Archaeology South-East

ASE

FINAL REPORT AND UPDATED PROJECT DESIGN
ARCHAEOLOGICAL EXCAVATION
GORESBROOK VILLAGE, DAGENHAM
LONDON BOROUGH OF BARKING AND DAGENHAM

NGR: 546950 183760

Planning Reference: 12/00854/FUL

ASE Project No: 6020
Site Code: GOR13

ASE Report No: 2014001
OASIS ID: archaeol6-169173

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Abstract

This report presents the results of archaeological investigations carried out by Archaeology South-East at Goresbrook Village, Dagenham, London Borough of Barking and Dagenham, between August and November 2013. The fieldwork was commissioned by CgMs Consulting, on behalf of their client, in advance of the redevelopment of the site for residential dwellings.

The earliest identifiable activity on the site dates to the Late Neolithic/Early Bronze Age and consists of a single pit containing three barbed and tanged flint arrowheads and evidence of possible ritual activity. Two areas of Late Bronze Age pits and post holes were also identified and are indicative of domestic activity. Occupation of the site continues into the Early Iron Age with the discovery of a pit containing pottery and burnt bone. An 18th century routeway and two 20th century pits were also recorded.

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1.0 INTRODUCTION

1.1.1 Archaeology South-East (ASE), a division of the Centre for Applied Archaeology (CAA), Institute of Archaeology (IoA), University College London (UCL) was commissioned by CgMs Consulting Ltd to undertake an archaeological field evaluation and subsequent programme of mitigation works at Goresbrook Village, Goresbrook Road, Dagenham, London Borough of Barking & Dagenham (NGR 546940 183760; Figure 1).

1.2 Geology and Topography

1.2.1 According to the British Geological Survey 1:50,000 map, the site lies on London Clay, overlain by Taplow Gravels, defined as 'post-diversionary river terrace deposits'. Alluvial deposits associated with the River Thames lie south of the site. Ripple Road (the A13) forms the site boundary on the south.

1.3 Scope of the Project

1.3.1 Planning permission for the construction of residential dwellings with associated access, car-parking and services was granted by London Borough of Barking and Dagenham Council, with the condition that a programme of archaeological work be undertaken prior to the commencement of any construction work.

1.4 Circumstances and Dates of Work

- DBA (CgMs 2012) prepared on behalf of Countryside Properties August 2012
- Evaluation, 9 trenches excavated in August 2013 (phase 1, ASE 2013a)
- Excavation mitigation area 1, excavated in August 2013 (phase 1, ASE 2013b)
- Evaluation, 4 trenches excavated in October 2013 (phase 2, ASE 2013c)
- Excavation mitigation area 2, excavated in November 2013 (phase 2)

1.5 Archaeological methodology (Figure 2)

1.5.1 As listed above, following on from two phases of evaluation work (ASE 2013a and ASE 2013c), two archaeological mitigation areas were excavated around trench 13 (phase 1) and trenches 6 and 7 (phase 2) in which significant archaeological remains had been identified. All evaluation and mitigation work was conducted according to a Written Scheme of Investigation, most recently ASE 2013d.

1.5.2 The mitigation area around trench 13 was 17m x 13m (ASE 2013b). The mitigation area around trenches 6 and 7 was 23.40m x 11.10m.

1.5.3 All evaluation trenches and mitigation areas were surveyed using GPS survey equipment and excavated using a 20 tonne mechanical excavator fitted with a 2m wide flat blade ditching bucket under archaeological supervision. Overburden deposits (e.g. demolition material, modern made ground) were removed and excavation continued to the surface of natural geology whereupon archaeological features were exposed. Care was taken to not machine off seemingly homogenous layers that might have been the upper parts of archaeological features.

1.5.4 The resultant surfaces were then cleaned and pre-excavation plans prepared using Global Positioning System (GPS) planning technology in combination with Total Station surveying.

1.5.5 All areas were CAT scanned to detect any live services prior to excavation, and all machining was carried out under the supervision of a qualified archaeologist.

1.5.6 All areas were left open to allow for potential weathering out of features, and inspected regularly. All discreet features were investigated by half-section or fully excavated. Linear features were investigated by sondage. All feature relationships were defined, investigated and recorded.

1.5.7 All excavated deposits and features were recorded according to current professional standards using the ASE recording sheets. Post-excavation plans were made both by digital means and by hand planning at a scale of 1:20. Sections were drawn at a scale of 1:10. All features were photographed and levelled with reference to Ordnance Datum.

1.5.8 All finds were collected and retained.

1.5.9 On site sampling methodology, processing and recording was undertaken within the guidelines laid out by English Heritage (2002). The sampling aimed to recover spatial and temporal information concerning the occupation of the site. This was best achieved by sampling a range of feature types (pits, ditches, post-holes) from across the site, the fills of which can be compared and contrasted. A standard bulk sample size of 40litres (or 100% of small features) was taken from dated/datable sealed contexts to recover environmental remains such as fish, small mammals, molluscs and botanicals.

1.6 Organisation of the Report

1.6.1 This report has been prepared in accordance with the guidelines laid out in *Management of Research Projects in the Historic Environment (MoRPHE), Project Planning Notes 3 (PPN3): Archaeological Excavation (English Heritage 2008).*

1.6.2 The report seeks to place the results from all phases of work 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.

1.6.3 All finds and environmental archives are all recorded under a single site code: GOR13.

1.6.4 The results from the evaluations have been integrated and assessed with the results from the main two phases of excavation. None of the other evaluation trenches are included.

1.7 Site Archive

1.7.1 Archaeology South-east informed the London Archaeological Archive and Research Centre (LAARC) that the fieldwork would be taking place and that an archive would be generated. The site code GOR13 has been assigned to the archive by the LAARC. It is currently held at the offices of ASE and it is anticipated that the archive will be deposited with the LAARC on completion of all stages of fieldwork and reporting. The contents of the archive are tabulated below (Table 1).

Number of Contexts	143
No. of files/paper record	2
Plan and sections sheets	21
Bulk Samples	11
Photographs	143
Bulk finds	1 Box
Environmental flots/residue	11

Table 1: Quantification of site archive

2.0 HISTORICAL AND ARCHAEOLOGICAL BACKGROUND

2.1 Introduction

2.1.1 The full archaeological background is contained within the Desk Based Assessment (CgMs 2012). A summary is produced below. No scheduled Ancient Monuments lie within the study area and the site does not lie within an Archaeological Priority Zone. However, the site is considered to have a general archaeological potential for remains of prehistoric date.

2.2 Prehistoric

2.2.1 The area has been seen as a focus of activity throughout the prehistoric periods, with settlement focused on the gravel terrace and seasonal exploitation of the alluvial floodplain to the south.

2.2.2 Palaeolithic flint tools have been identified in drift deposits in the Barking area, and during gravel extraction at Gale Street to the north-east of the site.

2.2.3 Finds and features of a prehistoric date within a 1km radius of the site include a Neolithic axehead from the Barking area, a single east-west ditch containing pottery of Late Bronze Age / early Iron Age date at Bromhall Road to the north-west and a single sherd of Bronze Age pottery from Gale Street.

2.3 Roman

2.3.1 A Roman vase was identified in the Barking area, and four sherds of pottery of possible Roman date have been found at Castle Green, Gale Street, to the east of the site.

2.4 Anglo Saxon and Medieval

2.4.1 No finds of Anglo-Saxon date have been identified within a 1km radius of the site.

2.4.2 According to historic mapping, the site lay in in open farmland surrounded by pockets of small-scale settlement, which can be traced back as far as the 17th century.

2.5 Recent Development

2.5.1 Three housing blocks previously stood on the western part of the site and two multi-storey car-parks to the north-west and south-east, with associated roads and pathways. This has resulted in extensive truncation of the site. During the archaeological fieldwork, it was clear that the south car park basement, to the south of the evaluation trenches 12 and 13, was constructed into the gravel thus removing the archaeological horizon in this area.

2.6 Previous work on the site

2.6.1 As discussed above in section 1.4, several phases of archaeological work have been undertaken on the site.

2.6.2 The first phase of evaluation (ASE 2103a) and mitigation area (2013b) revealed prehistoric activity centred on Trench 13, all other trenches were archaeologically sterile (Figure 2).

2.6.3 A second phase of evaluation (ASE 2013c) in the central part of the site revealed further remains and led to the excavation of a second mitigation area (phase) centred on Trench 6 in which further prehistoric remains were recorded.

2.6.4 The earliest identifiable activity on the site dated to the Late Neolithic/ Early Bronze Age and consisted of a single pit containing three barbed and tanged flint arrowheads and evidence of possible ritual activity.

2.6.5 An area of intercut and discrete Late Bronze Age pits and post holes were also identified.

2.6.6 Iron Age occupation was also recorded, with the identification of a pit containing Early Iron Age pottery and unidentified cremated bone.

2.6.4 More recent activity includes an 18th century routeway and a 20th century pit.

3.0 RESEARCH AIMS

3.1 Several Written Schemes of Investigation have been written for the various phases of archaeological evaluation and mitigation. The following list of aims and objectives collates these together:

- To determine, as far as reasonably possible, the location, form, extent, date, character, condition, significance and quality of any surviving archaeological remains, irrespective of period, liable to be threatened by the proposed development
- To clarify the nature and extent of existing disturbance and intrusions, assessing the degree of archaeological survival and its significance
- To establish the date and nature of identified features
- To establish the environmental context of the prehistoric and later activity
- To report on the results of all archaeological work

4.0 ARCHAEOLOGICAL RESULTS

(Figures 2-12)

4.1 Introduction

4.1.1 The archaeological features exposed in the excavation areas included pits and post holes containing artefacts indicative of Bronze Age settlement activity and a possible post-medieval routeway.

4.1.2 The archaeology is discussed under provisional date-phased headings determined primarily through assessment of the dateable artefacts, predominantly the pottery, and secondarily through the creation of relative chronologies where stratigraphic relationships exist. Although several stratified contexts produced relatively large groups of pottery sherds, there are few diagnostic elements meaning most context groups can only be broadly dated. On the basis of this, 5 phases of activity have been defined.

Period 1	Late Neolithic / early Bronze Age	2500-1800BC
Period 2 Phase 1	Late Bronze Age	1150-600BC
Period 2 Phase 2	Early Iron Age	600-400BC
Period 3 Phase 1	Post-medieval	AD1700-1800
Period 3 Phase 2	Post-Medieval	AD1900-2000

Table 2: Archaeological periods represented on the site

4.1.3 The archaeological sequence is discussed by land use entities where possible. In this way, linear features, such as ditches which may have numerous individual slots and context numbers, are discussed as single entities, and other cut features such as pits and postholes are grouped together by structure, common date and/or type.

4.2 Natural Geology and Topography

4.2.1 The Taplow Sand and Gravel geology was encountered ranging from 5.65m AOD to 5.81m AOD in mitigation area 1 in the southern end of the site, and at a slightly higher level of 5.56m in mitigation area 2.

4.2.2 The overburden on site comprised a layer of made ground formed of silt and brick rubble and tarmac measuring a thickness of 0.15m, which immediately overlay the geology. This in turn was overlain by a 10cm thick layer of brick ballast, forming the surface of the former car park. The site was stripped of topsoil and subsoil in the 1990s.

4.2.3 No archaeological finds were present within the overburden.

4.3 Period 1: Late Neolithic / Early Bronze Age 2500-1800

(Figure 3)

Open Area 1: A single pit

4.3.1 The earliest identifiable activity on the site was a late Neolithic / Early Bronze Age pit [13/005]. The pit contained two sandy silt fills, with the lowest containing evidence of burning. The environmental sample <01> taken from the primary pit fill was found to contain significant quantities of burnt flint and stone, along with 3 barbed and tanged flint arrowheads, probably representing an *in situ* burning event. Similar barbed and tanged arrowheads are usually associated with the Beaker phase of the Late Neolithic / Early Bronze Age.

4.3.2 As discussed in Section 6 below, the presence of a significant component of wild clematis in this sample is unusual, as the thin stems of this climbing shrub are unsuitable as fuel and are not commonly found in archaeological charcoal assemblages. These fragments may be the remains of kindling, however, given their dominance in the assemblage it seems probable that clematis formed a significant component of the burning event, for example as a wreath or a woven basket (cf. Bichard 2008, Gale & Cutler 2000) used in a ritual or symbolic burning.

4.4 Period 2 Phase 1: Late Bronze Age 1150-600BC

(Figures 4-6)

Open Area 2: An area of intercutting pits and discrete pits and post holes

4.4.1 The evidence for Open Area 2 comprises a large pit (GP3), or a possible series of intercutting pits forming a large roughly circular area with a diameter of 5m. A possible three contemporary pits [022/053/056] were identified, with similar U-shaped profiles and slightly undulating bases. The pits are roughly 0.40m deep but were probably some 0.20m - 0.30m deeper originally; before topsoil and subsoil overburden were removed. Each pit contained 2 fills containing large quantities of Late Bronze Age pottery and showed possible evidence of recut. They were partially truncated by the later post medieval track way. Fired clay fragments were also recovered.

4.4.2 Four post holes (GP1) surrounded the intercutting pits. Three (SGs 13, 23 and 24) were of similar size, shape and depth of *c*. 0.20m, but they do not appear to have any structural association with each other, and it is not certain that they are contemporary as only one (SG13) contained contemporary dating evidence.

4.4.3 A scatter of other pits (GP2) to the east of the large pit (GP3) are also assigned to this period based on the dating of pottery found in 3 of the features and the similar size and character of the remaining features. They range from 0.35m to 0.50m in diameter, with depths of 0.10-0.25m. They all had U-shaped profiles with flat bases and each contained a single silty sand fill.

4.4.4 The samples from these features produced an interesting if small assemblage of charred grains and charcoal fragments which informs as to the contemporary local environment, wood fuel and agricultural practises.

Open Area 5

4.4.5 Open area 5 was situated 30m north of Open Area 2. The area comprised pits and post holes of varying sizes with similar characteristics to the features in Open Area 2. Late Bronze Age pottery was retrieved from six of the pits and from post hole [101]. Some of the post holes were immediately next to another, perhaps forming double post holes to support a heavy structure, or showing signs of rebuilding. A north/south line of four post holes lay perpendicular to a line of four east/west oriented post holes. A pair of post holes lay opposite the north/south line. Together the post holes (GP11) formed a rectangular pattern, measuring a length of 2.60m by a width of 2.50m, perhaps indicating a roughly square shaped structure.

4.4.6 A cluster or possible line of shallow pits (GP12) in the northeast corner of mitigation area 2 also dated to the Late Bronze Age. Some of the pits contained a single fill, and others contained two fills, but the most recent fills of each pit dated to the Late-Bronze Age. It is difficult to fully understand the exact function of the pits due to the degraded nature of the pottery, and lack of diagnostic sherds, but the presence of coal, pottery and worked and burnt flint within samples <6> and <7> are clear indicators of occupation. The southernmost pit was truncated by a post hole [88], similar in size and shape to GP11 post holes, and sample <11> from pit [92] contained burnt flint, fired clay and pottery. All residues from the samples from OA5 contained small to moderate quantities of magnetised material, and samples <8>, <9>, <10> and <11> also contained small amounts of industrial debris.

4.4.7 Some of the post holes (GPs 14 and 15) appear to be arranged in lines, with each post hole spaced some 2.50m apart from the next, probably indicating fence lines on a roughly northeast-southwest axis. The post holes were similar in size, with a diameter of 0.30m and depths ranging from 0.09-0.30m, although they were probably some 0.20m - 0.30m deeper originally; before topsoil and subsoil overburden were removed. No finds were retrieved from the post holes, but they have been assigned to this phase as they are similar in size and characteristic to the surrounding Bronze Age features, and 2 sherds of Late Bronze Age pottery were retrieved from the fill of post hole [101], 3m north of the post hole lines.

4.4.8 A large pit [78] (GP13) was encountered in the western part of the excavation area between the two rows of posts (GPs 14 and 15). It measured 1.56m by 1.40m and contained a single homogenous clayey sand fill. The pit was fully excavated and found to contain no finds. It appeared to have been excavated down to the level of the Greensand underlying the Taplow Gravels (4.81m AOD). It is possible the feature was used as a water hole, either for animals or for people. The post holes and pits towards the east of Open Area 5 seem to suggest settlement activity, so it is possible the pit functioned as a water source for the settlement. It was truncated by one of the ditches forming the post-medieval Routeway 1.

4.4.9 Pit [6/005] contained pottery dating to 950-600BC, slightly earlier than the pottery seen in the surrounding pits (1150-600BC) but this is still a rather broad date range.

4.4.10 Small quantities of barley, glume wheat, and wild or cultivated oat grain were evident in many of the samples taken from OA5.

4.5 Period 2 Phase 2: Early Iron Age 600-400BC

(Figure 7)

Open Area 3: A single pit

4.5.1 A single pit [39] (GP8) contained a diagnostic pot sherd dating to 600-400BC. This was larger, shallower and slightly more irregular in shape than the surrounding pits and post holes which are thought to be of Late Bronze Age / Early Iron Age date. This pit has therefore been given a slightly later date range than the surrounding features; however, this is based on more fragmentary and less conclusive pot sherds. The pit also contained fired clay fragments and an unidentifiable fragment of cremated bone retrieved from sample <5>. The sample also produced an interesting assemblage of charred grains and charcoal fragments which can inform as to the contemporary local environment, wood fuel and agricultural practises.

4.5.2 The fact that there are similar features of a Late Bronze Age and Early Iron Age date may be indicative of an overall broad phase of Late Bronze Age / Early Iron Age occupation from *c.* 1150-400BC, rather than two separate phases of activity.

4.6 Period 3 Phase 1: Post-medieval AD1700-1800

(Figures 8-10 and 12)

Routeway 1

4.6.1 Two parallel north-south aligned ditches (GP4 and GP5) were recorded *c*. 1.70m apart. The ditches were excavated by 6 sondages at regular intervals and were found to be shallow and almost ephemeral in some areas, with similar U-shaped profiles.

4.6.2 The ditches were also identified in mitigation area 2, where the west ditch appeared to terminate, and the east ditch extended further north beyond the limit of excavation. A further 3 sondages were excavated in the east ditch and the terminus of the west ditch was fully excavated. The sondages revealed the same shallow U-shaped profile, with a single clayey sand fill devoid of pottery, containing three fragments of animal bone. It is likely that the ditches were cleaned out periodically and that the bone fragments reflect the period in which the ditch began to fall into disuse.

4.6.3 The ditches are interpreted as delineating a possible routeway between fields. The easternmost ditch (GP5) clearly truncated the large Late Bronze

Age pit GP3 and a single plain stem fragment of clay tobacco pipe dating to the 18th century was recovered as well as 3 tiny colourless fragments of glass dating to the 19th to mid 20th century.

4.6.4 The northern end of the ditches forming Routeway 1 were also encountered in mitigation area 2, where the west ditch (GP10) appears to terminate.

4.6.5 This routeway is not represented on any historic maps, but it follows the same north-south – east-west orientation as the current land boundary and surrounding roads attesting to its recent date.

4.7 Period 3 Phase 2: Post-medieval AD1900-2000

(Figure 11)

Open Area 4: 20th Century pits

4.7.1 A 20th century pit was identified adjacent to the modern drain on the southern limit of the excavation area. This contained a single sand fill with 2 small pieces of CBM typical of London Brick Company bricks as well as late post-medieval glass.

4.7.2 A square shaped pit [9/03] was encountered in Trench 9 measuring a length of 0.70m and a depth greater than 0.22m. The pit contained a single grey clay fill [9/04] similar to the layer of made ground [9/04] overlying the geology in Trench 9.

5.0 THE FINDS

5.0.1 A small assemblage of finds, mostly consisting of pottery, was recovered during the work, summarized in table 2. Finds recovered from environmental residues are summarised in Appendix 2. Finds were all washed and dried or air dried as appropriate. They were quantified by count and weight and bagged by material and context. Finds were packed and stored according to IFA guidelines (2008). None of the finds require further conservation.

5.0.2 In general, the finds assemblage does not hold any potential for further analysis. It is too small, lacking intrinsically interesting or diagnostic finds and is recommended for discard. The prehistoric pottery comes from a relatively small number of features, mostly pits, and is probably indicative of settlement activity of early to mid 1st millennium date. As such it has some limited local significance; however, the overall small size and relatively undiagnostic nature of the assemblage means that it contributes little to our understanding of topics such as site function or status.

Cxt	Pot	Wt (g)	CBM	Wt (g)	Bone	Wt (g)	FCF	Wt (g)	Flint	Wt (g)	Stone	Wt (g)	Glass	Wt (g)	CTP	Wt (g)	F. Clay	Wt (g)	Slag	Wt (g)	Mortar	Wt (g)
2/001	1	<2																				
3/006	1	6					4	18			1	<2	1	2								
4/006	4	20					4	56					1	16					1	<2		
13/009	20	302					4	48														
9			2	8									2	4								
19					3	112																
21	1	16																				
25	1	20					2	58														
27															1	4					1	30
28	29	310																				
30	2	6																				
40	16	124																				
42	22	74																				
44							3	22														
55	126	946					18	280									5	8				
59	3	22																				
83									1	2												
87	6	28															1	52				
91	6	22																				
94	7	36																				
102	2	14																				
Total	**247**	**1946**	**2**	**8**	**3**	**112**	**35**	**482**	**1**	**2**	**1**	**<2**	**4**	**22**	**1**	**4**	**6**	**60**	**1**	**<2**	**1**	**30**

Table 3: Quantification of the finds

5.1 **The Prehistoric Pottery** by Anna Doherty

5.1.1 A moderate assemblage of prehistoric pottery was recovered from the mitigation area; including material from evaluation Trench 13, this totals 277 sherds, weighing 2.03kg. Although several stratified contexts produced relatively large groups of sherds there are few diagnostic elements and consequently, most context groups can only be dated quite broadly. The majority of fabrics and diagnostic forms would be in keeping with a Late Bronze Age date; however one or two sherds from a single context may be indicative of activity in the Early Iron Age.

5.1.2 Methodology

5.1.3 The pottery was examined using a x20 binocular microscope. It was recorded according to a site-specific type-series which was defined using the guidelines of the Prehistoric Ceramics Research Group (PCRG 2010).

5.1.4 The pottery was quantified by sherd count, weight and Estimated Vessel Number (EVE) on *pro forma* sheets and data was entered into an Excel spreadsheet.

5.1.5 Site specific fabric codes:

FLIN1 A broad grouping of medium coarse flint-tempered wares. Generally contains moderate, moderately sorted flint of 0.5-2mm (although may contain rare larger examples). The matrix generally contains moderate quartz of silt-size to 0.1mm although rare coarser quartz grains up to 0.4mm may also appear.

FLIN2 Sparse flint of 0.2-1mm (although may contain rare slightly larger examples) within a silty background matrix.

FLSH1 Similar to FLIN1 but with sparse shell of 0.5-1mm

QUAR1 Common quartz of silt-sized to 0.1mm and rare larger quartz grains up to 0.4mm

SHEL1 Moderate fine shell inclusions (frequently leached out) of 0.2-0.5mm in a silty background matrix

5.1.6 Overview

5.1.7 The vast majority of the assemblage is flint-tempered: about 80% of the sherds could be assigned to one medium coarse flint-tempered fabric grouping (FLIN1) whist roughly 17% were associated with a flint-tempered fine ware (FLIN2). Both of these ware groups are very typical of post Deverel-Rimbury (PDR) assemblages of the Late Bronze Age. More particularly, the absence of very coarsely flint-tempered wares and the presence of moderate quantities of fine quartz in most examples are probably more typical traits in 1st millennium assemblages rather than those from the very beginning of the Late Bronze Age.

5.1.8 Most rimsherds are fragmentary, making it difficult to classify any of the form types with much certainty. However, there are several examples of simple necked jar/bowls and one partial rim from what appears to be a hemispherical bowl. Several examples of flint-gritted bases (another very typical PDR trait) were also recorded.

5.1.9 The majority of the assemblage is undecorated, although context [55], contained several examples of impressed/incised decoration. One partial rimsherd in this group had a flaring profile with finger-tipping along the rim interior and an applied cordon on the exterior. The use of external cordons was noted in the Late Bronze Age assemblage from North Shoebury (Brown 1995, 80 and fig 64.65). Two other body/shoulder sherds in this group also feature fingertip/fingernail decoration. A single rounded shoulder sherd from a fine ware vessel found in this group also included a series of incised horizontal lines. Both finger-tipping and horizontal line decoration are common decorative styles in the local East London/south Essex area and in the wider South-East region. Although individual decorated sherds may be encountered in plain ware PDR assemblages (c.1150-800), an increasing use of decoration is a feature of the later part of the Late Bronze Age (c.800-600).

5.1.10 One substantial group of pottery, from context [40], generally comprises bodysherds and a few partial rims comparable to other material the site as a whole. However, a small number of sherds in this group are in slightly different fabrics including a shelly ware (SHEL1), a flint-with-shell fabric (FLSH1) and a purely sandy fabric (QUAR1). It is of some note that shelly fabrics were entirely absent from the Mucking Late Bronze Age assemblage despite the presence of some elements of decorated PDR pottery from the South Rings (Brudenell 2008). This suggests that shelly wares should be considered a development of the Early Iron Age in the local area. One diagnostic feature sherd, a well formed footring base, recovered from the residue of the environmental sample from this context, also seems to confirm an element of Early Iron Age dating. This is a typical Early Iron Age form trait which can, for example, be paralleled in local assemblages of this date from Hunt's Hill Farm and Rectory Road, Orsett (Cotton et al 2011, Fig 40, P58; Hamilton 1988, Fig.68, no 5, 79).

5.2 The Post-Roman Pottery by Luke Barber

5.2.1 The only sherd of post-Roman pottery consists of a bodysherd from a London stoneware bottle of 18th- century (context [3/006]).

5.3 The Ceramic Building Material by Luke Barber

5.3.1 The only material from the site consists of two small pieces of brick from context [9]. These are of a well-fired granular fabric with notable calcareous inclusions, typical of London Brick Company bricks of the 20th century.

5.4 The Clay Tobacco Pipe by Elke Raemen

5.4.1 A single plain stem fragment of clay tobacco pipe (CTP) was recovered from [27]. The fragment is of 18th-century date.

5.5 **The Glass** by Elke Raemen

5.5.1 A small assemblage comprising seven fragments of glass was recovered from four individual contexts, including both hand-collected glass and fragments recovered from environmental residues. None predate the 19th century.

5.5.2 Contexts [3/006] and [4/006] each contained a colourless cylindrical bottle fragment dating to c. 1850-1950.

5.5.3 A third fragment, possibly from a milk bottle and of similar date, was recovered from [9].

5.5.4 The same context also contained an amber body fragment, again from a cylindrical bottle and of mid 19th-to mid 20th-century date.

5.5.5 Three tiny colourless fragments dating to the 19th to mid 20th century were recovered from [48].

5.6 **The Fired Clay** by Elke Raemen

5.6.1 A small assemblage consisting of 19 fired clay fragments (wt 196g) was recovered from four different contexts. The majority of the assemblage (13 pieces) was recovered form environmental residues, although six hand-collected fragments are also included. Three different fabrics were noted:

Fabric 1: Orange matrix with common fine quartz

Fabric 2: Orange matrix with moderate coarse quartz. Rare very coarse quartz

Fabric 3: Silty, light orange matrix with common fine quartz, rare coarse quartz and common organic temper

5.6.2 Fragments are severely abraded and therefore largely amorphous, with only fragments from [40] retaining some features. Included are two rounded corner fragments and three fragments retaining one flat surface.

5.7 **The Metallurgical Remains** by Luke Barber

5.7.1 Context [4/006] produced a 3g fragment of black aerated clinker, almost certainly of 19th- century date. The remaining material was recovered from two environmental residues from contexts [13/006] and [13/009]. Both of these are dominated by ‘magnetic fines’, composed in the main of well rounded/polished ferruginous siltstone grits with no sign of deliberate human modification. These are likely to be from natural fluvial deposits. However, [13/006] contained a single probable hammerscale flake, while [13/009] contained a similarly tiny speck of probable fuel ash slag.

5.8 **The Geological Material** by Luke Barber

5.8.1 Context [3/006] contained an abraded piece of Welsh roofing slate, likely to be of 19th- century date. The only other retained stone was recovered from the residues: that from [13/006] producing a naturally holed flint pebbles and that from [13/009] a small quartz crystal.

5.9 **The Animal Bone** by Gemma Ayton

5.9.1 A small assemblage of animal bone containing three fragments has been recovered during the excavation from context [19]. The fragments are in a very poor condition with evidence of substantial surface erosion. Two of the specimens derive from a large mammal and formed part of a long-bone, the third fragment is unidentifiable. A further unidentifiable fragment of cremated bone was retrieved from sample <5>.

5.10 **The Worked Flint** By Karine Le Hégarat

5.10.1 Eight pieces of struck flint weighing 37g were retrieved from the residues of environmental samples. The material was quantified by piece count and weight and was directly catalogued into an Excel spreadsheet. A breakdown of the composition of the assemblage is provided below.

Phase	Landuse	Context	Parent context	Feature_type	Subgroup	Group	Sample	Category_type	Pieces	Weight (g)
1.1	OA1	13/006	13/005	P	27	7	<1>	Barbed and tanged arrowhead	3	4
1.1	OA1	13/006	13/005	P	27	7	<1>	Misc. Retouch	1	<2
2.1	OA2	28	20	P	9	3	<4>	Flake	1	9
2.1	OA5	6/006	6/005	P	30	11	<6>	Flake	1	22
3.1	RW1	48	47	D	22	4	<3>	Flake	2	2

Table 4: The flintwork

5.10.2 Four irregular flakes were retrieved from Late Bronze Age pits [20] and [6/005] and from post-medieval ditch [47]. These pieces of flint débitage could not be closely dated on technological grounds. In addition, three barbed and tanged arrowheads including two of Sutton b type and one of Conygar Hill type (Green 1984) as well as a chip with invasive retouch on one face were recovered from pit [13/005] SG27. The retouched chip could not refit to the arrowheads. No other artefacts were present in the pit fill, and the Beaker flintwork was used here to date the feature.

5.10.3 At first glance this small assemblage appears ordinary for the area. The site at Goresbrook Road is lying on the gravel Thames terraces. During the

prehistoric period these would have been overlooking marshes offering great opportunities for hunting and fishing, and so the area is particularly rich in settlements dating to the Bronze Age (Howell *et al.* 2011). To the east of the site, various excavation works along New Road have revealed Bronze Age activity in the form of features and artefacts. The recent investigation at 105-109 New Road also produced a Sutton type barbed-and-tanged arrowhead (Grey 2010). Similarly the burnt artefact came from a small pit that contained burnt flint/heated stone fragments. Slightly further afield, at approximately 6km west of the site, a Sutton b type barbed and tanged arrowhead was found in the posthole of an Iron Age roundhouse (Howell *et al.* 2011 p. 37). The artefact was interpreted as a placed deposit.

5.10.4 The small Beaker flint assemblage from Goresbrook is therefore not unusual for the area. It becomes more interesting as it is likely that the retouch flints were deliberately placed in pit [13/005] and became burnt in the feature. The small group of flintwork consisting of three arrowheads and a retouched chip with no other pieces of flint débitage implies that the artefacts were deliberately selected, and observations in the field together with the material recovered from the residue suggest that the arrowheads were most likely burnt *in-situ.* While the pit measures 1m in length, 0.9m in breadth and 0.41m in depth, primary fill (13/006) measures only 0.16m in depth. The material recovered from this basal fill differs from the material in the uppermost fill in that it appears slightly burnt. Furthermore, the residue contained a moderate amount of burnt rounded stones and a small assemblage of charcoal. All the stones had been moderately burnt to a reddish colour. Nonetheless, deposition of deliberately selected Beaker flintwork is not uncommon in domestic and funerary Beaker contexts (Garwood 2011).

5.10.5 The main difference here comes from the fact the environmental remains appear to provide information regarding the “container” the arrowheads were placed in; a potential basket manufactured using clematis (see Mooney, Le Hégarat & Allott). It seems that the three barbed and tanged arrowheads from Goresbrook represent a special deposition, although the exact reason for their deposition remains unclear.

5.10.6 The arrowheads are illustrated on Figure 13. Detailed descriptions for the illustrated flints are below.

1. The first barbed and tanged arrowhead is incomplete. It is the largest of the three. Approximately 85% of the artefact is present, with one of the barbs being absent. It has been manufactured from a mid grey flint and is slightly burnt. The damage is mostly visible on one of the surface. The artefact is sub-triangular in plan and displays straight lateral edges. The arrowhead is 28.19mm long, 1.27mm thick and weights 1g. It would have been approximately 19.28mm wide. It is finely invasively pressure-flaked on both surfaces. It has a sub-square barb measuring 1.95mm long and a sub-square tang measuring 4.18mm long (D/G). It seems that the second barb wasn’t damage during the initial production of the implement, but rather after the heating episode. The arrowhead fits into the sub-classification of "non-fancy" barbed and tanged arrowhead described as Sutton type (subdivision b) (Green 1984).

2. The second barbed and tanged arrowhead is incomplete. The tip and one of the barbs are absent. The artefact is also slightly burnt, and one of the surface exhibits extensive heat damage. While one of the lateral edge is straight, the opposite edge appears to be more convex. The actual length is 17.04mm, but it may have been as long as the previous artefact. The actual breadth is 14.25mm. It is 0.78mm thick and weights 1g. The surviving barb is squared as is the tang (B/F). The barb measures 3.11mm and the tang 3.62mm. One face is finely worked with invasive retouch. The heat damage on the other surface is too important to determine if the retouch covered the entire artefact. This last arrowhead fits into the sub-classification of "fancy" barbed and tanged arrowhead described as Conygar Hill type (Green 1984).

3. The last barbed and tanged arrowhead is complete. It was made on a mid-brown flint. It is sub-triangular in shape. While one of the lateral edge is straight, the second one is slightly convex. It is finely made and displays invasive retouch on both faces. The arrowhead measures 22.10mm in length, 18.68mm in breath, 3.70mm in thickness and weights 2g. One face is relatively flat, and the other one, more prominent, appears to have received less flaking. The first barb measures 1.69mm and is rounded, the sub-squared tang measures 3.85mm and the second barb is obliquely cut and measures 1.86mm. This arrowhead is also of Sutton type (Sutton b).

6.0 ENVIRONMENTAL ASSESSMENT

By Dawn Elise Mooney, Karine Le Hégarat & Lucy Allott

6.1 Introduction

6.1.1 Eleven bulk environmental samples were taken during evaluation and excavation work at the site to recover environmental indicators such as wood charcoal, charred macrobotanical remains, fauna and mollusca as well as to assist finds recovery. These samples originated from pits, post holes and ditches at the site, and ranged between 30 and 40 litres in volume. The provenance of individual samples is discussed in the following text, and recorded in appendix 2. Samples <1> - <5> were processed and analysed at Archaeology South-East, Portslade, East Sussex during August – September 2013, and have previously been reported on in a mitigation report (Mooney & Le Hégarat 2013). The results of this analysis are included here, along with samples <6> - <11>, which were taken during evaluation and mitigation work at the site during November 2014. These samples were also processed and analysed at Archaeology South-East, between December 2013 and January 2014. This report examines material from bulk environmental samples taken during all phases of work at the site.

6.2 Methods

6.2.1 The samples were processed in a flotation tank and the residues and flots were retained on 500µm and 300µm meshes respectively and air dried. The residues were passed through graded sieves of 8mm, 4mm and 2mm and each fraction sorted for environmental and artefactual remains (Appendix 2). The flots were analysed under a stereozoom microscope at x7-45 magnifications and an overview of their contents is recorded in Appendix 2. Identifications of macrobotanical remains were made through comparison with published reference atlases (Cappers *et al*. 2006, Jacomet 2006) and reference material. Taxonomic identifications are recorded in Appendix 2 and nomenclature used follows Stace (1997).

6.2.2 Charred wood remains from 8 samples were analysed from the site. Twenty charcoal fragments (or the total number of fragments >4mm if less than 20) recovered from the heavy residue of each sample were fractured along three planes (transverse, radial and tangential) according to standardised procedures (Gale & Cutler 2000). Specimens were viewed under a stereozoom microscope for initial grouping, and an incident light microscope at magnifications up to 400x to facilitate identification of the woody taxa present. Taxonomic identifications were assigned by comparing suites of anatomical characteristics visible with those documented in reference atlases (Hather 2000, Schoch *et al.* 2004), and by comparison with modern reference material held at the Institute of Archaeology, University College London. Identifications have been given to species where possible, however genera, family or group names have been given where anatomical differences between taxa are not significant enough to permit satisfactory identification. Where identifications were uncertain due to poor preservation or limited size of charcoal specimens the identification is preceded by cf., denoting

'compares with'. Nomenclature used follows Stace (1997), and taxonomic identifications of charcoal are recorded in Appendix 2.

6.3 Results

Period 1 - Phase 1: The Late Neolithic / Early Bronze Age 2500-1800

Landuse OA1

6.3.1 Sample <1> from the lower fill [13/006] of pit [13/005] produced a large flot (90ml) which contained a relatively large quantity of charred wood fragments. The sample produced a moderate amount of charred plant remains including charred weed seeds and unidentified fragments of bulbs and/or tubers. A single indeterminate charred fruit stone fragment was also present in the residue. The assemblage of charred weed seeds consisted mainly of bugle (*Ajuga reptans*), although occasional seeds of vetch/vetchling/tare (*Vicia*/*Lathyrus* sp.), bedstraws (*Galium* spp.), possible privet (cf. *Ligustrum* sp.) were also recorded.

6.3.2 Charcoal remains from the residue of the sample were comprised of approximately equal quantities of mature oak (*Quercus* sp.) wood and small roundwood of wild clematis (cf. *Clematis vitalba*). Burnt stones including fragments of burnt unworked flint were common in the residue. In addition, worked flints including three barbed and tanged arrowheads and a small amount of magnetised material were also recorded. A sample of the clematis charcoal from this sample was submitted to SUERC for radiocarbon dating in December 2013, the results of which are discussed in Section 7.

6.4 Period 2 - Phase 1: Late Bronze Age 1150-600BC

Landuse OA2

6.4.1 Two samples were examined from land use OA2. Sample <2> was taken from the single fill [13/009] of pit [13/008] and sample <4> came from the basal fill [28] of pit [20].

6.4.2 A small assemblage of charred grains (between 25 and 30 items) was recovered from sample <2>, the majority of which were too fragmented to be identified. They provide limited evidence for glume wheat (either emmer or spelt) and possibly barley (cf. *Hordeum* sp.). A small amount of chaff was recorded including spikelet forks, glume bases, and spikelet bases. Although the majority were in a poor condition and could be either spelt or emmer, one of the glume bases displayed characteristics of spelt (*Triticum spelta*): strong veins, slight angular appearance with a strong primary keel and a slight secondary keel. A single twisted oat (*Avena* sp) awn fragment which could represent wild or cultivated oat was present. The small assemblage of charred weed seeds included knotgrass / dock (*Polygonum*/*Rumex* sp.), ribwort plantain (*Plantago lanceolata*) and a seed from the pink (Caryophyllaceae) family. Charred cereal remains were uncommon in sample <4>. The assemblage comprised fewer than five grains and a poorly preserved glume base which can be assumed to provide evidence for glume wheat (either

emmer or spelt). Charred weed seeds were also uncommon, however bedstraws and possible grass were noted.

6.4.3 Charred wood fragments were less common in sample <2> than from sample <1>, however a wide range of wood taxa were recorded including cherry/blackthorn (*Prunus* sp.), Maloideae (a group of taxa which includes hawthorn (*Crataegus monogyna*), rowan, whitebeam and service (*Sorbus* sp.), apple (*Malus* sp.) and pear (*Pyrus* sp.)), wild privet (cf. *Ligustrum vulgare*), ash (*Fraxinus excelsior*), birch (*Betula* sp.), holly (*Ilex aquifolium*), and oak. Sample <4> contained only a small amount of charred wood fragments. The charcoal assemblage was dominated by oak, however cherry/blackthorn and willow/poplar (*Salix/Populus*) were also present.

6.4.4 A small amount of pottery, magnetised material and burnt unworked flint were present in the residue of sample <2>, while the residue of sample <4> also contained a small amount of pottery and burnt unworked flint, along with fired clay fragments.

Landuse OA5

6.4.5 Landuse OA5, comprising Middle Bronze Age pit and post holes in mitigation area 2, was represented by 6 bulk environmental samples. These were as follows: sample <6> from fill [6/006] of pit [6/005], sample <7> from fill [6/004] of pit [6/003], sample <8> from fill [67] of pit [66], sample <9> from fill [69] of pit [68], sample <10> from fill [79] of pit [78], and sample <11> from the upper fill [94] of pit [92].

6.4.6 Preservation and abundance of macrobotanical remains varied greatly across the MBA samples from OA5. Samples <6>, <7> and <8> contained the richest assemblages of crop and weed/wild plant remains with 1.3, 3.4 and 1.5 fragments per litre sampled, respectively. Small quantities of barley, glume wheat, and wild or cultivated oat grain were evident. Preservation of these was too poor to refine the identifications to species. Glume bases, which are more readily identifiable to species, are indicative of both spelt and emmer and it is entirely possible that both cereals are also represented by grains. Non-cereal crops, broad bean/horse bean and pea, were less abundant than cereal grains. Further small pulses such as vetch/tare were also present and although recorded as weed/wild seeds some of these may have been grown for fodder. The majority of seeds noted are common weeds of arable land or disturbed waste ground common alongside habitations. A broad range of taxa were recorded and a full list is provided in Table 3. Black bindweed (*Fallopia convolvulus*), pale persicaria (*Persicaria* cf. *lapathifolia*) and goosefoot (*Chenopodium* sp.) are the most commonly occurring taxa. Several knotgrass/dock were recorded and although the majority have not been identified to species, a nutlet consistent with knotgrass (*Polygonum aviculare)* is present in sample <7>. Other species level identifications include common chickweed (*Stellaria media*), lesser stitchwort (*Stellaria graminea*), black nightshade (*Solanum nigrum*) and stinking chamomile (*Anthemis cotula*). Amphibious bistort (*Persicaria* cf. *amphibia*) in sample <8> provides the only clear evidence for plants occurring either in water or on very damp ground.

6.4.7 Cereal grains were less abundant in samples <9, 10 and 11> than in samples <6, 7 and 8>. Due to fragmentation and abrasion the majority of grains have been recoded as indeterminate although a possible barley grain was recorded in sample <10>. With the exception of grass stem fragments no chaff was recovered. A similar array of weed/wild taxa such as pale persicaria, knotgrass/dock and goosefoots were evident. They were, however, less numerous and less well preserved than those in samples <6, 7 and 8> and the only species level identification made was fig-leaved goosefoot (*Chenopodium ficifolium*) in sample <10>.

6.4.8 Small to moderate quantities of charcoal were recovered from the residues of all samples, with material analysed from samples <6>, <7>, <8> and <11>. The preservation of charred wood remains in these samples was poor to moderate, with all displaying at least some degree of sediment concretion and infiltration linked to fluctuations in ground water level. The charcoal assemblage was dominated by oak, however smaller quantities of a wide variety of other taxa were also recorded, including Maloideae, cherry/blackthorn, ash, hazel (*Corylus avellana*), beech (*Fagus sylvatica*) and field maple (cf. *Acer campestre*).

6.4.9 All residues from the samples from Landuse OA5 contained small to moderate quantities of magnetised material, and samples <8>, <9>, <10> and <11> also contained small amounts of industrial debris. Coal, pottery and worked and burnt flint were recorded in samples <6> and <7>, and pottery and worked flint were also present in sample <8>. Sample <11> also contained burnt flint, fired clay and pottery in the residue.

Period 2 - Phase 2: Early Iron Age 600-400BC

Landuse OA3

6.4.10 Charred plant remains were slightly more numerous in sample <5>, which originated from the fill [40] of pit [39]. Charred cereal remains were limited to a single grain of glume wheat (either emmer or spelt) and a single grain of possible barley, and chaff was limited to a poorly preserved glume base. Nonetheless, sample <5> produced a moderate assemblage of charred weed seeds including black bindweed, sheep's sorrel (*Rumex acetosella*), red shank/pale persicaria type (*Persicaria maculosa*/*lapathifolia*), possible knotgrass, goosefoot, vetch/vetchling/tare, wild radish (*Raphanus raphanistrum*) as well as some blackberry/raspberry (*Rubus fruticosus* agg./*idaeus*).

6.4.11 The charcoal assemblage was again dominated by oak, with a smaller quantity of cherry/blackthorn also recorded. Small burnt bone fragments were present, and the residue also produced a small amount of pottery, fired clay and burnt unworked flint.

Period 3 - Phase 1: Post-medieval AD1700-1800

Landuse RW1

6.4.12 Sample <3>, from the fill [48] of ditch [47], produced a small flot which contained very few charred plant remains. The assemblage of charred plant macrofossils was limited to a single charred grain which was too poorly preserved to be identified, a seed of blackberry/raspberry and a single grass (Poaceae) caryopsis. A single unidentified fragment of bulb and/or tuber was also present. A very small amount of glass and burnt unworked flint were present in the residue.

6.5 Discussion

6.5.1 Environmental sampling at the site confirmed the presence of charcoal and charred plant macrofossils, however other environmental indicators were scarce.

Charred plant macrofossils

6.5.2 Charred crop remains were present in small to moderate quantities in features dating from the Late Bronze Age, Early Iron Age and post-medieval periods with all samples producing fewer than 4 fragments per litre of soil processed. Preservation of these remains also varied greatly both between and within samples. Many of the cereal caryopses had abraded and highly pitted surfaces or were fragmented suggesting some level of disturbance and movement after charring. This is contrasted with occasional well preserved weed seeds retaining sufficient surface morphological features to be identified to species.

6.5.3 Sampling has provided no evidence for cereals during the Late Neolithic/Early Bronze Age occupation at this site. Although this may reflect plant exploitation at this time it is difficult to conclude this from a single sample. All of the remains recovered are from wild plants and although they are charred they may have been incidental inclusions in the fire. Plants represented are indicative of woodland and grassland vegetation.

6.5.4 Evidence for cereal cultivation and processing is far clearer in the Late Bronze Age assemblage. The samples are dominated by domestic waste including food preparation debris (charred grains) and crop processing waste (charred chaff and charred weed seeds). The small chaff assemblage suggests that both emmer and spelt were cultivated during the Late Bronze Age which is further supported by glume wheat grains of both crops. This compares well with other sites in the area such as Lofts Farm, Heybridge (Murphy 1988) and Springfield Lyons, Chelmsford (Murphy 1990) in which both emmer and spelt wheat are important cereal crops. There is also limited evidence for beans, peas and barley although none of the barley grains were well enough preserved to suggest whether these grains were hulled or naked barley. The small quantities of grain, chaff and arable weeds are likely to derive from episodes of crop processing and it is typical during the period for regular crop processing to be carried out. However, none of the assemblages are sufficiently large to conclude that this waste product was routinely dumped in these features. It appears more likely therefore that the material represents general waste, perhaps originating from hearths, which accumulated in these open pit features. A similar, although far smaller, assemblage of cereals and their associated chaff and weeds was recovered

from the single Iron Age sample. There is no clear evidence to suggest significant changes in the cereals cultivated, however this sample does contain the first occurrences of bramble/raspberry, sheep's sorrel and wild radish/charlock which may suggest changes in ground conditions in the vicinity of the occupation.

6.5.5 The macrobotanical assemblage from the post-medieval ditch is very small and as such it does not provide clear evidence for arable activities undertaken or wild plant exploitation during this phase of landuse.

Charcoal

6.5.6 Preservation of charred wood remains from the site was in general poor to moderate. All samples from which charcoal was analysed displayed at least some degree of sediment concretion and infiltration, likely to result from fluctuating groundwater levels. With the exception of sample <1>, which seems to represent *in situ* burning or primary deposition (see below), all the samples derive from contexts representing the secondary deposition of burnt material. The charred wood remains recovered from these samples are likely to represent amalgams of material from numerous domestic and industrial burning events, and therefore are of limited value in a discussion of the selection of fuel woods for particular purposes.

6.5.7 There is very little variation in the composition of the charcoal assemblage throughout the various phases of occupation at the site. The prevalence of oak charcoal in the majority of samples suggests that wood for fuel was mostly sourced from oak-dominated deciduous woodland. The frequent occurrence of this taxon throughout the prehistoric occupation of the site suggest that it was widespread in the local landscape, as oak is known to be a strong and durable wood and is often preferred for construction timber (Taylor 1981). However, oak is also an excellent firewood and may have been selected as fuel over other locally available taxa. Ash and beech are also likely to derive from woodland areas, while taxa such as hazel, holly, Maloideae, privet and cherry/blackthorn may have grown as underwood in woodlands, or on woodland margins or hedgerows. Birch and field maple require more light, and are probably representative of the exploitation of woodland margins or more open areas. The presence of willow/poplar charcoal may also indicate the limited exploitation of damp woodland or wetland margin environments for fuel procurement.

6.5.8 Sample <1>, from the lower fill [13/006] of pit [13/005], also contained significant quantities of burnt flint and stone, along with three flint arrowheads which had also been burnt (see Le Hégarat, this volume), and as such this context may represent an *in situ* burning event or the intentional deposition of an assemblage of burnt material. The presence of a significant component of wild clematis in this sample is unusual, as the thin stems of this climbing shrub are unsuitable as fuel and are not commonly found in archaeological charcoal assemblages. This shrub is found in a wide range of habitats, including the woodlands and hedgerows exploited by the inhabitants of the site for fuel procurement. These fragments may be the remains of kindling, however given their dominance in the assemblage it seems probable that clematis formed a significant component of the burning event, for example as

a wreath or a woven basket (cf. Bichard 2008, Gale & Cutler 2000) used in a ritual or symbolic burning. The results of the radiocarbon dating of clematis charcoal from this sample will shed further light on the dating of this feature.

6.6 Conclusion

6.6.1 Environmental sampling during evaluation and excavation work at the site has revealed a variety of evidence for environment, diet, and selection of wood for fuel. Furthermore, the relatively large proportion of wild clematis charcoal found in Late Neolithic/Early Bronze Age pit [13/005] is likely to represent the symbolic deposition and burning of this plant, possibly as a garland or basketry object. During the Bronze Age and Early Iron Age, emmer and spelt wheat were cultivated and processed by the occupants of the site, along with peas, beans and barley. There is evidence for a mixture of woodland and grassland vegetation in the environs of the site, with a possible increase in instances of disturbed ground during the Early Iron Age, probably related to intensification in agricultural activity. Woodlands in the vicinity of the site exploited for fuel acquisition were dominated by oak and ash, although underwood taxa were also utilised. Firewood may also have been collected from more open woodland margin and hedgerow environments, and damp woodland or wetland margins.

7.0 SCIENTIFIC DATING By Dawn Elise Mooney

7.1 Introduction & Methodology

7.1.1 A single sample was submitted to the Scottish Universities Environmental Research Centre, East Kilbride (SUERC) for radiocarbon analysis from the site. The radiocarbon dating programme was designed in order to provide a more precise date for pit feature [13/005] recorded in Trench 13, which produced three barbed and tanged arrowheads of Early Bronze Age date (Le Hégarat, this report, section 5.10). A single fragment of wild clematis (*Clematis vitalba*) from fill [13/006] of pit [13/005] was submitted for dating. Radiocarbon dating of the sample was carried out by SUERC in January 2014, with results delivered on 3rd February 2014. The laboratory maintains a continual programme of quality assurance procedures, in addition to participation in international inter-comparisons (Scott 2003). These tests indicate no laboratory offsets and demonstrate the validity of the measurement quoted.

7.2 Results

7.2.1 The radiocarbon results are given in Table 5, and are quoted in accordance with the international standard known as the Trondheim convention (Stuiver & Kra 1986). They are conventional radiocarbon ages (Stuiver & Polach 1977). 2 Sigma calibrated dates, obtained using IntCal04 (Reimer *et al.* 2004), are also given at the 95.4% and 68.2% confidence levels.

Laboratory Code	Sample ID	Material & context	δ13C (‰)	Radiocarbon age (BP)	Calibrated date (95.4% confidence)	Calibrated date (68.2% confidence)
SUERC-50119	ASE_DS_00201	*Clematis vitalba* charcoal from fill [13/006] of pit [13/005]	-24	3949± 42	2571 - 2302 calBC	2563 - 2349 calBC

Table 5: Results of radiocarbon dating of charcoal from the site

7.3 Discussion

7.3.1 The radiocarbon dating of the wild clematis charcoal fragment indicated a Late Neolithic to Early Bronze Age date for the pit. This is in agreement with the artefactual and stratigraphic dating of the feature. The charcoal has been interpreted as likely to be directly related to the primary function of the pit (Mooney, Le Hégarat & Allott, this report). Wild clematis is a relatively short-lived shrub compared to the oak (*Quercus* sp.) charcoal also found in the deposit, and this reinforces the likely accuracy of the date.

8.0 DISCUSSION AND CONCLUSIONS

8.1 Introduction

8.1.1 The investigation of this site has provided evidence of archaeological activity spanning some two millennia, from the Late Neolithic / Early Bronze Age, to the Early Iron Age. The series of pits and postholes encountered strongly suggests that prehistoric settlement existed nearby. Although large groups of pottery sherds were encountered in several stratified contexts there were few diagnostic sherds, therefore, most context groups are quite broadly dated.

8.2 Period 1 Phase 1: Late Neolithic / Early Bronze Age pit Open Area 1

8.2.1 The Late Neolithic period in London is characterised by a general movement of settlement from earlier Neolithic riverside locations to the gravel and brickearth areas of the Thames and its tributaries (MoLAS 2000).

8.2.2 Settlement sites of this period are rare, and are usually represented by scatters of lithic and ceramic material and by shallow pits. It is not that unusual to find an isolated pit, such as the one identified during this excavation. Isolated pits at sites on the Thames gravel terraces in the areas around Heathrow and at Mucking, Essex have been found to contain pottery, flint tools, animal bone and charred fruit pips and hazelnut seeds.

8.2.3 However, the significant quantities of burnt flint and stone and clematis found within the pit on this site are likely to represent an *in situ* burning event, and the presence of barbed and tanged arrowheads suggests structured deposition and evidence of such activity is much less common. Radiocarbon dating of the clematis charcoal provided a more specific date of 2571 – 2302 calBC for this event. A known example of similar activity was found at a site in Holloway Lane, Harmondsworth, Middlesex where 6 barbed and tanged arrowheads of Late Neolithic/ Early Bronze Age date were found in a pit along with the remains of an aurochs (*ibid*.).

8.3 Period 2 Phase 1: Late Bronze Age activity Open Areas 2 and 5

8.3.1 There is evidence for the emergence of more permanent and intensive forms of land use on the Thames gravel terraces from the middle of the Bronze Age (MoLAS 2000).

8.3.2 Settlements are usually characterised by features such as postholes, pits, waterholes, gullies and ditches. Two areas (OA2 and OA5) characterised by these types of features were located 30m apart from each other.

8.3.3 The presence of large intercutting pits (GP3) in OA2 containing Late Bronze Age pottery and fired clay fragments may represent domestic activity. The undiagnostic quality of the pottery and lack of charred wood, wheat or grain from the environmental sample makes it difficult to understand the function of the pits, but it is possible they were used as large storage pits. The pits do not appear to belong to a sunken building; although the base is slightly irregular and undulating and the feature is surrounded by at least 4 post holes so it is

possible. The sheer size (5m in diameter with a possible depth of up to 0.80m) and large concentration of pottery suggest that the site is at least within close proximity to a settlement.

8.3.4 The dense concentration of post holes (GP11) may indicate the presence of a structure or a fenced enclosure in Open Area 5. The pits, containing coal, pottery, worked flint and fired clay suggest hearths, buildings or wattled fences probably existed, if not immediately on the site, in close proximity to it. This theory is supported by the presence of a possible water hole [78].

8.3.5 No archaeology was encountered in Trenches 10 and 11 between the two excavation areas, or in Trenches 7 and 12, or to the north in Trenches 1-5 and 8 and 9. However, it is possible that archaeology continues either beyond the eastern site boundary beneath undeveloped grassland or to the south of mitigation area 1 although here 3 rows of former houses constructed in the 1940's will have caused severe truncation.

8.4 Period 2 Phase 2: Early Iron Age pit Open Area 3

8.4.1 Although the majority of fabrics and diagnostic forms of pottery identified were in keeping with a Late Bronze Age date; evidence of Early Iron Age activity was indicated by sherds and fired clay fragments found in a single pit [39], suggesting there may have been a broader phase of Late Bronze Age / Early Iron Age period occupation between 1150-400BC.

8.4.2 Interestingly, the pit also contained an unidentifiable fragment of cremated bone from sample <5> which provides further possible evidence of funerary / ritual activity.

8.5 Period 3 Phase 1: Post-medieval Routeway 1

8.5.1 This 18th century track (RW1) was probably used for agricultural purposes and provided a route between the east - west oriented Ripple Road to the south and White Farm to the northeast (shown on Fig 12, the 1777 Chapman and Andre Map of Essex). The 1919 Ordnance Survey map of the area (not included in this report) shows that the site remained as undeveloped arable farmland until the 20th century (CgMs 2012).

8.6 Period 3 Phase 2: Post-medieval activity Open Area 4

8.6.1 The two pits possibly relate to post 1939 residential development (CgMs 2012).

8.7 Consideration of research aims

8.7.1 In this section relevant original research aims, detailed in section 3.0, are considered.

Original Aim

- *To clarify the nature and extent of existing disturbance and intrusions, assessing the degree of archaeological survival and its significance*

8.7.2 During the archaeological fieldwork, it was clear that the south car park basement, to the south of the evaluation trenches 12 and 13, (Fig. 2) was constructed into the gravel thus removing the archaeological horizon in this area.

8.7.3 The site was stripped of topsoil and subsoil in the 1990s. It is likely the top of some features may have been slightly truncated during this process, suggesting their overall depth/height may have been greater than the size recorded during the excavations. A small number of modern service trenches and pits were encountered in trenches 6, 7 and 9, none of which appeared to truncate underlying archaeological features. The geological horizon was clearly visible in each trench; therefore it was possible to determine the presence or lack of archaeology in each trench.

Original Aim

- *To establish the date and nature of identified features*

8.7.4 The archaeological features exposed in the excavation areas included pits and post holes containing artefacts indicative of Bronze Age settlement activity and a possible post-medieval routeway.

8.7.5 5 phases of activity have been defined:

- Period 1: Late Neolithic / early Bronze Age 2500-1800BC
- Period 2 Phase 1:Late Bronze Age 1150-600BC
- Period 2 Phase 2: Early Iron Age 600-400BC
- Period 3 Phase 1: Post-medieval AD1700-1800
- Period 3 Phase 2: Post-medieval AD1900-2000

Original Aim

- To establish the environmental context of the prehistoric and later activity

8.7.6 During the Bronze Age and Early Iron Age, emmer and spelt wheat were cultivated and processed by the occupants of the site, along with peas, beans and barley. There is evidence for a mixture of woodland and grassland vegetation in the environs of the site, with a possible increase in instances of disturbed ground during the Early Iron Age, probably related to intensification in agricultural activity. Woodlands in the vicinity of the site exploited for fuel acquisition were dominated by oak and ash, although underwood taxa were also utilised. Firewood may also have been collected from more open woodland margin and hedgerow environments, and damp woodland or wetland margins.

8.7.7 Wild clematis charcoal found in Late Neolithic/Early Bronze Age pit [13/005] is likely to represent the symbolic deposition and burning of this plant, possibly as a garland or basketry object.

9.0 PUBLICATION PROJECT

9.1 Revised Research agenda

9.1.1 This section combines those original research aims that the site archive has the potential to address with any new research aims identified in the assessment process by stratigraphic, finds and environmental specialists to produce a set of revised research aims that will form the basis of any future research agenda. A new set of revised research aims (RRA's) are posed as questions below.

9.1.2 RRA 1 Do the substantial number of Late Bronze Age pits containing coal, pottery, worked flint and fired clay indicate a settlement within site itself, or do they reflect the existence of a settlement to the east of the site, outside of the current study area? How does the dense concentration of post holes (GP11) compare to known examples of Late Bronze Age structures?

9.1.3 An area of large intercutting pits (GP3) in OA2 containing Late Bronze Age pottery and fired clay fragments appears to represent some form of domestic activity, but the undiagnostic quality of the pottery and lack of charred wood, wheat or grain from the environmental sample makes it difficult to understand the function of the pits. Are there any other examples of shallow, intercutting, domestic but environmentally sterile pits from the Late Bronze Age?

9.1.4 Wild clematis charcoal found in Late Neolithic/Early Bronze Age pit [13/005] is likely to represent the symbolic deposition and burning of this plant, possibly as a garland or basketry object, along with three barbed and tanged arrow heads. Are there any other examples of clematis (or other none-fuel related plant remains) reflecting similar ritual activities across the Thames gravels, or within the surrounding area?

9.2 Publication

9.2.2 The prehistoric results of this investigation are considered to be of sufficient local and regional significance to merit publication as a short article or note, with accompanying plans, photographs and sections in a suitable regional journal such as London Archaeologist.

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Appendix 1: Context Register

Context	Context Type	Interpretative ID	Feature Type	Parent Context	Comments	Overall spot-date	Dating comments	Sub group	Group	Landuse	Period	Phase	Sample No.
1	L		ES	1	Carpark surface								
2	L		ES	2	Made Ground								
3	L		NS	3	Sand & Gravels								
4	C	C	PH	4				1	2	OA2	2	1	
5	F	U	PH	4				1	2	OA2	2	1	
6	C	C	PH	6				2	2	OA2	2	1	
7	F	U	PH	6				2	2	OA2	2	1	
8	C	C	P	8				3	6	OA4	3	2	
9	F	U	P	8		AD1900-2000	CBM	3	6	OA4	3	2	
10	C	C	D	10				4	5	RW1	3	1	
11	F	U	D	10				4	5	RW1	3	1	
12	C	C	D	12				5	4	RW1	3	1	
13	F	U	D	12				5	4	RW1	3	1	
14	C	C	D	14				6	4	RW1	3	1	
15	F	U	D	14				6	4	RW1	3	1	
16	C	C	PH	16				7	2	OA2	2	1	
17	F	U	PH	16				7	2	OA2	2	1	

Context	Context Type	Interpretative ID	Feature Type	Parent Context	Comments	Overall spot-date	Dating comments	Sub group	Group	Landuse	Period	Phase	Sample No.
18	C	C	D	18				8	5	RW1	3	1	
19	F	U	D	18				8	5	RW1	3	1	
20	C	C	P	20				9	3	OA2	2	1	
21	F	U	P	20	2nd Fill	??1150-600BC	Based on one pot sherd, not very certainly datable but consistent with other LBA fabrics	9	3	OA2	2	1	
22	C	C	P	22				10	3	OA2	2	1	
23	F	U	P	22				10	3	OA2	2	1	
24	C	C	P	24				11	3	OA2	2	1	
25	F	U	P	24		??1150-600BC	Based on one pot sherd, not very certainly datable but consistent with other LBA fabrics; presence of FCF also quite typical of LBA	11	3	OA2	2	1	
26	C	C	D	26				12	5	RW1	3	1	
27	F	U	D	26		AD1700-1800	One CTP frag	12	5	RW1	3	1	
28	F	U	P	20	Primary fill	1150-600BC	diagnostic pot; asscoated with prehistoric flint	9	3	OA2	2	1	4
29	C	C	PH	29				13	1	OA2	2	1	
30	F	U	PH	29		1150-600BC	2 diagnostic rims	13	1	OA2	2	1	
31	C	C	P	31				14	2	OA2	2	1	
32	F	U	P	31				14	2	OA2	2	1	
33	C	C	P	33				15	2	OA2	2	1	
34	F	U	P	33				15	2	OA2	2	1	

Context	Context Type	Interpretative ID	Feature Type	Parent Context	Comments	Overall spot-date	Dating comments	Sub group	Group	Landuse	Period	Phase	Sample No.
35	C	C	P	35				16	2	OA2	2	1	
36	F	U	P	35				16	2	OA2	2	1	
37	C	C	P	37				17	2	OA2	2	1	
38	F	U	P	37				17	2	OA2	2	1	
39	C	C	P	39				18	8	OA3	2	2	
40	F	U	P	39		??600-400BC with probable ?resid LBA material	One diagnostic piece of pot from the residue of the enviro sample seems to be Early Iron Age but the rest seems similar to the probable LBA material seen in other groups	18	8	OA3	2	2	5
41	C	C	P	41				19	2	OA2	2	1	
42	F	U	P	41		1150-600BC	diagnostic pot	19	2	OA2	2	1	
43	C	C	P	43				20	2	OA2	2	1	
44	F	U	P	43		4000BC-AD40	Nothing inherently datable but some FCF probably deriving from prehistoric activity	20	2	OA2	2	1	
45	C	C	PH	45				21	1	OA2	2	1	
46	F	U	PH	45				21	1	OA2	2	1	
47	C	C	D	47				22	4	RW1	3	1	
48	F	U	D	47		9000BC-AD40	Not a very reliable date- tiny flint flakes which Karine says may even be natural	22	4	RW1	3	1	3
49	C	C	PH	49				23	1	OA2	2	1	

Context	Context Type	Interpretative ID	Feature Type	Parent Context	Comments	Overall spot-date	Dating comments	Sub group	Group	Landuse	Period	Phase	Sample No.
50	F	U	PH	49				23	1	OA2	2	1	
51	C	C	PH	51				24	1	OA2	2	1	
52	F	U	PH	51				24	1	OA2	2	1	
53	C	C	P	53				25	3	OA2	2	1	
54	F	U	P	53	Primary fill			25	3	OA2	2	1	
55	F	U	P	53	2nd Fill	1150-600BC (probably later part of this range)	diagnostic pot; presence of FCF and fired clay also quite typical of LBA	25	3	OA2	2	1	
56	C	C	P	56				26	3	OA2	2	1	
57	F	U	P	56				26	3	OA2	2	1	
13/005	C	C	P	13/005				27	7	OA1	1	1	
13/006	F	U	P	13/005	Primary fill	2500-1800 BC*	3 barbed and tanged arrowheads; *tiny fleck of hammerscale from the enviro sample is later but presumably intrusive	27	7	OA1	1	1	1
13/007	F	D	P	13/005	2nd fill			27	7	OA1	1	1	
13/008	C	C	P	13/008				28	2	OA2	2	1	
13/	F	U	P	13/0		1300-600 BC	moderate pot group, probably	28	2	OA2	2	1	2

Context	Context Type	Interpretative ID	Feature Type	Parent Context	Comments	Overall spot-date	Dating comments	Sub group	Group	Landuse	Period	Phase	Sample No.
009				08			contemporary with other features containing LBA pot but could feasibly be a little earlier						
6/003	C	C	P	6/003				29	11	OA5	2	1	
6/004	F	U	P	6/003		1150-600BC		29	11	OA5	2	1	
6/005	C	C	P	6/005				30	11	OA5	2	1	
6/006	F	U	P	6/005		950-600BC		30	11	OA5	2	1	
6/007	VOID				See 68								
6/008	VOID				See 69								
6/009	C	C	PH	6/009				31	11	OA5	2	1	
6/010	F	U	PH	6/009				31	11	OA5	2	1	
6/011	C	C	PH	6/011				32	11	OA5	2	1	
6/012	F	U	PH	6/011				32	11	OA5	2	1	
6/013	C	C	PH	6/013				33	11	OA5	2	1	
6/014	F	U	PH	6/013				33	11	OA5	2	1	

Context	Context Type	Interpretative ID	Feature Type	Parent Context	Comments	Overall spot-date	Dating comments	Sub group	Group	Landuse	Period	Phase	Sample No.
6/015	C	C	PH	6/015				34	11	OA5	2	1	
6/016	F	U	PH	6/015		950-600BC		34	11	OA5	2	1	
6/017	VOID				See 60								
6/018	VOID				See 61								
7/003	C	C	PH	7/003				35	17	OA5	2	1	
7/004	F	U	PH	7/003				35	17	OA5	2	1	6
7/005	C	C	P	7/005				36	17	OA5	2	1	
7/006	F	U	P	7/005				36	17	OA5	2	1	7
9/003	C	C	P	9/003			Late Post-Med	37	16	OA4	3	2	
9/004	F	U	P	9/004			Late Post-Med	37	16	OA4	3	2	
58	C	C	PH	58				38	11	OA5	2	1	
59	F	D	PH	58		LBA 1150-600BC		38	11	OA5	2	1	
60	C	C	PH	60				39	17	OA5	2	1	
61	F	D	PH	60		1150-600BC		39	17	OA5	2	1	
62	C	C	PH	62				40	17	OA5	2	1	

Context	Context Type	Interpretative ID	Feature Type	Parent Context	Comments	Overall spot-date	Dating comments	Sub group	Group	Landuse	Period	Phase	Sample No.
63	F	D	PH	62				40	17	OA5	2	1	
64	C	C	PH	64				41	11	OA5	2	1	
65	F	D	PH	64				41	11	OA5	2	1	
66	C	C	P	66				42	11	OA5	2	1	
67	F	U	P	66				42	11	OA5	2	1	8
68	C	C	P	68				43	11	OA5	2	1	
69	F	U	P	68				43	11	OA5	2	1	9
70	C	C	P	70				44	15	OA5	2	1	
71	F	U	P	70				44	15	OA5	2	1	
72	C	C	P	72				45	15	OA5	2	1	
73	F	U	P	72				45	15	OA5	2	1	
74	C	C	P	74				46	17	OA5	2	1	
75	F	U	P	74				46	17	OA5	2	1	
76	C	C	P	76				47	15	OA5	2	1	
77	F	U	P	76				47	15	OA5	2	1	
78	C	C	P	78				48	13	OA5	2	1	
79	F	U	P	78				48	13	OA5	2	1	10
80	C	C	D	80				49	9	RW1	3	1	
81	F	U	D	80				49	9	RW1	3	1	
82	C	C	D	82				50	9	RW1	3	1	

Context	Context Type	Interpretative ID	Feature Type	Parent Context	Comments	Overall spot-date	Dating comments	Sub group	Group	Landuse	Period	Phase	Sample No.
83	F	U	D	82				50	9	RW1	3	1	
84	C	C	P	84		1150-600BC		51	12	OA5	2	1	
85	C	C	D	85				52	10	RW1	3	1	
86	F	U	D	85				52	10	RW1	3	1	
87	F	U	P	84		1150-600BC		51	12	OA5	2	1	
88	C	C	PH	88				53	17	OA5	2	1	
89	F	D	PH	88				53	17	OA5	2	1	
90	C	C	P	90				54	12	OA5	2	1	
91	F	U	P	90		1150-600BC		54	12	OA5	2	1	
92	C	C	P	92				55	12	OA5	2	1	
93	F	U	P	92	Primary fill			55	12	OA5	2	1	
94	F	U	P	92	Upper fill of pit	1150-600BC		55	12	OA5	2	1	11
95	C	C	P	95				56	12	OA5	2	1	
96	F	U	P	95				56	12	OA5	2	1	
97	C	C	P	97				57	12	OA5	2	1	
98	F	D	P	97				57	12	OA5	2	1	
99	C	C	PH	99				58	17	OA5	2	1	
100	F	D	PH	99				58	17	OA5	2	1	
101	C	C	PH	101				59	17	OA5	2	1	

Context	Context Type	Interpretative ID	Feature Type	Parent Context	Comments	Overall spot-date	Dating comments	Sub group	Group	Landuse	Period	Phase	Sample No.
102	F	D	PH	101		1150-600BC		59	17	OA5	2	1	
103	C	C	PH	103				60	14	OA5	2	1	
104	F	D	PH	103				60	14	OA5	2	1	
105	C	C	PH	105				61	14	OA5	2	1	
106	F	D	PH	105				61	14	OA5	2	1	
107	C	C	PH	107				62	14	OA5	2	1	
108	F	D	PH	107				62	14	OA5	2	1	
109	C	C	PH	109				63	17	OA5	2	1	
110	F	D	PH	109				63	17	OA5	2	1	
111	C	C	PH	111				64	15	OA5	2	1	
112	F	U	PH	111				64	15	OA5	2	1	
113	C	D	PH	113				65	17	OA5	2	1	
114	F	U	PH	113				65	17	OA5	2	1	
11	C	C	PH	115				66	17	OA5	2	1	

Context	Context Type	Interpretative ID	Feature Type	Parent Context	Comments	Overall spot-date	Dating comments	Sub group	Group	Landuse	Period	Phase	Sample No.
5													
116	F	D	PH	115				66	17	OA5	2	1	
117	C	C	PH	117				67	14	OA5	2	1	
118	F	D	PH	117				67	14	OA5	2	1	
119	C	C	D	119				68	9	RW1	3	1	
120	F	U	D	119				68	9	RW1	3	1	

Appendix 2: Environmental Data

Period / Phasing	Group	Sub Group	Landuse	Sample Number	Context	Context / deposit type	Sample Volume litres	Sub-Sample Volume litres	Charcoal >4mm	Weight (g)	Charcoal <4mm	Weight (g)	Charcoal Identifications	Charred botanicals (other than charcoal)	Weight (g)	Burnt bone 4-8mm	Weight (g)	Burnt bone 2-4mm	Weight (g)	Other (eg ind, pot, cbm)
1.1	7	27	OA1	1	13/006	P	30	30	**	2	***	2	cf. *Clematis vitalba* (12), *Quercus* sp. (8)	*	<2					Flint (including 3 arrowheads) **/4g - Stone */6g - FCF **/272g - Magnetised material ****/82g
2.1	2	28	OA2	2	13/009	P	40	40	**	2	***	2	cf. *Ligustrum vulgare* (2), *Prunus* sp. (5), Maloideae (5), *Fraxinus excelsior* (2), *Betula* sp. (3), *Quercus* sp. (1), *Ilex aquifolium* (1)							Quartz */<2g - Pot **/84g - FCF **/322g - Magnetised material ***/8g
3.1	4	22	RW1	3	48	D	40	40												Flint */2g - Glass */<2g - FCF */34g
2.1	3	9	OA2	4	28	P	40	40	*	<2	**	<2	*Quercus* sp. (3), *Prunus* sp. (2), *Salix/Populus* (1)							Pot **/52g - Fired clay */6g - Flint */9g - FCF **/36g
2.2	8	18	OA3	5	40	P	40	40	**	4	***	2	*Quercus* sp. (19), *Prunus* sp. (1)			*	<2			Pot **/124g - Fired clay **/136g - FCF **/596g

Period / Phasing	Group	Sub Group	Landuse	Sample Number	Context	Context / deposit type	Sample Volume litres	Sub-Sample Volume litres	Charcoal >4mm	Weight (g)	Charcoal <4mm	Weight (g)	Charcoal Identifications	Charred Botanicals (other than charcoal)	Weight (g)	Burnt bone 4-8mm	Weight (g)	Burnt bone 2-4mm	Weight (g)	Other (eg ind, pot, cbm)
2.1	11	30	OA5	6	6/006	P	40	40	**	2	***	4	*Quercus* sp. (13), *Prunus* sp. (2), *Fraxinus excelsior* (2), Maloideae (2), *Corylus avellana* (1)			**	<2	**	<2	Coal */2g - Magnetised material ***/6g - Flint */24g - Pot **/40g - FCF **/298g
2.1	11	29	OA5	7	6/004	P	40	40	**	4	****	8	*Quercus* sp. (13), *Prunus* sp. (2), *Fraxinus excelsior* (2), *Fagus sylvatica* (2), Maloideae (1)			*	<2	**	<2	Coal */12g - Magnetised material ****/10g - FCF */42g - Pot **/122g
2.1	11	42	OA5	8	67	P	40	40	**	<2	**	2	*Quercus* sp. (19), *Prunus* sp. (1)							Pot */6g - Industrial debris **/2g - FCF */38g - Magnetised material ***/4g
2.1	11	43	OA5	9	69	P	40	40	*	<2	**	<2								Industrial debris **/<2g - Magnetised material ***/<2g
2.1	13	48	OA5	10	79	P	40	40			*	<2								Coal */<2g - Magnetised material ***/4g - Industrial debris **/<2g
2.1	12	55	OA5	11	94	P	40	40	**	8	***	6	*Quercus* sp. (10), cf. *Acer campestre* (1), *Prunus* sp. (1)			*	<2			FCF */118g - Fired clay */74g - Pot **/120g - Industrial debris **/4g -

Period / Phasing	Group	Sub Group	Landuse	Sample Number	Context	Context / deposit type	Sample Volume litres	Sub-Sample Volume litres	Charcoal >4mm	Weight (g)	Charcoal <4mm	Weight (g)	Charcoal Identifications	Charred Botanicals (other than charcoal)	Weight (g)	Burnt bone 4-8mm	Weight (g)	Burnt bone 2-4mm	Weight (g)	Other (eg ind, pot, cbm)
																				Magnetised material ***/14g

Appendix 3: HER Summary

Site Code	GOR13					
Identification Name and Address	Goresbrook Village, Goresbrook Road, Dagenham, London Borough of Barking & Dagenham.					
County, District &/or Borough	London Borough of Barking & Dagenham.					
OS Grid Refs.	NGR 546940 183760					
Geology	London Clay, overlain by Taplow Gravels					
Arch. South-East Project Number	6020					
Type of Fieldwork	**Eval.**	**Excav.**				
Type of Site		**Shallow Urban**				
Dates of Fieldwork	**Eval**. Aug Oct 2013	**Excav.** Nov 2013				
Sponsor/Client	CgMs					
Project Manager	Andy Leonard					
Project Supervisor	Catherine Douglas					
Period Summary			**Neo.**	**BA**	**IA**	RB
			PM			

Summary

This report presents the results of archaeological investigations carried out by Archaeology South-East at Goresbrook Village, Dagenham, London Borough of Barking and Dagenham, between August and November 2013. The fieldwork was commissioned by CgMs Consulting, on behalf of their client, in advance of the redevelopment of the site for residential dwellings.

The earliest identifiable activity on the site dates to the Late Neolithic/ Early Bronze Age and consists of a single pit containing three barbed and tanged flint arrowheads and evidence of possible ritual activity. Two areas of Late Bronze Age pits and post holes were also identified and are indicative of domestic activity. Occupation of the site continues into the Early Iron Age with the discovery of a pit containing pottery and burnt bone. An 18th century routeway and two 20th century pits were also recorded.

Appendix 4: OASIS

OASIS ID: archaeol6-169173

Project details	
Project name	Archaeological excavations at Goresbrook Village, Dagenham
Short description of the project	This report presents the results of archaeological investigations carried out by Archaeology South-East at Goresbrook Village, Dagenham, London Borough of Barking and Dagenham, between August and November 2013. The fieldwork was commissioned by CgMs Consulting, on behalf of their client, in advance of the redevelopment of the site for residential dwellings. The earliest identifiable activity on the site dates to the Late Neolithic/ Early Bronze Age and consists of a single pit containing three barbed and tanged flint arrowheads and evidence of possible ritual activity. Two areas of Late Bronze Age pits and post holes were also identified and are indicative of domestic activity. Occupation of the site continues into the Early Iron Age with the discovery of a pit containing pottery and burnt bone. An 18th century routeway and two 20th century pits were also recorded.
Project dates	Start: 07-08-2013 End: 22-11-2013
Previous/future work	Yes / No
Any associated project reference codes	GOR13 - Sitecode
Type of project	Recording project
Site status	None
Current Land use	Other 3 - Built over
Monument type	PITS Late Prehistoric
Monument type	POSTHOLES Late Prehistoric
Significant Finds	FLINT TOOLS Late Neolithic
Significant Finds	POTTERY Late Prehistoric
Investigation type	"'Open-area excavation"'
Prompt	Planning agreement (Section 106 or 52)
Project location	
Country	England
Site location	GREATER LONDON BARKING AND DAGENHAM DAGENHAM Archaeological excavations at Goresbrook Village, Dagenham
Study area	100.00 Square metres
Site coordinates	TQ 546950 183760 50.943466091 0.202237019955 50 56 36 N 000 12 08 E Point

Height OD / Depth	Min: 5.56m Max: 5.81m

Project creators

Name of Organisation	Archaeology South-East
Project brief originator	CgMs Consulting
Project design originator	ASE/CgMs
Project director/manager	Andrew Leonard
Project supervisor	Catherine Douglas
Type of sponsor/funding body	CgMs Consulting

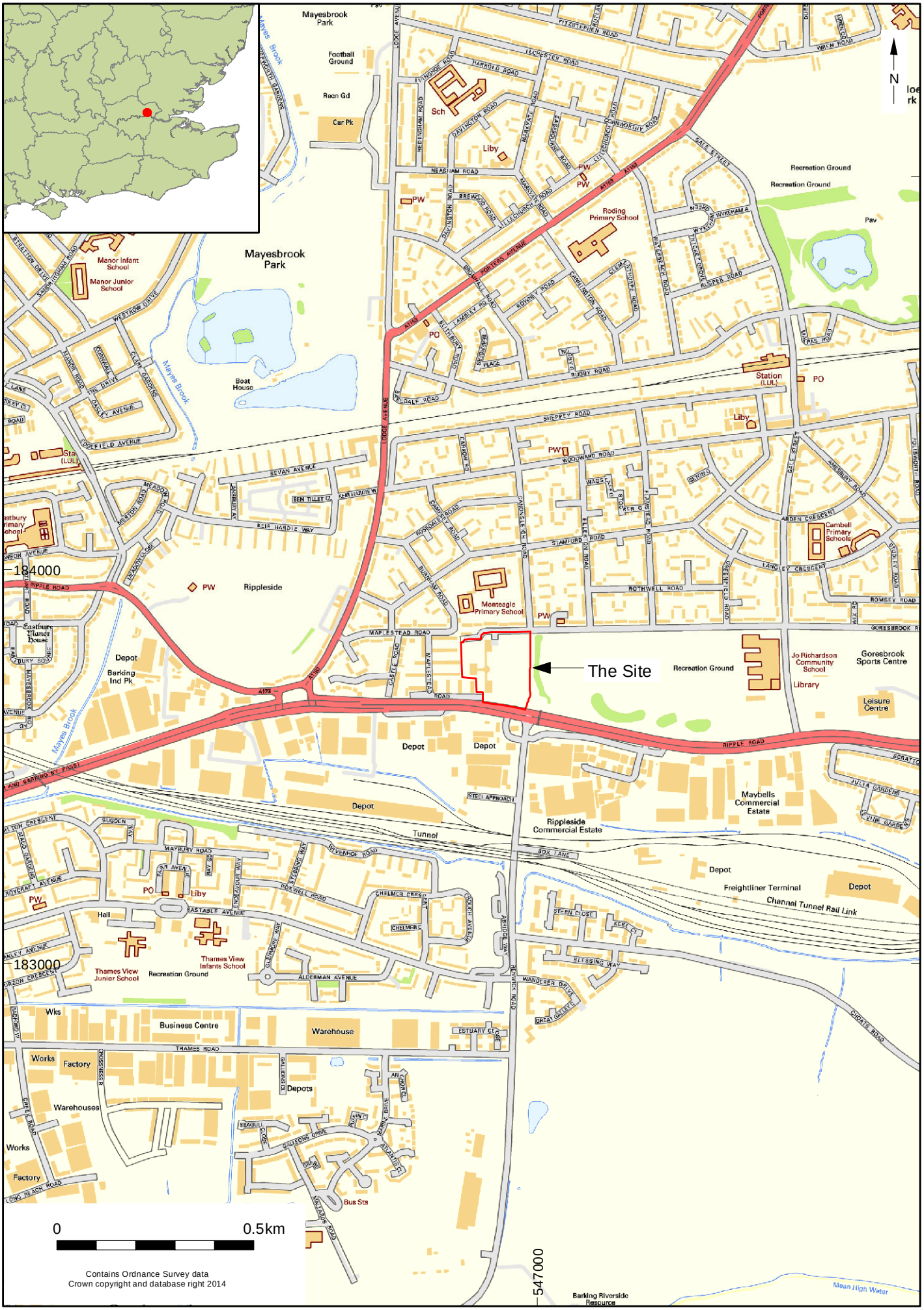
Project archives

Physical Archive recipient	LAARC
Physical Archive ID	GOR13
Physical Contents	"Animal Bones","Ceramics","Environmental","Glass","Human Bones","Worked stone/lithics"
Digital Archive recipient	LAARC
Digital Archive ID	GOR13
Digital Contents	"Animal Bones","Ceramics","Environmental","Glass","Human Bones","Stratigraphic","Survey","Worked stone/lithics"
Digital Media available	"Images raster / digital photography","Survey","Text"
Paper Archive recipient	LAARC
Paper Archive ID	GOR13
Paper Contents	"Animal Bones","Ceramics","Environmental","Glass","Human Bones","Stratigraphic","Survey","Worked stone/lithics"
Paper Media available	"Context sheet","Correspondence","Drawing","Miscellaneous Material","Photograph","Plan","Report","Section","Survey "

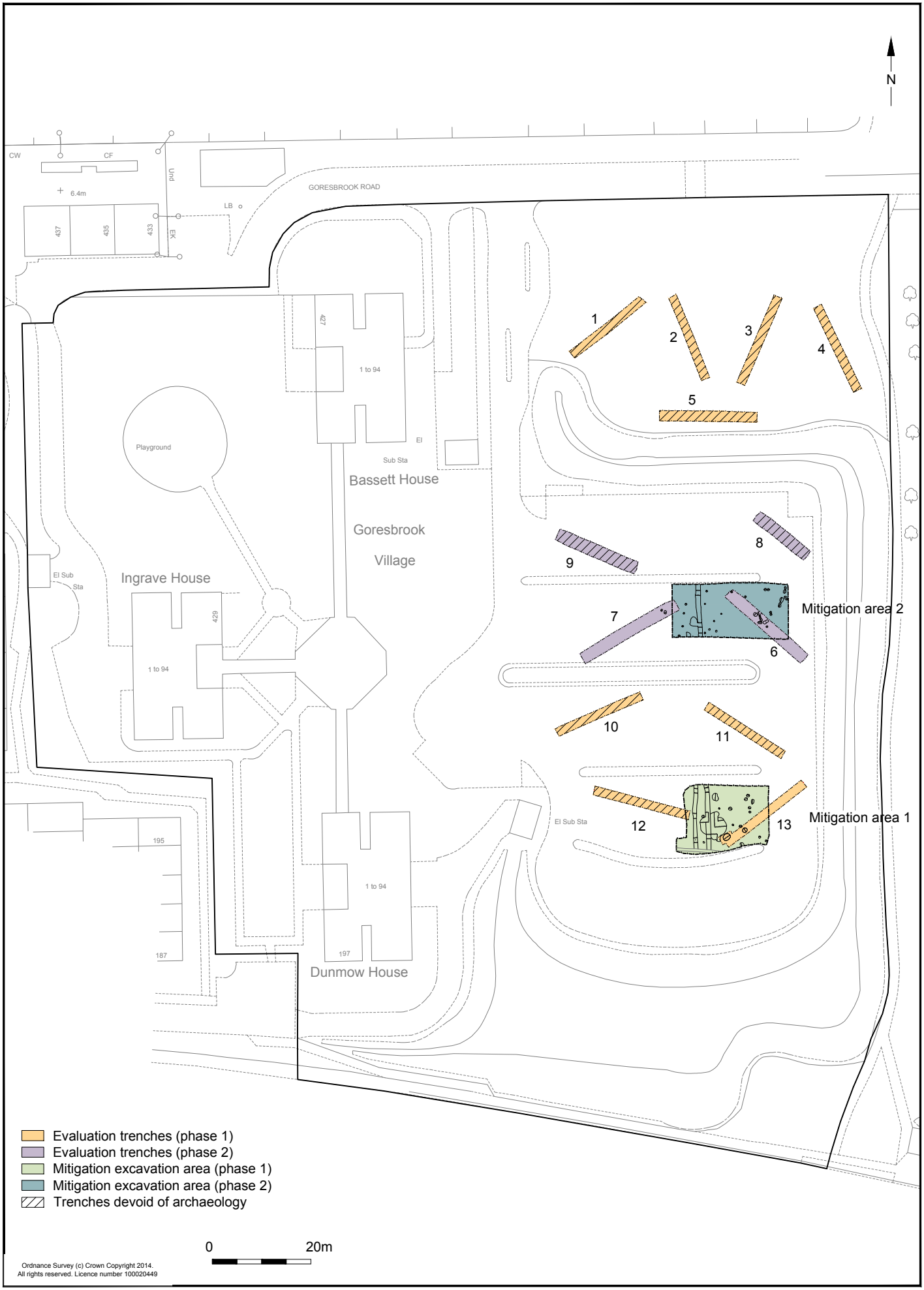
Project bibliography 1

Publication type	Grey literature (unpublished document/manuscript)
Title	Final report and updated project design, excavations at GORESBROOK VILLAGE, DAGENHAM

Author(s)/Editor(s)	Douglas, C
Other bibliographic details	ASE Report No: 2014001
Date	2014
Issuer or publisher	ASE
Place of issue or publication	Portslade
Description	grey lit bound rep
Entered by	Dan Swift (d.swift@ucl.ac.uk)
Entered on	28 January 2014



© **Archaeology South-East**		Goresbrook Village, Dagenham	Fig. 1
Project Ref: 6020	Jan 2014	Site location	
Report Ref: 2014001	Drawn by: JLR		



© **Archaeology South-East**		Goresbrook Village, Dagenham	Fig. 2
Project Ref: 6020	Jan 2014	Site plan showing all phases of work	
Report Ref: 2014001	Drawn by: JLR		

546941, 183725

N

OA1

Section 1

13/005

GP7

546941, 183708

0 2m

13/005 looking south-west

Section 1

SE NW

5.36mOD

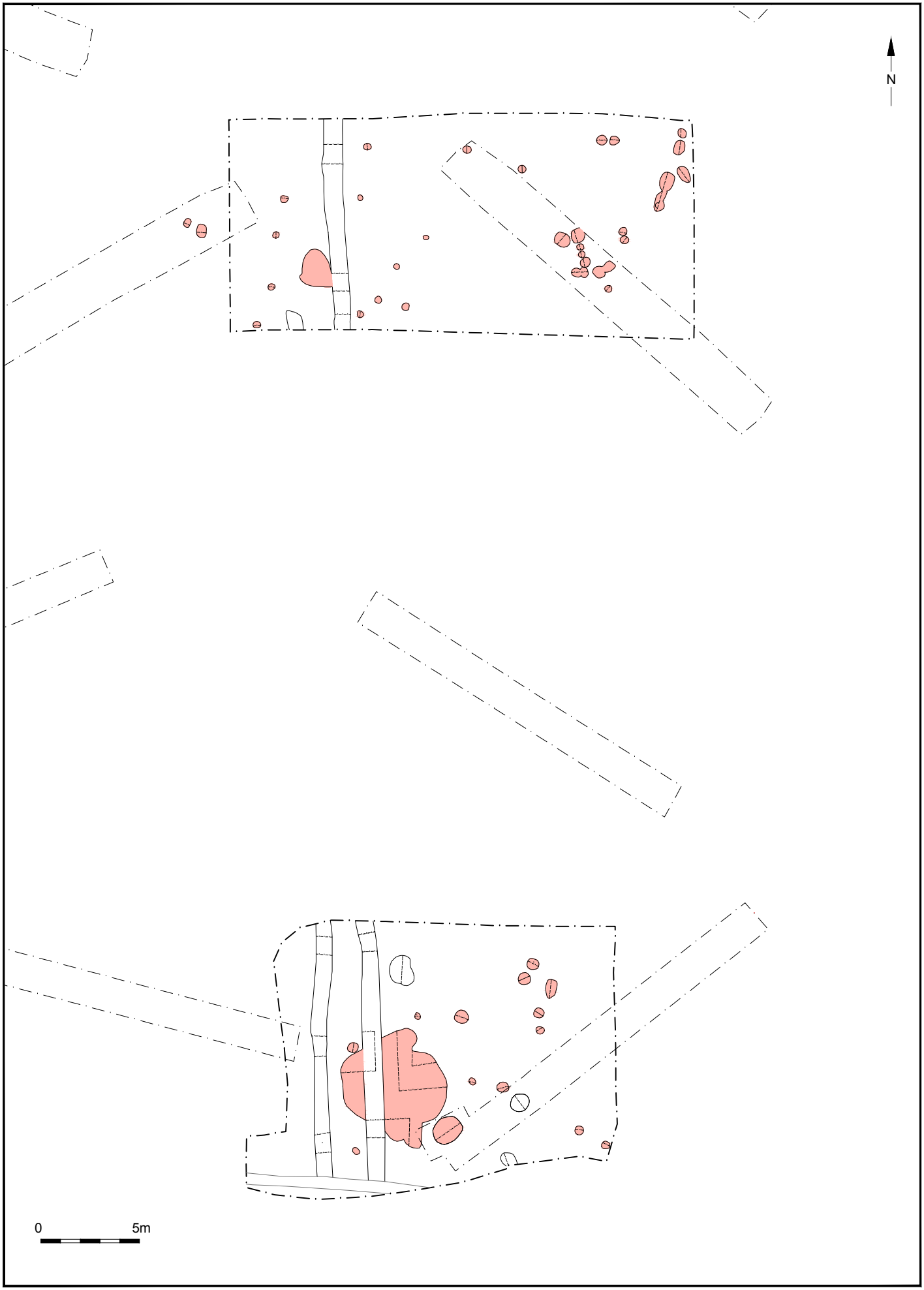
13/007

13/006

13/005

0 0.5m

© Archaeology South-East		Goresbrook Village, Dagenham	Fig. 3
Project Ref: 6020	Jan 2014	Period 1.1: Late Neolithic/Early Bronze Age 2500-1800BC	
Report Ref: 2014001	Drawn by: JLR		



© Archaeology South-East		Goresbrook Village, Dagenham	Fig. 4
Project Ref: 6020	Jan 2014	Period 2.1: Late Bronze Age 1150-600BC overall plan	
Report Ref: 2014001	Drawn by: JLR		

546941, 183725

N

016
037
043
029
GP1
041
GP2
033
035
Section 2
026
031
056
OA2
053
051
045
GP1
024
GP3
020
GP2
006
004
049
GP1
022
13/008

546941, 183708

0 2m

Features 053 and 056 looking south-west

Section 2

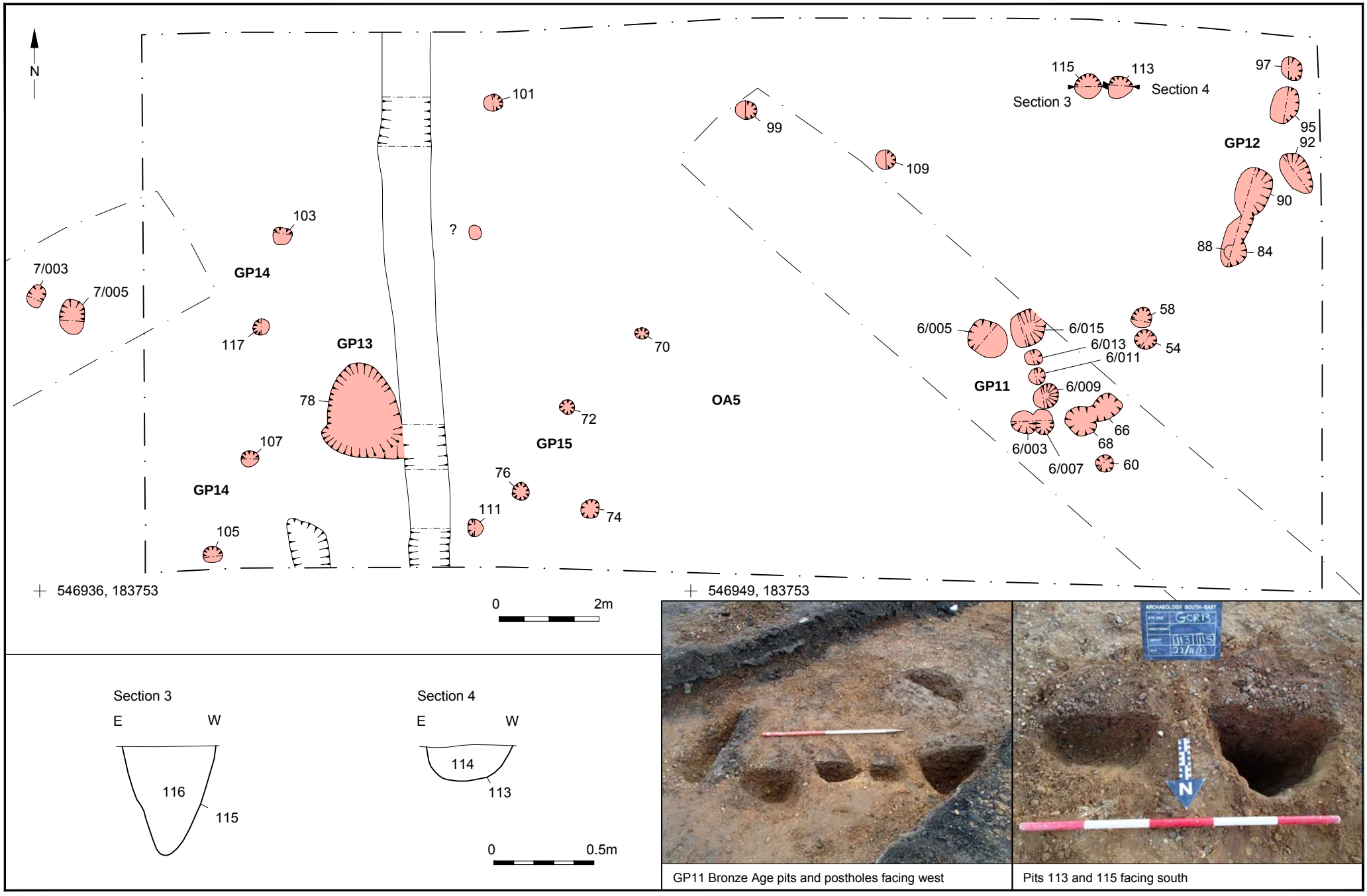
S N

5.38mOD

055
057
054
003
056
053

0 0.5m

© Archaeology South-East		Goresbrook Village, Dagenham	Fig. 5
Project Ref: 6020	Jan 2014	Period 2.1: Late Bronze Age 1150-600BC mitigation area 1	
Report Ref: 2014001	Drawn by: JLR		



GP11 Bronze Age pits and postholes facing west

Pits 113 and 115 facing south

© Archaeology South-East		Goresbrook Village, Dagenham	Fig. 6
Project Ref: 6020	Jan 2014	Period 2.1: Late Bronze Age 1150-600BC mitigation area 2	
Report Ref: 2014001	Drawn by: JLR		

546941, 183725

N

Section 5

GP8

039

OA3

546941, 183708

0 2m

Section 5

S N

5.33mOD

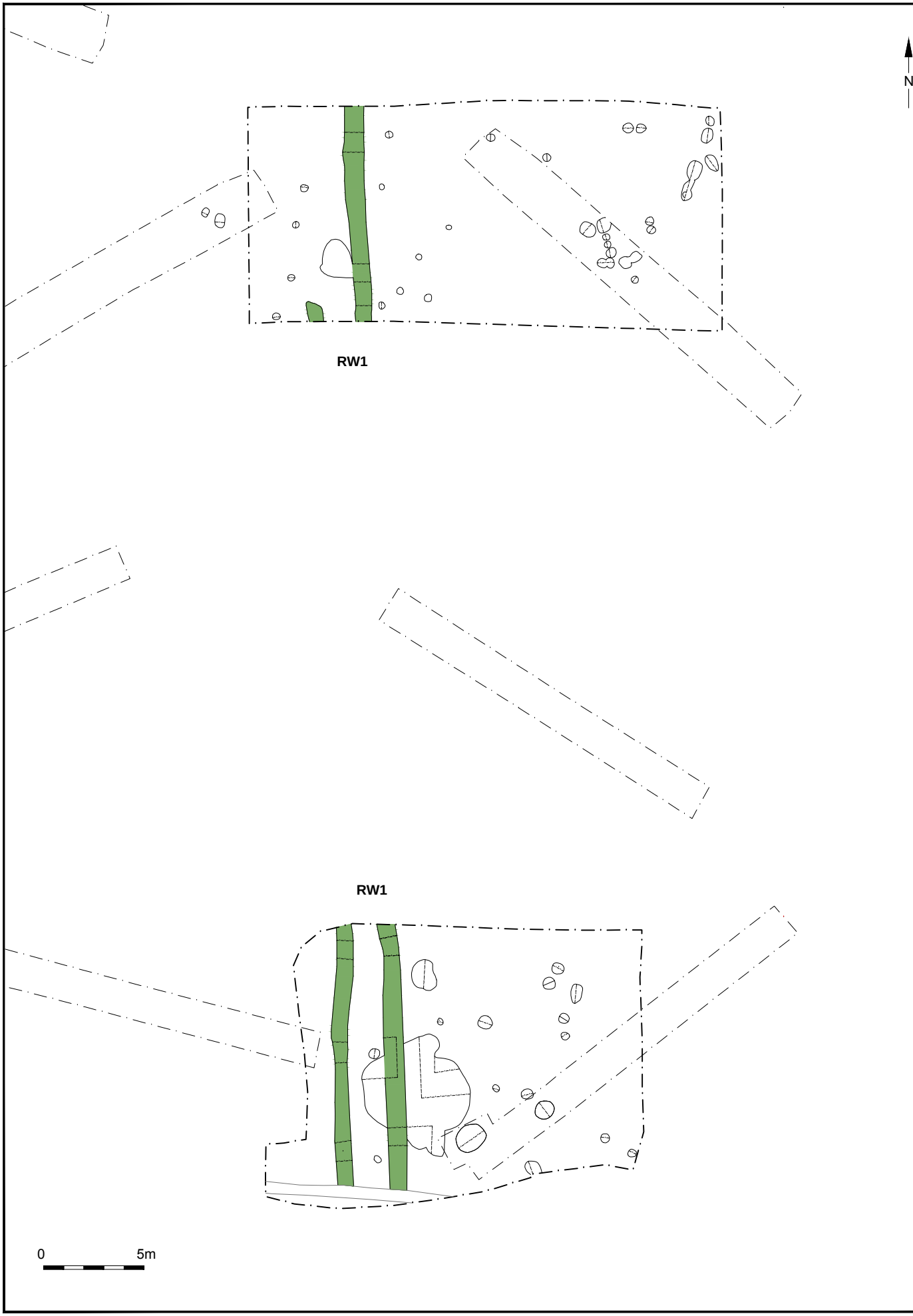
040

039

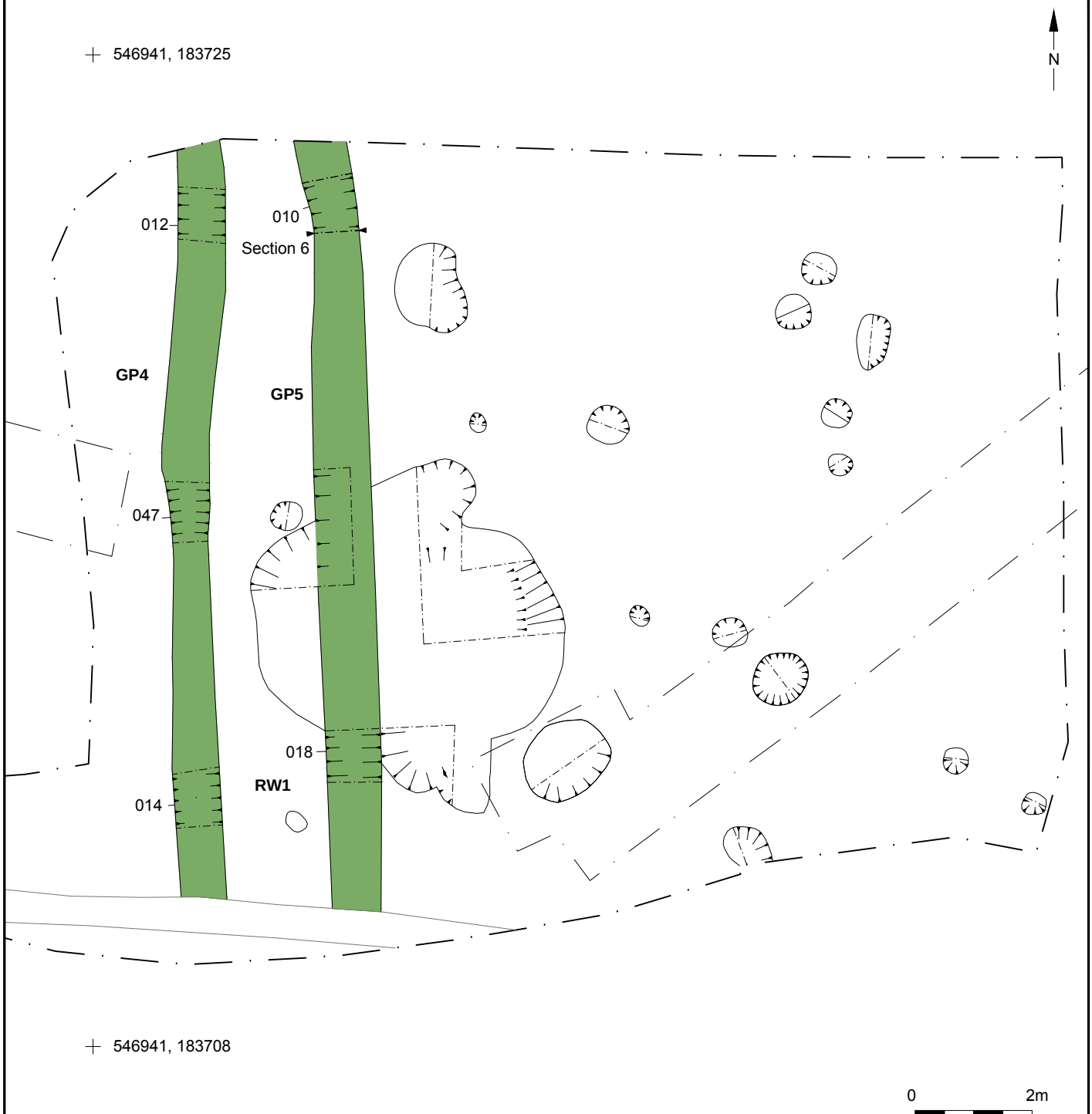
0 0.5m

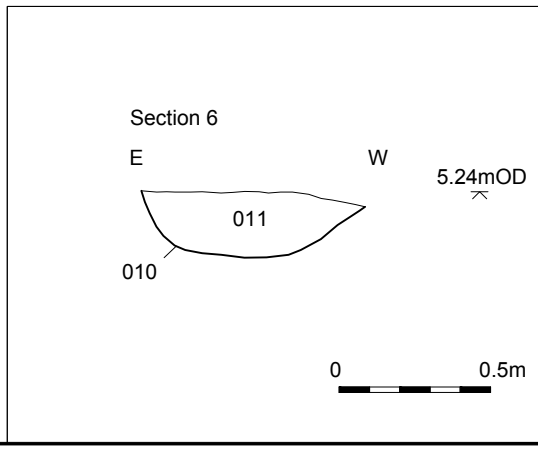
039 looking west

© Archaeology South-East		Goresbrook Village, Dagenham	Fig. 7
Project Ref: 6020	Jan 2014	Period 2.2: Early Iron Age 600-400BC	
Report Ref: 2014001	Drawn by: JLR		



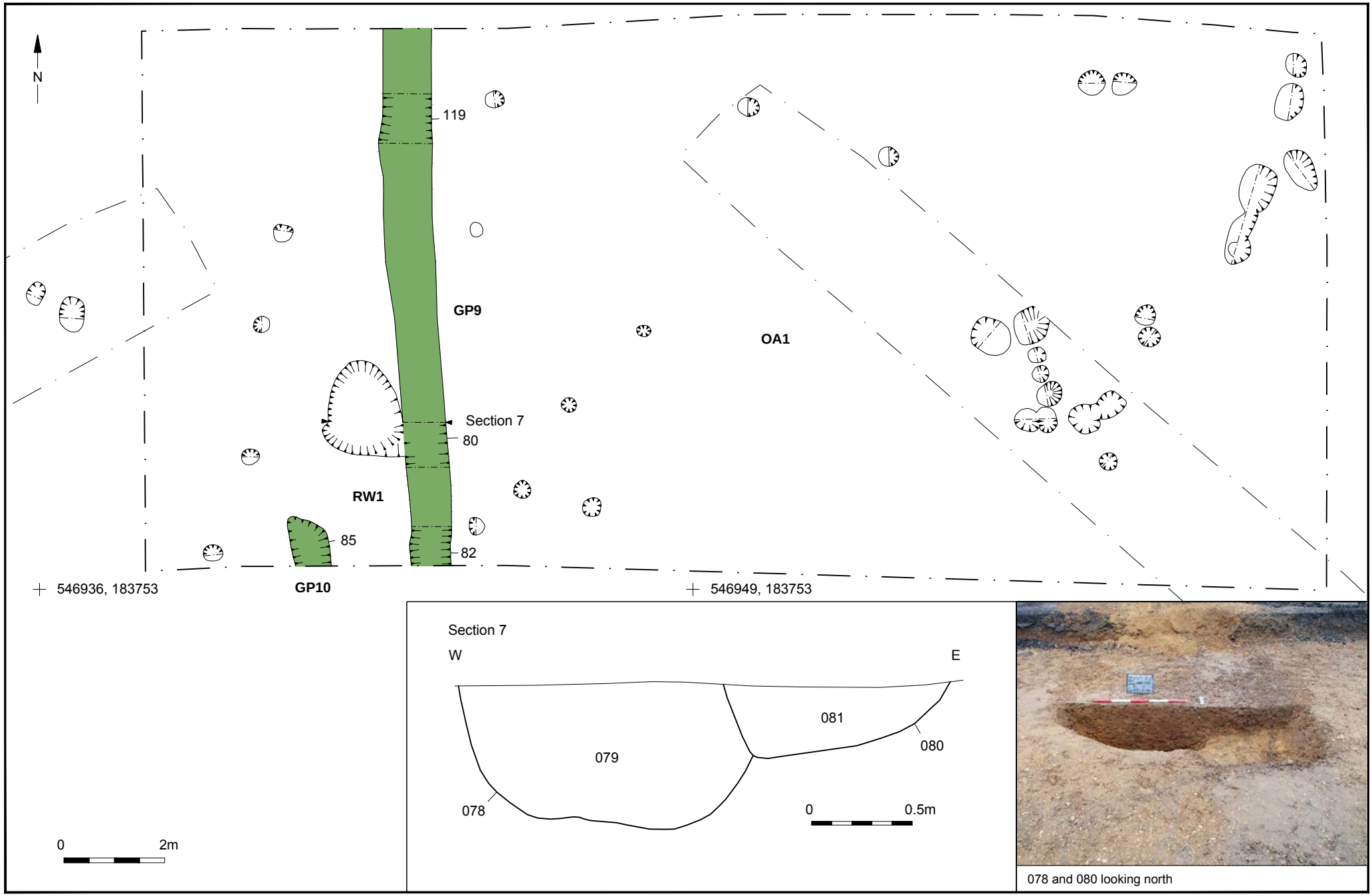
© Archaeology South-East		Goresbrook Village, Dagenham	Fig. 8
Project Ref: 6020	Jan 2014	Period 3.1: Post Medieval AD1700-1800 overall plan	
Report Ref: 2014001	Drawn by: JLR		





010 looking south

© Archaeology South-East		Goresbrook Village, Dagenham	Fig. 9
Project Ref: 6020	Jan 2014	Period 3.1: Post Medieval AD1700-1800 mitigation area 1	
Report Ref: 2014001	Drawn by: JLR		



078 and 080 looking north

© Archaeology South-East		Goresbrook Village, Dagenham	Fig. 10
Project Ref: 6020	Jan 2014	Period 3.1: Post Medieval AD1700-1800 mitigation area 2	
Report Ref: 2014001	Drawn by: JLR		

546941, 183725

N

OA4

Section 8

008

GP6

546941, 183708

0 2m

008 looking west

Section 8

S N

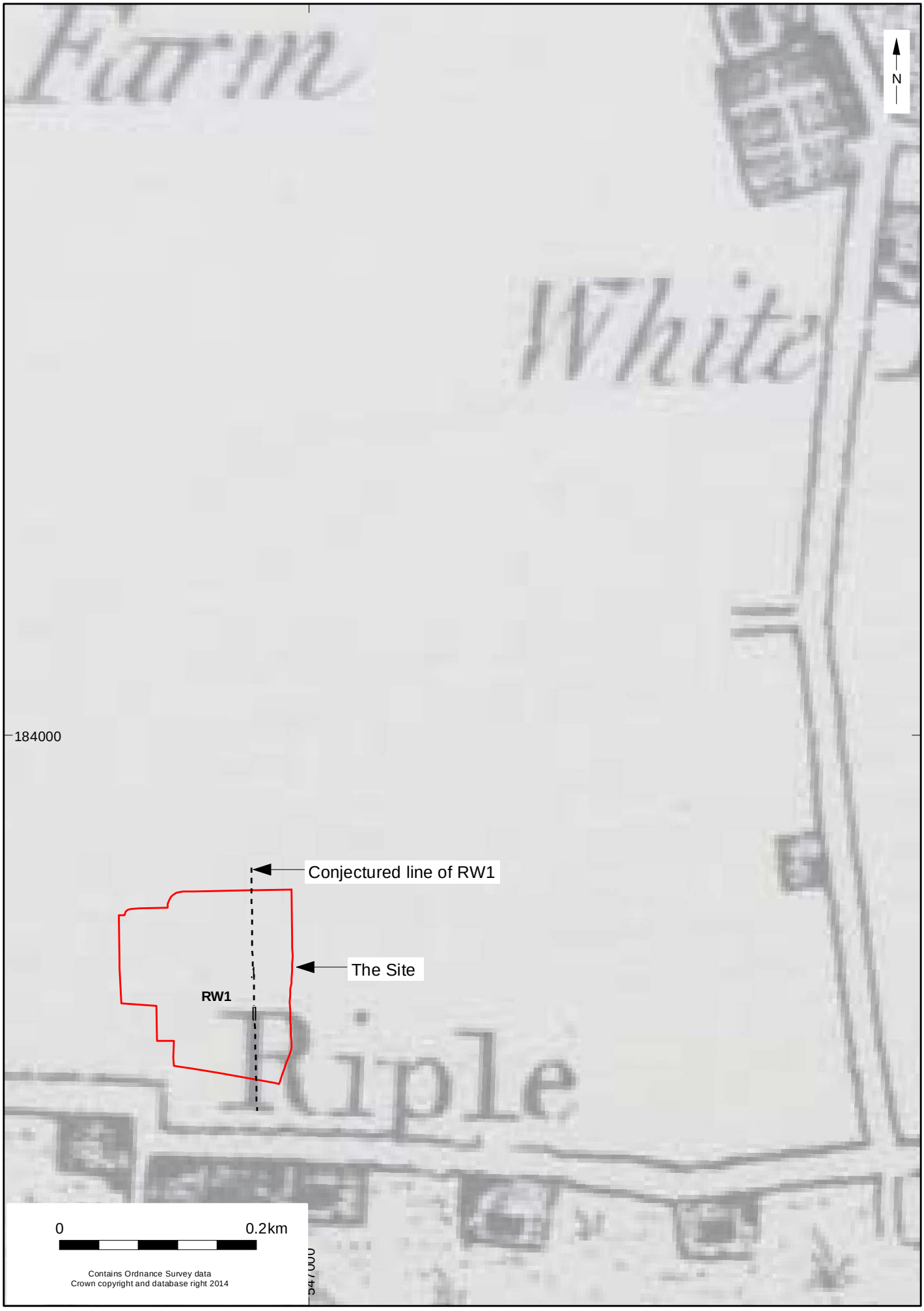
5.34mOD

009

008

0 0.5m

© Archaeology South-East		Goresbrook Village, Dagenham	Fig. 11
Project Ref: 6020	Jan 2014	Period 3.2: Post Medieval AD1900-200	
Report Ref: 2014001	Drawn by: JLR		



© Archaeology South-East		Goresbrook Village, Dagenham	Fig. 12
Project Ref: 6020	Jan 2014	Period 3.1: Post-medieval routeway 1 overlain on the 1777 Chapman and Andre Map of Essex	
Report Ref: 2014001	Drawn by: JLR		

© **Archaeology South-East**		Goresbrook Village, Dagenham	Fig. 13
Project Ref: 6020	Jan 2014	Barbed and tanged arrowheads from pit 13/005 and fill 13/006	
Report Ref: 2014001	Drawn by: JLR		

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