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BATTERSEA POWER STATION (PHASE 4A), LONDON BOROUGH OF WANDSWORTH

Geoarchaeological Deposit Model Report

NGR: TQ 2932 7720

Site Code: BPW16

Date: 21st October 2016

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1. NON-TECHNICAL SUMMARY

A programme of geoarchaeological monitoring of geotechnical site investigations and subsequent deposit modelling was undertaken by Quaternary Scientific (University of Reading) in connection with the proposed development of land at Battersea Power Station Phase 4A, Sleaford Street, London Borough of Wandsworth. The basal unit recorded within the geoarchaeological boreholes is the Early to Middle Devensian Kempton Park Gravel, which across the area of the site is generally recorded at between *ca*. -0.3 and 0.9m OD, elevations typical of the surface of the 'Battersea Eyot'. The Holocene alluvial sequence that overlies the Gravel within the area of the site has been deeply truncated, and the surviving remnants are both thin (0.35-1.2m) and only occasionally present. The alluvium that does remain is mineral-rich and relatively coarse grained (generally consisting of sandy/gravelly clay); such sequences are considered to be of limited palaeoenvironmental potential, and no units typical of soil or peat formation were recorded. No further environmental archaeological investigations were recommended. It is of note that the Battersea Eyot would have remained elevated above the surrounding floodplain during the prehistoric period, and may have provided an environment suitable for human occupation or utilisation. However, given the extent of truncation by the overlying Made Ground, the archaeological potential of the site is considered to be low.

2. INTRODUCTION

2.1 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 Battersea Power Station Phase 4A, Sleaford Street, London Borough of Wandsworth (National Grid Reference: centred on TQ 2932 7720; Site Code: BPW16; Figure 1). The work was commissioned by CgMs Consulting. The site lies within the area of the Battersea Channel Project, Nine Elms: exploration of the buried prehistoric landscape, more information on which can be found at https://content.historicengland.org.uk/content/docs/planning/battersea-channel-project.pdf.

2.2 Site context

The area of investigation is located on the south bank of the River Thames, occupying an area of land that lies *ca*. 450 from the present waterfront (Figure 1). The site is mapped by the BGS as Alluvium obscured by Made Ground, and can be regarded therefore as part of the historic floodplain of the River Thames. The site lies at approximately 2.1m OD (CgMs, 2015). Previous geoarchaeological investigations (Dawson et al., 2009; Morley, 2009; Corcoran et al., 2007; Branch *et al*., 2010) have revealed that a number of channels, bisecting areas of higher gravel 'islands' (eyots), existed in the Battersea area during the Late Devensian/early Holocene. Morley (2009/2010) show the Phase 4A site located at the eastern end of the so-called 'Battersea Eyot', an area of Kempton Park Gravel whose surface lies at between *ca*. 0.5 and 2.0m OD. At Wandsworth Road and Pascal Street (Young & Green, 2013), a site lying near the confluence of the Battersea Channel and River Thames, the Shepperton Gravel surface was recorded at between *ca*. -2.5 and -3.0m OD. This was consistent with investigations at the 120-146 Stewarts Road site to the south of the present site (Morley, 2009/2010; Figure 1), where the Gravel surface within the Battersea Channel was recorded at between *ca*. -2.8 and -3.0m OD. At the Wandsworth Road and Pascal Street site (Young & Green, 2013) a peat horizon was recorded between *ca*. -1.0 and 0.5m OD, whilst at the 120-146 Stewarts Road site (Morley, 2009/2010) peat was recorded between *ca*. -1.25 and -1.75m OD and subsequently radiocarbon dated to 7670-7510 cal BP (the Mesolithic cultural period). Despite being higher than the peat recorded at the Battersea Power Station site, this radiocarbon date is indicative of significantly earlier peat accumulation, and suggests a different sedimentary history in this part of the Battersea Channel. During previous work at Battersea Power Station (Branch *et al*., 2010) relatively thin peat horizons radiocarbon dated to the early to late Neolithic were identified at -2.92 to -2.97m OD within the Phase 1 area (ABH8; 6310-6180 cal BP), and at -2.09 to -2.16m OD (ABH2; 5320 to 4960 cal BP) and -1.52 to -1.56m OD (ABH7; 4000 to 3690 cal BP) within the Phase 2 area.

This geoarchaeological investigation is focussed on the Phase 4A area of Battersea Power Station, incorporating the area of land surrounding Sleaford Street, to the south of the Power Station itself. Although no recent geotechnical data is available for the site, two BGS archive boreholes (www.bgs.ac.uk/opengeoscience) within the area of the site show Made Ground either overlying a thin (<0.7m) horizon of clayey alluvium (TQ27NE265/A) or directly overlying sand and gravel

(TQ27NE1420). Beneath the floodplain in the wider area, up to 7.6m of Made Ground and Alluvium has been recorded resting on Shepperton Gravel. As stated above, a series of geoarchaeological Perry & Skelton, 1997; Dawson *et al*., 2009; Branch *et al*., 2010; Young *et al*., 2012) and geotechnical investigations (Figure 1) have been carried out at the site of the Power Station site itself, which reveal considerable variation in the height of the Shepperton Gravel surface. The thickness of the overlying alluvial and peat deposits is also recorded as being considerably variable across the Battersea Power Station site and the wider area (Branch *et al*., 2010). This is in part due to the variable height of the Shepperton Gravel, but is also related to successive stages of industrial development that have caused truncation of the stratigraphic sequence.

2.3 Palaeoenvironmental and archaeological significance

As outlined above, several geoarchaeological and palaeoenvironmental investigations have taken place within the area of the Battersea Channel Project, within which this site lies (e.g. Perry & Skelton, 1997; Dawson *et al*., 2009; Branch *et al*., 2010; Young *et al*., 2012; Young & Green, 2013; Young, 2015a; Young, 2015b; Young, 2016b). These investigations have revealed considerable variation in the nature and thickness of the stratigraphic units across the local area, with peat deposits dating from the late Mesolithic through to the Bronze Age. Such variations in these deposits are significant as they represent different environmental conditions that would have existed in a given location. For example: (1) the varying surface of the Shepperton/Kempton Park Gravel may represent the location of former channels and bars; (2) the presence of peat represents former terrestrial or semi-terrestrial land-surfaces, and (3) the alluvium represent periods of changing hydrological conditions. Thus by studying the sub-surface stratigraphy across the site in greater detail, it will be possible to build an understanding of the former landscapes and environmental changes that took place across space and time.

Organic-rich sediments (in particular peat) also have high potential to provide a detailed reconstruction of past environments on both the wetland and dryland. In particular, they provide the potential to increase knowledge and understanding of the interactions between hydrology, human activity, vegetation succession and climate. Significant vegetation changes include the Mesolithic/Neolithic decline of elm woodland, the Neolithic colonisation and decline of yew woodland; the Late Neolithic/Early Bronze Age growth of elm on peat, and the general decline of wetland and dryland woodland during the Bronze Age. Such investigations are carried out through the assessment/analysis of palaeoecological remains (e.g. pollen, plant macrofossils & insects) and radiocarbon dating.

Finally, areas of high gravel topography, soils and peat represent potential areas that might have been utilised or even occupied by prehistoric people, evidence of which may be preserved in the archaeological (e.g. features and structures) and palaeoenvironmental record (e.g. changes in vegetation composition). The results arising from the investigations at the site can be compared and integrated with records from adjacent sites within the area of the Battersea Channel Project.

2.4 Aims and objectives

A programme of geoarchaeological monitoring of geotechnical investigations, and a programme of deposit modelling, was therefore recommended in the Written Scheme of Investigation for the site (Young, 2016a), the aims of which were (1) clarify the nature of the sub-surface stratigraphy, in particular the presence and thickness of Alluvium and Peat across the site, and (2) to evaluate the potential of the sedimentary sequences for reconstructing the environmental history of the site and its environs.

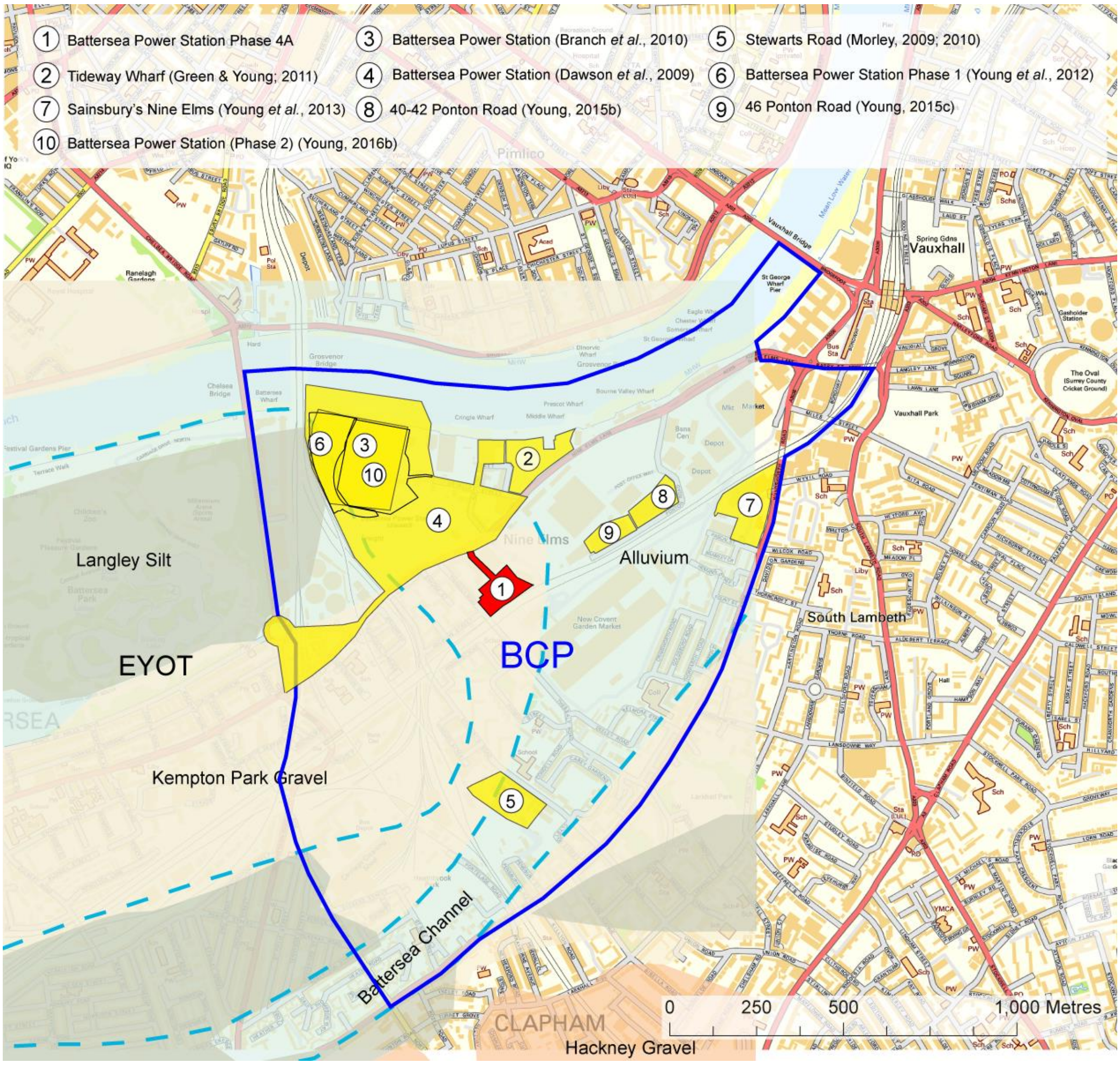

Figure 1: Location of Battersea Power Station Phase 4A, Sleaford Street, London Borough of Wandsworth and other nearby geoarchaeological investigations. The area of the Battersea Channel Project (BCP) is also shown. *Contains Ordnance Survey data © Crown copyright and database right [2012].*

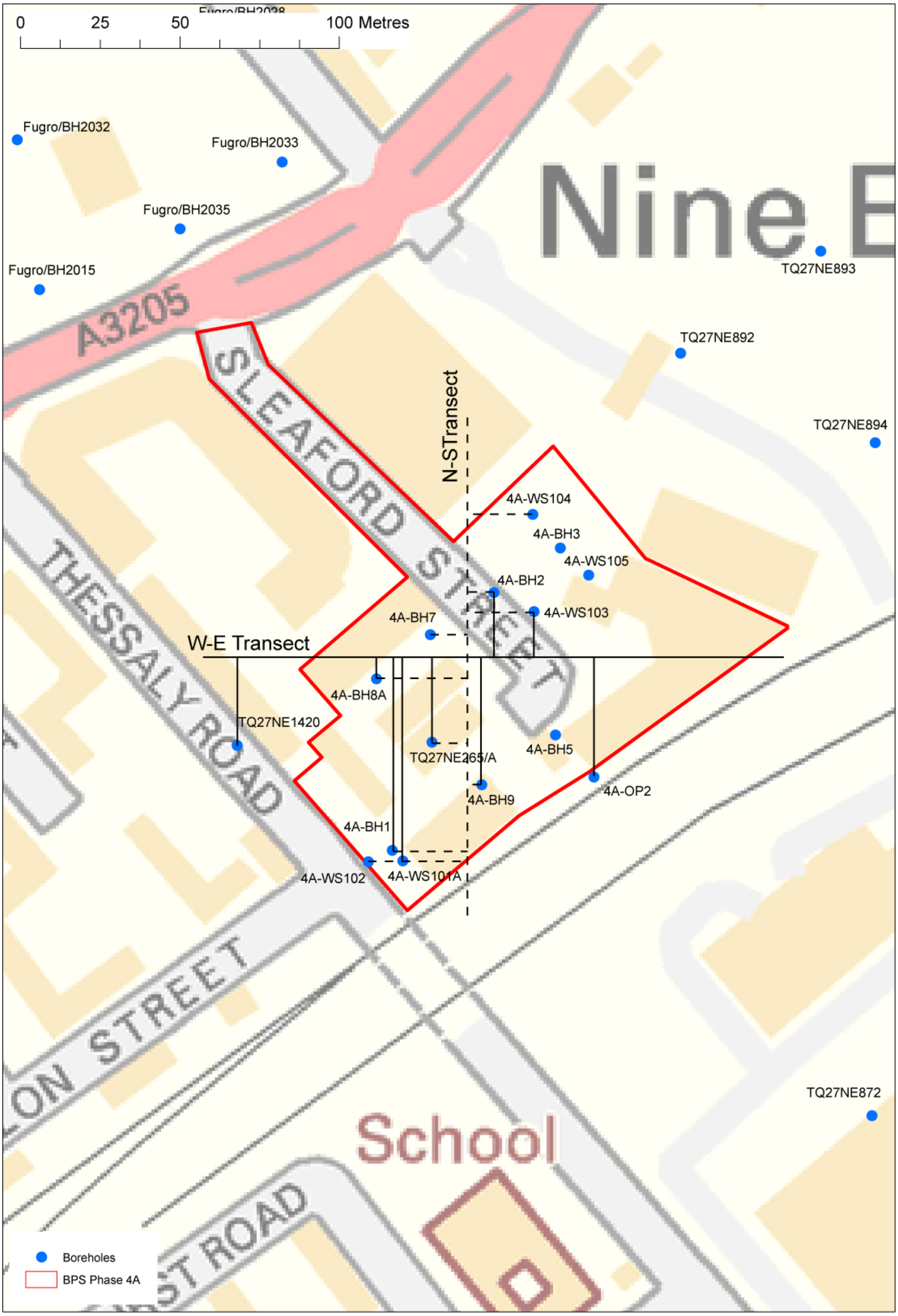

Figure 2: Location of the boreholes/test pits used in the deposit model at Battersea Power Station Phase 4A, Sleaford Street, London Borough of Wandsworth. West-East and North-South transects also shown. *Contains Ordnance Survey data © Crown Copyright and Database right 2016.*

3. METHODS

3.1 Field investigations and lithostratigraphic descriptions

A total of 13 boreholes and one test pit were put down by Soil Engineering during geotechnical investigations at the site in September 2016, of which three were monitored in the field (boreholes 4A-BH1, 4A-BH5 and 4A-BH8A) by Quaternary Scientific. The lithostratigraphy of the monitored boreholes was described in the field 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 sample using a scalpel; (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 of the geoarchaeological descriptions of the boreholes are displayed in Tables 1 to 3. The spatial attributes of the boreholes are displayed in Appendix 1 and in Figure 2. The elevation data for the new borehole was calculated using a recent topographic survey, provided by CgMs Consulting.

3.2 Deposit modelling

The deposit model was based on a review of 23 borehole and test pit records for the area of the Phase 4A investigations (see Figure 2). These incorporated five BGS archive boreholes (www.bgs.ac.uk/opengeoscience), four boreholes to the north of the site from the area of the Battersea Power Station site investigations (Fugro, 2004), and the 14 records from the present site. A model was also produced for the wider area (see Appendix and Figure 9), for which a total of 285 borehole/test pit records were utilised from various geotechnical and geoarchaeological investigations in the wider area of the Battersea Channel Project.

Modelling was undertaken using RockWorks 16 geological utilities software. The term 'deposit modelling' describes any method used to depict the sub-surface arrangement of geological deposits, but particularly the use of computer software to create contoured maps or three dimensional representations of contacts between stratigraphic units. The first requirement is to classify the recorded borehole sequences into uniformly identifiable stratigraphic units. At the Battersea Power Station Phase 4A site, the sedimentary units were classified into three groupings: (1) Gravel, (2) Alluvium, and (3) Made Ground. Models of surface height were generated for the Gravel and alluvium (Figures 3 and 4), with models of the thickness of the alluvium (Figure 5) and Made Ground (Figure 6) also modelled, using a nearest neighbour routine. Two-dimensional north-south and west-east stratigraphic profiles were also generated using Rockworks 16 for selected boreholes across the site (Figures 7 and 8). A model of the surface of the Gravel was generated for the wider area using the same technique (Figure 9).

How effectively Rockworks portrays the relief features of stratigraphic contacts or the thickness of sediment bodies depends on the number of data points (boreholes/test pits) per unit area, and the extent to which these points are evenly distributed across the area of interest. The portrayal is also affected by the significance assigned to these data points, in terms of the extent of the area around the point to which the data are deemed to apply. This can be predetermined for each data set, and in the present case the value chosen for each data point (borehole) is equivalent to an area of 50m radius for all models except that for the wider area (100m). The boreholes are relatively well distributed over the area of investigation, although part of the northward spur of the site (along Sleaford Street) was not covered by borehole data. In general, reliability improves towards the core area of boreholes where mutually supportive data are likely to be available from several adjacent data points. Reliability is also affected by the quality of the stratigraphic records, which in turn are affected by the nature of the sediments and/or their post-depositional disturbance during previous stages of land-use on the site. Finally, because of the 'smoothing' effect of the modelling procedure, the modelled levels of stratigraphic contacts may differ slightly from the levels recorded in borehole logs.

4. RESULTS AND INTERPRETATION OF THE LITHOSTRATIGRAPHIC DESCRIPTIONS AND DEPOSIT MODELLING

The results of the lithostratigraphic descriptions of the monitored boreholes are shown in Tables 1 to 3, with the deposit modelling displayed in Figures 3 to 8. Figure 3 to 6 are surface elevation and thickness models for each of the main stratigraphic units, whilst Figures 7 and 8 are two-dimensional north-south and west-east transects respectively. The results of the deposit modelling indicate that the number and distribution of the records is sufficient to permit modelling with a high level of reliability across the majority of the site; data is only absent from the northern spur of the site (along Sleaford Street). Overlying the London Clay bedrock, the full sequence of sediments recorded in the boreholes comprises:

Made Ground – present in all boreholes
Alluvium – only locally present
Kempton Park Gravel – widely present

4.1 Gravel

Gravel was present in all the boreholes that penetrated to the bottom of the Holocene sequence. At the present site this gravel is considered to represent the Kempton Park Gravel, deposited during the Early to Middle Devensian (80,000 to 30,000 years before present) and comprising the sands and gravels of a high-energy braided river system which, while it was active, would have been characterised by longitudinal gravel bars and intervening low-water channels in which finer-grained sediments might have been deposited. Such a relief pattern would have been present on the valley floor at the beginning of the Holocene when a lower-energy fluvial regime was being established. The surface of the Gravel is recorded at between -0.3 (4A-BH3) and 0.9m OD (4A-BH9) within the area of the site (Figure 3), with a gradual reduction in height apparent towards the north and east (see Figures 7 and 8). Beyond the margins of the site, the Gravel is recorded at slightly higher elevations of between 1 and 2m OD to the north and west (north of the A3205 and in the area of Thessaly Road), with similar elevations of between 0 and 1m OD recorded to the south and east (see Figure 3). To the west of London at Isleworth organic horizons are recorded associated with the Kempton Park Terrace at between 0.0 and 1.0m OD (Gibbard, 1985), although no such horizons were apparent at the present site, Gibbard (1985) shows the base of the Kempton Park Gravel falling below OD in central London, consistent with the elevations recorded here.

4.2 Alluvium

Overlying the Gravel, a unit of generally clayey-rich and gravelly alluvium was recorded in four of the 13 records from within the area of the site (4A-BH8A, WS103, WS104 and OP-2); these were all recorded in the northern or north-western area of the site with the exception of 4A-OP2, recorded towards the south. The surface of this unit (Figure 4) was relatively even at elevations between 1.00 (4A-WS103) and 1.75m OD (4A-OP2), with thicknesses of between 0.35 (4A-WS103) and 1.20m (4A-WS104) recorded (Figure 5).

The sediments of this alluvial unit are typical of the Upper Alluvium widely recorded across the floodplain in the Lower Thames Valley, and are indicative of deposition within low energy fluvial and/or semi-aquatic conditions during the Holocene. The high mineral content of the sediments may reflect increased sediment loads resulting from intensification of agricultural land use from the later prehistoric period onward, combined with the effects of rising sea level. On the basis of the evidence presented here, it is likely that alluvium accumulated across much of the site prior to the emplacement of the Made Ground; where alluvium is absent, it has most likely been truncated during the process of ground raising and levelling at the site.

4.3 Made Ground

Between 1.6 (4A-BH9) and 2.8m (4A-BH3) of Made Ground caps the Holocene alluvial sequence within the area of the site (Figure 6).

Table 1: Lithostratigraphic description of borehole 4A-BH1, Battersea Power Station Phase 4A, Sleaford Street, London Borough of Wandsworth.

Depth (m OD)	Depth (m bgs)	Description	Interpretation
2.40 to 1.40	0.00 to 1.00	Made Ground of brick rubble and concrete.	MADE GROUND
1.40 to 0.60	1.00 to 1.80	Redeposited alluvium; dark grey silty clay and sandy matrix with oyster shell and brick fragments.	
0.60 to -2.10	1.80 to 4.50	Gg3 Ga1 As+; orangey brown sandy gravel with a trace of clay. Clasts are flint, up to 80mm in diameter, well rounded.	KEMPTON PARK GRAVEL
-2.10+	4.50+	As4 Ag+ Ga+; stiff grey silty clay with traces of silt and sand.	LONDON CLAY

Table 2: Lithostratigraphic description of borehole 4A-BH5, Battersea Power Station Phase 4A, Sleaford Street, London Borough of Wandsworth.

Depth (m OD)	Depth (m bgs)	Description	Interpretation
2.50 to 1.40	0.00 to 1.10	Made Ground of brick rubble and concrete in a matrix of brown sandy clay.	MADE GROUND
1.40	1.10	Concrete obstruction – hole abandoned,	

Table 3: Lithostratigraphic description of borehole 4A-BH8A, Battersea Power Station Phase 4A, Sleaford Street, London Borough of Wandsworth.

Depth (m OD)	Depth (m bgs)	Description	Interpretation
2.50 to 1.50	0.00 to 1.00	Made Ground of brick rubble and concrete in a matrix of brown sandy clay.	MADE GROUND
1.50 to 1.30	1.00 to 1.20	Redeposited alluvium; grey silty clay matrix with brick fragments, clay pipe.	
1.30 to 1.10	1.20 to 1.40	As2 Ag1 Ga1 Gg+; dark greyish brown silty sandy clay with occasional gravel clasts. Diffuse contact in to:	ALLUVIUM
1.10 to 0.50	1.40 to 2.00	As2 Ag1 Ga1 Gg+; dark greyish brown silty sandy clay with occasional gravel clasts, some charcoal fragments and occasional Mollusca. Diffuse contact in to:	
0.50 to -4.20	2.00 to 6.70	Gg3 Ga1 As+; orangey brown sandy gravel with a trace of clay. Clasts are flint, up to 80mm in diameter, well rounded.	KEMPTON PARK GRAVEL

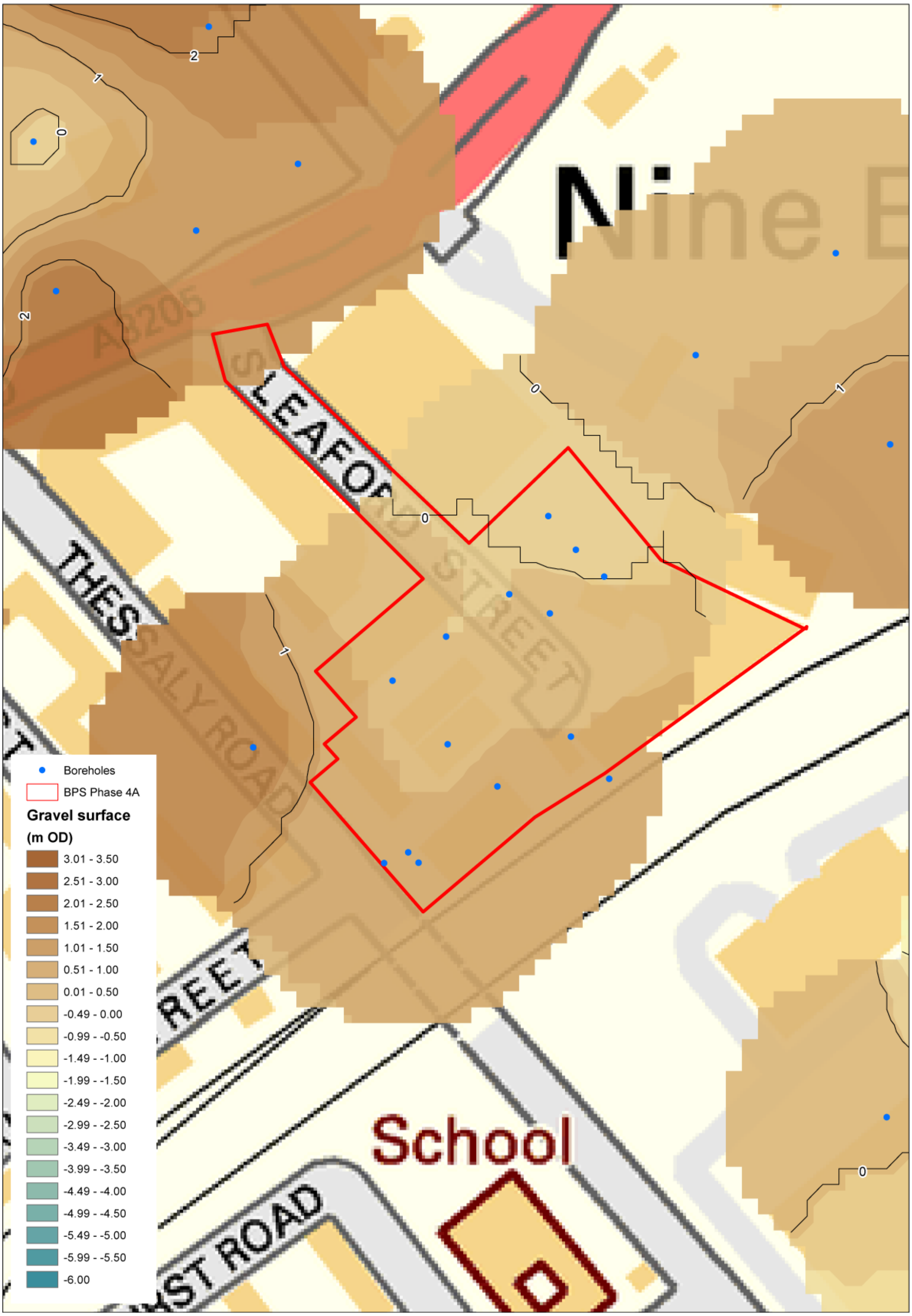

Figure 3: Kempton Park Gravel surface (contour heights in m OD). *Contains Ordnance Survey data © Crown Copyright and Database right 2016.*

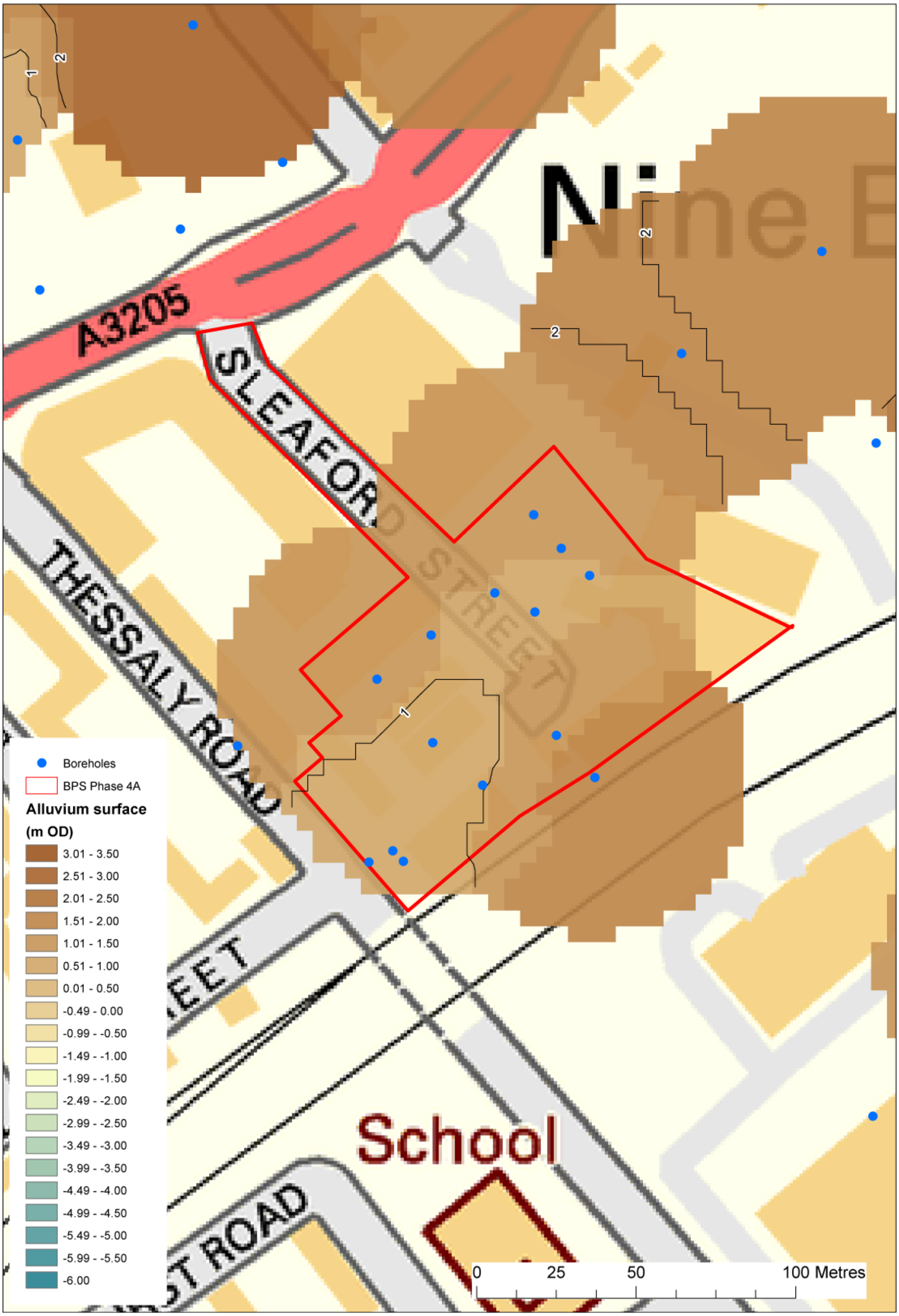

Figure 4: Alluvium surface (contour heights in m OD). *Contains Ordnance Survey data © Crown Copyright and Database right 2016.*

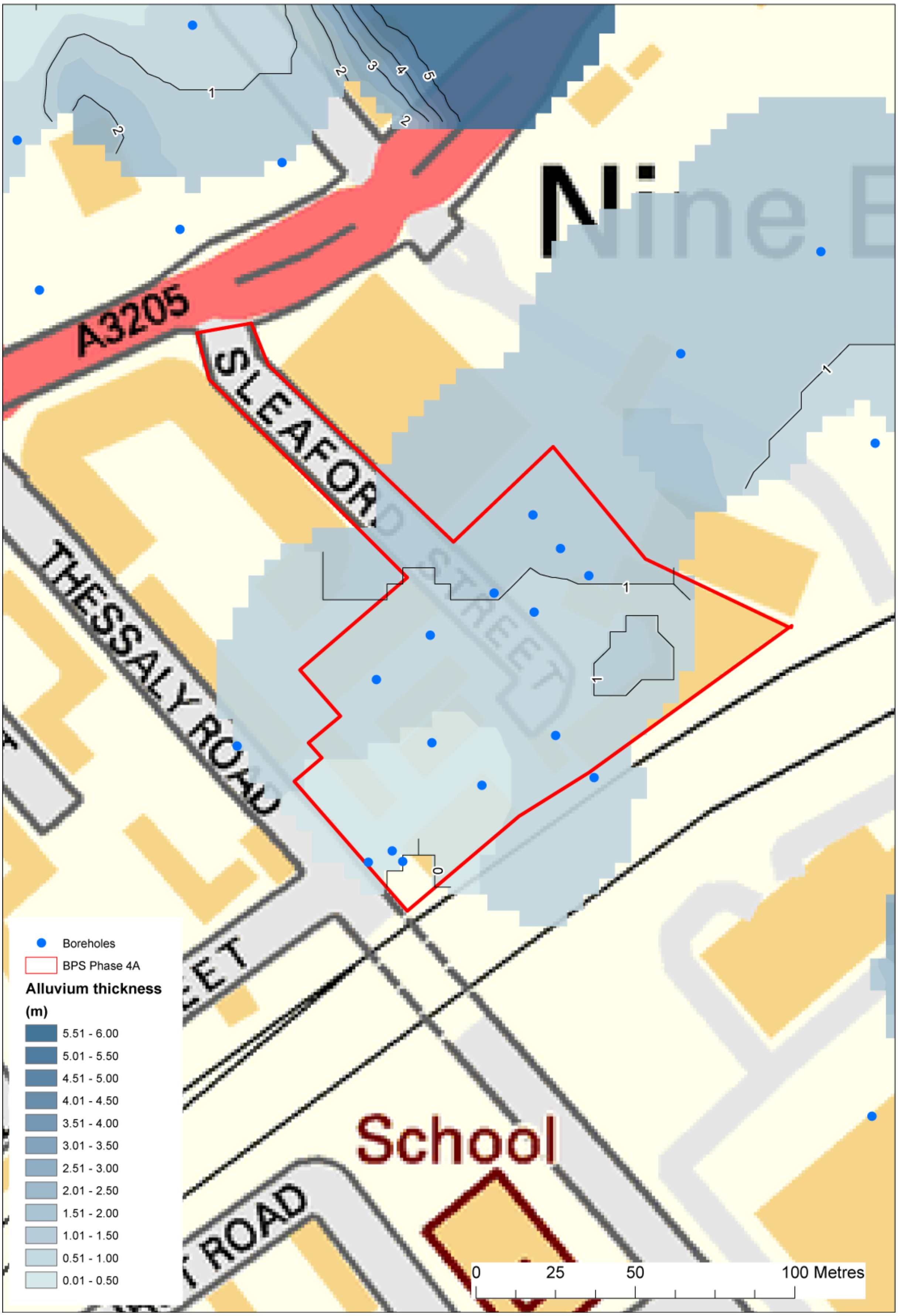

Figure 5: Alluvium thickness (contour heights in m). *Contains Ordnance Survey data © Crown Copyright and Database right 2016.*

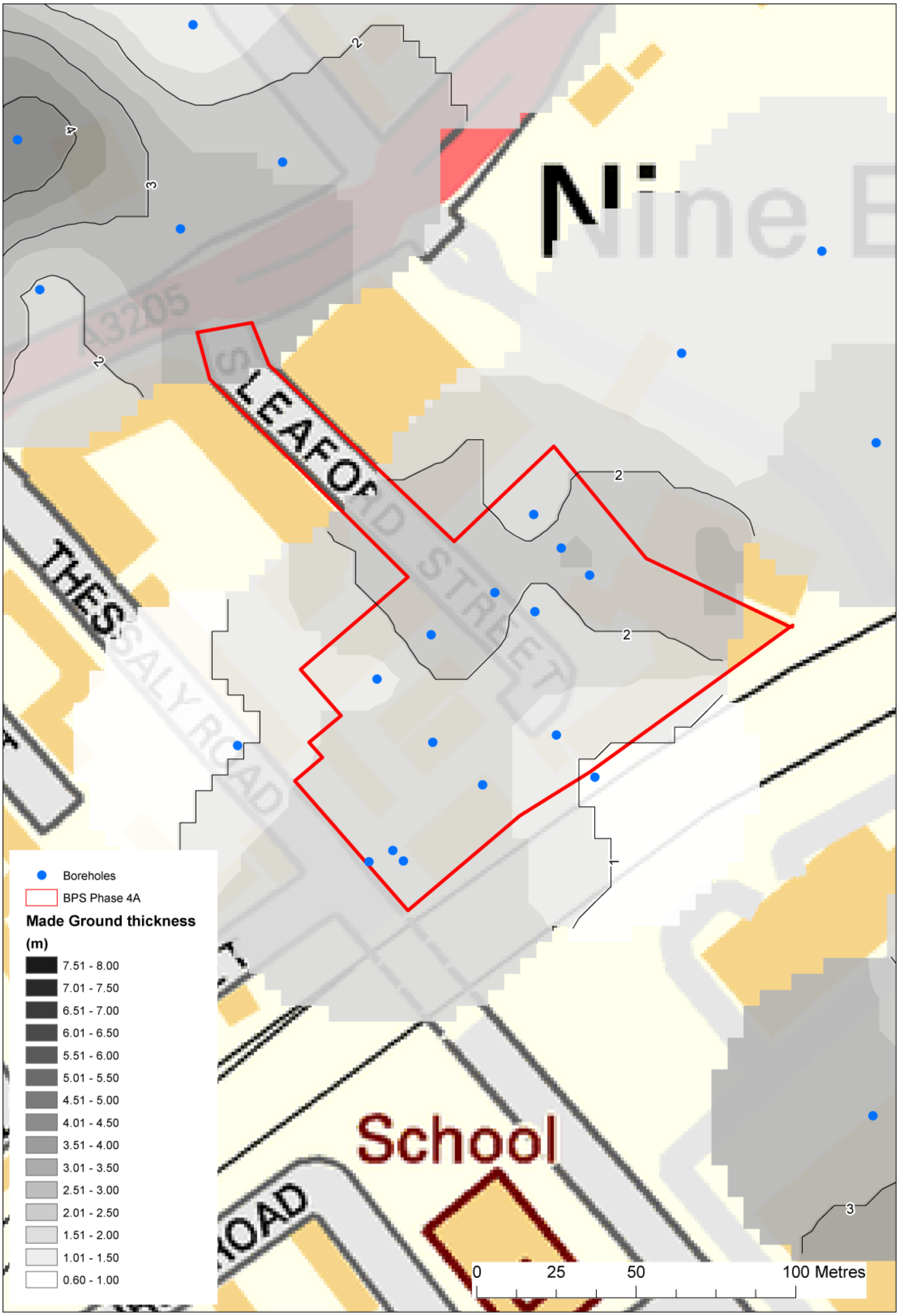

Figure 6: Made Ground thickness (contour heights in m). *Contains Ordnance Survey data © Crown Copyright and Database right 2016.*

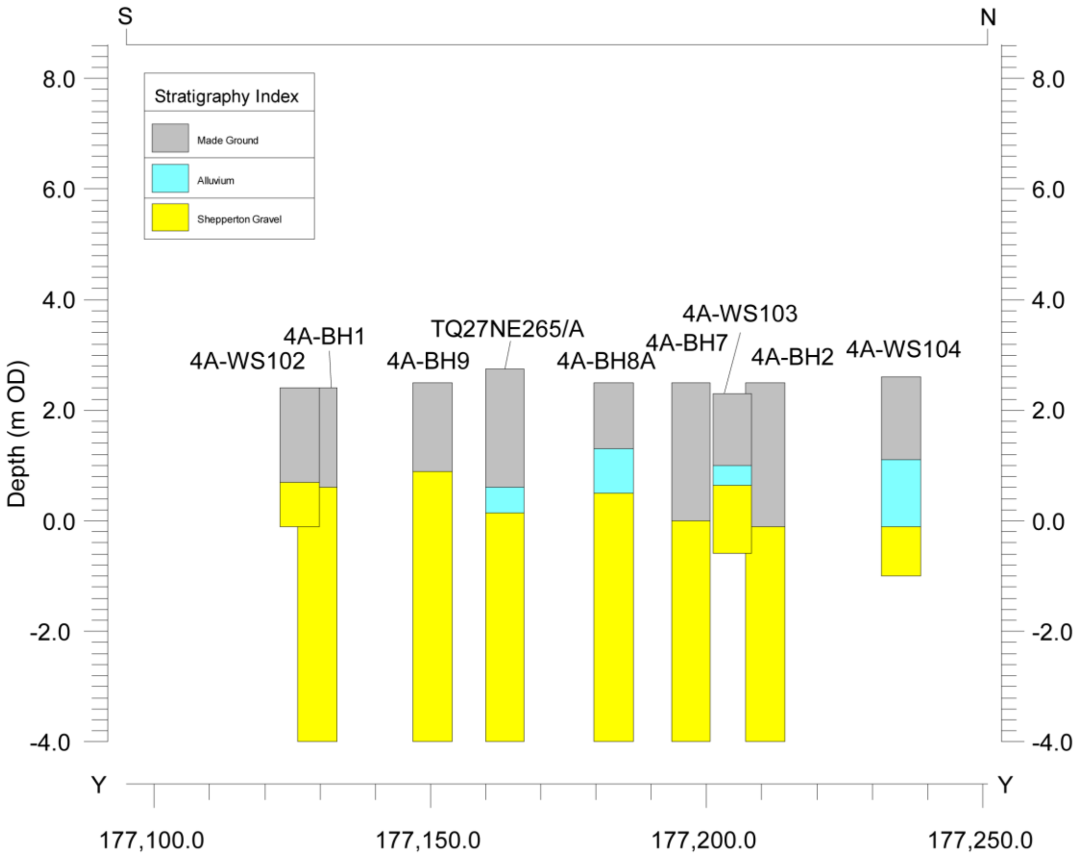

Figure 7: South-north transect of boreholes across the Battersea Power Station Phase 4A, Sleaford Street site (see Figure 2 for orientation).

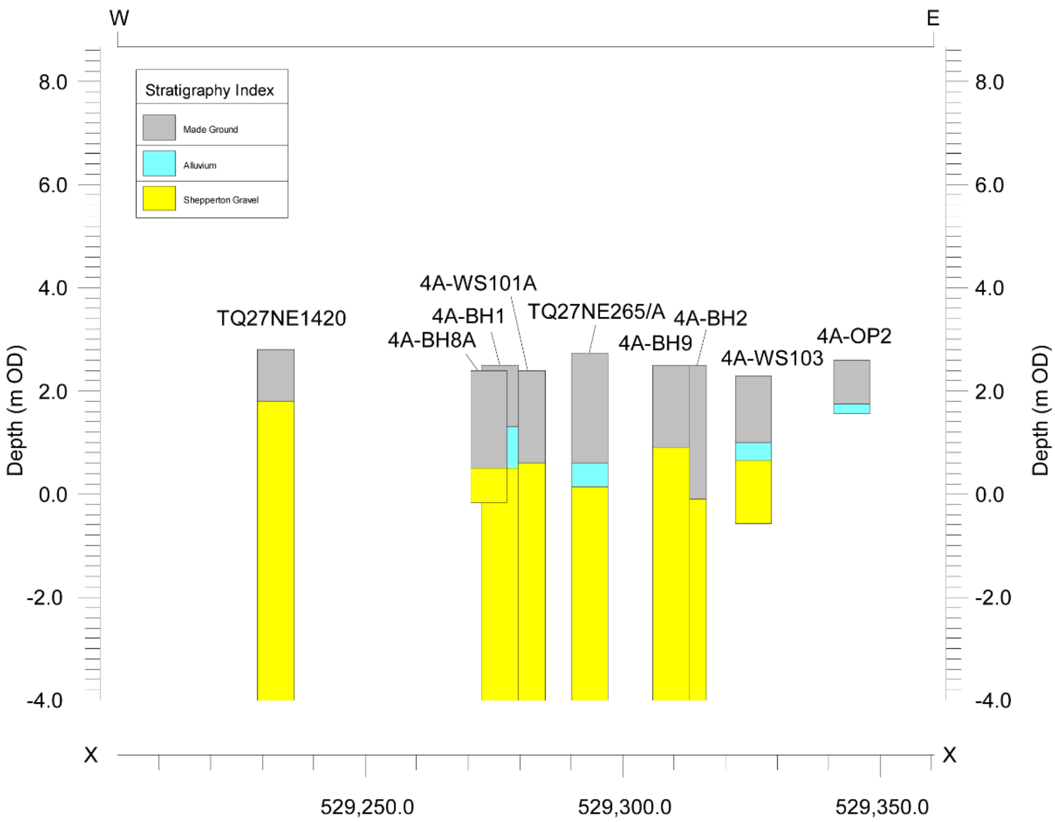

Figure 8: West-east transect of boreholes across the Battersea Power Station Phase 4A, Sleaford Street site (see Figure 2 for orientation).

5. DISCUSSION AND CONCLUSIONS

The aims of the geoarchaeological investigations at the Battersea Power Station Phase 4A site were to (1) clarify the nature of the sub-surface stratigraphy, in particular the possible presence and thickness of alluvium and peat 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, a programme of geoarchaeological fieldwork and deposit modelling of the surface elevation and thickness of the major stratigraphic units at the site was carried out, incorporating data from the new geotechnical boreholes and existing geotechnical data in the area of the site.

Previous geoarchaeological investigations (Dawson *et al.*, 2009; Morley, 2009/2010; Corcoran *et al.*, 2007; Branch *et al.*, 2010; Young *et al.*, 2012a) have revealed that a number of channels, bisecting areas of higher gravel 'islands' (eyots), existed in the Battersea area during the Late Devensian/Early Holocene. The Battersea Power Station Phase 4A site lies in area of elevated Kempton Park Gravel topography known as the 'Battersea Eyot'. The results of the geoarchaeological investigations have thus contributed to our understanding of the Holocene stratigraphic sequence within the area of the Phase 4A site, and in the wider area of the Battersea Channel Project more generally. The basal unit recorded within the geoarchaeological boreholes is the Early to Middle Devensian Kempton Park Gravel, which across the area of the site is generally recorded at between *ca*. -0.3 and 0.9m OD, elevations typical of the surface of the 'Battersea Eyot'. There is a gradual slope in the surface of the Gravel towards the east and north, perhaps more apparent in the wider model of the Gravel surface shown in Figure 9. This model demonstrates that the 'Battersea Eyot' probably extends north-eastwards, encompassing the area of the 40-42 (Young, 2015a) and 46 Ponton Road (Young, 2015b) sites. The Gravel surface then falls eastwards to *ca*. -2 to -3m OD in the area of the Wandsworth Road and Pascal Street site (Young & Green, 2013) and the Battersea Channel, where the Gravel most likely represents the Late Devensian Shepperton Gravel (e.g. Morley, 2009/2010). At Wandsworth Road and Pascal Street, a site lying near the confluence of the Battersea Channel and River Thames, the Shepperton Gravel surface was recorded at between *ca*. -2.5 and -3.0m OD. This was consistent with investigations at the 120-146 Stewarts Road site to the south of the present site (Morley, 2009/2010; Figure 1), where the Gravel surface within the Battersea Channel was recorded at between *ca*. -2.8 and -3.0m OD.

The Holocene alluvial sequence that overlies the Gravel within the area of the Phase 4A site has been deeply truncated, and the surviving remnants are both thin (0.35-1.2m) and only occasionally present. The alluvium that does remain is mineral-rich and relatively coarse grained (generally consisting of sandy/gravelly clay). Such sequences are of limited palaeoenvironmental potential, and no units typical of soil or peat formation were recorded. During previous work at Battersea Power Station (Branch *et al.*, 2010) relatively thin peat horizons radiocarbon dated to the early to late Neolithic were identified at -2.92 to -2.97m OD within the Phase 1 area (ABH8; 6310-6180 cal BP), and at -2.09 to -2.16m OD (ABH2; 5320 to 4960 cal BP) and -1.52 to -1.56m OD (ABH7; 4000 to 3690 cal BP) within the Phase 2 area. At the Wandsworth Road and Pascal Street site (Young & Green, 2013) a peat horizon was recorded between *ca*. -1.0 and 0.5m OD, whilst at the 120-146

Stewarts Road site (Morley, 2009/2010) peat was recorded between *ca*. -1.25 and -1.75m OD and subsequently radiocarbon dated to 7670-7510 cal BP (the Mesolithic cultural period). Despite being higher than the peat recorded at the Battersea Power Station site, this radiocarbon date is indicative of significantly earlier peat accumulation, and suggests a different sedimentary history in this part of the Battersea Channel.

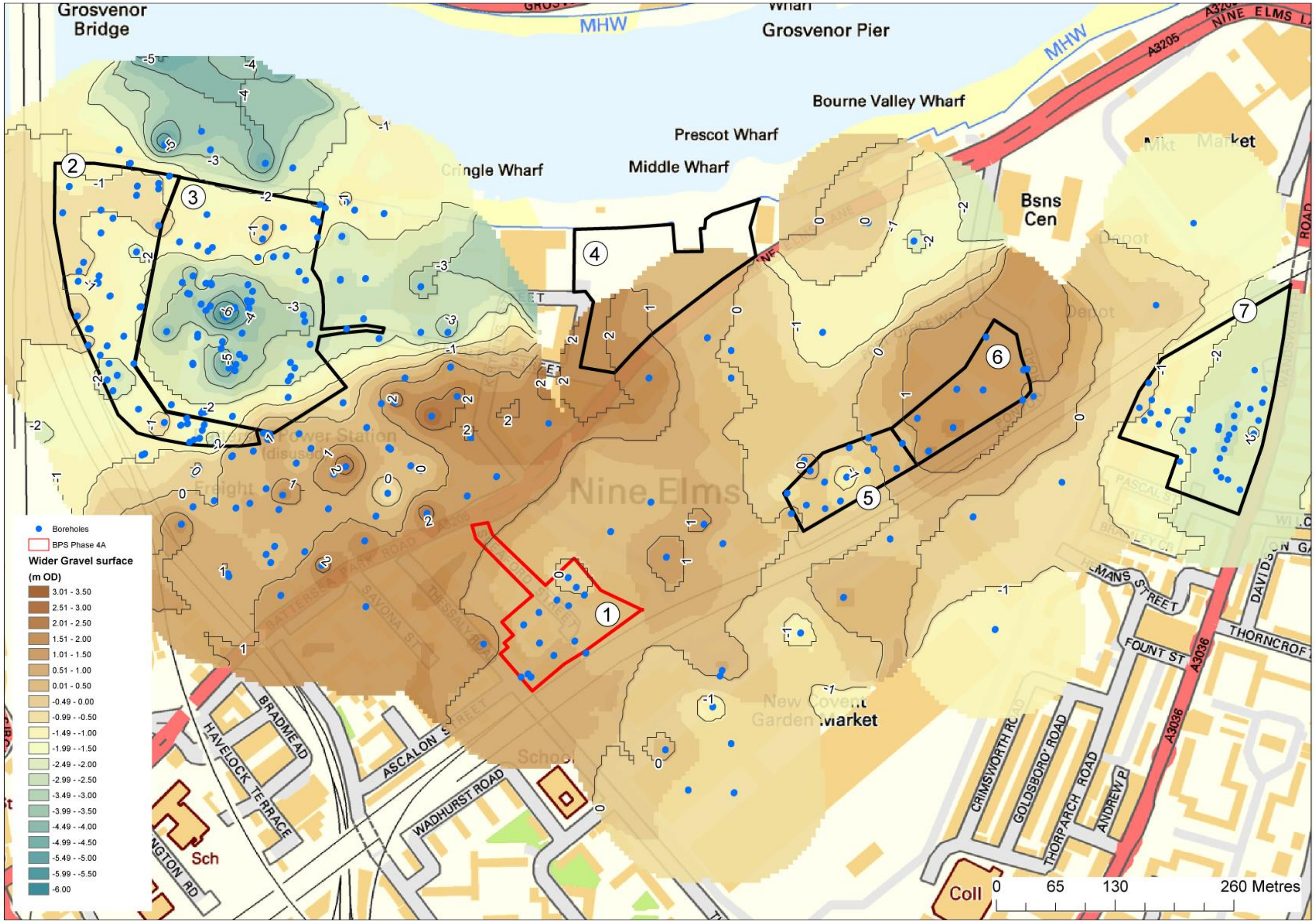

Figure 9: Shepperton/Kempton Park Gravel surface across the wider area (incorporating data from other sites within the area of the Battersea Channel Project), including (1) the present site; (2) Battersea Power Station Phase 1 (Young *et al*., 2012a); (3) Battersea Power Station Phase 2 (Young, 2016b); (4) Lombard Wall (Young *et al*., 2012b); (5) 46 Ponton Road (Young, 2015b); (6) 40-42 Ponton Road (Young, 2015b) and (7) Wandsworth Road and Pascal Street (Young and Green, 2013). *Contains Ordnance Survey data © Crown Copyright and Database right 2016.*

6. RECOMMENDATIONS

The alluvium that remains at the site is deeply truncated by the overlying Made Ground, only sporadically present and largely dominated by coarse-grained mineral-rich material (sandy/gravelly clays). In the absence of any organic-rich peat or soil horizons, either within the alluvium or overlying the Gravel, no further environmental archaeological investigations are recommended. It is of note that the Battersea Eyot would have remained elevated above the surrounding floodplain during the prehistoric period, and may have provided an environment suitable for human occupation or utilisation. However, given the extent of truncation by the overlying Made Ground, the archaeological potential of the site is considered to be low.

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8. APPENDIX

Table A1: Borehole attributes for the records used in the wider area of the deposit model, Battersea Power Station Phase 4A, Sleaford Street, London Borough of Wandsworth.

Name	Easting	Northing	Elevation (m OD)
Battersea Power Station Phase 4A (Soil Engineering, 2016)			
4A-BH1	529277.62	177126.09	2.40
4A-BH2	529309.43	177206.99	2.50
4A-BH3	529330.26	177220.91	2.50
4A-BH5	529328.80	177162.30	2.50
4A-BH7	529289.55	177193.70	2.50
4A-BH8A	529272.70	177179.88	2.50
4A-BH9	529305.67	177146.71	2.50
4A-OP2	529340.83	177149.11	2.60
4A-WS101A	529270.08	177122.63	2.40
4A-WS102	529280.86	177122.84	2.40
4A-WS103	529322.10	177200.92	2.30
4A-WS104	529321.68	177231.48	2.60
4A-WS105	529339.16	177212.43	2.60
Borehole records from the wider area (various sources)			
BH1846/1	529055.52	177636.21	5.14
BH1846/2	529078.31	177642.48	5.39
BH1846/3	529099.55	177558.96	4.50
BH1846/4	529114.52	177493.46	4.56
BH1846/5	529097.52	177514.96	4.42
BPS/ABH2	529013.00	177584.00	4.30

Name	Easting	Northing	Elevation (m OD)
BPS/ABH3	528809.00	177475.00	3.27
BPS/ABH7	529022.00	177461.00	3.94
BPS/ABH8	528828.00	177453.00	3.27
CJA/P2BH01	528910.55	177466.04	-0.08
CJA/P2BH02	528941.89	177482.27	0.20
CJA/P2BH03	528919.58	177530.88	0.06
CJA/P2BH04A	528964.64	177499.22	-0.09
CJA/P2BH05B	528930.37	177553.79	0.11
CJA/P2BH06	528956.36	177527.05	0.27
CJA/P2BH08	528998.95	177582.70	4.77
CJA/P2BH08B	529026.70	177566.52	4.46
CJA/P2BH09	528927.20	177588.90	4.82
CJA/P2BH10	529017.71	177467.09	4.76
CJA/P2BH11	528936.32	177379.36	3.79
CJA/P2BH12	528897.46	177398.40	3.95
CJA/P2BH13	528882.09	177500.85	0.06
CJA/P2BH14	528961.56	177475.76	0.24
CJA/P2BH15A	528974.86	177533.80	-0.17
CJA/P2BH16	528898.80	177554.72	0.05
FESBH105	528977.00	177370.00	3.87
FESBH112	528810.00	177609.00	3.99
FESBH113	528820.00	177540.00	4.17
FESBH115	528819.00	177466.00	3.37
FESBH2008	528954.00	177408.00	3.75
FESBH2011	528887.00	177421.00	3.85
FESBH2012	528858.00	177367.00	3.40
FESBH2012A	528855.00	177366.00	3.25
FESBH2016	528768.00	177631.00	4.65
FESBH2017	528842.00	177685.00	5.30
FESBH2019	528807.00	177554.00	4.20
FESBH2019A	528808.00	177562.00	4.25
FESBH2020	528835.00	177496.00	4.10
FESBH2021	528817.00	177448.00	3.25
FESBH2038	528849.00	177588.00	4.00
Fugro/BH2002	528916.00	177595.00	4.25
Fugro/BH2003	528932.00	177593.00	4.35
Fugro/BH2006	529043.00	177624.00	5.00
Fugro/BH2013	528898.00	177290.00	3.30
Fugro/BH2014	529052.00	177245.00	4.25
Fugro/BH2015	529167.00	177302.00	4.20

Name	Easting	Northing	Elevation (m OD)
Fugro/BH2022	529072.00	177558.00	4.45
Fugro/BH2022A	529072.00	177557.00	4.50
Fugro/BH2023B	529034.00	177557.00	4.15
Fugro/BH2024A1	529032.00	177519.00	3.95
Fugro/BH2024B	529033.00	177512.00	4.35
Fugro/BH2025	529015.00	177447.00	4.00
Fugro/BH2025B	529018.00	177452.00	4.05
Fugro/BH2026	529027.00	177389.00	4.10
Fugro/BH2027	529132.00	177424.00	4.25
Fugro/BH2028	529215.00	177385.00	3.90
Fugro/BH2029	529024.00	177357.00	3.95
Fugro/BH2030	529009.00	177322.00	4.05
Fugro/BH2031A	529124.00	177324.00	4.35
Fugro/BH2032	529160.00	177349.00	4.35
Fugro/BH2033	529243.00	177342.00	4.00
Fugro/BH2034	528991.00	177257.00	3.85
Fugro/BH2035	529211.00	177321.00	4.20
Fugro/BH2036	529007.00	177212.00	4.05
Fugro/BH2037	529099.00	177272.00	4.20
Fugro/BH2039B	528990.00	177615.00	4.95
Fugro/BH2042	528988.00	177390.00	4.00
Fugro/BH2043	528953.00	177364.00	3.65
Fugro/BHCH301	528970.00	177535.00	0.05
Fugro/BHCH303	528972.00	177532.00	0.05
Fugro/BHCH304	528972.00	177526.00	0.15
Fugro/BHCH305	528956.00	177526.00	-0.15
Fugro/BHCH306	528948.00	177521.00	-0.05
Fugro/BHCH307	528930.00	177529.00	-0.10
Fugro/BHCH308	528925.00	177524.00	-0.05
Fugro/BHCH313	528946.00	177473.00	-0.05
Fugro/BHCH314	528950.00	177461.00	-0.05
Fugro/BHGW02	528905.00	177543.00	0.10
Fugro/BHGW10	528967.00	177472.00	0.40
Fugro/TP201	528823.00	177625.00	4.50
Fugro/TP203	528806.00	177555.00	4.00
Fugro/TP2039B	528990.00	177615.00	5.50
Fugro/TP208	528873.00	177657.00	6.30
Fugro/TP224A	529000.00	177266.00	3.80
Fugro/TP228	529015.00	177429.00	5.70
Fugro/TP234	529040.00	177373.00	4.50

Name	Easting	Northing	Elevation (m OD)
Fugro/TP236	528918.00	177384.00	3.60
Fugro/TP237	528954.00	177365.00	2.00
Fugro/TP238	528917.00	177351.00	4.10
Fugro/TP239	528991.00	177329.00	4.10
Fugro/TP240	529065.00	177345.00	4.00
Fugro/TP243	528958.00	177308.00	4.00
Fugro/TP244	529005.00	177306.00	3.50
Fugro/TP246	529111.00	177299.00	4.30
Fugro/TP249	528996.00	177248.00	3.80
Fugro/TP250	529033.00	177260.00	4.00
Fugro/TP257	528784.00	177518.00	4.60
Fugro/TP258	528796.00	177486.00	4.60
Fugro/TP271	528905.00	177400.00	2.50
G/BH104A	528957.00	177458.00	-0.16
GBH1001	528880.00	177706.00	-2.17
GBH1002	528990.00	177685.00	-1.91
GBH101	528971.00	177552.00	-0.18
GBH102	528931.00	177552.00	-0.07
GBH103	528916.00	177495.00	-0.10
GBH105	528943.00	177490.00	-0.09
GBH1100	528810.00	177634.00	4.44
GBH201	528798.00	177504.00	3.23
GBH202	528785.00	177556.00	3.30
GBH203	528853.00	177528.00	4.30
GBH203B	528853.00	177528.00	4.30
GBH203C	528854.00	177528.00	4.30
GBH204	528851.00	177416.00	3.22
GBH301	528912.00	177345.00	3.47
GBH302	528922.00	177414.00	4.67
GBH302B	528924.00	177413.00	4.68
GBH302C	528920.00	177412.00	4.82
GBH401	528950.00	177233.00	3.27
GBH402	528973.00	177313.00	3.83
GBH403	528934.00	177316.00	3.59
GBH501	529059.00	177307.00	4.20
GBH601	529127.00	177372.00	4.06
GBH602A	529172.00	177408.00	4.12
GBH603A	529078.00	177353.00	4.04
GBH701	529079.00	177504.00	4.22
GBH702	529075.00	177423.00	4.22

Name	Easting	Northing	Elevation (m OD)
GBH801	529074.00	177605.00	4.74
GBH901	528926.00	177629.00	4.98
GBH902A	528982.00	177582.00	4.12
GBHPS17	528846.00	177466.00	3.80
GBHR103A	528916.00	177498.00	-0.07
GBHR201A	528796.00	177504.00	3.22
GBHR401A	528949.00	177236.00	3.16
GBHR601A	529125.00	177374.00	4.06
GBHS17	528846.00	177466.00	3.80
GEL-BH01	529565.90	177301.70	5.23
GEL-BH02A	529561.00	177324.00	5.26
GEL-BH03	529586.60	177348.40	5.14
GEL-BH04A	529629.30	177373.90	5.07
GEL-BH05	529650.30	177384.50	5.11
GEL-BH06	529687.50	177378.40	4.90
GEL-BH07	529681.20	177350.90	4.43
GEL-BH08	529626.50	177341.60	5.53
GEL-WS01	529582.20	177311.00	5.44
GEL-WS02	529602.20	177336.10	5.53
GEL-WS03	529656.60	177372.10	5.52
GEL-WS04	529649.10	177349.00	5.53
GEL-WS05	529619.60	177315.60	5.51
GEL-WS06	529602.90	177307.20	5.52
GTP/BH902	528987.00	177602.00	4.30
GTP10	529047.00	177604.00	4.26
GTP18	529117.00	177422.00	3.95
GTP20	529101.00	177396.00	3.63
GTP202	529200.00	177430.00	4.33
GTP203	529193.00	177462.00	4.29
GTP22	529149.00	177354.00	4.15
GTP34	528907.00	177380.00	4.03
GTP36	528911.00	177309.00	3.39
GTP37	528904.00	177406.00	4.40
GTP4	528896.00	177599.00	3.93
GTP40A	528823.00	177436.00	3.30
GTP45	528786.00	177567.00	3.09
MBH101	529779.00	177495.00	4.77
MBH102	529824.00	177460.00	4.66
MBH102A	529820.00	177459.00	4.66
MBH103	529831.00	177430.00	4.84

Name	Easting	Northing	Elevation (m OD)
MBH104	529776.00	177437.00	5.20
MBH105	529747.00	177438.00	5.20
MBH106	529743.00	177396.00	5.20
MBH107	529704.00	177406.00	5.20
MBH108	529716.00	177370.00	5.20
P1-QBH1	528775.41	177659.56	5.35
P1-QBH2	528791.01	177576.53	4.11
P1-QBH3	528816.91	177485.36	4.92
P1-QBH4	528912.01	177382.55	4.30
P2-QBH2	529047.90	177620.75	5.00
P2-QBH4	529038.90	177486.87	-0.02
P2-QBH5-S1	528992.40	177382.97	2.00
P2-QBH6	528879.53	177401.22	3.98
S2	528995.62	177384.00	2.00
S3	528991.46	177389.15	2.00
S4	528994.58	177388.60	2.00
SM-BH10	528976.00	177545.00	-0.09
SM-BH11	528911.00	177562.00	-0.01
SMBH12	528849.00	177650.00	1.27
SMBH13	528873.00	177617.00	1.06
SMBH14	528885.00	177671.00	5.25
SMBH15	528873.00	177663.00	0.91
SM-BH16	529010.00	177615.00	1.08
SMBH17	528921.00	177393.00	3.63
SM-BH4A	528923.00	177399.00	4.06
SM-BH5	528958.00	177465.00	-0.19
SM-BH6	528911.00	177465.00	-0.04
SM-BH7	528947.00	177517.00	0.02
SM-BH8	528907.00	177542.00	-0.02
SM-BH9	528925.00	177554.00	0.01
SNEBH101	530036.27	177341.69	2.93
SNEBH103	530072.98	177458.85	2.74
SNEBH104	529952.36	177403.90	2.94
SNEBH105	529991.38	177358.93	2.73
SNEBH106A	529993.81	177392.88	2.87
SNEBH107	530039.47	177372.68	3.00
SNEBH108	530072.04	177389.65	2.99
SNEBH109	530044.88	177388.41	2.93
SNEBH110	530033.19	177393.59	2.92
SNEBH111	529968.21	177399.79	2.92

Name	Easting	Northing	Elevation (m OD)
SNEBH112	529946.87	177417.74	2.90
SNEBH113	530006.25	177371.13	2.71
SNEBH114	530002.19	177416.15	2.82
SNEBH115	530050.52	177408.96	2.82
SNEBH116	530068.43	177416.52	2.87
SNEBH117A	530083.78	177438.25	2.96
SNEWS1	529960.44	177426.50	2.91
SNEWS10	530077.17	177404.10	2.85
SNEWS11	530054.58	177421.38	2.76
SNEWS12	530043.67	177339.34	3.07
SNEWS13	530056.99	177328.16	3.17
SNEWS15	530034.19	177397.61	2.87
SNEWS17	530031.21	177348.43	2.94
SNEWS2	529959.04	177411.76	2.87
SNEWS3	529977.79	177414.05	2.78
SNEWS4	529999.93	177404.61	2.76
SNEWS5	530070.60	177387.01	3.00
SNEWS6	530050.65	177395.36	2.88
SNEWS7	530042.98	177382.77	2.96
SNEWS8	530034.95	177362.43	2.91
SNEWS9	530081.69	177423.53	2.98
TQ27NE1241	529600.00	177500.00	3.16
TQ27NE1372	529700.00	177600.00	3.90
TQ27NE1393	528850.00	177660.00	5.43
TQ27NE1396	528830.00	177700.00	-1.52
TQ27NE1400	528930.00	177700.00	-3.05
TQ27NE1402	529020.00	177680.00	-2.44
TQ27NE1411	529050.00	177640.00	3.00
TQ27NE1420	529229.00	177159.00	2.80
TQ27NE1421	529143.00	177450.00	4.50
TQ27NE1422	529088.00	177634.00	5.10
TQ27NE152	528920.00	177720.00	-4.07
TQ27NE153	529410.00	177450.00	4.72
TQ27NE154A	529580.00	177360.00	3.66
TQ27NE155	529470.00	177290.00	3.51
TQ27NE156	529650.00	177620.00	3.66
TQ27NE159	529490.00	177130.00	3.66
TQ27NE1673	529190.00	177500.00	3.00
TQ27NE1860	529160.00	177550.00	5.33
TQ27NE1865	529120.00	177630.00	0.61

Name	Easting	Northing	Elevation (m OD)
TQ27NE1872	529160.00	177500.00	5.30
TQ27NE188	529100.00	177200.00	3.96
TQ27NE239/A	529500.00	177050.00	3.05
TQ27NE265/A	529290.00	177160.00	2.74
TQ27NE534	529480.00	177090.00	2.74
TQ27NE734	529500.00	177450.00	0.76
TQ27NE735	529500.00	177480.00	0.58
TQ27NE870	529474.00	177494.00	4.57
TQ27NE872	529428.00	177043.00	2.74
TQ27NE873	529453.00	176999.00	3.05
TQ27NE876	529503.00	176996.00	3.35
TQ27NE877	529488.00	177124.00	2.90
TQ27NE881	529576.00	177171.00	2.74
TQ27NE883	529623.00	177210.00	2.44
TQ27NE885	529674.00	177274.00	3.96
TQ27NE887	529789.00	177175.00	2.44
TQ27NE888	529765.00	177298.00	2.74
TQ27NE889	529862.00	177336.00	2.59
TQ27NE891	529957.00	177445.00	2.59
TQ27NE892	529368.00	177282.00	3.05
TQ27NE893	529412.00	177314.00	3.05
TQ27NE894	529429.00	177254.00	3.05
TQ27NE895	529491.00	177269.00	3.05
TQ27NE896	529819.00	177426.00	4.88
TQ27NE897	529965.00	177530.00	4.27
TQ37NW1303	530006.00	177620.00	3.96

9. OASIS FORM

OASIS ID: quaterna1-266218

Project details

Project name	BATTERSEA POWER STATION (PHASE 4A), SLEAFORD STREET
Short description of the project	A programme of geoarchaeological monitoring of geotechnical site investigations and subsequent deposit modelling was undertaken by Quaternary Scientific (University of Reading) in connection with the proposed development of land at Battersea Power Station Phase 4A, Sleaford Street, London Borough of Wandsworth. The basal unit recorded

	within the geoarchaeological boreholes is the Early to Middle Devensian Kempton Park Gravel, which across the area of the site is generally recorded at between ca. -0.3 and 0.9m OD, elevations typical of the surface of the 'Battersea Eyot'. The Holocene alluvial sequence that overlies the Gravel within the area of the site has been deeply truncated, and the surviving remnants are both thin (0.35-1.2m) and only occasionally present. The alluvium that does remain is mineral-rich and relatively coarse grained (generally consisting of sandy/gravelly clay); such sequences are considered to be of limited palaeoenvironmental potential, and no units typical of soil or peat formation were recorded. No further environmental archaeological investigations were recommended. It is of note that the Battersea Eyot would have remained elevated above the surrounding floodplain during the prehistoric period, and may have provided an environment suitable for human occupation or utilisation. However, given the extent of truncation by the overlying Made Ground, the archaeological potential of the site is considered to be low.
Project dates	Start: 01-09-2016 End: 21-10-2016
Previous/future work	No / Not known
Type of project	Environmental assessment
Survey techniques	Landscape

Project location

Country	England
Site location	GREATER LONDON WANDSWORTH BATTERSEA Battersea Power Station Phase 4A, Sleaford Street
Postcode	SW8 5AB
Site coordinates	TQ 2932 7720 51.478455992886 -0.137566168036 51 28 42 N 000 08 15 W Point

Project creators

Name of Organisation	Quaternary Scientific (QUEST)
Project brief originator	CgMs Consulting
Project design originator	D.S. Young

Project director/manager	D.S. Young
Project supervisor	D.S. Young
Type of sponsor/funding body	Developer

Project archives

Physical Archive Exists?	No
Digital Archive Exists?	No
Paper Archive recipient	LAARC
Paper Contents	"Environmental"
Paper Media available	"Report"

Entered by	Daniel Young (d.s.young@reading.ac.uk)
Entered on	21 October 2016