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120 KINGS POINT, READING, BERKSHIRE

Geoarchaeological Deposit Model Report

NGR: SU 72166 73357

Date: 20th December 2016

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DOCUMENT HISTORY

REVISION	DATE	PREPARED BY	SIGNED	APPROVED BY	SIGNED	REASON FOR ISSUE
v1	20/12/16	D.S. Young		C.R. Batchelor		First edition

CONTENTS

1. NON-TECHNICAL SUMMARY

A programme of geoarchaeological fieldwork and deposit modelling was undertaken, in order to (1) determine the sub-surface stratigraphy across the site; (2) to clarify the nature, depth and extent of any alluvium and organic/peat deposits, and (3) to investigate the palaeoenvironmental and archaeological potential of the site. The results of the deposit modelling indicate that the sediments recorded are similar to those found elsewhere in this area of Reading, with Chalk bedrock and Late Devensian Shepperton Gravel overlain by a sequence of Holocene alluvial sediments, buried beneath modern Made Ground. At the site and across the modelled area, the relief features of the Chalk bedrock and Shepperton Gravel surfaces indicate that the site lies on the floodplain of the River Kennet, and that the surface of the Late Devensian Gravel is variable, generally lying at between *ca*. 33.5 and 35.3m OD. The Gravel is overlain by Holocene alluvium, generally between 1 and 3m in thickness, and described as mineral-rich (sandy/clayey/gravelly silt), the surface of the alluvium relatively even at between *ca*. 36 and 36.5m OD. In contrast to other sites nearby, no peat or organic-rich horizons are recorded within the alluvium at the site. Perhaps significantly, the deposits of the Lower Alluvium are recorded at similar elevations here to the peat *ca*. 100m to north, perhaps indicative of subsequent erosion of the peat by fluvial (channel) activity in the area of the site. On this basis, no further environmental archaeological investigations are recommended, and the prehistoric archaeological potential of the site is considered to be low.

2. INTRODUCTION

2.1 Site context

This report summarises the findings arising out of the geoarchaeological deposit modelling undertaken by Quaternary Scientific (University of Reading) in connection with the proposed development of land at Kings Point, 120 Kings Road, Reading, Berkshire (National Grid Reference: centred on SU 72166 73357; Figures 1 & 2). Quaternary Scientific were commissioned by CgMs Consulting to undertake the geoarchaeological investigations. The site is located just to the east of the historic centre of Reading, lying *ca*. 50m to the south of the modern (culverted) course of the River Kennet and immediately north of the Kennet and Avon Canal. The River Thames is approximately 600m to the north. The British Geological Survey (BGS; http://mapapps.bgs.ac.uk/geologyofbritain/home.html) shows the site underlain by alluvium associated with the floodplain of the River Kennet, described as 'Clay, Silt, Sand and Gravel', overlying Cretaceous Seaford/Newhaven Chalk bedrock. To the north and south of the alluvial deposits, the superficial geology is mapped as Taplow Terrace gravel of Wolstonian (128-280,000 BP) age.

No BGS archive boreholes are available for the area of the site or its immediate vicinity (within *ca*. 50m); however, a total of three boreholes and four window samples were put down at the site during recent geotechnical investigations carried out by Jomas Associates Ltd (2016) (Figure 2). Although no elevation data was available for these borehole records, they confirm a sequence of Chalk bedrock, overlain by sandy gravel, alluvium and Made Ground. The surface of the gravel is recorded in the boreholes at between 2 (BH1, BH2) and 3.8m (WS3) below ground level (bgl),

generally increasing in depth towards the centre and west of the site. Overlying the gravel is a sequence of alluvium generally described as silty and clayey, and in places organic (BH1, WS1, WS3, WS4). The surface of the alluvium is recorded at between 0.75 (BH3) and 1.1m bgl (WS1). Between 1.1 and 0.75m of Made Ground caps the sequence.

2.2 Palaeoenvironmental and archaeological significance

Significantly, where the alluvium is described as organic, it has the potential to provide a detailed reconstruction of past environments on both the wetland and dryland during the prehistoric and/or historic periods via the preservation of palaeobotanical remains. Further downstream at Thames Valley Park, a 35m wide palaeochannel was recorded containing a 3.3m thick sequence of peat and alluvial deposits dating from the Late-Glacial to present day (Figure 1; Barnes et al., 1997). Recent investigations at Forbury Road indicate that a palaeochannel occupied this area of the floodplain (Batchelor *et al*., 2013), perhaps a minor tributary of the River Kennet. The palaeochannel is infilled by Holocene peat (of probable prehistoric age) and alluvium. Elsewhere in Reading, investigations along the course of the River Kennet at Kenavon Drive have recorded peat, alluvium and tufa deposits dating to the Mesolithic and early Neolithic period (Young, 2013).

The potential significance of the present site is enhanced by a large Prehistoric and Romano-British site excavated on the floodplain and terrace of the Thames at Thames Valley Park (Figure 1; Barnes et al., 1997). Here, Mesolithic archaeological finds consisting of flint scatters including knapping waste and tools were recorded on the terrace edge and were interpreted as being indicative of an industrial base with limited evidence for domestic activity. During the Neolithic and Bronze Age, Beaker sherds and flint artefacts were recorded on the terrace, whilst Peterborough ware of Ebbsfleet/Mortlake was recorded on the floodplain. Middle Iron Age to Roman activity consisted of an enclosure which was interpreted as being indicative of agricultural production and small scale industrial activity on the terrace, whilst various pits and postholes were recorded on the floodplain. In addition, thick sequences of peat, alluvial and tufa deposits may represent a lengthy period of accumulation during the prehistoric period with evidence for changes in vegetation and human activity on both the floodplain and dryland. The peat at Thames Valley Park also contained a significant quantity of animal bone (including probably Mesolithic aurochs) and plant macrofossils.

The Kings Point site thus offers an opportunity to contribute to our understanding of landscape evolution in this area of the Middle Thames Valley. On the basis of other nearby investigations, the organic horizons recorded within the alluvial sequences may be of prehistoric date, and include evidence of both palaeoenvironmental change and human activity.

2.3 Aims and objectives

Further borehole records are required in order to enhance our understanding of the sub-surface stratigraphy of the Kings Point site, and to assess its palaeoenvironmental potential. Five significant research aims relevant to the geoarchaeological investigations were outlined within the WSI for the site (Young, 2016a):

1. To clarify the nature of the sub-surface stratigraphy across the site;
2. To clarify the nature, depth and extent of any alluvium and organic/peat deposits;
3. To investigate whether the sequences contain any artefact or ecofact evidence for prehistoric or historic human activity;
4. To investigate whether the sequences contain any evidence for natural and/or anthropogenic changes to the landscape (wetland and dryland), including those related to sea level change;
5. To integrate the new geoarchaeological record with other recent work in the local area for publication in an academic journal.

In order to address the first two of these aims, the following objectives were undertaken:

1. To retrieve two geoarchaeological borehole sequences (QBH1 and QBH2) at selected locations across the site (see Figure 2);
2. To use the stratigraphic data from the new geoarchaeological boreholes to produce a deposit model of the elevation and thickness of the main stratigraphic units at the site.

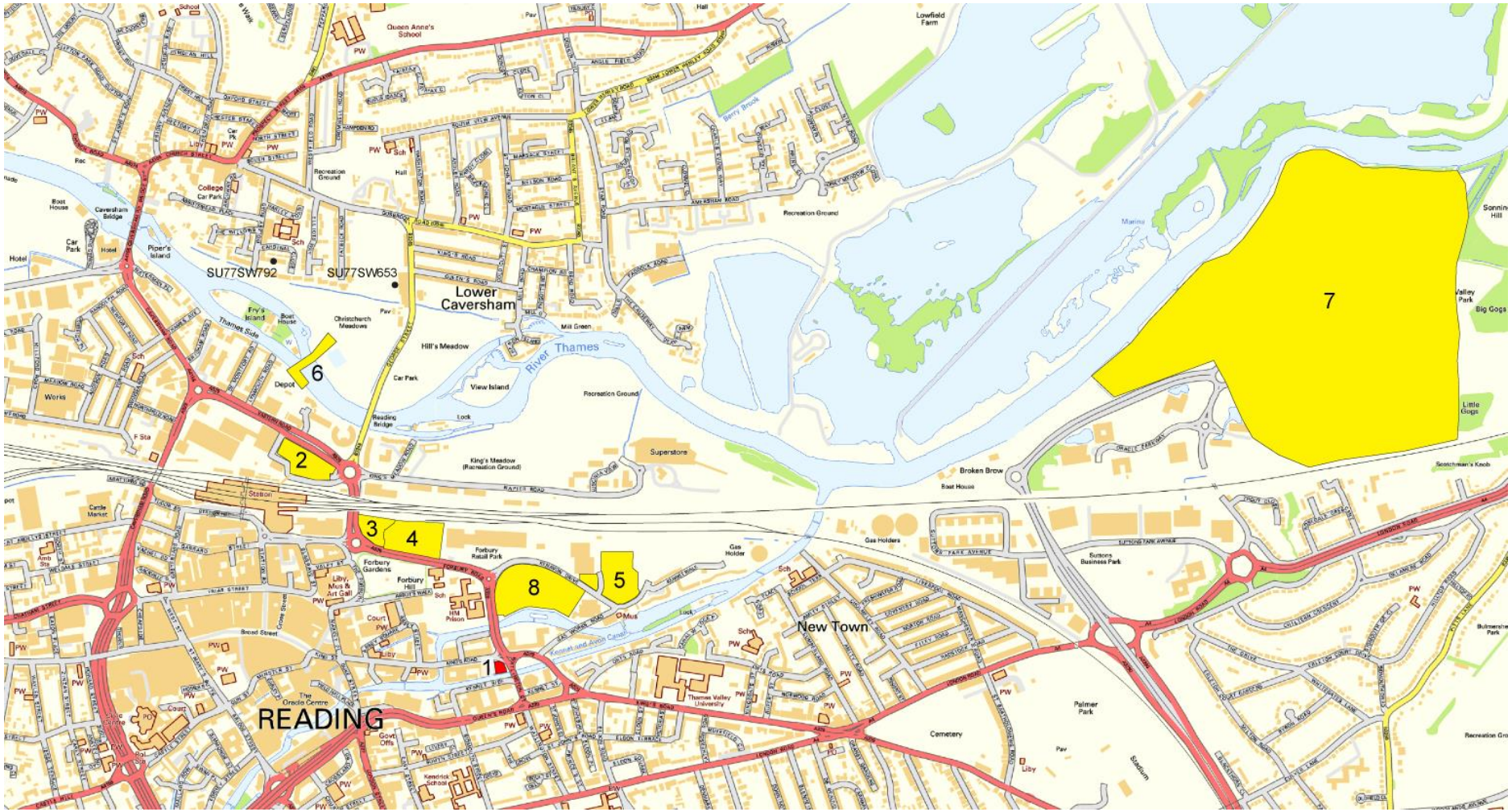

Figure 1: Location of the (1) Kings Point, 120 Kings Road, Reading site, and other sites of geoarchaeological/archaeological interest: (2) Royal Mail Sorting Office (Batchelor & Green, 2010); (3) Former NCP Car Park, Forbury Road (Dinwiddy, 2008); (4) Energis House (Batchelor et al., 2013); (5) Kenavon Drive (Young, 2013); (6) Thames Pedestrian/Cycle Bridge (Batchelor, 2014); (7) Thames Valley Park (Barnes et al., 1997) and (8) Land South of Kenavon Drive (Young, 2016b). *Contains Ordnance Survey data © Crown copyright and database right [2016]*.

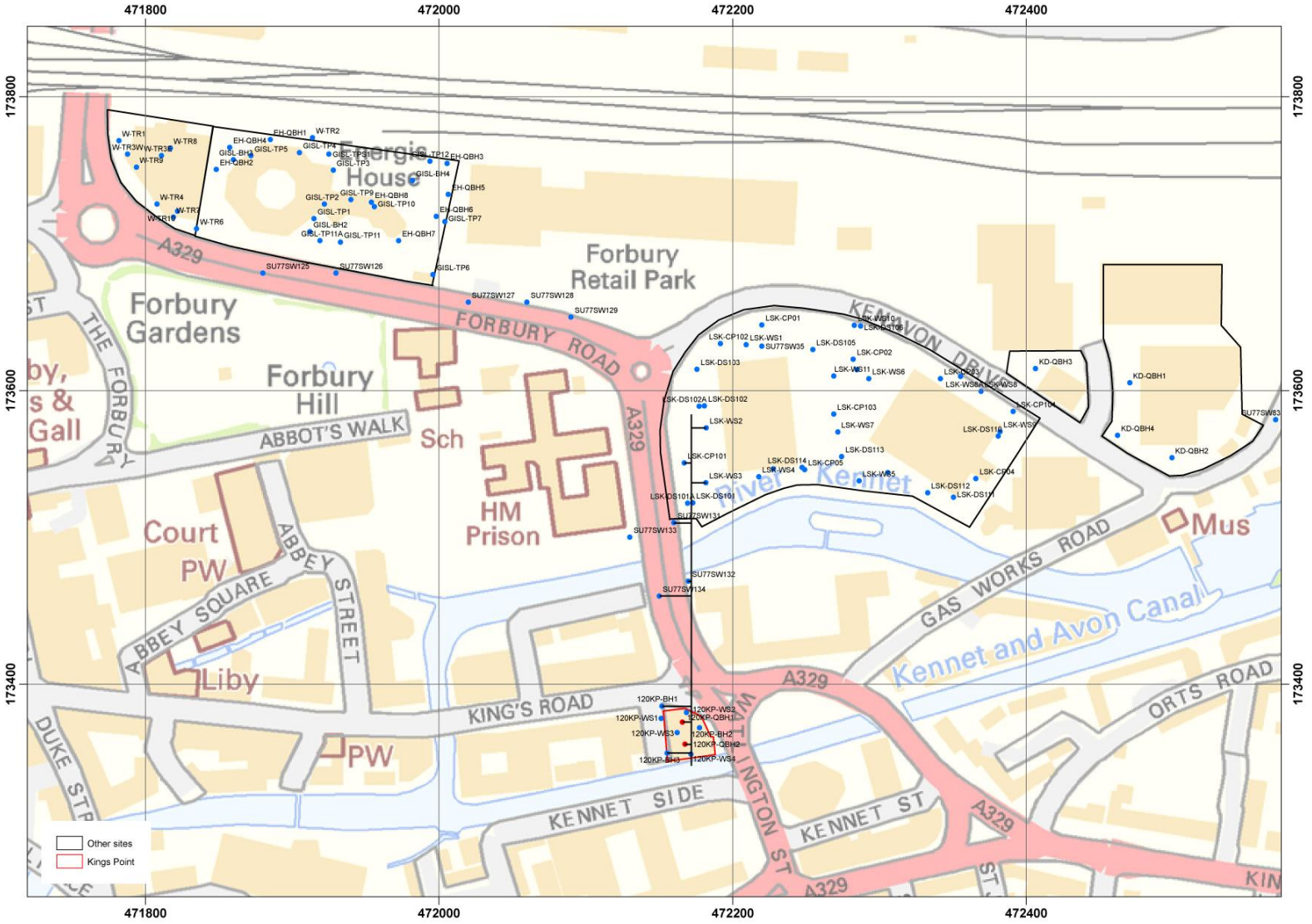

Figure 2: Location of the geotechnical and geoarchaeological borehole sequences used in the deposit model at the Kings Point, 120 Kings Road, Reading site, and other nearby sites of interest, Position of the N-S transect also shown. *Contains Ordnance Survey data © Crown copyright and database right [2016].*

3. METHODS

3.1 Field investigations

Two geoarchaeological boreholes (boreholes QBH1 and QBH2) were put down at the site in November 2016 (Figure 2) by Quaternary Scientific. The 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 obtained using a Leica Differential GPS (see Appendix).

3.2 Lithostratigraphic descriptions

The lithostratigraphy of the core samples 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 monitored boreholes are displayed in Tables 1 and 2.

3.3 Deposit modelling

The deposit model, incorporating the present site and the wider area, was based on a review of 108 geotechnical, geoarchaeological and archaeological sequences, incorporating seven geotechnical (Jomas Associates Ltd, 2016) and two geoarchaeological boreholes from the present site, 37 geotechnical boreholes from the Land South of Kenavon Drive site (Delta-Simons, 2013; CGL, 2016), 10 archaeological trenches from the Former NCP Car Park (Dinwiddy, 2008), four geoarchaeological boreholes from Kenavon Drive (Young, 2013), 25 geoarchaeological/geotechnical boreholes from Energis House (Batchelor *et al.*, 2013), seven geotechnical boreholes from Kings Point (Jomas Associates Ltd, 2016) and 23 BGS archive boreholes (http://mapapps.bgs.ac.uk/geologyofbritain/home.html) (see Appendix).

Sedimentary units from the boreholes were classified into six main groupings: (1) Bedrock, (2) Gravel, (3) Lower Alluvium, (4) Peat, (5) Upper Alluvium and (6) Made Ground. The classified data for groups 1-6 were then input into a database with the RockWorks geological utilities software. Models of surface height were generated for the Gravel (Figure 4), Lower Alluvium (Figure 5), the Upper Alluvium (Figure 7) and the Early Holocene land surface (variously interpreted as the bedrock or gravel) (Figure 10). Thickness of the peat (Figure 6), the combined Holocene alluvial sequence (Figure 8), and the Made Ground (Figure 9) were also modelled (also using a nearest neighbour routine). Because the boreholes are not uniformly distributed over the area of investigation, the reliability of the models generated using RockWorks is variable. In general, reliability improves from

outlying areas where the models are largely supported by scattered archival records towards the core area of boreholes.

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 and section drawings. As a consequence of this the modelling procedure has been manually adjusted so that only those areas for which sufficient stratigraphic data is present will be modelled. In order to achieve this, a maximum distance cut-off filter equivalent to a 50m radius around each record is applied to all deposit models, with the exception of the Early Holocene land surface, to which a 100m radius is applied. Finally, it is important to recognise that multiple sets of boreholes are represented, put down at different times and recorded using different descriptive terms and subject to differing technical constraints in terms of recorded detail including the exact levels of the stratigraphic boundaries.

4. RESULTS AND INTERPRETATION OF THE DEPOSIT MODELLING

A summary of the borehole data included in the deposit model is shown in the Appendix, and the results of the deposit modelling are displayed in Figures 3 to 10. Figure 3 as a two-dimensional north-south transect of selected boreholes across the site; Figures 5 to 10 are surface elevation and thickness models for each of the main stratigraphic units. The results of the deposit modelling indicate that the number and spread of the logs is sufficient to permit modelling with a high level of certainty across the site (see Figure 2).

The full sequence of sediments recorded in the boreholes comprises:

Made Ground – widely present
Upper Alluvium – widely present
Peat – locally present; not recorded within the area of the site
Lower Alluvium –locally present
Gravel (Shepperton Gravel) – widely present
Bedrock (Chalk) – widely present

4.1 Bedrock

The bedrock Chalk was recorded in the majority of boreholes that penetrated to sufficient depths across the modelled area. Within the site itself, the surface of the Chalk is recorded in three of the nine boreholes, at levels of between 24.8 (BH2) and 29.3m OD (BH3). The lowest surface is recorded towards the centre of the site (BH2), from where it rises both to the north (BH1) and south (BH3).

To the north of the site the Chalk rises to between *ca*. 27 and 33m OD towards the west of the Land South of Kenavon Drive site (see Figures 2 and 3), continuing to rise to *ca*. 38m OD to the west of here. The deposit model thus indicates that the present site lies on the floodplain of the

River Kennet, the lower bedrock surfaces recorded here most likely being a result of erosion during the Pleistocene associated with high-energy river channels, such as that which deposited the Late Devensian Shepperton Gravel.

4.2 Gravel

The Shepperton Gravel was present in those boreholes that penetrated to the bottom of the Holocene sequence across the site (all but WS2), overlying the Chalk bedrock. It was deposited during the Late Glacial (15,000 to 10,000 years before present) and comprises 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 (silts/clays) 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.

In the area of the present site the surface of the Shepperton Gravel was variable, generally lying at between *ca*. 33.5 and 35.3m OD (see Figure 4), with a gentle rise indicated towards the south. North of the present site, in the area of the Land South of Kenavon Drive site (Young, 2016b), the Gravel surface falls slightly to between *ca*. 32.5 and 34m OD (illustrated well in Figure 3), perhaps indicative of an Early Holocene channel, probably aligned broadly east-west, in this area to the north of the present site. In the wider area, similar surface elevations were recorded at the Kenavon Drive (Young, 2013), Kings Point (Jomas Associates, 2016) and Energis House (Batchelor *et al*., 2013) sites (33-35.5m OD) to the northeast and northwest, the latter site lying on the floodplain of the River Thames.

4.3 Lower Alluvium

Deposits typical of the Lower Alluvium were identified in four of the nine borehole records from within the area of the site, its surface lying at between 33.80 (WS3) and 35.82m OD (QBH2) (Figure 5). The Lower Alluvium was identified elsewhere in selected areas of the Thames and Kennet floodplain (e.g. at the Kenavon Drive, Kings Point, Energis House and Former NCP Car Park (Dinwiddy, 2008) sites). Where recorded, the Lower Alluvium rests directly on the Shepperton Gravel, and is described as predominantly silty or clayey, tending to become increasingly sandy downward in most sequences. The Lower Alluvium frequently contains detrital wood or plant remains, and in many cases is described as organic, with occasional Mollusca and tufa remains.

Where recorded, the sediments of the Lower Alluvium are indicative of deposition during the Early to Mid-Holocene, when the main course of the Thames and Kennet were probably confined to a single meandering channel. During this period, the surface of the Shepperton Gravel was progressively buried beneath the sandy and silty flood deposits of the river. The richly-organic nature of the Lower Alluvium suggests that this was a period during which the valley floor was occupied by a network of actively shifting channels, with a drainage pattern on the floodplain that was still largely determined by the relief on the surface of the underlying Shepperton Gravel.

4.4 Peat

No peat was recorded in any of the boreholes at the present site. Around 100m to the north, a horizon of peat was recorded in BGS archive boreholes SU77SW132 and SU77SW133; elsewhere, it was recorded within the area of the floodplain at the Kenavon Drive, Energis House and the Former NCP Car Park sites, its surface generally lying at between *ca*. 33.5 and 36m OD. In general, the peat appears to be thickest where the Shepperton Gravel surface is lower, with thicknesses of between *ca*. 0.5 and 1.5m recorded (Figure 6). Where recorded it is indicative of a transition towards semi-terrestrial (marshy) conditions, supporting the growth of sedge fen/reed swamp and/or wetland woodland communities. Significantly, the range of elevations at which the peat is recorded to the north of the site coincide with the presence of Lower Alluvium at Kings Point (again illustrated well in Figure 3), indicating that any peat that was present here may have been eroded by subsequent fluvial activity during the Early to Middle Holocene.

4.5 Upper Alluvium

The Upper Alluvium rests either on the peat or Lower Alluvium, and where these were not present (including in the records from the present site) directly on the Shepperton Gravel or the bedrock Chalk. The deposits of the Upper Alluvium are described as predominantly silty or clayey and very occasionally organic, although such organic deposits were note recorded within the present site. The surface of the alluvium is relatively even in the area of the present site, lying at between *ca*. 36 and 36.5m OD (Figure 7). The sediments of the Upper Alluvium 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.

The Holocene alluvial sequence within the area of the site is generally recorded in thicknesses of between *ca*. 0.8 (QBH2) and 3m (WS3) (Figure 8). In general, greater thicknesses are recorded in the more northerly areas of the floodplain at the Energis House and Former NCP Car Park sites, where up to 6m is recorded (Figure 8).

4.6 Made Ground

Made Ground is the term used by the British Geological Survey to describe modern, man-made superficial deposits (BGS 2015). Between *ca*. 0.5 and 1m of this unit caps the alluvial sequence across the site. The Made Ground is generally thicker towards the centre and east of the site (2-3m), with less than 1m recorded towards the west (Figure 11).

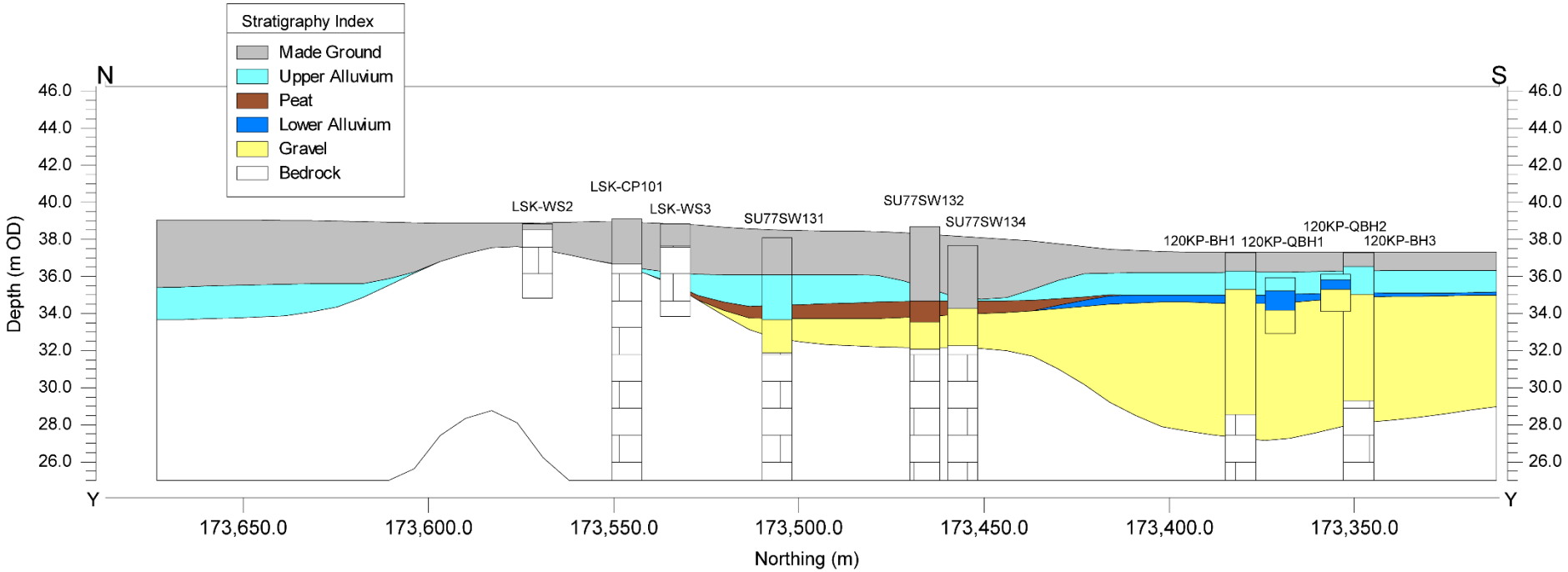

Figure 3: North-south transect of selected boreholes across the site and the wider area.

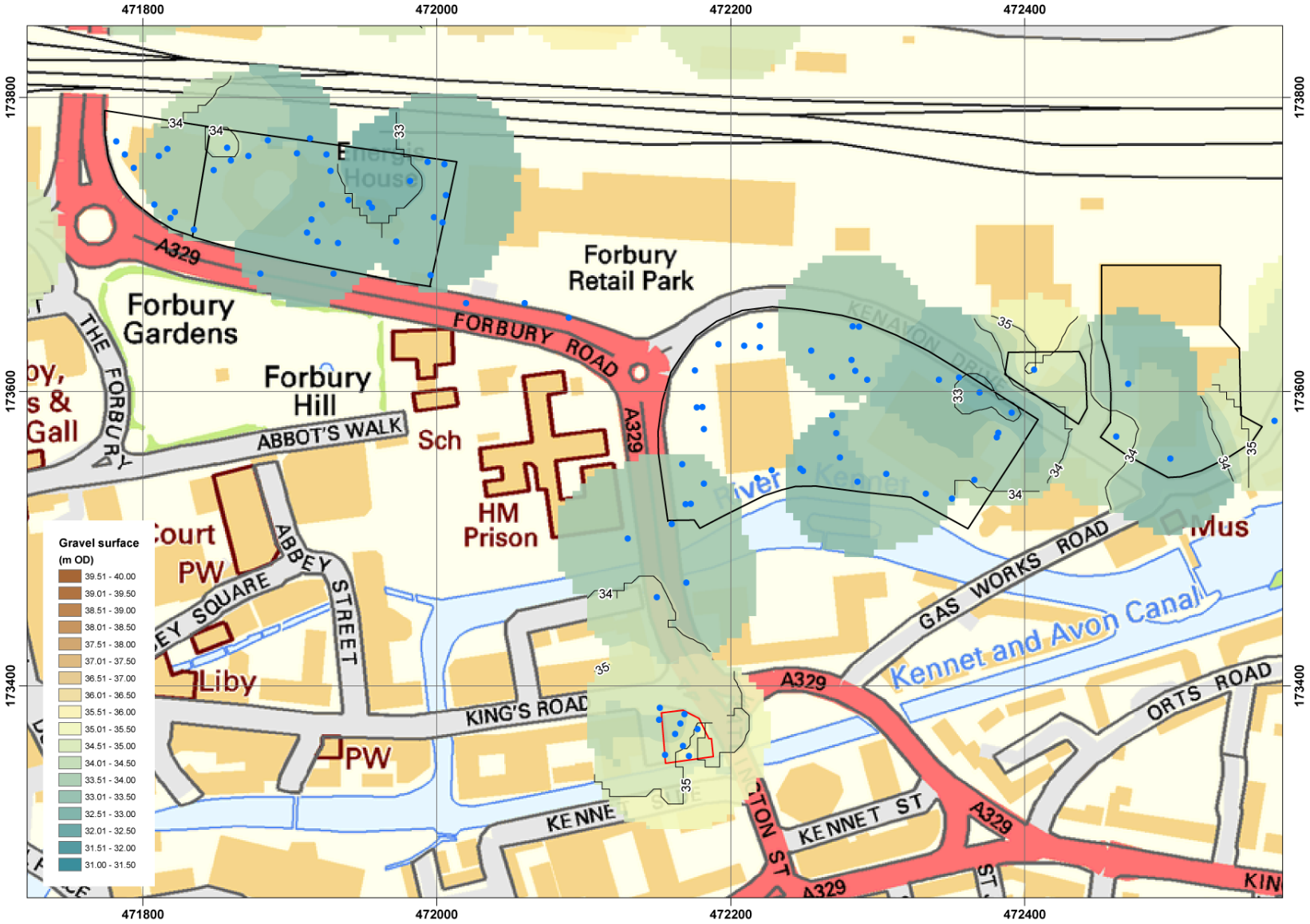

Figure 4: Top of the Shepperton Gravel (m OD) (site outline in red). *Contains Ordnance Survey data © Crown copyright and database right [2016].*

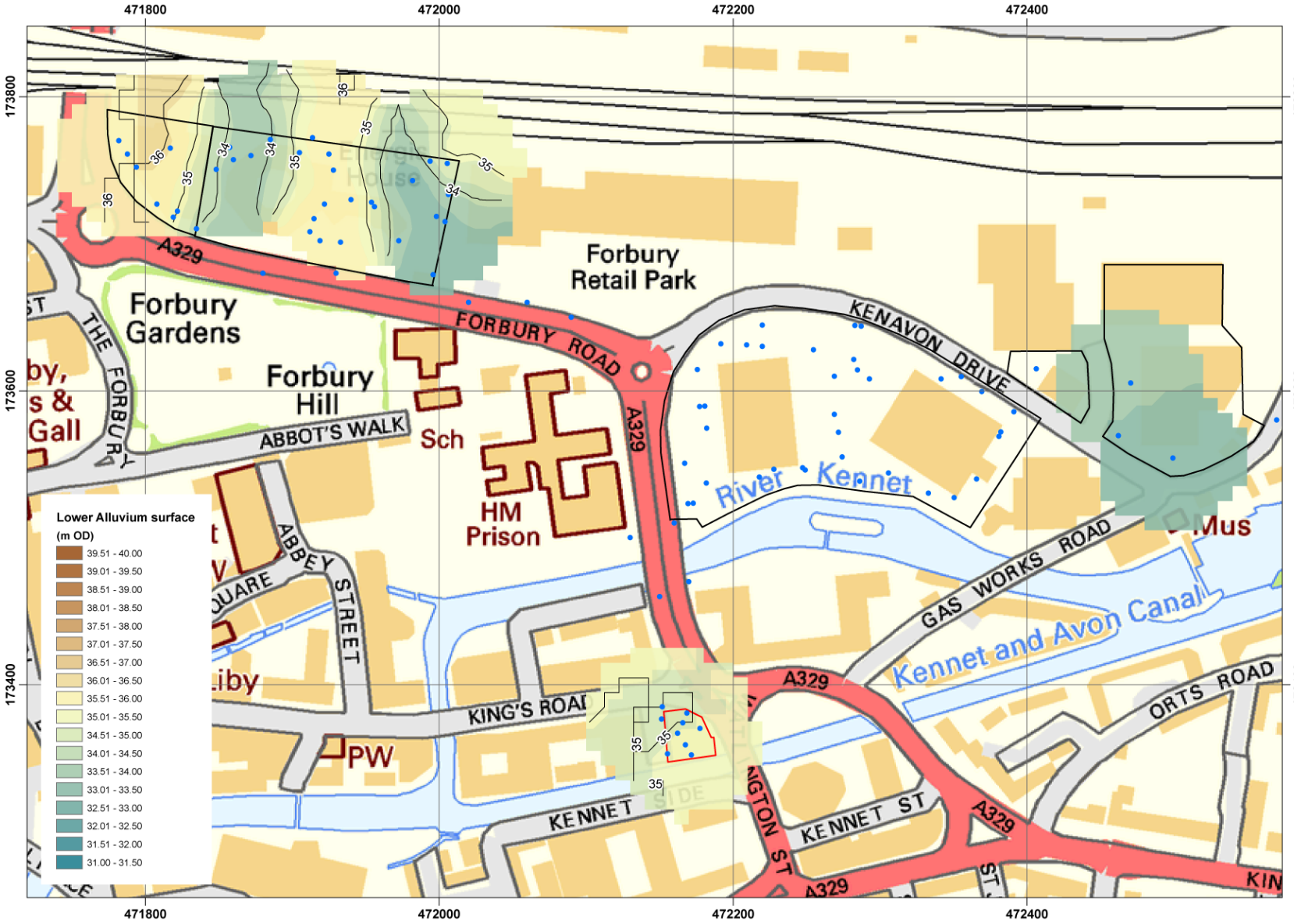

Figure 5: Top of the Lower Alluvium (m OD) (site outline in red). *Contains Ordnance Survey data © Crown copyright and database right [2016]*.

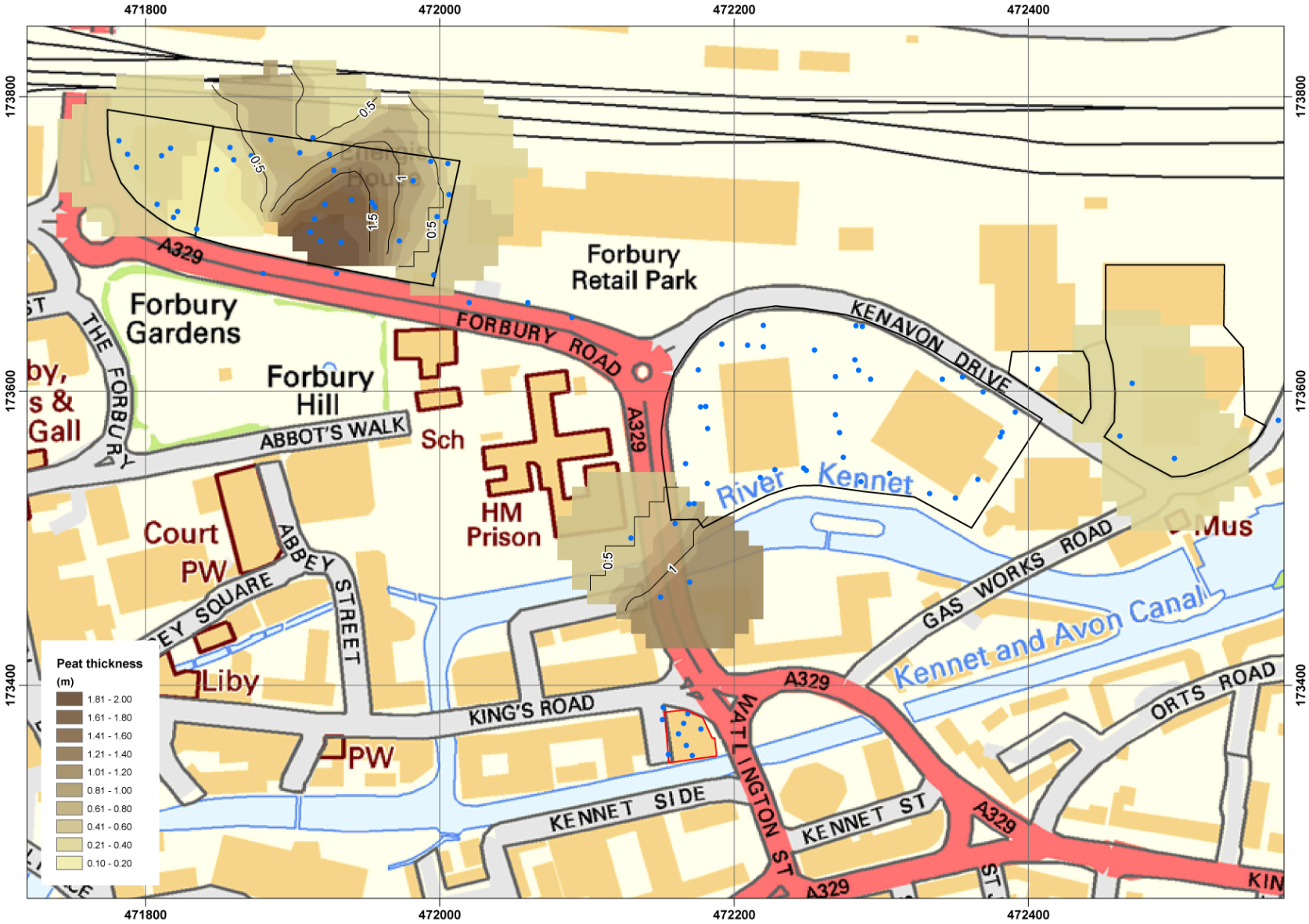

Figure 6: Thickness of the peat (m) (site outline in red). *Contains Ordnance Survey data © Crown copyright and database right [2016].*

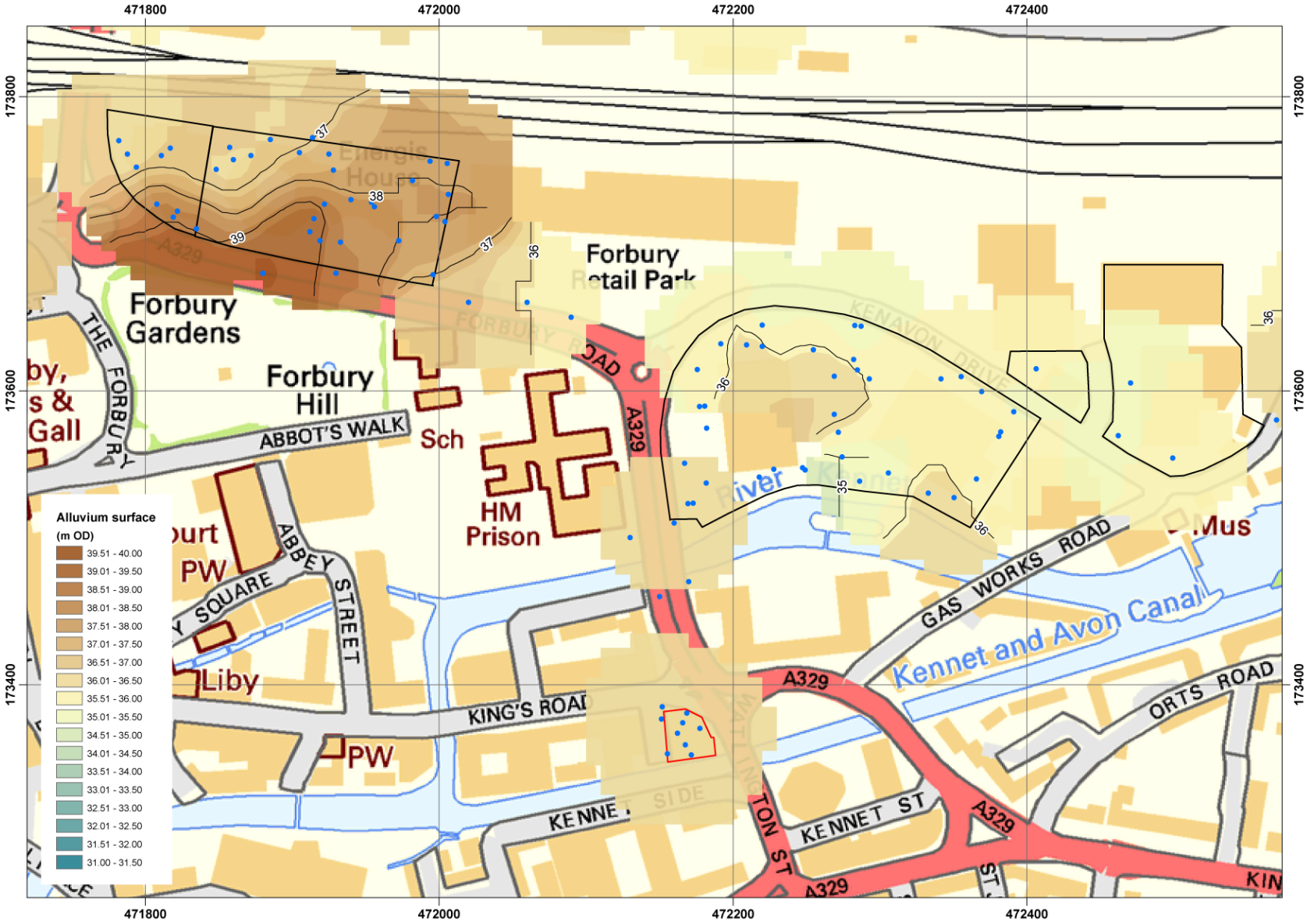

Figure 7: Top of the Upper Alluvium (m OD) (site outline in red). *Contains Ordnance Survey data © Crown copyright and database right [2016].*

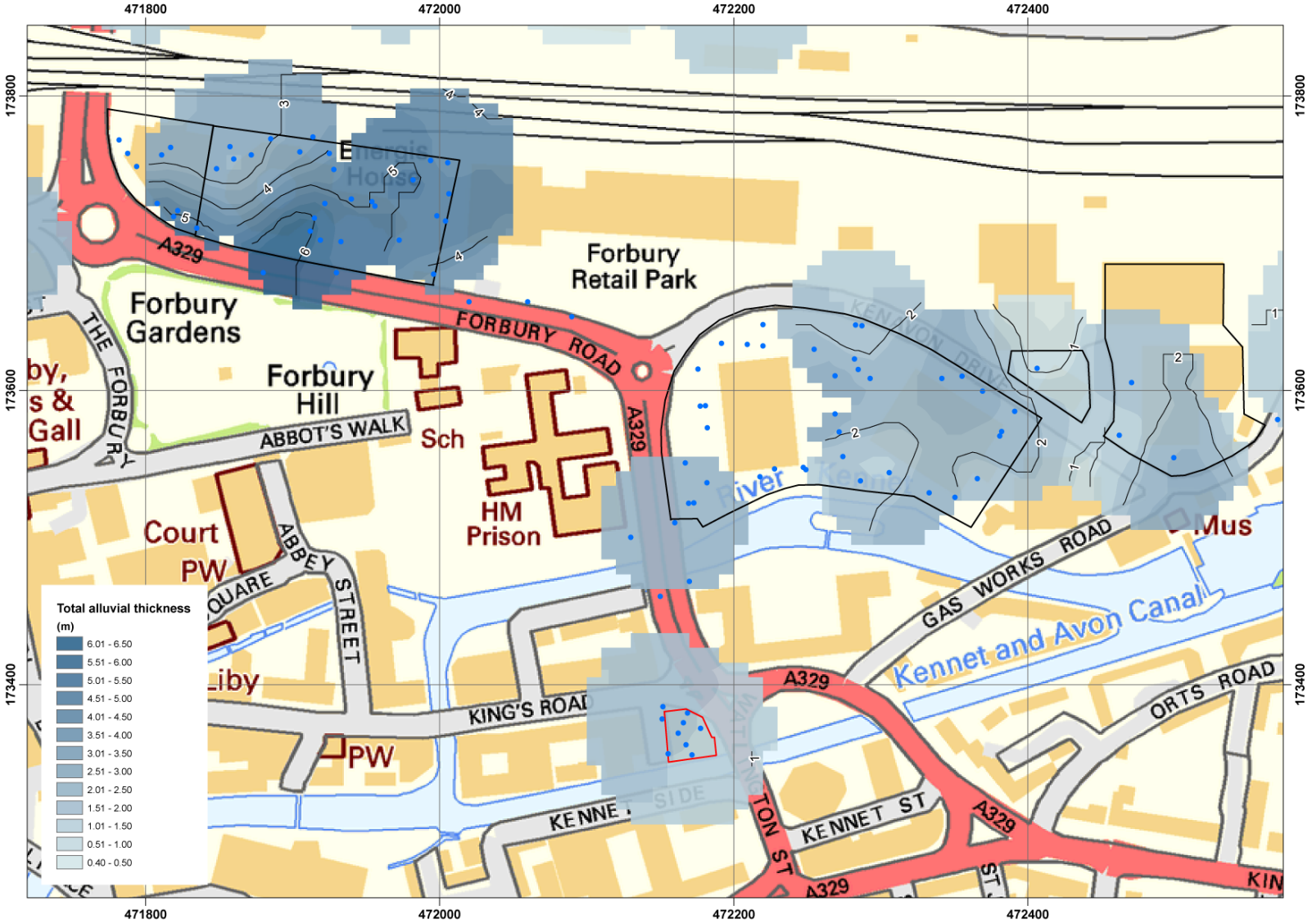

Figure 8: Thickness of the Holocene alluvial sequence (Lower Alluvium, Peat and Upper Alluvium) (m) (site outline in red). *Contains Ordnance Survey data © Crown copyright and database right [2016].*

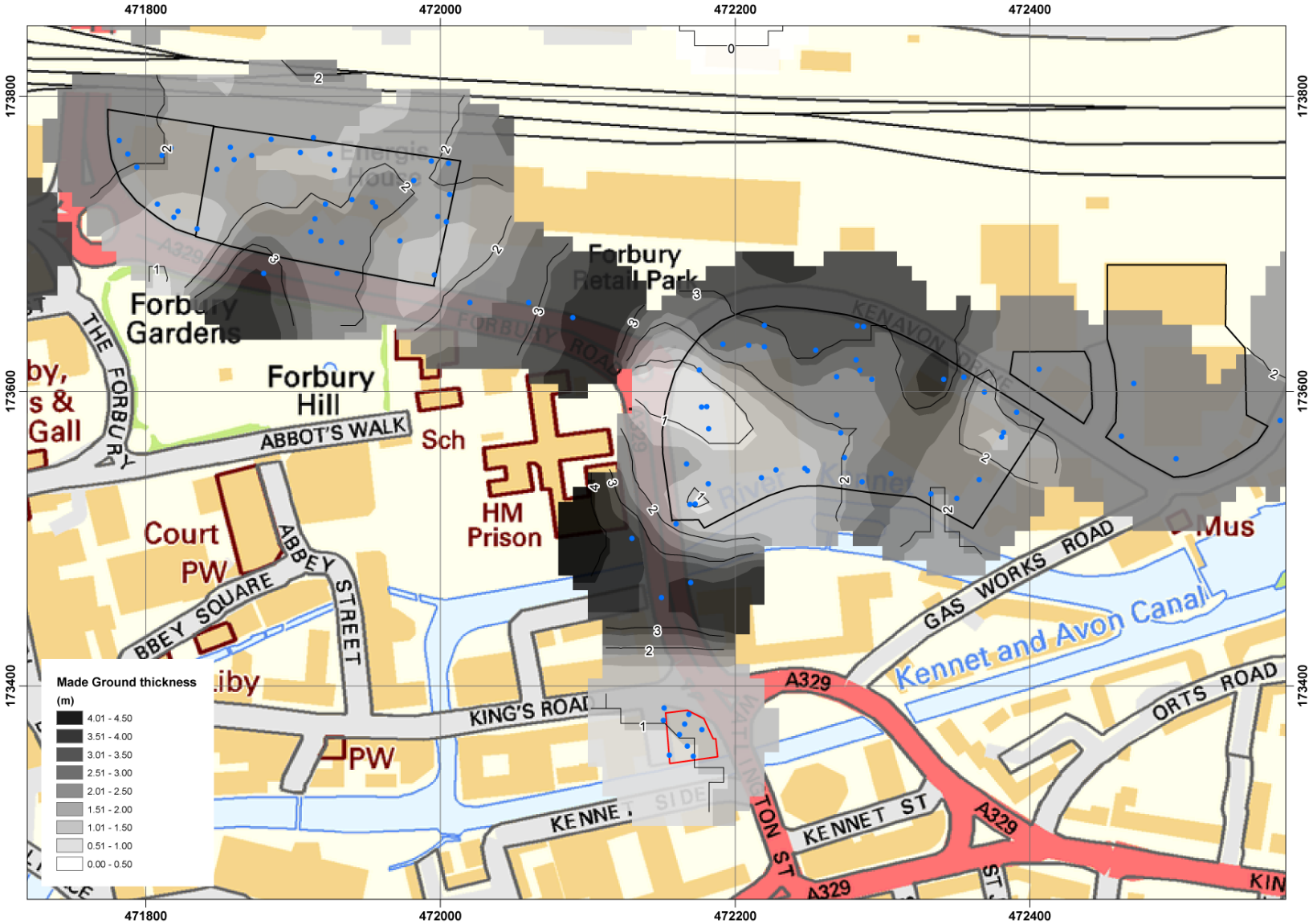

Figure 9: Thickness of Made Ground (m) (site outline in red). *Contains Ordnance Survey data © Crown copyright and database right [2016].*

5. DISCUSSION

The aims of the geoarchaeological investigations were: (1) to clarify the nature of the sub-surface stratigraphy across the site; (2) to clarify the nature, depth and extent of any alluvium and organic/peat deposits, and (3) to investigate the palaeoenvironmental and archaeological potential of the site. In order to address these aims, two geoarchaeological boreholes were put down at the site, the stratigraphic data from these and existing geotechnical records used to produce a deposit model of the major depositional units across the site and the wider area. The results of the deposit modelling indicate that the sediments recorded at the site are similar to those recorded elsewhere in this area of Reading, with Chalk bedrock/Late Devensian Shepperton Gravel overlain by a sequence of Holocene alluvial sediments, buried beneath modern Made Ground. At the site and across the modelled area, the relief features of the Chalk bedrock and Shepperton Gravel surfaces (see Figure 10) indicate that the site lies on the floodplain of the River Kennet, and that the surface of the Late Devensian Gravel is variable, generally lying at between *ca*. 33.5 and 35.3m OD

Slightly lower Gravel surfaces were recorded *ca*. 100m to the north/northeast at the Land South of Kenavon Drive site (Young, 2016b) at between *ca*. 32.5 and 34m OD. Similar Gravel surfaces were recorded meanwhile at the Kenavon Drive (Young, 2013) and Energis House (Batchelor *et al*., 2013) sites (*ca*. 33-35.5m OD) to the northeast and northwest respectively, the latter site lying on the floodplain of the River Thames. The Gravel is overlain by Holocene alluvium, generally between 1 and 3m in thickness, and described as mineral-rich (sandy/clayey/gravelly silt), the surface of the alluvium relatively even at between *ca*. 36 and 36.5m OD. In contrast to other sites nearby (e.g. Kenavon Drive, Young, 2013; Energis House, Batchelor *et al*., 2013), no peat or organic-rich horizons are recorded within the alluvium at the site. Perhaps significantly, the deposits of the Lower Alluvium are recorded at similar elevations here to the peat *ca*. 100m to north, perhaps indicative of subsequent erosion of the peat by fluvial (channel) activity.

The topography of the Early Holocene land surface is shown in Figure 10 (interpreted as the surface of either the Chalk bedrock, where no superficial geology is recorded, or the Late Devensian Gravel). No significant relief features typical of palaeochannels or gravel islands can be identified within the area of the site itself. At Kenavon Drive, to the north east (Young, 2013; see Figure 1) a palaeochannel aligned broadly north-south, whose base lay at *ca*. 33m OD, was recorded towards the middle of the site, and was infilled with a Neolithic (5920 to 5750 cal BP) peat horizon that lay at between *ca*. 33.2 and 33.9m OD. Similarly, a peat filled palaeochannel aligned broadly WNW-ESE and whose base also lay at *ca*. 33m OD was recorded at the Energis House site (Batchelor et al., 2013), *ca*. 400m to the northwest (Figure 1). Peat was also recorded directly overlying the Gravel at the base of the palaeochannel at the Energis House site, at between *ca*. 32.70 and 34.01m OD. Although undated and slightly thicker at the Energis House site, it is possible that this peat is (at least in part) contemporaneous with that recorded at Kenavon Drive, since it lies at a similar height OD (Young, 2013). The base of the sequence within the palaeochannel at the Kenavon Drive site (and that at Energis House) is recorded at a similar elevation to the base of the palaeochannel fill at Thames Valley Park, *ca*. 1.5km to the northeast (Barnes *et al.,* 1997). Here, no

radiocarbon determinations were carried out, but the pollen-stratigraphic sequence indicates that it spans from the Late Glacial to the present day.

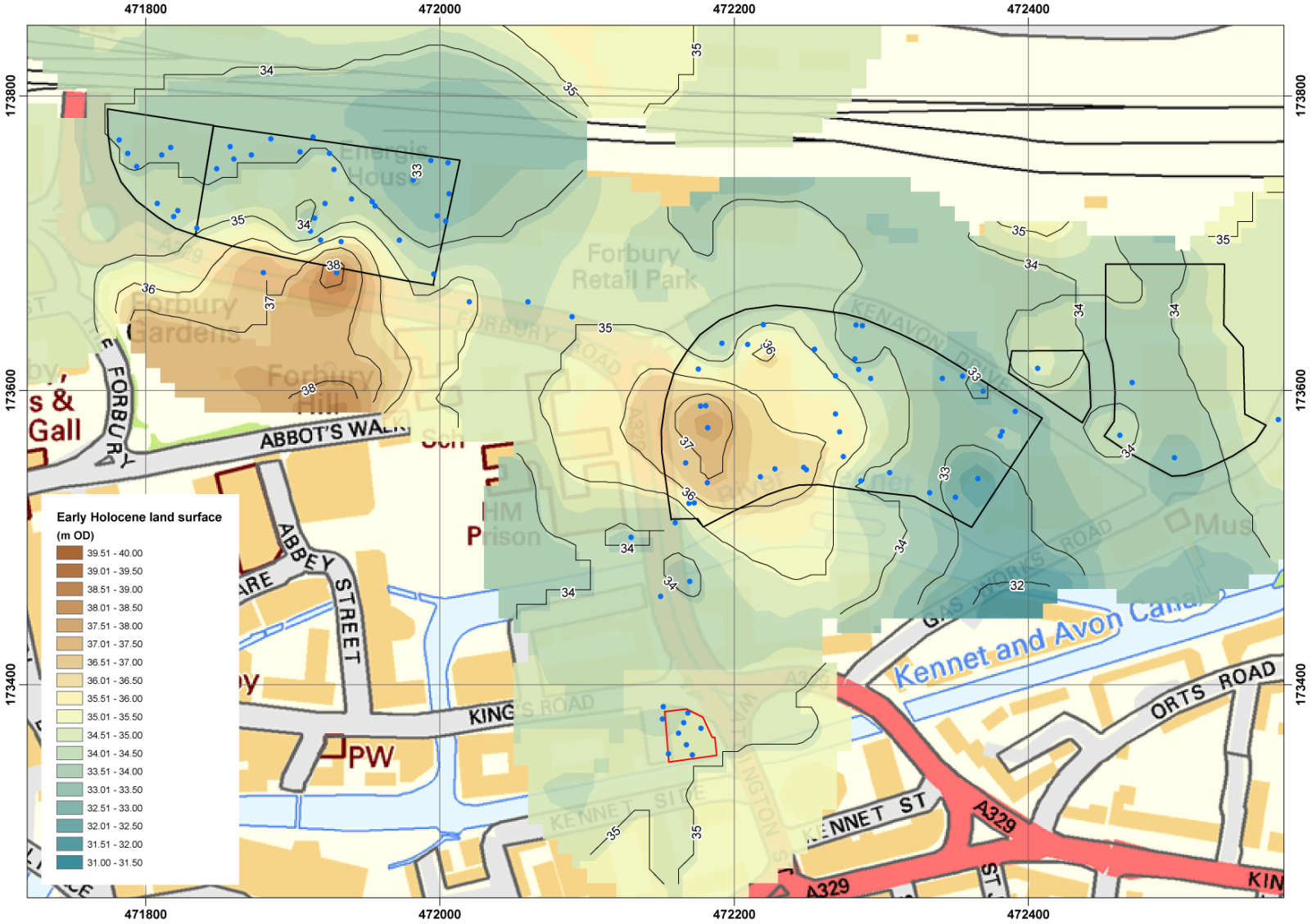

Figure 10: Early Holocene land surface (m OD) (site outline in red). Note: a 100m radius for each borehole has been used for deposit modelling purposes. *Contains Ordnance Survey data © Crown copyright and database right [2016].*

6. CONCLUSIONS & RECOMMENDATIONS

The results of the deposit modelling exercise indicate that the site lies on the floodplain of the River Kennet, and that no organic-rich or peat horizons are present within the alluvium at the site. The absence of these horizons may be a result of subsequent (Early/Middle Holocene) fluvial activity in the area of the site, perhaps eroding any organic deposits and resulting in the accumulation of mineral rich, generally coarse-grained (sandy) alluvium in the lower part of the sequence, where peat horizons have been recorded elsewhere. On the basis of the limited palaeoenviromental potential of these sequences, no further environmental archaeological investigations are recommended.

With regards to its archaeological potential, the topographic setting of the site and the fluvial-nature of the sediments indicate that it is of limited prehistoric archaeological potential. However, such archaeological evidence has been recorded in areas of elevated Gravel topography, including *ca*. 2km to the northeast during archaeological investigations at Thames Valley Park (Figure 1; Barnes *et al*., 1997), where Mesolithic archaeological finds consisting of flint scatters including knapping waste and tools were recorded on the terrace edge, along with Neolithic and Bronze Age Beaker sherds and flint artefacts, and a Middle Iron Age to Roman enclosure. The archaeological potential of the floodplain was also highlighted here, with Peterborough ware of Ebbsfleet/Mortlake, along with various pits and postholes of Middle Iron Age to Roman date recorded on the floodplain. A rolled and chipped flint axe of Neolithic date was also found on the floodplain at the Gasworks, approximately 400m to the east (MDR11180, SU 72900 73700). As stated above, the Scheduled Monument of Reading Abbey (Clunic and Benediictine Monastery and Civil War earthwork) (1007932, SU 7171 7360) is located on the opposite side of Forbury Way, on the area of higher ground that extends westwards from the site itself; on this area of higher ground, Early Neolithic flakes and pottery and flints of late Neolithic to Bronze Age date were found at the Abbey Church approximately 200m to the west (MDR11355, MDR3901, SU 72020 73600), and a small assemblage of worked flint, attributable to the Prehistoric period in general, was found during archaeological investigations at Forbury Gardens, approximately 350m west of the site (MRM15881, SU 71877 73581) (CgMs, 2016).

7. REFERENCES

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8. APPENDIX 1

Table 1: Borehole attributes for those records used in the deposit model, Kings Point, 120 Kings Road, Reading.

Name	Easting	Northing	Elevation (m OD)	Top of Alluvium (m bgl)	Top of peat (m bgl)	Top of Lower Alluvium (m bgl)	Top of Gravel (m bgl)	Top of bedrock (m bgl)
Geotechnical boreholes (present site; Jomas Associates Ltd, 2016)								
120KP-BH1	472151.92	173384.87	37.30	1.00			2.00	8.75
120KP-BH2	472177.59	173370.30	37.30	1.00			2.00	12.50
120KP-BH3	472155.38	173353.01	37.30	0.75			2.25	8.00
120KP-WS1	472151.37	173376.67	37.30	1.10		2.10	3.50	
120KP-WS2	472168.67	173380.68	37.30					
120KP-WS3	472162.30	173367.02	37.30	0.80		3.50	3.80	
120KP-WS4	472171.76	173352.10	37.30	1.10			2.20	
Geoarchaeological boreholes (present site)								
120KP-QBH1	472165.83	173374.11	35.94	0.00		0.70	1.75	
120KP-QBH2	472167.57	173359.07	36.12	0.00		0.30	0.80	
Energis House (Batchelor et al.*, 2013)*								
EH-QBH1	471885.09	173770.77	38.32	2.00	3.94	4.92	4.92	
EH-QBH2	471848.40	173750.48	38.32	2.00	4.50	4.54	4.56	
EH-QBH3	472005.48	173754.60	40.46	3.13	4.83	5.00	7.08	
EH-QBH4	471857.48	173765.62	38.32	1.00			3.95	
EH-QBH5	472006.36	173733.37	40.31	2.00			7.00	
EH-QBH6	471998.31	173718.38	40.14	2.17	6.50	6.95	6.95	
EH-QBH7	471972.62	173701.94	40.14					
EH-QBH8	471953.95	173728.14	38.49					
GISL-BH1	471696.00	173699.00	40.20	3.25			5.30	
GISL-BH2	471912.00	173708.00	41.80	1.90			8.50	
GISL-BH3	471860.00	173757.00	38.20	2.60	4.25	4.40	4.40	
GISL-BH4	471982.00	173743.00	40.10	2.00	6.30	7.40	7.40	
GISL-TP1	471915.00	173717.00	42.00	2.30				

Name	Easting	Northing	Elevation (m OD)	Top of Alluvium (m bgl)	Top of peat (m bgl)	Top of Lower Alluvium (m bgl)	Top of Gravel (m bgl)	Top of bedrock (m bgl)
GISL-TP10	471956.00	173725.00	38.90					
GISL-TP11	471933.00	173701.00	41.10	2.80				
GISL-TP11A	471919.00	173702.00	41.30					
GISL-TP12	471994.00	173756.00	40.30					
GISL-TP2	471922.00	173727.00	38.70					
GISL-TP3	471928.00	173750.00	38.30	1.05				
GISL-TP4	471905.00	173762.00	38.30					
GISL-TP5	471872.00	173760.00	38.30					
GISL-TP6	471996.00	173679.00	40.80					
GISL-TP7	472004.00	173715.00	40.60					
GISL-TP9	471940.00	173730.00	38.90	1.10	1.10	3.00		
GISL-TPS1	471925.00	173761.00	38.40	0.75				
Kenavon Drive (Young, 2013)								
KD-QBH1	472470.58	173605.13	37.78	2.25	3.90	4.16	4.27	
KD-QBH2	472499.28	173554.27	38.03	2.30	4.56	4.85	4.97	
KD-QBH3	472406.49	173614.82	38.09	2.50			2.90	
KD-QBH4	472462.27	173569.40	37.83	2.50			3.31	
Land South of Kenavon Drive (CGL, 2016/Young, 2016b)								
LSK-CP101	472167.10	173550.50	39.10					2.40
LSK-CP102	472191.74	173631.99	39.10	3.80				5.50
LSK-CP103	472269.00	173583.84	38.80					2.70
LSK-CP104	472391.13	173585.69	38.20	3.20			5.60	6.70
LSK-CP105	472305.77	173543.89	38.30	3.40			4.50	7.20
LSK-DS101	472172.95	173523.51	38.90					
LSK-DS101A	472169.51	173523.25	38.90					
LSK-DS102	472180.89	173589.39	38.80					
LSK-DS102A	472177.19	173589.13	38.80					

Name	Easting	Northing	Elevation (m OD)	Top of Alluvium (m bgl)	Top of peat (m bgl)	Top of Lower Alluvium (m bgl)	Top of Gravel (m bgl)	Top of bedrock (m bgl)
LSK-DS103	472175.86	173614.26	39.00					
LSK-DS105	472254.71	173627.76	38.40					
LSK-DS106	472287.25	173643.90	38.40	2.70				
LSK-DS107	472284.87	173614.00	38.30	0.70				
LSK-DS109	472355.41	173609.50	38.30	2.40				
LSK-DS110	472381.07	173568.76	37.60					
LSK-DS111	472350.65	173527.22	38.20	1.90				
LSK-DS112	472332.92	173530.39	38.20	1.80				
LSK-DS113	472274.45	173555.00	38.60					2.10
LSK-DS114	472247.46	173547.59	39.00					
LSK-DS115	472227.88	173546.53	39.00					
LSK-CP01	472220.00	173,644.70	36.25	4.00				6.00
LSK-CP02	472,282.20	173,621.30	25.07	4.00				6.00
LSK-CP03	472,341.70	173,607.90	25.45				5.00	6.50
LSK-CP04	472,365.80	173,539.80	25.45	3.00				6.50
LSK-CP05	472,249.10	173,545.90	38.00					2.20
LSK-WS1	472,209.40	173,631.10	5.00	1.80				4.70
LSK-WS2	472,182.00	173,574.50	4.00					0.30
LSK-WS3	472,181.80	173,537.20	5.00					1.20
LSK-WS4	472,218.00	173,541.20	1.45					
LSK-WS5	472,286.20	173,538.50	5.00				5.30	5.90
LSK-WS6	472,292.80	173,607.90	5.00	2.80				3.70
LSK-WS7	472,271.80	173,571.70	1.50					
LSK-WS8	472369.30	173599.40	1.00					
LSK-WS8A	472,369.30	173,599.40	6.00	2.50			5.80	
LSK-WS9	472,382.20	173,571.90	5.00	1.80			4.00	
LSK-WS10	472,283.00	173,644.20	5.00	3.80			4.80	

Name	Easting	Northing	Elevation (m OD)	Top of Alluvium (m bgl)	Top of peat (m bgl)	Top of Lower Alluvium (m bgl)	Top of Gravel (m bgl)	Top of bedrock (m bgl)
LSK-WS11	472,269.00	173,609.90	5.00	2.00				3.20
Former NCP Car Park (Dinwiddy, 2008)								
W-TR1	471782.00	173770.00	38.51	2.40				
W-TR10	471822.00	173722.00	38.05					
W-TR2	471914.00	173772.00	38.88	2.50	2.50	2.80		
W-TR3E	471811.00	173760.00	38.99	2.70	2.78	2.92		
W-TR3W	471788.00	173761.00	38.74	2.70	2.78	2.92		
W-TR4	471808.00	173727.00	40.98	1.60				
W-TR6	471835.00	173710.00	40.14	0.90				
W-TR7	471819.00	173718.00	40.29					
W-TR8	471817.00	173765.00	38.05	1.38	1.38	1.63		
W-TR9	471794.00	173752.00	38.05	1.75	1.75	2.00		
BGS Archive boreholes (http://mapapps.bgs.ac.uk/geologyofbritain/home.html)								
SU77SW125	471880.00	173680.00	41.16					3.90
SU77SW126	471930.00	173680.00	41.15					2.05
SU77SW127	472020.00	173660.00	39.28	2.65				3.90
SU77SW128	472060.00	173660.00	38.49	2.56				4.40
SU77SW129	472090.00	173650.00	38.99					3.85
SU77SW131	472160.00	173510.00	38.08	2.00			4.40	6.20
SU77SW132	472170.00	173470.00	38.70		4.00		5.15	6.60
SU77SW133	472130.00	173500.00	38.50		4.30		4.75	6.15
SU77SW134	472150.00	173460.00	37.67				3.40	5.40
SU77SW301	471800.00	173890.00	37.93	2.00			3.40	
SU77SW302	471840.00	173910.00	37.92	2.00			3.20	
SU77SW303	471890.00	173900.00	37.60	1.15			2.55	
SU77SW304	471940.00	173900.00	37.25	0.85			2.35	
SU77SW305	471970.00	173890.00	37.22	0.85			2.30	

Name	Easting	Northing	Elevation (m OD)	Top of Alluvium (m bgl)	Top of peat (m bgl)	Top of Lower Alluvium (m bgl)	Top of Gravel (m bgl)	Top of bedrock (m bgl)
SU77SW307	472100.00	173880.00	36.65	0.60			1.05	
SU77SW308	472200.00	173860.00	36.40	0.40			2.00	7.00
SU77SW308	472200.00	173860.00	36.40	0.40			1.50	
SU77SW35	472220.00	173630.00	40.50					2.13
SU77SW83	472570.00	173580.00	37.39				2.40	8.20
SU77SW85	472610.00	173640.00	37.71	1.50			2.90	
SU77SW86	472600.00	173650.00	37.71	1.80			2.60	8.10
SU77SW87	472600.00	173620.00	37.72	1.60			2.70	
SU77SW88	472600.00	173620.00	37.82	1.70			2.50	6.90

9. APPENDIX 2: OASIS

OASIS ID: quaterna1-271657

Project details

Project name	Kings Point, 120 Kings Road, Reading
Short description of the project	A programme of geoarchaeological fieldwork (including two boreholes) and deposit modelling (incorporating the results of previous geotechnical investigations) was carried out at the site, in order to (1) clarify the nature of the sub-surface stratigraphy across the site; (2) to clarify the nature, depth and extent of any alluvium and organic/peat deposits, and (3) to investigate the palaeoenvironmental and archaeological potential of the site. The results of the deposit modelling indicate that the sediments recorded at the site are similar to those recorded elsewhere in this area of Reading, with Chalk bedrock/Late Devensian Shepperton Gravel overlain by a sequence of Holocene alluvial sediments, buried beneath modern Made Ground. At the site and across the modelled area, the relief features of the Chalk bedrock and Shepperton Gravel surfaces indicate that the site lies on the floodplain of the River Kennet, and that the surface of the Late Devensian Gravel is relatively even, generally lying at between ca. 33.5 and 35.3m OD. The Gravel is overlain by Holocene alluvium, generally between 1 and 3m in thickness, and described as mineral-rich (sandy/clayey/gravelly silt), the surface of the alluvium relatively even at between ca. 36 and 36.5m OD. In contrast to other sites nearby, no peat or organic-rich horizons are recorded within the alluvium at the site. Perhaps significantly, the deposits of the Lower Alluvium are recorded at similar elevations here to the peat ca. 100m to north, perhaps indicative of subsequent erosion of the peat by fluvial (channel) activity in the area of the site. On this basis, no further environmental archaeological investigations are recommended, and the prehistoric archaeological potential of the site is considered to be limited.
Project dates	Start: 01-09-2016 End: 19-12-2016
Previous/future work	Not known / Not known
Type of project	Environmental assessment
Survey techniques	Landscape

Project location

Country	England

Site location	BERKSHIRE READING READING Kings Point, 120 Kings Drive
Postcode	RG1 3DA
Site coordinates	SU 72166 73357 51.454099212744 -0.96126545979 51 27 14 N 000 57 40 W Point

Project creators

Name of Organisation	Quaternary Scientific (QUEST)
Project brief originator	CgMs Consulting
Project design originator	D.S. Young
Project director/manager	C.R. Batchelor
Project supervisor	D.S. Young
Type of sponsor/funding body	Developer

Project archives

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

Entered by	Daniel Young (d.s.young@reading.ac.uk)
Entered on	19 December 2016