HOUGHTON REGIS NORTH SITE 1
HOUGHTON REGIS
BEDFORDSHIRE

DEVELOPMENT AREAS F1 AND F2

ASSESSMENT AND
UPDATED PROJECT DESIGN

Albion archaeology

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Preface

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The excavation was supervised by Ian Turner overseen by Wes Keir (Project Officer) under the management of Mike Luke (Project Manager). Investigation and recording was undertaken by: Matt Billings, Marco Capardoni, Jack Eldridge, William Eves, Berta Font, Petros Fountaoukidis, Alan King, Jeff Langdown, Sebastian Moya Garcia, Jonathan Nilsson, Matteo Palombeli, Sabine Pescheck, Arkadiusz Pruchniak, Ernie Rizzo, Krzysztof Ryniec, Irene Sala, Gareth Shane, Chris Sopp, Tori Guy, Juha-Matti Vuorinen, Catie Watts, Heather White and Adrian Woolmer. Metal-detecting was undertaken by Archie Gillespie and Mike Head. All dGPS survey was undertaken by Mercedes Planas (Souterrain Archaeological Services). Finds processing was supervised by Jackie Wells (Finds Officer) and the environmental samples were processed under the supervision of Gary Edmondson. The contextual assessment and creation of a phasing hierarchy were undertaken by Jo Barker. All Albion projects are under the overall management of Drew Shotliff (Operations Manager).

The project was commissioned by WT Partnership, on behalf of Lands Improvement Holdings, and monitored on behalf of the local planning authority by Martin Oake (Central Bedfordshire Council Archaeologist).

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1.0	*30/09/2019*	*Issued to CBCA*

Key Terms

Throughout this document the following terms or abbreviations are used:

ABG	Animal bone group
ACA	Archaeological Character Area
CBCA	Central Bedfordshire Council Archaeologist
Client	WT Partnership on behalf of Lands Improvement Holdings
CI*f*A	Chartered Institute *for* Archaeologists
HRDC	Houghton Regis Development Consortium
HRN1	Houghton Regis North 1 development area
LPA	Local Planning Authority (Central Bedfordshire Council)
Procedures Manual	*Procedures Manual Volume 1 Fieldwork*, 3rd edn, 2017 Albion Archaeology
WSARM	Written Scheme of Archaeological Resource Management

Non-Technical Summary

In 2014, Central Bedfordshire Council granted outline planning consent (CB/12/03613) for a housing-led urban extension to the north of Houghton Regis — a development known as Houghton Regis North 1 (HRN1). HRN1 lies within an area where extensive archaeological remains of early prehistoric to medieval date have been found. Condition 20 on the planning consent required the preparation of a Written Scheme of Archaeological Resource Management (WSARM) for each development area.

The WSRAM for development areas F1 and F2 included open-area excavation of c.*5.3ha of land centred on TL 0348/2540. The fieldwork was undertaken between late August 2018 and the end of February 2019. This document presents an assessment of the results of the archaeological fieldwork as well as an Updated Project Design with proposals for analysis, final reporting and archiving.*

The earliest evidence for activity was late Neolithic/early Bronze Age in date (Phase 1) and comprised a ring-ditch monument, which was later enlarged. In the middle Bronze Age/early Iron Age (Phase 2) a field system was established in the northern part of the excavation area. The boundary of one field had been dug across the centre of the earlier ring-ditch monument, suggesting that although its ditch was no longer extant its mound was still visible. Situated to the south of the fields was an area of dispersed burials, post-built structures, pits and postholes. A late Iron Age/early Roman (Phase 3) settlement was established; it comprised enclosed and dispersed elements, including enclosures, structures, pits and an urned cremation burial. Although it occupied a similar area to the Phase 2 activity, its boundaries were on different alignments.

During the Roman period a settlement was established over the southern part of the excavation area and appeared, at least spatially, to have no association with the Phase 3 settlement. The Roman settlement comprised enclosures laid out on either side of an east-west aligned trackway. The layout of the enclosures and the trackway were altered over time. The only buildings positively identified within the settlement were roundhouses although the layout of some of the smaller enclosures suggests that these may have served as drainage around rectangular buildings. The remains of two drying ovens used for crop-processing were identified. There are some possibly unusual aspects to the finds assemblage, including a large number of coins, objects with possible military associations and a votive stone carving.

The investigated remains and the finds recovered from them have the potential to contribute to a number of local and regional research themes. These relate to the evolution of the landscape through time and the nature of activity both within, and on the periphery, of settlements. In particular, there is potential to contribute to regional themes relating to the character and economic basis of settlement in the late Iron Age and Roman periods. On this basis and in accordance with the WSARM, a further programme of analysis is proposed, resulting in a final report that will be published as an Albion Monograph. Upon completion of the analysis and final report, the project archive will be accessioned with Luton Culture (accession number LUTNM: 2018/19).

1. INTRODUCTION

1.1 Project Background

In 2014, Central Bedfordshire Council granted outline planning consent (CB/12/03613) for a housing-led urban extension to the north of Houghton Regis — a development known as Houghton Regis North Site 1 (HRN1).

HRN1 lies within an area where extensive archaeological remains of early prehistoric to medieval date have been found. For this reason the application was supported by the results of an archaeological field evaluation (Albion 2012). The latter had revealed evidence for a series of Iron Age/Roman settlements, field boundaries and trackways along with evidence for dispersed activity and medieval cultivation.

The Central Bedfordshire Council Archaeologist (CBCA) advised that further archaeological work would be required to record and advance understanding of archaeological remains that would be unavoidably destroyed as a consequence of the development. Condition 20 on the planning consent stated that:

> *No development shall take place within each development area or sub area of that development area … until a written scheme of archaeological resource management* [WSARM] *for that development area or sub area has been submitted to and approved in writing by the Local Planning Authority…*

Albion Archaeology was commissioned by the client to undertake open-area excavation within the development area known as F1 and F2 on the eastern side of HRN1. The work was undertaken between 29th August 2018 and 26th February 2019 in accordance with a WSARM (Albion 2017a), approved by the LPA.

1.2 Status and Purpose of this Report

This report presents an assessment of the results of the open-area excavation, together with an Updated Project Design (UPD). The latter describes the further work required to analyse the results of the fieldwork, produce a final report and deposit the resultant archive with Luton Culture

1.3 Site Location and Description

The open-area excavation was centred on TL 0348 2540 on the north-east edge of Houghton Regis (Fig. 1).

The topography of the area is relatively flat, lying at 121–126m OD between the headwaters of the Houghton Brook (a tributary of the River Lea) and the Ouzel Brook (part of the Great Ouse drainage basin). From north-west to south-east the site straddles a series of geological strata dating to the Cretaceous Period (approximately 94 to 101 million years ago):

- West Melbury Marly Chalk Formation - Chalk
- Totternhoe Stone Member - Chalk

- Zag Chalk Formation - Chalk

No superficial deposits are recorded[1].

1.4 Archaeological Background

1.4.1 Introduction

HRN1 forms part of a landscape to the north of Houghton Regis that contains a variety of heritage assets dating from the Mesolithic period to the modern day. The adjacent chalk ridgelines of the Chilterns have long been known to contain evidence for early prehistoric settlement and ritual activity (Branigan 1994), but until recently our understanding of past land-use and occupation in the vicinity of HRN1 was based largely on surface artefact collection and small-scale excavations undertaken by The Manshead Society (Hudspith 1995). They identified scatters of Mesolithic, Neolithic and Bronze Age flint tools along the chalk ridge between Chalton and Wingfield and concentrations of Iron Age and Roman artefacts in the vicinity of Chalton Cross Farm and Houghton Park.

In preparation of the planning applications for HRN1 and the associated Woodside Link road, a number of archaeological investigations were carried out in the area:

- *Desk-based assessment (Albion 2012)
- Field-walking (Amey 2012)
- *Geophysical survey (Stratascan 2012)
- Trial-trench evaluation (Albion 2010 and 2013)
- *Trial-trench evaluation (Albion 2012)

Note: those directly associated with HRN1 are indicated by an asterisk.

The evaluation work allowed the identification of twenty-one Archaeological Character Areas (ACA), which were described within Chapter 13 of the Environmental Statement for HRN1 (HRDC 2012, 1–20). F1 and F2 encompass ACA13 and elements of ACA11, ACA12 and ACA14 (Fig. 1). Features found during the evaluation within these ACAs were associated with a late Iron Age enclosure system and Roman settlement.

Subsequent to the evaluation, open-area archaeological investigations were carried out on the Woodside Link (Albion 2018) and the A5–M1 Link Road (Brown 2015) (Fig. 1). Of most relevance to the F1 and F2 investigations was an area of Roman activity investigated within the route of the Woodside Link, *c.*130m to the east, and within HRN1 J1 (Part) and J2, *c.*850m to the south (Albion 2018 and 2019a). Archaeological remains found included three drying ovens, a water-pit and two inhumations. In addition, various boundary ditches and trackways were present.

The investigations within the A5–M1 Link Road (Fig. 1) revealed archaeological activity dating from the late Bronze Age through to medieval

[1] http://mapapps.bgs.ac.uk/geologyofbritain/home.html?location=houghton+regis&gobBtn=go

periods (MOLA 2015). Archaeological remains found at the eastern end of the link road included pit groups dating to the late Bronze Age/early Iron Age, late Iron Age to Roman enclosures and trackways, cemeteries dating to the late Iron Age/Roman and Saxon periods, and an area of Saxon–medieval settlement.

Immediately west of F1 and F2 an archaeological evaluation on land to the rear of Osborne House, Sundon Road revealed several Iron Age/Roman boundary ditches (Heritage Network 2015).

The table below is based on one in the WSARM (Albion 2017a) and summarises the known archaeological features within the immediate vicinity of the F1 and F2 investigation area:

Archaeological Character Area	Nature of Archaeological Remains
11 (part of)	Dispersed late Bronze Age/early Iron Age pits containing burnt stone identified within the Woodside Link road corridor (Albion 2018). Later prehistoric and undated field boundary ditches, some of which were identified within the A5–M1 Link road investigations (Brown 2015). Medieval furrows.
12 (part of)	Two undated pits and later prehistoric field boundaries identified during the A5–M1 Link road investigations (Brown 2015).
13	Late Iron Age enclosure system and Roman settlement
14 (part of)	Dispersed Iron Age pits containing burnt stone identified within the Woodside Link road corridor (Albion 2018). Roman or otherwise undated field boundary ditches and medieval furrows.

Table 1: Known archaeological remains in the vicinity of the investigation area prior to the open-area excavation

2. PROJECT METHODOLOGIES AND ORIGINAL OBJECTIVES

2.1 Introduction

The project methodologies and objectives were detailed in the WSARM (Albion 2017a). They are summarised here along with an overview of the national and regional research frameworks relevant to the project.

Throughout the project the requirements and professional standards set out in the following documents were adhered to (see also Appendix 3):

Albion Archaeology	• *Procedures Manual: Volume 1 Fieldwork* (3rd edn, 2017b)
CI*f*A	• *Charter and by-law; Code of conduct* (2014) • *Standard and guidance for archaeological excavation* (2014)
East Anglian Archaeology Occasional Paper 14	• Gurney, D. *Standards for Field Archaeology in the East of England* (2003)
Historic England	• *Management of Research Projects in the Historic Environment* (2015) • *Environmental Archaeology: A guide to the theory and practice of methods, from sampling and recovery to post-excavation* (2nd edn, 2011)
Luton Culture	• *Procedures for preparing archaeological archives for deposition with Luton Culture* (2013)

2.2 Methodologies

2.2.1 Fieldwork

Open-area excavation comprised *c*.5.3ha was undertaken between 29th August 2018 and 26th February 2019. All archaeological features and deposits were investigated in accordance with the WSARM (Albion 2017a) and Albion Archaeology's *Procedures Manual* (Albion 2017b).

The overburden was removed by a 360 degree mechanical excavator, fitted with a toothless ditching bucket, operating under archaeological supervision. Archaeological hand-excavation and recording then proceeded once sufficient archaeological features were exposed. The fieldwork was monitored by the CBCA on behalf of the LPA and it was "signed-off" as being completed in line with the WSARM in an email of 7th March 2019.

2.2.2 Outreach

Schools and community groups from the Houghton Regis area were selected and invited by Georgina Chapman of Political Developments and Intelligence on behalf of the client to have tours of the open-area excavation during January 2019 (Albion 2019c). Groups attended from Thornhill Primary School, Tithe Farm Primary School, Central Bedfordshire College, the Manshead Archaeological Society and the Houghton Regis Heritage Society.

2.2.3 Post-fieldwork

Following the fieldwork, checking and consolidation of the site records was completed. In addition, all outstanding artefacts and ecofact samples were processed. The site archive was consolidated and its internal consistency checked in accordance with the requirements outlined in *Management of Research Projects in the Historic Environment, section 2* (Historic England 2015).

2.3 The National and Regional Research Frameworks

The project was undertaken in line with national and regional research frameworks.

National heritage strategy is embodied within *Heritage 2020: strategic priorities for England's historic environment 2015-2020*[2]; it is a cross-sector collaboration initiative being delivered under the auspices of the Historic Environment Forum and builds on the successes of the National Heritage Protection Plan (NHPP) 2011–2015, published by English Heritage in 2010.

The aim of the Heritage 2020 initiative is to put together, on behalf of the whole environment sector, a unifying framework—as requested by the NHPP consultation—which encourages individual organisations to work together using agreed common priorities to add value to all their work. Five key themes regarding the understanding, valuing, caring and enjoying of England's historic environment have been identified:

- discovery, identification and understanding
- constructive conservation and sustainable management
- public engagement
- capacity building
- helping things to happen

Whilst these themes are at a relatively high conceptual level, the work undertaken as part of the investigation, in line with national planning policy, can be seen to fit within this framework.

On a regional level, a number of research frameworks have been devised. The earliest comprises *Research and Archaeology: a Framework for the Eastern Counties 1. Resource assessment* (Glazebrook 1997). This was complemented by *Research and Archaeology: a Framework for the Eastern Counties 2. Research agenda and strategy* (Brown and Glazebrook 2000), which set out research priorities.

These documents were reviewed and revised in *Revision of the Regional Research Framework for the Eastern Region* (Medlycott and Brown 2008). Finally, the regional research framework was again reviewed and augmented in *Research and Archaeology Revisited: a revised framework for the East of England* (Medlycott 2011a).

[2] Available online at http://www.heritage2020.net/2020-framework/

In addition to these regionally focussed documents, work has also specifically been done on the county of Bedfordshire: *Bedfordshire Archaeology. Research and Archaeology: Resource Assessment, Research Agenda and Strategy* (Oake *et al.* 2007).

2.4 Original Project Objectives

Based on the results of the evaluation, it was anticipated that the open-area excavation within F1 and F2 might produce evidence for Bronze Age, Iron Age, Roman and medieval/post-medieval activity. The principal feature type was expected to be ditches.

Based on the research agendas and those formulated in the WSARM (Albion 2017b), a number of areas of research and investigation were highlighted that could potentially be addressed by the investigations:

- Landscape development in the Bronze and Iron Ages (Oake 2007, 9–10);
- Characterising Roman rural settlement, including settlement layout and economy (Oake 2007, 10–12; Going and Plouviez 2000, 19–22 and Medlycott 2011b, 47);
- Regional variation in settlement in the Roman period (Oake 2007, 17 and Medlycott 2011b, 47);
- The origins and development of field systems and the relationship between field systems and settlements in the Iron Age and Roman periods (Oake 2007, 10–12; Bryant 2000, 15; Going and Plouviez 2000, 19–22 and Medlycott 2011b, 47);
- The origin and development of medieval field systems (Oake 2007, 14).

HRN1 traverses a wide archaeological landscape. The regional research framework (Medlycott 2011a, 84–5) states that: 'Human interaction with landscape and environment is central to archaeological study […] in the East of England' and 'the establishment of projects at a landscape scale, rather than that of an individual site, would allow for the chronological and spatial development of complex areas of palimpsest cropmarks and finds scatters to be analysed. Targeted fieldwork providing dating evidence for those landscapes should be a primary future research aim for the region'.

Overall, the scale of HRN1 presents an opportunity to understand how the wider landscape was utilised during the Iron Age, Roman and medieval periods, a research theme that is likely to be of regional significance.

3. SITE SEQUENCE: SUMMARY OF THE RESULTS

3.1 Introduction

The recorded contextual data represents the features and deposits investigated during the fieldwork (i.e. pits, ditches, fills, layers etc.) (Fig. 2). This contextual data has been assessed in order to establish whether it would provide a coherent spatial and chronological framework. The main criteria used were:

- Do the contexts form a coherent spatial or interpretive unit e.g. boundary, enclosure, pit group etc.?
- Do the contexts have stratigraphic relationships with other contexts?
- Do the contexts contain suitable dating material?

It was possible to assign 3,443 out of 3,477 contexts to the resultant contextual hierarchy which comprised:

- Groups (G), e.g. structures, ditches, pits etc.
- Land-use Areas (L), e.g. trackway, boundaries, enclosures etc.
- Site Landscapes (SL), e.g. a meaningful spatial element within a phase, such as a settlement or field system etc.
- Phases, e.g. episodes of human activity corresponding to broad, chronological periods based largely on their artefactual assemblage.

A summary of the contextual/phasing hierarchy is present in Table 2 below and further details can be found in Appendix 1.

Phase	Period	Site Landscape	Principal features	No. contexts
1	Late Neolithic/ early Bronze Age	51	Original ring-ditch L1	15
			Later (outer) ring-ditch L2	21
			Posthole L3 adjacent to ring-ditch L2	3
			Unurned cremation burial L4 near ring-ditch L1	4
2	Middle Bronze Age/early Iron Age	52	Field L10	44
			Field L11	14
			Curvilinear ditch L15	8
			Dispersed activity L16	55
			Two pits L17	5
		53	Unurned cremation burial L8	3
			Crouched inhumation L9	3
			Cremation cemetery L12	29
			Two unurned cremation burials L14	6
			Pit and two postholes L18	6
3	Late Iron Age/ early Roman	54	Rectangular enclosure containing water-pits, a pit and posthole L21	121
			Field containing a water-pit L22	24
			Field containing a sub-division L23	5
			Field containing a sub-division and pits L24	25

Phase	Period	Site Landscape	Principal features	No. contexts
			Field containing a pit and posthole L26	4
			Field containing a pit L27	5
			Enclosure containing roundhouses, post-built structures, pits and postholes L28	185
			Enclosure containing a sub-division and pit L31	15
			Enclosure containing a sub-division L32	10
		55	Possible urned cremation burial L13	3
			Dispersed roundhouses, pits and postholes L25	27
			Dispersed roundhouses and a pit L29	19
			Enclosure containing a roundhouse L30	28
4	Roman	56	Square enclosure containing a roundhouse and sub-division L152	57
			Enclosure containing a sub-division and posthole L153	11
			Enclosure containing a sub-division L154	32
			Enclosure containing sub-enclosures and pits L155	42
			Enclosure containing a sub-enclosure and pits L156	17
			East-west trackway L163	40
			Activity focus comprising a roundhouse and pits L181	46
			Unenclosed activity containing a pond and pits L183	63
			Funnel L184	80
			Enclosure containing two pits L186	13
		57	Enclosure containing a sub-division and two postholes L40	17
			Enclosure containing a small pit and a possible animal burial L41	22
			1st extensive redefinition ditch L42 of enclosure L40	9
			Rectangular enclosure containing a cobbled surface L43	35
			Enclosure containing a water-pit L157	36
			Enclosure forming a possible coral L158	42
			Enclosure L159	18
			Enclosure containing a drying oven L160	85
			Later activity L166	31
			Southern settlement boundary L167	45
			Possible water-pits L168	55
			Trackway L169	53
			Enclosure containing sub-divisions and a quarry pit L170	48
			Enclosure L171	36
			Enclosure containing sub-divisions L172	67
			Enclosure containing a sub-enclosure and pit L173	36
			Enclosure containing a sub-division L174	31
			Enclosure containing a sub-enclosure L191	40

Phase	Period	Site Landscape	Principal features	No. contexts
4	Roman	57	Enclosure L192	37
			Enclosure L193	26
			Enclosure L202	34
			Enclosure L205	15
			Enclosure L211	12
			Enclosure containing sub-enclosures and postholes L212	110
			Enclosure containing a water-pit L219	28
			Enclosure L231	9
		58	Enclosure L44	16
			Field L49	13
			Field L51	11
			Enclosure L52	34
			Sub-enclosure containing two postholes L53	40
			Enclosure containing sub-divisions and pits L175	82
			Enclosure containing a sub-enclosure and pit L178	36
			Trackway L179	7
			Hollow L185	15
			Enclosure containing a drying oven, water-pit and pits L196	114
			Rectilinear enclosure L199	27
			Enclosure L200	25
			Enclosure with a sub-division and pit L207	32
			Enclosure containing a drying oven, pits, posthole and water-pits L209	61
			Enclosure containing a pit L217	37
			Quarry pits L232	126
			Parallel ditches L237	17
			Unenclosed pits L244	61
		59	Field L50	13
			Enclosure L197	35
			Enclosure containing pits L198	16
			Enclosure containing a sub-division and pits L208	58
			Enclosure containing a sub-enclosure and pits L220	49
			Northern settlement boundary L221	15
			Enclosure containing a water-pit L222	9
			Enclosure containing a pit and sub-division L223	17
			Oval enclosure containing a sub-division, pits and postholes L224	73
			Quarry pits L225	42
			Enclosure containing quarry pits L226	57
			Enclosure containing two pits L227	56
			Unenclosed activity L233	3
			Post-occupation layers L230	2
5	Medieval	60	Open field system L250	4
			Open field system L251	26
6	Post-medieval	61	Field L262	9

Phase	Period	Site Landscape	Principal features	No. contexts
			Field L263	10
7	Modern	62	Anti-traveller ditch L264	3
			Agricultural activity L265	4
20	Undated	-	Tree-throws, root disturbance and natural geology L266	123
			Total	**3443**

Table 2: Summary of the contextual/phasing hierarchy by Phase

The following summary is presented by Phase (P), Site Landscape (SL), Land-use Area and, where relevant, Group (G).

3.1 Phase 1: Late Neolithic/early Bronze Age (Fig. 3)

The earliest evidence for human activity (SL51) comprised a ring-ditch L1/L2, posthole L3 and unurned cremation burial L4 (Fig. 3). They were situated *c.*150m south of the current course of the Ouzel Brook.

Ring-ditch monument L1

The original ring-ditch was sub-circular in plan with an internal diameter of 5m. The ditch was 0.6–0.8m wide and 0.5m deep, with steeply sloping sides and a flat base. The ring-ditch was not identified within the geophysical survey report (Stratascan 2012), although with hindsight is visible on one of the greyscale plots (op. cit. fig. 9).

Later ring-ditch L2 and posthole L3

Later ring-ditch L2 had an internal diameter of 15m and completely enclosed ring-ditch L1 centrally within it. The ditch defining L2 varied from 1.9m to 2.7m wide and was 0.6–0.8m deep. A layer of firm mid-orange-brown silty clay sealed inner ditch L1; it is likely to pertain to mound material associated with L2. Notable was the absence of a buried soil beneath the possible mound material, suggesting that the area was cleared of topsoil prior to the construction of the original monument.

Posthole L3

Feature L3 was 0.5m in diameter and 0.2m deep. It was situated on the south-west outer edge of ring-ditch L2. Although fully excavated, it did not contain any cremated remains so it has been interpreted as a posthole.

Unurned cremation burial L4

A circular grave (0.5m in diameter and 0.2m deep) was positioned 10m to the south-east of ring-ditch L2 and contained 27g of cremated bone mixed with a firm dark brown-grey silty-clay. In the absence of any datable finds it has been assigned to Phase 1 based on its proximity to the ring-ditch monument.

3.2 Phase 2: Middle Bronze Age/early Iron Age (Fig. 4)

Field system SL52 was established in the northern half of the excavation area during the middle Bronze Age/early Iron Age (Phase 2). Situated to the south of the fields was an area of dispersed activity SL53, including burials, post-built structures, pits and postholes.

The boundary of one field in SL52 had been dug across the Phase 1 late Neolithic/early Bronze Age ring-ditch monument L1/L2 and it is possible that its mound had been used to sight in the field boundary.

3.2.1 Field system SL52

The field system comprised at least three rectilinear fields L10, L11 and L19, all of which were defined by several truncated lengths of ditch (0.3–0.9m wide and 0.1–0.3m deep), on a broadly east-west or north-south alignment. Two field boundaries had been partially redug at least once, on the same course and alignment.

Evidence for internal activity comprised pits L17 and a curvilinear ditch L15 within fields L11 and L19 respectively.

3.2.2 Dispersed activity SL53

Evidence for dispersed activity was found south of field system L52 across an area *c.*250m x 150m in extent. It contained seven cremation burials L8 (1), L12 (4) and L14 (2), an inhumation L9 and a loose focus of features L16 containing two post-built structures and five pits.

Assignment to this phase was made on the basis of the presence of contemporary pottery within three pits and the cremation urns within two of the burials. The undated pits and unurned cremation burials have been assigned to Phase 2 on the basis of their shared characteristics and/or distribution in relation to dated features.

Dispersed cremation burials L8 and L14

Three unurned cremation burials L8 and L14 (2) were dispersed across the area. The graves were 0.3–0.8m in diameter and 0.1m deep. They contained 0.57kg of cremated bone mixed with charcoal and small stones.

Inhumation L9

An inhumation was situated adjacent to the southern limit of excavation, 20m south-west of cremation cemetery L12. It comprised an oval grave (0.9m long, 0.6m wide and 0.1m deep) that contained an articulated and crouched human skeleton, laid with its head to the west and feet to the east.

Cremation cemetery L12

A cremation cemetery L12, comprising of four burials (three urned and one unurned) was identified in the south-east corner of the excavation area. Three of the burials were clustered together, whilst the fourth was situated 20m to the north-west. The graves were generally 0.4–0.5m in diameter and 0.1–0.5m deep. In total, they contained 1.9kg of cremated bone. No grave goods were identified, but the urns have been dated to the middle Bronze Age and the late Bronze Age/early Iron Age.

Dispersed activity L16

Five pits and two post-built structures L16 were spread across an area of 65m x 45m, just to the south of field L10. The two post-built structures were spaced *c.*2.6m apart. The most substantial structure was rectangular in layout and 4.4m x 3.8m in size. Two rectangular pits (1m long, 0.5m–0.6m wide and

0.1m deep) may represent doorposts defining an east-facing entrance. They both contained late Bronze Age/early Iron pottery and animal bone. The northernmost post-built structure was also rectangular in layout (*c*.4m x 2m) and was defined by five small postholes.

Similar activity was identified along the Woodside Link road corridor to the east (Albion 2018; Barker forthcoming).

3.3 Phase 3: Late Iron Age/early Roman (Fig. 5)

Phase 3 is represented by the establishment of a settlement over the entire excavation area. It comprised enclosed elements SL54 and dispersed elements SL55, including enclosures, structures, pits and a possible urned cremation burial. Its constituent boundaries were on different alignments to the Phase 2 boundaries.

3.3.1 Enclosed settlement SL54

Settlement SL54 comprised at least ten enclosures/fields L21, L22, L23, L24, L25, L26, L27, L31, L32 and L28. Enclosure L28 contained the majority of the contemporary features and may, therefore, have been the domestic focus. It contained evidence for two roundhouses, two post-built structures along with dispersed and clustered pits and postholes. Late Iron Age/early Roman pottery was recovered from thirty-two of the features.

The enclosures/fields were generally square or rectilinear in plan. All were defined by ditched boundaries (1.1–1.6m wide and 0.4–0.9m deep) on a general NW-SE or NE-SW alignment. Three boundaries had been redug at least twice.

In addition to enclosure L28, possible evidence for domestic activity in the form of water-pits, pits and postholes was present in some of the other enclosures. Water-pits, defined by their depth (up to 2m deep) and size (1.7–7.6m in diameter), were located in the corners of enclosures L22, L21 or dug into the boundaries of enclosures L21 and L28.

3.3.2 Dispersed settlement SL55

Settlement activity to the south of SL54 comprised dispersed roundhouses, a possible urned cremation burial L13, pits L29, and a rectangular enclosure containing a roundhouse L30.

Settlement-related activity L29 was spread across the area to the south of enclosed settlement SL54; it comprised four roundhouses, a ditch and two pits. The roundhouses were spaced 50m to 100m apart and were defined by truncated, curved ditches. These were 0.4–1m wide and 0.1–0.5m deep; they are interpreted as drains around the outer walls rather than being structural. One roundhouse contained a pit presumed to be contemporary.

Enclosure L30 was one of the few enclosed spaces within SL55. It was rectangular (*c*. 20m wide and 40m long) and defined by truncated lengths of ditch (0.4m wide and 0.1–0.2m deep). The presence of a roundhouse in the interior of the enclosure was indicated by a truncated ditch.

Cremation burial L13 was situated adjacent to an L-shaped ditch. It comprised a grave (0.7m in diameter and 0.7m deep) containing 82g of cremated bone. Sherds of late Iron Age/early Roman pottery on the surface of the burial suggests that the cremation deposit had been urned. A fragment of Roman vessel glass was also found mixed with the bone and pottery, but it is unclear if it represents a grave good.

Datable material from SL55 was sparse; assignment of these features to Phase 3 was predominantly based on stratigraphic relationships with Roman Phase 4 activity.

3.4 Phase 4: Roman (Figs 6–10)

During the Roman period an enclosed settlement was established over the southern part of the Phase 3 dispersed settlement. It comprised enclosures on either side of an east-west aligned trackway and continued beyond the area of investigation. The main episodes of settlement are distinguished as SL56 and its subsequent modifications SL57, SL58 and SL59 (Figs 6–9).

3.4.1 Establishment of settlement SL56 (Fig. 6)

SL56 was at least 1.7ha in extent and the area to the north of the settlement was apparently devoid of features, although it is possible that elements of the Phase 3 dispersed settlement SL54 may have continued in use.

The main focus of the settlement was an east-west aligned trackway L163, defined by two parallel ditches spaced *c*.23m apart. The area to the south of the trackway contained five enclosures L152, L153, L154, L155 and L156. Activity on the north side of the trackway appeared to involve less intensive sub-division of the land.

The enclosures to the south of the trackway varied in size and were defined by ditches that had been redug at least once, on the same course and alignment. The interior of several had been sub-divided through the digging of extra ditches or sub-enclosures. Pits were present in the majority of the enclosures and a roundhouse with an east-facing entrance was situated in enclosure L152. It had an internal diameter of 11m and was defined by a ditch 0.3–0.6m wide and 0.1–0.2m deep.

The evidence for activity north of the trackway included a small enclosure L186, a pond L183, and dispersed pits, quarry pits and a roundhouse L181. The northern extent of the settlement was defined by a possible livestock 'race' L184 also aligned east-west. The roundhouse was similar in size to the roundhouse in enclosure L152. Two entrances were indicated by gaps in the encircling ditch to the north and south; two doorposts also marked the northern entrance.

3.4.2 First redefinition SL57 of the settlement (Fig. 7)

The first significant modification to the layout of the settlement comprised the establishment of new enclosures on the north side of the trackway and the reorganisation and replacement of existing enclosures on the south side of the

trackway. The settlement (*c*.2.1ha) was defined on its south side by a substantial boundary ditch L167 (2.1–3.5m wide and 0.7–1m deep), which had been redug at least twice.

Settlement SL57 was still organised around the east-west trackway L169, which had been redug at least twice on the same alignment. The course of the northern trackway ditch was altered, however, resulting in a narrower routeway, *c*.13m wide.

Enclosures to the south of trackway L169

Reorganisation and replacement of pre-existing enclosures boundaries (of SL56) to the south of trackway L169 resulted in five new enclosures L157, L158, L159, L160 and L162. The curved layout of enclosures L158 and L159 and their narrow entrances suggest that they may have been used to control the movement of livestock. Several possible water-pits L168 (*c*.0.8–1.2m deep), were also associated with these two enclosures.

Positioned within enclosure L160 was a possible long hearth or drying oven. It comprised a NE-SW aligned flue (1.6m long, 0.4m wide and 0.2m deep) with a semi-circular chamber (1.7m in diameter and 0.6m deep) at the south-west end. Scorching of the sides and base of the flue was visible. Interestingly, its location coincided with the roundhouse in L152 assigned to settlement SL56 and it is likely that the roundhouse ditch or perhaps remains of the structure were utilised as a compound area for this activity.

Other pits were present in enclosure L160 and several produced assemblages of metal artefacts, including hobnails, a pruning hook and a knife.

Enclosures to the north of trackway L169

Eighteen new enclosures L40, L41, L42, L43, L170, L171, L172, L173, L174, L191, L192, L193, L202, L205, L211, L212, L219 and L231 were established to the north of trackway L169. They varied in shape and size and the interior of some had been sub-divided. Internal activity comprised a number of small pits and a water-pit, but no obvious structures were identified. However, the layout of enclosure L41 may indicate that it contained a building. A stone surface may have been associated with this putative building — perhaps a yard or entranceway.

Later activity to the south of trackway L169

Later activity L166 was represented by modifications to enclosures L158 and L159. The curved layout of the new ditches reflected the existing boundaries and once again suggests that this area was associated with the management of livestock.

3.4.3 Second redefinition SL58 of the settlement (Fig. 8)

A second redefinition of the settlement extended over 2.5ha and comprised alterations to the layout of enclosures to the north of the trackway L179 and expansion to the north. No new enclosures were identified to the south, but it is likely that the pre-existing SL57 enclosures were retained. A field system L49 and L51 was also established on the northern part of the investigation area, in the same location as the Phase 3 enclosed settlement SL54, but on a

different alignment. Small sub-rectangular enclosures established in the fields may represent livestock pens.

Enclosures L44, L52, L53, L175, L178, L196, L199, L200, L207, L209, L216 and L217

Enclosures to the north of trackway L179 were reorganised, but generally retained the layout of earlier enclosures and it is feasible that many of the SL57 enclosure boundaries continued to be utilised. Internal activity L232 generally comprised pits and intercutting quarry pits. Two enclosures L196 and L209 also contained the truncated remains of drying ovens suggesting that these enclosures were associated with crop-processing activities.

A series of parallel and often intercutting ditches L237 were identified on the northern side of enclosure L200. Their function is unclear, but they may represent modifications to the northern boundary or drainage. Their size (0.6–0.9m wide and 0.1–0.3m deep) suggests that they were not wheel ruts.

No definitive structures have been identified in settlement SL58, but it is possible that some enclosures (e.g. L207 or L217) may represent the location of buildings. A possible building was represented by a layer of friable mid-brown-grey silty clay L185, which sealed postholes and small pits.

Crop-processing enclosure L209

The most complete drying oven was located in enclosure L209 and comprised the basal remains of an 'E-shaped' form, similar to examples excavated at Hall Farm, Orton Longueville (Mackreth 1996) and Cogenhoe, Northamptonshire (Moore 2017, 101–106). The enclosure was almost semi-circular in shape, with an internal diameter of 13m, and its layout suggests that it was dug specifically for the oven. Entrances were indicated by gaps on the east and west sides. It also contained a number of pits, including a water-pit.

The drying oven was positioned centrally within the enclosure and comprised a north-south aligned flue, with a drying chamber to the north and stoking pit to the south. The fireplace was indicated by a thick layer of charcoal and scorched sides.

Crop-processing enclosure L196

The remains of a possible rectangular-type drying oven (Morris 1979, 168, fig. 11) were identified in enclosure L196. The oven was positioned in the northern part of the enclosure, close to the northern boundary. A narrow ditch to the west suggests that the oven was situated in a sub-enclosure, whilst a line of postholes to the south could also suggest that it was within a building.

Only the base of the oven had survived; it was defined by small lumps of limestone, charcoal and scorching on the sides and base. No stone lining had survived *in situ*, but the oven was most likely constructed with limestone. Like the drying oven in enclosure L209 it was also associated with a water-pit.

3.4.4 Final redefinition of the settlement SL59 (Fig. 9)

The final redefinition of the settlement extended over 1.5ha and comprised the establishment of new enclosures and the occasional recutting of earlier

enclosure boundaries. The trackway did not appear to be maintained at this stage, although the location of enclosures indicates that a routeway still existed to the south, assigned to L180. Fields to the north continued to be maintained through the recutting of ditches and a new oval enclosure L224 was also established in this area.

New enclosures L208 and L229

Two new rectangular enclosures L208 and L220 were established to the north of the trackway; they incorporated a number of the SL58 enclosures. It is possible that many of the SL58 boundaries continued to be utilised and it is most probable that the SL58 drying ovens also remained in use.

Internal activity comprised quarry pits and smaller pits and postholes. Two pits in L222, in particular, were deep (1.8–2m) and had steep, sloping sides; they are considered to be water-pits.

3.5 Phase 5: Medieval (Fig. 10)

Two arrays of furrows SL60, indicative of medieval open-field systems, were identified in the investigation area (Fig. 10). Both L250 and L251 had been previously identified through geophysical survey and in the Woodside Link road corridor (Albion 2018; Barker forthcoming). They followed a slightly different alignment to the Phase 4 Roman ditches. The best-preserved field system in the investigation area was represented by broadly east to west aligned furrows L251.

3.6 Phase 6: Post-medieval (Fig. 11)

Field boundaries defining two fields L262 and L263 were identified in the investigation area (SL61). Their alignment, broadly north-south and east-west, and an assemblage of post-medieval clay pipe and flat roof tile indicate that they post-dated other activity in the investigation area.

The alignment of a ditch defining field L262 was positioned almost at right-angles to the medieval Phase 5 furrows and may have followed a former medieval headland (Figs 10 and 11).

3.7 Phase 7: Modern (Fig. 11)

Modern agricultural deposits, comprising topsoil and subsoil L265, were assigned to SL62. The topsoil consisted of friable dark brown-grey clay-silt, 0.3m thick. The underlying subsoil consisted of firm mid-brown-grey clay-silt, with frequent stones, typically *c*.0.1m thick.

Modern disturbance in the form of an anti-traveller ditch L264 was situated on the west side of the investigation area. It was 0.8–1m wide and more than 0.4m deep.

4. QUANTIFICATION AND ASSESSMENT OF THE ARTEFACTS AND ECOFACTS

4.1 Introduction

This section provides a summary of the artefacts and ecofacts recovered during the investigations. At the end of each sub-section the potential of each individual data-set to address the original research objectives is reviewed. Summarised information on quantity, spatial provenance, date and condition is provided.

4.1 Ceramics

By Jackie Wells

4.1.1 Methodology

The assemblage was recorded by fabric type and quantified by minimum sherd count and weight. Pottery was spot-dated by form and/or fabric type, and was a principal determinant in assigning contexts to chronological period.

4.1.2 Quantification, date range and fabrics

The pottery assemblage totals 6,415 sherds (109.1kg), the majority associated with the establishment and redefinition of the Phase 4 Roman settlement and field system (Table 3).

Phase	Sherd No.	Wt. (g)
1	10	81
2	329	5,025
3	944	15,480
4	5,125	88,364
5	1	7
6	3	20
7	3	167
Total	**6,415**	**109,144**

Table 3: Pottery quantification by Phase

The pottery spans the mid/late Bronze Age, Iron Age and Roman periods. Single sherds of Saxon and post-medieval date also occur. Fabrics are listed in Table 4 in accordance with the Bedfordshire Ceramic Type Series.

Fabric type	Common name	Sherd No.	Wt. (g)
BA/EIA			
F01A	Coarse flint	117	2,066
F01B	Fine flint	32	401
F01C	Flint and quartz	202	2,868
F02	Grog and flint	5	55
Iron Age			
F03	Grog and sand	74	1,049
F05	Grog and shell	7	71
F06A	Fine grog	141	1,422
F06B	Medium grog	481	7,261
F06C	Coarse grog	107	3,926
F07	Shell	156	2,958
F09	Sand and grog	510	8,837

Fabric type	Common name	Sherd No.	Wt. (g)
F29	Coarse sand	3	190
F34	Sand	275	3,724
F39	Grog and mica	6	176
Roman			
R01	Samian ware	99	1,213
R02	Mica gilded ware	2	10
R03	White ware	19	798
R03A	Verulamium region white ware	14	186
R03B	Gritty white ware	32	493
R03C	Smooth white ware	10	109
R05A	Oxidised sandy	112	1,361
R05B	Fine oxidised sandy	5	62
R05D	White-slipped oxidised sandy	10	68
R06A	Nene Valley grey ware	5	57
R06B	Coarse grey ware	1,159	13,389
R06C	Fine grey ware	604	6,779
R06D	Micaceous grey ware	10	214
R06F	Grog and sand grey ware	13	314
R06G	Silty grey ware	2	21
R06H	White-slipped grey ware	18	313
R06I	Black-slipped grey ware	151	2,441
R07A	Black-burnished ware	39	671
R07B	Sandy black ware	265	3,447
R07C	Gritty black ware	40	694
R08	Micaceous black ware	1	6
R09A	Pink-grogged ware	168	14,684
R10A	Gritty buff ware	64	1,009
R10B	Fine buff ware	1	9
R10C	White-slipped buff ware	1	13
R11	Oxford oxidised ware	25	297
R11A	Oxford white ware	1	53
R11D	Oxford red-slipped ware	30	641
R11E	Oxford white ware (mortaria)	23	1,212
R11F	Oxford oxidised ware (mortaria)	3	77
R12A	Nene Valley mortaria	2	9
R12B	Nene Valley colour-coated ware	39	546
R13	Shelly ware	1,015	17,586
R13B	Shelly with limestone and sand	10	194
R14	Sand (red-brown harsh)	166	1,932
R17	Smooth oxidised sandy	63	675
R18A	Gritty pink ware	30	404
R19	Amphora (unsourced)	3	602
R19A	Amphora (Dressel 20)	1	338
R21	Mortaria (unsourced)	1	172
R22A	Hadham oxidised ware	40	720
R23	Roughcast colour-coated ware	1	2
R26	Terra Nigra	3	41
R33	Verulamium region mortaria	1	36
R35	Grog	14	412
R38	Colour-coated ware (unsourced)	8	44
R42A	Horningsea ware	2	71
R	Non-specific Roman	2	40
Post-Roman			
A	Saxon	1	219
P01	Post-medieval glazed red earthenware	1	23

BA/EIA – Bronze Age/early Iron Age

Table 4: Pottery type series

Phase 1

Outer ring-ditch L2 yielded ten flint- and flint/sand-tempered body sherds (81g). The pottery is abraded and well-fragmented, and an absence of forms or diagnostic elements precludes identification beyond a broad prehistoric date.

Phase 2

Phase 2 features yielded 329 sherds (5kg: MSW[3] 15g), the majority associated with L16 post-built structure G109 and isolated pit G5 (SL52). Pottery deriving from cremation cemetery L12 (SL53) comprises sherds (1.3kg) from a minimum of three flint-tempered vessels, including middle Bronze Age Deverel-Rimbury Bucket Urn with a finger-impressed rim and cordons. Pottery from L16 features occurs in a range of coarse and fine flint- and sand-tempered fabrics, typical of transitional late Bronze Age/earliest Iron Age Post-Deverel Rimbury 'plainware' assemblages in south-east England (*c*.850–600 BC). Dating is largely based on fabric characteristics as the majority of the assemblage comprises small and abraded body sherds deriving from the sieved residues of environmental samples; it is possible they could be contemporary with the earlier funerary pottery.

Phase 3

The Phase 3 assemblage totals 944 sherds (15.4kg: MSW 16g) and derives mainly from enclosed settlement SL54, principally domestic core L28 (Table 5). Ninety-four percent of the assemblage (by sherd count and weight) comprises late Iron Age wares. Fully Romanised wares constitute the remainder.

Site Landscape	Principal features	Sherd No.	Wt. (g)
SL54 Enclosed settlement	L21 Enclosure	122	2,090
	L22 Enclosure	1	10
	L23 Enclosure	1	79
	L24 Enclosure	1	14
	L28 Enclosure containing a domestic focus	739	12,669
	L31 Enclosure	11	225
	L32 Enclosure	4	47
SL55 Dispersed settlement	L13 Possible urned cremation burial	48	198
	L29 Dispersed activity	8	50
	L30 Enclosure	9	98
Total		**944**	**15,480**

Table 5: Phase 3 pottery quantification

Iron Age vessels are in the 'Belgic' tradition (*c*.50 BC–AD 100) and are mainly grog-tempered, with shelly, sandy or mixed grog/sand/shelly wares comprising the remainder. All are likely to be of local origin; a number of kilns producing shelly wares during the mid-1st century are known in north Bedfordshire, for example Stagsden and Harrold (Dawson 2000; Brown 1994), although provenance for other fabrics remains unclear.

Vessels are predominantly wheel-thrown; a number are hand-built with wheel-finished shoulder and rim, and some are entirely hand-built. The latter mainly

[3] Mean sherd weight

occur in coarse grog and shelly fabrics (respectively F06C and F07), and generally represent the largest vessels in the assemblage (storage-type vessels and some cooking pots). Diagnostic forms in the 'Belgic' tradition are narrow-necked or wide-mouthed jars, many displaying single or multiple cordons, with simple everted, beaded or lid-seated rims. Simple bowls, platters, butt-beakers, and a pedestal urn also occur. Single body and base sherds have been modified to form rudimentary lids.

Roman pottery entirely comprises local sand-tempered and shelly coarse wares, broadly of 1st- and early 2nd-century date. Forms are everted rim jars, one with a neck cordon, straight-sided dishes and plain-rimmed bowls.

Phase 4

Settlement features assigned to Phase 4 yielded 5,125 sherds (88.3kg). Ditches and gullys represent the main focus of deposition, containing 47% of the assemblage by sherd count. Pits yielded 25%, wells/water-pits yielded 11% and structural deposits yielded 6%. The largest assemblages were associated with the first redefinition of settlement SL57, principally the enclosures north of trackway L169 and boundary L167 (Table 6).

Site Landscape	Principal features	Sherd No.	Wt. (g)
SL56 Settlement establishment	L163 Trackway	22	269
	Enclosures S of trackway L163	180	1,862
	L181 Activity focus	126	1,725
	L183 Unenclosed activity	382	4,931
	L184 Putative livestock 'race'	335	4,762
	L186 Enclosure	13	240
		1,058	13,789
SL57 Settlement redefinition (1)	L169 Trackway	56	624
	Enclosures S of trackway L169	516	8,499
	Enclosures N of trackway L169	939	16,014
	L166 Later activity	43	655
	L167 Southern settlement boundary	199	13,777
	L168 Sink holes	343	5,682
		2,096	45,251
SL58 Settlement redefinition (2)	L179 Trackway	1	9
	Enclosures N of trackway L179	382	4,923
	L49 Field	2	13
	L185 Putative building	177	2,472
	L196 Crop processing enclosure	356	5,534
	L209 Crop processing enclosure	14	176
	L232 Quarry pits	254	4,025
	L237 Parallel ditches	1	11
	L244 Unenclosed pits	113	2,383
		1,300	19,546
SL59 Final settlement redefinition	L50 Field	5	73
	Enclosures N of routeway L180	538	8,020
	L221 Northern settlement boundary	50	669
	L225 Quarry pits	62	810
	L233 Unenclosed activity	14	167
		669	9,739
Total		**5,123**	**88,325**

Table 6: Phase 4 SL56-SL59 pottery quantification

Late Iron Age wares (888 sherds weighing 15.2kg) are comparable in fabric and form with those of the preceding phase, and occur with varying frequency across all Site Landscapes (Table 7).

	Iron Age		Roman	
Site Landscape	% Sherd	% Wt.	% Sherd	%Wt.
SL56	35.0	29.6	17.6	12.7
SL57	47.8	53.5	39.5	50.7
SL58	9.3	10.6	28.8	24.6
SL59	7.9	6.3	14.1	12.0
Total	**100**	**100**	**100**	**100**

Table 7: Phase 4 Site Landscape pottery quantification

Roman pottery totals 4,233 sherds, weighing 72.8kg (MSW 17g) and spans the entire Roman period, with the bulk of the material dating to the 2nd and 3rd centuries. The assemblage is dominated by a standard range of local sandy coarse wares and a smaller number of shelly wares (Table 8). Regional imports include products from the Nene Valley (grey ware and colour-coated ware); Verulamium region (white and pink wares); Bucks/Northants (pink-grogged ware); Oxfordshire and Hertfordshire (oxidised wares). Gaulish samian (ninety-nine sherds) and four sherds of amphora represent continental imports.

Fabric group	**% Sherd**	**% Wt.**
Local		
Grey wares	45.4	31.4
Sandy coarse wares (oxidised/reduced)	16.8	12.6
Shelly coarse wares	23.8	24.1
Regional		
Black-burnished ware	0.9	0.9
Colour-coated wares (Nene Valley)	1.0	0.8
Grey wares (Nene Valley)	0.2	0.1
Oxidised wares (Hadham)	0.9	1.0
Oxfordshire wares	2.2	3.5
Pink-grogged ware	3.9	20.1
White /pink wares	2.5	2.7
Imports		
Samian ware	2.3	1.7
Amphora	0.1	1.1
Total	**100**	**100**

Table 8: Roman pottery quantification by fabric group

A range of standard Roman forms occur, representing a fairly typical domestic assemblage. Jars of varying size and function, ranging from lid-seated or everted rimmed cooking pots to large storage vessels are dominant, supplemented by a small number or bowls (plain-rimmed, rectangular-rimmed, flanged), straight-sided dishes, colour-coated beakers, a small number of platters, lids (including one fashioned from a modified base), strainers, flagons, mortaria, and amphora.

Phases 5–7

Seven residual Roman coarse ware sherds (194g) derived from medieval furrows L251, post-medieval field boundary L263 and modern subsoil L265.

The poor and abraded condition of the pottery is consistent with its recovery from agricultural deposits.

4.1.3 Analytical potential

The majority of the assemblage is later Iron Age and Roman in date, and primarily local in character. The transitional date of a proportion of the assemblage may be of value in examining the persistence of native rural potting traditions in the face of Romanisation. The Roman pottery is largely low-status and domestic, indicated by the basic, utilitarian wares present, and the negligible quantity of regional and continental imports. Most of the assemblage comprises coarse wares, represented by a standard range of well-documented locally manufactured fabrics; thus the assemblage is unlikely to yield new data on Roman ceramic fabrics. Analytical potential will be enhanced by the comparison of the assemblage with those recovered from other sites in the Houghton Regis environs, and contemporary sites further afield, and will help to place the material in a landscape context.

With the possible exception of the Bronze Age Deverel-Rimbury Urn, analytical potential for the small later prehistoric assemblage is limited by its fragmented nature and absence of forms or diagnostic elements. The former can usefully be added to existing find-spots for pottery of this date, and compared with the few other local examples.

4.2 Ceramic Building Material

By Jackie Wells

4.2.1 Methodology, quantification and provenance

Fired clay fragments (18.1kg) and 271 pieces of brick and roof tile (32kg) were recorded by fabric type and where possible form, and quantified by minimum fragment count and weight. The assemblage derived mainly from Roman features assigned to Phase 4 (Table 9).

	Fired clay		Brick & Tile	
Phase	**Frag. No.**	**Wt. (g)**	**Frag. No.**	**Wt. (g)**
3	93	5,614	2	468
4	316	12,550	264	31,067
5	4	27	-	-
6	-	-	2	112
7	-	-	3	371
Total	**413**	**18,191**	**271**	**32,018**

Table 9: CBM quantification by Phase

Fired clay

Fired clay fragments mainly occur in a sandy fabric containing either organic or calcareous inclusions. Most pieces are amorphous, although a number retain traces of flat or slightly undulating finger-smoothed surfaces.

Portable furniture recovered from dispersed features across the site includes fragments from a minimum of 30 hand-made slabs/bricks ranging in thickness from 30–55mm. Slabs occur with greatest frequency on late Iron Age and early Roman sites, and are likely to represent 'bake stones' or temporary

shelves in ovens or kilns. Fragments of several flat circular trays or discs, some with raised edges were recovered. They range from 25–30mm in thickness, although the pieces are too small to permit estimation of diameter.

The majority of the Phase 3 assemblage derived from settlement SL54 (5.5kg). Pits L244 associated with the second settlement redefinition SL58 contained the bulk of the Phase 4 assemblage (5.1kg), with remaining Site Landscapes each yielding deposits of less than 300g.

Brick and tile

Roman building material occurs in a standard range of forms, dominated by tegulae (Table 10). The majority are sand-tempered, with thirty-eight shelly examples and nine in a grog-tempered fabric. Fragments have a mean weight of 118g, and are uniformly abraded. The largest assemblage (15.3kg) was associated with settlement redefinition SL57, principally enclosure L43 and quarry pits L168.

Two abraded pieces of post-medieval roof tile (112g) derived from Phase 6 field L263.

Type	Frag. No.	Wt. (g)
Brick	20	3,581
Flue	6	374
Fragment	62	3,379
Imbrex	13	1,208
Tegula	170	23,476
Total	**271**	**32,018**

Table 10: Quantification of Roman building material by type

4.2.2 Analytical potential

Beyond the establishment of date, the ceramic building material has little potential for analysis.

4.3 'Other Artefacts'

By Holly Duncan and Jackie Wells

4.3.1 Introduction

Each object was assigned a preliminary identification and functional category and was quantified by number and/or weight. All ironwork and selected non-ferrous objects were x-rayed by P Greaves of Drakon Heritage Ltd, and the preliminary identifications were updated in light of the information gained.

4.3.2 Quantification

Nine hundred and three objects were recovered by metal-detecting, hand excavation and soil sample processing. Bulk finds, comprising fuel ash slag, ferrous slag and burnt stone, were also collected (Table 11).

Material	Quantity/Wt. (g)	%
Individual finds		
Bone	1	0.1
Ceramic	1	0.1
Copper alloy	155	17.3
Flint	2	0.2
Glass	12	1.4
Iron	695	76.9
Lead alloy	7	0.7
Shale	1	0.1
Silver	3	0.3
Stone	25	2.8
Tooth	1	0.1
	903	**100**
Bulk finds		
Burnt stone	11,580g	-
Ferrous slag	4,784g	-
Fuel ash slag	268g	-

Table 11: 'Other artefacts' by material

4.3.3 Range and variety

Objects are generally of standard form, and can be assigned to several categories relating to their function, ranging from personalia to trade, commerce, household and craft/industrial activity (Table 12).

Finds Category	Material	Quantity/Wt. (g)
Fastenings and fittings	Copper alloy	1
	Iron	322
Household	Ceramic	14g
	Copper alloy	7
	Glass	13
	Iron	2
	Lead alloy	4
	Stone	11,580g
Crafts and industry	Ceramic	1/254g
	Copper alloy	5/69g
	Iron	12
	Lead alloy	1
	Shale	1
	Slag	4,784g
Multipurpose blades & sharpeners	Copper alloy	2
	Iron	7
	Stone	2
Commerce	Silver (coin)	3
	Copper alloy (coin)	90
Measurement	Lead alloy	1
Communication	Copper alloy	2
	Iron	1
Transportation	Copper alloy	1
Subsistence	Iron	5
	Stone	19
Militaria and Weaponry	Copper alloy	10
	Iron	4
Dress and Accessories	Bone	1
	Copper alloy	23
	Iron	277

Finds Category	Material	Quantity/Wt. (g)
Toiletry and pharmaceutical	Copper alloy	4
Religion & belief systems	Copper alloy	1
	Stone	1
	Tooth	1
Prehistoric	Copper alloy	2
	Flint	2
Multifunctional	Copper alloy	2
	Iron	9
Uncertain identification	Copper alloy	6
	Iron	61
	Lead alloy	1
	Stone	3

Table 12: Summarised 'other artefacts' by function and material

4.3.4 Date range

The earliest artefacts are two secondary flint flakes, which may date from the late Neolithic into the Bronze Age. The Bronze Age is represented by a cast copper alloy spearhead and a copper alloy awl and the late pre-Conquest Iron Age by two brooches.

Roman finds comprise the bulk of the assemblage. Five fragments from bun-shaped querns of Hertfordshire Puddingstone and a 'beehive' lava quern can be assigned to the earlier Roman period. Personal items include four 1st–2nd-century brooches, two penannular bracelets (later 1st and 2nd centuries) and a cable twist bracelet (2nd to 4th centuries). Two hair pins may also date to this period. Two bracelets of the light bangle type and two finger-rings date to the 3rd and 4th centuries. One of the more noteworthy finds is a military belt buckle of 4th–5th-century date. A nail cleaner and mirror fragment are datable to the first two centuries AD. Coins include two 2nd-century sestertii, thirty-eight 3rd-century examples and at least thirty-seven datable to the 4th century.

Post-medieval/modern finds are confined to a possible farthing and part of a heel iron.

4.3.5 Provenance

The bulk of the assemblage was associated with the establishment and redefinitions of the Phase 4 Roman settlement (Table 13).

Phase	No. finds	%
3	11	1.2
4	787	87.2
5	7	0.8
6	1	0.1
7	97	10.7
Total	**903**	**100**

Table 13: 'Other artefacts' quantification by Phase

4.3.6 Phase 3: Late Iron Age/early Roman

The small Phase 3 assemblage derives mainly from settlement SL54, principally domestic core L28 (Table 14). Personal items include two copper alloy brooches and the rim from a greenish-colourless glass cup or bowl, the

latter recovered from urned cremation deposit G58 (L13). Respectively collected from water-pit G48 and pit group G44, a socketed spud or hoe and a putative sandstone saddle quern/shallow mortar suggest agricultural or horticultural activity. A sizeable quantity of reddened and fire-crazed stone (11.5kg) in post-built structure G42 perhaps suggests the presence of a fire-pit, or may have resulted from accidental burning of the building's posts.

SL	L	G	Item	Quantity/Wt. (g)
54	13	58	Glass vessel	1
	21	27	Copper alloy brooch	1
		48	Iron socketed spud	1
	28	34	Iron nail	1
		35	Iron nail	1
		40	Iron nail	1
		42	Burnt unworked stone	11,580
		44	Stone quern/paving	1
		46	Copper alloy brooch	1
	32	62	Iron strap fragment	1
			Iron tack (or worn hobnail?)	1
55	30	367	Copper alloy stud	1

Table 14: 'Other artefacts' from Phase 3

4.3.7 Phase 4: Roman

Settlement features assigned to Phase 4 yielded the majority of the site assemblage, the greatest quantities associated with the first redefinition of the settlement L57.

Settlement SL56

A total of 111 objects derived from SL56, most associated with enclosures south of trackway L163 and unenclosed activity L183 (Table 15). Distribution of personal items was restricted to features north of trackway L163. They include a copper alloy brooch of late pre-Conquest Iron Age date, a 3rd–4th-century copper alloy finger ring, a dog tooth amulet and small groups of hobnails.

The occurrence of querns and a millstone was also restricted to the northern area. Quern stones are of locally available Hertfordshire Puddingstone and a putative millstone appears to be of Millstone Grit, its presence indicating larger-scale grain-processing and also access to traded goods from the Pennine region. Tools were not numerous amongst the SL56 assemblage: a socketed chisel, pruning hook and knife were recovered from the southern enclosures, and pits within enclosure L154 contained a small assemblage of iron nails and a possible socketed mortise chisel. Activity area L183 yielded a small quantity of undatable copper alloy waste, and iron and copper alloy strip fragments.

Typical of rural sites, there are few items with possible military associations. They comprise a bell-shaped mount/stud (variously interpreted as box fittings associated with the Roman military or short sword or dagger pommels) and a possible flat-bladed bolt-head from L155. Coins are represented by two 4th-century examples.

L	G	Item	Quantity/Wt. (g)
152	153	Iron nail	7
		Iron strap fragment	2
		Fuel ash slag	6g
		Ferrous undiagnostic slag	18g
154	185	Copper alloy coin (4th century?)	1
	206	Iron nail	1
	207	Iron nail	1
		Iron socketed chisel	1
155	179	Iron hobnail	1
	183	Iron bolt head	1
156	216	Iron hobnail	4
	219	Iron nail	1
		Iron hobnail	2
	237	Iron nail	2
		Copper alloy coin (4th century)	1
163	224	Iron nail	1
		Iron hobnail	7
		Copper alloy annular ring	1
181	381	Copper alloy finger ring (3rd–4th century)	1
		Iron nail	1
		Iron hobnail	1
	453	Iron nail	2
183	332	Stone quern	1
		Iron nail	2
	333	Iron nail	1
		Stone millstone	1
		Iron stem (stylus?)	1
	336	Copper alloy brooch (1st century)	1
	337	Iron hobnail	2
		Stone quern	1
	338	Iron nail	1
		Copper alloy waste	9g
		Tooth amulet	1
		Copper alloy strip fragment	1
		Iron strip fragment	1
183	339	Iron nail	1
	457	Iron nail	2
184	370	Iron nail	1
		Iron hobnail	1
	387	Copper alloy bell-shaped mount	1
186	414	Stone quern	1

Table 15: 'Other artefacts' from SL56

Settlement redefinition SL57

SL57 deposits yielded the greatest quantity of 'other artefacts' (361 objects), mainly deriving from enclosure L160 and possible water-pits L168 (Table 16). The majority comprise general fasteners and fittings (timber nails, a latch lifter and a padlock bolt) and numerous hobnails, all broadly datable to the Roman period. The fill of possible drying oven G169 (L160) contained various structural fasteners, including nails, a double-spiked loop and ring, the blade of a knife or razor, a small socketed pruning hook, and a socketed handle possibly from a cleaver or similar-sized implement.

Evidence for low-level craft/industrial activities is limited to small quantities (all < 100g) of ferrous slag, some associated with smelting, and fragments of

scrap or bar iron. Possible copper alloy working in the form of waste, off-cuts and folded scrap was attested in possible water-pits within L168. Tools comprise a possible modelling tool/double-ended chisel, a possible chisel and a tracer, and more unusually, a copper alloy hand-saw blade, although none relating to horticulture and/or agriculture were identified.

Twenty-nine coins were recovered from eight of the enclosures, twenty-two deriving from enclosures south of trackway L169, six from enclosures to the north and a single example from the trackway roadside ditch. Provisional identifications place the majority of coins in the later 3rd and 4th centuries, with only two dating to the late 2nd/early 3rd century.

In contrast to the distribution pattern noted in settlement SL56, artefacts associated with the household and personal items more frequently occurred south of trackway L169. Household items comprise vessel glass fragments from prismatic bottles and two 'waisted' lead vessel repair plugs, associated with ceramic vessels. The spirally twisted stem of a possible cauldron hanger and a white metal plated mandolin bowled spoon also occurred. Personal objects include a two light bangle bracelets and a cable twist bracelet, a looped earring wire, a hinged brooch pin (L191) and part of a bar and loop handle from a toiletry set.

Three items potentially relating to the military are an iron rectangular buckle frame and two flat, circular studs with integral rivets which could have been used as apron mounts, or to decorate household boxes.

L	G	Item	Quantity/Wt. (g)
42	65	Iron nail	1
43	68	Iron nail	3
		Stone quern	1
	572	Iron T-clamp	1
		Iron cleat	1
		Iron nail	24
		Iron key?	1
		Iron nail?	1
		Iron strip fragment	3
157	196	Copper alloy coin (3rd/4th century)	1
	197	Copper alloy spoon	1
		Copper alloy coin (late 3rd century)	1
	210	Iron nail	1
		Copper alloy coin (4th century)	1
	233	Copper alloy coin (later 3rd century)	1
		Copper alloy stud	1
158	184	Copper alloy coin (3rd–4th century)	1
158	190	Iron nail	5
		Ferrous slag (undiagnostic)	46g
		Iron strip fragment	1
		Iron sheet fragment	1
158	191	Iron hobnail	1
158	193	Iron hobnail	1
159	180	Iron strap fragment (perforated)	1
	192	Iron nail	1
		Ferrous slag (undiagnostic)	14g
160	161	Copper alloy coin (3rd century)	1

L	G	Item	Quantity/Wt. (g)
	162	Iron nail	3
		Glass vessel	1
		Copper alloy bracelet (later 3rd – 4th century)	1
	168	Iron bracket or hinge	1
	169	Iron hobnail	34
		Iron knife	1
		Iron nail	9
		Iron double-spiked loop and ring	1
		Iron 'pruning' hook	1
		Iron strap fragment	2
		Iron socketed handle?	1
	171	Iron nail	1
	172	Iron nail	10
		Iron hobnail	98
	173	Iron nail	2
		Glass vessel	1
		Iron hobnail	1
	175	Iron hobnail	1
	213	Iron bar-iron	1
		Iron nail	4
		Copper alloy stud	1
		Iron strap fragment (perforated)	1
	215	Iron nail	2
	230	Iron knife	1
		Copper alloy coin (later 3rd century)	1
		Stone quern (re-used?)	1
	232	Copper alloy coin (later 3rd century)	1
		Lead alloy vessel repair	1
161	164	Iron nail	1
		Iron hobnail	1
	166	Iron hobnail	1
161	167	Copper alloy coin (4th century)	1
166	201	Iron nail	1
167	220	Copper alloy coin (later 3rd century)	1
		Flint flake	1
		Iron nail	4
		Iron strap fragment	1
	221	Silver coin (late 2nd/ early 3rd century)	1
		Copper alloy coin (4th century)	4
		Iron modelling tool?	1
		Iron nail	2
		Flint flake	1
		Iron strip fragment (perforated)	1
	222	Copper alloy coin (illegible)	2
		Iron cleat	1
		Iron latch lifter	1
		Glass vessel	1
168	211	Iron chisel	1
		Copper alloy coin (later 3rd century)	4
		Iron hobnail	1
		Iron knife	2
		Iron nail	13
		Iron tack	2
		Iron stud (door stud?)	1
		Glass vessel	1
		Copper alloy off-cut	4
		Copper alloy waste	60g
		Iron strap fragment	1

L	G	Item	Quantity/Wt. (g)
		Iron bucket handle mount	1
		Iron strap fragment (perforated)	1
		Copper alloy sheet fragment	1
	212	Copper alloy bracelet (2nd – 4th ; late 3rd-4th century)	2
		Copper alloy earring	3
		Iron hobnail	16
		Copper alloy coin (later 3rd century)	1
		Iron nail	22
		Iron annular ring	1
		Iron hooked termina006C	1
		Copper alloy folded scrap	1
		Ferrous smelting slag	15g
		Iron sheet fragment	1
		Iron strip fragment with boss/rivet in situ	1
	236	Iron buckle	1
		Iron hobnail	1
		Iron tracer?	1
		Iron nail	2
169	260	Copper alloy coin (later 3rd century)	1
	262	Iron nail	1
		Copper alloy padlock bolt	1
		Copper alloy awl (Bronze Age)	1
		Bone hair pin (1st-3rd century)	1
170	277	Iron nail	1
171	314	Iron nail	1
	315	Ferrous slag (undiagnostic)	39g
172	318	Lead vessel repair plug	1
	355	Copper alloy spearhead (Bronze Age)	1
		Iron shears (loop only)	1
173	292	Iron binding strip?	1
		Iron nail	1
173	294	Iron nail	1
		Iron strip fragment	1
	307	Iron nail	1
		Iron hexagonal bar fragment	1
		Ferrous slag (undiagnostic)	51g
174	382	Copper alloy brooch pin?	1
	383	Ferrous slag (undiagnostic)	41g
191	349	Iron ferrule	1
	350	Copper alloy brooch pin (hinged)	1
		Iron nail	3
		Iron strip fragment	1
	379	Iron ferrule	1
192	384	Ferrous slag (undiagnostic)	40g
202	362	Copper alloy saw	1
		Iron nail	2
	371	Iron nail	1
212	342	Iron nail	1
	393	Iron cauldron hanger?	1
	460	Iron nail	2
	468	Iron scrap/bar iron?	1
	470	Copper alloy coin (later 3rd century)	2
	471	Iron nail	2
	473	Iron nail	3
		Ferrous slag (undiagnostic)	13g
		Glass vessel	1
		Iron hobnail	3
		Iron strap fragment	1

L	G	Item	Quantity/Wt. (g)
	475	Copper alloy coin (later 3rd century)	1
		Iron nail	1
		Iron sheet fragment with nail shank corroded in place	1
	480	Copper alloy coin (4th century)	1
219	496	Iron nail	1
		Copper alloy coin (later 3rd century)	1
		Copper alloy toilet set suspension loop	1
	497	Iron nail	1
	525	Copper alloy coin (later 3rd century)	1
231	356	Iron nail	3
		Ferrous slag (smelting)	90g
		Vitrified clay lining	24g

Table 16: 'Other artefacts' from SL57

Settlement redefinition SL58

An assemblage of 213 objects derived from SL58, most associated with L196 water-pits and L232 quarry pits (Table 17). Tools are more numerous than in previous phases with metalworking attested by the presence of a punch, cake slag (1.3kg) and smelting slag (1.6kg). Wood working is suggested by a spoon bit, a lanceolate terminal, a drill bit head, and an iron blade from a possible bow saw; and textile processing by the presence of a double-ended iron wool comb. Two iron knife blades and a whetstone occur and assorted structural fasteners and fittings—timber nails, iron bindings, hinges and a lock plate. Horticultural/agriculture activity is attested by an ox goad and a bill/reaping hook blade, while the low numbers and fragmentary nature of quern stones may suggest the import of processed grain to the site.

Personalia includes two copper alloy penannular bracelets, a brooch and a hair pin, all of 1st–2nd-century date, and fifty iron hobnails. A votive cast copper alloy cockerel figurine, a nail cleaner and a silvered copper alloy fragment, possibly from a hand mirror, also occur. Household items comprise a single early Roman vessel glass fragment, a decorative copper alloy stud and an iron drop handle.

Coinage is poorly represented in comparison with the SL57 assemblage, and comprises only six coins of late 3rd-century/early 4th-century date, and military items are two iron spearhead blades and a 2nd-century flat enamelled decorative circular stud.

L	G	Item	Quantity/Wt. (g)
44	84	Copper alloy coin (later 3rd century)	1
49	87	Copper alloy ?mirror fragment	1
51	89	Iron drop handle	1
53	530	Iron spearhead (Manning type III)	1
175	284	Iron nail	1
	302	Iron hobnail	1
	303	Iron nail	1
		Iron loop-headed spike	1
		Iron hobnail	3
		Ferrous smelting(?) slag	21g
	306	Stone quern	1
	566	Iron nail	1
178	265	Iron nail	3

L	G	Item	Quantity/Wt. (g)
		Glass vessel	1
	286	Iron nail	5
		Iron tack	1
	289	Iron nail	2
		Copper alloy stud (enamelled) (2nd century)	1
		Ferrous slag (undiagnostic)	42g
	317	Iron nail	1
		Vitrified clay	8g
179	226	Copper alloy coin (later 3rd; 4th century)	2
185	341	Iron nail	3
		Iron drill bit	1
		Copper alloy knife/razor handle	1
		Copper alloy hair pin (1st and 2nd century)	1
		Copper alloy mirror? (1st – 2nd century?)	1
196	392	Iron nail	4
		Ferrous slag (?smithing)	114g
	394	Iron nail	9
		Iron awl or lanceolate terminal	1
		Ferrous slag	19g
		Copper alloy vessel?	1
		Stone quern	1
		Copper alloy coin (4th century)	1
		Copper alloy brooch (late 1st – 2nd century)	1
		Copper alloy nail cleaner (1st – 2nd century)	1
		Iron bar (tool stem?)	1
	439	Iron nail	2
		Iron perforated strap fragment	1
	454	Iron nail	17
		Iron wool comb	1
		Iron punch (metalworking)	1
		Iron knife (blade tip only)	1
		Ferrous slag (undiagnostic)	100g
		Iron spearhead	1
		Iron hobnail	17
		Iron perforated strap fragment	1
		Iron L-shaped bar fragment	1
		Iron T-shaped fragment	1
		Iron sheet fragments (folded together)	2
196	461	Iron nail	4
		Iron oval link	1
		Iron curved blade(?) fragment	1
		Iron strip fragment	1
199	441	Iron binding or hinge fragment	1
	443	Copper alloy stud	1
		Iron nail	1
		Iron rod fragment	1
207	489	Silver coin (earlier 3rd century)	1
	491	Iron nail	1
		Iron strip fragment	1
209	493	Iron nail	1
	517	Iron nail	1
216	476	Iron nail	1
217	502	Iron nail	1
		Iron hobnail	3
232	363	Iron nail	3
		Iron hinge strap	1
		Copper alloy bracelet (1st – 2nd; continuing?)	1
		Copper alloy figurine (cockerel)	1

L	G	Item	Quantity/Wt. (g)
	364	Iron nail	6
		Iron spiked loop?	1
		Iron hinge (terminal?)	1
		Iron angle binding?	1
		Iron lock plate	1
		Iron saw	1
		Iron bill bit head	1
		Ferrous smelting slag	1,605g
		Vitrified clay	230g
		Iron knife	1
		Iron strap fragment	1
		Iron rod (curved) fragment	1
		Iron bar fragment	1
		Iron strip fragment	2
		Iron strap fragment (perforated)	1
	435	Iron nail	2
		Iron binding/hinge	2
		Ferrous slag (smithing?)	319g
	436	Iron nail	3
		Iron ferrule	1
		Ferrous slag (undiagnostic)	102g
		Stone quern	1
		Copper alloy bracelet (mid-2nd century)	1
	437	Iron hinge	1
		Stone whetstone	1
	438	Iron nail	1
		Iron hinge	1
		Iron wall hook	1
		Ferrous slag (slag cake – smelting)	1,361g
		Iron stylus	1
		Iron sheet fragment	2
		Iron strap/plate fragment	1
		Iron blade (curved) fragment	1
232	459	Iron nail	9
		Iron binding	1
		Iron strap fragment	1
237	376	Lead weight	1
244	375	Copper alloy coin (later 3rd century)	1
	397	Iron nail	4
		Iron ox goad	1
		Iron hobnail	26
		Iron hinge pivot?	1
		Ferrous smelting slag	190g
		Ferrous slag (undiagnostic)	15g

Table 17: 'Other artefacts' from SL58

Final settlement redefinition SL59

Features assigned to SL59 yielded 102 artefacts; the largest assemblage derived from northern settlement boundary L221. A similar range of objects to those occurring in the previous phases was collected (Table 18). The majority comprise general fasteners and fittings (timber nails, a latch lifter, staples/timber dogs), twenty-one late Roman coins, personal items (bangle bracelets and hobnails) and the ubiquitous items associated with low-level craft and agricultural activity (querns, a bow saw, mortise chisel, drill bits, possible metalworking punch, crucible fragment, bar iron and ferrous slag; a pruning hook, ox goad and billhook/reaping hook blade fragment). Items with

possible military associations include two spearheads, a bolt head and possible apron fittings or strap mounts.

Of particular interest is a votive carving, probably of the god Mercury, crudely fashioned from local Totternhoe clunch (Ht. 148mm; w.89.5mm; th. 66mm (at base)). The nature of the carving is suggestive of an amateur sculptor, and the object is thought to be unparalleled from Eastern Britain (pers. comm. Dr. Martin Henig).

L	G	Item	Quantity/Wt. (g)
50	88	Stone burnisher?	1
197	426	Copper alloy buckle	1
	428	Ceramic crucible	1
		Ferrous undiagnostic slag	62g
		Iron handle (looped terminus only)	1
	429	Iron nail	2
		Iron staple/joiner's dog	1
		Stone quern	1
		Ferrous smelting(?) slag	85g
198	365	Iron nail	1
		Lead vessel repair	1
		Copper alloy coin	1
208	433	Iron cleat	1
		Copper alloy coin	1
		Iron strip fragment	1
	514	Iron nail	1
		Iron hobnail	1
208	550	Iron nail	1
220	463	Iron sheet fragment	1
		Iron strip fragment	1
	508	Copper alloy coin	1
	509	Copper alloy coin	1
		Iron knife	1
	546	Iron nail	1
		Iron strap fragment	1
	554	Copper alloy moulded rod (bridle bit?)	1
221	507	Iron nail	4
		Copper alloy coin	7
		Copper alloy mount for mirror?	1
		Stone quern	2
		Copper alloy bracelet	2
		Copper alloy perforated strap	1
		Stone statuette/carving	1
222	431	Iron nail	3
223	296	Glass vessel	1
	299	Iron nail	1
	305	Shale spindle whorl	1
224	73	Iron nail	1
	76	Iron nail	2
	81	Iron nail	3
		Iron rod (curved - ?latch lifter)	1
225	434	Ferrous smithing slag	356g
		Iron sheet fragment	1
	523	Iron nail	1
		Copper alloy coin	1
	524	Iron nail	3
		Stone quern	1

L	G	Item	Quantity/Wt. (g)
		Iron strip fragment	1
		Iron housing for tool handle or bolt?	1
226	273	Iron nail	1
	274	Iron nail	1
	276	Iron nail	1
	290	Iron nail	2
		Glass vessel	1
		Copper alloy coin	1
		Copper alloy strap mount	1
	291	Iron nail	2
		Stone quern	1
227	267	Iron nail	1
	268	Iron nail	1
	271	Iron nail	4
		Stone whetstone	1
		Iron hobnail	1
	272	Iron nail	4
		Iron bar fragment	1
230	533	Copper alloy coin	5
		Iron hobnail	1
		Copper alloy strap mount	1
		Copper alloy annular ring	1
		Copper alloy rivet/pin head	1
	534	Copper alloy coin	3
		Copper alloy stylus tip?	1

Table 18: 'Other artefacts' from SL59

4.3.8 Phases 5–7: Post-Roman

Post-Roman features yielded a collection of 105 mainly unstratified objects, the majority metal-detected from subsoil L265 (Table 19). With the exception of a post-medieval heel iron, datable items are Roman. They include thirty-four 3rd–4th-century coins and a number of personal objects, including brooches, hobnails and single examples of a hair pin, buckle, knife and mirror fragment.

Phase	L	G	Item	Quantity/Wt. (g)
5	251	526	Lead waste	11g
			Copper alloy knife end-plate	1
			Copper alloy coin	3
			Copper alloy finger ring	1
			Copper alloy buckle	1
6	263	108	Copper alloy pin/stud head	1
7	265	527	Copper alloy rove	1
			Iron rove	1
			Lead vessel repair	1
			Silver coin	1
			Copper alloy coin	30
			Copper alloy stylus tip?	1
			Copper alloy 'mini-terret' ring	1
			Stone quern	6
			Copper alloy strap end	1
			Copper alloy strap mount	2
			Copper alloy uncertain (crest mount?)	1
			Copper alloy brooch	2
			Iron hobnail	45
			Iron heel iron	1

Phase	L	G	Item	Quantity/Wt. (g)
			Copper alloy mirror	1
			Iron S-shaped hook	1
			Lead sheet fragment/off-cut	1

Table 19: 'Other artefacts' from Phases 5–7

4.3.9 Potential

The 'other artefact' assemblage is the largest recovered to date from the Houghton Regis North sites. The material has good potential to contribute to finalising the chronological framework and to address the project's research aims. In contrast to the nearby sites of Woodside Link and HRN1 J1 and J2, the presence of numerous domestic finds suggests these will be able to provide a broader range of information regarding activity on the site. Of particular interest is the votive stone carving, thought to be unparalleled from Eastern Britain, and, therefore, of at least regional interest.

When examined as a component of the landscape with site assemblages from nearby investigation areas, the material will be able to contribute to a picture of the wider landscape of the Houghton Regis environs and its exploitation during the Iron Age and Roman periods.

4.4 Animal Bone

By Mark Maltby

4.4.1 Methodology

All the bones and teeth were examined and the presence of the following was noted: zones of bone, approximate percentage of bone present, gnawing damage, erosion, weathering, concretions, burning (charring and calcification), fusion data and other comments including observations of pathology.

4.4.2 Overall sample size and bone preservation

Animal bone totalling 4,543 fragments (142.3kg) was collected from 634 contexts, of which 2,277 fragments were identified to species. The assemblages from the late Iron Age/early Roman (Phase 3) and Roman (Phase 4) periods were generally good. Slight weathering was observed on many elements, although damage was usually slight. Canid gnawing was observed on some bones from these phases, but only accounted for 1.14% of the assemblage from each Site Landscape (SL). Animal bones from the earlier Phases 1 and 2 were poorly preserved, with nearly all of the bone eroded and fragmented.

4.4.3 Phase 1: Late Neolithic/early Bronze Age (SL51)

Twelve animal bone fragments were found in the outer ring-ditch L2. Preservation was quite poor. Nearly all the bones were eroded and fragmented, but ten of the bones could be identified. A minimum of four cattle were represented by fragments of three radii, two metatarsals and a mandible. Three different cattle were represented by the radii, all of which had fully fused proximal epiphyses, likely to be from animals of over a year old. The mandible came from a younger calf that probably died between six and twelve months old. Sheep/goat was represented by a tibia shaft fragment.

A radius shaft fragment and the fused distal end of a metacarpal found in association could have been from the same adult red deer. A largely complete horse metatarsal was also recovered. This would be a significant find if proved by radiocarbon dating not to be intrusive as there is no firm evidence to confirm the presence of horses in Britain any earlier than the later second millennium BC (Bendrey *et al.* 2013).

The placement of cattle bones in association with late Neolithic/early Bronze Age monuments was quite a common occurrence in southern and central England (Wilkins 2011), but the deposition here was not on the same scale as the spectacular finds at Irthlingborough or Gayhurst in Northamptonshire (Davis and Payne 1993; Deighton 2005; Towers *et al.* 2011). Red deer antlers are frequently associated with these monuments but finds of their bones are much rarer (Wilkins 2011).

4.4.4 Phase 2: Middle Bronze Age/early Iron Age

A total of thirty-eight animal bone fragments were recovered, of which only twelve were identified. Features in field system SL52 produced ten fragments, including an adult cattle fourth premolar and a mandible fragment. Part of a mandible of a sow was also found.

The twenty-eight fragments from SL53 (L18) came mainly from a small pit. Only eight elements, all from cattle, were identified. These included an associated bone group (ABG) that consisted of the distal epiphysis of a femur and the complete tibia, calcaneus and astragalus from the right hindlimb of a calf. All the bones were porous indicating that the animal was under a year old. A radius and carpal found in the same context could have belonged to the same calf. There was no evidence of butchery or gnawing on any of these bones.

ABGs are commonly found on Iron Age sites and they can be interpreted in a variety of ways depending on completeness, preservation and context (Morris 2011). ABGs of several species were found in late Bronze Age/early Iron Age pits at Biddenham Loop, for example (Maltby 2016a). Whether this group represents a ritual deposition of a young calf or a more prosaic disposal of a carcass that was not exploited for food is impossible to determine based on this isolated find, although the proximity of the pit to the cremation cemetery should be noted. Parts of a cattle ulna and scapula were found in the same pit. One of the postholes in L18 produced a fragment of a sheep/goat radius.

4.4.5 Phase 3: Late Iron Age/early Roman

Enclosed settlement SL54

Rectangular enclosure L21 produced a total of fifty-nine animal bone fragments, most of them eroded. Twenty-two of the thirty-one identified elements belonged to cattle. These included eight vertebrae from a water-pit, some of which could have belonged to the same animal. Small numbers of sheep/goat and pig were also found (Table 20). The distal end of a red deer tibia was found in a ditch.

Field and water-pit L22 contained only two weathered bone fragments; identified as a cattle metacarpal and a horse first phalanx. An eroded portion of a dog metatarsal was the only bone recovered from field L24.

Enclosure L28 produced the most animal bones from Phase 3. Preservation was generally quite good, but slight weathering was observed on many elements. The 193 fragments included 108 identified specimens (Table 20). Sheep/goat elements (thirty-eight) were the most commonly represented. These included eight mandible fragments from at least six jaws and eight tibia fragments from at least four different bones. The humerus and radius were each represented by five fragments. Fine knife cuts were observed on an immature sheep femur found in a water-pit and on a humerus in a ditch. Cattle elements (thirty-two) were also well represented. These included five cervical vertebrae from the neck of a young adult from a water-pit. No evidence for butchery was found on any of these, but deep incisions were observed on several aspects of a first phalanx shaft from the water-pit. A largely complete cattle radius was recovered from the enclosure ditch.

The seventeen dog bones included thirteen from an ABG of an adult in a water-pit associated with enclosure L28. Most of the bones came from the upper forelimbs but a few ribs, small portions of the cranium and a tibia were also recovered. There was no evidence for carcass-processing but it is uncertain whether the complete carcass was deposited. None of the foot bones or vertebrae was recovered. The sixteen pig elements included four mandible fragments from at least three jaws and parts of three different scapulae were also recorded. Only four horse elements were recorded, all from enclosure L28. A chicken ulna was found in a water-pit associated with enclosure L28.

Only ten bone fragments were recovered from enclosure L31, including five of unidentified mammal. Elements of cattle, sheep/goat, horse and a mandible of an adult dog were identified (Table 20). A single unidentified mammal fragment was retrieved from enclosure L32.

Nine animal bone fragments were retrieved from sieved samples from the urned cremation burial L18. Seven were calcified and one, a sheep/goat deciduous upper premolar, was charred. None of the other fragments were identified, although three calcined limb bone fragments had internal structures similar to humeri of medium-sized mammals, possibly sheep/goat or pig.

Dispersed settlement L55

Dispersed roundhouses, pits and postholes L25

Only three elements including two cattle teeth were recovered from dispersed roundhouses L25. In contrast, five elements were recovered from dispersed roundhouses L29, including two of horse and one each of cattle and sheep/goat. Enclosure L30 contained five elements, including a sheep/goat mandible fragment and a cattle metatarsal.

	SL54						SL55					
	L21	**L22**	**L24**	**L28**	**L31**	**L32**	**L25**	**L29**	**L30**	**Total**	**ABGs**	**%**
Cattle	22	1		32	2		2	1	1	61	5	40.9
Sheep/Goat	4			38	1			1	1	45		32.8
Pig	3			16						19		13.9
Horse	1	1		4	1			2		9		6.6
Dog			1	17	1					19	13	4.4
Red Deer	1									1		0.7
Chicken				1						1		0.7
Total Identified	31	2	1	108	5	0	2	4	2	155	18	
Unidentified	28			86	5	1	1	1	3	125		
Total	59	2	1	194	10	1	3	5	5	280		

Counts are of numbers of individual specimens (NISP)
Total includes bones from sieved samples
Totals include associated bone groups (ABGs)
% excludes bones assigned to ABGs of four or more bones

Table 20: Phase 3: Late Iron Age/early Roman animal bone

4.4.6 Phase 4: Roman

Settlement SL56

A total of 555 animal bone fragments were collected from nine Land-use Areas. These included 247 unidentified fragments. The identified material was dominated by cattle, although their numbers were inflated by bones from two ABGs. Sheep/goat elements were the second most commonly identified. Horses were moderately well represented but pig elements were rarely encountered. Most of the dog bones were found in small groups. Single finds of chicken, frog and rodent were also recorded (Table 21).

The assemblage was better preserved than those from earlier phases. Erosion damage was recorded on only seven (2%) of the identified elements. There was quite a lot of evidence for weathering, which was noted on seventy-four (24%) of the identified bones, although damage was usually slight. Canid gnawing was observed on forty-two (14%) bones of cattle (twenty-six), sheep/goat (nine), pig (two) and horse (five). Only three fragments, including one of sheep/goat, were burnt. Butchery marks were observed on one sheep/goat and seven cattle bones.

	L152	**L154**	**L155**	**L156**	**L163**	**L181**	**L183**	**L184**	**L186**	**Total**	**ABGs**	**%**
Cattle	17	27	2	5	35	7	32	80	3	208	70	59.5
Sheep/Goat	11	3	5	1	2	9	24	3	1	59		25.4
Pig				1	1	2		1		5		2.2
Horse	3	2	1	1	1		8	3	2	21		9.1
Dog	2		1		1	1		6	2	13	6	3.0
Chicken								1		1		0.4
Frog							1			1		0.4
Total Identified	33	32	9	8	40	19	65	94	8	308	76	

	L152	L154	L155	L156	L163	L181	L183	L184	L186	Total	ABGs	%
Unid Rodent							1			1		
Unid Mammal	49	10	9	27	33	32	60	24	2	246		
Unidentified	49	10	9	27	33	32	61	24	2	247		
Total	82	42	18	35	73	51	126	118	10	555		

Counts are of numbers of individual specimens (NISP)
Total includes bones from sieved samples
Totals include associated bone groups (ABGs)
% excludes bones assigned to ABGs of four or more bones

Table 21: Animal bones from SL56 (Phase 4 Roman)

First redefinition of the settlement SL57

SL57 produced a substantial faunal assemblage. A total of 1,808 fragments were recorded from twenty-seven Land-use Areas. L168 contained nearly 500 fragments and five other Land-use Areas provided over 100 (Table 22). Altogether there were 854 identified elements. These were dominated by cattle, which provided over half of the identified elements. They were particularly prominent in L41, L43, L157 and L169. Sheep/goat elements continued comfortably to be the next most commonly identified but rarely outnumbered cattle in the Land-use Areas. The percentages of horse and pig were similar to those found in SL56 with pigs very poorly represented. Small clusters of dog bones were found in several features. Other species identified in small numbers were chicken, red deer, roe deer, cat, (cf) plover and short-tailed vole.

The assemblage was generally quite well preserved. Only six identified elements were recorded as eroded. Weathering was noted on 274 (32%) of the identified bones, although damage was minimal in many cases. Canid gnawing was observed on 119 (14%) of the bones of cattle (seventy-nine), sheep/goat (thirty-one), pig (two), horse (six) and red deer (one). Only fifteen fragments, including three of cattle and two of sheep/goat, were burnt. Butchery marks were recorded on two sheep/goat and thirty-seven cattle bones.

	L40	L41	L42	L43	L157	L158	L159	L160	L161
Cattle	3	19	6	39	78	16	6	24	
Sheep/Goat		1	1	3	10	6	3	23	1
Pig		1			2	1	1	3	
Horse	1			5	7	4		6	
Dog			1	1					
Cat									
Red Deer									
Roe Deer									
Short-tailed Vole									
Chicken								1	
Plover									
Total Identified	4	21	8	48	97	27	10	57	1
Unid Rodent									

	L40	L41	L42	L43	L157	L158	L159	L160	L161
Unid Mammal	6	11	3	56	60	21	6	108	8
Unid Bird						1			
Unidentified	6	11	3	56	60	22	6	108	8
Total	10	32	11	104	157	49	16	165	9
	L166	**L167**	**L168**	**L169**	**L170**	**L171**	**L172**	**L173**	**L174**
Cattle	5	33	93	36	4	5	22	39	3
Sheep/Goat	10	18	82	6	4	3	5	35	4
Pig	1		10	1	1		2	2	
Horse	3	12	14	1			3	7	
Dog		4	8	1					2
Cat								1	
Red Deer			1						
Roe Deer									
Short-tailed Vole			1						
Chicken		3	3	1					
Plover								1	
Total Identified	19	70	212	46	9	8	32	85	9
Unid Rodent			2						
Unid Mammal	11	123	278	85	4	20	17	60	
Unid Bird									
Unidentified	11	123	280	85	4	20	17	60	0
Total	30	193	492	131	13	28	49	145	9

	L191	L192	L193	L202	L205	L211	L212	L219	L231	Total	ABG	%
Cattle	3	3	6	5	7		17	11	2	485	5	56.5
Sheep/Goat	5	1	4	2		1	5	4	3	240		28.3
Pig										25		2.9
Horse				1		1	3	1		69		8.1
Dog	2		2							21		2.5
Cat										1		0.1
Red Deer										1		0.1
Roe Deer					1					1		0.1
Short-tailed Vole										1		0.1
Chicken	1									9		1.1
Plover										1		0.1
Total Identified	11	4	12	8	8	2	25	16	5	854	5	
Unid Rodent										2		
Unid Mammal	10	1	7	11	4	2	27	11	1	951		
Unid Bird										1		
Unidentified	10	1	7	11	4	2	27	11	1	954		
Total	21	5	19	19	12	4	52	27	6	1808		

Counts are of numbers of individual specimens (NISP)
Total includes bones from sieved samples
Totals include associated bone groups (ABGs)
% excludes bones assigned to ABGs of four or more bones

Table 22: Animal bones from SL57 (Phase 4 Roman)

Second redefinition of the settlement SL58

SL58 provided a total of 898 bone fragments from eighteen Land-use Areas. The largest assemblage came from L175, which produced 232 fragments. L196 and L232 both provided over 100 (Table 23). Altogether, 417 elements were identified including twenty-six that formed ABGs of four or more bones. As in previous phases, the assemblage was dominated by cattle, which provided 59% of the identified elements and cattle were the most common species recorded in every Land-use Area. Sheep/goat formed just under a quarter of the identified elements. No other species contributed over 10% of the assemblage. Horse elements continued to outnumber those of pig and dog. L175 was the only Land-use Area that produced other species. Six bird bones were assigned to chicken, duck and Sparrowhawk.

The assemblage was slightly better preserved than those from SL56 and SL57. Only seven identified elements were eroded. Slight weathering was observed on 115 (24%) of the identified bones. Canid gnawing was recorded on fifty (10%) of the bones of cattle (twenty-nine), sheep/goat (eleven), pig (two), horse (seven) and dog (one). Only seven fragments, including one of horse, were burnt. Butchery marks were recorded on two sheep/goat and thirty-seven cattle bones. Cattle provided thirty-three of the fifty-six measured bones.

	L199	L200	L207	L209	L216	L217	L232	L237	L244	Total	ABG	%
Cattle	13	8	13	20	3	4	44	1	11	277	11	58.5
Sheep/Goat	6		4	8		1	24		9	122	11	24.4
Pig	2						3		3	20		4.4
Horse		1		2		2	3			39	4	7.7
Dog			2	2			7			18		4.0
Chicken										1		0.2
Duck										1		0.2
Sparrowhawk										3		0.7
Total Identified	21	9	19	32	3	7	81	1	23	481	26	
Unidentified	6	4	54	16	3	18	51	2	12	417		
Total	27	13	73	48	6	25	132	3	35	898		

Counts are of numbers of individual specimens (NISP)
Total includes bones from sieved samples
Totals include associated bone groups (ABGs)
% excludes bones assigned to ABGs of four or more bones

Table 23: Animal bones from SL58 (Phase 4 Roman)

Final redefinition of the settlement SL59

SL59 produced a total of 950 bone fragments from fourteen Land-use Areas. Assemblages of over 100 fragments were provided by L208, L222, L225 and L226 (Table 24). Altogether, 457 elements were identified including ten from two ABGs. The assemblage was again dominated by cattle, which provided 61% of the identified elements excluding ABGs. Sheep/goat elements formed only 21% of the identified elements. Horses (13%) were better represented

than in previous phases. Pig, dog, red deer, mouse, chicken and rook/crow were found in small numbers. There was also a residual bone of an aurochs.

The assemblage was slightly better preserved than those from SL56 and SL57. Thirteen of the identified elements including the aurochs bone were eroded. Weathering was recorded on 142 (31%) of the identified elements. Canid gnawing damage was observed on fifty-one (11%) of the bones of cattle (forty), sheep/goat (five), horse (five) and red deer (one). Burning was recorded on twenty-one fragments including four of cattle, two of horse and one of goat. Butchery marks were recorded on one sheep/goat and sixteen cattle bones. There was also a worked red deer antler offcut. Cattle provided thirty-six of the fifty-nine bones that were measured.

	L50	**L197**	**L198**	**L208**	**L220**	**L221**	**L222**
Cattle	1	23		34	7	28	42
Sheep/Goat	1	7	1	13	3	8	8
Pig		3			4		2
Horse		5		16	1	3	14
Dog							6
Red Deer						2	
Aurochs*					1		
Mouse							
Chicken							
Rook/Crow							
Total Identified	2	38	1	63	16	41	72
Unid Rodent							
Unid Mammal	6	20	1	89	11	51	54
Unid Bird				1			
Unidentified	6	20	1	90	11	51	54
Total	8	58	2	153	27	92	126

	L223	**L224**	**L225**	**L226**	**L227**	**L233**	**L234**	**Total**	**ABG**	**%**
Cattle	6	27	53	29	15		9	274	4	60.4
Sheep/Goat	1	9	15	17	11		1	95		21.3
Pig				5				14		3.1
Horse		3	7	5	3			57		12.8
Dog			1		1		1	9	6	0.7
Red Deer					1			3		0.7
Aurochs								1		0.2
Mouse				1				1		0.2
Chicken	1				1			2		0.4
Rook/Crow					1			1		0.2
Total Identified	8	39	76	57	33	0	11	457	10	
Unid Rodent				4				4		
Unid Mammal	8	21	109	81	19	1	27	498		
Unid Bird								1		
Unidentified	8	21	109	85	19	1	27	503		

Total	16	60	185	142	52	1	38	960		

Counts are of numbers of individual specimens (NISP)
Total includes bones from sieved samples
Totals include associated bone groups (ABGs)
% excludes bones assigned to ABGs of four or more bones
Aurochs* = residual

Table 24: Animal bones from SL59 (Phase 4 Roman)

4.4.7 Phase 6: Post-medieval

Two unidentified mammal fragments were recovered from a ditch in field L262.

4.4.8 Phase 7: Modern

An unidentified mammal fragment was found in L264.

4.4.9 Assessment of potential

Overall, the animal bone assemblage was moderately well preserved and once fully quantified will provide information for the Iron Age and Roman, and to a lesser extent the Bronze Age, environs in the area. In particular, the Phase 4 Roman assemblage is sufficiently large and diverse to facilitate intra-site analysis with adjacent excavations, such as Woodside Link (Albion 2018) and HRN1 J1 and J2 (Albion 2019a).

The presence of horse in Phase 1 outer ring-ditch L2 could possibly be very significant. Previous claims for the introduction of horses in the late Neolithic or early Bronze Age period in Britain and Ireland have not been supported by direct radiocarbon dating, which has not been able to confirm the presence of horses in Britain any earlier that the later 2nd millennium BC (Bendrey *et al.* 2013). Given that there was substantial Roman activity on the site, it will be important to obtain a radiocarbon determination for this bone to verify its date.

4.5 Charred and Waterlogged Plant Remains

By John Giorgi

4.5.1 Introduction

Environmental bulk soil samples were collected for the recovery of charred plant remains for potential information on the agrarian economy of the site with the bulk of the samples being from late Iron Age and Roman features.

4.5.2 Methodology

A total of 193 samples were collected from a wide range of features, but mainly pits, ditches and grave fills, with 177 processed for the recovery of charred plant remains. Over half (105) of the samples were from Roman deposits (Phase 4) with smaller numbers from the other phases; thirteen from the late Neolithic/early Bronze Age (Phase 1), twenty-nine from the middle Bronze Age/early Iron Age (Phase 2) and twenty-seven from the late Iron Age/early Roman period (Phase 3). One sample was also collected from a post-medieval ditch fill (Phase 6), while two samples were from undated features (Phase 8).

Sample size ranged from 1l to 30l, most of which were between 10l and 30l, the smaller samples mainly being from grave fills. The samples were processed using a Siraf-style flotation tank and meshes of 0.3mm and 1mm for the recovery of the flots and residues respectively. The flots were then dried along with the residues which were sorted for biological and artefactual remains. Identifiable charred plant remains were present in 133 of the 177 samples and sorted from the flots and identified using a binocular microscope (with a magnification of up to x40) together with modern and charred reference material and manuals (Cappers *et al* 2006; Jacomet 2006).

4.5.3 Results

The results are shown in Appendix 2. The samples collectively produced just over 10,000 quantified items, consisting largely of cereal debris, mainly grains with smaller amounts of cereal chaff and fewer wild plant/weed seeds.

Almost all the charred plant remains were recovered from Roman samples (72% of the quantified remains) and late Iron Age/early Roman samples (27%), with relatively few remains from middle Bronze Age/early Iron Age features and only occasional charred items from late Neolithic/early Bronze Age deposits. No charred plant remains were present in the post-medieval samples.

Phase 1: Late Neolithic/early Bronze Age

Thirteen samples were collected from this phase from a ring-ditch monument and associated activity SL51; ten from the fills of the inner L1 and outer L2 ring-ditch and three from a cremation burial L4 situated to the south-east of the monument.

Phase 2: Middle Bronze Age/early Iron Age

Twenty-nine samples were collected from this phase from twenty-five fills associated with an inhumation and five urned and un-urned cremation burials (including a cemetery L12) within SL53; and from four fills of two pits within SL52.

Phase 3: Late Iron Age/early Roman

Twenty-seven samples were collected from this phase, all from the enclosed settlement area SL54 in the northern half of the excavation except for one grave fill sample from dispersed settlement area SL55 to the south, which, however, produced no charred plant remains. Most of the samples were from ditch and pit fills with a few from hearths, graves and post-holes and single ones from a hollow.

Phase 4: Roman

One hundred and five Roman samples were processed for the recovery of charred plant remains from a range of features, mainly ditches and pits, associated with four development phases, SL56, SL57, SL58 and SL59, of the Roman settlement. Ninety-seven of the samples produced charred plant remains, which included twenty rich assemblages (> 100 quantified items). One sample from a pit/well, G212, produced a waterlogged plant assemblage.

Phase 6: Post-medieval

One sample was collected from post-medieval ditch G108, but produced no identifiable charred plant remains.

4.5.4 Assessment of potential

Identifiable charred plant remains are present in 133 of the 177 samples taken on site (Appendix 2). Nine flots from late Iron Age and Roman contexts contained very rich charred plant assemblages and one Roman sample produced identifiable 'waterlogged' plant remains.

Once fully quantified and analysed, the charred plant remains have good potential to contribute to the project's aims and objectives by comparing crop-husbandry practices with other sites in the vicinity, such as Woodside Link (Giorgi 2018, forthcoming), HRN1 J1 and J2 (Albion 2019a) and development areas ACA2, ACA8 and ACA9 (Albion 2019b).

Further analysis of the charred plant remains will provide information on the following:

- The range of plant foods used on the site and possible changes over time;
- Aspects of the arable economy of the settlement/diet of the inhabitants during the late Iron Age and Roman periods;
- Aspects of crop husbandry (range of crops cultivated, the soils used for growing the crops, possibly sowing and harvesting methods) and any changes between the different phases of the site;
- The nature of the crop-processing activities taking place within the site.

4.6 Wood Charcoal

By John Giorgi

Charcoal was present in all the samples with variable amounts of potentially identifiable fragments (>2mm) in 120 of the flots, including rectilinear fragments and round wood of various sizes. There were large amounts of charcoal in eighteen samples from seven grave fills, five pit fills, four ditch fills and two oven fills, the identification of which may provide information on the range of woods being used as fuel during the different phases of the site and potential changes between periods.

The charcoal in the samples from the oven in L161 (Phase 4, SL57) may shed light on the different woods being used as fuel, while that from the cremation burials will provide evidence on the woods used in the cremation rituals.

A provisional scan of the transversal section of some of the larger fragments using a low-powered microscope from the oven and several other samples suggest the presence of ash (*Fraxinus*) and alder/hazel (*Alnus/Corylus avellana*), although such identifications can only be considered tentative with further analysis required using a more appropriate high-powered microscope.

4.6.1 Assessment of potential

Identifiable wood charcoal was present in 120 samples. Once quantified and analysed, it has good potential to contribute to the project's aims and objectives by comparing wood charcoal with other sites in the vicinity, such as the Woodside Link (Challinor 2018, forthcoming). It will also provide information on the following:

- Wood species used in pyres during the Bronze Age and Iron Age periods.
- Wood species used for fuel for the two drying ovens.
- Character of the local woodland environment.

4.7 Human Bone

By Natasha Powers

4.7.1 Introduction

One inhumation and nine cremation burials were recovered. The majority of the burials have been assigned to the middle Bronze Age/early Iron Age (Phase 2). The cremation burials were predominantly concentrated in the southern portion of the site.

4.7.2 Methods

Hand-collected human bone was scanned by context and quantified by minimum fragment count and weight. An assessment was made of the state of preservation on a three point scale from 'good' to 'poor'.

Each sample of burnt bone was recorded in accordance with current guidelines (McKinley 2004). The total weight of the sample was established in grams and the sample was passed through a series of graded sieves to separate the fractions greater than 10mm, 5mm and 2mm. The resulting fractions were weighed, and proportions were calculated as a percentage of the total bone present.

4.7.3 Results

Phase 1: Late Neolithic/early Bronze Age

One possible early Bronze Age cremation burial was recorded, L4, in the northwest of the site. The burnt bone (26.2g) made up only a small proportion of the deposit with 1175.3g of residue present and up to 80% of those deposits consisting of fuel slag and burnt flint, suggesting that it may not have been as effectively separated from the soils at the pyre site as is common.

Phase 2: Middle Bronze Age/early Iron Age

Crouched burial

Crouched inhumation L9 was identified adjacent to the southern limit of the investigation area. The skeleton was largely complete and the bone was well-preserved but highly fragmentary.

Cremation burials

A total of 2443.3g of burnt bone was recovered from seven burials: two associated with urns (L12), and the other five from unurned deposits: L8 (1), L12 (2) and L14 (2). The quantities of burnt bone within each burial were generally small with only two burials within L12 (one urned and one unurned) containing more than 500g of burnt bone (Table 25). The largest quantity of bone came from an urned burial in L12, suggesting that the vessel had perhaps afforded the remains a degree of protection after deposition. None of the burials contained the full quantity of bone that would be expected from the cremation of an adult (1600–3600g (McKinley 1989)), probably reflecting a combination of incomplete collection from the pyre, and later truncation.

P	L	Total weight (g)
1	4	26.2
2	8	224.1
	12	654.2
		42.4
		371.4
		816.2
	14	203.2
		131.8
3	13	81.7

Table 25: Total weight of human bone

Phase 3: Late Iron Age/early Roman

A single deposit of burnt bone was recovered from a burial assigned to L13. The deposit consisted of 81.7g of burnt bone (Table 25). The burial may represent a token deposit of remains from the pyre, or show that the area had been horizontally truncated at a later date.

4.7.4 Assessment of potential

Once analysed the human bone assemblage has good potential to contribute to the project's aims and objectives by comparing burial practices with other sites in the vicinity, such as the Woodside Link to the north (Duhig 2018, forthcoming), the M1-A5 Link Road (Brown 2015) and HRN1 J1 and J2 (Albion 2019a). It will also provide information on the age, sex and pathological conditions of the Bronze Age and Iron Age inhabitants of the area. The number of burials is too small, however, to draw firm conclusions about the demographic composition of the living population and, as is commonplace, none of the burials contain the complete remains of an individual.

5. DISCUSSION OF RESEARCH OBJECTIVES FOR ANALYSIS

5.1 Introduction

The original project objectives for analysis were presented in the WSARM (Albion 2017b) and are briefly discussed in Section 2.4. The assessment in Sections 3 and 4 indicates that the results of the fieldwork can contribute to a number of updated research themes. These are based on objectives taken from the local and regional research frameworks (Medlycott 2011a; Oake *et al* 2007) and for the Roman period from the results of the recently published three volumes on new visions of the countryside of Roman Britain (Smith *et al*. 2016; Allen *et al.* 2017; Smith *et al*. 2018).

In summary, the investigations have produced evidence for a landscape utilised from the late Neolithic/early Bronze Age to the present day. The types of human activity have varied both chronologically and spatially. This activity will be examined both within single chronological periods and as cross-period themes. The latter will ensure that any continuity and discontinuity in the landscape will be explicitly considered.

The updated research themes are discussed below under the following headings:

1. Establishment of a chronological framework (all phases)
2. Continuity and discontinuity in the landscape (all phases)
3. Settlement character and economic basis of settlements and other activity (middle Bronze Age/early Iron Age, late Iron Age/early Roman and Roman phases)
4. The nature of activity away from settlements (all phases)
5. The local environment (all phases)
6. Ritual and religion (late Neolithic/early Bronze Age and Roman phases)

5.2 Research Theme 1: Chronological Framework

5.2.1 Summary

The assessment demonstrates that it has been possible to establish a chronological framework for the archaeological remains recorded on the site; all significant features/deposits have been assigned to chronological phases. This was achieved primarily through the spot-dating of artefacts and stratigraphic sequence.

The earliest evidence of activity dates to the late Neolithic/early Bronze Age (Phase 1), in the form of a ring-ditch monument L1/L2. The next phase of activity took place in the middle Bronze Age to early Iron Age period (Phase 2) and comprised a field system SL52 and dispersed activity SL53, including dispersed burials, post-built structures, pits and postholes. During the late Iron Age to early Roman (Phase 3) an enclosed settlement SL54 was laid out across the northern half of the excavation area, with dispersed settlement activity

SL55, in the form of roundhouses, to the south. During the 1st to 4th centuries AD a settlement was established in the southern half of the investigation area. It comprised an east-west aligned trackway with enclosures situated on either side. The settlement's layout changed over time (SL56–SL59). The only evidence for medieval (Phase 5) activity is a series of furrows relating to open-field cultivation and the only evidence for activity in the post-medieval period (Phase 6) were ditched field boundaries.

5.2.2 Statement of potential

The assessment has demonstrated that it has been possible to establish a chronological framework for the archaeological remains recorded on the site. There is moderate potential to refine the chronological framework once the full identification of the pottery and 'other artefacts' has been completed. In addition, targeted radiocarbon dating may assist in dating key features such as the ring-ditch monument and undated burials. The finalised framework will underpin the analysis and final reporting. It is fundamental to the successful conclusion of the project.

5.3 Research Theme 2: Continuity and Discontinuity in the Landscape

5.3.1 Summary

The investigations have produced evidence for seven chronological periods. The latter can usefully characterise activity at a particular point in time and, thereby, highlight discontinuity. Conversely, they can also hinder an appreciation of continuity in the landscape. The transition from one chronological period to the next is a common theme in both national (Historic England 2014), regional (Medlycott 2011a) and county research agendas (Oake *et al*. 2007). Continuity, discontinuity and transition from one period to the next are, therefore, a major research theme and are discussed briefly below.

5.3.2 Late Neolithic/early Bronze Age

A ring-ditch monument was established in Phase 1 on previously unoccupied land *c*.1km to the north of a similar ring-ditch identified on the Woodside Link (Albion 2018).

5.3.3 Middle Bronze Age/early Iron Age

A field system and dispersed activity including burial, took place in Phase 2. One of the ditches of the field system had been dug, presumably deliberately, across the Phase 1 ring-ditch (see below). Ring-ditches serving as 'nodal points' for middle Bronze Age fields has been observed at other sites in the region, e.g. Biddenham Loop (Luke 2016, 121).

5.3.4 Late Iron Age/early Roman

The enclosed and dispersed settlement assigned to this phase was established in the same area as the middle Bronze Age to early Iron Age (Phase 2) activity. However, the boundary alignments differed from those of Phase 2 possibly, suggesting a hiatus between the two periods.

5.3.5 Roman

During the Roman period (Phase 4) the Phase 3 dispersed settlement was replaced by an enclosed settlement on either side of a trackway. However, a level of continuity was evident in the reuse of Phase 3 boundary alignments and roundhouse-type buildings. The reuse or continuity of earlier boundaries and/or their alignment was also seen on the Biddenham Loop (Luke 2016, 197) and at Heathrow Perry Oaks (Lewis *et al*. 2006, 166–8).

The trackway remained the focus of the settlement throughout Phase 4, although it and the layout of enclosures on either side were modified. Expansion into the northern half of the investigation area did not occur until later in the Roman period, possibly suggesting that the late Iron Age to early Roman enclosures and fields continued to be utilised well into Phase 4.

This fits the trend observed by the rural settlement of Roman Britain project where 'continuity of settlement from the late Iron Age seems to have been the norm' (Smith *et al*. 2016, 408).

5.3.6 Medieval and post-medieval

Strip cultivation indicating a medieval open-field system (Phase 5) and the subsequent post-medieval field boundaries (Phase 6) are on similar alignments to the earlier Iron Age and Roman enclosures, but do not precisely correspond.

5.3.7 Statement of potential

There is good potential to elucidate the issues of continuity and discontinuity in the development of the landscape.

5.4 Research Theme 3: Settlement Character and Economic Basis

5.4.1 Summary

The Roman settlement SL56–59 comprised enclosures laid out on either side of a trackway. It can be interpreted as a complex farmstead, the dominant settlement type within the central Britain zone (Smith 2016 151–7), or possibly a village (op. cit., 151–64). The pottery assemblage is dominated by a standard range of local coarse wares with a small percentage of regional and continental imports. Although large, the 'other artefact' assemblage comprises a typical range of objects, ranging from personalia to trade, commerce, household and craft/industrial activity. There are a few items with possible military associations e.g. bell-shaped mount/stud (variously interpreted as box fittings associated with the Roman military or short sword or dagger pommels), a possible flat-bladed bolt-head etc. Although this will need to be examined in more detail, small numbers of items with possible military associations are often found on rural settlements. The number of coins is perhaps unusual, although again this will need to be compared to other sites where intensive metal-detecting has been undertaken. Of particular interest is the votive carving, currently thought to be unparalleled from Eastern Britain (pers comm. Dr. Martin Henig).

Two crop-processing areas, each containing a drying oven and water-pit, were identified within the Roman settlement. The two drying ovens are of different

types: one of E-shaped form and the other rectangular. Drying ovens are intrinsically interesting structures and once their charred remains are fully analysed they will provide detailed information on their function and on the economic basis of the settlement. The Rural Settlement of Roman Britain project stated that the analysis of corndryers 'has confirmed that there is evidence for an increase in the scale of arable cultivation over the course of the first to fourth centuries AD' (Lodwick 2017, 61). A further four ovens were found to the south on the Woodside Link (Albion 2018) and within J1 (part) and J2 (Albion 2019a). Having this number of drying ovens in close proximity enhances their significance and likelihood of understanding of the economic basis of the related settlement(s).

The characterisation of rural agrarian and economic activity in the Roman period is an area of research highlighted by Medlycott as requiring further work: 'we still need to understand the Roman agricultural 'norm', against which assemblages can be compared' (Medlycott 2011b, 46). The Phase 4 evidence has the potential to contribute to our understanding of how Roman economy was organised.

5.4.2 Statement of potential

Further analysis of the structural, artefactual and ecofactual data will assist in determining the 'status' of the settlements, in particular whether or not the Roman settlement represents a typical farmstead site. When fully examined the archaeological features such as roundhouses, ditched enclosures, pits and drying ovens, alongside the botanical data (charred plant remains and charcoal) and animal bone assemblage, will elucidate the economic basis of the area in the late Iron Age and Roman periods. It will then be possible to usefully compare it with the evidence from nearby sites, and those elsewhere within Bedfordshire and the wider Chiltern region.

5.5 Research Theme 4: Landscape

5.5.1 Summary

For the prehistoric and Roman periods, prior to large-scale, open-area excavations, most archaeological investigations had been concentrated on settlements themselves, so that little information about the wider landscape was available.

The use of the landscape during the late Bronze Age/early Iron Age transition is a key question in the regional research agenda, with evidence for 'complex' activities taking place away from settlements — e.g. isolated pits, substantial ditched boundaries and pit alignments (Medlycott 2011b, 29–31). The evidence recovered for field systems and dispersed activity can be compared with more substantial evidence found elsewhere, e.g. Land West of Kempston (Luke 2016, 137–42) and Biddenham Loop (Luke 2016, 145–7).

Late Iron Age and Roman rural settlement densities, distribution and associated land-use is better understood, but Medlycott has highlighted that there is still a bias '…towards the larger and more affluent rural sites' and more work is still required to answer key questions about the Roman rural

landscape (2011b, 46–7). The size and density of the rural settlement investigated will, therefore, contribute to an understanding of the wider landscape. The data-sets can also be compared to similar activity investigated within other parts of HRN1 (Albion 2019a and b) and on the neighbouring Woodside Link (Albion 2018).

5.5.2 Statement of potential

The late Bronze Age/early Iron Age and the late Iron Age/Roman activity identified within the investigations will contribute to our understanding of the wider landscape during these periods.

5.6 Research Theme 5: Local Environment

5.6.1 Summary

Human interaction with landscape and environment is central to archaeological study. The extent of woodland and the pace of woodland clearance during the Roman period are of particular interest (Medlycott 2011b, 46; Murphy 2007, 79).

5.6.2 Statement of potential

The quantification and analysis of the wood charcoal will provide information on the character of the local woodland environment during the late Iron Age and Roman periods.

5.7 Research Theme 6: Ritual and Religion

An insight into the beliefs and practices of past peoples is provided by their, treatment of the dead, monuments and evidence for 'structured deposits'.

5.7.1 Burials

The majority of the firm evidence for ritual and religion derives from the ten definite, formal human burials. They include the one possible early Bronze Age cremation burial, seven middle Bronze Age/early Iron Age cremation burials, one late Iron Age/early Roman cremation burial and a middle Bronze Age/early Iron Age inhumation. Four of the middle Bronze Age/early Iron Age cremation burials formed a cremation cemetery. A cremation cemetery was also identified within development areas J1 (part) and J2 to the south, although it was slightly later in date (Albion 2019a).

The regional research agenda (Medlycott 2011a, 31) and the results of the Rural Settlement of Roman Britain project (Smith *et al.* 2018) indicate that further research is needed into the chronology, location and types of burials.

Statement of potential

The human burials identified within the investigations will contribute to our understanding of burial practices during the early Bronze Age to the early Roman period. Once analysed, comparisons can be made with late Iron Age to early Roman cremation burials identified in development areas J1 (part) and J2 to the south (Albion 2019a).

5.7.2 Monuments

The ring-ditch monument was defined by a small ring-ditch which at a later date was replaced by a larger ring-ditch. No burial was found within the monument although a cremation burial placed to the south may be contemporary. A similar ring-ditches were also identified *c*.1km to the south on the Woodside Link (Albion 2018; Barker forthcoming). Prior to their discovery known ring-ditch monuments in this part of Bedfordshire were generally sited on the north-facing chalk escarpment of the Chilterns, such as Five Knolls, Dunstable (Dyer 1991, 25–29) or on ridgelines at Barton-le-Clay; Galley Hill, Luton and Streatley (Clark 1991, 4–24 and Dyer 1974, 24).

'In general the ceremonial/funerary monuments in the county are not well understood either individually or as groups or complexes' (Oake *et. al*. 2007, 9). Indeed, the fundamental interpretation of ring-ditches as either funerary or ceremonial is often impossible to determine based on non-intrusive survey or ploughed-out remains (Clare 1986 and 1987). Another important consideration is the veneration of monuments in later periods and it is therefore interesting that one of the ditches of the middle/late Bronze Age field system appears to be deliberately dug across the centre of the monument.

Statement of potential

This monument, together with the Woodside Link example, will contribute to our understanding of this type of ceremonial/funerary monument.

6. UPDATED PROJECT DESIGN

6.1 Introduction

As established in the previous sections, the results of the investigation have the potential to contribute to a number of regional research objectives. On this basis and in accordance with the WSARM (Albion 2017a) this sections provides the methodologies and task list for the proposed analysis and subsequent final reporting and archiving programmes.

Details of the professional standards and guidelines that will be adhered to during the project are provided in Appendix 3.

6.2 Analysis

6.2.1 Contextual

The underlying framework for the analysis and final reporting of the results will be the contextual hierarchy. The provisional hierarchy, described in this report, will be rigorously checked and compared with quantified artefact and ecofact data. Research will focus on the subtleties of this complex chronology with particular reference to the Roman period. It is envisaged that the broad outlines of the structural hierarchy used in this assessment will remain largely intact.

The digitised plan and section data will be interrogated via GIS software linked to relational database tables to produce mock-up final illustrations. Plans will be produced to show all features in each Phase, with Land-use Areas identifiable. Significant Groups referred to will also be annotated.

6.2.2 Radiocarbon determinations

The majority of deposits on site can be well-dated by artefactual and/or stratigraphic evidence. However, accelerator mass spectrometry (AMS) determinations will be undertaken by Scottish Universities Environmental Research Centre Radiocarbon Laboratory (SUERC) on key features where suitable material is present to assist in finalising the phasing hierarchy. Key features to be considered for dating include the ring-ditch monument, cremation burials, inhumation and the possible middle/late Bronze Age field ditches. The material available for dating includes human and animal bone, charred seeds and charcoal, but specialist advice will be sought to determine the most suitable for radiocarbon determination. In addition, the possible late Neolithic/early Bronze Age horse bone will be subject to radiocarbon determination because there is no firm evidence in Britain for the presence of horses in Britain any earlier than the later second millennium BC.

6.2.3 Pottery

Detailed quantification of the pottery assemblage will be required. The final report will summarise the pottery assemblage within appropriate chronological periods by fabric type, form, decoration and attribute. The text will refer to comparative assemblages (published or unpublished). In addition, where

appropriate, the pottery assemblage from individual elements of the structural hierarchy, e.g. Land-use Areas and Groups, will be discussed.

Selection of pottery vessels for publication-standard illustration will be made at this juncture.

6.2.4 Ceramic building material

No further analysis of the tile and fired clay assemblage is required, although the text produced for this assessment will be amended as necessary to reflect any changes to the site's phasing or interpretation identified during analysis.

6.2.5 'Other artefacts'

Ahead of analysis stone objects will be subject to petrological identification by Dr. J. Eyers (Chiltern Archaeology). The preliminary identifications of the coins will be confirmed, and analysed, by Dr. Peter Guest as part of analysis stage of this project. The votive carving will be examined by Dr. Martin Henig.

Each 'other artefact' will be assigned a narrow term, and where applicable, a date range. Narrow term information will be established by an examination of each object, noting:

- form
- method of manufacture
- material and source
- presence of diagnostic features
- condition
- selected parallels from comparable sites
- comparison with ceramic data from the site

A selection of artefacts will be made for inclusion in the final report. Selection of artefacts for publication-standard illustration will be made at this juncture.

A specialist text will summarise the assemblage within appropriate chronological periods by material type and forms. The text will refer to comparative assemblages (published or unpublished).

6.2.6 Animal bone

All bones and teeth from the hand-collected and sieved samples will be examined and recorded in detail onto a relational database. Where present, the following information will be recorded on each specimen: species; anatomy (element); parts (zones) of the element present; handedness (on bones in associated groups); percentage of element present; gnawing damage; breakage patterns; erosion; weathering; charring; concretions; fusion data; sexing data; animal bone group number; sieved sample number; other comments (including evidence for pathology).

Separate data tables linked to the main table by an individual identification number will be created for metrical, butchery and tooth-ageing data. Where

necessary, identifications will be confirmed by reference to comparative skeleton collections. Tooth eruption and wear descriptions for cattle, sheep/goat and pig will follow the recording method of Grant (1982), to facilitate comparisons with other assemblages. Similarly, for national and international comparative purposes, measurements will follow those recommended by von den Driesch (1976).

Relevant faunal evidence will be incorporated within the site narrative to assist in the general interpretation of settlement usage and deposition. Broader discussion of the animal bone assemblage within the report will be limited by the small size of the assemblage; where possible, it will focus on species abundance with briefer comments on other evidence. However, where available, the data accumulated on body parts represented, ageing and sexing, butchery methods, pathology and stature will also contribute to broader regional surveys of animal husbandry practices, meat diet, carcass processing methods and deposition in the Roman period.

6.2.7 Charred plant remains and wood charcoal

Once fully quantified the charred grain assemblages will be analysed with reference to the contextual data to recover further information on the agrarian economy of the settlements, the location and extent of crop-processing activities and to provide information about the local environment.

Nomenclature and taxonomic order for the wild plants follows Stace (2005) also used for ecological data together with Brenchley (1911; 1913), Hanf (1983) and Wilson *et al* (2003).

Analysis of the charcoal will concentrate on species identification and quantification where the assessment has proved that this is possible. This will provide information on the range of woods used as fuel for cremation and crop-processing, whilst charcoal from other features may provide an insight into the character of the local woodland environment.

Analysis will include:

- The sorting, identification and quantification of the fifty productive samples;
- Sub-sampling may be required of the particularly rich assemblages;
- Tables of results will then be prepared followed by a discussion of the charred material taking into consideration evidence from other sites of similar periods in the area.

6.2.8 Human bone

All of the human bone recovered will be quantified and analysed. This will include:

- Number of individuals;
- Age and sex;
- Pathology;

- Selection of bone;
- Pyre technology.

6.3 Final Report

6.3.1 Overview

The scale and significance of the results mean that the final report will be suitable for submission to the *Albion Monograph* series. Consistent with the results of this assessment, the final report will concentrate on evidence from the late Neolithic, Bronze Age, Iron Age and Roman periods.

6.3.2 Introduction and site narrative

The introduction will provide sufficient information to put the results into context but will not be as detailed as this assessment report. The contextual hierarchy will provide the chronological/spatial structure for the site narrative. It will be organised by Site Landscape, Phase, Land-use Area, Group and, where appropriate, Sub-group. Where appropriate, artefactual and ecofactual evidence will be integrated into the site narrative. The level of detail presented will be commensurate to the significance of the results, e.g. the burials, drying ovens etc will be described in detail whereas features of uncertain function containing few finds will not.

6.3.3 Specialist reports

All the specialist reports will be read and edited to ensure a consistency in approach. Specialist reports will be published in full, either as part of the body of the report or as an appendix.

6.3.4 Discussion

Discussion will focus upon the research themes outlined within Section 5, specifically the Roman settlement/crop-processing activities with remains from other periods described and discussed in less detail. The results will be compared with those from other excavations in the vicinity and further afield, as appropriate.

6.3.5 Illustrations

Illustrations will be produced for the introductory, site narrative and discussion sections of the final report. The selected artefact illustrations will be checked and scanned, and a digital paste-up of the final figures completed.

6.4 Archiving

Subject to the landowner's consent, the written and material archives will be accessioned with Luton Culture (accession number LUTNM: 2018/19), in line with *Procedures for preparing archaeological archives for deposition with Luton Culture* (Luton Culture 2013).

The site archive currently includes the elements listed below in Table 26. It will increase in size once the contextual analysis and specialist reports have been finalised.

Record type	Quantity	Comments
Context records	325 A4 sheets	incl. 3427 contexts
Registers	137 A4 sheets	incl. contexts, drawings, registered artefacts, photo, ecofact samples
Sample record sheets	193 A4 sheets	-
Site drawings	47 permatrace sheets (62 x 62cm) 1 digital AutoCAD compatible site plan 1 digital GIS-based site plan	incl. 1077 section drawings
Photographs	*c*. 1826 digital images	A selection of these will be retained for archiving on completion of analysis
Pottery	33 boxes	6447 sherds (*c*.109.7kg) -
Ceramic building material	8 boxes	686 fragments (*c*. 50.4kg) incl. fired clay
Stone objects	5 boxes	Quern fragments
Registered and other bulk non-ceramic artefacts	5 large tubs	incl. 374 registered artefacts (which includes copper-alloy brooches, bracelets, rings and coins)
Animal bone	46 boxes	7261 fragments (*c*.152.3kg)
Human bone	2 boxes	*c*.2.6kg (from 9 cremation burials) *c*. 1.9kg (from 1 inhumation)
Bulk soil samples	193 samples	Only significant flots and residues will be retained for archive on completion of analysis

Table 26: Site archive

6.5 The Project Team, Programme and Management

6.5.1 The Project Team

To ensure a consistency of approach it is anticipated that the project team will be the same as that used in the assessment stage of the project. This includes specialists who have analysed and published similar data-sets from other contemporary sites in the vicinity.

The majority of the project team (see Table 27) work for Albion Archaeology. MoRPHE stresses the possibilities for personal and professional development (Historic England 2015, 16 and 26) and every opportunity will be taken to facilitate professional development for team members, giving them the opportunity to expand their experience of post-excavation analysis within the scope of this project.

Task	Name, Title/Organisation	Initials
Overall management	Drew Shotliff, Albion Operations Manager	DS
Project management and co author	Mike Luke, Albion Project Manager	ML
Co-author and contextual analysis	Jo Barker, Albion Project Officer	JRB
Animal bone	Mark Maltby, University of Bournemouth	MM
Charred plant remains	John Giorgi, freelance specialist	JG
Coins	Dr. Peter Guest, freelance specialist	PG

Task	Name, Title/Organisation	Initials
Human bone	Natasha Powers, Allen Archaeology	NP
Other artefacts	Holly Duncan, Albion, Artefacts Manager	HBD
Pottery and CBM	Jackie Wells, Albion Finds Officer	JW
Radiocarbon determinations	Scottish Universities Environmental Research Centre	SUERC
Stone	Jill Eyres, Chiltern Archaeology	JE
Votive carving	Dr. Martin Henig, freelance specialist	MH
Wood charcoal	Dana Challinor, freelance specialist	DC
Structural illustration	Joan Lightning, Albion CAD technician/illustrator	JL
Artefact illustrations	Mike Trevarthen, freelance illustrator	MT
Archiving	Helen Parslow, Albion Archives Officer	HP

Table 27: The project team

6.5.2 The project programme

The programme is itemised in Table 28, below, within which a number of key stages have been identified; completion of these key stages of the project will each provide a natural review point as recommended by MoRPHE (Historic England 2015). The programme will commence on submission of this Assessment and Updated Project Design.

Task Description	Name *	Time estimate (duration of task)
Radiocarbon determinations	SUERC	
Final phasing and contextual analysis	JRB	
Key stage 1: completion/finalising of the contextual hierarchy		4 months
Pottery and CBM – final quantification, recording and reporting	JW	
'Other artefacts' – petrological identifications	JE	
'Other artefacts' – individual reports on coins and votive carving	PG/MH	
'Other artefacts' – final quantification, recording and reporting	HBD	
Animal bone – final quantification, recording and reporting	MM	
Charred plant remains – analysis and reporting	JG	
Human bone – analysis and reporting	NP	
Stone – analysis and reporting	JE	
Wood charcoal – analysis and reporting	DC	
Site narrative	JRB	
Structural illustration	JL/MT	
Key stage 2: completion/finalising of specialist analysis and texts		8 months
Artefact illustrations	MT	
Amendments to structural illustrations	JL/MT/JRB	
Integration of all specialist texts	JRB	
Production of discussion	JRB	
Editing final report	JRB/ML/DS	
Key stage 3: completion of first draft		2 months
Albion's refereeing process	JRB/ML	
Addressing comments received	JRB/ML	
Key stage 4: issue of final report		
Key stage 5: Archiving		2 months (concurrent with Stage 3)
Archive preparation (contextual)	JRB	
Archive preparation (artefacts/ecofacts)	HP/JW	
Archive preparation and liaison with Luton Culture	HP	
Archive transfer	HP	
Key stage 6: end of project		

Table 28: Summary of project programme

* For initials see Table 27.

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8. APPENDIX 1: PROVISIONAL STRUCTURAL PHASING

8.1 Methodology

In order to produce a structured preliminary assessment, the context records and pottery spot dates were superficially examined to arrive at a provisional phasing sequence (Figs 2–11).

All archaeological features have been assigned to an assessment group and provisional phase.

8.2 Summary of Provisional Phasing

8.2.1 Phase 1: late Neolithic to early Bronze Age (*c*. 3000–1600 BC)

Group	Land-use Area	Group description
2	1	Inner ring-ditch
3	2	Outer ring-ditch
11	3	Small pit and a posthole
19	2	Mound material
51	4	Unurned cremation burial

8.2.2 Phase 2: middle Bronze Age to early Iron Age (*c*. 1600–400 BC)

Group	Land-use Area	Group description
4	16	Three small pits
5	16	Isolated pit
6	16	Isolated pit
7	12	Two urned cremation burials
8	12	Unurned cremation burial
9	12	Two postholes
10	17	Small pit and a posthole
12	11	Truncated ditch
13	16	Posthole
14	11	Field boundary ditch
15	10	Field boundary ditch
16	10	Extensive redefinition ditch G16 of field boundary ditch G15
17	10	Field boundary ditch
18	10	Field boundary ditch
105	16	Posthole
107	15	Short ditch
109	16	Post-built structure
114	16	Post-built structure
115	16	Posthole

Group	Land-use Area	Group description
116	12	Urned cremation burial
150	18	Small pit containing a partial animal skeleton
151	18	Two postholes
152	14	Two unurned cremation burials
239	9	Crouched inhumation
449	8	Unurned cremation burial

8.2.3 Phase 3: late Iron Age to early Roman (*c.* 100 BC–AD 100)

Group	Land-use Area	Group description
20	28	L-shaped enclosure ditch
21	28	Extensive redefinition ditch G21 of L-shaped enclosure G20
22	28	Ditch
23	28	Extensive redefinition ditch G23 of ditch G22
24	31	Field boundary ditch
25	21	Extensive redefinition ditch G25 of field boundary G24
26	21	Field boundary ditch
27	21	Partial redefinition ditch G27 of field boundary ditch G26
28	21	Field boundary ditch
29	21	Field boundary ditch
30	21	Extensive redefinition ditch G30 of field boundary ditch G29
31	28	Roundhouse
32	28	Roundhouse containing a doorpost
33	28	Oval pit
34	28	Drainage feature
35	28	Pit
36	28	Four-post structure
38	28	Pit
39	28	Two postholes
40	28	Trample layer
42	28	Post-built structure
43	28	Two pits
44	28	Cluster of four pits
45	28	Posthole
46	28	Water-pit
48	21	Water-pit
49	27	Truncated field boundary ditch
50	26	Small pit
52	23	Field boundary ditch
54	24	Sub-division ditch
55	24	Oval pit
56	24	Field boundary ditch

Group	Land-use Area	Group description
57	24	Extensive redefinition ditch G57 of field boundary ditch G56
58	13	Urned cremation burial
59	22	Field boundary ditch
60	31	Enclosure
61	32	Enclosure ditch
62	32	Partial redefinition ditch G62 of enclosure ditch G61
63	32	Subdivision ditch
92	25	Small pit
93	25	Two small pits
94	25	Possible roundhouse
100	21	Extensive redefinition ditch G100 of ditch G25
101	21	Water-pit
102	28	Two postholes
103	27	Oval pit
106	22	Water-pit
110	25	Posthole
111	31	Enclosure ditch
117	28	Curved ditch
118	26	Posthole
119	28	Posthole
154	29	Ditch
158	29	Possible roundhouse
345	30	Ditch
347	30	Ditch
367	30	Possible roundhouse
399	30	Ditch
418	29	Possible roundhouse
440	30	Enclosure ditch
494	25	Possible roundhouse
515	25	Pit
541	29	Posthole
543	29	Possible roundhouse
561	21	Small pit
574	21	Posthole

8.2.4 Phase 4: Roman (*c*. 1st–4th century)

Group	Land-use Area	Group description
64	40	L-shaped enclosure ditch
65	42	Enclosure ditch
66	40	Subdivision ditch
67	40	Pit

Group	Land-use Area	Group description
68	43	L-shaped enclosure ditch
69	43	Extensive redefinition ditch G69 or enclosure ditch G68
70	41	Enclosure ditch
71	41	Extensive redefinition ditch G71 of enclosure ditch G70
72	41	Enclosure ditch
73	224	Enclosure ditch
74	224	Enclosure ditch
75	224	Enclosure ditch
76	224	Enclosure ditch
77	224	Subdivision ditch
78	224	Two postholes
79	224	Posthole
80	224	Posthole
81	224	Hollow
82	224	Three postholes
83	44	L-shaped enclosure ditch
84	44	Extensive redefinition ditch G84 of L-shaped enclosure ditch G83
85	44	Posthole
86	43	L-shaped enclosure ditch
87	49	Field boundary ditch
88	50	Extensive redefinition ditch G88 of field boundary ditch G87
89	51	Field boundary ditch
95	52	L-shaped enclosure ditch
96	52	Enclosure ditch
97	224	Sub-division ditch
98	52	Double postholes
99	52	Posthole
104	224	Oval pit
112	41	Small pit containing possible animal burial
113	41	Small pit
153	152	Roundhouse
155	152	Enclosure ditch
156	152	Enclosure ditch
157	153	Enclosure ditch
159	153	L-shaped ditch
160	152	Enclosure ditch
161	152	Extensive redefinition ditch G161 of enclosure ditch G160
162	160	L-shaped ditch
163	160	L-shaped ditch
164	161	Partial redefinition ditch G164 or L-shaped ditch G163
165	161	Partial redefinition ditch G165 of enclosure ditch G162
166	161	Extensive redefinition ditch G166 or enclosure ditch G162

Group	Land-use Area	Group description
167	161	Enclosure ditch
168	160	Elongated pit
169	160	Possible drying oven
170	160	Possible drying oven flue
171	160	Short ditch
172	160	Pit
173	160	Small pit
174	152	Small pit
175	160	Small pit
177	155	Enclosure ditch
179	155	Enclosure ditch
180	159	Ditch
181	154	Ditch
182	155	Partial redefinition ditch G182 of enclosure ditch G177
183	155	Curved ditch
184	158	Ditch
185	154	Enclosure ditch
187	154	Short enclosure ditch
188	154	Ditch
189	154	Ditch
190	158	Enclosure ditch
191	158	Redefinition ditch G191 of enclosure ditch G190
192	159	Enclosure ditch
193	158	Curved enclosure ditch
194	157	Enclosure ditch
195	157	Extensive redefinition ditch G195 of enclosure ditch G194
196	157	Ditch
197	157	Ditch
198	155	Ditch
199	166	Short enclosure ditch
200	166	Enclosure ditch
201	166	Extensive redefinition ditch G201 of enclosure ditch G200
202	166	Enclosure ditch
203	166	Enclosure ditch
204	166	Extensive redefinition ditch G204 of enclosure ditch G203
205	154	Small pit
206	154	Three small pits
207	154	Small pit
208	155	Pit
209	155	Pit
210	157	Water-pit
211	168	Possible water-pit

Group	Land-use Area	Group description
212	168	Possible water-pit
213	160	Pit
215	160	Intercutting quarry pits
216	156	Isolated posthole
217	156	Enclosure ditch
218	156	Enclosure ditch
219	156	Enclosure ditch
220	167	Southern settlement boundary ditch
221	167	1st partial redefinition ditch G221 of southern settlement boundary G220
222	167	2nd partial redefinition ditch G222 of southern settlement boundary G220
223	167	2nd partial redefinition ditch G223 of southern settlement boundary G220
224	163	Southern trackway ditch
225	169	Partial redefinition ditch G225 of southern trackway ditch G224
226	179	2nd partial redefinition ditch G226 of southern trackway ditch G226
227	160	3rd partial redefinition ditch G227 of southern trackway ditch G224
228	169	Sump pit
229	160	Enclosure ditch
230	160	1st extensive redefinition ditch G230 of enclosure ditch G229
232	160	1st extensive redefinition ditch G232 of enclosure ditch G231
233	157	Enclosure ditch
235	160	Posthole
236	168	Possible water-pit
237	156	Pit
238	155	Elongated pit
240	155	L-shaped enclosure ditch
241	155	Enclosure ditch
242	209	Oval pit
243	156	Oval pit
244	53	Posthole
245	41	Ditch
250	163	Boundary ditch
251	163	1st extensive redefinition ditch G254 of ditch G253
252	170	Enclosure ditch
253	170	Enclosure ditch
254	170	Enclosure ditch
255	170	1st extensive redefinition ditch G255 of enclosure ditch G254
256	170	Enclosure ditch
257	170	Sub-division ditch

Group	Land-use Area	Group description
258	170	Enclosure ditch
259	170	Enclosure ditch
260	169	Northern trackway ditch
261	169	1st extensive redefinition ditch G261 of northern trackway ditch G260
262	169	2nd extensive redefinition ditch G262 of northern trackway ditch G260
263	178	Enclosure ditch
264	170	Ditch
265	178	L-shaped enclosure
266	227	Enclosure ditch
267	227	Enclosure ditch
268	227	Enclosure ditch
269	227	1st partial redefinition ditch G269 of enclosure ditch G267
270	227	1st extensive redefinition of enclosure ditch
271	227	Enclosure ditch
272	227	2nd extensive redefinition ditch G272 of enclosure ditch G269
273	226	Enclosure ditch
274	226	Enclosure ditch
275	226	Enclosure ditch
276	226	Enclosure ditch
277	170	Ditch
278	171	Ditch
279	172	1st extensive redefinition ditch G279 of ditch G278
280	173	Ditch
281	175	Ditch
282	175	1st partial redefinition ditch G282 of ditch G281
283	175	Enclosure ditch
284	175	1st partial redefinition ditch G284 of enclosure ditch G283
285	175	2nd partial redefinition ditch G285 of enclosure ditch G283
286	178	3rd partial redefinition ditch G286 of enclosure ditch G283
287	175	4th partial redefinition ditch G287 of enclosure ditch G283
288	175	5th partial redefinition ditch G288 of enclosure ditch G283
289	178	Enclosure ditch
290	226	Enclosure ditch
291	226	Enclosure ditch
292	173	Enclosure ditch
294	173	Extensive redefinition ditch G294 of enclosure ditch G293
295	223	Enclosure ditch
296	223	Enclosure ditch
297	223	Enclosure ditch
299	223	Ditch
300	175	Ditch

Group	Land-use Area	Group description
301	175	Ditch
302	175	L-shaped ditch
303	175	Possible water-pit
305	223	Oval pit
306	175	Ditch
307	173	Pit
309	244	Pit
310	244	Two postholes
311	185	Short ditch
313	172	Short ditch
314	171	Short ditch
315	171	Extensive redefinition ditch G315 of short ditch G314
316	171	Partial redefinition ditch G316 of short ditch G314
317	178	Pit
318	172	Two short ditches
319	172	Two postholes
320	172	Pit
321	172	Hollow
322	227	Cluster of intercutting pits and a posthole
323	227	Pit
324	226	Six intercutting quarry pits
325	226	Three intercutting quarry pits
326	170	Quarry pit
327	178	Short ditch
328	183	Two pits
329	183	Pit
330	183	Curved ditch
332	183	Two pits
333	183	Quarry pit
336	183	Quarry pit
337	183	Three small pits
338	183	Pond
339	183	Ditch
340	171	Two postholes
341	185	Hollow
342	212	L-shaped ditch
343	212	Ditch
344	212	Extensive redefinition ditch G344 of ditch G344
348	191	Ditch
349	191	Enclosure ditch
350	191	Enclosure ditch
351	191	Enclosure ditch

Group	Land-use Area	Group description
352	191	Extensive redefinition ditch G352 of enclosure ditch G351
353	172	Ditch
354	172	Ditch
355	172	Extensive redefinition ditch G355 of ditch G354
356	231	Ditch
357	202	Ditch
358	202	Partial redefinition ditch G358 of ditch G357
359	231	Ditch
360	231	Ditch
362	202	Ditch
363	232	Cluster of quarry pits
364	232	Ditch
365	198	Enclosure ditch
366	196	Ditch
368	212	L-shaped ditch
369	184	Boundary ditch
370	184	Extensive redefinition ditch G370 of boundary ditch G369
371	202	Ditch
372	212	Ditch
373	212	Ditch
374	237	Ditch
375	244	Ditch
376	237	Ditch
377	237	Enclosure ditch
378	200	Extensive redefinition ditch G378 of enclosure ditch G377
379	191	Ditch
380	197	Ditch
381	181	Roundhouse enclosure containing doorposts
382	174	Ditch
383	174	Ditch
384	192	Ditch
386	174	Ditch
387	184	Boundary ditch
388	174	Enclosure ditch
389	192	Enclosure ditch
390	193	Enclosure ditch
391	174	Structural slot/ trench
392	196	Enclosure ditch
393	212	Enclosure ditch
394	196	Enclosure ditch
395	184	Short ditch
396	184	Oval pit

Group	Land-use Area	Group description
397	244	Deep pit
398	196	Enclosure ditch
400	196	Possible rectangular drying oven
401	196	Pit
402	196	Three postholes
405	244	Two postholes
406	244	Small pit
407	244	Two postholes
408	244	Posthole
409	244	Two postholes
410	244	Pit
411	244	Posthole
412	186	Enclosure ditch
413	186	Pit
414	186	Pit
415	193	Enclosure ditch
416	193	1st partial redefinition ditch G416 of enclosure ditch G415
417	193	2nd partial redefinition ditch G417 of enclosure ditch G415
419	184	Ditch
420	192	Ditch
421	192	Extensive redefinition ditch G421 of ditch G420
422	196	Enclosure ditch
423	196	Enclosure ditch
424	196	Partial redefinition ditch G424 of enclosure ditch G422
425	208	Curved ditch
426	197	Enclosure ditch
427	197	Enclosure ditch
428	197	Enclosure ditch
429	197	Extensive redefinition ditch G429 of enclosure ditch G427
430	197	External surface
431	222	Water-pit
432	244	Deep pit
433	208	Water-pit
434	225	Large pit
435	232	Quarry pit
436	232	Quarry pit
437	232	Quarry pit
438	232	Quarry pit
439	196	Short ditch
441	199	Enclosure ditch
442	199	Enclosure ditch
443	199	Enclosure ditch

Group	Land-use Area	Group description
444	200	Enclosure ditch
446	193	Enclosure ditch
447	193	Pit
448	200	Short ditch
450	181	Two postholes
451	181	Two postholes
453	181	Pit
454	196	Water-pit
455	181	Pit
457	183	Quarry pits
458	183	Quarry pit
459	232	Quarry pits
460	212	Water-pit
461	196	Water-pit
462	220	Enclosure ditch
463	220	1st extensive redefinition ditch G463 of enclosure ditch G462
464	212	Short ditch
465	205	Enclosure ditch
466	205	Enclosure ditch
467	212	Sub-division ditch
468	212	Extensive redefinition ditch G468 of sub-division G467
469	212	Enclosure ditch
470	212	Enclosure ditch
471	212	Extensive redefinition ditch G471 of enclosure ditch G469
472	212	Enclosure ditch
473	212	Extensive redefinition ditch G473 of enclosure ditch G470
474	212	Enclosure ditch
475	212	Enclosure ditch
476	216	Enclosure ditch
477	216	Extensive redefinition ditch G477 of enclosure ditch G476
478	212	Ditch
479	216	Extensive redefinition ditch G479 of ditch G478
480	212	Short ditch
481	212	Sub-division ditch
482	212	Posthole
483	211	Enclosure ditch
484	211	Partial redefinition ditch G484 of enclosure ditch G483
485	208	Enclosure ditch
488	207	Short ditch
489	207	Sub-division ditch
490	207	Enclosure ditch
491	207	Enclosure ditch

Group	Land-use Area	Group description
492	207	Enclosure ditch
493	209	Curved ditch
496	219	Enclosure ditch
497	219	Enclosure ditch
498	217	Enclosure ditch
499	208	Three small pits
501	217	Ditch
502	217	Enclosure ditch
503	217	Ditch
504	217	Enclosure ditch
505	217	Enclosure ditch
506	220	Boundary ditch
507	221	1st extensive redefinition ditch G507 of boundary ditch G506
508	220	Enclosure ditch
509	220	1st extensive redefinition ditch G509 of ditch G508
510	208	Enclosure ditch
511	208	Enclosure ditch
512	233	Pit
513	209	Pit
514	208	Pit
516	207	Pit
517	209	Pit
518	209	Narrow ditch
519	209	Reverse tuning fork type drying oven
520	209	Ditch
521	209	Short ditch
522	209	Water-pit
523	225	Quarry pit
524	225	Quarry pit
525	219	Water-pit
529	53	Enclosure
530	53	Enclosure ditch
531	53	Posthole
532	53	Posthole
535	216	Sub-division ditch
536	181	Pit
538	208	Posthole
539	159	Posthole
540	166	Posthole
544	183	Quarry pit
545	198	Four postholes and a pit
546	220	Two small pits

Group	Land-use Area	Group description
547	172	Posthole and two pits
550	208	Pit
553	220	Ditch
554	220	Ditch
556	192	Ditch
557	192	Short ditch
558	192	Three postholes
559	172	Oval pit
562	153	Posthole
565	234	Pit
566	234	Animal burial
567	212	Posthole
568	237	Ditch
571	40	Posthole
572	43	Hollow
573	155	Pit
577	199	Enclosure ditch
579	196	Ditch
580	220	Ditch
582	200	Ditch

8.2.5 Phase 5: Medieval (*c.* AD 1150–1500)

Group	Land-use Area	Group description
91	250	NW-SE Furrows
526	251	NNE-SSW furrows

8.2.6 Phase 6: Post-medieval (c. AD 1500–1750)

Group	Land-use Area	Group description
108	263	Field boundary ditch
542	262	Ditch
548	262	Ditch

8.2.7 Phase 7: Modern (18th-century onwards)

Group	Land-use Area	Group description
527	265	Agricultural activity
570	264	Modern disturbance

9. APPENDIX 2: ENVIRONMENTAL SAMPLES BY PHASE

Phase	Site landscape	Land-use Area	Group	Sample	Feature type	Vol. processed (litres)	Flot vol (ml)	Charcoal (>,<2mm)	Charred grain	Charred chaff	Charred seeds	Charred tuber/roots	Uncharred seeds	Bone	snails	insect
1	51	1	2	187	Ditch	10	<1	0,1							1	
				188	Ditch	30	<1	0,2					1			1
				189	Ditch	30	<1	0,2		1	1				1	
				190	Ditch	30	<1	0,2								
				191	Ditch	30	<1	0,1								
				192	Ditch	15	<1	0,1							1	
		2	3	147	Ditch	30	<1	0,3					1		2	
				148	Ditch	30	<1	0,1							2	
				149	Ditch	30	<1	0,2							1	1
				150	Ditch	30	<1	0,2							1	
		4	51	125	Grave	10	19	3,5					1	2		

Phase	Site landscape	Land-use Area	Group	Sample	Feature type	Vol. processed (litres)	Flot vol (ml)	Charcoal (>,<2mm)	Charred grain	Charred chaff	Charred seeds	Charred tuber/roots	Uncharred seeds	Bone	snails	insect
1	51	4	51	126	Grave	10	3	1,5					1	1		1
				127	Grave	10	34	3,5						2		1
2	52	16	5	100	Pit	20	4	2,3	1	1	1		1	1	1	
			6	185	Pit	30	<1	1,3					1			1
				186	Pit	10	33	2,5	1	2	1		1	1		
			105	132	Pit	20	<1	0,3					1			1
	53	8	449	60	Grave	30	2	1,5	1			1	1	3		
				61	Grave	30	8	1,4	2	1	1	1	3	1		

Phase	Site landscape	Land-use Area	Group	Sample	Feature type	Vol. processed (litres)	Flot vol (ml)	Charcoal (>,<2mm)	Charred grain	Charred chaff	Charred seeds	Charred tuber/roots	Uncharred seeds	Bone	snails	insect
2	53	9	239	5	Grave	30	1	1,3	1					2	2	1
		12	7	18	Grave	6	3	2,3						2	1	
				19	Grave	8	2	2,5			1			1	2	
				20	Grave	8	2	2,5	1		1			1	1	
				21	Grave	7	2	3,5	1	1	1			1	1	
				22	Grave	8	<1	1,3							1	
				23	Grave	6	<1	2,5	1		1	1		1	1	1
				24	Grave	7	2	1,5			1			1		
				25	Grave	8	<1	0,2			1				1	

Phase	Site landscape	Land-use Area	Group	Sample	Feature type	Vol. processed (litres)	Flot vol (ml)	Charcoal (>,<2mm)	Charred grain	Charred chaff	Charred seeds	Charred tuber/roots	Uncharred seeds	Bone	snails	insect
2	53	12	7	26	Grave	7	<1	1,3								1
				14	Grave	10	95	5,5					1	3		
				15	Grave	3	5	3,5					2	1		
				16	Grave	3	17	5,5					1	3	1	
				134	Grave	7	52	4,5						3		
			8	27	Grave	6	2	2,5							1	
				28	Grave	7	2	2,4	1						1	1
				29	Grave	8	1	2,5					1		1	
			116	30	Grave	7	<1	0,2							1	
				31	Grave	7	1	1,3	1		1		1		1	1

Phase	Site landscape	Land-use Area	Group	Sample	Feature type	Vol. processed (litres)	Flot vol (ml)	Charcoal (>,<2mm)	Charred grain	Charred chaff	Charred seeds	Charred tuber/roots	Uncharred seeds	Bone	snails	insect
2	53	14	152	9	Grave	6	93	5,5	1					3	1	
				10	Grave	5	140	5,5					1	2	2	
				11	Grave	4	53	4,5						3	1	
				12	Grave	5	260	5,5						3	1	
3	54	13	58	162	Grave	6	<1	0,3					1		1	
		21	25	139	Ditch	0										
			26	142	Ditch	27	1	0,4	1		1		1		3	
			27	141	Ditch	27	21	2,5	5	2	2	1	1		2	

Phase	Site landscape	Land-use Area	Group	Sample	Feature type	Vol. processed (litres)	Flot vol (ml)	Charcoal (>,<2mm)	Charred grain	Charred chaff	Charred seeds	Charred tuber/roots	Uncharred seeds	Bone	snails	insect
3	54	21	29	145	Ditch	20	1	0,4					1		2	1
				146	Ditch	27	2	0,2					1			1
			48	151	Water-pit	0										
				163	Water-pit	20	<1	0,1							1	
			561	128	Pit	30	2	0,2	1				1		1	
		22	106	178	Water-pit	30	2	0,2							3	
		25	515	102	Pit	20	3	2,5					1			
		26	118	129	Pit	25	44	4,5					1			1
		27	103	133	Pit	20	24	4,5	1				3			1
		28	20	140	Ditch	27	<1	0,1	1	1	1		1			

Phase	Site landscape	Land-use Area	Group	Sample	Feature type	Vol. processed (litres)	Flot vol (ml)	Charcoal (>,<2mm)	Charred grain	Charred chaff	Charred seeds	Charred tuber/roots	Uncharred seeds	Bone	snails	insect
3	54	28	20	143	Ditch	27	2	1,3	1	1			1	1		1
			21	144	Ditch	27	<1	0,2	1				1			
			32	130	Ditch	10	3	2,5	2	1	1		2	1		
			34	124	Pit	5	1	1,2	2	1	1			1	1	
			38	123	Pit	1	<1	0,1								
			40	138	Hollow	30	29	2,4	5	3	3			1	1	

Phase	Site landscape	Land-use Area	Group	Sample	Feature type	Vol. processed (litres)	Flot vol (ml)	Charcoal (>,<2mm)	Charred grain	Charred chaff	Charred seeds	Charred tuber/roots	Uncharred seeds	Bone	snails	insect
3	54	28	42	136	Posthole	10	18	0,4	3	5	2					
				137	Posthole	10	2	2,4	2	2			1			
			43	135	Pit	10	23	2,5	5	3	2		1	1		1
			44	184	Pit	30	2	1,3	2	1	1		1		1	1
				119	Hearth	5	18	1,2	5		2	1			1	

Phase	Site landscape	Land-use Area	Group	Sample	Feature type	Vol. processed (litres)	Flot vol (ml)	Charcoal (>,<2mm)	Charred grain	Charred chaff	Charred seeds	Charred tuber/roots	Uncharred seeds	Bone	snails	insect
3	54	28	44	183	Pit	10	46	2,5	5	2	3	1	1		1	
			46	131	Water-pit	30	30	3,5	5	3	3	1	1	1	2	
		31	60	105	Ditch	30	13	2,5	1				1	1		
				154	Ditch	27	39	5,5	1	1	1		1		1	

Phase	Site landscape	Land-use Area	Group	Sample	Feature type	Vol. processed (litres)	Flot vol (ml)	Charcoal (>,<2mm)	Charred grain	Charred chaff	Charred seeds	Charred tuber/roots	Uncharred seeds	Bone	snails	insect
4	56	152	153	32	Ditch	30	460	5,5	5	3	2		1	1	3	
			161	33	Ditch	10	2	1,2	2	3	1		1		3	
		154	206	17	Pit	10	19	4,5	1				3		4	
		163	224	92	Ditch	30	<1	1,3	1	1	1		1		2	
			251	99	Ditch	30	2	1,2	1				1		2	

Phase	Site landscape	Land-use Area	Group	Sample	Feature type	Vol. processed (litres)	Flot vol (ml)	Charcoal (>,<2mm)	Charred grain	Charred chaff	Charred seeds	Charred tuber/roots	Uncharred seeds	Bone	snails	insect
4	56	183	338	42	Water-pit/pond	19	4	3,5	2	2	1		1	1	2	1
		184	370	73	Ditch	30	2	0,2	2	1	1		2	1	2	1
				81	Ditch	30	12	0,2	2		1		1		5	
				177	Ditch	30	<1	0,1	1	1	1		1		1	1
			387	72	Ditch	30	7	1,2	1	1	1		1	1	1	

Phase	Site landscape	Land-use Area	Group	Sample	Feature type	Vol. processed (litres)	Flot vol (ml)	Charcoal (>,<2mm)	Charred grain	Charred chaff	Charred seeds	Charred tuber/roots	Uncharred seeds	Bone	snails	insect
4	56	184	396	63	Pit	20	2	0,2	2				1	1	2	
				64	Pit	30	2	1,1	3	1	1		1		3	
	57	40	64	156	Ditch	27	2	0,2		1	1		2			1
		41	72	106	Ditch	7	5	2,4					1		1	
				157	Ditch	28	1	1,4	1		1		1		1	
		42	65	155	Ditch	10	<1	0,3	1				1			

Phase	Site landscape	Land-use Area	Group	Sample	Feature type	Vol. processed (litres)	Flot vol (ml)	Charcoal (>,<2mm)	Charred grain	Charred chaff	Charred seeds	Charred tuber/roots	Uncharred seeds	Bone	snails	insect
4	57	43	572	160	Hollow	28	2	1,3	1	2	2		1		1	
		158	191	36	Ditch	10	2	1,3	2	2	1		1		2	2
		160	162	4	Ditch	10	152	5,5	5	3	1		1	1	3	
			169	2	Oven	10	250	5,5	5	5	2		1	1	3	

Phase	Site landscape	Land-use Area	Group	Sample	Feature type	Vol. processed (litres)	Flot vol (ml)	Charcoal (>,<2mm)	Charred grain	Charred chaff	Charred seeds	Charred tuber/roots	Uncharred seeds	Bone	snails	insect
4	57	160	169	40	Oven	10	130	5,5	5	4	3		1	1	3	
				41	Oven	20	350	5,5	5	5	3			1	2	
			172	37	Pitt	10	2	1,2	2	3	1		1		2	
			230	34	Ditch	10	2	1,4	1	3	1		1		1	

Phase	Site landscape	Land-use Area	Group	Sample	Feature type	Vol. processed (litres)	Flot vol (ml)	Charcoal (>,<2mm)	Charred grain	Charred chaff	Charred seeds	Charred tuber/roots	Uncharred seeds	Bone	snails	insect
4	57	166	199	35	Ditch	10	3	2,5	2	2	1		1		2	
		168	211	39	Quarry pits	30	88	4,5	3	3	2	1		1	4	
				170	Quarry pits	30	2	1,5	1	2	1				4	
			212	13	Quarry pits	2	1	1,2	1	1	1		1		2	
				38	Quarry pits	10	29	3,4	3	2	1		1	1	4	

Phase	Site landscape	Land-use Area	Group	Sample	Feature type	Vol. processed (litres)	Flot vol (ml)	Charcoal (>,<2mm)	Charred grain	Charred chaff	Charred seeds	Charred tuber/roots	Uncharred seeds	Bone	snails	insect
4	57	168	212	169	Quarry pits	30	c 100	3,4	1	1	1		5		1	5
			236	6	Water-pit	20	42	3,5	5	4	2		1	1	3	
				7	Water-pit	10	3	2,5	3	1	1				2	
				8	Water-pit	10	3	2,3	2	2	1		1		2	
		169	261	93	Ditch	30	2		1	2			1		2	

Phase	Site landscape	Land-use Area	Group	Sample	Feature type	Vol. processed (litres)	Flot vol (ml)	Charcoal (>,<2mm)	Charred grain	Charred chaff	Charred seeds	Charred tuber/roots	Uncharred seeds	Bone	snails	insect
4	57	170	326	45	Quarry pit	30	2	1,2	1	1	1			1	2	
		171	315	48	Ditch	30	<1	0,3	2	1	1		1	1	1	
		172	320	53	Pit	16	1	0,2					1		1	
				86	Pit	0										
				87	Pit	0										
				88	Pit	0										
				89	Pit	0										
				90	Pit	0										
				91	Pit	0										
			321	49	Posthole	30	<1	0,3	1	2	1		1		1	1
			355	193	Posthole	10	<1	0,1							1	
		173	307	173	Pit	0										
		174	383	68	Ditch	30	35	0,2	1						2	

Phase	Site landscape	Land-use Area	Group	Sample	Feature type	Vol. processed (litres)	Flot vol (ml)	Charcoal (>,<2mm)	Charred grain	Charred chaff	Charred seeds	Charred tuber/roots	Uncharred seeds	Bone	snails	insect
4	57	174	391	84	Structural slot	30	3	0,2	2	1	1				2	
		191	350	95	Ditch	30	4	1,4	2	2	2		1	1	3	
		192	420	94	Ditch	30	2	1,3	2	1	1		1	1	3	1
		202	357	181	Ditch	0										
			371	82	Ditch	30	3	1,3	1		1		1		4	1
		212	393	76	Ditch	30	3	1,2	1		1		1		1	

Phase	Site landscape	Land-use Area	Group	Sample	Feature type	Vol. processed (litres)	Flot vol (ml)	Charcoal (>,<2mm)	Charred grain	Charred chaff	Charred seeds	Charred tuber/roots	Uncharred seeds	Bone	snails	insect
4	57	212	460	54	Water-pit	30	21	2,3	3	1	1				5	
				182	Water-pit	0										
			468	115	Ditch	30	2	1,3	2		1				1	1
			473	114	Ditch	30	23	3,5	3	1	1		1	1	2	
		219	496	112	Ditch	30	3	2,3	2	1	1		1		1	1
			497	117	Ditch	30	1	0,2	1	1	1		1		1	

Phase	Site landscape	Land-use Area	Group	Sample	Feature type	Vol. processed (litres)	Flot vol (ml)	Charcoal (>,<2mm)	Charred grain	Charred chaff	Charred seeds	Charred tuber/roots	Uncharred seeds	Bone	snails	insect
4	57	219	525	120	Water-pit	30	12	2,3	3	1	2		1	1	4	1
				175	Water-pit	30	<1	0,2	1						1	
	58	49	87	153	Ditch	0										
				152	Ditch	30	<1	0,2					1		1	
		175	285	51	Ditch	30	1	0,2	1				1	1	2	1
			303	52	Water-pit	20	3	1,3	1	1			1	1	1	1
				172	Pit	0										
		178	265	46	Ditch	30	14	2,3	2	1	1			1	2	

Phase	Site landscape	Land-use Area	Group	Sample	Feature type	Vol. processed (litres)	Flot vol (ml)	Charcoal (>,<2mm)	Charred grain	Charred chaff	Charred seeds	Charred tuber/roots	Uncharred seeds	Bone	snails	insect
4	58	178	289	47	Ditch	30	3	3,4	2	1	1		1	1	2	1
		185	341	50	Posthole	18	1	1,3	1	2	1		1		2	
				85	Hollow	30	20	1,2	3	1	1			1	3	
		196	392	69	Ditch	30	24	2,4	2	1	1		3		3	
			394	71	Ditch	30	3	2,3	1	1	1		1		2	

Phase	Site landscape	Land-use Area	Group	Sample	Feature type	Vol. processed (litres)	Flot vol (ml)	Charcoal (>,<2mm)	Charred grain	Charred chaff	Charred seeds	Charred tuber/roots	Uncharred seeds	Bone	snails	insect
4	58	196	400	62	Drying oven	9	<1	0,2	1	1					2	1
				58	Drying oven	5	4	3,5	3	2			1		1	
				59	Drying oven	3	1	1,2	1						1	
			402	55	Posthole	30	9	2,3	1				1			
				56	Posthole	10	1	0,2	1							
				57	Posthole	10	2	1,5	1				1		1	
			423	121	Ditch	30	90	2,2	5	5	2		1	2	5	

Phase	Site landscape	Land-use Area	Group	Sample	Feature type	Vol. processed (litres)	Flot vol (ml)	Charcoal (>,<2mm)	Charred grain	Charred chaff	Charred seeds	Charred tuber/roots	Uncharred seeds	Bone	snails	insect
4	58	196	454	70	Water-pit	30	2	1,4	1	1	1		1		3	
		199	441	78	Ditch	30	4	1,3	1	1				1	2	
			443	77	Ditch	30	2	1,2	1				1		2	
		207	491	111	Ditch	30	3	1,2	1				2		2	
			516	101	Pit	30	30	5,5	1	1	1			1		
		209	493	110	Ditch	30	2	1,3	2	2	1		1		1	
			518	104	Ditch	5										
			519	103	Drying oven	5	<1	0,1					1		1	

Phase	Site landscape	Land-use Area	Group	Sample	Feature type	Vol. processed (litres)	Flot vol (ml)	Charcoal (>,<2mm)	Charred grain	Charred chaff	Charred seeds	Charred tuber/roots	Uncharred seeds	Bone	snails	insect
4	58	209	522	107	Water-pit	30	2	0,2		1			1		1	
		217	498	113	Ditch	30	2	1,3	2		1		2		1	
		232	363	179	Well	0										
				180	Layer	30	2	0,2	1	1			1		3	
			364	83	Ditch	30	32	4,5	1		1		1		4	1
			435	98	Quarry pits	30	25	2,4	3	2	1		1		3	
			436	3	Quarry pits	20	2	2,5	2	2	1			1	3	

Phase	Site landscape	Land-use Area	Group	Sample	Feature type	Vol. processed (litres)	Flot vol (ml)	Charcoal (>,<2mm)	Charred grain	Charred chaff	Charred seeds	Charred tuber/roots	Uncharred seeds	Bone	snails	insect
4	58	232		65	Quarry pits	30	58	2,2	3	3	1		1	1	2	
				66	Quarry pits	30	2	1,1	1						2	
				167	Quarry pits	30	3	0,2	1				1		2	
				168	Quarry pits	30	<1	0,3	2	1	1				1	
		244	397	1	Deep pit	10	1	0,2	1	1	1		1		2	1
	59	197	426	96	Ditch	30	2	0,2								
			428	74	Ditch	30	6	1,2	1	1			1	1		

Phase	Site landscape	Land-use Area	Group	Sample	Feature type	Vol. processed (litres)	Flot vol (ml)	Charcoal (>,<2mm)	Charred grain	Charred chaff	Charred seeds	Charred tuber/roots	Uncharred seeds	Bone	snails	insect
4	59	197	429	75	Ditch	30	22	1,2	3	2	1		2		2	
		198	365	79	Ditch	30	2	0,2	1		1		1		2	
		208	425	109	Ditch	30	20	1,2	5	3	2				2	
			433	174	Water-pit	30	<1	0,2	1	1				1	1	
			510	108	Ditch	30	19	1,3	3	3	1		4		2	

Phase	Site landscape	Land-use Area	Group	Sample	Feature type	Vol. processed (litres)	Flot vol (ml)	Charcoal (>,<2mm)	Charred grain	Charred chaff	Charred seeds	Charred tuber/roots	Uncharred seeds	Bone	snails	insect
4	59	208	514	122	Pit	30	6	1,3	3	2	2		1		3	
		220	463	80	Ditch	30	<1	1,2	2	1	1			1	2	1
			509	116	Ditch	30	1	1,2	1				1	1	2	1
		221	507	118	Ditch	30	22	2,3	5	3	2		1		3	
		222	431	67	Water-pit	20	57	4,5	4	3	1			1	3	

Phase	Site landscape	Land-use Area	Group	Sample	Feature type	Vol. processed (litres)	Flot vol (ml)	Charcoal (>,<2mm)	Charred grain	Charred chaff	Charred seeds	Charred tuber/roots	Uncharred seeds	Bone	snails	insect
4	59	224	76	158	Ditch	30	2	1,4	2	1	1		1		2	1
				159	Ditch	28	1	1,3	2	1	2		1		1	
		225	434	97	Large pit	30	3	1,2	2	2	1		1	1	5	1
				165	Large pit	0										
			523	164	Quarry pit	30										
		226	275	43	Ditch	28	8	1,2	2	1			1	1	2	
			325	44	Intercutting pits	19	5	1,3	1				1	1	4	

Phase	Site landscape	Land-use Area	Group	Sample	Feature type	Vol. processed (litres)	Flot vol (ml)	Charcoal (>,<2mm)	Charred grain	Charred chaff	Charred seeds	Charred tuber/roots	Uncharred seeds	Bone	snails	insect
6	61	263	108	161	Ditch	28	<1	0,1					1		1	1

Item frequency: 1=1-10; 2=11-50; 3=50-100; 4=100-250; 5= >250 items

10. APPENDIX 3: PROFESSIONAL STANDARDS AND GUIDELINES

The project will be undertaken using Historic England's guidelines on *Management of Research Projects in the Historic Environment* (MoRPHE) (Historic England 2015). In addition, the project will follow all relevant guidance issued by Historic England, much of which is available on the Historic Environment Local Management (HELM) website http://www.helm.org.uk.

The following are particularly relevant to this project:

- *Heritage 2020 draft strategic priorities* (Heritage Alliance 2014)
- *National Heritage Protection Plan Framework* (HE 2013) and associated guidelines and Action Plans
- *Environmental Archaeology. A guide to the theory and practice of methods, from sampling and recovery to post-excavation* (English Heritage 2011)

Throughout the project, the following standards and guidance will also be adhered to:

- Archaeology Data Service (ADS) – *Guides to Good Practice* (2011).
- Association of County Archaeological Officers – notably *Standards for Field Archaeology in East Anglia* (East Anglian Archaeology Occasional Paper, 14), by D Gurney (2003).
- Luton Culture guidelines - *Procedures for preparing archaeological archives for deposition with Luton Culture* (Luton Culture 2013).
- The Chartered Institute *for* Archaeologists' (CIfA) *Codes of Conduct* and standard and guidance documents relevant to the project. These include:
    - *Code of conduct* (2014)
    - *Standard and guidance for archaeological excavation* (2014)
    - *Standard and guidance for the collection, documentation, conservation and research of archaeological materials* (2014)

In addition, relevant guidelines published by national or regional societies and specialist interest groups will be consulted, where applicable.

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