GEOARCHAEOLOGICAL FIELDWORK REPORT

CHAILEY INDUSTRIAL ESTATE
PUMP LANE
HAYES
HILLINGDON UB3 3NB

NOVEMBER 2019

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1. NON-TECHNICAL SUMMARY

A programme of geoarchaeological field investigations was undertaken at the Chailey Industrial estate site in order to: (1) clarify the nature of the sub-surface stratigraphy across the site; (2) investigate whether the sequences contain any artefact or ecofact evidence for prehistoric or historic human activity, and (3) investigate whether the sequences contain any ecofact evidence with the potential for palaeoenvironmental reconstruction. The results of the investigations have revealed a sequence of Lynch Hill Gravel overlain by a thin (less than 0.65m thick) and patchily present horizon of slightly gravelly, sandy clayey silt, interpreted as the Langley Silt but substantially altered by near surface processes, capped by Made Ground. In three of the eight test-pits the Langley Silt has been entirely truncated during the emplacement of the overlying Made Ground, which here is between 0.2 and 0.95m thick.

On the basis of the limited thickness and largely truncated nature of the Langley Silt across the site, no further archaeological or palaeoenvironmental investigations are recommended. No evidence for stable land surfaces or lithic artefacts were identified within the Lynch Hill Gravel, although many of the lithic artefacts previously identified from within this unit have been identified towards its base, which at this site is likely to be below the level of impact of the proposed development (4-6m below ground level).

2. INTRODUCTION

2.1 Site context

This report summarises the findings arising out of the geoarchaeological fieldwork undertaken by Quaternary Scientific (QUEST), University of Reading in connection with the proposed development at Chailey Industrial Estate, Pump Lane, Hayes, London Borough of Hillingdon (National Grid Reference (NGR): TQ 10116 79673; Figure 1). Quaternary Scientific were commissioned by RPS Group to undertake the geoarchaeological investigations.

The Chailey Industrial Estate site is located to the east of the town of Hayes, bordered to the north by Pump Lane, to the west and south by residential properties off Little Road and Chalfont Road respectively, and to the east and south east by industrial units. The site comprises an area of level ground lying at approximately 31-32m OD (Ordnance Datum).The Yeading Brook (the upper reach of the River Crane) lies approximately 500m to the east of the site, whilst the Grand Union Canal is located approximately 145m to the south. The British Geological Survey (BGS 1:50,000 Sheet 269 Windsor) shows the site underlain by London Clay bedrock, with the superficial geology recorded as Langley Silt. In this area the Langley Silt and London Clay are separated by the Lynch Hill Gravel, which is shown by the BGS outcropping immediately to the west of the site, probably as a result of exploitation and removal of the Langley Silt here. This area of Hayes was heavily exploited in the 19th century by brickpits in which the Langley Silt, then known as 'brickearth', was very actively exploited and largely removed. These features are shown as Brick Fields in 19th Century maps.

A recent geotechnical investigation at the site (Hydrock, 2018; see Table 1 & Figure 2) confirmed a sequence of London Clay bedrock, overlain by the sands and gravels of the Lynch Hill Gravel, Langley Silt (entirely truncated in places) and Made Ground. The surface of the Lynch Hill Gravel was recorded at levels between 28.84 (CP02) and 30.32m OD (WS03), its surface gently sloping downwards towards the east. The Lynch Hill Gravel was overlain by Langley Silt (generally described as a variably sandy and gravelly clay) in nine of the 15 interventions, its surface generally recorded at between 29.84 (CP02) and 30.67m OD (WS02) and present in variable thicknesses of between 0.1 (CP01) and 1.0m (CP02). In the remaining six interventions the Made Ground directly overlies the Lynch Hill Gravel, and it is assumed that the Langley Silt has been entirely truncated in these locations.

Table 1: Summary of the results of the geotechnical investigations undertaken by Hydrock (2018).

Name	Easting	Northing	Elevation (m OD)	Top of Langley Silt (m OD)	Top of Gravel (m OD)	Top of London Clay (m OD)
CP01	510049.00	179744.00	31.08	30.33	30.23	26.33
CP02	510162.00	179746.00	30.24	29.84	28.84	26.94
CP03	510127.00	179634.00	30.62	-	29.72	24.42
WS01	510069.00	179788.00	31.06	30.46	30.11	-
WS02	510080.00	179726.00	30.90	30.67	30.00	-
WS03	510050.00	179747.00	31.02	-	30.32	-
WS04	510046.00	179693.00	31.03	30.53	30.13	-

Name	Easting	Northing	Elevation (m OD)	Top of Langley Silt (m OD)	Top of Gravel (m OD)	Top of London Clay (m OD)
WS05	510082.00	179682.00	30.79	30.29	29.79	-
WS06	510095.00	179648.00	30.63	-	29.93	-
WS07	510126.00	179635.00	30.60	30.00	29.80	-
WS08	510151.00	179685.00	30.67	30.22	29.57	-
WS09	510117.00	179700.00	30.69	30.19	29.64	-
WS10	510187.00	179733.00	30.22	-	-	-
WS10A	510191.00	179731.00	30.35	-	-	-
WS11	510104.00	179766.00	30.85	-	-	-

2.3 Palaeolithic Archaeological potential and Pleistocene Mammalia

The Lynch Hill Gravel to the west of London and the overlying Langley Silt have been fairly rich sources of Lower and Middle Palaeolithic material, notably west of the River Crane around Yiewsley and West Drayton (e.g. Collins, 1978) and east of the River Brent in Ealing (e.g. Brown, 1887). In general, where Lower Palaeolithic artefacts and mammalian remains have been recovered in these localities from the Lynch Hill Gravel, they have come from the base and lower part of the gravel and are all in a more or less rolled condition. Where Levallois material has been recovered it has come mainly from the 'brickearth' (Langley Silt), e.g. at Creffield Road in Ealing (Brown, 1887) and some of it is in mint condition and probably primary context with refitting material present. At Creffield Road Brown (1886; 1887; 1889), described a 'working floor' lying on a seam of black-stained gravel (= Lynch Hill Gravel) immediately beneath the brickearth (Langley Silt), which he thought to be humic staining on an extensive land surface. He also identified two further seams or surfaces at depth within the gravels associated with small numbers of unrolled flint tools. He reported (Brown, 1887) 10 or 12 flint artefacts from the Lynch Hill gravels, 8 or 10 from the upper part and 2 from the lower. In contrast, Collins (1988), working in the Yiewsley area, suggested that within the Lynch Hill terrace sequence, artefacts may be more common in the lower part of the gravels. Bazely *et al*. (1991) did not support the idea of an extensive stable land surface at the top of the Lynch Hill Gravels, as the humic component is more likely to be manganese staining and they noted the flints that Brown had collected, though not badly rolled, were not in pristine condition. Marsden (1927) recorded flints from the vicinity of Brown's site, including some Levallois flakes, 'thrown up' from a depth of 4 to 6.5 ft in the brickearth. The occurrence of the Levallois industry is important as it indicates a MIS 8 age, at oldest, and follows on from the MIS 9 age ascribed to the Lynch Hill Gravel. Bazely *et al*. (1991) recovered 21 artefacts from the Lynch Hill Gravel at Creffield Road, but only from the Langley Silt.

The Greater London HER shows five sites of Palaeolithic finds within 1km of the Pump Lane site. Three handaxes and one core were recovered at Provident Industrial Estate, shown immediately to the southwest of the present site (TQ 100 797). At the site of the E.M.I. Co. Works (TQ 095 795) five handaxes were found; Wymer (1968) describes these as rolled and stained hand-axes and pointed hand-axes. At Botwell (TQ 106 796) pointed and cordate hand-axes, as well as a tortoise core and Levallois flake were recorded, whilst at the United Glass Co. Works in Harlington (TQ 089 797) three hand-axes, including a broken sub-cordate hand-axe and a cleaver were found (Wymer, 1968). A

large number of flint implements were described at Eastwood's Pit, although Roe (1968) highlights that these may have come from a number of locations including Yiewsley, West Drayton and Hillingdon; Roe (1968) records a total of 523 handaxes, three cores, 515 flakes and 101 Levallois flakes. Not far to the east of the present site Roe (1968) records 21 handaxes and six unretouched flakes from Southall Gasworks. This latter site was the subject of recent geoarchaeological investigation by Batchelor & Green (2017); the surviving remnants of Langley Silt at this site were considered to be thin and significantly altered by near-surface processes.

A spectacular discovery of mammoth remains in the Southall spread of Lynch Hill Gravel is recorded by Brown (1889) who describes a mammoth skeleton, complete and articulated, found at a depth of 13 feet (3.96m) at a site in Norwood Lane (now Tentalow Lane) about two kilometres to the east of the present site. Juby (2011) provides further discussion of the Palaeolithic finds in this area, scrutinising the associated museum collections of artefacts and mammalian remains of a large number of published accounts of sites in London and London suburbs, with extensive chapters on West Drayton, Yiewsley and Creffield Road.

2.3 Aims & Objectives

Additional sedimentary records are required to enhance our understanding of the sub-surface stratigraphy at the site, and to assess its palaeoenvironmental and Palaeolithic archaeological potential. Three significant research aims relevant to the geoarchaeological investigation at the site are outlined here:

1. To clarify the nature of the sub-surface stratigraphy across the site;
2. To investigate whether the sequences contain any artefact or ecofact evidence for prehistoric or historic human activity.
3. To investigate whether the sequences contain any ecofact evidence with the potential for palaeoenvironmental reconstruction.

In order to address these aims, the following objectives are proposed:

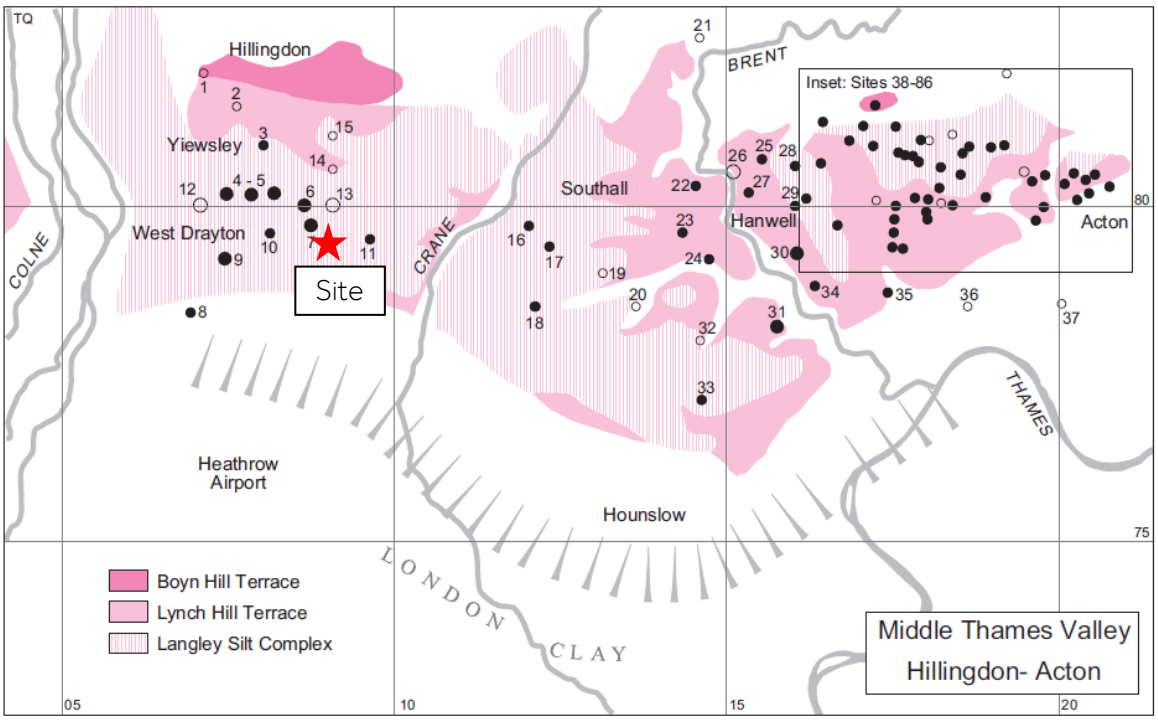
1. To open and describe a total of eight geoarchaeological test-pits evenly distributed across the site;
2. To provide a basic deposit model based on the results of the geoarchaeological field investigations;
3. To make recommendations for any further archaeological/palaeoenvironmental investigations at the site (if necessary).



Figure 1: Location of Chailey Industrial Estate, Pump Lane, Hayes. Figure provided by Pre-Construct Archaeology.



Figure 2: Geoarchaeological test-pit locations at Chailey Industrial Estate, Pump Lane, Hayes showing the NW-SE transect (see Figure 3). Surface elevation of each test-pit also shown. Original Figure provided by Archaeology South-East.



Map 8. Middle Thames Valley: Hillingdon–Acton

1 HILLINGDON L.B. (G)
2 Yiewsley, Colham Green TQ 075815 (G)
3 Hayes, Goulds Green TQ 079809 (A)
4–5 Yiewsley, Sabey's and Eastwood's Pits TQ 073802–081802 (A)
6 Dawley, Maynard's Pit TQ 085800 (A)
7 Odell's Pit TQ 086797 (A)
8 Harmondsworth, Holloway Lane TQ 068784 (A)
9 Boyer's or Bowyer's Pit TQ 073792 (A)
10 Public Record Office TQ 080796 (A)
11 Site of E.M.I. factory TQ 095795 (A)
12 West Drayton (G)
13 Dawley (G)
14 Hayes, Botwell (G)
15 Hayes and Harlington (G)
16 EALING L.B. Southall Gas Works TQ 119797 (A)
17 Featherstone Road or Terrace TQ 122794 (A)
18 HOUNSLOW L.B. Heston, North Hyde Pits TQ 120785 (E)
19 EALING L.B. Southall (G)
20 Norwood Green and vicinity TQ 135785 (G)
21 Greenford (G)
22 Hanwell, Gibson's Pit TQ 144803 (A)
23 Near Windmill Bridge TQ 142796 (A)
24 Windmill Lane TQ 146792 (E)
25 Hanwell, Bristow Pit TQ 154807 (E)
26 Hanwell (G)
27 The Lawn TQ 152802 (E)
28 Kensington Cemetery TQ 159806 (A)
29 St George's Cemetery TQ 159800 (A)
30 Boston Road or Seward's Pit TQ 159793 (A)
31 HOUNSLOW L.B. Zion Lane, Macklin's Pit TQ 156782 (E)
32 Osterley (G)
33 Near Osterley Station TQ 145771 (A)
34 EALING L.B. Gravel pit near Boston Manor Station TQ 162788 (E)
35 South Ealing, Ealing Park Gardens TQ 173787 (A)
36 HOUNSLOW L.B. Gunnersbury Park TQ 185785 (G)
37 Gunnersbury (G)

Inset area of EALING London Borough (Sites Nos 38–86)
Sites excluded are those known to have yielded only flakes or Levallois flakes or have reason to be considered later than OIS–8, or come from beyond the known area of the terrace deposits.

38 Hanwell, Grosvenor Road TQ 161802 (A)
39 West Ealing, Manor Road TQ 164807 (A)

Figure 3: Wymer (1999) Map 8 Middle Thames Valley, Hillingdon – Acton showing the Lynch Hill terrace, Langley Silt Complex and Lower and Middle Palaeolithic sites. Reproduced from Wymer (1999).

3. METHODS

A total of eight test-pits were excavated at the site by Archaeology South-East. The test-pits were opened using a mechanical excavator equipped with a toothless bucket. Each test-pit measured around 2x2m at surface and was dug to the base of the Made Ground/surface of the natural deposits. During these excavations all Made Ground was removed and placed in a single large pile. Subsequent to this work the site was attended by Quaternary Scientific (QUEST) geoarchaeologists, who extended each of the test pits to depths of between 1.2 and 2.0m (again using a mechanical excavator equipped with a toothless bucket), observing the excavation of the Langley Silt and the upper part of the Lynch Hill Gravel.

Field-based descriptions of the sequences was carried out, noting composition, colour boundary types (sharp or diffuse) and (where relevant) degree of humification. Photographs were taken of each described section. These were carried out from observations of the test-pit sections from the surface (for health and safety reasons, the test-pits were not be entered at any time) and examination of the excavated material, which was separated in to piles related to spits of around 300mm. Each of these spits was routinely examined for lithic artefacts.

The results of the lithostratigraphic descriptions are shown in Tables 2 to 9, with a northwest-southeast transect of selected test-pits shown in Figure 3. The photographs of the described sections are shown in Figures 4 to 11.

4. RESULTS AND DISCUSSION OF GEOARCHAEOLOGICAL INVESTIGATIONS

The results of the lithostratigraphic descriptions of the test-pits are shown in Tables 2 to 9, with a northwest-southeast transect of selected test-pits shown in Figure 3 and the photographs of the described sections in Figures 4 to 11. The results of the investigations have confirmed a sequence of Wolstonian (Marine Isotope Stage (MIS) 8-10) Lynch Hill Gravel, overlain by Langley Silt of Devensian (MIS 2-4) origin, and modern Made Ground. In places the Langley Silt has been significantly disturbed or entirely truncated by the emplacement of the overlying Made Ground (see below).

The surface of the Lynch Hill Gravel was recorded in the new test-pits at between 29.32 (TP8) and 30.1m OD (TP4). Similar to the existing geotechnical interventions, these records indicate that the Gravel falls slightly towards the east towards the Yeading Brook (see Figure 3). No lithic artefacts or evidence for stable land surfaces were encountered within or at the surface of the Gravel.

Overlying the Gravel in five of the eight test-pits was an occasionally gravelly, slightly sandy clayey silt, interpreted as the Langley Silt and present in thicknesses of between 0.2 (TP7) and 0.65m (TP3). The surface of this unit was recorded at between 29.72 (TP8) and 30.65m OD (TP4). It is important to note that none of the exposed sections of this unit displayed the classic features of 'brickearth' – i.e. a dense network of tubes and cavities with evidence of clay translocation and/or reprecipitation of calcium carbonate or platiness. In addition, this unit in each of these test-pits is described as 'massive' (i.e. with no surviving evidence of depositional or post-depositional structure), potentially indicative of near-surface disturbance. In many of the sequences the presence of root remains suggests a history involving pedological processes, bioturbation and again near-surface disturbance of the sediment. No lithic artefacts were observed within the Langley Silt in any of the eight test-pits, although it was not possible to sieve this material. Similarly, no lithic artefacts were observed within the Lynch Hill Gravel, although sieving of these deposits was not undertaken during this phase of the work.

In the remaining three test-pits (TP1, TP2 and TP5) deposits consistent with the Langley Silt were present, but these were heavily disturbed by the overlying Made Ground with inclusions of brick, charcoal and leaching from the overlying unit. The natural deposits across the site are overlain by between 0.2 (TP4) and 0.95m (TP2) of Made Ground.

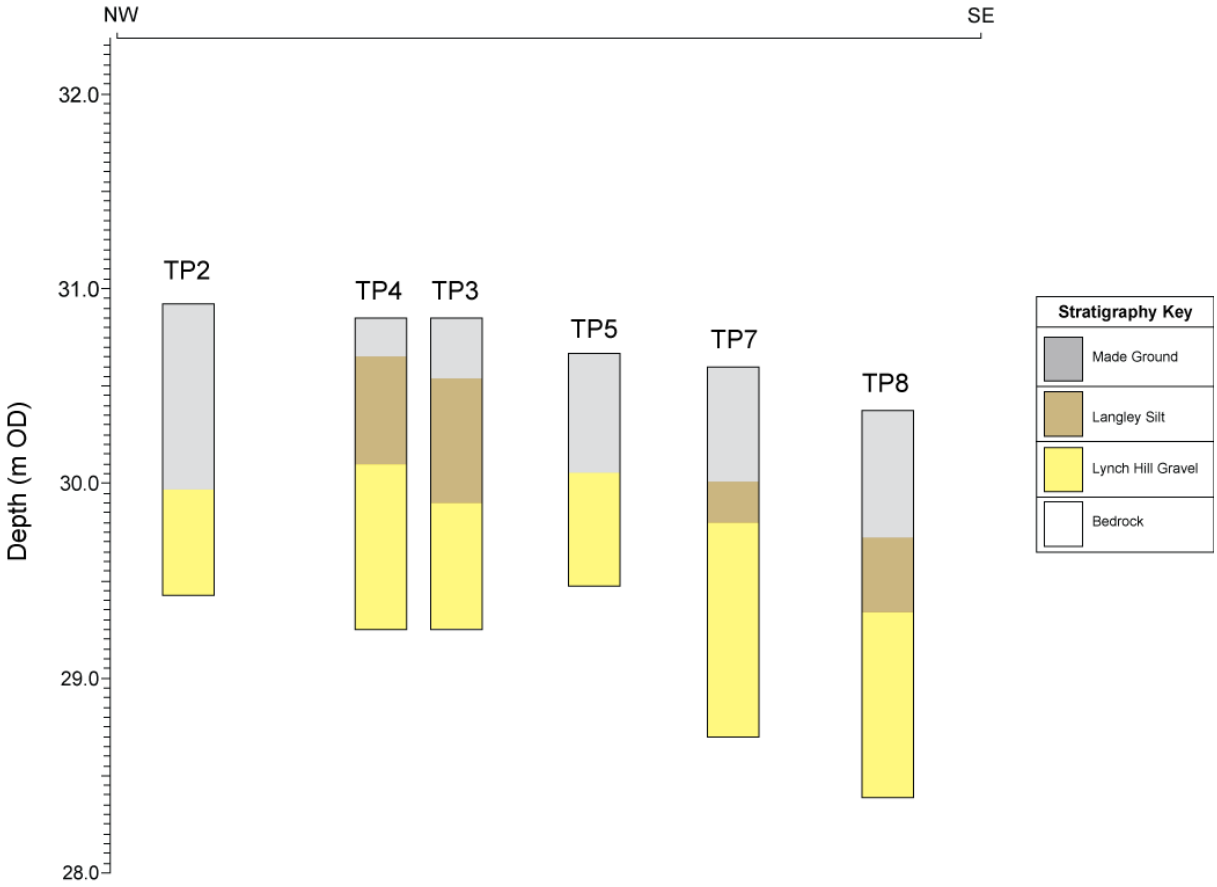


Figure 3: Northwest-southeast transect of selected test-pits across the Chailey Industrial Estate, Pump Lane, Hayes Site.

Table 2: Lithostratigraphic description of trial-pit TP1, Chailey Industrial Estate, Pump Lane, Hayes.

Depth (m bgl)	Depth (m OD)	Description	Stratigraphic Unit
0.00 to 0.05	30.96 to 30.91	Tarmac hardstanding	MADE GROUND
0.05 to 0.45	30.91 to 30.51	Concrete slab	
0.45 to 0.90	30.51 to 30.06	Ag3 As1 Gg+; reddish brown clayey silt with occasional flint clasts and modern rooting. Occasional brick fragments - reworked/disturbed Langley Silt. Sharp contact in to:	
0.90 to 1.40	30.06 to 29.56	Gg3 Ga1; reddish brown clast supported sandy gravel. Clasts are sub-rounded to angular; flint, 20-100mm in diameter.	LYNCH HILL GRAVEL

Table 3: Lithostratigraphic description of trial-pit TP2, Chailey Industrial Estate, Pump Lane, Hayes.

Depth (m bgl)	Depth (m OD)	Description	Stratigraphic Unit
0.00 to 0.05	30.92 to 30.87	Tarmac hardstanding	MADE GROUND
0.05 to 0.25	30.87 to 30.67	Concrete slab	
0.25 to 0.95	30.67 to 29.97	As3 Ag1; reddish brown silty clay. Occasional brick and charcoal fragments - reworked/disturbed Langley Silt. Sharp contact in to:	
0.95 to 1.50	29.97 to 29.42	Gg3 Ga1; reddish brown clast supported sandy gravel. Some sub-horizontal bedding. Clasts are sub-rounded to angular; flint, 20-80mm in diameter.	LYNCH HILL GRAVEL

Table 4: Lithostratigraphic description of trial-pit TP3, Chailey Industrial Estate, Pump Lane, Hayes.

Depth (m bgl)	Depth (m OD)	Description	Stratigraphic Unit
0.00 to 0.05	30.85 to 30.80	Tarmac hardstanding	MADE GROUND
0.05 to 0.30	30.80 to 30.55	Concrete slab	
0.30 to 0.95	30.55 to 29.90	As3 Ag1 Ga+; reddish brown silty clay with a trace of sand. Sharp contact in to:	LANGLEY SILT
0.95 to 1.60	29.90 to 29.25	Gg3 Ga1; reddish brown clast supported sandy gravel. Sub-horizontal bedding. Clasts are sub-rounded to angular; flint, 30-80mm in diameter.	LYNCH HILL GRAVEL

Table 5: Lithostratigraphic description of trial-pit TP4, Chailey Industrial Estate, Pump Lane, Hayes.

Depth (m bgl)	Depth (m OD)	Description	Stratigraphic Unit
0.00 to 0.05	30.85 to 30.80	Tarmac hardstanding	MADE GROUND
0.05 to 0.20	30.80 to 30.65	Concrete slab	
0.20 to 0.75	30.65 to 30.10	As3 Ag1 Ga+; reddish brown silty clay occasional flint clasts. Sharp contact in to:	LANGLEY SILT
0.75 to 1.60	30.10 to 29.25	Gg3 Ga1; reddish brown clast supported sandy gravel. Sub-horizontal bedding. Clasts are sub-rounded to angular; flint, 20-80mm in diameter.	LYNCH HILL GRAVEL

Table 6: Lithostratigraphic description of trial-pit TP5, Chailey Industrial Estate, Pump Lane, Hayes.

Depth (m bgl)	Depth (m OD)	Description	Stratigraphic Unit
0.00 to 0.05	30.66 to 30.61	Tarmac hardstanding	MADE GROUND
0.05 to 0.25	30.61 to 30.41	Concrete slab	
0.25 to 0.60	30.41 to 30.06	Ag2 As1 Gg1; black to dark grey (colour leached from unit above) moderately to poorly sorted gravelly clayey silt with frequent brick fragments. Reworked/disturbed Langley Silt. Sharp contact in to:	
0.60 to 1.20	30.06 to 29.46	Gg3 Ga1; reddish brown clast supported sandy gravel. Sub-horizontal bedding. Clasts are sub-rounded to angular; flint, 20-80mm in diameter.	LYNCH HILL GRAVEL

Table 7: Lithostratigraphic description of trial-pit TP6, Chailey Industrial Estate, Pump Lane, Hayes.

Depth (m bgl)	Depth (m OD)	Description	Stratigraphic Unit
0.00 to 0.05	30.51 to 30.46	Tarmac hardstanding	MADE GROUND
0.05 to 0.25	30.46 to 30.26	Concrete slab	
0.25 to 0.50	30.26 to 30.01	Black sandy clay containing tarmac fragment sand gravel.	
0.50 to 0.70	30.01 to 29.81	Ag3 As1 Ga+; dark grey clayey silt with a trace of sand. Colour leached from unit above. Sharp contact in to:	LANGLEY SILT
0.70 to 0.85	29.81 to 29.66	Ag3 As1 Ga+; reddish brown clayey silt with a trace of sand. Sharp contact in to:	
0.85 to 1.60	29.66 to 28.91	Gg3 Ga1; reddish brown clast supported sandy gravel. Sub-horizontal bedding. Clasts are sub-rounded to angular; flint, 30-80mm in diameter.	LYNCH HILL GRAVEL

Table 8: Lithostratigraphic description of trial-pit TP7, Chailey Industrial Estate, Pump Lane, Hayes.

Depth (m bgl)	Depth (m OD)	Description	Stratigraphic Unit
0.00 to 0.05	30.60 to 30.55	Tarmac hardstanding	MADE GROUND
0.05 to 0.20	30.55 to 30.40	Concrete slab	
0.20 to 0.35	30.40 to 30.25	Dark grey sandy clayey gravel with a trace of silt; frequent brick fragments.	
0.35 to 0.60	30.25 to 30.00	Ag3 As1; dark grey clayey silt with occasional fine brick fragments. Reworked Langley Silt. Sharp contact in to:	
0.60 to 0.80	30.00 to 29.80	Ag3 As1; reddish brown clayey silt. Sharp contact in to:	LANGLEY SILT
0.80 to 1.90	29.80 to 28.70	Gg3 Ga1; reddish brown clast supported sandy gravel. Sub-horizontal bedding. Clasts are sub-rounded to angular; flint, 30-80mm in diameter.	LYNCH HILL GRAVEL

Table 9: Lithostratigraphic description of trial-pit TP8, Chailey Industrial Estate, Pump Lane, Hayes.

Depth (m bgl)	Depth (m OD)	Description	Stratigraphic Unit
0.00 to 0.10	30.37 to 30.27	Tarmac hardstanding	MADE GROUND
0.10 to 0.65	30.27 to 29.72	Dark grey sandy clayey gravel with a trace of silt; frequent brick fragments.	
0.65 to 1.05	29.72 to 29.32	Ag3 As1 Gg+; reddish brown clayey silt with occasional gravel clasts. Sharp contact in to:	LANGLEY SILT
1.05 to 2.00	29.32 to 28.37	Gg3 Ga1; reddish brown clast supported sandy gravel. Sub-horizontal bedding. Clasts are sub-rounded to angular; flint, 30-80mm in diameter.	LYNCH HILL GRAVEL



Figure 4: Photograph of Test-pit TP1, Chailey Industrial Estate, Pump Lane, Hayes.



Figure 5: Photograph of Test-pit TP2, Chailey Industrial Estate, Pump Lane, Hayes.



Figure 6: Photograph of Test-pit TP3, Chailey Industrial Estate, Pump Lane, Hayes.



Figure 7: Photograph of Test-pit TP4, Chailey Industrial Estate, Pump Lane, Hayes.



Figure 8: Photograph of Test-pit TP5, Chailey Industrial Estate, Pump Lane, Hayes.



Figure 9: Photograph of Test-pit TP6, Chailey Industrial Estate, Pump Lane, Hayes.



Figure 10: Photograph of Test-pit TP7, Chailey Industrial Estate, Pump Lane, Hayes.



Figure 11: Photograph of Test-pit TP8, Chailey Industrial Estate, Pump Lane, Hayes.

5. CONCLUSIONS AND RECOMMENDATIONS

The aim of the geoarchaeological investigations were (1) to clarify the nature of the sub-surface stratigraphy across the site; (2) to investigate whether the sequences contain any artefact or ecofact evidence for prehistoric or historic human activity, and (3) to investigate whether the sequences contain any ecofact evidence with the potential for palaeoenvironmental reconstruction. The results of the investigations have revealed a sequence of Lynch Hill Gravel overlain by a thin (less than 0.65m thick) and patchily present horizon of slightly gravelly, sandy clayey silt, interpreted as the Langley Silt but substantially altered by near surface processes, capped by Made Ground. In three of the eight test-pits the Langley Silt has been entirely truncated during the emplacement of the overlying Made Ground, which here is between 0.2 and 0.95m thick.

On the basis of the limited thickness and largely truncated nature of the Langley Silt across the site, no further archaeological or palaeoenvironmental investigations are recommended. No evidence for stable land surfaces or lithic artefacts were identified within the Lynch Hill Gravel, although many of the lithic artefacts previously identified from within this unit have been identified towards its base, which at this site is likely to be below the level of impact of the proposed development (4-6m below ground level).

6. REFERENCES

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7. APPENDIX 1: OASIS

OASIS ID: quaterna1-374637

Project details

Project name	Chailey Industrial Estate, Hayes
Short description of the project	A programme of geoarchaeological field investigations was undertaken at the Chailey Industrial estate site in order to: (1) clarify the nature of the sub-surface stratigraphy across the site; (2) investigate whether the sequences contain any artefact or ecofact evidence for prehistoric or historic human activity, and (3) investigate whether the sequences contain any ecofact evidence with the potential for palaeoenvironmental reconstruction. The results of the investigations have revealed a sequence of Lynch Hill Gravel overlain by a thin (less than 0.65m) horizon of slightly gravelly, sandy clayey silt, interpreted as the Langley Silt but substantially altered by near surface processes, capped by Made Ground. In three of the eight test-pits the Langley Silt has been entirely truncated during the emplacement of the overlying Made Ground, which here is between 0.2 and 0.95m thick. Thus, on the basis of the limited thickness and largely truncated nature of the Langley Silt across the site, no further work is recommended.
Project dates	Start: 01-03-2019 End: 21-11-2019
Previous/future work	No / Not known
Type of project	Environmental assessment
Survey techniques	Landscape

Project location

Country	England
Site location	GREATER LONDON HILLINGDON HAYES Chailey Industrial Estate
Postcode	UB3 3NB
Site coordinates	TQ 1012 7967 51.504730394865 -0.413185081752 51 30 17 N 000 24 47 W Point

Project creators

Name of Organisation	Quaternary Scientific (QUEST)

Project brief originator	RPS
Project design originator	Dr C.R. Batchelor
Project director/manager	D.S. Young
Project supervisor	D.S. Young
Type of sponsor/funding body	Developer

Project archives

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

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