QUEST
QUATERNARY SCIENTIFIC

University of Reading

# LEVEN WHARF POPLAR LONDON BOROUGH OF TOWER HAMLETS

## Geoarchaeological Deposit Model Report

**NGR**: TQ 3850 8155

**Site Code:** LWF15

**Date:** 17th November 2015

**Written by:** D.S. Young MSc

**QUEST**, School of Archaeology, Geography and Environmental Science, Whiteknights, University of Reading, RG6 6AB

**Tel**: 0118 378 7978 / 8941
**Email**: d.s.young@reading.ac.uk
http://www.reading.ac.uk/quest

# CONTENTS



# 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 Leven Wharf, Poplar, London Borough of Tower Hamlets (National Grid Reference: TQ 3850 8155; Site Code: LWF15; Figure 1). The work was commissioned by RPS Group on behalf of Vision Homes in response to Planning Condition 24 (LPA Ref PA/13/03053). The site is in the lower valley of the River Lea, approximately 1km from the confluence of the Lea with the River Thames. The northern boundary of the site is adjacent to the present-day channel of the Lea at a point where the river, known here as Bow Creek, begins to follow a very convoluted meandering course. The British Geological Survey (1:50,000 Sheet 257 Romford 1996) shows the site underlain by Alluvium, described as comprising mainly sand, silt and clay with some gravel, resting on London Clay bedrock. In fact, the Holocene alluvium of the Lower Thames and its tributaries is almost everywhere underlain by Late Devensian Late Glacial Gravels (in the Thames valley, the Shepperton Gravel of Gibbard, 1985, 1994; in the Lea valley, the Lea Valley Gravel of Gibbard, 1994), and this gravel is widely recorded in boreholes in the vicinity of the site.

The site lies within the area that has been investigated in the Lea Valley Mapping Project (Corcoran *et al.,* 2011). In this project the Lea Valley has been divided into Landscape Zones characterised by their Holocene landscape history, based largely on sedimentary evidence derived from borehole records. The Leven Wharf site is within Landscape Zone LZ1.6, which represents the deposits of a tributary valley. The surface of the gravels are estimated as lying at around 0m OD, and are overlain by sands that accumulated within a tributary channel draining off the river terrace from the south and west. Peat is recorded overlying the sands; this is generally thin (<0.3m), but significantly thicker horizons (up to 3m) are recorded towards the north of the zone. The Peat is undated and may be of different age to that recorded throughout the rest of the Lower Thames Valley / Lower

Lea Valley, due to the different and possibly localised processes that led to its formation (Corcoran *et al.*, 2011).

A total of eighteen geotechnical boreholes have been put down across the Leven Wharf site (RPS, 2013). These records indicate a relatively flat Gravel surface ranging between 0 and 1m OD (3.5-6.8m below ground level (bgl)). The overlying alluvial deposits range between 0 and 3.75m thick, and are largely inorganic, consisting of clays, silts, sands and fine gravel. Peat horizons are noted in boreholes Leven-BH1 and Leven-BH9 only. The alluvial deposits are capped by a variable thickness of Made Ground. Separate geotechnical investigations on the adjacent Devons Wharf site, carried out in 2007 indicated a similar sequence of deposits (AIG 2007). Here however, definitive horizons of Peat were recorded in boreholes BH3 (50cm; close to Leven-BH9 where Peat horizons are noted) and BH5 (30cm). Unfortunately no spatial data exists for these records, so that they cannot be incorporated into the deposit modelling process.

The Leven Wharf site thus provides an opportunity to contribute to our understanding of landscape evolution in this part of the Lower Lea and Lower Thames Valley. In particular, the existing geotechnical evidence suggests there is potential to find Peat (in the southwestern and northeastern areas of the site) that is of different age to that usually recorded in both Valleys, and thus may clarify the existence, age or environmental history of the tributary proposed by Corcoran *et al*. (2011). A programme of geoarchaeological fieldwork and deposit modelling was therefore recommended in the Written Scheme of Investigation for the site (Batchelor, 2015), 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.

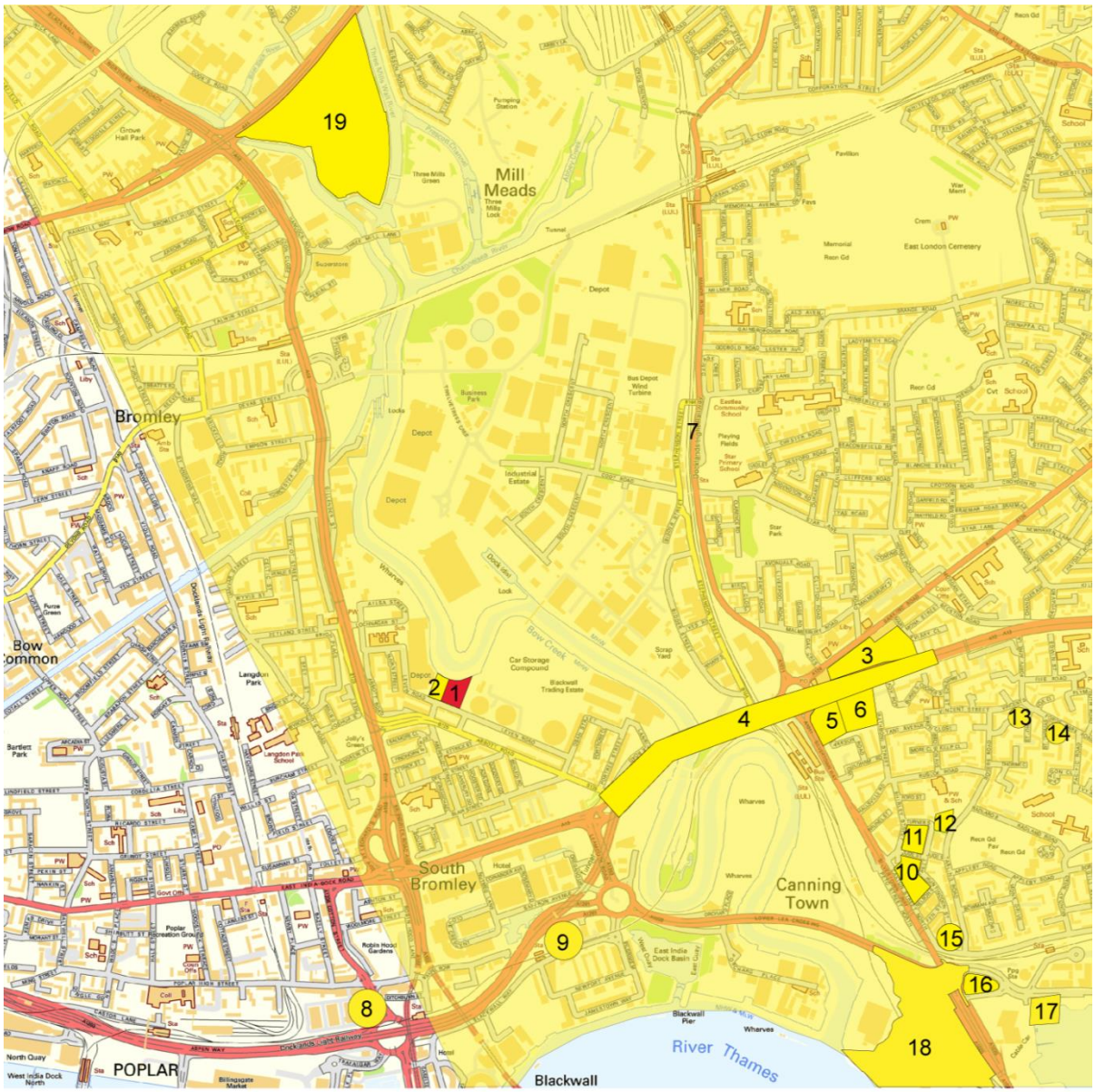


**Figure 1: Location of (1) Leven Wharf and selected nearby sites (2) Devons Wharf (AIG, 2007); (3) Rathbone Market (RBO10; Young et al., 2013); (4) A13 Ironbridge-Canning Town (Stafford, 2012); (5) Canning Town Phase 2 (Young, 2014); (6) Canning Town Phase 1 (CTR12; Green & Young, 2012); (7) area of the Lower Lea Valley Mapping Project (Corcoran et al., 2011); (8) Preston Road (PPP06; Branch et al., 2007); (9) East India Docks (Pepys, 1665); (10) Caxton Works (Young & Batchelor, 2014a), (11) St Luke's Square (LUC07; Weale, 2008; Wicks, 2008) and (12) 105-107 Tarling Road (Batchelor & Young, 2014); (13) The Pitts Head (PHD12; Batchelor et al., 2013); (14) Fords Park Road (FDP07; Eastbury et al., 2009); (15) 118 Victoria Dock Road (Barnett et al., 2010); (16) Tidal Basin Road (Young & Batchelor, 2013b); (17) The Cable Car North Station (Batchelor et al., 2014); (18) Silvertown Tunnel (Young & Green, 2015); (19) Strand East (Green & Batchelor, 2014). *Contains Ordnance Survey data © Crown copyright and database right [2015]*.**

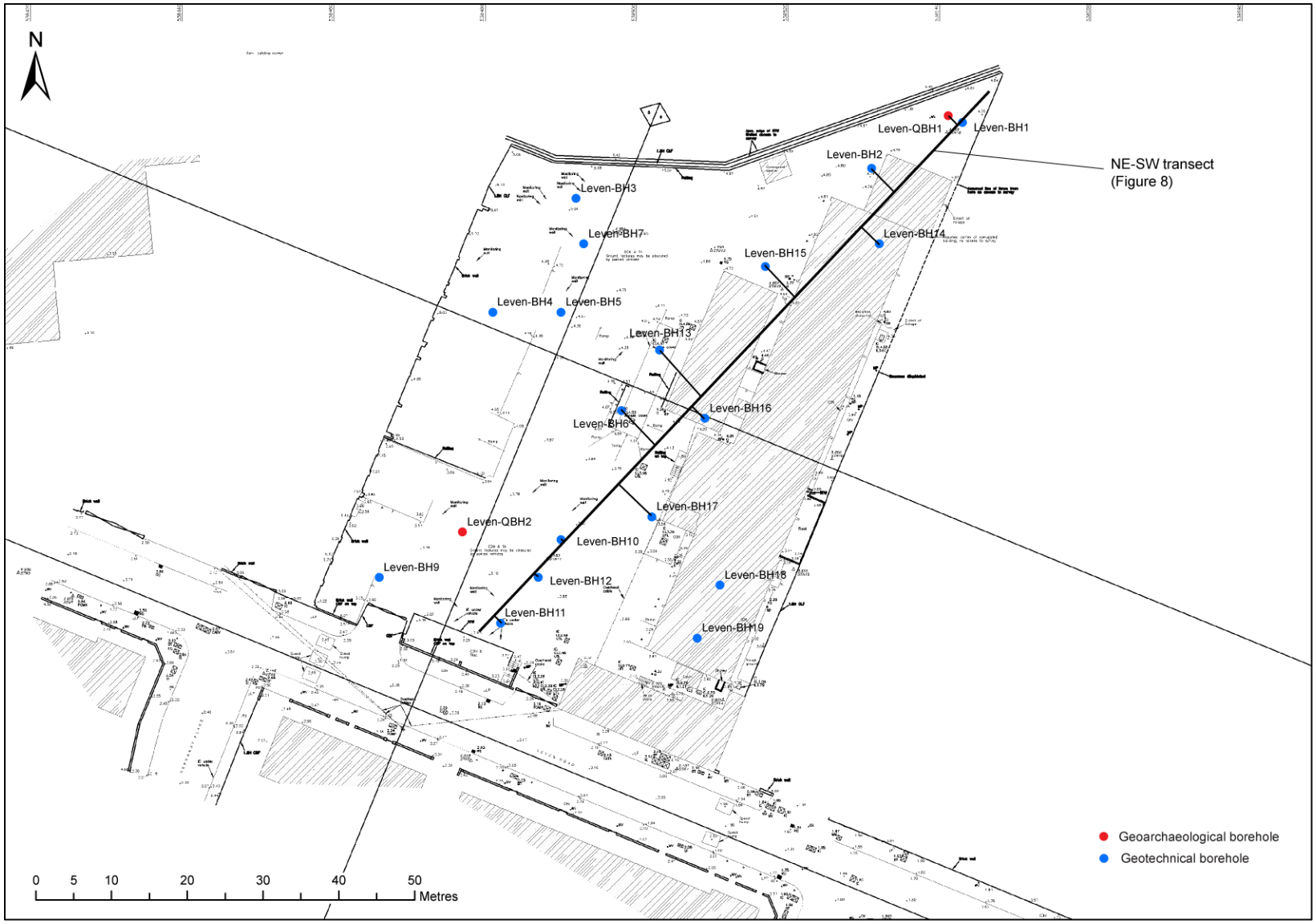


**Figure 2: Location of the existing geotechnical and new geoarchaeological boreholes at Leven Wharf, Poplar.**

# 2. METHODS

### Field investigations and lithostratigraphic descriptions

Two geoarchaeological boreholes (boreholes QBH1 and QBH2) were put down at the site in October 2015 (Figure 2) by Quaternary Scientific. 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 borehole locations were recorded using a Leica GS09 Differential GPS. The lithostratigraphy of the retained core samples 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 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 2 and 3. The spatial attributes of the boreholes are displayed in Table 1 and in Figure 2.

### Deposit modelling

The deposit model was based on a review of 20 borehole records for the site (Figure 2; Table 1), incorporating the existing 18 geotechnical borehole records and two new geoarchaeological boreholes. 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 Leven Wharf site, the sedimentary units were classified into four groupings: (1) London Clay, (2) Gravel, (3) Alluvium and (4) Made Ground. Models of surface height (using a nearest neighbour routine) were generated for the London Clay, Gravel and Alluvium (Figures 3 to 5). Thickness of the Alluvium (Figure 6) and Made Ground (Figure 7) was also modelled (also using a nearest neighbour routine). A two-dimensional stratigraphic profile was also generated using Rockworks 16 for selected boreholes across the site (Figure 8).

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. The boreholes are relatively well distributed over the area of investigation. 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.

Table 1: Borehole attributes for the records used in the deposit model, Leven Wharf, Poplar.

| Borehole | Easting | Northing | Elevation (m OD) |
|---|---|---|---|
| Leven-QBH1 | 538539 | 181596 | 4.8 |
| Leven-QBH2 | 538477 | 181539 | 3.1 |
| Leven-BH1 | 538543 | 181593 | 4.8 |
| Leven-BH2 | 538531 | 181587 | 4.8 |
| Leven-BH3 | 538492 | 181583 | 5.0 |
| Leven-BH4 | 538481 | 181568 | 5.0 |
| Leven-BH5 | 538490 | 181568 | 4.6 |
| Leven-BH6 | 538498 | 181555 | 4.3 |
| Leven-BH7 | 538493 | 181577 | 5.0 |
| Leven-BH9 | 538466 | 181533 | 3.2 |
| Leven-BH10 | 538490 | 181538 | 3.1 |
| Leven-BH11 | 538482 | 181527 | 3.0 |
| Leven-BH12 | 538487 | 181533 | 2.9 |
| Leven-BH13 | 538503 | 181563 | 4.7 |
| Leven-BH14 | 538532 | 181577 | 4.8 |
| Leven-BH15 | 538517 | 181574 | 4.8 |
| Leven-BH16 | 538509 | 181554 | 4.5 |
| Leven-BH17 | 538502 | 181541 | 3.4 |
| Leven-BH18 | 538511 | 181532 | 3.2 |
| Leven-BH19 | 538508 | 181525 | 3.2 |

# 3. RESULTS AND INTERPRETATION OF THE LITHOSTRATIGRAPHIC DESCRIPTIONS AND DEPOSIT MODELLING

The results of the deposit modelling are displayed in Figures 3 to 8. Figures 3 to 5 provide surface elevation models for each of the main stratigraphic units (London Clay, Gravel and Alluvium), whilst Figures 6 and 7 provide thickness models for the Alluvium and Made Ground. A two-dimensional stratigraphic profile across the site (NE-SW) is shown in Figure 8. The results of the lithostratigraphic description of the two new geoarchaeological boreholes are shown in Tables 2 and 3. The results indicate that a sufficient number and spread of boreholes have been put down in the area of the site to permit deposit modelling of the major stratigraphic units.

The basal unit recorded at the site is the bedrock London Clay, described as a grey, stiff clay or silty clay in the geotechnical logs. The surface of this unit is relatively even across the site (Figure 3),

lying at between -3.4 and -4.6m OD. The London Clay is overlain by a horizon of sandy gravel across the site, interpreted as the Lea Valley Gravel of Gibbard (1994) and deposited within a high energy braided river system during the Late Devensian (Marine Isotope Stage 2, *ca.* 16,000-11,500 cal BP). The surface of the Gravel lies at between -1.6 and 0.2m OD (Figure 4). The Gravel is recorded at its lowest in the northeastern area of the site in boreholes Leven-BH2 and BH15, where it lies at between -0.9 and -1.5m OD, before rising in the area of boreholes Leven-BH1 and Leven-QBH1 to between -0.45 and -0.03m OD. Towards the centre of the site it generally lies at between 0.2 and -0.5m OD, before falling towards the south of the site to between *ca.* -0.7 and -1.1m OD. In one borehole towards the southeastern corner of the site the Gravel rises to 0.2m OD (Leven-BH19). In general, the Gravel surface is typical of the topography associated with a braided river system, with areas of higher gravel bars (e.g. towards the centre and southeast of the site) and intervening channels (towards the southwest and northeast of the site) (see Figure 8).

In selected geotechnical records (Leven-BH11, BH12 and BH16) and in the new geoarchaeological boreholes, the Gravel is overlain by a horizon of generally silty and occasionally gravelly sand, recorded in boreholes QBH1 and QBH2 between 0.11 and -0.03 and 0.15 and -0.70m OD respectively and elsewhere generally recorded to a level of between 0.0 and -0.3m OD. This horizon is indicative of deposition within a moderate-energy fluvial environment, and is considered to represent the Lower Alluvium recorded elsewhere in the Lower Lea and Thames Valleys, most likely deposited during the Early Holocene, following a reduction in flow rate at the end of the Late Glacial period.

In borehole Leven-QBH1 a well humified, silty herbaceous Peat is recorded between -0.01 and 0.01m OD within the Lower Alluvium, indicative of a short period of semi-terrestrial conditions supporting the growth of wetland vegetation. No distinct organic horizons were recorded within borehole Leven-QBH2, or within the geotechnical boreholes; however as noted above 'Peat horizons' (with no specified depth) were recorded within the Alluvium in boreholes Leven-BH1 and BH9. It is unclear whether these represent isolated pockets of Peat, or correlate with the Peat horizon recorded in Leven-QBH1.

Either directly overlying the Gravel, or overlying the Lower Alluvium where it is recorded, is a horizon of generally silty, clayey Alluvium with occasional detrital plant material, most likely deposited on the floodplain at a distance from any active channels and similar to the Upper Alluvium recorded elsewhere in the Lower Lea and Thames Valleys. This horizon is likely to have accumulated from the Neolithic period (circa 4000 BC) onwards, as a result of increased sediment supply resulting from woodland clearance and agricultural activity within the river catchment. The surface of the Alluvium falls from a maximum of 3.6m OD towards the north of the site to *ca.* 0.0m OD towards the south (Figure 5), the significant difference in surface elevation most likely caused by a greater extent of truncation by the overlying Made Ground towards the south of the site (see below). The total thickness of Alluvium (incorporating the Lower Alluvium where present) is between 3 and 4m in the northern and northeastern areas of the site, whilst between *ca.* 0.5 and 2m is recorded towards the south (Figure 6). The sequence is capped by between *ca.* 1.5-4.5m of

 

Made Ground, with generally greater thicknesses (3-4m) recorded towards the south of the site (Figure 7).

Table 2: Lithostratigraphic description of borehole Leven-QBH1, Leven Wharf, Poplar.

| Depth (m OD) | Depth (m bgs) | Description |
|---|---|---|
| 4.80 to 3.60 | 0.00 to 1.20 | Made Ground |
| 3.60 to 2.80 | 1.20 to 2.00 | 10YR 6/1; Ag2 As2 Dl+; grey silt and clay with a trace of detrital wood. |
| 2.80 to 2.15 | 2.00 to 2.65 | 10YR 4/1; Ag2 As2; dark grey silt and clay. Diffuse contact in to: |
| 2.15 to 1.80 | 2.65 to 3.00 | 10YR 4/1; Ag2 As1 Dh1 Dl+; dark grey clayey silt with detrital herbaceous material and a trace of detrital wood. |
| 1.80 to 0.80 | 3.00 to 4.00 | 10YR 4/1; Ag2 As2 Dh+ Dl+; dark grey silt and clay with traces of detrital herbaceous material and detrital wood. Some darker horizontal layers of the same texture. Diffuse contact in to: |
| 0.80 to 0.11 | 4.00 to 4.69 | 2.5Y 4/1; Ag3 As1 Ga+ Dh+; dark grey clayey silt with traces of sand and detrital herbaceous material. Sharp contact in to: |
| 0.11 to 0.10 | 4.69 to 4.70 | 2.5Y 3/1; Gg3 Ga1 As+; very dark grey sandy gravel with a trace of clay. Clasts are flint, up to 15mm in diameter. Sharp contact in to: |
| 0.10 to 0.01 | 4.70 to 4.79 | 2.5Y 4/1; Ag2 As1 Ga1 Gg+; dark grey sandy clayey silt with occasional gravel clasts. Sharp contact in to: |
| 0.01 to -0.01 | 4.79 to 4.81 | 7.5YR 3/1; Sh2 Ag1 Th$^{3}$1; humo. 2/3; very dark grey well humified, silty herbaceous peat. Sharp contact in to: |
| -0.01 to -0.03 | 4.81 to 4.83 | 10YR 3/2; Ga2 Ag2; very dark greyish brown silt and sand with some Mollusca. Sharp contact in to: |
| -0.03 to -0.20 | 4.83 to 5.00 | Gg3 Ga1; sandy gravel. Clasts are flint, up to 30mm in diameter, sub-angular to well-rounded. |

Table 3: Lithostratigraphic description of borehole Leven-QBH2, Leven Wharf, Poplar.

| Depth (m OD) | Depth (m bgs) | Description |
|---|---|---|
| 3.10 to 1.05 | 0.00 to 2.05 | Made Ground |
| 1.05 to 0.60 | 2.05 to 2.50 | Disturbed Alluvium (Made Ground) |
| 0.60 to 0.25 | 2.50 to 2.85 | Gley 1 6/1; As3 Ag1; blueish grey silty clay. Diffuse contact in to: |
| 0.25 to 0.15 | 2.85 to 2.95 | 10YR 4/1; As2 Sh1 Ag1 Ga+; dark grey organic silty clay with a trace of sand. Diffuse contact in to: |
| 0.15 to 0.10 | 2.95 to 3.00 | 5Y 5/2; Ga2 As1 Ag1 Gg+; olive grey clayey silty sand with occasional gravel clasts. |
| 0.10 to -0.70 | 3.00 to 3.80 | 5Y 5/2; Ga3 Ag1 Gg+; olive grey silty sand with occasional gravel clasts. Diffuse contact in to: |
| -0.70 to -0.90 | 3.80 to 4.00 | Gg2 Ga2; sand and gravel. Clasts are flint, up to 30mm in diameter, sub-angular to well-rounded. |

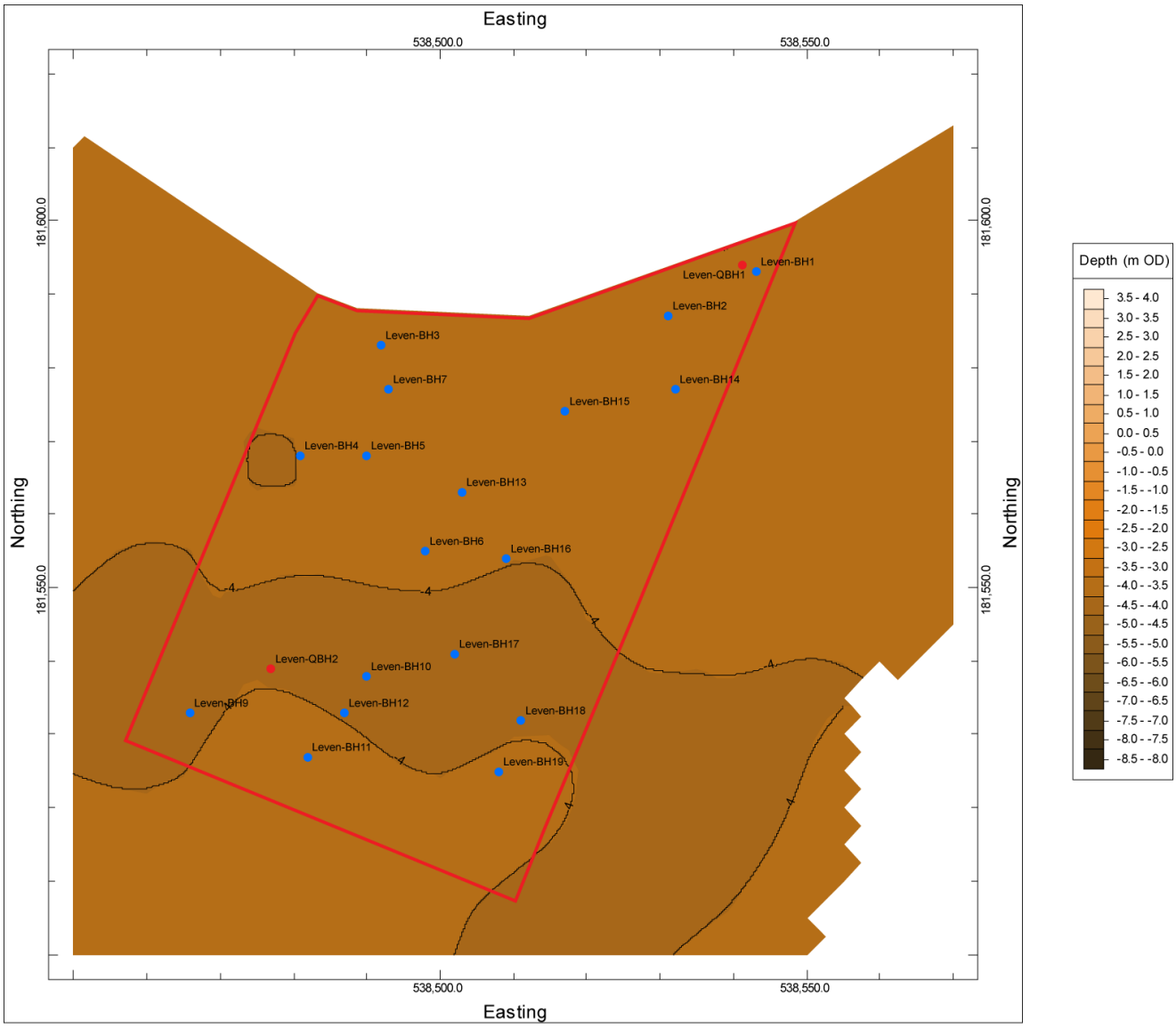


Figure 3: London Clay surface (contour heights in m OD).

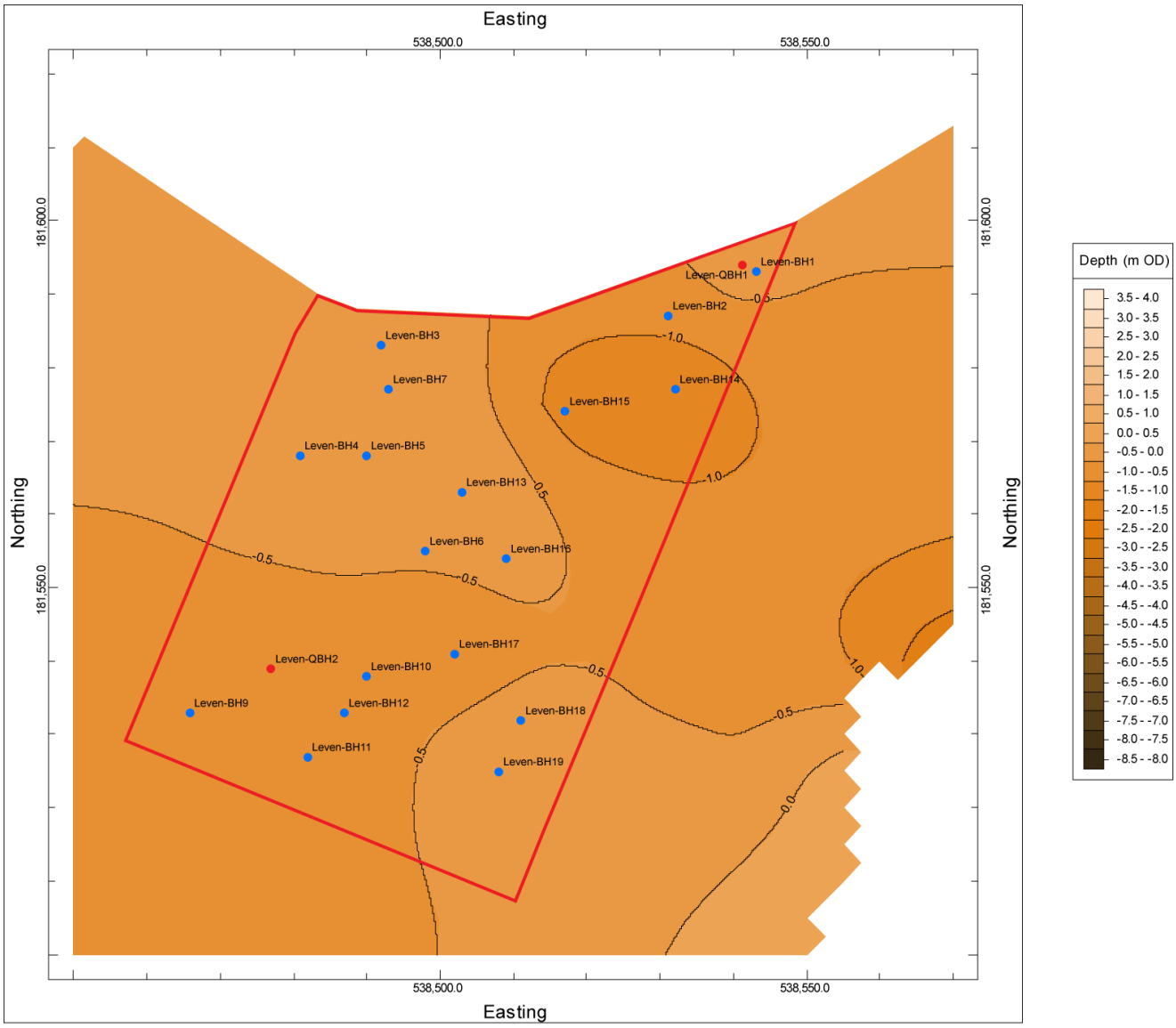


Figure 4: Shepperton Gravel surface (contour heights in m OD).

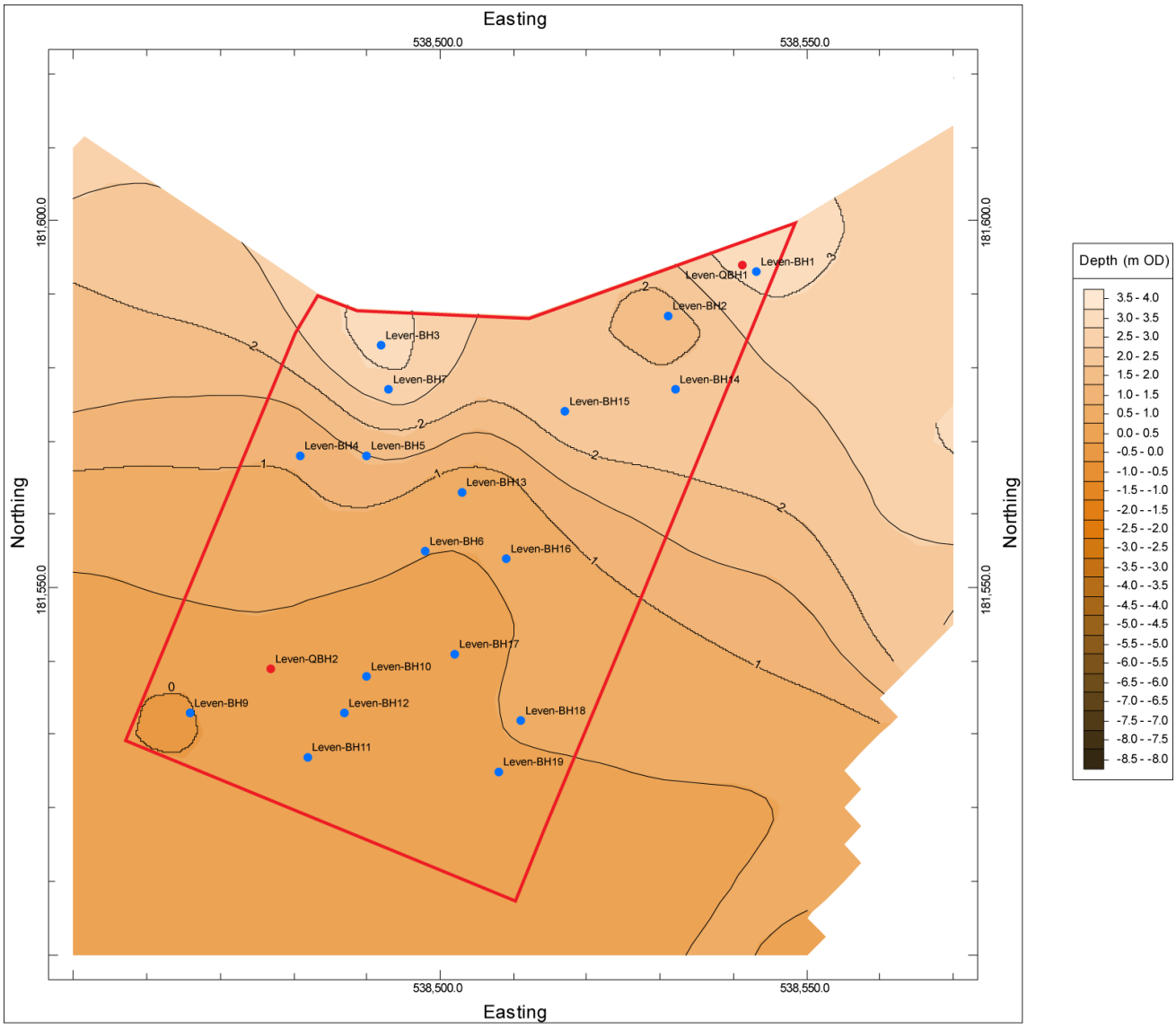


Figure 5: Alluvium surface (contour heights in m OD).

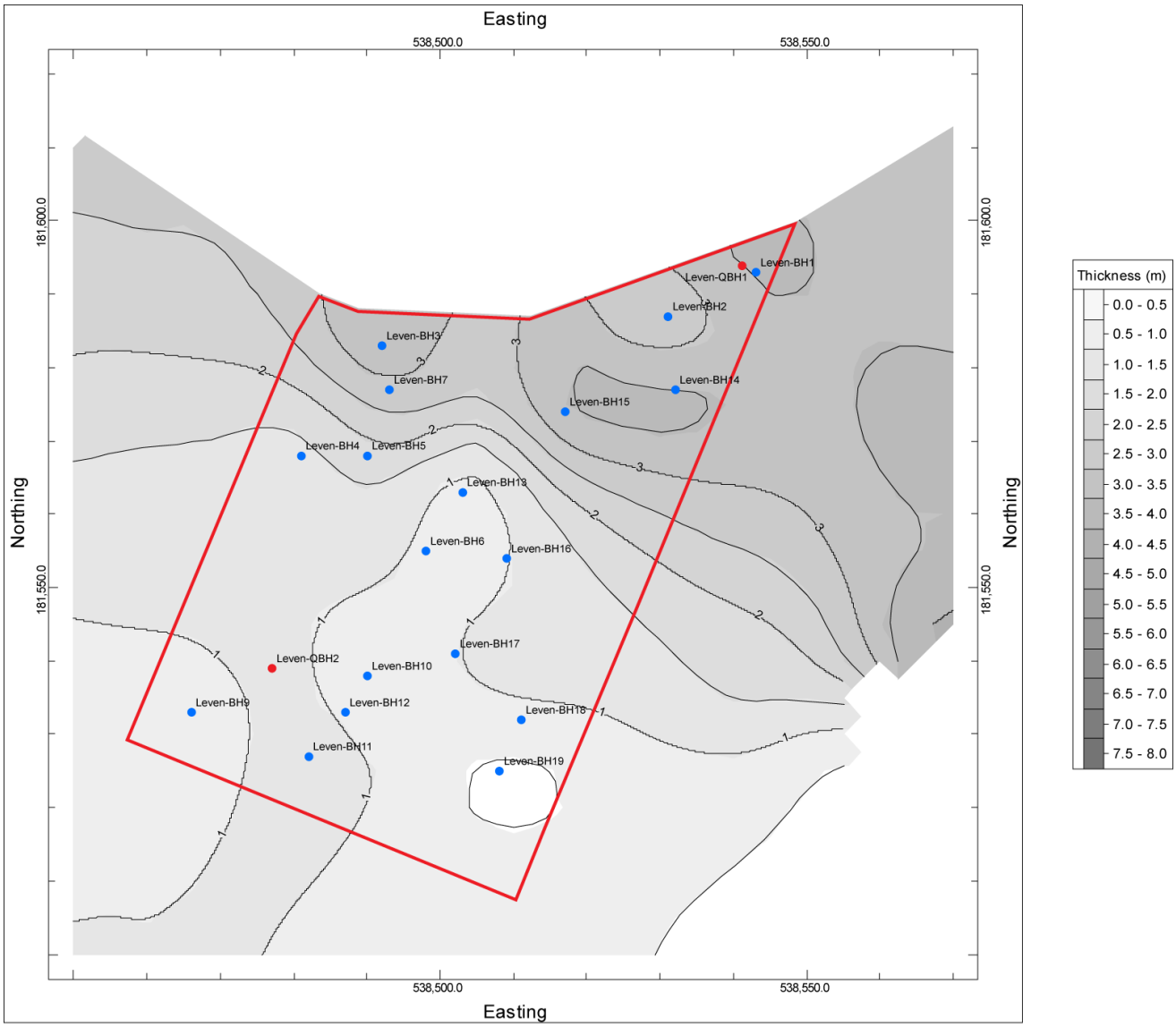


Figure 6: Alluvium thickness (contour heights in m).

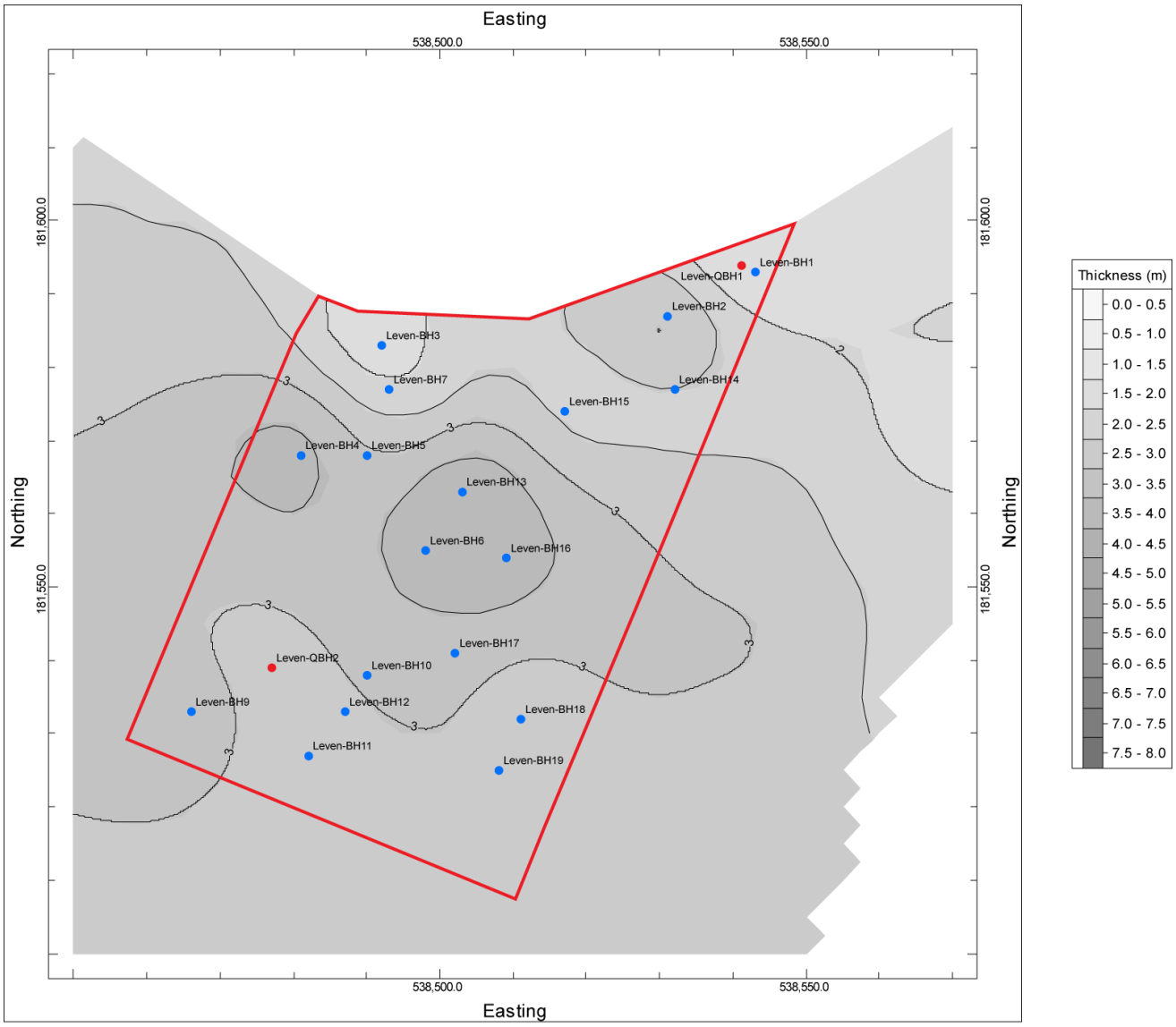


Figure 7: Made Ground thickness (contour heights in m).

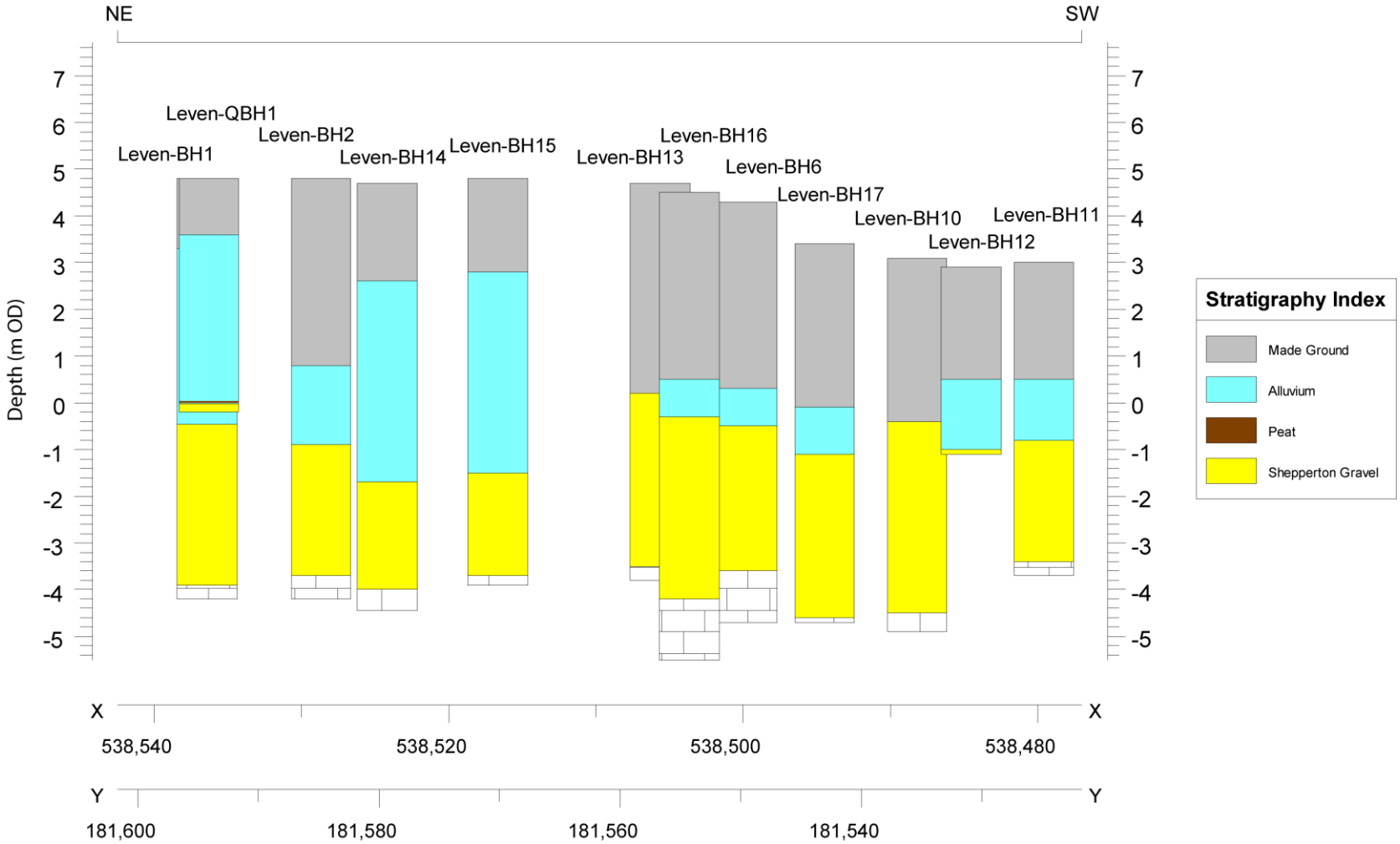


Figure 8: Northeast-southwest transect of boreholes across the Leven Wharf site.

# 4. DISCUSSION AND CONCLUSIONS

The aim of the geoarchaeological investigations at the Leven Wharf site was to (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. 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 logs from previous geotechnical boreholes and records from two new geoarchaeological boreholes.

The results of the geoarchaeological investigations have contributed to our understanding of the Holocene stratigraphic sequence in this area of the Lea Valley. Overlying the London Clay bedrock at the site is a sequence of Late Devensian Lea Valley Gravel, Holocene alluvial deposits and variable thicknesses of Made Ground, which in places (particularly towards the south of the site) has truncated the alluvial sequence significantly. As described above, the site lies within Corcoran *et al.*'s (2011) Landscape Zone LZ1.6, which is described as characterised by a Gravel surface lying at approximately 0m OD. In fact, the surface of the Lea Valley Gravel is recorded at between -1.6 and 0.2m OD across the site, in places significantly lower than described by Corcoran *et al.* (2011). Corcoran *et al.* (2011) describe the Gravel surface in zone LZ1.6 as overlain by sand deposits which 'probably accumulated within a tributary channel draining off the river terrace to the south and west' (p61). In selected geotechnical records (Leven-BH11, BH12 and BH16) and in the new geoarchaeological boreholes, the Gravel is overlain by a horizon of generally silty and occasionally gravelly sand, recorded in boreholes QBH1 and QBH2 between 0.11 and -0.03 and 0.15 and -0.70m OD respectively and elsewhere generally recorded to a level of between *ca.* -0.3 and 0.0m OD. This horizon is indicative of deposition within a moderate-energy fluvial environment, and is similar in character to the Lower Alluvium recorded elsewhere in the Lower Lea and Thames Valleys, most likely deposited during the Early Holocene. It is possible that this unit accumulated within a tributary channel draining from the south and west as described by Corcoran *et al.* (2011), or it may have accumulated within a former channel associated with the floodplain of the River Lea.

Significantly, the sand is described by Corcoran *et al.* (2011) as being overlain by Peat, which 'on the southern edges of the tributary is relatively thin (less than 0.3m thick)... significantly thicker peat units occur further north in LZ1.6 (up to 3m in depth)' (p61). Corcoran *et al.* (2011) stress that the Peat here is currently undated, and may be of different age to that recorded throughout the rest of the Lower Thames Valley/Lower Lea Valley, due to the different and possibly localised processes that led to its formation (Corcoran *et al.*, 2011). Although no distinct organic horizons were recorded within borehole Leven-QBH2, a very thin (0.02m) horizon of silty, herbaceous Peat was recorded in borehole Leven-QBH1 between -0.01 and 0.01m OD *within* the sandy Lower Alluvium, indicative of a transition to semi-terrestrial conditions supporting the growth of wetland vegetation. Given the localised nature of the Peat at the site, recorded as 'pockets' in selected geotechnical logs and in Leven-QBH1, it is unclear whether these represent isolated pockets of Peat, forming in floodplain hollows, or a widespread unit of Peat which has subsequently been eroded by fluvial activity.

# 5. RECOMMENDATIONS

On the basis of the unknown age of the Peat at the Leven Wharf site, and its limited thickness, a limited programme of environmental archaeological assessment of borehole Leven-QBH1 is recommended. The assessment should incorporate rangefinder radiocarbon dating, to provide an age for the onset of Peat formation (if suitable material for dating is available), and a limited assessment of the archaeobotanical remains (waterlogged seeds) to provide a provisional reconstruction of the vegetation history. The environmental assessment will provide recommendations for further analysis (if necessary).

# 6. ADDENDUM

No identifiable seeds or wood were found during an assessment of the plant macrofossil remains in a sample of the Peat from borehole QBH1 (0.01 to -0.01m OD). As a consequence, no material suitable for radiocarbon dating was identified. An alternative technique for radiocarbon dating, dating of the humic acid and humin fractions of a bulk peat sample, is not considered to be a viable option, since the mass of peat remaining is likely to be insufficient for this technique. Due to the localised nature of the Peat horizons at the site, further sampling of the Peat by way of additional geoarchaeological boreholes, was not recommended.

On the basis of the above, and following discussion of these findings with Simon Blatherwick (RPS Consulting) and John Gould (Archaeological Adviser for the London Borough of Tower Hamlets, Greater London Archaeological Advisory Service) no further work was recommended.

# 7. REFERENCES

AIG Engineering Group (2007) Devons Wharf, Leven Road, Poplar: Phase One and Phase Two environmental report. Unpublished report.

Barnett, C., Allen, M.J., Evans, G., Grimm, J.M., Scaife, R., Stevens, C.J. & Wyles, S.F. (2011) A Submerged Forest with Evidence of Early Neolithic Burning Activity and the Tilbury Alluvial Sequence at Canning Town, East London. *Transactions of the London and Middlesex Archaeological Society*, 61, 1-15.

Batchelor, C.R. & Young, D.S. (2014) *105-107 Tarling Road, London Borough of Newham (Site Code: TAR13): Geoarchaeological Assessment Report.* Quaternary Scientific (QUEST) Unpublished Report March 2014; Project Number 206/13.

Batchelor, C.R., Young, Austin, P., and Elias, S. (2013) The Pitts Head Public House, 2 Fords Park Road, London Borough of Newham, E16 1NL (site code: PHD12): Environmental Archaeological Assessment. Quaternary Scientific (QUEST) Unpublished Report January 2013; Project Number 180/12.

Batchelor, R., Green, C., Young, D., Austin, P., Cameron, N. & Elias, S. (2015) The Evolution of the Prehistoric Landscape beneath the London Cable Car. *London Archaeologist* **14(3)** 65-72.

Batchelor, C.R. (2015) in RPS 2015, Leven Wharf, Poplar, London Borough of Tower Hamlets: Written Scheme of Investigation. *Quaternary Scientific (QUEST) Unpublished Report September 2015; Project Number 179/14.*

Branch, N.P., Batchelor, C.R., Elias, S., Green., C.P. & Swindle, G.E. (2007) Preston Road, Poplar High Street, Poplar, London Borough of Hamlets (site code: PPP06): environmental archaeological analysis. ArchaeoScape Unpublished Report.

Branch, N., Canti, M., Clark, P. and Turney,C. (2005) *Environmental Archaeology: theoretical and Practical Approaches*. Edward Arnold, London.

Corcoran, J., Halsey, C., Spurr, G., Burton, E. and Jamieson, D. (2011) *Mapping past landscapes in the lower Lea valley : A geoarchaeological study of the Quaternary sequence*. Museum of London Archaeology, MOLA Monograph 55.

Eastbury, E. Ruddy, M. & Jones, S. (2009) MoLA 2009. Canning Town Sites, London E16, London Borough of Newham: Post-Excavation Assessment and updated project design. MoLA Unpublished Report.

Gibbard, P. (1984) *The Pleistocene History of the Lower Thames Valley*. Cambridge University Press, Cambridge.

Green, C.P. and Batchelor, C.R.. (2014) *A report on the geoarchaeological deposit modelling on land at Strand East, London Borough of Newham*. Quaternary Scientific (QUEST) Unpublished Report November 2014; Project Number 221/14.

Green, C.P. and Young, D.S. (2012) A report on the geoarchaeological investigations and deposit modelling on land at Canning Town Regeneration Area 7/1C, London Borough of Newham (NGR: TQ 539610 181443). *Quaternary Scientific Unpublished Report.*

Pepys, S. (1665). *Samuel Pepys Diary September 1665*. Available at http://www.pepysinfo/1665/1665sep.html accessed on 20th April 2007.

RPS, 2015, Written Scheme Of Investigation For Geo-Archaeological Borehole Evaluation and Topograhic Model Reporting at Glaucus Works, Leven Road, London, E14 0LP London Borough of Tower Hamlets, Prepared on behalf of Vision Homes

RPS, 2013 (November), Leven Wharf, London Borough of Tower Hamlets. A Historic Environment/Archaeological Appraisal

 

Stafford, E., Goodburn, D. and Bates, M. (2012).Landscape and Prehistory of the East London Wetlands. Investigations along the A13 DBFO Roadscheme, Tower Hamlets, Newham and Barking and Dagenham, 2000-2003. Oxford Archaeology Monograph 17.

Weale, A. (2008) St Luke's Square, Canning Town, London Borough of Newham. An Archaeological Evaluation. *Thames Valley Archaeological Services Ltd Unpublished Report, March 2008*.

Wicks, K. (2010) St Luke's Square, Canning Town, London Borough of Newham (Site Code: LUC07): Palynological Assessment. *AFESS, University of Reading Unpublished Report, 2010*.

Young, D.S. (2014) Land at Canning Town Phase 2, London Borough of Newham (site code: CAN13): environmental archaeological assessment report. Quaternary Scientific (QUEST) Unpublished Report October 2014; Project Number 198/14.

Young, D.S. & Batchelor, C.R. (2013b) A report on the geoarchaeological borehole investigations and deposit modelling on land at Tidal Basin Road, London Borough of Newham (NGR: TQ 39950 80750). Quaternary Scientific (QUEST) Unpublished Report August 2013; Project Number 156/13.

Young, D.S. & Green, C.P. (2015) A report on the geoarchaeological deposit modelling on land associated with the Silvertown Tunnel, London Boroughs of Greenwich and Newham. Quaternary Scientific (QUEST) Unpublished Report May 2015; Project Number 046/15

Young, D.S. Batchelor, C.R. & Green, C.P. (2013) *Phase 2, Rathbone Market, Canning Town, London Borough of Newham (site code: RBO10): Geoarchaeological Fieldwork Report*. Quaternary Scientific (QUEST) Unpublished Report January 2013; Project Number 165/12.

Young, D.S. & Batchelor, C.R. (2014a) Caxton Works, The Moss Building and Goswell Bakeries, Caxton Street North, Canning Town (Site Code: CSN14): Environmental Archaeological Assessment Report. Quaternary Scientific (QUEST) Unpublished Report October 2014; Project Number 034/14.

# 8. OASIS FORM

## OASIS ID: quaterna1-227919

### Project details

| | |
|---|---|
| Project name | Leven Wharf, Poplar Geoarchaeological Deposit Model |
| Short description of the project | The aim of the geoarchaeological investigations at the Leven Wharf site was to (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. In order to achieve this aim, a programme of geoarchaeological fieldwork and deposit modelling was carried out, incorporating logs from previous geotechnical boreholes and records from two new geoarchaeological boreholes. The results of the investigations have contributed to our understanding of the Holocene stratigraphic sequence in this area of the Lea Valley. Overlying the London Clay bedrock at the site is a sequence of Late Devensian Lea Valley Gravel, Holocene alluvial deposits (in one borehole containing a thin (0.02m) Peat horizon) and Made Ground. On the basis of the unknown age of the Peat and its limited thickness, a limited programme of environmental archaeological assessment of borehole Leven-QBH1 was recommended. |
| Project dates | Start: 01-09-2015 End: 30-10-2015 |
| Type of project | Environmental assessment |

## Project location

| | |
|---|---|
| Country | England |
| Site location | GREATER LONDON TOWER HAMLETS POPLAR Leven Wharf |
| Postcode | E14 0LL |
| Study area | 0 Hectares |
| Site coordinates | TQ 3850 8155 51.515371637405 -0.003733711919 51 30 55 N 000 00 13 W Point |

## Project creators

| | |
|---|---|
| Name of Organisation | Quaternary Scientific (QUEST) |
| Project brief originator | RPS |
| Project design originator | D.S. Young |
| Project director/manager | C.R. Batchelor |
| Project supervisor | D.S. Young |

| | |
|---|---|
| Entered by | Daniel Young (d.s.young@reading.ac.uk) |
| Entered on | 27 October 2015 |