Mount Pleasant, London

Environmental Assessment Chapter 12: Archaeology - Addendum

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Comments

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1. Introduction

1.1. This ES Addendum was undertaken to provide supplementary information to the existing Archaeology and Cultural Heritage Chapter, which was prepared by Waterman Energy, Environment & Design Ltd. The original chapter presents an assessment of the likely significant effects of the anticipated demolition and construction works associated with each of the three Development Scenarios on buried heritage (archaeology).

1.2. The existing Chapter provides a summary of relevant planning policy and a description of the methods used in the assessment and as such this is not repeated here. This was followed by a description of the assumed future baseline conditions of the Site and surrounding area, and an assessment of the potentially significant effects of each Development Scenario during the construction works. Mitigation measures are identified where appropriate to avoid, reduce or offset any potentially adverse effects, and the nature and significance of the likely residual effects are described.

1.3. The assessment presented in the Chapter was informed by a desk-based Buried Heritage (Archaeology) Assessment, which is presented in Appendix 12.1 of the ES. The assessment of the likely significant effects of each of the three Development Scenarios on built (above ground) heritage is presented separately in Volume 3: Townscape, Visual and Built Heritage Assessment.

1.4. This ES addendum presents additional information on the likely ground disturbance and archaeological potential of the Site following on from a geo-archaeological investigation, commissioned by Waterman and undertaken by AOC archaeology. This concludes with a summary of any changes in the assessment, resulting from this information. The full geo-archaeological report is presented in **Appendix B**.

1.5. This addendum summarises the findings arising from the geo-archaeological fieldwork and deposit modelling undertaken by Quaternary Scientific (University of Reading) in connection with the proposed development of Land at Phoenix Place, London Borough of Islington (National Grid Reference: centred on TQ 3100 8200). The Site lies on a former terrace of the Thames occupied by the Hackney Gravel, and is located approximately one kilometre north of the modern waterfront.

1.6. The Site is mapped by the British Geological Society and located at a point where the River Fleet cuts down through the Hackney Gravel to expose the London Clay bedrock (1:50,000 Sheet 286 North London 2006). Berry (1979) notes that an enclosed hollow underlies part of the Fleet Valley (identified as a circular feature on the BGS mapping) in the area of Calthorpe Street, and underlying the northern part of the site. This feature was considered to represent a possible scour feature related to the older Hackney Gravel. The superficial geology at the Site is thus fairly complex, with Hackney Gravel recorded to the North of the Site, London Clay through the centre, and Alluvium, associated with the River Fleet, towards the south. The River Fleet, now largely subterranean, rises several kilometres to the north at Hampstead Heath and Highgate.

1.7. The aim of the geo-archaeological investigations at the site was to:

- clarify the nature of the sub-surface stratigraphy, in particular the presence and thickness of Alluvium across the site, and
- to evaluate the potential of the sedimentary sequences for reconstructing the environmental history of the site and its environs.

1.8. In order to achieve this aim, seven geo-archaeological boreholes were taken from two transects aligned broadly NW-SE and SW-NE (**Appendix B**).

2. Methodology

2.1. Seven geo-archaeological boreholes were taken at the Site in February 2014. Borehole core samples were recovered using an Eijkelkamp window sampler and gouge set using an Atlas Copco TT 2-stroke percussion engine. This coring technique is a suitable method for the recovery of continuous, undisturbed core samples and provides sub-samples suitable for not only sedimentary and microfossil assessment and analysis, but also macrofossil analysis.

2.2. The recovered core samples were wrapped in clear plastic to prevent moisture loss, labelled with the depth (metres from ground surface) and orientation (top and base) and returned to Quaternary Scientific for storage in a purpose built facility at 2oC. This temperature prevents fungal growth on the core surface, which may lead to anomalous radiocarbon dates, and moisture loss. The spatial attributes of each borehole were recorded using a Leica GS09 Differential GPS.

2.3. Where cores were retained, the lithostratigraphy of boreholes was described in the laboratory using standard procedures for recording unconsolidated sediment and organic sediments, noting the physical properties (colour), composition (gravel, sand, clay, silt and organic matter) and inclusions (e.g. artefacts). The procedure involved:

- cleaning the samples with a spatula or scalpel blade and distilled water to remove surface contaminants;
- recording the physical properties, most notably colour using a Munsell Soil Colour Chart;
- recording the composition; gravel (Grana glareosa; Gg), fine sand (Grana arenosa; Ga), silt (Argilla granosa; Ag) and clay (Argilla steatoides);
- recording the degree of peat humification and
- recording the unit boundaries e.g. sharp or diffuse.

2.4. The results are displayed in the full report attached as **Appendix B**.

3. Results of the Fieldwork

3.1. The results of the geo-archaeological investigations (Appendix A) have permitted a programme of two-dimensional deposit modelling of the surface elevation and thickness of each major stratigraphic unit. The basal unit at the site is the London Clay bedrock. The surface of this unit is uneven, lying at its highest in the north and west of the site, at a truncated minimum height of 10.37m OD in borehole <QBH7> and 9.24m OD in <QBH5>. The London Clay was not reached further west in borehole <QBH6> due to the presence of a concrete slab that prevented drilling below 12.36m OD. Towards the south and east of the site the London Clay surface was recorded at 6.92m OD in borehole <QBH4>. The full results of the assessment are outlined in **Appendix B** of this addendum.

4. Conclusions

4.1. As noted in the existing ES Chapter there is evidence in the vicinity of the Phoenix Place site for buried heritage assets, surviving from prehistory into the post medieval period. The archaeological evaluation on the Calthorpe Street site identified deep sedimentary and alluvial deposits, which would contribute to regional research objectives. These deposits have now been identified, as present on the Phoenix Place site, and can be described as being of medium significance.

4.2. The Phoenix Place site has been truncated as a result of development from the eighteenth century through to the twentieth century. The level of truncation has been confirmed by the geo-archaeological assessment to be of a much more shallow nature compared to the Calthorpe Street site, because no large buildings, including a basement, having been built.

4.3. Given the above, the main potential for survival is considered to be palaeo-environmental riverine deposits laid down by the River Fleet. The geo-archaeological investigation has confirmed this assessment. On the Phoenix Place site there is also a low potential for the survival of pre-1540 buried heritage assets and a moderate potential for the survival of eighteenth to twentieth century survival of buildings' footings (such as from the Phoenix Foundry), both of which have been evaluated as being of low significance.

4.4. The geo-archaeological assessment confirmed the presence of moderately significant palaeo-environmental deposits laid down by the Fleet River. These survive beneath the Site which would therefore be disturbed and impacted by its redevelopment..

4.5. It is considered that the fieldwork and desk base assessment undertaken to date is sufficient to provide adequate information to obtain planning consent. The geo-archaeological assessment has identified low potential for archaeological survival.

4.6. However given the potential for survival of archaeological remains below the made ground in the northern areas of the site, and the potential for encountering the remains of civil war defences, there will be a requirement for further archaeological fieldwork in due course. It is likely that this will be in the form of further sampling, during any site investigations, along with targeted trenching and a watching brief.

4.7. Discussions with GLAAS have confirmed that any subsequent investigation can be carried out in advance of ground works (possibly during other geotechnical investigations) and this could be secured by an appropriately worded condition on any planning consent. The archaeological monitoring and recording would be focused on the Phoenix Place site which has not been subjected to severe truncation. This could be secured through an appropriately worded planning condition.

4.8. As a result of the additional information, detailed above, it is not considered that the results of the assessment contained in the existing Archaeology ES chapter and summarised in **Table 1** below require updating.

Table 1: Summary of Potential and Likely Residual Effects on Buried Heritage (Archaeology)

Issue	Potential Effect / Significance	Mitigation Measures	Likely Residual Effect
Demolition and Construction			
Development Scenario 1			
Effects of demolition on buried archaeology (except palaeo-environmental remains).	**Negligible.**	None required.	**Negligible**.
Effects of demolition on palaeo-environmental remains.	**Permanent**, **long-term**, **local adverse effect** of **minor significance**.	Programme of geo-archaeological surveys.	**Permanent**, **long-term**, **local adverse effect** of **minor significance**.
Effect of excavations and construction of the basement and foundations on buried archaeology (except palaeo-environmental remains).	**Permanent**, **long-term**, **local adverse effect** of **minor significance.**	An archaeological watching brief.	**Permanent**, **long-term**, **local adverse effect** of **minor significance**.
Effect of excavations and construction of the basement and foundations on palaeo-environmental remains.	**Permanent**, **long-term**, **local adverse effect** of **moderate significance**.	Programme of geo-archaeological surveys.	**Permanent**, **long-term**, **local adverse effect** of **moderate significance**.
Development Scenario 2			
Effects of demolition on buried archaeology (except palaeo-environmental remains).	**Negligible**.	None required.	**Negligible**.
Effects of demolition on palaeo-environmental remains.	**Permanent**, **long-term**, **local adverse effect** of **minor significance**.	Programme of geo-archaeological surveys.	**Permanent**, **long-term**, **local adverse effect** of **minor significance**.
Effect of excavations and construction of the basement and foundations on buried archaeology (except palaeo-environmental remains).	**Permanent**, **long-term**, **local adverse** of **minor significance**.	An archaeological watching brief.	**Permanent**, **long-term**, **local adverse** of **minor significance**.
Effect of excavations and construction of the basement and foundations on palaeo-environmental remains.	**Permanent, long-term, local adverse effect of moderate significance.**	Programme of geo-archaeological surveys.	**Permanent, long-term, local adverse effect of moderate significance.**
Development Scenario 3			

Issue	Potential Effect / Significance	Mitigation Measures	Likely Residual Effect
Effects of demolition on buried archaeology (except palaeo-environmental remains).	**Negligible**.	None required.	**Negligible**.
Effects of demolition on palaeo-environmental remains.	**Permanent**, **long-term**, **local adverse effect** of **minor significance**.	Programme of geo-archaeological surveys.	**Permanent**, **long-term**, **local adverse effect** of **minor significance**.
Effect of excavations and construction of the basement and foundations on buried archaeology (except palaeo-environmental remains).	**Permanent**, **long-term**, **local adverse** and of **minor significance**.	An archaeological watching brief.	**Permanent**, **long-term**, **local adverse** and of **minor significance**.
Effect of excavations and construction of the basement and foundations on palaeo-environmental remains.	**Permanent**, **long-term**, **local adverse** and of **moderate significance**.	Programme of geo-archaeological surveys.	**Permanent**, **long-term**, **local adverse** and of **moderate significance**.

5. References and Sources

Bibliography

Waterman 2013. Mount Pleasant, London Buried Heritage (Archaeology) Desk - Based Assessment

D.S. Young and C.P. Green 2014. Phoenix Place, London borough of Islington: Geoarchaeological Fieldwork Report. Quaternary Scientific (QUEST),

Appendices

A. Time Chart & Glossary

Time Chart

Palaeolithic	Before c. 10000 BC	Old Stone Age - development of man and earlier hominids, hunting, gathering and the use of chipped flint tools. Divided into lower, middle and upper.
Mesolithic	c.10000 BC - 4000 BC	Middle stone age - nomadic hunter gatherer groups, and the beginnings of food production. Divided into early and late.
Neolithic	c. 4000 BC - 2200 BC	New stone age - first settled agrarian communities and monumental structures. Divided into early, middle and late.
Bronze Age	c. 2600 BC - 700 BC	First use of bronze - copper mining, extensive trade links. Divided into early, middle and later sub-periods.
Iron Age	800 BC - 43 AD	First use of iron and earliest hillforts and oppida. Some interaction with Romans and others. Divided into early, middle and later.
Roman	43 - 410 AD	The first historical period, with written records, saw southern Britain subject to Roman government and culture (also Romano-British). Starts with Roman invasion of 43AD and ends with emperor Honorius advising Britain to rake up its own defence.
Early medieval	410 - 1066 AD	What has been called the Dark Ages, the period from the departure of the Roman legions, and breakdown of Roman rule, to the Norman Conquest. This period saw the colonisation of much of Britain by Angles, Saxons, Vikings and others.
Medieval	1066 - 1540 AD	Also known as the Middle Ages. From the Norman Conquest through to the dissolution of Monasteries.
Post-medieval	1540 - 1750 AD	From the dissolution of monasteries. It covers the Tudor, Elizabethan, Jacobean and Part of the Hanoverian periods, including the English Civil War and Revolution.
Industrial age	1750 - 1899 AD	Late Hanoverian and Victorian reigns, Empire, Industrial Revolution and the full emergence of the capitalist economy.
20th Century	1900 - 1999 AD	Previously recorded as Modern. Heritage assets from a post industrial age economy, including those related to WWI and WWII.

Glossary

Archaeological interest	There will be archaeological interest in a 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.
Conservation (for heritage policy)	The process of maintaining and managing change to a heritage asset in a way that sustains and, where appropriate, enhances its significance.
Designated heritage asset	A World Heritage Site, Scheduled Monument, Listed Building, Protected Wreck Site, Registered Park and Garden, Registered Battlefield or Conservation Area designated under the relevant legislation.
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).
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.
Setting of a heritage asset	The surroundings in which a heritage asset is experienced. Its extent is not fixed and may change as the asset and its surroundings evolve. Elements of a setting may make a positive or negative contribution to the significance of an asset, may affect the ability to appreciate that significance or may be neutral.
Significance (for heritage policy)	The value of a heritage asset to this and future generations because of its heritage interest. That interest may be archaeological, architectural, artistic or historic. Significance derives not only from a heritage asset's physical presence, but also from its setting.

B. Geo-Archaeological Report

PHOENIX PLACE, LONDON BOROUGH OF ISLINGTON (NGR: TQ 3100 8220): GEOARCHAEOLOGICAL FIELDWORK REPORT

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INTRODUCTION

This report summarises the findings arising out of the geoarchaeological fieldwork and deposit modelling undertaken by Quaternary Scientific (University of Reading) in connection with the proposed development of Land at Phoenix Place, London Borough of Islington (National Grid Reference: *centred on* TQ 3100 8200; Figure 1). Quaternary Scientific were commissioned by AOC Archaeology to undertake the geoarchaeological investigations. The site lies on a former terrace of the Thames occupied by the Hackney Gravel, and is located approximately one kilometre north of the modern waterfront (Figure 1). The site is mapped by the British Geological Society as lying at a point where the River Fleet cuts down through the Hackney Gravel to expose the London Clay bedrock (1:50,000 Sheet 286 North London 2006). Berry (1979) notes that an enclosed hollow underlies part of the Fleet Valley (identified as a circular feature on the BGS mapping) in the area of Calthorpe Street, and underlying the northern part of the site. This feature was considered to represent a possible scour feature related to the older Hackney Gravel (Gibbard, 1985). The superficial geology at the site is thus fairly complex, with Hackney Gravel recorded to the North of the site, London Clay through the centre, and Alluvium associated with the River Fleet towards the south. The River Fleet, now largely subterranean, rises several kilometres to the north at Hampstead Heath and Highgate.

The aim of the geoarchaeological investigations at the site was to (1) clarify the nature of the sub-surface stratigraphy, in particular the presence and thickness of Alluvium across the site, and (2) to evaluate the potential of the sedimentary sequences for reconstructing the environmental history of the site and its environs. In order to achieve this aim, seven geoarchaeological boreholes were put down in two transects aligned broadly NW-SE and SW-NE (Figure 2).

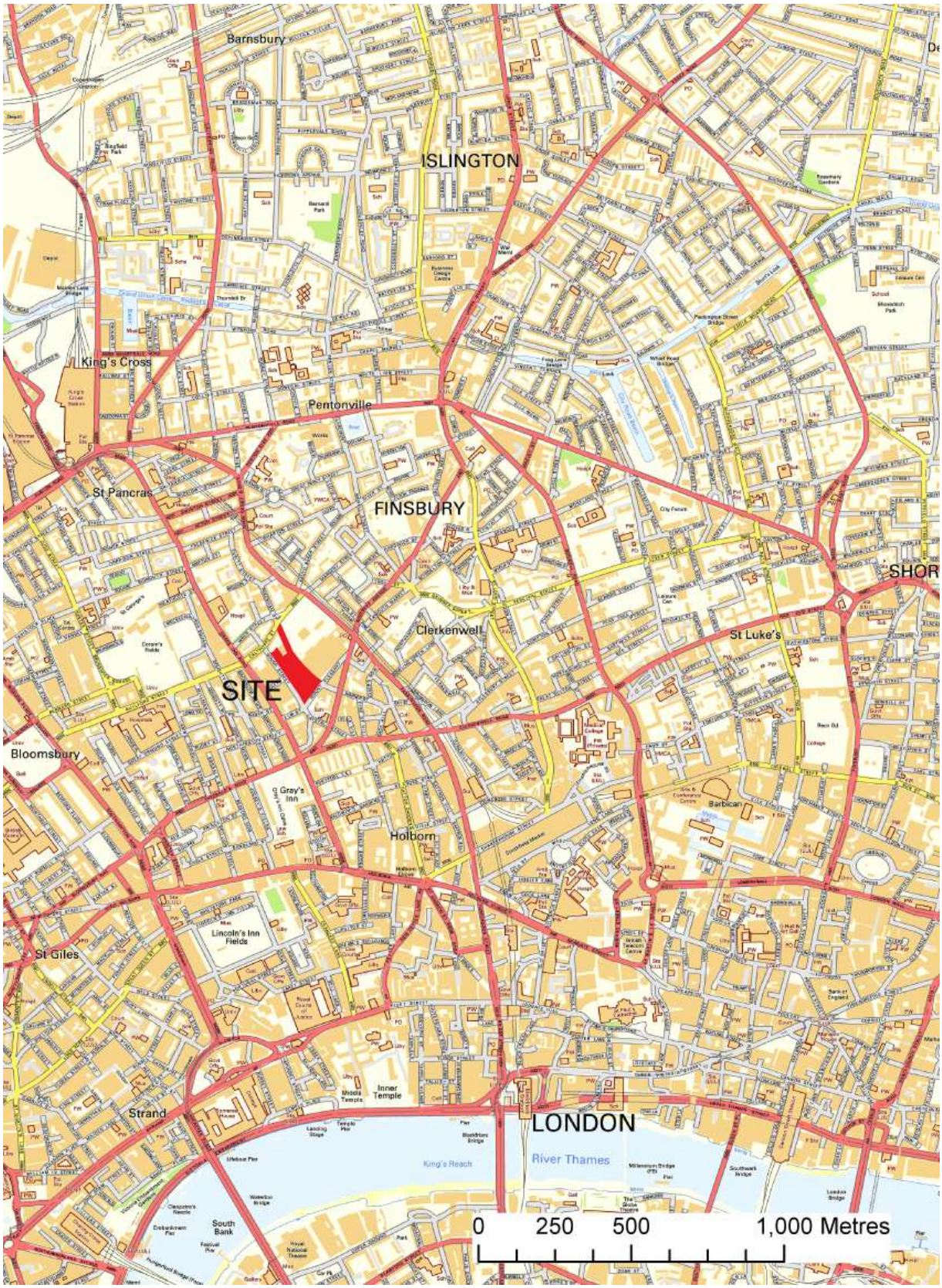

Figure 1: Location of Phoenix Place, London Borough of Islington. ***Contains Ordnance Survey data © Crown copyright and database right [2012]***

Figure 2: Detailed site map incorporating the location of the geoarchaeological boreholes at Phoenix Place, London Borough of Islington. Site outline shown in red. ***Contains Ordnance Survey data © Crown copyright and database right [2012]***

METHODS

Field investigations

Seven geoarchaeological boreholes (boreholes <QBH1> to <QBH7>) were put down at the site in February 2014 (Figure 2). Borehole core samples were recovered using an Eijkelkamp window sampler and gouge set using an Atlas Copco TT 2-stroke percussion engine. This coring technique is a suitable method for the recovery of continuous, undisturbed core samples and provides sub-samples suitable for not only sedimentary and microfossil assessment and analysis, but also macrofossil analysis. The recovered core samples were wrapped in clear plastic to prevent moisture loss, labelled with the depth (metres from ground surface) and orientation (top and base) and returned to Quaternary Scientific for storage in a purpose built facility at 2^{o}C. This temperature prevents fungal growth on the core surface, which may lead to anomalous radiocarbon dates, and moisture loss. The spatial attributes of each borehole were recorded using a Leica GS09 Differential GPS (Table 1 and Figure 2).

Table 1: Borehole attributes at Phoenix Place, London Borough of Islington

Borehole	Easting	Northing	Elevation (m OD)
QBH1	531030.01	182191.41	12.89
QBH2	531015.29	182206.51	12.08
QBH3	530999.95	182223.82	12.10
QBH4	530985.11	182241.67	14.82
QBH5	530975.39	182235.49	14.86
QBH6	530961.50	182224.16	14.76
QBH7	530967.68	182288.85	15.87

Lithostratigraphic descriptions

Where cores were retained, the lithostratigraphy of boreholes <QBH1> to <QBH7> was described in the laboratory using standard procedures for recording unconsolidated sediment and organic sediments, noting the physical properties (colour), composition (gravel, sand, clay, silt and organic matter) and inclusions (e.g. artefacts) (Tröels-Smith, 1955). The procedure involved: (1) cleaning the samples with a spatula or scalpel blade and distilled water to remove surface contaminants; (2) recording the physical properties, most notably colour using a Munsell Soil Colour Chart; (3) recording the composition; gravel (Grana glareosa; Gg), fine sand (Grana arenosa; Ga), silt (Argilla granosa; Ag) and clay (Argilla steatoides); (4) recording the degree of peat humification and (5) recording the unit boundaries e.g. sharp or diffuse. The results are displayed in Figures 3 and 4 and in Tables 2 to 8.

RESULTS AND INTERPRETATION OF THE LITHOSTRATIGRAPHIC DESCRIPTIONS

The results of the geoarchaeological investigations (Tables 2 to 8) have permitted a programme of two-dimensional deposit modelling of the surface elevation and thickness of each major stratigraphic unit (Figures 3 and 4). The basal unit at the site is the London Clay bedrock. The surface of this unit is uneven, lying at its highest in the north and west of the site, at a truncated minimum height of 10.37m OD in borehole <QBH7> (Figure 3) and 9.24m OD in <QBH5>. The London Clay was not reached further west in borehole <QBH6> due to the presence of a concrete slab that prevented drilling below 12.36m OD. Towards the south and east of the site the London Clay surface was recorded at 6.92m OD in borehole <QBH4>.

Towards the south and east of the site the London Clay is a horizon of sand and gravel (Figures 3 and 4), referred to by Gibbard (1985) as the Fleet Valley Gravel, which can be correlated with the Shepperton Gravel. These sediments were deposited during the Late Devensian, in a channel tributary to the Thames (Gibbard, 1985). The Gravel surface is recorded in boreholes <QBH4> (7.26m OD) and <QBH2> (6.47m OD), demonstrating a surface that falls southwards along the course of the Fleet, as might be expected. It was not possible to confirm the surface of the Gravel in borehole <QBH1> due to the nature of the Made Ground here, where coarse rubble meant that the borehole was prone to collapse. The area of this borehole was however excavated to the maximum depth of the machine arm of a JCB, which confirmed the presence of Made Ground to a depth of 8.39m OD.

The Gravel is overlain in boreholes <QBH2>, <QBH3> and <QBH4> by a horizon of Alluvium, which is generally composed of sandy silt or silty, sandy clay with frequent horizontal bedding and in places detrital organic material. This unit is generally between 1.0 and 2.0m thick, the surface lying at between *ca*. 8.5 and 9.0m OD (Figure 3). The Alluvium is predominantly coarse grained, and most likely represents in-channel (fluvial) deposition during the Holocene. In borehole <QBH5> this unit is recorded directly overlying the London Clay between 10.73 and 9.24m OD.

The Alluvium is overlain across the site by a considerable thickness of Made Ground. In the lower, southern part of the site (in the area of boreholes <QBH1> to <QBH3>) the Made Ground is between 3.5 and 4.5m thick, whilst in the area of boreholes <QBH4> to <QBH7> it is generally between 6.0 and 7.0m thick, except in the area of borehole <QBH5> where a thickness of 4.0m was recorded. The modern surface of the site reflects the natural topography and the variable extent of ground raising, which has formed a series of terraces

increasing in height northwards. In the area of <QBH7> the modern surface lies at lies at *ca*. 15.9m OD, whilst in the area of boreholes <QBH4> to <QBH6> it is recorded at *ca*. 14.8m OD. In the lower, southern part of the site it is recorded at between *ca*. 12.1 and 12.9m OD.

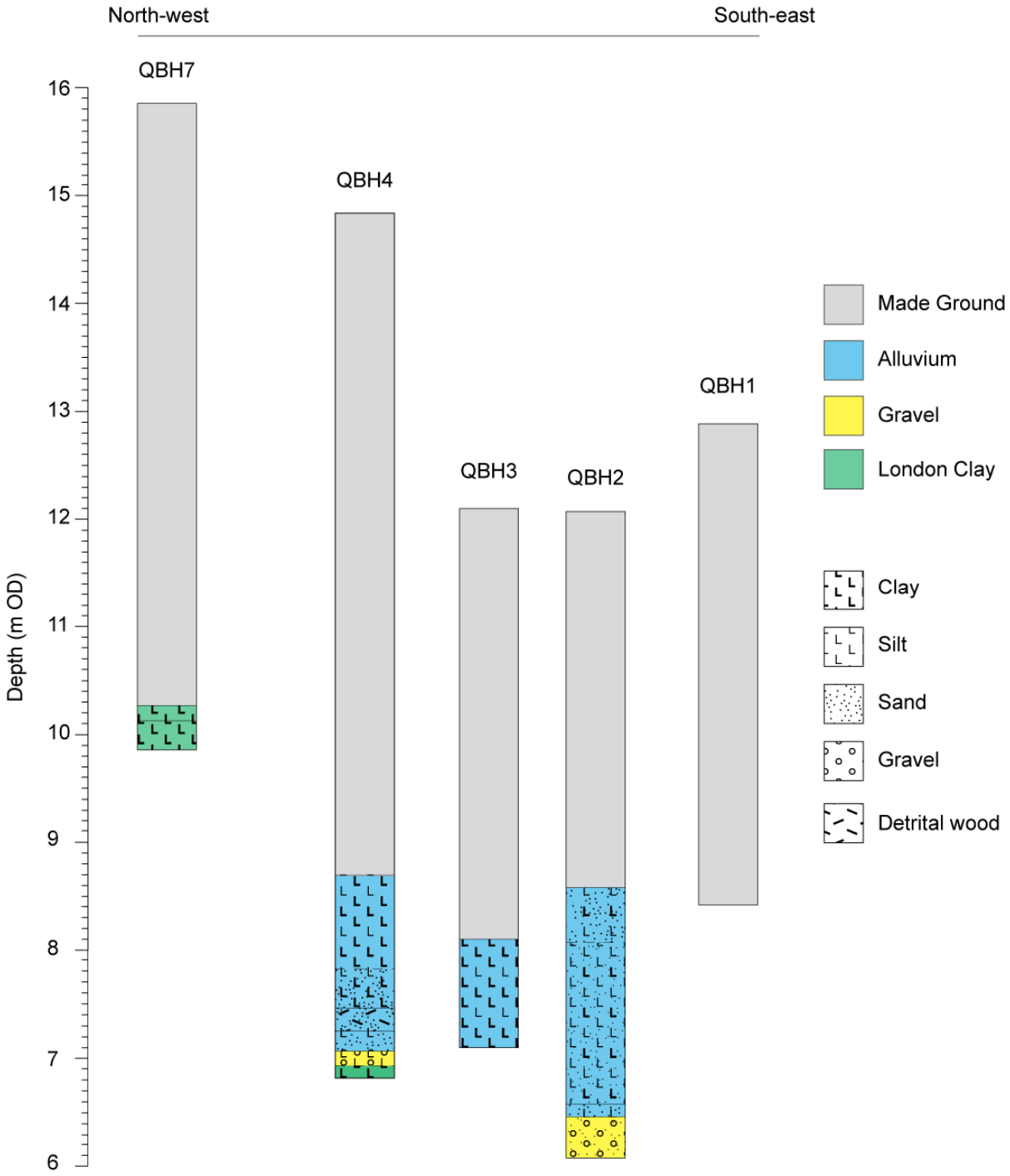

Figure 3: North-west to South-east transect of boreholes across Phoenix Place, London Borough of Islington.

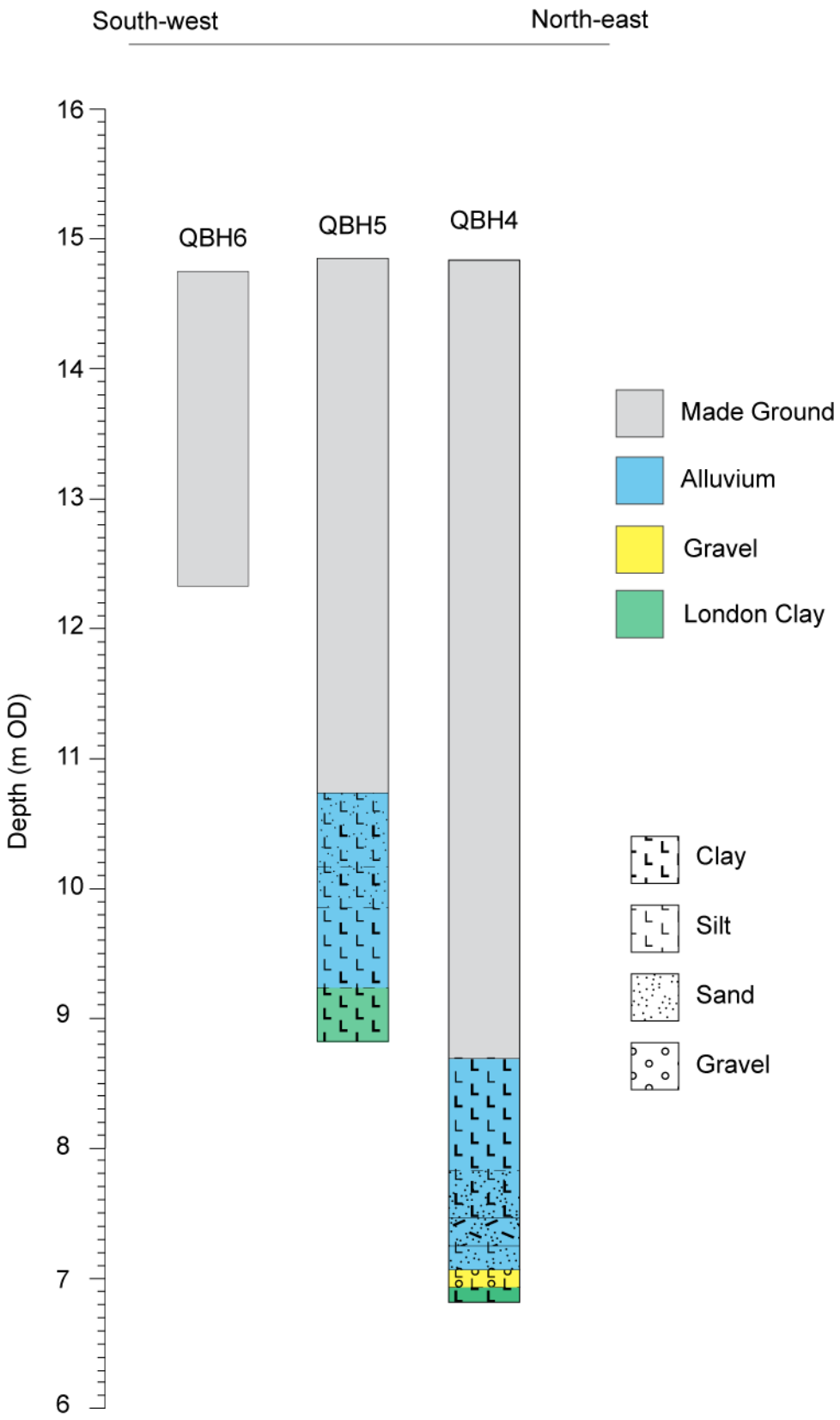

Figure 4: South-west to North-east transect of boreholes across Phoenix Place, London Borough of Islington.

Table 2: Lithostratigraphic description of borehole <QBH1>, Phoenix Place, London Borough of Islington

Depth (m OD)	Depth (m bgs)	Composition
12.89 to 9.89	0.00 to 3.00	Made Ground of rubble, glass, metal and industrial waste. Diffuse contact in to:
9.89 to 8.39	3.00 to 4.50	Made Ground of rubble, glass, metal, industrial waste and redeposited Alluvium.

Table 3: Lithostratigraphic description of borehole <QBH2>, Phoenix Place, London Borough of Islington

Depth (m OD)	Depth (m bgs)	Composition
12.08 to 8.78	0.00 to 3.30	Made Ground of rubble, glass, metal and industrial waste.
8.78 to 8.58	3.30 to 3.50	Made Ground/redeposited Alluvium.
8.58 to 8.08	3.50 to 4.00	Ga2 As1 Ag1; dark grey clayey silty sand with some horizontal bedding.
8.08 to 6.60	4.00 to 5.48	Ag2 As1 Ga1 Gg+; greenish grey sandy clayey silt with occasional gravel (flint) clasts. Sharp contact in to:
6.60 to 6.47	5.48 to 5.61	Ga3 Ag1; very dark grey silty sand. Sharp contact in to:
6.47 to 6.08	5.61 to 6.00	Gg3 Ga1 Ag+; dark grey sandy gravel with a trace of silt. Flint clasts up to 60mm in diameter.

Table 4: Lithostratigraphic description of borehole <QBH3>, Phoenix Place, London Borough of Islington

Depth (m OD)	Depth (m bgs)	Composition
12.10 to 8.10	4.00 to 4.00	Made Ground.
8.10 to 7.10	4.21 to 5.00	10YR 5/1; As3 Ag1 Ga+; firm grey silty clay with a trace of sand. Some ?horizontal bedding of sandier material. Orange mottling.

Table 5: Lithostratigraphic description of borehole <QBH4>, Phoenix Place, London Borough of Islington

Depth (m OD)	Depth (m bgs)	Composition
14.82 to 8.69	0.00 to 6.13	Made Ground. Sharp contact in to:
8.69 to 7.82	6.13 to 7.00	As3 Ag1 Gg+; bluey grey silty clay with occasional gravel clasts. Black mottling.
7.82 to 7.47	7.00 to 7.35	10YR 4/1; As2 Ag1 Ga1 Gg+ Dh+; dark grey silty sandy clay with traces of detrital herbaceous material and occasional gravel clasts. Sharp contact in to:
7.47 to 7.26	7.35 to 7.56	10YR 4/1; Ga2 Ag1 Dl1 As+; dark grey silty sand with frequent detrital wood and a trace of clay. Some horizontal bedding. Sharp contact in to:
7.26 to 7.08	7.56 to 7.74	10YR 4/1; Gg2 Ga1 Ag1; dark grey sandy silty gravel. Flint clasts up to 60mm in diameter. Sharp contact in to:
7.08 to 6.92	7.74 to 7.90	10YR 4/1 Gg2 Ag2 Ga+; dark grey silt and gravel

		with a trace of sand. Flint clasts up to 50mm in diameter. Diffuse contact in to:
6.92 to 6.82	7.90 to 8.00	10YR 4/1; As4 Ag+ Ga+; firm dark grey clay with traces of silt and sand.

Table 6: Lithostratigraphic description of borehole <QBH5>, Phoenix Place, London Borough of Islington

Depth (m OD)	Depth (m bgs)	Composition
14.86 to 10.73	0.00 to 4.13	Made Ground. Sharp contact in to:
10.73 to 10.17	4.13 to 4.69	10YR 3/1; Ag2 As1 Ga1 Gg+; very dark grey sandy clayey silt with occasional small (<10mm diameter) gravel clasts. Diffuse contact in to:
10.17 to 9.86	4.69 to 5.00	10YR 4/4; Ag2 As1 Ga1 Gg+; dark yellowish brown sandy clayey silt with occasional small (<10mm diameter) gravel clasts.
9.86 to 9.24	5.00 to 5.62	10YR 4/1; As3 Ag1 Ga+ Gg+; firm dark grey silty clay with a trace of sand and occasional small (<10mm diameter) gravel clasts. Diffuse contact in to:
9.24 to 8.86	5.62 to 6.00	10YR 4/1; As4 Ag+; very firm brown clay with a trace of silt. Some iron staining and ?ferrous nodules.

Table 7: Lithostratigraphic description of borehole <QBH6>, Phoenix Place, London Borough of Islington

Depth (m OD)	Depth (m bgs)	Composition
14.76 to 12.36	0.00 to 2.40	Made Ground
12.36	2.40	Obstruction (?concrete slab)

Table 8: Lithostratigraphic description of borehole <QBH7>, Phoenix Place, London Borough of Islington

Depth (m OD)	Depth (m bgs)	Composition
15.87 to 10.37	0.00 to 5.50	Made Ground of brick rubble.
10.37 to 10.27	5.50 to 5.60	Made Ground of brick rubble and redeposited Alluvium/London Clay. Sharp contact in to:
10.27 to 10.12	5.60 to 5.75	As4 Ag+ Gg+; brownish grey firm clay with a trace of silt and rare gravel (flint) clasts. Sharp contact in to:
10.12 to 9.87	5.75 to 6.00	As4 Ag+ Ga+; brownish grey very firm clay with a trace of silt and sand.

DISCUSSION, CONCLUSIONS AND RECOMMENDATIONS

The aim of the geoarchaeological investigations at the Phoenix Place site was to (1) clarify the nature of the sub-surface stratigraphy, in particular the presence and thickness of Alluvium across the site, and (2) to evaluate the potential of the sedimentary sequences for reconstructing the environmental history of the site and its environs. In order to achieve this aim, seven geoarchaeological boreholes were put down at the site and a programme of two-dimensional deposit modelling of the surface elevation and thickness of the major stratigraphic units was carried out.

The results of a previous geotechnical investigation at the site (conducted in 1976 and available as BGS borehole records) conforms to the new geoarchaeological investigations.

The results of the geoarchaeological investigations largely confirm the sedimentary sequence indicated by the BGS geological mapping of this part of the valley of the Fleet, and conform with previous geotechnical investigations at the site (see http://mapapps.bgs.ac.uk/geologyofbritain/home.html). The borehole records indicate that a horizon of sand and gravel (equivalent to the Shepperton Gravel and deposited during the Late Devensian) is present in the southern and eastern parts of the site, falling southwards from 7.26m OD in borehole <QBH4> to 6.47m OD in <QBH2>. The Gravel is overlain by between 1.0 and 2.0m of generally sandy and silty Holocene Alluvium, in places containing detrital organic material and present between *ca*. 7.0 and 9.0m OD in the southern part of the site. In the area of borehole <QBH7>, Made Ground lies directly on top of the London Clay bedrock at 10.27m OD. This borehole lies in the area of the London Clay outcrop that separates the Alluvium of the River Fleet and the Hackney Gravel, which lies to the north of the site and occupies a former (Wolstonian) terrace of the Thames.

No in-situ organic horizons are recorded within the Alluvium at the Phoenix Place site. The Alluvium is predominantly coarse grained, and most likely represents in-channel (fluvial) deposition. The palaeoenvironmental potential of these sequences is therefore considered limited, and no further assessment is recommended on these sequences.

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