

# **An Archaeological & Geoarchaeological Evaluation at 163-169 & 171-173 Knightsbridge, City of Westminster, SW7 1 DW**

**Central National Grid Reference: TQ 27612 79648**

**Site Code: KNK 09**

**Written and Researched by Sarah Barrowman**

**Pre-Construct Archaeology Ltd, August 2009**

**Project Manager: Tim Bradley**

**Commissioning Client: CgMs Consulting**

## **Contractor:**

**Pre-Construct Archaeology Ltd  
Unit 54, Brockley Cross Business Park  
96 Endwell Road  
Brockley  
London, SE4 2PD**

**Tel.: 020 7732 3925**

**Fax: 020 7732 7896**

**E-mail: [tbradley@pre-construct.com](mailto:tbradley@pre-construct.com)**

**Web: [www.pre-construct.com](http://www.pre-construct.com)**

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## **1 ABSTRACT**

- 1.1 This report details the results and working methods of an archaeological and geoarchaeological evaluation undertaken by Pre-Construct Archaeology Ltd at 163-169 and 171-173 Knightsbridge, City of Westminster (Figure 1). The central National Grid Reference for this site is TQ 27612 79648. The evaluation was undertaken on the 6<sup>th</sup> and 7<sup>th</sup> of August 2009. The commissioning client was CgMs Consulting.
- 1.2 The archaeological programme consisted of six test pits, plus a seventh test pit in a previously exposed area (Figure 2). The evaluation aimed to determine the presence and character of the truncated terrace deposits and assess their significance. The evaluation also aimed to clarify the nature and extent of existing disturbance and intrusions (principally the basement) and hence assess the degree of archaeological survival (Bradley 2009).
- 1.3 The work was monitored on behalf of the City of Westminster by Diane Abrams of English Heritage GLAAS.
- 1.4 London Clay was observed within all seven test pits, and represented the oldest deposit observed during the evaluation. The test pits also contained the remains of a terrace deposit, likely associated with Taplow Gravel and downslope movement. The surface of these deposits had been truncated by a former basement in all areas.
- 1.5 All of the test pits were overlain by modern made ground that had been used to backfill the area of the former basement, and five were sealed by a layer of crush recently laid as a piling mat.

## **2 INTRODUCTION**

- 2.1 An archaeological and geoarchaeological evaluation was undertaken by Pre-Construct Archaeology Ltd in advance of the redevelopment of land 163-169 and 171-173 Knightsbridge, City of Westminster. The study site covers an area of approximately 1354 square metres. The archaeological evaluation involved the excavation and recording of six test pits, and the re-opening and recording of a 7<sup>th</sup> test pit, which aimed to determine the archaeological and geoarchaeological potential of the site (Figure 2).
- 2.2 The site has most recently been occupied by the Knightsbridge Palace Hotel (also known as the Hotel Normandie or the Normandie Suites) at 163-169 Knightsbridge, and Victorian buildings at 171-173 Knightsbridge.
- 2.3 The evaluation revealed truncated natural strata directly beneath made ground deposits of basement backfill, suggesting that the construction of the basement of the previous buildings at the site had truncated the underlying archaeological horizons.
- 2.4 The commissioning client was CgMs Consulting. The evaluation was supervised by Sarah Barrowman of Pre-Construct Archaeology Ltd. The project was managed for Pre-Construct Archaeology Ltd by Tim Bradley, and was monitored by Diane Abrams of English Heritage.
- 2.5 The completed archive comprising written, drawn and photographic records will be deposited with the London Archaeological Archive and Research Centre (LAARC) under the unique site code KNK 09.



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Figure 1  
 Site Location  
 1:10,000 at A4



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Figure 2  
 Detailed Site Location showing Geotechnical Test Pit Locations  
 1:250 at A4

### 3 PLANNING BACKGROUND

- 3.1 The study aims to satisfy the objectives of the City of Westminster, which fully recognizes the importance of the buried heritage for which they are the custodians. In November 1990 the Department of the Environment issued Planning Policy Guidance Note 16 (PPG16) 'Archaeology and Planning'. It provides guidance for planning authorities, property owners, developers and others on the preservation and investigation of archaeological remains.
- 3.2 The Council's Archaeology Policy, as defined in the City of Westminster's Unitary Development Plan adopted 24 January 2007, is as follows:

**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 Lillystone 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.*



3.3 The site does not lie within an area of Special Archaeological Priority, as defined by the City of Westminster UDP Map. There are no Scheduled Ancient Monuments or Listed Buildings on the site.

## **4 GEOLOGY AND TOPOGRAPHY**

### **4.1 Geology**

4.1.1 The site lies mainly on ground mapped by the British Geological Survey as Kempton Park Gravels. In the northwest corner, the site extends onto ground mapped as London Clay. This is the bluff between the Kempton Park Gravels (and terrace) and the Hackney Gravels (and terrace) which lie at a higher level to the north. The extension of this outcrop of the London Clay surrounds the higher ground to the north of Knightsbridge, occupied by Kensington Gardens and adjacent areas, and underlain by remnants of the Hackney, Lynch Hill and Boyn Hill Gravels (and terraces)<sup>1</sup>.

4.1.2 Previous reports on the site (MoL Undated) suggested that there was potential for palaeoenvironmental or topographical information in the form of a palaeochannel which may have extended through the site. However, visits to the site prior to the evaluation suggested that the channel did not survive in the area of the site, with 500mm of truncated natural Terrace gravel sealing the exposed London Clay at the base of the backfilled Victorian basement in the north west corner of the site, and exposed London Clay at the south west end of the site directly under the basement slab (Bradley 2009).

### **4.2 Topography**

4.2.1 The closest watercourse to the site is the Serpentine approximately 280m to the north. The River Thames is located approximately 1.93km to the south.

4.2.2 The evaluation site varies in height from 12.60m OD in the north, to 10.88m OD in the south. The basement floor level was believed to have extended to depths of between 8.77m OD to 9.00m OD.

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1.1.1 \_\_\_\_\_  
<sup>1</sup> C. Green, QUEST, Appendix 1

## **5 ARCHAEOLOGICAL AND HISTORICAL BACKGROUND**

5.1 The archaeological and historical background the site is laid out in full in a previous Written Scheme of Investigation (MoL undated). The following is a summary from the relevant parts of this document and other applicable sources.

### **5.2 Prehistoric**

5.2.1 There is limited *in situ* prehistoric material recorded from within the vicinity of the site. It has been suggested by some sources (MoL undated) that there is potential for the discovery of palaeo-environmental or topographical information, including a palaeochannel possibly crossing the site. This suggested potential has been disputed<sup>2</sup>.

### **5.3 Roman**

5.3.1 The site lies between a network of Roman roads and prior archaeological investigations within Hyde Park to the north-west have recorded features to suggest a degree of Roman activity within the greater area.

### **5.4 Saxon and Medieval**

5.4.1 The place name of Knightsbridge is believed to date to the 11<sup>th</sup> century, though a bridge believed to be of Saxon origin is thought to have been located to the east of the area. The evaluation site lies close to two medieval routes, likely to have been within the medieval village of Knightsbridge or in its hinterland. The road Knightsbridge began as a medieval route which linked the villages of Knightsbridge and Kensington.

### **5.5 Post-Medieval**

5.5.1 The area to the south of Hyde Park had been famous for its market gardens, being close to ancient road links to London. Notable development began in the 17<sup>th</sup> century when wealthy landowners began the construction of rural mansions. The area to the north of the sit remained largely rural or parklands in the 18<sup>th</sup> century, with only the occasional buildings along Knightsbridge.

5.5.2 Desmart's map of 1717 shows site as being located within in a formal garden fronting a property on the southern side of the road. Terraced housing is first shown on the site on mid 18<sup>th</sup> century maps, such as Rocque's map of 1746. Further cartographic evidence suggests that development on the site had been consistent since the mid 18<sup>th</sup> century, also earlier occupation is possible, and by the late 19<sup>th</sup> century the site was almost completely developed.

1.1.1 \_\_\_\_\_

<sup>2</sup> C. Green, QUEST, Appendix 1

5.5.3 The site is known to have been re-developed in the early 20<sup>th</sup> century when the Knightsbridge Palace Hotel (later the Normandie Suites) was constructed at 163-169 Knightsbridge, and the buildings which had existed at 171-173 are recorded as having been of Victorian date.

## 6 ARCHAEOLOGICAL METHODOLOGY

- 6.1 The methodology for the excavation of the trenches and test pits was outlined in the *Method Statement for an Archaeological & Geoarchaeological Evaluation* (Bradley 2009). Six auger locations were originally proposed for the site, though this was revised to the excavation of six test pits, with a seventh also being excavated in order to record an area which had previously been exposed and observed. Test Pits were positioned to appropriately cover the previously proposed auger survey of the area. Some variation in the final position of the Test Pits was required due to space and access constraints on the site.
- 6.2 The evaluation aimed to determine the presence and character of the truncated terrace deposits and assess their significance. The evaluation also aimed to clarify the nature and extent of existing disturbances and intrusions (principally the basement) and hence assess the degree of archaeological survival.
- 6.3 The Test Pits were excavated with a mechanical excavator fitted with a flat-bladed ditching bucket in spits of between 100mm and 200mm, under the supervision of an archaeologist. Their relative dimensions are shown below:

Trench/Test Pit Number	Length at Top (m)	Width at Top (m)	Max. Depth (m)
Test Pit 1	3.28	2.30	6.89
Test Pit 2	2.30	2.30	8.67
Test Pit 3	3.00	2.30	7.37
Test Pit 4	3.00	2.20	7.93
Test Pit 5	2.80	2.30	7.54
Test Pit 6	3.10	2.20	7.73
Test Pit 7	3.00	2.30	8.62

- 6.4 All deposits were recorded on pro forma context sheets. Plans were drawn at a scale of 1:20 and sections at 1:20. A photographic record was also kept of all the Test Pits. Geoarchaeological samples were taken from relevant contexts. No pre-modern artefacts were encountered.
- 6.5 A temporary benchmark was established on site, taken from one of the benchmarks established by the Keltbray engineer. This benchmark had a height of 12.41m OD.

## **7 TRENCH & TEST PIT SUMMARY**

### **7.1 Test Pit 1 (Figures 2 & 3)**

#### ***Phase 1***

7.1.1 The earliest deposit observed in Test Pit 1 was London Clay [1], which was composed of firm mid yellowish-reddish-brown clay, and was encountered at 6.89m OD. The surface of the deposit formed the limit of excavation, with the deposit representing the underlying geology of the area. This was overlain by a terrace deposit [14], the surface of which had been truncated by the basement. This was composed of friable-soft predominately mid reddish-yellowish-brown clayey-sand with darker veins of root-type action, but also contained patches which were mid bluish-grey in colour with veins of dark greyish-blue, with the change in colour being a likely result of natural oxidisation and weathering processes. The deposit contained moderate amounts of small sub-angular gravels. It was encountered at 7.64m OD, with a thickness of 0.76m, and dimensions of 3.28m by 2.30m which extended beyond the limits of excavation.

#### ***Phase 2***

7.1.2 The natural deposits were overlain by a layer of modern made ground [13]. This was composed of loose mid greyish-brown ceramic building material crush mixed with sandy-silt, with moderate inclusions of wood, frequent concrete crush, and occasional plastic pieces and stone. This was encountered at 10.87m OD, with a thickness of 2.20m, and dimensions of 3.28m by 2.30m extending beyond the limits of excavation. The Test Pit was then sealed by the crush layer of the recently laid piling mat [+] at 11.47m OD.

### **7.2 Test Pit 2 (Figures 2 & 3)**

#### ***Phase 1***

7.2.1 The earliest deposit observed in Test Pit 2 was London Clay [1], which was composed of firm mid yellowish-reddish-brown clay, and encountered at 8.67m OD. The surface of the deposit formed the limit of excavation, and it extended beyond the limits of excavation. This was overlain by a layer of truncated terrace deposit [10], which was composed of friable mid reddish-yellowish-brown clayey-sand that was 0.67m thick and encountered at 9.41m OD, and extended beyond the limits of excavation. An area of diesel contamination was also evident in part of this deposit.

#### ***Phase 2***

7.2.2 The terrace deposit [10] was overlain by a layer of modern made ground [9], composed of re-deposited soft mid greyish-brown sandy-clay, with moderate inclusions of ceramic building material fragments and concrete pieces, and occasional plastic. This was encountered at 10.96m

OD, and was 1.54m thick, with dimensions of 2.30m by 2.30m which extended beyond the limits of excavation. This was overlain by the crush of the piling mat [+] which sealed the trench at 11.89m OD.

### **7.3 Test Pit 3 (Figures 2 & 3)**

#### ***Phase 1***

7.3.1 The earliest deposit observed in Test Pit 3 was the London Clay [1], which was composed of firm mid yellowish-reddish-brown clay, and was encountered at 7.37m OD. The surface of the deposit formed the limit of excavation. This was overlain by a terrace deposit [8], composed of friable mid reddish-yellowish-brown clayey-sand, the surface of which had been truncated by the basement. It was 0.56m thick; with visible dimensions of 3.00m by 2.30m extending beyond the limits of excavation, and it was encountered at 7.96m OD.

#### ***Phase 2***

7.3.2 The natural deposits were overlain by a modern layer of made ground [7] which represented basement backfill. It was composed of soft mid greyish-brown sandy-clay, with inclusions of moderate amounts of ceramic building material and concrete fragments, and occasional plastic and wood pieces. This was encountered at 10.18m OD, being 2.24m thick, with observed dimensions of 3.00m by 2.30m extending beyond the limits of excavation. The Test Pit was sealed by a recently laid layer of crush for the piling mat [+], which was recorded from 11.50m OD.

### **7.4 Test Pit 4 (Figures 2 & 3)**

#### ***Phase 1***

7.4.1 The earliest deposit observed in Test Pit 4 was London Clay [1], composed of firm mid yellowish-reddish-brown clay, and encountered at 7.93m OD, forming the limit of excavation. The London Clay was overlain by a truncated terrace deposit [5] that was composed of friable mid reddish-yellowish-brown clayey-sand. This was 0.70m thick, encountered at 8.59m OD, and extended beyond the limits of excavation, with visible dimensions of 3.00m by 2.20m.

#### ***Phase 2***

7.4.2 The terrace deposit [5] was overlain by a layer of modern made ground [6] which backfilled the area of the former basement. This was composed of soft mid greyish-brown sandy-clay, with moderate inclusions of ceramic building material, and occasional inclusions of metal and wood. It was encountered at 11.13m OD, being 2.50m thick, and sealed the area of the test pit.

## 7.5 Test Pit 5 (Figures 2 & 3)

### **Phase 1**

7.5.1 The earliest deposit observed in Test Pit 5 was the London Clay [1], which was composed of firm mid yellowish-reddish-brown clay, and was encountered at 7.54m OD. The surface of the deposit formed the limit of excavation, and the deposit represented the underlying geology of the area. This was overlain by a truncated terrace deposit [12] that was composed of friable mid reddish-yellowish-brown clayey-sand, which was encountered at 8.37m OD, with a thickness of 0.86m, and dimensions of 2.80m by 2.30m extending beyond the limits of excavation.

### **Phase 2**

7.5.2 The terrace deposit [12] was overlain by a layer of modern made ground [11], which backfilled the area of the former basement. This was composed of loose mid greyish-brown sandy-silt with concrete pieces, and inclusions of frequent ceramic building material and occasional plastic, timber, and stone. The deposit sealed the area of the Test Pit, and was encountered at 11.31m OD, with a thickness of 3.14m.

## 7.6 Test Pit 6 (Figures 2 & 3)

### **Phase 1**

7.6.1 The earliest deposit observed in Test Pit 6 was London Clay [1], being composed of firm mid yellowish-reddish-brown clay, and encountered at 7.54m OD. The surface of the deposit formed the limit of excavation, representing the underlying geology of the area. This was overlain by a truncated terrace deposit [2], composed of friable mid reddish-yellowish-brown clayey-sand, with moderate dark blackish-brown veins of likely plant root action. This was encountered at 8.65m OD, with a thickness of 0.72m, and dimensions of 3.10m by 2.20m extending beyond the limits of excavation.

### **Phase 2**

7.6.2 The natural deposits were overlain by the recently laid crush piling mat [+], which also sealed the Test Pit from 10.88m OD.

## 7.7 Test Pit 7 (Figures 2 & 3)

### **Phase 1**



7.7.1 The earliest deposit observed in Test Pit 7 was London Clay [1], which was composed of firm mid yellowish-reddish-brown clay, and encountered at 8.62m OD. The surface of the deposit formed the limit of excavation, and represented the underlying geology of the area. This was overlain by a terrace deposit [4] of friable mid brownish-yellow clayey-sand, which contained occasional small sub-rounded to sub-angular gravels. It was observed to be 0.50m thick, with dimensions of 3.00m by 2.30m that extended beyond the limits of excavation, and a thickness of 0.50m.

**Phase 2**

7.7.2 The terrace deposit [4] was overlain by a layer of re-deposited natural or basement backfill [3] which represents the result of the backfilling of the area which had previously been excavated prior to this evaluation. It was composed of moderately compacted mid reddish-yellowish-brown silty-clay with occasional small gravels, and was encountered from 9.95m OD, 0.86m thick, and had dimensions of 3.00m by 2.30m which extended beyond the limits of excavation. This was overlain by the recently laid layer of crush piling mat [+] which sealed that Test Pit from 12.60m OD.

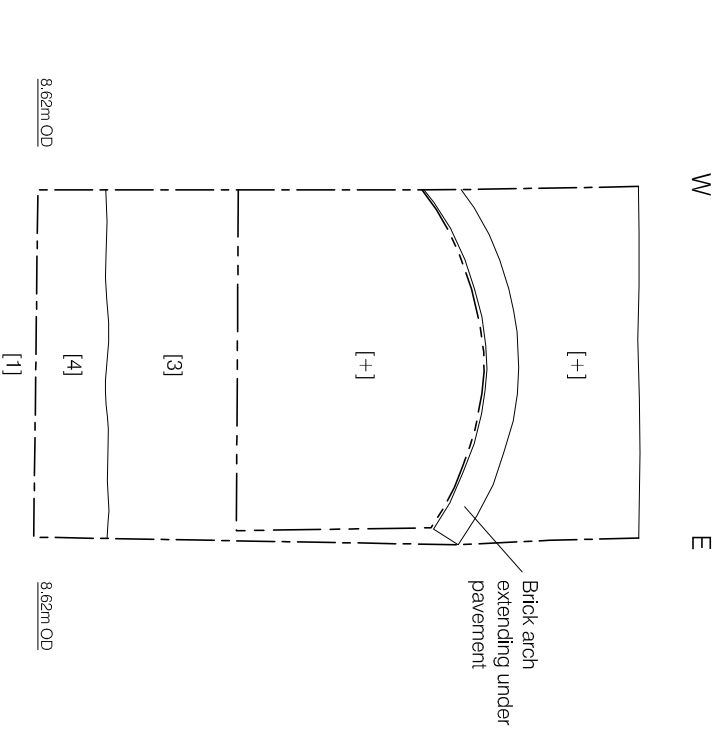
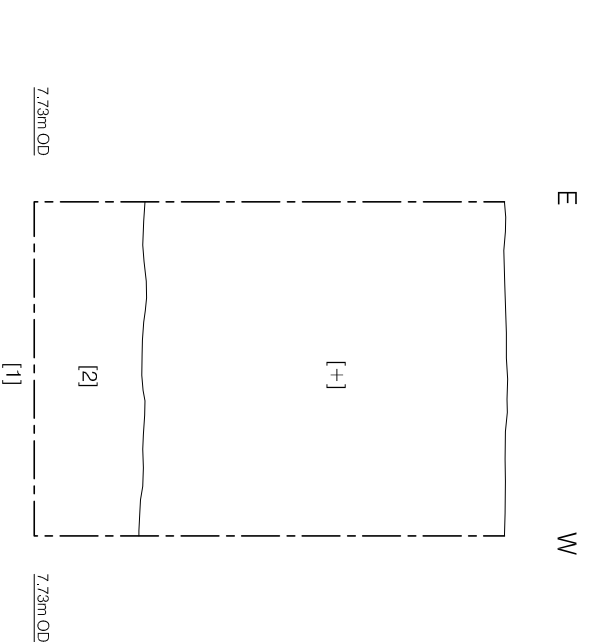
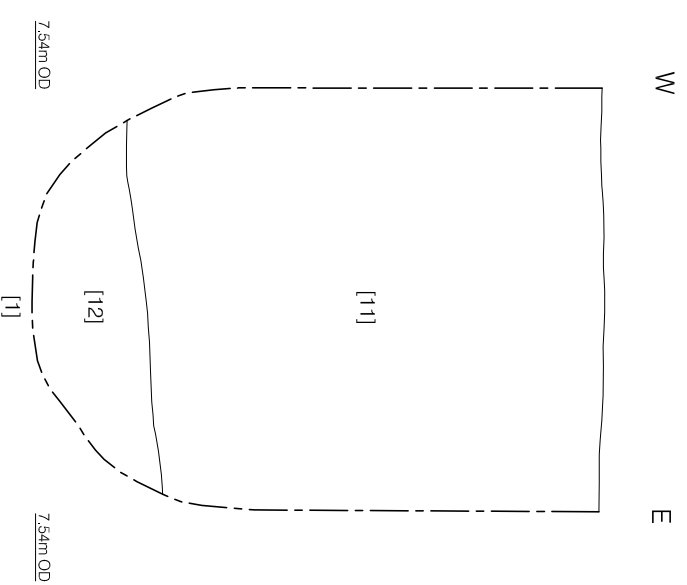
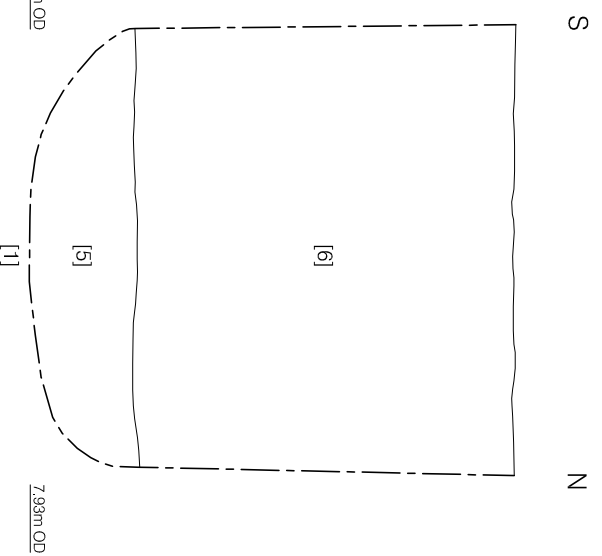
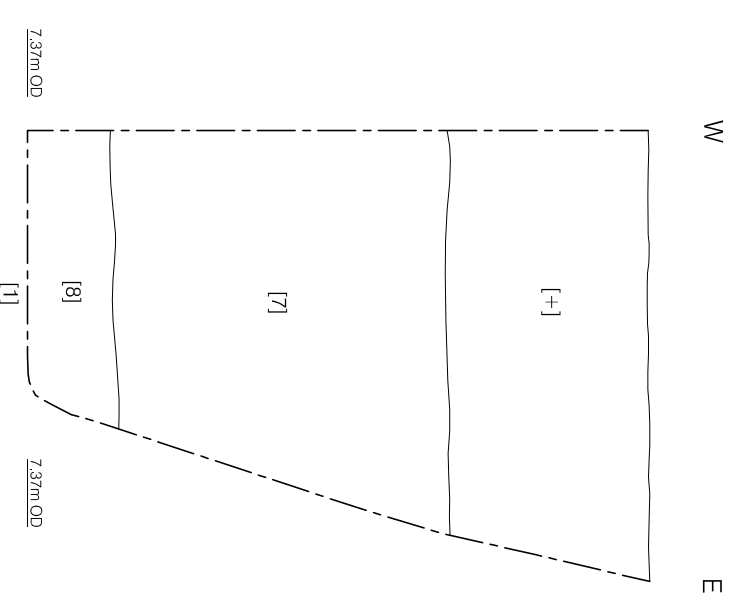
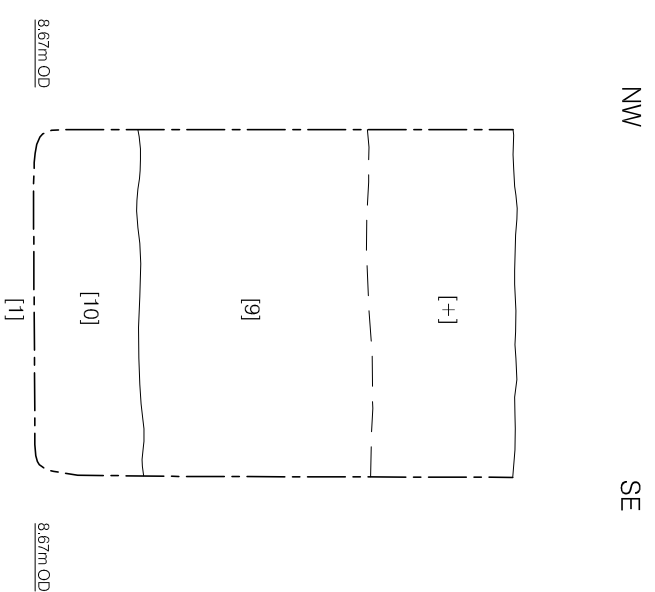
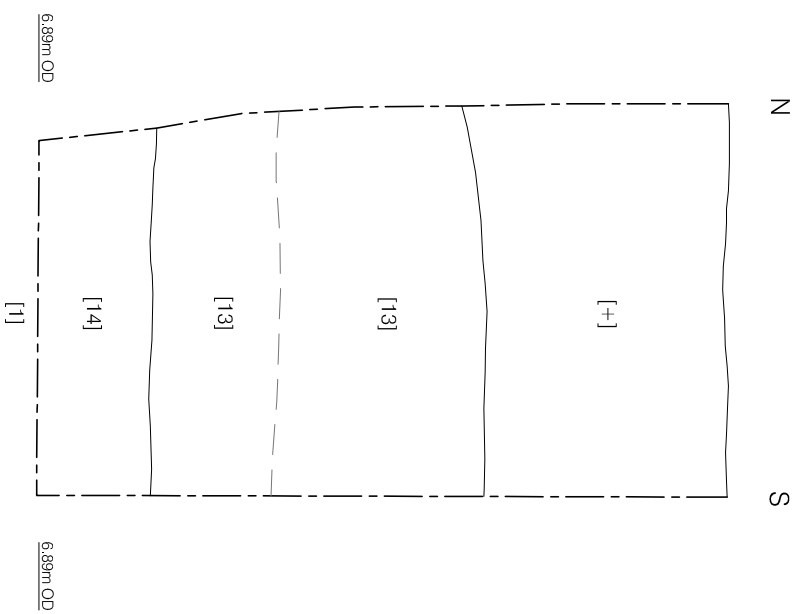
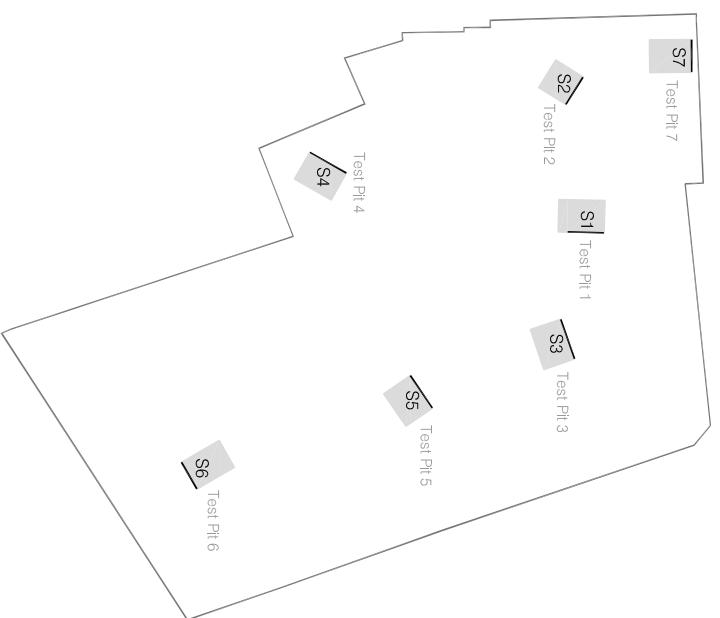
## **8 THE ARCHAEOLOGICAL SEQUENCE**

### **8.1 Phase 1: Natural**

- 8.1.1 The London Clay was observed consistently in all seven of the Test Pit locations, and formed the basal limit of excavation. The depth at which it was encountered varied across the site, from 8.67m OD in the northwest to 6.89m OD in the central northern area. The general slope pattern of the London Clay runs downwards towards the north-eastern area of the site, although this is not a definitive pattern and may be due to natural undulations in the landscape.
- 8.1.2 Terrace deposits were observed in all of the Test Pits across the site. These were generally observed to likely represent the disturbed remnants of sandy facies of a terrace deposit, most probably the Taplow Gravel. The higher level of the London Clay surface in the northwest corner of the site indicates a close proximity to the bluff separating the area mapped as Kempton Park Terrace from the Hackney Terrace. The presence of very clayey, gravelly deposits in the most northerly test pits (TP1 and TP7) almost certainly reflects downslope movement of gravelly material from the higher ground across the exposed London Clay.
- 8.1.3 All of these deposits were observed to have been truncated by the construction of the basement on the site, to depths of 7.64m OD to 9.41m OD. No relict surface horizons were encountered as a result of this truncation, though the presence of root channels and root remains in areas indicates the former existence of a soil above the level of the surviving terrace sediments.

### **8.2 Phase 2 – Modern Deposits**

- 8.2.1 Modern re-deposited made ground was observed within each of the Test Pits which were excavated, and in each case it was representational of basement backfill and of no archaeological interest.



0 2.5m  
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Figure 3  
Sections 1 to 7  
1:50 at A3

## **9 INTERPRETATION AND CONCLUSIONS**

### **9.1 Interpretation**

- 9.1.1 All of the test pits revealed deposits of London Clay across the site. This was observed to be a level of between 6.89m OD and 8.67m OD.
- 9.1.2 Overlying the London Clay in most of the test pits was a layer of clayey-sand, most likely to represent the disturbed remains of sandy facies of terrace deposit, most likely Taplow Gravel. The clayey-gravelly deposits in the northern Test Pits 1 and 7 are also likely the result of downslope movement of material from higher ground over exposed London Clay. The evidence of root channels and remains in areas indicates that a soil horizon would have been present above the observed terrace deposits. No archaeological features or artefacts were observed within the terrace deposits.
- 9.1.3 The basement which had been associated with the former development upon the site was observed to have truncated the natural surface of the terrace deposit in all of the test pits undertaken to depths of between 9.41m OD to 7.64m OD.
- 9.1.4 It had been predicted by some sources that a palaeochannel may have crossed the site. However, the poorly sorted condition of most of the terrace deposits, their clay content and the general absence of depositional structures suggest that none of the sediment at the site is of fluvial origin in its present form.
- 9.1.5 Overlying the truncated terrace deposits was a layer of made ground, the result of the modern backfilling of the former basement area, and hence of no archaeological interest. This was followed by a layer of crush recently laid to form a piling mat.

### **9.2 Conclusions**

- 9.2.1 The evaluation revealed the presence of London Clay across the site, overlain by a layer terrace deposits which was also observed within all of the test pits, the result of downslope movement and the remains of facies likely to be associated with the terrace deposits of the Taplow Gravel.
- 9.2.2 The construction of the basement which was associated with the former development of the site was observed to have had a notable impact with the truncation of the Terrace Deposits in all of the Test Pits, with no evidence of the original surface levels observed to have survived.
- 9.2.3 No evidence of a palaeochannel was observed during the evaluation, nor were any archaeological features or artefacts.

## **10 ACKNOWLEDGMENTS**

- 10.1 Pre-Construct Archaeology Ltd would like to thank CgMs for commissioning the work, particularly Duncan Hawkins. Thanks are also extended to Diane Abrams of English Heritage for monitoring the work. The onsite assistance and co-operation of the Keltbray staff was also greatly appreciated.
- 10.2 The author would like to thank Tim Bradley for his project management, Mark Roughley for the illustrations, and Lisa Lonsdale for logistics. Thanks are also given to Rob Batchelor and Chris Green for their work on the geoarchaeology, and to Will Johnson for his work on site.

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## **APPENDIX 1: GEOARCHAEOLOGICAL ASSESSMENT REPORT**

### **KNIGHTSBRIDGE PALACE HOTEL, CITY OF WESTMINSTER: GEOARCHAEOLOGICAL ASSESSMENT REPORT**

*Quaternary Scientific (QUEST) Unpublished Report; August 2009; Project Number 063/09*

**C.P. Green**

Quaternary Scientific (QUEST), School of Human and Environmental Sciences, University of Reading, Whiteknights, PO Box 227, Reading, RG6 6AB, UK

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#### **INTRODUCTION**

This report summarises the findings arising out of the geoarchaeological assessment undertaken by Quaternary Scientific (QUEST) in connection with the proposed development at Knightsbridge Palace Hotel, City of Westminster (National Grid Reference: TQ 277 797).

#### **SITE CONTEXT**

The site lies to the north of the River Thames at a distance of c.1.7km from the modern waterfront. It is very close to the northern edge of a broad terrace remnant that forms the ground occupied by Chelsea and South Kensington and extends upstream beneath Fulham and Chelsea and beyond. This is mapped by the British Geological Survey (BGS) (1:50,000 Sheet 256 North London 1994) as the Kempton Park Terrace forming the surface of the Kempton Park Gravel which comprises aggradational sands and gravels laid down under cold climatic conditions in the Mid Devensian. Gibbard (1989) suggests "that the aggradation began in 45,000-44,000 BP and ended in 32,000-30,000 BP". Organic deposits recorded in association with the Kempton Park Gravel at Kempton Park (Gibbard et al 1982) and at Isleworth (Kerney et al 1982) have been dated respectively to 43,140±1,520/-1,280 BP and 35,230 ± 185 BP. Vertebrate remains have been recorded in the Kempton Park Gravel in the London area and include Rangifer tarandus (reindeer), Ursus arctos (brown bear) and Saiga tartarica (saiga antelope), all species adapted to cold climatic conditions.

Immediately to the north of the site the ground rises to form a staircase of terrace remnants underlain in ascending order, according to the BGS mapping, by the Hackney Gravel, the Lynch Hill Gravel and the Boyn Hill Gravel. On the sloping ground, rising from the level of the Kempton Park Gravel to the Hackney Gravel, the bedrock London Clay is mapped, forming a narrow outcrop that extends westward into Kensington where it separates the Taplow Terrace from the higher terrace remnants. The mapped boundary between the Kempton Park Gravel and the underlying London Clay lies just inside the present site near its northern margin.

(N.B. In the WSI prepared by the Museum of London Archaeological Service for this site, this narrow outcrop of the London Clay was misinterpreted as a product of downcutting by a tributary of the Westbourne, leading to the misguided belief that a palaeochannel might be preserved within the northern part of the site).

## **RESULTS**

### **FIELD RECORD**

Seven test pits were put down at the site and revealed a rather uniform sediment sequence across the whole area. Only three sediment units were recognised in the field: Unit 1 - London Clay; Unit 2 - Sandy Terrace Deposits; Unit 3 - Made Ground. The surface of the London Clay was slightly uneven between 6.89m OD and 8.67m OD - a maximum difference of 1.78m with the highest points in the north west corner of the site (TP7 - 8.62m OD, TP2 - 8.67mOD). The Sandy Terrace Deposits forming Unit 2 were evidently truncated, varying irregularly in thickness from 0.92m in the south of the site (TP6) to 0.48m in the northwest corner of the site (TP7). The truncated surface of the terrace deposits was recorded between 7.64m OD and 9.41m OD. No primary depositional structures were preserved in these sediments which were all massive in structure.

### **SAMPLE DESCRIPTION**

Small (500-700g) bulk samples of the Sandy Terrace Deposits were taken in each test pit and were subsequently examined in the laboratory using a low-powered binocular microscope (10-40x magnification).

#### **TP1**

Mainly 2.5Y6/2 light brownish grey with irregular patches of 5YR4/6 yellowish red and localised sharply defined patches of Mn staining; very poorly sorted gravelly very clayey sand with well-rounded and sub-angular flint (up to 43mm long dimension) and small well-rounded quartz.

#### **TP2**

Intimate and fairly uniform mixture of 7.5YR5/6 strong brown and 10YR5/6 yellowish brown with scattered small weakly defined patches of Mn staining; moderately sorted slightly clayey medium sand.

#### **TP3**

Patchy mixture of 5YR5/8 yellowish red and 10YR5/3 brown with small greyer areas and small well defined specks of Mn staining; moderately sorted moderately clayey medium sand with scattered flint granules; short lengths of root channel with patchy Mn staining; very infrequent small root remnants.



#### **TP4**

Sample fairly heavily contaminated with CBM (up to 15mm) clinker and lime mortar

#### **TP5**

5YR5/8 yellowish red and 10YR5/3 brown poorly sorted clayey sand; very infrequent small root remnants; isolated short lengths of faunal burrow with infill of dark brown fine-grained soil.

#### **TP6**

7.5YR5/6 strong brown and 10YR5/6 yellowish brown poorly sorted moderately clayey sand; weakly developed layering/lamination; some parting surfaces heavily Mn stained; Mn staining associated with root channels and root remains.

#### **TP7**

10YR5/6 yellowish brown, 7.5YR5/6 strong brown, 2.5Y6/2 light brownish grey and 10YR4/4 dark yellowish brown; very poorly sorted clayey sand with granules and fine to medium gravel (up to 35mm long dimension).

### **INTERPRETATION**

#### **Topography**

The topographic position of the terrace deposits at this site, resting on a bedrock London Clay surface between 6.89m OD and 8.67m OD and with a truncated surface between 7.64m OD and 9.41m OD is difficult to reconcile with the recorded levels of the Kempton Park Gravel in this area. Gibbard (1986, Fig.9) shows the Kempton Park Gravel in the Kensington and Knightsbridge area resting on a London Clay surface close to 0.0m OD with a surface at c.7.0m OD. The levels at the present site are more consistent with the record provided by Gibbard (1986, Fig.8) for the Taplow Gravel in the same area.

The dating of the Taplow Gravel and associated terrace is unresolved. Contained vertebrate remains include *Ovibos moschatus* (musk ox), *Mammuthus primigenius* (mammoth) and *Coelodonta antiquitatis* (woolly rhino) and indicate aggradation under cold climatic conditions. The position of the Taplow Terrace below the level of the Lynch Hill Terrace and above the Kempton Park Terrace indicates a date between MIS 9 and the last major cold stage - the Devensian. A date prior to the last interglacial - the Ipswichian (MIS 5e) is generally accepted for the Taplow Terrace.

## **Sediments**

The sediment examined in the samples ranges from slightly clayey moderately sorted sand (TP2) to very clayey very poorly sorted gravelly sand (TP1 and TP7). Most of the samples are clayey and poorly sorted. There are some colour variations, with yellowish and reddish hues present in all samples and greys more prominent in the more clayey samples. Manganese staining is present in four of the samples (TP1, TP2, TP3 and TP6) and remnants of organic material and soil-related features in three samples (TP3, TP5 and TP6). Sample TP4, while generally similar in appearance to sample TP2, was contaminated throughout with typical building demolition debris in the form of mortar and CBM. The remains of primary structures, in the form of coarse laminations were present in TP6 but otherwise all the sample material appears originally to have been massive.

The poorly sorted condition of most of the samples, their clay content and the general absence of depositional structures suggest that none of the sediment at the site is of fluvial origin in its present form. The higher level of the bedrock London Clay surface in the northwest corner of the site indicates close proximity to the bluff separating the area mapped as Kempton Park Terrace from the Hackney Terrace. The presence of very clayey, gravelly deposits in the most northerly test pits (TP1 and TP7) almost certainly reflects downslope movement of gravelly material from the higher ground across the exposed London Clay. The clayey sands observed in the remaining test pits are most likely to represent disturbed remnants of a sandy facies of a terrace deposit - most probably the Taplow Gravel. The presence of root channels and root remains in several of the samples indicates the former existence of a soil above the level of the surviving terrace sediments and its truncation during groundworks preceding the deposition of the material forming the Made Ground.

## **RECOMMENDATIONS**

Neither the field record nor the bulk samples provide any indication of palaeoenvironmental evidence requiring more detailed examination. It is therefore not recommended that further work be carried out on the samples collected at this site, nor that further work be carried out to collect additional samples.

## **REFERENCES**

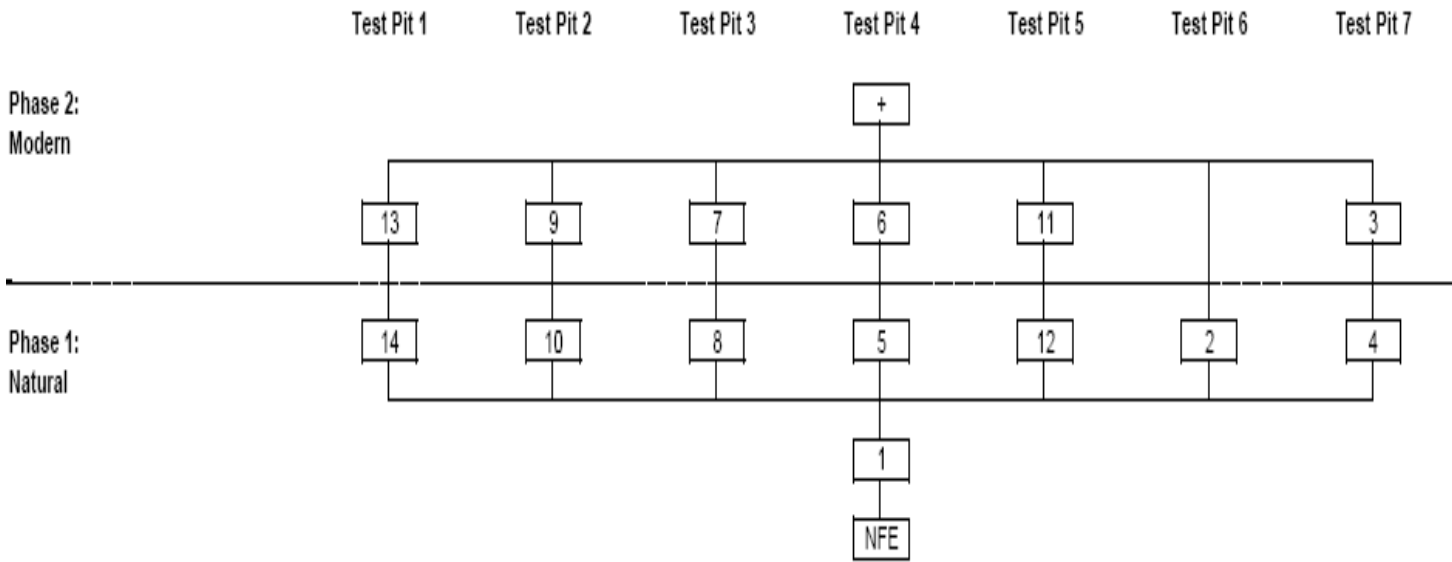
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## APPENDIX 2: CONTEXT INDEX

Context No.	Test Pit	Plan	Section / Elevation	Type	Description	Date	Phase
1	TP1-7	TP1-7	S1-7	Natural	London Clay	-	1
2	TP6	-	S6	Natural	Terrace Deposit	-	1
3	TP7	-	S7	Layer	Re-Deposited Natural/Basement Backfill	Modern	2
4	TP7	-	S7	Natural	Terrace Deposit	-	1
5	TP4	-	S4	Natural	Terrace Deposit	-	1
6	TP4	-	S4	Layer	Made Ground/Basement Backfill	Modern	2
7	TP3	-	S3	Layer	Made Ground/Basement Backfill	Modern	2
8	TP3	-	S3	Natural	Terrace Deposit	-	1
9	TP2	-	S2	Layer	Made Ground/Basement Backfill	Modern	2
10	TP2	-	S2	Natural	Terrace Deposit	-	1
11	TP5	-	S5	Layer	Made Ground/Basement Backfill	-	2
12	TP5	-	S5	Natural	Terrace Deposit	-	1
13	TP1	-	S1	Layer	Made Ground/Basement Backfill	Modern	2
14	TP1	-	S1	Natural	Terrace Deposit	-	1

### APPENDIX 3: SITE MATRIX



## APPENDIX 4: OASIS REPORT FORM

**OASIS ID: preconst1-63140**

### Project details

Project name	163-169 and 171-173 Knightsbridge
Short description of the project	An archaeological evaluation was undertaken by Pre-Construct Archaeology Ltd at 163-169 and 171-173 Knightsbridge, City of Westminster, consisting of six test pits, plus a seventh test pit in a previously exposed area. London Clay was observed within all test pits, and represent the oldest deposits observed during the evaluation. The test pits also contained the remains of a terrace deposit, likely associated with Taplow Gravel and downslope movement, the surface of which had been truncated by a former basement in all areas observed. All of the test pits were overlain by modern made ground that had been used to backfill the area of the former basement, and five were sealed by a layer of crush recently laid as a piling mat.
Project dates	Start: 06-08-2009 End: 07-08-2009
Previous/future work	No / No
Any associated project reference codes	KNK 09 - Sitecode
Type of project	Field evaluation
Site status	None
Current Land use	Vacant Land 1 - Vacant land previously developed
Methods &	'Grab-sampling','Test Pits'

techniques

Development type Urban residential (e.g. flats, houses, etc.)

Development type Urban commercial (e.g. offices, shops, banks, etc.)

Prompt Direction from Local Planning Authority - PPG16

Position in the  
planning process Not known / Not recorded

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### Project location

Country England

Site location GREATER LONDON CITY OF WESTMINSTER PADDINGTON  
BAYSWATER AND KNIGHTSBRIDGE 163-169 and 171-173 Knightsbridge,  
City of Westminster

Postcode SW7 1DW

Study area 1354.05 Square metres

Site coordinates TQ 27612 79648 51.5008470233 -0.161265511903 51 30 03 N 000 09 40 W  
Point

Height OD / Depth Min: 7.64m Max: 9.41m

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### Project creators

Name of  
Organisation Pre-Construct Archaeology Ltd

Project brief CgMs Consulting

originator

Project design  
originator                      Tim Bradley

Project  
director/manager              Tim Bradley

Project supervisor            Sarah Barrowman

Type of  
sponsor/funding  
body                              Consultancy

Name of  
sponsor/funding  
body                              CgMs Consulting

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### Project archives

Physical Archive  
recipient                        LAARC

Physical Archive ID        KNK 09

Physical Contents         'Environmental'

Digital Archive  
recipient                        LAARC

Digital Archive ID        KNK 09

Digital Media  
available                        'Images raster / digital photography'



Paper Archive recipient	LAARC
Paper Archive ID	KNK 09
Paper Media available	'Context sheet', 'Diary', 'Photograph', 'Plan', 'Report', 'Section'

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**Project bibliography 1**

Publication type	Grey literature (unpublished document/manuscript)
Title	An Archaeological Evaluation at 163-169 and 171-173 Knightsbridge, City of Westminster, SW7 1 DW
Author(s)/Editor(s)	Barrowman, S.
Date	2009
Issuer or publisher	Pre-Construct Archaeology Ltd
Place of issue or publication	London
Description	Client Report

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Entered by	Sarah Barrowman (sbarrowman@pre-construct.com)
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