

**An Archaeological
Evaluation at Cobnor Estate, Chidham, Chichester, West Sussex**

Planning Ref: CH/04/01612/FUL

**NGR 47900 10230
Project No: 4028
Site Code: CCP 09**

ASE Report No. 2009169



**Greg Priestley-Bell
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Abstract

Archaeology South-East carried out an archaeological evaluation in advance of managed realignment works at Cobnor Estate, Chidham, West Sussex. The work revealed significant remains from three broad periods: Bronze Age, Mid-Late Iron Age and post-medieval. A well-preserved Bronze Age burnt mound, measuring c. 10m x 12m was recorded. Evidence for Mid-Late Iron Age activity was identified, consisting primarily of a briquetage spread on a buried land surface; a possibly associated hearth or kiln was also recorded. An extensive area of possibly post-medieval hard-standing probably represented a hard for beaching small boats.

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1.0 INTRODUCTION

1.1 Site Background

- 1.1.1 Archaeology South-East (ASE), a division of University College London Centre for Applied Archaeology (UCLCAA), was commissioned by Halcrow Group Ltd, on behalf of their client Associated British Ports, to undertake an archaeological evaluation, at Cobnor Point, Chidham, near Chichester, West Sussex (NGR 47900 10230) (Fig. 1).
- 1.1.2 The archaeological work is in advance of the Cobnor Point Managed Realignment project, which aims to create an inter-tidal habitat zone around an area of Chichester Harbour at the south-eastern edge of the Chidham Peninsula. The scheme will entail significant impacts on the present landscape, including substantial groundworks, the potential adverse effect of tidal erosion on the archaeological resource and the alteration of soil conditions throughout the site.

1.2 Geology and Topography

- 1.2.1 The site is located on the western side of Chichester Harbour, fronted to the east by Bosham Channel and to the south by Chichester Channel. The site comprises 6.5ha of grassland and woodland at Cobnor Point on the south-eastern side of the Chidham peninsula. The site is bounded to the south and east by earthen embankments which form the sea wall along this section of coast.
- 1.2.2 The British Geological Survey (BGS) indicates that the underlying solid geology in the southern part of the Chidham Peninsula, where the site is located, consists of Reading Clay overlain by Brickearth and raised beach deposits. The underlying geology in the northern part of the peninsula consists of Chalk overlain by Brickearth.

1.3 Planning Background

- 1.3.1 Planning permission was granted by Chichester District Council for groundworks associated with the Cobnor Point Managed Realignment project (planning ref. CH/04/0612/FUL). Archaeological issues were addressed through a condition on the planning consent as follows:

Condition 9 – ‘The developer shall arrange for an archaeological organisation of appropriately qualified archaeologists to observe the excavations and record archaeological evidence that may be uncovered as a result of the development

Reason – the site is potentially of archaeological interest’

Condition 10 – *‘An archaeological investigation of the site shall be carried out in accordance with a specification to be submitted to and agreed by the District Planning Authority in writing prior to the commencement of works. The investigation shall be undertaken by an appropriately qualified archaeologist, and shall include the recording of findings and subsequent publication of results.’*

‘Reason – the site is of archaeological significance and it is important that it is recorded by excavation before it is destroyed’

- 1.3.2 A Written Scheme of Investigation (WSI) was produced by Halcrow Group Ltd (Halcrow, 2009). The WSI aimed to address the requirement for archaeological investigation as stipulated in planning condition no. 10 of the planning consent as reproduced above. This document outlined the methods to be used during the archaeological evaluation of the site, namely the excavation and recording of fourteen 1.8m wide archaeological evaluation trenches of varying length. The document also provided background information which is re-used in this report with due acknowledgement

1.4 Aims and Objectives

- 1.4.1 The general aims of the archaeological investigation were to determine:

- The extent, survival and significance of the buried archaeological resource within the site;
- The scope of the final programme of archaeological mitigation.

- 1.4.2 The specific objectives of the investigation were:

- To determine the nature of the buried archaeological resource in a programme of evaluation work prior to the main programme of realignment works commencing;
- To ascertain the presence and nature of Neolithic activity within the site;
- To ascertain the presence and nature of Iron Age and Romano-British salt-working activity within the site;
- To test for significant archaeological remains from other periods within the site;
- To reproduce the results of the evaluation into a report to inform the final mitigation applied to the site during realignment works.

1.5 Scope of Report

- 1.5.1 This report details the findings of an archaeological evaluation undertaken by Greg Priestley-Bell (Senior Archaeologist), Nick Garland and Chris Russell (Archaeologists) between the 6th - 12th October 2009 inclusively. The project was managed by Darryl Palmer (Senior Project Manager) and Jim Stevenson (Project Manager, Post-Excavation).

2.0 ARCHAEOLOGICAL BACKGROUND

This section is based upon a Desk-Based Assessment (DBA) commissioned by Associated British Ports and produced by Chris Blandford Associates (2004). The DBA covers an area within a 1k radius of NGR 4794 1023, the centre of the site. Much of the information contained within the DBA is re-used in this report with due acknowledgement.

2.1 Introduction

- 2.1.1 A number of sources were consulted, primarily the West Sussex Sites and Monuments Record (WSSMR), the Chichester Unitary District Authority Sites and Monuments Record (CSMR) and the National Monuments Record and aerial photograph collection (NMR) and the results are summarised below. Details were taken of all archaeological sites and listed buildings within a 1 kilometre radius of the centre of the site. The identified sites (numbered 1 – 12) are tabulated in Table 1 and plotted on Figure 1.

No	Description	NGR	Reference
1	Neolithic flint working site found during 1982 field-walking survey. Finds – waste flakes and fire-cracked flint	479030 101990	WSSMR 114 CSMR 216 NMR SU80SW41
2	Probable Neolithic site found during 1982 field-walking survey of Chichester Harbour. Finds – worked flint and fire-cracked flint	479280 101660	WSSMR 108 CSMR 208 NMR SU80SW41
3	Probable Neolithic flint working site found during 1982 field-walking survey. Finds – scrapers, worked flint and fire-cracked flint	479980 101570	WSSMR 109 NMR SU80SW41
4	Probable Neolithic flint working site found during 1982 field-walking survey. Finds – worked flint and fire-cracked flint	478350 102300	WSSMR 115 CSMR 217 NMR SU80SW41
5	Post-medieval brick kiln, shown on estate map of 1785	478700 102700	WSSMR 5979
6	Neolithic flint working site found during 1982 field-walking survey. Finds – waste flakes	479400 102820	WSSMR 113 CSMR 215 NMR SU80SW41
7	Post-medieval garden located at Chidmere Farm	479000 103000	WSSMR 137
8	Neolithic flint working site found during 1982 field-walking survey. Finds – worked flint	480010 102000	WSSMR 683 NMR SU80SW41
9	Neolithic and Iron Age cores, flakes and scatters of calcined flint on the shore	479770 102780	CSMR 254
10	Iron Age? fired clay fragments from a coastal site near Chidham	479800 102490	CSMR 255
11	Neolithic polished axe fragment found near Cobnor House during 1978 excavation	479050 102500	CSMR 256
12	Possible Neolithic flintwork and fragment of Neolithic polished axe found during	479700 102600	CSMR 257

	coastline survey		
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Table 1: Gazetteer of known archaeology within 1km radius of the site

2.2 Archaeological Periods Represented

2.2.1 *Prehistoric*

Palaeolithic 450,000 - 10,000 BC

Mesolithic 10,000 - 5,000 BC

Neolithic 5,000 - 2,300 BC

Bronze Age 2,300 - 600 BC

Iron Age 600 - AD 42

2.2.2 *Historic*

Roman AD 42 - 410

Anglo Saxon/Early Medieval AD 410 - 1065

Medieval AD 1066 – 1485

Post-Medieval AD 1486 – present

2.2.3 Palaeolithic

A Lower Palaeolithic handaxe was found in the inter-tidal muds west of Hayling Island, c. 4.5km west of the site, while a number of Upper Palaeolithic flints are recorded from around Langstone Harbour, c. 8km to the west of the site. No artefacts from this period have been found on the Chidham Peninsula.

2.2.4 Mesolithic

No remains have been found within the study area dating to this period, although an excavation of beach shingle at Chidham, c. 1.75km to the northwest of the site revealed a number of Mesolithic flints. In addition, further Mesolithic flints have been identified at various locations around Chichester Harbour (Cartwright, 1984).

2.2.5 Neolithic

Neolithic activity is well represented in the study area. Ten sites from this period have been identified: six of these are flint-working sites, identified during the 1982 Chichester Harbour Survey (Cartwright, 1984) at locations along the tidal margins of the foreshore, immediately adjacent and in close proximity to the study area (Nos 1-4, 6 and 8, Table 1 and Fig 1). Finds comprised worked and fire-cracked flint.

Outside the study area, the Chichester Harbour Survey (Cartwright 1984), recorded numerous other finds dating to this period, along the tidal margins of the foreshore. Excavations on the Chidham Peninsula in 1978 (Bedwin 1980) revealed a total of 630 worked flints of likely Neolithic date, including three *possible* leaf-shaped arrowheads and many notched scrapers.

2.2.6 Bronze Age

Prior to the current investigation, no evidence of Bronze Age settlement or activity has been identified within the study area. However, pits and pottery have been found at Bosham, c. 2km to the north-east of the site, while an unurned cremation burial was found at Thorney island airfield, c. 3km to the west of the

site. Similar burials, along with Bronze Age flintwork and pottery, have also been recorded along the coastline and a number of metalwork hoards have been found on Hayling Island.

2.2.7 Iron Age

Evidence from within the study area of Iron Age activity has been identified c. 500m to the north-east of the site, where a number of flints (No 9, Fig 1) and fragments of fired clay (No 10, Fig 1) dating to the Iron Age, were found on and close to the foreshore. As well as the Iron Age pottery recovered from a number of locations during the 1982 Chichester Harbour Survey, pottery was also recovered c. 1.5km to the north of the site during the excavation of two Roman salt-working sites on Chidham foreshore. Richard Bradley has suggested that salt production began in this area during the Iron Age (Bedwin 1980). There are possible Late Iron Age salt-working sites on the foreshore to the north of the subject site.

2.2.8 Roman

No remains have been found within the study area dating to this period. A number of Roman salt-working sites have been recorded on the foreshore north of the subject site. Other salt-working sites have been identified close to the north of the study area, particularly on the western shore of Hayling Island, Langstone Harbor.

2.2.9 Anglo Saxon/Early Medieval

No remains have been found within the study area dating to this period. Chidham is included in the Domesday Book as part of the larger estate of Bosham Chapelry and therefore may represent a secondary settlement. Bosham is believed to be one of the earliest Saxon villages on the shores of Chichester harbour.

2.2.10 Medieval and Post-Medieval

No remains have been found within the study area dating to the medieval period. By the 13th century Chidham was referred to as the manorial centre of the Bosham Chapelry and the two areas remained linked until the dissolution of the College of Bosham in 1548, after which Chidham descended as a separate parish. It is likely that the site lay away from the focus of later medieval settlement, remaining heavily wooded. With the dissolution of the College of Bosham, Chidham passed to Thomas Fisher before being sold, granted and divided numerous times over the next 400 years.

2.2.11 Cartographic Evidence

The earliest map that shows the site in its wider setting is a 1724 survey of Chichester Harbour; there is little detail however. Yeakell and Gardner's 1778 map of Sussex shows the southern tip of the Chidham peninsula, including the site, covered by dense woodland (Great Coppice and Cobnor Coppice), unlike the majority of the parish of Chidham. A brick kiln (No 5, Fig 1) is shown on an estate map of 1785, together with a garden (No 7, Fig 1).

The 1st Series 1" OS map of c. 1805/6 shows the site still largely covered by woodland, although small fields have been cut into both coppices. It seems that

reclamation of land by the construction of sea defences began in the early 19th century. While the 1778 map had shown an irregular coastline, the 1805 map shows it close to its present outline, indicating that reclamation was largely completed during the intervening period.

By the 1st Edition 6" OS map of 1869-75, Cobnor House has been constructed to the north of the site. There are a few thick Shaws (strips of woodland) shown around the fields of Cobnor House, presumably remnants of the great coppices. By 1895-8 (2nd Edition OS) the area of woodland has again been reduced. During the 20th century the patchwork of small regular fields over the Chidham Peninsula, created by the 1812 and 1821 enclosures.

3.0 METHODOLOGY

- 3.1** Initially, fourteen trial trenches, measuring 1.8m wide and between 7m – 22m long, were machine excavated across the area of proposed development under archaeological supervision (Fig. 2).
- 3.2** The trenches were laid out to a pattern agreed with James Kenny, the Chichester District Archaeologist. The original location of trench T7 was moved c. 10m to the north-east due to standing water. After consultation with James Kenny, a further trench (T13b) was excavated in order to define remains identified in Trench T13b.
- 3.3** All of the trenches were excavated under constant archaeological supervision, using a 13 ton 360° tracked excavator, fitted with a toothless ditching bucket. Revealed surfaces were manually cleaned in an attempt to identify any archaeological deposits or features. The sections of the trenches were selectively cleaned to observe and record their stratigraphy. All spoil removed from the trenches was scanned visually and with a metal detector for the presence of unstratified artefacts.
- 3.4** All encountered archaeological deposits, features and finds were recorded according to accepted professional standards in accordance with the approved ASE Written Scheme of Investigation using pro-forma context record sheets. Sections through archaeological features and deposits were drawn at a scale of 1:10..
- 3.5** A full photographic record of the trenches and associated deposits and features was kept (including monochrome prints, colour slides and digital), and will form part of the site archive. The archive is presently held at the Archaeology South-East offices at Portslade, East Sussex, and will in due course be offered to a suitable local museum.
- 3.6** Only undifferentiated topsoil, subsoil and overburden of recent origin was removed by machine and kept separately. The excavation was taken, in spits of no more than 0.1m for the top and sub soil, down to the top of the first significant archaeological horizon or the top of the underlying 'natural'.

Number of Contexts	45 contexts
No. of files/paper record	1 file
Plan and sections sheets	1 sheet plans and sections
Photographs	40 photographs

Table 2: Quantification of site archive

4.0 ARCHAEOLOGICAL RESULTS

A full context listing is given in Appendix 1

4.1 Trench T1

- 4.1.1 Topsoil [1/001] consisting of 200mm of mid greyish brown clayey silt overlay natural [1/002], consisting of dark reddish brown clayey silt with occasional flints. No archaeological remains were identified. Trench T1 measured 10m x 1.80m.

4.2 Trench T2

- 4.2.1 Topsoil [2/001] consisting of 200mm of mid greyish brown clayey silt overlay alluvium, [2/002], consisting of mid greyish brown silty clay. Layer [2/002] overlay a compacted surface, [2/003], consisting mid brownish grey silty clay with 70% flint cobbles and gravel. Layer [2/003] extended over the entire area of the trench. Trench T2 measured 10m x 1.80m.

4.3 Trench T3

- 4.3.1 Topsoil [3/001] consisting of 200mm of mid greyish brown clayey silt overlay alluvium [3/002] consisting of mid greyish brown silty clay. Layer [3/002] overlay a compacted surface [3/003] consisting of flint cobbles and gravel, which in turn overlay natural (alluvium) [3/004]. At the north-western end of the trench topsoil [3/001] overlay a layer of mid brown silty clay with 60% gravel [3/005] that extended for c. 3.5m down the trench. Trench T3 measured 8m x 1.80m.

4.4 Trench T4

- 4.4.1 Topsoil [4/001], consisting of 250mm of mid greyish brown clayey silt, overlay natural [4/002] consisting of mid yellowish brown silty clay with 60% gravel. No archaeological remains were identified. Trench T4 measured 12m x 1.80m.

4.5 Trench T5

- 4.5.1 Topsoil [5/001], consisting of 250mm of mid greyish brown clayey silt, overlay natural [5/002] consisting of mid yellowish brown silty clay with 60% gravel. No significant archaeological remains were identified. Trench T5 measured 12m x 1.80m.

4.6 Trench T6

- 4.6.1 Topsoil [6/001], consisting of 200mm of mid greyish brown slightly clayey silt, overlay natural [6/002], consisting of light yellowish brown silty clay with 50% gravel. At the western end of the trench topsoil [6/001] overlay a c. 200mm thick layer [6/003] of dark greyish brown clayey silt with 40% fired clay clumps. After consultation with the CDC Archaeologist, James Kenny, this layer was sampled by a 1m long hand dug slot. Trench T6 measured 10m x 1.80m.

4.7 Trench T7

- 4.7.1 Topsoil [7/001], consisting of 250mm of mid greyish brown clayey silt, overlay mid yellowish grey silty clay alluvium [7/002]. Alluvium [7/002] overlay a layer, [7/004], of dark yellowish grey silty clay that contained mid-late Iron Age pottery and briquetage. The underlying natural [7/003] consisted of mid yellowish brown silty clay with 20% gravel. Trench T7 measured 7m x 1.80m.

4.8 Trench T8

- 4.8.1 Topsoil [8/001], consisting of 250mm of mid greyish brown clayey silt, overlay a layer [8/002] of light brownish yellow slightly clay silt. Layer [8/002] overlay natural [8/003] consisting of mid yellowish brown silty clay with 20% gravel. No archaeological remains were identified. Trench T8 measured 7m x 1.80m.

4.9 Trench T9

- 4.9.1 Topsoil [9/001], consisting of 250mm of mid greyish brown clayey silt, overlay mid yellowish grey silty clay alluvium [9/002]. Alluvium [9/002] contained two cuts, [9/003] and [9/005] each measuring 2m wide and 800mm deep; [9/003] cut [9/005]. Both cuts contained similar fills, [9/004] and [9/006] respectively, of light yellowish brown clayey silt. Trench T9 measured 22m x 1.80m.
- 4.9.2 At the south-eastern end of the trench, alluvium [9/002] overlay a deposit [9/008] of rounded flint pebbles, which in turn overlay a deposit [9/007] of mid yellowish brown silty clay with 60% rounded flint pebbles. Deposit [9/007] was also recorded at the north-western end of the trench.

4.10 Trench T10

- 4.10.1 Topsoil [10/001], consisting of 200mm of mid greyish brown clayey silt, overlay mid yellowish brown silty clay alluvium [10/002] in the centre of the trench. At the ends of the trench topsoil [10/001] overlay a deposit [10/003] of rounded flint pebbles. No archaeological remains were identified. Trench T10 measured 22m x 1.80m.

4.11 Trench T11

- 4.11.1 Topsoil [11/001], consisting of 250mm of mid greyish brown slightly clayey silt overlay a layer [11/002] of mid yellowish brown silty clay. Layer [11/002] overlay natural [11/003] consisting of mid greyish brown silty clay with 70% gravel and rounded flint pebbles. No archaeological remains were identified. Trench T11 measured 22m x 1.80m.

4.12 Trench T12

- 4.12.1 Topsoil [12/001], consisting of 200mm of mid greyish brown slightly clayey silt, overlay natural [12/002] consisting of very light whitish yellow very silty clay with 10% gravel. No archaeological remains were identified. Trench T12 measured 20m x 1.80m.

4.13 Trenches T13a and T13b

- 4.13.1 Topsoil [13/001] consisting of up to 300mm of mid greyish brown clayey silt. Over most of the northern part of trench T13a, topsoil [13/001] overlay mid yellowish brown/brownish yellow silty clay alluvium [13/002], which in turn overlay natural [13/003] consisting of light yellowish grey silty clay with 70% gravel.
- 4.13.2 At the southern end of trench T13a and in trench T13b, topsoil [13/001] overlay a layer [13/004] of dark/very dark greyish brown/blackish grey silty clay with 80% calcined (heavily fire-cracked) flint. One fragment of perhaps Iron Age pottery was recovered from deposit [13/004], together with small quantities of worked flint and bone and a fragment of quartzite possible rubber stone. Trench T13 measured 20m x 1.80m and T13b 7m x 1.80m.

4.14 Trench T14

- 4.14.1 Topsoil [14/001], consisting of 250mm of mid greyish brown clayey silt, overlay mid yellowish grey silty clay alluvium [14/002]. Alluvium [14/002] extended to the base of a sondage at c. 1.8m below ground level. No archaeological remains were identified. Trench T14 measured 22m x 1.80m.

5.0 FINDS

A small assemblage of finds was recovered during the watching brief. A summary can be found in Table 3 .

Context	Pot No/g	Bone No/g	Flint No/g	FCF No/g	Stone No/g	F.Clay No/g	Wood No/g
6/003				16/432		3/274	
7/004	16/208					4/84	
8/002	1/16						
9/007				3/146			
9/009		4/36					1/16
13/004	1/2	9/18	6/126		1/66	1/6	
Total	18/226	13/54	6/126	19/578	1/66	8/364	1/16

Table 3: Quantification of the finds.

5.1 The Later Prehistoric Pottery by Anna Doherty

- 5.1.1 A small assemblage of 19 flint-tempered sherds, weighing 226 grams was recovered during the evaluation: all but two sherds coming from one context [7/004]. The pottery was examined using a x20 binocular microscope and quantified by sherd count and weight. However, at present, formal fabric descriptions have not been set out, since fabric groupings may become more clearly defined if further material is recovered in the event of further work. If this is the case, the current assemblage should be fully integrated at the analysis stage.
- 5.1.2 Seven sherds are in one distinctive fabric with common flint, which is generally very fine (c.0.5-1mm) but with rare very large fragments up to 6mm in size. This fabric also contains moderate coarse quartz grains of around 0.2-0.3mm and rare possible glauconite grains. Sandy flint-tempered fabrics are more closely associated with the Middle and Late Iron Age periods. The only diagnostic sherd in the assemblage is from a handmade, well-formed bead-rim jar. This is a form which developed during in the Middle Iron Age but remained in use throughout the Late Iron Age and into the early Roman period. The assemblage is probably too small to draw any firm conclusions based on the absence of types but, if the pottery was as late as the 1st century AD, some non flint-tempered fabrics would be expected.
- 5.1.3 The remainder of the sherds are in coarser flint-tempered fabrics lacking quartz inclusions. Several of these are particularly coarse and thick-walled. Although it is unreliable to date flint-tempered bodysherds purely on the basis of fabric, these are much more typical of Late Bronze Age assemblages. All of the coarser sherds were associated with probable Middle/Late Iron Age pottery in [7/004] and could be purely residual.

- 5.1.4 However, it is worth noting that many of the coarsest examples feature a distinctive pinkish/orange firing colour which is one trait associated with briquetage vessels. Although briquetage usually features organic rather than flint inclusions, it is possible that some of the unusually coarse flint-tempered sherds represent contemporary Middle to Late Iron Age material possibly related to salt-working; clearer examples of briquetage have been identified from context [7/004], which are described in the fired clay report below.

5.2 The Worked Flint by Chris Butler

- 5.2.1 A small assemblage of four pieces of worked flint weighing 125gms was recovered from context 13/004 during the work.
- 5.2.2 The assessment comprised a visual inspection of each bag, counting the number of pieces of each type of worked flint present, noting details of the range and variety of pieces, general condition, and the potential for further detailed analysis. Those pieces of flint that were obviously not worked were discarded during the assessment.
- 5.2.3 All of the flint is either black or dark grey in colour, with the dark grey pieces also having some orange staining. Cortex, where present is a thin, smooth, and light grey in colour.
- 5.2.4 The four pieces comprise three hard hammer-struck flakes, with no evidence of platform preparation, and all three pieces having hinge fractures. The fourth piece is a core fragment, being the lower part of a nodule from which flakes have been removed, possibly from two platforms. All of these pieces are probably later prehistoric in date, although the lack of any diagnostic features makes it difficult to date them.
- 5.2.5 This small residual assemblage has little potential for further study, and therefore it is recommended that no further work be undertaken on this assemblage, although the flintwork should be retained for possible further study in the future.

5.3 The Fired Clay by Elke Raemen

- 5.3.1 A total of eight fragments of fired clay (wt 364g) were recovered from three individually numbered contexts. Three different fabrics have been noted:

Fabric 1. Sparse fine sand-tempered with occasional to moderate organic temper.

Fabric 2. Sparse fine sand-tempered with occasional iron oxide inclusions to 1mm and occasional organic temper.

Fabric 3. Sparse fine sand-tempered with rare iron oxide inclusions to 1mm. Some with rare crushed flint to 2mm.

- 5.3.2 Of interest is a probable pedestal fragment (fabric 1) and pinch pot (fabric 2) from [7/004]. Two undiagnostic fragments, both in fabric 1 were also recovered

from [7/004]. The fabric as well as their association with the pedestal and pinch prop, suggest they also represent briquetage. Pieces from other contexts are again undiagnostic of form, including a piece with one flat surface from [6/003]. Although nothing suggests them to be briquetage, an identification as such cannot be ruled out.

- 5.3.3 The assemblage is too small to be of any potential for further analysis. However, their presence in this area is of significance, as in this vicinity comparatively little evidence for salt production has been found up to date. They should therefore be kept and studied in conjunction with finds from any further stages of work.

5.4 The Geological Material by Luke Barber

- 5.4.1 A single piece of stone was recovered from context [13/004]. This consists of a non-calcareous dark grey micaceous quartzite cobble fragment. The piece clearly has all-round attrition that may have come from natural rolling on the beach. There are no obvious man-made wear marks on the piece, however, this is not unusual considering the hardness of the stone. Quartzite cobbles are frequently found on sites, even those some way inland, and it is likely that many were collected for use as polishing/sharpening stones.

5.5 The Animal Bone by Gemma Ayton

- 5.5.1 Two contexts, [9/009] and [13/004], produced 13 fragments of bone. The assemblage contains cattle-sized rib and cattle teeth fragments. The teeth were recovered from context [9/009] and are highly fragmented though one upper molar was identified. Four fragments of cattle-sized rib were recovered from context [13/004]. The bone is discoloured though the surface is in good condition. No evidence for burning, butchery or gnawing was noted.
- 5.5.2 The assemblage holds no potential for further analysis due to its size and condition.

5.6 Environmental Samples by Lucy Allott

- 5.6.1 Three samples were taken during archaeological work at Cobnor Point. Sampling aimed to establish evidence for environmental remains such as charred macrobotanicals, wood charcoal, fauna and mollusca within the deposits. All of the samples were taken from deposits that appeared burnt or darkened and sample <3> was taken from a burnt mound deposit [13/0004].
- 5.6.2 The samples were processed in their entirety in a flotation tank, the residues and flots were captured on 500µm and 250µm sieves and were air dried prior to sorting. To facilitate sorting the residues were passed through 4mm and 2mm geological sieves and each fraction sorted for environmental and artefact remains (Table 4). The flots were scanned under a stereozoom microscope at magnifications of x7-45 and an overview of their contents recorded (Table 5).
- 5.6.3 Results

The flot from sample <1>, [6/003] contained a large amount of uncharred vegetation (approximately 50%) which suggests a degree of modern disturbance and potential mixing within these sediments. No charred macrobotanical remains, such as seeds or fruits were present however the flot contained frequent wood charcoal fragments. These were generally well preserved and preliminary identifications/groups of identifications of some of these were made (with reference to Hather 2000) to establish their suitability for further analysis and potential to provide radiocarbon dates. Oak (*Quercus* sp.), ash (*Fraxinus excelsior*) and probable hazel/alder/hornbeam (*Corylus/Alnus/Carpinus* sp.) were present in this assemblage. The hazel/alder/hornbeam (*Corylus/Alnus/Carpinus* sp.) identification could be refined if viewed at high magnifications.

5.6.4 Sample <2> [7/004] and <3>, [13/004] were dominated by uncharred vegetation including roots and seeds. Very few charcoal fragments were noted in the flots from either sample and where present these were all <2mm in size. The residue from sample <1>, [6/003] also produced a small assemblage of wood charcoal fragments however no other environmental remains were recovered.

5.6.5 Discussion

This work confirmed the presence of a small assemblage of wood charcoal in deposit [6003]. Although charcoal fragments within this deposit could provide information on fuel use the large proportion of uncharred vegetation may have moved these charcoal fragments from their original contextual location and may therefore hinder any potential to provide interpretations. Any future work at this site should aim to identify areas with fewer disturbances that could be used to further our understanding of these features. As identified by Dunkin and Yates (2008), burnt mounds form an integral part of the complex and regulated land use of the Coastal Plain during the Bronze Age. It is therefore of interest to establish evidence for fuel use and any potential woodland management of this landscape that is associated with burnt mounds.

Table 4: Residue Quantification (* = 0-10, ** = 11-50, *** = 51-250, **** = >250) and weights in grams

Sample Number	Context	Sample Volume (litres)	Sample Volume processed (litres)	Charcoal >4mm	Weight (g)	Charcoal <4mm	Weight (g)	Other
1	7/004	20	20	***	50	***	8	FCF****/392 FIRED CLAY**/46 POT*/42 FLINT*/10
2	6/003	10	10					FCF >4mm (****/439 2-4mm****822 <2mm****/528)
3	13/004	10	10	**	1	**	2	FCF****/1330 FIRED CLAY****/1998

Table 5: Flot Quantification (* = 0-10, ** = 11-50, *** = 51-250, **** = >250)

Sample Number	Context	weight (g)	Flot volume (ml)	Uncharred %	sediment %	uncharred seeds	Charcoal >4mm	Charcoal <4mm	Charcoal <2mm	charred crop seeds	charred weed seeds
1	7/004	76	225	50		***	**	***	****		
2	6/003	4	40	95	<5	*			**		
3	13/004	6	20	98		*			**		

6.0 DISCUSSION

6.1 Trench T2

- 6.1.1 Layer [2/003] (the surface of which occurred at 1.80m AOD) was probably a hard-standing or 'hard' for the beaching of small boats; the existing topography indicates that the proposed hard lay within a small embayment that was almost certainly man-made. Before the construction of the existing seawall, it is likely that the hard was partly or perhaps completely covered at high tide. Layer [2/002] represented an apparently short period of alluviation that occurred between the disuse of the hard and the completion of the seawall; alluviation in the area behind the seawall would have begun as soon as ongoing construction reduced the scouring effect of the sea and allowed silting to take place.
- 6.1.2 Cartographic evidence suggests that the present seawall was constructed at some time between 1778 – 1806, and it is reasonable to suggest that the hard might have been in use immediately prior to this period. Although no evidence was recovered that might indicate the date of construction of the hard, it may have been originally constructed to facilitate the transport of coppiced wood in the post-medieval period.

6.2 Trench T3

- 6.2.1 The hard identified in trench T2 apparently extended into trench T3 where it was probably represented by layer [3/003] (which occurred at 1.41m AOD). Layer [3/005] (which occurred at 2.00m AOD) represented a later area of hard-standing, or perhaps a later phase of hard [3/003].

6.3 Trench T6

- 6.3.1 Layer [6/003] (which occurred at 2.20m AOD) perhaps represented the site of a destroyed hearth or kiln; the fired clay clumps possibly the remains of a clay lining. A significant quantity of fire-cracked flint was also present, perhaps suggesting the presence of a nearby burnt mound (usually of Bronze Age Date) or prehistoric cooking site.
- 6.3.2 Alternatively, given the almost certain presence of mid-late Iron Age salt-working on the site (see trench T7), layer [6/003] might represent an associated feature, perhaps a kiln for the production of briquetage. It is noted in the pottery report that the unusually coarse flint-tempered sherds from [7/004] in trench T7 might represent mid-late Iron Age material possibly related to salt-working. If this were the case, the fire-cracked flint from [6/003] might represent raw material for tempering briquetage vessels. Amongst the many settlement tanks and boiling hearths recorded at an extensive Late Iron Age salt-working site at Lydd, Kent, a kiln was identified, almost certainly for the production of briquetage objects (Priestley-Bell in prep.).

6.4 Trench T7

- 6.4.1 Layer [7/004] (which occurred at 1.55m AOD) probably represented part of a buried land surface, almost certainly associated with mid-late Iron Age salt-working. Although no features were identified, perhaps due to the very rapid water-logging of the trench, the presence of two pieces of firmly diagnostic briquetage provided clear evidence for salt-working. The pieces consisted of a fragment of pedestal and a 'pinch prop' (sometimes called a hand brick).
- 6.4.2 A possible Iron Age salt-working site was excavated on the Chidham Peninsula (Fig. 1) in 1978 when a suggested 'evaporation pan' was recorded (Bedwin, 168). The site had originally been identified by Richard Bradley in the 1960s and was one of several possible Iron Age salt-working sites recorded by him in the Chichester, Langstone and Portsmouth harbours. Bradley went on to suggest that salt production in the area had begun in the Iron Age.
- 6.4.3 The pedestal fragment and pinch prop from the current site were very similar to briquetage objects recorded from the Late Iron Age salt-working site at Lydd, Kent (see above) (Priestley-Bell in prep.). The generally very good state of preservation of the salt-working features identified at Lydd allowed a relatively detailed model of the Late Iron Age salt making process to be constructed as follows:
- i) Brine was placed in clay-lined settlement tanks to remove sediment and to increase the salt concentration through evaporation.
 - ii) The concentrated liquor was placed in boiling vessels set on three or more (usually four) pedestals within clay-lined boiling pits; the pedestals were set on flattened circular bases of green clay; green clay pinch props were placed between the side of vessel and boiling pit to prevent rocking.
 - iii) Salt crystals were probably ladled off during boiling and the boiling vessel continually topped up with more liquor.
 - iv) The damp salt was placed in open fabric drying vessels, which may have been placed over slow fires, in order to produce salt cakes. These drying vessels may have subsequently served as packaging during the transport of the salt.
- 6.4.4 Pedestals and pinch props can be seen as important elements in the process, suggesting that the above outline might also broadly describe salt-working at Cobnor Point.

6.5 Trench T9

- 6.5.1 Cuts [9/003] and [9/005] (occurring at 1.90m AOD) were pits of clearly modern origin. The character of the fills ([9/004 and [9/006] respectively) indicated that they had not become fully compacted since infilling.

6.6 Trenches 13A and 13B

- 6.6.1 Deposit [13/004] (which occurred at 1.90m AOD) was almost certainly a 'burnt mound' probably dating to the Late bronze Age. The burnt mound appeared to cover an area measuring approximately 10m x 12m, while existing surface topography suggested that it might reach a height of c. 500mm above the surface of the underlying natural. Burnt mounds are always associated with a nearby water source; in this instance a large pond lay immediately to the west of the feature. Until recently this pond has held water, however it is believed to be of some antiquity and is spring fed (pers.comm. Ms Diana Beale).
- 6.6.2 The term 'burnt mound' applies to a set of features: the mound itself, a trough and a hearth or hearths. It is generally accepted that the basic function of this set of features was to produce hot water and/or steam in relatively large quantities. What is not clear however is the precise use to which these products were put. Since burnt mounds were first identified as a class of monument in their own right, the list of suggested uses has grown steadily, it includes (starting with the three most commonly advocated): cooking, bathing/sauna, textile production (including washing, dyeing and fulling), laundry, leather working, fat rendering, general purpose 'kitchen sink', brewing, the soaking of osiers for basketry, the production of narcotic vapours, eel and fish store and as ritual foci.
- 6.6.3 The debate has been fuelled by a characteristic paucity of finds from burnt mounds; although Irish sites have produced a variety of usually single items, including spindle whorls, a stone pestle, mortars, a saddle quern and rubber stone (as perhaps identified on the current site), a whetstone, a chert core and at least two bronze pins, one disk-headed. However, these finds cannot necessarily be regarded as indicators of function, and may be examples of structured deposition, perhaps representing acts of 'decommission' (Priestley-Bell in prep.).
- 6.6.4 In recent years there has been a growing body of evidence confirming that burnt mounds were important elements of a Bronze Age settled landscape. On the West Sussex Coastal Plain, David Dunkin (2001) has identified links between Later Bronze Age metalwork deposits and the locations of burnt mounds, watercourses and settlements. Perhaps the most compelling example of this inter-relationship however is at Bradley Fen, near Peterborough (Hanson Aggregates & Cambridge Archaeology Unit, 2007) where three burnt mounds were identified, each beside a water hole, within a Bronze Age field system and associated with round houses, granaries and metalwork deposits. The overall organisation of the various settlement elements identified on that site indicated that the burnt mounds were almost certainly all in use at the same time, each serving the occupants of one or two round houses (Priestley-Bell in prep.).

7.0 CONCLUSIONS

- 7.1** Archaeological remains from three periods were revealed in five trenches, Bronze Age in T13A/13B, mid-late Iron Age/prehistoric in T6 and T7 and probably post-medieval in T2 and T3. Given the relatively small size of the total area sampled, there is a high probability of further archaeological remains being present on the subject site.
- 7.2** The proven good state of preservation of the Bronze Age and post-medieval remains, and the apparent good preservation of the salt-working land surface was primarily due to the low energy burial of much of the site by alluvium. The unsuitability of the land for arable agriculture and the resultant lack of ploughing was certainly a contributory factor to the general state of preservation.
- 7.3** The results from the current work at Cobnor Point underline the archaeological potential of the coastal margins in the Chichester, Langstone and Portsmouth locality, and in particular those areas that have been subject to alluviation.

Acknowledgements

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APPENDIX 1: CONTEXT REGISTER

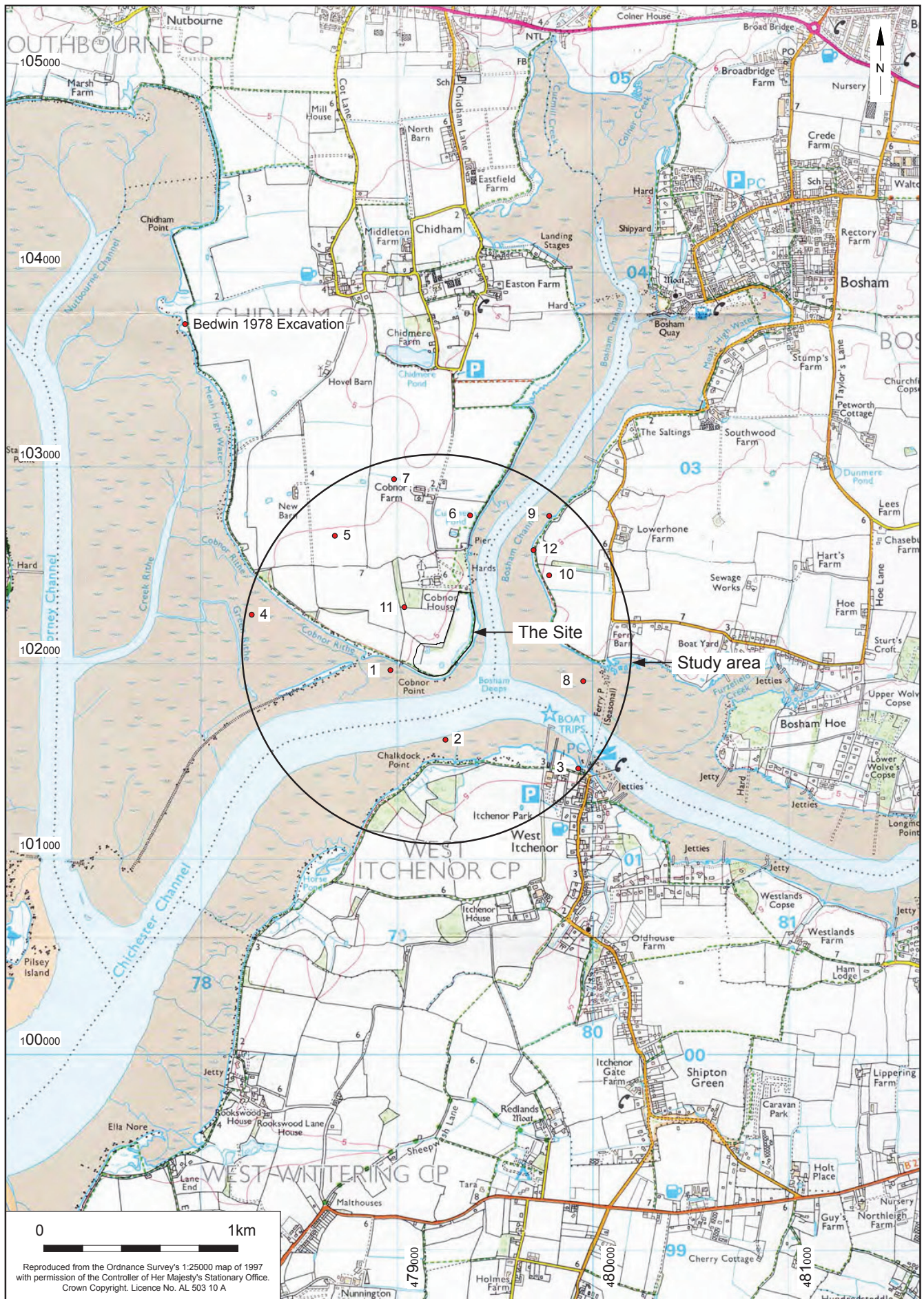
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CPC09	1	1/001	L			Topsoil
CPC09	1	1/002	L			Gravel
CPC09	2	2/001	L			Topsoil
CPC09	2	2/002	L			Alluvium
CPC09	2	2/003	L		PM?	Hard
CPC09	3	3/001	L			Topsoil
CPC09	3	3/002	L			Alluvium
CPC09	3	3/003	L		PM?	Hard
CPC09	3	3/004	L			Alluvium
CPC09	3	3/005	L		PM?	Hard
CPC09	4	4/001	L			Topsoil
CPC09	4	4/002	L			Reading Clay
CPC09	5	5/001	L			Topsoil
CPC09	5	5/002	L			Reading Clay
CPC09	6	6/001	L			Topsoil
CPC09	6	6/002	L			Alluvium
CPC09	6	6/003	L		IA/RB?	Kiln destruction debris?
CPC09	7	7/001	L			Topsoil
CPC09	7	7/002	L			Alluvium
CPC09	7	7/003	L			Alluvium
CPC09	7	7/004	L		IA/RB?	Salt working area
CPC09	8	8/001	L			Topsoil
CPC09	8	8/002	L			Alluvium
CPC09	8	8/003	L			Reading Clay
CPC09	9	9/001	L			Topsoil
CPC09	9	9/002	L			Alluvium
CPC09	9	9/003	C		Modern	Pit
CPC09	9	9/004	F	9003		
CPC09	9	9/005	C		Modern	Pit
CPC09	9	9/006	F	9005		
CPC09	9	9/007	L			Beach, raised?
CPC09	9	9/008	L			Beach, storm?
CPC09	9	9/009	L			Alluvium
CPC09	10	10/001	L			Topsoil
CPC09	10	10/002	L			Alluvium
CPC09	10	10/003				Beach
CPC09	11	11/001	L			Topsoil

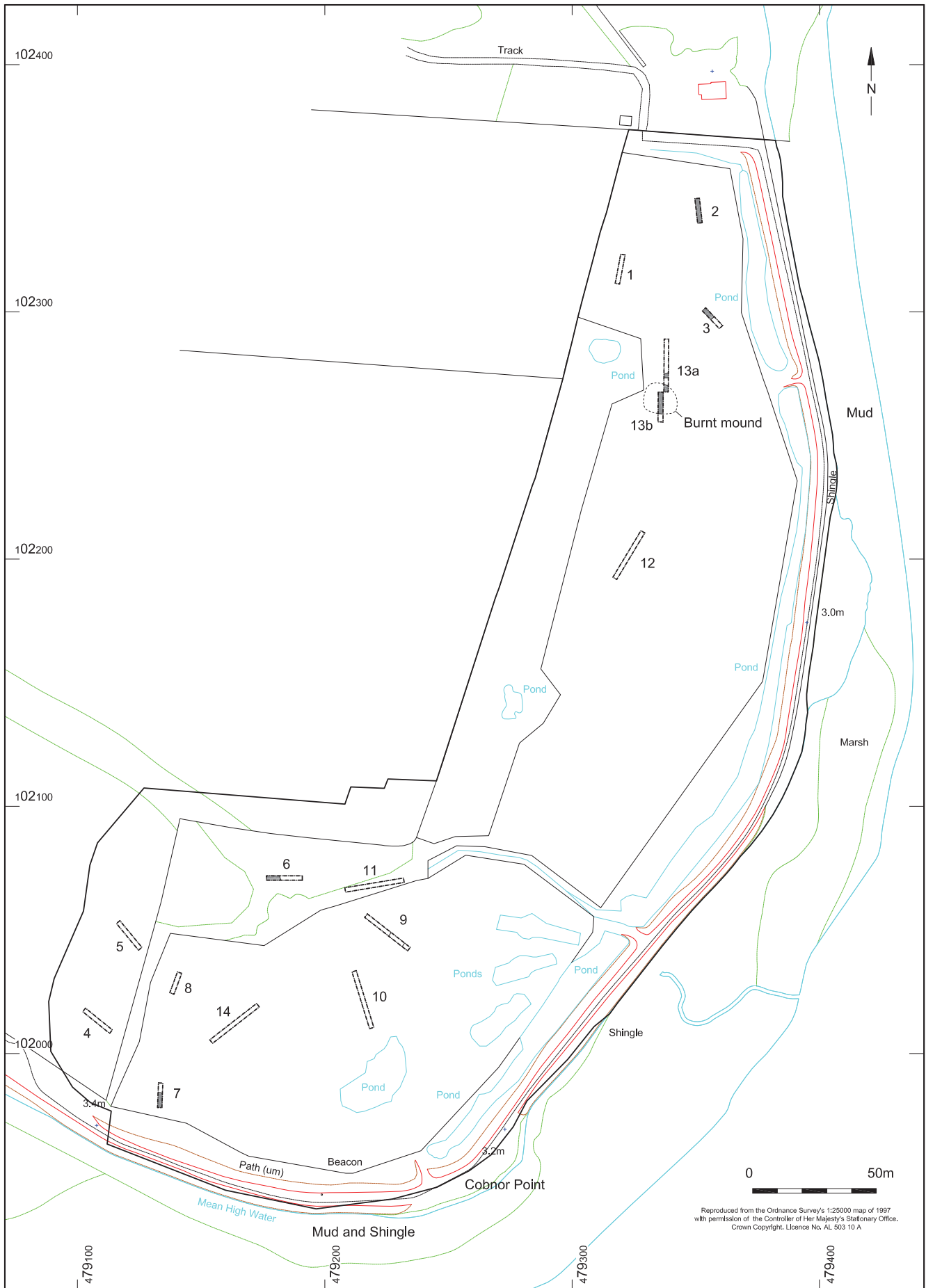
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CPC09	11	11/003	L			Beach
CPC09	12	12/001	L			Topsoil
CPC09	12	12/002	L			Reading Clay?
CPC09	13A, 13B	13/001	L			Topsoil
CPC09	13A, 13B	13/002	L			Alluvium
CPC09	13A, 13B	13/003	L			Reading Clay?
CPC09	13A, 13B	13/004	L		BA	Burnt Mound
CPC09	14	14/001	L			Topsoil
CPC09	14	14/002	L			Alluvium

BA=Bronze Age, C=cut, F=fill, IA=Iron Age, L=layer, PM=Post-medieval, RB=Romano-British

SMR Summary Form

Site Name: Cobnor Point	
Site Address: Cobnor Estate Chidham, near Chichester West Sussex	
Summary: Archaeology South-East carried out an archaeological evaluation in advance of proposed managed realignment works at Cobnor Estate, Chidham, West Sussex. The work revealed significant remains from three broad periods: Bronze Age, mid-late Iron Age and Post-medieval. A well-preserved Bronze Age burnt mound, measuring c. 10m x 12m was recorded and preserved <i>in situ</i> . Evidence for mid-late Iron Age was identified, consisting primarily of a briquetage spread on a buried land surface; a possibly associated hearth or kiln was also recorded. An extensive area of possibly post-medieval hard-standing probably represented a hard for beaching small boats.	
District/Unitary: Chidham	Parish: Chidham
Nature of Development: Groundworks associated with managed realignment and habitat creation	
Period(s): Bronze Age, mid-late Iron Age, ?post-medieval	
NGR (centre of site : 8 figures): NGR SU 790 023	
Type of archaeological work (delete) Evaluation	
Date of Recording: 7 th – 12 th October 2009	
Unit undertaking recording: Archaeology South-East	
Geology: Reading Clay capped by Brickearth and beach deposits	
Title and author of accompanying report: An Archaeological evaluation at Cobnor Estate, Chidham, Chichester, West Sussex by Greg Priestley-Bell	
Summary of fieldwork results Bronze Age – burnt mound; mid-late Iron Age salt-working; post-medieval hard (hard-standing for beaching boats)	
Likelihood of surviving archaeological remains on-site: High: very good potential for preservation due to alluvium cover and lack of ploughing	
Location of archive/finds: Currently held at the offices of ASE	
Contact at Unit: Darryl Palmer	Date: November 2009

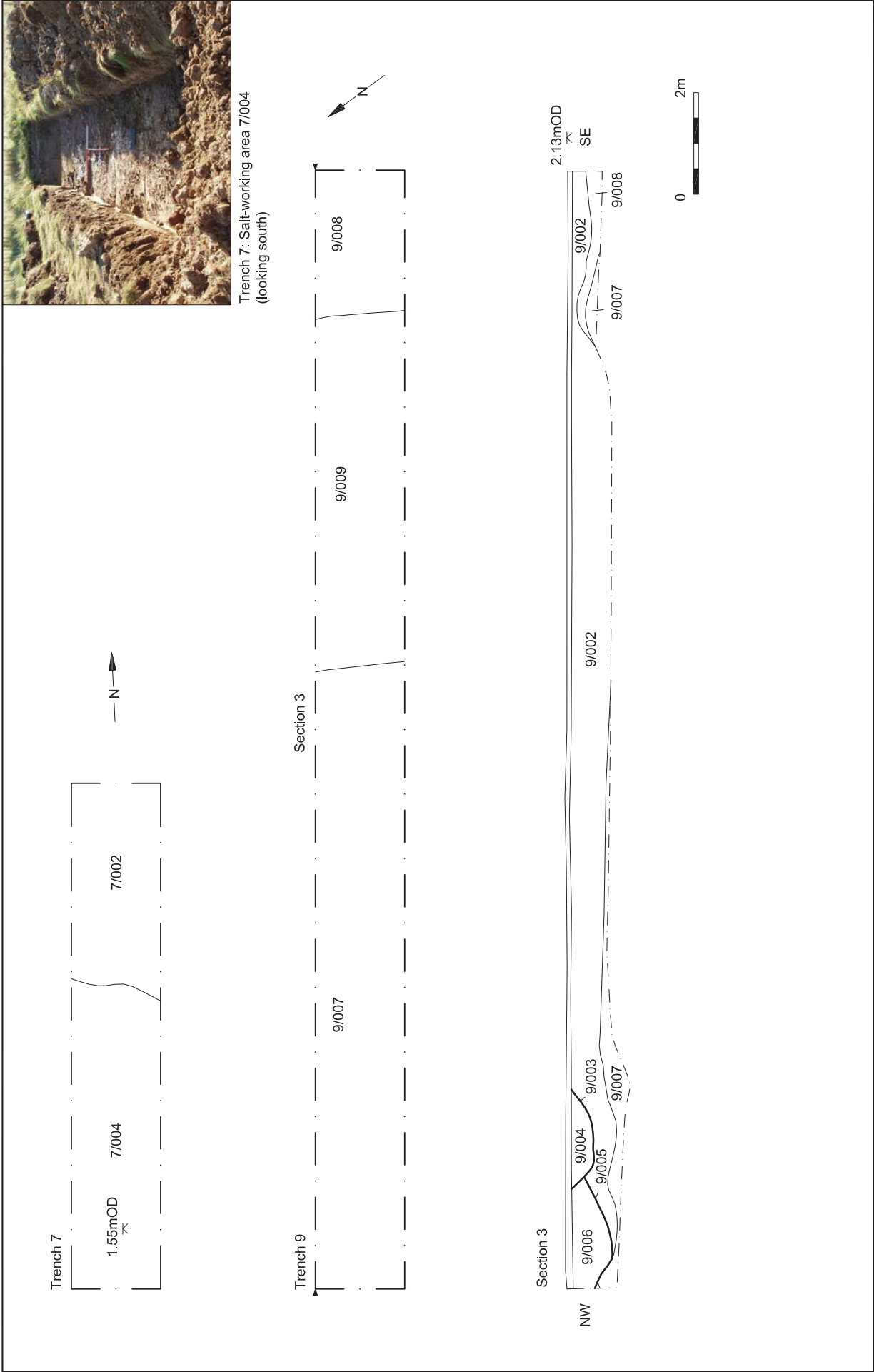




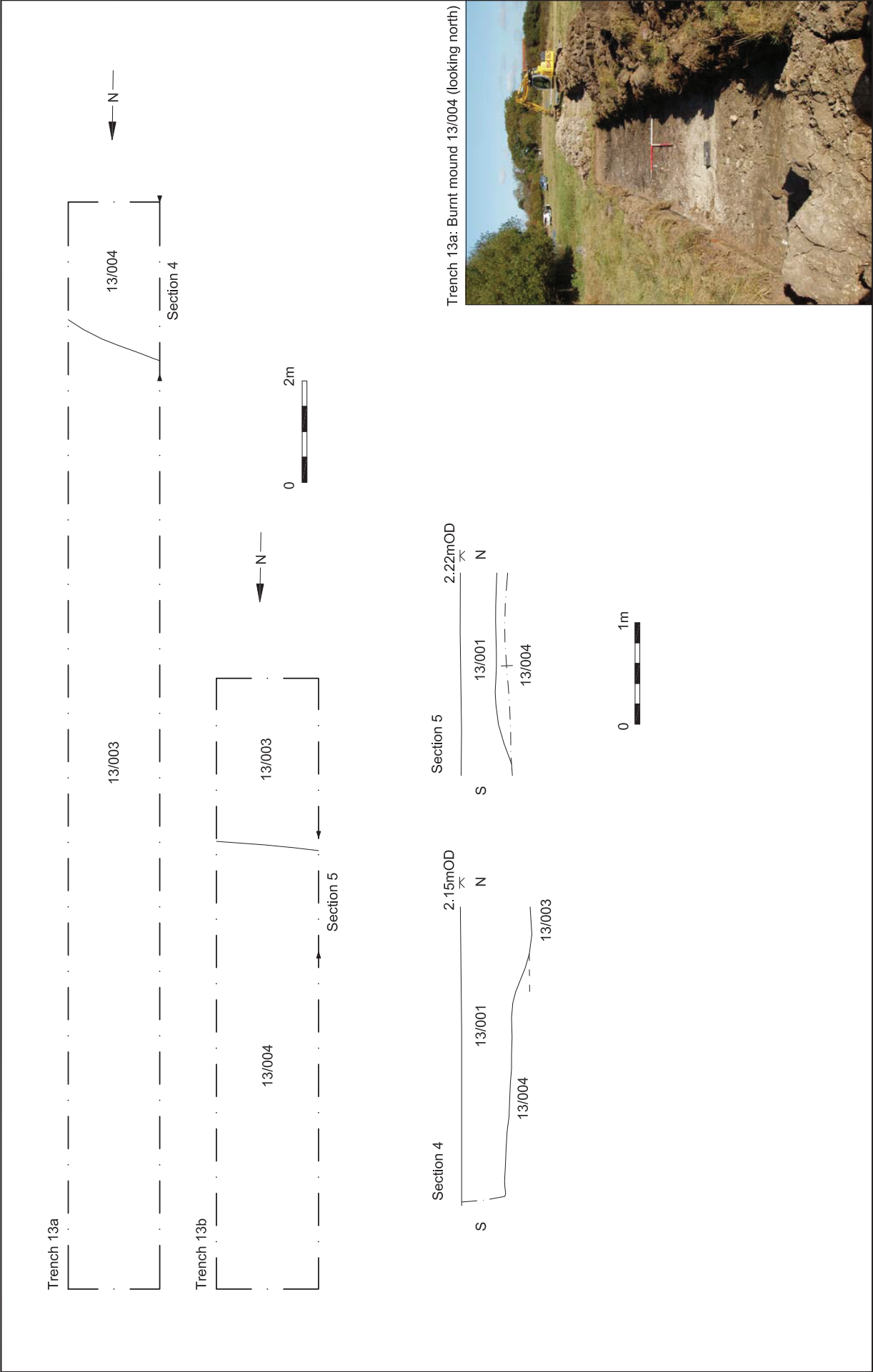
© Archaeology South-East		Cobnor Point, Chichester	Fig. 2
Project Ref: 4028	Nov 2009	Trench location	
Report Ref: 2009169	Drawn by: JLR		



© Archaeology South-East		Cobnor Point, Chichester	Fig. 3
Project Ref: 4028	Oct 2009	Trenches 2, 3 and 6: Plans and sections	
Report Ref: 2009169	Drawn by: JLR		



© Archaeology South-East		Cobnor Point, Chichester	Fig. 4
Project Ref: 4028	Oct 2009	Trenches 7 and 9: Plans and sections	
Report Ref: 2009169	Drawn by: JLR		



© Archaeology South-East		Cobnor Point, Chichester	Fig. 5
Project Ref: 4028	Nov 2009	Trenches 13a and b: Plans and sections	
Report Ref: 2009169	Drawn by: JLR		

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