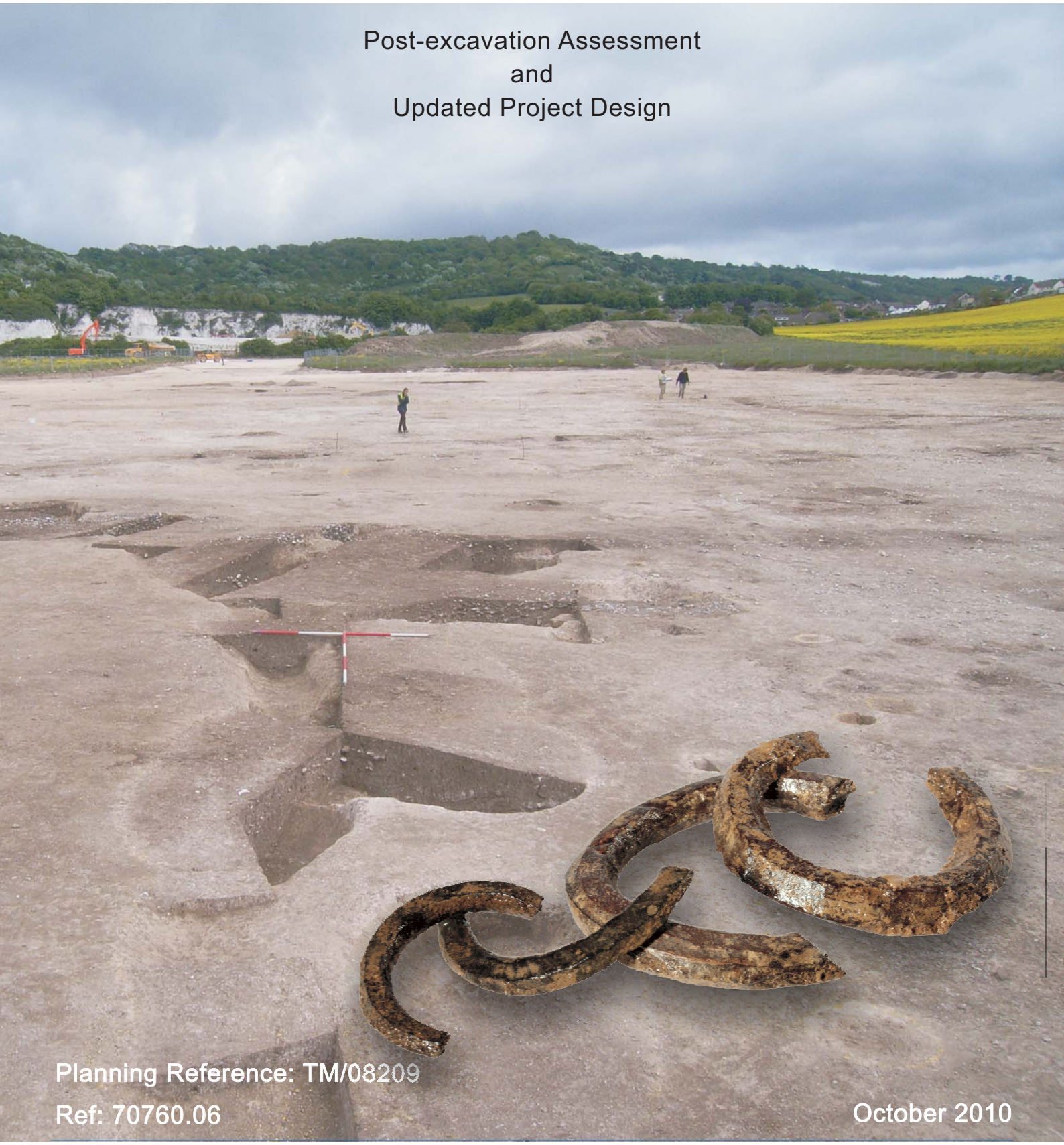
Wessex Archaeology

# Margetts Pit, Margetts Lane, Burham, Kent

Post-excavation Assessment
and
Updated Project Design



Planning Reference: TM/08209

Ref: 70760.06

October 2010

# Margetts Pit, Margetts Lane, Burham, Kent:

# Post-Excavation Assessment and Updated Project Design

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Planning Reference: TM/08209

October 2010

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## Quality Assurance

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|---|---|---|---|---|---|
| **Site Code** | **70760** | **Accession Code** | | **Client Code** | |
| **Planning Application Ref.** | **TM/08209** | **NGR** | **572050, 162220** | | |

| Version | Status* | Prepared by | Approved by | Approver's signature | Date | File |
|---|---|---|---|---|---|---|
| F | | ABP | CB | | 7/7/10 | 70760_MARGETTS_PIT_ASSREP_V1_0.DOC |
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*** I = Internal draft; E = External draft; F = Final**

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# Post-Excavation Assessment and Updated Project Design

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# Margetts Pit, Burham, Kent:

# Post-Excavation Assessment and Updated Project Design

**Summary**

Wessex Archaeology was commissioned by Aylesford Newsprint Services Ltd via their consultants AECOM (formerly known as Faber Maunsell) to undertake an archaeological excavation at Margetts Pit, Margetts Lane, Burham, Kent, covering *c.* 1.9ha centred on National Grid Reference 572050 162220 ('the Site'). The works formed the final stage of a programme of archaeological works in connection with proposals to develop the Site, as part of a scheme of closure and land restoration for Margetts Pit. The work was required by Kent County Council as a condition of granting planning permission (Planning reference: TM/08209) for the creation of a lagoon to provide a soakaway for surface water and balancing capacity.

The excavation, undertaken from 19 January–27 February 2009 and from 16 March–15 May 2009, uncovered evidence for activity dating from the Neolithic until the early Romano-British period. Much of this activity could be dated with some confidence on the basis of the associated finds and stratigraphy. A significant number of features, however, including extensive arrangements of postholes forming possible linear structures in the centre of the Site, are less securely dated, as is a series of topographic features, possibly lynchets and trackways.

The evidence for Neolithic activity was limited, despite the Site's proximity to a Neolithic causewayed enclosure to the immediate northwest. However, from the Middle Bronze Age, *c.* 1600 BC, there is the possibility of near continuity of activity on the Site until the end of the 1st century AD. This activity includes the establishment of a prehistoric field system with associated settlement activity, probably in the Middle Bronze Age, and the expansion of occupation, with accompanying cremation and inhumation burials, and an extensive arrangement of postholes, in the Late Bronze Age.

A substantial shale working industry, manufacturing bracelets, occurred on the Site, spanning the Late Bronze Age and Early Iron Age, its early date giving it regional and national importance. Activity continued through the Middle Iron Age, although apparently on a reduced scale, although the Iron Age saw the possible reorganisation of the landscape in the form of ditches cutting across the earlier field system. This culminated in the construction during the Late Iron Age of a subrectangular double-ditched enclosure which continued to be used into the early Romano-British period.

In view of the significance of the stratigraphic, artefactual and environment results of excavation, and their potential to address many of the research questions outlined in the project design for the excavation, it is proposed that a programme of analysis be undertaken that will lead to the publication of the results and the curation of the archive. It is proposed that the publication takes the form of short monograph. This will describe the archaeology of all periods represented in relation to contemporary developments within the wider landscape, but will focus in particular on the development, scale, duration and organisation of the Late Bronze Age and Early Iron Age shale bracelet manufacturing industry.

# Margetts Pit, Burham, Kent:

# Post-Excavation Assessment and Updated Project Design

**Acknowledgements**

This project was commissioned by Aylesford Newsprint Services Ltd. (ANSL), through their consultant AECOM (formerly Faber Maunsell), and Wessex Archaeology is grateful to Ian Buoxup (ANSL) and Ed Slaney and Helen Maclean (AECOM) in this regard. The assistance of Melvyn Goodyear (Operations Manager, Margetts Pit) and Chris Porter (Site Manager, Margetts Pit) in bringing the fieldwork to a successful conclusion, is also acknowledged. Wessex Archaeology would also like to thank Lis Dyson and Wendy Rogers who monitored the fieldwork on behalf of Kent County Council.

The project was managed for Wessex Archaeology by Caroline Budd, with assistance from Mark Williams during the fieldwork stage. The fieldwork was directed by Jon Milward and Chris Ellis, assisted by Paul Samual Armour, Matt Astill, Ben Atfield, David Atkin, Cornelius Barton, Elina Brook, Gareth Chaffey, Paul Clarke, Will Clarke, Kirsten Egging Dinwiddy, Artur Fedorowitz, Becky Fitzpatrick, Darryl Freer, Michael Green, Naomi Hall, Peter James, Dan Joyce, Marie Kelleher, Kat Manning, Jeremy Mordue, Ruth Rolfe, Andy Sole and Tom wells. Metal detecting was undertaken by Rodger Richards whose help was greatly appreciated during the early stages of the fieldwork.

The finds assessment was undertaken by Matt Leivers (prehistoric pottery, flint and shale), Rachael Seager Smith (Late Iron Age/early Romano-British pottery), Jacqueline I. McKinley (human bone) and Jessica Grimm (animal bone), and edited by Lorraine Mepham. The illustrations are by Linda Coleman. Thanks are extended to Sue Davies and Andrew Lawson who were consulted on shale excavation procedures.

The environmental samples were processed by Nicki Mulhall, Elina Brook, Piotr Orczewski, Chloe Hunnisett and Marta Perez-Fernandez. The bulk and mollusc samples were assessed by Sarah F. Wyles. Soils and sediments (including requirement and sampling for micro-fossils and soil micromorphology) were assessed by David Norcott. Radiocarbon considerations were provided by Chris J. Stevens and Alistair Barclay.

This report was compiled by Jon Milward and Andrew Powell, and edited by Alistair Barclay and Caroline Budd.

# Margetts Pit, Burham, Kent:

# Post-Excavation Assessment and Updated Project Design

## 1 INTRODUCTION

### 1.1 Project background

1.1.1 Wessex Archaeology (WA) was commissioned by AECOM on behalf of Aylesford Newsprint to undertake an archaeological excavation at Margetts Pit, Burham, Kent, centred on National Grid Reference (NGR) 572050 162220 ('the Site') (**Fig. 1**). The works formed the final stage of a programme of archaeological works in connection with proposals to develop the Site, as part of a scheme of closure and land restoration for Margetts Pit.

1.1.2 The archaeological work was required by Kent County Council (KCC) as a condition of granting planning permission (Planning reference: TM/08209) for the creation of a lagoon to provide a soakaway for surface water and balancing capacity.

### 1.2 Site location, topography and geology

1.2.1 The Site comprises a *c.* 1.9ha area to the northwest of the village of Burham, on the east side of the Medway valley, and on the lower slopes of the North Downs. It is bounded to the north by agricultural land, to the east by the Margetts Pit chalk quarry, to the south by agricultural land flanking Court Road and to the west by Margetts Lane (**Fig. 1**).

1.2.2 The Site slopes gradually from the northeast at 25.7m above Ordnance Datum (aOD) to the southwest at 14.4m aOD.

1.2.3 The natural geology comprises Cretaceous Lower Chalk, overlain by Pleistocene Head deposits (soliflucted chalk drift) (Geological Survey of Great Britain, 1977, Drift, Sheet 272, Chatham), supporting well drained, silty chalk soils (Faber Maunsell 2008). Prior to the fieldwork the Site was under arable cultivation.

### 1.3 Scope of document

1.3.1 The purpose of this report is provide an interim summary of the results of the excavation (see **Sections 3–5**), to assess their potential to address the research aims specified in the Project Design, as outlined in **Section 2** (see **Section 6**), and to recommend a costed programme of further work needed to achieve those aims, including analysis, public dissemination through publication and the curation of the archive (see **Section 7**).

### 1.4 Previous work

1.4.1 Margetts Pit has been the subject of a phased programme of archaeological investigations relating to the proposed development (**Table 1**). The initial phase, commissioned in advance of the finalisation of development

proposals, comprised a cultural heritage desk-based assessment (DBA) which highlighted the archaeological potential of the Site (Faber Maunsell 2007).

**Table 1**: Previous stages of archaeological work

| Work | Date | Report | Report ref. |
|---|---|---|---|
| Cultural heritage desk-based assessment | September 2007 | Faber Maunsell/Aecom (2007) | 44894ILEE |
| Surface artefact collection and geophysical survey | December 2007 | Archaeological Services and Consultancy Ltd (2007) | 1005/BMP/02 |
| Specification for archaeological test pits and soil strip | September 2008 | Faber Maunsell/Aecom (2008) | 60042836 |
| Topsoil test pit evaluation | January 2009 | Wessex Archaeology (2009a) | 70760.02 |
| Strip and Map | January–February 2009 | Wessex Archaeology (2009b) | 70760.03 |
| Project design for excavation | March 2009 | Wessex Archaeology (2009b) | 70760.03 |
| Excavation | January–May 2009 | Wessex Archaeology (2009c) | 70760.04 |
| Post-excavation interim statement | August 2009 | Wessex Archaeology (2009c) | 70760.04 |

1.4.2 There followed three phases of archaeological field evaluation, starting with fieldwalking (surface artefact collection) and geophysical survey, covering an area of *c.* 6.6ha, carried out by Archaeological Services & Consultancy Ltd (2007). Finds of Bronze Age and Iron Age date were recovered during the fieldwalking, and the geophysical survey revealed part of an Early Neolithic causewayed enclosure previously identified from aerial photographs, a rectilinear enclosure and further possible ditches and large infilled features (**Fig. 1**).

1.4.3 Following consultation with KCC, a *c.* 1.9ha area at the south of the Development Area was selected for the lagoon on the basis of a low concentration of geophysical anomalies. KCC Heritage had requested the lagoon be sited further away from the causewayed enclosure but this was not possible. The area within which the lagoon had to be sited was subject to the third phase of evaluation, comprising the excavation of 167 topsoil test pits (**Fig. 1**) by Wessex Archaeology (2009a), during which small quantities of prehistoric, Romano-British and medieval pottery were recovered. Two evaluation test pits contained prehistoric pottery; both were situated in the west of the Site. In addition, worked flint was recovered from 86 of the test pits. Relatively large quantities of post-medieval and modern pottery and ceramic building material were also recovered.

1.4.4 On the basis of the evaluation results, Wessex Archaeology was commissioned to carry out a programme of archaeologically monitored Strip and Map (**Fig. 2**). The features revealed included probable Bronze Age shale bracelet working areas and a Late Iron Age enclosure (Wessex Archaeology 2009b). There were also clusters of postholes and pits suggestive of nucleated settlement, a series of cremation burials of possible Bronze Age date, undated inhumation burials, a series of undated linear ditches, possible fence-lines, and an undated trackway containing evidence for wheel ruts. Metal detecting carried out during the stripping led to the

recovery of a possible Bronze Age wheel type pin, four Iron Age potin coins and a Romano-British silver coin dating to the first half of the 4th century.

1.4.5 On the basis of these results, further mitigation works in advance of development, involving the archaeological excavation of the Site, was agreed in consultation with KCC. A project design for the excavation was prepared by AECOM and Wessex Archaeology, and approved by KCC (Wessex Archaeology 2009b). The excavation took place in two stages, between January 19th and February 27th 2009, and between March 16th and May 15th 2009 (Wessex Archaeology 2009c).

## 1.5 Archaeological and historical background

1.5.1 The archaeological and historical setting of the Site is detailed in the DBA (Faber Maunsel 2007) and is summarised here.

***Palaeolithic and Mesolithic (to 4000 BC)***

1.5.2 Isolated finds of Palaeolithic handaxes and Mesolithic flints indicate human presence in the general area during these periods.

***Neolithic (4000–2200 BC)***

1.5.3 A Neolithic causewayed enclosure, discovered during aerial reconnaissance by the RCHME in June 1982 (Oswald *et al.* 2001), lies to the immediate northwest (**Fig. 1**). The enclosure was partly mapped during the geophysical survey, and was the focus of investigation in 2009 by Birmingham University as part of a research project investigating the Neolithic of the Medway Valley (Paul Garwood pers comm).

1.5.4 The Neolithic chambered tombs of Kit's Coty and Little Kit's Coty lie to the c. 3–4km southeast of the Site, as does a large Early Neolithic post-built structure, found along with traces of a second, similar structure, on the line of the Channel Tunnel Rail Link at White Horse Stone; Middle Neolithic pits and Late Neolithic circular post-built structures and pits containing Grooved Ware pottery were also uncovered (Booth *et al.* forthcoming).

***Bronze Age–Iron Age (2200 BC–AD 43)***

1.5.5 Activity in the Bronze Age is indicated by a number of sites in the area, as well as by isolated finds. Evidence for Late Bronze Age settlement, including pits and a gully, was found at Holborough to the west of the Site, in areas of potential suggested by earlier fieldwalking (Wessex Archaeology 1998).

1.5.6 Evidence for Late Bronze Age/Early Iron Age settlement, including pit clusters, four-post structures and posthole groups suggesting the presence of roundhouses, was uncovered at White Horse Stone (Booth *et al.* forthcoming). The recovery of a potential shale bracelet roughout and a fragment of bracelet from Early Iron Age contexts at White Horse Stone is of particular interest as it may demonstrate a link between the community and the Margetts Pit shale working industry (**Section 3.6**, below).

1.5.7 At Aylesford Pit, 2.5km south of the Site, an extensive Belgic cremation cemetery, one of the type sites for the Late Iron Age Aylesford–Swarling culture, was revealed during quarry works at the end of the 19th century (Evans 1890; Cunliffe 1991, 132–41). Other Late Iron Age activity is indicated by part of a structure at Eccles, to the south of the Site, that may

have been a precursor to a Romano-British villa (KCC Sites and Monuments Record (SMR); Faber Maunsell 2007).

***Romano-British (AD 43–410)***

1.5.8 The distribution of Romano-British sites in the Medway valley demonstrates that this area was extensively settled during this period. Eccles was the site of the small Roman town of *Aiglessa*, near which was a large villa and tile kiln (Detsicas 1977). Another small but high status building was excavated at Burham, at the end of the 19th century (KCC SMR).

1.5.9 A storage cellar, landing ramp and wharf (previously interpreted as a Mithraic temple) was discovered on the banks of the Medway near Holborough to the northwest of the Site (Jessup 1956).

***Saxon–medieval (410–1500)***

1.5.10 It is likely that the Site lay within agricultural land during the Saxon and medieval periods. The presence of small-scale communities in the Medway valley is demonstrated in part by the Anglo-Saxon cemetery at Holborough (Evison 1956).

1.5.11 The settlement of Burham has early medieval origins and is first recorded in the Domesday Survey of 1086 in the vicinity of the 12th century St Mary's Church. The settlement was re-located onto higher and drier ground to the east during the 16th century.

***Post-medieval–modern (1500 to present)***

1.5.12 Burham Common was inclosed in 1813, most of it becoming part of Burham Street Farm under the ownership of the Earl of Aylesford.

1.5.13 Improvements to the navigability of the River Medway opened up the industrial potential of the area, and from the late 18th century the district became increasingly important in the production of Portland cement. The Margetts Pit quarry is an example of the impact this industry had upon the landscape.

1.5.14 Evidence for Second World War defensive measures in the area includes a pillbox and a heavy anti-aircraft battery.

## 2 AIMS AND METHODS

### 2.1 Aims and objectives

2.1.1 The objective of the excavation was to examine the archaeological resource within a framework of defined aims, to seek a better understanding of that resource, to analyse the findings and to disseminate the results of the work.

2.1.2 In light of the evidence uncovered during the Strip and Map stage (Wessex Archaeology 2009b), the original aims and objectives of the Strip and Map (Faber Maunsell 2008) were supplemented and superseded by more specific aims, as follows:

- To place the evidence from this Site in its wider landscape context;
- To provide a refined chronology of the archaeological phasing;
- To understand the function of structural remains and the activities taking place within and close to the Site;
- To determine the date, extent, nature and duration of habitation of the Site;
- To understand the nature of agricultural or industrial activities at the Site;
- To record all archaeology of Neolithic date uncovered during the course of excavation, including any remains associated with the Neolithic causewayed enclosure and to understand how the results relate to the enclosure and our current understanding of activities in and around enclosures on a regional and national scale;
- To record the human burials on the Site and any other associated ritual activity;
- To determine the chronology, nature, character and spatial pattern of any ritual activity within the Site;
- To determine the nature, chronology, character and spatial pattern of the shale manufacturing areas with a view to placing the findings within a regional and national framework;
- To determine the nature, date, chronology, character and spatial pattern of activities across the Site, clarifying how activity areas and features relate to each other both spatially and chronologically;
- To record, where exposed, the main elements of the Iron Age enclosure system and any other Iron Age activity within the Site, clarifying its spatial and chronological relationship, where possible, with the other archaeological features revealed;

- To investigate the function, chronology, alignment and spatial distribution of structural remains, including the possible area boundaries/'fences';

- To provide an overall chronological framework for the Site and to place the main activities within this framework with a view to placing the evidence into its wider landscape context;

- To supplement the above aims in order to provide a more general identification, record and understanding of prehistoric, Roman, early medieval, medieval and post-medieval archaeology located within the Site and to place this within its chronological, spatial and landscape contexts and within the current regional and local research frameworks including the South East Research Framework aims and objectives.

## 2.2 Methodology

2.2.1 The methodology set out in the specification for the test pits and soil strip (Faber Maunsell 2008) was developed, in agreement with KCC, to include a specific sampling strategy for the Site which reflected specialist recommendations made during on-site consultation (Wessex Archaeology 2009b).

2.2.2 All works were undertaken in accordance with the guidance and standards outlined in the Institute for Archaeologists' *Standard and Guidance for Archaeological Excavation* (1999) excepting where they are superseded by statements made below. This assessment follows guidance by English Heritage (MAP2, MoRPHE).

2.2.3 All work was carried out in accordance with the Health and Safety at Work Act 1974 and the Management of Health and Safety Regulations 1992, and all other relevant Health and Safety legislation, regulations and codes of practice in force at the time.

## 2.3 Excavation methods

2.3.1 The Site was *c.* 1.9ha in size, its shape dictated by the footprint of the proposed development. This comprised a subrectangular area at the west, measuring *c.* 100m by 150m, covering the proposed lagoon, and narrower areas at the east covering an access road (**Fig. 1**).

***Strip and Map***

2.3.2 During the Strip and Map phase of works, the Site was stripped of topsoil and subsoil by mechanical excavator under archaeological supervision to a depth 0.5–0.9m, to either the top of archaeological deposits or natural geology, whichever was encountered first. A metal detector was employed for the duration of the stripping.

2.3.3 The Site boundary, all archaeological features and topographical details were mapped in relation to the Ordnance Survey National Grid using Total Station (TST) and Global Positioning System (GPS) surveying equipment.

***Excavation***

2.3.4 The excavation of the Site was recorded using Wessex Archaeology's *pro forma* recording system, including the production of a full written, drawn and photographic record. A metal detector was routinely used to scan features and excavated spoil.

Features

2.3.5 All excavated archaeological features were mapped in relation to the Ordnance Survey National Grid using Total Station (TST) and Global Positioning System (GPS) surveying equipment.

2.3.6 All intersections and feature relationships were investigated to establish phasing and a stratigraphic chronology for the Site.

2.3.7 A third of the postholes were excavated, although those within boundary/fence-lines or non-coherent clusters were subjected to an increased level of sampling to achieve a better understanding of the groups, with some groups, particularly those considered to represent buildings, being fully excavated.

2.3.8 All pits were half-sectioned, with 13, containing ritual/placed deposits or significant collections of finds, being fully excavated.

2.3.9 Linear features were sampled to a maximum of 20%, with all terminals being excavated. A sample of gullies relating to structures were fully excavated.

Artefacts

2.3.10 All artefacts were recovered, stored and processed in accordance with standard methodologies and national guidelines (Institute for Archaeologists 2001; Society of Museum Archaeologists 1993; 1995). Small finds were recorded three-dimensionally using TST and GPS surveying equipment. Bulk finds were collected and recorded by context from both excavated features and the surfaces of unexcavated features.

Human remains

2.3.11 All burial deposits (12 cremation-related features and five inhumation burials) were fully excavated and recorded following Wessex Archaeology and IfA (Brinkley and McKinley 2004) guidelines. Their excavation complied with a Ministry of Justice Licence which was obtained for the Site (Ref: OPR/072/42).

Shale-working

2.3.12 The evidence for Late Bronze Age shale-working required a specific excavation strategy to be developed following on-site consultation with specialists and KCC. The nature of the shale-working deposits was initially investigated by excavating two 1m square test pits (**Test pits A and B**) on the edges of two pits cluster where the waste was most concentrated (**Fig. 6**). The test pits were quartered and excavated in 0.2m spits with 100% of the waste (struck flint with shale waste and artefacts) being retained. This indicated that the material was waste from a bracelet manufacturing industry which had been transported from a working area and dumped in pits, rather than accumulating through *in situ* working.

2.3.13 After seeking expert advice (A. Lawson *pers. comm.*) and following site visits by Sue Davies and Pippa Bradley (Wessex Archaeology) it was agreed with KCC that the shale-working deposits should be excavated by context, rather than in a grid pattern, with the result that approximately 50% (by area) of the two main pit clusters (**3953** and **3054**) was excavated. In these, and in other contexts, the shale-working waste (comprising both shale and flint) was recovered by hand during excavation, or using a 10mm mesh sieve. Deposits were also bulk sampled for environmental processing, allowing the retrieval of flint micro-debitage and small fragments of shale.

# 3 RESULTS

## 3.1 Introduction

3.1.1 A total of 1165 archaeological features dating from the Late Neolithic to the early Romano-British period were recorded on the Site (**Figs** 3–10). The evidence for Neolithic activity comprised two pits and a component of the flint assemblage which was judged to be of probable Late Neolithic/Early Bronze Age date.

3.1.2 For the later prehistoric period, there is uncertainty as to the precise dating of some features, due to the longevity of flint-tempered pottery and the scarcity of diagnostic forms during the period from the Middle Bronze Age to the Early Iron Age. Although most of this material can be assigned to the Late Bronze Age date with some confidence, many features contained only small quantities of datable material, some of which may be residual or intrusive. As a result, the phasing of some features within the substantial developments that took place on the Site during the late prehistoric period is presently tentative and provisional.

3.1.3 Nonetheless, a small number of features apparently dating from the Middle Bronze Age represents the start of a phase of settlement, probably accompanied by the laying out of a rectilinear field system. Settlement increased during the Late Bronze Age accompanied by evidence for funerary practices, and the establishment of a shale bracelet manufacturing industry. There is evidence for reorganisation of the landscape, in the form of a rounded enclosure, possibly during the Iron Age when activity is represented by smaller numbers of pits located amongst Late Bronze Age features.

3.1.4 The Late Iron Age saw the construction of a subrectangular enclosure, with associated domestic features and structures. The enclosure continued in use, with slight modifications, into the early Romano-British period.

3.1.5 There remain a large number of undated features, including many unexcavated postholes. While many of these appear to be spatially associated with the areas of Late Bronze Age activity, the possibility remains that others are likely be of earlier or later date.

## 3.2 Natural deposits and soil sequence

3.2.1 The topsoil, comprising dark grey brown silty clay with sparse inclusions of sub-rounded flints and flecks of chalk, was a uniform 0.3m thick across the Site (**201**). It overlay a mid grey brown silty clay subsoil B-horizon (**202**) up to 0.7m thick.

3.2.2 Over most of the Site, the subsoil overlay soliflucted chalk drift (**203**). However, in part of the access road area it overlay a 0.2m thick colluvially derived layer (**271**/**3051**) which was especially visible overlying the Late Iron Age/early Romano-British enclosure.

### 3.3 Topographic features

3.3.1 There was a series of shallow terraces running across the slope, possibly comprising negative lynchets resulting from cultivation within unditched fields (**Fig. 2**). Their orientation, approximately north-northwest to south-southeast, matches that of the ditches of the Bronze Age field system (below, **Fig. 4**); a number of possible hedge-lines closely associated with the ditches and terraces were also identified. There were also two shallow linear depressions interpreted at trackways. Trackway 1, in the centre of the main excavation area, was traced for 58m (**Plate 1**); Trackway 2 lay *c.* 50 m to the northeast.

3.3.2 The date of these feature has not been firmly established. Their shared orientation with the Bronze Age field system might indicate contemporaneity. However, the Late Iron Age/early Romano-British enclosure (below, **Fig. 10**) was on a similar alignment, and the interpretation of shallow striations in the bases of the possible trackways as wheel ruts would suggest that the trackways at least are of a relatively late date.

3.3.3 One of the terraces in the centre of the Site contained an elongated spread containing shale-working waste dating to the Late Bronze Age/Early Iron Age (below, **3044**, **Fig. 7**). This may represent either the dumping of the waste against the edge of a contemporary field, or the later accumulation of redeposited material. That this material was redeposited is supported by the fact that another linear spread of material (**1292/1386**), *c.* 9m to the south and possibly associated with the same terrace, contained not only a further substantial quantity of Late Bronze Age/Early Iron Age pottery (68 sherds, 904g) and a shale roughout (**ON 173**), but also small quantities of Late Iron Age and Romano-British pottery (six sherds, 77g), along with a Roman glass bead, fragments of ceramic building material, three fragments of an iron knife (**ON 160/161/170**) and a Saxon fired clay loomweight (**ON 169**). The mixed-date nature of this deposit suggests it is redeposited, either by natural processes or perhaps by cultivation.

### 3.4 Late Neolithic–Early Bronze Age (*c.* 2850–1600 BC)

3.4.1 Despite the proximity of the Site to the Early Neolithic causewayed enclosure, *c.* 60m to the northwest, only two Neolithic features were recorded (**Fig. 3**). Pit **1969**, towards the north of the lagoon area, was *c.* 0.6m in diameter and 0.26m deep, with a single fill containing one sherd of Late Neolithic Woodlands-type Grooved Ware pottery, 20 pieces of struck flint, animal bone and burnt flint (**Plate 2**).

3.4.2 Pit **2932**, *c.* 40 m to the southwest, was *c.* 0.8m in diameter and 0.2m deep (**Plate 3**). Its lower fill (**2933**) contained two joining fragments of a Neolithic Cornish stone axe, an undiagnostic body sherd in a similar fabric to the Grooved Ware from pit **1969**, animal bone and burnt flint. The upper fill (**2934**) comprised a dump of burnt material containing struck and burnt flint, stone and animal bone as well as charred hazelnut shells.

3.4.3 Evidence for flint-working potentially of this period was recovered from a number of later features. For example, part of the flint assemblage recovered from Late Bronze Age pit group **3053** (below, **Fig. 6**), comprised debitage from careful and deliberate knapping which, on the basis of the

core types and flake morphology, appears at odds with later prehistoric flint-working, and is suggested to be of Late Neolithic or Early Bronze Age date (see **Section 4.6**).

3.4.4 In addition, eight abraded and probably residual Beaker or Early Bronze Age sherds (two possibly from Collared Urns) were also found in later features.

### 3.5 Middle Bronze Age (*c.* 1600–1100 BC)

3.5.1 Activity in this period is indicated by a relatively small pottery assemblage (383 sherds) which is consistent with Middle Bronze Age Deverel–Rimbury traditions (**Section 4.1**). It was recovered from a range of features dispersed mostly across the western part of the Site (**Fig. 4**). These include the ditches of a rectilinear field system, 19 pits and/or postholes and two placed vessels, one of which accounted for over half the assemblage (54% by weight).

3.5.2 However, many of the discrete features were located within groups of Late Bronze Age features, and much of the pottery assemblage was found alongside the much larger Late Bronze Age assemblage, with the result that that the chronological distinctiveness of much of this phase cannot be clearly established.

***Pits and postholes***

3.5.3 The pits varied in size, the largest being pit **1698** which was *c.* 2m in diameter and 0.5m deep. They contained varying but generally small quantities of Middle Bronze Age pottery (maximum – 7 sherds, 86g from pit **524**) (**Plate 4**), worked and burnt flint, stone and animal bone, representing probable domestic waste. Pit **437**, near the southern edge of the Site, was *c.* 0.4m in diameter and 0.15m deep, and contained small quantities of both Early and Middle Bronze Age pottery, and is potentially one of the earliest Bronze Age features on the Site (**Plate 5**).

3.5.4 Similar finds were recovered from a number of postholes, which on their own formed no obvious groups or structures but many of which may be associated with some of the more numerous Late Bronze Age and undated postholes.

***Deposition of vessels***

3.5.5 At least two Middle Bronze Age vessels appeared to have been deliberately placed in the ground, both closely associated with the field system ditches at the west of the Site. The purpose of this deposition, whether for some primarily ritual or practical (such as storage) function, is unclear.

3.5.6 No cut was visible for the best preserved of these vessels, a decorated jar (**ON 95** – 30 sherds, 1986g) (**Plate 6**), which was found to contain a small quantity of animal bone along with worked and burnt flint (**362** is the assigned cut number).

3.5.7 The base of another jar (**ON 104** – 20 sherds, 690g), which also contained a piece of animal bone, was recovered from a small cut (**381**), *c.* 0.25m in diameter and 0.1m deep.

3.5.8 In addition, 65 sherds (612g), from four or five separate vessels (**ON 106**) were recovered from another small cut (**403**), although it is unclear whether any of these vessels were in their *in situ* position.

***Field system***

3.5.9 Twenty sherds of Middle Bronze Age pottery (and no Late Bronze Age sherds) were recovered from ditch **2473**, which forms part of a rectilinear field system orientated approximately north-northwest to south-southeast. The field system is represented by arrangements of shallow ditches at both the western (**240**, **248**, **2473**, **3057** and **3058**) and eastern (**3035**) parts of the Site. Two of the ditches at the west (**240**, **248**) lay parallel and *c.* 3.5m apart, possibly defining a length of trackway. There were no comparable ditches in the central part of the Site, possibly due to truncation by subsequent ploughing; at the east, ditch **3035** (**Plate 7**) only survived in places as short shallow sections beneath the subsoil.

3.5.10 Although the pottery from some of these ditches was of predominantly Late Bronze Age date, ditch **2473**, and ditches **3057** and **3058** which lay at a right angle to it, pre-date Late Bronze Age pit groups **3054**, **3055** and **3056** (below, **Fig. 6**), and a Middle Bronze Age date for the establishment of such a field system would conform to the wider pattern of development in this period. The occurrence of later pottery in these ditches probably reflects the increased level of activity in the Late Bronze Age, including the possible continued maintenance of the ditches at least for a period.

## 3.6 Late Bronze Age (*c.* 1100 BC–700 BC)

3.6.1 The Late Bronze Age saw a significant increase in activity on the Site, including settlement and funerary activity and evidence for a shale-working industry (**Fig. 5**, with detail on **Figs 6–8**).

***Field system***

3.6.2 The quantities of Late Bronze Age pottery from some of the ditches of the suggested Middle Bronze Age field system indicate that it continued in use, and was possibly modified, during part of this period.

3.6.3 Although all of the field system ditches contained some shale-working waste, only ditch **3041** (**Fig. 6**, **Plate 8**) contained it in significant quantities (1428 pieces weighing 984g), comparable to some of the pits in adjacent pit groups **3053** (**Fig. 6**, **Plate 10**) and **3054** (**Fig. 6**). However, in the two (out of three) excavated sections of this ditch in which with lower and upper fills were distinguished, over 95% (by weight) of the shale came from the upper fill, and it is possible that this derived from the adjacent spread (**3045**, below). While this ditch may be a Late Bronze Age addition to the field system, its construction may be of relatively early (i.e. pre-shale-working) date; its stratigraphic relationship with spread **3045**, however, was not clearly established.

***Pits***

3.6.4 Numerous Late Bronze Age pits were recorded across the Site, these occurring as groups of intercutting pits, as clusters of pits, as broad spreads of pits and as single isolated features.

3.6.5 Three of the groups of intercutting pits (**3054**, **3055** and **3056**) had direct stratigraphical relationships with the field system, with some of the pits in each group cutting the infilled ditches (**Fig. 6**). Pit group **3054** was located at the corner of a field defined by ditches **2473** and **3058**, with groups **3055** and **3056** also cutting ditch **3058** (and its extension **3057**). A fourth group (**3053**) lay to the immediate north of group **3054**.

3.6.6 A loose cluster of further pits and postholes lay to the north of ditch **3057/3058**, but the considerably fewer features in the area to its south, suggests that by this date this ditch formed the southern boundary of an activity area, rather than simply a field boundary.

3.6.7 The pits in groups **3055** (7 pits) and **3056** (at least 12 pits) were relatively small and shallow, typically 1m wide and up to 0.5m deep, and they produced relatively small quantities of pottery, worked and burnt flint and animal bone, probably representing domestic waste. Significantly, only one pit in these two groups contained any shale – five fragments (1g) from group **3055**, possibly intrusive. These pits were similar to the 15 pits in group **3047**, located *c.* 60m to the north (**Fig. 8**, **Plate 17**); although group **3047** did not cut any ditch it lay on the line of main north-south boundary. While the pits in group **3047** contained a sizeable assemblage of worked flint (658 pieces), they too produced only five pieces (15g) of shale.

3.6.8 Within group **3055** Pit 2183 contained a sheep/goat skeleton (see **Section 4.19, Table 10**), while a ?lead miniature wheel-shaped object (**ON7**) was recovered from the top or just above the adjacent pit 2266 (**Fig. 6, Plate 11**).

3.6.9 These intercutting pits were also similar in size to the earliest pits in groups **3053** and **3054**. In contrast, the latest pits in groups **3053** and **3054** were significantly larger, up to 3m wide and 0.7m deep in group **3053**, and 4m wide and 0.6m deep in group **3054**. It was the upper fills of these pits that contained substantial deposits of shale-working waste (see below, **Fig. 6**, **section 1**; **Plates 9–11**). This indicates that the shale-working deposits are relatively late in the sequence of deposition within the Late Bronze Age pits.

3.6.10 There was a tight cluster of 20 small pits (group **3048**, **Fig. 5**), rarely intercutting, in the central southern part of the Site, in an area with few other features. They ranged in size, up to 1.1m by 0.6m wide and 0.3m deep (**1394**)m and contained material typical of domestic waste. Although none contained any shale, six of the pits contained Late Bronze Age pottery and a further two contained Early/Middle Iron Age pottery (see below), so that this group, although possibly representing a relatively short episode of activity, probably spans the period of shale-working on the Site (see below). One pit (**1304**) was truncated by a tree-throw hole.

3.6.11 There was a very dispersed cluster of pits (and postholes) to the east of trackway 1 (**Fig. 7**). These all contained dark charcoal-rich fills with finds typical of to domestic waste disposal. A particularly rich pit was **422** (**Plate 12**) which at *c.* 1.9m in diameter and 0.4m deep was also the largest pit in this area. It contained a primary fill followed by three separate episodes of dumping which, in addition to domestic refuse, contained an annular amber bead, shale-working waste, copper pins and a bone object.

3.6.12 Also of note among these pits were those which contained abnormal or special deposits, such as pit **1340**, which contained a pair of large red deer antlers as well as an amber bead fragment.

3.6.13 A very large pit (**393**, **Fig. 8, Plate 18**) in the northwest corner of the Site area measured *c.* 4m by 3.4m wide and 0.55m deep. It had three fills which also produced finds indicative of domestic waste and a small number of shale bracelet roughouts and other shale-working waste.

***Funerary evidence***

3.6.14 Four crouched inhumation burials and 12 cremation-related deposits were recorded across the Site (see **Section 4.18**, **Tables 6–7**).

Inhumation burials

3.6.15 Three of the inhumation burials (**411**, **419** and **982**) lay in a rough east–west line towards the northern central part of the Site (**Figs 5** and **7**). The most easterly (grave **982**) contained the burial of an adult female aged *c.* 40–45 (**984**) (**Plate 13**), while an ephemeral feature (**832**), less than 2m to the west, contained three fragments of probably redeposited bone, also from an adult, possibly from the same individual.

3.6.16 Grave **419**, which lay 21m to the west and was cut by Late Bronze Age pit **422** (above), contained the burial of another adult female aged *c.* 40–45 (**420**), which provided a radiocarbon date from early in the Late Bronze Age (1120–970 cal BC, **Table 14**, below); further redeposited bone was recovered from one of the fills of pit **422**.

3.6.17 Grave **411**, a further 22m to the west, contained the burial of an adult female aged *c.* 20–25 (**412**).

3.6.18 The fourth inhumation grave (**408**) lay towards the southwest corner of the Site (**Fig. 6**). It contained the burial of an adult male aged *c.* 25–35 (**409**).

3.6.19 Although a small abraded fragment of Late Bronze Age pottery was recovered from the fill of grave **408**, none of the graves contained grave goods. However, the radiocarbon date from grave **419**, and the grave's stratigraphical relationship with pit **422**, indicate a likely Late Bronze Age date for all these graves.

Cremation burials and other cremation-related deposits

3.6.20 Thirteen features, all small, roughly circular depressions, contained cremated human bone, of which seven are interpreted as possible or likely unurned cremation graves (**Figs 5–7**). A cremation-related deposit in one feature (**856**), comprising less than 1g of cremated bone, was contained within a Late Bronze Age vessel (**ON 159**).

3.6.21 Eleven of the features were located within an area less than 50m across towards the southwest of the Site, representing a small cremation cemetery which almost certainly extends further to the south (**Fig. 5**). All but two of the features in this group lay above a terrace. The two cremation-related features outside the cemetery focus (grave **1414** and feature **856**) lay 20m apart, *c.* 60m to the northeast (**Fig. 7**).

3.6.22 Six (possibly nine) individuals, both male and female, are represented in these features, including immature, subadult/adults and adult individuals. Fragments of amber, probably from beads, were found in cremation graves **279** and **315**. A radiocarbon of date in the Late Bronze Age (1010–840 cal BC, **Table 14**, below) was obtained from the cremated bone in feature **332**.

***Deposition of vessels***

3.6.23 Three Late Bronze Age vessels appeared to have been deliberately placed in the ground, again for unknown purposes. One vessel (**ON 96**, 84 sherds, 1244g) had been placed in a small cut (**339**) located among the group of pits north of ditch **3057/3058**, at the west of the Site (**Fig. 6**).

3.6.24 The other two vessels were located among the group of pits east of Trackway 1. One small cut (**3016**) contained the base and lower part of a fine flint-tempered jar (**ON 100**, 80 sherds, 699g), and a single residual Middle Bronze Age sherd (**Fig. 7**). The other, feature **384**, contained the base and lower part of **ON 103** (30 sherds, 1986g) (**Plate 14**), whose fill (**385**) contained two fragments of a shale roughout (16g), and a small assemblage flint debitage (86 pieces), the product of fairly careful reduction designed to produce useable blanks.

***Animal burials***

3.6.25 At least three features of this date, all at the west of the Site, contained partial animal burials (see **Section 4.19**, **Table 10**). One pit, in pit group **3055** cutting ditch **3057/3058**, contained the skeleton of a sheep/goat, along with residual Middle Bronze Age pottery, worked and burnt flint and shale. To the north of the ditch, pit **1971** contained a partial lamb skeleton, Late Bronze Age pottery, and a copper alloy rod (**ON 8**), and pit **2023** contained a partial sheep/goat skeleton (**Fig. 6**).

3.6.26 Other animal burials on the Site, either undated or containing unspecific prehistoric pottery, could also belong to this period, although such features are also dated to the Early Iron Age. It is possible, but by no means certain, that these are some form of ritual deposits.

***Structures***

3.6.27 Despite the large numbers of postholes recorded on the Site (**Fig. 4**), few clearly defined structures typical of late prehistoric settlements, such as roundhouses or four-post 'granaries', could be identified. While it is possible to 'construct' a number of potential structures from apparent arcs of postholes, or square (or rectangular) settings of four (or more) postholes, particularly where the postholes occurred in large concentrations, in very few cases were these arrangements unambiguous.

3.6.28 No convincing roundhouses were identified in the arrangements of postholes. While it is possible that a short length of curved gully (**272**), describing the arc of a circle *c.* 3m in diameter, in the northwest of the Site, might have had some structural function, this is probably too small to have been a domestic roundhouse (**Fig. 8**, **Plate 19**).

3.6.29 There are two adjacent possible rectilinear structures towards the southeast of the main excavation area, a six-post structure (**1537**), measuring 3.4m by 4m (**Fig. 7**, **Plate 15**), and a four-post structure (**1168**), *c.* 2.2m square, and another possible four-post structure (**2387**), *c.* 2.4m square, at the northwest

(**Fig. 8**). None of these, however, produced any datable finds, and it should be noted that the most convincing example of a four-post structure on the Site (**906**) was of Late Iron Age date (below).

3.6.30 The most visibly apparent structures on the Site, however, are the many short lines of postholes sharing the same orientation as the late prehistoric field system, and the possible lynchets and trackways. Although only a small proportion of these postholes were excavated, of which even fewer contained any dating evidence, the recovery of small numbers of sherds of predominantly Middle/Late Bronze Age, Late Bronze Age and unspecific late prehistoric date supports the view that these features are broadly contemporary with the use of the field system and the Late Bronze Age activity on the Site.

3.6.31 These lines of postholes are particularly evident to the west of **Trackway 1** (although there are also examples to the east), being arranged in up to three (possibly more) parallel lines extending for up to 90m. The lines are spaced *c.* 2m apart. The postholes in each line are more irregularly spaced, possibly indicating repairs and replacements, but the majority are between 1m and 1.5m apart. As they were recorded, these lines are discontinuous, often with no more than five to ten postholes occurring in a line before a break. This may be due to the total truncation of some intervening postholes, an interpretation supported by the fact that the many short sections line up to form what appear to have been continuous lines, or at least lines with fewer breaks.

3.6.32 The fact that in some sections the postholes are arranged in lateral pairs (or triples) across the parallel lines indicates that the individual lines were probably contemporary structures, rather than a sequence with one replacing another. Where this lateral matching is evident, it is possible to suggest series of adjacent four-post, six-post or longer structures, but this seems an unlikely interpretation given that elsewhere such matching is far less regular, and even absent.

3.6.33 The function of all these structures, as well as their precise date, is therefore unclear. The extensive lines west of **Trackway 1** may represent some form of fenced boundary, perhaps associated with the operation of the field system, the use of the trackway or some other activity on the Site, or perhaps having some symbolic significance. Alternatively, they may have formed some non-boundary structure, the *c.* 2m wide channels between the lines possibly used in the control and management of livestock. Elsewhere, many of the postholes occur in pairs, or small groups. What is clear from their overall density, however, is that they represent intensive and extensive activity across the Site.

***Shale-working***

3.6.34 Almost 10 kg of shale, including bracelet blanks and roughouts at various stages of manufacture, broken examples of finished bracelets, and shale-working debitage in the form of numerous very small shale chips, were recovered from the Site, indicating the presence of a shale bracelet manufacturing industry. While small quantities of shale were recovered along with domestic waste from a range of features across the Site, the bulk of the assemblage was concentrated in two main areas – in spreads of material associated with groups of intercutting pits in the area of the field

system ditches at the west of the Site, and a within a possible negative lynchet *c.* 80 m to the northeast.

3.6.35 As described above, the contexts within the pit groups **3053** and **3054** which contained the largest quantities of shale were late in the sequence of deposition within these pits, in some cases forming layers or spreads of material overlying the largely filled pits (**Fig. 6**, **Plates 9–11**). These were initially excavated in **Test pits A** (**3054**) and **B** (**3053**). In pit group **3053**, for example, a single deposit (**3060**), *c.* 0.3m thick, consisting almost entirely of struck flint and shale, was deposited on top of the earlier partially filled pits (**Fig. 6**, **section 1**), while a similar layer (**3059**), up to 0.3m thick, filled a number of partially pits in pit group **3054**. In many such contexts the shale was also accompanied by other finds such as pottery, animal bone and burnt flint.

3.6.36 Another, elongated spread of material (**3045**) lay to the north, adjacent to and north of ditch **3041** (**Plate 8**). The relationship between the ditch and the spread, which occurred as a lens in the subsoil, was not clearly established, but the bulk of the shale for the ditch (95% by weight) was recovered from its upper fill (see above, para. 3.6.3).

3.6.37 The spread of material (**3044**) recorded in the possible negative lynchet to the east was *c.* 13m long and 4.5m wide (**Fig. 7**, **Plate 16**), and comprised a lens towards the base of the subsoil. It is unclear whether this represents the dumping of the waste against the edge of a contemporary field, or the later accumulation of redeposited material.

3.6.38 A number of other features also contained shale-rich deposits, including the last pit (**2214**) in a sequence of five intercutting pits towards the northwest of the Site (**Fig. 8**, **Plate 20**). This contained almost 700g of shale, along with animal bone and worked and burnt flint. Although an earlier pit in the group contained Late Bronze Age pottery, the only pottery from this pit was a single fragment of unspecific prehistoric date. Another pit (**1965**), or possible tree-throw hole, to the southeast (**Fig. 5**) contained a similar quantity of shale, along with Late Bronze Age sherds, animal bone, worked and burnt flint and fired clay.

3.6.39 Dating of the shale-working is provided largely by the predominantly Late Bronze Age pottery found in the shale-rich deposits and in other features where shale was found, including a piece of shale bracelet found inside Late Bronze Age vessels (**ON 103**, above). The association of shale also with Early Iron Age pottery (see below), however, suggests that this activity occurred at the transition of the Late Bronze Age and the Early Iron Age. Although some of the apparently Late Bronze Age pits in pit groups **3053** and **3054** were stratigraphically later than the shale deposits, this may simply indicate that the shale-working, or the dumping of waste, had moved within the Site.

### 3.7 Early and Middle Iron Age (*c.* 700–100 BC)

3.7.1 The small number of Early and Middle Iron Age features on the Site (**Fig. 9**), comprising 23 pits and postholes, are found largely within the distribution of Late Bronze Age features, including those north of Middle Bronze Age ditch **3057/3058** at the west of the Site, and the dispersed group east of

**Trackway 1**, suggesting a continuation of activity from the Late Bronze Age, although on a reduced scale. The pits, which were of varying size similar in range to those of Late Bronze Age date, contained small amounts domestic refuse including animal bone and pottery. The largest was pit **1299** at *c.* 2.6m in diameter and 0.7m deep (**Plate 21**). Two of the pits (**1197** and **1351**) in Late Bronze Age pit group **3048** (above) at the south of the Site, are also of this date.

3.7.2 Further evidence for continuity is suggested by the occasional occurrence of Late Bronze Age and Early Iron Age pottery within the same contexts, and by the presence of shale-working debris (357g), including a roughout and a bracelet fragment, in Early Iron Age pit **1238**.

3.7.3 There was also an adjacent pair of pits (**550** and **733**), both *c.* 1.1m wide and 0.35m deep, in the area of the Late Iron Age/early Romano-British activity to the east.

***Animal burials***

3.7.4 At least two Early Iron Age features within the central part of the Site contained animal burials. Pit **1854** contained a complete sheep/goat skeleton (**Animal Bone Group (ABG) 201**) and cattle bones, while a young sheep/goat skeleton (**ABG 183**) had been deposited in a small cut (**1338**) within the backfill of pit **1321**. As with the similar Late Bronze Age features, the reasons for such burials are uncertain.

***Vessel deposition***

3.7.5 Towards the southeast of the main excavation area there was a truncated Early Iron Age vessel (**ON 171**, 147 sherds, 515g), placed in a small cut (**1235**), containing a number of flints at its base.

## 3.8 Late prehistoric

3.8.1 Three ditches at the southwest of the Site (**Fig. 9**) are of uncertain but likely to be late prehistoric date, and are notable in not conforming to the general orientation shared by many other features on the Site.

3.8.2 Ditch **3040** ran northeast from the western edge of the excavation, curving slightly, to shale-working spread **3045**, although its stratigraphical relationship with the spread was not established. It contained a single Late Iron Age sherd, and was cut by ditch **3039**.

3.8.3 Ditch **3039**, which appears to form the northeastern arc of a large rounded enclosure lying largely outside the Site, was up to 1m wide and 0.4m deep with a U-shaped profile. It cut across shale-working spread **3045** and ditch **3040**, and contained sherds of Middle Bronze Age (12 sherds, 102g), Late Bronze Age (59 sherds, 135g) and late prehistoric (26 sherds, 42g) pottery. It also contained animal bone, worked and burnt flint, stone, and a copper alloy pin (**ON 266**), but only small quantities of shale, most from where it cut across spread **3045**. Many of the intercutting Late Bronze Age pits lay within the area bounded by the ditch, as did most, but not all, of the cremation graves in the cemetery at the southwest of the Site (**Fig. 5**), but no relationship between these features was established.

3.8.4 Ditch **3038**, which was of similar dimensions and profile to ditch **3039**, is probably associated with it, running north from its eastern edge then curving to the east before terminating on the western edge of **Trackway 1**. It contained two Middle Bronze Age sherds (10g) and five Late Bronze Age sherds (44g), along with further animal bone and worked and burnt flint, but no shale.

3.8.5 Given the concentration of Middle and Late Bronze Age activity in the western part of the Site, it is possible that much of the material in ditches **3038** and **3039** was residual. They certainly represent a significant reorganisation of that landscape divided up by the Bronze Age rectilinear field system, with ditch **3039** cutting across the lines both of the main ditched boundary of the field system at the west of the Site, and a possible lynchet, although the chronological relationship with the latter could not be established.

3.8.6 The fact that ditch **3039** also cuts through deposit **3045** implies a date for this reorganisation after the Late Bronze Age-Early Iron Age transition, the suggested period for the shale-working on the Site. It is unclear, however, whether the ditch dates to the Early and Middle Iron Age, or perhaps more likely, to the Late Iron Age, as hinted at by the sherd of pottery in ditch **3040**, in which case it could be associated with wider reorganisation indicated by the construction of the subrectangular enclosure and related ditches (below).

### 3.9 Late Iron Age–early Romano-British (*c.* 100 BC–AD 150)

3.9.1 The Late Iron Age saw the construction of a subrectangular ditched enclosure, initially detected by the geophysical survey, which remained the focus for activity into the early Romano-British period (**Fig. 10**). The Romano-British pottery indicates that the Site was probably abandoned in the second half of the 1st century AD. Only the southern end of the enclosure, including an entrance, was exposed in the access road part of the Site. A number of other ditches closely associated with the enclosure were recorded, suggesting possible alterations to its layout and use during this period. A series of pits and postholes also date to this general period, many of them clustered in the area south of the enclosure, including a Late Iron Age four-post structure. A single early Romano-British feature (**435**) was recorded in the western part of the Site.

3.9.2 As discussed above, the enclosure shares the same general orientation as the late prehistoric field system and the topographic features, and it may be that the possible lynchets and trackways described above, one of which (**Trackway 2**) flanks a ditch closely associated with the enclosure, belong to this phase of activity.

#### *Enclosure*

3.9.3 The subrectangular enclosure as revealed by the geophysical survey measured *c.* 76m northwest to southeast, by 63m wide, enclosing an area *c.* 0.46ha (Archaeological Services & Consultancy Ltd 2007). Two main phases of construction are suggested by the ceramic and stratigraphic evidence.

Phase 1: Late Iron Age

3.9.4 The indication from the geophysical survey of a double ditched enclosure was confirmed by the excavation at its southwest corner. The outer ditch in this area (**3025**) was up to 1.5m wide and 0.55m deep with a V-shaped profile (**Plate 22**). In the sections where more than one fill was recorded, the primary fill contained Late Iron Age pottery only, with early Romano-British sherds being recovered only from the uppermost fill. Ditch **3025** terminated midway along the southeastern end of the enclosure.

3.9.5 Along the western side of the enclosure, another Late Iron Age ditch (**564**) lay parallel to and approximately 4m inside ditch **3025**. It was *c.* 0.8m wide and 0.4m deep, with a single fill (**Plate 23**). At the corner of the enclosure this ditch had been heavily truncated, but further along the front it appeared to divide into two cuts, *c.* 0.5m apart. The smaller, inner cut (**3037**), measuring *c.* 0.8m wide and 0.1m deep, had a single fill with less than 10% of the sherds (by weight) being of Romano-British date. The outer cut (**3036**), measuring *c.* 1.2m by 0.3m, contained no pottery in the primary fill, and Late Iron Age and Romano-British pottery in the upper fill in proportions of *c.* 3:2.

3.9.6 Only a single ditch (**3023**) was recorded at the enclosure's southeast corner. This was up to 1.9m wide and 0.65m deep, again with a V-shaped profile (**Plate 24**). The single early Romano-British sherd within the otherwise wholly Late Iron Age pottery assemblage was recovered from the upper fill. The ditch's terminal lay 14m east of that of ditch **3025**, but its line was offset by approximately 8m, creating a staggered entrance.

3.9.7 Possibly related to these ditches was a short length of shallow U-shaped gully (**3028**) at a slight angle between them, partly blocking the entrance. It was up to 1m wide and 0.2m deep, with a terminal at its west end *c.* 4.4m from ditch **3025**, and its eastern end cut by ditch **3027** (below).

3.9.8 Despite the recovery of early Romano-British pottery from some of the fills of the Phase 1 ditches, none of it derived from identifiable early fills, and a Late Iron Age date for the construction of the enclosure seems likely.

3.9.9 One other ditch appears to belong to this phase. Ditch **3026** ran southeast to northwest, apparently into the enclosure entrance, passing between the terminals of ditch **3025** and gully **3028**. Its line was not detected inside the enclosure by the geophysical survey, but it was detected extending almost 90m to the southeast and its position may be related to the asymmetrical arrangement of the enclosure entrance, possibly aiding the movement of livestock into the enclosure. The ditch was *c.* 1.9m wide and 0.8m deep, with a V-shaped profile, and all the Romano-British sherds (*c.* 25% by weight) were recovered only from its uppermost fill.

Phase 2: early Romano-British

3.9.10 The pottery from two further ditches associated with the enclosure suggests that they have an early Romano-British construction date. Ditch **3027**, which lay parallel to ditch **3026**, and *c.* 4.5m to its northeast, ran northeast from a terminal whose position matched the extent of the discrete features outside the front of the enclosure. It was *c.* 1m wide and 0.5m deep with a V-shaped profile. While clearly laid out with reference to ditch **3026**, possibly now defining a trackway leading up to the enclosure entrance, most of the pottery

(*c.* 84%) from its single fill was of Romano-British date, suggesting a modification to the enclosure entrance; it cut the eastern end of gully **3028**. It may be contemporary with a recut (**3046**) of ditch **3026**, identified in a number of sections. Like ditch **3026**, ditch 3027 was not detected further inside the enclosure by the geophysical survey.

3.9.11 Southwest of the enclosure, ditch **3024** did not following the curving line of the enclosure ditch (**3025**) but followed a straight line along the eastern edge of **Trackway 2** to a terminal on line with the enclosure's southwest corner. It measured 1.9m wide and up to 0.9m deep, with a wider, less pronounced V-shaped profile (**Plate 25**) than the Late Iron Age ditches, suggesting a different function. It contained exclusively Romano-British pottery.

***Other features and deposits***

3.9.12 There was a dense cluster of pits and postholes immediately south of the enclosure, its extent seemingly defined by the line of ditch **3024** at the west, and by the line and terminal of ditch **3027** at the east. Two pits, one of them (**473**) containing early Romano-British pottery, cut the northeastern edge of Late Iron Age ditch **3026**, while a small number of features lay between ditches **3026** and **3027**.

3.9.13 The presence of a pit and two postholes between the inner and outer enclosure ditches at its southwest corner may indicate that some of the activity represented by these features pre-dates the construction of the enclosure, or at least its outer ditch.

Structures

3.9.14 A square four-post structure (**906**) (**Plate 26**) lay on the western edge of **Trackway 2**. The postholes, set 3m apart (centre to centre) averaged 1m in diameter and were up to 0.4m deep, with well preserved post-pipes. All contained Late Iron Age pottery. Similar features of this date are frequently interpreted as above ground granaries, although other functions are possible. While other four-post combinations can be suggested within the cluster of postholes (as across the rest of the rest), none have postholes of comparable scale, and they are consequently less convincing as genuine structures.

3.9.15 As with the concentrations of postholes in the central part of the Site (discussed above), many of those south of the enclosure can be readily combined with others to produce apparent pairs, triples or other combinations, such as lines lying parallel to the ditches. There were, however, no clearly identifiable structures among them, and neither their functions, perhaps related to livestock control, nor their evident relationship with the enclosure, particularly its entrance, have been established. A small number produced pottery of Iron Age (**Fig. 9**), Late Iron Age and early Romano-British date.

Pits outside the enclosure

3.9.16 Pit **633** was the largest pit in the enclosure area, *c.* 2.5m wide and 0.6m deep (**Plate 27**). It contained a sequence of well defined dumps of domestic refuse with early Romano-British pottery throughout, along with animal bone, stone, fired clay and a lead weight (**ON 636**).

Features within the enclosure

3.9.17 Late Iron Age pit **666** lay between the outer and inner enclosure ditches at its southwest corner. It was *c.* 1.6m in diameter and 0.5m deep, with vertical sides and a flat base (**Plate 28**), and its three fills contained Early to Late Iron Age pottery, animal bone and a copper alloy rod (**ON 667**).

3.9.18 Also between the ditch, on the edge of the excavation, were three small intercutting pits, the earliest of which (**600**), with small flint cobbles at its base (**Plate 29**), contained a single early Romano-British sherd.

3.9.19 Only one of the features within the inner ditch was dated. Early Romano-British pit **580**, also on the edge of the excavation, was *c.* 1.1m in diameter and 0.3m deep. Its two fills contained pottery, animal bone, shell, flint and fired clay.

Other features

3.9.20 East of the entrance two narrow gullies, possibly for drainage, ran from the northeast towards ditch **3027**. At the edge of the excavation the infilled ditch was cut by a broad feature (**3032**), *c.* 2.5m wide, at least 3.4m long and up to 0.35m deep, containing over 2.6kg of Late Iron Age to early Romano-British pottery, along with other domestic waste, its fill being particularly rich in charred plant remains (**Section 5.2**).

3.9.21 On the opposite side of the trackway an undated deposit of cobbles (**523**) had been dumped in the top of ditch **3026**, perhaps to create a consolidated area for access across the ditch.

### 3.10 Later periods

3.10.1 Apart from a narrow ditch (**3031**) aligned northeast to southwest, which cut across the Late Iron Age and early Romano-British ditches at the southwest of the enclosure, no other features later than early Romano-British were recorded on the Site. Some of the Romano-British pottery is of potentially later date, and late Roman coins, all recovered from subsoil layers, indicate later activity in the area. Post-Roman finds include a fired clay Saxon loomweight (from mixed date spread **1292**), and pottery, ceramic building material (CBM), glass, metalwork, and clay pipe fragments of medieval, post-medieval and/or modern date.

# 4 FINDS

## 4.1 Introduction

4.1.1 This section considers the finds recovered from two stages of fieldwork on the Site carried out by Wessex Archaeology: the test pit evaluation, and the excavation. Finds from the test pits have already been reported on (Wessex Archaeology 2009a), and only a summary of the descriptions and quantifications are included here.

4.1.2 A finds assemblage of moderate size was recovered, with a wide chronological range from early prehistoric to post-medieval (**Table 2**). Finds from the evaluation test pits were largely of post-medieval date, while little material later than Romano-British was recovered during the excavation.

**Table 2**: Finds totals by material type (excluding finds from bulk samples)

| | Eval. test pits | | Excavation | | Total | |
|---|---|---|---|---|---|---|
| **Material type** | ***No.*** | ***Wt. (g)*** | ***No.*** | ***Wt. (g)*** | ***No.*** | ***Wt. (g)*** |
| Pottery | 291 | 2495 | 9289 | 86,893 | 9590 | 89,388 |
| *Prehistoric* | *5* | *46* | *8536* | *78,092* | *8541* | *78,138* |
| *Late Iron Age/Romano-British* | *7* | *37* | *753* | *8801* | *760* | *8838* |
| *Post-medieval* | *279* | *2412* | - | - | *279* | *2412* |
| Ceramic building mat. | 623 | 7574 | 19 | 1181 | 642 | 8755 |
| *Opus signinum* | - | - | 1 | 147 | 1 | 147 |
| Fired clay | 5 | 15 | 577 | 5108 | 582 | 5123 |
| Clay pipe | 25 | 46 | - | - | 25 | 46 |
| Stone | 9 | 410 | 689 | 78,258 | 698 | 78,668 |
| Struck flint | 304 | 5090 | 6420 | 106125 | 6724 | 111,215 |
| Burnt flint | 174 | 3972 | 7758 | 63602 | 7932 | 67,574 |
| Glass | 110 | 874 | 2 | 9 | 112 | 883 |
| Slag | 4 | 191 | 10 | 10 | 14 | 201 |
| Metalwork | 36 | - | 87 | - | 123 | - |
| *Coins* | - | - | *11* | - | *11* | - |
| *Copper alloy* | *4* | - | *33* | - | *37* | - |
| *Lead* | - | - | *24* | - | *24* | - |
| *Iron* | *32* | - | *19* | - | *51* | - |
| Shale | - | - | 7874 | 9885 | 7874 | 9885 |
| Amber | - | - | 240 | 31 | 240 | 31 |
| Worked bone | - | - | 11 | - | 11 | - |
| Human bone: *Inhumations (no.)* | - | - | 4 | - | 4 | - |
| *Cremated bone (g)* | | | - | 883 | - | 883 |
| Animal bone | 11 | 112 | 18,251 | 45,510 | 18,262 | 45,615 |
| Marine shell | 17 | 188 | 34 | 264 | 51 | 452 |

4.1.3 The chronological focus within the excavation assemblage is on the late prehistoric period, and this includes a large and very significant group of shale-working waste (also associated with flintwork), and a large pottery assemblage. The recovery of cremated and unburnt human remains, of presumed prehistoric date, is also of interest. The large animal bone assemblage is comparatively rare in the region, and therefore of significance.

4.1.4 All finds have been quantified by material type within each context; totals by material type are given in **Table 2**. For the purposes of this assessment, all material types have been at least visually scanned, in order to ascertain their nature, condition and potential date range. Spot dates have been recorded

for datable finds (pottery, coins, other metalwork). All data have been entered on to the project database (Access)

4.1.5 The following section describes the finds largely by material type, and it is on this information that the archaeological potential of the finds is based (**Section 6.3**), while **Section 7.3** presents method statements outlining proposed further work in order to achieve that potential.

## 4.1 Pottery

***Introduction***

4.1.1 The pottery consists mostly of Late Bronze Age and Early Iron Age material, with only a handful of earlier ceramics (Late Neolithic and Early Bronze Age) and a small (although still significant) Middle Iron Age group. Late Iron Age and Romano-British pottery makes up a small proportion of the total. Post-medieval pottery derived entirely from the evaluation test pits.

4.1.2 The whole pottery assemblage has been quantified by broad ware group (e.g. flint-tempered ware) or known ware type (e.g. samian) within each context, and totals are given in **Table 3**. Spot dates have been recorded on a context by context basis, but it is worth noting that in many cases, the quantities of pottery per context are so low, and/or the condition so abraded, as to render the assigned spot dates more uncertain. Where contexts contain chronologically mixed pottery groups, it is not always clear which sherds are redeposited and which may be intrusive.

***Neolithic***

4.1.3 A single sherd dates to the Late Neolithic period. This is a piece of Woodlands-type Grooved Ware, from pit **1969**. An undiagnostic body sherd in a similar fabric from pit **2932** was associated with fragments of a polished stone axe, and the two are likely to be contemporaneous.

***Beaker and Early Bronze Age***

4.1.4 Eight sherds derive from Beakers or other Early Bronze Age vessels (two with incised line decoration may be from Collared Urns). All are abraded, in grog-tempered or sandy fabrics (only one is flint-tempered); their size and condition indicates that all were redeposited in the contexts in which they were found.

***Middle Bronze Age***

4.1.5 A total of 383 sherds were identified with coarse tempers or other features which suggests that they may belong to Middle Bronze Age Deverel–Rimbury traditions, rather than to Late Bronze Age or Early Iron Age types. These include vessels with a finger-pressed applied cordon, and some rim forms that are more akin to Deverel–Rimbury types. All of these sherds, however, occur alongside Late Bronze Age sherds, so this possible earlier element may be more apparent than real.

***Late Bronze Age and Early Iron Age***

4.1.6 The majority of the assemblage dates to these periods. Most sherds are flint-tempered. There has been a considerable degree of fragmentation, hindering the identification of forms at this stage of assessment, although it is apparent that the material includes jars and bowls in a range of coarse and finewares. Some vessels are handled, and these tend to be jars in

coarse fabrics. Burnish occurs, most commonly on bowls, usually but not exclusively on finewares. Decoration includes finger-tip impression on rims and shoulders, finger-nail marks on and within rims, and scoring, slashing, tooling and finger-smearing on bodies. Most motifs are simple – usually horizontal lines, although more complex geometric designs also occur, generally variations on filled triangles. More unusual forms include an omphalos-based, thin-walled burnished cup with a flaring rim and tooled and incised decoration.

4.1.7 As a whole, the assemblage has a number of parallels in the region. Similar forms occur commonly in Kent, for instance at Cliffs End Farm, Ramsgate (Leivers, in prep.) and Highstead (Bennett *et al*. 2007). Large, securely dated assemblages are scarce; at present, only the Cliffs End Farm material provides a sound chronology – on this basis a concentration in the 10th and 9th centuries BC might be predicted, with perhaps a more limited amount of activity in the 11th century.

**Table 3**: Pottery totals by ware type (excavation only)

| Date range | Ware type | Number | Weight (g) |
|---|---|---|---|
| Neolithic | Calcareous ware | 2 | 24 |
| Beaker/ Early Bronze Age | Sandy | 3 | 9 |
| | Flint-tempered | 1 | 4 |
| | Grog-tempered | 4 | 20 |
| Middle Bronze Age– Early Iron Age | Flint tempered | 7763 | 71,916 |
| | Sandy | 76 | 599 |
| | Organic | 47 | 824 |
| Middle–Late Iron Age | Flint tempered | 277 | 3385 |
| | Sandy | 57 | 336 |
| Late prehistoric (unspecific) | Calcareous | 5 | 9 |
| | Flint-tempered | 293 | 941 |
| | Grog-tempered | 8 | 25 |
| | *Sub-total prehistoric* | *8536* | *78,092* |
| Late Iron Age/ Romano-British | Sandy ware | 97 | 872 |
| | Grog-tempered ware | 84 | 1405 |
| | Flint-tempered | 54 | 351 |
| | Sand and fine flint-tempered ware | 39 | 356 |
| | Glauconitic sand | 33 | 307 |
| | Calcareous ware | 6 | 43 |
| | Samian | 6 | 61 |
| | Amphora | 8 | 626 |
| | Thameside fine greyware | 43 | 189 |
| | Fine oxidised ware | 7 | 16 |
| | White-slipped red ware | 9 | 38 |
| | Oxidised ware | 25 | 220 |
| | Verulamium region whiteware | 4 | 209 |
| | N Kent/S Essex shell-tempered ware | 195 | 2222 |
| | Patchgrove ware | 91 | 1338 |
| | Thameside greywares | 50 | 541 |
| | Other greyware | 2 | 7 |
| | *Sub-total Late Iron Age/Romano-British* | *753* | *8801* |
| | **Overall total** | **9289** | **86,893** |

***Middle Iron Age***

4.1.8 The small Middle Iron Age group is significant in that it points to some continuity of settlement and other activity between the main phases of Late Bronze Age/Early Iron Age and Late Iron Age/early Romano-British occupation. Material of this date was only recovered from 12 contexts,

indicating a considerable decline in activity. Even if the difficulties of identifying Middle Iron Age material from amongst the mass of featureless sherds on the basis of fabrics alone is accounted for, the proportion of the assemblage attributable to this period is still very small.

***Late Iron Age and early Romano-British***

4.1.9 The Late Iron Age and early Roman-British pottery broadly spans the period from *c.* 100 BC until *c.* AD 120/130, with only a handful of sherds indicating activity after this date. Most pieces survive in moderately good condition (mean sherd weight 11.6g) although rims are relatively scarce (*c*. 8% of the total) and many are broken at the neck/shoulder junction, hampering the precise identification of vessel form.

4.1.10 The fabric composition of the Late Iron Age assemblage is broadly comparable with others from the Medway valley area (Kelly 1971, 78–84; Biddulph 2004; Barclay *et al*. 2006; Booth 2009; Jones 2009) although as noted on the Channel Tunnel Rail Link (CTRL) sites (Booth 2009, 7, fig.4), the proportions of the various fabrics varies considerably between sites. The continued use of flint-, sand-with-flint-, and the glauconitic sand-tempered fabrics indicates that the assemblage has its roots firmly embedded in the Late Bronze Age/Early Iron Age and Middle Iron Age ceramic traditions of the area (Kelly 1971, 78–84; Biddulph 2004; Barclay *et al.* 2006), although this has, of course, hampered the precise dating of the less diagnostic sherds.

4.1.11 Continuity of activity throughout the Iron Age at this site has yet to be fully established, but there is some evidence, from the relatively high proportion of grog-tempered wares (25% of the sherds) compared with the flint-tempered (17%) and glauconitic sandy wares (10%) for instance, to suggest at least an intensification of activity in the final decades of the 1st century BC into the 1st century AD. Evidence from the CTRL sites at Hockers Lane and Thurnham (Booth 2009, 5) and Queen Elizabeth Square Maidstone (Biddulph 2004, 18) indicates that the glauconitic fabrics preceded the appearance of the grog-tempered wares, although with a substantial chronological overlap between the two groups.

4.1.12 The non-glauconitic sandy wares are unusually frequent at this site. In general, these wares were of little or no importance during the pre-Conquest period in west Kent (Pollard 1988, 31; Barclay *et al.* 2006) but in the absence of diagnostic forms, some of these sherds may spill over into the early Roman period. It is also possible that more of these sherds do in fact contain glauconite, currently unrecognised due to their very dark firing colour for example.

4.1.13 The Late Iron Age vessel forms display the characteristics of the Aylesford–Swarling (Cunliffe 1991, 83–93) or 'Belgic' (Thompson 1982, 4–5) styles of pottery, with angular or rounded vessel shapes, some clearly based on north Gaulish prototypes, and often with pedestal or footring bases and decoration based on curves, corrugation and cordons. Forms include everted rim jars with rippled shoulders, plain everted rim jars, round shouldered jars (Thompson 1982, types B2–1, C2–3 and C4) as well as the ubiquitous bead rim jar forms. Surface treatments are limited to smoothing and burnishing; with the exception of the corrugations and cordons characteristic of this

style, decoration was also comparatively uncommon and restricted to scoring with only a handful of sherds exhibiting tooled, incised, rouletted or impressed motifs.

4.1.14 Evidence from the CTRL sites has indicated that the glauconitic sand-with-flint-, and flint-tempered fabrics continued to be used up until *c*. AD 70, declining rapidly thereafter (Booth 2009, 7). Sand-with-flint- and flint-tempered wares were also made on the north Kent marshes during this trans-Conquest period (Monaghan 1987, 179, fabrics F1 and F2), while the calcareous wares, present in small quantities in the Medway valley from the later 1st century BC, peaked in importance during the Flavian to Trajanic periods (the 'north Kent/south Essex shell-tempered wares'), declining sharply after the mid 2nd century AD.

4.1.15 Similarly, the grog-tempered ware enjoyed a long period of popularity in this area (Booth 2009, 7), with one distinctive subgroup – Patchgrove ware (Ward-Perkins 1939, 176–8) – becoming especially common during the later 1st and early 2nd century AD and perhaps continuing, at least for a limited range of larger jar forms, into the 3rd century AD. The production of a wide range of sand-tempered wares (fine greywares and the Thameside products) in the north Kent coastal zone also seems to have begun around the middle of the 1st century AD, (Monaghan 1987, 216). Vessel forms in this assemblage (e.g. *ibid*., types 2G1, 3E1, 3E3, 3F1, 3I1F, 4J, 6D and 7A1) indicate that the majority belong to the earlier phases of the industry, prior to c. AD 120/130, with only one sherd (from a shallow, plain-rimmed dish (*ibid*., 147, type 5E1, dated c. AD 130/160–260/230) found in ditch **3027**), necessarily post-dating this.

4.1.16 Although present on the nearby CTRL sites at Thurnham and Hockers Lane (Booth 2009, 7) Gallo-Belgic imports were not found at Margetts Pit. Continental imports were limited to 1st century AD southern Gaulish samian (forms 18, 18R and 27), an incompletely slipped samian footring base possibly from a central Gaulish source (pit **633**) and six pieces of Dressel 20 olive oil amphora. The few sherds of fine oxidised ware and white-slipped red ware, both probably from local north Kentish sources, probably served as fine tablewares while the oxidised ware sherds were mostly derived from flagons from a variety unidentified sources. The only regional import was a worn mortarium or mortarium-like bowl from the Verulamium district, also likely to be of late 1st or early 2nd century AD date.

### 4.2 Ceramic building material

4.2.1 Most of the CBM from the Site was recovered from the evaluation test pits, and comprises fragments of medieval and post-medieval roof tile, and post-medieval brick. A few pieces of Romano-British CBM, however, were identified from the excavation, including two, or possibly three *tegulae*. These fragments came from context **271**, ditch **3037**, pit **633** and ditch **3026**.

### 4.3 *Opus signinum*

4.3.1 Further building material of Romano-British date was recovered in the form of a single piece of *opus signinum*, recovered from the subsoil (**202**).

### 4.4 Fired clay

4.4.1 The fired clay consists almost entirely of small, abraded and featureless fragments in a variety of oxidised fabrics, mostly inclusion-free, but including some with an admixture of chalk, and a few pieces with flint inclusions. This material is likely to have a structural origin, from pit/hearth linings or from upstanding structures; a few fragments bear possible wattle or lath impressions.

4.4.2 One ceramic object was positively identified – a fragment from a bun-shaped loomweight of Middle/Late Saxon date, from mixed-date deposit **1292**.

4.4.3 In addition, a group of 22 small fragments from one context (Iron Age pit **1685**) appear to derive from some object(s) with smooth, curved surfaces; the fragments have a slightly powdery feel, and may represent mould fragments, from the casting of copper alloy objects.

### 4.5 Clay pipe

4.5.1 Clay pipe fragments derived only from the evaluation test pits; these comprised stem fragments, with no datable bowls or stamps.

### 4.6 Struck flint

4.6.1 A large quantity of struck flint was recovered from the Site, much of it closely associated with the shale-working debris as substantial dumps in pits or layers. Some 50% of these deposits were excavated and bulk sampled. Only the lithics retrieved from the bulk samples (9234 pieces) have been assessed and are reported on below (**Table 4**). These samples came from ditches, postholes, pits and pit groups over the entire Site, and so provide a reasonably representative selection in terms of feature type and position. All stages of reduction were present, from primary flakes to chips. A small quantity of flint recovered by hand from other contexts was scanned to provide more certainty that some of the more unusual features of the assemblage did not result from the nature of the sample. Nothing was seen in this other material to suggest that it differed in any way.

**Table 4**: Composition of the flint assemblage from bulk samples

| Type | Number | % |
|---|---|---|
| *Debitage* | | |
| Flake cores | 132 | 1.43 |
| Tested nodules/core fragments | 175 | 1.90 |
| Blades | 2 | 0.02 |
| Flakes | 5689 | 61.61 |
| Maintenance and Rejuvenation | 8 | 0.09 |
| Chips | 2758 | 29.87 |
| Angular shatter | 461 | 4.99 |
| *Tools* | | |
| Scrapers | 1 | 0.01 |
| Piercers | 1 | 0.01 |
| Miscellaneous retouch | 7 | 0.07 |
| Knife | 1 | 0.01 |
| Axe | 2 | 0.02 |
| **Total** | **9234** | **100** |

4.6.2 The raw material in almost every instance appears to be nodular flint of variable quality (much of it being rather poor), with a chalky cortex. The source is likely to have been local, presumably the chalk of the North Downs. The pieces are for the most part in mint condition, with only a handful showing any significant staining, rolling or other evidence for complex post-depositional histories.

4.6.3 With the exception of a single feature (pit **384**), and two adjacent clusters of intercutting pits, no feature contained more than 22 pieces of flint, all of which had later prehistoric characteristics.

4.6.4 Pit **384** contained a Late Bronze Age vessel in the fill of which (**385**) was a small group of knapping debris, consisting of 25 flakes, 14 broken flakes and 47 chips. Unlike much of the material from elsewhere on the Site (which seemed to result from reduction sequences with the apparent intent of merely reducing nodules into smaller pieces, without any particular care over the shape or utility of the resulting pieces), the debitage in this group was the product of a fairly careful skilled flake technology, the aim of which was clearly to produce useable blanks and tools.

4.6.5 A total of 4078 pieces was retrieved from samples from Late Bronze Age pit group **3054**. With the exception of a single scraper and six pieces with short areas of retouch, all were debitage or cores. Samples from Late Bronze Age pit group **3053** immediately to the north contained 4994 pieces (only one of which was a retouched tool – in this instance an awl).

4.6.6 In both pit groups, the material falls into two categories, which correspond to the types mentioned above: on the one hand, sequences which seem to have been concerned only with the reduction of nodules into smaller pieces; on the other, careful and deliberate knapping. The first seems unequivocally Late Bronze Age, and fits comfortably within patterns of flint working for that period. The second seems entirely at odds with later prehistoric flint working, and is ostensibly earlier – Late Neolithic or Early Bronze Age, on the basis of the core types and flake morphology. Both types occur together in the same contexts, associated with Late Bronze Age ceramics and shale-working debris.

4.6.7 There is no consistent difference in condition between the two categories of pieces, both of which are mint or near mint (on occasion, some of the earlier types are a little glossier). On first analysis, it would appear that the pottery provides the dating for the group, with the later group of lithics contemporary with the ceramics, and the earlier group of lithics redeposited. The mechanisms by which this took place remain obscure, as does the original location or locations of this material.

4.6.8 The most notable aspect of the assemblage is the almost total lack of tools. Neither the Late Bronze Age nor the potentially earlier component has any significant quantity of retouched or even utilised material. In an assemblage of this size, a retouched component amounting to less than 0.1% is extraordinary. A number of possibilities present themselves.

4.6.9 In terms of the Late Bronze Age material, the lack of retouched or utilised material is perhaps explicable if the purpose of the reduction was not the creation of suitable tool-making blanks. What tools there are, are merely

thick irregular pieces with short areas of abrupt retouch along one portion of a longer concave edge. These may have served a purpose akin to scrapers, and may conceivably be connected with the Late Bronze Age shale-working although there is no particular reason to suppose that they are. On the other hand, it may be the case that the material recovered from the samples represents only discarded waste, and that the finished products were used (and discarded) elsewhere. The question then becomes, where were these putative tools used and discarded? A rapid scan suggests that there does not seem to be any greater proportion of tools present amongst the bulk of the unassessed material, indicating that there are not deposits containing tools elsewhere on the Site. On balance, the production of formal tools does not seem to have been the primary purpose of the Late Bronze Age flint industry.

4.6.10 The absence of tools in the potentially earlier material is more difficult to explain. In this case, the production of blanks for conversion into tools was clearly the intention. However, as with the later component, such tools are absent (one awl and one scraper are the only instances). Even if the material has been redeposited from earlier contexts, one could reasonably expect some indications of tool making – pieces broken during retouching, for instance, of which there are none – unless the production of blanks and their conversion into tools took place in entirely different places. The occurrence of over 2,700 chips and pieces of micro-debitage suggests that this was not the case, however.

### 4.7 Burnt flint

4.7.1 Burnt, unworked flint was recovered in some quantity. This material type is intrinsically undatable, but is frequently associated with prehistoric activity. In this instance, the majority of the burnt flint from the excavation came from contexts dated by associated pottery to the later prehistoric period, with a small amount from Romano-British contexts. In general the distribution across the Site was relatively low level; only ten contexts produced more than 1kg of burnt flint, with the largest groups from Early Iron Age pit **1336** (4.3kg), and early Iron Age pits **1854** (4kg), **1238** (5.4kg) and **1943** (5.6kg). It may be noted that at least five of these ten contexts were also associated with shale-working waste (spreads **3044**, **3045**, Late Bronze Age pit **393**, and Early Iron Age pit **1238**).

### 4.8 Stone

4.8.1 The stone includes portable objects as well as unworked, burnt fragments. Shale has been quantified and is discussed separately (see below).

4.8.2 Two joining pieces from the blade of a Neolithic polished stone axe were recovered from pit **2932**. Macroscopically, the material resembles a Gabbroic greenstone; typically, axes in this material are Cornish.

4.8.3 Other objects include one complete saddle quern (late prehistoric pit **1578**), and two, or possibly three other quern fragments (unstratified, Late Bronze Age pit **393**, and pit group **3054**). Three other fragments with flat, possibly worn surfaces, are of more dubious identification (Late Bronze Age pits **1932** and **2388**, and pit group **3054**).

4.8.4 Four chalk disc-shaped objects with central perforations are somewhat large for spindle-whorls (diameters between 60mm and 80mm), but could have functioned as weights; these came from Late Bronze Age pits **393** and **422**, and pit group **3054**, and Early Iron Age pit **254**. Another two pieces of chalk could be rough-outs for similar objects – the dimensions are similar, and both have traces of the beginnings of boring for central perforations (Late Bronze Age pit **396**, and Early Iron Age pit **1907**). A further possible small chalk object came from Middle Iron Age pit **1685**; this appears to derive from the corner of a rectangular object, of unknown function.

4.8.5 A roughly spherical pebble appears to have been used as a grinder or pounder; this came from Early Iron Age pit **1336**. All the stratified objects were from late prehistoric contexts.

4.8.6 The overwhelming majority of the stone recovered, however, was unworked, but showed signs of heating or burning. Much of this is likely to represent locally available greensand or other sandstones; a few pieces have been retained for further geological identification, along with a small number of pieces that may be non-local, but most has been discarded. It was distributed at a fairly low level across the Site. Thirteen contexts yielded more than 1kg, with the largest amount from late prehistoric pit **1578** (10.4kg). Three of these 13 contexts coincided with large deposits of burnt flint (pits **393** and **1943**, and spread **3045**).

## 4.9 Shale

4.9.1 The material is an organic-rich black stone, referred to as shale for convenience: its geological provenance is not known at present. A very substantial quantity of material was recovered, mainly from the bulk samples (**Table 5**).

**Table 5**: Composition of the shale assemblage from bulk samples

| Type | Number |
|---|---|
| Finished objects | 10 |
| Roughouts; finishing in progress | 291 |
| Roughouts | 226 |
| Working debris | 6929 |
| **Total** | **7456** |

4.9.2 The manufacturing process seems to have been given over entirely to the creation of bracelets/armlets/bangles; all finished objects were of this type, as was the entirety of the part-finished component which could be identified with any certainty. In every instance, the technology appears to involve hand-working: there are no lathe cores or any other evidence for lathe-turning, supporting the dating suggested by the associated ceramics of a Late Bronze Age to Early Iron Age date.

4.9.3 **Figure 11 Plates 30–1** show a typical range of the shale material recovered and the various stages of working from circular block to finished roughout. There is very little evidence for actual finished objects (ie smoothed and polished), although this stage may have been completed off-site or at another site. It is possible that objects were traded in an unpolished state.

4.9.4 Distributions were concentrated in two zones: on the western side of the Site in a cluster of intercutting pits and ditches and spreads to the north of them; and in a possible negative lynchet 85m further east. In both zones, small features in the immediate vicinity also contained shale. As the shale working debris within the possible lynchet was found associated with material of later (Late Iron Age to Saxon) date, it is likely that if had been redeposited in that location. Shale working debris, therefore, may originally have been more widely distributed across the Site, but disturbed and truncated by later (including recent) cultivation.

### 4.10 Glass

4.10.1 Most of the glass recovered from the Site came from the evaluation test pits, and was of post-medieval or modern date. This material has been discarded. The two pieces recovered from the excavation are Romano-British; one is a small fragment from a translucent blue globular bead (mixed-date layer **1292**), while the second is a fragment of window glass, with a rounded edge (Late Iron Age enclosure ditch **3025**).

### 4.11 Slag

4.11.1 A very small amount of slag was recovered, mostly from the evaluation test pits (and thus probably post-medieval in date). Ten pieces from pit/posthole **1108** are of uncertain identification; they are in a very light, vesicular material.

### 4.12 Coins

4.12.1 Eleven coins were recovered. These comprise six copper alloy coins, four potin coins and a plated silver coin, and range in date from the Late Iron Age through to the Late Roman period. In general, the coins are in fair condition. Most of the copper alloy coins show signs of some post depositional corrosion, although all are at least legible after some basic cleaning. All of the coins could be assigned to period (five Iron Age and six Roman).

4.12.2 Four of the Late Iron Age coins were cast in potin (a tin-rich bronze mixture) whilst the fifth is a copper alloy unit. One of the potin coins (subsoil **202**) is a crude example of the flat linear I series, probably struck early in the 1st century BC. The remaining three potin coins are all similar issues, of the Kentish Primary Series, bearing a stylised helmeted bust on one side and a butting bull on the reverse (two more from subsoil **202**; one from the underlying layer **271/3051**, overlying the Late Iron Age enclosure). All of these are likely to have been cast late in the 2nd century BC or early in the 1st century BC. The fifth Iron Age coin (context **271/3051**) is a struck bronze unit. Although heavily corroded it is possible to tentatively identify this coin, and assign a broad date range of *c*. 40BC to *c*. 40 AD.

4.12.3 One of the Roman coins (from subsoil **202**), is more likely to be associated with the assemblage of Iron Age coins than the other Roman coins, which all date to the late 3rd or 4th centuries AD. This coin is a plated copy of a silver *denarius* of Augustus struck in *c*. 7–6 BC. Republican and Augustan coins have been recorded in both pre-Conquest Iron Age contexts and post-Conquest Roman deposits – the coinage used to pay the invading army is likely to have contained quantities of Republican and Augustan coinage,

which remained in circulation well into the 1st century AD. This coin has also been pierced for suspension, suggesting that it was used as a pendant after being taken out of circulation, although neither the obverse nor reverse engraving would have been displayed upright by this suspension. Plated copies of *denarii* such as this point to contemporary attempts at forgery – the silver content of coins of the Republic and Early Empire was high relative to that issued by emperors towards the end of the 1st century AD, and attempts to forge these coins may reflect this. The Empire made strenuous efforts to remove such early silver from circulation during the 1st century AD (also partly because of its high silver content), and the coin is unlikely to have remained in circulation after the end of the 1st century AD. Similar plated copies of this coin are known from Kent, whilst a genuine *denarius* of this type is known from the large site at Goodnestone (David Holman, pers. comm.).

4.12.4 The remaining five Roman coins are all common issues of the late 3rd and early 4th centuries AD, and date from after the apparent abandonment of the Site. The earliest (subsoil **202**) is a corroded *antoninianus* of Victorinus (AD 268–270). Three of the coins (all from subsoil **202**) date to early in the 4th century – two are 'Soli Invicto Comiti' issues of Constantine I minted in London in AD 310 and between AD 307 and 317 respectively, while the third is an issue struck by Maximian I between AD 307 and AD 310. One of these was pierced for suspension so that the portrait on the obverse was upright. The latest coin (subsoil **202**) is a 'Gloria Exercitus' issue of Constantine I, issued in Trier in AD 332.

4.12.5 The assemblage recovered from the Site points to coin use and loss on the Site in two discrete periods. The Late Iron Age coins (together with the plated copy of the *denarius* of Augustus) point to coin use on the Site in the 1st century BC, perhaps continuing as late as the Roman Conquest. The second group, comprising the five late Roman coins, point to activity outside, in the general area of the Site, at the end of the 3rd century and early in the 4th century AD. Although none of these late coins are unusual as site finds, and the assemblage is a small one, it is unusual to have a coin assemblage dominated by coins struck between AD 307 and 317. Late Roman coin assemblages tend to be dominated by big peaks of coin loss in the 270s to 290s and then again in the AD 330s to 360s, with a noticeable hiatus in losses of coins struck between AD 296 and 330. In the light of this, the assemblage must be recognised as slightly unusual. It may be that some or all of these coins derive from a dispersed hoard of this date (nine of the 11 coins came from subsoil **202**), or that activity on the Site was confined to a fairly narrow time span. Certainly the absence of more coins of the AD 330s and AD 360s suggests that coin use on the Site is unlikely to have lasted into the second half of the 4th century AD.

### 4.13 Copper alloy

4.13.1 Eleven copper alloy objects came from contexts dated by pottery as late prehistoric (Middle Bronze Age to Early Iron Age). These comprised five pins and a further shank fragment, three sheet fragments, one possible chain link, and two small coil fragments (from a single object). Three of the pins came from Late Bronze Age pit **422**, and two from a pit in Late Bronze Age pit **3047** (**Fig. 11, Plate 32**: pins recovered from 422 and other contexts).

4.13.2 Ten objects came from the subsoil (**202**), including four brooches (three bow and one disc), and a domed stud and a second domed fragment, probably also from a stud; all these objects are Romano-British. Also from the subsoil, however, was a small D-shaped buckle of medieval date. A further Romano-British brooch came from the underlying context **271/3051**, and a second buckle (medieval or later) was an unstratified find.

4.13.3 One wheel-shaped object (**7**) from the subsoil (**206**) above pit group **3055** (**Fig. 6, Plate 11 and Fig. 11, Plate 33**) is difficult to parallel in Britain. The object is heavier than expected for copper alloy and may have a high lead content. Its exact metallurgical composition awaits further work. One possible parallel is a four-spoked wheel from the Late Bronze Age site of Flag Fen (Coombs 1992, 515 and fig 8.17; Stuart Needham pers comm). At the time of publication this object was considered to be unique in Britain with probable parallels in Switzerland and North Italy (Primas 1984).

### 4.14 Lead

4.14.1 Fifteen of the 24 lead objects appear to be weights; these are presumed to be of Romano-British date or later. These are in various shapes – four square or rectangular, eight disc-shaped (one with a central perforation), two cylindrical and one conical. The conical object has small perforations at top and bottom. Their weights range from 9–235g, although 13 of the 15 fall within the range of 9–56g. None have any markings. Other objects comprise two waste fragments, one moulding, and two roughly circular objects (one perforated) which could be further weights.

4.14.2 Eleven of the lead objects (all weights) are from the subsoil (**202**), and two (a weight and the moulding) were unstratified; one waste fragment came from Late Bronze Age pit **422**; and one weight from Romano-British pit **633**. Other objects came from undated contexts.

### 4.15 Iron

4.15.1 Just under half of the iron objects came from the evaluation test pits; these comprise nails and other structural objects, and also include one horseshoe, and are all likely to be post-medieval. The iron objects from the excavation include five further nails, one hobnail, four knives and part of a horse bridle. One of the knives came from shale-working spread **3045**, while the other three, and the horse bridle, were from Romano-British contexts. The knife from **3045** may not be contemporary with the deposit and could represent an intrusive find.

### 4.16 Amber

4.16.1 One complete annular amber bead came from Late Bronze Age pit **422**, along with further tiny fragments. Seventeen other late prehistoric contexts also produced tiny amber fragments, presumably also representing beads (Middle Bronze Age posthole **2925**, Late Bronze Age pits **856**, **1340**, **2319**, **2487** and pit groups **3053** and **3054**; Early Iron Age pits **254**, **1336**, **1338**; ditches **2402** and **2151**; cremation graves **279**, **315**; and layer **3045**).

## 4.17 Worked bone

4.17.1 The worked bone comprises 11 objects and three pieces of worked antler, all from late prehistoric contexts (Middle Bronze Age to Early Iron Age). Most of the recognisable objects appear to be pointed implements of various types (Late Bronze Age pits **393**, **422** and **1980**, Early Iron Age pit **1943** and early Romano-British pit **602**). These may have had varying functions, as gouges, awls, *etc*. Early Iron Age pit **1336** contained a dog canine perforated for use as a pendant. Five other objects are more incomplete and are of uncertain function; one may be a shank from a pin or needle (Late Bronze Age pit **2627**); one has lateral perforations at one end (pit group **3054**); one has a longitudinal incision (pit group **3054**); one is a small strip with a perforation at one end (pit **2319**); and one shows no signs of working but is polished, presumably through use-wear (Late Bronze Age pit **422**).

## 4.18 Human bone

***Introduction***

4.18.1 Human bone from 19 contexts was subject to assessment. Cremated bone was recovered from 13 contexts including the remains of a minimum of three unurned burials, all with redeposited pyre debris. Other deposit types are of uncertain form but may include the remains of a further four burials. Unburnt bone was excavated from six contexts including the remains of four inhumation burials; redeposited bone, one a possible 'placed' deposit, was recovered from two other contexts.

4.18.2 Three of the inhumation graves formed an east–west line of dispersed singletons *c*. 23m apart across the central northern area of the Site; the fourth grave lay *c*. 62m to the southwest (**Fig. 5**). The features containing cremated bone were mostly confined to an area *c.* 45m by 16m in the southwest area of the Site, half laying within a smaller area, *c.* 13m by 9m. One cremation grave lay in the centre of the Site.

4.18.3 Radiocarbon dates in the Late Bronze Age were obtained from bone in two of the graves (**Section 5.6**, below). The inhumation burial (**420**) in grave **419** dated to probably the 11th century BC, while the cremation burial (**331**) in grave **332** falls within the 10th or early 9th century BC. Other than a small fragment of residual pottery from one inhumation grave no other dating evidence was recovered with any of the human bone. However, most of the features in the southwestern part of the Site, where most of the cremation-related deposits lay, also appear to be Late Bronze Age in date. Features in the north-eastern area of the Site, close to which some of the inhumation graves were located, include some of Early Iron Age date. In general most of the features on the Site are likely to relate to activity across this temporal range of Late Bronze Age to Early/?Middle Iron Age. By association, the various deposits of human bone are likely to span a similar range, although such assumptions have frequently been found to be inaccurate.

***Methods***

4.18.4 All the bone was subject to a rapid scan to assess the condition of the bone, demographic data, potential for indices recovery and the presence of pathological lesions. Any deposits comprised entirely of animal bone were separated out for assessment by the archaeozoologist. All the cremated bone was weighted by context. Assessments of age and sex were based on

standard methodologies (Buikstra and Ubelaker 1994; Scheuer and Black 2000). Grading for preservation of the unburnt bone follows McKinley (2004a, fig. 6).

***Results***

4.18.5 A summary of the results is presented in **Table 6** (cremated bone) and **Table 7** (unburnt bone).

**Table 6:** Summary of results from scan of cremated human bone

| Cut | Cont. | Deposit type | Weight (g) | Age/sex | Comment |
|---|---|---|---|---|---|
| 279 | 280 | ?un. burial ?+rpd | 86.9 | subadult/adult >13 yr. | quads.; some u/b animal |
| 294 | 293 | crd? | 21.4 | | quads. (bone from 3 missing) some animal; some poor oxidation |
| 295 | 296 | ? | - | ?immature <12 yr. | some u/b animal; quads. – ?human bone from 2, SE & SW 5.3g charred & u/b animal |
| 297 | 298 | un. burial? + ?rpd | 71.6 | subadult/adult >15 yr. ?female | frag. u/b animal; poor oxidation; quads. (bone from 3 missing). |
| 314 | 313 | ?crd | 2.2 | immature <15 yr. | scraps u/b animal bone; bone from W. half missing; poorly oxidised |
| 315 | 316 | un. burial + rpd | 44.8 | adult >18 yr. | u/b animal bone; some poor oxidation; 2 halves |
| 317 | 318 | ?un. burial + ?rpd | 179.8 | adult >18 yr. | Poor oxidation; quads. (bone from 1 missing) |
| 327 | 328 | ?un.burial + rpd/?rpd | 82.5 | juvenile/subadult <15yr. | frag. u/b animal bone; quads. |
| 330 | 329 | ?crd | 24.1 | subadult/adult >13 yr. | poor oxidation; some u/b animal; quads (bone from 1 missing) |
| 332 | 331 | crd | 29.4 | subadult/adult >13 yr. | charcoal stained; quads. (bone from 2 missing). |
| 433 | 434 | ?un. burial + rpd | 79.1 | subadult/adult >13 yr. | variable oxidations; charcoal staining; quads |
| 856 | 1097 | ?mortuary deposit | 0.5 | immature <15 yr. | some u/b animal |
| 1414 | 1415 | un. burial + rpd /?rpd | 260.2 | adult >18 yr. | poor oxidation, worn & chalky; u/b animal; quads |

**Key**. un. - unurned; rpd - redeposited pyre debris; crd - cremation-related deposit; u/b - unburnt

4.18.6 Only a single feature from which human bone was recovered had been cut by a later feature (grave **419** cut by Late Bronze Age pit **422**); the human bone was radiocarbon dated to 1120–970 cal BC (**Table 14**, below). Most of the features were relatively shallow (0.06–0.15m) indicating they had all been subject to some level of disturbance by truncation; the inhumation graves averaged 0.13m and the cremation-related features 0.11m. It is possible that bone may have been removed from some of the latter as a result of truncation, particularly those of less than 0.10m depth (five

features), although there is no direct correlation between the quantity of bone recovered and the depth of the feature. Similarly, some damage and bone loss may have occurred within the inhumation graves, although the highest percentage skeletal recovery was from the shallowest grave (**982**; **Table 7**).

**Table 7**: Summary of results from scan of unburnt human bone

| Cut | Cont. | Deposit type | Quantif. | Age/sex | Pathology | Condition; comment |
|---|---|---|---|---|---|---|
| **408** | **409** | **in situ** | ***c.* 60%** | **adult *c.* 25–35 yr. male** | **caries; amtl; abscess; calculus; infection – left knee; congenital absence left patella (ass. atrophy); Schmorl's node – T, L; osteophytes – T, L** | **2; much frag., poss. few indices with reconstruction** |
| **411** | **412** | **in situ** | ***c.* 28% (right side)** | **adult *c.* 20–25 yr. female** | **-** | **3; very frag., no indices; some hand with leg, knee with arm** |
| **419** | **420** | **in situ** | ***c.* 70%** | **adult *c.* 40–55 yr. female** | **caries; calculus; abscess; sinusitis (?secondary); ?pnb – malar; ddd – L: osteophytes – L, T** | **3–4; heavily frag.; indices unlikely. C14** |
| **422** | **426 Inc. with 420** | **redep.** | ***c.* 20 frags. (mostly hand)** | **adult >18 yr.** | **-** | **2–4** |
| **832** | **833** | **redep.** | **3 frags. left distal fibula** | **adult >18 yr.** | **?mv – unfused distal coalition** | **2** |
| **982** | **984** | **in situ** | ***c.* 97%** | **adult *c.* 40–50 yr. female** | **caries; calculus fracture – skull (depressed), T (compression); Schmorl's node – T/L; osteophytes – T, L; spondylolysis – L5; ?ddd – L; mv –wormian bones** | **4; major indices with some esp. skull reconstruction** |

**Key**: amtl – *ante mortem* tooth loss; pnb – periosteal new bone; ddd – degenerative disc disease; mv – morphological variation; T – thoracic; L – lumbar
Bone condition between grade 1 (good) – 5 (heavily eroded)

4.18.7 Bone survival from the inhumation graves is very variable, with a range of *c.* 28–97% skeletal recovery. The bone itself is generally in fair–moderate condition (eroded) but in most cases it is heavily fragmented which is further suggestive of disturbance. Some reconstruction will be required to enable measurements to be taken and various skeletal indices to be calculated; though the latter are likely to be limited. Most of the cremated bone is in fairly good condition. That from the unurned burial recovered from the centre of the Site is slightly worn and chalky in appearance, suggestive a different burial environment to that experienced in the south-western portion of the Site. There was also very little if any trabecular bone in most deposits, this being the first to be lost in adverse burial environments (McKinley 1997, 245; Nielsen-Marsh *et al*. 2000).

4.18.8 A minimum of six, possibly nine individuals is represented within the cremated bone assemblage; two immature individuals, one/?three

subadult/adults and two/?three adults. A minimum of four individuals is represented within the unburnt bone assemblage; all adults comprising one male and three females.

4.18.9 No pathological lesions were observed in the cremated remains. A variety of lesions were observed in three of the adults from the inhumation graves including the commonly observed dental and joint diseases, and some more unusual conditions. The adult male from grave **408** appears to have suffered from a rare congenital absence of the left patella resulting in a marked non-development/atrophy of the left lower limb (robusticity not length; Bernhang and Levine 1973). The condition clearly severely affected this individuals mobility and use of his left leg. The knee joint had also been affected by a gross, probably unrelated, infection. Infection of the maxillary sinus cavity was seen in the remains from grave **419**, possibly secondary to a dental abscess. Healed fractures, possibly resulting from a single traumatic event were seen in the skull and a thoracic vertebra of the adult female from grave **982** (**Table 7**).

4.18.10 The nature of many of the cremation-related deposits is currently unclear. At least three probably represent the remains of unurned burials with redeposited pyre debris, as may a further four, but alternative interpretations need to be investigated. The quantities of bone recovered are consistently very low and many of the deposit include fragments of charred or unburnt animal bone. One vessel (in pit **856**), excavated by the writer, has some similarities with ritual deposits – sometimes associated with cremation cemeteries – observed from a growing number of Bronze Age sites (Dinwiddy and McKinley 2009).

## 4.19 Animal bone

***Methodology***

4.19.1 The faunal assemblage recovered from the Site amounts to 9151 bones. Conjoining fragments that were demonstrably from the same bone were counted as one bone in order to minimise distortion, and therefore specimen counts (NISP) given here differ from the absolute raw fragment counts in **Table 2**. Animal Bone Groups (ABGs) were also given a count of 1. No fragments were recorded as 'medium mammal' or 'large mammal'; these were instead consigned to the unidentified category.

4.19.2 The extent of mechanical or chemical attrition to the bone surface was recorded; the numbers of gnawed bone were also noted. Marks from chopping, sawing, knife cuts and fractures made when the bone was fresh were recorded as butchery marks.

4.19.3 Since most of the bone derives from the areas of late prehistoric settlement and shale-working activity, the faunal assemblage is treated here as a single chronological entity.

***Preservation***

4.19.4 The disarticulated, fragmented nature of the assemblage and the presence of butchery marks show that the animal bone represents food remains. As can be seen from **Table 8**, the high number of unidentifiable bones attests to the fragmented and root-etched state the bones are in. The loss of bone cortex due to root etching and erosion also explains the low number of

identified butchery or gnawing marks. This means that carcass utilisation and the amount of carnivore scavenging cannot be assessed in this way. However, the distribution of the different skeletal elements might shed some light on carcass utilisation. The fragmentary nature of the assemblage is also reflected in the low numbers of ageable and measurable bones.

**Table 8**: Bone condition and potential (% of total)

| NISP (no.) | Unidentified (no.) | Gnawed | Loose teeth | Burnt | Measurable | Ageable | Butchered | Total no. frags. |
|---|---|---|---|---|---|---|---|---|
| 1838 | 7302 | 0.8% | 3.6% | 11.7% | 0.9% | 3.2% | 0.2% | 9140 |

4.19.5 A large proportion of the animal bone shows charring or complete calcination. Burnt bone is less prone to destruction by alkaline or acidic soils (J. McKinley pers. comm.), so it is quite possible that the burnt bone is a result of taphonomic rather than cultural agents. Only some of the burnt fragments could be identified.

***Species proportions***

4.19.6 **Table 9** shows that the assemblage is dominated by the remains from domesticated animals. Sheep/goat were probably the type of livestock most commonly kept, whereas cattle would have provided the larger proportion of meat. Pork would also have been eaten on a regular basis. Small proportions of horse and dog were also present on the Site. The disarticulated nature of their remains and the fact that their bones are mixed in with the bones of other meat providers does indicate that horse and dog meat was eaten occasionally. It is thus particularly important to look for butchery marks on the bones of these species.

**Table 9**: Relative proportion (%) of species of the identified fragments

| Total no. ident. frags (NISP) | Horse | Cattle | Sheep/ goat | Pig | Dog | Deer | Bird | Other |
|---|---|---|---|---|---|---|---|---|
| 1838 | 3.8 | 32.2 | 47.1 | 15.0 | 0.5 | 0.5 | 0.4 | 0.4 |

4.19.7 The few bird bones were found in mixed-date layer **1292** and are probably all chicken. The only wild species present in the material is deer. Late Bronze Age pit **1340** contained the remains of two enormous shed antlers of red deer. All other deer remains also consist of antler. Due to the fragmented and poorly preserved nature of the material, it is quite possible that further post-cranial deer bones were not noted during this rapid assessment.

***Husbandry strategies***

4.19.8 Only small numbers of bone can be measured as the overall state of the bone is quite poor. This means that only limited information will be gained on the phenotype of the animals. However, some complete cattle metapodia, sheep skeletons and complete dog long bones can provide a height at the withers. Slightly more bones can be aged and provide insight in the kill-off patterns of the different species.

4.19.9 Only two instances of pathologically changed bone were seen. Pit group **3053** contained a broken cattle rib and a cattle mandibula with dental

pathology. As the ABGs were not scanned for pathology, the number of affected bones may rise. It should also be taken into account that the poor preservation of the bone cortex will have obscured patches of new bone (indicators for inflammation).

***Deposition***

4.19.10 Some contexts contained interesting bone sets that warrant further investigation. A total of 11 (partial) skeletons are present in the assemblage (**Table 10**). Of these, five were recognised in the field and were recorded there as ABGs. In addition, a number of these deposits will provide high quality sample material for radiocarbon dating (see below).

4.19.11 Most of these skeletons are slightly better preserved than the majority of the disarticulated material. Careful recording of the skeletons might be able to shed light on their nature.

4.19.12 Articulated bone was found in a number of contexts, indicating that at least some of the assemblage represents primary deposits. Early Iron Age pit **1943**, for example, contained the heavily fragmented remains of a horse skull and mandibles.

**Table 10**: Summary of Animal Bone Groups (ABGs)

| Context | Description | ABG No. |
|---|---|---|
| Late Bronze Age pit 2183 (group 3055) | Sheep/goat skeleton | - |
| Late Bronze Age pit 1971 | Partial lamb skeleton | - |
| Late Bronze Age pit 2023 | Partial sheep/goat skeleton | - |
| Early Iron Age pit 1338 | Sheep/goat skeleton | 183 |
| Early Iron Age pit 1854 | Sheep/goat skeleton with cattle bones | 201 |
| Prehistoric pit 921 | Lamb skeleton | 156 |
| Prehistoric pit 2029 | Partial sheep/goat skeleton | - |
| Undated feature 416 | Calf skeleton | 109 |
| Undated pit 1762 | Sheep/goat skeleton | 196 |
| Subsoil layer 1366 | Partial sheep/goat skeleton | - |
| Subsoil layer 1420 | Partial sheep/goat skeleton | - |

## 4.20 Marine shell

4.20.1 The small assemblage of marine shell (51 pieces, 452g) consists almost entirely of oyster, with one whelk, and a few small mussel fragments. The oyster includes both right and left valves, i.e. both preparation and consumption waste.

# 5 ENVIRONMENTAL EVIDENCE

## 5.1 Environmental samples taken

5.1.1 A total of 217 bulk samples were taken, mainly from Late Bronze Age to Iron Age features, and were processed for the recovery and assessment of charred plant remains and wood charcoal. The sample size was generally of 40 litres where possible, maintaining context integrity. Where multiple samples were taken from the same feature, such as cremation deposits, the sampling strategy was defined with regard to the retrieval of both ecofacts and artefacts. The remains from these samples should provide information on the nature of the different activities present on Site, namely the cremation related activities, the flint and shale-working activities and general settlement activities. A break down of the bulk samples into phase groups is shown in **Table 11**.

**Table 11**. Environmental bulk sample provenance summary

| Phase | No. of samples | Vol. (l.) | Feature types |
|---|---|---|---|
| Late Neolithic | 2 | 20 | Pits |
| Middle Bronze Age | 18 | 154 | Ditch, pits and postholes |
| Late Bronze Age | 127 | 1925 | Cremation deposits, ditches, gullies, pits, postholes, shale-working deposits |
| Early Iron Age | 9 | 252 | Pits |
| Middle Iron Age | 1 | 30 | Pit |
| Prehistoric/ late prehistoric | 11 | 177 | Ditches, pits and postholes |
| Late Iron Age/ Early Romano-British | 15 | 258 | Enclosure and associated ditches, pit and postholes |
| Undated | 34 | 318 | Pits, postholes, gullies, lynchet deposit |
| **Totals** | **217** | **3154** | |

5.1.2 Ten mollusc samples were taken through Late Iron Age ditch **3026**, and its possibly early Romano-British re-cut (**3046**). It was hoped that the mollusc assemblages from this feature would provide some information on the nature of the local landscape throughout the use of the enclosure. Molluscs were also present in the bulk samples.

5.1.3 Two monolith samples were taken through ditch deposits, one through Late Bronze Age pit **2106** (pit group **3056**) and one through Late Iron Age enclosure ditch **3023** (cut **487**). Detailed sediment descriptions of these deposits should provide some insight on the development of the possible and shale/flint working areas at the west of the Site, as well as potentially providing some sedimentary history for the Late Iron Age enclosure.

## 5.2 Charred plant remains

5.2.1 Bulk samples were processed by standard flotation methods; the flot retained on a 0.5 mm mesh, residues fractionated into 4 mm, 2mm and 1mm fractions and dried. The coarse fractions (>5.6 mm) were sorted, weighed and discarded. Flots were scanned under a x10–x40 stereo-binocular microscope and the presence of charred remains quantified (**Appendix 1**) to record the preservation and nature of the charred plant and wood charcoal remains. Preliminary identifications of dominant or important taxa are noted below, following the nomenclature of Stace (1997).

5.2.2 The flots varied in size, and the charred material, except in the richer deposits, was often quite poorly preserved. Roots, modern seeds and the burrowing snail (the medieval introduced *Cecilioides acicula*) were predominant in around a third of the flots, a factor that accounts both for the poor preservation and potentially the low density of material. It also increases the likelihood that some of the material may be reworked or intrusive. A number of the seeds of speedwells *(Veronica hederifolia*) and goosefoots (*Chenopodium* sp.) recorded are likely to be modern.

***Late Neolithic***

5.2.3 Large numbers of hazelnut (*Corylus avellana*) shell fragments were recovered from pit **2932**. No other charred plant remains were observed. It has been noted elsewhere that wild foods formed an important part of the Neolithic diet (Moffett *et al.* 1989).

***Middle Bronze Age***

5.2.4 Cereal remains were recorded in the sample from the field system ditch and in nine of the 17 samples from pits and postholes. These were generally in low quantities but large amounts were recovered from pits **362** and **437**. These cereal remains included grain fragments of barley (*Hordeum vulgare sl*) and grain and chaff fragments of hulled wheats, both emmer and spelt, (*Triticum dicoccum/spelta*). The presence of both spelt and emmer is common within this part of Kent extending from the Middle Bronze Age into the Romano-British period (Pelling 2008).

5.2.5 Low numbers of other charred remains were observed in six of the features and a larger number again in pit **437**. These included tubers and stems of false oat-grass (*Arrhenatherum elatius* var. *bulbosus*), fragments of hazelnut shell and a few weed seeds, including those of vetches/wild peas (*Vicia/ Lathyrus* spp.), goosefoots, speedwells, oats/brome grass (*Avena/Bromus* spp.), bedstraws (*Galium* spp.), and brassicas (Brassicaceae).

***Late Bronze Age***

5.2.6 A moderate quantity of cereal remains, of possible wheat (*Triticum* sp.) was recovered from one of the five field system and gully samples, ditch **2402**. The small amounts of other charred material included hazelnut shell fragments and seeds of bedstraws, vetches/wild peas and oats/brome grass.

5.2.7 Small numbers of generally poorly preserved cereal remains were recorded in 20 of the 47 samples from cremation related deposits. These cereal remains included grain fragments of barley and grain and chaff fragments of hulled wheats, both emmer and spelt. Low quantities of other charred remains were observed in 18 of the deposits. These included tubers and stems of false oat-grass, fragments of hazelnut shell and a few weed seeds, including those of vetches/wild peas, goosefoots, oats/brome grass, bedstraws and poa grass (Poaceae). False oat-grass in particular has an association with cremation related deposits (Godwin 1984) and was observed in the cremation deposits at the sites at West Malling (Stevens 2009a) and at Kingsborough Manor, Isle of Sheppey (Stevens 2008).

5.2.8 Generally only low levels of cereal remains and other charred material were observed in the 19 samples from Pit group **3053**. This is also true for the 23 samples recorded from pit group **3054**, with the exception of a larger number

of both cereals and weed seeds observed in pit **1994**. The species range was similar to those observed in the other Late Bronze age samples with the addition of seeds of knotgrass (Polygonaceae) and corn gromwell (*Lithospermum arvense*).

5.2.9 Six of the other pits and postholes (**393**, **422, 1199, 1340, 2305** and **2319**) contained high numbers of charred cereal remains, including those of barley and hulled wheat, again of both emmer and spelt and two of these also produced large quantities of charred weed seeds. The weed seed assemblages were similar to those observed in the other Late Bronze Age samples.

5.2.10 Cereal remains were recovered from all five layer samples, in a large quantity from layer **2405**.

***Early Iron Age***

5.2.11 Large amounts of cereal remains were recorded in four of the nine samples from pits. These included remains of barley and hulled wheat, both emmer and spelt. Although weed seeds were observed in all of the pits, they were only recorded in high numbers in pit **254**. The weed seeds assemblages were similar to those seen in the Late Bronze Age samples but also included seeds of clover/meddick (*Trifolium/Medicago* spp.), sedge (*Carex* spp.), and hedge parsley (*Torilis* spp).

***Middle Iron Age***

5.2.12 The single sample from pit **1685** only produced a moderate quantity of charred cereal remains and weed seeds.

***Late prehistoric***

5.2.13 Low numbers of charred cereal remains, including those of barley and hulled wheat, were recorded in seven of the 11 samples from late prehistoric features. Very few other charred remains were observed. These included hazelnut shell fragments and seeds of vetches/wild peas, goosefoots and redshank/pale persicaria (*Persicaria* sp.).

***Late Iron Age–Romano-British***

5.2.14 The seven samples from the Iron Age enclosure ditches and associated ditches all produced charred cereal remains, in a large quantity from ditch **3026**. These included grain and chaff fragments of barley and hulled wheat, both spelt and emmer. Other charred remains were generally only present in ditch **3026**. The assemblages included remains of hazelnut shell, vetches/wild peas, oat/brome grass, bedstraws, knotgrass and corn gromwell.

5.2.15 Three of the samples from the pits and postholes produced large numbers of charred remains. These were from pits **633** and **606**. The cereal remains include those of barley and hulled wheat, both emmer and spelt. The chaff fragments included barley rachis and awns of oats. The weed seed assemblages were similar to those recovered from the ditches and also included seeds of rye grass/ fescue (*Lolium/Festuca* spp), spike rush (*Eleocharis* spp.) and more unusually a seed of field maple (*Acer campestre*).

5.2.16 The richer charred plant assemblages from the Site are typical of the domestic waste produced on settlement sites. Many of the weed species are common arable types, representative of grain contaminants. In terms of ecology most of the weed seeds are broad in their ecological tolerances growing over a wide range of soil types and tolerating a wide range of crop-husbandry practices.

***Undated***

5.2.17 The thirty samples from the 13 undated pits and postholes mainly contained small amounts of charred plant remains.

5.2.18 Large quantities of charred plant remains were observed within pit **680**. The cereal remains included those of barley and hulled wheat and the weed seeds, seeds of oats/brome grass, vetches/wild peas, knotgrass, speedwell and goosefoots. This is similar to the assemblages recovered from the Late Bronze Age to Late Iron Age/ Early Romano-British phases of the site.

5.2.19 A single sample taken from undated pit **443** produced large quantities of cereal remains, including grain and rachis fragments of free-threshing wheat (*Triticum aestivum* sl), which only became common in southern England within the Saxon and medieval periods (Greig 1981). There were also a number of culm node fragments. The low levels of other charred remains observed included fragments of hawthorn (*Crataegus monogyna*) stones and seeds of buttercups (*Ranunculus* spp.).

## 5.3 Wood charcoal

5.3.1 Wood charcoal, not yet identified, was noted from the flots of the bulk samples and is recorded in **Appendix 1**. Wood charcoal was generally sparse and the fragments were mainly mature wood pieces with a few round wood fragments. Moderate quantities of wood charcoal were recovered from the Late Neolithic pit **2932** and Middle Bronze Age posthole **277**. The Late Bronze Age cremation related deposits only produced very small quantities of wood charcoal. This may indicate that much of the bone was separated prior to burial from the pyre material. Only small quantities of charcoal were recovered from the other Late Bronze Age features. Of the Early and Middle Iron Age samples, only two produced large amounts of wood charcoal, these were from pit **1685** and pit **1943.** The undated pit **443** contained the highest number of wood charcoal pieces.

## 5.4 Land and fresh/brackish water molluscs

5.4.1 Ten samples of between 950g and 1600g, from Late Iron Age ditch **3026** and its early Romano-British recut (**3046**) were processed by standard methods (Evans 1972) for land snails. The flots (0.5mm) were rapidly assessed by scanning under a x10–x40 stereo-binocular microscope to provide some information about shell preservation and species representation. The numbers of shells and the presence of taxonomic groups were quantified (**Table 12**). Nomenclature is according to Kerney (1999).

5.4.2 Although the mollusc samples from ditch groups **3026** and **3046** were not taken in a contiguous column, due to a concern to ensure there was no cross sampling of contexts, the mollusc samples were taken as spot

samples from the contexts represented in these ditch sections. The numbers of molluscs recovered from these samples were too low to enable a detailed interpretation of the local landscape and any changing land use to be discerned. These assemblages are dominated by the open country species *Vallonia* spp. and the intermediate species *Trichia hispida* and may indicate an area of open grassland.

**Table 12**. Land snails from Late Iron Age ditch 3026 and recut 3046

| **Feature** | **Ditch 3026** | | | | | | | | **Recut 3046** | |
|---|---|---|---|---|---|---|---|---|---|---|
| **Cut** | 463 | 463 | 463 | 463 | 463 | 463 | 463 | 463 | 471 | 471 |
| **Series** | 325 | 325 | 325 | 325 | 325 | 326 | 327 | 327 | 326 | 326 |
| **Context** | 464 | 465 | 465 | 469 | 470 | 466 | 2985 | 2985 | 472 | 472 |
| **Sample** | 314 | 313 | 312 | 311 | 310 | 322 | 324 | 323 | 321 | 320 |
| **Depth (m)** | 0.0-0.1 | 0.2-0.3 | 0.3-0.4 | 0.5-0.6 | 0.7-0.8 | 0.3-0.4 | 0.1-0.2 | 0.0-0.1 | 0.1-0.2 | 0.0-0.1 |
| **Weight (g)** | 1325 | 1525 | 1425 | 1600 | 1175 | 950 | 1450 | 1300 | 1075 | 1200 |
| ***Open country species*** | | | | | | | | | | |
| *Pupilla muscorum* | C | - | - | C | C | C | C | - | C | C |
| *Vertigo* spp. | - | - | - | - | - | - | - | - | C | - |
| *Helicella itala* | C | C | C | C | C | B | C | C | C | C |
| *Vallonia* spp. | B | B | B | A | A | B | C | A | B | A |
| ***Catholic species*** | | | | | | | | | | |
| *Trichia hispida* | C | A | A | B | A | B | B | B | C | A |
| *Pomatias elegans* | - | + | + | + | - | + | + | C | + | + |
| *Cochlicopa* spp. | C | - | - | - | - | - | - | - | - | - |
| *Cepaea* spp | - | C | - | + | + | + | - | - | + | C |
| ***Shade-loving species*** | | | | | | | | | | |
| *Oxychilus* | - | C | C | - | - | - | - | - | C | - |
| *Aegopinella* | C | - | - | - | - | - | - | - | - | - |
| *Helicigona lapicida* | - | + | - | - | - | + | - | - | + | - |
| ***Burrowing species*** | | | | | | | | | | |
| *Cecilioides acicula* | A | A | A | A | A | A | A | A | A | A |
| **Approx totals** | 16 | 30 | 27 | 23 | 30 | 20 | 15 | 27 | 15 | 35 |

Key: A = *>10, B = 9-5, C = <5, + = present*
*NB* Series 325 measured from bottom up, Series 326 and 327 measured from top down

5.4.3 Molluscs were also noted within the bulk samples and these may aid in broadly characterising the nature of the wider landscape. A number of these samples however contained large numbers of the burrowing snail *Cecilioides acicula*, a medieval introduction and a few Introduced Helicellids, post-Roman introductions, which may be indicative of intrusive material within the assemblages. The assemblages included the open country species *Vallonia* spp, *Pupilla muscorum*, *Vertigo pygmaea*, *Helicella itala* and *Truncatellina cylindrica*, the intermediate species *Trichia hispida*, *Cochlicopa* spp., *Cepaea* spp, *Pomatias elegans*, *Euconulus fulvus*, *Punctum pygmaeum* and Limacidae and the shade-loving species *Oxychilus cellarius, Aegopinella pura*, *Aegopinella nitidula*, Clausiliidae, *Ena obscura*, *Vitrea* spp., *Acanthinula aculeata*, *Carychium tridentatum*, *Helicigona lapicida* and *Acicula fusca*. The presence of *Acicula fusca*, observed in the cremation related deposit 327, is noteworthy as it a woodland species in the strict sense and is uncommon on archaeological sites of Neolithic and later date (Evans 1972, 135). *Truncatellina cylindrica* was recorded in the assemblage from pit **2487**. This species is a rare obligatory xerophile. Large numbers of fresh-water snails of Planorbids and *Lymnaea/Bithynia* spp. were recovered from enclosure ditch 2151, group 3039. A further nine samples also contained a few fresh-water snails.

5.4.4 These mollusc assemblages indicate the presence of a number of environments within the area. This could be an area of open grassland with patches of longer grass and possibly some small areas of primary woodland. Although there were no waterlogged deposits recorded on the Site, there is an indication of occasional minor flooding in small areas in particular around ditch **3039**.

## 5.5 Sediments

5.5.1 The two monoliths taken should be described in detail according to Hodgson (1997) in order to provide some insight on the development of the shale-working area at the west of the Site, and potentially providing some sedimentary history for the ditch of the Late Iron Age enclosure (**Table 13**).

**Table 13**. Sediment profile summary

| Monolith core sample | Depth | Cut | Feature description |
|---|---|---|---|
| 295 | 1m | 487 | Late Iron Age enclosure ditch 3032 |
| 299 | 1m | 2106 | Late Bronze Age pit in pit group 3056 |

## 5.6 Radiocarbon results

5.6.1 A small number of cremation and inhumation burials of assumed Late Bronze Age date (1100–700 BC) were recorded during excavation. As these were largely undated and given that other periods (Neolithic, Iron Age and Romano-British) were represented on the Site or nearby, it was decided to obtain radiocarbon dates for one each of the inhumation and cremation burials.

5.6.2 The results confirm the suggestion that the burials broadly date to the Late Bronze Age occupation. The inhumation burial (**420**) in grave **419** is the earlier of the two dates and may belong to the 11th century BC, while the cremation burial (**331**) in grave **332** falls within the 10th or early 9th century BC (**Table 14**).

5.6.3 Other radiocarbon dated Late Bronze Age burials occur at Kingsborough, Sheppey (Allen *et al.* 2008, 303 and table 16) and Cliffs End, Thanet (Matt Leivers pers comm).

5.6.4 It is recommended that radiocarbon dates are selected for a selection of the remaining human and animal burials, in particular for those that can not be dated through other means (e.g. from stratigraphic and artefactual association). It is further recommended that a sequence of dates are obtained for the shale working deposits.

**Table 14**. Radiocarbon results

| Lab no. | Sample ID | Result BP | Δ 13C | Cal. BC |
|---|---|---|---|---|
| NZA-33074 | 331 cremated human bone, femur | 2774±35 | -23.4 | 1010–840 BC 95.4% |
| NZA-33223 | 420 human bone right femur | 2858±25 | -19.1 | 1120–970 BC 86.3% |

# 6 POTENTIAL

## 6.1 Introduction

6.1.1 The results of the excavation have the potential to provide information relating to many of the original research aims and objectives (see **Section 2.1**), providing stratigraphic, artefactual and environmental evidence for activity on the Site dating from the Late Neolithic through to the early Romano-British period. All the periods between are represented, although the small number of Early Bronze Age sherds were found only in later features.

6.1.2 From the Middle Bronze Age there is the possibility of near continuity of activity until the abandonment of the Late Iron Age enclosure around the end of the 1st century AD. This activity includes the establishment of a prehistoric field system, probably in the Middle Bronze Age, late Bronze Age settlement and mortuary activity, a substantial shale-working industry spanning the Late Bronze Age and Early Iron Age, and the possible reorganisation of the landscape in the Iron Age, culminating in the construction of a double ditched enclosure in the Late Iron Age which continued to be used into the Romano-British period.

## 6.2 Stratigraphic potential

***Neolithic–Early Bronze Age***

6.2.1 The limited evidence from this period, comprising two Late Neolithic pits, a component of the struck flint assemblage redeposited in later features, and a small number of residual Early Bronze Age sherds, provides no insight into the use of the Early Neolithic causewayed enclosure immediately northwest of the Site, but does indicate low-level activity within the landscape immediately outside the enclosure after its period of likely use.

***Middle and Late Bronze Age field system and settlement***

6.2.2 The Middle and Late Bronze Age evidence has the potential to provide an understanding of the date and development of permanent and long-term settlement and exploitation of the landscape, with associated mortuary and possibly other forms of ritual activity, the establishment of a rectilinear field system, and the economic and social basis for a specialised shale-working industry.

6.2.3 While the ceramic evidence for a Middle Bronze Age date for the establishment of the field system on the Site is inconclusive, such a date would be consistent with similar developments more widely in evidence in this period, including examples found in Kent (e.g. Yates 2007; Williams 2007, 101). Analysis of the Middle Bronze Age contexts have the potential to clarify the origins and possible development of the field system.

6.2.4 The contents of a number of other Middle Bronze Age features, including pits and postholes, indicate settlement activity in the area, probably focused towards the field system at the west of the Site, although no clear structures of this period were identified. This period also saw the deliberate deposition of vessels in small pits, an activity of uncertain function, either practical or

symbolic, which continued through the Late Bronze Age and into the Early Iron Age.

6.2.5 It is difficult to draw a clear distinction between Middle Bronze Age and Late Bronze Age on ceramic grounds alone, and it appears that there was broad continuity of occupation over these periods. The phasing of the Middle and Late Bronze Age features may be revised following the proposed analysis of ceramics (below). However, the Late Bronze Age saw a much wider range of activities on the Site. These included the possible maintenance and modification of the earlier field system, and an expansion of settlement activity as represented by a large increase in the number of pits and postholes containing settlement debris.

6.2.6 Many of the numerous postholes in the central part of the Site appear to form linear structures, including possible parallel fence-lines. Of the sample that were excavated only a few contained dating evidence, and it is possible that some of this material is residual. Further analysis of these features is necessary in order to more clearly establish their function and date, to identify possible phases of construction and individual and associated structural components, and their relationship, therefore, to the wider organisation of activity on the Site.

6.2.7 At the west of the Site, many intercutting pits were cut into the infilled field system ditches, suggesting that some of these boundaries were no longer significant, at least locally, by this time.

6.2.8 Again, there are no unambiguous settlement structures dating to the Late Bronze Age, but it is possible that post-built structures are represented within the many concentrations of postholes in the central and western parts of the Site.

***Shale working***

6.2.9 A shale bracelet industry appears to have been established relatively late in the Late Bronze Age, at least after a substantial period of settlement, as represented by the groups of intercutting pits at the west of the Site. Its archaeological significance is enhanced by its relatively early date, the nearest known parallel in southern England being the large Iron Age and later Kimmeridge shale industry in south Dorset.

6.2.10 The shale-working waste, comprising bracelet roughouts and fragments, and debitage, along with large quantities of struck flint, was recovered predominantly from the upper fills of pits that were late in the sequences of intercutting pits. Here, and elsewhere on the Site, it formed broad spreads of material mixed with settlement debris.

6.2.11 Analysis of the varied contexts containing flint and shale assemblages, when combined with the analysis of the shale itself (below), may throw light on the techniques, processes and organisation of shale bracelet manufacture on the Site, as well as providing greater precision as to its date and duration.

6.2.12 This period also saw mortuary activity in the form of a number of cremation burials and related features, most of them concentrated within a small cremation cemetery at the southwest of the Site, and a smaller number of

more widely dispersed inhumation burials. The deposition of vessels continued in this period.

***Iron Age***

6.2.13 The Iron Age material, while limited, has the potential to show the levels of both continuity and change from the Late Bronze Age, and trace subsequent developments in the landscape. Continuity from the into the Early Iron Age is indicated by the occasional occurrence in some features of pottery from both periods, the continuity of vessel deposition, and by the presence of significant shale-working material in an Early Iron Age pit. However, shale-working had ended well before the Middle Iron Age, which saw a significant reduction of activity. A number of animal burials, or pits containing significant animal bone groups, date to this period, and other undated examples may also belong to this period.

6.2.14 Two, possibly three, insecurely dated ditches at the southwest of the Site appear to represent a reorganisation of the landscape in the late prehistoric period, post-dating the period of Late Bronze Age/Early Iron Age shale-working. One interpretation is that they form part of process of reorganisation which led to the construction of a Late Iron Age enclosure to their northeast.

***Late Iron Age and early Romano-British***

6.2.15 The Late Iron Age and early Romano-British evidence points to major changes in the pattern of settlement and agricultural exploitation of the landscape. A double-ditched subrectangular enclosure, whose full extent was revealed by the geophysical survey, was constructed in the Late Iron Age. Only its southeast end was exposed on the Site, the ditches here being offset on either side of an entrance. A ditch ran southeast from the enclosure entrance, possibly to aid the movement of livestock. In the early Romano-British period a second, parallel ditch was added, forming a possible trackway or droveway up the entrance.

6.2.16 Little of the enclosure's interior was exposed, making it had to determine its function. There was, however, a significant concentration of features, mainly pits and postholes, southwest of the entrance, although no obvious structures could be discerned within the postholes, apart from a Late Iron Age four-post 'granary' structure outside the enclosure's southwest side.

6.2.17 The enclosure continued in use into the early Romano-British period, before being abandoned around the end of the 1st century AD. It is similar in size and development to a Late Iron Age and early Romano-British enclosure recorded on the West Malling and Leybourne bypass (Ellis 2009).

## 6.3 Finds potential

***Introduction***

6.3.1 Most of the finds evidence from the Site relates to the later prehistoric period, focusing on the Late Bronze Age to Early Iron Age. For this period there is a substantial pottery assemblage (around 8500 sherds). Human remains, both inhumed and cremated, were recovered from several contexts, whose nature is not at this stage wholly understood. Two of the graves, one inhumation and one cremation, have produced radiocarbon dates at different times within the Late Bronze Age, and the others are

presumed to be of similar date, although this has yet to be firmly established.

6.3.2 The presence of early prehistoric material is of interest, but quantities are too small for more than limited comment. Nevertheless, some further work should be undertaken in order to establish more firmly the quantities and chronology of artefacts currently undated (e.g. worked flint), which are associated with early prehistoric ceramics.

***Struck flint***

6.3.3 Further analysis of the lithics has the potential to allow the relationship between the groups of debitage and the other materials with which it is found. The chronological distinctions apparent amongst the flint cannot be adequately explained and are at odds with the currently understood chronology of the site: fuller analysis would provide the means to address this question. Similarly, a better understanding of the chronology of the lithic material would provide more secure dating evidence for the shale-working industry.

***Evidence for shale-working***

6.3.4 Of most interest amongst the late prehistoric assemblage, however, is the evidence for on-site shale-working, unparalleled in southern England outside the large Iron Age and Romano-British shale-working industry centred on the Kimmeridge shale beds of south Dorset. Even in the latter area there is little evidence for shale exploitation prior to the Iron Age; this evidence is therefore of at least regional, if not national importance, not only because of its size, but because of its secure contextual associations and dating.

6.3.5 At this stage, no finer classification of stages of manufacture has been attempted, although this would certainly be worthwhile (following, for instance, Hunter forthcoming, or Cox and Mills 1991) in order to allow a fuller understanding of the technological processes involved in the manufacture of objects. It may also be possible to better understand the relationship between the large deposits of shale-working waste and the struck flint with which it is mixed (if indeed there is any). A quantification of the stages of working conflated in the 'Roughouts; finishing in progress' category (which includes roughouts with virtually no further work through to virtually finished pieces) and their distribution may assist in the identification of working areas, and if finishing was carried out separately to earlier stages of manufacture.

6.3.6 Characterisation of the raw materials (by visual inspection and/or non-destructive surface X-ray fluorescence analysis (XRF) – Davis 1993; Hunter *et al.* 1993) is required in order to identify probable sources of the material. Questions of trade and distribution can only be addressed once the material has been sourced. It will be necessary to place the Site into its local and regional context, in order to be able to understand the role that this (clearly major) centre of personal ornament manufacture played.

***The pottery assemblage***

6.3.7 The late prehistoric pottery assemblage is of local and regional significance. This is an assemblage of substantial size, of which a high proportion is well stratified. At this stage, some uncertainties of dating exist; this is largely due to the longevity of fabric types such as the flint-tempered wares, and the

scarcity of diagnostic forms. Detailed analysis will address these uncertainties and may answer questions concerning the presence or otherwise of Middle Bronze Age ceramics, and what portion of the material (if any) is Early Iron Age rather than Late Bronze Age. Continuity between the Early and Late Iron Age material can also be considered; this would be of certain significance if it could be established, since ceramic evidence from the sites along the Channel Tunnel Rail Link (CTRL) suggests a complete relocation of settlements (and expansion) in the Late Iron Age (Barclay *et al*. 2006). The CTRL sites provide a large body of data with which to compare the Margetts Pit assemblage; further comparanda are provided by assemblages from Ramsgate (Leivers in prep.) and Highstead (Bennett *et al*. 2007); the former has a sound chronology based on radiocarbon dates. If a similarly sound chronology could be established for the Margetts Pit late prehistoric assemblage, then the importance of the assemblage would be considerable.

6.3.8 Activity definitely continued on the Site through the trans-Conquest period. Difficulties of dating pre- and post-Conquest groups in Kent are well known (e.g. Pollard 1988, 29–33 and 41) and likewise at Margetts Pit, the early groups are identifiable by the absence of imports and other Romanised fabrics/forms rather than the presence of anything diagnostic. Nevertheless, some potential exists for separating the Late Iron Age and early Roman groups based on a combination of the stratigraphic sequence, the spot dates and other associated finds.

***Human remains and burial contexts***

6.3.9 On the basis of the two radiocarbon dates so far obtained, it seems likely that many of the deposits containing human remains are of a similar Late Bronze Age date. This assumption is less secure for those outside the cremation cemetery at the southwest of the Site, which could easily be of another date, and further selected radiocarbon dating would help resolve this issue. Singletons and small groups of burial remains are a common feature of the prehistoric landscape and are likely to have been made in a liminal area, but close to the settlement from which the individuals derived. The form and nature of the cremation-related deposits will be considered in their regional and national contexts.

6.3.10 Analysis will provide more detailed demographic data with regard to the age and sex of individuals. The recovery of metric data – including that used for stature estimates and cranial indices – will be limited due to poor skeletal recovery and the heavily fragmented condition of the bone; with reconstruction some data can be recovered for at least one individual. Recording of pathological data will allow assessment of the life style, health and, by inference, potentially the status of individuals. The potential congenital absence of the patella in one of the inhumed individuals is of great intrinsic interest; only two other examples of this very rare condition have been reported in archaeological assemblages from the UK (McKinley in prep.; Patrick and Waldron 2003) and the addition of a further case will enhance our understanding of its possible aetiology and affect on the individuals who suffered from it in the past.

***The faunal remains***

6.3.11 The significance of the animal bone assemblage lies in its large size, and comparative rarity value in the region – published animal bone assemblages

from prehistoric sites in Kent are scarce. The Environmental Archaeology Bibliography, hosted by the Archaeology Data Service (ADS) contains only a single brief report on animal bone from the late prehistoric period (Late Bronze Age to Middle Iron Age). A recent review of prehistoric Kent (Champion 2007, 67–132) mentions little evidence for the use of animal products during this period. The Channel Tunnel Rail Link (CTRL) archive (Section 1), also hosted by ADS, includes several sites covering this chronological period, but only two sites yielded sufficient animal bone material for comparison. A further assemblage for comparison comes from Cliffs End, Ramsgate (Grimm, in prep.). Analysis and publication of the assemblage from Margetts Pit, therefore, is of great importance.

***Metalwork***

6.3.12 The wheel-shaped object and the small number of pins and pin fragments from Late Bronze Age and Iron Age contexts should be further researched. The wheel-shaped object could be of continental origin and therefore the metallurgy should be analysed. A comparison can then be made with the analysed results with the similar object from Flag Fen and objects from Italy (Peter Northover pers comm).

***Other finds***

6.3.13 Other finds have more limited potential, because of small quantities and/or repetitive nature. Objects from the late prehistoric period are of interest in providing a fuller picture of the material culture in use (quernstones, worked bone, metalwork, amber), and some idea of site activities and long-distance contacts. Correlation of artefact types may enable further comment to be made; any associations with the shale-working areas, in particular, will be sought. The perforated chalk objects are unusual, and warrant further work in order to clarify their possible function(s).

6.3.14 As with the shale some of these materials indicate that the Site was involved in trade, perhaps by sea with other areas of coastal Britain and possibly the adjacent areas of mainland Europe. Amber could have come from the east coast of Britain or from other areas of Northern Europe (Beck and Shennan 1991). The finds from the Site add to the corpus from Kent, where such finds have historically been unrepresented (see Beck and Shennan 1991, figs 6.1, 7.1–2, 8.1).

6.3.15 Romano-British objects (coins, metalwork, glass, ceramic building material) are not commonly represented, but allow minimal comment on lifestyle and structural evidence. Some of the Romano-British finds (particularly coins and metalwork) came from a subsoil context rather than stratified features.

## 6.4 Environmental potential

***Charred plant remains***

6.4.1 Charred hazelnut shells were recovered from one of the Neolithic pits, indicating the exploitation of the wild food resources. The detailed analysis of the other charred plant remains has the potential to provide limited information on agricultural processes and settlement activities fating from the Middle and Late Bronze Age to the Late Iron Age/Early Romano-British period in this part of north Kent. The presence of weed seeds as well as cereal remains creates the opportunity to examine crop-husbandry

techniques, and to determine the farming economy, nature of tilled soils and time of harvest.

6.4.2 Good Middle Bronze Age to Iron Age assemblages are known to the south around Ashford, e.g. Whitehorse Stone, Saltwood Tunnel (Giorgi 2006; Stevens 2006), and to the east on Thanet (Stevens 2009b; Wessex Archaeology 2005; 2006). Late Bronze Age to Iron Age assemblages are somewhat rarer from this part of Kent, although limited assemblages are known from Kingsborough Manor, Isle of Sheppey (Stevens 2008) and at West Malling (Stevens 2009a).

***Wood charcoal***

6.4.3 There is little potential for the analysis of the wood charcoal to provide detailed information on the funerary practices and the management and exploitation of the local woodland resource due to the paucity of the remains recovered. A small analytical programme may provide a limited comparison between the funerary practices and general settlement activities and any change in assemblage composition between the Late Neolithic, Late Bronze Age and Late Iron Age/Early Romano-British samples. This can be compared with data obtained from other sites in this part of Kent such as the material from West Malling (Barnett 2009).

***Land snails and fresh/brackish water molluscs***

6.4.4 Snail numbers are too low from the mollusc samples from ditch groups **3026** and **3046** to enable detailed interpretation of the local landscape and land use to be ascertained by the analysis of these samples. Although the features are not generally ideal for mollusc analysis, there is the potential for some general characterisation of the local landscape and any broad changes of environment within it to be determined by the analysis of the mollusc assemblages within the bulk samples. This information could augment that gleaned from the study of the other environmental material.

***Sediments***

6.4.5 Detailed sediment descriptions of the sampled sediments may provide some insight on the development of the possible midden deposits and shale/flint working areas in group **3050**, as well as potentially providing some sedimentary history for the Iron Age enclosure.

6.4.6 Soil micromorphology could provide much more detailed information on sediment history and activity on the Site through the sequences.

6.4.7 Monolith 299 to the south-east of the site was taken through one of the ditch features associated with shale working and deposition of burnt flint. It is possible that micromorphological analysis might elucidate the nature of the local activity and the formation processes associated with the deposition of the fill (i.e. colluviation, dump etc.).

6.4.8 Micromorphological analysis of the sequence through Iron Age enclosure ditch (monolith 295) could shed some light on the nature of activities within; however, the information could be difficult to interpret with accuracy given the small amount of the enclosure exposed and the absence of internal features excavated.

***Radiocarbon dating***

6.4.9 The two radiocarbon dates so far obtained, from the inhumation burial in grave **419**, and the cremation deposit in feature **332**, have provided important information about the position of these series of burials within the development of the Site, placing them both in the Late Bronze Age (1150-800 cal BC).

6.4.10 Given the availability of suitable datable materials, further radiocarbon dating could help resolve a number of the other chronological uncertainties on the Site:

- the date of the Grooved Ware associated activity;
- the establishment of the Bronze Age field system;
- the time span for mortuary activity on the Site, both within the cremation cemetery at the southwest and within the more dispersed cremation and inhumation graves;
- the date of shale-working industry on the Site;
- and the date of the animal bone deposits;
- radiocarbon dating could also help clarify the late prehistoric ceramic sequence.

# 7 UPDATED RESEARCH AIMS AND PROPOSALS FOR PUBLICATION, ANALYSIS AND ARCHIVE

## 7.1 Updated research aims

7.1.1 The research aims outlined in the original WSI (Faber Maunsell 2008) were superseded by more specific aims following the Strip and Map (see **Section 2.1**, above). These have been further reviewed in the light of the excavation results, and current regional and local research frameworks including the South East Research Framework (SERF in particular Weekes 2007).

7.1.2 The following updated research aims have been identified and will guide the further analysis:

- What is the character and extent of pre-Bronze Age activity on the site?
- What are the origins, date and duration and character of the Bronze Age settlement and filed system? What is its relationship to the earlier Neolithic enclosure and other traces of Neolithic and early Bronze Age activity?
- What is the scale, significance and date of the shale industry? How does this activity articulate with the settlement evidence? What are the implications for long distance, possibly maritime, connections and regional exchange systems?
- What evidence is there for a decline in importance of the settlement during the later centuries of the Iron Age period? What evidence is there for remodelling of the settlement during this phase and for a change in landuse?
- What evidence is there for social change in the Late Iron Age/Early Roman period? How apparent are changes in material culture, environmental evidence, settlement and landuse?

***What is the character and extent of pre-Bronze Age activity on the site?***

7.1.3 Evidence for pre-Middle Bronze Age archaeology, in particular the identified Grooved Ware associated activity, will be considered within the context of the earlier Neolithic causewayed enclosure and the local Late Neolithic/Early Bronze Age sequence.

***What are the origins, date and duration and character of the Bronze Age settlement and filed system? What is its relationship to the earlier Neolithic enclosure and other traces of Neolithic and early Bronze Age activity?***

7.1.4 A key research aim will be to understand the origins, date and duration of the Middle Bronze Age field system and settlement and to identify any further traces of earlier activity. It will be important to understand any connection between the Neolithic enclosure and pits and the Later Bronze Age archaeology. The possibility that other features (eg burials) are of

Neolithic or Early Bronze Age date should be resolved with a further programme of radiocarbon dating.

7.1.5 The environmental and artefactual evidence will be examined to throw light on the development, scale, duration and organisation of the field system and associated settlement evidence. In particular evidence for environmental change and for the introduction of certain types of cultivated crops will be considered.

***What is the scale, significance and date of the shale industry? How does this activity articulate with the settlement evidence? What are the implications for long distance, possibly maritime, connections and regional exchange systems?***

7.1.6 A major research aim will be the Late Bronze Age and Early Iron Age shale bracelet manufacturing industry. The programme of analysis will examine the methods of manufacture, in relation to the large associated assemblage of struck flint, and will seek to establish the source of the raw material, the form and quantities in which it was brought to the Site, and the possible routes of transport. It will also examine the economic and social implications of the industry for the status of the local settlement, and the wider patterns of exchange and trade, including the extent of the market for finished products from this Site. The depositional relationship between the shale and other types of material (eg amber and bronzework) will be considered.

7.1.7 It will be important to examine the relationship of the shale working activity on the Site to the evidence for contemporary settlement activity, as represented by non-shale working deposits and features; for agricultural activity, as represented by faunal and environmental remains, and the development an abandonment of the late prehistoric field system; and for mortuary and other possibly ritual activity, as represented by inhumation and cremation burials, vessel deposition and animals burials.

***What evidence is there for a decline in importance of the settlement during the later centuries of the Iron Age period? What evidence is there for remodelling of the settlement during this phase and for a change in landuse?***

7.1.8 After the early Iron Age there appears to be a decrease in settlement activity. A research aim will be to determine when the shale industry ends and the character and scale of any subsequent Iron Age activity. Was abandonment of the settlement sudden or a more gradual process of settlement shift and reorganisation – can this be linked to any depositional events on the site (eg involving the burial of human or animal remains)? It will examine evidence for continuity/discontinuity between the Middle Iron Age and the Late Iron Age/Romano-British period.

***What evidence is there for social change in the Late Iron Age/Early Roman period? How apparent are changes in material culture, environmental evidence, settlement and landuse?***

7.1.9 The Late Iron Age and early Romano-British evidence points to major changes in the pattern of settlement and agricultural exploitation of the landscape. The key feature is a double-ditched subrectangular enclosure that was constructed in the Iron Age and re-used in the Roman period. Although the excavation of this enclosure was limited by the area of

excavation, the aim will be characterise this site from the available evidence and to place it in its local and regional context.

## 7.2 Publication proposal

7.2.1 In view of the significance of the results outlined in **Section 6** above the following programme of analysis and publication is proposed (**see tasklist below**):

- A thematic journal article in the *Proceedings of the Prehistoric Society* on the nationally important shale working site, detailing its character and significance;
- An online detailed report (multi-period narrative with complementary finds and environmental sections) to be published on the Kent Archaeological Society (KAS) website. Following current adopted publication practice for the region's archaeology;
- The KAS web report to be signposted with a short summary note in the regional journal *Archaeologia Cantiana.*

7.2.2 All three publications will be complementary, and they will be fully cross-referenced so that they reach academic, specialist and local audiences. The online KAS web report will also address the low-level but locally and regionally significant Neolithic and Romano-British elements of the archaeologically analysis and research.

7.2.3 The KAS web report will describe the archaeology of all periods represented on the Site in relation to contemporary developments within the wider landscape, although the main focus will be on the Late Bronze Age/Early Iron Age shale working industry. This will include the nature of Late Neolithic activity close to the earlier causewayed enclosure monument; the establishment and development of a field system in the later Bronze Age associated with permanent settlement, burials and industrial activity; the subsequent reorganisation of the landscape in the Late Iron Age; and the apparent abandonment of the Site around the end of the 1st century AD.

7.2.4 It will conclude with a thematic discussion, examining aspects of domestic, agricultural, industrial, economic and ritual life across the period of the Site's occupation.

7.2.5 All Wessex Archaeology reports are peer reviewed internally and by external referees. The proposed programme of post-excavation work will take approximately two years from an agreed start date – provisionally set as April 2011. An outline of the publication programme is set out below (**see *Synopses***). The identified research aims will guide the programme of analysis and will be used to structure the publication.

***Synopses***

***Proceedings of the Prehistoric Society article***
**Margetts Pit, Burham, Kent: A later prehistoric shale working site**
*8000 words, 10 figures, 6 plates, 4 tables*

The nature of the pre-Bronze Age activity
The origins of the Bronze Age settlement and fieldsystem
The shale working industry: date, duration and character
Other key and associated artefacts: amber, metalwork and pottery
Aspects of funerary activity and the origins of the people: results of isotopes
Wider? maritime connections and exchange

***Archaeologia Cantiana publication note***
*1500 words, 3 figures & 2 plates*
*A summary of the multi-phased site: all periods. Cross-*

***KAS website report***
**Margetts Pit, Burham, Kent: A later prehistoric shale working site**
By Andrew Powell, Matt Leivers, Rachael Seager Smith and Alistair Barclay
50,000 words, 25 figures, 10 plates, 15 tables

*Prelims*
Introduction
Early Prehistoric
Later Prehistoric settlement and shale working
Romano-British and later
Shale working finds
Other finds
Environmental evidence
Discussion
Neolithic, EBA & MBA activity
Summary of the journal article: LBA and EIA aspects
The decline and transformation of the site in the later Iron Age
Late Iron Age and Roman impact and reorganisation

Bibliography
Appendices
Tables x 20
Figures x 35
Plates x 10

## 7.3 Recommended analysis and potential

7.3.1 To address the identified Updated Research Aims the following analysis is recommended.

***Stratigraphic analyses and descriptive chapters (tasks 6–8, 16–25)***

7.3.2 The current phasing of the Site, as presented above, is necessarily provisional and based mainly upon the initial pottery spot-dating. There is scope for revision of this chronology depending on the results of detailed

analysis of the finds assemblages, and the programme of radiocarbon dating. Phasing will be recorded in the Site context database.

7.3.3 A significant number of features, deposits and potential structures are at present insecurely dated, and establishing a relative and absolute chronology for these is essential to understanding the development of the near continuous activity on the Site over *c.* 1700 years. This will include analysis of the postholes in the central part of the Site with the aim of establishing their possible function and date.

7.3.4 In addition, the relationship between the topographical and archaeological features will be analysed in order to establish whether they are contemporary with any of the archaeological phases.

7.3.5 Stratigraphic analysis will be undertaken of the more complex stratigraphy at the west of the Site in order to seek to clarify the date of the establishment, and any subsequent modification, of the prehistoric field system, the overlying groups of intercutting pits and shale bearing deposits.

7.3.6 In particular, detailed stratigraphic analysis will be undertaken of the shale-bearing contexts themselves, in order to establish, in combination with the analysis of the shale and flint assemblages, the date, development and duration of the shale industry, and to seek identity specific activity areas related to different stages of bracelet production.

***Finds analyses***

7.3.7 Further work on the finds assemblage will have two main objectives:

- Archive enhancement, to ensure that minimum standards are met for all artefact types, and that the archive forms a coherent and cross-referenced whole;
- Detailed analysis and reporting for selected artefact types, to form part of a publication report on the Site;

7.3.8 Method statements are presented below, and will involve varying levels of analysis for the various material types and site assemblages. All analytical data will be recorded in database format (Access), and linked to the Site context data.

<u>Pottery (task 26)</u>

7.3.9 Full analysis of fabrics and forms will be undertaken for the late prehistoric assemblage in order to more certainly assign dates. Analysis and recording will follow the standard Wessex Archaeology recording system for pottery (Morris 1994), which accords with nationally recommended guidelines (Prehistoric Ceramics Research Group 1997). Further dating evidence will be sought through a programme of radiocarbon dating, to date directly sherds from within and between features, particularly from the pit groups associated with shale working debris. Sherds will be examined for charred residues; if insufficient charred residues are identified, other dates should be sought, for instance on animal bone. Any refinement of the preliminary spot dating information will feed back into the structural analysis.

7.3.10 The results of the analysis will be presented in a report for publication, describing the range of types present and discussing them within a chronological framework, and also within their local and regional context, using appropriate comparanda from the region. Aspects of manufacture, vessel function, and pottery deposition (for example, contrasting refuse disposal with 'placed deposits') will be considered. A selection of vessels will be illustrated as a representative sample (maximum 40 vessels).

7.3.11 The Late Iron Age and Romano-British ceramics do not merit comprehensive analysis, but do warrant some further work. This will involve the reconsideration of large, well stratified groups from specific features. The assemblage will be discussed generally, building on the results presented in this report, with wider, regional comparisons of the assemblage. A limited selection of vessels will be illustrated, from selected feature groups (maximum 25 vessels).

Worked flint (task 34)

7.3.12 None of the small groups of material from individual pits, posthole and other small features warrant further analysis.

7.3.13 Contexts containing Late Neolithic and/or Beaker ceramics that have significant lithic assemblages will be analysed.

7.3.14 The material from the key groups **3053** and **3054** will be analysed to identify the presence of chronologically-distinct technologies; to explain the almost total absence of tools; or to typify the activities of which the flint formed a part. These questions will be addressed by undertaking the following:

- *Stratigraphic analysis*. This will demonstrate whether or not the chronological mixing of types is uniform throughout the horizontal and vertical extents of the feature groups, or whether relative proportions vary with stratigraphic position. It may be that there is proportionally more early material in lower levels, for instance. This task will be dependent on the analyses of the ceramics and shale from the same features.

- *Analysis of selected samples*. Further stratigraphic work will inform the selection of samples to be analysed within the key features. It will be important to isolate contextually coherent groups of flintwork that can be related to the shale working activities. This material will be characterised.

- Once the character of the flintwork is determined it should be possible to approximate the quantity and scale of the flintworking that is present within the collected samples. This will be achieved by scanning the material that is not chosen for detailed analysis. A large sample, over 9,000 pieces, has already been examined. Increasing the analysed sample size may provide more information on the relative proportions of Later Bronze Age and earlier material.

- *Comparison with two other feature groups will be undertaken*. Late Bronze ditch **3041** and spread **3044** also contained deposits of shale working waste and pottery. A comparison will be made between the

assessed flint and lithic material from these groups to characterise types of material and activities.

- *Analysis of minor groups.* A selection of small groups will also be scanned and the flint characterised. The results will be compared with those from the large key groups.

- *Usewear.* If the above successfully identifies discarded shale working tools then these will be subjected to a programme of low-powered usewear.

- The results of the analyses will be presented in a report for publication, in which the range of types is described and discussed in terms of technology, chronology, and potential implications for an understanding of site functions, particularly with regard to the shale working component. A selection of flint tools will be illustrated, as a representative sample.

Burnt flint (task 33)

7.3.15 No further analysis of the burnt, unworked flint is proposed, but some consideration will be given to its distribution across the Site, and to any correlation with other artefact types, in particular for the areas of shale working. The assessment results will be incorporated in the main flint report.

Stone (tasks 36–7)

7.3.16 Lithologies of the retained samples of burnt, unworked stone, and the identified portable objects, will be confirmed by a geologist.

7.3.17 Existing catalogue entries for the portable objects will be enhanced following geological identifications; further parallels will be sought for the perforated chalk objects. The stone objects will be briefly discussed in terms of functional type, chronology and potential sources. Two or three of the perforated chalk objects will be illustrated.

7.3.18 No further analysis of the burnt, unworked stone is proposed, but some consideration will be given to its distribution across the Site, and to any correlation with other artefact types, in particular for the areas of shale working.

Amber (task 32)

7.3.19 A short report and catalogue of the amber finds will be prepared. The recovery of amber beads from at least 16 separate contexts is quite significant for a Late Bronze Age/Early Iron Age site, as is the association with cremation burials (**279, 315** and **856)**. The possibility that the Site was involved in the amber trade will also be considered.

Shale (tasks 12, 22–3, 27–9)

7.3.20 Petrological analysis of the shale will be undertaken to seek to establish it provenance. A classification system for the shale will be devised, following Hunter (nd) and Cox and Mills (1991), which will include an expansion of the category currently recorded as 'roughouts'. Analysis will aim to characterise the stages of manufacture represented on the Site, and to confirm the restriction of finished products to bracelets only. Comparative data for the Late Bronze Age is limited, but some comparison with the Iron Age shale

working sites in south Dorset may be useful, e.g. Rope Lake Hole (Cox and Woodward 1987). Comparison of the two main areas of shale working on the Site will be made, to investigate any variation between the two, and also to ascertain whether different stages of manufacture took place in spatially discrete areas. A selection of objects will illustrate the various stages of manufacture represented.

Coins (tasks 38–9)

7.3.21 Specialist comment will be sought for the Iron Age coins, for confirmation of identification. A short report for publication will be prepared, based on the results presented in this report, and incorporating any new information on the Iron Age coins.

Metalwork (tasks 11, 30–1, 40)

7.3.22 Selected objects will be submitted for conservation treatment (see **Section 7.6** below).

7.3.23 Existing catalogue entries for objects other than nails will then be enhanced, and appropriate parallels sought to support identification and dating. The objects will be briefly discussed in terms of functional type. A representative selection of objects will be illustrated, concentrating on the later prehistoric objects (maximum six objects). A selected number of the Bronze Age objects will be subjected to metallurgical analysis by Dr Peter Northover (University of Oxford, Dept. of Materials). Dr Stuart Needham (formerly of the British Museum) has been approached to write a report on the early metalwork, in particular the wheel-shaped object. The report will consider the wider, possible Continental, significant of this object in particular.

Worked bone (task 41–2)

7.3.24 Existing catalogue entries for the worked bone objects will be enhanced with identifications of bone species and element, and appropriate parallels will be sought to support identifications and dating. The objects will be briefly discussed in terms of functional type. A representative selection of objects will be illustrated (maximum five objects). Particular attention will be given to those tools recovered from the shale working waste deposits.

Human bone (task 43)

7.3.25 Analysis of the cremated bone will follow the writer's standard procedure (McKinley 1994, 5–6; 2004b). All unsorted <4mm residues will be subject to a rapid scan at this stage to extract any identifiable material, osseous or artefactual.

7.3.26 Taphonomic factors potentially affecting differential bone preservation will be assessed. The age of individuals will be assessed using standard methodologies (Brothwell 1972; Beek 1983; Buikstra and Ubelaker 1994; Scheuer and Black 2000). Sex will be ascertained from the sexually dimorphic traits of the skeleton (Bass 1987; Buikstra and Ubelaker 1994). Where possible a standard suite of measurement will be taken (Brothwell and Zakrzewski 2004) and non-metric traits recorded (Berry and Berry 1967; Finnegan 1978).

7.3.27 Pathological lesions will be recorded in text and via digital photography. The bones with healed fractures and showing unusual conditions will require x-radiographs, and some will require photographing for publication purposes.

7.3.28 Radiocarbon dates will be obtained for the remaining three inhumation graves (**408**, **411** and **982**) and two further cremation-related deposits, in addition to the two dates already obtained (see **Table 14**). It will also be important to obtain dates for those cremation burials that are associated with finds of amber (**279, 315** and **856**).

7.3.29 Given that the site was involved in a coastal network of trade it is possible that some of the buried individuals are non-locals. It is recommended that the oxygen and strontium isotopes are analysed from at least two and possibly four of the inhumation burials.

Animal bone (task 44)

7.3.30 The assemblages from the late prehistoric activity areas and settlement will be fully analysed and compared in order to explore husbandry strategies, diet and the use of animal products on the Site. Extra care will be taken in the identification of post-cranial deer bones, butchery marks on horse and dog remains and the recording of the 11 ABGs. Attention will be paid to the taphonomic processes that led to the assemblage's formation.

7.3.31 As Kent forms a cultural unit with eastern Britain (Cunliffe 1982, 40) it should be compared with animal bone assemblages from that area rather than with assemblages from the south. Other Late Bronze Age and Early Iron Age sites from Kent will be considered (eg White Horse Stone and Cliffs End). Further afield comparison will be made with other large bone assemblages (Hambleton 1999: Blackhorse Road, Letchworth, Cambridgeshire; Haddenham, Cambridgeshire; Ivinghoe Beacon, Buckinghamshire and Pennyland, Buckinghamshire.

7.3.32 Radiocarbon dates will be obtained for animal burials that are unphased and believed to be of a particular age. Articulating or articulated animal bone may also be radiocarbon dated to help provide an absolute chronology for key deposits (eg within the areas of shale working deposits).

Other finds

7.3.33 Further analysis is not proposed for other categories of material (ceramic building material, fired clay, clay pipe, glass, slag, marine shell). Where applicable existing information from the assessment will be incorporated into the publication.

***Environmental analyses***

Charred plant remains (tasks 9 and 45)

7.3.34 It is proposed to analysis the charred plant remains from 21 of the samples, as indicated in **Appendix 1**. The suggested samples for analysis are from Late Neolithic, Middle Bronze Age and Late Bronze Age pits, and a shale working spread, Early and Middle Iron Age pits, Late Iron Age/Early Romano-British pits and a ditch, and one presently undated pit (**443**) if it can be dated.

7.3.35 All identifiable charred plant macrofossils will be extracted from the 2mm and 1mm residues together with the flot. Identification will be undertaken using stereo incident light microscopy at magnifications of up to x40 using a Leica MS5 microscope, following the nomenclature of Stace (1997) and with reference to modern reference collections where appropriate, quantified and the results tabulated.

Wood charcoal (tasks 9 and 46)

7.3.36 A small targeted analytical programme is proposed, as indicated in **Appendix 1**. The suggested samples for analysis are from a Late Neolithic pit, a Middle Bronze Age posthole, a Late Bronze Age cremation related deposit**,** Early and Iron Age pits, and undated pit **443** if this feature is dated.

7.3.37 Identifiable charcoal will be extracted from the 2mm residue together and the flot (>2mm). Larger richer samples will be sub-sampled. Fragments will be prepared for identification according to the standard methodology of Leney and Casteel (1975, see also Gale and Cutler 2000). Charcoal pieces will be fractured with a razor blade so that three planes can be seen: transverse section (TS), radial longitudinal section (RL) and tangential longitudinal section (TL). They will then be examined under bi-focal epi-illuminated microscopy at magnifications of x50, x100 and x400 using a Kyowa ME-LUX2 microscope. Identification will be undertaken according to the anatomical characteristics described by Schweingruber (1990) and Butterfield and Meylan (1980). Identification will be to the lowest taxonomic level possible, usually that of genus and nomenclature according to Stace (1997), individual taxon (mature and twig) will be separated, quantified, and the results tabulated.

Sediments (tasks 48–9)

7.3.38 The two monoliths taken, one through a ditch features associated with Late Bronze Age/Early Iron Age shale working (monolith 299), the other through the Iron Age enclosure ditch (monolith 295), should be described in detail according to Hodgson (1997), and interpretations regarding deposition made. In addition, field notes should be written up and incorporated into text.

7.3.39 Should initial results warrant it, soil micromorphology would be of great use in providing a more detailed sedimentary history. A contingency should be made for this to be undertaken.

Radiocarbon dating (tasks 13–15)

7.3.40 It is proposed that a suite of up to 12 radiocarbon dates is obtained to help clarify the chronological framework of the Site, and resolve some of the phasing problems caused both by the significant number of undated features, and the uncertainties inherent in the chronology of the late prehistoric ceramics. A provisional list of features to be considered for radiocarbon dating includes:

7.3.41 The charred hazelnuts in Neolithic Grooved Ware pit **2932**, to enable a determination of the possible relationship to the causewayed enclosure;

7.3.42 The Bronze Age field system, to determine the date of its construction either in the Middle or Late Bronze Age;

7.3.43 Further cremation and inhumation burials to identify any possible sequence of burial rites, and to ascertain the potential duration of use of the cremation cemetery; up to six dates are proposed – two from cremation graves (one within the cemetery and one outlier), and the remaining three inhumation graves;

7.3.44 Pit deposits directly associated with shale working debris, in order to obtain dates for a key sequence of the shale working industry; up to three samples are proposed;

- the red deer antlers in pit **1340**;
- features forming parts of the linear and other posthole structures in the central part of the Site, to establish the phase of activity with which they are associated.

7.3.45 Obtaining radiocarbon dates for these features will be dependent of identifying suitable and stratigraphically secure datable materials.

## 7.5 Archive storage and curation

***Museum***

7.5.1 The project archive is currently held by Wessex Archaeology under the project code 70760. It is anticipated that it will ultimately be deposited with Canterbury City Museum. Deposition of the finds, when a suitable repository is identified, will only be carried out with the full agreement of the landowner.

***Preparation of the archive***

7.5.2 The complete site archive, which will include paper records, photographic records, graphics, digital data, artefacts and ecofacts, will be prepared following nationally recommended guidelines (Walker 1990; SMA 1995; Richards and Robinson 2000; Brown 2007).

7.5.3 All archive elements are marked with the WA site code, and a full index will be prepared. The archive comprises the following:

- 55 cardboard boxes or airtight plastic boxes of artefacts and ecofacts, ordered by material type
- 12 files/document cases of paper records and A3/A4 graphics
- A1 graphics
- Slide sheets and black & white contact prints
- Digital data (Access databases, Excel spreadsheets, Word documents; survey data; photographs; graphic; GIS projects; AutoCAD drawings).

***Conservation***

7.5.4 Finds which have been identified as of unstable condition and therefore potentially in need of further conservation treatment comprise the metal and shale objects. All metal objects have been X-radiographed as part of the assessment phase, as a basic record and also to aid identification. Metalwork is currently held in airtight plastic boxes with a drying agent (silica gel).

7.5.5 Preliminary stabilisation and packaging measures have been undertaken for some of the shale objects by a trained in-house conservator, and monitoring has been maintained in the interim period. Shale is currently held in a wet condition in airtight plastic boxes.

7.5.6 Selected metal and shale objects will be submitted for further conservation treatment, involving investigative cleaning of metalwork, and the stabilisation for long-term curation of shale objects (freeze-drying). A total of 10 metal objects (9 copper alloy; 1 iron) has been selected (see **Appendix 2**). The precise number of shale objects which will require preservation by freeze-drying is not currently known; a contingency figure of 35 objects is suggested, comprising all of the ten identified finished objects, as well as approximately 5% of the roughouts, to be selected in order to give a representative sample of the various stages of bracelet manufacture.

7.5.7 Conservation work will be carried out partly by an experienced ICON accredited in-house conservator (metal objects) and partly by an external conservation facility (Wiltshire Conservation Centre: shale).

***Discard policy***

7.5.8 Wessex Archaeology follows the guidelines set out in Selection, Retention and Dispersal (Society of Museum Archaeologists 1993), which allows for the discard of selected artefact and ecofact categories which are not considered to warrant any future analysis. In this instance, most of the material from the evaluation test pits (apart from pottery and worked flint) has already been discarded, along with burnt, unworked flint and stone (apart from a few selected samples) from the excavation. Only a representative sample of the flint waste will be retained. Any further discard could target undiagnostic fired clay, on the grounds of lack of archaeological interest; and the unconserved iron and shale objects (unsuitable for long-term curation). The full discard policy will be fully documented in the project archive.

7.5.9 The discard of environmental remains and samples follows the guidelines laid out in Wessex Archaeology's 'Archive and Dispersal Policy for Environmental Remains and Samples'. The archive policy conforms with nationally recommended guidelines (SMA 1993; 1995; English Heritage 2002) and is available upon request.

## 7.6 Copyright

7.6.1 The full copyright of the written/illustrative archive relating to the Site will be retained by Wessex Archaeology Ltd under the Copyright, Designs and Patents Act 1998 with all rights reserved. The recipient museum, however, will be granted an exclusive licence for the use of the archive for educational purpose, including academic research, providing that such use shall be non-profitmaking, and conforms with the Copyright and Related Rights regulations 2003.

7.6.2 This report, and the archive generally, may contain material that is non-Wessex Archaeology copyright (e.g. Ordnance Survey, British Geological Survey, Crown Copyright), or the intellectual property of third parties, which we are able to provide for limited reproduction under the terms of our own copyright licences, but for which copyright itself is non-transferable by Wessex Archaeology. You are reminded that you remain bound by conditions of the Copyright, Designs and Patents Act 1988 with regard to multiple copying and electronic dissemination of the report.

***Security copy***

7.6.3 In line with current best practice, on completion of the project a security copy of the paper records will be prepared, in the form of microfilm. The master jackets and one diazo copy of the microfilm will be submitted to the National Monument Record Centre (English Heritage), a second diazo copy will be deposited with the paper records, and a third diazo copy will be retained by Wessex Archaeology.

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## APPENDIX 1: ASSESSMENT OF THE CHARRED PLANT REMAINS AND CHARCOAL

| Cut | Context | Sample | Vol (l.) | Flot size | Roots % | Grain | Chaff | Cereal notes | Charred other | Notes for table | Charcoal > 4/2MM | Other | Analysis |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| ***Late Neolithic*** | | | | | | | | | | | | | |
| Pit | | | | | | | | | | | | | |
| 2932 | 2933 | 308 | 10 | 40 | 10 | - | - | - | A | *Corylus avellana* | 5/3 ml | Moll-t (A) | CPR, CHL |
| | 2934 | 309 | 10 | 50 | 10 | - | - | - | A | *Corylus avellana* | 8/15 ml | Moll-t (A) | CPR, CHL |
| ***Middle Bronze Age*** | | | | | | | | | | | | | |
| Field system ditch | | | | | | | | | | | | | |
| 2473 | 2475 | 297 | 35 | 180 | 10 | C | - | Indet. grain frags | C | *Vicia/Lathyrus* | 3/10 ml | Moll-t (A**), Smb (B) | |
| Pits and postholes | | | | | | | | | | | | | |
| 277 | 278 | 46 | 3 | 80 | 5 | - | - | - | C | *Galium* | 15/25 ml | Moll-t (A) | CHL |
| 281 | 282, NE quad | 24 | 2 | 7 | 30 | - | - | - | C | *Arrhenatherum, Vicia/Lathyrus, Chenopodium* | 0/1 ml | Moll-t (A) | |
| | 282, NW quad | 25 | 2 | 10 | 30 | - | - | - | C | *Arrhenatherum* | 0/1 ml | Moll-t (A) | |
| | 282, SE quad | 23 | 3.5 | 20 | 30 | C | - | Indet. grain frag | C | *Arrhenatherum, Chenopodium* | 1/1 ml | Moll-t (A) | |
| | 282, SW quad | 22 | 2 | 15 | 30 | - | - | - | C | *Arrhenatherum, Chenopodium* | 1/1 ml | Moll-t (A) | |
| 362 | 363 | 87 | 2 | 5 | 20 | - | - | - | - | - | 0/<1 ml | Moll-t (A) | |
| | 364, obj 95 | 98 | 11 | 30 | 75 | A | C | ?Hulled wheat grain frags, glume frags | C | *Vicia/Lathyrus* | 1/1 ml | Moll-t (A) | CPR |
| 381 | 382 | 94 | 3 | 3 | 20 | - | - | - | - | - | - | Moll-t (A) | |
| | 383, obj 104 | 336 | 2.5 | 3 | 20 | - | - | - | - | - | 0/<1 ml | Moll-t (A) | |
| 403 | 404 | 97 | 8 | 25 | 10 | C | C | Indet. grain frags, glume frags | - | - | 1/3 ml | Moll-t (A*), Smb (A) | |
| | 405, obj 106 | 96 | 8 | 20 | 40 | C | - | ?Barley grain frags | C | *Vicia/Lathyrus* | 1/2 ml | Moll-t (A*), Smb (B) | |
| 437 | 438 | 125 | 19 | 70 | 70 | A | B | Hulled wheat and barley grain frags, spelt and emmer glumes and spikelet fork | A | *Avena/Bromus, Vicia/Lathyrus*, Brassicaceae, *Chenopodium* (prob. Modern) | 2/3 ml | Moll-t (A**), Smb (B) | CPR |
| 524 | 526 | 128 | 19 | 60 | 40 | C | C | Indet. grain frags, emmer glume frag | C | *Vicia/Lathyrus, Corylus avellana* | 10/5 ml | Moll-t (A*), Smb (B) | |
| 1902 | 1904 | 252 | 9 | 10 | 60 | - | - | - | C | *Veronica* (prob. modern) | 0/1 ml | Moll-t (A) | |
| 2925 | 2927 | 315 | 5 | 15 | 15 | C | C | ?Hulled wheat grain frags, emmer glume + base frags | - | - | 0/1 ml | Moll-t (A) | |
| 2643 | 2644 | 300 | 15 | 30 | 40 | C | - | Indet. grain frags | - | - | 2/1 ml | Moll-t (A), Smb (B) | |
| 2706 | 2708 | 317 | 5 | 5 | 60 | C | - | Indet. grain frags | - | - | 0/1 ml | Moll-t (A) | |
| ***Late Bronze Age (and Late Bronze Age/Early Iron Age)*** | | | | | | | | | | | | | |
| *Field system ditch 3041* | | | | | | | | | | | | | |
| 2246 | 2247 | 275 | 40 | 120 | 10 | C | C | Indet grain frags, glume frags | C | *Corylus avellana* | 0/2 ml | Moll-t (A*) | |
| | 2248 | 276 | 40 | 40 | 60 | - | - | - | C | *Galium* | 0/1 ml | Moll-t (A*) | |

| Cut | Context | Sample | Vol (l.) | Flot size | Roots % | Grain | Chaff | Cereal notes | Charred other | Notes for table | Charcoal > 4/2MM | Other | Analysis |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 2402 | 2403 | 288 | 40 | 175 | 10 | - | C | Glume frags | - | - | 2/8 ml | Moll-t (A**), Smb (B) | M |
| | 2404 | 289 | 44 | 1000 | 5 | A | - | ?Wheat grain frags | C | *Corylus avellana, Vicia/Lathyrus, Avena/Bromus* | 1/2 ml | Moll-t (A*), Smb (C) | |
| *Gully* | | | | | | | | | | | | | |
| 272 | 273 | 2 | 40 | 80 | 30 | - | - | - | - | - | 5/20 ml | Moll-t (A*), Smb (C) | |
| *Cremation deposits* | | | | | | | | | | | | | |
| 279 | 280, NE quad | 81 | 2 | 10 | 50 | - | - | - | C | *Vicia/Lathyrus* | 0/1 ml | Moll-t (B) | |
| | 280, NW quad | 82 | 3.5 | 5 | 70 | - | - | - | - | - | 0/<1 ml | Moll-t (A) | |
| | 280, SE quad | 84 | 5 | 10 | 65 | C | - | Indet. Grain frags | C | *?Arrhenatherum* stem | 0/1 ml | Moll-t (A) | |
| | 280, SW quad | 83 | 2 | 3 | 40 | - | - | - | - | - | 0/<1 ml | Moll-t (B) | |
| 294 | 293, NE quad | 37 | 8 | 40 | 75 | B | C | Indet. Grain frags, glume frags | C | *Corylus avellana, Chenopodium* (prob modern) | 0/2 ml | Moll-t (A) | |
| | 293, NW quad | 40 | 12 | 40 | 80 | B | C | Hulled wheat and Barley grain frags, glume frags | C | *Avena/Bromus* | 1/3 ml | Moll-t (A) | |
| | 293, SE quad | 38 | 3 | 10 | 25 | C | - | Indet. Grain frags | - | - | 1/1 ml | Moll-t (A) | |
| | 293, SW quad | 39 | 3 | 20 | 40 | C | - | Indet. Grain frags | - | *Chenopodium* (prob modern) | 0/2 ml | Moll-t (A) | |
| 295 | 296, NE quad | 42 | 5 | 15 | 25 | C | C | Indet. Grain frags, glume frags inc.emmer spikelet fork | B | *Arrhenatherum, Vicia/Lathyrus, Galium, Chenopodium* | 1/1 ml | Moll-t (A) | |
| | 296, NW quad | 43 | 6 | 10 | 60 | C | - | ?Barley grain frags | B | *Arrhenatherum, Chenopodium* (prob. Modern) | <1/1 ml | Moll-t (A) | |
| | 296, SE quad | 45 | 5 | 10 | 55 | C | - | ?barley and hulled wheat grain frags | C | *Arrhenatherum* | 1/1 ml | Moll-t (A) | |
| | 296, SW quad | 44 | 4 | 20 | 30 | C | - | ?Barley grain frags | C | *Galium* | 1/1 ml | Moll-t (A) | |
| 297 | 298, NE quad | 34 | 3 | 25 | 60 | - | - | - | - | *Chenopodium* (prob modern) | 2/3 ml | Moll-t (A) | CHL |
| | 298, NW quad | 35 | 2 | 10 | 40 | - | - | - | - | - | 2/2 ml | Moll-t (A) | CHL |
| | 298, SE quad | 33 | 1 | 15 | 60 | - | C | Glume frag | - | *Chenopodium* (prob modern) | 2/1 ml | Moll-t (A) | CHL |
| | 298, SW quad | 32 | 1 | 10 | 40 | - | - | - | - | - | 1/2 ml | Moll-t (A) | CHL |
| 314 | 313, E half | 52 | 2.5 | 15 | 60 | C | - | Indet. Grain frags | - | - | 0/1 ml | Moll-t (A), Smb (C) | |
| | 313, W half | 53 | 3 | 40 | 50 | - | - | - | - | *Chenopodium* (prob modern) | 1/2 ml | Moll-t (A*) | |
| 315 | 316, NE half | 49 | 1 | 5 | 10 | - | - | - | - | - | 0/1 ml | Moll-t (B) | |
| | 316, SW half | 50 | 1 | 2 | 25 | - | - | - | - | - | 0/1 ml | Moll-t (A) | |
| 317 | 318, E quad | 58 | 1 | 25 | 70 | - | - | - | C | *Avena/Bromus* | 0/1 ml | Moll-t (A) | |
| | 318, N quad | 55 | 1 | 10 | 70 | - | - | - | - | - | 1/<1 ml | Moll-t (B) | |
| | 318, S quad | 57 | 2 | 20 | 75 | - | - | - | - | - | <1/1 ml | Moll-t (A) | |
| | 318, W quad | 56 | 2 | 5 | 50 | - | - | - | - | - | 1/<1 ml | Moll-t (A) | |
| 327 | 328, NE quad | 63 | 2 | 40 | 5 | C | - | Indet. Grain frags | C | *Arrhenatherum, Vicia/Lathyrus* | 0/1 ml | Moll-t (A*) | |
| | 328, NW quad | 64 | 2 | 175 | 5 | - | - | - | C | *Arrhenatherum* stems | 0/1 ml | Moll-t (A**) | |
| | 328, SE quad | 62 | 2 | 40 | 10 | - | - | - | C | *Arrhenatherum,* Poaceae | 0/1 ml | Moll-t (A*) | |
| | 328, SW quad | 61 | 2 | 50 | 5 | - | - | - | C | *Arrhenatherum* | 0/<1 ml | Moll-t (A**) | M |

| Cut | Context | Sample | Vol (l.) | Flot size | Roots % | Grain | Chaff | Cereal notes | Charred other | Notes for table | Charcoal > 4/2MM | Other | Analysis |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 330 | 329, NE quad | 74 | 5 | 7 | 40 | - | - | - | - | - | <1/<1 ml | Moll-t (A) | |
| | 329, NW quad | 71 | 7 | 10 | 65 | - | - | - | - | - | 0/1 ml | Moll-t (A) | |
| | 329, SE quad | 73 | 7 | 10 | 65 | C | - | Indet. Grain frags | C | *Galium* | <1/<1 ml | Moll-t (A*) | |
| | 329, SW quad | 72 | 7 | 10 | 60 | C | - | Indet. Grain frags | - | - | <1/1 ml | Moll-t (A) | |
| 332 | 331, NE quad | 79 | 2 | 3 | 40 | - | - | - | - | - | - | Moll-t (A) | |
| | 331, NW quad | 76 | 1.5 | 10 | 45 | - | - | - | - | - | 0/<1 ml | Moll-t (A) | |
| | 331, SE quad | 78 | 2 | 2.5 | 40 | C | - | Indet. Grain frag | - | - | 0/<1 ml | Moll-t (A) | |
| | 331, SW quad | 77 | 2 | 5 | 40 | - | - | - | - | - | <1/<1 ml | Moll-t (B) | |
| 433 | 434, E quad | 124 | 1 | 5 | 30 | C | - | Indet. Grain frag | - | - | 0/1 ml | Moll-t (A) | |
| | 434, N quad | 121 | 1 | 5 | 20 | - | - | - | - | - | <1/1 ml | Moll-t (A) | |
| | 434, S quad | 123 | 1 | 5 | 25 | - | - | - | - | - | <1/1 ml | Moll-t (A) | |
| | 434, W quad | 122 | 1 | 10 | 35 | - | - | - | - | - | 1/3 ml | Moll-t (A) | |
| 856 | 1097 (outside obj 159) | 332 | 0.5 | 2 | 25 | - | - | - | C | *Chenopodium* | 0/<1 ml | Moll-t (C) | |
| | 1097, obj 159 | 331 | 11.8 | 40 | 50 | - | C | Emmer glume frag | C | *Galium* | 1/1 ml | Moll-t (A) | |
| | 851, outside obj 159 | 334 | 1 | 4 | 25 | - | - | - | C | *Galium* | - | Moll-t (B) | |
| | 857, obj 159 | 333 | 0.5 | 2 | 25 | - | - | - | C | *Corylus avellana* | - | Moll-t (B) | |
| 1414 | 1415, E quad | 232 | 10 | 20 | 25 | C | - | Indet. Grain frags | - | - | 1/1 ml | Moll-t (A) | |
| | 1415, N quad | 231 | 20 | 10 | 25 | C | - | Indet. Grain frag | - | - | 2/1 ml | Moll-t (A) | |
| | 1415, S+W quad | 230 | 20 | 30 | 35 | C | - | Indet. Grain frag | - | - | 2/2 ml | Moll-t (A), Moll-f (C) | |
| *Intercutting pit groups* | | | | | | | | | | | | | |
| Pit group 3053 | | | | | | | | | | | | | |
| Shale deposit: Test pit B | 1005.01 | 133 | 20 | 500 | 5 | C | C | Indet. Grain frags, emmer glume frag | - | - | 1/2 ml | Moll-t (A) | |
| | 1007.01 | 138 | 12 | 450 | 3 | - | - | - | - | - | 1/2 ml | Moll-t (A) | |
| | 1007.05 | 141 | 15 | 175 | 3 | C | C | Hulled wheat and ?barley grain frags, glume and glume base frags | - | - | 1/2 ml | Moll-t (A) | |
| | 1008.01 | 143 | 3 | 100 | 5 | C | - | Indet. Grain frags | C | *Corylus avellana* | 0/1 ml | Moll-t (B) | |
| 1631 | 1632 | 241 | 20 | 10 | 40 | C | - | Indet grain frags | - | - | <1/1 ml | Moll-t (A) | |
| | 1633 | 240 | 20 | 60 | 50 | C | C | Indet. Grain frags, glume frags | C | *Vicia/Lathyrus* | 1/1 ml | Moll-t (A*) | |
| 1634 | 1635 | 242 | 8 | 40 | 10 | C | - | Indet grain frags | C | *Arrhenatherum* | 0/2 ml | Moll-t (A*), Smb (C) | |
| | 1636 | 239 | 20 | 40 | 10 | C | - | Indet. Grain frag | C | *Vicia/Lathyrus, Corylus avellana* | 0/1 ml | Moll-t (A*) | |
| 1637 | 1639 | 243 | 20 | 40 | 15 | C | - | Indet grain frags | C | *Corylus avellana* | 0/2 ml | Moll-t (A*) | |
| 1640 | 1642 | 238 | 32 | 70 | 50 | C | - | ?Hulled wheat grain frags | - | - | 0/5 ml | Moll-t (A*) | |
| 2598 | 2599 | 302 | 6 | 20 | 50 | C | C | Hulled wheat grain and glume frags | C | *Vicia/Lathyrus, Avena/Bromus, Chenopodium* (prob. Modern) | 1/1 ml | Moll-t (A), Smb (C) | |

| Cut | Context | Sample | Vol (l.) | Flot size | Roots % | Grain | Chaff | Cereal notes | Charred other | Notes for table | Charcoal > 4/2MM | Other | Analysis |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 2600 | 2622 | 301 | 20 | 40 | 60 | B | C | Hulled wheat grain and glume frags | C | Galium, Chenopodium (prob. Modern) | 1/1 ml | Moll-t (A*) | |
| 2607 | 2625 | 304 | 19 | 50 | 50 | C | C | Indet. Grain frags, emmer and spelt glumes | C | *Corylus avellana, Galium* | 0/2 ml | Moll-t (A*), Smb (C) | |
| 2648 | 2657 | 306 | 20 | 5 | 50 | - | - | - | - | - | 0/<1 ml | Moll-t (A) | |
| 2658 | 2662 | 307 | 20 | 20 | 60 | C | - | Indet grain frags | - | - | 0/1 ml | Moll-t (A), Min. wood | |
| | 1644 | 237 | 10 | 20 | 50 | C | C | Indet. Grain frags, glume frags | - | - | 1/1 ml | Moll-t (A), Smb (C) | |
| | 2506 | 291 | 40 | 1250 | 5 | C | - | Indet. Grain frags | - | - | 1/4 ml | Moll-t (A) | |
| | 2626 | 303 | 15 | 75 | 20 | C | C | Indet. Grain frags, glume frags | C | *Vicia/Lathyrus* | 1/3 ml | Moll-t (A*), Smb (A) | |
| | 2667 | 305 | 19 | 50 | 50 | C | C | ?Hulled wheat and ?barley grain frags, glume frags | C | *Vicia/Lathyrus, Corylus avellana* | 1/2 ml | Moll-t (A*) | |
| Pit group 3054 | | | | | | | | | | | | | |
| Shale deposit: Test pit A | 1002.1 | 166 | 25 | 650 | 5 | - | - | - | - | - | 1/1 ml | Moll-t (A*), Moll-f (C), Smb (C) | |
| | 1002.5 | 169 | 30 | 900 | 5 | C | - | Indet. Grain frags, glume frags | - | - | 0/1 ml | Moll-t (A*) | |
| | 1010.9 | 177 | 3 | 30 | 25 | - | - | - | - | - | 0/<1 ml | Moll-t (A) | |
| | 1012.25 | 201 | 5 | 10 | 7 | - | C | Glume frags | - | - | - | Moll-t (A), Smb (B) | |
| | 1014.17 | 184 | 20 | 200 | 3 | C | - | ?Hulled wheat grain frags | - | - | 0/1 ml | Moll-t (A*), Smb (B) | |
| | 1014.21 | 186 | 20 | 40 | 15 | C | C | Indet. Grain frags, glume frags | - | - | 0/1 ml | Moll-t (A*) | |
| | 1014.25 | 189 | 7 | 40 | 10 | C | - | Indet. Grain frag | - | - | 0/1 ml | Moll-t (A*), Smb (B) | |
| | 1021.13 | 181 | 20 | 180 | 15 | C | - | ?Hulled wheat grain frags | - | - | 1/2 ml | Moll-t (A*) | |
| | 1021.9 | 179 | 18 | 650 | 2 | C | - | Indet. Grain frag | C | *Corylus avellana* | 0/1 ml | Moll-t (A*) | |
| 1984 | 1985 | 260 | 10 | 60 | 5 | - | C | Glume frag | - | - | 0/1 ml | Moll-t (A) | |
| 1986 | 2048 | 255 | 20 | 225 | 3 | C | C | ?barley and ?hulled wheat grain frags, glume frags | - | - | 1/1 ml | Moll-t (A*), Smb (C) | |
| | 2049 | 257 | 20 | 700 | 3 | C | - | Indet. Grain frags | - | - | 0/2 ml | Moll-t (A*), Smb (C) | |
| | 2050 | 256 | 19 | 50 | 15 | C | - | Indet. Grain frags | C | *Vicia/Lathyrus, Veronica, Chenopodium* (prob. Modern) | 1/2 ml | Moll-t (A*) | |
| 1989 | 1990 | 261 | 5 | 5 | 70 | C | - | Indet. Grain frag | - | - | <1/<1 ml | Moll-t (A) | |
| 1994 | 1997 | 263 | 27 | 180 | 2 | A | B | Hulled wheat and ?barley grain frags, glume frags including Emmer | A | *Vicia/Lathyrus, Avena/Bromus, Arrhenatherum, Galium, Chenopodium* (prob. Modern) | 1/2 ml | Moll-t (A**) | CPR |

| Cut | Context | Sample | Vol (l.) | Flot size | Roots % | Grain | Chaff | Cereal notes | Charred other | Notes for table | Charcoal > 4/2MM | Other | Analysis |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | 1998 | 264 | 32 | 60 | 5 | B | - | Indet. Grain frags | A | *Lithospermum, Galium, Vicia/Lathyrus, Avena/Bromus* | 1/1 ml | Moll-t (A*), Moll-f (C) | |
| | 2000 | 259 | 10 | 60 | 7 | C | - | Indet. Grain frags | C | *Avena/Bromus* | 0/2 ml | Moll-t (A*) | |
| | 2002 | 258 | 20 | 210 | 7 | C | - | Indet. Grain frags | A | *Vicia/Lathyrus,* Polygonaceae*, Avena/Bromus, Galium* | 0/4 ml | Moll-t (A**), Smb (C) | |
| 2040 | 2041 | 262 | 5 | 40 | 5 | C | - | Indet. Grain frag | C | *Corylus avellana* | 0/<1 ml | Moll-t (A), Smb (C) | |
| 2255 | 2257 | 283 | 40 | 110 | 5 | B | B | Hulled wheat and barley grain frags, glume frags including Emmer | C | *Vicia/Lathyrus, Avena/Bromus* | 1/5 ml | Mollt (A*), Smb (B) | |
| 2477 | 2481 | 298 | 34 | 50 | 40 | B | B | Hulled wheat and barley grain frags, emmer and spelt glume frags | C | *Vicia/Lathyrus, Veronica* | 2/3 ml | Moll-t (A*), Smb (B) | |
| | 1993 | 265 | 10 | 50 | 10 | C | C | Indet.grain frags, glume frags | C | *Corylus avellana, Galium* | 0/1 ml | Moll-t (A) | |
| | 2252 | 282 | 40 | 40 | 60 | C | - | ?Barley grain frags | - | - | 0/1 ml | Moll-t (A) | |
| Pit group 3055 | | | | | | | | | | | | | |
| 2183 | 2184 | 290 | 40 | 70 | 10 | B | C | Hulled wheat and barley grain frags, glume frags | C | *Vicia/Lathyrus, Corylus avellana* | 1/3 ml | Moll-t (A*) | |
| *Other pits and postholes* | | | | | | | | | | | | | |
| 274 | 276 | 47 | 2 | 25 | 10 | C | - | ?Barley grain frags | - | - | 7/5 ml | Moll-t (A) | |
| 335 | 336 | 88 | 8 | 35 | 10 | - | C | Glume frag | - | - | 5/8 ml | Moll-t (A) | |
| 339 | 340 | 85 | 20 | 30 | 15 | C | - | Indet. Grain frags | - | - | 1/2 ml | Moll-t (A*) | |
| | 340, obj 96 | 338 | 5 | 10 | 10 | C | C | Hulled wheat grain, emmer glume frags | - | - | 0/1 ml | Moll-t (A) | |
| 384 | 385, obj 103 | 99 | 10 | 40 | 80 | C | C | Hulled wheat frags, glume frags | C | *Avena/Bromus, Chenopodium* | 0/1 ml | Moll-t (A) | |
| 393 | 391, NE quad | 95 | 22 | 50 | 65 | B | B | Indet. Grain frags, glume frags | B | *Vicia/Lathyrus, Avena/Bromus*, Polygonaceae, *Chenopodium* (prob. Modern) | 2/3 ml | Moll-t (A*) | |
| | 391, NE quad | 95* | 20 | 60 | 50 | A | B | Hulled wheat and ?barley grain frags, glume frags - Emmer and Spelt | B | *Avena/Bromus,* Polygonaceae*, Galium, Corylus avellana, Chenopodium* | 3/3 ml | Moll-t (A*), Moll-f (C), Smb (B) | CPR |
| 422 | 424 | 118 | 20 | 150 | 50 | A* | B | Hulled wheat and barley grain frags, glume frags | A | *Avena/Bromus, Vicia/Lathyrus, Galium, Corylus avellana,* Polygonaceae | 5/8 ml | Moll-t (A*), Smb (A) | CPR |
| | 426 | 119 | 20 | 60 | 30 | A | C | Hulled wheat and barley grain frags, glume frags | B | *Avena/Bromus, Vicia/Lathyrus* | 1/3 ml | Moll-t (A), Smb (B) | CPR |
| 1199 | 1312 | 222 | 22 | 35 | 65 | A | C | Hulled wheat and barley grain frags, ?emmer and spelt glume frags | B | *Vicia/Lathyrus, Avena/Bromus, Galium* | 1/2 ml | Moll-t (A*) | |

| Cut | Context | Sample | Vol (l.) | Flot size | Roots % | Grain | Chaff | Cereal notes | Charred other | Notes for table | Charcoal > 4/2MM | Other | Analysis |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1309 | 1310 | 221 | 20 | 30 | 35 | C | C | Hulled wheat and ?barley grain frags, ?Emmer glume frags | - | - | 1/1 ml | Moll-t (A) | |
| 1340 | 1341 | 224 | 21 | 35 | 60 | A | C | Hulled wheat and barley grain frags, ?emmer and spelt glume frags | - | - | 2/4 ml | Moll-t (A*) | CPR |
| | 1341 | 284 | 20 | 110 | 35 | A | B | Hulled wheat and barley grain frags, glume frags including Emmer | C | *Vicia/Lathyrus* | 5/5 ml | Moll-t (A*) | CPR |
| 1407 | 1408 | 234 | 10 | 15 | 50 | C | C | ?hulled wheat grain frags, ?emmer glume frags | C | *Galium* | 0/1 ml | Moll-t (A*), Smb (C) | |
| 1924 | 1925 | 266 | 40 | 10 | 50 | - | - | - | C | *Chenopodium* (prob. Modern) | 2/2 ml | Moll-t (A) | |
| 2211 | 2212 | 270 | 40 | 180 | 8 | C | C | Indet. Grain frags, glume frags | - | - | 10/15 ml | Moll-t (A*) | |
| | 2213 | 271 | 17 | 15 | 70 | C | - | ?Hulled wheat frags | C | *Corylus avellana* | 0/1 ml | Moll-t (A) | |
| 2214 | 2162 | 274 | 9 | 15 | 35 | C | - | Indet. grain frags | - | - | <1/<1 ml | Moll-t (A) | |
| | 2164 | 272 | 18 | 125 | 7 | C | - | Indet. grain frags | C | *Corylus avellana* | 0/1 ml | Moll-t (A) | |
| | 2164 | 273 | 7 | 1000 | 2 | - | - | - | C | *Chenopodium* (prob modern) | 1/3 ml | Moll-t (A) | |
| 2305 | 2307 | 329 | 20 | 260 | 3 | B | - | Hulled wheat and barley grain frags | C | *Vicia/Lathyrus, Veronica* | 3/7 ml | Moll-t (A) | |
| | 2309 | 328 | 40 | 900 | 2 | B | A | Hulled wheat grain frags, glume frags including emmer | - | - | 0/3 ml | Moll-t (A*), Smb (B) | CPR |
| 2319 | 2320 | 281 | 40 | 100 | 30 | A | C | Hulled wheat and barley grain frags, glume frags | A | *Corylus avellana, Avena/Bromus,* Polygonaceae*, Galium, Chenopodium* | 5/8 ml | Moll-t (A**), Smb (B) | |
| 2388 | 2390 | 287 | 18 | 110 | 20 | C | C | Indet grain frags, glume frags | B | *Corylus avellana, Vicia/Lathyrus, Galium, Chenopodium* | 8/20 ml | Moll-t (A), Smb (C) | |
| | 2389/90 | 286 | 20 | 80 | 35 | C | C | ?Hulled wheat grain frags, glume frags | C | Polygonaceae | 3/12 ml | Moll-t (A) | |
| 2487 | 2488 | 296 | 29 | 40 | 20 | B | B | Hulled wheat and barley grain frags, emmer and spelt glume frags | C | *Avena/Bromus, Vicia/Lathyrus,* Polygonaceae | 1/2 ml | Moll-t (A*), Smb (C) | M |
| 3016 | 3018, obj 100 | 337 | 1 | 2 | 30 | - | - | - | C | *Chenopodium* | 0/<1 ml | Moll-t (A) | |
| *Layers* | | | | | | | | | | | | | |
| 3044 | 2187 | 268 | 40 | 75 | 50 | C | C | Hulled wheat grain frags, glume frags | C | *Avena/Bromus* | 3/3 ml | Moll-t (A*) | |
| 3045 | 2314 | 279 | 30 | 40 | 50 | C | - | Indet. Grain frag | - | - | <1/1 ml | Moll-t (A*) | |
| | 2405 | 294 | 40 | 200 | 10 | A | C | Hulled wheat and barley grain frags, glume frags | C | *Vicia/Lathyrus* | 1/1 ml | Moll-t (A*) | CPR |
| | 2489 | 292 | 40 | 450 | 5 | C | - | Barley grain frag | - | *Chenopodium* (prob. Modern) | 1/1 ml | Moll-t (A*) | |
| | 2495 | 293 | 45 | 250 | 10 | C | C | Hulled wheat and barley grain frags, glume frags | C | *Corylus avellana* | 1/1 ml | Moll-t (A) | |

| Cut | Context | Sample | Vol (l.) | Flot size | Roots % | Grain | Chaff | Cereal notes | Charred other | Notes for table | Charcoal > 4/2MM | Other | Analysis |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| ***Early Iron Age*** | | | | | | | | | | | | | |
| *Pits* | | | | | | | | | | | | | |
| 254 | 255 | 1 | 40 | 80 | 30 | A | B | Hulled wheat and ?barley grain frags, glume and glume base frags | A | *Corylus avellana, Vicia/Lathyrus, Galium, Trifolium/Medicago, Chenopodium* | 5/8 ml | Moll-t (A*), Smb (C) | CPR |
| 1238 | 1239 | 220 | 40 | 90 | 40 | A* | C | Hulled wheat and barley grain frags, glume frags | B | *Vicia/Lathyrus, Avena/Bromus, Galium* | 3/8 ml | Moll-t (A*), Smb (B) | CPR |
| 1299 | 1301 | 233 | 20 | 30 | 60 | A | C | Hulled wheat and barley grain frags, ?emmer and spelt glume frags | B | *Vicia/Lathyrus, Avena/Bromus, Carex, Chenopodium* (prob. Modern) | 2/2 ml | Moll-t (A*), Smb (C) | |
| 1336 | 1337 | 226 | 24 | 40 | 70 | C | - | Indet. Grain frags | C | *Vicia/Lathyrus, Veronica* | 3/2 ml | Moll-t (A*) | |
| | 1337 | 226* | 17 | 40 | 20 | B | C | Hulled wheat and barley grain frags, ?emmer glume frags | - | - | 2/4 ml | Moll-t (A*), Smb (C) | |
| 1338 | 1339 | 225 | 6 | 20 | 20 | B | C | Hulled wheat and barley grain frags, glume frags | C | *Vicia/Lathyrus, Corylus avellana, Chenopodium* | <1/1 ml | Moll-t (A) | |
| 1671 | 1672 | 251 | 37 | 90 | 15 | C | C | Indet. Grain frags, glume frags including emmer glume base | B | *Vicia/Lathyrus, Avena/Bromus, Corylus avellana, Torilis* | 1/1 ml | Moll-t (A*), Smb (B) | |
| 1854 | 1855 | 253 | 30 | 220 | 15 | C | - | ?Barley grain frags | C | *Veronica, Chenopodium* (prob. Modern) | 1/1 ml | Moll-t (A*) | |
| 1943 | 1957 | 267 | 38 | 150 | 15 | A | - | Hulled wheat and barley grain frags | B | *Vicia/Lathyrus*, Polygonaceae, Brassicaceae | 20/15 ml | Moll-t (A), Smb (B) | CPR, CHL |
| ***Middle Iron Age*** | | | | | | | | | | | | | |
| *Pits* | | | | | | | | | | | | | |
| 1685 | 1686 | 249 | 30 | 270 | 35 | B | C | Hulled wheat and barley grain frags, ?emmer glume frags | B | *Vicia/Lathyrus, Avena/Bromus, Corylus avellana, Galium* | 20/100 ml | Moll-t (A*), Moll-f (C) | CPR, CHL |
| ***Late prehistoric*** | | | | | | | | | | | | | |
| *Ditches* | | | | | | | | | | | | | |
| 3039 cut 2151 | 2152 | 269 | 18 | 110 | 25 | C | - | ?Hulled wheat grain frags | C | *Chenopodium* (prob. Modern) | 1/1 ml | Moll-t (A*), Moll-f (C) | |
| 3039 cut 2312 | 2313 | 280 | 40 | 130 | 10 | C | - | Hulled wheat and ?barley grain frags | C | *Corylus avellana* | 0/3 ml | Moll-t (A**), Moll-f (A*) | M |
| 3038 cut 1596 | 1597 | 236 | 48 | 225 | 40 | B | C | Hulled wheat and barley grain frags, ?emmer glume frags | - | - | 1/2 ml | Moll-t (A**) | |
| *Pits and postholes* | | | | | | | | | | | | | |
| 710 | 711 | 150 | 10 | 15 | 30 | C | - | Indet. Grain frags | - | - | 0/<1 ml | Moll-t (A), Moll-f (C) | |
| 1578 | 1579 | 235 | 10 | 30 | 50 | B | - | Barley and hulled wheat grain frags | C | *Vicia/Lathyrus, Chenopodium* | 0/2 ml | Moll-t (A*) | |

| Cut | Context | Sample | Vol (l.) | Flot size | Roots % | Grain | Chaff | Cereal notes | Charred other | Notes for table | Charcoal > 4/2MM | Other | Analysis |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1651 | 1652 | 245 | 5 | 15 | 50 | C | - | Indet. Grain frags | - | - | 3/1 ml | Moll-t (A) | |
| | | 246 | 3 | 10 | 30 | - | - | - | C | *Chenopodium* | 4/1 ml | Moll-t (A) | |
| | | 247 | 3 | 20 | 25 | - | - | - | - | *Chenopodium* (prob. Modern) | 3/2 ml | Moll-t (A) | |
| | | 248 | 3 | 15 | 30 | - | - | - | - | *Chenopodium* (prob. Modern) | 2/3 ml | Moll-t (A) | |
| 2029 | 2031 | 254 | 7 | 5 | 50 | - | - | - | - | - | 0/1 ml | Moll-t (A*) | |
| 2690 | 2692 | 319 | 30 | 35 | 60 | C | - | Indet. Grain frags | C | *Persacaria, Chenopodium* (prob. Modern) | 5/5 ml | Moll-t (A) | |
| ***Late Iron Age/early Romano-British*** | | | | | | | | | | | | | |
| *Enclosures and associated ditches* | | | | | | | | | | | | | |
| 777 | 778 | 152 | 10 | 15 | 10 | C | B | Indet. Grain frags, glume frags – spelt and emmer | - | - | <1/<1 ml | Moll-t (A*) | |
| 3023 cut 543 | 544 | 153 | 20 | 30 | 25 | C | C | ?Barley grain frags, glume frags | - | - | 0/<1 ml | Moll-t (A*) | |
| 3025 cut 735 | 737 | 159 | 20 | 30 | 50 | C | C | Hulled wheat grain frags and glume frags | - | - | 1/1 ml | Moll-t (A*), Smb (C) | |
| 3026 cut 463 | 469 | 158 | 20 | 40 | 50 | A | C | Hulled wheat and barley grain frags, ?emmer and spelt glume frags | A | *Vicia/Lathyrus, Avena/Bromus* | 3/2 ml | Moll-t (A*) | CPR |
| | 465 | 157 | 20 | 30 | 30 | C | C | Barley grain frags, glume frags | - | - | 1/1 ml | Moll-t (A*) | |
| | 468 | 127 | 1.5 | 25 | 5 | C | C | Indet. grain frags, ?emmer glume frag | B | *Vicia/Lathyrus, Avena/Bromus, Lithospermum*, Polygonaceae, *Chenopodium* (prob. Modern) | 8/5 ml | Moll-t (A*) | |
| 3027 cut 529 | 530 | 154 | 20 | 30 | 40 | B | C | Hulled wheat and barley grains, glume frags | C | *Avena/Bromus, Galium* | 1/1 ml | Moll-t (A*) | |
| *Pits and postholes* | | | | | | | | | | | | | |
| 435 | 436, obj 120 | 330 | 0.75 | 2 | 20 | - | C | Glume base frag | - | - | - | Moll-t (B) | |
| 593 | 594 | 149 | 40 | 30 | 70 | C | - | Indet. grain frags | C | *Vicia/Lathyrus* | 0/<1 ml | Moll-t (A*), Smb (C) | |
| 595 | 597 | 146 | 8 | 25 | 70 | C | - | ?Hulled wheat grain frags | - | - | 1/1 ml | Moll-t (A) | |
| 633 | 635 | 156 | 40 | 80 | 50 | A* | A | Hulled wheat and barley grain frags, ?emmer and spelt glume frags | A | *Corylus avellana, Galium, Vicia/Lathyrus, Avena/Bromus*, Polygonaceae, *Chenopodium* (prob modern) | 8/10 ml | Moll-t (A**), Smb/f (A), Min. nodules (C) | CPR |
| 633 | 636 | 155 | 20 | 40 | 55 | A* | A | Hulled wheat and barley grain frags, emmer and spelt glume frags, spikelet forks | A | *Avena/Bromus, Lolium/Festuca*, Polygonaceae, *Vicia/Lathyrus* | 2/5 ml | Moll-t (A*), Smb/f (C) | CPR |
| 536 g3032 | 538 | 130 | 10 | 30 | 65 | C | - | Indet. Grain frags | - | - | 3/5 ml | Moll-t (C) | |
| 3032 cut 538 | 540 | 129 | 8 | 60 | 25 | - | - | - | - | - | 4/10 ml | Moll-t (A) | |

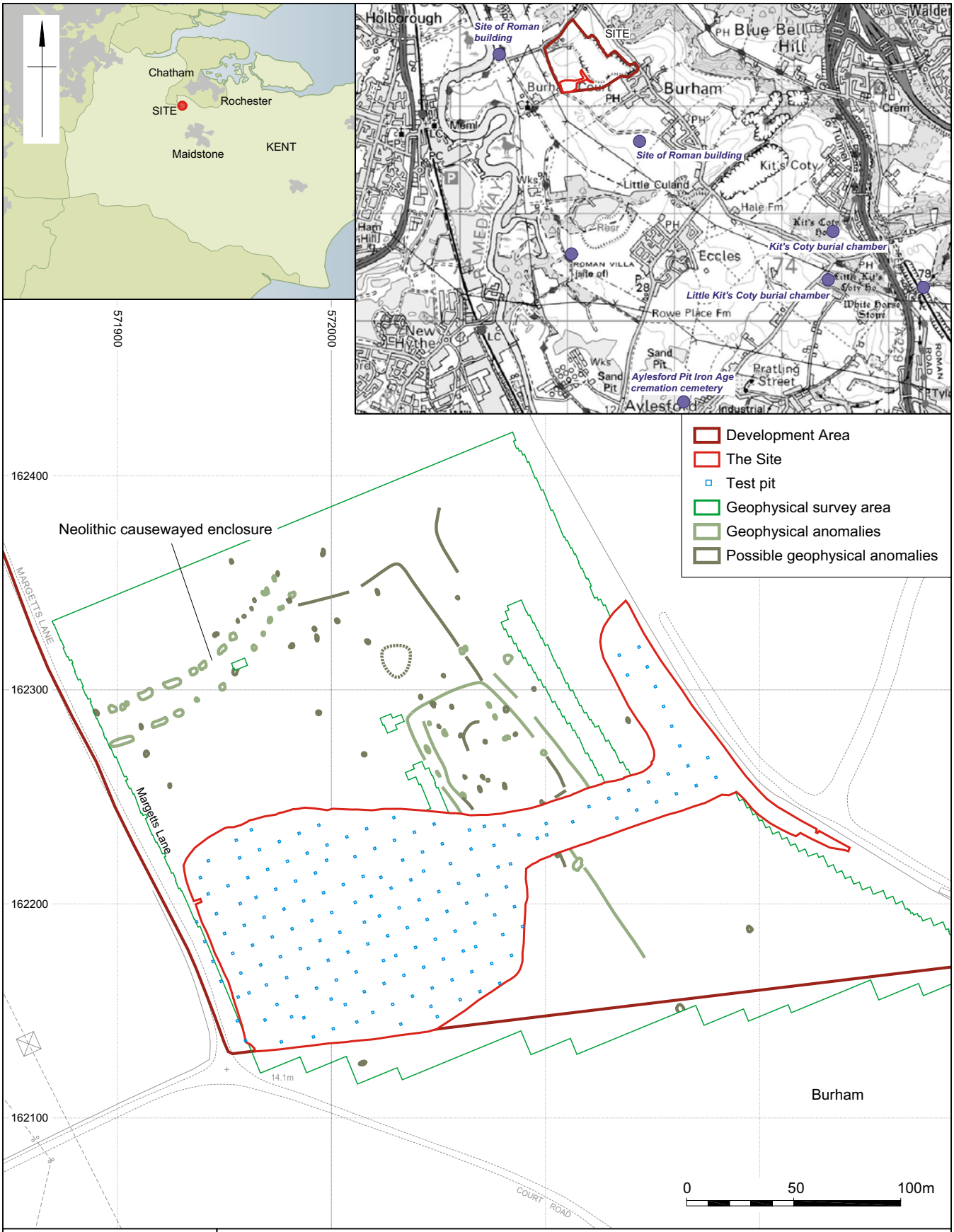
| Cut | Context | Sample | Vol (l.) | Flot size | Roots % | Grain | Chaff | Cereal notes | Charred other | Notes for table | Charcoal > 4/2MM | Other | Analysis |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 3032 cut 606 | 587 | 147 | 20 | 60 | 40 | A* | A** | Hulled wheat and barley grain frags, ?emmer and spelt glume frags, barley rachiis, avena awns | A* | *Acer* fruit, *Avena/Bromus, Vicia/Lathyrus*, Polygonaceae, *Lithospermum*, Poaceae, *Chenopodium, Galium, Eleocharis* | 4/10 ml | Moll-t A**), fish (C) | CPR |
| ***Undated*** | | | | | | | | | | | | | |
| *Pits and postholes* | | | | | | | | | | | | | |
| 284 | 283, NE quad | 6 | 2 | 5 | 60 | - | - | - | - | *Chenopodium* (prob modern) | - | Moll-t (A) | |
| | 283, NW quad | 7 | 1 | 3 | 50 | - | - | - | - | - | - | Moll-t (A) | |
| | 283, SE quad | 4 | 2 | 5 | 60 | - | - | - | - | - | 0/<1 ml | Moll-t (B) | |
| | 283, SW quad | 5 | 2 | 5 | 40 | - | - | - | C | *Veronica* (prob. modern) | 0/<1 ml | Moll-t (A) | |
| 285 | 286, E qd spit 1 | 9 | 4 | 15 | 65 | C | - | Indet. grain frags | - | *Chenopodium* (prob modern) | 2/1 ml | Moll-t (A) | |
| | 286, E qd spit 2 | 10 | 1 | 5 | 60 | - | - | - | - | - | 0/1 ml | Moll-t (B) | |
| | 286, N qd spit 1 | 15 | 1.5 | 10 | 50 | C | - | Indet. grain frags | C | *Veronica* (prob. modern) | 1/1 ml | Moll-t (A) | |
| | 286, S qd spit 1 | 11 | 4 | 25 | 70 | - | - | - | - | *Chenopodium* (prob modern) | 0/<1 ml | Moll-t (A) | |
| | 286, W qd spit 1 | 13 | 3 | 10 | 50 | C | - | Indet. grain frags | - | - | <1/1 ml | Moll-t (A) | |
| | 286, W qd spit 2 | 14 | 1.5 | 5 | 50 | - | - | - | - | - | 0/<1 ml | Moll-t (B) | |
| 291 | 292, E quad | 30 | 6 | 60 | 70 | C | - | Hulled wheat grain frag | C | *Arrhenatherum, Vicia/Lathyrus, Chenopodium* (prob modern) | 1/5 ml | Moll-t (A*) | |
| | 292, N quad | 27 | 8 | 50 | 80 | C | - | Hulled wheat grain frag | C | *Arrhenatherum, Chenopodium* | 1/4 ml | Moll-t (A*), | |
| | 292, S quad | 29 | 6 | 40 | 75 | C | - | Indet. grain frags | C | *Veronica, Chenopodium* (prob. modern) | 2/5 ml | Moll-t (A) | |
| | 292, W quad | 28 | 6 | 60 | 60 | C | - | Indet. grain frags | - | - | 0/6 ml | Moll-t (A*), Smb (C) | |
| 319 | 320 | 59 | 10 | 40 | 80 | - | - | - | C | *Arrhenatherum, Vicia/Lathyrus, Chenopodium (prob. Modern)* | <1/1 ml | Moll-t (A) | |
| 324 | 323, NE quad | 69 | 10 | 20 | 60 | - | - | - | - | - | 2/2 ml | Moll-t (A) | |
| | 323, NW quad | 66 | 10 | 15 | 70 | - | - | - | - | - | 2/2 ml | Moll-t (A) | |
| | 323, SE quad | 68 | 10 | 15 | 60 | - | - | - | - | - | 2/2 ml | Moll-t (A) | |
| | 323, SW quad | 67 | 3 | 5 | 40 | C | - | Hulled wheat grain frags | C | *Veronica* (prob. modern) | 0/1 ml | Moll-t (A) | |
| 379 | 380, NE quad | 92 | 2 | 12 | 15 | - | - | - | - | - | 1/3 ml | Moll-t (A) | |
| | 380, NW quad | 93 | 4 | 25 | 10 | C | - | Indet. grain frag | - | - | 2/7 ml | Moll-t (A) | |
| | 380, SE quad | 91 | 3.5 | 10 | 15 | C | - | Indet. grain frags | - | - | 1/3 ml | Moll-t (A) | |
| | 380, SW quad | 90 | 4 | 15 | 10 | B | - | Hulled wheat and ?barley grain frags | C | *Vicia/Lathyrus* | 2/3 ml | Moll-t (A) | |
| 443 | 445 | 126 | 8 | 350 | 5 | A | A | Free-threshing wheat grains, rachiis and culm frags | C | *Crataegus, Ranunculus, Chenopodium (prob. Modern)* | 175/100 ml | Moll-t (A) | CPR, CHL |
| 680 | 681 | 148 | 40 | 50 | 70 | A | C | Hulled wheat and barley grains, glume frags | A | *Avena/Bromus, Vicia/Lathyrus*, Polygonaceae, *Veronica, Chenopodium (prob. Modern)* | 5/5 ml | Moll-t (A), Smb (B) | |
| 738 | 741 | 151 | 10 | 10 | 50 | B | - | Hulled wheat and Barley grain frags | C | *Avena/Bromus,* | <1/1 ml | Moll-t (A), Moll-f (C) | |
| 1690 | 1691 | 250 | 6 | 25 | 50 | - | - | - | - | - | 5/3 ml | Moll-t (A) | |

| Cut | Context | Sample | Vol (l.) | Flot size | Roots % | Grain | Chaff | Cereal notes | Charred other | Notes for table | Charcoal > 4/2MM | Other | Analysis |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1216 | 1217 | 223 | 4 | 10 | 25 | - | - | - | - | - | 3/2 ml | Moll-t (A), Moll-f (C) | |
| 2697 | 2699 | 318 | 8 | 15 | 40 | C | - | Indet. grain frags | - | - | 5/2 ml | Moll-t (A) | |
| 2709 | 2711 | 316 | 9 | 15 | 30 | C | C | Indet. grain frags, emmer and spelt glumes and spikelet fork | C | *Avena/Bromus, Chenopodium* (prob. Modern) | 0/1 ml | Moll-t (A) | |
| *Gullies* | | | | | | | | | | | | | |
| 2063 | 2064 | 278 | 40 | 10 | 60 | - | - | - | - | - | 0/1 ml | Moll-t (A) | |
| 2294 | 2295 | 285 | 20 | 500 | 5 | - | - | - | - | - | 0/2 ml | Moll-t (A***) | |
| *Layers* | | | | | | | | | | | | | |
| Possible lynchet deposit | 1292 | 227 | 45 | 120 | 30 | C | - | Indet. grain frags | C | *Corylus avellana, Chenopodium* (prob modern) | 7/8ml | Moll-t (A**), Smb/f (C) | |
| | 1386 | 228 | 24 | 40 | 60 | - | - | - | C | *Vicia/Lathyrus* | 2/2 ml | Moll-t (A) | |

**Key**: A*** = exceptional, A** = 100+, A* = 30-99, A = >10, B = 9-5, C = <5, + = present. Analysis: CPR = charred plant remains; CHL = charcoal; M = Molluscs

## APPENDIX 2: METALWORK CONSERVATION

| ON | Context | Material | Object | Comments | Treatment proposal | Time estimate |
|---|---|---|---|---|---|---|
| ***Objects to be treated in house*** | | | | | | |
| 7 | 206 | Copper alloy | Object | - may not be copper alloy<br>- diagonal marks visible on many surfaces | - remove soil, chalk and some corrosion | 6.0hr |
| 75 | 202 | Copper alloy | Brooch | | - remove soil and some corrosion | 4.5hr |
| 80 | 255 | Copper alloy | Chain link | - in 2 pieces<br>- ridges visible in corrosion products, spiralling around part of fragments | - remove soil, chalk and some corrosion | 3.5hr |
| 86 | 202 | Copper alloy | Brooch | | - remove soil, chalk and some corrosion products | 4.5hr |
| 111 | 424 | Copper alloy | Pin | - poor surface | - remove soil and some corrosion<br>- lacquer to consolidate surface | 4.5hr |
| 113 | 426 | Copper alloy | Pin | | - remove soil and some corrosion | 5.5hr |
| 114 | 426 | Copper alloy | Pin | - poor surface | - remove soil and some corrosion<br>- lacquer to consolidate surface | 5.5hr |
| 157 | 902 | Copper alloy | Pin | | - remove soil and some corrosion | 3.0hr |
| 326 | 404 | Copper alloy | Spiral x 2 | - may not be copper alloy | - remove soil and some corrosion | 3.0hr |
| ***Objects that cannot be treated in house*** | | | | | | |
| 27 | 210 | Iron | Knife | | - could airbrade cross sections across blade and at junction of tang with blade to confirm profiles | - |



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Site location and evaluation

Figure 1

571900
572000
572100
572200
162300
162200
Neolithic causewayed enclosure
Trackway 1
Trackway 2
14.1m

Development boundary
The Site
Archaeological features - all phases
Spreads
Possible hedge-lines
Tree throw hole
Geophysical anomalies
Topographic features

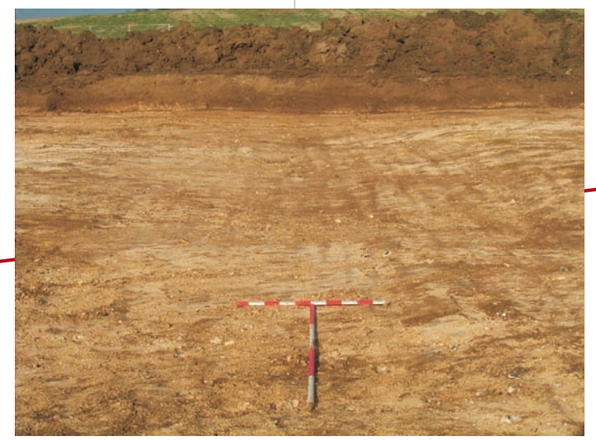

Plate 1: Trackway 1, facing north-northwest

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0 50m



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Archaeological and topographical features exposed by Strip and Map

Figure 2

571900
572000
572100
572200
162300
162200

Neolithic causewayed enclosure

Plate 3: Pit 2932, facing south-southwest

1969

2932

Plate 2: Pit 1969, facing west-southwest

Development boundary
The Site
Neolithic feature
Other archaeological features
Tree throw hole
Geophysical anomalies
Topographic features

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0 50m



| | | | |
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Neolithic features

Figure 3

Plate 4: Pit 524, facing west-southwest

Plate 5: Pit 437, facing east

Plate 7: Ditch 3035, facing northwest

Plate 6: Vessel ON 95 under excavation (cut not visible)




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0 50m



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Middle Bronze Age features

Figure 4


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0 50m



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Late Bronze Age features

Figure 5

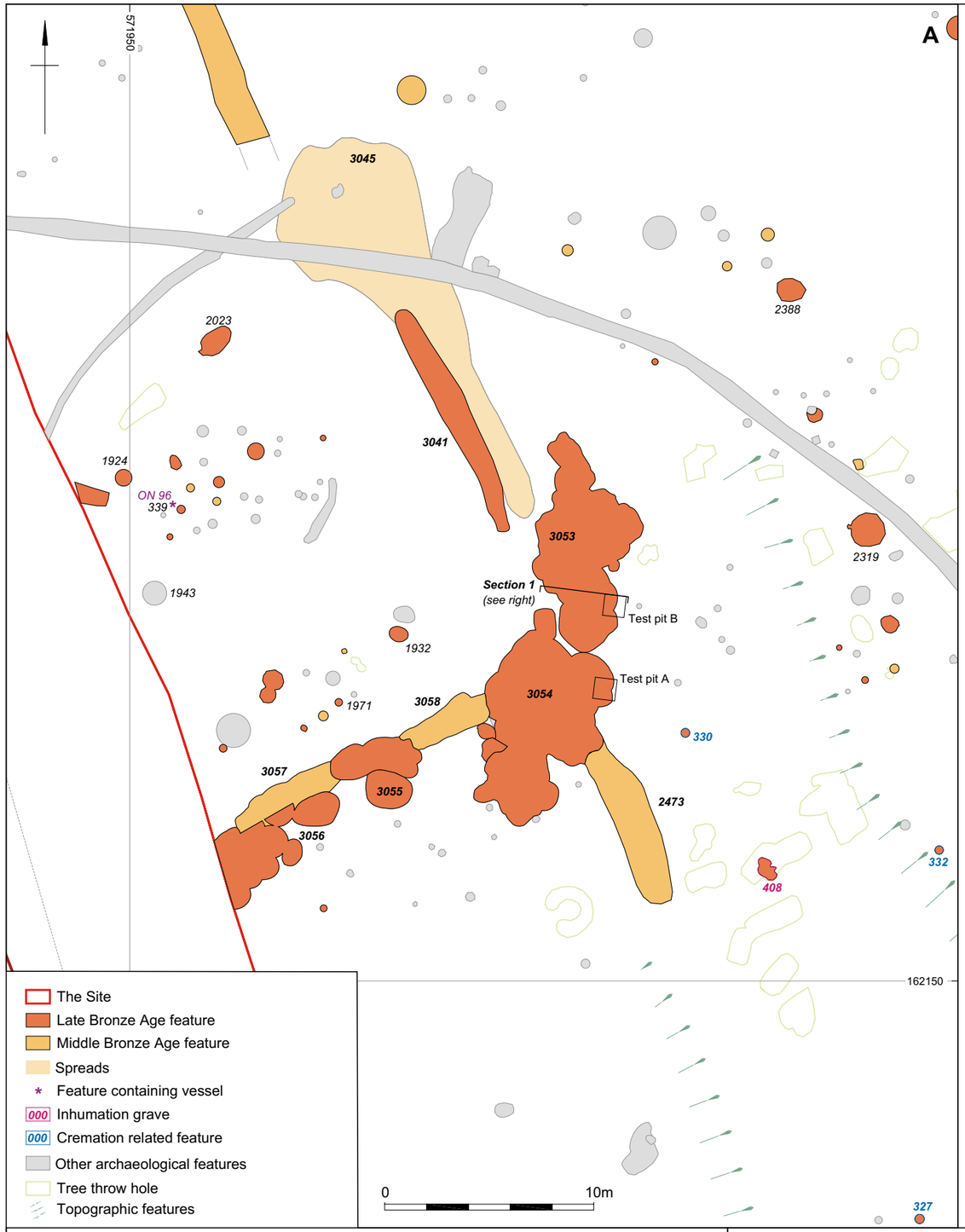
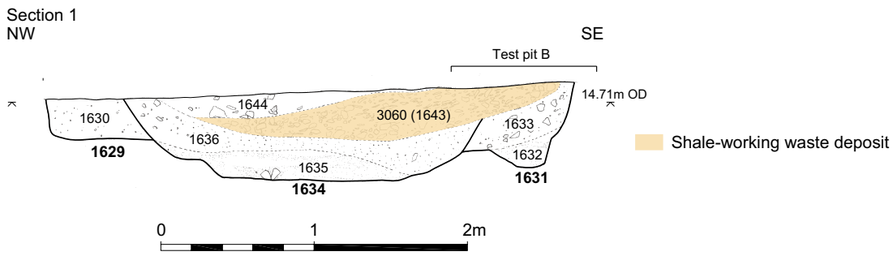



Plate 8: Ditch 3041 and deposit of shale-working waste 3045, facing north-northwest

Plate 9: Deposit of shale-working waste in pit group 3054, facing south

Plate 10: Deposit of shale-working waste (3060) in pit group 3053, facing west


Plate 11: Wheel-shaped object from above or the top of intercutting pits 3055




Section 1: South-facing section through pit group 3053 showing deposit of shale-working waste (3060)

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Late Bronze Age features, inset A

Figure 6

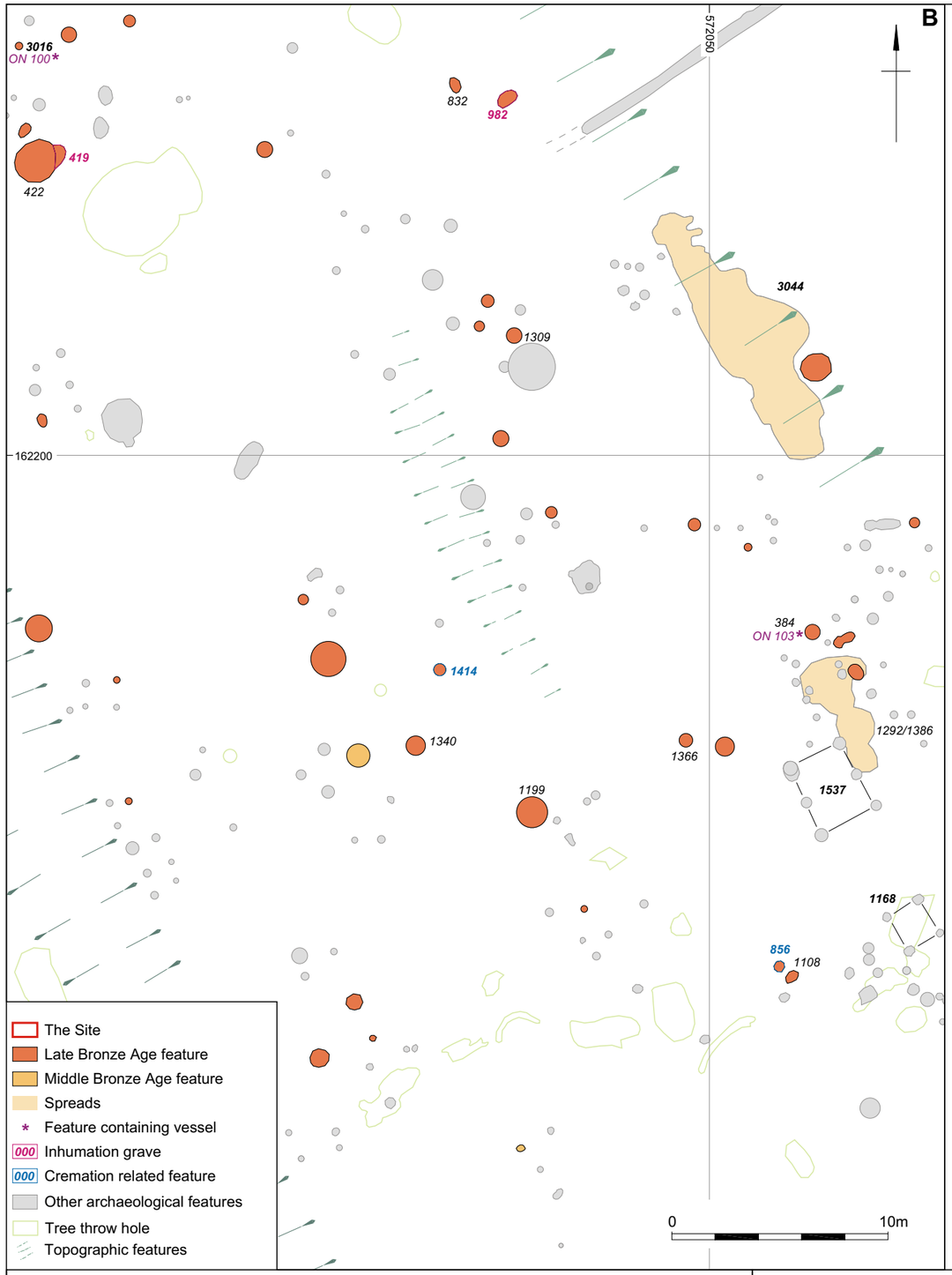


Plate 12: Pit 422, facing south-southeast

Plate 13: Inhumation burial 984 in grave 982, facing southwest

Plate 14: Vessel ON 103, facing south-southwest

Plate 15: Possible six-post structure 1537, facing southwest

Plate 16: Deposit of shale-working waste 3044 in possible lynchet, facing northwest

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Late Bronze Age features, inset B

Figure 7

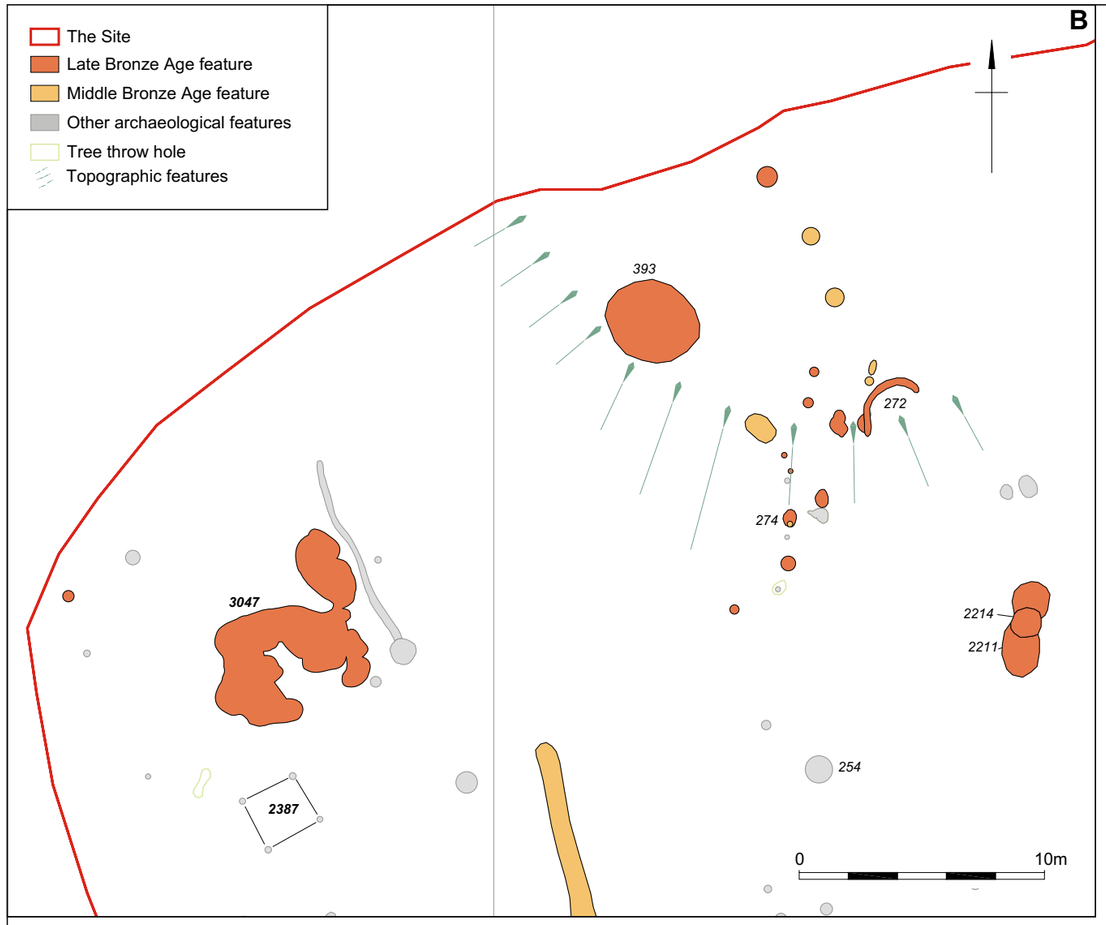


Plate 19: Gully 272 facing northwest

Plate 20: Deposit of shale-working waste in pit 2214, facing east

Plate 17: Pit group 3047 facing northwest

Plate 18: Pit 393, facing northwest

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Late Bronze Age features, inset C

Figure 8

571950
572000
572050
572100
162200
162150
2294
254
1762
1671
1651
1685
1854
1690
416
1238
1299
1336
1321
1338
1197
1351
1578
319
921
*1235
ON 171
550
710
738
733
2697
2709
3040
2063
1943
1907
1994
443
3039
3038
Trackway
Trackway
Plate 21: Pit 1299, facing south
Development Area
The Site
Early Iron Age feature
Middle Iron Age feature
Iron Age feature
Prehistoric/late prehistoric feature
* Feature containing vessel
Other archaeological features
Tree throw hole
Geophysical anomalies
Topographic features
Wessex Archaeology
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| | | | |
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Early and Middle Iron Age, and unspecific prehistoric/late prehistoric, and selected undated features

Figure 9

Plate 22: Section through ditch 556 3025, facing southeast

Plate 23: Section through ditch 564, facing southeast

Plate 24: Section through ditch 3023, facing south-southeast

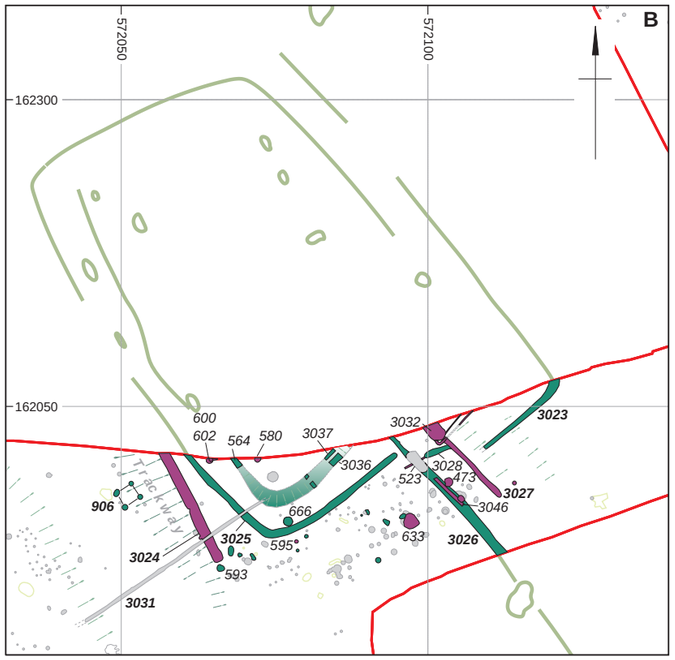
Plate 25: Section through ditch 3024, facing north-northwest

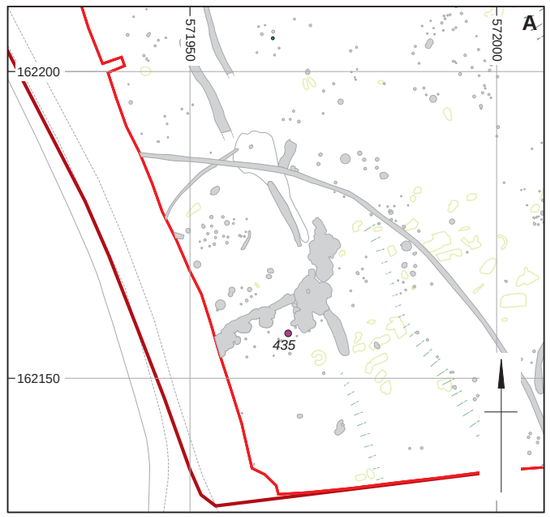
Plate 26: Four-post structure 906, facing north

Plate 27: Pit 633, facing northeast

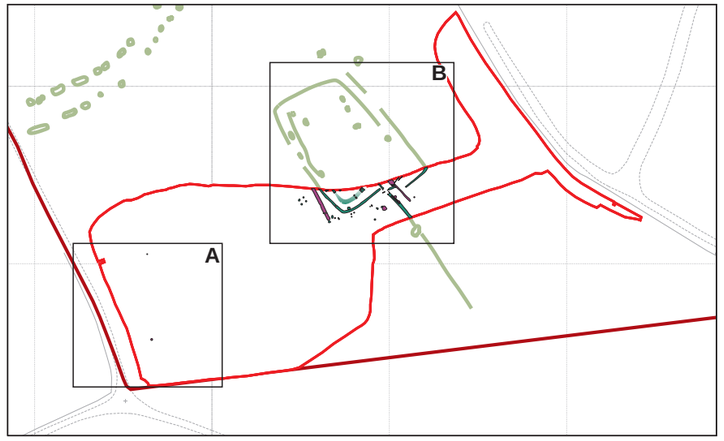
Plate 28: Pit 666, facing west-southwest

Plate 29: Cobbles in base of pit 600, facing north-northwest




The Site
Late Iron Age feature
Early Romano-British
Other archaeological features
Tree throw hole
Geophysical anomalies
Topographic features

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0 50m



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Late Iron Age and early Romano-British features

Figure 10

Plates 30-1: Detail of the worked shale roughouts showing typical reduction sequences


Plates 32-3: Copper alloy pins and the wheel-shaped object

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Worked shale and copper alloy objects

Figure 11

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