with London Clay	18th/19th	3
	77	Layer	BH208	London Clay	natural	1
	78	Layer	BH209	Gravel on terram mat	modern	6
	79	layer	Bh209	Demolition rubble	20th	5
	80	Layer	BH209	Silt sand	19th	4
	81	layer	Bh209	Clay silt	19th	4

Site Code	Context	Type	Core	Description	Date	Phase
				sand		
	82	layer	BH209	Coarse Sand	natural	2
	83	Layer	BH209	gravels	natural	2
	84	Layer	BH209	London clay	Natural	2
	85	Layer	BH210	Concrete Slab	Modern	6
	86	Layer	BH210	Clay	18/19th	3
	87	Layer	BH210	Clay	18/19th	3
	88	Layer	BH210	Clay	18/19th	3
	89	Layer	BH210	Redeposited London Clay	18/19th	3
	90	Layer	BH210	London Clay	Natural	1
	91	Layer	BH211	Concrete Slab	Modern	6
	92	Layer	Bh211	Concrete Slab	Modern	6
	93	Layer	BH211	Silty Clay	18/19th C	3
	94	Layer	Bh211	London clay	natural	1

25/11/13 JB

Figure 1
Site Location
1:20,000 at A4



26/02/15 MR

Figure 2
Geotechnical Survey Locations
1:625 at A4

P C A

PCA SOUTH
UNIT 54
BROCKLEY CROSS BUSINESS CENTRE
96 ENDWELL ROAD
BROCKLEY
LONDON SE4 2PD
TEL: 020 7732 3925 / 020 7639 9091
FAX: 020 7639 9588
EMAIL: info@pre-construct.com

PCA NORTH
UNIT 19A
TURSDALE BUSINESS PARK
DURHAM DH6 5PG
TEL: 0191 377 1111
FAX: 0191 377 0101
EMAIL: info.north@pre-construct.com

PCA CENTRAL
THE GRANARY, RECTORY FARM
BREWERY ROAD, PAMPISFORD
CAMBRIDGESHIRE CB22 3EN
TEL: 01223 845 522
FAX: 01223 845 522
EMAIL: info.central@pre-construct.com

PCA WEST
BLOCK 4
CHILCOMB HOUSE
CHILCOMB LANE
WINCHESTER
HAMPSHIRE SO23 8RB
TEL: 01962 849 549
EMAIL: info.west@pre-construct.com

PCA MIDLANDS
17-19 KETTERING RD
LITTLE BOWDEN
MARKET HARBOROUGH
LEICESTERSHIRE LE16 8AN
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