

50 LOMBARD WALL, CHARLTON, LONDON BOROUGH OF GREENWICH SE7 7SQ (SITE CODE: LBW11): GEOARCHAEOLOGICAL FIELDWORK REPORT

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INTRODUCTION

This report summarises the findings arising out of the geoarchaeological fieldwork undertaken by Quaternary Scientific (University of Reading) in connection with the proposed development at 50 Lombard Wall, Charlton, London Borough of Greenwich SE7 7SQ (National Grid Reference: centred on TQ 4082 7900; site code: LBW11; Figure 1). The site is located on the floodplain of the Estuarine Thames adjacent to the modern waterfront, and less than 1km north of the floodplain edge. Previous geotechnical investigations at the site carried out by RPS Health, Safety and Environment (Figure 2; Hawkins, 2011) indicate that the pre-Holocene gravel surface lies around OD towards the centre of the site (BH2 & BH3), and falls below -2m OD towards the north in boreholes BH1 & BH4); the geotechnical window sample put down towards the south of the site had not reached this surface by ca. 0.38m OD (WS6). Based upon other borehole records provided by the British Geological Survey, it appears that the height of the gravel surface decreases further (to between -3.94m and -6.28m OD) immediately to the north and west of the site. Similarly at the nearby Greenwich Industrial Estate site (GEI02; Morley, 2003; Figure 1) to the southwest of Lombard Wall, a geoarchaeological investigation revealed the gravel surface ranging between ca. -4 and -7.50m OD. These abrupt changes in gravel surface topography are recorded at other sites neighbouring the River Thames, such as Norman Road (Batchelor *et al.*, 2008).

Above the gravel surface, the geotechnical records indicate a sequence of Holocene alluvial deposits (including peat), and made ground. The thickness of made ground is variable across the site, from 1.50m in BH2 to 6m in BH4. Peat also appears to be absent in certain areas of the site (e.g. BH2), as well as in borehole records neighbouring the site (based on BGS borehole records). Elsewhere in boreholes BH1, BH3, WS1, WS2 and WS6, there are indications of peat horizons of variable thickness and depth. In borehole BH1 towards the north of the site, a ca. 1m thick peat horizon is recorded above -2.09m OD immediately overlying the gravel surface; similarly BGS borehole TQ47NW303 contains a thick peat horizon lying between -2.70m and -1.50m OD. In the remaining boreholes, peat thickness tends to be <1m and rests at or above OD height (e.g. BH3 & WS6).

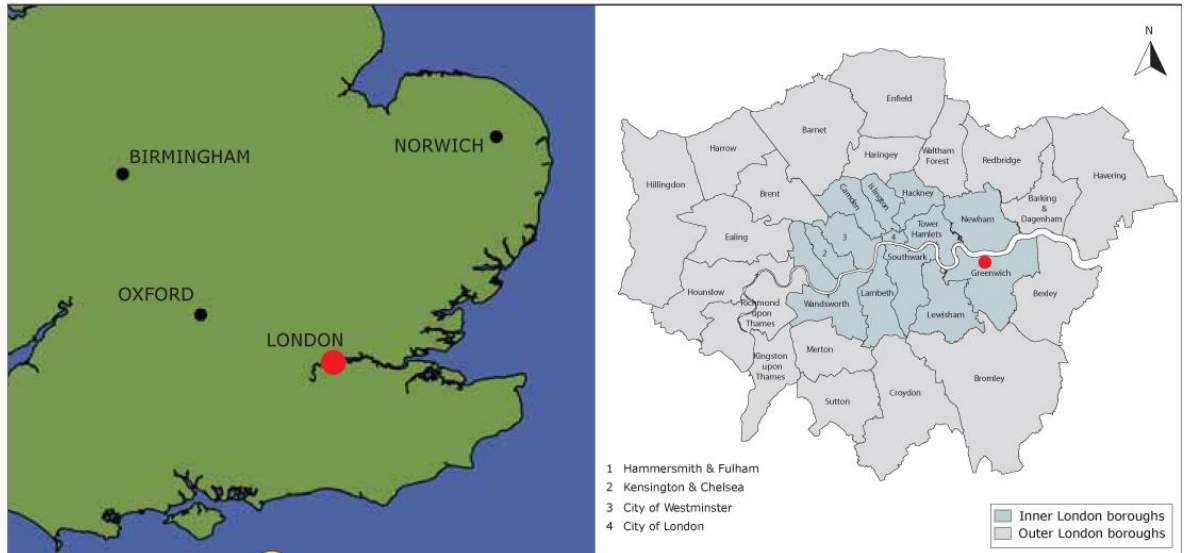
At least some of these peat horizon(s) are likely to represent prehistoric accumulation, and thus have the potential to provide data contributing to the reconstruction of past environments on both the wetland and dryland, and in particular, to increase knowledge and understanding of the interactions between relative sea level, human activity, vegetation succession and climate in this area of the Lower Thames Valley. If represented at Lombard Wall, 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.

Six significant research aims were outlined for geoarchaeological investigations at Lombard Wall during the generation of the Written Scheme of Investigation (Batchelor, 2011). The geoarchaeological field investigations aimed to address the first of these research aims: 'To clarify the nature, depth and extent of the main stratigraphic units (gravel, alluvium, peat and made ground)'. The following objectives were proposed in order to achieve this aim:

1. To obtain 4 geoarchaeological boreholes from select locations across the site (Figure 2).
2. To obtain X, Y, Z co-ordinates for each of the previous RPS geotechnical borehole locations (unavailable prior to the geoarchaeological fieldwork).
3. To use the stratigraphic data from these and existing borehole records to produce a deposit model of the major depositional units across the site.

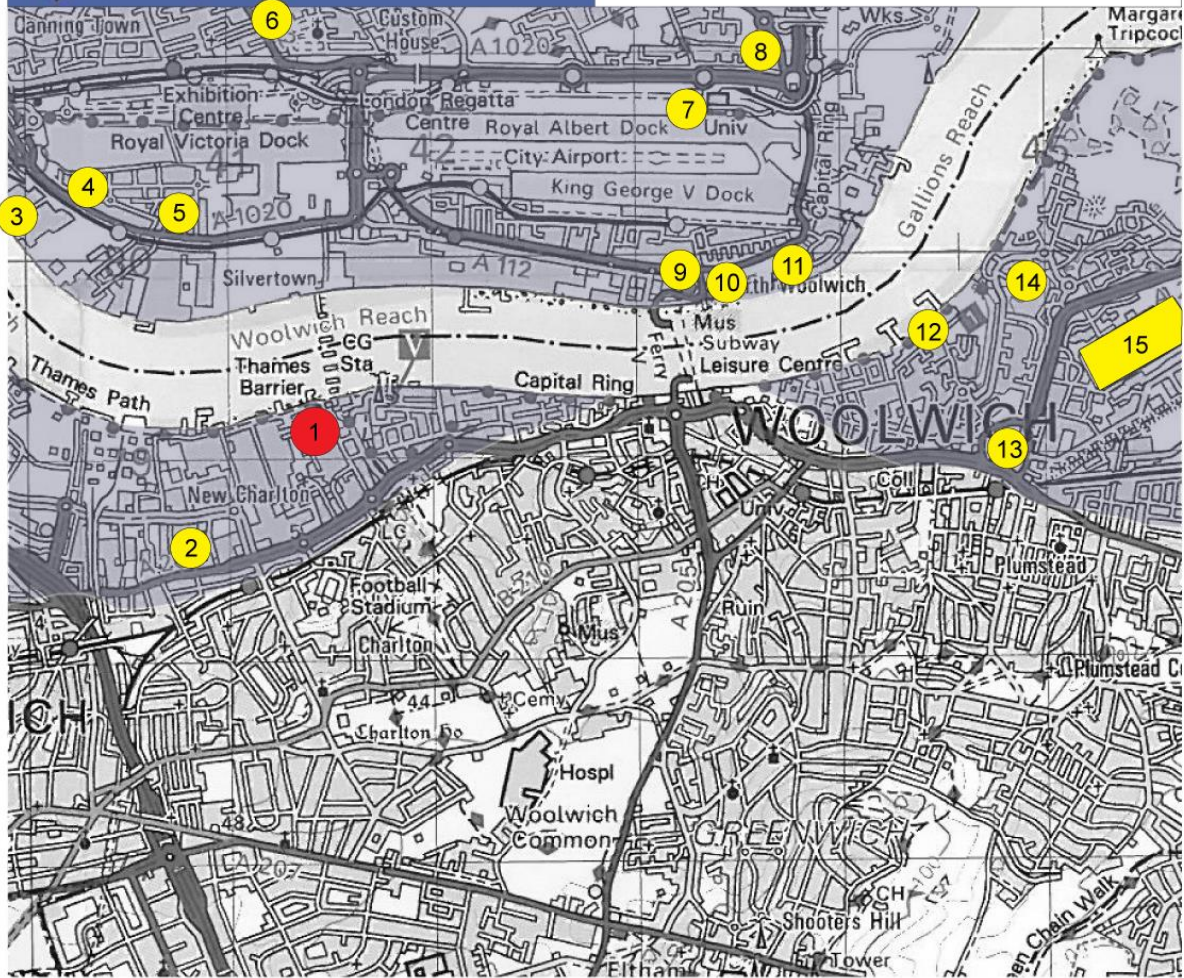
The four geoarchaeological borehole locations (<QBH1> to <QBH4>) were selected for the following reasons: <QBH1> was selected to establish the depth of the gravel surface in this area of the site, and to collect the peat recorded in WS6. <QBH2> was located between BH2 (no peat) and WS2 (peat), to establish the continuity of the peat in this area of the site. <QBH3> is to be put down in the vicinity of BH1 to obtain the peat recorded in the geotechnical record. Combined, <QBH1> to <QBH3> represent a north-south transect across the site, and with increasing distance from the adjacent river. <QBH4> was put down in the location of geotechnical borehole <BH3> to obtain the peat recorded in this area of the site. Boreholes have not been selected in the northwest and southeast corners of the site due to restricted access, and/or a lack of significant peat horizons as indicated by the geotechnical records.

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- 1 Hammersmith & Fulham
- 2 Kensington & Chelsea
- 3 City of Westminster
- 4 City of London

Inner London boroughs
Outer London boroughs



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Figure 1: Location of 50 Lombard Wall, Charlton, London Borough of Greenwich (LBW11) (1) and other nearby sites: (2) Greenwich Industrial Estate (GIE02; Morley, 2003); (3) London Cable Car (CAB11; Batchelor *et al.*, 2011; in prep); (4) Silvertown (BWC96; Wilkinson *et al.*, 2000); (5) Fort Street (HW-FO94; Wessex Archaeology, 2000); (6) Royal Docks Community School (PRG97; Holder, 1995); (7) Royal Albert Docks (Batchelor, 2009); (8) Ferndale Street (HE-FE95; Divers, 1995); (9) Albert Road (AET01; Spurr *et al.*, 2001); (10) North Woolwich Pumping Station (WW-PS93; Sidell, 2003); (11) Barge House Road (BAJ00; Corcoran *et al.*, 2001); (12) Woolwich Arsenal DLR Extension (WWA02; Corcoran, 2003); (13) Woolwich Trade Park/Pettman Crescent (WTP03/PWO08; Batchelor, 2009; Batchelor and Young, 2009); (14) Gallions Reach (Sidell, 2003); (15) Belmarsh Prison (BLJ08 & BWQ08; Hart, 2009). Figure modified from Hawkins, 2011.

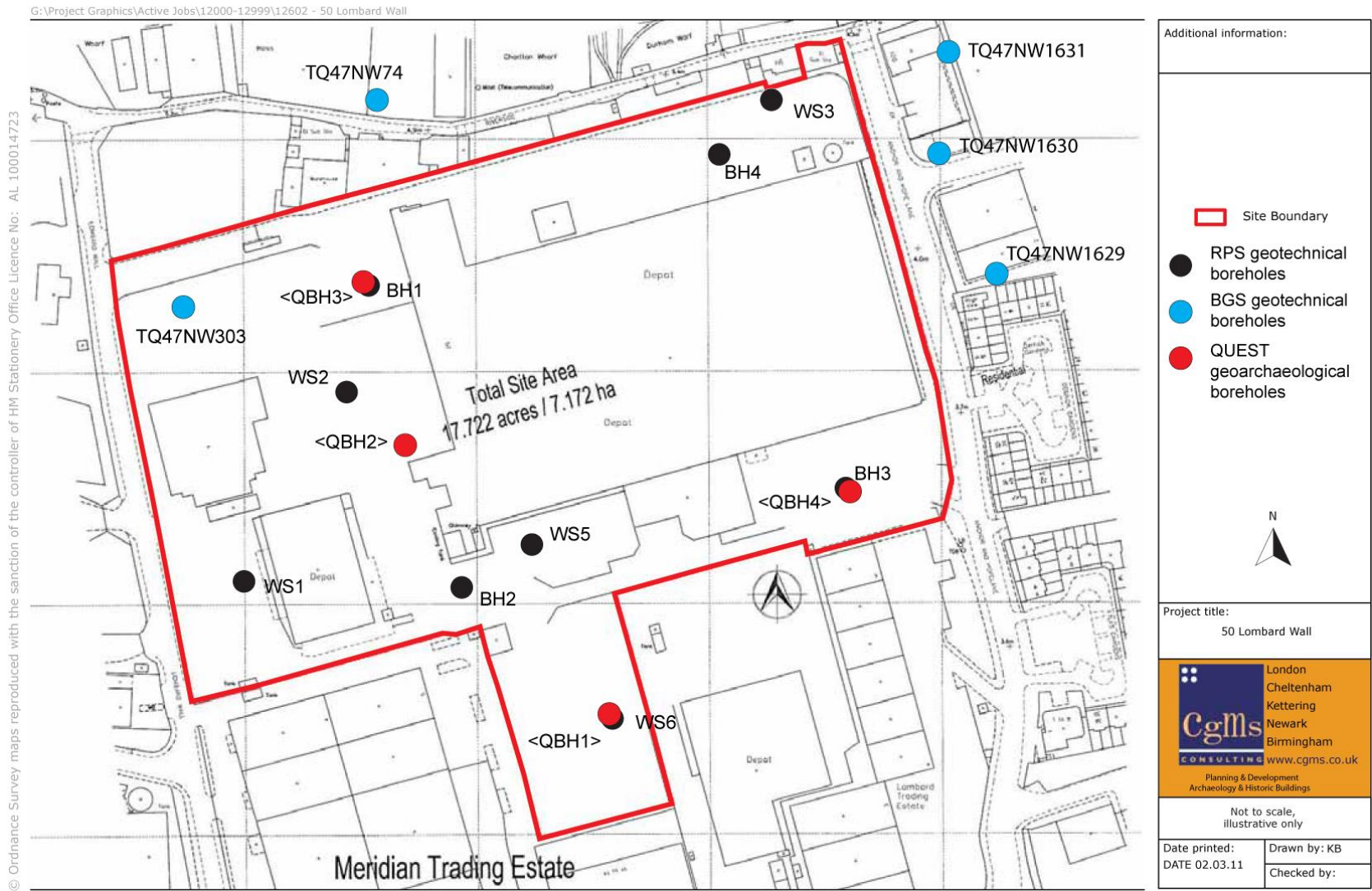


Figure 2: Detailed site map incorporating the location of the previous geotechnical investigations and proposed geoarchaeological boreholes

METHODS

Field investigations

Four boreholes (Boreholes <QBH1> to <QBH4>) were put down at the site in November 2011 (Figure 2). Borehole core samples were recovered using cable percussion coring, carried out by Tony Bedford Drilling Services, and monitored by a member of Quaternary Scientific staff. The spatial attributes of each borehole were recorded (Table 1 and Figure 2). The spatial attributes for the original geotechnical boreholes are also shown (boreholes BH1-4, WS1-3 & 5-6) in Table 1 and Figure 2; these were not recorded during the original geotechnical works and thus were returned to during the geoarchaeological works.

Table 1: Borehole attributes, 50 Lombard Wall, Charlton, London Borough of Greenwich (site code: LBW11)

Borehole number	Easting	Northing	Elevation (m OD)
<i>Geoarchaeological boreholes</i>			
<QBH1>	540859.4640	178851.2290	5.38
<QBH2>	540771.4980	178966.2390	3.91
<QBH3>	540756.1060	179036.1170	6.01
<QBH4>	540928.7383	179115.0700	5.15
<i>Geotechnical boreholes</i>			
BH1	540756.1060	179036.1170	6.01
BH2	540795.4900	178905.1600	5.20
BH3	540962.5630	178946.8320	5.15
BH4	540905.3700	179091.8100	7.05
WS1	540702.030	178909.560	Unobtainable
WS2	540745.7170	178989.6390	4.70
WS3	540928.7383	179115.0700	6.78
WS5	540825.8670	178924.0190	5.19
WS6	540859.4640	178851.2290	5.38

Lithostratigraphic descriptions

The lithostratigraphy of (Q.<BH1> to Q.<BH4>) were 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) (Troels-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 Tables 2 to 5.

RESULTS, INTERPRETATION AND DISCUSSION OF THE LITHOSTRATIGRAPHIC DESCRIPTIONS

The major stratigraphic units recorded within the new geoarchaeological boreholes (<QBH1> to <QBH4>; Tables 2 to 5) are broadly similar to those recorded during the previous geotechnical investigations. However, the depths at which each of these units are recorded varies considerably; both across the site in general, and between geoarchaeological and geotechnical boreholes put down in the same locations (Figures 3 to 5).

As outlined in the introduction, the locations of the four new geoarchaeological boreholes were specifically selected:

1. <QBH1> was selected to establish the depth of the Gravel surface in this area of the site, and to collect the peat recorded in WS6. The results of the field investigations (Table 2) have revealed that the gravel lies at -1.07m OD, and that the peat previously recorded was most likely mis-identified. Not only was the material not identified in the geoarchaeological sequence, but the horizon is significantly above OD making natural formation unlikely (i.e. if peat is present, it most likely represents redeposition).
2. <QBH2> was located between BH2 (no peat) and WS2 (peat), to establish the continuity of the peat in this area of the site. The results of the geoarchaeological investigation (Table 3) have revealed an organic-rich sand lying between 0.34 and 0.47m OD, overlain by a 4cm thick unit of organic-rich peaty clay. Such thin organic-rich horizons could easily be missed during routine geotechnical investigations, possibly explaining its absence in the nearby BH2 record.
3. <QBH3> is to be put down in the vicinity of BH1 to obtain the peat recorded in the geotechnical record. The results of this investigation (Table 4) indicate that whilst the gravel surface was located at a similar elevation in both the geotechnical and geoarchaeological boreholes, the overlying alluvial sequence was somewhat different. In the new geoarchaeological borehole, the gravel was overlain by sand and organic-rich sand, a thin horizon of inorganic alluvium and a ca. 1m thick horizon of Peat. However, this peat is 1m above the same unit in the adjacent geotechnical borehole, whilst the organic sand is absent entirely. This is thought to represent the coarser sampling and description methodology frequently carried out during geotechnical investigations.
4. <QBH4> was put down in the location of geotechnical borehole BH3 to obtain the Peat recorded in this area of the site. The results of the geoarchaeological investigation have revealed that the gravel surface and overlying peat is recorded approximately 1m beneath that of the previous BH3 record (Table 5). Once again, this is thought to represent the coarser sampling and description methodology frequently carried out

during geotechnical investigations.

The combined results of the geoarchaeological and geotechnical borehole investigations (Figures 3 to 5) suggest that the surface of the sand and gravel is recorded around or below -2m OD in the northern area of the site (<QBH3>, BH1 & BH4). Further to the north and east of the site, this surface decreases further in height to between -3.94m and -6.28m OD (TQ47NW1629 to 31, TQ47NW74 & TQ47NW303). Immediately to the south of <QBH1>/BH3, the gravel surface rises steeply to -0.30m OD in BH2, and 0.15/-0.68m OD in BH3/<QBH4>; the surface may have been higher still in intervening <QBH2>, but the borehole was abandoned whilst in the overlying sands due to strong odours emitting from the borehole. In the southern area of the site, new borehole <QBH1> put down adjacent to WS6, suggests that the gravel surface dips to below -1m OD.

The arrangement of the topography appears to suggest a topographic high point (gravel eyot) centred on Lombard Wall on an east-west alignment between at least boreholes BH2 and <QBH4>. This interpretation is enhanced by a low gravel surface recorded to the south-west at Greenwich Industrial Estate (-4 to -7.50m OD; Morley, 2003; Figure 1). Similar gravel high points (of ca. -1 to -2m OD) are recorded on the opposite bank of the River Thames, centred on Royal Albert Dock/Royal Docks Community School (Batchelor, 2009/Holder, 1995) and Barking Riverside (Batchelor *et al.*, 2011b), both of which are surrounded by areas with a gravel surface ranging between -3.5m and >-5m OD.

This overall gravel surface is representative of pre-Holocene river terrace gravels laid down within a high energy braided river environment. Within the previous geotechnical logs and Desk Based Assessment from Lombard Wall, this surface is referred to as the Kempton Park Gravel. However, Gibbard (1994) has a borehole transect along the line of the A102 (Blackwall Tunnel Approach Road), which is close to the Lombard Wall site. These boreholes show the Shepperton Gravel at ca. -2.0 to -3.0m OD and the Kempton Park Gravel at ca. 3.0m OD. This would suggest that the Lombard Wall site is underlain by Shepperton Gravel, but at a slightly elevated level in at least some areas of the site than observed on the A102 transect.

In all four of the new boreholes, the surface of the sand and gravel is overlain by coarse sands which frequently become increasingly organic and contain wood remains upwards. This horizon is interpreted as deposition taking place during a decrease in fluvial energy during the Late Glacial, whilst the transition towards an organic-rich sand and wood

macrofossils, is thought to represent the development of more terrestrial conditions and establishment of woodland. This sand is not recorded within the previous geotechnical investigations, although, borehole TQ47NW303 contains a thick horizon of 'silt with vegetation', which may be of similar origin to the sands and organic sands recorded in the new boreholes.

Above the sands, alluvium and peat is recorded in all the new boreholes. In <QBH1> and <QBH2> the peat horizon is very thin (<10cm), prior to a transition to fine-grained organic-rich alluvium, and inorganic alluvium. In <QBH3> and <QBH4>, the sequence is similar, although the thicker and deeper peat is preceded by a thin horizon of organic-rich alluvium. The thickness of the peat appears proportional to the height of the underlying gravel surface as would be expected; i.e. thinner horizons of peat over areas with an elevated gravel surface and vice versa. The general sequence of organic-rich sands through peat formation, organic-rich alluvium and finally inorganic alluvium, is interpreted as representing a general transition from terrestrial and semi-terrestrial environments supporting woodland, to eventual inundation; a process of environmental changes possibly caused by rising relative sea level.

In all boreholes, the alluvial sequence is overlain by a variable thickness of made ground to the present day surface of ca. 3 to 7m OD.

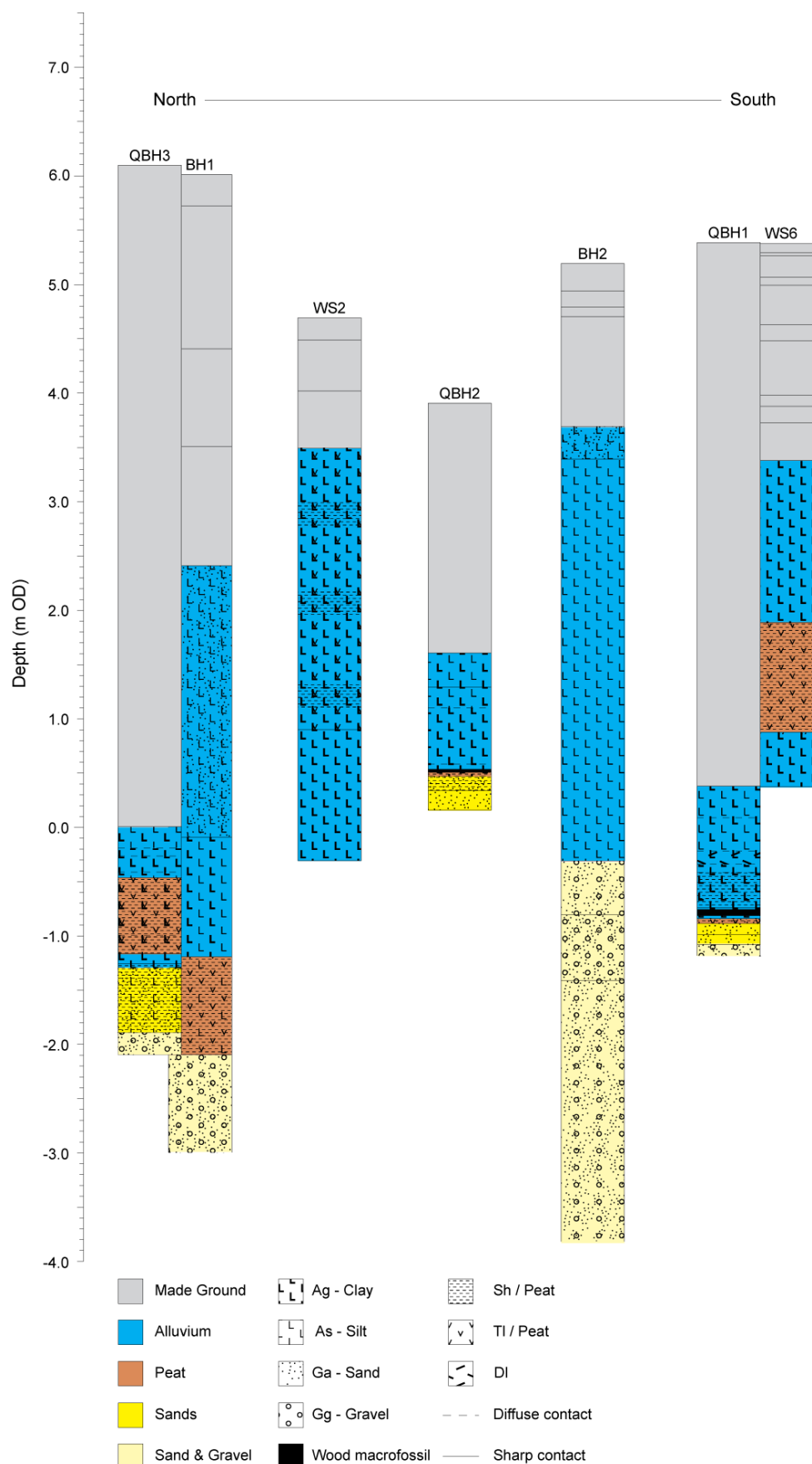


Figure 3: North-south transect of boreholes across 50 Lombard Wall, Charlton, London Borough of Greenwich (site code: LBW11)

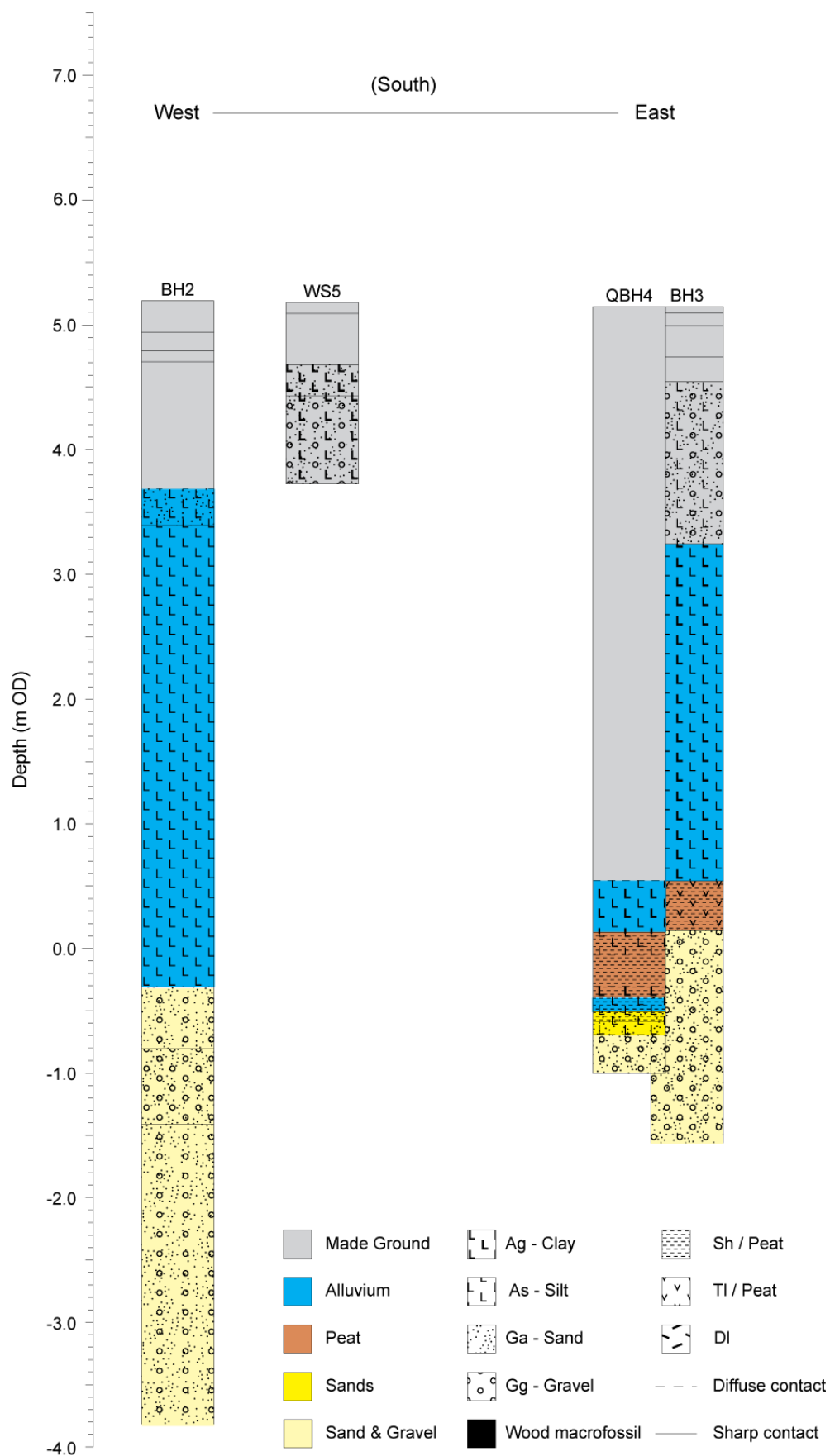


Figure 4: Southern west-east transect of boreholes across 50 Lombard Wall, Charlton, London Borough of Greenwich (site code: LBW11)

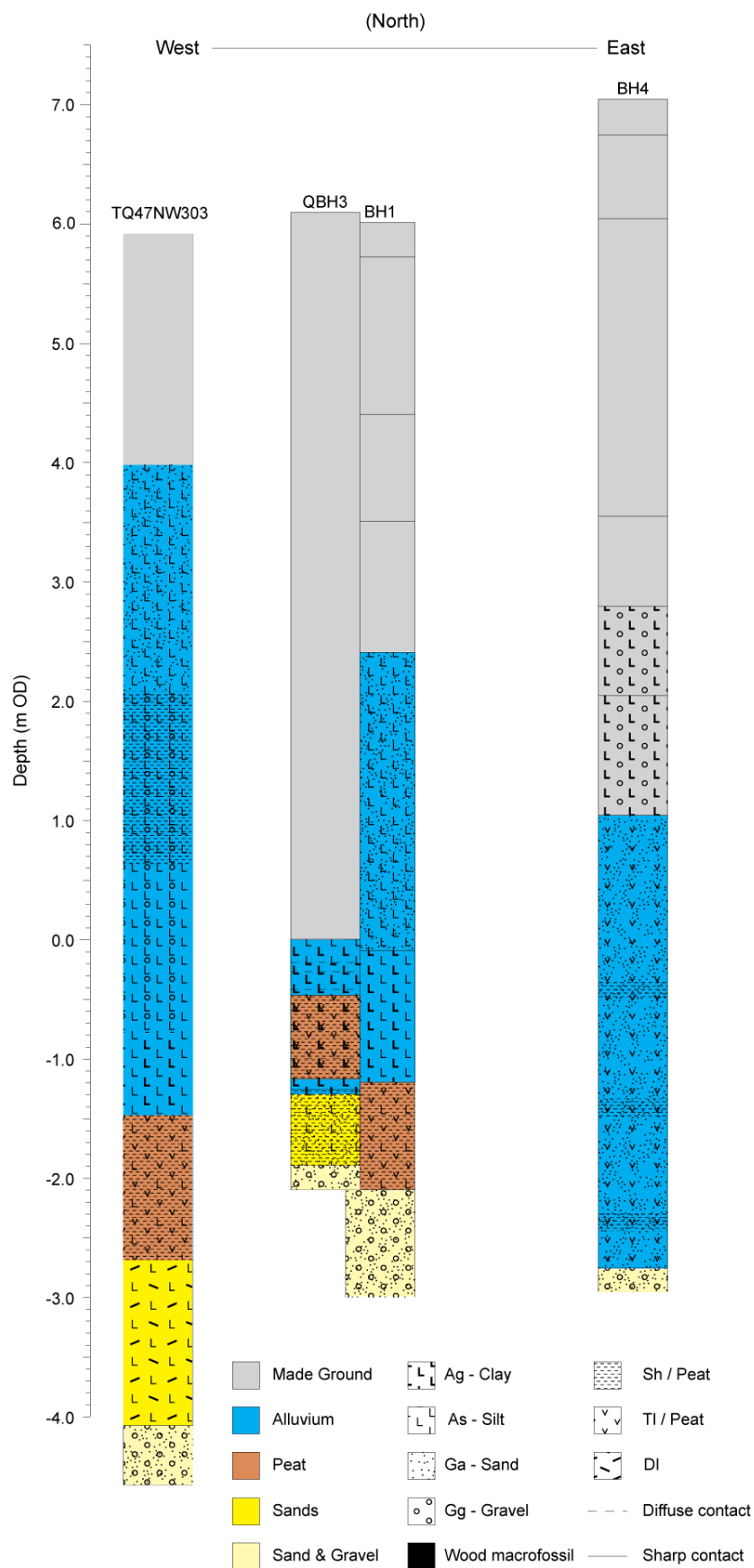


Figure 5: Northern west-east transect of boreholes across 50 Lombard Wall, Charlton, London Borough of Greenwich (site code: LBW11)

Table 2: Lithostratigraphic description of Borehole <QBH1>, 50 Lombard Wall, Charlton, London Borough of Greenwich (site code: LBW11)

Depth (m OD)	Depth (bgs)	Unit number	Description
5.38 to 0.38	0 to 5.00	11	Made Ground
0.38 to 0.08	5.00 to 5.30	10	10YR 2/1 mottled 10YR 4/1; As3, Ag1, Sh+, Ga+, Mollusca fragments+, mortar+, Gg+; Black mottled dark grey silty clay with organic, sand, gravel, mortar and Mollusca fragment inclusions. Gravel of various shapes, sizes and lithologies. diffuse contact into:
0.08 to -0.22	5.30 to 5.60	9	10YR 4/1; As3, Ag1, chalk nodules+; Dark grey stiff silty clay with chalk nodule inclusions; diffuse contact into:
-0.22 to -0.34	5.60 to 5.72	8	10YR 4/2 with 10YR 3/1; As3, DI1, Sh+; Dark greyish brown with very dark grey clay with detrital wood and traces of organic matter; diffuse contact into:
-0.34 to -0.42	5.72 to 5.80	7	10YR 4/1 mottled 10YR 2/1; As4, Sh+, DI+; Dark grey mottled black clay with organic matter and detrital wood inclusions; diffuse contact into:
-0.42 to -0.74	5.80 to 6.12	6	10YR 4/2; As3, Sh1, DI+; Dark greyish brown organic-rich clay with wood (detrital or <i>in situ</i>) inclusions. Wood inclusions include towards the base of the unit.
-0.74 to -0.76	6.12 to 6.14	5	10YR 4/2; As4, Sh+, DI+; Dark greyish brown clay with inclusions of organic matter and detrital wood.
-0.76 to -0.82	6.14 to 6.20		Large wood macrofossil
-0.82 to -0.84	6.20 to 6.22	5	10YR 4/2; As4, Sh+, DI+; Dark greyish brown clay with inclusions of organic matter and detrital wood; sharp contact into:
-0.84 to -0.88	6.22 to 6.26	4	2.5YR 3/1; Sh2, TI ⁴ 1, Ga1; Humo 4; Reddish black very well humified, very organic-rich sandy wood peat; diffuse contact into:
-0.88 to -0.98	6.26 to 6.36	3	10YR 5/4; Ga4 alternating with and 10YR 3/1; Sh3, Ga1; Yellowish brown sand alternating with very dark grey very organic-rich sand. Contacts between the two units is sharp to diffuse. Diffuse contact into:
-0.98 to -1.07	6.36 to 6.45	2	10YR 5/4; Ga4, Sh+; Yellowish brown sand with organic-rich inclusions.
Below -1.07	>6.45	1	Sand and gravels recorded in the field but not recovered.

Table 3: Lithostratigraphic description of Borehole <QBH2>, 50 Lombard Wall, Charlton, London Borough of Greenwich (site code: LBW11)

Depth (m OD)	Depth (bgs)	Unit number	Description
3.91 to 1.61	0 to 2.30	8	Made Ground
1.61 to 1.29	2.30 to 2.62	7	10YR 3/1 mottled 10YR 4/1; As3, Ag1; Very dark grey mottled with dark grey silty clay; sharp contact into:
1.29 to 1.11	2.62 to 2.80	6	10YR 3/1; As2, Ag2, Gg+, Ga+, rooting+, brick+; Very dark grey silty clay with gravel, sand, rooting and brick fragment inclusions; diffuse contact into:
1.11 to 0.58	2.80 to 3.33	5	10YR 5/1; As4; Grey clay; diffuse contact into:
0.58 to 0.54	3.33 to 3.37	4	10YR 4/1; As4, Sh+, DI+; Dark grey clay with detrital wood and organic-rich inclusions; sharp contact into:
0.54 to 0.51	3.37 to 3.40		Wood macrofossil
0.51 to 0.47	3.40 to 3.44	3	10YR 3/1; As2, Sh2, TI/DI+; Very dark grey very organic-rich clay with wood (detrital or in situ) inclusions; diffuse contact into:
0.47 to 0.34	3.44 to 3.57	2	10YR 3/1 to 10YR 5/4; Ga3, Sh1, DI+ / Sh3, Ga1, DI+; Very dark grey alternating with yellowish brown organic-rich sand to very organic-rich sand with wood inclusions (detrital or rooting); sharp contact into:
0.34 to 0.16	3.57 to 3.75	1	10YR 5/4; Ga4; Yellowish brown sand.
Below 0.16	>3.75		Borehole abandoned due to gaseous emissions.

Table 4: Lithostratigraphic description of Borehole <QBH3>, 50 Lombard Wall, Charlton, London Borough of Greenwich (site code: LBW11)

Depth (m OD)	Depth (bgs)	Unit number	Description
6.01 to 0.01	0 to 6.00	11	Made Ground
0.01 to -0.19	6.00 to 6.20	10	10YR 3/1 mottled 10YR 5/1; As3, Ag1, brick fragments+, detrital wood+, Ga+; Very dark grey mottled with grey silty clay with inclusions of detrital wood, sand and brick fragments; diffuse contact into:
-0.19 to -0.26	6.20 to 6.27	9	10YR 4/1; As4; Dark grey clay; diffuse contact into:
-0.26 to -0.41	6.27 to 6.42	8	10YR 5/1 to 10R 4/1; As4, DI+; Grey to dark grey clay with detrital wood inclusions; diffuse contact into:
-0.41 to -0.46	6.42 to 6.47	7	10YR 4/2; As3, Ag1, DI+; Dark greyish brown silty clay with detrital wood inclusions; sharp contact

-0.46 to -0.99	6.47 to 7.00	6	into: 10YR 2/1; Sh2, TI ³ 1, As1; Humo 3-4; Black well humified, very organic-rich wood peat with clay; diffuse contact into:
-0.99 to -1.16	7.00 to 7.17	5	10YR 4/2 to 10YR 3/2; As2, Sh1, TI ³ 1; Humo 3-4; Very dark greyish brown to dark greyish brown highly organic-rich clay with well humified wood peat. A large wood macrofossil is present at the base of the unit; sharp contact into:
-1.16 to -1.25	7.17 to 7.26	4	10YR 5/1; As4, DI+; Grey clay with detrital wood inclusions; sharp contact into:
-1.25 to -1.28	7.26 to 7.29	3	10YR 4/2; As3, Sh1, DI/TI+; Dark greyish brown organic-rich clay with wood macrofossil inclusions (detrital or in situ); diffuse contact into:
-1.28 to -1.94	7.29 to 7.95	2	10YR 4/1 to 10YR 5/4; Ga2, Sh1, Ag1, DI+; Dark grey to yellowish brown organic-rich silty sand with detrital wood inclusions; diffuse contact into:
Below -1.94	>7.95	1	Sand and gravels recorded in the field but not recovered.

Table 5: Lithostratigraphic description of Borehole <QBH4>, 50 Lombard Wall, Charlton, London Borough of Greenwich (site code: LBW11)

Depth (m OD)	Depth (bgs)	Unit number	Description
5.15 to 0.55	0 to 4.60	10	Made Ground
0.55 to 0.16	4.60 to 4.99	9	10YR 5/1; As3, Ag1, calcareous nodules+, Sh+; Grey silty clay with calcareous nodules from 4.75 to 4.80m BGS, and organic rich inclusions from 4.88 to 4.99m BGS; diffuse contact into:
0.16 to 0.09	4.99 to 5.06	8	2.5Y 3/1; Ag2, Sh1, As1; Very dark grey organic-rich clayey silt; sharp contact into:
0.09 to -0.05	5.06 to 5.20	7	2.5YR 2.5/1; Sh3, Ag1; Humo 3; Reddish black well humified, very organic-rich silt; diffuse contact into:
-0.05 to -0.30	5.20 to 5.45	6	2.5YR 2.5/1; Sh3, TI ² 1, Ag+; Humo 3; Reddish black well humified highly organic-rich wood peat with silt inclusions; diffuse contact into:
-0.30 to -0.38	5.45 to 5.53	5	10YR 2/2; As2, Sh2, DI/TI+; Very dark brown very organic-rich clay with wood macrofossil (detrital or in situ) inclusions; sharp contact into:
-0.38 to -0.50	5.53 to 5.65	4	10YR 2/2; Ag3, Sh1, DI+; Very dark brown organic-rich silt with detrital wood inclusions; unknown contact into:
-0.50 to -0.58	5.70 to 5.78	3	10YR 2/1; Ga2, Ag1, Sh1; Black organic-rich silty sand; sharp contact into:
-0.58 to -0.68	5.78 to 5.83	2	10YR 3/2; Ag2, Ga2, Gg+; Very dark greyish brown silty sand with gravel inclusions; diffuse contact into:
-0.68 to -1.00	5.83 to 6.15	1	10YR 3/2; Ga2, Gg2; Very dark greyish brown sandy gravel.

CONCLUSIONS AND RECOMMENDATIONS

There is a strong case for recommending further investigation of the Holocene sequences at the Lombard Wall site. The combined results of the geoarchaeological and previous geotechnical investigations suggest a highly variable sand and gravel topography across the site, with a west-east aligned gravel island towards its centre. Such islands may have been a foci for prehistoric activity (e.g. the Horsleydown and Bermondsey eyots in central London), and thus study of the environmental archaeological remains within these borehole sequences could provide important evidence of human activity in this area of the Lower Thames Valley.

In the absence of OD data during the production of the Desk Based Assessment (Hawkins, 2011) and Written Scheme of Investigation (Batchelor, 2011) for the site, a minimum of two differently aged peat horizons were suggested for the site with the lower peat recorded in BH1 potentially dating to the Early Holocene (Mesolithic to Early Neolithic), and the remaining peat units possibly of Neolithic/Bronze Age. This hypothesis may still be correct, or the peat may be of relatively similar age, having migrated from areas of low to high topography in response to relative sea level changes.

An environmental archaeological assessment of both boreholes is therefore recommended to elucidate the ages of the peat, and to evaluate the potential for reconstructing the past environmental conditions of the site and its environs. Assessment is recommended on three boreholes: <QBH3>, <QBH2> and <QBH1> representing a north-south transect across the site. The assessment will incorporate: (1) rangefinder radiocarbon dating, to provide an age for the peat in <QBH1> and <QBH2> (one date from each), and the onset and cessation of peat formation in <QBH3>; (2) organic matter determinations to aid interpretation of the sedimentary units, and to identify horizons of maximum organic-matter for radiocarbon dating; (3) assessment of the archaeobotanical remains (pollen, waterlogged wood and seeds) to provide a provisional reconstruction of the vegetation history; (4) assessment of the diatoms to provide an indication of the palaeohydrology (e.g. marine, brackish or freshwater), and (5) assessment of the zooarchaeological remains (insects and Mollusca) to provide information on the general environmental conditions, climatic change and hydrology of the site. The environmental assessment will also highlight any indications of nearby human activity, and provide recommendations for further analysis (if necessary).

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APPENDIX 1: OASIS

Project details

Project name	50 Lombard Wall: Geoarchaeological Fieldwork
Short description of the project	Four geoarchaeological boreholes were put down across the site at selected locations. Combined with previous geotechnical records, a model of the sub-surface stratigraphy indicates a sequence of Shepperton Gravel overlain by sands and organic sands, alluvium (including peat) and made ground. The Shepperton Gravel undulates across the site from >-2m OD in the north, to approximately 0m OD at its centre. This topographic high point may represent a gravel eyot: a possible foci for human activity. The thickness of the overlying sands and alluvium reflects that of the underlying topography. Further environmental archaeological assessment work was recommended.
Project dates	Start: 14-10-2011 End: 18-11-2011
Previous/future work	No / Yes
Any associated project reference codes	LBW11 - Sitecode
Type of project	Environmental assessment
Site status	None
Current Land use	Industry and Commerce 1 - Industrial
Significant Finds	PEAT Uncertain
Survey techniques	Archaeology

Project location

Country	England
Site location	GREATER LONDON GREENWICH GREENWICH 50 Lombard Wall
Postcode	SE7 7SQ
Site coordinates	TQ 3062 7608 51.4680904594 -0.119268800282 51 28 05 N 000 07 09 W Point
Height OD / Depth	Min: -1.94m Max: 1.61m

Project creators

Name of Organisation	Quaternary Scientific (QUEST)
Project brief originator	CgMs Consulting
Project design originator	Dr C.R. Batchelor
Project director/manager	C.R. Batchelor
Project supervisor	C.R. Batchelor

Type of sponsor/funding body	Developer
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Project archives

Physical Archive recipient	LAARC
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Physical Contents	'Environmental'
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Digital Archive recipient	LAARC
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Digital Contents	'Environmental'
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Digital Media available	'Images raster / digital photography','Images vector','Text'
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Paper Archive Exists?	No
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Paper Archive recipient	LAARC
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Entered by	c.r.batchelor (c.r.batchelor@reading.ac.uk)
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Entered on	18 November 2011
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