Archaeology South-East

ASE

Archaeological Investigations at Hedge Place Road, Dartford, Kent

NGR: TQ 58070 74143

Planning Reference: DA/12/01150/FUL
Planning Inspectorate Appeal Reference: APP/T2215/A/13/2195591

ASE Project No: 160917
Site Code: HPR16

ASE Report No: 2017007
OASIS ID: archaeol6-272651

By Simon Stevens
With contributions by
Karine Le Hégarat, Anna Doherty, Luke Barber, Isa Benedetti-Whitton, Susan Chandler, Hayley Forsyth-Magee and Stacey Adams

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Date of Issue:	January 2017		
Revision:	1		

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Abstract

Archaeology South-East was commissioned by CgMs Consulting to undertake a programme of archaeological work at Hedge Place Road, Stone, Dartford, Kent (TQ 58070 74143) in advance of a residential development.

An archaeological evaluation of the site by trial trenching identified archaeological deposits in the eastern part of the site. A subsequent strip, map and sample exercise resulted in the identification and recording of a limited number of linear features broadly dated to the prehistoric or Late Iron Age/Early Romano-British period on the evidence of scraps of pottery and flintwork, as well as indications of post-medieval quarrying activity. The quality of environmental evidence was poor.

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1.0 INTRODUCTION

1.1 Introduction

1.1.1 Archaeology South-East (ASE), the contracting division of the Centre for Applied Archaeology (CAA) at the Institute of Archaeology (IoA), University College London (UCL) was commissioned by CgMs Consulting to undertake a programme of archaeological work at Hedge Place Road, Stone, Dartford, Kent (Figure 1). The site is centred at National Grid Reference (NGR) TQ 58070 74143.

1.2 Site Location

1.2.1 The site lies immediately to the north of the Bluewater Shopping Centre and occupies an area of approximately 0.93ha. It is bounded to the south by Hedge Place Road, to the east by a minor lane, and to the west by a footpath and to the north by the site of a former quarry now backfilled and currently rough ground used for grazing horses.

1.3 Geology and Topography

1.3.1 According to latest data available from the British Geological Survey the underlying bedrock at the sites consists of chalk overlain by Boyn Hill Gravel (BGS 2016).

1.4 Scope of the Project

1.4.1 A planning application was submitted to Dartford Borough Council for the construction of a residential development with associated works in September 2012 (ref. DA/12/01150/FUL). Planning permission was refused by Dartford Borough Council in February 2013, but was subsequently granted in August 2015 after an appeal to The Planning Inspectorate (ref. APP/T2215/A/13/2195591).

1.4.2 Following consultation between Dartford Borough Council and Kent County Council (KCC) (Dartford Borough Council's advisers on archaeological issues), a condition (No. 3) was attached to the permission requiring that:

> *'No development or site clearance works shall commence until the implementation of a programme of archaeological work has been completed in accordance with a written specification and timetable which has been submitted to and approved in writing by the Local Planning Authority.'*

1.4.3 An archaeological desk-based assessment was prepared in support of the original planning application (CgMs 2014). An archaeological evaluation of the site by trial trenching was undertaken in October 2016. A shallow undated gully was recorded in Trench 5 (ASE 2016a). This was considered likely to be of late 19th or early 20th century origin.

1.4.4 A more substantial ditch was recorded in Trench 13 of the evaluation, sealed beneath colluvium. This contained fragments of pottery and a worked flint that are dated as broadly prehistoric. The ditch could be associated with prehistoric activity previously recorded to the east of the site (*ibid.*)

1.4.5 Subsequently ASE was commissioned by CgMs to undertake a strip, map and sample mitigation at the site, carried out in accordance with a Written Scheme of Investigation (WSI) prepared by ASE (ASE 2016b), with reference to the *KCC Manual of Specification for Mitigation - Strip, Map and Sample*, and the relevant *Standards and Guidance* of the Institute for Archaeologists (CIfA 2014a,b).

1.4.6 The Written Scheme of Investigation (ASE 2016b) was formally lodged through a letter dated 18th July 2016 in order to discharge the planning condition. The on-site archaeological works have now been undertaken and completed to the satisfaction of the KCC Archaeological Officer. This report represents the final stage of archaeological work and that the condition is sought to be discharged on this basis.

1.4.7 This stage of fieldwork was undertaken by ASE in December 2016. The strip, map and sample mitigation was undertaken in the field by a team comprising Simon Stevens (Senior Archaeologist), John Cook and Naomi Humphreys (Archaeological Surveyors). The project was managed by Jon Sygrave and Neil Griffin (Fieldwork), and by Jim Stevenson and Dan Swift (Post-Excavation).

1.5 RESEARCH AIMS

1.5.1 The broad research aims of the strip, map and sample mitigation, given in the WSI (ASE 2016b) were:

> *'To excavate and record all archaeological remains and deposits exposed in the stripped areas in order to understand their character, extent, preservation, significance and date before their loss through development impacts.*
>
> *To understand to what extent the features exposed during the evaluation can be explained through excavation/observation of the wider area.*
>
> *To refine the dating, character and function of the features at this site.*
>
> *To establish a broad phased plan of the archaeology revealed following the stripping of the site;*
>
> *To provide a refined chronology of the archaeological phasing'*

1.5.2 The project also sought to address issues identified within the following areas of research in line with the South-Eastern Research Framework (SERF):

To clarify the form, character and extent of prehistoric archaeology on the site.

To identify any structural remains and establish date, form, function and status in so far as is practicable

To use environmental evidence to better understand local diet and subsistence'

1.6 Organisation of the Report

1.6.1 The current report seeks to place the results from the strip, map and sample exercise undertaken at the site within their local archaeological and historical setting; to quantify and summarise the results; specify their significance and potential, including any capacity to address the original research aims.

2.0 HISTORICAL AND ARCHAEOLOGICAL BACKGROUND

2.1 Introduction

2.1.1 The archaeological background is set out in an Archaeological Desk-Based Assessment (DBA) prepared for the site by CgMs Consulting (CgMs 2014); please refer to that document for a full background.

2.2 Prehistoric

2.2.1 Palaeolithic flint implements have been recovered as chance finds in the vicinity of the site. Some were found 'possibly in gravel above Upper Chalk' immediately to the north of the site in 1931 during gravel extraction (TQ57SE71 TQ580741). Elsewhere within 1km of the site the tip of an Acheulian handaxe was found in the topsoil of an evaluation trench approximately 250m east of the study site (TQ57SE173 TQ58267421), 19 flint flakes were found in Pleistocene fluvial gravels during an evaluation approximately 250m north east of the site (TQ57SE160 TQ5825674305), a Palaeolithic hand axe was discovered somewhere in Stone (TQ57SE76 TQ5774) and TQ57SE75 TQ5774), whilst Globe Pit in Greenhithe approximately 900m north east of the site produced a significant number of worked flints (TQ57SE16 TQ58857462).

2.2.2 Three pits containing burnt flint were recorded in Area B of the archaeological investigations at Waterstone Park approximately 50m east of the north eastern boundary of the site. These pits were identified as possible fire pits or hearths of possible Neolithic or Bronze Age date. In addition, a deposit of colluvium was recorded and was found to contain a large amount of burnt flint along with flint tempered pottery of possible Bronze Age date. No other evidence of archaeological activity was recorded within Area B.

2.2.3 Approximately 200m from the eastern boundary of the site within Area A of the Waterstone Park excavations, a Bronze Age ring ditch was recorded, possible evidence of a ploughed out barrow.

2.2.4 Elsewhere three hard-hammer struck flakes of probable Neolithic or Bronze Age date were found during a watching brief approximately 800m north west of the site (TQ57SE172 TQ5764874811), a Neolithic polished axe was found at Horns Cross gravel pit approximately 900m north west of the site (TQ57SE60 TQ57157443) and a bronze spearhead found at Stone Court approximately 600m north west of the site (TQ57SE15 TQ57597476).

2.3 Iron Age and Roman

2.3.1 A possible Iron Age inhumation was recorded approximately 150m east of the site during the Area A excavations at Waterstone Park (TQ57SE208 TQ58257425).

2.3.2 Evidence of a late Iron Age-Romano British farming settlement was recorded during the investigations at Waterstone Park approximately 150m south east of the site. Evidence of field systems were recorded along with a number of grain storage pits some containing ritual deposits including a foal and dog burial (TQ57SE209 TQ58287418 and TQ57SE178 TQ5835874182).

2.3.3 Elsewhere a substantial Iron Age storage pit was found in the face of the Stone Castle Chalk pit in 1941 approximately 200m south of the site (TQ57SE48 TQ57967400). Chalk pit excavations in the 1960s identified an Iron Age hut circle and cattle enclosure approximately 700m south of the site.

2.3.4 Evidence of a potential Iron Age settlement comprising three pits and a large quantity of pottery fragments of Belgic type, were found during construction of a new housing estate approximately 800m south west of the site (TQ57SE13 TQ57197376).

2.3.5 The proposed alignment of Watling Street (the Roman road leading from London to Canterbury) lies approximately 1km south of the site following the line of the A296.

2.3.6 The excavations in the 1960s at the chalk pit approximately 700m south of the site revealed the remains of a Romano British settlement, probably a farmstead represented by pits, ditches and flint footings of a small building close to the line of Watling Street.

2.3.7 A Romano British cemetery containing both inhumations and cremations was recorded during investigations at Stone Castle chalk pit approximately 300m north east of the site (TQ57SE6 TQ58487436) most likely associated with the settlement activity recorded to the south.

2.3.8 A further Roman cremation burial and associated pottery was recorded at Horns Cross approximately 900m north west of the site (TQ57SE62 TQ5774).

2.4 Anglo-Saxon and Early Medieval

2.4.1 Settlement at Stone has been recorded since the Saxon period and Stone was recorded in the Domesday Survey of 1086 comprising of an estate of 23 acres and a mill.

2.4.2 Stone Castle was originally constructed in the 12th century during the reign of King John and was the home of John de Norwood, the Lord of the Manor of Stone by the 14th century. The castle is situated approximately 300m east of the study site (TQ57SE1031 TQ58397406).

2.4.3 St Mary's church was originally constructed in the 13th century approximately 800m north west of the study site. The church and the adjacent former Bishop's manor (TQ57SE5 TQ57587478) formed the core of the medieval settlement at Stone.

2.4.4 A number of Anglo Saxon and medieval finds have been recorded within a 1km radius of the site. These include two Anglo Saxon/early medieval copper alloy pins and a lead weight (MKE58032, MKE58036, MKE58033 TQ5800074000), a medieval iron key (MKE58127 TQ5770074800) and a medieval lead weight (MKE58035 TQ5800074000).

2.5 Late Medieval and Post-Medieval

2.5.1 The 1769 Andrews, Drury and Herbert Map shows the site occupied by agricultural land on the edge of the small hamlet of Hedge Place to the west of

Stone Castle. Between 1907 and 1931 sand and gravel quarrying had extended into the land to the north of the site. The site itself remained agricultural land.

3.0 METHODOLOGY

3.1 Archaeological Methodology

3.1.1 The size of the strip, map and sample area, was agreed after liaison between ASE, CgMs and KCC, and is shown on Figure 2. It was located in the south-eastern corner of the site.

3.1.2 The area was mechanically excavated using a toothless ditching bucket under archaeological supervision. Machine excavation continued to the top of archaeological deposits or the surface of geological deposits, whichever was uppermost. Machine excavation proceeded in spits of no more than 200mm depth in accordance with the WSI (ASE 2016b).

3.1.3 All archaeological features and deposits were manually cleaned, excavated and recorded using the standard context record sheets used by Archaeology South-East. All features were planned using a Digital Global Positioning System (DGPS) and DGPS Total Station (Leica 1205 R100 Total Station, Leica System 1200 GPS).

3.1.4 On-site sampling methodology, processing and recording was undertaken within the guidelines laid out in the WSI (*ibid.*). A standard bulk sample size of 40litres was taken from sealed contexts to recover environmental remains such as fish, small mammals, molluscs and botanicals.

3.2 The Site Archive

3.2.1 The site archive is currently held at the offices of ASE and will be offered to Dartford Museum in due course. Material from all stages of fieldwork will be deposited under site code HPR16. The contents of the archive are tabulated below (Table 1).

Context sheets	66
Section sheets	2
Plans sheets	0
Colour photographs	0
B&W photos	0
Digital photos	56
Context register	3
Drawing register	7
Watching brief forms	0
Trench Record forms	13

Table 1: Quantification of the site paper archive

Bulk finds (quantity e.g. 1 bag, 1 box, 0.5 box 0.5 of a box)	1 small box
Registered finds (number of)	1
Flots and remains from bulk samples	-
Palaeoenvironmental specialists sample samples (e.g. columns, prepared slides)	-
Waterlogged wood	-
Wet sieved remains from bulk samples	-

Table 2: Quantification of the artefact and environmental samples

4.0 ARCHAEOLOGICAL RESULTS

4.1 Introduction

4.1.1 Following the identification of a probable prehistoric feature during the evaluation of the site, it was stipulated by KCC that part of the site would need to be subjected to further archaeological scrutiny in order to meet the terms of the planning condition pertaining to archaeological remains. These mitigation works took the form of an archaeological strip, map and sample exercise targeted on the part of the site where potential prehistoric deposits had been encountered during the archaeological evaluation of the site (ASE 2016a).

4.2 Site Stratigraphy (Figure 3)

4.2.1 Following the mechanical removal of layers of topsoil [100] and layers of made ground [101] and [102], four archaeological features were identified in the strip, map and sample area; a further stretch of the ditch originally identified during the evaluation, two previously unrecorded gullies and deposits representing the remains of quarrying activity at the site.

Context	Type	Description	Width (m)	Depth (m)
100	Layer	Topsoil		0.26
101	Layer	Made ground		0.43
102	Layer	Made ground		0.26
103	Layer	Natural	-	-
104	Cut	Gully terminus	0.67	-
105	Fill	Gully terminus	-	0.15
106	Cut	Gully	0.79	-
107	Fill	Gully	-	0.15
108	Cut	Gully terminus	0.61	-
109	Fill	Gully terminus	-	0.19
110	Cut	Ditch terminus	1.95	
111	Fill	Ditch terminus	-	0.19
112	Cut	Ditch	NFE	NFE
113	Fill	Ditch	-	-
114	Cut	Ditch	1.57	-
115	Fill	Ditch	-	0.05
116	Fill	Ditch	-	0.08
117	Fill	Ditch	-	0.21
118	Fill	Ditch	-	0.25
119	Cut	Gully	0.80	-
120	Fill	Gully	-	0.26
121	Cut	Gully	0.69	
122	Fill	Gully	-	0.35
123	Cut	Gully	0.68	-
124	Fill	Gully	-	0.29
125	Cut	Quarry	NFE	
126	Fill	Quarry	-	>1.5

Table 3: Recorded contexts (NFE – not fully excavated)

4.2.2 Ditch [114] ran from the south-eastern corner of the stripped area and turned to run northwards before terminating. A section was manually excavated

through the feature to the south of the evaluation trench, where it was 1.57m wide and 590mm deep. The fills of the feature were found to be similar to those previously recorded. The basal fill was [118], a mid-brown silty clay, which was overlain by [117], a mid-greyish brown silty clay. Scraps of pottery dating broadly to the Late Bronze Age to Iron Age were recovered from these contexts. A sample from context [118] produced limited environmental remains.

4.2.3 The upper fills [116], a layer of yellowish brown silty sand, and [115], a mid-greyish brown silty clay did not produce any dating evidence.

4.2.4 The ditch (recorded here as [112] and [113]) had been partially truncated by a curving gully which ran from south-east to north-west in the south-eastern part of the stripped area. Four sections were excavated though the gully, recorded as cuts [104], [106], [108] and [119]. The single fills ([105], [107], [109] and [120] respectively) were all orange or greyish brown silty clays, from which fire-cracked flint and animal teeth were recovered, which may be residual.

4.2.5 The ditch terminated further to the north, where it was recorded as a 1.95m wide, 190mm deep cut [110]. It had been partially truncated by quarrying activity (see below) resulting in the survival of only the primary fill, an orangey brown silty clay [111]. Fire-cracked flint was recovered from this context as well as scraps of Late Iron Age/Early Romano-British pottery but an environmental sample taken for analysis produced no significant material.

4.2.6 The ditch terminus had been partially truncated by the remains of quarrying activity which occupied much of the northern part of the stripped area. Recorded as cut [125], the extent of the feature remains unclear, but it was more than 1.5m deep, and had been backfilled with a highly-mixed deposit containing layers of brick rubble and other post-medieval material [126].

4.2.7 The quarry also truncated another short stretch of gully which ran under the northern baulk of the stripped area. Two sections were excavated through the feature, recorded as cuts [121] and [123]. The single, undated fills were orangey brown silty clays ([122] and [124] respectively).

5.0 THE FINDS

5.1 Summary

5.1.1 A small assemblage of finds was recovered during the archaeological strip, map and sample at Hedge Place, Dartford. All finds were washed and dried or air dried as appropriate. They were subsequently quantified by count and weight and were bagged by material and context. Bulk finds are quantified in Table 4, whilst a single registered find is described separately. All finds have been packed and stored following CIfA guidelines (2014c).

Context	Lithics	Weight (g)	Pottery	Weight (g)	CBM	Weight (g)	Iron	Weight (g)	Bone	Weight (g)	Clay Tobacco Pipe	Weight (g)	Fire Cracked Flint	Weight (g)	Geological Material	Weight (g)	Glass	Weight (g)
100			25	383	3	127					1	6	3	31	3	32	3	386
107																		
111													2	143				
117			3	2														
118			1	2														
120									2	6								
124																		
126	3	23	9	130	7	226	2	120			6	14						
Total	3	23	38	517	10	353	2	120	2	6	7	20	5	174	3	32	3	386

Table 4: Finds quantification (Strip, Map and Sample)

5.2 **The Flintwork** by Karine Le Hégarat

5.2.1 A total of four pieces of struck flint weighing 30g were recovered during the archaeological work at the site. Context [126] contained three flakes, one of which was retouched, and evaluation context [13/008] also produced a flake. The later was made from Bullhead Beds flint and consists of a primary flake. One of the flakes from context [126] is broken. It is made on a dark grey flint and displays a cortical platform. Another flake from the same context is entirely recorticated light bluish white. It exhibits thin flake scar removals on the dorsal face. The retouched flake has been modified on the proximal left. Originally, the modification may have extended further on the lateral edge, but the flake is broken and it is impossible to confirm this.

5.2.2 The pieces of worked flint provide limited evidence for a prehistoric presence in the landscape, but they are not closely datable. The exception is the retouched flake. Based on its condition and technological traits, this piece is likely to predate the Middle Bronze Age.

5.3 **The Prehistoric/Roman Pottery** by Anna Doherty

5.3.1 Some very small abraded fragments of flint-tempered prehistoric pottery were hand-collected from gully fills [117] and [118]: in total just 4 sherds, weighing 4 grams. The sherds are possibly too small to adequately characterise fabric type; however, they appear to contain relatively fine flint of <1.5mm. As such, they are probably more likely to belong to the later prehistoric period (Late Bronze Age or pre-Belgic Iron Age), though they cannot be dated with certainty. A similarly fragmented flint-tempered sherd had been recovered from context [13/007], during the evaluation.

5.3.2 In addition 10 Late Iron Age/early Roman sherds, weighing 21g, were recovered from environmental sample <1001>, taken from gully fill [111]. The sherds are in a well-fired unoxidised ware with a fine sandy matrix and sparse grog of c.1-2mm with very rare inclusions of flint up to 2mm. All of the sherds are probably from the same vessel and one shows traces of rilled decoration. This material dates to the 1st century AD and is almost certainly of later date than the prehistoric sherds from contexts [117] and [118].

5.4 **The Post-Roman Pottery** by Luke Barber

5.4.1 The archaeological monitoring recovered 34 sherds of pottery weighing 340 grams from two individually numbered contexts. The material has been fully listed in Table 5 as part of the visible archive and has been discarded.

Context	Fabric	Period	No	Weight	Comments
100	Frechen stoneware	EPM	2	8g	Jug x1 (Iron wash, salt glaze). Simple upright rim
100	Glazed red earthenware (early)	EPM	1	16g	Uncertain form x1 (clear glaze all over). Worn
100	Unglazed red earthenware	LPM	1	2g	Flower pot x1
100	Glazed red earthenware (early)	LPM	1	34g	Jug x1 (spot metallic glaze). C18th?
100	English stoneware	LPM	2	52g	Bottle x2 (x1 tan top large spirit bottle with Bristol glaze, x1 iron wash, salt glaze)
100	Blue transfer-printed whiteware	LPM	9	64g	Plate x3 (x1 Willow, x1 Asiatic pheasant pattern), dish x1 (Willow pattern), bowl x2 (uncertain pattern)
100	Black transfer-printed whiteware	LPM	2	60g	Preserve jar x1 (Keiller marmalade), basin (foliage design)
100	Refined whiteware	LPM	4	34g	Jug x1 (blue marbled), bowl x1, ?preserve jar x1
100	English porcelain	LPM	3	10g	Cup x1, saucer x1
126	English stoneware	LPM	2	30g	Plate x1 (Willow pattern), bowl x1 (Willow pattern)
126	Refined whiteware	LPM	3	26g	Preserve jar x1 (close-set vertical ribbing), uncertain forms x2
126	English porcelain	LPM	1	4g	Uncertain form x1

Table 5: Pottery assemblage (EPM – Early Post-Medieval c. 1550-1750; Late Post-Medieval c. 1750-1900+).

5.4.2 The earliest sherds can best be placed in a mid-17th- to mid-18th- century date bracket but the earthenware sherd from [100] is notably abraded. Although the associated Frechen stoneware is not abraded, it is likely this is due to its hard firing. As such the early material may well relate to manuring during periods of

arable cultivation. The late post-medieval assemblage is a fairly typical domestic spread one may expect from a lower class household in the second half of the 19th century.

5.5 The Ceramic Building Material (CBM) by Isa Benedetti-Whitton

5.5.1 Ten tile fragments weighing a total of 353g were hand collected from two contexts: [100] and [126]. The assemblage was composed entirely of roof tile fragments in the same fine sandy and occasionally calcareous fabric. One fragment from [100] had a large round peg hole. It is possible that the tile is of an originally early post medieval date, *c.*16th-17th century, but traces of cement mortar present on the fragment with peg hole from [100] indicate re-use during the mid-19th century or later. However, none of the tile fragments from [126] had any mortar on them at all (or any distinguishing features of any sort) and could represent an earlier deposit.

5.5.2 All the material was quantified by form, weight and fabric and recorded on standard recording forms. This information was then entered into a digital Excel database. Fabric descriptions were developed with the aid of a x20 binocular microscope and use the following conventions: frequency of inclusions as sparse, moderate, common or abundant; the size of inclusions as fine (up to 0.25mm), medium (up to 0.25mm and 0.5mm), coarse (0.5mm-1.0mm) and very coarse (larger than 1.0mm). None of the CBM has been retained.

5.6 The Clay Tobacco Pipe by Luke Barber

5.6.1 The archaeological work recovered seven fragments of clay pipe stem from the site. The earliest was recovered from topsoil [100] and consists of a worn 6g piece of *c.*1650-1700 date range (44mm long with a bore diameter of 2.6mm). The other pieces (14g with a cumulative length of 210mm and bore diameters of 1.3mm to 1.5mm) are fresher but belong to a *c.*1750-1900 date range ([126]). The clay pipe has been discarded.

5.7 The Geological Material by Luke Barber

5.7.1 Context [100] produced three pieces (32g) of Welsh roofing slate, almost certainly of the mid 19th to early 20th centuries. The material has been discarded.

5.8 The Glass by Luke Barber

5.8.1 Topsoil [100] produced three pieces of glass, all of which are slightly abraded but uncorroded. These consist of two base fragments from dark green cylindrical wine/beer bottles (358g), one of which has a diameter of 79mm. Both have lightly kicked bases. The other piece is from a cylindrical bottle in aqua-coloured glass (28g). All pieces can be placed in a mid-19th- to early 20th-century date range. The glass has been discarded.

5.9 The Bulk Metalwork by Susan Chandler

5.9.1 Two iron objects were recovered during the works on site, weighing a total of 120g. These objects were both recovered from quarry fill [126]. They consist of a single nail, with a square head and square sectioned stem and approximately

half of a horse shoe with the remains of two further nails attached. The shoe is much worn from use at the toe, with one open nail hole and has a slightly thickened heel. It is likely to be late medieval or post-medieval in date, and comparable though more complete examples can be found in Goodall (2011, fig 13.4 N26 or N27, 371). These examples are dated *c*1500.

5.10 The Metallurgical Remains by Luke Barber

5.10.1 Two environmental residues produced magnetic fractions which were carefully scanned for the presence of metallurgical remains. That from ditch fill [111] was composed of <1g of magnetic fines (granules of ferruginous siltstone and clay which have had their magnetic properties enhanced through burning) with four tiny crumbs of fuel ash slag and a single hammerscale sphere. The magnetic fraction from ditch fill [118] consisted purely of magnetic fines (<1g). The fuel ash slag is not diagnostic of process and, although the hammerscale clearly relates to iron smithing, the single, tiny piece could easily be residual or intrusive. The slag has been discarded

5.11 The Animal Bone by Hayley Forsyth-Magee

5.11.1 A small assemblage of animal bone containing just two fragments weighing 6g was recovered from the excavations. The faunal remains were hand-collected from gully fill [120] and are in a moderate state of preservation, with some signs of surface erosion.

5.11.2 The faunal remains consist of teeth and have been identified as sheep 1st and 2nd mandibular molars. The dentition is adult and both teeth show signs of moderate wear on the occlusal surfaces. No evidence of butchery, burning, gnawing, pathology or non-metric traits have been noted.

5.12 The Registered Find by Susan Chandler

5.12.1 A single registered find, RF <1>, was recorded: a copper alloy penny of Queen Elizabeth II, dated 1961, recovered from topsoil [100].

6.0 THE ENVIRONMENTAL MATERIAL by Stacey Adams

6.1 Introduction

6.1.1 Two bulk samples were taken during excavations at Hedge Place, Dartford from ditch fills [111] and [118] for the recovery of environmental remains such as plant macrofossils, wood charcoal, fauna and Mollusca. The following report details the preservation of the charred plant material and discusses its potential to inform on the diet, arable economy and local environment of the site.

6.2 Methods

6.2.1 The flotation samples, both 40L in volume, were processed by flotation tank with a 250µm mesh for retention of the flot and a 500µm mesh for the heavy residue, before being air dried. The heavy residues were passed through graded sieves of 8, 4 and 2mm and each fraction sorted for environmental and artefactual remains (Table 6). Artefacts recovered from the samples were distributed to specialists, and are incorporated in the relevant sections of this volume where they add further information to the existing finds assemblage.

6.2.2 The flots were scanned in their entirety, under a stereozoom microscope at 7-45x magnifications and their contents recorded (Table 7). Provisional identification of the charred remains was based on observations of gross morphology and surface cell structure and quantification was based on approximate number of individuals. Nomenclature follows Stace (1997) for wild species.

6.3 Results

Samples <1001> [111] and <1002> [118].

6.3.1 The heavy residues contained worked flint, fire-cracked flint, pot and magnetic material. Wood charcoal fragments were present in both samples although they were too infrequent to be submitted for identification (<3g from the >4mm fraction of the heavy residue).

6.3.2 The flots contained 80 to 95% uncharred material of modern roots, twigs and elder (*Sambucus*) seeds. Land snail shells were abundant in both samples and included intrusive burrowing molluscs (*Ceciloides*). A small number of insect remains were present in ditch fill [111].

Charred Plant Macrofossils

6.3.3 Charred plant macrofossils were absent from ditch fill [111] and rare in ditch fill [118]. Preservation of the charred remains was moderate with identification possible to genus and occasionally species level. Black-bindweed (*Fallopia convolvulus*) is a common arable weed and also grows on waste ground. Buttercups (*Ranunculus acris*-type) are a grassland taxa, particularly found in wetland areas. An indeterminate wild grass (Poaceae) caryposis was also identified in ditch fill [118].

6.4 Discussion

6.4.1 The charred plant remains from Hedge Place were likely growing in the vicinity of the site and became burnt alongside the wood charcoal. The presence of

moderately well-preserved charred plant macrofossils and the small amount of wood charcoal indicates the potential for the future recovery of such remains if well-secure primary deposits are targeted.

Sample Number	Context	Context / Deposit Type	Sample Volume (L)	Charcoal <4mm	Weight (g)	Land Snail shells	Weight (g)	Other (eg. pot, flint etc.) (presence/ weight)
1001	111	Ditch	40	*	<1	*	<1	Flint (*/16g) FCF (**/35g) Pot (*/19g) Mag.Mat. >2mm (**/<1g) Mag.Mat. <2mm (**/<1g)
1002	118	Ditch	40	*	<1	*	<1	Flint (**/692g) FCF (*/38g) Mag.Mat. >2mm (*/<1g) Mag.Mat. <2mm (**/<1g)

Table 6: Residue quantification (* = 1-10, ** = 11-50, *** = 51-250, **** = >250) and weights in grams.

Sample Number	Context	Weight (g)	Flot volume (ml)	Uncharred %	Sediment %	Seeds uncharred	Charcoal <4mm	Charcoal <2mm	Weed seeds charred	Identifications	Preservation	Insects, Fly Pupae etc.	Land Snail Shells	Notes
1001	111	3	25	90	5		*	*				*	****	*Ceciloides*
1002	118	4	15	80		*Sambucus**	**	***	*	Poaceae (small) *Fallopia convolvulus* *Ranunculus acris*-type	++		***	*Ceciloides* Modern twigs

Table 7: Flot quantification (* = 1-10, ** = 11-50, *** = 51-250, **** = >250).

7.0 DISCUSSION

7.1 Overview of stratigraphic sequence

7.1.1 Overlaying the natural on site was of approximately 0.70m of made-ground beneath 0.26m of topsoil. Cut into the natural was a ditch, first identified during the evaluation stage of works. This had been cut by a gully and a quarry. A further gully was identified, also cut by later quarrying activity. The natural was located between 39.32 and 39.69m OD.

7.2 Deposit Survival and existing impacts

7.2.1 The archaeological deposits are sealed beneath approximately 1.0m of overburden. However, the presence of two made ground deposits and an absence of subsoil suggest significant truncation across the site. Post-medieval quarrying has further truncated the natural and features across the eastern part of the site.

7.3 Archaeological features

7.3.1 The ditch previously identified in the evaluation crossed the area from the south-eastern corner turning north. The sparse dating evidence recovered suggests a prehistoric to early Romano-British date. This ditch was cut by an undated gully and post-medieval quarrying activity, which also cut a further, undated gully.

7.4 Consideration of research aims

7.4.1 Unfortunately, the research aims cannot be adequately addressed due to the paucity of features and a lack of reliable dating evidence. Prehistoric activity in the vicinity of the site is evidenced by broadly dated pottery and flintwork, some of which was residual in later features. Whilst some of the features encountered may represent the remains of a prehistoric/Early Romano-British field system, no further clarification is possible from the evidence available. Despite the survival of environmental material, the samples did not provide any significant information.

7.4.2 Post-medieval quarrying activity was also recorded on site. There are no quarries shown in any of the cartographic sources (CgMs 2014), so the activity was probably short term and small scale, arguably terminated when the material was not considered economically viable, leaving a conspicuous open field in an area of Kent where there were numerous quarries (including the large-scale working now occupied by the Bluewater Shopping Centre immediately to the south of the current site).

7.5 Discussion

7.5.1 Interpretation of the remains at the site has been somewhat hampered by the lack of clear dating evidence and the poor quality of the environmental material.

7.5.2 Given the scarcity of material culture and environmental evidence, it can be safely concluded that the features lay some distance from the focus (or foci) of domestic or industrial activity, probably located to the east at the site excavated

at Waterstone Park (see Section 2.0 above). Arguably, the range of dating evidence could suggest that the ditch was part of a field system that was in use over a long period of time, but the evidence is too limited to draw firm conclusions about the nature of the activity at the current site.

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ACKNOWLEDGEMENTS

ASE would like to thank Suzanne Gailey of CgMs Consulting for commissioning the work and for her assistance throughout the project. Thanks are also due to Wendy Rogers of Kent County Council for her guidance and monitoring.

HER Form

Site Code	HPR16					
Identification Name and Address	Hedge Place Road, Dartford					
County, District &/or Borough	Dartford Borough, Kent					
OS Grid Refs.	558070 174143					
Geology	Boyn Hill gravel over chalk					
Arch. South-East Project Number	160917					
Type of Fieldwork		Excav.✓				
Type of Site	Green Field ✓					
Dates of Fieldwork		Excav. 12.12.2016 - 22.12.2015				
Sponsor/Client	CgMs Consulting					
Project Manager	Jon Sygrave/Neil Griffin					
Project Supervisor	Simon Stevens					
Period Summary			Neo. ✓	BA ✓	IA ✓	
			PM ✓			

Site Summary

Archaeology South-East was commissioned by CgMs Consulting to undertake a programme of archaeological work at Hedge Place Road, Stone, Dartford, Kent (TQ 58070 74143) in advance of a residential development.

An archaeological evaluation of the site by trial trenching identified archaeological deposits in the eastern part of the site. A subsequent strip, map and sample exercise resulted in the identification and recording of a limited number of linear features broadly dated to the prehistoric or Late Iron Age/Early Romano-British period on the evidence of scraps of pottery and flintwork, as well as indications of post-medieval quarrying activity. The quality of environmental evidence was poor.

OASIS Form

OASIS ID: archaeol6-272651

Project details

Project name	An Archaeological Investigation at Hedge Place Road, Dartford, Kent
Short description of the project	Archaeology South-East was commissioned by CgMs Consulting to undertake a programme of archaeological work at Hedge Place Road, Stone, Dartford, Kent (TQ 58070 74143) in advance of a residential development. An archaeological evaluation of the site by trial trenching identified archaeological deposits in the eastern part of the site. A subsequent strip, map and sample exercise resulted in the identification and recording of a limited number of linear features broadly dated to the prehistoric period on the evidence of scraps of pottery and flintwork, as well as indications of post-medieval quarrying activity. The quality of environmental evidence was poor.
Project dates	Start: 12-12-2016 End: 22-12-2016
Previous/future work	Yes / No
Any associated project reference codes	160917 - Contracting Unit No.
Any associated project reference codes	HPR16 - Sitecode
Any associated project reference codes	DA/12/01150/FUL - Planning Application No.
Type of project	Recording project
Site status	None
Current Land use	Other 13 - Waste ground
Monument type	GULLY Late Prehistoric
Monument type	DITCH Late Prehistoric
Significant Finds	FLINTWORK Late Prehistoric
Significant Finds	POTTERY Late Prehistoric
Investigation type	""""Open-area excavation""""
Prompt	Direction from Local Planning Authority - PPS

Project location

Country	England
Site location	KENT DARTFORD STONE Hedge Place Road
Postcode	DA9 9JJ
Study area	0.93 Hectares

Site coordinates	TQ 58070 74143 51.443666482506 0.274798429074 51 26 37 N 000 16 29 E Point

Project creators

Name of Organisation	Archaeology South-East
Project brief originator	CgMs Consulting
Project design originator	Archaeology South-East
Project director/manager	JON SYGRAVE
Project supervisor	Simon Stevens
Type of sponsor/funding body	Client
Name of sponsor/funding body	CgMs Consulting

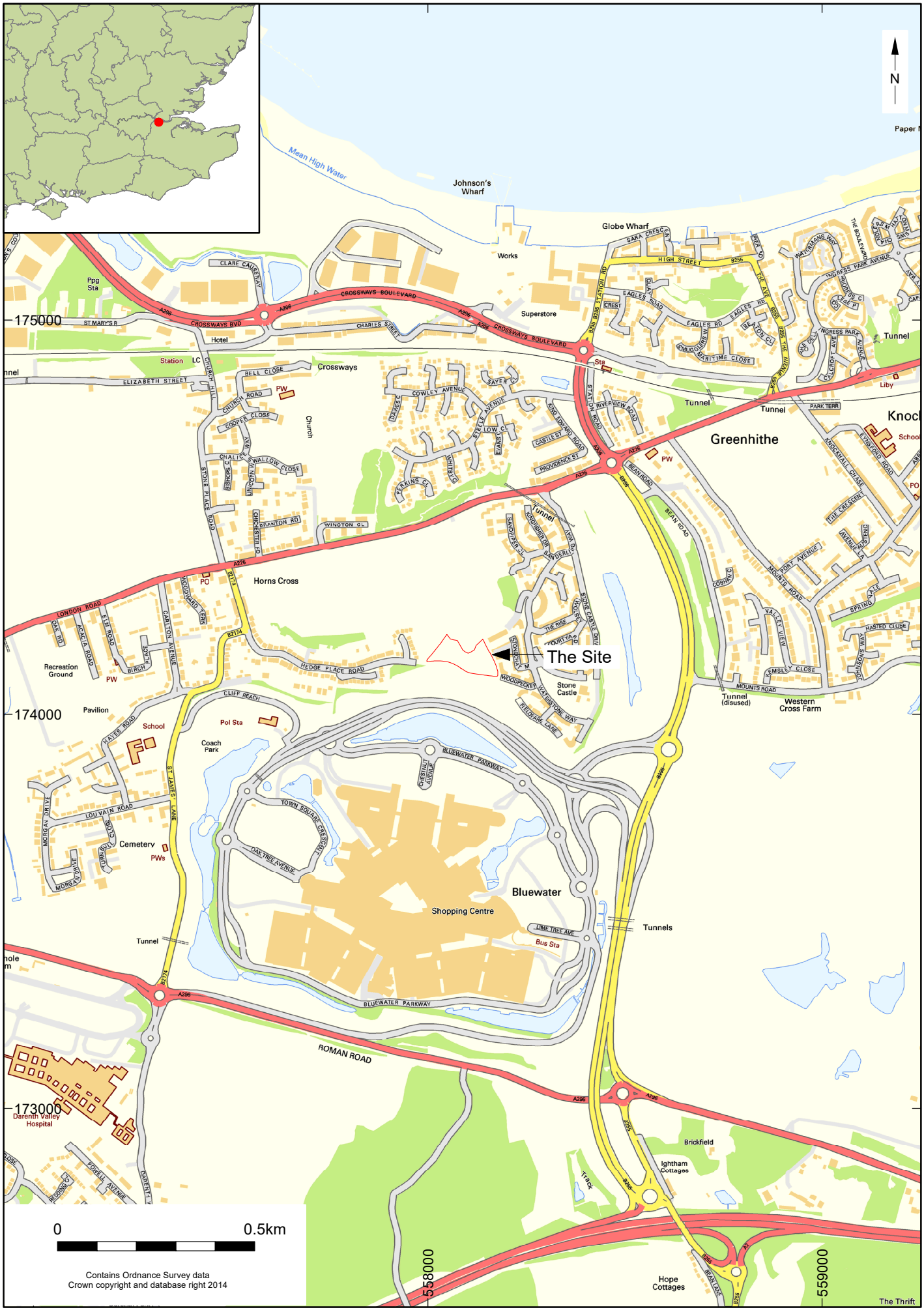
Project archives

Physical Archive recipient	Dartford Museum
Physical Contents	"Ceramics","Worked stone/lithics"
Digital Archive recipient	Dartford Museum
Digital Contents	"other"
Digital Media available	"Images raster / digital photography","Survey"
Paper Archive recipient	Dartford Museum
Paper Contents	"other"
Paper Media available	"Context sheet","Correspondence","Miscellaneous Material","Report","Unpublished Text"

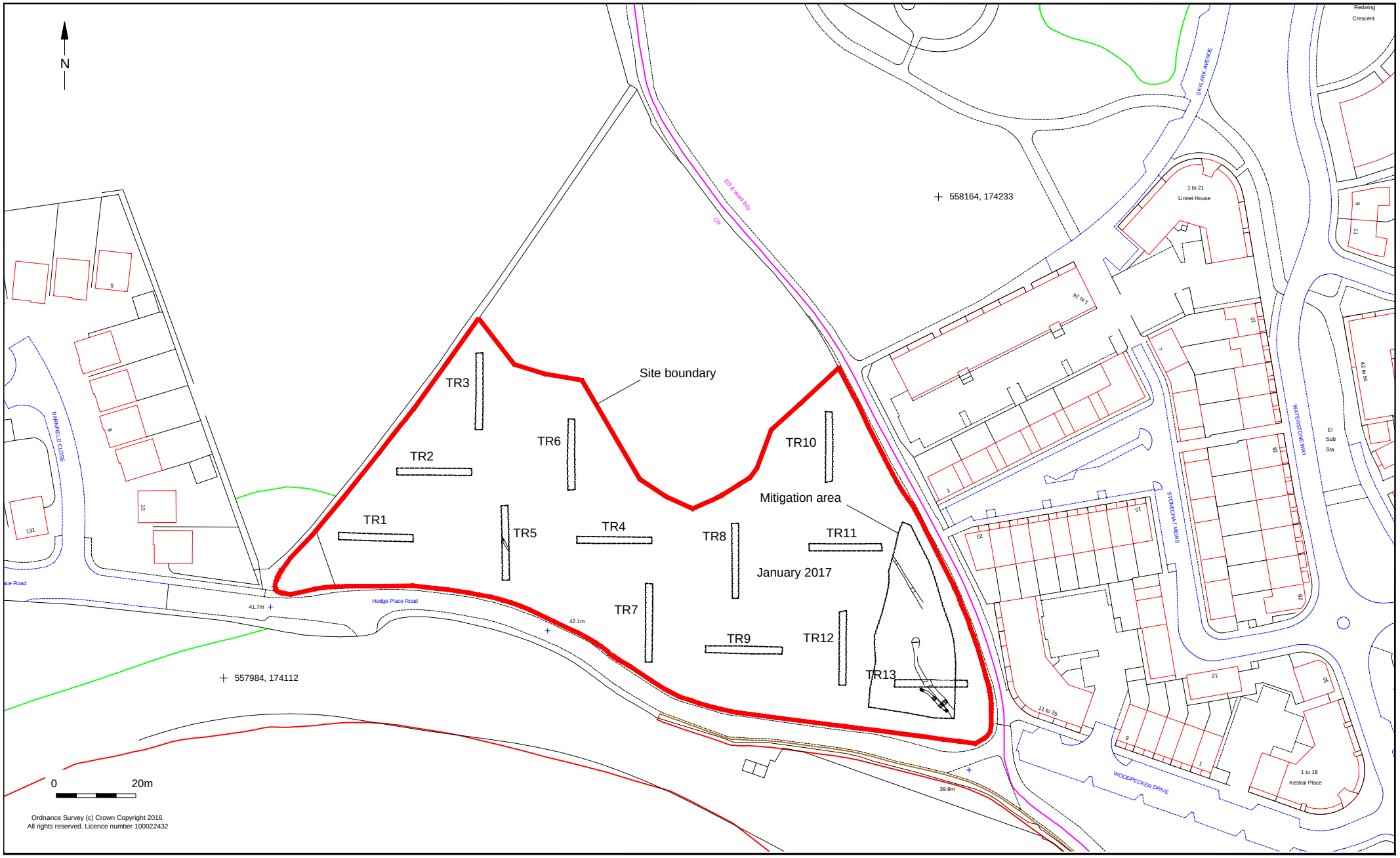
Project bibliography 1

Publication type	Grey literature (unpublished document/manuscript)
Title	Archaeologica Investigations at Hedge Place Road, Dartford, Kent
Author(s)/Editor(s)	Stevens, S.
Other bibliographic details	ASE Report No. 2017007
Date	2017
Issuer or publisher	Archaeology South-East

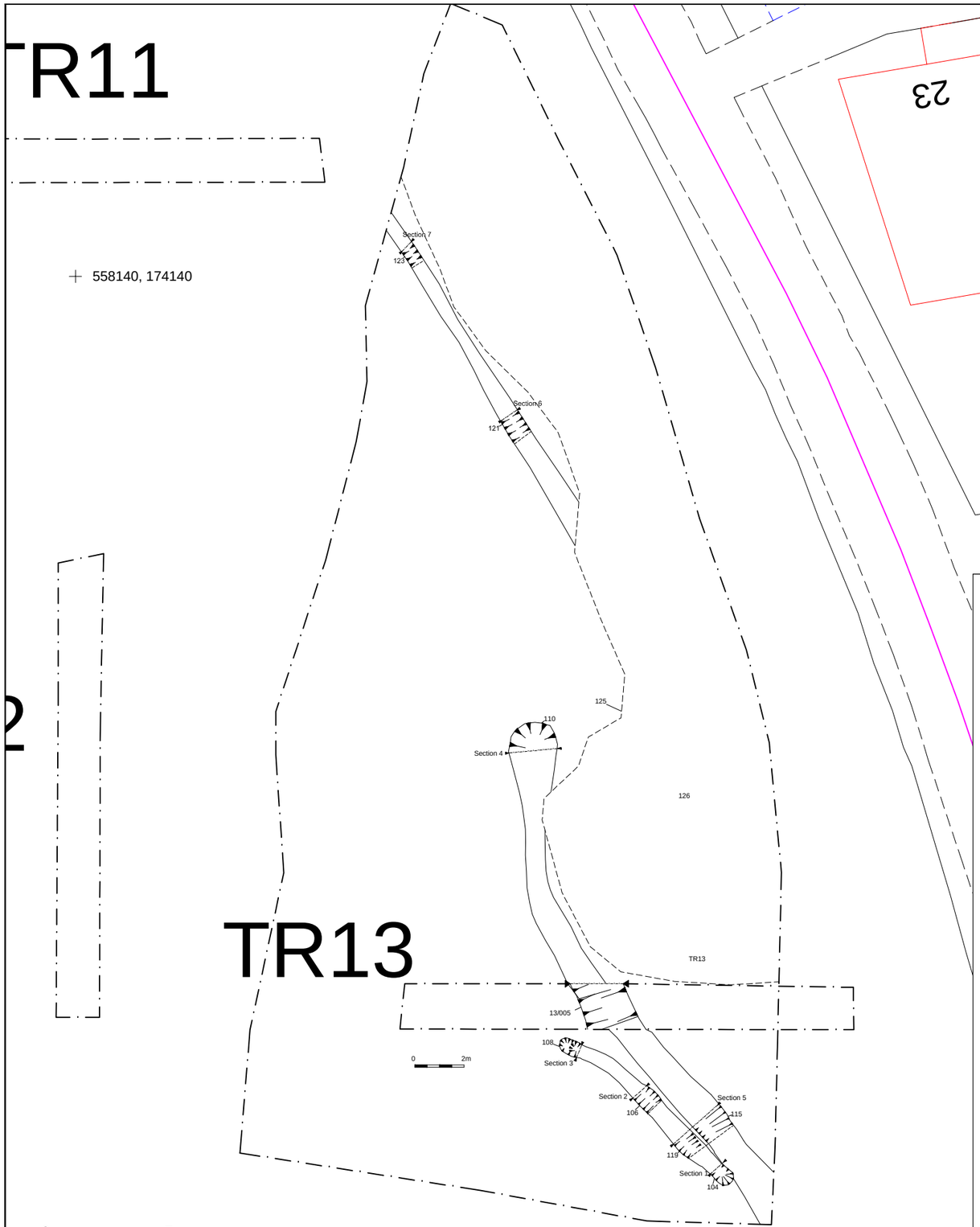
Place of issue or publication	Portslade, East Sussex
Description	Standard ASE client report. A4-sized with cover logos
Entered by	Simon Stevens (simon.stevens@ucl.ac.uk)
Entered on	25 January 2017



© Archaeology South-East		Hedge Place, Dartford	Fig. 1
Project Ref: 160917	January 2017	Site location	
Report Ref: 2017007	Drawn by: JC		



© **Archaeology South-East**		Hedge Place, Dartford	Fig. 2
Project Ref: 160917	January 2017	Site plan	
Report Ref: 2017007	Drawn by: JC		

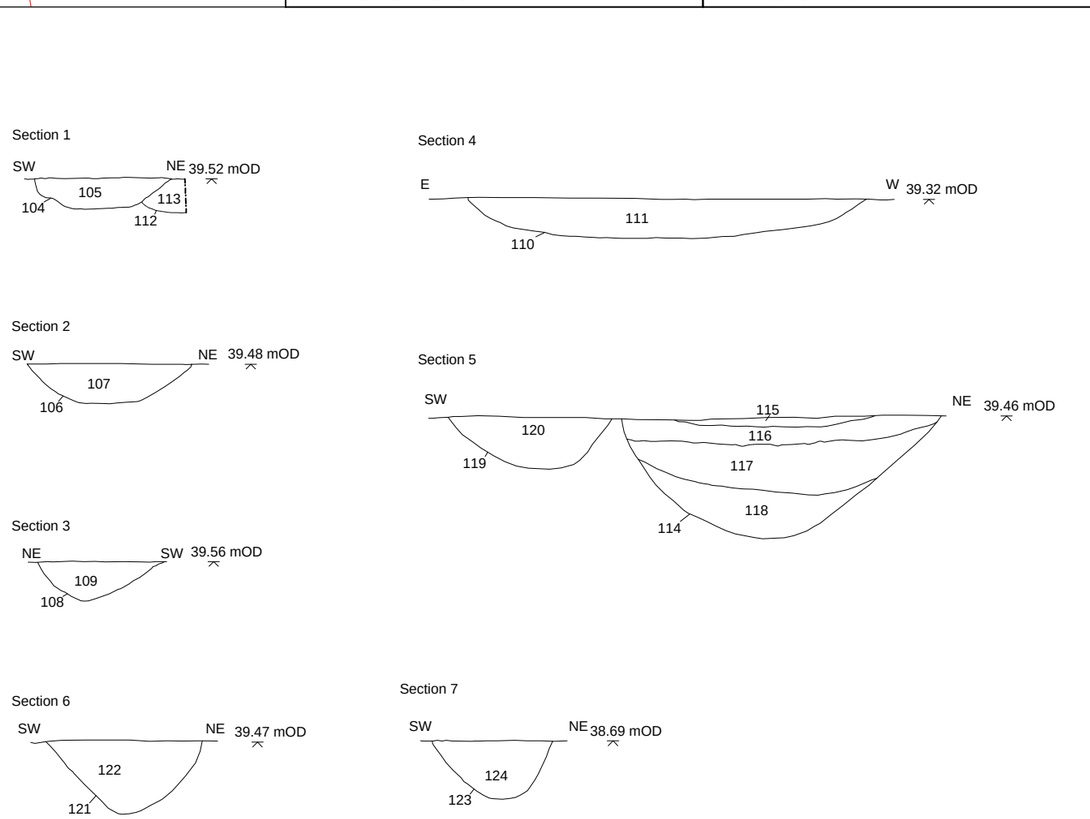


General site shot looking west

General site shot looking north west

Features [115] and [119] looking north west

Feature [121] looking north



		Hedge Place, Dartford	Fig. 3
Project Ref: 160917	January 2017	Site plan, photographs and sections	
Report Ref: 2017007	Drawn by: JC		

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