



LAND TO THE EAST OF NORTH DANE WAY, MEDWAY, KENT

Geoarchaeological Fieldwork Report

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1. NON-TECHNICAL SUMMARY

A programme of geoarchaeological field investigations was undertaken at the North Dane Way, Medway, Kent site in order to: (1) establish the presence/absence, nature, character, distribution, extent and depth of Quaternary deposits across the site, in particular terrace gravels associated with the Luton River; (2) investigate whether the sequences contain any artefact or ecofact evidence for Palaeolithic human activity; (3) investigate whether the sequences contain any faunal or biological remains that might be used to reconstruct the palaeoenvironment of the Pleistocene; (4) integrate the new geoarchaeological record with recent geotechnical data from the site and prepare a deposit model which makes recommendations for any further work. In order to address these aims, a total of 14 geoarchaeological test-pits were put down across the site.

The results of the geoarchaeological investigations have confirmed a sequence of Coombe Rock (frost shattered Chalk bedrock) across the site, overlain by a variable sequence of Clay-with-flints, colluvium or Head, and modern topsoil. Clay-with-flints was recorded in six of the new geoarchaeological Test Pits. There was no indication of flint artefacts being present in any of the stratigraphic units across the site. No stratigraphic units thought to represent river terrace gravels were identified; gravel-rich units sited on the Head mapped on the valley floor showed flints tending towards the horizontal and the pit face showing a horizontality, suggesting deposition by aggradation. However, given the size of the flints, up to 16 cm or more, the deposit is considered to have been created by major movements of surface material from the adjacent slope to the valley bottom during thaw periods within a periglacial environment. These deposits are therefore considered to represent colluvium, with the same interpretation adopted for those gravel-rich units identified during the geotechnical investigation.

No material of significant Palaeolithic potential was found during the geoarchaeological investigations. There is a low chance of recovering artefacts from the valley bottom Head, but these are likely to have been reworked from upslope. The Test Pits on the Clay-with-Flints (QTP11 and 12) showed only redistributed (colluvial/soliflucted) deposits. Similarly, the Test Pits on the Chalk slopes revealed only redistributed Clay-with-Flints. Sieving of the gravel-rich units at the site, including those in Test Pits QTP3, 4 and 5, was not possible on-site due to the clay-rich and matrix-supported nature of these deposits. No faunal or other biological remains were identified in any of the Test Pits, and as a result the material is considered to be of negligible palaeoenvironmental potential. On the basis of the work presented here, no further geoarchaeological or palaeoenvironmental investigations are recommended at the site with the exception of wet-sieving of the samples obtained from the Head in Test Pits QTP3 and QTP5 to check for lithic artefacts.

2. INTRODUCTION

2.1 Site context

This report summarises the findings arising out of the geoarchaeological field investigations undertaken by Quaternary Scientific (University of Reading) in connection with the proposed development of Land to the East of North Dane Way, Medway, Kent (National Grid Reference (NGR): TQ 77483 65179). This document has been commissioned by Canterbury Archaeological Trust. The work described here is in accordance with Kent County Council's Specification for Preliminary Evaluation of Quaternary Deposits and Palaeolithic Potential.

The site is located to the south-east of Chatham, between Luton, Hale and Capstone. The ground is currently undeveloped open land, divided into areas of arable cultivation, dense scrub and containing Whites Wood, a small woodland belt (see Canterbury Archaeological Trust, 2019). It is bounded to the north by properties along Capstone Road, to the east by Capstone Road, to the south by woods and fields and to the west by North Dane Road. The site occupies a spur of higher ground between two dry valleys draining broadly southwest-northeast, these tributary valleys joining another larger dry valley draining southeast to northwest (the Luton Valley) just to the north of the site. The ground rises within the site from around 60-70m OD in the north, to 100m OD towards the south. The ground falls to around 30-40m OD either side of this spur, and just to the north, within the dry valleys. The British Geological Survey (BGS) (1:50,000 Sheet 272 Chatham 1977) show the majority of the site underlain by Lewes Nodular Chalk Formation bedrock, with Seaford Chalk Formation shown underlying the higher ground in the southwestern area of the site. In terms of superficial geology, the BGS shown Clay-with-flints in the southwestern area of the site, with Head, described as Clay, Silt Sand and Gravel, occupying the extreme north of the site where the spur of higher ground meets the Luton Valley. The BGS differentiate a ribbon of 'Head Brickearth' (as opposed to 'Head') in the Luton valley, and extending into a dry valley to the west of the site.

A geotechnical investigation undertaken in September 2018, comprising a total of ten boreholes and seven Test Pits (see Figure 3), confirmed a sequence of Chalk bedrock overlain by a variable sequence of either gravelly clay or clayey, in places sandy gravel. Five of these interventions were located in the far northern area of the site (BH1, BH2, TP1-TP3), including two within the mapped area of Head (BH1 and TP1). These interventions show Chalk bedrock at between 2.8 (BH1) and 0.2m below ground level (bgl) (TP2), overlain by gravelly, sandy clay in BH2 between 0.4 and 0.7m bgl, and clayey gravel in the remainder of the interventions. It should be noted here that it is difficult to differentiate between certain stratigraphic units within geotechnical logs on the basis of their similar textural composition; this includes Clay-with-flints, Head, and terrace gravels at the present site.

2.2 Pleistocene and Palaeolithic archaeological potential

This mapped area of 'Head' forms the focus of the geoarchaeological investigations proposed here. Wenban-Smith *et al.* (2007) highlight that patches of gravel at various points between the small dry valleys which enter the Luton Valley from the south are mapped by the BGS as Head, but that this is considered to be erroneous – these deposits most likely representing terrace deposits of the Luton River, which drained the Luton Valley during the Pleistocene. Wenban-Smith *et al.* (2007) suggest that these outcrops merit further investigation, given their proven Palaeolithic potential (see below) and the potential for faunal or biological preservation.

Handaxe finds are abundant at the head of the Luton Valley, and at various points along its southern flank, particularly from the gravel quarry at Stonecross Pit (see Wenban-Smith *et al.*, 2007). Canterbury Archaeological Trust (2019) undertook a review of the archaeological and historical evidence within 1km of the site on the Historic Environment Record (HER) for Kent; this highlighted the Palaeolithic working floor at Stonecross Pit, Luton, 400m to the northwest of the site, the results of which were published by Turner (1928) and shown in Roe (1968). Here, numerous flint implements were found in a clayey layer rich in coarse angular flint pieces, below 6ft of brickearth that had been removed for brick-making (HER Number TQ 76 NE 36). In addition, Lower/Middle Palaeolithic finds, including three hand-axes, flake tools and debitage were found at Darland, 500m east of the site (HER Number TQ 76 NE 403).

The superficial deposits recorded as Head by the BGS in the northern part of the site are therefore of interest, on the basis that the nature and depositional origin of these deposits is unclear. If, as Wenban-Smith *et al.* (2007) suggest, they relate to the terrace gravels of the Luton River, they are of Palaeolithic archaeological potential and warrant further investigation on this basis.

2.3 Aims and objectives

On the basis of the uncertainty regarding the deposits described as 'Head' in the northern area of the site, and those deposits consistent with 'Head' or fluvial gravels elsewhere, a programme of geoarchaeological investigations was recommended in the Written Scheme of Investigation (WSI; Young, 2019) in order to investigate the Pleistocene/Palaeolithic potential and significance of the Quaternary deposits at the site. The aims of the geoarchaeological investigations are as follows:

- To establish the presence/absence, nature, character, distribution, extent and depth of Quaternary deposits across the site, in particular terrace gravels associated with the Luton River;
- 2. To investigate whether the sequences contain any artefact or ecofact evidence for Palaeolithic human activity;
- **3.** To investigate whether the sequences contain any faunal or biological remains that might be used to reconstruct the palaeoenvironment of the Pleistocene;
- 4. To integrate the new geoarchaeological record with recent geotechnical data from the site and prepare a deposit model which makes recommendations for any further work.

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

- 1. To put down a total of 14 geoarchaeological test-pits across the site (Figure 4) to bedrock Chalk (approximately 0.5 to 3.0m bgl);
- 2. On-site sieving of selected stratigraphic units to check for the presence of artefacts or biological remains;

- **3.** To use the stratigraphic data from the new locations, and existing records to produce a new deposit model of the major depositional units across the site;
- 4. To produce a report detailing the significance and potential of the sediments, and making recommendations for any necessary further investigation of the Palaeolithic archaeology and Pleistocene deposits during the mitigation stage.

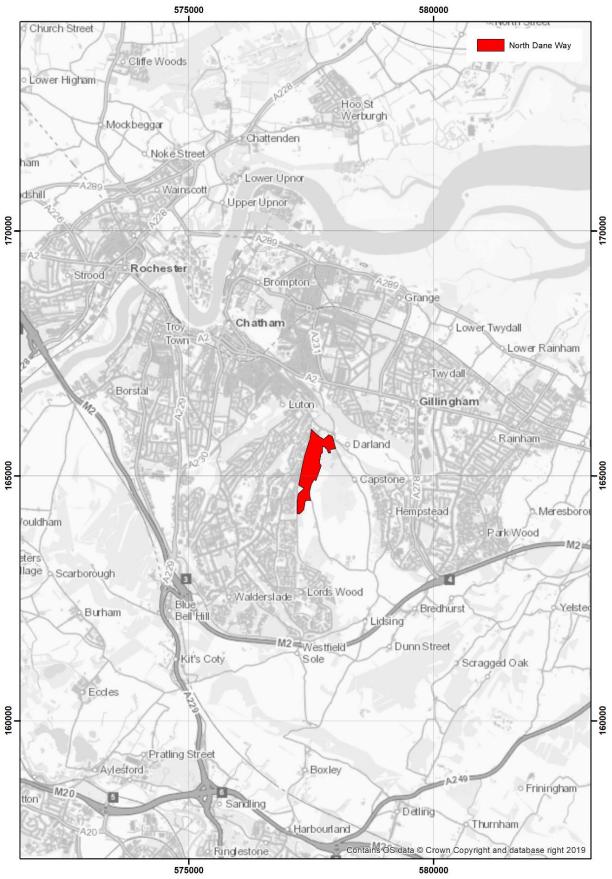


Figure 1: Location of the site at North Dane Way, Medway, Kent .

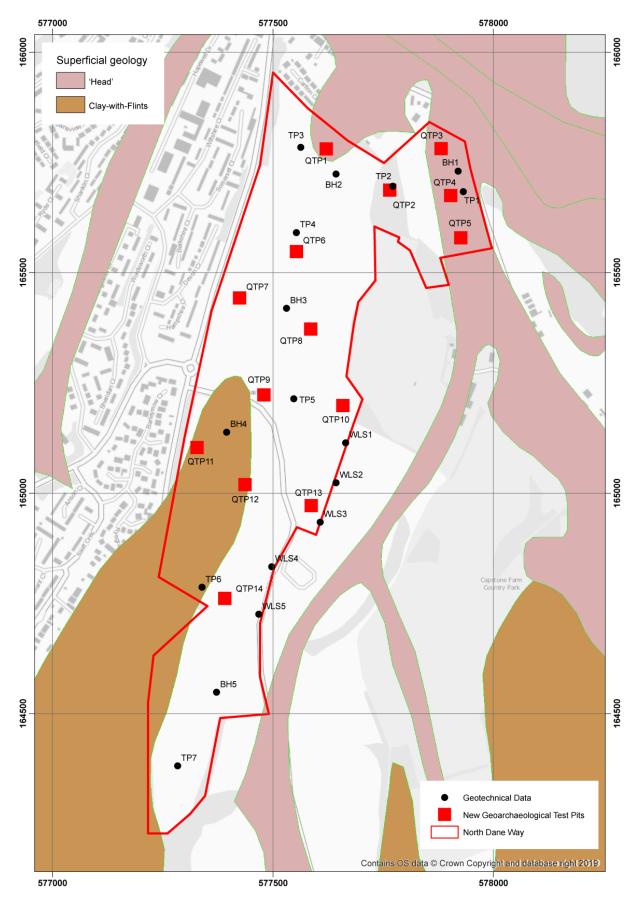


Figure 2: Location of the geoarchaeological Test Pits, existing geotechnical interventions and superficial geology in the area of the Land at North Dane Way, Medway, Kent site (geological data from http://mapapps2.bgs.ac.uk/geoindex/home.html).

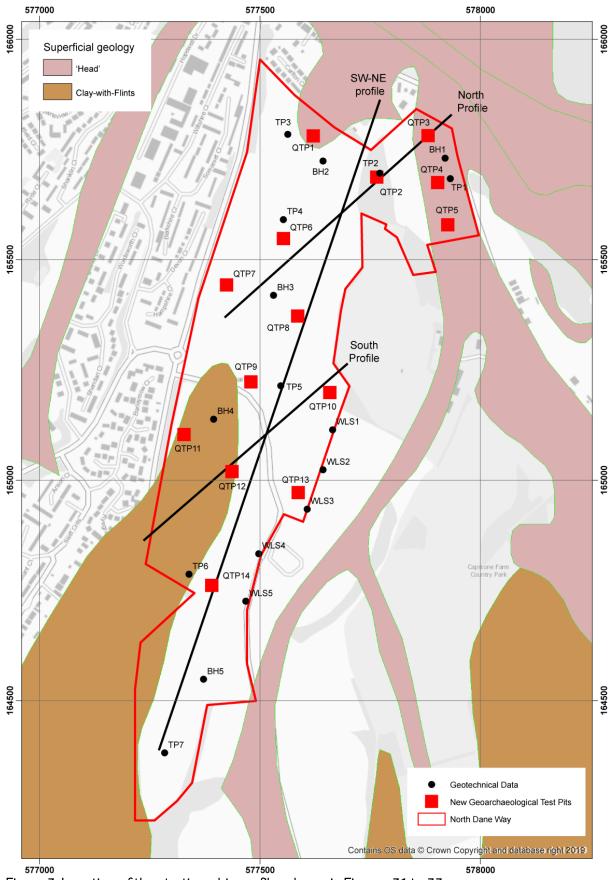


Figure 3: Location of the stratigraphic profiles shown in Figures 31 to 33.

3. METHODS

4.1 Field investigations and lithostratigraphic descriptions

A total of fourteen geoarchaeological Test Pits were put down at the site using a mechanical excavator, with a view to establishing the stratigraphic sequences present (see Table 1 and Figure 2). The Test Pits measured approximately 1.5 x 2.0m at the ground surface, but narrowed with depth. The pits were sunk until bedrock Chalk, in the form of Coombe Rock (frost shattered Chalk), was met. None was more than 2.5m deep. As many of the Test Pits were more than 1.2m deep, they were recorded by observing the material brought up by the mechanical excavator, by making stratigraphic logs at a scale of 1:25 of one sidewall, using a surveying staff as scale, and by photographing the sections. From these, descriptive, stratigraphic and photographic logs were constructed. The results of the lithostratigraphic descriptions of these Test Pits, including a descriptive record of the lithostratigraphy, interpretted stratigraphic logs and photographs, are displayed in Tables 2 to 15 and Figures 3 to 30.

No sieving was undertaken on site due to the matrix-supported (clay-rich) nature of the deposits encountered. However, samples were retained from selected units within Test Pits QTP3 and 5 for laboratory processing if deemed necessary; these samples are currently retained by Canterbury Archaeological Trust.

Test Pit	Test Pit Easting		Elevation (m OD)
QTP1	577620.640	165780.828	64.93
QTP2	577765.097	165687.261	59.13
QTP3	577881.482	165781.490	37.05
QTP4	577903.052	165675.176	37.73
QTP5	577926.079	165579.012	39.29
QTP6	577552.965	165547.782	80.92
QTP7	577424.501	165442.818	81.78
QTP8	577585.543	165371.972	84.21
QTP9	577479.568	165222.432	88.91
QTP10	577658.449	165198.305	81.09
QTP11	577327.897	165103.464	91.10
QTP12	577436.478	165019.385	93.47
QTP13	577586.768	164971.284	86.10
QTP14	577390.993	164761.220	95.56

Table 1: Spatial data for the new geoarchaeological Test Pits at North Dane Way, Medway, Kent.

4. RESULTS, INTERPRETATION & DISCUSSION OF THE GEOARCHAEOLOGICAL FIELD INVESTIGATIONS

The results of the geoarchaeological field investigations are displayed in Tables 2 to 15 and Figures 3 to 30. Southwest to northeast stratigraphic profiles of selected interventions across the site are shown in Figure 31, along with profiles for the northern (Figure 32) and southern areas of the site (Figure 33).

4.1 Head

Test Pits 3, 4 and 5

These pits were sited on the Head mapped on the valley floor and were a particular focus of attention, given the views of Wenban-Smith *et al.* (2007) (see above). A stratigraphy was established of:

Soil	Units	3.1, 4.1, 5.1
Silt with chalk granules		4.2
Sandy silt		4.3
Silt clay with a minor amount of flint		3.2, 4.4, 5.2
Coarse flint gravel with silty-clay matrix		3.3, 4.5, 5.3
Brown clay		4.6
Dark brown clay		3.4
Coombe rock		3.5, 4.6, 5.4

The major units are shown in bold.

Coombe rock – is the result of frost and permafrost shattering of the Chalk during the last Pleistocene cold stage when glaciers occurred in more northerly parts of Britain.

Dark brown clay – found here and in several other of the Test Pits. Chalk is primarily calcium carbonate but it does contain impurities. As the Chalk is dissolved by groundwater, the impurities are left behind forming a dark brown clay coating the Chalk.

Brown clay – appears to lack bedding structures or other features that would aid in assessing its origin. Thought to be a slopewash deposit from the Clay-with-flints under conditions capable of moving fine material but not the flints.

Coarse flint gravel – shows flints tending towards the horizontal and the pit face showing a horizontality, suggesting deposition by aggradation. Given the size of the flints, up to 16 cm or more, the deposit is considered to have been created by major movements of surface material from the adjacent slope to the valley bottom during thaw periods within a periglacial environment.

Flinty silty clay – similar in formation to the coarse gravel, but under less vigorous conditions so that the proportion of flint is lower and the flints are smaller.

Sandy silt – this is incised into the silty clay and may be occupying a channel cut by a minor surface stream or rill.

Silt with chalk granules - thought to be slopewash.

Summary:

The dominance of silts and clays and the lack of beds of sands, is not in keeping with river terrace deposits as suggested might be the case by Wenban-Smith *et al.* (2007). No on-site sieving was undertaken on the sedimentary units from these Test Pits on the basis of their matrix-supported nature. However, samples were retained from these Test Pits for further work if required.

4.2 Clay-with-flints

Test Pits 11 and 12

Test Pits 11 and 12 were located on the Clay-with-flints at its periphery. A basic stratigraphy showed:

Soil	Units	11.1, 12.1
Brown clay with occasional flints		11.2, 12.2
Clay-with-flints, disturbed		12.3
Dark brown clay		11.3, 12.4
Coomberock		11.4, 12.5

The major units are shown in bold. Mapping the limits of superficial deposits is by its nature is an inexact science as beds may feather out or become patchy. Thus it was not surprising that the Claywith-flints was not seen in Test Pit QTP11.

Coombe rock – as described above, is the result of frost and permafrost shattering of the Chalk during the last Pleistocene cold stage when glaciers occurred in more northerly parts of Britain. This unit was recorded in both Test Pits QTP11 and 12.

Dark brown clay – found here and in several other of the Test Pits. Chalk is primarily calcium carbonate but it does contain impurities. As the Chalk is dissolved by groundwater, the impurities are left behind forming a dark brown clay coating the Chalk.

Clay-with- flints – can be recognised by the name of the deposit, its topographical position and the characteristic orange-red colour of the clay. In this case the lower and upper limits of the deposit were very irregular and could be seen to be deformed by subsidence into a depression or solution hollow in the Coombe rock. Recorded only in Test Pit 12.

Brown clay, occasional flints - appears to lack bedding structures or other features that would aid in assessing its origin. Thought to be a slopewash deposit from the Clay-with-flints under conditions capable of moving fine material and some smaller flints. Recorded in both Test Pits 11 and 12.

Summary:

The Clay-with-flints was present only in Test Pit 12, was approximately 0.5 m thick and was in a disturbed state. The deposit was monitored during its excavation, both in the pit as it was removed and on the spoil as it was set aside. Hand-trowelling revealed no indication of flint artefacts being present within this unit.

4.3 Chalk slopes

Test Pits 1, 2, 6, 7, 8, 9, 10, 13 and 14

These Test Pits were located on the crest of the valley side and, mostly, on the valley slopes.

Soil	All Test Pits
Yellow sand	Unit 14.2
Various flinty gravels	Units 1.2, 2.2, 6.2, 6.3,
Brown clay	Units 7.2, 8.2, 8.3, 9.2, 13.2
Raft of Coombe rock	Unit 13.3
Disturbed Clay-with-flints	Units 1.3, 8.4, 9.3, 10.2, 13.5, 14.3
Brown clay	Units 8.5, 9.4, 13.4
Dark brown clay	Units 9.5, 13.6
Coomberock	All Test Pits

Coombe rock – the surface of the coombe rock here is highly irregular, with shallow depressions and steep-sided hollows a metre or more deep, thought to be solution features. It is notable that these deeper features are found in the Test Pits nearer the mapped Clay-with-flints (Test Pits QTP8, 9, 13 and 14) and may be the result of surface water flowing off the Clay-with-flints and chemically eroding the adjacent Coombe rock. The upper part of the Coombe rock may be mixed with the overlying brown clay (e.g. QTP7). In places the matrix was a light brown silt (QTP6 and QTP7), similar to aeolian silts recorded in association with Coombe rock at sites in the Medway valley, such as Upper Halling (e.g. Kerney, 1963), suggesting a period when the Coombe rock formed an exposed surface upon which the silts were deposited, before becoming covered with the various slope deposits.

Dark brown clay – found here and in several other of the Test Pits. Chalk is primarily calcium carbonate but it does contain impurities. As the Chalk is dissolved by groundwater, the impurities are left behind forming a dark brown clay coating the Chalk. Recorded in Test Pits QTP9 and 13.

Disturbed Clay-with-flints – these deposits are mostly located adjacent to the main spread of the Clay-with-flints and may be the result of the deposit flowing downslope in saturated conditions or that the deposit was formerly more extensive and is now preserved only in depressions and solution hollows. Recorded in Test Pits QTP1, 8, 9, 10, 13 and 14.

Brown clay – at all stratigraphic levels, these appear to lack bedding structures or other features that would aid assessing its origin. Thought to be a slopewash deposit from the Clay-with-flints under conditions capable of moving fine material and some smaller flints. Recorded in Test Pits QTP8, 9 and 13.

Raft of Coombe rock – Recorded in all of these Test Pits, this unit is thought to have moved downslope under saturated conditions.

Flinty gravels – thought to be the result surface wash under vigorous conditions. Recorded in Test Pits QTP1, 2 and 6.

Yellow sand – recorded only in Test Pit QTP4 and difficult to interpret. The nearest sand outcrop is the Thanet Sand, some 3 km to the north and at a lower altitude. Possibly it formerly extended further south. Human intervention cannot be ruled out, but thought to be unlikely as the overlying soil does not show any disturbance.

Unit	m bgs	mOD	Thickness (m)	Description	Stratigraphic Unit
1.1	0.0-0.25	64.9-64.65	0.25	Soil.	MODERN SOIL
1.2	0.25-0.55	64.65 - 64.35	0.30	Sandy silty clay, frequent flints up to 5 cm, some chalk clasts.	COLLUVIUM/ HEAD
1.3	0.55 - 1.1	64.35 - 63.8	0.55	Large flints in silty clay yellowish red-(5YR5/8 to 2.5YR4/8) silty clay matrix. Flints up to 10 cm, black, rounded with white cortex if whole, angular if broken.	
1.4	1.1 +	>63.8		Broken chalk, clasts up to 5 cm, angular, mostly clast supported within a silty chalk matrix.	

Table 2: QTP1 descriptive log. Ground Surface 64.9m OD. Beds horizontal but of variable thickness.

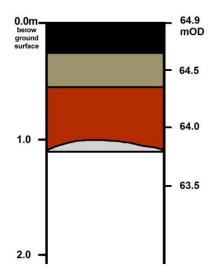
m bgs – metres below ground surface

OD – Ordnance Datum

L - litres

Medway East Hill/North Dane Way

QTP 1



1.1 Soil

1.2 Flinty sandy silty clay (colluvium)

1.3 Soliflucted Clay-with-flints

1.4 Chalk, coombe rock

Figure 3: QTP1 stratigraphic log.

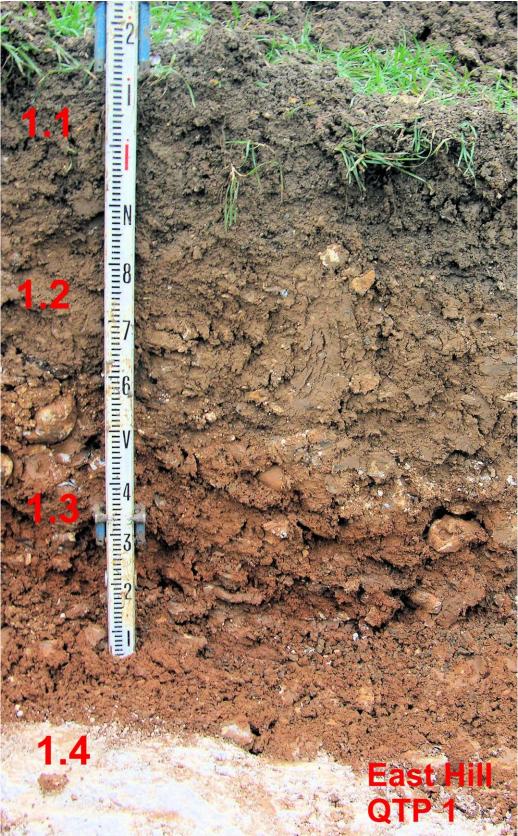


Figure 4: QTP1 photographic log.

Unit	m bgs	m OD	Thickness (m)	Description	Stratigraphic Unit
2.1	0.0-0.25	59.1 - 58.85	0.25	Soil.	MODERN SOIL
2.2	0.25-0.55	58.85 - 58.7	0.15	Clayey gravel with sub- angular flints up to 6 cm.	COLLUVIUM/ HEAD
2.3	0.55 +	>58.7		Broken chalk, clasts up to 5 cm, angular, mostly clast supported within a silty chalk matrix. Coombe rock.	

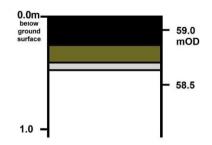
Table 3: QTP2 descriptive log. Ground Surface 59.1m OD. Beds horizontal but of variable thickness.

m bgs – metres below ground surface

OD – Ordnance Datum L - litres

Medway East Hill/North Dane Way

QTP 2



2.1 Soil

2.2 Clayey flinty gravel

2.3 Broken chalk in silty clay matrix

Figure 5: QTP2 stratigraphic log.

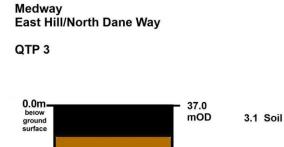


Figure 6: QTP2 photographic log.

				OD. Beds horizontal		
Unit	m bgs	mOD	Thickness	Description	Stratigraphic	Samples
			(m)		Unit	
3.1	0.0-0.25	37.0-36.75	0.25	Soil.	MODERN SOIL	
3.2	0.25 - 1.2	36.75-35.8	0.95	Flinty sandy silty	COLLUVIUM/	Bags, 2 x
				clay, flints mostly	HEAD	c.10L,
				sub-angular with		collected
				white patina, up to		from each
				2-3 cm.		of 0.55,
				Colluvium.		1.0 mbgs
3.3	1.2 - 2.25	35.8 - 34.75		Flints, often with		Bags, 2 x
	to 2.5	to 34.5		white patina, and		c.10L,
				chalk clasts, within		collected
				a brown silty clay		from 1.3
				matrix, flint modal		m bgs.
				size of 5 cm but		5
				examples up to 16		
				cm. Unit as a		
				whole shows a		
				sub-horizontal		
				breakage pattern,		
				suggesting		
				deposition by		
				aggradation.		
3.4	2.25 - 2.50	34.75-34.5	0.25	Dark brown silty	СООМВЕ	
J.4	2.25 2.30	JT./J J4.J	0.20	clay, brecciated;	ROCK	
				lies beside		
				coombe rock.		
				?Residue from		
				dissolution of		
7 5	251	N745		coombe rock.		
3.5	2.5 +	>34.5		Irregular chalk		
				surface. Broken		
				chalk, clasts, sub-		
				angular, mostly		
				clast supported		
				within a silty chalk		
				matrix.		
				Oudrage an Date una	1 liture e	

Table 4: QTP3 descriptive log. Ground Surface 39.3m OD. Beds horizontal but of variable thickness.

m bgs – metres below ground surface OD – Ordnance Datum L - litres



36.0

35.0

34.0



- 3.3 Poorly sorted coarse flint gravel with silty clay matrix
- 3.4 Dark brown silty clay
- 3.5 Broken chalk in silty clay matrix

Figure 7: QTP3 stratigraphic log.

3.0

1.0

2.0

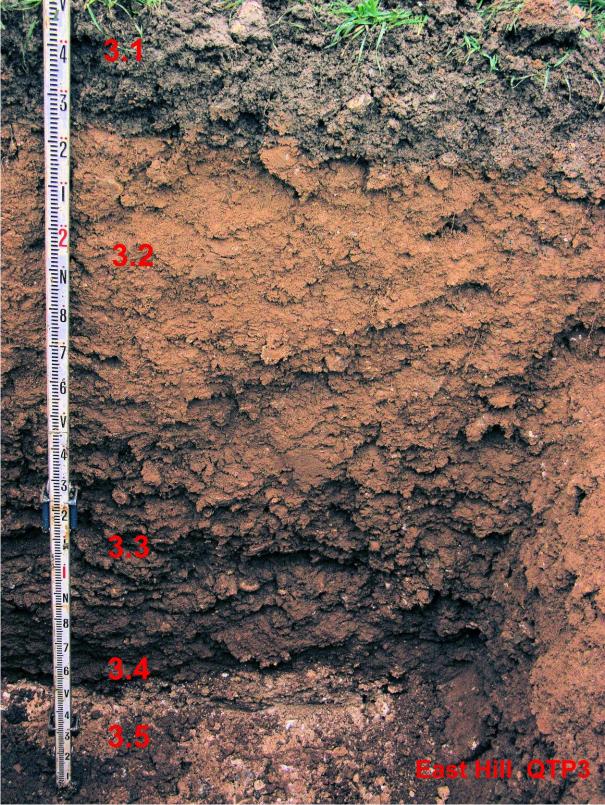


Figure 8: QTP3 photographic log.

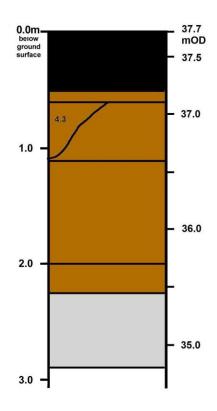
Unit	m bgs	mOD	Thickness (m)	Description	Stratigraphic Unit
4.1	0.0-0.5	37.7 – 37.2	0.5	Soil, grey-brown, darker at surface (4.1a), lighter with depth (4.1b)	MODERN SOIL
4.2	0.5-0.6	37.2-37.1	0.1	Silt with chalk granules. ?Loessic (wind-blown)	LOESS
4.3	0.6-1.1	37.1-36.6	0.5	Brown stoneless sandy silty clay, lying to the side of, channelled into. Unit 4.4.	COLLUVIUM/ HEAD
4.4	0.6-1.1	37.1-36.6	0.5	Flinty brown sandy silty clay, flints mostly granular, sub-angular, white patina.	
4.5	1.1-1.9	36.6 - 35.8	0.8	Flints, with white patina, and chalk clasts, within a brown silty clay matrix, flint modal size 5 cm but examples up to 20 cm occur. Unit as a whole shows a sub-horizontal breakage pattern, suggesting deposition by aggradation.	
4.6	1.9-2.15	35.8 – 35.55	0.25	Brown silty clay, brecciated. ?Residue from dissolution of coombe rock.	COOMBE ROCK
4.7	2.15 +	>35.55		Irregular chalk surface. Broken chalk, clasts, sub- angular, mostly clast supported within a clay- chalk matrix.	l - litros

Table 5: QTP4 descriptive log. Ground Surface 37.7m OD. Beds horizontal but of variable thickness.

m bgs – metres below ground surface OD – Ordnance Datum L - litres



QTP 4



4.1a Soil

- 4.1b Sub-soil
- 4.2 Silt with chalk granules
- 4.3 Sandy silt
- 4.4 Silty clay, minor amount of flint
- 4.5 Poorly sorted coarse flint gravel with silty clay matrix
- 4.6 Brown clay

4.7 Broken chalk in silty clay matrix

Figure 9: QTP4 stratigraphic log.

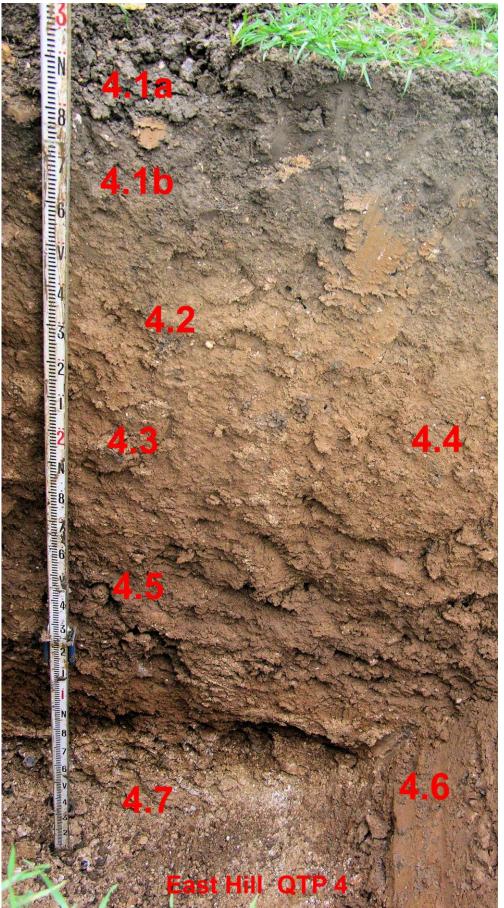
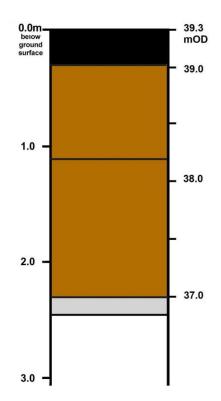


Figure 10: QTP4 photographic log.

m bgs	mOD	Thickness (m)	Description	Stratigraphic Unit	Sample
0.0-0.3	39.3 - 39.0	0.3	Soil.	MODERN SOIL	
0.3 - 1.1	39.0 - 38.2	0.8	Sandy silty clay, flints mostly granular, but some up to 1 cm, mostly sub-angular with white patina.	COLLUVIUM/ HEAD	
		0.7	Flints within a brown silty clay matrix. Flints in basal area have modal size of 5 cm but examples up to 12 cm occur. Unit as a whole shows a sub- horizontal breakage pattern, suggesting deposition by aggradation.		Bags, 2 x c.10L, collected from each of 1.45 and 1.8 m bgs
1.8->2.3	>37.5		Irregular chalk surface. Broken chalk, sub-angular, mostly clast supported within a silty chalk matrix. Coombe rock.	ROCK	
	0.0-0.3 0.3-1.1 1.1-1.8 1.8->2.3	0.0-0.3 39.3-39.0 0.3-1.1 39.0-38.2 1.1-1.8 38.2-37.5 1.8->2.3 >37.5	(m) 0.0-0.3 39.3-39.0 0.3 0.3-1.1 39.0-38.2 0.8 1.1-1.8 38.2-37.5 0.7 1.8->2.3 >37.5 0.7	(m)0.0-0.339.3-39.00.3Soil.0.3-1.139.0-38.20.8Sandy silty clay, flints mostly granular, but some up to 1 cm, mostly sub-angular with white patina.Sandy silty clay, flints mostly granular, but some up to 1 cm, mostly sub-angular with white patina.1.1-1.838.2-37.50.7Flints within a brown silty clay matrix. Flints in basal area have modal size of 5 cm but examples up to 12 cm occur. Unit as a whole shows a sub- horizontal breakage pattern, suggesting deposition by aggradation.1.8->2.3>37.5Irregular chalk surface. Broken chalk, sub-angular, mostly clast supported within a silty chalk matrix. Coombe rock.	Image: constraint of the second se



QTP 5



- 5.1 Soil
- 5.2 Silty clay, minor amount of flint, lessening with depth
- 5.3 Poorly sorted coarse flint gravel with silty clay matrix

5.4 Broken chalk in silty clay matrix

Figure 11: QTP5 stratigraphic log.

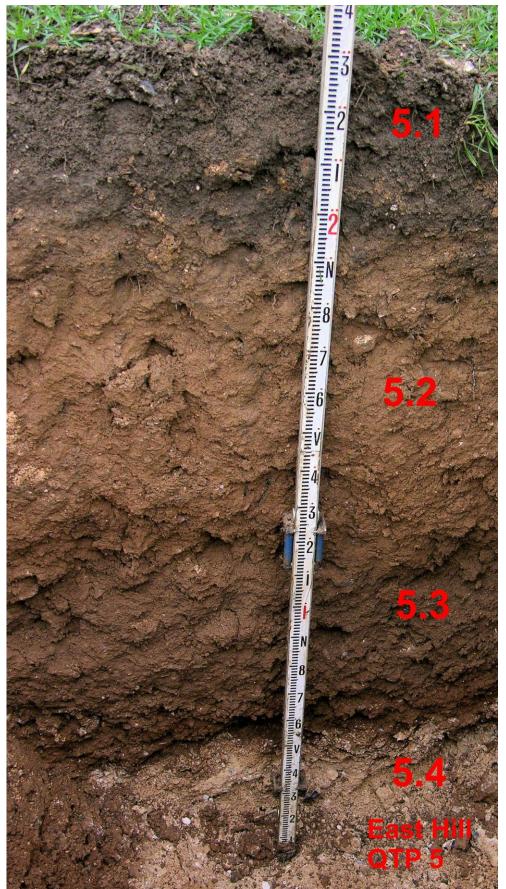


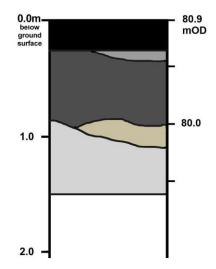
Figure 12: QTP5 photographic log.

Unit	mbgs	mOD	Thickness	Description	Stratigraphic				
	-		(m)		Unit				
6.1	0.0-0.25	80.9 - 80.65	0.25	Soil.	MODERN SOIL				
6.2	0.25-0.35	80.65 - 80.5	0.15	Poorly sorted medium gravel, rounded and sub-angular flint, up to c.5 cm. No overt bedding, clasts at various angles.	COLLUVIUM/ HEAD				
6.3	Side face 0.35 – 0.75 End face 0.35 – 1.5	80.5 - 80.1	0.4	Side face. Coarse poorly sorted gravel, rounded and sub-angular flints, often with white cortex, in red-brown clayey matrix. Reworked Clay-with-flints. End face Seen to lie with in solution hollow in coombe rock (Figure 14b).					
6.4	0.75-0.95	80.1 - 79.9	0.2	Broken chalk; sub-angular clasts up to c.7 cm in light brown silty matrix.	COOMBE ROCK				
6.5	0.95 - 1.5	79.9–79.4	0.55	Broken chalk, sub-angular, mostly clast supported within a silty chalk matrix.					
m bgs –	m bgs – metres below ground surface OD – Ordnance Datum L - litres								

Table 7: QTP6 descriptive log. Ground Surface 80.9m OD. Beds horizontal but of variable thickness.

Medway East Hill/North Dane Way

QTP 6



6.1 Soil

6.2 Medium gravel with silty clay matrix

6.3 Coarse gravel with silty clay matrix

6.4 Broken chalk with light brown silty matrix

6.5 Broken chalk in silty clay matrix

Figure 13: QTP6 stratigraphic log.

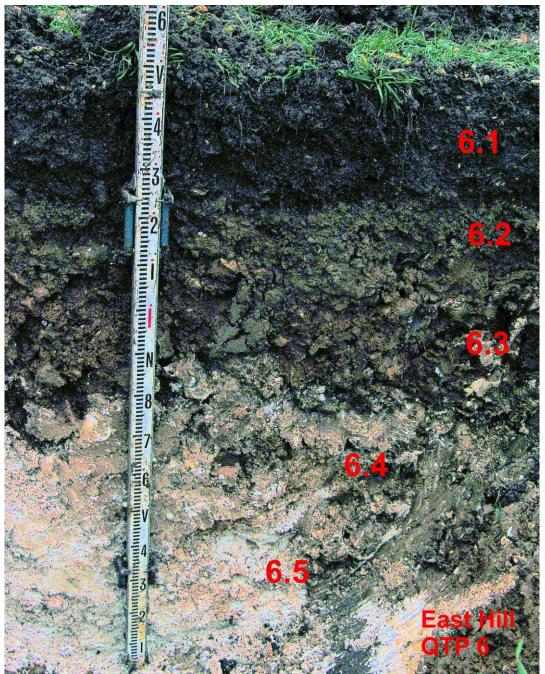


Figure 14a: QTP6 photographic log.



Figure 14b: QTP6 photographic log, end section.

Unit	m bgs	mOD	Thickness	Description	Stratigraphic				
	_		(m)		Unit				
7.1	0.0-0.25	81.8-81.55	0.25	Soil.	MODERN				
					SOIL				
7.2	0.25-0.40	81.55-81.40	0.15	Brown stony silty clay; flints	COLLUVIUM/				
				2 – 3 cm, sub-angular and	HEAD				
				rounded.					
7.3	0.40-0.50	81.40-81.30	0.1	Broken chalk; sub-angular	COOMBE				
				clasts up to c.7 cm in light	ROCK				
				brown silty matrix.					
7.4	0.50 -	81.30 - <81.05	0.25+	Broken chalk, sub-angular,					
	>0.75			mostly clast supported					
				within a silty chalk matrix.					
m has –	n bas – metres below around surface OD – Ordnance Datum L - litres								

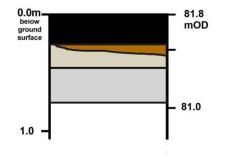
Table 8: QTP7 descriptive log. Ground Surface 81.8m OD. Beds horizontal but of variable thickness.

m bgs – metres below ground surface

OD – Ordnance Datum L - litres

Medway East Hill/North Dane Way

QTP 7



7.1 Soil

- 7.2 Brown stony silty clay
- 7.3 Broken chalk, clasts in brown silty matrix

7.4 Broken chalk in silty clay matrix

Figure 15: QTP7 stratigraphic log.