Wessex Archaeology

Land to the West of Waterlooville, Hampshire: Phase 1

Post-excavation Assessment Report

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LAND TO THE WEST OF WATERLOOVILLE, HAMPSHIRE: PHASE 1

Post-excavation Assessment Report

Prepared for:
CgMs Consulting
Morley House
26 Holborn Viaduct
London
EC1A 2AT

on behalf of:
Grainger Plc
Central 127
Milton Park
Abingdon
OX14 4SA

by
Wessex Archaeology
Portway House
Old Sarum Park
Salisbury
SP4 6EB

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POST-EXCAVATION ASSESSMENT REPORT

Contents

List of Figures

List of Tables

List of Appendix Tables

Summary

Wessex Archaeology was commissioned by CgMs Consulting on behalf of Grainger Plc to undertake a programme of archaeological mitigation on land, proposed as mixed residential and community development, to the west of Waterlooville, Hampshire (NGR 467224 108998). Fieldwork comprised a two phased, 380 trench, evaluation (April to May 2007), which was then followed by the Phase 1 excavation (Areas 1-6: 5.9 hectares) during February to June 2008.

Evidence recorded ranged from Early Mesolithic to post-medieval, although most of the evidence was of Middle/Late Iron Age and Romano-British in date.

The unexpected discovery of Early Mesolithic activity, comprising two principal foci of flint debris, one within a group of shallow hollows and the other recovered as residual material from Romano-British features, is of at least local importance.

Later Bronze Age activity on the Site includes a ditched trackway, the suggestion of other land divisions and a horseshoe-shaped gully enclosing a Middle Bronze Age urned cremation burial. Residual pottery dating to this period was also recovered.

Middle/Late Iron Age and early Romano-British occupation was concentrated towards the south of the Site, where the remains of a banjo enclosure with an associated field system, four-post structure and ditched metal-working area was located.

The most abundant evidence for human activity was a rural hinterland settlement belonging to the Romano-British period (1st to 3rd century) that is characterised by a series of enclosures. This settlement had been extended and modified over time and was set within an interconnected and evolving landscape of fields and tracks. Notable features within and around the enclosures included a timber roundhouse, wells, pits and a keyhole-shaped kiln. The settlement is associated with good assemblages of charred and waterlogged plant remains, and pollen that provides evidence for contemporary agricultural practice and landuse. There is also evidence for domestic occupation, for on-site metal-working and for the import of salt containers and non-local quernstones. The Site has also produced the earliest find of okra from Britain, which also suggests the Site was indirectly associated with coastal trade and contact.

This report presents an interim statement of the Phase 1 results and assesses their potential for further analysis and publication. It outlines the scope for further work (tasks and methods) and the required resources. These proposals will be subject to review on completion of the additional Phase 1 mitigation and Phase 2 work.

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Damian De Rosa managed the project on behalf of Wessex Archaeology. The excavation was directed by Susan Clelland, with the assistance of David Reay and Laura Cassie. The Site survey was produced by Lucy Parker. The fieldwork was undertaken by Paul Samual Armour, Ben Attfield, Aleksandra Bolczyk, James Box, Luke Brannlund, Piotr Brozyna, Paul Cooke, Dr Patrice De Rijk, John Diffey, Michael Flemming, Darryl Freer, Ramon Ferrer Santon, Catriona Gibson, Peter James, Steve Kemp, Claire McGlenn, John Milward, Dave Murdie, Emma Nordstrom, Piotr Orczewski, Antonio Ramon, Sian Reynolds, Gregory Shepherd, Mark Stewart, Vasilis Tsamis and Tom Wells.

This report was written by Susan Clelland and Dr Alistair Barclay with contributions from Dr Patrice De Rijk (slag), Phil Harding (flint), Kayt Brown (pottery and other finds) and Dr Chris Stevens (environmental). The illustrations were drawn by Elizabeth James. The samples were processed by Nicki Mulhall, Marta Perez-Fernandez, Christo Nicolle and Sophie Nias Cooper under the supervision of Sarah F. Wyles. The charred plant remains, charcoal and radiocarbon dating requirements were assessed by Dr Chris Stevens. Geoarchaeology, soils and sediments were assessed by David Norcott and pollen by Dr Michael Grant. Pollen samples were prepared by Dr M. Grant using facilities at CEESR, Kingston University.

LAND TO THE WEST OF WATERLOOVILLE, HAMPSHIRE: PHASE 1

Post-excavation Assessment Report

1 INTRODUCTION

1.1 Introduction

1.1.1 Wessex Archaeology (WA) was commissioned by CgMs Consulting on behalf of Grainger Plc to undertake a programme of archaeological mitigation on land to the west of Waterlooville, Hampshire, centred on National Grid Reference (NGR) 467224 108998 and hereafter referred to as the Site (**Figure 1**).

1.1.2 The proposed development comprises residential housing, a school, a cemetery and community facilities (based in the existing Plant Farm buildings).

1.1.3 The Site is allocated for housing and associated development in the Hampshire Structure Plan and is being proposed for development in the emerging Local Development Framework (LDF). However, until the Local Development Frameworks are produced, the planning policy framework for this area will take into consideration the adopted Winchester District Local Plan Review (2006), the Havant Borough Local Plan (adopted 2005) and the West of Waterlooville Major Development Area: Master Planning Brief (November 2003).

1.2 Scope of report

1.2.1 This report presents the project background, an interim statement and assessment of the excavation results and, proposals and recommendations for further analysis and publication.

1.3 Planning and Archaeological background

1.3.1 An outline planning application, supported by an Environmental Statement, was submitted to Winchester City Council and Havant Borough Council. Discussions and meetings held with English Heritage, the Historic Environment Officer, Winchester City Council (Tracey Mathews) and the Hampshire Archaeological Officer (Stephen Appleby) confirmed that they did not object to the planning application and that a planning condition-based approach to archaeological issues was acceptable. However, in order to identify options for *in situ* preservation, the Winchester City Archaeologist and Hampshire Archaeological Officer requested that an archaeological evaluation (trial trenching) should be carried out during the design stage.

1.3.2 An Environmental Statement was prepared, and as part of this various studies were undertaken including an Archaeological Desk-Based Assessment (JSAC 2005) and a Geophysical Survey (GSB 2005). A Written Scheme of Investigation (WSI) was prepared by CgMs Consulting (CgMs 2007) detailing the methods by which an archaeological field evaluation for the Phase 1 development area should be undertaken at the Site. Following this a Project Design for an archaeological field evaluation for the Phase 1 development area was prepared by Wessex Archaeology (2007a) and the

work, comprising the excavation of 380 (25m x 2m) trial trenches, was undertaken from the 10th April to 25th May 2007 (**Figure 1**).

1.3.3 The Phase 1 evaluation revealed evidence of archaeological remains within the Site dating from the Middle/Late Iron Age to the Romano-British period as well as more limited medieval and post-medieval activity. The results set out in the evaluation report (WA 2007b) identified six zones of archaeological importance (summarised below 1.7.2) that would require further archaeological mitigation (excavation) prior to any future development being undertaken at the Site. The programme of Phase 1 excavation targeting these zones (Areas 1 to 6, totalling approximately 6 ha) was undertaken between February and June 2008.

1.3.4 A subsequent archaeological field evaluation of the Phase 2 development (WA 2008b) area comprising the excavation of 130 (25m x 2m) trial trenches (**Figure 1**) was undertaken by Wessex Archaeology between the 7th January and 22nd February 2008. Trenches were located to target anomalies identified in the geophysical survey and to provide a random sample of the Site. A further six zones (Zones 7-12) of archaeological importance were identified (summarised below Section1.8).

1.4 The Site: location, topology, land-use and geology

1.4.1 The Site, which is north of Portsmouth, comprises a block of land west of the modern town of Waterlooville, it is bounded to the east and south by the built up areas of Waterlooville and Purbrook, and to the north and west by agricultural land (**Figure 1**).

1.4.2 At the time of fieldwork the land within the Site was a mixture of pasture and arable. The Site topography ranged from 58.7m above Ordnance Datum (aOD) in the central eastern area (Area 4) to 46.5m aOD in the north (Area 1) and 48.4m aOD in the south (Area 6).

1.4.3 The Site is shown by the British Geological Survey (Sheet 316: Fareham) on the northern edge of an extensive outcrop of Chalk, Portsdown Hill, which is part of a massive syncline (Bere Forest) that is located immediately north of the Chalk Downs. The Site itself is underlain by the London Clay Formation above which are Head deposits (northern part of Site) and deposits belonging to the Bracklesham Beds (southern part of Site).

1.5 Desk-Based Assessment

1.5.1 The Archaeological Desk-Based Assessment (JSAC 2005) identified a medium to high potential for the remains of a medieval Grange, located around Plant Farm, and associated field system, a low to medium potential for prehistoric and Roman settlement evidence and a low potential for all other periods.

1.6 Geophysical Survey

1.6.1 The geophysical survey identified a number of anomalies of potential archaeological interest (WA 2007b) including the remains of a field system surrounding Plant Farm, a probable settlement of prehistoric/Iron Age date, two bands of pit-type anomalies, and a number of anomalies adjacent to Purbrook Heath Road which may have been the remains of Roman roadside

activity. Isolated ditch and pit-type anomalies were identified across the Site, but these were weak and difficult to interpret (GSB 2005).

1.7 Phase 1 Field Evaluation

1.7.1 A summary of the results of the Phase 1 evaluation (WA 2007b) is presented below.

1.7.2 The northern part of the Phase 1 evaluation area was found to be mostly devoid of archaeological features except for a few scattered ditches, pits, hearths and post-holes, none of which produced any dating evidence. Post-medieval drainage ditches and former field boundaries were recorded within a number of trenches as were numerous modern field drains.

1.7.3 Six zones (Areas 1 to 6) of archaeological importance were identified across the central and southern parts of the Phase 1 evaluation, which produced evidence for potential settlement activity of Middle/Late Iron Age and Romano-British period. These six areas were subsequently targeted for excavation (see Section 4, Results).

1.7.4 The heaviest concentrations of archaeological features comprising ditches, hearths and pits were identified within Areas 2 and 3. Evidence was uncovered for a substantial Middle/Late Iron Age and Roman enclosure ditch, possibly enclosing a settlement. Another ditch produced evidence for possible kiln furniture in association with substantial quantities of charcoal and fired clay, which may indicate pottery production.

1.7.5 No evidence for any medieval activity centred round Plant Farm was found although documentary evidence suggests that Plant Farm may have been the location of the 13th century Grange of Southwick Priory. Additionally, a chapel, the hermitage of St Leonards, may have been in use here during this period. However no evidence for this was found during the evaluation.

1.7.6 The evaluation concluded that, given the limited number of recorded sites in the vicinity of the Site, the evidence recovered of later prehistoric/early Romano-British settlement and landscape division was likely to be of regional importance.

1.8 Phase 2 Field Evaluation

1.8.1 A summary of the results of the Phase 2 evaluation (WA 2008b) are presented below.

1.8.2 Archaeological remains of varying intensity and importance were found to survive across the evaluated area. Following on from the Phase 1 evaluation trenching, another six zones (numbered 7-12) of significant archaeological activity, requiring further mitigation, were identified (**Figure 1**).

1.8.3 The heaviest concentrations of activity were centred on a probable multi-phase sub-rectangular ditched settlement enclosure (Zone 10) dating to the Middle/Late Iron Age. Associated field systems and occupation was recorded in the far south of the Site (Zone 8) situated immediately west of Phase 1 excavation Area 6, and comprised ditches, gullies and a possible truncated structure (see Section 4.6.4).

1.8.4 This area of occupation was superseded by a probable sub-circular ditched Romano-British settlement (Zone 11) with a number of associated boundary ditches, pits and hearths, located directly north of Area 4. Finds recovered produced a varied domestic assemblage and a small quantity of iron slag. A postulated occupation date of the 1st to 2nd centuries AD potentially extending into the 3rd centuries AD infers this settlement enclosure co-existed with the settlement activity recorded within the Phase 1 excavation Areas 1-4 (see Section 4 below).

1.8.5 In addition sporadic earlier prehistoric evidence was recovered including some Mesolithic flint from Zone 11 and a pit from which Neolithic pottery and worked flint were recovered (Zone 9). Residual prehistoric pottery was found in Zone 10. Early Bronze Age activity was revealed by the ditches of a probable funerary barrow in the south-east of the Site (Zone 7).

1.8.6 Little evidence for medieval activity was recovered, however fairly extensive undated field ditches were recorded across the evaluated area which may belong to this period.

1.8.7 The Phase 2 evaluation added substantially to a growing body of information deriving from the Site which represents a picture of successive settlement, agriculture and landscape re-organisation principally dating from the Middle Iron Age through the Romano-British period, though a growing human presence within, and impact on the landscape, is evidenced from at least the Neolithic period.

1.9 Additional Phase 1 Mitigation

1.9.1 Due to the results of the Phase 1 excavation additional areas of archaeological mitigation are required adjacent to Phase 1 excavation Areas 1 and 6 (**Figures 1- 2, 5-6**). The extension of Area 1 is required to further investigate the function of the ditches and pits recorded in the original south-west corner of the area to determine their use as settlement, industrial or agricultural boundaries (see Section 4.7). To the west of Area 6 in Phase 2 evaluation trench 520 an area approximately 10m by 10m will be opened up to examine activity within the banjo enclosure (see Section 4.6).

2 ORIGINAL RESEARCH AIMS

2.1 Introduction

2.1.1 The principal aim of the programme of Strip, Map and Record excavation was to mitigate the threat posed by the proposed development by recording and sampling all archaeological remains within six designated excavation areas (**Figure 1**), ensuring preservation by record of the archaeological resource (WA 2008a). Additionally a number of regional research priorities and themes undertaken with reference to the wider research aims as set out in the *Solent-Thames Archaeological Research Framework* (www.buckscc.gov.uk) were identified prior to excavation.

2.2 Original Project Research Aims:

- What evidence is there for the continuity of settlement, occupation and land use from the Late Iron Age through to the early Romano-British period
- To place the evidence from this Site in its wider landscape context and in light of known and recent discoveries within the Hampshire basin
- Can specific aspects of material culture, including metalwork and pottery offer a basis for the understanding of patterns of production and distribution in the Late Iron Age and early Romano-British periods within the Hampshire basin?
- Can the dating frameworks for later Iron Age and early Romano-British settlement be refined?
- If identified on the Site can pottery production be linked to Rowlands Castle Wares?

2.3 Site Specific Aims:

- To define the nature, extent, character and chronology of the Late Iron Age/conquest and Roman occupation on the Site;
- To establish whether there is any evidence for continuity of occupation/settlement from the Late Iron Age to the conquest period continuing into the early Romano-British period;
- To identify the nature of industrial activity being undertaken at the Site and establish whether there is continuity from the Late Iron Age to the early Romano-British period;
- To identify the possibility of pottery production being undertaken at the Site as may have been indicated during the Phase 1 evaluation (WA 2007b);
- To determine the date, extent, nature and duration of habitation of the Site;

- To ascertain whether specific agricultural or industrial activities can be determined from the excavated evidence;

- To determine whether buried soils or occupation horizons are preserved on the Site.

3 METHODOLOGY

3.1 Introduction

3.1.1 All excavation and post-excavation procedures were conducted in compliance with the standards outlined in the Institute for Field Archaeologist's *Standard and Guidance for Archaeological Excavation* (as amended 2008), except where they are superseded by statements below.

3.2 Excavation Methodology

3.2.1 In consultation with Winchester City Council and Hampshire County Council, six areas requiring archaeological mitigation were defined (**Figure 1**).

3.2.2 The methodology for all mitigation works was set out in detail in the Project Design for an Archaeological Strip, Map and Record Excavation (Wessex Archaeology 2008a).

3.2.3 Modern overburden (i.e. topsoil and subsoil) was removed using a mechanical excavator, under close archaeological supervision, to the first recognisable archaeological horizon, as identified in the evaluation.

3.2.4 The Site was further cleaned by hand, as appropriate, to enable an accurate Site plan to be produced. Investigation of the archaeological features and deposits was undertaken as specified in the Project Design, sufficient to satisfy the principal aims of the excavation.

3.2.5 Archaeological remains were hand-excavated in an archaeologically controlled and stratigraphic manner in order to meet the aims and objectives of the excavation. A sufficient sample of archaeological remains was investigated through sample excavation to record the horizontal and vertical extent of the stratigraphic sequence to the level of undisturbed natural deposits.

Recording

3.2.6 The extent of the excavation areas were accurately recorded using a Leica global positioning system (GPS 1200). The data was overlaid onto the Ordnance Survey (OS) National Grid (using digital map data). During fieldwork digital plans were produced using AutoCAD.

3.2.7 A full written, drawn and photographic record was made of all archaeological features. Hand drawn plans and sections were produced at a scale of 1:20 for plans and 1:10 for sections. All plans and section points were surveyed using Lecia GPS 1200, giving accurate 3D OS co-ordinates and spot heights relative to Ordnance Datum. Wessex Archaeology *pro forma* sheets were used exclusively for all recording.

3.2.8 Colour transparency, monochrome negative photographs (35mm) and digital images were taken (including a scale) as appropriate. A number of general photographs were also taken to provide an overview of the Site and the progress of the excavation.

Human Remains

3.2.9 The excavation and assessment of the human remains followed Wessex Archaeology's guidelines, which fully comply with all current legislation and standards set out by the Institute of Field Archaeologists (Brickley and McKinley 2004) and English Heritage (2002).

Artefact Recovery

3.2.10 All artefacts were collected stored and processed in accordance with standard methodologies and national guidelines (IFA 2008: SMA 1993: SMA 1995). Small finds were recorded three dimensionally using Lecia GPS. Bulk finds were collected and recorded by context.

3.2.11 All artefacts have been retained from excavated contexts unless they are of modern origin, in which case the relevant context records have been amended.

Environmental Sampling

3.2.12 Sampling targeted dateable archaeological contexts where appropriate and was conducted under the guidance of the Wessex Archaeology environmental specialists.

3.3 The Archive

3.3.1 The artefacts and accompanying documentary records from the excavation have been compiled into a stable, fully cross referenced, and indexed archive in accordance with Appendix 6 of *Management of Archaeological Projects* (English Heritage 1991). The archive of the Site and of the previous evaluation is currently stored at the offices of Wessex Archaeology, Salisbury, Wiltshire, under the code WINCM AY319 and Wessex Archaeology Project codes 65800-65801 and 65803.

3.3.2 A digital archive (Access database) was also produced alongside the paper archive. This is a fully cross-referenced and fully relational database and GIS package, which contains information recovered from the excavation.

4 RESULTS

4.1 Introduction

4.1.1 The following section summarises the results of the archaeological excavation and integrates the relevant findings from the evaluation (**Figures 2-8**). An assessment of the artefactual and ecofactual assemblages is presented in Sections 5 and 6 below. More detailed descriptions of the archaeological features and deposits can be found in the paper and digital archive.

4.1.2 A summary of the main results of the excavation of these six areas is presented in **Tables 1-2**:

Table 1: Summary of Main Findings by Area

Area	Size (hectares)	Main archaeological findings	Figure number
1	0.4	Prehistoric waterhole, ditches and other features, Iron Age and Romano British enclosures and ditches	2,3-4
2	2.0	Early Mesolithic flintwork in tree-throw holes; Bronze Age ditches and ring gully with cremation burial, Iron Age and Romano-British enclosures and associated features, medieval enclosure	2,3
3	1.8	Romano-British enclosures and trackway	2, 6
4	0.7	Bronze Age, Iron Age and Romano-British ditches	2,6
5	0.2	Medieval and post-medieval ditches	2, 8
6	0.8	Iron Age banjo enclosure and associated ditches, four-post structure, possible iron-working debris	2, 5

4.1.3 Early Mesolithic to post-medieval activity was identified across the Site. The phasing appeared to indicate that activity had different spatial foci during each period, resulting in zoning of similarly dated features (**Table 2,** Figures 2-8), discussed below. However, it should be borne in mind that the selective nature of the excavation, guided by geophysical and trial trenching results, may have partly caused this pattern. Further analysis of the data may clarify this apparent patterning. The Site phasing is at this stage provisional, and some features may be reassigned to other phases following more detailed analysis at the post-excavation stage.

4.1.4 Variation in feature depths was largely due to differential truncation as a result of past human activity (i.e. agricultural practices) and natural processes on an undulating topography.

Table 2: Summary of Main Findings by Phase and Area

Phase	Area 1	Area 2	Area 3	Area 4	Area 5	Area 6
Mesolithic	N/A	Early Mesolithic flintwork found in tree-throw holes **63987** and residually in LIA/ERB settlement pits and ditches	N/A	N/A	N/A	N/A
Bronze Age	Residual pottery in RB features	Ring gully **63787** with central cremation burial **63016**, trackway **63786** and associated field gullies **63784**, **64001**, **63998** and ditches, **63866**, **63947**	Un-urned cremation burial **62204** (date uncertain)	Polished axe fragment (Neolithic-Bronze Age) found residually in Prehistoric pit **60205**	N/A	N/A
Prehistoric–Iron Age	Shallow pits **61206**, **61158** and **61173**	Boundary ditch **63203**	N/A	Small pits **60203**, **60205**, **60207**, **60306**, **60319**, **60229** and shallow gullies **60423**	N/A	N/A
Middle-Late Iron Age and early Romano-British	Residual pottery in RB features	Residual pottery in RB features	Residual pottery in RB features	Trackway ditches **60420**, **60422**, **60425**	N/A	Banjo enclosure **65194**, **65195** with associated metal-working area **61593** with four-post structure **65023** and a small rectangular field system **65081**, **65196**, **65198-200** Later field boundaries **65201**, **65202**, **65197**
Romano-British	Large waterhole **61260**, field ditches **61245**, **61151-2**, **61167-8**, **61244**, trackway ditches **61193**, **61249** and several pits	Settlement Enclosure **63973-63983**, roundhouse **63976** and associated kiln **63391**, wells **63376**, **63567**, **63890**, and many pits and field and trackway ditches	Settlement Enclosure with small-scale metal-working **62524-5**, **62527-29** an associated well **62178** and many field and trackway ditches	Trackway **60424**, **60426** and field ditches **60427**, **60357**	Small pits **60030**, **60049**, **60085**	Residual pottery sherd in top of LIA/ERB ditch
Medieval	N/A	Field ditches **63791**, **63632** and a small pit **63543**	Field ditches **62003**, **62522**, **62523**	N/A	Quarry pit **35004**, field boundary **60095** and several smaller internal field divisions	N/A
Post-medieval-Modern	Field boundaries **61021**, **61261**, field drains	Fence-lines **63376**, field drains	Field drains	Field drains	Farm track **60097**, field drains, flint-packed footings **60104**, **60032**, small hearth **60017**	Field drains

4.2 Natural Deposits and Soil Sequence

4.2.1 The modern overburden generally comprised a topsoil, typically a mid-to dark grey brown silty loam overlying a pale brown to grey silty loam subsoil. Across the Site this sequence of deposits varied in thickness from 0.3m up to 0.6m. Archaeological features and deposits were noted both within the base of and below subsoil deposits. Within Area 6 a colluvial layer of mid- to light brown silty sand was recorded below the subsoil layer; this deposit increased in depth downslope, west to east, up to a maximum depth of 0.6m.

4.2.2 In addition to archaeological features a total of 83 natural features, including many tree-throw holes, were investigated across the Site.

4.3 Early Mesolithic (10, 000-8500 BC)

4.3.1 In Area 2 six irregular, shallow hollows, Group **63987** (**Figure 3**, **Plate** 1) probably tree-throw holes, contained Early Mesolithic knapping debris. A large and varied worked flint assemblage was recovered from these features, some of which was in exceptional condition (see Section 5, below). A second concentration of Mesolithic flintwork was recovered as residual material within Roman features around Enclosure C (**Figure 7**).

4.4 Later Bronze Age (1500-700 BC)

Summary

4.4.1 Evidence for Bronze Age occupation of the landscape centred on a small horseshoe-shaped ditched enclosure bounding a central urned cremation burial, deliberately positioned adjacent to a trackway in the centre of the Site (Area 2). The ditches of a probable funerary barrow identified in the far south of the Site during the Phase 2 evaluation, adds to the general picture of landscape re-organisation during this period (see Section 1.8 above).

Enclosed urned cremation burial

4.4.2 Located in the west of Area 2, a horseshoe-shaped gully (**63787**), enclosing an urned cremation burial (**63016**), was recorded (**Figure 3**, **Plates 2-3**). The gully was 2.7 m in diameter with an opening to the north where its two termini appeared to respect an east to west aligned ditched trackway (**63786**). No datable material was retrieved from the trackway ditches (**63786**) to confirm this association (see below Section 4.4.3), although the features are considered to be of a similar date.

Landscape Organisation

4.4.3 A central east to west aligned trackway (**63786**) extended 107m across the centre of Area 2 and comprised parallel gully segments 2.5m apart which formed flanking drainage/markers either side of a probable track (**Figure 3**). The western end of the trackway was truncated by subsequent ploughing at the point where the parallel gullies intersected with a change in the underlying geology from sand to clay. The gully segments forming the trackway were stratigraphically earlier than all features with which it intersected and significantly the deliberate positioning of enclosed urned cremation burial (**63787** and **63016**) strongly infer a contemporary relationship.

4.4.4 A heavily truncated un-urned cremation burial (**62204**) was recorded towards the south of Area 2 (**Figure 2**). Very little of the burial had survived subsequent plough damage so that only a small quantity of cremated material was recovered from a shallow 0.4m diameter scoop-shaped pit base (see Section 5.9.7 below). It is likely that this feature belongs to either the Bronze Age or Romano-British phase of activity.

4.4.5 Undated shallow gullies **63784** and **64001** were located at the western and eastern ends of trackway **63786** (**Figure 3**). Both were sterile in nature and were truncated by Roman field ditches. It is postulated that they form the remnants of an organised Bronze Age landscape often characterised by field divisions and trackways (Yates 2007, 63-4, fig. 7.1). Situated at the southern end of **64001**, two very diffuse shallow parallel linear features **63866** and **63947**, disturbed at their northern ends by later bioturbation, are also thought to be part of this landscape. Several sherds of Middle/Late Bronze Age pottery were recovered from the fills of **63947**. East to west gully **63998** located parallel to, and 15m south of track **63786**, may also be part of this landscape; it was cut by Roman field ditches (**Figure 3**).

4.5 Undiagnostic ?Iron Age (*c.* 700-100 BC)

Summary

4.5.1 Several features recorded across the Site were found to contain undiagnostic pottery fragments that could not be securely assigned to a definite period of occupation. Features included gullies and pits and demonstrate the successive settlement within the Site from the Bronze Age through to the Romano-British period.

Archaeological features

4.5.2 In the north-eastern corner of Area 2, east to west boundary ditch **63203** was aligned broadly parallel with track **63786** and, therefore, could be contemporary or of a slightly later date (**Figure 3**). Pottery recovered from ditch **63203** was largely un-diagnostic flint and sandy-tempered ware providing an uncertain date ranging from the later Bronze Age to the Middle/Late Iron Age and early Romano-British periods.

4.5.3 Three irregular shallow pits (**61206, 61158** and **61173**) were recorded across the centre of Area 1 and were all found to contain compact deposits of fine heat-fractured flint within a black to mid-grey brown sandy clay (**Figure 3**). The similarity of this material with the deliberately backfilled upper deposits of waterhole **61260** (**Figures 3** and **4**) may indicate a Middle/Late-Iron Age and early Romano-British date. A fragment of un-diagnostic flint-tempered prehistoric pottery was recovered from feature **61206**. It is thought that these three features may relate to the industrial process associated with the creation of the abundant heat-fractured flint recorded across Area 1.

4.5.4 In the south of Area 4, a north-west to south-east aligned linear feature **60423** comprising two opposing shallow gullies, the southern of which curved to the south-east appeared to form a north-eastern boundary (**Figure 2**). Pottery recovered from these heavily truncated concave gullies was dated to the later prehistoric – Iron Age. A small pit (**60205**), was located south-west of gully **60423**, and contained probable Iron Age pottery and notably a flake from a reworked polished flint axe and two poorly worked flint

cores. Four further undated pits, (**60203**, **60207**, **60306** and **60319**) also located in the west of Area 4 and due to their similarity of form are likely to be contemporary with pit **60205**. Pottery of Iron Age and Romano-British date was recovered from pit **60229** also part of this group (**Figure 3**).

4.6 Middle/Late Iron Age – Early Romano-British (*c.* 400 BC – AD 150)

Summary

4.6.1 Occupation during this period centred on the remains of a probable banjo enclosure (Enclosure A) located in the south of the Site in Area 6 (**Figure 2**). An external subsidiary enclosed smithying area with four-post structure adjoined the banjo enclosure ditch to the south and a series of small paddocks/fields adjoined the northern banjo enclosure ditch. Middle to Late Iron Age settlement activity is attested by a possible truncated structure identified within the central area of the banjo enclosure during the Phase 2 evaluation trenching, which included a spread of domestic debris comprising burnt animal bone, a hulled wheat grain and a glume fragment. In the east of the Site in Area 4, three parallel ditches demarcated a north-west to south-east aligned trackway provided evidence for wider landscape re-organisation during this period.

Banjo Enclosure (Enclosure A)

4.6.2 The banjo enclosure (Enclosure A) comprised opposing south-east to north-west aligned antenna ditches (**65194** and **65195**), which created an approach upslope towards a 7m wide entrance (**Figure 5**). The course of each ditch turned outwards 90° to form the curved eastern side of a probable sub-circular enclosure (**Figure 5**), although the full extent of the banjo enclosure lay outside the excavated area. Ditch **65195** was picked up to the north-west in evaluation Trench **518** (**Figure 5**).

4.6.3 Finds recovered from the fills of the banjo enclosure ditches were largely flint-tempered vessel fragments representing plain and bead rim or high-shouldered jars. Sandy and organic tempered wares were also present within the ceramic assemblage. Several burnt fragments of sheep or goat bone were found and metal-working slag and hearth components were found in the southern of the banjo enclosure ditches which formed part of an enclosed industrial area (see Section 4.6.6 below).

4.6.4 Enclosure ditches **65194** and **65195** were subsequently re-cut as far as the entrance so as to form two opposing termini. This redefined the enclosure entrance and rendered both the north and south antenna ditches obsolete. This remodelling cut through the silted ditch **65193**, indicating that it had become redundant by this phase.

4.6.5 A small complex of heavily truncated features were recorded during the Phase 2 evaluation within Trench **520** (**Figure 5**) comprising a curvilinear gully opposed by an arc of post/stake-holes. All were filled with charcoal-rich material containing Middle/Late Iron Age pottery, fragile fragments of burnt animal bone and grain fragments (WA 2008b). Located centrally it is likely this truncated structure relates to domestic activity associated with the banjo enclosure.

Metal-working Area

4.6.6 A subsidiary activity area was formed by hook-shaped ditch **65193** and the southern banjo enclosure ditch **65194** (**Figure 5**). This enclosed an area of 0.04ha. The ditch contained localised deliberate backfill below the secondary silting. High levels of metal-working debris (mostly slag) were recovered from both ditches, which included smithing hearth bottoms, hammerscale and parts of a crucible. This all points to localised metal-working. A fragment of hearth clay lining with the remains of a tuyère hole with slag adhering provides further evidence of metal-working within this defined area. The northern end of ditch **65193** terminated to form a 2m wide entrance with ditch **65194** (**Figure 5**).

4.6.7 Lying adjacent to **65194** and 8m west of the subsidiary enclosure entrance four flint packed post-holes defined post-built structure **65023.** It measured 3m north to south and 1.8m east to west (**Figure 5**) and appears to have been constructed out of posts that were approximately 0.5m in diameter. This four-post structure points to some storage function in this area. A group of what turned out to be natural hollows were investigated in the west of this enclosed area. These were the only other internal features observed within the area enclosed by ditch **65193**.

Field System

4.6.8 North-east of the banjo enclosure, ditches **65081**, **65196**, **65198-200** represent the denuded remains of a sub-rectangular field system (**Figure 5**). Several sherds of pottery belonging to this phase of activity were recovered from ditches **65198** and **65199**. The other ditches are included here on spatial grounds and similarity of appearance. All the ditches exhibited a pitted base indicative of hedged/tree-lined field ditches.

4.6.9 Ditch **65201,** located to the north-east of the banjo enclosure (**Figure 5**), was traced for at least 70m and appeared to have been hedged/tree-lined. A little Middle/Late Iron Age and early Roman pottery was recovered from the fills of **65201**. Ditch **65197** extended east-west across the width of the excavation area, cutting the northern banjo enclosure ditch (**Figure 5**). Several sherds of Middle/Late Iron Age and early Roman pottery were also recovered from its fills. It is unclear whether ditch **65201**, as it was more substantial than the other ditches, formed the outer ditch to the banjo enclosure or formed a field boundary with ditch **65197**. An east-west aligned shallow field gully **65202** located in the north-east corner of Area 6, filled predominately with colluvium is likely to be associated with this field organisation.

Trackways

4.6.10 Bisecting the centre of Area 4 three parallel ditches (**60420**, **60422**, and **60425**) formed a staggered north-west to south-east aligned trackway which superseded segmented gullies **60423** (see Section 4.5.4 above) and provide evidence of a wider influence within the landscape during this time (**Figure 5**).

4.7 Romano-British (AD 43 – 410)

Introduction

4.7.1 Archaeology dating to this period was by far the most abundant, occurring to varying degrees within excavation Areas 1-5 (**Figure 2**), although only a single sherd of early Roman pottery was found within Area 6.

4.7.2 The most prominent features of this date were a complex of settlement and field ditched enclosures connected through ditched tracks indicating a high level of landscape organisation. These evolved through continual modification, centres of activity shifted from Area 3 in the early Romano-British period (AD 43-150) westwards to Area 2 during the late 1st /early 2nd centuries AD (**Figures 6-7**).

4.7.3 Occupation during this period has been divided into early and mid-/late Romano-British activity within six phases have been identified and are described below:

Early Romano-British (AD 43 – 150)

Summary

4.7.4 Within the early Romano-British period (AD 43-150) three principal phases of modification were identified through the stratigraphic sequence of inter-cutting enclosure and landscape ditches within Areas 2 and 3.

4.7.5 A rectangular settlement enclosure, Enclosure B, formed the focus of occupation (**Figure 6**). Material recovered from the enclosure ditches suggested a domestic and small-scale metal-working industrial function. Fragments of triangular loomweight, oxidised fragments of oven or kiln floor and hearth fragments associated with slag deposits were found deliberately dumped within the enclosure ditches. The metal-working debris recovered predominately comprised smithying slag lumps and hearth bottoms associated with smithying processes. Pottery recovered was largely of a domestic assemblage principally comprising jars and several bowls. Pottery ranged from handmade vessels to decorated burnished wares and included a skeuemorphic handle and Gallo-Belgic plate copy. Trade and contacts with the wider Roman world is implied by the recovery of an okra seed (see Section 6.3.12 below).

4.7.6 A series of paddocks/fields radiated westwards and northwards of Enclosure B connected by ditched tracks. A contemporary smaller enclosure, Enclosure C, was located in the south-west of Area 2.

Romano-British Phase 1

4.7.7 During this phase, occupation evidence was found predominately in a south-west to north-east band of features across Areas 2 and 3, with a little activity identified in Area 1 and a trackway in Area 4 (**Figure 6**). Phase 1 features included enclosures, ditches, pits, post-holes etc. Rectangular Enclosure B was associated with metal-working. A horseshoe-shaped enclosure **63983** (Enclosure C) was identified in Area 2 (**Figure 7 inset**). A series of trackway ditches extended across Areas 2 and 3, presumably to allow the movement of livestock between enclosures. A small kiln and a well indicate settlement activity.

Enclosure B

4.7.8 In Area 3, ditches **62524**, **62527** and **62528** represent the original construction phase of Enclosure B, a small sub-rectangular enclosure (47m x 17m) aligned broadly east to west with entrances in the north-west and south-east corners (**Figure 6**). The ditches measured approximately 1m in width with moderate concave sides and a flat base. No evidence for an associated bank was recorded and no internal features were recorded. Finds recovered from the ditches of this enclosure incorporated both domestic handmade and wheel-thrown jars and bowls and small-scale industrial remains such as rotary quern fragments and metal-working slag, fired clay hearth and triangular loomweight fragments (see Section 5.8 below).

Associated features

4.7.9 A substantial well, **62178,** was located 9m north of the north-west corner of Enclosure B (**Figure 6**). Small quantities of fired clay and burnt flint were found with occasional fragments of early Roman pottery within the uppermost well deposits. At a depth of 1.5m the feature had near vertical sides and a diameter of *c.*1.2m. It was excavated by machine to a depth of 3.6m, but no further due to health and safety considerations. The fill sequence throughout the well profile comprised waterlogged blue-grey silty clays. It should be noted that in comparison to nearby enclosure ditches the finds recovered from well **61278** were sparse.

4.7.10 Located approximately 15m north of well **62178** were two short, slightly sinuous north-west to south-east aligned and directly opposed ditch segments, **62535** and **62536**. Both had square-ended termini (**Figure 6**). Deliberate dumps of material recorded within these ditch segments included fragments of smithing hearth bottoms. This suggests that metal-working in this area may initially have been undertaken beyond the bounds of Enclosure B.

4.7.11 Within Area 3, tree-throw holes (**62502**, **62379** and **62546**) and a truncated ditch (**62538**) contained small amounts of abraded early Roman pottery, burnt flint and fired clay (**Figure 6**).

Central trackway

4.7.12 North-east to south-west aligned ditches **62540** and **62542** located in the south-west corner of Area 3 formed part of a track/approach towards the western entrance of Enclosure B (**Figure 6**).

Enclosure C

4.7.13 In Area 2, ditch **63983** represents the earliest construction phase of Enclosure C (**Figure 6**). Orientated north-east to south-west this small horseshoe-shaped enclosure with a wide (10.8m) north-east facing entrance. An area of approximately 0.03ha was enclosed. Only the base of the feature survived subsequent modification. Material filling all phases of this enclosure was gleyed silty clay, largely deposited by water eroding the feature's sides.

Associated features

4.7.14 North-east of Enclosure C lay a small truncated keyhole-shaped kiln, **63391**, (1.44m x 0.62m) with a northern hearth and southern flue (**Figure 6**). No

surviving superstructure was evident though a heat affected lens of clay (?lining) covered the base and sides of the rounded northern end of the kiln. This was overlain by a layer of hearth debris comprising charcoal, charred plant remains, pottery and fired clay. This deposit extended along the length of the flue component of the feature though a majority of the pottery recovered was found dumped within the centre of the hearth. A vertically sided pit/post-hole, **63462**, 0.4m in diameter and 0.15m deep was located 3m east of the kiln (**Figure 6**). It was filled with deliberately dumped rake-out material including charcoal and smithing hearth bottom fragments. An undated rectangular hearth, **63256,** (1.8m x 1m x 0.1m) located near the kiln **63391** may have been related (**Figure 6**).

4.7.15 Situated 8m west of Enclosure C, the shallow remains of a north facing ring gully **63994** was recorded cutting the northern of the two Bronze Age trackway gullies **63786**. Located centrally within this ring gully a shallow, well-defined ovate pit, **63003** was found to be deliberately backfilled with material containing a loomweight and may represent the remains of a small open structure.

Landscape Organisation

4.7.16 Fragments of substantial landscape boundaries were identified across Areas 1-3. These are probably the remains of trackways and enclosures, and included ditch **63986**, continuing probably as ditch **62542** and **62540** in Area 3, **64002** and **63775** (Area 2) and **61245** (Area 1) (**Figure 6**). Aligned north-west to south-east ditch **63986** formed a substantial boundary feature in the north-east corner of Area 2. It contained pottery, fired clay and quernstone fragments. A short 20m section of curvilinear ditch (**64002**) was located against the eastern extent of Area 2 and opposed ditch **63775**, which was 55m to the west (**Figure 6**). The northern terminal of ditch **64002** formed a post-hole slot. Ditch **63775** extended for 30m north to south and 50m south-east to north-west and represented the initial establishment of a field/droveway boundary realigned successively by **63774** (**Figure 6**) and later **63773** (**Figure 7**). With an average width and depth of 0.5m and 0.2m respectively, the ditch profile was steeper along the internal (western) than external side to facilitate the collection of down-slope run-off (south-east to north-west). Subsequent to later re-alignment, the upper portion of the south-east to north-west section of this ditch was filled through the deliberate dumping of domestic debris.

4.7.17 In the western part of Area 2, ditch **63779** (**Figure 6**), which had a steep U-shaped profile, contained a distinct upper deposit of deliberately backfilled midden material that comprised pottery, fired clay, burnt flint and charcoal. This feature comprised a 16m length of east to west linear ditch with a rounded terminal, attached to which was a perpendicular gully 5.5m long. The east to west section of the gully followed a comparable alignment to ditch **63775**.

4.7.18 Sinuous east to west aligned ditch **63782** was located 24m south of ditch **63775** (see Section 4.6.12) and extended 40m and terminated at its western end (**Figure 6**). The relationship with perpendicular ditch segments **63132** was not clearly defined and the two may be contemporary.

4.7.19 In the south-east of Area 2 north-west to south-east aligned ditch **63799** had a rounded north-western terminal and extended beyond the limit of

excavation to the south-east and represented the principal landscape boundary in this part of the area.

4.7.20 In Area 4, parallel ditches **60424** and **60426**, located 5m apart, formed a north-west to south-east aligned trackway that led down slope towards the areas of occupation activity in Areas 2 and 3. Significant quantities of charcoal and pottery were found dumped within shallower ditch **60426**, which increased significantly in size down slope (northwards), extending from 0.76m to 2.8m in width and 0.16m to 1.05m in depth. A continuation of this ditch was recorded in Trench **532** to the north-west of Area 4 (**Figure 6**).

4.7.21 In the south-west corner of Area 1, two ditches (**61244** and **61252**), aligned east to west and north-north-east to south-south-west respectively were recorded (**Figure 6**). Ditch **61252** extended beyond the southern limit of excavation and was truncated at its northern extent by pit **61160**. The ditch lay perpendicular to later ditch **61251** (**Figure 7**) and contained episodic primary collapse overlain by charcoal-rich secondary silting from which fragments of briquetage (salt containers) were recovered as well as Early Roman jars and a pedestal base. Several fragments of dense flint-tempered pottery were also recovered from ditch **61252** and are thought to be residual Bronze Age material.

*Waterhole **61260***

4.7.22 Within Area 1, large waterhole **61260** (**Figure 4**) was backfilled with a series of deliberately dumped deposits containing between 40% to 60% burnt flint that was thought to be the remains of some form of industrial processing. These deposits overlay a sequence of primary edge collapse and secondary infill layers. Charcoal fragments and flecking were recorded within these secondary deposits and two fragments of rotary quern were retrieved (deposit **61256** Object 27 and 28). Few fragments of heat fractured flint were noted within the deposit in the lower half of this feature. Several pottery fragments recovered from the upper deliberately backfilled layers were dated to the early Romano-British period. Immediately north of this waterhole boundary ditch **61245** (55m x 0.8-1.8m x 0.75m) formed the south-eastern corner of a field (**Figure 6**).

Romano-British Phase 2

4.7.23 Enclosure B was expanded during this phase to double its original size. Well **62178**, encompassed within the expanded enclosure, appears to have gone out of use at this time. The track leading to the western enclosure entrance was further formalised through the construction of a flanking ditch and a series of square paddocks. The eastern side of Enclosure C was realigned and to the north of this enclosure several field/plot boundaries were also reinstated or re-aligned. The addition of an L-shaped ditch altered the field layout in Area 1.

Enclosure B

4.7.24 This second phase of activity, associated with Enclosure B, involved ditches **62525** and **62529** (**Figure 6**). The alignment of the southern terminal of ditch **62525** in relation to the northern terminal of ditch **62527** indicates that the two ditch construction phases may have overlapped. In which case the enclosure modifications represented by **62525** and **62529** did not occur simultaneously.

4.7.25 Enclosure B was modified and extended at some point; ditch **62525** forming the northern boundary of this larger enclosure, encompassing a sub-square area of approximately 0.2 ha (**Figure 6**). Ditch **62525** cut earlier boundary **62524**. Artefacts and ecofacts recovered from associated ditch fills suggests the enclosure's function was related to metal-working processes. Numerous deliberate dumps of charcoal, pottery, slag, fired clay and burnt flint were recorded within the ditch. The majority of the pottery recovered is of early Roman date. Later Roman pottery found within the upper surface of the ditch would appear to be associated with an abandonment phase. Examination of environmental samples taken from the ditch produced evidence for smelting and smithing processes. Examination of the slag recovered suggests the material may not have travelled far from its place of manufacture. The southern enclosure boundary initially represented by ditches **62527** and **62528** was re-established through the construction of ditch **62529**, which closed off the southern entrance to the enclosure and widened and slightly re-aligned the western entrance. Further deliberate dumps of fired clay, charcoal and pottery were recorded within this feature suggesting that metal-working activity was now occurring within the bounds of the enclosure.

Central trackway

4.7.26 North-east to south-west aligned ditch **62543** (47m x 0.5m x 0.2m) represents the formalisation of a southern track boundary that led towards the western entrance of Enclosure B (**Figure 6**).

Enclosure C

4.7.27 Cut away at both ends, ditch **63982** formed a minor remodelling and slight enlargement of horseshoe-shaped enclosure **63983**, replacing the south-eastern side of the enclosure and increasing the encompassed area to 0.05ha (**Figure 6** and **Figure 7 inset**).

Landscape Organisation

4.7.28 A second phase of landscape organisation is represented by ditches **62391**, **62539** and **62544** that were located immediately west of Enclosure B to form two sub-square fields each measuring approximately 0.13 ha (**Figure 6**). Field entrances were located in the south, off the north-east to south-west aligned trackway that led to the western entrance of Enclosure B.

4.7.29 Ditch **62539** had a uniform fill sequence comprising the primary stabilisation of the ditch profile, overlain by low energy water derived secondary silting. The exception was the south-eastern terminal, which was rich in deliberately dumped artefacts and ecofacts (including an okra seed) presumably due to its proximity to the western entrance of Enclosure B. An apparent low density pattern of artefact occurrence was also prevalent through ditch **62544**, which formed the western limit of this field system. Small quantities of fired clay, burnt flint and slag were noted within all landscape ditches west of Enclosure B. The entrances of both these adjacent fields was from the south, though terminal **62391** aligned with the Phase 2 north-western corner of Enclosure B (represented by ditch **62525**) formed an additional field opening to the east (**Figure 6**).

4.7.30 Alterations to the landscape organisation associated with Enclosure C were concentrated north and west of the enclosure and involved ditches **63774**, **63785** and **63795** (**Figure 6**). The entrance droveway (see Section 4.7.12

above) was narrowed through the construction of sub-square, curvilinear ditch **63797** and several small field plots were created (**Figure 6**).

Romano-British Phase 3

4.7.31 A change in landscape use is evident throughout Phases 3 and 4. Enclosure B and adjacent paddocks went out of use. They are replaced by a substantial sinuous northern boundary ditch and a significantly less substantial southern, broadly parallel ditch, which form a possible droveway. Minor alterations in field layout are evident to the west of Enclosure C, which was itself enlarged on the same alignment to form a complete sub-rectangular enclosed area.

Enclosure B

4.7.32 Ditch **62526** extended 100m on a north-east to south-west alignment from the eastern limit of Area 3 bisecting Enclosure B and signifying its end of use (**Figure 6**). It formed the southern boundary of an elongated east to west aligned field or large drove way with **62537** to the north. Ditch **62526** contained fills indicative of a natural infilling, except where it crossed through the centre of Enclosure B where artefacts and ecofacts relating to metalworking were recovered.

4.7.33 North-east to south-west aligned boundary ditch **62537** turned to the west where it intersected with western field boundary ditch **65244**. It continued beyond the northern limit of Area 3 (**Figure 6**). It was U-shaped in profile and contained a fill sequence which appeared generally more sterile than previously noted in this area, with little evidence for occupational detritus.

Enclosure C

4.7.34 In Area 2 the third phase of enclosure modification to Enclosure C was represented by ditch **63977** (**Figure 6** and **Figure 7 inset**). This created a sub-rectangular area measuring approximately 36m south-east to north-west and 22m north-west to south-east. No entrances were identified within the excavated area and finds recovered from the upper sequence of the ditch included pottery dating to the later 2nd-3rd century AD reflecting the continued use of the immediate area during the later Romano-British period.

Landscape Organisation

4.7.35 A trapezoidal field was established west of Enclosure C by ditches **63782**, **63995** and **63781** enclosing an area of 0.04ha (**Figure 6**). Most of the finds came from sections along the southern portion of the feature with the greatest concentrations of pottery recovered from ditch **63995**. A sharp interface between primary and secondary ditch deposits was particularly noted in ditch **63995** which may reflect maintenance.

4.7.36 A curvilinear, right-angled ditch (**61167**) with an eastern rounded terminal located in the south-west corner of Area 1 (**Figure 6**). Measuring 24m x 0.8m x 0.35m, the ditch had a U-shaped profile with some primary material recorded along the western side of the ditch. A possible though poorly defined re-cutting/cleaning episode is inferred by the profile of overlying deliberate dump deposits which were found to contain settlement/industrial debris including fired clay (briquetage), charcoal and a pottery assemblage predominately comprising storage vessels some of which were hand made. The quantity of finds decreased towards the ditch terminal in which there

was no evidence for deliberate dumping. The ditch truncated the eastern part of **61244** and was later replaced by ditch **61168** (**Figure 7**).

Discrete Features

4.7.37 Fourteen pits which were broadly dated to the Romano-British period were recorded across Areas 1-5 though the large majority were located within Area 2 (**60030, 60049, 60085, 60312, 61160, 62107, 63049, 63181, 63230, 63289, 63487, 63523, 63541, 63903**) (**Figure 6**). The pits ranged in shape and size (0.4m dia–0.8m dia x 0.1-0.65m) and were generally filled through out with charcoal flecks, burnt flint fragments and occasional pottery fragments. In addition fragments of slag were recovered from pit **63289** and hearth debris was recovered from pit **63049**. Two further pits (**61004, 63733**) can be dated to the early Romano-British period (1st-early 2nd centuries AD) (**Figure 6**).

4.7.38 Within Area 3, pits **62012, 62139, 62297, 62309, 62327, 62467, 62470, 62498** and **62509** were recorded across the excavation area (**Figure 6**). Sizes ranged between 0.6m dia x 0.05m and 1.5m x 1m x 0.2m and generally contained topsoil derived secondary fills with charcoal and burnt flint fragments. No datable material was recovered, though it is likely given their form and location that these features relate to the Romano-British occupation of this area.

4.7.39 Recorded within Area 1, small pits, **61048**, **61056**, **61064**, **61067**, **61069** and **61152** were located in a cluster in the south-west corner of the area amongst a zone of tree-throw holes (**Figure 6**). All were sub-oval ranging between 0.76m x 0.53m x 0.1m and 2.3m x 1.18m x 0.3m. However, no datable material was recovered, although the location of the cluster strongly suggests a Romano-British date. Oval pit **61076** was recorded to the west of this group, and cut early Roman ditch **61244**.

Middle and Late Roman-British (AD 150-410)

Summary

4.7.40 During this period Enclosure C remained the centre of activity on the Site. The enclosure was modified and enlarged through successive ditch reconstructions before its abandonment. The area was in continual use with landscape organisation continually evolving. As a consequence the transition through all six construction phases attributed to the Romano-British period was blurred.

4.7.41 A roundhouse associated with Enclosure C, formed the focus of occupation (**Figure 7**). Several wells and a group of storage and rubbish pits associated with the roundhouse reflect this occupation. Material recovered from these features suggested a continuation of the domestic and small-scale metal-working industrial function evidenced during previous phases. An increase in the range of ceramic vessels recovered may infer an increase in influence and importance of the Site though handmade flint-tempered vessels were recovered with burnished and decorated vessels. The ceramic assemblage included numerous jar types, bowls, dishes, plates (including several Gallo-Belgic dish copies) carinated and poppy head beakers, flagons, cups, amphora, several pedestal bases and strainers. In addition some imported fineware vessel types (samian and a Gaulish cornice rim beaker) were recovered.

4.7.42 Small-scale industrial activity occurring within the Site continue to be implied through the recovery of fragments of triangular loomweight, oxidised fragments of oven or kiln floor, quernstone fragments and metal-working debris.

Romano-British Phase 4

4.7.43 Landscape organisation adjacent to Enclosure C becomes more complex during this phase of activity. The western field boundaries are reinstated, and a number of smaller sub-rectangular to trapezoidal field/plots are defined south-east of Enclosure C. Field boundaries and tracks between Enclosure C and Area 1 are remodelled. As the Phase 3 Enclosure C goes out of use, a roundhouse was constructed beyond the northern enclosure limit, flanked to the east by ditch segments. To the south-east within Areas 4 and 5 a number of field ditches and several small isolated pits were recorded reflecting an expansion in landscape organisation feasibly suggesting an increase in land being brought into productive use.

Enclosure C

4.7.44 The sub-rectangular enclosed area represented by ditch **63977** (**Figure 7 inset**) appeared to go out of use during this phase with the northern section of the ditch being utilised as part of the drip gully associated with the construction of roundhouse **63976**.

*Roundhouse **63976***

4.7.45 Superseding Enclosure C the heavily truncated remains of a post-built roundhouse with a diameter of *c.* 7.5m (**63976**) comprising an incomplete circle of postholes and the remnants of an outer drip gully were identified directly beyond the northern limit of the Phase 3 Enclosure C boundary (**Figure 7**). A double posthole lay adjacent to a deliberate break in the drip gully circuit and is likely to represent an east facing entrance to the roundhouse. Given the proximity of the structure to the Phase 3 Enclosure C ditch it is probable that the southern end of the drip gully arc utilised this ditch. It is likely that this structure continued to be in use throughout Romano-British Phases 4-6 described below.

Associated features

4.7.46 Adjacent to the western side of this structure, a well **63376**, a substantial rubbish pit **63916** and two smaller pits, **63664** and **63681**, were recorded. It is thought these discrete features were constructed and used during the life span of the roundhouse. A further pit **63623** located 3.5m south of the roundhouse may also represent part of this pit group (**Figure 7**). Finds recovered from these discrete features are domestic in origin and include flagons, beakers, bowls and jars. Though few nails were found across the Site, a significant number came from deliberate occupation dumps filling the upper portion of well **63376**. Fragments of Dressel 20 amphorae were also recovered from pits **63681** and **63623**.

4.7.47 Three north-east to south-west aligned ditch segments, **63979**, **63980** and **63981** were recorded 7m east of roundhouse **63976** (**Figure 7**). These were 11m in length and may have been drainage ditches.

4.7.48 Two wells were recorded within Area 2 (**62178** and **63567**). Well **63567** had a diameter of 3.25m and measured 2.65m in depth. Situated within the area

formerly occupied by Enclosure C, it is thought to be the earlier of the two wells (**Figure** 7). A sequence of deliberately backfilled deposits containing early Roman pottery was recorded towards the base of the feature overlain by a series of secondary deposits, which were found to contain fired clay, slag, animal bone and pottery of 1st to 2nd century AD date. The pottery assemblage was domestic and comprised bowls and jars.

4.7.49 Located 15m east of Enclosure C and possibly associated with trapezoidal field ditch **63796** well **63890** measured 4.2m (east to west) x 3.7m (north- to south) x 3m (**Figure** 7). The well profile comprised a broad shallow western approach with the principal shaft located against the eastern edge. It had steep, convex sides that tapered towards the base. The lower 2m of the feature were filled with fairly sterile gleyed waterlain deposits below secondary fills and a sequence of deliberate dumps of charcoal-rich occupation debris. Little artefactual material was recovered from the lower 2m of deposits. Pottery recovered from the secondary infill sequence dated from the Middle-Late 1st-2nd centuries AD and was found in conjunction with fired clay and burnt flint fragments. Deliberately dumped material recorded at the top of the well fill sequence included animal bone and pottery dating to the later 2nd–early 3rd centuries AD.

4.7.50 Within Area 2, two pits, **63370,** a deliberately backfilled rubbish pit situated north of Enclosure C and **63421,** located adjacent to well **63890,** were found to contain pottery dating to the later 2nd century (**Figure 7**). Two postholes **63435** and **63437** were located north-east and south-west of pit **63421** respectively and may have been associated with a well structure.

Landscape Organisation

4.7.51 Respecting a similar alignment to earlier constructions, curvilinear ditch **63773**, and north-east to south-west orientated ditch segments **63789** and **63018** established the field boundaries to the west of roundhouse **63796** (**Figure 7**).

4.7.52 The northern of these three ditches, **63773** was a long (100m x 0.7m x 0.2-0.7m) curvilinear boundary ditch forming an irregular sub-rectangular field and represented the final re-establishment of this boundary during the Romano-British period. This ditch increased significantly in size at its south-western extent, where it was recorded as having a steep U-shaped profile. The deliberate dumping of settlement debris was prevalent towards the southern end of the feature which lay 20m west of roundhouse **63976**. A south-western terminal opposed the north-eastern terminal of ditch **63789** to form an access westwards. Ditch **63789** was orientated north-east to south-west was largely dug away by later re-cutting events. Following the same alignment ditch **63018** is thought to be a southern continuation of this boundary. A 21m length of this heavily recut ditch was recorded extending to the south-western limit of excavation.

4.7.53 South-east of roundhouse **63976** a trapezoidal field was created by ditches **63792** and **63796** with an internal division created by ditch **63793** (**Figure 7**). Ditch **63792** (18m x 1.1m x 0.4m) had a well defined northern terminal and formed the western field boundary. An increase in the concentration of charcoal fleck inclusions was noted towards the surface of the ditch fill. Curvilinear ditch **63796** measuring a total of 20m in length formed the eastern boundary. The western end of this ditch appeared to form a diffuse

terminal adjacent to well **63890.** However the ground was heavily disturbed at this point and the relationship between ditch and well was unclear. Few artefacts or charcoal were present within the fills of the ditch. East to west aligned ditch **63793** measured 12m in length with a rounded west terminal. An eastern terminal was recorded though its shallow indistinct nature may reflect machine truncation rather than an actual end of the ditch. Pottery and slag were recovered from the ditch fills. Postholes **63516**, **63518** and pit **63523** were located parallel and adjacent to the northern side of this ditch.

4.7.54 In the north-east corner of Area 2 a field was formed by an L-shaped ditch (**63771**) and north-west to south-east aligned ditch **63188** (**Figure 7**). A south-eastern field entrance was formed by the eastern terminal of ditch **63771** and the western terminal of opposing undated ditch **63261**. In the south-east corner of Area 2 north to south aligned ditch segments **63945**, **63985** and **63832** represent further field boundaries. A shallow sub-oval pit (**63837**: 3.1m x 2.06m x 0.8m) and a small oval pit (**63370**: 0.88m x 0.5m x 0.3m) were also recorded in the area directly north and east of roundhouse **63976** (**Figure 7**).

4.7.55 To the east in Area 3 substantial field boundary ditch **62545**, orientated broadly parallel to **63188** (Area 2), extends 37m from the north-west corner of the area terminating at its eastern extent to form a possible north-eastern field boundary with **63188** and **62541**. Replacing the earlier principal east to west trackway north-east to south-west aligned narrow field ditch **62541** with a north-eastern terminal forms the southern of these field boundaries to create a large field division with a probable south-eastern entrance (**Figure 7**).

4.7.56 In Area 1, a large boundary ditch **61250** and curvilinear ditch segment **61168** bound the backfilled area of waterhole **61260**. East of this ditch, parallel curvilinear ditches **61193** and **61249** formed a south to north-east aligned track (**Figure 7**).

4.7.57 To the south in Area 4 several ditches were noted as having been re-cut. The track delineated by ditches **60422**, **60424** and **60425** are replaced by field ditch **60428** to form a north-western boundary with ditch **60427**. Terminal **60357** formed the opposing possible eastern boundary (**Figure 7**). Further to the south in Area 5 small pit **60010** and a large irregular shallow hollow, **60029**, were also found to contain pottery dating to this period.

Romano-British Phase 5

4.7.58 During this fifth phase a boundary ditch was constructed around roundhouse **63796** and the Site was altered to create enlarged fields directly surrounding this structure. Scattered features were also dated to this period

*Roundhouse **63976** and associated ditches*

4.7.59 Curvilinear enclosing ditch **63975** created a wide western entrance to roundhouse **63976** (**Figure 7**). The ditch formed a rounded northern end and a sub-rectangular southern end. A majority of the finds recovered from this ditch derived from its curved northern end and predominately included vessel body sherds dated to the late 2nd and 3rd centuries AD.

Landscape Organisation

4.7.60 West of roundhouse **63796**, perpendicular ditches **63777** and **63778** formed the principal north-east and south-west field divisions with ditch **63788** (**Figure 7**). The eastern terminal of **63778** and the north-eastern terminal of shallower north-east to south-west aligned field ditch **63788** formed an entrance facing Enclosure C. Artefacts recovered from these ditches decreased in number westwards away from the roundhouse and were significantly less abundant than during previous phases of field organisation, indicating a decrease in occupational intensity associated with this settlement.

4.7.61 East of roundhouse **63976**, ditches **63794**, **63772** and **63800** formed a broadly north to south aligned field with the southern of these ditches **63800** forming an east to west track alignment with ditch **63988** (**Figure 7, Area 2 plan**). Similar to the fields to the west of the roundhouse relatively little occupational debris was recovered.

4.7.62 Circular rubbish pit **63861** (**Figure 7**) with a diameter of 1.9m cut the southern terminal of field boundary **63773**. Several deliberate dumps of charcoal, fired clay and pottery fragments filled the pit.

4.7.63 To the north in Area 1 an east to west aligned ditch segment **61251** was recorded. Its western end was cut by a small pit (**61160**) (**Figure 7**).

Romano-British Phase 6

4.7.64 During this phase there is evidence that the Site began to decline in importance and the finds assemblage suggests that it was finally abandoned by the middle of the 3rd century AD.

*Roundhouse **63976** and associated ditches*

4.7.65 The final stratigraphic construction phase comprised minor re-cutting of the ditches surrounding roundhouse **63976** to form an eastern boundary, ditch **63973**, and southern boundary, ditch **63974** (**Figure 7**). Ditch **63974** is thought to continue as ditch **63790** (see **Figure 7 inset**) where it forms a south-western terminal. Ditch segment **63999** located between roundhouse **63976** and ditch **63973** also formed part of this restructuring.

Landscape Organisation

4.7.66 It is thought that the majority of field and trackway ditches went of use during this time. Evidence for occupation mainly comprised the cutting of small pits.

4.7.67 Three undated pits were recorded across Area 2, (**63211, 63387,** and **63697**) (**Figure 2**). As with undated pits recorded in Area 3 the features were largely filled by topsoil derived secondary deposits containing charcoal flecks and occasional burnt flint fragments. Pits were circular to oval in shape and measured between 0.4m and 0.8m in diameter and between 0.1 and 0.5m in depth. Given the dominance of Romano-British features in this area it is likely these pits relate to this period of occupation.

4.7.68 A small circular hearth, **63406**, was recorded cutting ditch **63773** in Area 3 and two undated circular hearths were recorded in Area 2, **62051** and **62234**. The predominance of Romano-British activity within these two areas strongly suggests that these hearths date to that period of occupation.

4.8 Medieval (AD 1066-1499)

4.8.1 Medieval features occurred across the Site and formed three distinct spatial groups (south of Areas 2, 3 and Area 5).

4.8.2 In the eastern part of Area 2, a field boundary ditch, **63791,** was orientated north to south and initially it had rounded termini. Gully **63632** represented a later extension to the western side of this field ditch (**Figure 8**). A shallow primary deposit reflects maintenance during use. Later dumps of flint nodules and re-deposited natural capping suggest the ditch was deliberately backfilled. A circular pit, **63543** (0.7m dia x 0.5m), located in the central southern area of **63791** cut Roman-British ditch **63792** and adjacent Roman-British pit **63541** (**Figure 8**).

4.8.3 Three east to west aligned field gullies were recorded in the north-east corner of Area 3. Medieval pottery sherds were recovered from the northern of these, ditch **62003** and fragments of ceramic building material and animal bone were retrieved from southernmost gully **62523**. A short section of shallow field gully (**62522**) noted between these two features barely survived machine stripping such that neither the eastern or western end represent true terminals.

4.8.4 Within Area 5 a large quarry pit, **35004** and a small adjacent pit was recorded within Trench **350** during the Phase 1 evaluation. Boundary ditch **60095** (56m x 3.4m x 0.9m) traversed north to south, bisecting the western side of Area 5 was associated with smaller field division, ditch **60096**. Undated ditches **60098**, **60100** and **60103** are likely to reflect alterations to field organisation during the later medieval to post-medieval periods (**Figure 8**). A pit, **60091,** containing medieval pottery was also recorded towards the east of Area 5.

4.9 Post-medieval (1500-1799) – Modern (1800 – present)

4.9.1 Evidence for activity during this period consists largely of extant field boundary ditches and field drains. In addition field boundary ditches **61021** (east to west) and **61261** (north to south) were recorded bisecting excavation Area 1. Fence **63776** formed the western and northern boundaries of a plot division bisecting Area 2 and a small pit, **63170** was recorded adjacent to an east to west ceramic field drain punctuated by enlarged soakaway holes in the south-west corner of Area 2 (**Figure 8**).

4.9.2 A slightly sinuous north-north-west to south-south-east shallow pitted linear feature, **60097** (12m x 1.5m x 0.1m), thought to represent trample associated with a frequently used farm track, was recorded in the north-east corner of Area 5. Fragments of both ceramic building material and pottery collected during excavation are post-medieval in date. It is possible this feature predated the current entrance to Plant Farm off London Road, located approximately 10m to the north and beyond the limit of excavation (**Figure 8**).

4.9.3 Towards the eastern limit of Area 5 two flint-packed sub-rectangular foundation plinths, **60032** and **60104,** located 8m apart and measuring between 1m² and 1.5m x 1m and extending to 0.3m in depth, are thought to be footing pads for a post-medieval barn/farm outbuilding (**Figure 8**).

4.9.4 A 28m length of east to west aligned field ditch, **60000**, containing a ceramic field drain was recorded bisecting the south of Area 5 (**Figure 8**).

4.9.5 A small circular hearth **60017** was recorded cutting medieval field ditch **60099** in Area 5.

4.10 Undated features

4.10.1 A number of isolated undated postholes and shallow gully segments were distributed throughout the Site and could not be attributed to any period of occupation through feature association or fill type. These have not been individually numbered on the figures accompanying this document (**Figures 1-8**).

5 RESULTS - FINDS

5.1 Introduction

5.1.1 Finds were recovered from 62 of the 380 Phase 1 evaluation trenches and from all six of the subsequent Phase 1 excavation areas (Areas 1-6), although the majority of the finds assemblages were concentrated within Area 2. Overall, the finds assemblages have a broad date range (Early Mesolithic to post-medieval), but with an emphasis on the Middle/Late Iron Age and Romano-British period.

5.1.2 All finds have been quantified by material type within each context, and totals by material type (fragment count) are presented in **Table 3**. The condition of the assemblage varies; with the exception of the harder fired post-Roman wares, most of the pottery has suffered a significant level of abrasion. The scarcity of animal bone suggests that the soil conditions were not conducive to the survival of some finds.

5.1.3 Finds from the Phase 2 evaluation have not been included here as they will be assessed at the next stage (the results may be found in WA 2008b). However, elements of the material recovered shed light on activity in adjacent areas or activity across the Site (e.g. Iron Age pottery and fired clay from a probable enclosure in Zone 10; Middle and Late Iron Age pottery from a possible structure within the banjo enclosure (Enclosure A), Mesolithic flint from Zone 11 and Neolithic pottery and worked flint from a pit in Zone 9 (WA 2008b).

Table 3: Finds totals by material type

	Phase 1 Evaluation	Phase 1 Mitigation (Areas 1-6)	Total
	Fragment count	Fragment count	
Pottery			
Prehistoric unspec.	-	20	20
Neolithic	1	-	1
Bronze Age	-	32	32
Iron Age	21	234	255
Romano-British	1008	11,292	12,300
Medieval	68	108	176
Post-medieval	2	4	6
TOTAL	*1100*	*11,690*	12,790
Ceramic Building Material	37	62	99
Fired Clay	115	835	950
Worked Flint	41	465	506
Burnt Flint	693	4868	5561
Stone	1	51	52
Glass	1	2	3
Slag	-	243	243
Metalwork			
Copper Alloy	-	7	7
Lead	1	-	1
Iron	20	73	93
Human Bone (burnt)	-	112	112
Animal Bone	68	115	183

5.2 Pottery

5.2.1 The pottery assemblage comprises a total of 12,790 sherds. Of this material, 11,690 sherds were recovered from the six excavated areas. The majority of the pottery is Romano-British in date, spanning the mid-1st century AD through the 3rd and possibly 4th centuries AD, with a concentration of Middle/Late Iron Age sherds in Area 6. Small quantities of prehistoric, medieval and post-medieval sherds are also present.

5.2.2 The pottery is in a variable state of preservation; overall, the mean sherd weight was 13g. A number of contexts contained large sherds and reasonable vessel profiles, but in general, the surface preservation of most sherds was very poor. The slipped surfaces of the samian wares, for example, had in all but one instance completely disappeared and many other fabrics were powdery to the touch. However, the vast majority of sherds occurred in significant groups; of the 161 feature groups identified, 46 contained more than 50 sherds, these alone accounting for 88% of the total number of sherds present in the assemblage.

5.2.3 A rapid scan was undertaken to spot-date the pottery and to provide a basic archive, outlining the general nature and range of fabrics within the assemblage. The sherds from each context were divided into broad ware groups (e.g. sandy ware, flint-tempered ware) and counted; totals are presented in **Table 4**. The range of vessel forms, sherd condition and cross-context joins were also noted, with all the information being entered into an Access database, forming part of the project archive.

Table 4: Pottery assemblage by ware type

		Phase 1 Evaluation	Phase 1 Mitigation (Areas 1-6)
Date Range	**Ware Group**	**No. sherds**	**No. sherds**
Prehistoric unspec.	unidentifiable fragments	-	20
Bronze Age	Flint-tempered	-	32
Middle/Late Iron Age	Flint-tempered	21	199
	Organic-tempered	-	9
	Sandy	-	26
		21	***286***
Romano-British	Amphora	-	49
	Samian	1	44
	Imported finewares	1	2
	Mortaria	-	3
	Whiteware	75	141
	Black Burnished ware	9	33
	Sandy ware	625	3816
	Greyware	56	4920
	Fine grey ware	-	24
	Oxidised ware	-	282
	Sandy/flint-tempered ware	128	1013
	Flint-tempered ware	92	862
	Calcareous	-	22
	Vesicular	-	81
	Calcareous	22	-

		1009	*11,292*
Medieval	Sandy	68	108
Post-medieval	Earthenwares	2	4
	Overall total	**1100**	**11,690**

Prehistoric

5.2.4 A small quantity of Middle Bronze Age pottery was recovered, most notably the remains of a flint-tempered urn in pit **63016** within horseshoe-shaped gully **63787** (Area 2), which contained a small amount of cremated human bone. A few flint-tempered body sherds, occurring as residual finds, have been tentatively assigned to the Middle Bronze Age.

Middle/Late Iron Age and Romano-British

5.2.5 A distinctive fabric, densely tempered with fine flint was dated to the Middle/Late Iron Age. Diagnostic sherds were confined to pieces from simple bead rim jars and high shouldered bead rim jars. Although present in a number of features scattered across the site, this ware was especially frequent in the banjo enclosure ditches 65194 and 65195 and ditch 65193 in area 6 as well as ditches 62524, 62525 and 62539 in area 3. Other Late Iron Age fabrics included hand-made sandy wares, although some of these may continue into the early Roman period. Forms include a number of Gallo-Belgic dishes imitating *Camulodunum* forms 2 and 12 (Hawkes and Hull 1947, pl. XLIX), pedestal bases, bead rim jars and high shouldered bead rim jars. At Fishbourne, this latter type was prevalent during the period *c.* AD 43-75 (Cunliffe 1971, type 166, fig. 102), and probably represents a continuation of the Late Iron Age traditions in the area. A skeuomorphic handle in a reduced sandy fabric may have been an attempt at copying a metal vessel.

5.2.6 The principal imported Roman ware is samian, spanning the main export period, with vessels from the South, Central and East Gaulish industries. Two sherds of Central Gaulish colour-coat dated *c.* 80 – 120 AD comprise the only other imported fineware. Amphora consists entirely of body sherds of Dressel 20 type from southern Spain.

5.2.7 British finewares are few; three flanged bowl rim sherds in a fine reduced sandy fabric are the only finds of this type outside Area 2. No examples of late Romano-British finewares, such as Oxfordshire or New Forest products, were identified, suggesting that activity had ceased prior to the mid-/late 3rd century AD.

5.2.8 Overall, oxidised wares, comprising a range of orange, buff and white, predominantly sandy fabrics, are comparatively rare. Forms include jar and bowl rim fragments, and a range of early flagon forms. These flagons, all from Area 2, comprise pulley rims, a copy of a Hofheim flagon and a ring-necked flagon with flaring mouth, all of which can be assigned a date in the period from the last quarter of the 1st century to the first quarter of the 2nd century AD. Within Area 5 sherds of a single butt beaker occurred across four contexts within ditch **60426**, and at least four other butt beakers were identified, all late 1st century AD in date. Mortaria are not well represented, the only identifiable form being a probable New Forest wall-sided type paralleled at Fishbourne in 3rd century AD contexts (Cunliffe 1971, type 293).

5.2.9 The bulk of the assemblage comprised coarseware fabrics, which could be split into three broad groups: reduced sandy wares, coarse sandy/flint-tempered fabrics and Black Burnished ware. The reduced sandy wares form the predominant coarseware group and encompass products of the nearby Alice Holt and Rowlands Castle industries, and presumably other, as yet unidentified, sources within the locality. Within this group are two examples of pseudo-beaker types, apparently imitating early Roman butt beakers. Dishes and bowl forms include the late 1st century AD Fishbourne type 221 (Cunliffe 1971, fig 108, 225) and bowls with corrugated necks. The late 1st century to early 2nd century Alice Holt Atrebatic bowls (Lyne and Jeffries 1979, class 5) and a small number of 2nd century AD flat rimmed bowls are also present within the assemblage.

5.2.10 Jar forms dominate the reduced sandy wares, particularly jars with short everted rims paralleled at Fishbourne (Cunliffe 1971, types 313-314), where they were assigned a 3rd century date. However, it appears that this form may have had an earlier start date – it was found, for example, within the late 1st/2nd century AD cemetery at Westhampnett, on the Chichester by-pass (Mepham 1997). Many of the Fishbourne examples display distinctive incised 'batch marks', but only two such marks were observed within the Waterlooville assemblage. Large storage jars are also well represented, including the Alice Holt 'beehive' type jars with finger pulling marks on the interior surface (Lyne and Jefferies 1979, class 10). Although originating in the late 2nd century AD, this form continues and increases in popularity into the 4th century.

5.2.11 Similar large storage jars also occurred in a coarse sandy/flint-tempered fabric, identified at Fishbourne (Cunliffe 1971, type 165, fig 101, 211), where the fabric was considered to span the 1st to 3rd centuries AD. Although the examples at Fishbourne lacked the finger-pulling marks that characterise the Alice Holt and Rowlands Castle types, sherds from Waterlooville did display such marks, perhaps indicating that these vessels are also likely to be 3rd century in date. Also present in this fabric are a quantity of large storage jars with bead rims, smaller bead rim jars and a few examples of high-shouldered bead rim jars.

5.2.12 Black Burnished ware is not well represented within the assemblage and with the exception of a single sherd from Area 5, all examples came from Area 2. Forms are restricted to simple everted rim jars and flat rimmed bowls and are unlikely to have reached this area prior to the mid-2nd century AD.

5.2.13 A small quantity of briquetage was also identified within the pottery assemblage. These sherds were from Areas 1 and 3, although a small quantity of organic-tempered fragments from Area 2 may also prove to be briquetage. Tripod fragments were also found in ditch **60357**, along with pieces from a large storage jar, two imitation Gallo-Belgic dishes, a strainer and various other jar/bowl rim fragments.

Medieval and Post-Medieval

5.2.14 The majority of medieval sherds are in sandy fabrics, many of which appear to fall within the West Sussex ceramic tradition. Most of these are in finer sandy fabrics and many are glazed. The suggested date range for these medieval wares is 14th to 15th century. Post-medieval wares are confined to

six sherds: Verwood-type earthenwares from east Dorset and a single sherd of tin-glazed earthenware.

5.3 Ceramic Building Material

5.3.1 The majority of fragments are likely to be Romano-British in date, although the only diagnostic pieces comprise two *tegula* fragments and a single *tessera*. A small quantity of medieval and post-medieval brick, roof and plain floor tile was also recovered, some from medieval contexts and some from the topsoil and subsoil.

5.4 Fired Clay

5.4.1 Most of this material comprised undiagnostic, amorphous lumps but fragments from four triangular loomweights were also identified, two each from Areas 2 and 3, with both examples in Area 2 coming from ditch **63789**. A large oxidised fragment with a curved edge (ditch **62535**) may derive from an oven or kiln floor, and fragments from ditch **63794** with distinctive markings on one surface and measuring 70mm in thickness may have served a similar structural purpose. A number of contexts contained fragments displaying evidence of exposure to high temperatures. These probable hearth fragments may well have derived from domestic contexts, but the pieces from ditch **62536** had distinct edges and vitrified surfaces and were found in association with slag deposits, suggesting an industrial origin. One large fragment from Area 5 (ditch **65193**) was certainly associated with metal-working as it preserved part of a tuyère hole, approximately 20mm in diameter, with slag adhering below the hole. Pieces from Area 2, associated with the possible kiln **63391**, may also derive from industrial structures. These comprise a quantity of thin fragments, some slightly curved and two with probable edges, displaying large, well-preserved grain and spikelet impressions. A small quantity of possible saltworking equipment was also identified.

5.5 Flint

5.5.1 Worked flint from the evaluation and the subsequent excavation was quantified and assessed; this data is held in an Excel spreadsheet within the project archive. The results identified two groups of material, one comprising blades and microliths, thought to be of Early Mesolithic date, and residual material of probable Neolithic and Early Bronze Age date, which was mostly from features associated with Romano-British land use.

5.5.2 The Early Mesolithic worked flint was concentrated in six irregular shallow hollows (**63987**) at the north edge of Area 2. These features were thought to represent a tree-throw hole, tree base or natural hollow in the sand. It has also been possible to identify a low density spread of similar material (based on technological characteristics) that had been redeposited into Middle/Late Iron Age and Romano-British features on the southern side of Area 2. It is likely that this material is also of Early Mesolithic date.

5.5.3 Most of the remaining material comprised residual, often undiagnostic, artefacts that had silted into features related to later Iron Age and Romano-British settlement and land use in the area. The density of this material is also generally low; however sufficient numbers of pieces survive to confirm earlier prehistoric activity, possibly including settlement across most of this landscape.

5.6 Burnt Flint

5.6.1 Burnt, unworked flint was recovered in some quantity. This material type is intrinsically undatable, although often associated with prehistoric activity. In this instance the majority of the burnt flint (*c.*60% by weight of the total) came from Middle/Late Iron Age and Romano-British contexts, and a further 34% from undated contexts. Two features, both in Area 2, produced more than 10kg – ditches **62529** and **65194**.

5.7 Stone

Introduction

5.7.1 This assessment aims to identify the geological character and (where possible) the geological source of the stone collected from the Site and, where possible, to determine the level of exploitation of local and non-local stone types. Comparison was also made with worked stone identified from prehistoric/Roman sites to the south (Adanac Park, Southampton; Hayward 2008a) and the north (Old Kempshott Lane, Basingstoke; Hayward 2007a); PPB 92/93 (Hayward 2007b) and Popley, Basingstoke; Hayward 2008b).

Methodology

5.7.2 Fifty-one fragments (24.7kg) of worked, burnt and unworked stone from the excavated areas were examined, using a hand lens (Gowland x10), to determine their geological character and (where possible) outcrop source.

5.7.3 By examining the local geological maps (BGS Sheets 316 and 331) and accompanying regional and local memoirs (Arkell 1947; Melville and Freshney 1982; Hopson 2000) as well as comparison with stone samples retained by this specialist from adjoining sites, an attempt was made to identify a source for each rock type.

Summary

5.7.4 Petrological analysis of the worked stone assemblage identified a number of features:

- The limited variety of worked stone types (five) identified from the prehistoric and Roman assemblage at Waterlooville;
- All the material from prehistoric and Roman levels is local, coming from outcrops within the Hampshire Basin (50km);
- Dominance in the use of one rock type (Lodsworth Greensand) during early Romano-British period;
- The dominance of portable stone artefacts associated with rural sites (quernstones; whetstones).

5.7.5 The above characteristics suggest that the Site is perhaps of a lower status when compared with some of the other rural Roman sites in Hampshire. At Popley (North Hampshire), for example, the presence of German lavastone and Millstone Grit within the assemblage was no doubt influenced by the proximity of Silchester.

5.7.6 Nevertheless there are interesting features worth mentioning:

- The presence of an ironstone conglomerate from the Isle of Purbeck, used for a saddle quern. The Site's proximity to the Roman Road network in the west country may account for its presence;
- The variety of quernstone profiles in Lodsworth Greensand, testifying perhaps to the longevity of the Site.

5.8 Slag

5.8.1 Industrial residues (243 fragments) were recovered. This material was examined macroscopically, with diagnostic features such as shape, inclusions and magnetism recorded. Quantification was by count and weight of the material types within each context, the results of which are presented in **Table 5.**

Table 5: Quantification of slag types by count and weight

Type	n	G (g)	n (%)	G (%)
SHb	42	4,355	17.3	81.0
SSb	155	608	63.8	11.3
Hs	26	6	10.7	0.1
Hw	11	320	4.5	5.9
Rest	9	90	3.7	1.7
Total	*243*	*5,379*	*100.0*	*100.0*

Types

5.8.2 Smithing hearth bottoms (SHb) form the largest category by weight; by number, however, the silicate-rich (smithing-) slag lumps (SSb) predominate. The difference between number and weight is caused by different densities of the two slag types, the mean density of the smithing hearth bottom being 2.6-3.1 g/cm^3, the density of the silicate-rich (smithing-) slag lumps is 2.0-2.2 g/cm^3. Other types include hammerscale, clay hearth lining, crucible fragments, pieces of scorched coal, fragments of iron pan and an irregular rounded and rusty fragment, possibly also iron.

Smithing hearth bottom (SHb)

5.8.3 Smithing hearth bottoms are produced during the heating of iron, and are characteristically plano-convex in shape. At Waterlooville, many fragments of this type were from larger smithing hearth bottoms. Those which had survived more or less intact measured approximately 88 x 85 x 39 mm. Smithing hearth bottoms are produced when the iron oxide at the surface of the heated iron reacts with the fuel ash in the hearth and clay coating or lining of the hearth. Consequently this material can comprise a mix of conglomerated slag droplets, small fragments of charcoal (or impressions left from burnt out charcoal), and part of the clay hearth lining. At Waterlooville the clay lining adhering to the slag would indicate that the hearth had at least one straight side. Quartz inclusions were also noted within the hearth bottoms; although regularly found in smithing slag, the use of quartz within this process is not yet understood fully. It is possible that quartz was deliberately added to the hearth lining to improve its refractory properties. A small proportion of the smithing hearth bottoms were slightly

weathered, so it was not always possible to distinguish between fragments of smithing hearth bottom and silicate-rich (smithing-) slag lumps.

Silicate-rich (smithing-) slag lumps (SSb)

5.8.4 This type of slag comprised small, irregularly shaped, vesicular fragments, often displaying a greenish to blackish glazed surface. Inclusions of charcoal and quartz were visible in some of the fragments. This type of slag can be produced by both domestic and industrial activity, being derived from fuel ash and clay lining, however its association at Waterlooville with smithing hearth bottoms, would suggest an industrial origin.

Hammerscale (Hs)

5.8.5 Hammerscale can be divided into two main types: flakes and spheres, both produced by hammering the red-hot iron on the anvil. The flakes are pieces of iron oxide that flake-off the surface of the iron, the spheres are droplets of molten slag that are squeezed out of the iron by the force of the hammer and solidify in the air. Whereas almost all flakes are magnetic, spheres are less likely to be magnetic. Hammerscale was found in two samples at Waterlooville, principally flake hammerscale. The flakes are quite large, up to 10mm, and relatively thick. This may indicate over-heating of the iron, as the longer iron is heated, the more it will oxidise. As hammerscale is very brittle, the large size of the flakes suggests that smithing activity occurred within close proximity to where the samples were taken.

Clay lining of the hearth (Hw)

5.8.6 Sintered and vitrified fragments of the clay hearth lining were found amongst the slag material from Waterlooville, and also amongst the fired clay assemblage (see above). Like the silicate-rich (smithing-) slag lumps, vitrified clay lining can derive from a variety of activities, although again its association with smithing hearth bottoms is a strong indication for a smithing hearth. The fragments found are partly vitrified on the internal, fire facing side and consist of reddish-brown clay at the external side. The clay was possibly organically tempered.

Crucible

5.8.7 Five fragments of a crucible were recovered. The rim of the crucible is partly glazed and has a reddish colour. The fragments show traces of slag on the interior surface. The reddish colour of the glaze may derive from copper alloy production. The shape of the fragments points to a flat bowl with a depth of *c.* 40mm. The rim has a thickness of 11mm and the clay is organically tempered.

5.9 Human Bone

5.9.1 Cremated bone was recovered from five contexts, including the remains of a Middle Bronze Age urned burial, a charcoal-rich deposit from a pit and redeposited material from a ditch fill.

5.9.2 Osteological analysis followed the writer's standard procedure for the examination of cremated bone (McKinley 1994, 5-21; 2000). Age was assessed from the stage of skeletal development (Scheuer and Black 2000); there was insufficient evidence for assessment of sex.

5.9.3 Both of the discrete deposits from which bone was recovered had been subject to disturbance in antiquity and, slightly, in machine stripping of the Site. The maximum surviving depth of these features was 0.13m and some bone had clearly been lost from one if not both as a result of truncation. The bone is in poor condition, being worn and slightly chalky in appearance, and no trabecular bone (demonstrated to suffer preferential loss in acidic soil conditions (McKinley 1997a, 245; Nielsen-Marsh *et al.* 2000)) has survived. It is probable that both deposits originally contained more bone than was available for analysis.

5.9.4 Very small quantities of bone were recovered from both discrete deposits and, notwithstanding the undoubted loss of a proportion of the original contents, it seems that neither is likely to have ever held a substantial quantity (**Table 6**). The surviving bone is white in colour, indicative of full oxidation (Holden *et al.* 1995a and b); however, since any poorly oxidised bone would have been subject to preferential destruction in this burial environment, observations on the efficiency of cremation could be misleading. The largest surviving bone fragment is 17mm, but the majority of fragments from all deposits are less than 10mm. This is more likely to be a consequence of poor bone condition, with extensive fragmentation along dehydration fissures, than an artefact of any other deliberate human manipulation. Most of the few identifiable skeletal elements (*c.* 30-40% of total bone weight in deposits) comprised fragments of either the easily distinguishable skull vault or one of the long bone shafts (upper and lower limb), though a fragment of vertebra was also observed.

5.9.5 Despite the uncertain nature of the deposit in pit **62204**, the remains of a minimum of two individuals is likely to be represented; pit **62204** and grave **63016** were situated *c.* 260m apart and it is unlikely that the remains from *a* single cremation would have been separated over this distance. The small fragment of probable human bone from ditch **63792**, *c.* 60m east of the urned burial, could have derived from the remains of a third cremation or could be the scattered remnants from one of the two already represented within the assemblage, but the evidence is too insubstantial to offer any reliable comment.

5.9.6 The form of the urned burial, even on the scant evidence available, is worthy of some further comment. The vessel had been inverted on burial and the base damaged/removed in antiquity resulting in incorporation of the grave fill. The fill of either the vessel and/or the grave included substantial quantities of pyre debris creating a black, charcoal-rich fill of homogenous appearance (excavated in quadrants). The majority of the bone (66.4%) was recovered from one quadrant; a second quadrant contained almost no bone (2.6%) and the rest was divided between the remaining quadrants. Whilst it is possible that the seemingly empty quadrants may have held more trabecular bone, on the current evidence the bone was clearly concentrated in a way which would not be commensurate with it having been placed loose in the vessel prior to inversion. Evidence recovered recently by the writer from an inverted urned burial of similar date strongly suggested that the bone had been placed in the vessel in an organic (textile/skin) bag and pyre debris added to the vessel prior to inversion – the indications are that the burial at Waterlooville may have been of a similar type.

5.9.7 The nature of the deposit from cut **62204** is unclear. The majority of the bone (89%) from this charcoal-rich deposit was from the material disturbed by the machine (**62530**), the remaining 0.13m depth of the cut containing only 0.4g of bone. The deposit could represent the truncated remains of an unurned burial where pyre debris had first been deposited in the base of the grave, but such burial forms are rare – pyre debris generally being deposited after the burial was made (McKinley 1997b). Alternatively it could represent a deposit of pyre debris, the burial having been made elsewhere or the bone scattered/otherwise dispersed.

Table 6: Summary of Human Bone Results

context	cut	deposit type	weight	age/sex
62205/62230	62204	cremation-related deposit	3.8g	adult >25 yr.
63017/63131	63016	urned burial + redeposited pyre debris	11.6g	adult >18 yr.
63608	63584	redeposited	0.7g	human

5.10 Animal Bone

Introduction

5.10.1 The faunal assemblage consists of 183 hand collected and sampled mammal bone fragments. The material dates to the Middle/Late Iron Age, the Romano-British and the medieval periods. 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 (**Table 7**) may differ from the absolute raw fragment counts in **Table 3**. No fragments were recorded as 'medium mammal' or 'large mammal'; these were instead consigned to the unidentified category.

5.10.2 The extent of mechanical or chemical attrition to the bone surface was recorded, with 1 indicating very poor condition, 2 poor, 3 fair, 4 good and 5 excellent. The numbers of gnawed bone were also noted. Marks from chopping, sawing, knife cuts and fractures made when the bone as fresh were recorded as butchery marks.

Table 7: Summary of Animal Bone Results

Context	Period	NISP	Unidentified	Total	Loose Teeth	Gnawed	Burnt	Measure	Age	Condition
7201	unphased	1		1						Fair
21104	Roman		2	2			2			Fair
21105	Roman		1	1			1			Fair
35002	Roman	1		1				1		Good
35005	Medieval	4	2	6		1		1	1	Fair
35006	Medieval	14	6	20	6	2			1	Fair
35018	Medieval	5	2	7				1		Fair
35019	Medieval	1		1						Good
41506	unphased	5	32	37			37		2	Fair
46909	MIA/LIA		1	1			1			Fair
52004	MIA/LIA		9	9			9			Fair
52005	unphased		1	1			1			Fair
52007	MIA/LIA	3	39	42			42		1	Fair
52009	unphased		1	1			1			Fair
52026	MIA/LIA	2	25	27			6		1	Fair
52029	unphased		1	1			1			Fair
52034	MIA/LIA		4	4			4			Fair

62054	Roman		1	1						Fair
62243	Early Roman	2		2			2			Fair
63056	Roman		1	1			1			Fair
63244	Roman		2	2			2			Fair
63506	Roman		1	1			1			Fair
63613	Roman	1		1	1					Very poor
63636	Roman	1		1	1					Very poor
63699	Roman	2		2	2					Poor
63729	Roman		1	1			1			Fair
63872	Roman	1	1	2	1		1			Very poor
63942	Roman		1	1			1			Fair
65071	Iron Age	1	5	6			6			Fair

Condition and preservation

5.10.3 The overall condition of the bones is fair with a number of bones in a poor or very poor condition. In addition, the sandy clays of the Bracklesham Beds would not be conducive to good bone preservation. Generally, poorer preservation is correlated to a lower proportion of identified bones, more loose teeth and a predominance of horse/cattle bones over sheep/pig bones. Burnt (calcined) bone survives far better in adverse soil conditions. These burnt fragments might derive from burning waste or cooking practices, although a more ritual explanation cannot be excluded. Marks left by scavengers or butchery tools show more easily on better preserved bones. The presence of canid gnawing marks indicates that bone waste was accessible or fed to dogs.

*Species proportions (**Table 8**)*

5.10.4 The small numbers of identified bone do not allow for interpretations regarding species proportions. It can only be said that sheep/goat were present in the Iron Age, cattle and sheep/goat in the Romano-British period and horse, cattle, sheep/goat and pig in the medieval period. In addition, the find of a post-cranial deer (probably roe deer) bone in medieval context **35005** indicates hunting of these animals. Gnawed bones in medieval contexts confirm the presence of dogs on the Site.

Table 8: Species Identified Bones per context

Context	Period	Horse	Cattle	Sheep/Goat	Pig	Deer
7201	unphased	1				
35002	Roman		1			
35005	Medieval		2	1		1
35006	Medieval	1	4	8	1	
35018	Medieval		1	3	1	
35019	Medieval			1		
41506	unphased			5		
52007	MIA/LIA			1	2	
52026	MIA/LIA			1	1	
62243	ER			2		
63613	Roman	1				
63636	Roman	1				

63699	Roman		2			
63872	Roman		1			
65071	Iron Age			1		

Population characteristics

5.10.5 In line with the low numbers of identifiable bone, only a few bones can inform on the age at death of the animal of the phenotype of the animal.

5.11 Metalwork

5.11.1 A significant proportion of the iron objects comprised miscellaneous, as yet unidentifiable fragments. Objects that could be identified at this stage include 33 nails, a long pin or awl, and a hook.

5.11.2 Of the copper alloy objects only two have been identified: four fragments of a brooch (of an unidentifiable type) and a possible fitting comprising a flat fragment with a ?rivet on the underside. Further identification of these objects may be possible after X-raying. Both of these objects are in poor condition and require conservation treatment.

5.11.3 A single fragment of lead sheet was also recovered.

5.12 Other finds

5.12.1 Other finds comprise a piece of clay pipe stem and three fragments of modern glass.

6 RESULTS – ENVIRONMENTAL

6.1 Introduction

6.1.1 The range of samples taken across Areas 1-6 were assessed to gauge their potential to contribute to our understanding of the Site environment, economy, changing local landscape and the range of activities represented.

6.1.2 The underlying geology and soils are described above (see Section 1.4 above).

6.1.3 Observations on Site confirm that the underlying geology is Tertiary, with a mixture of silts, clays and sands varying in proportion over relatively short distances.

6.1.4 Limited environmental evidence was recovered from the Phase 1 and 2 evaluations (WA 2007b; WA 2008b) but included charred plant remains charcoal from Iron Age-Romano-British and medieval features. Charred hazelnut shells were also recovered from a pit in Zone 9 which contained Neolithic pottery and worked flint (WA 2008b).

6.2 Environmental samples taken

6.2.1 A total of 165 bulk samples were taken from features (all phases) and were processed for the recovery and assessment of charred plant remains and charcoals (see **Table 9** below).

Table 9: Summary of Bulk Samples by Phase

Phase	Area 1		Area 2		Area 3		Area 4		Area 5		Area 6		Total	
	No	Vol	No	Vol	No	Vol	No	Vol	No	Vol	No	Vol	No	Vol
E Meso	-	-	1	38	-	-	-	-	-	-	-	-	1	38
BA	-	-	12	53.05	-	-	-	-	-	-	-	-	12	53.05
Prehistoric	1	20	-	-	-	-	-	-	-	-	-	-	1	20
LIA-ERB	-	-	-	-	1	19	-	-	-	-	19	204	20	223
?LIA-ERB	-	-	-	-	-	-	-	-	-	-	1	16	1	16
ERB	10	70.5	18	157	23	329.5	5	77	-	-	-	-	56	634
?ERB	-	-	5	68	-	-	1	18	-	-	-	-	6	86
E-MRB	-	-	16	195.5	-	-	-	-	-	-	-	-	16	195.5
RB	4	36	18	215.5	5	61	1	16	-	-	-	-	28	328.5
?RB	-	-	1	1	-	-	1	18	-	-	-	-	2	19
Med	-	-	1	20	-	-	-	-	-	-	-	-	1	20
Modern	-	-	-	-	-	-	1	10	-	-	-	-	1	10
Undated	5	44	1	2	6	83.5	6	110	1	7	-	-	20	246.5
Total	20	170.5	73	755.05	35	493	15	249	1	7	20	220	165	1889.55

6.2.2 In addition to the bulk samples, seven monolith samples were taken from five sequences in order to allow detailed sediment description and interpretation, and to inform sub-sampling for microfossil assessment. These are listed below in **Table10.**

Table 10: Monoliths by Phase

Area	Phase	Group type	Group no.	Feature type	Feature	Sample
1	ERB		61260	Waterhole	61225	112
3	ERB	Field Boundary	62537	Ditch	62142	89
3	ERB		62536	Ditch	62381	100
2	E-MRB			Pit/Waterhole	63376	157
2	E-MRB			Pit/Waterhole	63376	158
2	E-MRB			Waterhole	63567	168

6.2.3 Six samples were processed for the recovery of waterlogged plant and wood remains taken from three wells and waterholes (**Table 11**). Two pieces of waterlogged worked wood were retrieved from a well. A large natural log from Area 2 was also recovered.

Table 11: Waterlogged Samples

Area	Phase	Group no	Feature type	Feature	Context	Sample	Type	Vol
1	ERB	61260	Waterhole	61225	61253	113W	w. plants and wood	1
1	ERB	61260	Waterhole	61225	61259	114W	w. plants and wood	1
1	ERB	61260	Waterhole	61225	61256	115W	w. wood	1
1	ERB	61260	Waterhole	61225	61255	116W	w. wood	1
2	E-MRB	-	Well	63376	63935	188W	w. plants and wood	1
3	E-MRB	-	Waterhole	63567	63965	189W	w. plants and wood	1
2	Roman	-	Well	63890	63900	182	2 pieces worked wood	-
2	-	-	Natural		63002	191	1 natural log	-

6.3 Assessment Results; methods and data

Charred Plant Remains and Wood Charcoals

6.3.1 Bulk samples were processed by standard flotation methods; the flot retained on a 0.5mm mesh, residues fractionated into 5.6mm, 2mm and 1mm fractions and dried. The coarse fractions (>5.6mm) were sorted, weighed and discarded. Flots were scanned under a x10 – x40 stereo-binocular microscope and the presence of charred remains quantified (Appendix 2: **Table A2.1**) 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).

6.3.2 The flots varied in size with differing quantities of roots and modern seeds that may be indicative of stratigraphic movement, reworking or the degree of contamination by later intrusive elements. In particular the seeds of goosefoot (*Chenopodium* spp.) recovered from a number of the flots may all be modern examples. Charred material comprised varying degrees of preservation.

6.3.3 Samples were also tested using a magnet for hammer scale. Some traces of both flat and round hammer scale were observed in some of the sample

residues within Area 3, indicative of both smithying and smelting processes in the vicinity.

Charred plant remains

Early Mesolithic

6.3.4 The single sample from tree-throw hole **63987** in Area 2 only contained sparse charred remains. These comprised a few unidentifiable grain fragments and a few fragments of hazelnut shell (*Corylus avellana*). While hazelnuts have been shown to form a dominant part of the Mesolithic diet (Zvelebil 1994), the grain suggests that either some or all of the charred remains are intrusive (the sample did contain high numbers of modern roots) or that the flint has itself been reworked into a later feature.

Bronze Age

6.3.5 Very few charred plant remains were observed in the 12 samples from cremation pit **63016** in Area 2. A single possible grain of barley (*Hordeum vulgare*) was noted together with low numbers of hazelnut fragments and seeds of knotgrass (Polygonaceae). No tubers of onion couch grass (*Arrhenatherum elatius ssp. bulbosum*) were recorded, although these have a common association with cremation-related deposits (Godwin 1984).

Prehistoric

6.3.6 The single sample from the possible pit **61206** in Area 1 only produced a few scrappy unidentifiable cereal remains.

Middle/Late Iron Age and Early Romano-British

6.3.7 Only low levels of charred cereal remains and charred weed seeds were observed in the samples from Area 3 and Area 6 with the exception of a sample from **65069** (enclosure ditch **65071**) within the possible banjo enclosure group **65195** in Area 6. A high number of cereal remains were retrieved from this sample, including grains of barley and hulled wheat, spelt/emmer (*Triticum spelta/dicoccum*), as well as hulled wheat glumes and spikelet fork fragments. The weed seeds recovered in these samples were those of wild oat/brome grass (*Avena/Bromus* spp.) and goosefoots. There were also fragments of hazel nut shells and some buds present.

6.3.8 Charred cereal remains, in particular glumes and grains of hulled wheats emmer or spelt, are a common feature of Bronze Age, Iron Age and Romano-British sites in Hampshire (Knight and Gibson 2007; Wessex Archaeology 2006; Campbell 2000; Murphy 1989; Monk 1985; Monk and Fasham 1980).

Early Romano-British and ? Early Romano-British

6.3.9 Very sparse remains were recorded in the 10 samples from Area 1. The remains included seeds of knotgrass, brassicas (Brassicaceae), vetches/wild pea (*Vicia/Lathyrus* spp.) and goosefoots, as well a few buds.

6.3.10 High numbers of charred cereal remains were recovered from six of the 23 samples from Area 2. These were from boundary ditch group **63283**, enclosure group **63983**, pit **63462** and in particular kiln group **63391**. The cereal remains comprised grains and rachis fragments of barley and grains and chaff fragments, including glumes and spikelet forks, of hulled wheat. Some of the hulled wheat grains from the kiln group showed evidence of germination. A piece of briquetage from the kiln contained a number of

impressions of grains and spikelets. The weed seed assemblages included seeds of wild oat/brome grass, knotgrass, brassicas, vetches/wild peas, goosefoots, poa grass (Poaceae) and small nettle (*Urtica urens*). There were also fragments of hazel nut shells and some buds present.

6.3.11 Seven of the 23 samples from Area 3 produced large quantities of charred plant remains. These samples were from ditch group **62536**, field boundary group **62539**, industrial enclosure group **62525** and industrial group **62529**. The charred cereal remains included grains of hulled wheat and barley together with glume and spikelet fragments of both spelt and emmer wheat. The weed seeds assemblages were similar to those from Area 2 but also included seeds of cleavers (*Galium* spp.), hedge-parsley (*Torilis* spp.) and also catkins.

6.3.12 In addition there was a single seed of okra (*Hibiscus esculentus*) recovered from **62170**, part of field boundary group **62539**. This well preserved charred seed has been identified by Dr Chris Stevens and Dr Ruth Pelling using modern material for comparison. This is a highly significant find as it is believed to be the first time this species has been identified from an archaeological deposit in Britain or indeed Europe (the species does not appear in the literature on archaeological remains of cultivated plants 1981-2004 by H. Kroll. http://www.archaeobotany.de). The deposit is dated to the early Romano-British period, and the findings of reasonable quantities of hulled wheat grains and chaff is in keeping with a Roman rather than later date for the deposit. As such it potentially provides the earliest evidence for this species in north-west Europe. The species has been thought to originate in West Africa where it has been found archaeologically (Zach and Klee 2003), however, such an early find in Europe would tend to support the alterative view that the species was domesticated in India.

6.3.13 Two of the five samples from ditch group **60426** in Area 4 were rich in charred plant remains. The cereal remains comprised grains of hulled wheat and barley but no chaff fragments, while the weed seed assemblages were similar to those from Areas 2 and 3, but also included capsules of runch (*Raphanus raphanistrum ssp. raphanistrum*) and Apiaceae. One sample, 49, contained a very large number of vetches/wild pea seeds.

Early-Middle Romano-British

6.3.14 Four of the samples from field ditch group **63775**, rectangular enclosure group **63988** and pit **63861** in Area 2 contained high numbers of cereal remains, comprising grain and chaff fragments of barley and hulled wheat, including both spelt and emmer. The charred weed seeds included species observed in earlier periods. There were also fragments of hawthorn (*Crataegus monogyna*) stones observed in pit **63861**. In addition to these charred remains, a large number of waterlogged seeds were observed in the sample from well/waterhole **63376**. These seeds included those of common nettle (*Urtica dioica*), bramble (*Rubus* spp.), buttercup (*Ranunculus* spp.), knotgrass and woundwort (*Stachys* spp.). There were also fragments of hazelnuts and sloe stones (*Prunus spinosa*), and a number of thorns and buds. This waterlogged component can provide information on the surrounding vegetation and immediate environment of the waterhole, while the charred weed seeds are typical of those recovered in arable assemblages.

Romano-British

6.3.15 Only low levels of charred remains were recorded in the samples from Area 1, while only two of the 19 samples from Area 2 produced large amounts of charred material. These samples were from pits **63916** and **63049** and contained high numbers of cereal remains, comprising grain and chaff fragments of barley and hulled wheat, including both spelt and emmer. The charred weed seeds included species observed in earlier periods.

6.3.16 The sample taken from industrial enclosure group **62527** in Area 3 contained a large quantity of hulled wheat and barley grains and chaff fragments and charred weed seeds. There was a possible seed of lentil (*Lens culinaris*) within the sample. The samples from Area 4 only produced small amounts of charred remains.

Medieval

6.3.17 No charred plant remains were observed within the single sample from the field boundary group **63791** in Area 2.

Modern

6.3.18 A very low number of unidentifiable charred grain fragments were recovered from the ditch group **60411**.

Undated

6.3.19 The 20 undated samples from Areas 1, 2, 3, 4 and 5 only contained low levels of charred plant remains. The small quantity of grain fragments which were identifiable were of hulled wheat. The majority of the weed seeds were those of goosefoot, cleavers and speedwells (*Veronica* spp.), together with wild oats/brome grass, rye-grass (*Lolium* spp.) and knotgrass. There were also fragments of hazelnut shells and sloes and some buds, thorns and possible tubers. There is nothing in the plant assemblages to assist in attributing any of these features to any of the Site phases.

Wood Charcoal

6.3.20 Wood charcoal was noted from the flots of the bulk samples and is recorded in **Appendix 2: Table A2.1**. The wood charcoal retrieved was mainly mature wood fragments with occasional round wood and twiggy pieces. Only small amounts of wood charcoal were observed in the samples from the Early Mesolithic feature **63987** and in the Bronze Age cremation pit **63016** in Area 2, and moderate quantities in prehistoric pit **61206** in Area 1.

6.3.21 Seven of the Middle/Late Iron Age and early Romano-British samples in Area 6 produced large quantities of wood charcoal, in particular from the possible banjo enclosure (Enclosure C, **65194**). Very large amounts of wood charcoal were recorded in three of the early Romano-British features in Area 2, boundary ditch group **63283,** settlement enclosure group **63983** and pit **63462**, in five of the early Romano-British features in Area 3, ditch group **62536**, field group **62170** and industrial enclosure group **62529** and in one of the early Romano-British features in Area 4, ditch group **60426**. Although there were not huge quantities of wood charcoal in the early-Romano-British samples from Area 1, one of the samples from enclosure ditch group **61167** contained a significant quantity of twiggy and stem material.

6.3.22 Six of the samples from early-middle Romano-British features in Area 2 contained high numbers of charcoal fragments, in particular from settlement

group **63795** and pit **63861**. Of the Romano-British samples, four from Area 2 produced significant quantities of charcoal, from pits **63049** and **63916**, and well group **63890**. Only sparse quantities of charcoal were noted in the medieval and modern samples. A total of eight of the undated samples produced large numbers of wood charcoal fragments. These were from two pits, **61035** and **61100**, in Area 1, from tree-throw hole **63168** in Area 2, from hearth **62234** and pits **62012** and **62139** in Area 3, trackway ditch group **60420** in Area 4 and pit **60017** in Area 5.

Waterlogged Plant Remains and Waterlogged Wood

6.3.23 Some features were noted to be waterlogged, or partially waterlogged, in the field. Subsamples of 1 litre were taken from bulk samples from these features (**Table 12**) and processed for the recovery of waterlogged remains. Laboratory flotation was undertaken with flots retained on a 0.25mm mesh and residues on a 0.5mm mesh. Residues and flots were stored in sealed containers with industrial methylated spirits (IMS). The larger fraction (>5.6mm) was sorted, weighed and discarded. The flots were visually inspected under a x10 to x40 stereo-binocular microscope to determine if waterlogged material occurred. Generally the samples were not particularly rich either in the number of remains of the diversity of species represented. Little to no insect remains were recorded in these waterlogged samples. Where waterlogged material was present, preliminary identifications of dominant taxa, were conducted and are presented below.

Table 12: Waterlogged Remains

Area	Phase	Group no.	Feature type	Feature	Context	Sample	Comments
1	ERB	61260	Waterhole	61225	61253	113W	bramble (*Rubus* sp.), hawthorn (*Crataegus monogyna*) and haz (*Corylus avellana*), twig wood
1	ERB	61260	Waterhole	61225	61259	114W	waterlogged material mainly root
1	ERB	61260	Waterhole	61225	61256	115W	waterlogged wood frags
1	ERB	61260	Waterhole	61225	61255	116W	waterlogged wood frags
2	ERB-MRB		Well	63376	63935	188W	Occasional seeds of ?clary (cf. *Salvia* sp.), nettles (*Urtica dioica)*, bramble (*Rubus* sp.) , some wood/branch frags.
3	ERB-MRB		Waterhole	63567	63965	189W	twigs and branch wood, few seeds of knotgrass, (Polygonaceae)

6.3.24 In addition to these samples two pieces of worked wood were recovered from the Roman well **63890** in Area 2, although no significant quantities of waterlogged plant material were observed in this feature.

6.3.25 A large unworked, piece of probable branch, but possible large root (*c.* 120 x 25mm) was recovered of probable oak (*Quercus* sp.), embedded within what is thought to be a natural deposit. A rim of Romano-British pottery was also recovered from the surrounding material adhering to the wood. It should be noted that given the depth of the wood and the fact that features within this part of the Site at similar depth did not produce waterlogged material suggests that the wood is much more recent in date than Romano-British. No tree stands in the area today, and the most feasible explanation is that it is either a dropped branch or a branch/root from a toppled tree that has penetrated the natural.

Sediments

6.3.26 The monoliths were cleaned prior to recording and standard descriptions used, (following Hodgson 1997) including Munsell colour, texture, structure and nature of boundaries, as given below in **Appendix 2: Tables A2.2-A2.5**. The sampled sequences are discussed below:

*Enclosure ditch **62142**, sample 89*

6.3.27 This boundary ditch sequence shows signs of rooting and pedogenesis and is well oxidised throughout, although less so in the lower (probable primary) fill. It is likely that any pollen present will be degraded in this relatively shallow aerated feature, but if present may be of interest as the feature is likely to have filled relatively slowly. No clear signs of recut are present, although this cannot be ruled out.

*Ditch **62381**, sample 100*

6.3.28 This sequence is dominated by the charcoal-rich dumps **62384** and **62389**. Although significant indications of pedogenesis were observed within these layers (common macropores; moderately well developed structure), on balance it is thought that these are essentially dumps of charcoal type material, possibly including topsoil, which may have subsequently undergone some pedogenesis *in situ*, rather than buried soils proper. This conclusion is supported by the lack of charcoal in **62383**, immediately beneath **62384**. If the latter were a palaeosol some charcoal should have moved down profile via worm- and root-action.

*Waterhole **61225**, sample 112*

6.3.29 This monolith was taken through the basal sediments of a waterhole. All sampled contexts appear to have formed in standing water and indeed to have remained waterlogged, with preserved small roots and twiggy material being observed throughout the sequence on Site.

6.3.30 This sequence has excellent potential for pollen preservation, although it is difficult to be sure of the degree of disturbance which the sediments may have been subjected (animal trampling, periodic clearing out etc).

*Large pit / waterhole **63376**, samples 157 and 158*

6.3.31 Two monolith samples were taken from the section of this large feature, which was not bottomed. The lower sample only was described (158), as the uppermost deposits are less likely to be directly related to the use of the feature.

6.3.32 The pit / waterhole fills can best be summarised as a series of dumps laid down in a feature which often held standing water. The lower fills show only slight oxidation and may well have reasonable pollen preservation.

*Well **63567**, sample 168*

6.3.33 As only the upper part of this feature was sampled, the monolith was subjected to rapid visual assessment to inform on its suitability for detailed description and further work.

6.3.34 The sample was composed almost entirely of heavily oxidised tertiary fills which are unrelated to the use of the feature. The sample is therefore not considered suitable for further work.

Pollen

6.3.35 Pollen assessment (counts of 100-150 Total Land Pollen (TLP)) was carried out on 7 samples from three features; **62536** (early Roman Ditch), **61260** (Middle/Late Iron Age and early Romano-British, waterhole **61225**) and **63376** (Roman well).

6.3.36 Assessment is being used to assess:

- the contemporary environment at the time of sediment filling;
- whether the sediment fills are associated with the features primary function or if they were cleaned out whilst in use and are contemporary with a disuse phase of the Site.

Assessment methods and data

6.3.37 Seven samples were selected for assessment from three stratified features, as listed in the sediment descriptions above.

6.3.38 Samples were processed using standard procedure (Moore *et al.* 1991). 1cm3 of sediment was sampled. A Lycopodium spike was added to allow the calculation of pollen concentration. All samples received the following treatment: 20mls of 10% KOH at 80°C for 30 minutes; 20mls of 60% HF (80°C for 2 hours); 15mls of acetolysis mix (80°C for 3 minutes); stained in 0.2% aqueous solution of safranin and mounted on glass microscope slides in silicone oil following dehydration with tert-butyl alcohol.

6.3.39 Counts of 100-150 Total Land Pollen (TLP – excluding *Alnus glutinosa*, Cyperaceae, aquatics and spores) were made for each level and calculated as a percentage of the pollen sum (A. glutinosa, Cyperaceae, spores and aquatics calculated as percentage TLP + Group Sum). Identification was made using a Nikon SE at x400 magnification. Pollen nomenclature is based on Bennett (1994; Bennett *et al.*, 1994) and ordered according to Stace (1997). The pollen diagram was drawn using Tilia v 2.0.2 (Grimm 1991).

Pollen Results

6.3.40 Pollen results are shown in **Appendix 2: Table A2.6**, and plotted in **Figure 9** for feature **61260** (Middle/Late Iron Age–Roman waterhole) and **Figure 10** for feature **63376** (Roman well). Pollen concentrations were variable between samples, ranging from very high values from the upper sediments in **61260** (0.52m) to moderate in feature **62536** (0.82m). Pollen was present in sufficient numbers and concentration from all samples to permit sufficient counts during assessment.

Interpretation

6.3.41 The early Roman ditch (feature **62536**; monolith 100) had the lowest pollen concentration from all of the samples assessed with 7361 grains cm-3. The single sample shows a local environment that is predominantly open (79.6% dwarf shrubs and herbs), with *Ranunculus acris*-type (buttercup; 5.1%), *Plantago lanceolata* (ribwort plantain; 12.2%), *Cichorium intybus*-type (chicory / dandelions; 7.1%) Poaceae undif. (grasses; 46.9%) dominant, suggesting that pastoral activity was probably the dominant local landuse. The presence of *Quercus* (oak; 6.1%) and *Corylus avellana*-type (hazel;

11.2%) suggest that local stands of woodland were present. The absence of a large pollen assemblage associated with marshy / waterlogged conditions possibly suggest that there was limited local vegetation cover along the ditch banks and that it was routinely maintained during this phase of sediment accumulation, and therefore the pollen assemblage reflects an occupation phase rather than post-abandonment.

6.3.42 The exact date of feature **61260** (waterhole **61225**) is probably Romano-British as Romano-British pottery was found in the very top of the feature, and a rotary quern from near the base (**Figure 4**) but Bronze Age pottery was recovered from its fill. The pollen diagram can be divided into two separate assemblages (**Figure 9**).

6.3.43 The upper two samples indicate that *Alnus glutinosa* (alder; 32.6-35.2% TLP + *A. glutinosa*) was dominant on the Site, along with *Salix* (willow; 4.9-12.9%). Associated with them are *R. acris*-type (1.9-2.9%), Chenopodiaceae (goosefoot; 0.6%), Mentha-type (mint; 0.6%), Succisa pratensis (devil's-bit scabious; 0.6%), C. intybus-type (1.0-3.2%), Solidago virgaurea-type (daisy; 1.0%) and Cyperaceae undif. (sedge; 0.6-1.9% TLP + Cyperaceae), indicative of wet conditions. It is probable that local stands of alder and willow were present around the margins of the feature, possibly forming carr woodland. *Quercus* (11.7-12.9%), *Tilia cordata* (small leaved lime; 1.3%) and *C. avellana*-type (8.7-12.9%) are present in the local stands of dry woodland. *P. lanceolata* (3.9-6.8%) and *Rumex acetosella* (sorrel; 1.0%) suggest pastoral activity, with high values of Poaceae undif. (41.3-56.3%) indicating an open environment. Poaceae with an annulus greater than 8µm were present in both samples and these may be derived from cereals, suggesting arable activity. However, some grasses, such as *Glyceria* (sweet grass), often associated with wet areas similar to that suggested around the feature, also produce large Poaceae grains. The presence of high values of *Pteridium aquilinum* (bracken; 17.3-17.6% TLP + Spores) may suggest areas of disturbed ground, though this may also be associated with areas of open woodland. The pollen concentration from these upper two samples is very high (354954-625297 grains cm-3).

6.3.44 The lower two samples are dominated by Poaceae undif. (33.3-39.4%) with *Pinus sylvestris* (pine; 7.7-10.1%), *Juniperus communis* (juniper; 1.0-6.1%), *Quercus* (7.1-10.6%) and *C. avellana*-type (5.8-11.1%). The *P. sylvestris* and *J. communis* were both poorly preserved, with a high number of Pre-Quaternary spores and other unidentifiable pollen (due mainly to corrosion and degradation) present in the assemblage. It is highly probable that these sediments are re-worked from the local tertiary geology and, therefore, it is difficult to distinguish what aspects of the assemblage are derived from the local environment at time of deposition. Pollen concentrations are much lower than in the overlying sediments (16855-31820 grains cm-3).

6.3.45 The Roman well (feature **63376**; **Figure 10**) is dominated by *C. intybus*-type (14.6-29.4%) and Poaceae undif. (33-46.1%), with *C. avellana*-type dominant in the upper sample (43.7%). *P. lanceolata* (1.0-1.9%) and *P. aquilinum* (7.1-7.8% TLP + Spores) are present suggesting limited disturbance. The pollen assemblage is impoverished due to the dominance of a few taxa, so it is difficult to identify the nature of the local environment, but it does contain close similarities to the assemblage from feature **62536** (see above).

6.3.46 The three features assessed contain a number of similarities in their pollen assemblage, with open ground a common feature with varying amounts of *C. avellana* and *Quercus* woodland. Pastoral activity is recognised, with potential arable activity also identified. Feature **61260** contains evidence for local areas of wet woodland. This may be either very localised, and hence not recognised in the other pollen assemblages from the other features, or else the fill may have accumulated prior to the early Romano-British period with subsequent clearance of the *A. glutinosa* and *Salix*.

6.4 Scientific Dating

6.4.1 Suitable material for radiocarbon dating was obtained from a number of features. Radiocarbon dating would have the potential to clarify the date of some deposits where a Middle-Late Iron Age date cannot be distinguished from an earlier Romano-British date on pottery typology alone, e.g. banjo enclosure **65069** in Area 6, but has little potential for any of the other deposits of this date.

6.4.2 Radiocarbon dating should also be used to provide any key environmental sequences with an absolute timeframe (i.e. selected pollen sequence).

6.4.3 Given the importance and unusual nature of the find of the okra seed, it would be beneficial to radiocarbon date it to confirm its early Romano-British date as opposed to later intrusion, although the deposit contained very few roots. A radiocarbon date for this deposit also has the potential to provide a more precise date for early Romano-British activity on the Site.

7 ARCHIVE STORAGE AND CURATION

7.1 Museum

7.1.1 It is recommended that the project archive resulting from the excavation be deposited with Winchester Museums Service. The Museum has agreed in principle to accept the project archive on completion of the project, under the accession code AY319. Deposition of the finds with the Museum will only be carried out with the full agreement of the landowner.

7.2 Preparation of Archive

7.2.1 The complete archive, which will include paper records, photographic records, graphics, artefacts and ecofacts, and digital data, will be prepared following Winchester Museum's Service's guidelines, and in general following nationally recommended guidelines (Walker 1990; SMA 1995; Richards and Robinson 2000; Brown 2007).

7.2.2 All archive elements are marked with the Site accession code (AY319), and a full index has been prepared. The archive comprises the following:

- 53 cardboard boxes or airtight plastic boxes of artefacts and ecofacts, ordered by material type
- 23 files of paper records and A3/A4 graphics
- 6 files of photographs
- 29 A1 graphics

7.3 Conservation

7.3.1 No immediate conservation requirements were noted in the field. Finds which have been identified as of unstable condition and therefore potentially in need of further conservation treatment comprise the metal objects.

7.3.2 Two metal objects have been selected at this stage for further conservation treatment, involving investigative cleaning and stabilisation for long-term storage (copper alloy brooch and fitting). Following X-radiography of the whole metalwork assemblage (excluding lead), further objects may be selected for conservation treatment, the selection to be based on a combination of the need for identification, intrinsic interest of specific objects, and provenance on the Site. The metal finds are appropriately packaged for long term storage.

7.4 Discard Policy

7.4.1 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, burnt (unworked) flint and stone has already been discarded, and no further discard is anticipated.

7.4.2 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.

7.5 Copyright

7.5.1 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 1988 with all rights reserved. The recipient museum, however, will be granted an exclusive licence for the use of the archive for educational purposes, including academic research, providing that such use shall be non-profitmaking, and conforms to the Copyright and Related Rights regulations 2003.

7.6 Security Copy

7.6.1 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 Archaeological Record (English Heritage), a second diazo copy will be deposited with the paper records, and a third diazo copy will be retained by Wessex Archaeology.

8 STATEMENT OF POTENTIAL

8.1 Potential of the features

8.1.1 The Site has the potential to contribute to most of the Original Research Aims (see Section 2 above) as well as address additional questions concerning the nature of prehistoric activity (i.e. of Early Mesolithic and Middle Bronze Age date). The evidence will make a considerable contribution to local and to some extent regional knowledge.

8.1.2 Little evidence exists prior to the Late Bronze Age but the recovery of Mesolithic material indicates some sporadic use of this area. Evidence for Mesolithic activity on the Site was unexpected, although sites of this date are well-known within the county. Clusters of Early Mesolithic material occur on the Greensand and Late Mesolithic sites concentrated on the Greensand, Chalk downland and Solent harbours (Jacobi 1981; Gardiner 2006; Wymer 1977).

8.1.3 The typology of the flintwork from the Site places it within the Early Mesolithic, probably representing short stay hunting camps. The occurrence of these sites close to a stream may also be significant and related to the tracking and hunting of animals. As well as flintwork, some charred hazelnut was recovered, although it is uncertain whether these are contemporary, but such plant remains are common on Mesolithic sites.

8.1.4 Otherwise there are only slight traces of human activity prior to the later Bronze Age, comprising scattered remains of Neolithic and Early Bronze Age date.

8.1.5 The beginnings of a formalised landscape can be seen during the Middle/Late Bronze Age through evidence of track construction and cremation burial. Residual Bronze Age artefacts, which were recovered from later features, also testify to a presence in the landscape at this time. Collectively the evidence is far from extensive and may not all belong to the same phase of activity.

8.1.6 As with other sites of this period the evidence appears to show a co-axial arrangement of ditched land divisions and a trackway. The trackway pre-dates a small barrow of Middle Bronze Age date. The incorporation of funerary remains within an organised landscape is not unusual and the association here is an important find. Similar sites have been noted in the general area and across much of southern Britain by Yates (2007). The barrow seems to have been deliberately sited and may indicate that the trackway formed an important boundary. The cremation deposit within the barrow contained charred cereal, which provides indirect evidence for cereal cultivation, perhaps within the immediate landscape. The funerary deposit will also contribute to our knowledge of local cremation practices and rites (see Section 5.9).

8.1.7 The possibility that at least one waterhole and features with burnt flint could belong to this phase of activity requires further investigation. However, the general paucity of artefacts of later Bronze Age date may be taken to

indicate that settlement was almost certainly not located in the immediate area.

8.1.8 There is an absence of Early and Middle Iron Age evidence from the excavated areas, although this could simply reflect that such settlement foci were away from the Areas of excavation. The only tangible remains of Middle Iron Age occur in the most southern excavated area (Area 6), which was situated some 500m away from the remains of earlier date. This could indicate that settlement had perhaps shifted to new sites. It is likely that investigation of the remaining Phase 1 and Phase 2 excavation areas will enhance our knowledge of the prehistoric periods.

8.1.9 The most significant find of this period on the Site is the banjo enclosure (Area 6), several of which have now been excavated within the County but none are known from the immediate area. The detailed comparison of this Site with well-excavated comparanda is likely to shed new information on this type of enclosure, its use and duration, and our present understanding of contemporary later Iron Age society (see Haselgrove *et al.* 2001).

8.1.10 The banjo enclosure enclosed a relatively large central area and has a long ditched entranceway in comparison to other Hampshire sites (e.g. Blagden Copse, Bramdean, Micheldever Wood and Owlesbury; Cunliffe 1991, 220-3, figs 12.5-12.6).

8.1.11 The Waterlooville example seems to have been more complex than some other examples in Hampshire (e.g. Micheldever Wood), with a series of secondary enclosed spaces between the ditches, which can be paralleled at sites in the County (e.g. Bramdean, Upper Cranbourne).It is possible that the entrance was connected to an outer ditch, perhaps a continuation of ditch **65201**. However no stratigraphic evidence for this was found in the areas excavated. From the evidence recovered, metal-working (iron-working with some evidence for bronzework) was being carried out on the Site. The excavation of a single four-post structure indicates the Site had a storage function too. Normally such structures are interpreted as raised granaries, and this interpretation would not be at odds with the recovery of charred cereal remains (hulled wheat and barley) from the same Site.

8.1.12 Middle Iron Age settlement was found within the central area of the banjo enclosure (Figure 2) in Area 6 during the Phase 2 evaluation. Further investigation will reveal more of the character of this Site, and from the Phase 1 work it can be shown to resemble in plan other comparable sites in Hampshire (Cunliffe 1991, 220-3 and figs 12.5 and 12.6). As with the other excavated sites in Hampshire the evidence points to a ditched settlement enclosure rather than a specialised corral for herding animals.

8.1.13 Probably of slightly later date is the more extensive enclosure of parts of the local landscape, as evident in Areas 1-4. This may have commenced in the Middle/Late Iron Age and was certainly underway during the early Romano-British period.

8.1.14 The settlement (a small rural farmstead) consisted of small sometimes curvilinear ditched enclosures with evidence of settlement, a network of trackways and a system of large rectilinear field enclosures. Preliminary

analysis has revealed that the Site underwent at least six phases of modification and was in existence until at least the 3rd century AD.

8.1.15 Both the form of the Site and the finds indicate a low status rural settlement that was engaged in some localised trade and exchange of goods (briquetáge, quernstones of non-local origin). There is evidence for on-site metal-working, although this is small-scale and probably no more than would be expected on a settlement of this type. Animal bone was generally poorly preserved, although it would seem likely from the layout of the Site that some of the enclosures were used for stock management (sheep/goat, cattle). Certainly meat was consumed on the Site. There is evidence that cereal crops were grown, processed and consumed on the Site. The single find of a charred okra seed is the one unexpected find from the Site and perhaps at odds with its rural low status character. This find is of international importance being the first known identification of this species in North-west Europe and as such provides evidence for Continental links. Further work will clarify the nature of the deposit.

8.1.16 The extensive investigation of a low status Romano-British settlement is of both local and regional significance (Massey 2006). It will be important to understand how and why the settlement pattern changed and evolved during the Middle/Late Iron Age to early Romano-British period and how this relates to wider changes in the socio-political system. It will be important to look at other similar sites in the region and their relationship within the hinterland of the urban centres of Roman Winchester and Chichester. The type of settlement and its layout will be compared with other sites in the region. Given the Site has a history that stretches across the pre- and post-conquest period, it will be important to look at signs of continuity in social practice as discussed by Massey (2006, 4). In addition, it will also be important to look for any aspects of change and for signs of 'Romanisation' in either Site layout, social practice and/or material culture.

8.1.17 The date and nature of the abandonment of the Site needs to be considered. Although the Site has a long history of development, it is uncertain whether settlement stopped in the 3rd century or carried on into the 4th century AD. There is certainly no evidence for late Roman occupation.

8.2 Potential of the finds

8.2.1 The Site produced a finds assemblage of moderate size, although its potential is somewhat limited by preservation bias (poor survival of animal bone, high levels of abrasion on ceramics, corrosion of metal objects), and the small size of some of the material assemblages – only pottery and burnt (unworked) flint occurred in any significant quantity. The latter category is intrinsically undatable but is assumed to be associated with prehistoric activities on the Site.

Prehistoric

8.2.2 The chronological emphasis of the finds assemblage is on the Romano-British period, but the small and unexpected Mesolithic lithic assemblage is of interest. This is an important addition to the corpus of Mesolithic material from Hampshire. Wymer (1977) demonstrated that Mesolithic material is by no means scarce in this part of the county; however, his gazetteer was compiled from records, most of which comprised surface collections. In addition many of the items were easily identifiable tranchet axes and picks,

objects that did not necessarily provide an accurate record of the distribution or character of Mesolithic activity in the area. A brief survey of data recorded by Wymer suggests that there is a direct correlation between the location of Mesolithic sites and deposits of Bagshot Sands. The Waterlooville assemblage was recovered under controlled conditions and provides good evidence for Mesolithic activity in this part of Hampshire. It demonstrates not only the character and technology of Mesolithic activity but also information of site location and the extent to which the worked flint may survive in a former arable landscape.

8.2.3 Worked flints from stratified deposits of Neolithic and Bronze Age date are rare from the Site but included a flake from a reworked polished flint axe that was found with two poorly worked flake cores in a prehistoric pit in the south-west corner of Area 4. Worked flints of probable Neolithic and Bronze Age date were otherwise found across most parts of the Site as material that had been redeposited in features of Romano-British date.

Middle/Late Iron Age and Romano-British

8.2.4 The Middle/Late Iron Age and Romano-British assemblage has the potential to inform on aspects of Site status, the range of local and regional contacts (and hence trade/exchange), and craft/industrial activities, as well as Site chronology.

Chronology

8.2.5 The pottery, as the largest component within the finds assemblage, offers the most potential. The spot-dating has already provided a preliminary Site chronology, but some refinement of this will be possible through further fabric and form analysis as well as detailed considerations of the material in its stratigraphic groups, information not available at the spot-dating stage. There are, for instance, already some indications of changing spatial and chronological associations within the fabrics. While the flint-tempered and calcareous wares tended to occur either together or separately, they were not found in direct association with either the sand/flint-tempered ware or the more 'Romanised' grey wares belonging to the Conquest and early Romano-British periods, thus suggesting that the flint and calcareous fabrics are of earlier, perhaps later prehistoric, date. At the opposite end of the spectrum, further analysis will clarify whether activity at the Site ceased during the late 3rd or 4th century.

8.2.6 From the stone assemblage, further analysis of the quernstone profile typologies, including referral to key texts by Shaffrey (2006) and Peacock (1987), will go some way to providing a firmer chronology.

Trade/Exchange

8.2.7 Evidence for local and regional contacts is also provided by the pottery and stone objects. These indicate that the Site was largely supplied from the local area, most of the pottery being from the Rowlands Castle and Alice Holt industries, while the querns came from the Lodsworth production centre. Regional (and continental) imports are very scarce.

8.2.8 The chronology and output of the Rowlands Castle industry is not yet fully understood, and the kiln remains unpublished (Huson 1997), and the Waterlooville assemblage could go some way towards characterising the early industry. The occurrence of early examples of the everted rim jar form

on the Site has been noted, and the association with the various other ware types could help to confirm this chronology. A wider range of Rowlands Castle products could also be identified. From the Lodsworth querns, it may also be possible to investigate whether the different profiles relate in any way to variations within the Greensand rock itself.

Craft/Industry

8.2.9 On-site ironworking (smithing) is attested by a small quantity of slag, including hearth bottoms, and ceramic hearth fragments, including a tuyère. The only evidence for copper working is a single crucible. Evidence for other activities is confined to grain processing (quern fragments) and weaving (ceramic loomweights). The presence of small quantities of both briquetage vessels and saltworking equipment is unsurprising given the proximity to areas of intensive saltworking along the coast, e.g. around Langstone and Portsmouth Harbours (Bradley and Hooper 1973).

Site Status and Lifestyle

8.2.10 Although early Romano-British ceramic imports were restricted to a small quantity of Samian and Central Gaulish beakers, the inhabitants of the Site used a relatively large number of local imitations of these imported forms (the vessel with the skeuomorphic handle, for example, and a range of beakers and bowls). This paucity of imports (which would provide the 'middle range' tablewares) is perhaps surprising given the proximity of the Site to the coast and others such as the Fishbourne palace. Other high quality, 'luxury' goods (e.g. glass, metalwork) are also markedly absent. Personal items are restricted to one brooch.

8.3 Potential of the environmental evidence

Charred Plant Remains

8.3.1 Archaeobotanical data pertaining to cereal agriculture during the Middle/Late Iron Age and Romano-British period are very rare in this area of south-east Hampshire. While the density of remains was variable across the features on this Site, overall the assemblages from this Site are on average considerably richer than the Romano-British site at Crookhorn, Portsmouth (Murphy 1989), where only two samples were examined and the multi-period site at Dowd's Farm, Hedge End (Wessex Archaeology 2007c; in prep.). The remains are also generally richer than the small assemblages available across the county border to east for Romano-British Sussex (cf. Hinton 1997).

8.3.2 The Site at Waterlooville can provide much more detailed information than these aforementioned sites. Significantly, the Site also shows distinct differences to other sites in Hampshire. These have commonly produced charred evidence for both spelt wheat and barley (Campbell 2000; Caruthers 1991; Murphy 1989), so the presence of notable quantities of emmer in comparison to spelt, in both Middle/Late Iron Age and Romano-British contexts at Waterlooville can be seen to be unusual and the extent of the importance of emmer over spelt which needs to be clarified.

8.3.3 As such the charred assemblages from this Site are of considerable importance in providing information on crops and agricultural practices in this part of later Iron Age and Romano-British Hampshire. Such information pertains to the range and type of crops grown, the types of soils under

cultivation and the storage and processing of these crops. For example, in addition to the predominance of emmer, the charred seed of okra requires further investigation, as it potentially can provide extremely valuable, hitherto unrecorded evidence for this crop within the Roman Europe.

8.3.4 Additionally the assemblages can also assist in interpreting the usage of different areas of the Site, such as the kiln area in Area 2, a general settlement area, and the industrial enclosures in Area 3 associated with hammerscale. Such analysis then provides clear potential to provide an important input into the overall economy and interpretation of the archaeology and the nature of the settlement itself.

Wood Charcoal

8.3.5 The quantity of charcoal retrieved was generally high. The detailed analysis of the wood charcoal from a selection of features can address questions concerning the selection and use of woodland resources for domestic fuel and industrial activities. It is hoped that there will be differences between the material recovered from the settlement areas, from the kiln and from the industrial enclosures. The wood charcoal analysis may assist in defining the nature and complexity of the local woodland and hedgerow environments and of the management (coppicing and pollarding) of that resource. There is also a limited potential to define the nature of pyre technology and selection of wood specifically for this activity.

Waterlogged Plant Remains, Waterlogged Wood and insect Remains

8.3.6 The waterlogged plant remains from the Early and Early-Middle Romano-British wells/waterholes, **61260**, **63376** and **63567** will augment the information gained from the charred remains with more details of the immediate vegetation and landscape. The identification of the waterlogged wood will add to the information gained from the wood charcoal concerning the local woodland resource. However, few insect remains were recorded in the samples and there is no potential for further analysis.

8.3.7 While only a few features contained waterlogged material, such material rarely survives on sites, especially those on the chalk downlands to the North. As such they provide one of the few circumstances in which material of this date is preserved on archaeological settlements of this date in this area of Hampshire.

Sediments

8.3.8 Unless specific questions are raised during the post-excavation process regarding particular features or layers, the sediments have no further potential *per se*.

Pollen

8.3.9 Full pollen analysis is recommended for each of the features assessed,(ditch **62536**, waterhole **61225**, and well (**63376**) which will include an increase in the number of samples per feature. This should provide increase in the pollen assemblage diversity which is essential for providing robust interpretations of the local and surrounding vegetation, including its spatial variability, which can be achieved by analysing several contemporary features. As part of this analysis radiocarbon dating is strongly recommended, especially for feature **61260** (waterhole **61225**).

8.3.10 As with waterlogged remains, pollen rarely survives on the drier more calcareous sites to the north. The outstanding preservation for the nature of the Site and that multiple contemporary features are available for study allows an unprecedented chance to examine the localised environment of a Site of this date for this region, and providing some potential insight into landuse around the settlement. Information on the wider environment including the extent of woodland will also be provided by analysing the remains. This information will augment the results of both the wood charcoal and waterlogged wood analyses.

8.4 Scientific dating

8.4.1 Suitable material for radiocarbon dating was obtained from a number of features from across the Site. Radiocarbon dating has the potential to assist with the interpretation of features where Middle-Late Iron Age pottery cannot be distinguished from earlier Romano-British date on typology alone, e.g. banjo enclosure **65069** in Area 6.

8.4.2 Given the importance and unusual nature of the find of okra seed, it would be beneficial to radiocarbon date this seed to confirm that it is early Romano-British as opposed to a later intrusion, although the deposit had very few roots. A radiocarbon date for this deposit also has the potential to provide a more precise date for early Romano-British activity on the Site.

8.4.3 The features chosen for pollen analysis have some potential for dating, in particular that from **61260** which has waterlogged twigs and seeds. There is suitable charred cereal and other remains for dating the pollen sequences associated with ditch group **62536** and well/waterhole **63376**.

9 PROPOSAL FOR FURTHER WORK AND METHOD STATEMENTS

9.1 Proposal for further work

General

9.1.1 The archaeology in the vicinity of the Site will be re-examined by reviewing published reports and available grey literature. This will contribute towards the discussion of the Site within its wider landscape and its relationship to any nearby sites. In particular other Iron Age and Romano-British sites within the hinterland of known high status and/or urban centres.

9.1.2 An Access database and AutoCAD drawings have been constructed to facilitate rapid cross-examinations and updating of the archive during post-excavation analysis.

9.1.3 Once the initial post-excavation analysis is completed, revisions will be made as required to the phasing. The publication text will be written and will include the key results of the proposed specialist work. Illustrations will be prepared to accompany the report. The results will be discussed in their local and regional context.

9.2 Finds

9.2.1 Only the pottery warrants further detailed analysis, although details of other material categories will be used in the proposed publication. This will entail some enhancement of existing texts, and consideration of intra-site distributions, as detailed below.

9.3 Pottery

9.3.1 The pottery from selected feature groups (all the prehistoric features and those of Middle/Late Iron Age and Roman date, chosen on the basis of the number of sherds (over 50) and their stratigraphic/spatial importance to the Site narrative – probably around 90% of the assemblage), will be subjected to full fabric and form analysis, following the standard Wessex Archaeology recording system (Morris 1994). Where appropriate, correlations will be made with the existing type series for the area (e.g. Cunliffe 1971; Lyne and Jefferies 1979). In order to conform to the minimum standards for the archiving of Roman pottery (Darling 1994), the existing scan for the rest of the assemblage will be enhanced by the addition of weight information for the sherds in each fabric within each context.

9.3.2 All of these data will feed into the stratigraphic text, enabling further refinement of the Site chronology. A publication report will be prepared, discussing the range of types present, and their implications for an understanding of local and regional contacts (and hence production and distribution networks), and the position of the Site within the local settlement hierarchy. Any new information on the Rowlands Castle industry will be considered. A selection of vessels (in the region of 20 vessels – one figure) will be illustrated to support the text.

9.4 Flint

9.4.1 No further recording of the flint is required. The assemblage will be placed within its local and regional context. A small number of flints will be illustrated.

9.5 Fired Clay

9.5.1 No further recording of the fired clay is required, although it may be worth examining in more detail the spatial distribution of this material. Further comparisons should be sought for the possible kiln structure. A short report will be prepared on this material for inclusion in the final publication. Up to six of the fragments will be illustrated.

9.6 Metalwork

9.6.1 Following X-radiography, the existing metalwork catalogue entries will be enhanced as appropriate, and a further selection for conservation treatment may be made (estimated to be no more than ten objects). Details of object identifications will be fed into the stratigraphic text, where no formal report is considered necessary.

9.7 Worked Stone

9.7.1 Analysis of quernstone typologies may assist in further defining Site chronology. A small number of artefacts will be illustrated (maximum six objects) and a short report based on this assessment will be produced for publication.

9.8 Human Bone

9.8.1 No further work is proposed on the human bone assemblage. The assessment report will be edited for use in the final publication.

9.9 Animal Bone

9.9.1 No further work is proposed on the small animal bone assemblages. The assessment report will be edited for use in the final publication.

9.10 Other Finds

9.10.1 No other finds categories warrant further analysis, although details of these finds will be included in the publication as appropriate.

9.11 Conservation

9.11.1 No immediate conservation requirements were noted in the field. Finds which have been identified as of unstable condition and therefore potentially in need of further conservation treatment comprise the metal objects.

9.11.2 The metalwork requires X-radiography to aid the identification of the material and to form part of the Site archive. This will be undertaken as part of the analysis. Depending on the results of the X-radiography it may be necessary to undertake remedial conservation, however other than a copper alloy brooch and a possible fitting it is unlikely that any other objects will require further work.

9.12 Environmental

Charred Plant Remains

9.12.1 It is proposed to analyse in detail 26 samples of Middle/Late Iron Age and early Romano-British date from a range of features and areas, but in particular from the banjo enclosure (Enclosure A) in Area 6, the settlement

area and kiln in Area 2, the enclosures and industrial enclosures in Area 3. The okra seed will also be investigated.

9.12.2 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

9.12.3 A targeted selection of 10 samples is proposed for detailed analysis. These cover the Bronze Age cremation pit **63016** in Area 2, the banjo enclosure in Area 6, the enclosure in Area 1, the settlement area and kiln in Area 2 and the industrial enclosures in Area 3.

9.12.4 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.

Waterlogged Plant Remains and Waterlogged Wood

9.12.5 The waterlogged plant remains from waterhole/wells **63376** and **63567** and two of the samples from **61260** should be analysed in detail. The waterlogged wood from these samples and the further two samples from well/waterhole **61260** should also be identified. Identifications of the two pieces of waterlogged wood and the large natural piece should also be made.

9.12.6 Waterlogged plant macrofossils will be identified 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.

Sediments

9.12.7 The sediments should be retained until all requirements for sub-sampling for pollen etc have been met; it is then recommended that they be discarded.

Pollen

9.12.8 Full pollen analysis is recommended for each of the features assessed (ERB ditch **62536**, ?LIA/ERB waterhole **61225** and RB well **63376**), including an increase in the number of samples per feature. This should provide increase

in the pollen assemblage diversity which is essential for providing robust interpretations of the local and surrounding vegetation, including its spatial variability, which can be achieved by analysing these three probably contemporary features. As part of this analysis radiocarbon dating is strongly recommended, especially for feature **61260**.

9.12.9 Samples will be processed using standard procedures (Moore *et al.* 1991). Preparation will involve the following treatment: 20mls of 10% KOH at 80°C for 30 minutes; 20mls of 60% HF (80°C for 2 hours); 15 mls of acetolysis mix (80°C for 3 minutes); stained in 0.2% aqueous solution of safranin and mounted on glass microscope slides in silicone oil following dehydration with tert-butyl alcohol.

9.12.10 Sampling will follow closer intervals than those used in the assessment. Extended counting will be used and counts calculated as a percentage of the pollen sum (A. glutinosa, Cyperaceae, spores and aquatics calculated as percentage TLP + Group Sum). Identification will be made using a Nikon SE / Nikon eclipse e400 at x400 magnification. Pollen nomenclature is based on Bennett (1994; Bennett *et al.* 1994) and ordered according to Stace (1997). The pollen diagram prepared using Tilia v 2.0.2 (Grimm 1991).

10 PUBLICATION AND PROGRAMME

10.1 Publication

10.1.1 The report will be produced as a volume in the well-established Wessex Archaeology monograph series in a format similar to the *Archaeology of the A303 Stonehenge Improvement M Leivers and C Moore 2008,* or the work at Marnel Park, Basingstoke. A draft synopsis for the publication has been drawn up covering the current results. The results of the Phase 1 additional mitigation fieldwork could either be included, depending on the timescale of this work, or presented as a separate synthetic article for *Hampshire Studies*. This would present the results of the additional fieldwork together with an overall synthesis of the activity on the Site.

10.1.2 It is envisaged that the results of the finds and environmental analyses will be included in the archaeological description.

10.2 Draft Publication Synopsis

Introduction	*c.* 500 words
Geology, soils and topography	*c.* 300 words
Archaeological background	*c.* 500 words
Results	
Mesolithic, Neolithic and Early Bronze Age	*c.* 750 words
Tree-throw holes with worked flint, redeposited flint	
Neolithic pit, redeposited Neolithic pottery and flint	
Bronze Age	*c.* 1500 words
Ring gully with central cremation burial	
Trackway and associated ditches/gullies	
Undated cremation burial	
Early Bronze Age redeposited pottery	
Middle and Late Iron	*c.* 4000 words
Banjo enclosure and associated features	
Pits, boundary ditches and other features	
Residual activity	
Romano-British	*c.* 3500 words
Enclosures, waterholes, roundhouse, pits, ovens, other settlement features and boundary ditches	
Medieval and post-medieval activity	*c.* 1500 words
Boundary ditches, pits, quarry pit, fencelines, hearth and farm track	
Discussion	*c.* 5000 words

10.2.1 This report will be illustrated appropriately with line drawings and photographs. It is envisaged that any detailed tabulated material or methods sections will be presented in an appendix.

10.3 Post-Excavation Programme

10.3.1 A programme for the post-excavation work will be submitted once this assessment report has been approved. The task list provided (see below) is for Phase 1 work only, any integration of additional results or preparation of a synthetic article would be dealt with separately.

10.4 Management Structure

10.4.1 Wessex Archaeology operates a project management system. The team will be headed by the Project Manager, in this instance Pippa Bradley, who will assume ultimate responsibility for the implementation and execution of the project specification as outlined in the Proposal for Analysis and Publication (Section 9, above), and the achievement of performance targets, be they academic, budgetary, or scheduled. The post-excavation manager will be assisted by the fieldwork manager, who will be involved in team meetings and discussions.

10.4.2 The Manager may delegate specific aspects of the project to other key staff, who both supervise others and have a direct input into the compilation of the report. They may also undertake direct liaison with external consultants and specialists who are contributing to the publication report, and the museum named as the recipient of the project archive. The Manager will have a major input into how the publication report is written, and will define and control the scope and form of the post-excavation programme.

10.5 Performance Monitoring and Quality Standards

10.5.1 The Post-excavation Manager (Pippa Bradley) will be assisted by the Reports Manager (Julie Gardiner), who will help to ensure that the report meets internal quality standards as defined in Wessex Archaeology's guidelines. The overall progress will be monitored internally by the Head of Post-Excavation (Karen Walker).

10.6 Designated Project Team

10.6.1 The team consists primarily of internal Wessex Archaeology staff. The post-excavation project will be managed by Pippa Bradley. **Table 13** summarises the WA staff and external specialists that are scheduled to undertake the work as outlined in the task list (**Table 14**) and the programme.

10.6.2 Internal and external finds and environmental analysis, conservation work and scientific analyses will be coordinated by Rachael Seager Smith and Chris Stevens.

10.7 Personnel

10.7.1 It is currently proposed that the following Wessex Archaeology core staff and external specialists will be involved in the programme of post-excavation analyses:

10.7.2 Table 13 summarised the project team, although WA retains the right to make changes to this if circumstances arise.

Table 13: Project Team

Head of Post-excavation	Karen Walker BA MPhil, MIFA
Post-excavation Manager	Pippa Bradley BA Hons, Dip Post-Ex, MPhil, MIFA
Fieldwork Project Manager	Damian De Rosa BA MIFA
Senior Technical Manager (publications)	Julie Gardiner BA PhD, FSA MIFA
Senior Technical Manager (finds and environmental)	Andy Crockett BTech, MIFA
Senior Technical Manager (Graphics Office)	Linda Coleman BA Hons
Senior Project Officer (IT support)	Jens Neuberger MA (Archaeology) MA (World Heritage Studies) AIFA
Project Officer (post-excavation)	Susan Clelland BA
Senior Project Officer (human bone)	Jacqueline I. McKinley BTech, MIFA
Senior Project Officer (finds, Iron Age and Roman pottery)	Rachael Seager Smith BA, MIFA
Senior Project Officer (earlier prehistoric pottery)	Matt Leivers BA PhD, AIFA
External specialist (stone)	Kevin Hayward BSc MSc
Project Officer (flint)	Phil Harding Hon. Doctor of the University, Southampton MIFA
Senior Project Officer (environmental)	Chris J. Stevens BSc PhD, MIFA
Project Officer (sediments)	David Norcott PIFA BA Hons MSc
Project Officer (environmental)	Sarah Wyles BA, AIFA
Project Officer (animal bone)	Jessica Grimm MA, AIFA
Project Officer (conservation)	Lynn Wootten BSc Hons ICON accredited
Senior Project Officer (charcoal)	Catherine Barnett BSc MSc PhD MIFA MIEEM
Senior Project Officer (pollen)	Michael Grant BSc MSc PhD MIFA
Graphics Officer	Elizabeth James BA Hons MAAIS
Records Officer	Stuart Wilkinson MA, Society Of Archivists, Records Management Society, ICON
Records Assistant	Helen MacIntyre HND (Practical Archaeology) BSc Hons

11 TASK LIST, RESOURCES AND PROGRAMME

11.1 Task List

11.1.1 The table below lists the tasks necessary to complete the proposed programme of post-excavation analyses and publication. Indications of which individuals will carry out specific task are at this stage, provisional only.

Table 14: Task List

Task No	Task	Grade	Name	Days
Management				
1	General management	PM	P Bradley	10
2	QA	Head	K Walker	1
3	Management & consultation	PM	D De Rosa	3
4	Finds management	SPM	A Crockett	3
5	Environmental management	SPO	C Stevens	3
6	Graphic management	SPM	L Coleman	1
7	IT support	SPO	J Neuberger	5
8	Project meetings	All		5
Stratigraphic analysis				
9	Check and enhance phasing	SPO	S Clelland	5
10	Update database & digital plans	SPO	S Clelland	5
11	Site narrative	SPO	S Clelland	20
12	Figures for publication	DO	Illustrator	15
Finds				
13	X-ray and cleaning metalwork	PO	L Wootten	3
14	Pottery: Bronze Age	SPO	M Leivers	2
15	Pottery: Roman	PO	R Seager Smith	35
16	Other finds: cbm, metalwork, fired clay	PO	R Seager Smith	5
17	Worked flint	PO	P Harding	5
18	Worked stone	Ext	K Hayward	3
19	Human bone	SPO	J McKinley	1
20	Animal bone	PO	J Grimm	1
21	Finds illustration	DO	Illustrator	15
Environmental				
22	Select & submit radiocarbon samples	SPO	C Stevens	1
23	radiocarbon	Ext	Rafter Radiocarbon	60
24	Extraction of samples	EO	S Wyles	3
25	Analysis CPR	SPO	C Stevens	3
26	Analysis charcoal	SPO	C Barnett	7
27	Sediments	PO	D Norcott	5
28	Pollen (includes prep)	SPO	M Grant	20
29	Edit specialist reports	PM	P Bradley	5
Report				
30	Assemble report, introduction, background, captions, bibliography		S Clelland	3
31	Write discussion	SPO	S Clelland	10
32	Write discussion	PM	P Bradley	5
33	Edit report	PM	P Bradley	10
34	Review report	PM	J Gardiner	5
35	Editors corrections	All	All	5
36	External referee	Ext		40
37	Copyedit	SPM	J Gardiner	10
38	Typeset	Ext		30

39	Proofs check	All		5
40	Index	Ext		10
41	Foreign language summaries	Ext		5
42	Cover design	DO	Illustrator	4
43	Publication (print & dist)		Ext	40
Archive				
44	Archive preparation	PO	S Wilkinson	1
45	Microfilm jobsheets and checking	PO	S Wilkinson	2
46	Microfilm paper records	Marathon	Ext	1
47	Archive deposition	PO	S Wilkinson	0.5
48	Box storage grant		Ext	1

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13 APPENDIX 1: FINDS TABLES

Table A.1.1 Catalogue of Worked Stone

LAYER	SF No	Type of object	No kept	Weight (g)	Dimensions Mm	Additional Comments	Stone Type	Geological Source
19707		Honestone	1	176	105mm long x 20mm thick		iron rich micaceous sandstone	Tertiary Gritstone Purbeck
46207			1	5			1 green Slate	Possible Cornish source e.g. Delabole Quarries
51400		Part of Saddle Quern smooth one side	1	1870	51mm thick	Very smooth one side	iron-rich micaceous gritstone conglomerate with quartz and calcareous inclusions	Tertiary Gritstone Purbeck
60001			3	30	3mm thick		Slate Dark Grey	Probably North Wales Source
60028			6	84			Slate Dark Grey	Probably North Wales Source
60206		Burnt Quernstone	1	608	40mm thick		Medium Grained Chert-rich Greensand	Lodsworth Greensand Pulborough Area West Sussex
61256	27	Quern Rotary	1	454	29mm thick	Quern Fragment	Coarse Shelly chert-rich Glauconitic Sandstone	Lodsworth Greensand Pulborough Area West Sussex
61256	28	Freshly prepared flat surface or off cut for quernstone production	1	3000			Coarse Shelly Very chert-rich Glauconitic Sandstone	Lodsworth Greensand Pulborough Area West Sussex
62285		Quern Rotary	1	293	68mm	Understone	Fine-Medium Grained Greensand	Probably Lodsworth Greensand Pulborough Area West Sussex
62531	26	Quern Rotary	1	1743	121mm long 67mm thick tapering to 25mm middle	Understone	Medium-Coarse Grained chert Rich Greensand	Lodsworth Greensand Pulborough Area West Sussex
63004		Quern Fragment	1	164	55mm x 38mm X 28mm thick	1 Flat Surface	Medium Grained Chert-rich Greensand	Lodsworth Greensand Pulborough Area West Sussex
63171			2	15			Slate 1 Green 1 purple	Possible Cornish Source e.g. Delabole Quarries
63285		Quern Fragments	2	128	Largest 61x45x35mm		Medium Grained Chert-rich Greensand	Lodsworth Greensand Pulborough Area West Sussex
63285		Whetstone	1	84	81mm x 21mm		Fine hard glauconitic Sandstone	Lower/Upper Greensand Local
63285		Rubber	1	313	75mm x		Flint	Upper

LAYER	SF No	Type of object	No kept	Weight (g)	Dimensions Mm	Additional Comments	Stone Type	Geological Source
					55mm x 40mm			Cretaceous Portsdown Hill
63285		Rubble	1	34			iron-rich micaceous gritstone conglomerate with quartz and calcareous inclusions	Tertiary Gritstone Purbeck
63285		Quern Rotary Very unsual form rotary hole in middle Illustration is required and consultation with Shaffrey quern forms	2	5500	Diameter 300mm 78mm thick		Very chert-rich medium grained greensand	Lodsworth Greensand Pulborough Area West Sussex
63377	46	Quern Rotary	1	366	51mm edge down to 22mm 108mm long	Understone	Medium Grained chert-rich Greensand	Lodsworth Greensand Pulborough Area West Sussex
63641		Quern	1	103	35mmx 30mm x 25mm	Quern Fragment	iron-rich micaceous gritstone conglomerate with quartz and calcareous inclusions	Tertiary Gritstone Purbeck
63641		Quern Rotary	1	225	52mm thick	Quern Fragment	Medium Grained chert-rich Greensand	Lodsworth Greensand Pulborough Area West Sussex
63656	58	Whetstone	1	123	34 wide 85mm long	Half a whetstone	Fine hard glauconitic Sandstone	Lower/Upper Greensand Local
63656	59	Fossil Echinoid possibly used as a Hammerstone/pestle	1	271	55mm long 50mm x 40mm across		Flint Fossil is very similar to Holaster a common Upper Cretaceous Irregular Echinoid in the Chalk	Upper Cretaceous Portsdown Hill
63600	52	Quern Rotary	1	521	110mm long 42mm thick edge 15mm middle	Understone	Medium Grained chert-rich Greensand	Lodsworth Greensand Pulborough Area West Sussex
63668	55	Quern Rotary	1	1373	135mm long 51mm thick edge 25mm middle	Understone	Coarse Shelly Chert-rich Glauconitic Sandstone	Lodsworth Greensand Pulborough Area West Sussex
63668	56	Quern Rotary	1	1386	125mm long 52mm thick edge 28mm middle Est total diameter 300mm	Understone same quernstone as 55 joins	Coarse Shelly Chert-rich Glauconitic Sandstone	Lodsworth Greensand Pulborough Area West Sussex
63731		Whetstone Fragment	1	153	45mm x 40mm x30mm	Broken	Sarsen	Tertiary of Hampshire Basin
63731		Natural Pebble	1	34	51x20x20mm	Waterworn "chatter marks" Common in river	Flint	Upper Cretaceous Portsdown Hill

LAYER	SF No	Type of object	No kept	Weight (g)	Dimensions Mm	Additional Comments	Stone Type	Geological Source
						pebbles		
63831		Quern Rotary	2	1157	39 tapering down to 11mm 2nd example 35mm thick	Understone	Medium-Coarse Grained chert-rich Greensand	Lodsworth Greensand Pulborough Area West Sussex
63915	69	Quern Saddle	2	2378	66mm edge down to 25mm middle thickness 170mm long	Uneven surface typical of Saddle	Medium Grained chert - rich Greensand	Lodsworth Greensand Pulborough Area West Sussex
63951	65	Quern Rotary Fragments	2	815	45mm edge tapering down to 30mm	Understone	Medium-Coarse Grained chert - rch Greensand	Lodsworth Greensand Pulborough Area West Sussex
63963		Natural Rubble or walling rubble	1	625	120mm long 35mm thick		Iron-rich Ferrugenous sandstone	Tertiary Gritstone Purbeck
63891	54	Rotary Quern Fragment	1	192	40mm thick tapering to 30mm		Medium Grained chert-rich Greensand	Lodsworth Greensand Pulborough Area West Sussex
63891	53	Rotary Quern Fragments	6	437	Largest 80mm x 70mm x28m		Medium-Coarse Grained chert-rich Greensand with 15mm lensoid pale grey patches	Variant of Lodsworth Greensand Pulborough Area West Sussex

14 APPENDIX 2: ENVIRONMENTAL TABLES

Table A2.1: Assessment of the Charred Plant Remains and Wood Charcoal

Feature	Context	Sample	Vol	Flot size	%Roots	Grain	Chaff	Comments	Weed seeds	Comments	Charcoal 4/2mm
Early Mesolithic											
Area 2											
Tree-throw hole											
63987	63281	133	38	15	70	C	-	Indet. grain frags	C	*Corylus avellana*, *Chenopodium* (prob modern)	0/1ml
Bronze Age											
Area 2											
Cremation Pit											
63016	63017	118	20	60	20	C	-	?Barley grain frag	C	Polygonaceae, *Corylus avellana* frag, *Chenopodium* (prob modern)	10/10ml
	63017 N quad	118	4	5	20	-	-	-	-	*Chenopodium* (prob. modern)	1/1ml
	63017 S quad	118	2	3	15	-	-	-	-	-	<1/<1ml
	63017 E quad	118	1	2	35	-	-	-	-	-	0/<1ml
	63017 W quad	118	2	5	20	-	-	-	-	-	2/1ml
63016, context and 63131 & obj 30	W quad spit 1	124	1.1	30	10	-	-	-	-	-	3/8ml
	E quad spit 1	124	1.7	25	10	-	-	-	-	-	3/8ml
	S quad spit 1	124	0.4	50	5	-	-	-	-	-	5/10ml
	S quad spit 2	124	0.3	15	5	-	-	-	-	-	3/3ml
	S quad spit 3	124	0.5	4	20	-	-	-	-	-	<1/1ml
	cleaning layer	124	0.1	3	5	-	-	-	-	-	0/<1ml
	soil around obj	125	20	25	50	-	-	-	-	-	2/3ml
Prehistoric											
Area 1											
?Pit											
61206	61207	70	20	175	10	C	-	Indet. grain frags	-	-	40/30ml

Feature	Context	Sample	Vol	Flot size	%Roots	Grain	Chaff	Comments	Weed seeds	Comments	Charcoal 4/2mm
Middle/Late Iron Age and Early Romano-British											
Area 3											
Industrial Enclosure group 62527											
62293	62191	86	19	50	8	C	-	Indet. grain frags	-	*Chenopodium* (Prob. modern)	20/10ml
Area 6											
4 - Post group 65023											
65019	65020	169	9	40	40	C	C	Indet. grain frags, glume frags	C	*Avena/Bromus*	10/10ml
65021	65022	170	8	15	50	-	-	-	C	*Chenopodium* (prob. modern)	0/2ml
Banjo Enclosure? - group 65194											
65050	65053	172	8	250	3	-	-	-	-	-	50/70ml
65188	65190	201	13	10	35	-	-	-	-	-	1/2ml
	65191	202	6	5	20	-	-	-	C	*Avena/Bromus*	1/1ml
65168	65169	203	19	175	5	-	-	-	C	*Corylus avellana*	70/50ml
	65181	204	18	220	10	C	B	Indet. grain frags, glume frags	C	*C.avellana, Chenopodium* (? modern)	60/100ml
	65184	205	5	425	3	C	-	Indet. grain frags	-	-	120/150ml
	65182	206	8	750	2	C	-	Indet. grain frags	-	Buds	150/225ml
65185	65186	200	13	20	40	-	-	-	-	-	5/3ml
Banjo Enclosure? - group 65195											
65069	65071	187	19	350	2	A	B	Hulled wheat, barley, glume spikelet	C	*Avena/Bromus*	100/120ml
65109	65110	192	3	2	10	-	-	-	-	-	<1/<1ml
	65111	193	7	3	30	-	-	-	-	-	0/<1ml
	65112	194	4	3	70	C	-	Indet. grain frag	-	-	0/<1ml
	65113	195	9	10	20	-	-	-	-	-	2/1ml
	65114	196	8	10	10	-	-	-	-	-	2/1ml
	65115	197	8	10	25	-	-	-	-	-	1/1ml
Field Ditch - group 65196											
65138	65139	198	17	30	70	-	-	-	-	-	2/1ml
Subsidiary Enclosure - group 65193											
65039	65040	171	22	450	8	C	C	Indet. grain frags, glume frags	C	*Avena/Bromus*	150/175ml
Middle/Late Iron Age and Early Romano-British											
Area 6											
Field Ditch - group 65201											
65083	65084	199	16	20	30	-	-	-	C	*Chenopodium* (prob. modern)	5/3ml

Feature	Context	Sample	Vol	Flot size	%Roots	Grain	Chaff	Comments	Weed seeds	Comments	Charcoal 4/2mm
Early Romano-British											
Area 1											
Enclosing Ditch - group 61244											
61184	61186	71	0.5	2	10	-	-	-	-	-	0/<1ml
	61188	72	1	2	10	C	-	Indet. grain frag	-	-	0/<1ml
Enclosing Ditch - group 61167											
61189	61192	73	10	175	5	-	-	-	C	Bud, Polygonaceae, Brassicaceae,	30/60ml
	61192	96	9	5	30	-	-	-	B	Brassicaceae, *Vicia/Lathyrus*, Polygonaceae, bud, *Chenopodium* (?)	<1/1ml
Field Boundary - group 61245											
61203	61205	74	9	10	40	-	-	-	-	-	2/1ml
Waterhole - group 61260											
61225	61231	77	20	3	15	-	-	-	-	-	<1/<1ml
	61253	113	6	400	n/a	-	-	-	-	-	5/5ml
	61259	114	5	60	n/a	-	-	-	-	-	3/3ml
	61256	115	5	225	n/a	-	-	-	-	-	3/5ml
	61255	116	5	500	n/a	-	-	-	-	-	1/1ml
Area 2											
Boundary ditch - group 63283											
63283	63284	143	9.5	25	30	C	-	Indet. grain frags	-	Bud, Chenopodium (prob.modern)	3/5ml
	63346	144	5	15	15	-	-	-	-	-	2/3ml
	63285	145	10	800	1	A	A	Hulled wheat grain and glume frags	C	*Avena/Bromus*, Buds, *Chenopodium* ?	300/250ml
	63345	146	9	15	10	-	-	-	-	-	1/3ml
	63344	147	1	1.5	20	-	-	-	-	-	0/<1ml
	63343	148	1	1	10	-	-	-	-	-	0/<1ml
	63342	149	0.5	1	20	-	-	-	-	-	-
Field ditch - group 63785											
63007	63011	128	20	10	25	C	-	Indet. grain frags	-	*Chenopodium* (Prob. modern)	3/2ml
Field ditch - group 63995											
63144	63147	129	20	40	35	C	C	Indet. grain frags, glume frag	B	*Avena/Bromus*, Polygonaceae, Brassicaceae, *Chenopodium* ?	10/5ml
Settlement Enclosure - group 63982											
63074	63075	134	16	50	8	C	B	Barley & hulled wheat frags, glumes	-	-	15/10ml
Settlement Enclosure - group 63983											
63054	63056	139	12	30	5	C	C	Barley & hulled wheat frags, glumes	-	-	10/5ml

Feature	Context	Sample	Vol	Flot size	%Roots	Grain	Chaff	Comments	Weed seeds	Comments	Charcoal 4/2mm
63054	63057	140	12	450	2	A	A	Barley and hulled wheat grain frags, glume frags	-	-	120/200ml
Ditch - group 63779											
63160	63163	121	10	10	20	B	-	Hulled wheat &?Barley grain frags.	C	*Avena/Bromus*, Bud, *Chenopodium* (prob modern)	5/5ml
	63162	122	1	20	5	B	C	?Hulled wheat grain frags, glume base	-	-	2/3ml
Kiln - group 63391											
63391	63393	152	7	60	20	A	A*	Hulled wheat grains inc some germinated and glume frags	B	Avena/Bromus, Vicia/Lathyrus	3/8ml
	63393	153	9	120	10	A	A*	Hulled wheat and barley grains inc some germinated , and glumes, spikelet forks and rachis frags.	A	*Corylus avellana*, Polygonaceae, Poaceae, *Avena/Bromus*, *Chenopodium* (prob modern)	10/40ml
	63393	154	6	130	10	A**	A*	Hulled wheat and barley grains inc some germinated , and glumes, spikelet forks and rachis frags.	A	*Vicia/Lathyrus*, Polygonaceae, Poaceae, *Avena/Bromus*, Brassicaceae, *Chenopodium* (prob modern)	25/25ml
Pit											
63462	63463	156	8	375	2	A	B	Hulled wheat and Barley grain frags, glume frags	B	*Avena/Bromus*, Polygonaceae, Buds	120/100ml
Area 3											
Ditch - group 62536											
62237	62240	87	9.5	140	2	B	A	Hulled wheat and Barley grain frags, glume frags	-	-	40/25ml
62381	62385	97	18	700	2	A	A	Hulled wheat and Barley grain frags, glume frags incl spikelet forks of ?Emmer	A	Catkin, *Avena/Bromus*, *Vicia/Lathyrus*, buds, Polygonaceae, *Galium*	300/200ml
	62384	98	27	350	3	B	A	Indet. grain frags, glume bases	-	*Chenopodium* (Prob. modern)	120/120ml
	62383	102	9	10	10	-	-	-	C	*Avena/Bromus*, *Chenopodium* (prob modern)	2/2ml
	62386	103	9	15	10	-	-	-	-	*Chenopodium* (Prob. modern)	3/3ml
	62387	104	1.5	2	25	-	-	-	-	-	0/1ml
	62388	105	1.5	2	20	-	-	-	-	-	<1/<1ml
	62389	106	10	120	5	B	B	Hulled and ?Free-threshing wheat and Barley grain frags, rachiis fragment, glumes including bases and spikelet fork - Spelt and Emmer.	C	*Avena/Bromus*	30/50ml
	62390	107	9	30	15	C	C	Hulled wheat grain frags, glumes	-	*Chenopodium* (Prob. modern)	7/5ml
	62382	101	1.5	1	10	-	C	Hulled wheat glume frag.	C	*Avena/Bromus*	0/<1ml
62412	62415	99	2	30	7	-	-	-	-	-	7/7ml

Feature	Context	Sample	Vol	Flot size	%Roots	Grain	Chaff	Comments	Weed seeds	Comments	Charcoal 4/2mm
Droveway Ditch - group 62543											
62168	62169	78	10	100	10	C	C	Indet. grain frag, glume frag	-	*Chenopodium* (prob. modern)	35/20ml
Field Boundary - group 62539											
62170	62173	82	36	1080	3	A	A	?Hulled wheat grains . spikelet fork, glume bases emmer and spelt	A	Catkin, *Hibiscus esculentus*, ?small fruit, *Avena/Bromus*, *Vicia/Lathyrus*, buds	450/300ml
Field Boundary - group 62537											
62489	62491	117	18	3	10	-	-	-	-	-	<1/<1ml
62142	62143	92	18	5	40	-	-	-	-	-	2/1ml
	62144	93	19	5	30	-	-	-	C	*Avena/Bromus*	1/1ml
	62145	94	19	7	20	-	C	Glume frags	-	-	3/1ml
Industrial Enclosure group 62524											
62097	62098	75	20	30	25	C	C	Indet. grain frag, glume base	-	-	5/8ml
62294	62295	90	19	5	20	-	-	-	-	-	1/.1ml
	62296	91	19	10	25	-	-	-	-	*Chenopodium* (Prob. modern)	2/2ml
Industrial Enclosure group 62525											
62074	62085	76	20	30	15	A	C	Hulled wheat and Barley grain frags, glume base	A	*Avena/Bromus*, *Torilis*, *Chenopodium* (prob modern)	5/5ml
Industrial Enclosure group 62529											
62197	62200	81	18	400	3	A**	A*	Hulled wheat and Barley grain frags, glume frags, awns	A**	*Avena/Bromus*, Polygonaceae, Poaceae, *Corylus avellana*, Brassicaceae, bud	150/125ml
62259	62270	88	17	800	2	-	-	-	B	*Vicia/Lathyrus*, Bud, Polygonaceae	350/300ml
Area 4											
Ditch - group 60426											
60365	60367	47	17	15	25	C	-	Indet. grain frag.	-	*Chenopodium* (prob. modern)	2/4ml
	60368	48	13	40	8	C	-	Hulled wheat and ?Barley grain frags	B	*Avena/Bromus*, *Vicia/Lathyrus*, ?Apiaceae, *Veronica*, *Chenopodium* (prob modern)	7/7ml
	60371	49	18	60	8	A	-	Hulled wheat and Barley grain frags	A**	*Avena/Bromus*, *Vicia/Lathyrus* (A**), Polygonaceae, Brassicaceae, *Chenopodium* (prob modern)	10/15ml
	60370	50	13	25	10	B	-	Hulled wheat grain frags	A*	*Avena/Bromus*, *Vicia/Lathyrus*, Runch, Brassicaceae, *Chenopodium* (prob modern)	5/5ml
	60369	52	16	200	5	-	-	-	C	*Galium*, *Vicia/Lathyrus*, *Chenopodium* (prob modern)	100/50ml

Feature	Context	Sample	Vol	Flot size	%Roots	Grain	Chaff	Comments	Weed seeds	Comments	Charcoal 4/2mm
?Early Romano-British											
Area 2											
Hearth - group 63256											
63256	63257	135	18	100	8	-	C	Glume base	C	Corylus avellana, Urtica urens, Chenopodium (prob modern)	25/35ml
	63257	136	18	40	10	-	-	-	C	Polygonaceae	5/7ml
	63265	137	9	100	3	-	-	-	C	Polygonaceae	20/30ml
	63265	138	6	30	10	-	-	-	B	*Corylus avellana*, Polygonaceae	10/7ml
	63266	155	17	110	8	-	-	-	C	Polygonaceae	15/45ml
Area 4											
Ditch - group 60425											
60314	60316	45	18	3	25	C	-	Indet. grain frag.	-	*Chenopodium* (prob. modern)	0/<1ml
Early - Middle Romano-British											
Area 2											
Field Boundary - group 63771											
63525	63527	160	4	20	10	-	-	-	-	-	5/5ml
Field Ditch - group 63788											
63024	63026	126	18	40	35	C	-	Indet. grain frags	-	-	5/5ml
	63025	127	20	125	8	C	-	Hulled wheat grain frag	C	*Vicia/Lathyrus*	55/30ml
Field Ditch - group 63775											
63260	63273	131	20	250	5	A	A	Hulled wheat grain and glume frags	A	*Vicia/Lathyrus, Avena/Bromus*, Polygonaceae, Bud, *Chenopodium* (?)	110/60ml
Rectangular enclosure - group 63988											
63730	63731	172	7	375	2	A	A	Hulled wheat and barley grain frags, glume frags	B	*Corylus avellana, Avena/Bromus*	75/180ml
Settlement Enclosure - group 63977											
63070	63071	132	20	20	25	C	-	Indet. grain frags	C	Polygonaceae	7/5ml
63213	63215	141	16	30	25	-	C	Glume frags	C	*Vicia/Lathyrus, Chenopodium* (?)	15/5ml
63961	63966	190	0.5	3	5	-	-	-	-	-	1/1ml
63549	63550	159	9	175	5	-	-	-	-	-	50/40ml
Settlement Enclosure - group 63795											
63968	63871	174	8	450	2	-	-	-	C	*Avena/Bromus, Vicia/Lathyrus*	225/100ml
	63872	175	8	100	3	C	-	Indet. grain frag	-	-	40/20ml

Feature	Context	Sample	Vol	Flot size	%Roots	Grain	Chaff	Comments	Weed seeds	Comments	Charcoal 4/2mm
Pit											
63861	63863	176	8	20	5	C	-	Indet. grain frag	-	-	3/5ml
	63864	177	19	1000	2	A	A	Hulled wheat and barley grains, glume frags inc 1 x c.f. Emmer,	A	*Crataegus*, *Avena/Bromus*, Poaceae, Polygonaceae, Buds	375/325ml
	63876	178	5	35	3	B	B	Hulled wheat and barley grain frags, glume frags	B	*Avena/Bromus*, Polygonaceae, *Corylus avellana*	10/5ml
Well/Waterholes											
63376	63935	188	17	250	2	B	C	Hulled wheat and barley grain frags, glume frags	A	*Corylus Avellana*, *Avena/Bromus*, *Galium*, Buds, *Chenopodium*. [Uncharred A*** *Prunus spinosa*, *Corylus avellana*, thorns, buds, *Urtica dioica* , *Ranunculus*, *Rubus*, Polygonaceae, *Stachys*, *Chenopodium]*	40/30ml
63567	63965	189	16	100	2	-	-	-	-	[uncharred C Polygonaceae, *Chenopodium*]	0/1ml
Romano-British											
Area 1											
Boundary Ditch - group 61250											
61139	61143	63	8	5	35	C	-	Indet. grain frag	-	-	1/1ml
Ditch - group 61251											
61081	61082	62	8	5	35	C	-	Indet. grain frag	-	*Chenopodium* (prob. modern)	1/1ml
Enclosure Ditch - group 61168											
61134	61136	64	10	15	20	-	C	Glume frag	-	-	1/1ml
61130	61132	65	10	10	20	-	-	-	-	-	2/1ml
Area 2											
Field Boundary - group 63788											
63097	63100	130	18	10	65	C	-	Indet. grain frags	C	*Corylus avellana*	0/1ml
Field Boundary - group 63792											
63584	63608	161	4	60	5	C	C	Indet. grain frags, glume frags	-	-	20/10ml
Field Boundary - group 63800											
63835	63836	183	17	20	45	-	-	-	C	*Chenopodium* (prob. modern)	3/3ml
Field Ditch - group 63772											
63303	63305	184	20	100	5	-	-	-	C	*?Avena/Bromus*, *Chenopodium* (prob. Modern)	20/20ml
Field Ditch - group 63773											
63253	63255	186	18	10	30	-	-	-	-	*Chenopodium* (prob. modern)	2/1ml

Feature	Context	Sample	Vol	Flot size	%Roots	Grain	Chaff	Comments	Weed seeds	Comments	Charcoal 4/2mm
Roundhouse - group 63976											
63409	63410	162	6	5	10	-	-	-	-	-	0/<1ml
63449	63450	163	10	10	20	-	-	-	C	*Corylus avellana*	1/<1ml
63531	63532	164	9	3	25	-	-	-	-	-	<1/1ml
63533	63534	165	9	5	25	-	-	-	-	-	1/1ml
63441	63442	166	8	5	20	-	-	-	-	-	1/1ml
Pits											
63003	63004	108	19	10	20	-	-	-	-	-	1/1ml
63049	63050	119	6	2	25	-	-	-	-	-	0/<1ml
	63052	120	9	250	3	B	-	?Hulled wheat and ?Barley grain frags.	A	*Vicia/Lathyrus*, Bud, *Avena/Bromus*, *Corylus avellana*	100/75ml
63370	63371	150	3	35	7	-	C	Glume frags	-	-	13/5ml
63916	63920	185	10	175	5	A	A*	Hulled wheat and barley grain frags, glume and spikelet frags of mainly spelt but with some emmer	B	Corylus avellana, Avena/Bromus, Polygonaceae, Chenopodium (prob modern)	40/80ml
Well - group 63890											
63890	63900	179	17	30	5	-	-	-	C	*Chenopodium* (prob. modern)	5/5ml
	63891	180	15	175	8	-	-	-	C	*Chenopodium* (prob. modern)	50/45ml
	63892	181	18	225	5	C	-	Indet. grain frag	-	-	70/90ml
Area 3											
Trackway Ditch - group 62541											
62373	62378	95	19	10	75	B	-	Hulled wheat grain frags	-	-	1/1ml
62443	62445	109	10	5	60	C	-	?Free-threshing wheat grain frag.	-	*Chenopodium* (Prob. modern)	<1/<1ml
62439	62440	110	10	5	50	C	-	Indet. grain frag	C	Polygonaceae	<1/<1ml
	62441	111	5	1	50	-	-	-	-	-	-
Industrial Enclosure - group 62527											
62155	62157	79	17	25	8	A	C	Hulled wheat and barley grains, glume frag, culm node	A	*Avena/Bromus, Vicia/Lathyrus, Corylus avellana, ?Lens culinaris*	3/2ml
Area 4											
Ditch - group 60357											
60357	60358	46	16	50	10	C	C	?Hulled wheat grain frag, glume frags	C	Polygonaceae, *Vicia/Lathyrus*, *Chenopodium* (prob.modern)	10/15ml
?Romano-British											
Area 2											
Posthole group - group 63996											
63353	63355	151	1	3	10	-	-	-	-	-	0/<1ml

Feature	Context	Sample	Vol	Flot size	%Roots	Grain	Chaff	Comments	Weed seeds	Comments	Charcoal 4/2mm
Area 4											
Ditch - group 60428											
60413	60415	56	18	5	50	-	-	-	-	*Chenopodium* (prob. modern)	0/1ml
Medieval											
Area 2											
Field Boundary - group 63791											
63609	63611	167	20	30	30	-	-	-	-	-	<1/1ml
Modern											
Area 4											
Ditch - group 60411											
60411	60412	57	10	3	25	C	-	Indet. grain frag	-	*Chenopodium* (prob. modern)	0/1ml
Undated											
Area 1											
Pits											
61035	61036	53	10	25	5	-	-	-	-	-	5/5ml
61035	61059	54	5	150	5	-	-	-	-	-	70/40ml
61100	61102	66	10	175	25	-	-	-	C	?Tuber	50/50ml
61160	61125	67	9	30	20	C	C	Hulled wheat grain and glume frags	C	*Avena/Bromus*, thorn	5/5ml
61173	61176	69	10	50	7	-	C	Glume frag	-	-	20/10ml
Area 2											
Tree-throw hole											
63168	63169	123	2	150	3	-	-	-	-	-	70/50ml
Area 3											
Hearths											
62051	62052	68	20	120	10	-	-	-	-	*Chenopodium* (prob. modern)	25/40ml
62234	62235	85	18	900	5	-	-	-	B	Large Viola, buds Polygonaceae	275/250ml
Pits											
62012	62021	59	17	40	40	-	-	-	C	Prunus spinosa, Corylus avellana, Lolium	5/10ml
	62022	60	16	500	3	B	C	Hulled wheat grain and glume frags	B	Polygonaceae, *Avena/Bromus*, Bud, *Chenopodium* (prob. modern)	150/125ml
62139	62140	80	7	650	1	C	-	Indet. grain frags	C	*Corylus avellana*	225/200ml
Cremation Pits											
62204	62205	83		60	8	-	-	-	-	*Chenopodium* (prob. modern)	2/5ml
	62530	84	6	20	20	-	-	-	-	*Chenopodium* (prob. modern)	<1/2ml

Feature	Context	Sample	Vol	Flot size	%Roots	Grain	Chaff	Comments	Weed seeds	Comments	Charcoal 4/2mm
Area 4											
Droveway Ditch - group 60420											
60286	60289	41	18	250	7	C	-	Indet. grain frag.	-	*Chenopodium* (prob. modern)	50/100ml
Droveway ditch - group 60422											
60301	60302	44	18	4	20	-	-	-	C	*Veronica*, *Chenopodium* (prob. modern)	<1/<1ml
Droveway ditch - group 60423											
60249	60250	42	20	5	60	C	-	Indet. grain frag.	C	*Galium*	1/<1ml
60261	60262	51	18	10	50	C	-	Indet. grain frag	-	*Chenopodium* (prob. modern)	2/1ml
Ditch - group 60427											
60380	60381	55	16	3	20	-	-	-	-	-	0/1ml
Gully											
60321	60322	43	20	4	25	-	-	-	C	Tuber?, *Chenopodium* (prob. modern)	0/<1ml
Area 5											
Pit											
60017	60020	25	7	250	5	-	-	-	-	*Chenopodium* (prob. modern)	75/50ml

KEY: A*** = exceptional, A** = 100+, A* = 30- 99, A = ≥10 items, B = 9 - 5 items, C = < 5 items, Analysis: C = charcoal, P = plant,

Table A2.2: Sediment Descriptions and Sub- samples Monolith [89]

Feature 62142 dwg 62034 mono 89
2 x monolith samples of 0.60 & 0.70m respectively, overlap at 0.52-0.60m, giving total length of 1.22m
0cm= *m aOD
[1 is used to denote when top of monolith taken as 0cm]

Depth [1](m)	*Pollen samples taken*	*Other sample s taken*	*Context (and excavators description)*	*Full sediment description*	*Interpretation*
0-0.42			62146	10yr 4/6 dark yellowish brown silty clay loam, 2% fine macropores. Clear to diffuse boundary.	Tertiary fill
0.42-0.60			62145	10yr 5/6 yellowish brown silty clay loam, 2% fine macropores. Clear boundary.	Secondary fill
0.60-0.73			62144	10yr 5/4 yellowish brown silty clay loam, 2% fine macropores. Clear boundary.	Secondary fill
0.73-1.09	0.96 1.04		62143	60/40% mottled 5/4 yellowish brown / strong brown silty clay loam, occasional silty inwash. Sharp boundary.	Primary fill
1.09-1.22				10yr 5/6 yellowish brown silt loam, firm, friable.	Geology

Table A2.3: Sediment Descriptions and Sub- samples Monolith [100]

Feature 62381 Dwg 62091 monolith 100
0cm= *m aOD
[1 is used to denote when top of monolith taken as 0cm]

Depth [1](m)	*Pollen samples taken*	*Other sample s taken*	*Context (and excavators description)*	*Full sediment description*	*Interpretation*
0-0.15			62390	10yr 5/6 yellowish brown clay loam (silt component quite coarse). Quite well developed blocky structure, 2% fine macropores, occasional fine fleshy rootlets, thin sub-vertical worm burrows. Sharp boundary.	Tertiary fill – likely ploughed in material
0.15-0.23			62389	10yr 4/4 dark yellowish brown clay loam, 2% charcoal lumps 2-5mm, 2-5% fine macropores, moderately developed medium crumb structure. Clear boundary.	Dump with pedogenesis.
0.23-0.53			62387	10yr 5/6 yellowish brown sandy clay loam, occasional vertical coarse worm burrow 5-10mm diam., quite well developed blocky structure, 0.5-1% fine macropores, clear boundary.	Secondary fill
0.53-0.70			62384	10yr 4/4 dark yellowish brown silty clay (plastic and smooth, finer silt component than has been common elsewhere). Common charcoal c.4mm, rare up to 30mm. 2% very fine macropores, moderately well developed fine to medium blocky structure. Clear boundary.	Dump(s) with pedogenesis; possibly significant stasis ?
0.70-0.86	82		62383	10yr 5/4 yellowish brown silty clay loam, weakly developed medium crumb structure, 0.5% fine macropores. Abrupt boundary	?topsoil derived primary fill
0.86-1.10+	96			Mottled yellowish brown / 20% pale grey silty clay loam geology.	Geology

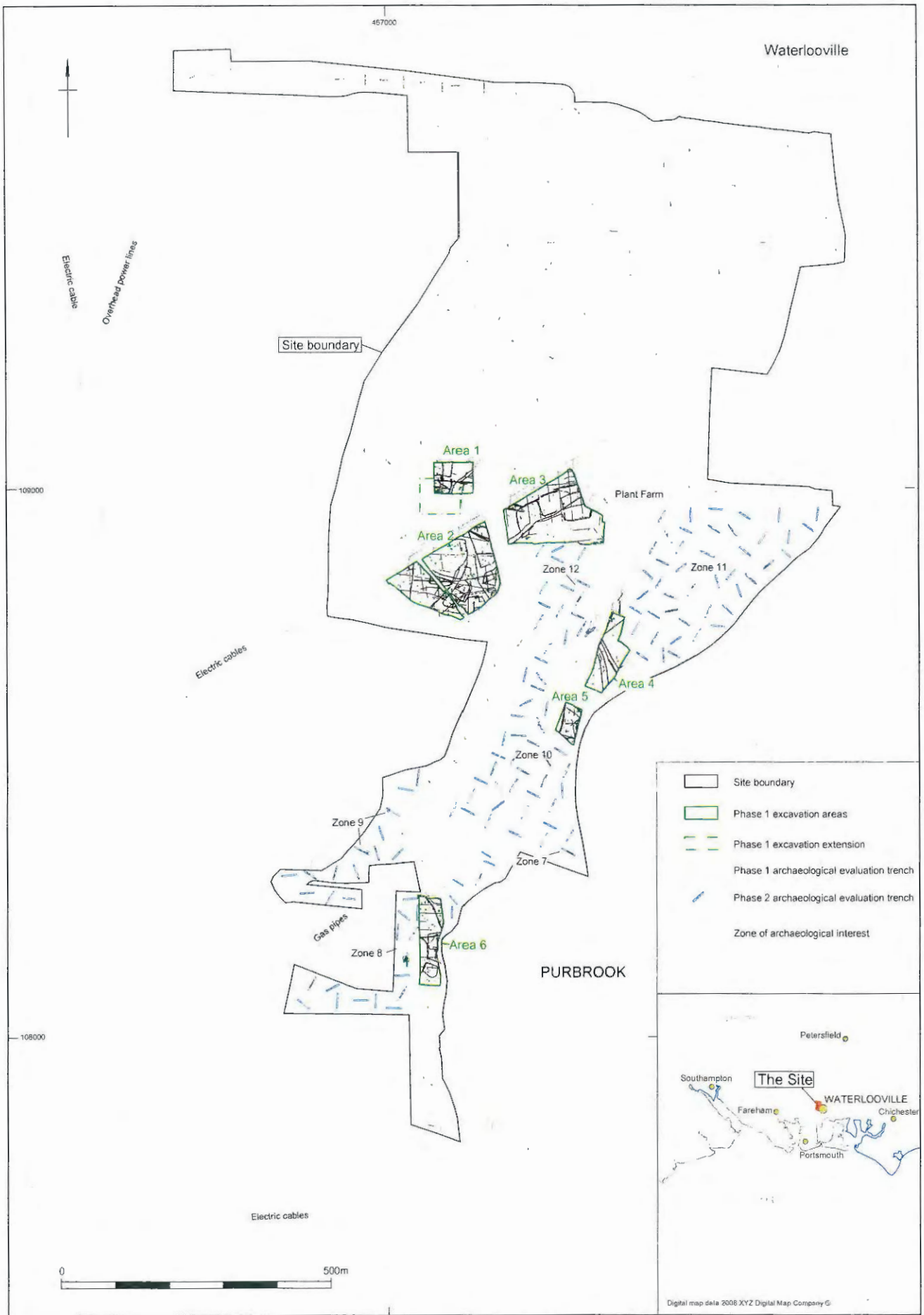
Table A2.4: Sediment Descriptions and Sub- samples Monolith [112]

Feature -61225 Dwg# 61059 monolith 112 0cm= *m aOD [1 is used to denote when top of monolith taken as 0cm]					
Depth [1](m)	*Pollen samples taken*	*Other samples taken*	*Context (and excavators description)*	*Full sediment description*	*Interpretation*
0-0.29				5y 5/1 grey silty clay loam, 5% fine prominent to distinct fine strong brown mottles – well defined iron staining around root and rootlet holes. Appears waterlogged, some small roots are still extant. Clear to sharp boundary (20-30mm)	Fill
0.29-0.35				5y 4/1 dark grey silty clay loam, , 2-5% fine prominent to distinct fine strong brown mottles. Sharp boundary.	Fill
0.35-0.39				5y 5/2 olive grey silty clay, less mottling than above (1-2%). Waterlogged roots still observed. Occasional inwash of fine olive sand (c.1mm). Sharp boundary.	Fill
0.39-0.69	0.52 0.60			5Y 3/1 very dark grey clay loam, several inwashes of olive sand towards top of layer, from 2mm to 12mm in thickness (0.39 to 0.46m). Only very sparse indistinct mottling, <0.5%. Rare charcoal fleck / lump <3mm	Partly waterlogged fill
0.69-0.88	0.76 0.80			5y 4/3 olive silty clay (although silt noticeable coarse; not quite sand but not far off). Common waterlogged roots 10-15mm diameter. Abrupt boundary.	Waterlogged fill
0.88-1.00+				5y 4/2 olive grey compact silt loam (quite coarse silt)	Geology

Table A2.5: Sediment Descriptions and Sub- samples Monolith [158]

Feature 61225 Dwg# 61059 monolith 158 0cm= *m aOD [1 is used to denote when top of monolith taken as 0cm]					
Depth [1](m)	*Pollen samples taken*	*Other samples taken*	*Context (and excavators description)*	*Full sediment description*	*Interpretation*
0-0.08			63504	2.5Y 4/2 dark greyish brown sandy clay loam (very fine sand, almost silt), <1% charcoal small lumps c. 2mm, 0.5% fine to medium macropores, clear to sharp boundary	Dump
0.08-0.17			63506	2.5y 5/2 greyish brown sandy clay loam (very fine sand as above). Very similar to above but slightly paler & more charcoal – 2% <4mm. sparse medium yellowish brown iron staining. Clear to sharp boundary	Dump
0.17-0.29				2.5Y 4/2 dark greyish brown sandy clay loam (very fine sand, almost silt), occasional charcoal fleck and rare lump (8mm), sharp boundary	Dump
0.29-0.42			63508	Banded inwashes of sorted very fine sand / coarse silt, c.5-10mm thick and interleaved with grey sandy clay loam with occasional charcoal flecks. There are 4 inwashes in total, (0.35, 36, 40 & 42m); the upper 2 are heavily iron panned almost to the point of concretion. Lower ones are pale. Clear boundary.	Reworking of pit contents by action of standing water.
0.42-0.53	0.42 0.50		63508	2.5y 5/2 greyish brown sandy clay loam, with sparse diffuse yellowish brown iron staining mottles. Abrupt boundary	Dump
0.53-0.60				Dark yellowish brown clay loam / (fine) sandy clay loam with 20% light to mid grey mottles	Geology

Feature	62536	61260				63376	
Monolith	100	112				158	
Depth within monolith (m)	0.82	0.52	0.60	0.76	0.80	0.42	0.50
Pollen Concentration (grains cm^{-3})	7361	625297	354954	31820	16855	59061	22491



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Scale:	see bar scale	Illustrator:	SEJ
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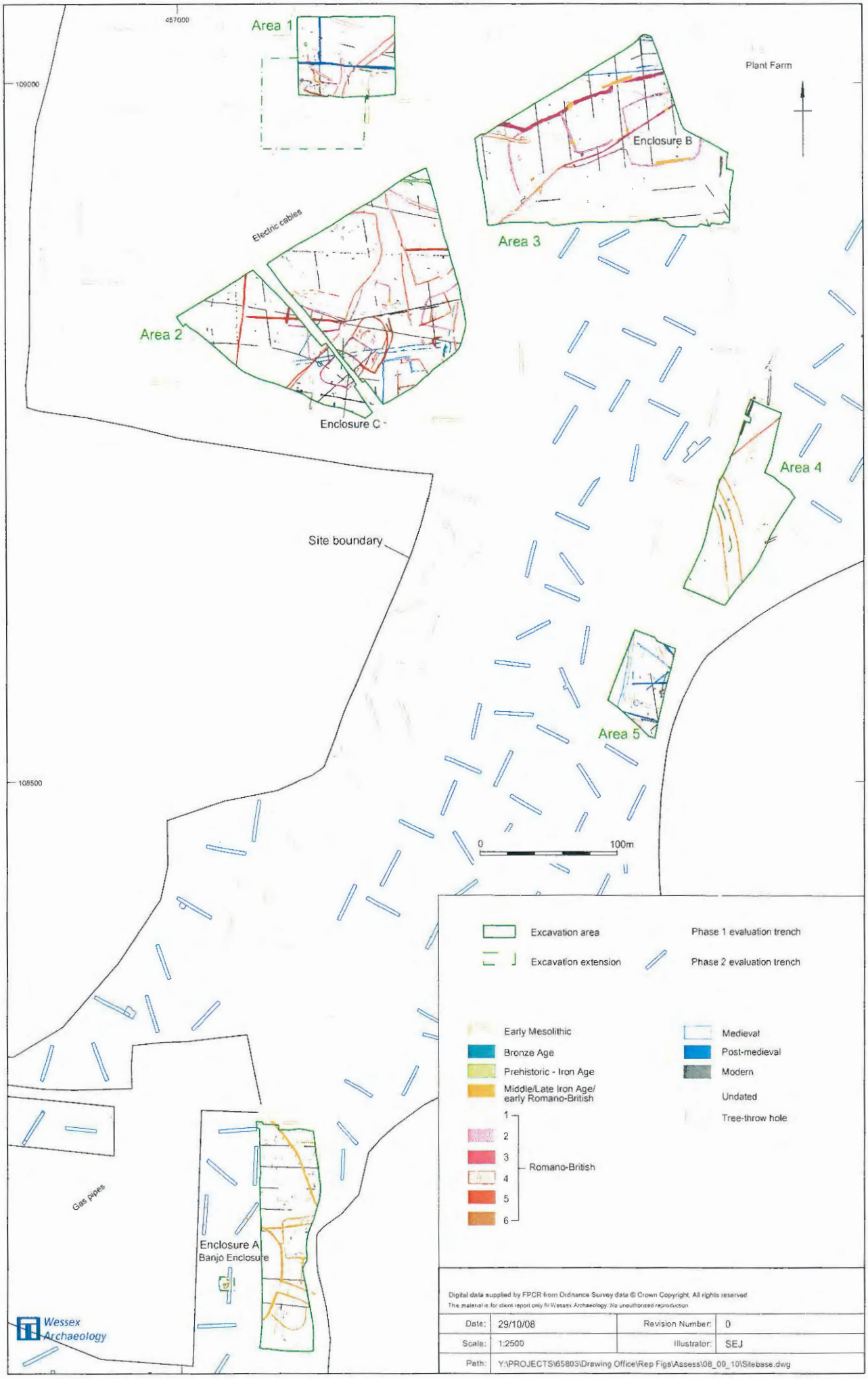
Site location showing evaluation and excavation areas

Figure 1



Phase 1 excavation results

Figure 2

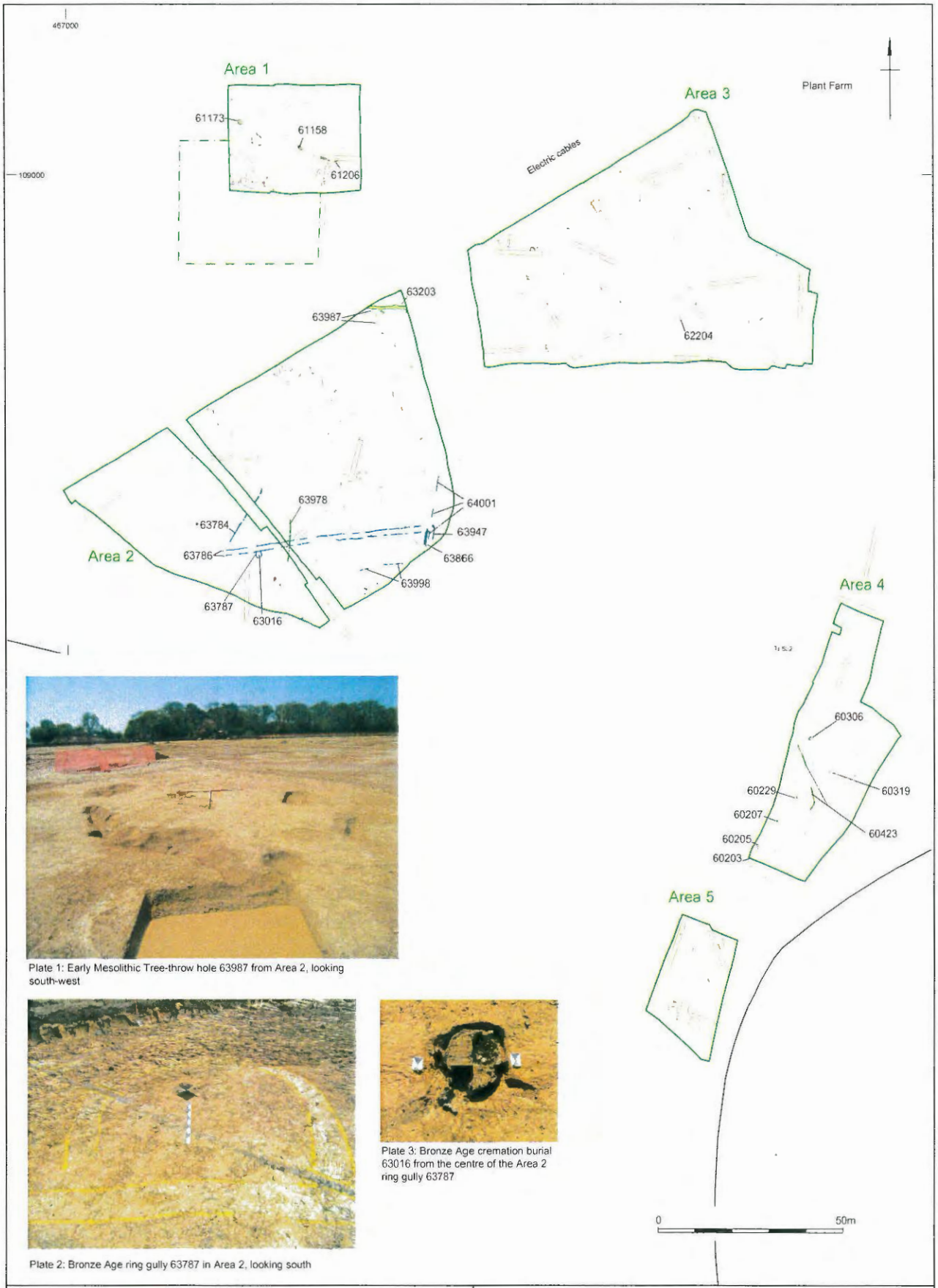


Plate 1: Early Mesolithic Tree-throw hole 63987 from Area 2, looking south-west

Plate 2: Bronze Age ring gully 63787 in Area 2, looking south

Plate 3: Bronze Age cremation burial 63016 from the centre of the Area 2 ring gully 63787

Excavation area
Excavation extension
Evaluation trench
Tree-throw hole

Early Mesolithic
Bronze Age
Prehistoric - Iron Age
Remaining phases
Undated

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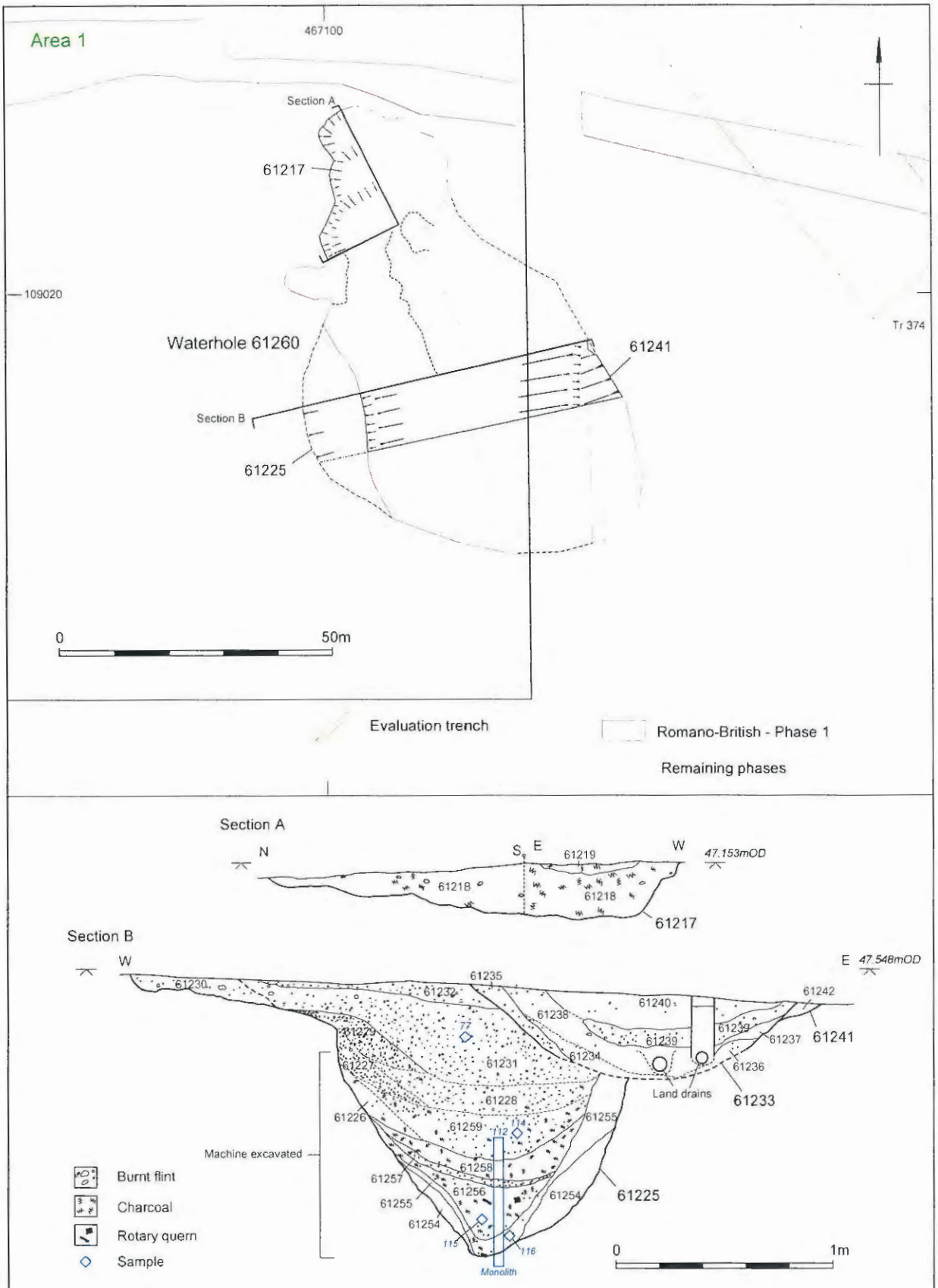
Prehistoric activity in Areas 1 to 5

Figure 3



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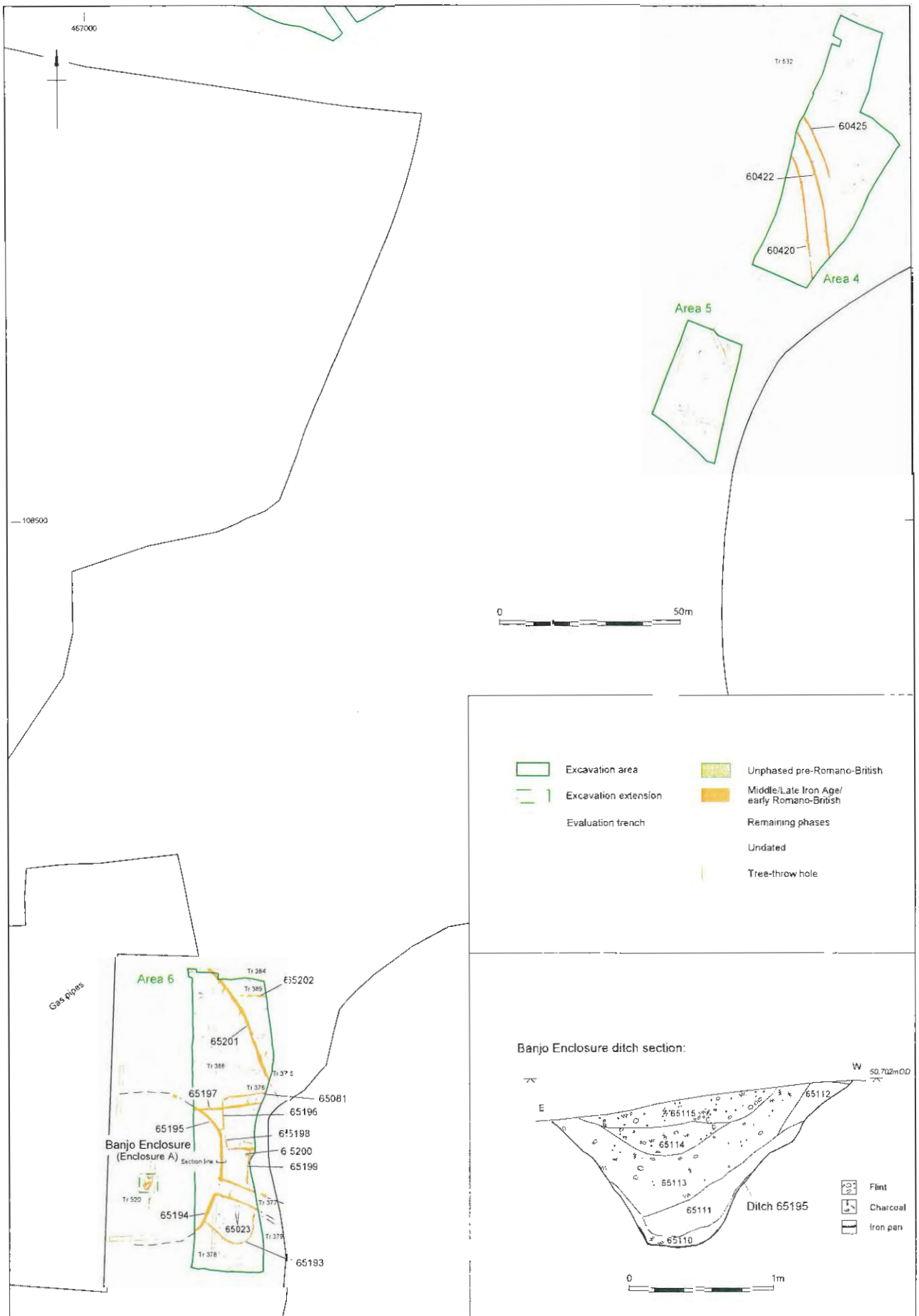
Area 1 :Waterhole 61260, detail plan and sections

Figure 4



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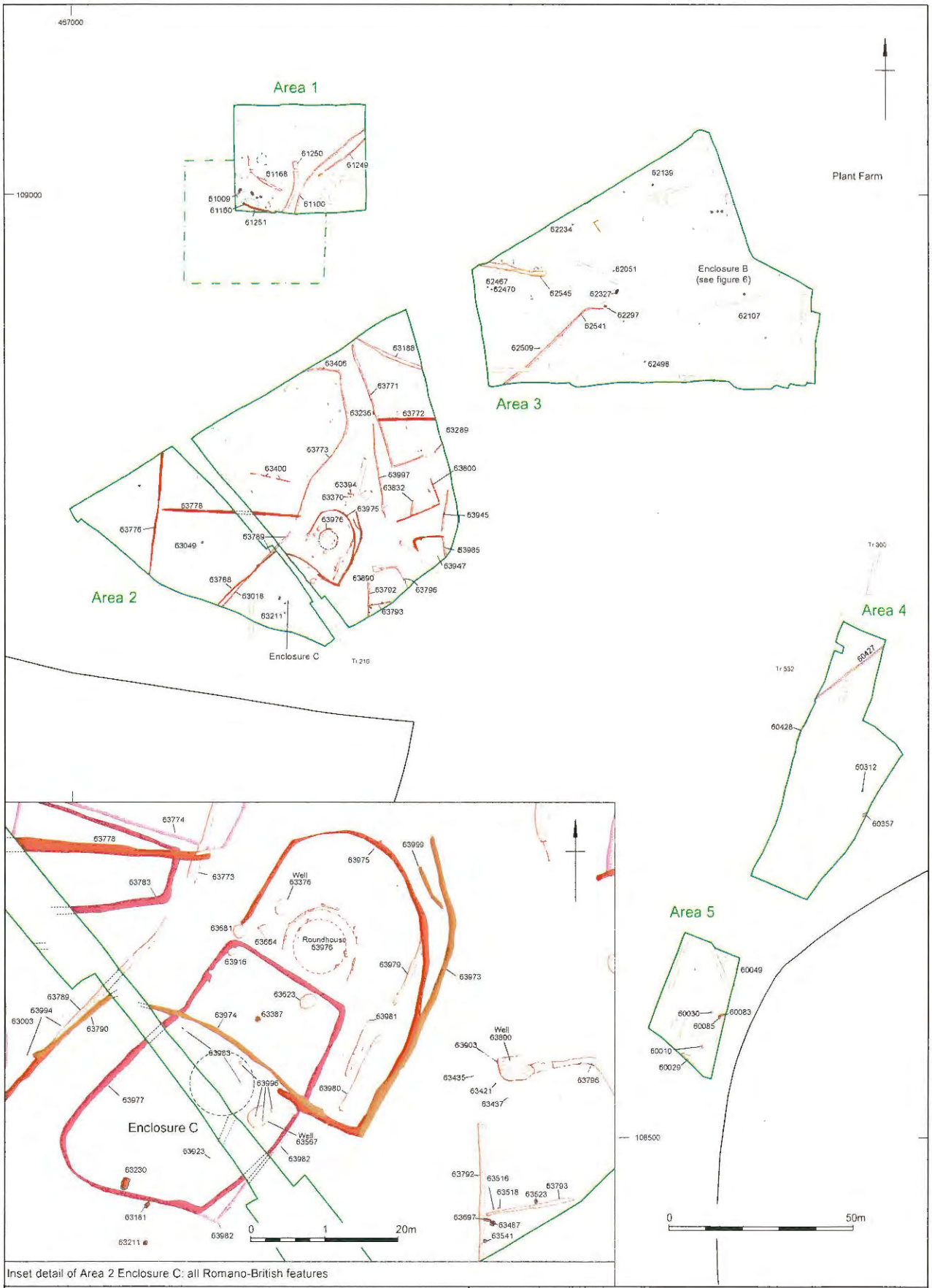
Late Iron Age /early Romano-British activity in Areas 4, 5 and 6

Figure 5

Early Romano-British activity (RB1-3) in Areas 1 to 5, with detailed plan of Enclosure B

Figure 6



Inset detail of Area 2 Enclosure C: all Romano-British features

Excavation area

Excavation extension

Evaluation trench

Romano-British:

1 2 3 4 5 6

Romano-British pit

Remaining phases

Undated

Tree-throw hole

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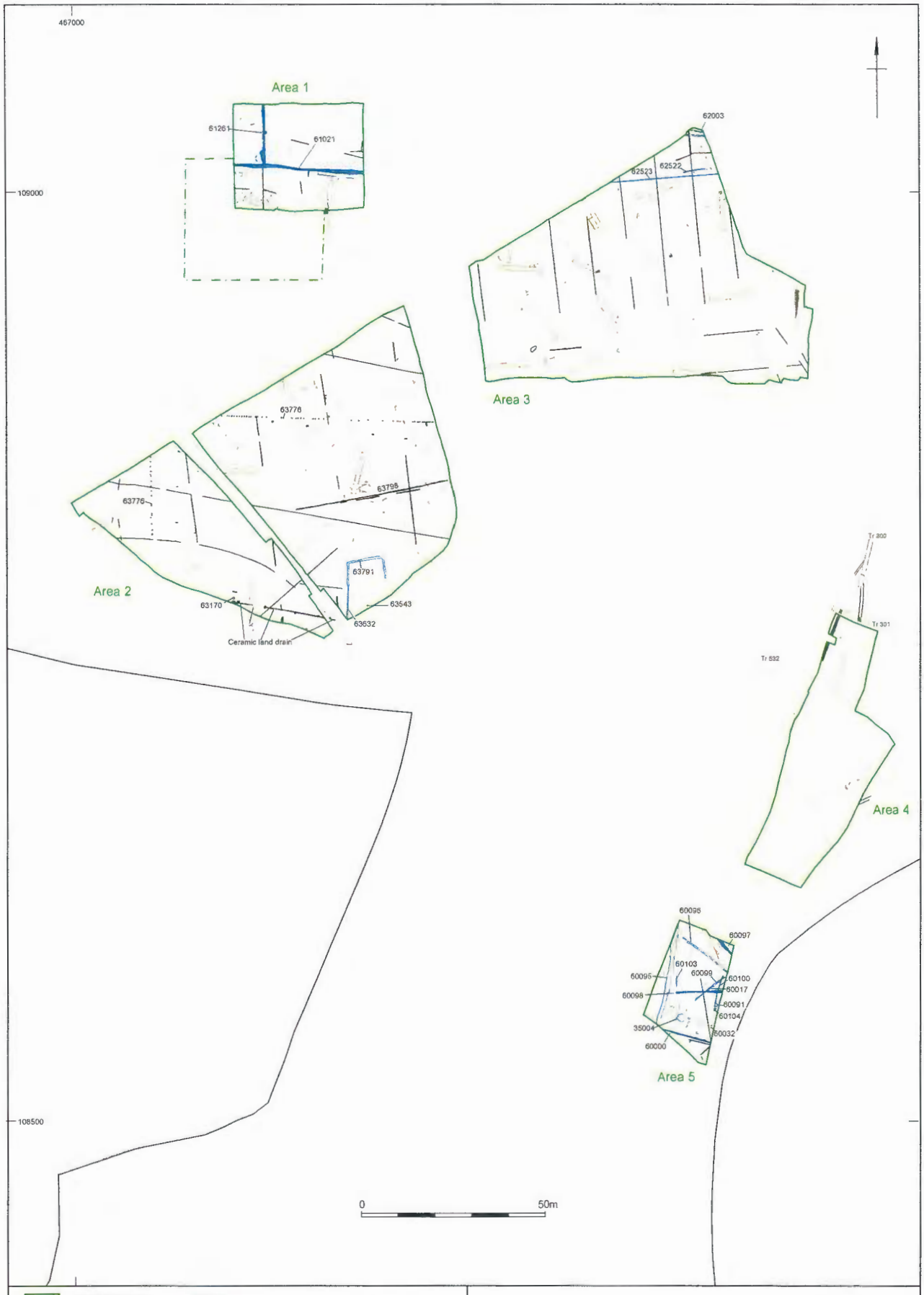
Later Romano-British activity (RB4-6) in Areas 1 to 5, with detailed plan of Enclosure C

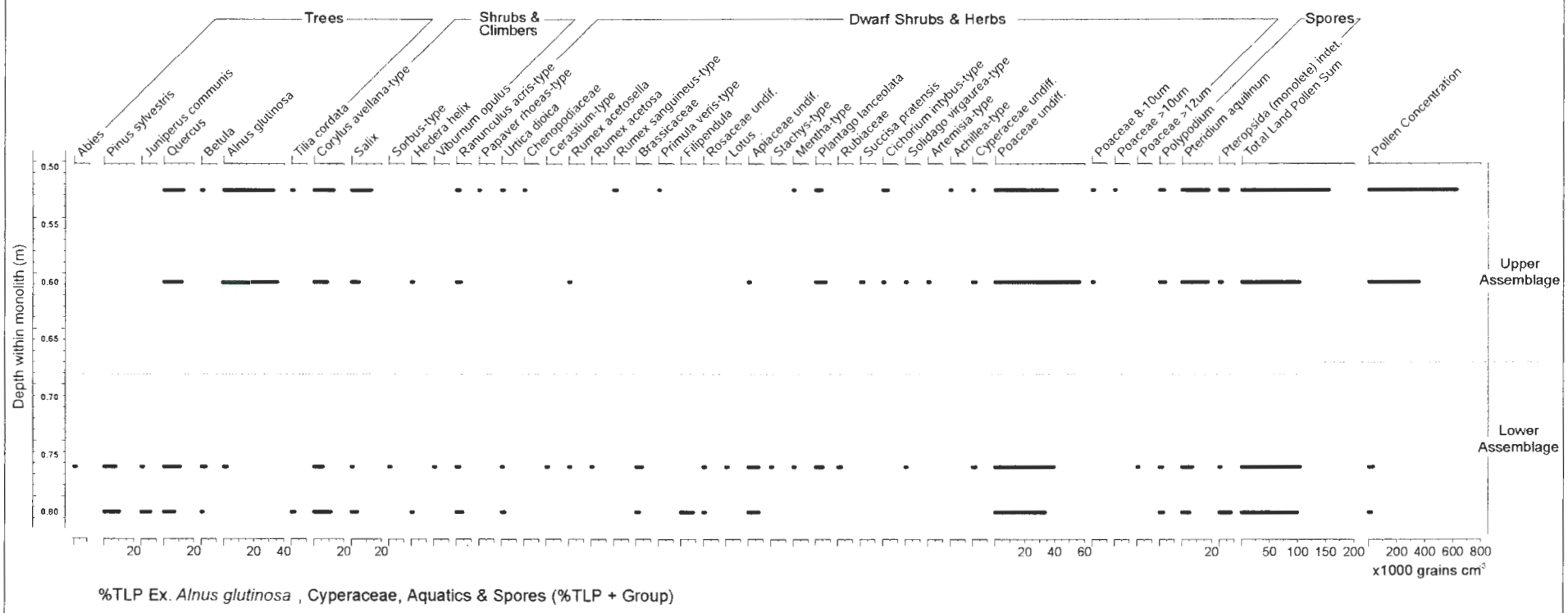
Figure 7



Medieval to modern activity in Areas 1 to 5

Figure 8

65803 Waterlooville Mitigation PX Assessment, Context 61260, Monolith 112, Pollen Assessment



%TLP Ex. *Alnus glutinosa* , Cyperaceae, Aquatics & Spores (%TLP + Group)

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Pollen assessment from Waterhole 61260

Figure 9