

**Archaeological Monitoring and Investigation at the Site of 37-39
Swanscombe Street, Swanscombe, Dartford,
Kent**

Site Code: SWAN-WB-15

NGR Site Centre: 560702 174051

Planning Application Number: DA/14/00075



Report for J Mann

07/03/2018

SWAT ARCHAEOLOGY

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Summary

In October 2016 SWAT Archaeology carried out a programme of archaeological monitoring and recording at the site of 37-39 Swanscombe Street, Swanscombe, Dartford, Kent. The works were commissioned by J Mann and carried out during the excavation of ground works associated with the construction of extensions to form a terrace of four 3-bedroomed houses. The Watching Brief was conducted in accordance with an archaeological Watching Brief generic specification issued by Kent County Council Heritage & Conservation.

Archaeological monitoring carried out on site during the construction of new foundations comprised two elements; an archaeological watching brief during the construction of foundations and a geoarchaeological assessment on surviving gravel sequences present. Despite the potential for the presence and survival of archaeological remains, no features were recorded during the archaeological monitoring works, although four, out of six flints retrieved from the Boyn Hill Gravel Formation showed potential for human activity.

The geoarchaeological works have suggested that the site provides further evidence of the extent of the Boyn Hill Gravel in the Swanscombe area, beyond the boundaries mapped by the British Geological Survey. No definitive Palaeolithic material was recorded and as such, no further work has been recommended.

Archaeological monitoring and recording has been successful in fulfilling the primary aims and objectives of the watching brief Specification. No significant buried archaeological remains were recorded during the works and archaeological, should they be present, will remain preserved in situ.

Archaeological Monitoring and Investigation at the Site of 37-39 Swanscombe Street, Swanscombe, Dartford, Kent

NGR Site Centre: 560702 174051

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1 INTRODUCTION

1.1 Project Background

1.1.1 Swale & Thames Survey Company (SWAT Archaeology) were commissioned by Mr J Mann (owner and applicant for planning permission) to undertake an archaeological watching brief during development on land at the site of 37-39 Swanscombe Street, Swanscombe, Dartford, Kent (Figure 1). A planning application (DA/14/00075), validated on the 14th March 2014, was received by Dartford Borough Council (DBC) for the erection of two storey and first floor extensions and alterations to provide a terrace of four 3-bedroom two storey dwellings with associated car parking and the erection of a bin/cycle store with iron railings along front boundary.

1.1.2 In mitigation of the potential impact that the development may have on the buried archaeological resource Kent County Council Heritage & Conservation (KCCHC), who provide an advisory service to DBC, requested that a programme of archaeological works comprising an archaeological watching brief, be carried out during construction works. This recommendation was subsequently added as a Condition to the planning approval, which stated that;

Before commencement of any building operations on site, details of a programme of archaeological work in accordance with a written specification and timetable, shall be submitted to and approved by the Local Planning Authority. The details shall be implemented as approved.

(DA/14/00075/FUL, Condition 02, 14/03/2014)

1.1.3 The fieldwork was carried out in June 2015 in accordance with an archaeological specification prepared by KCCHC (2014), prior to commencement of works, and in discussion with Lis Dyson, the Head of Heritage Conservation at KCCHC. A copy of the Specification is provided in Appendix 2.

1.2 Site Description and Topography

1.2.1 The site is centred on NGR 560702 174051, within the parish of Swanscombe, Kent (Figure 1). The following is taken from a Planning Statement submitted in support of the planning application;

1.2.2 *The site lies within the built-up confines of Swanscombe village, on the south side of the road, some 50 metres to the west of its junction with Southfleet Road. It has a frontage of 31.5 metres and a*

depth of 29 metres giving an area of 913 sq. metres (0.09 ha). Located upon the site are two detached two-storey buildings linked by a single-storey structure, designed originally as police houses with an office. A vehicular access exists to the side of No. 39 which also gives access to a staff car park to the school located to the rear. To the front of the site is located a grassed area and shared car parking. To the east is located a relatively new two-storey detached dwelling, No. 35A (see photo 3) and to the west, the Swanscombe Veterinary Surgery (No. 41/43) (photo 4). On the north side of the road are located a mix of house types and styles, including late Victorian two-storey terraced houses (photo 5), three-storey houses (photo 6) and a public house'. (Stephen Downes 2013: Section 1).

1.2.3 According to the British Geological Society (BGS), the site lies on Boyn Hill Gravels.

2 ARCHAEOLOGICAL AND HISTORICAL BACKGROUND

2.1 Introduction

2.1.1 Further details of previous discoveries and investigations within the immediate and wider area may be found in the Kent County Council Historic Environment Record and have been summarised in the Specification produced by KCCHC (2013).

2.1.2 In consultation with KCC, the Senior Archaeological Officer stated within the Specification that;

'The site of development lies on Boyn Hill Gravels. These deposits are considered to have potential for rare and important palaeolithic remains, in the form of flint artefacts or palaeoenvironmental indicators (shell, molluscs, seeds etc)'.

'Palaeolithic flints have been located at the Swan Valley Community School, just to the south'.

'Roman remains and later deposits are also recorded from the school site to the south'.

(Reference: KCCHC 2014, Paragraphs 2.1-2.4)

3 AIMS AND OBJECTIVES

3.1 Specific Aims

3.1.1 The purpose of archaeological monitoring and recording, as specified by KCCHC in the Specification was to:

Contribute to heritage knowledge of the area through the recording of the archaeological remains exposed as a result of excavations in connection with the groundworks.

Specific objectives should include assessment of gravel deposits encountered and assessment of the presence/absence of palaeolithic remains.

If palaeolithic remains are encountered the objectives will be to suitably investigate and record the remains, in accordance with the attached evaluation approach and in accordance with new mitigation measures agreed with the County Archaeologist.

(KCCHC 2014: Paragraphs 3.1-3.3).

3.1.2 The objectives of the monitoring were therefore to:

- To ensure the archaeological excavation and monitoring of all aspects of the development programme likely to affect buried archaeological remains;
- To secure the adequate recording of any archaeological remains revealed by the development programme;
- To secure the full analysis and interpretation of the site archive and the appropriate publication of the project results, if required;
- To secure the analysis, long term conservation and storage of the project archive.

3.1.3 The specific archaeological requirements of the watching brief are summarised below;

- Monitoring of all ground works;
- Mitigation by a programme of archaeological excavation and recording in the event that additional archaeological remains are encountered;
- Post-excavation and publication, where required.

4 METHODOLOGY

4.1 Introduction

4.1.1 All fieldwork was conducted in accordance with the methodology set out in the Specification (KCCHC 2014) and carried out in compliance with the standards outlined in the Chartered Institute for Archaeologists' Standards Guidance for Archaeological Watching Brief (CIfA 2014).

4.2 Fieldwork

4.2.1 Excavation of the foundation trenches was carried out by building contractors using a 360° machine equipped with a toothless ditching bucket (Figure 2). All areas of excavation were either carried out under the constant supervision of an experienced archaeologist or inspected and recorded by the archaeologist in attendance (See Table 1, below and Figure 2).

4.2.2 Where possible the areas of excavation were hand-cleaned with the intention of revealing any observed features in plan and section. If found archaeological features under threat were to be excavated to enable sufficient information about form, development date and stratigraphic relationships to be recorded without prejudice to more extensive investigations, should these prove to be necessary.

4.3 Recording

4.3.1 A complete drawn record comprising both plans and sections, drawn to appropriate scales (1:20 for plans, 1:10 for sections) was undertaken. Where appropriate, the plans and sections were annotated with coordinates and aOD heights.

4.3.2 Photographs were taken as appropriate providing a record of excavated features and deposits. The record also includes images of the Site overall. The photographic record comprises digital photography. A photographic register of all photographs taken is contained within the project archive.

4.3.3 A single context recording system was used to record the deposits. A full list is presented in Table 2 and Table 3 below. Layers and fills are identified in this report thus (100), whilst the cut of the feature is shown [100]. Context numbers were assigned to all deposits for recording purposes.

4.4 Timetable

4.4.1 Archaeological monitoring was carried out on the following days;

<i>Task</i>	<i>Date</i>	<i>Staff</i>
Archaeological monitoring during the construction of foundation trenches	19 th June 2015	Dr Paul Wilkinson
Geoarchaeological assessment (fieldwork)	19 th June 2015	QUEST

Table 1 Task List

5 RESULTS

5.1 Archaeological Monitoring

5.1.1 The foundation layout was roughly rectangular in plan measuring approximately 32m by 6m measuring approximately 1m in depth and 0.7m in width (Figure 2).

5.1.2 Prior to attendance the site had undergone an initial phase of stripping where approximately 0.5m of made ground had been removed. This exercise had no impact on archaeological horizons (Plate 2). Archaeological monitoring was carried out within the western, eastern and central extents of the foundations where the following stratigraphic sequence was recorded;

<i>Context Number</i>	<i>Description</i>	<i>Interpretation</i>	<i>Depths (m)</i>
101	Fine dark grey sandy silt with moderate rooting and small rounded stones	Made ground	0.00-0.16
102	Light yellow brown sandy gravel	Subsoil	0.16-0.47
103	Light yellow brown, red brown and red yellow gravels. Boyn Hill Gravel Formation	Natural	0.47-1.21+

Table 2 Stratigraphic Sequence, Representative Section 1 (0.00 = 30.88m aOD)

Note: Depths taken from the top of the previously reduced level.

<i>Context Number</i>	<i>Description</i>	<i>Interpretation</i>	<i>Depths (m)</i>
101	Fine dark grey sandy silt with moderate rooting and small rounded stones	Made ground	0.00-0.21
102	Light yellow brown sandy gravel	Subsoil	0.21-0.64
103	Light yellow brown, red brown and red yellow gravels. Boyn Hill Gravel Formation	Natural	0.64-1.23+

Table 3 Stratigraphic Sequence, Representative Section 2 (0.00 = 30.92m aOD)

Note: Depths taken from the top of the previously reduced level.

- 5.1.3 Remaining areas were not recorded due to disturbance caused by previous building on the site (as shown on Figure 2).
- 5.1.4 The Made Ground (101) was very dry and loose and frequently truncated by modern drainage/services trenches associated with the former buildings on site while the subsoil (102), which was relatively undisturbed, was formed primarily of a reworked gravel and contained no archaeological finds or features. Two representative sections (locations shown on Figure 2) were recorded; Section 1 (Figure 3 & Plate 4) within the western extent of the foundation and Section 2 (Figure 3 & Plate 4) within the eastern extent of the site. The underlying natural Boyn Hill Gravel Formation (103) remained relatively well preserved and although no archaeological features were present flints were retrieved from this deposit (see Finds, Section 6, below). Further assessment of the natural gravels (103) is provided in the geoarchaeological sequence below.

5.2 Geoaerchaeological Assessment (QUEST)

Introduction

5.2.1 This report summarises the findings arising out of the geoaerchaeological investigations undertaken by Quaternary Scientific (University of Reading) in connection with the proposed development at 37-39 Swanscombe Street, Swanscombe, Kent. The site comprises a plot of c.0.9 ha within the residential urban area of Swanscombe on the south side of the estuarine River Thames and about 1.2 km from the southern edge of the alluvial floodplain. Geoaerchaeological investigation of the site was limited to examination and measurement of trenches forming the footings of extensions to existing buildings on the site. In all about 35m of trench, about 0.7m wide and 1.2m deep were opened in three different locations within the site (Figure 1). The main aims of the investigation were to: (1) observe and record the sediments excavated; (2) interpret the sub-surface stratigraphy across the site and (3) highlight sediments of potential palaeoenvironmental and Palaeolithic significance.

Topographical, Geological and Archaeological Context

5.2.2 Swanscombe Street rises very gently from east to west and in the vicinity of the site marks a break of slope between level ground to the north, seen along Church Road and Eglinton Road and ground rising gently to the south seen along Keary Road. Mapping by the British Geological Survey (1:50,000 Sheet 271 Dartford 1998; and on line) shows the site underlain by the Thanet Sand Formation but close to the southern edge of a spread of the Middle Pleistocene Boyn Hill Gravel (Plate 1 below).

<i>Era</i>	<i>Period</i>	<i>Stage</i>	<i>Unit</i>	<i>Age (yrs)</i>
Quaternary	Pleistocene	Hoxnian	Boyn Hill Gravel	400,000
Tertiary	Palaeocene		Thanet Sand	55,000,000
Mesozoic	Upper Cretaceous		Upper Chalk	>65,000,000

Table 4 Chronological Periods

5.2.3 Investigations immediately to the south of the present site at the Swan Valley Community School (Wenban-Smith & Bridgland 2001; Figure 4) have shown that the Boyn Hill Gravel is also present there with a surface between 28.0m and 29.0m OD and a base between 26.5m and 27.0m OD. The gravel is described by Wenban-Smith and Bridgland (2001) as medium to fine with larger clasts most frequent near the base; consisting almost entirely of flint with large numbers of well-rounded flint pebbles (>50%), sub-horizontally bedded, yellowish brown to brownish yellow in colour with occasional thin reddish brown to yellowish red horizons. However, the test pits closest to the present site exposed solifluction deposits which appear to have cut out the Boyn Hill Gravel to rest

directly on the weathered bedrock Chalk. The solifluction deposits are described as a mixture of medium/coarse yellowish brown and reddish brown sands and flint and chalk gravel overlying and incorporated in involuted and soliflucted chalk rubble.

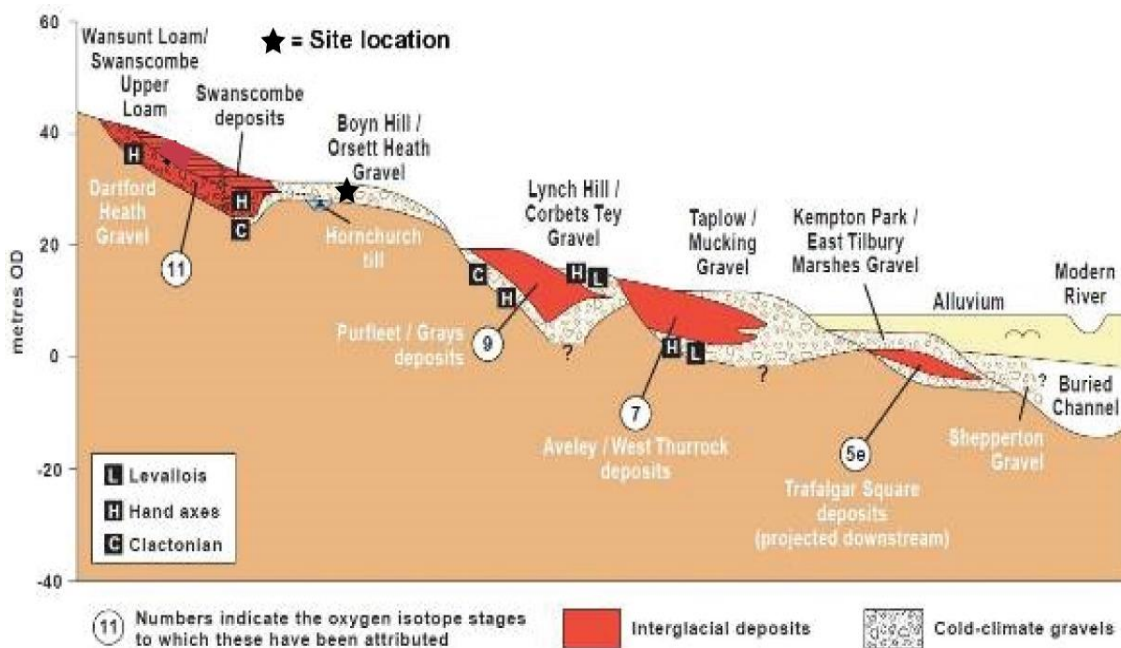


Plate 1 Site position within the Thames terrace sequence (Bridgland)

5.2.4 In all, over 800 Palaeolithic artefacts were recovered from various investigations at the Swan Valley Community School site (TQ 67 SW 221 in Figure 4). The main source of the artefacts was the Boyn Hill Gravel, with the artefacts preferentially disposed in the upper and middle part of the gravel unit, with lesser but significant numbers of artefacts coming from the solifluction deposits. Wenban-Smith & Bridgland (2001) correlate the sediment sequence at the Swan Valley Community School with the Lower Middle Gravel, the Upper Middle Gravel and the Upper Loam in the Barnfield Pit which lies less than a kilometre to the WNW and where these units occupy a height range between 26.5 and 34.0m OD (Conway et al 1996).

Methods

5.2.5 The building footings were examined within an area of about 32.0m E-W and about 6.0m N-S. Ground adjacent to all the footings had been taken down prior to investigation to a level equivalent to the ground level around the buildings occupying the site. Adjacent to the west end of the more westerly building this level truncated the natural sediment underlying the site, but elsewhere variable amounts of Made Ground had been removed, nominally down to the top of the gravel, or the level truncated Made Ground. All levels recorded are taken from this reduced ground surface, except at the N end of east-facing section in footings at the west end of westerly building (Log 4) where the section was cut down from the Made Ground forming the pre-development surface.

- 5.2.6 During the excavation of the trenches to accommodate the footings, the spoil raised was continuously examined for changes in the sedimentology of the deposits, for fossil material and for worked flint.
- 5.2.7 The resultant lithostratigraphic descriptions are displayed in Tables 5 to 10 (below).

Results and Interpretation

- 5.2.8 In all of the trenches, Made Ground was probably originally present overlying the sand and gravel. The N-S configuration of the gravel surface was seen only at the western end of the trenched area where it appeared to be essentially level at 30.99-31.02m OD. At the NW corner of the area of investigation the gravel surface was within 0.3m of the pre-development ground surface. It was overlain by Made Ground which thickened southward to just over a metre at the southern end of the east-facing section. At the eastern end of the trenched area the bottom of the trench at 29.71m OD exposed the uppermost 0.1m of the gravel.
- 5.2.9 The gravel exposed in the trenches was similar throughout the area of investigation. It was slightly clayey to clayey clast-supported sandy gravel consisting mainly of well-rounded flint pebbles with a smaller proportion of sub-angular flint. In most places the clasts were less than 100mm maximum dimension, but in the lower part of the exposure in the NW corner of the area of investigation, rolled nodular flint clasts up to 250 mm maximum dimension were present.
- 5.2.10 In general, two units of gravel could be recognised;

Unit 1 – A lower unit forming the bulk of the gravel observed; yellowish brown in colour with weakly developed sub-horizontal bedding defined by slight variations of colour and texture, in particular the presence of discontinuous thin (<100mm) seams of more clayey gravel, reddish brown or reddish yellow in colour. No evidence of systematic clast imbrication was recognised. In the east-facing section at the west end of the trenched area, the upper part of this unit was locally paler in colour – pale yellowish brown, with the appearance of a channel infill about 0.3m thick and about 2.0m wide but lacking any other well-defined stratigraphic definition.

Unit 2 – An upper unit immediately underlying the Made Ground, generally about 0.3m thick but in a few places up to 0.5m thick, much duller in colour than Unit 1, with some humic staining and particularly characterised by its clast fabric, with the long axes of most of the elongate clasts sub-horizontally disposed.

- 5.2.11 The gravel seen in the trenches resembles closely, in terms of elevation, colour, composition, texture and structure, the gravel described by Wenban-Smith & Bridgland (2001) at the Swan Valley

Community School to the South of Swanscombe Street and regarded by them as the lateral equivalent of the Middle Gravel of the sediment sequence recorded in the Barnfield Pit on the west side of Swanscombe (Conway et al 1996). There was no sign at 37-39 Swanscombe Street of the solifluction deposits seen by Wenban-Smith & Bridgland in the northern part of the Swan Valley Community School site. It seems likely therefore that the gravel of Unit 1 underlying 37-39 Swanscombe Street is the undisturbed Boyn Hill Gravel. As such, it forms a northward extension of the gravel recorded at levels between 27.0 and 29.0m OD by Wenban-Smith & Bridgland (2001), and is probably continuous with the Boyn Hill Gravel mapped by BGS to the north, forming the level surface visible to the north of the site. At 37-39 Swanscombe Street, the surface of the undisturbed gravel of Unit 1 falls eastward from ca. 30.70m OD at the western end of the site to 29.81m OD at the eastern end, approximately in accord with the natural slope of the land. The overlying Unit 2 represents disturbed gravel possibly affected by downslope movement across this slope towards the lower ground of the Ebbsfleet valley.

- 5.2.12 The absence of any convincing archaeological material from the spoil raised during the preparation of the footings is broadly consistent with the pattern of finds recorded by Wenban-Smith & Bridgland (2001) who showed that the main concentration of Palaeolithic material was in the southern part of the Swan Valley Community School site at some distance from the present site, and that the recovery of artefacts in the intervening area was at best patchy.

Depth (m OD)	Description
31.02- 30.62	Dull yellowish brown with some humic staining; slightly clayey to clayey clast-supported medium sandy gravel (<100mm long dimension), predominantly of well-rounded flint pebbles and a small amount of sub-angular flint; clast fabric displays the long axes of many of the elongate clasts lying horizontally.
30.62-30.02	Yellowish brown to yellowish red becoming paler yellowish brown towards the base of the section; slightly clayey to clayey clast-supported sandy gravel, predominantly of well-rounded flint pebbles and small amounts of sub-angular flint; weakly developed horizontal bedding defined by slight variations of colour and texture.

Table 5 Lithostratigraphic description of S end of W-facing section in footings at west end of westerly building (Log 1)

Depth (m OD)	Description
31.02-29.82	Structureless reddish brown clayey sand. This sand body was c.0.9m wide at the top and occupied a steep-sided sharply defined, concave upward hollow; the adjoining gravel was deeply penetrated (to the bottom of the section) by root channels. This appears to be a tree-throw hollow.

Table 6 Lithostratigraphic description of Middle of N-facing section in footings at west end of westerly building (Log 2)

Depth (m OD)	Description
31.02-30.67	Dull yellowish brown with humic staining; slightly clayey to clayey clast-supported medium sandy gravel (<100mm long dimension), predominantly well-rounded flint pebbles and a small amount of sub-angular flint; clast fabric displays the long axes of many of the elongate clasts lying horizontally.
30.67-29.82	Yellowish brown to yellowish red; slightly clayey to clayey clast-supported medium sandy gravel, predominantly well-rounded flint pebbles and small amounts of sub-angular flint; weakly developed horizontal bedding defined by slight variations of colour and texture, in particular the presence of discontinuous, thin (<100mm) seams of more clayey gravel, reddish yellow or reddish brown in colour.

Table 7 Lithostratigraphic description of S end of E-facing section in footings at west end of westerly building (Log 3)

Depth (m OD)	Description
31.29-30.99	Made Ground
30.99-30.79	Dull yellowish brown with humic staining; slightly clayey to clayey clast-supported medium sandy gravel (<100mm long dimension), predominantly well-rounded flint pebbles and a small proportion of sub-angular flint.
30.79-30.59	Pale yellowish brown slightly clayey clast-supported medium sandy gravel (<100mm long dimension), predominantly well-rounded flint pebbles and small amounts of sub-angular flint. This unit was defined largely by its colour but appeared to occupy a shallow concave upward depression. There were however no signs of an erosional contact.
30.59-29.89	Yellowish brown to yellowish red; slightly clayey to clayey clast-supported medium sandy gravel (<100mm long dimension, becoming coarser towards the base of the section), predominantly well-rounded flint pebbles and small amounts of sub-angular flint including towards the base, rolled clasts of nodular flint up to 250mm long dimension ; weakly developed horizontal bedding defined by slight variations of colour and texture, in particular the presence of

	discontinuous, thin (<100mm) seams of more clayey gravel, reddish yellow or reddish brown in colour.
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Table 8 Lithostratigraphic description of the near N end of E-facing section in footings at west end of westerly building (Log 4)

5.2.13 Two poorly defined possible waste flakes were recovered from machine spoil arising near the site of this log.

Depth (m OD)	Description
31.12-30.67	Made ground
30.67-30.42	Dirty yellowish brown with abundant humic staining; slightly clayey to clayey clast-supported medium sandy gravel (<100mm long dimension), predominantly well-rounded flint pebbles and a small proportion of sub-angular flint.
30.42-29.92	Dull yellowish brown; slightly clayey to clayey clast-supported medium sandy gravel (<100mm long dimension), predominantly well-rounded flint pebbles and small amounts of sub-angular flint; no well-developed structure.

Table 9 Lithostratigraphic description of the middle of S-facing section in footings between existing buildings and aligned with south face of buildings (Log 5)

Depth (m OD)	Description
30.91-29.81	Made ground
29.81-29.71	Slightly clayey sandy gravel.

Table 10 Lithostratigraphic description of the middle of W-facing section adjacent to the east boundary of the site (Log 6)

6 FINDS

6.1 Flint Assessment

6.1.1 A total of six flints (weighing 466g), recovered during an Archaeological Watching Brief conducted by SWAT Archaeology on a site at Swanscombe in 2015, were presented for review. The underlying geology was a deposit of the Boyne gravels (Paul Wilkinson pers. comm.) and these finds were said to have been recovered from it. Given the archaeological potential of the deposit, a descriptive note on all of the relevant material is presented below (Section 6.2). No specific details of the context of these finds were known.

6.1.2 Two small pieces (24g) with rounded and battered edges were natural. The remainder all showed potential for human activity, with one possible flake and three natural nodules possibly utilised for scraping. Differences in patination show these have varied depositional histories however and a degree of caution must be advised, given that they derive from a gravel deposit, where the effects of re-deposition, natural breakage, chipping and abrasion would be expected.

- 6.1.3 One piece of gravel flint might be a small struck flake, but a later break to the 'proximal' end hinders certain identification; it could be natural. One medium-sized naturally fractured nodule of gravel flint shows a short straight length of chalk-soil type patinated small, shallow scars and edge abrasion damage, possibly a result of use. One larger-sized nodule of gravel flint shows a short length of similarly chalk-soil type patinated shallow, less regular scars, which are truncated by later unpatinated scars and edge abrasion that form a small concave hollow. The latter could be a result of use, but the origin of the underlying patinated scars is uncertain (purpose?), in spite of the apparent uniformity in their concentration and direction of 'striking'. On both of these two flints, the scars and abrasion were all 'struck' from the same direction (uni-marginal) on thick, right-angled edges. The presence of the chalk-soil type patina suggests exposure in a soil deposit, with a later phase of unpatinated chipping/abrasion damage on both of the same edges. Neither edge has received a subsequent gravel patina, suggesting that if they were obtained from within the gravel deposit – any post-flaking/chipping re-exposure to the gravel environment would likely have been of very short duration. If these had been obtained from the surface of the gravel and from an area where the overburden would allow for the potential of these flints to have been encountered in the Late Prehistoric period, Lithic Later Bronze Age activity (Middle Bronze Age and later) could easily be responsible for the expedient, limited use seen on such pieces.
- 6.1.4 One medium-sized angular flint, with a little buff cortex and gravel-type patinated natural facets, shows uni-marginal chipping along the entire length of one long, steeply angled edge. Natural chipping is unlikely to be so uniform. However, while some of the chips are unpatinated, some appear to share the gravel-type patina seen on the natural facets. Thus two phases of chipping are present, one pre or contemporary to exposure within the gravel deposit and one post-exposure, giving rise to uncertainty over its origins and questioning whether the uniform nature of the chipping is coincidental. A broad natural concave hollow on the opposite thin edge also shows some unpatinated chipping scars, though these are randomly distributed on both sides. The question of whether this piece was recovered from within the gravels or its surface must again be considered. Overall, some utilisation of this flint would seem more likely than not. If it was recovered from within the gravels, the lack of patination on some of the chipping damage suggests only a short period of re-exposure to the gravel environment.
- 6.1.5 If these flints were recovered from within a sealed and securely datable deposit of the Boyne gravels, microscopic analysis might be worthwhile in order to attempt to confirm the presence of utilisation and thus flint-use at this particular level and location. However, the material would seem to have little of period-diagnostic significance in itself and if human activity at this horizon within

the gravels is already well attested by a greater number of more diagnostic flintwork found elsewhere, further intensive work on the flints from this site might be unnecessary at this time.

6.2 The Flint

- 6.2.1 One small piece of coarse gravel flint (5g) with an overshot, feather-terminated profile and a broken 'proximal' end might be a subsequently broken flake, though caution is advised.
- 6.2.2 One medium-sized nodule of gravel flint (134g) shows a moderate amount of cortex and many naturally fractured, gravel-patinated facets. One fresher-looking but still gravel patinated negative narrow blade-like small scar might just be from a flake removal, though its battered edge and gravel context makes a natural origin more likely. On a thick right-angled edge adjacent to this is a short (20mm) length of uni-marginal scarring which shows a couple of small, shallow, short scars and edge abrasion. This could represent use, presumably for scraping. The larger scars and edge abrasion damage show the early stages of a blue-white patina common to areas of chalk-soil geology, though a couple of the larger abrasion scars seem to truncate this and are later and possibly natural. The lightly patinated scars themselves truncate a single larger, shallow scar (possibly natural), which shows an advanced, strong blue-white patina with a slight yellowy hue. Presuming the early-stage patina is not a result of freezing (ongoing experiments by Geoff Halliwell have produced the early stages of this patina type in the absence of the usual geology by the process of repeated freezing; Halliwell pers. comm.), or was inherent in the flint matrix which underlay the more advanced patinated scar it truncated, which is not thought to be the case, it would suggest the flint had seen two periods of exposure in a chalk-soil context, possibly separated by an exposure to a brickearth, clay or gravel environment. There is no clear evidence of a gravel-type patina overlaying the lightly patinated scars, suggesting no lengthy period of re-exposure in the gravels post-chipping. A human origin for these scars is possible, but the natural action of the gravels must also be considered a potential cause, despite its organised appearance.
- 6.2.3 One larger-sized nodule (264g) shows a smoothed cortex probably with some gravel staining, plus one broad facet which could easily be the result of natural splitting and shows an advanced blue-white patina. One right-angled edge of this facet shows a small area of uni-marginal irregular scars featuring the early stages of a blue-white patina. These scars all originate from the split facet 'platform' and while human action is a possible cause it is not certain; the small flakes chipped off this edge would appear to be of little use and a natural origin must also be considered. The same edge also has a small (13mm wide) concave hollow of uni-marginal chipping and abrasion, with some of these scars unpatinated and subsequently truncating the larger patinated scars. Utilisation for scraping is possible. The presence of the chalk-soil type patinas does suggest two periods of exposure outside the gravel bed, plus one later episode of post-patination chipping.

6.2.4 One medium-sized natural flint (38g), which shows a small area of buff cortex and subsequent gravel-type staining on its naturally fractured facets, features two natural edges showing marginal chipping damage which might have resulted from expedient use. It has one broad, deep, concave hollow (33mm wide by 6mm deep) on one thin edge which shows some irregular unpatinated chipping on both faces. The opposite thick, steep edge, whose profile is uneven and formed of three broad shallow concave hollows, shows uni-marginal chipping along all of this (55mm) long edge. That it occurs solely on one face across a broad area makes it more likely that this damage is a result of utilisation. However only some of these scars are unpatinated; others appear to share the same colour as the natural facets. Thus, two phases of damage appear to be present and uncertainty on its origins must remain for now.

7 DISCUSSION

7.1 Archaeological Narrative

7.1.1 Archaeological monitoring carried out on site during the construction of new foundations comprised two elements. The first was carried out by an archaeologist who monitored excavations, with the aim of identifying and recording any archaeological finds or features present. The second part of the works consisted of a geoarchaeological examination and assessment of the underlying gravels exposed. Both of these methods are described, in detail, within this report.

7.1.2 Despite the potential for the presence and survival of archaeological remains, no features were recorded during the archaeological monitoring works. That said, four, out of six flints retrieved from the Boyn Hill Gravel Formation (103) showed potential for human activity (Paul Hart, above).

7.1.3 With regards to the geoarchaeological works, the site provides further evidence of the extent of the Boyn Hill Gravel, recorded as (103), in the Swanscombe area, beyond the boundaries mapped by the British Geological Survey. The sediments observed were closely similar to those recorded by Wenban-Smith and Bridgland (2001) to the south of the present site, at the Swan Valley Community School, and referred by them to the Middle Gravel of the sediment sequence recorded in the Barnfield Pit less than a kilometre to the WNW of the present site. No definitive Palaeolithic material was recorded and as such, no further work is recommended.

7.1.4 It is therefore suggested that the proposed development will have minimal impact on any significant archaeological remains and that should remains have once been present that they would have been relatively shallow and now removed.

7.2 Conclusions

- 7.2.1 Archaeological monitoring and recording has been successful in fulfilling the primary aims and objectives of the watching brief Specification. No significant buried archaeological remains were recorded during the works and archaeological, should they be present, will remain preserved in situ.

8 ARCHIVE

8.1 General

- 8.1.1 The Site archive, which will include; paper records, photographic records, graphics and digital data, will be prepared following nationally recommended guidelines (SMA 1995; ClfA 2009; Brown 2011; ADS 2013).
- 8.1.2 All archive elements will be marked with the site/accession code, and a full index will be prepared. The physical archive comprises 1 file/document case of paper records & A4 graphics including;

9 ACKNOWLEDGMENTS

- 9.1.1 SWAT would like to thank J Mann for commissioning the project. Thanks are also extended to Lis Dyson, Head of Heritage Conservation, Kent County Council, for her advice and assistance.
- 9.1.2 Dr Paul Wilkinson carried out the archaeological fieldwork; the geoarchaeological assessment was prepared by C P Green at QUEST, University of Reading and the flint assessment was provided by Paul Hart. Illustrations for this report were produced by Bartek Cichy. David Britchfield (MCIfA) produced the draft text for this report which was edited by Dr. Paul Wilkinson (MCIfA).

10 REFERENCES

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11 APPENDIX 1 – KCCHC HER FORM

Site Name: Archaeological Monitoring and Investigation at the Site of 37-39 Swanscombe Street, Swanscombe, Dartford, Kent

SWAT Site Code: SWAN-WB-17

Summary: *In October 2016 SWAT Archaeology carried out a programme of archaeological monitoring and recording at the site of 37-39 Swanscombe Street, Swanscombe, Dartford, Kent. The works were commissioned by J Mann and carried out during the excavation of ground works associated with the construction of extensions to form a terrace of four 3-bedroomed houses. The Watching Brief was conducted in accordance with an archaeological Watching Brief generic specification issued by Kent County Council Heritage & Conservation.*

Archaeological monitoring carried out on site during the construction of new foundations comprised two elements; an archaeological watching brief during the construction of foundations and a geoarchaeological assessment on surviving gravel sequences present. Despite the potential for the presence and survival of archaeological remains, no features were recorded during the archaeological monitoring works, although four, out of six flints retrieved from the Boyn Hill Gravel Formation showed potential for human activity. The geoarchaeological works have suggested that the site provides further evidence of the extent of the Boyn Hill Gravel in the Swanscombe area, beyond the boundaries mapped by the British Geological Survey. No definitive Palaeolithic material was recorded and as such, no further work has been recommended.

Archaeological monitoring and recording has been successful in fulfilling the primary aims and objectives of the watching brief Specification. No significant buried archaeological remains were recorded during the works and archaeological, should they be present, will remain preserved in situ.

District/Unitary: Dartford Borough Council

Period(s): Palaeolithic

NGR (centre of site to eight figures) NGR 560702 174051

Type of Archaeological work: Archaeological Watching Brief and Geoarchaeological Assessment

Date of recording: 19 July 2014

Unit undertaking recording: Swale and Thames Survey Company (SWAT Archaeology)

Geology: Boyn Hill Gravel Formation

Title and author of accompanying report: SWAT Archaeology (2017) Archaeological Monitoring and Investigation at the Site of 37-39 Swanscombe Street, Swanscombe, Dartford, Kent

Location of archive/finds: SWAT Archaeology. Graveney Rd, Faversham, Kent. ME13 8UP

Contact at Unit: Paul Wilkinson

Date: 06/03/2018

SPECIFICATION FOR AN ARCHAEOLOGICAL MONITORING AND INVESTIGATION AT THE SITE OF 37 – 39 SWANSCOMBE STREET SWANSCOMBE DARTFORD

Introduction

1.1 This specification is concerned with an archaeological programme of monitoring and investigation to be maintained at 37 – 39 Swanscombe Street Swanscombe Dartford.

1.2 The site has planning permission for conversion and extensions to form a terrace of 4 3-bedroomed dwellings with associated works. The Local Planning Authority’s planning reference for the proposal is DA/14/00075.

1.3 The Local Planning Authority has placed the following condition on the planning consent:

AR1 No development shall take place until the applicant, or their agents or successors in title, has secured the implementation of a programme of archaeological work in accordance with a written specification and timetable which has been submitted to and approved by the Local Planning Authority.

Reason: To ensure that features of archaeological interest are properly examined and recorded.

1.4 In view of the nature and extent of the proposed groundworks, it is considered that the programme of archaeological works can comprise archaeological monitoring of the groundworks connected with the development and recording of any archaeology revealed, especially palaeolithic flintwork, by a suitable archaeological contractor experienced with palaeolithic archaeology.

1.5 The archaeological monitoring should be maintained throughout the programme of ground excavation. The archaeological contractor will confirm the extent of proposed ground excavations in advance with the site developer and inform the County Archaeological Officer that arrangements are in place for appropriate monitoring.

1.6 The archaeological monitoring will be undertaken by an archaeologist qualified and experienced in palaeolithic archaeology.

1.7 If possible archaeological remains are encountered, machine excavation will cease to allow the remains to be investigated further. The main contractor will allow the archaeological contractor reasonable time and resources to undertake any inspection or recording required.

1.8 If palaeolithic flintwork are found, the archaeological contractor will inform the County Archaeological Officer and the developer immediately and further mitigation measures will be agreed. These mitigation measures may include altering the methodology to the attached appendix for palaeolithic assessment.

1.9 The site is located within the parish of Swanscombe, Dartford. It is centred at NGR: 560702/174051 and is accessed off Swanscombe Street.

1.10 According to the maps of the British Geological Survey, the site lies on Boyn Hill Gravels.

2. The Archaeological Potential

- 2.1 The archaeological potential is based on the proximity of archaeological remains presently recorded in the HER.
- 2.2 The site of development lies on Boyn Hill Gravels. These deposits are considered to have potential for rare and important palaeolithic remains, in the form of flint artefacts or palaeoenvironmental indicators (shell, molluscs, seeds etc).
- 2.3 Palaeolithic flints have been located at the Swan Valley Community School, just to the south.
- 2.4 Roman remains and later deposits are also recorded from the school site to the south.
- 2.5 Further information on the above is provided in the County Historic Environment Record held with Heritage, Planning & Environment (EE), KCC, Invicta House, County Hall, Maidstone, ME14 1XX (telephone 01622 221543).

3. Objectives

- 3.1 The objectives of the archaeological investigation are to contribute to heritage knowledge of the area through the recording of the archaeological remains exposed as a result of excavations in connection with the groundworks
- 3.2 Specific objectives should include assessment of gravel deposits encountered and assessment of the presence/absence of palaeolithic remains.
- 3.3 If palaeolithic remains are encountered the objectives will be to suitably investigate and record the remains, in accordance with the attached evaluation approach and in accordance with new mitigation measures agreed with the County Archaeologist.

4. Proposed Groundworks

- 4.1 The groundworks to be monitored are footings for the new extensions and services mainly but may include any associated access or landscaping works.
- 4.2 No details of groundworks have been submitted and the archaeological contractor should clarify the extent of the works with the developer before work begins.

5. Method

- 5.1 The archaeological contractor will monitor the excavations for all groundworks. Excavation should be undertaken using a flat bladed bucket and preferably in a single direction to enable archaeological remains to be recorded prior to disturbance from being driven over. **If possible archaeological remains are encountered, machine excavation will cease to allow the remains to be investigated further.**
- 5.2 The archaeologist will inspect the surfaces revealed. Any archaeological structures or features revealed will be recorded in plan and section as appropriate according to Section 6 below. **The main contractor will allow the archaeological contractor reasonable time and resources to undertake any inspection or recording required.**
- 5.3 Further limited excavation may be necessary to clarify the extent and nature of some archaeological deposits. In this case, the archaeological contractor will undertake the excavation by hand.

5.4 If significant remains are unexpectedly encountered the archaeological contractor will inform the County Archaeological Officer and the developer immediately and further mitigation measures will be agreed.

6. Recording

6.1 All structures, deposits and finds are to be recorded according to accepted professional standards.

6.2 All recording points used should be accurately tied into the National Grid, preferably by theodolite, and located on to the 1:1250 map of the area.

6.3 Plans indicating the location of all archaeological features encountered are to be drawn at an appropriate scale, located on the site plan and levelled with respect to OD. An overall site plan is to be maintained at a scale of 1:100.

6.4 All plans are to be accurately tied in to the site grid. All plans and sections are to be drawn on polyester based drafting film and clearly labelled.

6.5 All archaeological contexts are to be recorded individually on context record sheets. A further more general record of the work comprising a description and discussion of the archaeology is to be maintained as appropriate.

6.6 A full black and white and colour (35mm transparency) photographic record of the work is to be kept. The photographic record is to be regarded as part of the site archive. The archaeological contractor is to provide the County Archaeological Officer with a selection of photographic images which reflect the archaeological findings and investigations undertaken on this site.

6.7 All artefacts recovered during the excavations on the site are the property of the Landowner. They are to be suitably bagged, boxed and marked in accordance with the United Kingdom Institute for Conservation, Conservation Guidelines nos. 2 and on completion of the archaeological post-excavation programme the landowner will arrange for them to be deposited in a museum or similar repository agreed with the County Archaeological Officer and the Local Planning Authority.

6.8 The site archive, to include all project records and cultural material produced by the project, is to be prepared in accordance with *Guidelines for the preparation of excavation archives for long-term storage (UKIC 1990)*. On completion of the project the Applicant will arrange for the archive to be deposited in a suitable museum or similar repository to be agreed with the County Archaeological Officer and the Local Planning Authority.

7. Reporting

7.1 On completion of the archaeological watching brief the archaeological contractor will agree with the County Archaeologist a programme for the reporting of the results of the work. The reporting of the watching brief will be commensurate with the results but as a minimum must stand as a sufficiently detailed report on the archaeological monitoring to serve both future research and inform future planning decisions taken on the site.

7.2 Where the watching brief is being undertaken following an earlier evaluation, the results of the evaluation should be fully integrated within the report of the watching brief.

Report circulation

7.3 Copies of all reports are to be provided to:

- the Developer
- the County Archaeologist
- the Local Planning Authority
- Local Historical Society
- the project archive.

7.4 When submitting the report to the County Archaeologist the archaeological contractor should provide written confirmation that the report has been submitted to the above parties.

7.5 If the archaeological contractor is required, contractually, to only submit reports directly to the developer or their agent, the archaeological contractor must inform the County Archaeologist in writing that they have completed the report and to whom it has been forwarded to. The archaeological contractor must ensure that the developer is made aware of the need to circulate the report as in 7.3 above.

Reporting of watching briefs with limited remains

7.6 If the watching brief has resulted in limited or no archaeological remains being recorded then the archaeological contractor will complete the necessary post excavation works and produce a '**Minor Results Watching Brief Report**' within 4 weeks of the completion of the watching brief (**see sections 7.8 to 7.12 below**).

Reporting of watching briefs with significant archaeological remains

7.7 If significant archaeological remains are recorded then within 3 months of completion of the watching brief the archaeological contractor will undertake an assessment of the results and produce a MAP2 '**Post-excavation Assessment Report**'. This report will set out a programme of post excavation works through to completion of a '**Full Report**' and '**Publication**' of the findings (**see sections 7.13 to 7.17 below**).

Contents of a 'Watching Brief Report'

7.8 The archaeological contractor may determine the general style and format of the Watching Brief Report but it must be completed in accordance with this specification. The report must provide sufficient information and assessment to enable the County Archaeologist and the Local Planning Authority to stand as a detailed report on the archaeological fieldwork for future research and to inform on any future planning decisions for the site.

7.9 Reports that do not provide sufficient information or that have not been compiled in accordance with the relevant sections of this specification will be returned to the archaeological contractor for revision and resubmission.

7.10 The report is to include as a minimum:

7.10.1 An **Abstract** summarising the scope and results of the archaeological watching brief.

7.10.2 An **Introduction** including:

- the location of the site including National Grid Reference;
- an account of the background and circumstances of the work;

- a description of the development proposals, planning history and planning reference together with the planning condition (where appropriate);
- the scope and date of the fieldwork, the personnel involved and who commissioned it;
- the nature of potential impacts arising from the proposals;

7.10.3 An account of the **Archaeological Background** of the development site including:

- geology, soils and topography;
- any known existing disturbances on the site;
- background archaeological potential of the site. This should include a summary of the known Sites and Monuments Record entries generally within a 500m radius of the boundaries of the site. The SMR entries should be quoted with their full KSMR identifier (e.g TR36NW 12);
- summary of any previous phases of archaeological investigation at the development site;
- any constraints on the archaeological monitoring.

7.10.4 The **Methodology** employed during the watching brief must be detailed in the report. Simply referring to the methodology outlined in the specification is not acceptable. Any aims and objectives specified in the specification should be included as should any further objectives identified during the course of the watching brief. The frequency of monitoring visits, ground works observed and any constraints experienced while carrying out the monitoring should be detailed.

7.10.5 The report should include a quantification of the archive contents, their state and future location.

7.10.6 A description of the **Results** of the archaeological monitoring. This description must include for each area observed:

- the dimensions of the area observed;
- the nature and depth of overburden soils encountered;
- description of all archaeological features and finds encountered in each area observed, their dimensions, states of preservation and interpretation;
- a description of the geological subsoil encountered across the site;
- heights related to Ordnance Datum should be provided for each feature and deposit.
- for complex remains a Harris Matrix diagram should be provided.

7.10.7 The **Finds** recovered during the course of the watching brief should be described, quantified and assessed by artefact type within the report. The report should also provide an indication of the potential of each category of artefact for further analysis and research. For each category of artefact the report should describe the method of processing, any sub-sampling, conservation and assessment undertaken. Where appropriate local reference collections will be referred to for descriptive and analytical consistency. Any implications for future archive, conservation or discard of the artefacts should also be detailed.

7.10.8 The report should include a table showing the contexts, classes and quantity of artefacts recovered, together with their date and interpretation.

7.10.9 The report must include an assessment of the **Environmental** potential of the site. Details should be provided of any environmental sampling undertaken in connection with the fieldwork and the results of any processing and assessment of the samples. The report should describe the method of processing, any sub-sampling and assessment. Any potential for future analysis of the samples or environmental remains recovered from the evaluation should be described. Implications for future archive, conservation or discard of environmental samples or remains should be detailed.

7.10.10 The report should include, as appropriate, tables summarising environmental samples taken, together with the results of processing and assessment.

- 7.10.11 Any results from the watching brief involving the application of archaeological scientific techniques e.g. specialist dating should be included in the watching brief report.
- 7.10.12 An **Interpretation** of the archaeology of the site, including its location, extent, date, condition, significance and importance. This should include, even if no archaeology is identified as present on the site, description of areas of disturbance, non-archaeological deposits and changes in geological subsoil where appropriate.
- 7.10.13 A **Conclusion** with a summary of the archaeological results and how any archaeology observed relates to the development site. The effects of the development works on the archaeological remains should also be described. The report should highlight any areas of significant archaeological deposits that remain preserved within the development site. Particular note should be made of any variations in the depth of overburden covering any archaeological deposits revealed.
- 7.10.14 The report should include comments on the effectiveness of the methodology employed and the confidence of the results and interpretation.
- 7.10.15 Figures / illustrations – The report should include sufficient illustrations to support descriptions and interpretations within the report text. Figures are to be fully cross-referenced within the document text. As a minimum the report should include the following figures:
- a site location plan tied into the Ordnance Survey at 1:1250 or in the case of larger sites at 1:2500. The plan should also include at least two National Grid points and show the site boundary;
 - a plan at 1:100 or 1:200 showing the layout of the development groundworks clearly indicating the areas observed. The plan should show significant archaeological features, coloured by phases or period as related to the development site. Where possible, projection of archaeological features outside of the areas observed should be included on the plan. This plan should also include two National grid points;
 - plans of the features revealed in each of the excavation areas at a larger scale e.g. 1:20 or 1:50; such plans are to also illustrate areas of disturbance, change in subsoil and location of sections; The location of significant finds and samples taken should also be indicated;
 - relevant section drawings and soil trench profiles as appropriate;
 - illustrations and/or photographs of significant finds should be included where appropriate.
- 7.10.16 All report illustrations must be fully captioned and scale drawings must include a bar scale. Standard archaeological drawing conventions must be used. Plan and section illustrations must include the numbers of all contexts illustrated. North must be included on all plans and should be consistent. Sections must indicate the orientation of the section and the Ordnance Datum height of the section datum.
- 7.10.17 Black & White or Colour photographs should be included where appropriate to illustrate the archaeology of the site, the development operations or the range of soil profiles encountered. All photographs should be appropriately captioned.
- 7.11 The report will be submitted to the County Archaeologist in a bound hard-copy and in digital format. The digital copy will be supplied for preference in .pdf format or alternatively in .rtf format accompanied by digital copies of images, plans and maps in .bmp, .tif or .jpg format. The medium should be either on a PC-formatted floppy disk, on a PC CD-ROM (CD-R format only). Whichever software is used the digital files must be supplied in a PC readable format.

Contents of a 'Watching Brief Assessment Report'

- 7.13 The 'Archaeological Watching Brief Assessment Report' will follow the format and requirements detailed in 7.8 to 7.12 above.
- 7.14 In addition the report will include an assessment of the results of the archaeological monitoring and their potential to address both the original research aims and objectives of the project and any further research objectives identified during the course of the on-site and post excavation works.
- 7.15 The report will detail any further analysis necessary on the project records, artefact and environmental assemblages to achieve the research potential identified in the assessment. A justification should be included for each analysis proposed.
- 7.16 The report will set out a timetable for completion of analysis and reporting, detailing all individual tasks to be completed, resources required and the key personnel involved. The proposal should set out arrangements for monitoring of the post excavation process.
- 7.17 The report should include a synopsis of the proposed '**Full report**' and '**Publication**' and identify the likely destination of the publication.

8. General

- 8.1 The archaeological contractor is to allow the site records to be inspected and examined at any reasonable time, during or after the watching brief, by the developer, the County Archaeological Officer or any designated representative of the Local Planning Authority.
- 8.2 In undertaking the work the archaeological contractor is to abide by :
- all statutory provisions and by-laws relating to the work in question, especially the Health and Safety at Work *etc.* Act 1974;
 - the Institute of Field Archaeologist's *Code of Conduct*;
 - the Institute of Field Archaeologist's *Code of Approved Practice for the Regulation of Contractual Arrangements in Field Archaeology*.
- 8.3 On completion of the watching brief the archaeological contractor will prepare a consideration of the methodology used, including a confidence rating.
- 8.4 The archaeological contractor is to include with their report a completed copy of the Kent County Historic Environment Report Form (see appendix 1)
- 8.5 The archaeological contractor is to provide the County Archaeological Officer with a representative selection of transparencies illustrating the archaeology of the site and the operations of the investigation. These will be deposited with the County HER and will be used for presentations on aspects of the archaeology of Kent.

Site Name:	
Site Address:	
Summary:	
District/Unitary:	Parish:
Period(s):	
NGR (centre of site : 8 figures): (NB if large or linear site give multiple NGRs)	
Type of archaeological work (delete)	
Evaluation:	Watching Brief Field Walking
Documentary study	Building recording Earthwork survey
Excavation:	Geophysical Survey Field Survey
Geoarchaeological investigation	
Date of Recording:	
Unit undertaking recording:	
Geology:	
Title and author of accompanying report:	
Summary of fieldwork results (begin with earliest period first, add NGRs where appropriate)	
(cont. on attached sheet)	
Location of archive/finds:	
Contact at Unit:	Date:

Methodology for palaeolithic archaeological investigation

1. This appendix sets out the detailed, specific requirements for evaluating the geoarchaeological potential of the site. This is to be done through trial pits. Unless otherwise agreed with the County Archaeological Officer, the following methodology will be followed:
2. Unless it can be demonstrated that made ground lies immediately on top of pre Quaternary geology deep trial pits approximately xm x xm will be excavated. The trial pits will need to be excavated to a depth c.500mm greater than proposed disturbance by the development if known, or to a depth of c. 2m. There may be a need to take a selective number of test pits to the base of the Quaternary sequence although this may be more easily done with a targeted borehole survey, if considered necessary. Depth of test pits needs to be agreed with the County Archaeologist. Post palaeolithic archaeological deposits will not be removed by machine unless approved by the County Archaeologist.
- 3 The trial pitting will be supervised by a geo-archaeological specialist.
- 4 Within each trial pit, sediment will be removed by machine in spits up to 250mm thick and following the interfaces between sedimentary units wherever possible. Each spit and sedimentary unit will be numbered separately. Samples (100 litres) from each Pleistocene sedimentary unit will, where possible, be shaken through a 10mm mesh to retrieve artefacts and coarse ecofacts. Where sedimentary units are divided into spits, samples will be sieved from each spit if appropriate.
- 5 A record of the estimated proportion of each sedimentary unit sieved will be made. Spoil from each spit will be kept separately to allow correlation of artefacts to spits. Any intact activity areas such as knapping floors, if detectable, will not be excavated or disturbed at this stage. If such remains are encountered the County Archaeologist will be informed immediately and arrangements may need to be made for the pit to be shored or stepped and for hand cleaning and detailed recording undertaken. Where deposits with potential for environmental and/or scientific analysis are noted, bulk samples will be taken, from the spoil or the section (if safe to do so) for subsequent laboratory analysis. Samples shall be taken for potential analysis of clast content, particle size, micromorphology, pollen, mollusc, ostracod, micro-mammalian and other micro-faunal remains, and for dating purposes as appropriate. Monolith samples will be taken as appropriate and if safe.
- 6 If suitable deposits are observed provision should be made for specific environmental sampling and radiometric dating of the sediments, as agreed with the County Archaeologist, the geoarchaeologist.
- 7 The sedimentary sequence in each pit will be logged from the top of the pit; the pit or trial trench will not be entered unless it is safe to do so. At least one full and representative section of each pit will be drawn to a scale of 1:10. If necessary, more than one face will be drawn. The geological specialist will liaise regarding the recording of the sections; separate logs may be made in the field but an integrated record is required for the report. It is not intended at this stage that detailed sedimentological analysis is undertaken but where it is safe to do so selected sections should be carefully cleaned and orientations of sedimentary structures if present measured. If appropriate, further more detailed sedimentological recording will be arranged at a later date.
- 8 In the event of significant archaeological deposits being encountered the County Archaeologist is to be informed immediately. Further limited excavation may be required to clarify the nature, character and date of the archaeological deposits.
- 9 The above methodology can be varied if considered necessary by the geoarchaeological specialist. Any variations will be agreed with the County Archaeologist.
- 10 Recording, reporting and post excavation work will be in accordance with the Site Manual Part B.



Plate 2 Existing buildings on the site, prior to development



Plate 3 Excavation of the foundation trenches (note the level of ground reduction)



Plate 4 Representative Section 1



Plate 5 Representative Section 2

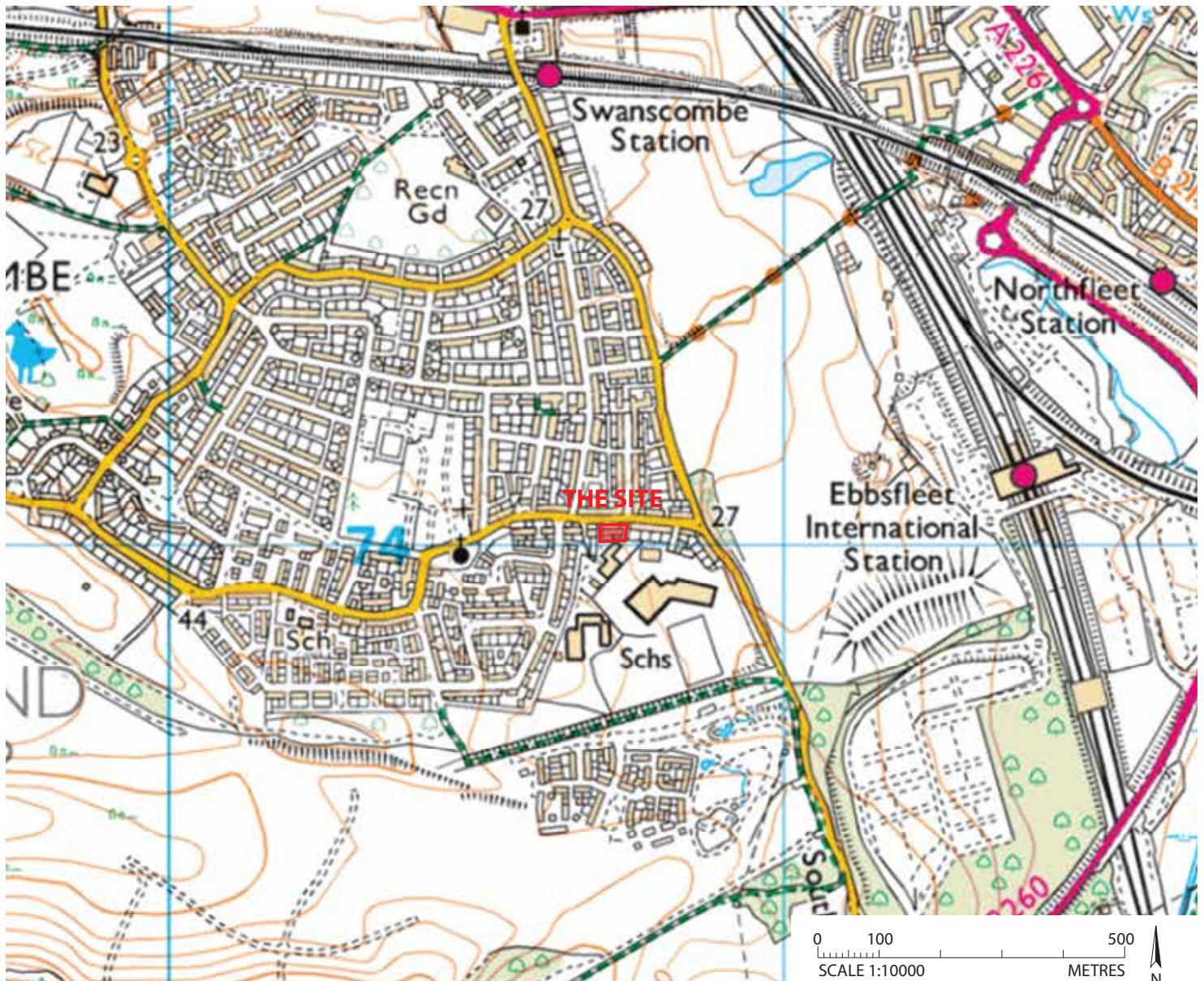
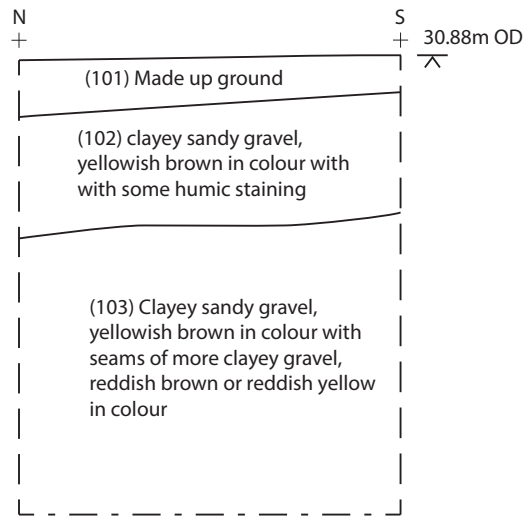


Figure 1: Site location map, scale 1:10000.



Figure 2: Trench location plan.

SECTION 1



SECTION 2

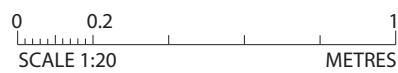
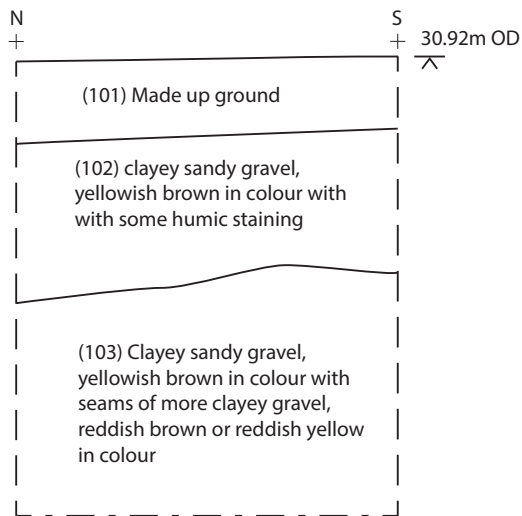


Figure 3: Representative sections

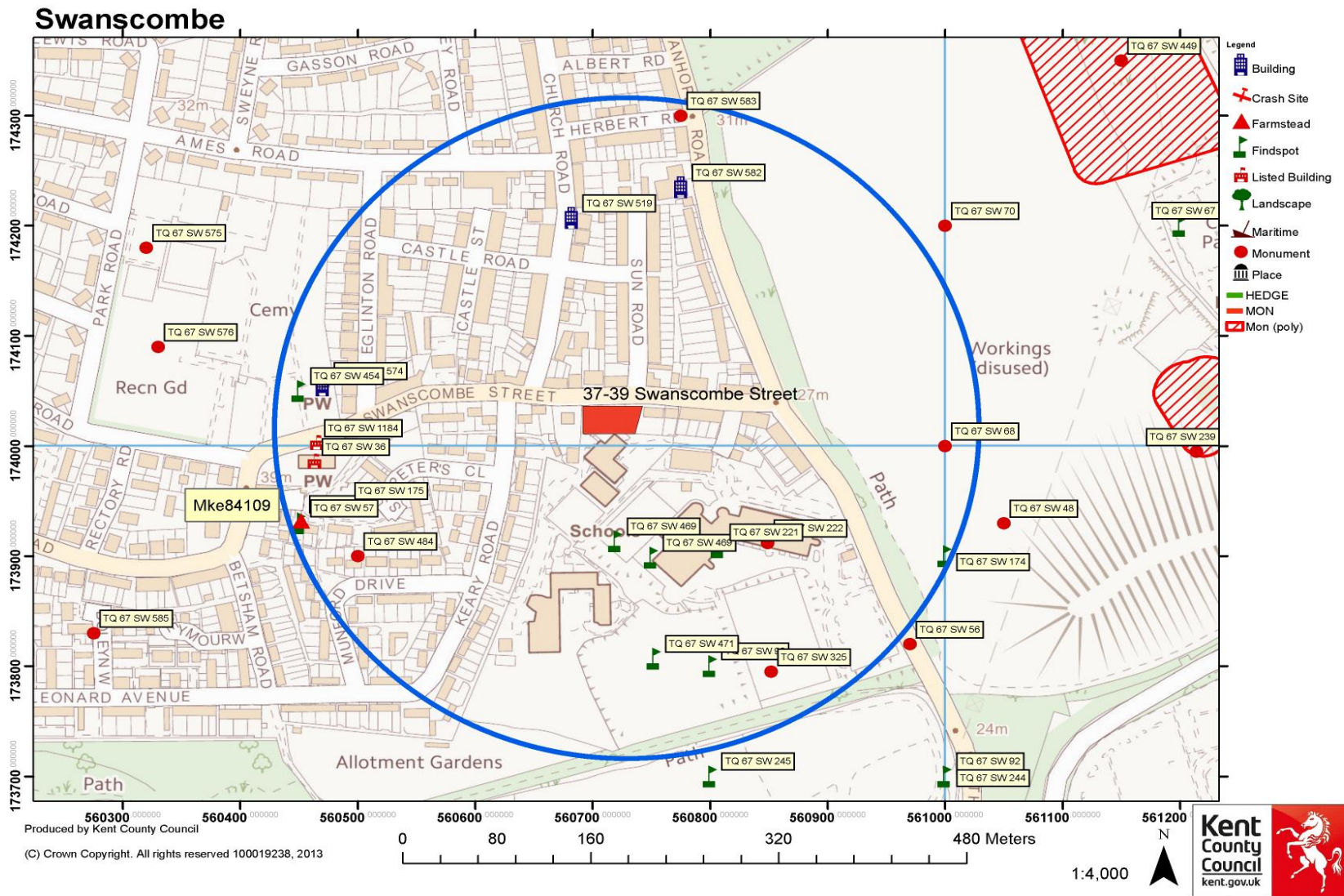


Figure 4: Relationship of the 37-39 Swanscombe Street to Swan Valley Community School (TQ 67 SW 22)