MARSTON PARK, MARSTON MORETAINE
BEDFORDSHIRE

ASSESSMENT OF POTENTIAL
AND
UPDATED PROJECT DESIGN

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Preface

Every effort has been made in the preparation of this document to provide as complete a summary as possible within the terms of the specification. All statements and opinions in this document are offered in good faith. Albion Archaeology cannot accept responsibility for errors of fact or opinion resulting from data supplied by a third party, or for any loss or other consequence arising from decisions or actions made upon the basis of facts or opinions expressed in this document.

Contributors

This report has been prepared by Tracy Preece and Mike Luke (Project Manager) with contributions by Jennifer Browning (animal remains), Holly Duncan (other artefacts), Damian Goodburn (wood), Pete Guest (coins), Harriet Jacklin (human remains), Angela Monckton (charred plant remains and molluscs), Quita Mould (leather), Anita Radini (waterlogged plant remains) Jackie Wells (ceramics). All figures were produced by Tracy Preece.

Acknowledgements

A project of this size inevitably requires the acknowledgment of a great many people who were involved in the fieldwork.

The excavation was supervised by Ian Turner and Kathy Pilkinton, under the direction of James Newboult, with hand excavation and recording carried out by the following staff: Ben Barker, Wesley Kier and Mark Phillips (Project Officers); Richard Gregson (Archaeological Supervisor); Iain Leslie, Anna Rebisz-Niziolek, Wiebke Starke, Slawomir Utrata, Adam Williams and Adrian Woolmer (Assistant Archaeological Supervisors); and Jo Ahmet, Hannah Bosworth, Jennifer Brazil, Ben Carrol, Catharine Godsiffe, Claire Lockwood, Gary Manning, Jessica Stevens, Gosia Trelk and Juha-Matti Vuorinen (Archaeological Technicians).

All finds were processed under the supervision of Jackie Wells (Finds Officer) who also undertook the initial finds identification during fieldwork. Processing of the ecofact samples was undertaken by Slawomir Utrata and Marcin Koziminski. Digitisation of the site plans was undertaken by Joan Lightning.

The fieldwork was managed by Joe Abrams and the post-fieldwork stage including this document by Mike Luke (Project Manager). All Albion projects are under the overall management of Drew Shotliff.

We would also like to acknowledge the comments of Martin Oake, Central Bedfordshire Council's Archaeological Officer (CAO), who monitored the site on behalf of the Local Planning Authority.

Albion Archaeology is grateful to Pippa Cheetham for commissioning the project on behalf of O&H Properties Ltd.

Structure of the Report

After an introduction (Section 1) detailing the planning and archaeological background, Section 2 presents the original research objectives of the project. Section 3 provides a provisional summary of the results. The potential of the data to address both the original and the revised research objectives is discussed in Sections 4 and 5. Section 6 presents the Updated Project Design, Section 7 is a bibliography and Section 8 is an appendix containing detailed method statements for analysis, publication and archiving

Version history

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1.0	23rd March 2012	*n/a*

Key Terms

Throughout this report the following terms or abbreviations are used:

Albion	Albion Archaeology
Client	O & H Properties
CAO	County Archaeological Officer of Central Bedfordshire Council
IfA	Institute for Archaeologists
UPD	Updated Project Design- the part of this report that details the tasks required to undertake the analysis, publication and archiving of this project
PD	Project Design- report produced prior to commencement of fieldwork and approved by the CAO which detailed the research aims and methodologies of the investigation

Non-Technical Summary

Between June and October 2010 Albion Archaeology undertook archaeological investigations on behalf of O&H Properties Ltd in advance of housing development on two areas of land adjacent to the Elstow Brook (a tributary of the River Great Ouse). The investigations were undertaken in accordance with a Project Design approved by the Local Planning Authority and a licence for lifting human remains issued by the Ministry of Justice.

The site was first recognised as having archaeological potential during examination of aerial photographs in the earlier stages of planning for the development. A number of enclosure ditches were visible which were initially interpreted as a 'banjo' enclosure, an extremely rare form of settlement in this region. Evaluation comprising a geophysical survey and trial trenching was carried out in 2003 by Albion Archaeology which confirmed the general distribution pattern of archaeological remains and allowed a revised interpretation of the detailed morphology of the site casting doubt on the previous identification of a 'banjo' enclosure.

Two areas on opposite sides of the Elstow Brook were subject to archaeological open area excavation. Area 1 was in the centre-west of the development area while Area 2 was to the south of the Elstow Brook. The evidence from these investigations shows that the site was occupied from the early Iron Age through to the later Romano-British period. The continuous settlement on the same piece of land over this period of time is rarely found especially as there is usually a disjunction between middle Iron Age and late Iron Age/Romano-British settlements.

The early-middle Iron Age evidence comprised two unenclosed settlements: one in Area 1 and another in Area 2. During the middle Iron Age in Area 1 a substantial ditched enclosure was created which contained three, possibly four, roundhouses. This enclosure was expanded during the late pre-Roman Iron Age to comprise two concentric boundary enclosure ditches, a rare settlement type. A 'ladder' enclosure system was established during the late Iron Age/early Roman period, seemingly earlier than at other settlements in the Ouse Valley. After this the settlement appears to have contracted to a sub-oval enclosure defined by a large ditch. Burials were found associated with the late Iron Age and Romano-British settlements. The quantity and type of waterlogged timber recovered from a number of Romano-British water pits was quite unusual for a rural settlement in this period. Saxon activity was confined to Area 2 and comprised evidence for sunken-featured buildings and post-built structures. By the medieval period Area 1 was part of the open fields of Marston Moretaine and the land continued to be arable fields up to the excavation.

This document presents an assessment of the archaeological remains found during the excavations. It concludes that these have the potential to address a number of national and regional research agendas. The methodologies and resources required to complete the project are detailed in the Updated Project Design. The end product will be the publication of the results in a monograph and the deposition of the project archive (Accession Number BEDFM: 2009.60) in Bedford Museum.

1. INTRODUCTION

1.1 Project background

Between June and October 2010, Albion Archaeology undertook archaeological investigation on two areas of land at Marston Moretaine, Bedfordshire, on behalf of O&H Properties Ltd in advance of housing development. The investigations were undertaken in accordance with the Project Design approved by the Local Planning Authority and a licence for lifting human remains issued by the Ministry of Justice.

1.2 Site location and description

The development area was located on the eastern fringes of the village of Marston Moretaine adjacent to the Marston Vale Millennium Country Park (Figure 1). It is centred on TL0002/4173. The land had been under arable cultivation and a significant part of the site was set-aside.

1.3 Topography and geology

It occupied a central location within the Marston Vale and is on effectively level ground, at *c*. 40m OD. The underlying geology is Oxford clay, although areas of terrace-like gravel deposits are also present.

1.4 Archaeological background

The Historic Environment Record documented that the site contained a complex arrangements of cropmark (HER 15321). A number of enclosure/boundary ditches were visible and some of these were initially interpreted as forming a 'banjo' enclosure (a type of middle to late Iron Age site rarely found in the Bedfordshire).

Evaluation, consisting of a geophysical survey and trial trenching, was carried out in 2003 (Albion 2003). While the results confirmed the presence of an Iron Age and Roman settlement, they also enabled a revised interpretation which cast doubt on the presence of a 'banjo' enclosure.

1.5 Areas of archaeological investigations

Two areas, separated by the Elstow Brook (a tributary of the River Great Ouse), were subject to open area excavation. These can be summarised as follows:

- **Area 1-** in the centre-west part of the development area centred on OS grid reference TL 0001/4170 and *c*. 5.2ha in extent (Figure 2).
- **Area 2-** in the south of the development area, on the site of the proposed southern access road and new bridge over the Elstow Brook (Figure 3). Centred on OS grid reference TL 9995/2412 and *c.* 0.5ha in extent.

1.6 Purpose of this report

This report presents an assessment of the results of the archaeological investigations associated with the residential development area. An Updated Project Design is included listing all tasks that will be required to analyse, publish and archive the results of the fieldwork.

2. SUMMARY OF ORIGINAL AIMS AND OBJECTIVES OF THE INVESTIGATION

2.1 Introduction

A series of research aims were presented in the Project Design (Albion 2009) so that the investigations were appropriately targeted in accordance with local, regional and national priorities.

2.2 National, regional and county research frameworks

National research priorities have been formulated by English Heritage in *Exploring our Past* (1991) which was updated in their draft Research Agenda (1997). The eastern region is covered by a resource assessment (Glazebrook 1997) with a research agenda and strategy (Brown and Glazebrook 2000) which has recently been updated (Medlycott 2011). At the county level Bedfordshire is covered by a resource assessment and research agenda (Oake *et al* 2007).

2.3 Original research objectives

The original research objectives were detailed in the Project Design (Albion 2009). They build upon objectives in the relevant national and regional frameworks and are summarised below in Table 1 and Table 2.

2.3.1 National research frameworks

The most pertinent expression of national research frameworks remains the Archaeology Division's draft research agenda (English Heritage 1997). Those which were considered most relevant to the investigations are summarised below.

Objective	Research Aims/Themes
Britain into Roman	The transition phase from the late Iron Age to Roman period.
Settlement hierarchies and interaction	A basic understanding of settlement types and their distribution is needed. However the study of an individual settlement and its environs is an important step towards formulating broader theories and research goals.
Rural settlement	Settlement patterns are the key to understanding the economic, social and political structures of rural England. This site was known to contain evidence for two areas of rural settlement, which were believed to originate in the late Iron Age and Romano-British period. Area 2 was also settled in the Saxon period.
Patterns of craftsmanship and industry (including agriculture)	The study of industry and craftsmanship is a continuing area of research. Although the site contains a farmstead which is primarily agricultural in character, the presence of slag in the field walking assemblage suggested that it may also have wider potential for addressing this aim.

Table 1: Original objectives based on national frameworks

2.3.2 Regional, county and period based research objectives

The project had the potential to address several of the priorities identified in the regional research frameworks (Glazebrook 1997; Brown & Glazebrook 2000), which have now been reviewed by Medlycott (2011).

Objective	Research Aims/Themes
1	Protection and positive management of the archaeological resource: The primary objective was to ensure that the archaeological impact of the development is minimised. Provide an accurate record of archaeological remains, retrieving artefacts and ecofact samples as appropriate.
2	Settlement character and development: To add to the knowledge of the ground plan and sequence of land use within the development area, enabling the identification of spatial and chronological variation. Characterisation of settlement forms and functions. Saxon period rural settlements are relatively rare in Bedfordshire and middle Saxon sites in particular are rare within the region.
3	Chronology: To enhance the chronological framework for occupation within the development area and the changing patterns of settlement and land use from the Iron Age to post-medieval. Later Iron Age settlement in the region appears to establish the pattern of settlement that persisted into the Roman period, at least on the river terrace gravels.
4	Environment: To increase knowledge of environmental changes and landscape in the Marston Vale between the Iron Age and post-medieval. Increase understanding of the agrarian economy and relationship between settlements and agricultural activity. An assumption has prevailed that clay lands were densely wooded until the Saxon period; the recovery of environmental data may help our understanding of this.
5	Regional artefacts studies: Understanding of what was used in everyday life and if locally produced goods or imported as a result of cultural exchange. How does the material culture of the site compare in terms of wealth with similar sites in the region?
6	Methodological development: Have post-depositional process acted on the area and affected the remains. Can the results of the investigation help in predicting the archaeological potential of similar sites?

Table 2: Original objectives based on regional and county frameworks

3. PROVISIONAL SUMMARY OF RESULTS

3.1 Contextual Data

3.1.1 Methodology

The contextual data was assessed in order to establish whether they would provide a coherent spatial and chronological framework. A total of 4245 contexts were assigned to a hierarchy composed of subgroups, groups, landscapes and phases.

3.1.2 The contextual hierarchy

During contextual assessment context numbers were assigned to a hierarchy of entities that gradually become more interpretative and less detailed in nature. Each hierarchical level moves the deposits/features up to the next level of spatial or functional interpretation. The actual names given to these entities e.g. group, landscape, are less important than their hierarchical position.

A sub-group (SG) is typically an aggregation of contexts, which are closely related both stratigraphically and processually, although sometimes it is a single context. Sub-groups represent the archaeological evidence for a distinct event or activity. It is a basic, indivisible unit of interpretation and is expressed as integer e.g. SG20: waterpit.

The subgroups were assigned to Groups (G), which are an aggregation of related sub-groups, e.g. a post-built structure or a group of pits. An integer e.g. G22 is used to designate "constructional" elements such as the cuts. Decimal point 1, e.g. G22.1 represents the use (primary) fills/sole fill. However, it is also used for associated components of features i.e. G2.1 is the original gully of roundhouse G2. Decimal point 2, e.g. G22.2 represents the use/disuse (secondary) fills and is also used for associated components of a feature i.e. G2.2 is the re-cut of original roundhouse G2.1. Decimal point 3, e.g. G22.3 represents the disuse (tertiary) fill as well as associated components of a feature i.e. G2.6 is a posthole associated with roundhouse G2. Decimal points 4, 5 etc are used for associated components of a feature i.e. G4.5 are postholes associated with roundhouse G4.

The Groups (G) were then assigned to Landscapes (L). These form larger coherent and contemporaneous units such as an enclosure system or activity focus. To assist the location of different parts of the excavation Landscape numbers under 100 are located in Area 1 (north of the Elstow Brook) and Landscape numbers over 100 are located in Area 2 (south of the Elstow Brook).

The Landscapes (L) were assigned to Phases (P) which represent broadly contemporary periods of activity across the whole site, e.g. all late Iron Age/early Roman transition period activity.

Phase	Landscape	Description
0	0	Geological strata
	20	Vegetation and palaeochannels
1	2	Unenclosed settlement
	101	Unenclosed settlement south of Elstow Brook
2	4	External activity focus outside settlement enclosure L6
	5	Southern side of settlement enclosure L6 with major ditch and sub-enclosures
	6	Main settlement enclosure ditched boundary
	7	Domestic focus located within settlement enclosure L6
	23	Small internal enclosures just inside the main settlement enclosure L6
3	1	Three cremation burials located in eastern part of large settlement enclosure
	3	Original ditches defining outer main settlement enclosure L24
	8	D-shaped enclosure and internal pitting
	15	Disuse of internal enclosure L6
	22	Redefinition of enclosed areas to the south and associated features
	24	Outer ditch of main settlement enclosure
	25	Activity focus within outer enclosure to the west
	26	Domestic focus located within enclosure L8
4	9	Rectilinear enclosure system
	10	Rectilinear 'ladder' enclosure system
	11	Field system located to the east of settlement
	14	Continued use and disuse of D-shaped enclosure L8
	27	Later activity
	31	Domestic activity located within enclosure system L9
	35	Pair of cremation burials and possible associated animal burial
	102	Settlement south of Elstow Brook.
	103	Cremation cemetery south of Elstow Brook comprising seven cremations in six graves
5	28	Settlement enclosure and associated trackway
	29	Activity within enclosure L28
	30	Later activity within enclosure L28
	104	Peripheral settlement activity south of Elstow Brook
	105	Two inhumation burials
6	16	Field system
	32	Layers forming over earlier features possibly associated with livestock
	33	Trackway
7	106	Settlement located to south of Elstow Brook
8	18	Open fields
9	19	Field boundaries
10	21	Overburden and land drains

Table 3: Summary of provisional phasing

3.1.3 Phase 1: Early-middle Iron Age

Phase 1 comprised two unenclosed settlements, one to the north (L2) and one to the south (L101) of the Elstow Brook. The northern settlement comprised two roundhouses located 30m apart (Figure 4). The largest roundhouse G7 was 15m in diameter with a SE entrance. The smaller roundhouse G8 was 9m in diameter and contained three gaps in the drainage gully; it is presumed that the one to the SE

represents a doorway. Other associated features comprised probable drainage ditches and a pit. The southern settlement contained the remnants of two post-built structures and a gully (Figure 5).

3.1.4 Phase 2: Middle Iron Age

Evidence for this phase comprises a settlement extending over *c*. 3ha enclosed within a polygonal ditch and with evidence for external activity to the west.

The enclosed settlement was defined by a large enclosure ditch (L6) with three entrances to the west, south and south-east (Figure 6). The latter was reorganised on several occasions and that to the west was adjacent to an area of external activity. The southern side was utilised as the boundary for a number of small internal enclosures (L5) possibly for stock control. The domestic focus (L7) comprised three roundhouses G4, G5 and G6, located *c*. 4m apart from one another, and all with SE-facing entrances. They had similar diameters, between 11m and 13m, and had all been rebuilt at least once. All three contained internal postholes and pits which are presumed to be contemporary with the building. There was a possible fourth roundhouse to the east defined by larger ditches G142/G285. A waterpit G21 was the most significant of the features found in the vicinity of the roundhouses. Small sub-enclosures (L23) were attached to the main enclosure ditch just north of the western entrance. Outside the western entrance was and area of pits and short ditch lengths (L4).

3.1.5 Phase 3: Late pre-Roman Iron Age

The Phase 3 settlement to the north of the Elstow Brook comprised the continued use of the polygonal enclosure, although this was redefined and extended (Figure 7).

The earlier enclosure persists and in places is recut and amended in other ways (L15). A large outer enclosure is created. There is evidence to suggest that this was originally defined by a small ditch (L3) which survived to the east and north. This was replaced by a more substantial ditch (L24) along broadly the same alignment forming a large enclosure which contained enclosure (L15). The SE entrance of the latter is blocked whilst the south entrance is narrowed. The alluvial fills and the larger dimension of the southern ditches suggest they may have been designed as flood defences as well as a settlement boundary. Indeed, this part of the site was lower and wetter than the area of the majority of the enclosure proper.

Further activity occurring in the southern part consisted of redefining the main enclosure and creation of a new sub-enclosure (L22). This contained two large pits and one of these (G33) had shallow, sloping sides indicating it had been used by animals. That this area was used for stock is supported by the absence of evidence within it for domestic activity.

A D-shaped enclosure (L8) was created within the southern part of the original large enclosure and this contained the domestic focus (L26) of the settlement. This comprised two roundhouses, G2 and G3; sufficient of their defining gullies survived to suggest that they had diameters of 7–12m. No entrances were identified. A number of pits and postholes were also located within the enclosure. The entrance to the domestic focus is interesting because although it was located in the same

position as that in the Phase 2 enclosure, it comprised two parallel ditches providing a corridor *c.* 3.3m wide and 60m long.

To the west, but within the new outer enclosures an activity focus (L25) comprised of postholes (including possible building G673), pits (including water pit G427) and short ditch lengths were identified. This was located in the same area as the activity focus in the previous phase.

Three cremation burials G352 and G353 (L1) were situated in different sub-enclosures to the east of domestic focus L26. Curiously G353 contained two urns.

3.1.6 Phase 4: Late Iron Age-early Roman

Settlement during this phase changed in both morphology and location. Most of the earlier ditches went out of use and a new rectilinear 'ladder' enclosure system was established to the north-west. To the south of the Elstow Brook an apparently new settlement, with associated cremation cemetery, was established.

In Area 1 part of the newly created NE-SW aligned rectilinear 'ladder' enclosure system (L9 and L10) abutted the earlier D-shaped enclosure (L14) suggesting it continued in use (Figure 8). However, it no longer contained domestic activity which was now dispersed (L32) within the new enclosure system. It comprised a roundhouse G1, possible structures G674 and several pits. Of the latter two, G30 and G31, were substantial and may have originally been dug as quarries. They were later reused as waterpits as indicated by the series of steps created by the use of structural timbers and offcuts within G31. In addition, the fills contained an assortment of woodwork including structural timbers, offcuts and part of a possible plough. Approximately 30m from the water pits were cobbled stone surfaces (G652) also found within the enclosures. It is possible these may have had some form of agricultural function perhaps a threshing floor.

To the east, numerous ditches (L11) were dug but do not appear to form a particularly coherent pattern. It is possible that this area was relatively wet and that they were dug for drainage. This may also explain why the domestic focus of the settlement shifted to the NW.

Two urned cremation burials (L35) were situated outside the D-shaped enclosure. These comprised G383 with four accessory pottery vessels and G384 with three accessory pottery vessels.

A number of ditches (L27) were dug that were clearly later additions and indicate that the D-shaped enclosure had gone out of use by the end of this phase. Associated with the ditches was a possible sump pit G32. The lower fills of this were waterlogged and contained timber offcuts and part of a piece of furniture.

Settlement in Area 2 to the south of the Elstow Brook consisted of a network of intercutting NE-SW ditches (L102) perpendicular to the Brook and a cremation cemetery (L103) located *c.* 100m to the SW (Figure 9). The ditches are presumed to be associated with the domestic focus of the settlement although no buildings were identified. The cemetery comprised seven cremation burials within six graves. Five of the burials were urned (G377, G380 G381 with two urns and G382) and two were un-urned G378 and G379. The graves contained between two and eight accessory

pottery vessels. Other grave good comprised brooches from G378, G379, G380 and G382.

3.1.7 Phase 5: late 1st-late 2nd century AD

In Area 1, the earlier 'ladder' enclosures were replaced by a more substantial single enclosure. The settlement to the south of the Elstow Brook in Area 2 probably continued in use but only ditches and two inhumations were present within the excavation area.

Settlement enclosure and associated trackway (L28) were defined by substantial ditches which had been redug on a number of occasions (Figure 10). Three entrances were identified into the main enclosure, one to the east, a 'funnelled' one to the NW possibly to assist with stock movement, and one to the south providing movement along the trackway in a SE direction. The enclosure contained several ditches (L29) which appeared to divide the space into several different areas. These contained a range of features including structural slots G651 which may be the foundations of a rectangular building, an apparently isolated hearth G425 and a range of other gullies and pits. Some of the features were stratigraphically late so are presumed to be part of minor reorganisations within the enclosure. These include square waterpit G20 which had been redug on a number of occasions. Its lower fills were waterlogged and contained a variety of pieces of timber. These included sections of what appeared to be displaced wattle weavers, short pieces of elaborately worked timber possibly from a firewood store, a piece of moulded timber, a large semi-circular lid and a piece possibly from a ladder. In addition the remains of up to four leather shoes were recovered.

A small enclosure was attached on the exterior to the SE side and appeared to have a SW facing entrance rather than one giving access to the main enclosure.

In Area 2, to the south of the Brook, the evidence recovered (L104) is suggestive of being on the periphery of a settlement. It comprised a number of ditches, a waterpit G22 and two adjacent inhumations G385 and G386 (L105) (Figure 11).

3.1.8 Phase 6: early 3rd-4th century AD

During the late Romano-British period the settlement appears to have gone out of use or shifted location. However, new fields (L16) and a parallel trackway (L33) were created (Figure 12). Some areas contained 'marsh'-type deposits (L32) overlying earlier water pits. The fills of the ditches do contain some evidence to suggest domestic activity in the vicinity.

3.1.9 Phase 7: early Saxon

The only firm evidence for settlement (L106) during the early Saxon period was found within Area 2 (Figure 13). It comprised the remains of two sunken-featured buildings S655 and S656, *c.* 70m apart. A possible third sunken-featured building G451 was located *c.* 40m to the south of G656. Two post-built structures were identified with G681 probably representing a building and G678 either a building or a fenceline. In addition, several areas of pits were identified (G452, G453 and G454). This activity is probably on the northern periphery of a settlement that was centred to the south and partially examined in advance of the construction of the

access road for the Marston Vale Millennium Country Park (Wells and Edwards forthcoming).

3.1.10 Phase 8: medieval

Parallel, NW-SE aligned furrows (L18) were found across Area 1 and demonstrate that this land was part of the open fields of Marston Moretaine during the medieval period (Figure 14). A NE-SW aligned headland was located near the southern limit of the excavation area.

3.1.11 Phase 9: post-medieval

This phase comprises the remains of ditched boundaries (L19) representing field systems some of which are visible on the Marston Moretaine tithe map of 1844 (Figure 15). Those to the south follow the alignment of the medieval headland.

3.2 Pottery

3.2.1 Methodology

For each context, pottery was recorded by fabric type and quantified by minimum sherd count and weight. This information was entered onto a table within the project Access database. Pottery was spot dated by individual fabric and / or form type, and was the principal determinant in assigning contexts to chronological period. Its presence was also used to assist in the identification of domestic activity.

3.2.2 Quantification

The assemblage comprises 8,092 sherds, weighing 160kg, the majority deriving from features assigned to the late Iron Age and Romano-British periods (Phases 4 and 5 respectively: Table 4).

Phase	Sherd No.	% Sherd	Wt (g)	% Wt
1	121	1.4	1299	<1.0
2	998	12.3	18763	11.7
3	1149	14.1	20374	12.7
4	3264	40.3	43706	27.3
5	2111	26.0	65595	40.9
6	308	3.8	7337	4.5
7	90	1.1	1349	<1.0
8	49	<1.0	1571	<1.0
9	2	<1.0	13	<1.0
Total	**8,092**	**-**	**160,007**	**-**

Table 4: Pottery Quantification

3.2.3 Pottery type series

Fabrics are listed below in chronological order (Table 5), using common names and type codes in accordance with the Bedfordshire Ceramic Type Series, currently maintained by Albion Archaeology. No new fabric types were identified.

Fabric Type	Common name	Sherd No.	Wt (g)
Late Bronze Age/early Iron Age transition			
F01C	Flint and quartz	5	20
		5	**20**
Iron Age			
F	Non-specific Iron Age	88	328
Early to middle Iron Age			
F16	Coarse shell	339	10093
F18	Fine sand and shell	37	528
F19	Sand and organic	130	1870
F27	Shell and grog	58	575
F28	Fine sand	88	1249
F29	Coarse sand	32	530
F30	Sand and calcareous	80	1433
F35	Micaceous	20	529
F38	Glauconitic	9	170
		793	**16977**
Mid-late pre-'Belgic' Iron Age			
F03	Grog and sand	144	2965
F04	Organic	7	74
F14	Fine mixed	77	1208
F15	Coarse mixed	86	1097
F17	Grog	175	2380
F20	Calcareous	22	271
F37	Calcareous mixed	18	221
		529	**8216**
Late Iron Age/Roman transition			
F05	Grog and shell	109	2426
F06A	Fine grog	205	1081
F06B	Medium grog	724	10426
F06C	Coarse grog	312	11252
F07	Shell	367	7741
F09	Sand and grog	1349	16666
F22	Grog and organic	37	465
F24	Buff shell	8	126
F33	Grog and calcareous	134	2725
F34	Sand	489	7805
F39	Grog and mica	24	306
		3758	**61019**
Roman			
R01	Samian ware	59	1091
R02	Mica gilded ware	3	148
R03	White ware	2	33
R03A	Verulamium white ware	7	97
R03B	Gritty white ware	14	73
R03C	Smooth white ware	65	182
R03E	Fine white ware	90	526
R04	Fine ware imports	30	388
R05A	Oxidised sandy	26	265
R05B	Fine oxidised sandy	6	50
R05C	Oxidised micaceous sandy	14	423
R05D	White-slipped oxidised	2	14
R06A	Nene Valley grey ware	7	78
R06B	Coarse grey ware	334	4687
R06C	Fine grey ware	468	14900
R06D	Micaceous grey ware	89	2393
R06E	Calcareous grey ware	33	909
R06F	Grog and sand grey ware	60	898
R06G	Silty grey ware	2	11
R06H	White-slipped grey ware	11	221
R06I	Black-slipped grey ware	19	1403
R07B	Sandy black ware	79	1422

Fabric Type	Common name	Sherd No.	Wt (g)
R09A	Pink grogged ware	25	1084
R09B	Pink grogged ware with shell	13	1688
R10A	Gritty buff ware	15	348
R10B	Fine buff ware	16	342
R10D	Buff micaceous ware	5	76
R11	Oxford oxidised	3	23
R11D	Oxford colour coat	6	77
R11E	Oxford mortaria (white)	6	582
R11F	Oxford mortaria (red)	1	28
R12A	Nene Valley mortaria	3	128
R12B	Nene Valley colour coat	21	469
R12C	Nene Valley parchment ware	1	19
R13	Shell	867	31501
R14	Sand (red brown harsh)	195	2774
R17	Smooth orange ware	155	743
R18A	Gritty pink ware	10	49
R19	Amphorae (unspecified)	2	333
R19A	Amphorae (Dressel 20)	1	169
R20	Mancetter-Hartshill mortaria	2	57
R21	Mortaria (unspecified)	6	275
R28	Gritty calcareous ware	5	71
R33	Mortaria (VRW)	1	49
R38	Colour coat (unspecified)	4	78
R	Non-specific Roman ware	3	36
		2786	**71211**
Saxon			
A05	Shell and sand	1	4
A15	Limestone and sand	2	74
A16	Coarse quartz	17	227
A18	Fine quartz	1	11
A19	Quartz and organic	20	412
A23	Sandstone	25	319
A26	Mica, sand and organic	4	112
A32	Red quartz	1	4
		71	**1163**
Medieval			
C59B	Harsh sand	1	97
		1	**97**
Post-medieval			
P01	Fine glazed red earthenware	1	84
P14	Blackware	1	1
		2	**85**
UNID	Unidentifiable / undatable	17	84

Table 5: Pottery type series

3.2.4 Provenance, phasing and date range

The pottery displays a wide date range, beginning in the late Bronze Age/early Iron Age, and peaking in the late Iron Age and Roman periods. A hiatus occurs after the Saxon period, with the remainder of the assemblage comprising a single medieval sherd and two sherds of post-medieval date. A total of 374 features (61% of contexts producing pottery) contained less than 100g, and 34 features (5%) yielded in excess of 1kg. Single sherds were collected from 142 features (23% of contexts yielding pottery). Although the assemblage is fragmentary, indicated by a relatively low average sherd weight of 20g, a proportion of vessels of late Iron Age and early Roman date are represented by more than single sherds. This suggests that much of the assemblage occurs in its primary context, close to areas where the pottery was

used. The assemblage is summarised below by chronological period, and quantified by Landscape (Table 6).

Phase	Landscape	Description	Sherd No.	Wt (g)
1	2	Unenclosed settlement	117	1282
	101	Unenclosed settlement S of Elstow Brook	4	17
2	4	Activity focus outside settlement enclosure L6	74	2074
	5	Small enclosures on S side of settlement enclosure L6	127	2130
	6	Main settlement enclosure	27	436
	7	Domestic focus within settlement enclosure L6	766	14059
	23	Internal enclosures within settlement enclosure L6	4	64
3	1	Three cremation burials	109	979
	3	Earliest ditches defining outer settlement enclosure L24	8	45
	8	D-shaped enclosure and internal pitting	46	694
	15	Disuse of internal enclosure L6	85	1508
	22	Redefinition of enclosed areas to the south & associated features	105	2044
	24	Outer ditch of main settlement enclosure	282	5928
	25	Activity focus within outer enclosure	378	7151
	26	Domestic focus within enclosure L8	136	2025
4	9	Rectilinear enclosure system	98	2326
	10	Rectilinear 'ladder' enclosure system	37	520
	11	Field system to E of settlement	19	197
	14	Continued use and disuse of enclosure L8	509	9203
	27	Later activity	259	4821
	31	Domestic activity within enclosure L9	110	2415
	35	Pair of cremation burials and possible associated animal burial	655	2767
	102	Settlement S of Elstow Brook	166	4367
	103	Cremation cemetery S of Elstow Brook	1411	17090
5	28	Settlement enclosure and associated trackway	853	18812
	29	Activity within enclosure L28	525	13078
	30	Later activity within L28	491	26751
	104	Peripheral settlement activity S of Elstow Brook	242	6942
6	16	Field system	275	6913
	32	Layers overlying earlier features, possibly assoc. with livestock	28	421
	33	Trackway	5	3
7	106	Settlement located to S of Elstow Brook	90	1349
8	18	Open fields	49	1571
9	19	Field boundaries	2	13

Table 6: Pottery quantification by Phase and Landscape

3.2.4.1 Phase 1: early-middle Iron Age

Features within unenclosed settlements L2 and L101 yielded 121 Iron Age sherds, weighing 1.2kg, the largest assemblages deriving from roundhouse G7 and associated features (496g), and roundhouse G8 (359g).

The assemblage comprises hand-made pottery tempered with a range of sand (types F03, F28, F29, F35), organic (F22), grog (F17) and calcareous/shelly inclusions (F14, F16, F27). Three flint tempered sherds of transitional late Bronze Age/early Iron Age date (11g) represent the earliest pottery recovered. Most sherds are abraded. No identifiable vessel forms are present, and only one vessel, represented by ten sherds, weighs in excess of 100g. Feature sherds are flat rims deriving from thin-walled vessels. Decoration is restricted to a single vessel with faint incised linear motifs.

3.2.4.2 Phase 2: middle Iron Age

Phase 2 features yielded 998 sherds, weighing 18.7kg, mainly associated with enclosed settlement L6 and domestic focus L7. The largest assemblage was associated with the rebuilding phases of L7 roundhouse G4, which collectively yielded 8.6kg, including eight sherds (993g) from a coarse shell tempered storage (?) jar. Post-holes associated with roundhouse G5 yielded 22 base and lower body sherds (838g), also from a large jar. Several other groups yielded in excess of 500g pottery (Table 7).

Landscape	Group	Description	Sherd No.	Wt (g)
4	85.1	Primary fill of ditch G85	9	895
	420.1	Primary fill of large pit G420	28	768
5	256.3	Tertiary fill of enclosure ditch G256	30	526
	258.2	Sole fill of original ditch G258.1	25	576
7	4.2	First rebuild of roundhouse G4	245	4038
	4.3	Second rebuild of roundhouse G4	146	3759
	4.4	Final rebuild of roundhouse G4	34	902
	5.2	Rebuild of roundhouse G5	64	955
	5.4	Post-holes associated with roundhouse G5	24	868
	6.3	Second rebuild of roundhouse G6	61	963
	6.4	Final rebuild of roundhouse G6	54	726

Table 7: Pottery quantification for selected Phase 2 Groups

There is a degree of overlap between the composition of the Phase 1 and 2 assemblages, although a subtle shift in the range and proportions of fabrics occurs. The Phase 2 repertoire comprises a wider variety of types than the preceding phase, and is dominated by shell tempered wares (F16, F18, F27) which total approximately half the assemblage. For all types local manufacture is likely, with raw materials deriving from the Oxford clays and glacial, alluvial or river gravel deposits.

Vessel wall thickness varies between 10-20mm, indicating a variable range of vessel sizes. Diagnostic forms are mainly variants of the slack- or round-shouldered, fairly open jars and bowls which dominate middle Iron Age assemblages in the region. Two handle fragments and a single vessel with an upright rim and horizontal perforated lug handle also occur. Rim forms are predominantly upright, rounded or flat-topped. Bases are mainly flat, although a single pinched-out example occurs. One shell tempered base has a series of post-firing drilled holes, suggesting its use as a strainer. Burnishing occurs on two fine-walled vessels. The surfaces of coarser wares are occasionally wiped or randomly twig-brushed prior to firing. Scoring, which may have served both functional and cultural purposes occurs on thirteen vessels. Scored vessels are usually represented in Bedfordshire middle Iron Age assemblages, although always constitute only a small proportion. Decoration is rare, and mainly comprises fingernail or fingertip impressions along rim tops. Sooting and internal residues visible on a number of sherds confirm their use as cooking pots.

Intrusive pottery comprises fifty-five late Iron Age and early Roman sherds (880g), recovered mainly from the fills of enclosure ditches G251and G256, and a single post-medieval sherd (1g) deriving from roundhouse G4.

3.2.4.3 Phase 3: late pre-Roman Iron Age

Features assigned to Phase 3 yielded 1,149 sherds weighing 20.3kg. The largest pottery concentrations were associated with enclosure L24 and activity focus L25. Both contained groups yielding in excess of 1kg pottery (Table 8). Additionally, L1 urned cremation burial G353 yielded 70 sherds (947g) from a single butt beaker.

Landscape	Group	Description	Sherd No.	Wt (g)
1	353	Two urned cremation burials	109	978
15	250.2	Secondary fill of enclosure ditch G250	49	1072
22	261.1	Original cut of enclosure ditch G261	59	775
	261.2	Sole fill of enclosure ditch G261	37	879
24	134.1	Sole fill of ditch G134	35	768
	262.2	Secondary fill of enclosure ditch G262	49	504
	262.3	Tertiary fill of enclosure ditch G262	56	1299
	269.1	Sole fill of ditch G269	13	616
25	69.1	Primary fill of ditch G69	22	843
	185.1	Sole fill of possible enclosure ditch G185	65	639
	188.1	Sole fill of ditch G188	53	951
	418.1	Sole fill of pits G418	20	660
	427.2	Secondary fill of pit G427	32	687
26	439.1	Sole fill of pits G439	60	1197

Table 8: Pottery quantification for selected Phase 3 Groups

The late pre-Roman Iron Age is defined by the appearance of pottery forms in the 'Belgic' tradition, which total 70% (by weight) of the assemblage. Twenty-nine percent of the material belongs to the middle Iron Age tradition of handmade slack-shouldered vessels, although some of this material may be residual. The condition of the material and comparable average sherd weights of middle and late Iron Age pottery (each 18g), suggest continuity in use of middle Iron Age-type vessels into the late 1st century BC and early 1st century AD. This has been observed elsewhere in the middle Ouse Valley, at sites such as Great Barford (Webley 2007), Stagsden (Slowikowski 2000), Little Paxton (Hancocks 2011), and within the Biddenham Loop (Wells in prep).

Intrusive Roman pottery totals 1% of the assemblage, and was recovered from all areas of the site.

A total of 734 sherds (12.8kg) are datable to the late Iron Age. Forty-six percent of the assemblage (by weight) occurs in grog tempered fabrics (F06A-C, F22, F39), attesting the large scale adoption of grog tempering during this period. Vessels in mixed grog and sand tempered wares (F09) and shelly fabrics (F07, F24) respectively total 22% and 17%. Grog and shelly/calcareous fabrics (F05, F33) constitute the remainder. All are likely to be of local origin; a number of kilns producing shelly wares during the mid 1st century BC are known in north Bedfordshire, although the other fabrics' provenance remains uncertain.

The majority of the late Iron Age vessels are wheel-thrown, a proportion is hand made with wheel-finished shoulder and rim, and some are entirely hand made. The latter mainly occur in fabrics F06C and F07, and generally represent the largest vessels in the assemblage (storage jars and cooking pots). Diagnostic forms are in the 'Belgic' tradition, the appearance of which in the south-east Midlands is conventionally dated to *c.* 50 BC, although the adoption of the tradition may not have become widespread until *c.* 40-50 years later (Hill 2002). Jars are the

dominant vessel form and occur in varying sizes. Most have simple everted or bead rims. Lid-seated vessels, cordoned jars, large storage vessels and wide-mouthed necked jars, butt beakers, pedestal urns, and a single carinated vessel are also present.

Decorative elements are linear and random combing, incised wavy lines, finger nail and finger tip impressions, and burnishing, the latter generally restricted to finer vessels. One shell tempered jar has been modified by the drilling of post-firing holes in the base, possibly for use as a strainer. A number of shelly vessels have heavily sooted exteriors, and / or internal sooty residues, indicating their use as cooking pots. The limited range of jar and bowl forms, coupled with a paucity of specialised tablewares, such as cups, beakers and platters may suggest the adoption of only a limited range of 'Belgic' vessel types by the local inhabitants (*c.f.* Hill 2002).

3.2.4.4 Phase 4: late Iron Age-early Roman transition

Features assigned to Phase 4 yielded 3,264 sherds, weighing 43.7kg, associated with the continued development and use of Phase 3 enclosure L8, and the establishment of enclosures, field systems and a cremation cemetery L103. Residual material comprises 72 sherds of early Iron Age pottery (1kg). Seventy-four percent (by weight) of the assemblage is datable to the late Iron Age, and 23% to the early Roman period. There is a significant degree of overlap between the range and proportions of late Iron Age fabrics types and vessel forms from the preceding phase (Table 9), and of Roman pottery from the succeeding phase. In consequence, and to avoid repetition, no further discussion is considered necessary here.

Fabric	Phase 3 %	Phase 4 %
F05	4.8	2.2
F06A	0.7	2.9
F06B	26.1	15.6
F06C	20.7	16.0
F07	16.5	7.6
F09	23.7	28.1
F24	0.4	-
F33	6.3	3.2
F34	-	23.9
F39	0.8	0.5
	100	**100**

Table 9: Percentage weight of late Iron Age fabric types by phase

The largest pottery concentrations were recovered from ditches assigned to L14 and L27, settlement L102 and cremation cemetery L103, with several groups yielding in excess of 1kg pottery (Table 8).

Landscape	Group	Description	Sherd No.	Wt (g)
9	289.2	Secondary fill of enclosure ditch G289	20	1340
14	263.4	Primary fill of enclosure ditch re-cut G263.3	169	3470
	267.2	Secondary fill of enclosure ditch G267	111	2261
27	287.1	Sole fill of enclosure ditch G287	116	2933
35	383	Urned cremation burial	395	1229
	384	Urned cremation burial	258	1525
102	224.1	Sole fill of enclosure ditch G224	21	1603

103	377	Urned cremation burial	316	3708
	378	Unurned cremation burial	165	2604
	379	Unurned cremation burial	278	2183
	380	Urned cremation burial	318	3553
	381	Two urned cremation burials within same grave cut	167	2196
	382	Urned cremation burial	167	2846

Table 10: Pottery quantification for selected Phase 4 Groups

The largest single deposits derive from cremation burials L103 and represent either urns or accessory vessels, the latter occurring in all but one burial (Table 11). Finer fabrics F06A/B, F09, and F34 appear to be the preferred choice for inclusion in burials. A limited range of vessel forms occur, including butt beakers, cordoned bowls and jars, platters (foot-ring and flat based), a carinated cup and a pedestal urn. None of these vessels show any sign of having been either accidentally or deliberately burnt. In addition, there appear to be no sub-standard or reused vessels, seconds, or repairs.

Landscape	Group	Vessel type	Fabrics	Forms
35	383	Urn + accessory	F09, F06B	-
	384	Urn + accessory x 3	F06A, F34, R03E	Butt beaker, cordoned bowl, platter
103	377	Urn + accessory x 3	F06B, F09, F34	Pedestal urn, cordoned jar, platter,
	378	Urn + accessory x 4	F06B, F09, F34	cordoned bowl
	379	Urn + accessory x 6	F09, F34, R03C,	Butt beaker, cordoned jar, platter
	380	Urn + accessory x 7	R06B, R17	Cordoned jar, flagon, platter,
			F06B, F09, F34, R04	cordoned bowl
				Butt beaker, cordoned bowl, platter
	381	Urn (20046)	F09	Cordoned jar
		Urn (20074) + accessory x 2	F06B, F09, R14	Cordoned vessels
	382	Urn + accessory x 3	F34	Jar / butt beaker, platter
				carinated vessel

Table 11: Phase 4 Cremation burials

3.2.4.5 Phases 5 and 6: Roman

Features assigned to early Roman Phase 5 yielded 2,111 sherds, weighing 65kg, the majority deriving from enclosure L28 and associated later activity L30. Later Roman features within Phase 6 contained 308 sherds (7.3kg), deriving mainly from the fills of field ditches G87 and G296. Fourteen Phase 5 groups yielded in excess of 1kg pottery, the largest concentration associated with the recut of water pit G20 (L30: Table 12). The latter contained 22kg, including 47 base and lower body sherds (6.7kg) from a large shelly storage vessel, and 31sherds (3.3kg) from a grey ware cordoned jar.

Twenty-two percent of the Phase 5 assemblage (by weight) is of late Iron Age date, indicating a persistence of local native traditions. This is consistent with the established local pattern where the currency of late 'Belgic' Iron Age wares is known, in some instances, to have extended into the early 2nd century. By Phase 6, this total has reduced to 15%, much of which is likely to be residual.

Forty-one residual early Iron Age sherds (911g) were recovered from Phase 5 features, mainly associated with settlement enclosure and associated trackway L28.

Phase	Landscape	Group	Description	Sherd No.	Wt (g)
5	**28**	171.1	Sole fill of sub-division ditch G171	162	2103
		281.1	Sole fill of enclosure ditch G281	49	2654
		288.1	Sole fill of enclosure ditch G288	237	6106
		291.6	Primary fill of ditch re-cut G291.5	111	3128
	29	20.1	Original form of water pit		
		230.1	Sole fill of ditches G230	36	2814
		423.1	Sole fill of pit G423	17	1560
		432.2	Secondary fill of waterpit G432	57	2218
				77	1669
	30	20.2	First recut of water pit G20	52	8406
		20.4	Final recut of water pit G20	261	13966
		415.1	Sole fill of pit G415	63	1258
		419.1	Sole fill of pit G419	70	1363
	104	22.2	Secondary fill of waterpit G22	103	3597
		22.3	Tertiary fill of waterpit G22	107	2671
6	**16**	60.1	Sole fill of field ditch G60	15	616
		87.1	Sole fill of field ditch G87	34	2141
		295.1	Sole fill of field ditch G295	43	852
		296.1	Sole fill of field ditch G296	105	2464
		411.2	Secondary fill of pits G411	45	506

Table 12: Pottery quantification for selected Phase 5 and Phase 6 Groups

The Roman assemblage (1,809 sherds, weighing 58kg) comprises a broad and diverse range of fabric types, the majority of which are of local origin (Table 13). Sand tempered reduced wares (fabric group R06 and sub-types; R07, R14) total 46% by sherd count and 41% by weight. Reduced wares are known to have been produced during the early Roman period at a series of sites to the south-east of Bedford. Shelly wares total 34% by sherd count and 45% by weight. Many are likely to be products of the Harrold kilns, N Beds, and it is probable that this production centre supplied the site from the later 1st century onwards. These wares are supplemented by a range of oxidised sandy wares (R05, R10, R17), which total 8% by sherd count and 4% by weight. Various sources are likely for these wares during the early Roman period, when small-scale localised manufacture would have been the main means of production.

Wares and fabric groups	Sherd No.	% Sherd	Wt (g)	% Wt
Local				
Reduced sandy wares	842	46.7	23763	41.0
Oxidised sandy wares	162	8.9	2610	4.5
Shell tempered wares	633	34.9	26152	45.2
Regional				
Mica-gilded ware	3	0.1	148	0.2
Pink grogged ware	25	1.4	2218	3.9
White wares: VRW / OXF / NV	50	2.8	735	1.3
NV grey ware	5	0.2	46	0.1
NV colour coat	19	1.0	417	0.7
OXF colour coat	14	0.8	683	1.1
Imports				
Samian	55	3.1	1061	1.8
Amphora	1	0.1	169	0.2
	1,809	**100**	**58,002**	**100**

Table 13: Roman phases pottery quantification by fabric group

Diagnostic coarse ware forms comprise a standard range of kitchen and table wares associated with the storage, preparation and consumption of food and drink. Jars of varying sizes and function are dominant, followed by bowls, dishes and beakers. Traded wares from more distant regional production centres total 7% of the

assemblage (by weight). In the early Roman period, these include 2nd century white ware flagons, jars, bowls and mortaria from the Verulamium region (group R03 R18A, R33), pink-grogged ware (R09) from either Bucks. or Northants., mica-gilded ware (R02) of uncertain source, and Nene Valley grey ware (R06A). By the mid-late Roman period, the range and proportion of imports has increased to include colour-coated wares and oxidised wares from the Nene Valley and Oxfordshire (respectively R12B and R11, R11D); and Oxford mortaria (R11E, R11F).

Totalling 2% by weight, the proportion of imports may be regarded as typical of a small rural site (*c.f.* Cooper 2000, 80). They comprise 55 abraded sherds of Gaulish samian, including bowls and a form 33 cup. A single base has a partial potters' stamp, which is illegible. One decorated body sherd has been chipped into a lozenge-shaped pendant, and has a drilled hole at one end for suspension.

3.2.4.6 Phase 7: early Saxon

Features within early Saxon settlement L106 yielded 90 sherds, weighing 1.3kg, the largest assemblages deriving from the fills of SFBs G451, G655 and pit cluster G454, which each contained over 350g of pottery.

Pottery datable to the Saxon period comprises 71 sherds weighing 1.1kg. The vessels are predominantly sand-tempered (fabric types A16, A18, A19, A23, A26, and A32), hard-fired, undecorated and in most cases, entirely reduced. Fabrics containing calcareous and organic inclusions (A05, A15) occur in smaller quantities. All are likely to be of local manufacture. Characteristic middle Saxon types such as Maxey or Ipswich wares are absent from the site.

Diagnostic elements are everted and simple upright rims, deriving from either jars or bowls. No bases survive. Vessel wall thickness varies between 3mm and 15mm. Decoration is restricted to a single vessel with incised linear motifs and a grid circle stamp. The surfaces of most sherds are untreated apart from simple hand-wiping, although several are burnished. A number are internally or externally sooted, and bear traces of thick internal black residues, the latter possibly resulting from the accidental burning of vessel contents during cooking.

Nineteen residual late Iron Age and early Roman sherds (186g) were recovered from SFBs G655 and G451.

3.2.4.7 Phase 8: Medieval

Medieval furrows within open fields L18, yielded 45 residual Iron Age sherds (1.3kg), two undiagnostic residual Roman grey ware sherds (90g), and a rim sherd from a 17th century glazed red earthenware bowl (84g). An abraded bung hole from a 12th-13th century sand tempered cistern (97g) was recovered from the tertiary fill of waterpit G30, and represents the only contemporary sherd within the Phase 8 assemblage.

3.2.4.8 Phase 9: Post-medieval

Two undiagnostic Roman grey ware sherds (13g) occurred as residual finds in post-medieval field boundaries L19.

3.3 Ceramic building material

3.3.1 Methodology

For each context, ceramic building material (CBM), comprising brick, roof tile and fired clay, was recorded by fabric type, and quantified by minimum fragment count and weight. Where possible, the brick and tile was also spot dated. This information was entered onto a table within the Projects Access database.

3.3.2 Quantification

Thirty-nine pieces of brick and roof tile (4.5kg) and 605 fired clay fragments (27.4kg) were collected, the majority deriving from features assigned to the late Iron Age/early Roman periods (Phases 4 and 5: Table 14).

Phase	Brick and tile		Fired Clay	
	Frag No.	*Wt (g)*	*Frag No.*	*Wt (g)*
1	-	-	1	4
2	2	34	51	684
3	4	103	183	6632
4	6	274	201	12621
5	14	3048	167	7453
6	10	953	1	14
8	2	132	1	4
9	1	15	-	-
Total	**39**	**4,559**	**605**	**27,408**

Table 14: CBM quantification by Phase

3.3.3 Provenance, phasing and date range

3.3.3.1 Brick and tile

Twenty-nine fragments (4.3kg) are datable to the Roman period (Table 15) with most associated with Phase 5 features. Pieces are moderately sized, with an average weight of 148g, and occur in shell and oxidised sand tempered fabrics (22 and seven examples respectively). All are slightly abraded.

Form	Frag. No.	Wt (g)
Flue	1	74
Imbrex	7	1547
Tegula	20	2551
Brick	1	141
Total	**29**	**4,313**

Table 15: Quantification of building material by form

Roof tiles comprise 20 flanged *tegulae* and seven curved *imbrices.* The former range in thickness between 15-27mm and the latter between 14-17mm. One shell tempered flue tile, identified by its thin walls and combed surfaces, was collected. Its presence may hint at the existence of a building with a hypocaust heating system within the locality. One abraded piece of brick (thickness 40mm) was also recovered. Although no direct evidence for stone-founded buildings was recovered from the excavation, the presence of building material may suggest the existence of such structures in the vicinity.

Ten pieces of post-medieval sand tempered roof tile (244g) were recovered. Five represent intrusive finds in earlier features, and the remainder derived from medieval and later field boundaries.

3.3.3.2 Fired clay

The fired clay assemblage represents secondary deposition of material and cannot be directly associated with the use of the features from which it was collected. Approximately 90% of the fired clay (by weight) occurs in an organic and sand, or purely organic fabric. The remainder occurs in a range of fine to coarse sand tempered fabrics. Most fragments are amorphous, although a proportion has at least one finger-smoothed surface.

Nine sandy pieces recovered from Phase 3 activity focus L25, Phase 4 enclosure L27, the later use of D-shaped enclosure L14 and Phase 5 internal features L30, represent structural daub, and retain wattle impressions ranging in diameter from *c.* 10-15mm. A possible impression of a right angle lath occurs on a fragment from L30.

The fill of enclosure ditch G224 within settlement L102 (Phase 4) yielded 34 sizeable pieces of variable thickness, deriving from an oven floor (6.4kg). The pieces occur in an organic fabric. Several are joining and have a number of pre-firing perforations *c*. 40mm in diameter. Some of the holes have thickened rims, burred up on the upper surface, indicating from which direction they were pierced. The perforations would have functioned as vents creating an updraught from a heat source below. Comparable perforated fired clay floors of this type are known from other Iron Age sites in the county, such as Stagsden (Gentil 2000), Harrold (Eagles and Evison 1970), and have been variously described as domestic or agricultural drying oven floors.

Identifiable fired clay objects recovered from Phases 2-5 comprise pieces from numerous rectangular or rounded flat slabs of varying size, ranging in thickness between 15-55mm (Table 16). Most occur in an organic fabric, and several have knife-trimmed edges. Slabs occur with greatest frequency on late Iron Age and early Roman sites, although their function remains unclear. Suggested uses include 'bake stones', temporary shelves in ovens or kilns, or cattle salt-licks.

Phase	Landscape	Description	Frag No.	Wt (g)
2	5	S side of settlement enclosure L6	1	53
3	8	D-shaped enclosure and internal pitting	27	2498
	15	Disuse of internal enclosure L6	9	186
	24	Outer ditch of main settlement enclosure	1	136
	25	Activity focus within outer enclosure	12	640
	26	Domestic focus located within enclosure L8	31	694
4	14	Continued use and disuse of enclosure L8	68	3297
	27	Later activity	12	288
5	28	Settlement enclosure and associated trackway	21	1051
	29	Activity within enclosure L28	9	1690
	104	Peripheral settlement activity south of Elstow Brook	1	71
			192	**10,604**

Table 16: Quantification of slabs by Phase and Landscape

An organic bar or pedestal fragment (360g) was collected from Phase 3 enclosure ditch L24. The object measures 53 x 45mm in width, and is likely to have been

used as an oven support. Phase 5 enclosure L28 contained seven pieces (739g) from a circular slab (25-30mm in thickness) with an up-turned edge / flange, forming a possible tray.

3.4 Leather

3.4.1 Methodology

A basic record (as defined in the RFG & FRG Guidelines 1993) of the assemblage was made, including measurement of relevant dimensions and species identification where possible. All measurements are in millimetres (mm). + indicates an incomplete measurement. No allowance has been made for shrinkage. Any shoe sizing has been calculated according to the modern English Shoe-Size scale.

Leather species were identified by hair follicle pattern using low powered magnification. Shoes soles and sole repairs are assumed to be of cattle hide unless stated otherwise.

3.4.2 Results

A small group of leather of Roman date was recovered from the fills of Phase 5 square waterpit G20 (Phase 5). Three items were recovered from the fills of the original waterpit G20.1 (RA121-122; RA131), one piece from the fills of the first recut G20.2 (RA126) and one piece from the second recut (RA125).

The leather comprises fragmentary shoes of nailed construction (RA121-122; RA125 and RA131) and the back part of a shoe of one-piece construction (RA126). A maximum of four shoes of nailed construction were present. All were represented by their bottom units only, so that the style of the shoe uppers is unknown.

Constructional features such as thonging and some details of their nailing patterns are preserved. Part of a nailed shoe insole (RA131) came from fill G20.1 as well as what appear to be the remains of two nailed shoe bottom units (RA121 and 122). A second fragmentary insole (RA125) came from fill of the second recut G20.3. The back part of a shoe one-piece construction (RA126) of adult size was found in fill G20.2. The back of the shoe extended to about ankle height and fastened with a series of long narrow loops.

3.5 Worked wood

3.5.1 Methodology

The lifted timbers and all timber records were re-examined and some additional features noted. All the worked material that was not clearly oak timber was sampled for species identification. Only a small amount of the material may be suitable for tree-ring sampling. All recording and sampling to date has been commensurate with the standards laid out in English Heritage Guidelines on such material (Brunning 1996).

3.5.2 Quantification

A total of 61 items of worked roundwood and timber were found, in addition to a fragment of unworked root and sections of bark. Roughly half of the woodwork comprised displaced wattle roundwood weavers recorded and sampled on site, the

rest were larger items of worked timber which include a number of short offcuts recorded. A smaller group of ten assorted, mainly second-hand, timbers were lifted and retained. The number of species identification samples taken was 43 and the number of tree-ring samples was three with perhaps up to another five to come. This assemblage is moderately small by national standards for the Roman period although such assemblages are rare on rural settlements.

3.5.3 Provenance

The quantity of waterlogged wood by Phase is presented in Table 17.

Phase	Landscape	Group	Quantity worked wood	Quantity unworked wood
2	7	21	1	
4	27	32.1	4	1 (root)
	31	30.1	0	
4	31	31.1	7	
	31	31.2	6	
5	29	20.1	7	1(bark pieces)
	30	20.2	18	
	30	20.3	2	
	30	20.4	16	2
			61	

Table 17: Occurrence of waterlogged wood by Phase, Landscape and Group

3.5.3.1 Phase 3: middle Iron Age

A single log with one axed end (timber 7444) was found in Phase 2 water pit G21. This may represent stockpiled firewood which was not of structural origin.

3.5.3.2 Phase 4: late Iron Age-early Roman transition

Woodwork was found within water pit G31 (L31). It had a series of steps leading down to the pit/pond. A smaller assemblage was also found within the fill of a sump pit G32.1 (L27).

Woodwork from the 'steps' into the pit G31

In the NW quadrant of pit G31 several short lengths of beam and other offcuts were found wedged in the sloping side. In some cases small roundwood stakes were used to retain the timbers (e.g. timbers 7217 and 7218). The uppermost elements of the steps were heavily eroded but a little lower they were fairly solid. Step timber 7215 was a beam c 0.92m long by 192 x170mm, with possible eroded mortises or bridle joints at the ends. Step timber 7216, situated below 7215, was an oak plank off cut, 320mm wide and c.90mm thick, which had a surface finish showing that it had been made by the 'tripod sawing' from an axe hewn baulk. This was one of the three archaeologically documented Roman methods of sawing out planks where a baulk was hauled on to a tripod and then sawn length ways in to planks (Goodburn 2001, 193). One end of the plank showed the shallow 'V' shape of an axe felling cut with opposed back cut and 'gob'. The plank scrap provides a clear insight into several details of local timber production methods in the Roman period.

Apart from other fragmentary plank off cuts, step group G31.1 also included a small radially faced, squared beam with a through mortise and several fastening holes (timber 7220). This oak timber may also have been part of a ladder but an origin as part of a vehicle or piece of machinery might also have been possible.

Woodwork from the fills of the pit G31
The fills of the pit G31 yielded an assortment of woodwork from beam and plank off cuts and fragments of small building timbers to more unusual items. Some of the off cuts, such as the crotched end of a partly worked beam that had been sawn off (timber 7367), represent stages in the production of building timbers. This type of material is very rare on urban sites due to the delivery of timbers prepared near the felling spot.

Oak plank fragment (timber 7223) was *c.* 0.68m long by 190mm wide and 54mm thick. It had a form and axe marks on one face showing that it had been sawn off the side of a slightly curved hewn saw baulk. The width of the plank showed that the original size of the baulk was probably 200mm square. One fragment of a small oak beam *c.* 129mm x125mm and machine truncated at 0.62m long showed features that suggest it was originally part of a wall stud (timber 7225). In most Roman timber framed buildings the infill between frame timbers was created by cutting sloping grooves in their sides, wedging cross battens in place and weaving fine wattle rods vertically over them. Such an infill groove is evident on the archive photograph of timber 7225.

One of the most unusual and potentially interesting finds of woodwork was timber 7224 which appears to have been made of boxed heart section of yew wood, possibly for strength and hardness. The object appears largely complete with a length of 0.42m and width of 120mm and thickness of 105mm. About half the length comprises a substantial tenon whilst the other end has been hewn to a sort of cone shape. On two sides of the cone a shallow rebate was chiselled for a strap like piece of iron at the end of which was a nail hole. The recessed strap appears to be the anchor for an iron tip for the object, resembling the iron shoe of some Roman foundation piles. Initially it was thought that the item might have been part of some form of composite trip hammer head for metal working. However on reflection the wear and curved form quite strongly suggests that it was originally part of a composite ploughshare with a hard wooden head joined into a plough or 'ard' beam and tipped with iron as the Romans did with their more expensive spades.

Woodwork from sump pit fill G32
The fills of this sump pit contained an offcut from a plank (timber 7281); a quartered timber with part of a possible lap or tenon joint (timber 7278), and a weaver fragment (timber 7279). Additionally an 18mm thick board fragment (timber 7280) was probably a radially faced oak board planed to leave one up-standing bead along one edge. This fragment is likely to have been part of quite carefully made furniture of some kind.

3.5.3.3 Phase 5: late 1st-late 2nd century AD

Woodwork from Phase 5 was confined to square waterpit G20.1 (L29) and its three successive recuts G20.2 to G20.4 (L30). The fills of the third recut G20.4, contained many sections of what appear to be displaced wattle weavers. The weavers were of roundwood with mainly chisel form cut ends, neatly cut with a bill hook or fine bladed axe. It is probable that these were part of a wattle fence around the top of the waterpit, placed to stop people and animals falling in. Several cleft pole stakes were also found in the fills of the original waterpit G20.1 (e.g. timber 7576 a half pole), and in the fills of its repair G20.2 (e.g. timber 7506 a quartered example). These may have formed part of the wattle fence. A fragment of cleft pale was also found

(timber 7538) in G20.2 that was only 12mm thick with a width of 127mm, this might also have been of fence origin.

The fills of waterpit G20 contained a wide range of short pieces of more elaborately worked timber (see below). It is tempting to see some of it as material that may have been thrown in by bored children (?!) as much of it would have been useful firewood already cut to easily managed lengths and thus useful. Some beam off-cuts have been casually reused as chopping blocks (timber 7486 from G20.3). Other material, such as the rough irregular cleft branch section axe cut to length (timber 7447 from G20.2), might also have been stock piled firewood which was not of structural origin. Any Roman settlement would have to have had extensive firewood stores which would have been substantial visual features.

Some of the building type timbers that were found with relict mortises may possibly have formed a rough foundation for a small rectangular building: these were confined to fills of the second waterpit G20.2. Timber 7445 was a straight, rectangular beam or thick plank *c.* 1.42m long and 130 x 69mm in section. It had been cut from a single small oak stem, and bore five narrow unpegged rectangular mortises. The form of the mortises was more typical of later medieval woodwork rather than Roman carpentry work where they are usually rather wider and squarer. Interestingly a short oak plank off-cut timber 7446 has a rather narrow broken tenon and peg hole set away from the tenon. The fragmented oak plank timber 7537 was also found to have been pierced by two narrow mortises and may have had an origin in large furniture. The mutual origin of material such as this can be examined in due course; it may lie in heavy furniture rather than building type structures.

One small oak off-cut of particular interest is timber 7339 found in the fill of G20.4, the final repair/re-cut of the waterpit. This comprises a box quartered, which is 95mm square and deeply moulded. Moulded timber of these proportions is extremely rare in Roman Britain; moulded construction material normally comprising stone.

Timber 7505, from G20.2, is a large semi-circular section of radially cleft oak board (0.87m long 405mmm wide and 24mmm thick). It resembles a large barrel head piece but appears to have been cut to have a hand grip on one side as if used as some form of lid; if this was the case, it would have to have been the removable lid of a vat or something similar. The coincidence in size of the semi-circular board and the diameter of a mill stone (840mm) found in pit fill G415.1 in L30 raises the possibility that timber 7505 may have formed part of a cover over a mill stone. The function of several holes, bored in and along the straight edge, is currently obscure.

Timber 7577, found in fills of the original waterpit G20.1, was rather different to all the other timbers examined by this writer as it was of elm rather than oak. It was 0.82m long and 118mm wide, and had been carefully scalloped on the edges achieving a strange shape that might indicate that it was a possible ox yoke in the making?

Two fragments of timber, 7684 and 7685, from G20.1 had proportions of through mortises that suggested they may have been fragments of ladders with rectangular rungs. Possibly the most enigmatic piece of worked timber is a piece of joinery or possibly machinery, timber 7449 from G20.2. The plank is 240mm long by 197mm

by 18mm thick; two edges are square, whilst two others are planed to a mitre edge. Around the edges are holes filled with what appears to be basket willow. The origin of this finely worked object is currently quite obscure.

3.6 Other Artefacts

3.6.1 Methodology

As part of the assessment, each object was assigned a preliminary identification and functional category and was quantified by number and/or weight. This data was entered into the project database. All ironwork and selected non-ferrous objects were x-rayed by Lincolnshire County Council Heritage Service's Conservation Department. An assessment of the condition of the metalwork was carried out at the same time and required stabilisation and repackaging undertaken.

3.6.2 Quantification and variation

A total of 159 individual items were recovered (this figure includes coinage and footware). Moderate quantities of bulk finds, including ferrous slags, fuel ash slags, vitrified clay (lining) and burnt stone were also recovered (Table 18). The majority of individual items were retrieved via hand excavation (73.6%); however metal detectoring accounted for 12.6% and environmental samples for 13.8%. Within the bulk finds assemblage, 95.1% of the burnt stone derived from environmental samples as well as all instances of ferrous hammerscale (both flake and spheroidal).

Material	No	wt	Hand excavation	Metal detected	Environmental samples
Antler	1		1		
Bone	5		5		
Copper Alloy	34		18	13	3
Ceramic	6		6		
Ferrous	58		54		4
Flint	2		2		
Glass	17		3		14
Leather	5		5		
Lead Alloy	9		2	7	
Plaster	1		1		
Stone	21		20		1
Total	159		117	20	22
Bulk finds					
Burnt stone		11369.2	513.2		10856
Ferrous slag		3377.22	3376.8		Hammerscale (0.42g)
Fuel ash slag		204.4			2.6g
vitrified clay		110.6	110.6		

Table 18: Other Artefacts assemblage by material and retrieval method

The objects were assigned to one of eighteen possible categories, the majority of categories relating to the function the objects performed (e.g. Crafts and Industry, Dress and Personal Adornment) although two categories (Prehistoric Flint and Objects of Uncertain Identity) are not functionally related (Table 19). Thirteen categories were represented; there is evidence of small scale crafts, in particular textile working and metalworking; there is also an emphasis on grain processing, although no other items directly related to agriculture, such as reaping hooks, were identified.

Category	Broad term	No.	Wt. (g)
Building Materials	Wall plaster	1	9.2
Building Materials	Window glass (?)	1	
Fasteners & Fittings	Loop-headed pin or spike	1	
Fasteners & Fittings	Nail	22	
Household	Glass bottle	1	
Household	Glass bowl	1	
Household	Glass vessel	14*	
Household	Vessel repair	2	
Household	Burnt stone (hearths?)		11369.2
Craft & Industry	Loom weights	4	
Craft & Industry	Pin beater	1	
Craft & Industry	Weaving comb	1	
Craft & Industry	Spindle whorl	1	
Craft & Industry	Spindle (?)	1	
Craft & Industry	Worked bone/trial piece?	1	
Craft & Industry	Chisel/punch	1	
Craft & Industry	Mould	1	
Craft & Industry	Copper alloy run-off	3	18.8
Craft & Industry	Lead alloy waste	3	44.2
Craft & Industry	Ferrous slag & hammerscale		3377.22
Craft & Industry	Vitrified clay (hearth lining?)		110.6
Craft & Industry	Fuel ash slag		204.4
Bladed tools & Sharpeners	Whetstone	7	
Commerce	Coin	13	
Horse trappings & transport	Snaffle(?)	1	
Agriculture & Subsistence	Millstone	2	
Agriculture & Subsistence	Quern	10	
Dress & Adornment	Brooch	7	
Dress & Adornment	Finger ring	1	
Dress & Adornment	Hair pin	2	
Dress & Adornment	Foot wear	5	
Dress & Adornment	Hobnail	8	
Toiletry	Comb	1	
Toiletry	Toiletry implement	1	
Prehistoric	Flint axe	1	
Prehistoric	Flint core	1	
Multifunctional	Ring	1	
Multifunctional	Weight	2	
Uncertain	Fragment – antler	1	
Uncertain	Fragment – copper alloy	3	
Uncertain	Fragment – iron	19	
Uncertain	Fragment – lead alloy	2	
Uncertain	Unidentified – copper alloy	4	
Uncertain	Unidentified – iron	5	
Uncertain	Unidentified – lead alloy (ingot?)	1	
Uncertain	Unidentified – stone (?whetstone)	1	
Total		159	

*13 comprising tiny sherds of blue-green glass from one context

Table 19: Other Artefacts by functional category

3.6.3 Date range

The earliest period represented is the Neolithic with the recovery of part of a ground and polished flint axe. A single platform cortical core fragment with small flake removals and unprepared striking platform could date to the later Neolithic or later. There are no items typologically dated to the Bronze Age. Iron Age activity is evidenced by a triangular loom weight, a bi-conical spindle whorl and a long-

handled weaving comb with short teeth; unusually teeth occur at both ends of the comb's handle. Long-handled weaving combs date to the Iron Age, in southern England going out of use during the 1st century AD. The upper stone of a bun-shaped rotary quern of coarse sandstone may date to the mid to late Iron Age. A flat-topped unpierced Hunsbury quern of Greensand may date to the 1st century BC to the mid to later 1st century AD. The late Iron Age- early Roman transitional period is well represented by two examples of Simple Gaulish brooches with rod bows, a penannular type C brooch, found in association with one of the Simple Gaulish brooches, and the remains of a possible Camulodunum VII/Nauheim brooch. Mid to later 1st century AD brooches include a Hod Hill and an iron Colchester brooch, the latter example with two circular perforations through the catch plate.

A copper alloy hairpin, with thick 'nail-like' head and no cordon or collar at junction with shank, is likely to belong to the first half of the Roman period. The hairpin shank swells just before mid-point and tapers in again, a trait noted on other copper alloy hairpins in East Anglia. The length of this pin, likely to be at least 80mm, suggests a date in the first two centuries AD (Cool 1991, 173-4). A second pin, with plain squared head decorated with chevron patterned grooves, exceeds 100mm in length and is probably of similar date. The base from a prismatic bottle of blue-green glass dates to between the 1st to the 3rd centuries, while the remains of a tubular rimmed bowl in translucent yellow-green glass may date from the later 1st to later 2nd century. Rotary querns, one of lava, but not originating from the Niedermendig quarries, and one of Millstone grit, in addition to two millstones (also of probable Millstone grit) attest to grain processing continuing during the Roman period; the presence of millstones perhaps suggesting this was on a more substantial scale than previously. Although it is apparent from the coinage that some activity continued into the later Roman period, there is nothing within the this study assemblage that is diagnostically of later Roman date.

Objects typologically dated to the earlier Saxon period include up to two annular loom weights and a cigar-shaped pin beater. Remains of a double-sided composite comb could belong to this period or later (up to the early medieval period); the teeth on either side of the comb are of the same width, as opposed to the norm in the Roman period where coarse teeth occurred on one side and fine teeth on the other.

3.6.4 Provenance

3.6.4.1 Phase 1: early-middle Iron Age

The assemblage of Other Artefacts from Phase 1 is limited in size and range (Table 20:) and does not contribute to defining the nature, extent or date of this phase of activity. The flint core is likely to be residual as indicated by post-depositional damage. The burnt stone was recovered from the fill of large pit G474 suggesting the presence of a hearth or similar in the vicinity.

Phase	Landscape	Group	Material	Narrow Term	Number	Wt (g)
1	2	474.1	Flint Stone	Core fragment Burnt stone	1	269

Table 20: Phase 1 Other Artefacts assemblage

3.6.4.2 Phase 2: middle Iron Age

The secondary and tertiary fills of ditch G256 (L5), situated on the southern side of the large settlement enclosure L6, produced a small assemblage with some indication that crafts were undertaken within the settlement (Table 21). A small piece of dense ferrous slag may be a fayalitic run. Although such by-products are frequently associated with smelting, fayalitic runs have been known to form on experimental smithing hearths (Starley 2008). Textile working is evidenced by a bi-conical spindle whorl, the fabric similar in composition to pottery fabric type F18 (see Wells this report). It has a central perforation of about 7mm, appropriate for the narrower spindles of the Iron Age and Roman periods (Rogers 1997, 1731). The bi-conical shape can be paralleled by spindle whorls from early to middle Iron Age contexts at Gravelly Guy, Oxfordshire (Barclay and Wait 2004, Fig. 8.11 nos. 159; 228; 340) and from Danebury (Poole 1991,372 and fig. 7.43 nos. 7.86-7.88).

The fuel ash slag recovered from the second and third rebuilds of roundhouse G4 (L7) may give a hint that the need to rebuild the structure may not have been due to deterioration, but could have resulted from a fire. Having said that, the quantities are small for a sizeable fire; alternatively the fuel ash may have formed in a hearth. Remains of what appears to have been a saddle quern, possibly reused as a whetstone, hints at the presence of bladed implements. The stone is Upper Greensand and may have been locally sourced (Bedfordshire or Buckinghamshire source). Although the fuel ash and whetstone are not closely dated, a brooch from the first rebuild of roundhouse G4 is, comprising a 'Simple Gaulish' (Olivier 1988, 38-42) or Colchester brooch (Mackreth 2011, 36-45). This brooch might date as early as 15BC (Mackreth 2011, 36-45 and 243-52), but it must be intrusive within the Phase 2 deposits.

Phase	Landscape	Group	Material	Narrow Term	Number	Wt. (g)
2	5	256.2	SLG	ferrous slag		32
		256.3	CA	fragment	1	
		256.3	CE	bi-conical spindle whorl	1	52.8
	7	*4.2*	*CA*	*simple Gaulish brooch with rod bow*	*1*	
		4.3	CE	fuel ash slag		183.4
		4.3	ST	?secondary whetstone?	1	
		4.4	CE	fuel ash slag		2.1
		5.2	ST	burnt stone		144

Table 21: Phase 2 Other Artefacts assemblage (items in italics intrusive)

The burnt stone from the rebuild of roundhouse G5 could suggest the presence of a hearth. Certainly the quantities from pit G466, within roundhouse enclosure G285, suggest periodic removal of hearth material.

3.6.4.3 Phase 3: late pre Roman Iron Age

The fills of enclosure ditch G250.2 (L15) produced part of a fine iron pin or spike, one end hooked or looped to one side of the shank, the end of the loop re-curved in the manner of a shepherd's crook. A similar loop-headed pin or spike was found in late Iron Age deposits of Site 2 along the Great Barford Bypass, Beds. (Howard-Davies 2007, 295 and fig.8.21 no. 25).

The fills of enclosure ditch G261 (L22) yielded part of the upper stone of a small bun-shaped quern of coarse sandstone (source unidentified). A second quern

fragment was found ditch fills G55 (L25). This second quern, of Millstone Grit from Derbyshire-Pennine area, appears to be a flat rotary quern with a straight edge or skirt. Both the form of this quern and its stone type suggest that this might be intrusive; flat rotary querns are generally considered a Roman introduction and although Millstone Grit was in use in the north of the country during the Iron Age, it wasn't until the later part of the Roman period when the market for gritstone querns widened and they began to be introduced into south-east England in quantity (Wright 1996, 371). Other intrusive Roman activity in L25 is indicated by the recovery of a Roman coin from fills of pit G421.1 (Table 22).

Phase	Landscape	Group	Material	Narrow Term	Number	Wt (g)
3	15	250.2	FE	Loop headed pin or spike	1	
	22	261.1	ST	upper stone of bun-shaped quern	1	
	24	233.1	ST	weight or counter-weight?	1	2500
		262.3	CE	loom weight(?) form indeterminate	1	259
		290.1	FE	Dome-headed nail	1	
		290.1	*PBA*	*vessel patch*	*1*	
		305.2	CA	run-off or partially melted object?	1	13.7
		305.2	CA	run-off or partially melted object?	1	4.1
		305.2	CA	Fragment - edge of binding?	1	
		305.2	*CA*	*stem fragment from double ended toiletry implement*	*1*	
		305.2	CA	partially melted object or run-off?	1	1
		305.2	FE	sheet fragment with folded over edge	1	
		305.2	CA	?brooch (fibula??)	1	
		305.2	SLG	hammerscale		0.1
		305.2	CE	fuel ash slag		0.5
	25	*55.1*	*ST*	*rotary quern*	*1*	
		272.1	ST	burnt stone		100.2
		412	SLG	ferrous smithing slag		397
		418.1	ST	mortar? or saddle quern?	1	
		421.1	*CA*	*Roman coin*	*1*	
		468.1	CA	Camulodunum type VII/Nauheim brooch	1	
	26	469.1	CE	fuel ash slag		3.7

Table 22: Phase 3 Other Artefacts assemblage (items in italics are intrusive)

What may be a mortar, or perhaps an unfinished saddle quern, was found in the fill of pit G418 (activity area L25). This was a roughly sub-rectangular thick slab of fine sandstone with a relatively flat upper surface, on which a concave depression has been pecked. This does not appear to have been used for a lengthy period as the surface of the depression is not smoothed or worn. Somewhat similar objects, but in chalk and smaller, were found at Danebury were they are described as hollowed objects of uncertain use (Laws *et al* 1991, fig 7.67 no. 8.184).

A second unusual stone object, thought to be a weight, was found in the outer ditch G233 of main settlement enclosure L24. This was of rounded beehive shape with a flattened apex, into which an iron rectangular sectioned rod had been inserted (only stub remaining). The sides are convex and have been carefully worked. The base of the stone is flat and rounded in plan; half the surface is slightly smoother and retains half of a hole which pierces one edge of the base. The weight appears to be a re-used and partially re-shaped quern of Upper Greensand with a source of Sussex or the Weald. Very similar weights, in varying sizes have been found at Easton Lane,

Winchester from deposits of middle Iron Age date (Fasham, Farwell and Whinney 1989 fig 101, nos 8- 9), and at Danebury, form W1 (Laws et al 1991, fig. 7.51 no. 8.74), all retaining evidence of an iron rod or ring *in situ*.

Weaving is suggested by part of a corner of a ceramic loom weight, possibly of triangular form, found within G262.3, the tertiary fill of the outer ditch of the main settlement enclosure L24. Fill G305.2, the southern portion of the same ditch, yielded hints of metal working in the form of three pieces of run-off or partially melted copper alloy, associated with a fragmented fibula brooch (?). This deposit also yielded a small quantity of flake hammerscale which might suggest that in addition to possible casting of copper alloy, ferrous smithing was carried out. However, caution is advised as the evidence is meagre and associated finds of, for example crucibles or moulds which would support copper alloy casting, or ferrous smithing slag, is lacking. The same fills producing this material also yielded part of a cast handle from a toiletry implement with cordon and reel moulding, of Roman date. Further evidence of intrusive Roman activity in the outer ditch fills of L24 is testified by a lead vessel repair from G290.1; this repair retains a sherd of pottery of Roman fabric type R13. That some ferrous smithing was being undertaken during Phase 3 is suggested by the recovery of a small hearth bottom (397g) from pit G412 in activity area L25.

Although there appears to be some intrusive artefacts in this phase, the fill of pit G468 in activity area L25 did yield a brooch which although incomplete, does appear to be a Camulodunum VII/Nauheim type brooch and is pre-conquest in date (Mackreth 2011, 13-15).

3.6.4.4 Phase 4: late Iron Age-early Roman transition

Other Artefacts were recovered from both Area 1 and Area 2 (south of the Elstow Brook). Craft activity was still evident in Area 1 indicated by the recovery of a long handled weaving comb from enclosure ditch G289 (L9) and a triangular loom weight in enclosure ditch G287 (L27). A small amount of undiagnostic ferrous slag, along with one ball of hammerslag also found within enclosure ditch G287, hints at iron smithing. Three flakes of hammerscale were found within the fills of cremation burial G384 (L35); this evidence is too meagre to indicate iron smithing in the area.

Grain processing continued to feature in Area 1, as indicated by the recovery of a coarse quartz conglomerate quern from possible threshing floor G652 (L31), and a large quern/millstone (diameter exceeding 610mm) of coarse sandstone from the fill of sump pit G32 (L27), not all that distant from the possible threshing floor. Although nails and other fittings that might be associated with building furnishings were absent, there is a hint that a structure did exist; a small fragment of fine wall plaster, one surface possessing a narrow, slightly curved incised line forming a border for a circular(?) area of red paint was recovered from the threshing floor surface. A fragment of clear colourless window glass from L14 however derives from modern intrusion. The fills of re-cut enclosure ditch G91.3 yielded a Hod Hill brooch, dating to c. AD43-70, of Hull's type 63; the 'wavy line' decoration on the lower cross-ribs of this brooch is closely paralleled by a brooch from Silchester (Hattatt 1987, 78 and fig 28 no. 852) and could derive from the same mould.

Phase	Landscape	Group	Material	Narrow Term	Number	Wt (g)
4	9	289.2	BO	Long handled/short toothed weaving comb	1	
	14	*266.1*	*GL*	*sherd clear colourless window glass*	*1*	
	27	32.2	ST	upper stone from millstone	1	
		91.4	CA	Hod Hill brooch	1	
		287.1	FE	Fragment/ tapering strip	1	
		287.1	SLG	hammerslag		0.001
		287.1	SLG	ferrous slag		52.4
		287.1	CE	triangular loom weight	1	1543
	31	652.2	PL	painted wall plaster	1	9.2
		652.2	ST	rotary quern (possibly beehive?)	1	
		653.2	FE	strip fragment?	1	
	35	384	SLG	Hammerscale (3 flakes)		0.01
	102	211.1	CA	strip fragment	1	
		212.1	FE	nail shank (stuck to stone)	1	
		212.1	*CA*	*Roman coin*	*1*	
		300.1	SLG	ferrous smelting slag?		389
		301.1	FE	strip/strap fragment	1	
		455.1	*BO*	*Double sided composite comb*	*1*	
	103	378	FE	Colchester brooch	1	
		379	CA	small fragments of ?brooch	1	
		379	FE	hobnail (or possibly small nail/tack?)	1	
		380	CA	Simple Gaulish brooch	1	
		380	CA	Penannular brooch	1	
		382	CA	foot from keyhole Rosette brooch	1	

Table 23: Phase 4 Other Artefacts assemblage (items in italics are intrusive)

Finds from L102, in the northern part of Area 2, were limited and generally not closely dated, comprising fragments of iron and copper alloy and a nail shank. There is evidence for intrusive activity in the recovery of a 4th century coin from ditch G212 and from pit cluster G455 a composite double-sided comb. Double-sided composite combs start being produced from about the 3rd century AD (MacGregor 1985, 92). The example from pit cluster G455 also has the same width teeth on both sides of the comb; Roman combs generally are provided with coarse teeth on one side and fine on the other (MacGregor 1985, 92). As there was Anglo-Saxon occupation in this area it is likely the comb derived from this later activity.

Four of the cremation burials in cemetery L103 yielded finds. Cremation burial G378, a female of 17+ years of age, was accompanied by an iron Colchester brooch, found fused to the remains. The brooch's catch plate has two small circular perforations; Colchester brooches with this trait are generally thought to be post-Conquest in date (Olivier 1988, 44). The cremation deposit within G379, a male of 17+ years of age, had small copper alloy fragments, which may have come from a brooch pin, and an iron hobnail or tack. The adult cremation burial G380 was accompanied by two brooches, one Simple Gaulish and one a type C penannular brooch; combined a date of c. early to mid-1st century might be suggested. G382 (female 21+ years of age) was the final cremation burial to yield a brooch, and only part of the foot of this brooch survived. This appears to be from a 'keyhole Rosette' brooch probably dating to c. AD 30-65.

3.6.4.5 Phase 5: late 1st-late 2nd century AD

The assemblage from Phase 5, although not extensive, does indicate a degree of Romanisation of the inhabitants, or rather their willingness to adopt aspects of Roman dress style and material culture. This is most clearly seen in the small assemblage of leather footware and hobnails, but also in the presence of imported glassware and a hairpin. The latter has a flat squared head one side of the pin decorated with grooves in a chevron pattern along c. one-third its length. The pin, which is 110mm long, may date to the first two centuries (Cool 1991, 173-4). The glass sherds, two of translucent yellow-green glass and two of blue-green glass (possibly from the same vessel) date to the early half of the Roman period; their presence indicating access to markets with imported goods.

Unlike preceding periods, there is no evidence of textile working; this could suggest these goods were also purchased. Evidence for other crafts is limited. Some of this may be due to the poor state of preservation of much of the ironwork which would have formed most of the tools; the recovery of five whetstone fragments does suggest the presence of bladed tools. Limited evidence of ironworking was found. The 37.4g of undiagnostic ferrous slag from G651 (L29) is too little to suggest any metalworking was carried out in this enclosure. In contrast pit G415 (L30) produced eight flakes of hammerscale and four spheres of hammerslag, which does suggest iron smithing in the vicinity; no accompanying slag however was found. Non-ferrous metalworking is suggested by a two piece mould fragment from pit G470 (L29). The mould fragment is incomplete, retaining a U-shaped channel down its length, which could be part of a channel or perhaps be for casting a hair pin. The only other craft indicated is bone-working; part of a sheep metacarpus(?) having one end possibly hollowed out, with a deep sawn/cut groove and the start of a second near the hollowed end, and two cross-hatched grooves at the other end.

Nails are more numerous, with twelve examples, than previous periods, as is the occurrence of ironwork generally, despite its poor state of preservation, and presumably reflects greater availability and perhaps affordability.

Phase	Landscape	Group	Material	Narrow Term	Number	Wt. (g)
5	28	67	GL	tubular rimmed bowl	1	
		227.1	ST	Whetstone fragment?	1	
		278.2	CA	Roman coin	1	
		281.1	FE	strap fragment perforated	1	
		283.1	FE	Flat headed nail	2	
		283.1	ST	primary whetstone	1	
		288.1	ST	whetstone fragment	1	
		288.1	CE	fuel ash slag		14.7
		288.1	ST	fragment primary whetstone?	1	
		291.6	FE	sheet fragment (perforated?)	1	
		291.6	CE	vitrified clay lining		7.4
		291.6	FE	flat headed nail	1	
		291.6	CA	uncertain - disc with cut-outs	1	
		297.1	ST	flat topped Hunsbury beehive quern	1	
		297.1	CA	plain D-sectioned finger ring	1	
	29	20.1	FL	ground and polished flint axe	1	
		20.1	LE	shoe sole	3	

Phase	Landscape	Group	Material	Narrow Term	Number	Wt. (g)
		432.4	FE	fragments (sheet?)	7	
		435.1	CA	shank of hair pin, needle or toiletry implement?	1	
		435.1	FE	nail shank?	2	
		463.1	FE	nail shank (or strip fragment?)	1	
		470.2	CE	Portion two piece mould	1	
		651.1	SLG	ferrous slag		37.4
		651.1	GL	Vessel body sherd	1	
		651.3	FE	hobnail	3	
	30	20.2	LE	shoe	1	
		20.3	LE	shoe sole	1	
		20.4	FE	snaffle bit link	1	
		20.4	ST	lower stone of rotary quern	1	
		20.4	ST	rotary quern (lower stone?)	1	
		20.4	ST	upper stone of rotary quern	1	
		20.4	PBA	possible fishing weight	1	7.8
		74.1	FE	Uncertain - tang and start of tool?	1	
		415.1	FE	flat headed nails	2	
		415.1	FE	nail shanks	3	
		415.1	FE	strip or blade fragment?	1	
		415.1	FE	bar/stem of tool?	1	
		415.1	FE	strap or large blade fragment?	1	
		415.1	FE	strip or strap fragment	1	
		415.1	ST	runnerstone of millstone	1	
		415.1	ST	rotary quern/millstone upper stone	1	
		415.1	SLG	hammerslag and hammerscale		0.3
		419.1	ST	whetstone?	1	
		419.1	CA	Roman coin	1	
		426.1	FE	Flat headed nail	1	
		426.1	CA	hair pin	1	
	104	22.2	BO	worked bone, cross-hatching and saw marks	1	
		22.2	ST	quern fragment?	1	
		22.2	GL	prismatic bottle base fragment	1	
		22.2	GL	vessel sherds blue-green glass	13	
		22.3	FE	rod? Broken both ends	1	

Table 24: Phase 5 Other Artefacts assemblage

One aspect of the assemblage remains constant and that is the presence of querns and, as in the case of Phase 4, at least one millstone. The millstone from pit 415 (L30) is an upper stone of Millstone Grit sourced in Derbyshire or the Pennines area. This millstone has a diameter of 840mm, concentric grooves on both faces and has four rectangular holes set in a line (two either side of the eye) down the centre of the stone. The rectangular holes served either as handle holes or were used to secure timber work that formed part of a turning mechanism. Of the six querns recovered from Phase 5, two are likely to originate from Phase 4 activity, comprising an upper stone from a flat topped Hunsbury quern (Upper Greensand), and a lower stone of Hertfordshire puddingstone. Hertfordshire puddingstone querns are thought to have gone out of use by 2nd century AD and it is interesting to note that the same deposit, the fills of the final re-cut of water pit G20.4, also contained the lower stone of quartz conglomerate quern from Forest of Dean, Wye Valley, S Wales area and part of a large quern or small millstone (diameter 610mm) of lava. The source of the lava

in the latter instance was not the Niedermendig quarries (Eyers 2011). A large quern (diameter 600mm) of Millstone Grit was deposited in pit G415 (L30), and a smaller fragment of one was found in the secondary fill of water pit G22 (L104), south of the Elstow Brook. The presence of non-local stones provides additional evidence of access to markets, the quantity of millstones and querns in the area north of the Elstow Brook suggesting some focus on grain processing and perhaps by extension an agrarian economy for this settlement.

Possibly connected with this suggested agrarian economy was a single link of a snaffle bit, with loops at right angles, found in fills of the final recut of water pit G20.4 (L30), hinting at the presence of a horse. The primary fill of the original water pit G20 yielded part of a Neolithic polished flint axe, possibly deposited as a result of side erosion or collapse.

3.6.4.6 Phase 6: early 3rd-4th century AD

Generally the Phase 6 assemblage has a restricted range of identifiable objects, and excluding the eight coins, most are not closely dated. The majority of iron items comprise nails or fragments of larger items the form of which is uncertain due to poor survival. Unusually for this site, no querns or millstones were recovered, whether this is due to a shift in the focus occupation or change in the economy of the site is unclear. Excluding the coin evidence there is nothing in this assemblage that needs date to the late Roman period. The single hairpin from G360 (L32) has a suggested date in the first two centuries AD, based upon its length.

Phase	Landscape	Group	Material	Narrow Term	Number	Wt. (g)
6	16	295.1	FE	hobnails or tacks? (x3)	3	
		295.1	FE	?shaft from tool or nail shank?	1	
		295.1	FE	tanged chisel/hinge/cleaver??	1	
		295.1	ST	primary whetstone	1	
		295.1	CA	Roman coin	1	
		295.1	ST	whetstone/sharpening stone	1	
		296.1	BO	spindle or unfinished antler/bone shaft?	1	
		296.1	FE	two flat headed nails	2	
		296.1	FE	nail shanks (four)	4	
		296.1	FE	strip fragment	2	
		296.1	FE	strip or blade fragment?	1	
		296.1	CE	vitrified clay lining		76
		296.1	SLG	ferrous slag		985
		296.1	CE	vitrified clay lining		27.2
		296.1	SLG	hammerscale and hammerslag		
		296.1	SLG	ferrous smithing slag and hearth lining		1484
		296.1	FE	flat rectangular headed nail	1	
		296.1	CA	cast ring	1	
		296.1	PBA	partially melted waste	1	7.6
		296.1	PBA	irregular shaped piece	1	10.5
	32	360	FE	hobnail	1	
		360	CA	Roman coins	7	
		360	PBA	waste fragment	1	26.1
		360	PBA	vessel repair patch	1	49.4
		360	PBA	rounded rod or possibly 'ingot'	1	10
		360	CA	hair pin	1	

Phase	Landscape	Group	Material	Narrow Term	Number	Wt. (g)
		360	PBA	small sheet fragment	2	
	33	123.1	FE	nail shank	1	

Table 25: Phase 6 Other Artefacts assemblage

Parts of ferrous smithing hearth bottom, smithing slag in association with vitrified clay lining and moderate quantities of both flake and spheroidal hammerscale were found within the primary fill of field ditch G296 (L16), suggesting smithing in the vicinity. Small quantities of partially melted lead alloy were recovered from this same ditch, as well as layer G360 (L32). Layer G360 produced a rounded rod of lead alloy with both ends cut off, perhaps a small 'ingot'. One artefact from G296 (L16) deserves some mention; this comprises a narrow roughly rounded rod of 'whittled' bone, which swells then tapers to either end (both ends broken off). This may represent an unfinished bone object, however, it is possible that it is a spindle; its narrowness (4.8mm by 4.6mm) appropriate for spindles of the Iron Age and Roman periods (Rogers 1997, 1731).

3.6.4.7 Phase 7: early Saxon

The early Saxon assemblage was small and restricted to the area south of the Elstow Brook. Weaving is evidenced by remains of two loom weights, both probably of annular form, in the fills of pit cluster G454 and part of a 'cigar-shaped' pin beater from the fills of SFB G655. Minor quantities of both flake and spheroidal hammerscale were recovered from the secondary fills of SFB G656 (two flakes and one sphere) and also from the fills of pit cluster G454 (three flakes and one sphere). It is impossible to know whether the hammerscale derived from contemporary smithing in the vicinity, further evidence of early to middle Saxon occupation was previously revealed adjoining the area of investigation (Wells and Edwards forthcoming), or if it was intrusive in nature. The double-sided composite comb, intrusive in Phase 4 L102 deposits, is likely to have originated from Phase 7 activity.

Phase	Landscape	Group	Material	Narrow Term	Number	Wt. (g)
7	106	454	CE	loom weight	1	50.8
		454.1	CE	annular loom weight	1	149
		454.1	SLG	hammerscale and hammerslag		
		655.1	CA	Roman coin	1	
		655.1	BO	half of a cigar-shaped pin beater	1	
		656.2	SLG	hammerscale and hammerslag		

Table 26: Phase 7 Other Artefacts assemblage

3.6.4.8 Phase 8: medieval and Phase 10: modern

The fills of a medieval furrow G720 yielded a fragment of worked antler, comprising a corner of a squared object, perhaps a handle. The antler is eroded, suggesting this item derived from earlier, disturbed deposits. No objects were found in Phase 9, post-medieval deposits. Modern subsoil deposits G750 produced the head and upper shank of a punch or chisel. Neither object is closely dated and therefore cannot contribute to a greater understanding of the nature and duration of the occupation.

Phase	Landscape	Group	Material	Narrow Term	Number	Wt. (g)
8	18	720	AN	squared fragment	1	
10	21	750	FE	Chisel or punch	1	

Table 27: Phase 8 and Phase 10 Other Artefacts assemblage

3.7 Coins

3.7.1 Results

Thirteen coins were recovered from the excavations, all of which are copper alloy issues from the Roman period (Table 28). The coins are in variable condition with several being heavily corroded.

Four large bronzes were struck during the first or second centuries, one dates to the later third century, while eight were struck during the fourth century (the latest appears to be a copy of the Fel Temp Reparatio type produced between 350 and 364). To find such a high proportion of early Roman coins is unusual for a Romano-British rural site, while it is also noteworthy that later fourth century Valentinianic and Theodosian types appear to be absent.

All the excavated coins were recovered from stratified deposits. One of the early bronzes (RA79) was recovered from the fill of a pit associated with the Phase 3 late Iron Age enclosure. A fourth century coin (RA411) came from a drainage ditch of the late Iron Age / early Roman Phase 4 (clearly intrusive), two coins (RA55 and RA109) were found in ditch and pit fills dated to Phase 5 (early Roman). Eight coins were recovered from Phase 6 later Roman deposits, while a single coin of early-fourth century date was found in the fill of the Phase 7 early Saxon SFB G655. All but one of the coins from Phase 6 contexts were found among layer G360 that could be associated with the keeping of livestock, including issues struck throughout the Roman period.

Phase	Landscape	Group	Ra number	Narrow Term	Type	Date	Number	Wt. (g)	Comments
3	25	451.1	79	Sestertius or dupondius?		1st-2nd	1	20.6	Copper alloy. Sestertius or dupondius? Surfaces worn, flaking and soil adhering. Dimensions 31.9mm by 30mm thickness 3.5mm
4	102	212.1	411	Constantine 1	AE3	0320-0324	1		Copper alloy. Ob. Constantinus AVG; Rev. Constantini Max AVG Laurel wreath round VOT.XX mint mark TSRII?? diameter 19.7mm
5	28	278.2	109	Radiate	AE3	0260-300	1	1.4	Copper alloy. Radiate, bust facing right. Oval, 20mm by 18.2mm
	30	419.1	55	Fel Temp Reparatio copy		0350-64	1		Copper alloy. Current diameter c. 11.5mm, bust facing right, some legend visible.
6	16	295.1	51	House of Constantine Gloria Exercitvs	AE3	0335-40	1		bust facing right - [ ] P (rest illegible). Reverse Gloria Exercitvs, 2 soliders standing either side of standard. Current diameter 15.5mm; weight 1.6
	32	360	70	House of Constantine Beata Tranqvillitas	AE3	0318-0324	1		Copper alloy. House of Constantine reverse Beata Tranqvillitas, altar inscrided VOTIS XX with F and S on either side altar. In ex. PLON
	32	360	60	AE3 coin		3rd-4th	1		Copper alloy. Diam c.21mm. Surfaces covered in soil/corrosion products. Bust facing right>
	32	360	57	Sestertius or as?		2nd	1		Copper alloy. Bust facing right
	32	360	56	AE3		4th	1		Copper alloy. Some legend visible, but surfaces currently have soil/concretion adhering. Diam 17mm
	32	360	61	As or sestertius?		1st-2nd	1	17	Copper alloy. As or sestertius? Very powdery surfaces.
	32	360	64	A3		4th	1		Copper alloy. Part coin, at least 19mm diameter, part legend survives on one face, opposing face obscured by soil and corrosion products.
	32	360	65	Sestertius		2nd	1		Copper alloy. Sestertius, bust facing right.
7	106	655.1	409	House of Constantine	AE3	0307-0337	1	1.8	Copper alloy. Obv. Constantinus AVG helmeted and cuirassed bust facing right. Constantine I? Diameter c. 19mm

Table 28: Coin assemblage

3.8 Charred plant remains

3.8.1 Methodology

A total of 134 environmental samples were taken, of which 43 were from burials assigned to Phase 3, Phase 4 and Phase 5.

The size of individual samples was generally 30 litres and 10 to 20 litres were processed in order to identify samples with the potential to contain a minimum of fifty items of plant remains for analysis. All 134 samples were wet-sieved in a York tank using a 0.5mm mesh with flotation into a 0.3mm mesh sieve. The flotation fractions (flots) were air-dried and packed carefully in self-seal polythene bags. The residues were also air-dried and sorted for finds. The fine residues were retained for sorting during analysis if required.

All the flots were examined for plant and animal remains using a x10-30 stereo microscope; for the flots with few remains the samples were sorted and items recovered were placed in a glass specimen tubes (stored with the flot). For samples with more abundant remains the flots were scanned and stored for potential sorting and analysis later on. The plant remains were rapidly identified without comparison with modern reference material and tabulated by type with either counts or an estimate of quantity. The plant names follow Stace (1991), both botanical and common names.

3.8.2 Results

Charred plant remains were found in 54 of the 91 Iron Age and Roman samples (59%) from the settlement feature and are discussed below by phase. Of the 54 samples, 13 contained over fifty items and will be sufficient for analysis. Very few of the samples from the cremation burials contained charred plant remains and when present they comprised only a few small charcoal fragments.

Weed seeds were present in all phases and were mainly of plants of arable or disturbed ground with the large grasses including brome grass (*Bromus* sp.) as the most common, followed by vetches (*Vicia* type). Other arable weeds included cleavers (*Galium aparine*) which is often associated with autumn sowing of such cereals as wheat, and scentless mayweed (*Tripleurospermum* sp.) which is a plant of better drained soils.

Weeds of spring sown crops or disturbed ground include the ubiquitous goose-foots (*Chenopodium* sp.) and docks (*Rumex* sp.), grassy vegetation is suggested by the presence of clover type plants (*Medicago/Melilotus/Trifolium*) and grass stem fragments together with a tuber of onion couch grass (*Arrhenatherum elatius)*.

Phase	Sample	Landscape	Group	Vol flot (mls)	Chd grain	Chaff	Chd seeds	Unchd seeds	Charcoal
1	550	2	7	10	1	0	1	xx	xx
	551	2	7	2	0	0	0	x	flecks
	552	2	7.2	3	1	0	0	0	flecks
	554	2	7	7	0	0	0	xx	flecks
	555	2	7	3	0	0	0	x	flecks
	556	2	7.1	5	2	1	16	x	x
	621	2	8	10					xxx oak, hazel and willow/poplar
	628	2	474.1	3					x flecks
2	508	4	83.1	10	2 W	3	4	x	x
	528	6	250.1	5	0	0	0	x	
	531	6	251.1	15	0	0	0		
	541	5	104.1	20	16, W, B	23	36		xx
	542	7	351	15	0	0	0	x	xx
	543	5	450.1	7	0	1	1	x	x
	558	7	4.2	3	0	0	0	x	flecks
	559	7	4.3	5	0	0		x	flecks
	560	7	4.4	10					xxx oak
	562	7	4.4	5					x flecks
	563	7	4.3	5	W x1				xx
	564	7	4.2	25-30	xx	3	xx large headed seeds		xxx oak and hazel, but few frags were id.
	565	7	4.2	10			1 frag		xx oak, hazel and willow/poplar
	566	7	4.3	5			x frag		x oak
	567	7	4.6	2					x flecks
	593	7	6.3	50	xxx W, B	15	10	x	xx oak
	594	7	5.2	3				x1, modern	flecks
	595	7	6.4	5					x flecks
	596	7	6.4	20					flecks
	597	7	6.4	10			1xfragment		xx oak
	598	7	6.6	5-10					x flecks
	599	7	6.5	40-50					x oak frag.
	600	7	5.4	5-10				x	flecks xx
	601	7	5.2	5					xxx flecks
	602	7	5.2	5					xx flecks
	627	7	285.3	5-10	W x2		x		xx
3	511	25	185.1	5	8 W, B	1	9		flecks
	513	25	673.1	25	0	0	0		xxx

Phase	Sample	Landscape	Group	Vol flot (mls)	Chd grain	Chaff	Chd seeds	Unchd seeds	Charcoal
	514	25	673.1	7	0	0	0		flecks
	515	25	673.1	15	8	0	6		xx
	516	25	673.1	7	5 W	0	2	x	xx
	521	26	439	95	0	4	3	x	xxx
	529	15	250.3	25	14 W, B	3	8		xx
	532	24	305.2	20	0	0	4		flecks
	534	22	261.1	5	4	3	12		x
	536	25	420.2	20	12	1	7	x	xx
	546	25	70.1	5	0	0	0	x	flecks
	561	26	469.2	25	xx W	0	x		x
	572	26	469.2	10	xx	3	xx		x
	573	26	469.1	20					x flecks
	585	22	261.2	x					x
	605	1	352	Lg flot					xxx
	610	1	352	Lg flot					xxx
	611	1	352	Lg flot					xxx
	623	1	353	1					tiny flecks
	624	1	353	2					flecks
	625	1	353	10					
	626	1	353	10					
4	1002	103	377	2					only few flecks
	1004	103	377	20					few flecks
	1005	103	378	5					flecks
	1006	103	378	5					flecks
	1007	103	378	2					flecks
	1008	103	380	20					xx flecks
	1010	103	379	5					few flecks
	1011	103	379	2					flecks
	1012	103	379	10					small charcoal flecks
	1013	103	379	2					
	1014	103	377	5					few flecks
	1015	103	377	2					
	1016	103	380	2-5	1x cereal grain frag, W? x1				x
	1017	103	380	2					flecks
	1018	103	380	2					flecks

Phase	Sample	Landscape	Group	Vol flot (mls)	Chd grain	Chaff	Chd seeds	Unchd seeds	Charcoal
	1019	103	381	2					
	1020	103	381	2-5	cereal x1				x
	1021	103	381	2					flecks
	1022	103	381	2-5					
	1023	103	381	5	W x1				flecks
	1024	103	1	5	W frag. X1				few flecks
	1025	103	382	2-5					flecks
	1026	103	382	2					
	1027	103	382	2	cereal x1 endosperm				few flecks
	1028	103	382	2	W x1				few flecks
	1034	102	456.1	300					xxx oak, hazel, ash and willow/poplar
	512	31	1.2	20	2 W	0	0	x	flecks
	518	31	1.2	10	1	0	0	x	x
	519	31	1.2	15	6 W	2	3	x	x
	522	27	287	15	50a W, B	10	10a	x Lemna	x
	523	27	87	12	30a	30a	x	x Lemna	x
	524	31	674	20	6 W	2	16		xx
	525	31	674	5	1	0	1		x
	526	31	674	5	0	0	1		x
	530	27	287	10	20a	10a	x		flecks
	537	35	383	3	0	0	0		flecks
	538	35	383	5	0	0	0		flecks
	539	35	350	2	0	0	0		flecks
	540	35	350	10	0	0	0	x	xx
	545	102	677	25	0	0	2	x	xx
	549	11	99	7	2	1	1		xx
	557	27	467	15	9	41	19	x	xx
	577	35	384	2					x flecks
	578	35	384	3					x flecks
	579	35	384	3					xx
	580	35	384	3					x flecks
	581	35	384	3					x flecks
	582	35	384	3					x flecks
	584	35	384	10					x and flecks
5	1009	105	385	15					flecks

Phase	Sample	Landscape	Group	Vol flot (mls)	Chd grain	Chaff	Chd seeds	Unchd seeds	Charcoal
	1037	104	22.2	5-10	x W, B	0	x	x, eg *Fumaria* sp.	xx
	500	28	288.1	30	x, B	0	x		
	501	29	432.2	7	20a W, B	0	2		x
	502	29	435	3	1	2	4	x	flecks
	503	29	435.1	12	1	3	x		
	504	30	419.1	50	xxx	xx	x		
	506	29	651.1	5	0	0	0		flecks
	507	29	651.1	7	frags	0	0		x
	509	29	651.3	12	6 W	1	0	x Lemna	x
	510	29	651.3	15	5 W	0	2	x	x
	520	28	288.1	15	12 B	0	X	x Lemna	flecks
	527	30	415.1	35	100a	xxx	100a		x
	544	29	425.1	25	100a	xx	Xx		x
	547	29	423.1	7	10a	3	20a		x
	548	29	423.1	3 W, B	5	2	4		flecks
	575	29	470.2	15	xxx	xxx	xxx		x
	616	30	20.4	no flot					
6	535	16	295.1	25	50a W	50a	x		x
	553	16	411.2	7	10a	0	10a		x
	576	16	296.1	25-30	xx	10a	xx large headed seeds		xxx oak and hazel, but few frags were id
	586	32	369	3	W x1 spelt?				xx
	617	16	87.1	20-40	xx mainly W	0			x with few large frags of oak
7	1030	106	656.2	25					x oak, ash
	1031	106	451.1	80	B x1			x	xxx oak, hazel
	1032	106	654.1	2					flecks
	1033	106	454.1	25					x 1 frag id: oak
	1035	106	655.1	100			x broken frags		xxx few frags id as oak, hazel, ash
	1036	106	655.1	100					xxx

Key : x = few 0-9 items, xx= moderate 10-49 items, xxx= abundant over 50 items of charred plant remains. Abundant charcoal recorded as xx and xxx

Table 29: Charred plant remains

3.8.2.1 Phase 1: early-middle Iron Age

Samples from the unenclosed settlement L2 included seven associated with the roundhouse G7 of which only three contained charred plant remains. The most were from sample 556 which produced just a few cereal grains, a chaff fragment and weed seeds which included scentless mayweed. This probably represents part of a scatter of waste from food preparation suggesting the consumption of glume wheat. Sample 621 from roundhouse terminal G8 contained only charcoal.

3.8.2.2 Phase 2: middle Iron Age

A total of 26 samples from the settlement enclosure L6 included only three with moderate numbers of charred plant remains. Samples 564 and 593 were from features associated with roundhouses, while sample 541 was from ditch G104. The sample from the latter contained more chaff than grains and also contained weed seeds probably as small scale cereal processing cleaning spelt wheat for consumption. Barley was also present showing this cereal was also consumed. The samples from the roundhouses probably represent a scatter of domestic waste from food preparation although many of the samples contained single numbers or no cereal remains. The only evidence for gathered food is a fragment of hazel nutshell.

3.8.2.3 Phase 3: late pre Roman Iron Age

Of the 15 samples from this phase, ten contained some charred plant remains although none were abundant. Seven samples contained 14 to 35 items in the flots. The largest remains are from sample 561, pit G469 (L26), although this contains similar items to the nearby pits and ditches. Only a few remains were found from possible building G673 (L25). The remains probably represent a scatter of domestic waste in the area.

Three large flots from samples 605, 610 and 611 in cremation burials G352 (L1) contained abundant charcoal.

3.8.2.4 Phase 4: late Iron Age-early Roman transition

Twelve of the 15 samples from features assigned to this phase contained charred plant remains with four containing over 50 items. The most productive samples were from later activity L27: samples 522, 523 and 530 from ditch G287 and sample 557 from pit G467 all have a moderate number of remains. All contain wheat chaff and suggest small scale cereal processing. The cereal grains included those of glume wheat, emmer or spelt (*Triticum dicoccum/spelta*), probably mainly spelt. Barley grains (*Hordeum vulgare*) were also found in smaller numbers, this was of was of a hulled form including some twisted grains which showed that six-row barley was present. Chaff of glume wheat including spelt (*Triticum spelta*) was recovered from about 30 samples. A few grains of bread wheat type were present and occasional glumes of emmer. There is also a scatter of remains from the post-built structure G674 (L9) and from other features in the phase which may represent domestic activity. The remains included a thorn of blackthorn or hawthorn, perhaps suggesting hedgerow species in the vicinity.

The cremation burials contained only occasional charred plant remains in single numbers (Table 29). These are likely to be incidentally included with the wood used for the cremation pyre.

3.8.2.5 Phase 5: late 1st-late 2nd century AD

Sixteen features were sampled from this phase and all but one contained some charred plant remains. Hearth G425 and pit G470 (L29), samples 544 and 575 and two pits samples 504 and 527 (L30) contained very abundant cereal remains including chaff as waste from some stages of processing spelt crops. Some of this waste compares with remains from corn driers processing spelt but features of this type were not found on the site

3.8.2.6 Phase 6: early 3rd-4th century AD

Five samples from field system L16 all contain some charred plant remains and three have numerous remains sufficient for analysis. Samples 535 and 576 have abundant remains but less chaff than the previous phase and sample 617 has more abundant grains with weed seeds.

3.8.2.7 Phase 7: early Saxon

Six samples, including those from sunken feature buildings G655 and G656 contained only a single grain of barley and a seed fragment in two of the samples.

3.9 Waterlogged samples

3.9.1 Methodology

A total of 14 features with potential waterlogged deposits from Phase 2, Phase 4, Phase 5 and Phase 6 were sampled, of which ten were examined. Eight samples were processed by wet-sieving an appropriate volume using a stack of sieves of different meshes 2mm, 1mm, 0.5 mm and 300 microns aperture for the retention of the organic fraction. Two samples were mainly green clay deposits which showed only a few charcoal flecks on examination and therefore were no longer in a waterlogged state of preservation. In order to retrieve sufficient number of items, these two samples, 622 and 569, were sieved as bulk samples in a York tank, on a 300 micron mesh.

The sorting of the sieved fractions obtained was carried out using a stereoscopic microscope with magnifications ranging from x7 to x45. Morphological criteria were used for the identification of plant species, based on modern reference material and seed identification manuals (e.g. Berggren 1981; Anderberg 1994; Cappers *et al*. 2006). Plant names follow Stace (1997). The abundance (1 = scarce <10; 2 = moderate 10-50; 3= frequent >50) of each archaeobotanical type was estimated on the basis of the minimum number of characteristic plant parts.

The identification of the wood was conducted using thin sections of the wood, cut with a sharp razor, and observing them under a microscope with magnification range between 40x to 200x. Identification keys and reference collection were also consulted. The identification of willows and poplars is

based on the differences existing between rays (Schweingruber 1982); these were not clearly visible in tangential sections of any of the examined material. Therefore these remains are described as willow/poplar (*Salix/Populus*). The plants were tabulated in their most usual modern habitats, based on Ingrouille (1995).

3.9.2 Results

Species composition was very similar across all the samples with most containing remains of decayed wood and leaves and other plants associated with wet and disturbed environments. The bulk of the plant remains belonged to wild taxa, but a few charred remains of food plants were also recovered.

Small numbers of charred remains were found in three samples dating to Phase 5 and one sample dating to Phase 6 (Table 30). These included a few grains of glume wheat (*Triticum cf. spelta*), unidentified wheat (*Triticum* ssp) and a few grains of barley (*Hordeum vulgare* L.), the latter in one sample only. The term glume wheat refers to wheat grains that remain in husks after threshing and require parching and pounding before consumption by humans (e.g. Hillman 1981). Moreover cereal bran and cereal pollen (probably wheat) were observed in small amounts in the squash of the three samples of Phase 5 (Table 29).

The waterlogged plant remains comprised seeds of crowfoot (*Ranunculus* subgen. *Batrachium*), an aquatic plant which has floating leaves and grows in calm or slow-flowing water. This was recovered in moderate numbers in all the samples. Seeds of plants such as rushes (*Juncus* sp), spike rush (*Eleocharis* sp.) and sedges (*Carex* spp) were present in samples across all the phases. These plants are commonly found at watersides.

Moreover, seeds of plants indicative of nitrogen-rich habitats, represented by docks (*Rumex* spp.), nettles (*Urtica dioica*), and goosefoot seeds (*Chenopodium* spp.) are all commonly found on waste ground and/or cultivated plots. Other plants found on disturbed ground were chickweed (*Stellaria media* and *Stellaria* sp.). Plants that grow in open fields usually as weeds were also recovered in small numbers, including mouse-ear (*Cerastium* sp.) and prickly sow-thistle (*Sonchus asper* L.) (Hillman 1981).

The remains were usually too small and too decayed for identification. However, there is a persistent presence of hazel and oak, while smaller amounts of ash and willow/polar occur among the large fragments of wood in the assemblage. Most of the fragments were aged between 4 to 7 years (small twigs). The remains do not allow any reconstruction of the wood habit of the trees from which the wood was cut; therefore it was not possible to draw conclusions about the type of woodland near the site and changes in time between phases.

Phase	2	4	5	5	5	5	5	5	6	na	
Landscape	7	31	29	30	30	30	30	30	32		
Group	285.1	31.2	20.1	20.2	20.2	20.3	20.4	20.4	360	na	
Sample number	622	615	505	631	618	620	632	616	569	614	
CHARRED PLANT REMAINS											
*Triticum*cf. spelta charred grains	-	-	-	1	-	1	-	-	-	-	Glume wheat
*Hordeumvulgare*L.	-	-	-	-	-	1	-	-	-	-	Barley
Charcoal flecks	-	-	-	1	1	1	-	-	2	-	Charcoal flecks
Quercus sp. (charcoal fragments)	-	-	-	-	-	-	-	-	1	-	Oak
AQUATIC											
*Ranunculus*subgen*Batrachium*	1	1	1	1	1	1	1	1	1	1	Crowfoot
MARSH OR WETLAND											
*Juncus*sp	1	-	-	2	-	1	-	1	-	1	Rushes
*Eleocharis*sp	1	1	2	-	-	1	-	1	-	-	Spike-rush
WOODY PLANTS											
*Corylusavellana*L.	1	1	-	-	-	1	-	-	-	-	Hazel
Fraxinus excelsior L.	-	1	-	-	-	-	1	1	-	-	Ash
Salix/Populus	-	-	1	-	-	-	-	1	-	-	Willow/Poplar
*Quercus*spp.	-	-	-	-	1	-	-	1	-	-	Oak
OTHER PLANTS											
*Urticadioica*L.	1	-	-	-	1	1	-	1	-	-	Nettle
Chenopodiumsp	1	1	1	1	1	1	1	1	1	1	Goosefoot
Stellaria media L.	1	-	-	-	-	1	-	-	-	-	Chick-weed
Stellaria sp.	-	-	-	-	-	-	-	1	-	-	Chickweed
Cerastium sp.	1	-	1	-	2	-	-	-	-	-	Mouse-ears
*Rumex*sp	-	1	1	-	-	1	1	2	-	-	Docks
Brassica sp.	-	-	-	-	-	-	-	1	-	-	Cabbages/Mustards
*Sonchusasper (*L.) Hill	-	-	-	-	-	-	-	1	1	-	Prickly sow-thistle
*Carex*ssp.	1	1	3	2	2	-	-	-	-	-	Sedges

Table 30: Plant macrofossils and other remains from waterlogged samples

Despite most of the wood found in the assemblage being from tree and shrub species widely used in Britain for coppicing (hazel, willow, ash and oak) (Rackham, 2001), no evidence of coppicing was identified. This probably suggests that the wood in the features formed naturally.

Several 'ephippias' (eggs enclosed in hard dark brown cases) of water fleas (*Daphnia* sp.*)* were also encountered in the majority of the samples. As ephippias are an adaptation developed by water fleas to survive unfavourable conditions, this possibly suggests that there were dry phases in the past, which could explain why the remains had deteriorated. A few eggs of the parasite *Trichuris,* whipworm, were recovered in one sample. It is not possible to establish the species, but it can be said that some type of sewage has entered the archaeological samples.

3.10 Molluscs

3.10.1 Methodology

A total of 11 samples contained the most abundant snail shells. These came from mainly ditches assigned to Phases 2, 3, 4 and 5, along with a Phase 3 grave G353 and a Phase 6 pit G32. Samples 10 litres in size were processed by wet-sieving as bulk samples in a 0.5mm mesh with flotation into a 0.5mm mesh sieve and the residues were air-dried and the flots submitted for examination and assessment.

The flots were examined with a x10 to x30 stereo microscope and the snails identified with an estimate of quantity and tabulated below. The snails were very numerous in some samples which were scanned but not sorted, some shells were identified to genus level only (Macan and Douglas Cooper 1969, Kerney and Cameron 1979).

3.10.2 Results

Of the 11 samples, four contained numerous snails (samples 531, 532, 530 and 500) with over a hundred shells and four others with a moderate number over 50 shells (samples 529, 522, 523 and 520), the rest contained fewer shells (Table 31). Shells of the burrowing snail (*Cecilioides acicula*), which can burrow to depths 2 metres and so indicate modern contamination, were few in number suggesting that this was uncontaminated archaeological material. The snails were identified and found to belong to the following ecological groups (after Evans 1972), indicating the types of habitat in the vicinity of the ditches and pits.

Phase	**2**	**3**	**2**	**3**	**3**	**4**	**4**	**4**	**5**	**5**	**6**	
Landscape	**6**	**15**	**6**	**24**	**1**	**27**	**27**	**27**	**28**	**28**	**32**	
Group	**250**	**250**	**251**	**305**	**353**	**287**	**287**	**287**	**288**	**288**	**32**	
Sample	**531**	**529**	**528**	**532**	**625**	**522**	**523**	**530**	**500**	**520**	**586**	
Fresh Water (slum)												
Anisus leucostoma (Millet)	++	+	+	+++	-	-	++	+++	+++	+	++	
Lymnaea sp.	+	+	+	+	-	-	-	-	+	-	-	
Lymnaea truncatula (Muller)	-	-	++	+	+	-	+	+	+	+	-	

Phase	2	3	2	3	3	4	4	4	5	5	6	
Landscape	**6**	**15**	**6**	**24**	**1**	**27**	**27**	**27**	**28**	**28**	**32**	
Group	**250**	**250**	**251**	**305**	**353**	**287**	**287**	**287**	**288**	**288**	**32**	
Sample	**531**	**529**	**528**	**532**	**625**	**522**	**523**	**530**	**500**	**520**	**586**	
Fresh Water (slum)												
Marsh												
Carychium sp.	+	+	++	+	-	-	-	-	-	-	-	
Shade-Intermediate												
Trichia spp.	-	+	+	+	++	++	+	+	+	+	-	
Cochlicopa lubrica (Muller)	+	-	+	+	-	-	-	-	-	-	-	
Oxychilus sp.	+	-	-	+	++	-	-	-	-	-	-	
Cepaea sp.	+	-	-	-	-	-	-	-	-	-	-	
Helix aspersa (Muller)	+	-	-	-	-	-	-	-	-	-	-	
Clausilia sp.	-	+	-	+	-	-	-	-	-	-	-	
Disturbed ground												
Pupilla muscorum (Linnaeus)	-	-	-	++	-	-	+	-	+	-	-	
Open ground												
Vallonia spp.	-	+	+	+	+	++	-	-	-	-	-	
Burrowing												
Cecilioides acicula	-	-	-	-	-	-	-	-	-	-	-	
Indet apices	+	+	+	+	+	+	+	+	+	+	+	
TOTAL (apices)	100a	70a	30a	100a	50a	50a	70a	100a	200a	50a	30a	

Key: a = approximate number of snail shells.
Abundance: + = 1-9, ++ 10-50, +++ = over 50-hundreds.

Table 31: Quantification of molluscs

Water-snails included the dwarf pond snail (*Lymnaea truncatula*) and numerous shells of *Anisus leucostoma* were also found. Both are snails of water prone to drying known as slum conditions, and the latter snail is very common in ditches from prehistoric times onwards. The former snail is the intermediate host of the parasite which causes liver fluke in sheep and cattle and is known from pasture land.

Snails of an intermediate moist habitats were also found including *Trichia* spp., *Cochlicopa lubrica*, and broken apices probably of *Oxychilus* sp., with the former being very numerous. These with the banded snail *Cepaea* spp. of which shell fragments were found in some of the samples, indicate shaded, vegetated conditions in the ditches. Two shells of the garden snail (*Helix aspersa*) were also found (sample 531) which also indicates a habitat covered with vegetation, perhaps taller vegetation such as hedges providing shade, although this cannot be demonstrated here.

Other snails included *Vallonia* spp. which are snails of open ground, and *Pupilla muscorum* were present in small numbers in some of the samples, this

is a snail of disturbed ground, hence ditches in an open landscape is suggested where these snails are found.

3.11 Animal bone

3.11.1 Methodology

The total assemblage comprised 9376 specimens of which 33% was identifiable to taxon. The assessment of the material includes notes on preservation, species, the presence of butchery marks, burning, gnawing and pathological conditions; however, no details were recorded at this stage. Surface preservation was assessed for each bag on a 5-point scale while fragmentation was similarly scored on a 4-point scale. The potential of the assemblage to provide ageing and biometrical information has been assessed by reference to the numbers of measurable, fused and unfused bones and ageable mandibles. Efforts were made to identify the presence of articulated bones and any concentrations of particular bone elements or species. Species representation has been assessed using a simple fragment count of identified fragments, with no allowance for articulated material.

3.11.2 Quantity and preservation

A total of 70 boxes of hand-collected animal bones fragments weighing 162.810kg, were assessed. Seven percent of the assemblage was collected during the evaluation, while the vast majority (93%) was recovered during the excavation. Bones were also retrieved both through sieving of environmental samples and this material was scanned.

Although there was some variability in preservation, around 50% of fragments in most phases were considered to be in 'good' condition, while a slightly lesser proportion was considered 'average'. Only in Phases 1 and 10 were a significant proportion of bones in poor condition. The ratio of identifiable to undiagnostic bone can also provide an indication of condition and in this case there was little variation between the phases, with the exception of the very small assemblages from Phases 8 and 10; in all the major phases it was 30-37%. This is a fairly normal proportion for a rural site and suggests reasonable preservation of the bones.

3.11.3 Range and variety of species

Domestic species, particularly cattle and sheep/goat, dominated the assemblage in all phases (Table 32). Horse and dog also occur in most phases and the number of dog bones in particular has been boosted by the presence of several partial skeletons. Domestic fowl and goose bones are rare. Only a small number of wild species were present and these are primarily deer. Wild bird bones were observed in Phases 2, 3 and 4, including bones from a large raptor in Phase 5, which should be compared with white-tailed eagle. Only one fish bone was observed in Phase 3.

In one deposit of Phase 5 (L30), an unusual specimen was encountered, which the author tentatively suggests could be a fossil bone from the flipper of an ichthyosaur. Oxford clay formation was laid down in the Jurassic and is well-known for the richness of its fossils, so this would not be unlikely.

3.11.4 Provenance

The following provides a brief overview of the bones recovered from each phase and where articulated bones are present. The proportion of bones recovered from each phase varied but the largest assemblages were recovered from Phases 2, 3 and 4. Table 32 shows the number of species represented for each phase.

A preliminary assessment of the relative proportions of cattle, sheep and pig for the most prolific phases suggests that there is an increase in cattle relative to sheep in phases 3 and 4. Sheep numbers rise compared with cattle in phase 5. Pig bones were significantly less common in all the major phases.

	Phase										
	0	**1**	**2**	**3**	**4**	**5**	**6**	**7**	**8**	**10**	**Total**
Cattle	9	41	270	396	245	274	54	34	11	2	1336
Sheep/goat	13	12	261	187	102	342	18	20	2	1	958
Pig	2	3	71	53	46	27	4	1	1		208
Horse	2	11	18	59	19	97	36	2			244
Dog	1		94	118	20	2	37				272
Deer	1		3	2	3	7	1	1			17
Cat			9	2							11
Hare			1								1
Rodent							1				1
Fowl/goose			1	10	2	9					22
Bird			1	4		6					11
Fish				1							1
Total Identified	*28*	*67*	*729*	*832*	*437*	*764*	*151*	*58*	*14*	*3*	*3083*
Large mammal	43	138	627	1331	541	874	256	87	14	13	3924
Medium mammal	2	5	594	452	280	385	31	36		8	1793
Indeterminate	6		149	194	95	69	40	12		11	576
Total	79	210	2099	2809	1353	2092	478	193	28	35	9376

Table 32: Species represented in each phase

3.11.4.1 Phase 1: early-middle Iron Age

Bones were recovered mostly from unenclosed settlement L2. Roundhouse G7 produced the most material and some possibly articulated horse bones were observed in pit G474.

3.11.4.2 Phase 2: middle Iron Age

Twenty-two percent of the assemblage was recovered from Phase 2 features with over 2000 specimens, among which cattle and sheep/goat appear equally represented. Articulated bones were a mixture of partial skeletons and articulated carcass parts, which could represent butchered joints (Table 33).

Phase	Landscape	Group	Articulated
2	4	424.1	articulated sheep/goat humerus and ulna
		475	cattle radius and ulna
	6	251.1	partial dog skeleton
	7	4.3	cattle astragalus and tibia
		4.9	One mostly complete sheep/goat skeleton and bones representing at least one more sheep/goat.
		284.1	thoracic vertebrae and ribs.

Table 33: Articulated/associated bone groups in Phase 2

3.11.4.3 Phase 3: Late pre-Roman Iron Age

Phase 3 produced the largest assemblage of bones. A total of 2809 bone fragments were hand-recovered and articulated bones were noted in a small number of deposits (Table 34).

Phase	Landscape	Group	Articulated
3	22	261.2	articulated cattle bones
	24	252.4	dog limb bones, potentially a disturbed burial.
		252.4	articulated horse forelimb
		269.1	articulated vertebrae (large mammal)

Table 34: Articulated/associated bone groups in Phase 3

3.11.4.4 Phase 4: late Iron Age-early Roman transition

A total of 1353 specimens were recovered and articulated remains included part of a juvenile cow skeleton from an enclosure ditch G298.2 (L27).

Phase	Landscape	Group	Articulated
4	10	159.1	pair of horse pelves
	14	263.4	articulated pig ulna and humerus
		368	articulated lumbar vertebrae and sacrum
	27	268.6	cattle calcaneum and astragalus
		298.2	partial juvenile cow skeleton

Table 35: Articulated/associated bone groups in Phase 4

3.11.4.5 Phase 5: late 1st-late 2nd century AD

This phase produced over 2000 bone fragments in total**.** A group of sheep/goat metapodials and skull fragments possibly related to tawyering (i.e. dressing of leather) or butchery was noted in possible structure G651 (L29).

Phase	Landscape	Group	Articulated
5	29	651.1	sheep/goat metapodials and phalanges (MNI- 4) but only one skull represented.
		651.1	Similar deposit to 5438 but mostly skull (MNI=1)
		356	horse forelimb
		356	horse bones
		356	horse vertebrae (mostly cervical and thoracic)

Table 36: Articulated/associated bone groups in Phase 5

3.11.4.6 Phase 6: early 3rd- 4th century AD

Phase 6 produced less material than the preceding phases. However, the two largest groups of material were in ditches G295.1 and G296.1, each of which contained over 150 bones. A partial dog skeleton was noted in ditch G296.1.

Phase	Landscape	Group	Context	Articulated
6	16	295.1	5813	cattle phalanges
		295.1	5813	articulated cervical vertebrae (cattle)
		296.1	7294	partial dog skeleton- probable disturbed burial.

Table 37: Articulated/associated bone groups in Phase 5

3.11.4.7 Phase 7: early Saxon

In Phase 7, the assemblage was fairly evenly distributed across the settlement area. None of the groups are particularly large and the number of identifiable bones is fairly low (58 specimens). The only articulated bones observed during the assessment were a (possibly) articulated cattle radius and ulna in SFB G656.

3.11.4.8 Phases 8, 9 and 10: medieval, post-medieval and modern and un-phased material

A total of 18 bone fragments were recovered from furrows G720 (L18). There were no animal bones in Phase 9. A small number of bones (n=35) were recovered from modern deposits (Phase 10). The only un-phased material, numbering 79 fragments, came from G721 and G722 (vegetation and natural features).

3.11.5 Modifications

The incidence of butchery, burning, gnawing and pathological bones was noted. The majority of butchery marks observed were fine cut marks rather than heavy marks made with a cleaver or similar. It is therefore likely that some cut marks will have been obscured by later taphonomic damage, such as the exfoliation of the cortical surface. Saw marks were noted on a sawn metatarsal in Phase 3, a red deer antler from Phase 4 and a cattle horncore in Phase 6.

Burnt bones were rare in most phases. They were most common in Phase 4, where 6% of bones were affected; however most of these derived from a single grave in cremation cemetery L103 which contained calcined bones. Gnawed bones also occurred most commonly in Phase 4, where 5% of bones were affected, suggesting greater availability to dogs and other scavengers. , Between 1% and 3% of bones had been chewed by dogs in most of the larger phases.

3.12 Human remains

3.12.1 Methodology

Human remains were recovered from twelve cremation burials assigned to Phases 3 and 4 within ten graves and two inhumations assigned to Phase 5.

The assessment of the cremation and inhumation burials included the identification of age, sex and pathology. Cranial and post-cranial metrics, non-

metric traits and stature were not recorded due to fragmentation of the skeletal material. All cremated material was processed and divided into fragments sizes of 2-5mm, 5-10mm and 10+mm to aid analysis, after McKinley and Roberts (1993). The bones were then weighed and an inventory taken. References used during cremation analysis include: Bass (1995), Buikstra and Ubelaker (1994), Brickley and McKinley (2004), Brothwell (1981), McKinley (1994), McKinley (2000a), McKinley (2000b), and McKinley and Bond (2001). All fusion data within this report are based on Scheuer and Black (2000).

3.12.2 Results

3.12.2.1 Phase 3: Late pre Roman Iron Age

In Area 1 two cremation burials *c.* 50m apart were identified (both assigned to L1). These comprised cremation burial G352 which was un-urned and G353 which was curious because it contained two urns placed in the same grave. Burial G352 weighed 786g and represent a possible male aged 21+ years old. The urns within G353 contained 36g and 91g of cremated human bone, the latter represents a non-sexable adult aged 21+ years old.

3.12.2.2 Phase 4: late Iron Age-early Romano-British

Within Area 1, two cremation burials located 2.5m apart were identified (assigned to L35). G383 contained cremated remains weighing 278g and had no age or sex indicators with which to make an estimate. G384 comprised an urned cremation burial containing cremated remains weighing 455g and represent a non-sexable adult aged 21+ years old.

Cremation cemetery L103 in Area 2, south of Elstow Brook, comprised seven cremation burials within six graves. G377 was an urned cremation burial containing 574g of human bone and represent a possible male aged 21+ years old. Un-urned cremation burial G378 contained 485g of human bone and represents a possible female aged 17+ years old. Un-urned cremation burial G379 contained 805g of human bone and represent a possible male aged 17+ years old. A further 7g of residual human bone was also found.

Urned cremation burial G380 contained 1111g of human bones and represent a non-sexable adult aged 21+ years old. Two urned cremation burials were found in grave G381. Urn 20046 contained 801g cremated bone and represented a possible male aged 21+ years old. Urn 20074 contained 823g of cremated remains which represent a non-sexable adult aged 25+ years old. Finally urned cremation burial G382 contained 684g of human bones and represent a possible female aged 21+ years old.

3.12.2.3 Phase 5: late 1st-late 2nd century AD

Two supine inhumation burials, 2.5m apart, were located in Area 2 (assigned to L105). The westernmost burial G385 was orientated E-W with the head at the E end. It was in a fragmentary condition with less than 25% of the skeleton available for analysis. It is identified as a non-sexable adult aged 36+ years old. Inhumation G386 was aligned NW-SE with the head at the SE end. It was in a fragmentary condition with less than 25% of the skeleton surviving. It is identified as a possible female aged 36+ years old.

4. ANALYTICAL POTENTIAL OF THE DATA

4.1 Introduction

This section reviews the potential of each individual data-set to address the original research objectives (Albion 2009). Relevant information on quantity, spatial provenance, date and condition is provided.

The contextual data is discussed first, as they have provided the framework for the preceding summary of results and the subsequent artefactual and ecofactual data-set discussions.

4.2 Contextual data

4.2.1 Quantity of records

Table 38 presents a breakdown of the total quantity and type of contextual records. These comprise the written description/interpretation of a deposit/feature (context sheets), a map-like drawing showing the location and inter-relationships between features (a plan), a profile drawing through a feature and its deposits (section), and photographs.

Contexts	Plan Sheets	Sections	Photographic films
4298	266	1110	87

Table 38: Quantity of contextual records

4.2.2 Condition and analytical potential

The excavation areas, especially Area 1, contained extensive traces of furrows which are the result of ploughing in the medieval period. Ploughing of all periods has clearly truncated features to the extent that the upper parts and only a few small areas of layers survive. Despite this, the area contained abundant evidence for continuous settlement from the early Iron Age through to the late Roman period and stratigraphical relationships have enabled a sequence of development to be established (objective 2: settlement character and objective 3: development). In addition, in nearly all phases the entirety of settlements was investigated which enhances significantly the analytical potential of the remains.

The features in Area 2, to the South of Elstow Brook, contained evidence for early Iron Age, late Iron Age, Romano-British and early Saxon settlement. However, the features were less dense than in Area 1 and were probably located on the periphery of settlements. However, the presence of burials including a small cremation cemetery and the fact that part of the settlement core has been examined in earlier investigations means this area also has a significant analytical potential.

4.3 Pottery

Assessment of the pottery assemblage has established a chronological framework for the site extending from the early Iron Age to the post-medieval periods. The majority of the pottery is of late Iron Age and early Roman date. Early Saxon pottery comprises a small component of the assemblage; a hiatus

occurs after this period, and the remainder of the assemblage comprises negligible quantities of medieval and post-medieval pottery. The assemblage demonstrates variable potential to address objectives relating to settlement character and development (objective 2), chronology (objective 3), regional artefact studies (objective 5), and to a lesser extent methodological development (objective 6).

The small pottery assemblage datable to early-middle Iron Age Phase 1 has little potential for analysis.

The middle Iron Age assemblage, however, has good potential to address the project aims. The assemblage affords an opportunity to examine the continuity in use of middle Iron Age-type vessels into the late 1st century BC and early 1st century AD. Observations may then be usefully compared with other sites in the middle Ouse Valley, (for example Great Barford, Stagsden, Little Paxton, and within the Biddenham Loop), to enhance the regional picture of activity during this period. The assemblage also has some potential to help promote the development of a more standardised Iron Age type series, and assist in the clarification and/or refinement of the dating for Iron Age types. Attention has been drawn (Bryant 2000) to the lack of published examples of Iron Age pottery assemblages within the region which have been subject to full quantification and analysis, noting that the absence of quantified assemblages severely limits the degree to which intra- and inter-site comparisons can be made. Lack of suitable material has also hindered the dating of earlier Iron Age assemblages (*ibid*, 2000, 15).

The majority of the assemblage is late Iron Age or early Roman in date, and is primarily local in character. The assemblages are largely low-status and domestic, indicated by the basic, utilitarian types present, coupled with the relatively small amount of both regional and continental imports. The pottery assemblage can be usefully compared with other, smaller, assemblages found in Marston Moretaine eg Woburn Road (Connor 2000), the Millennium Country Park (Wells and Edwards forthcoming), Beancroft Road (Shotliff and Crick 1999). The limited size of these ceramic assemblages may, however, make it difficult to establish the nature of the relationship between the sites.

The Roman assemblage generally reflects the typical composition of assemblages from Romano-British rural sites in the Great Ouse Valley. This material can be usefully compared with these sites to place Marston Park in a local and regional context. Most of the assemblage comprises coarse wares, represented by a standard range of locally manufactured, reduced, sand-tempered wares and a smaller quantity of shell-tempered vessels. A comparison with known kilns and their products will throw light upon the distribution of these wares and help to determine economic activity in terms of marketing patterns. Study of functional evidence may indicate the nature of settlement and activity undertaken across the site. Any spatial variation noted may indicate chronological or functional differences within specific landscape areas. The presence or absence of particular pottery types may be an indicator of status and socio-economic development, and will provide evidence regarding trade networks and means of exchange.

The small early Saxon assemblage of 71 sherds (1.1kg) recovered from Area 2 demonstrates continuity from the Roman period, which is often absent from multi-period sites in the county. As a small assemblage, the material has potential to provide supporting evidence rather than to permit detailed analysis. Small assemblages are not without value; they can contribute to wider studies even if they cannot provide detailed evidence on a site level. The value of the pottery lies in its comparison with the sizeable early to middle Saxon assemblage recovered from adjacent excavations within the Millennium Park (Wells and Edwards forthcoming). The combined assemblages may then be usefully compared with other contemporary sites in the region, and will help to place the study area in a local and regional context.

Beyond the establishment of chronology, the small post-Saxon assemblage has no potential for analysis.

4.4 Ceramic building material

Beyond the assistance in establishing a site chronology, the small assemblage of Roman brick and tile has low potential to contribute to any of the research objectives. The presence of brick and tile is interesting, given that no masonry structures were present within the excavation areas. Assuming that brick and tile is unlikely to have travelled far from its original point of use, it can be inferred that the material derived from a building with a tiled roof and heating system in the vicinity. Such a building and associated settlement may have had a direct impact on the degree of wealth and status attainable by the occupants of the site.

Fired clay fragments weighing approximately 27kg were recovered mainly from late Iron Age and Roman deposits. Certain types such as daub or slabs may have derived respectively from wattle and daub structures and / or domestic ovens. Fragments of a perforated oven floor are interesting; as such items are not usually recovered in such quantity, or in such good condition. However, as all the material is redeposited and cannot be directly associated with the use of the features from which it was recovered there is, in general, only moderate to low potential for analysis.

4.5 Leather

Leather from rural settlements in Roman Britain is still quite rare with the majority coming from urban and military sites. Relatively little leather of Roman date has been found in Bedfordshire. The leather recovered from the Phase 5 waterpit G20 comes from a well-stratified deposit and it should be studied so that it can be added to the dataset of material being gathered from rural locations in southern Britain. The nailed footwear is characteristic of the widespread adoption of the Roman ‘taste’ and shows the extent of the adoption of Roman fashion in rural areas. The one-piece shoe may be compared with other shoes of this type with long fastening loops as it may be possible to find a close parallel but the styles of fastening loops on individual shoes are very varied.

4.6 Worked wood

Woodwork is very rarely found preserved on rural Roman sites even though it was an essential building material and fuel of their society. So the survival of

any material is important requiring 'preservation through record'. The small but diverse assemblage is clearly of local and regional importance as a sample of the type of woodwork carried out at rural Roman sites in the area and has the potential to address some of the research objectives. A small number of the worked items may also be of considerable wider importance in terms of rather specialised woodworking techniques employed in the making of decorative building elements, large joinery and ploughing equipment.

The predominantly modest size of the oak timber used appears to be of the later, rather than the early, Roman period. There is moderate potential to establish whether this is a valid chronological indicator (objective 3) on rural settlements once the analysis of the associated finds is completed. Due to the meagre quantities of pottery contained within the Phase 4 waterlogged features (pit G31 and sump pit G32) this potential is limited to Phase 5 water pit G20 and its successors (G20.2-G20.4).

The assemblage has good potential to add to the trees and woodland management or more properly 'woodmanship' of the Roman period (e.g. Goodburn 1995; Goodburn 2001). This multidisciplinary aspect of research has already shown how varied Roman Britain's wooded parts were, from high wildwood-type forest to intensively managed coppice and orchards. A general characteristic of the assemblage is that most of the timber is derived from small fast grown trees from managed woodlands or even hedgerows, and that it is clearly recycled extensively, even where stone might be used elsewhere. It is most likely that the small regular roundwood was of coppice or pollarded origin. This type of managed tree land is likely to have grown fairly close to the occupation sites and hence can contribute to compiling a picture of the local environment (objective 4). A study of the species present, number of annual growth rings and whether the species was fast or slow grown will indicate trees exploited and length of the growth before cutting, a key feature of the woodmanship methods then employed.

There is also some evidence of the tapping of more distant woodland for special purposes, such as the yew used for the plough share due to its hardness and strength; as yew is toxic to livestock this must have grown somewhere outside regular farmland, or at least have been fenced off. The radially split board used for the mill or vat lid came from a large oak which must have been around 1m in diameter at chest height and probably derived from wildwood type woodland, known to have existed in pockets over much of Roman Britain as evidenced by the timbers derived from it.

The study and research of the probable plough share (timber 7224 Phase 4 pit G31.2), the reused building and joinery timbers present in deposits of both Phases 4 and 5, the moulded timber fragment (timber 7339 Phase 5 waterpit G20.4), the large semi-circular possible millstone or vat lid (timber 7505 Phase 5 G20.2), the possible elm yoke rough-out (Phase 5 G20.1) and finally the enigmatic, fine box base(?) (timber 7449 Phase 5 G20.2) has good potential to contribute to regional and national artefact studies (objective 5). Dependent upon the results of this work the potential may exist to provide supporting evidence for the settlement's economy during Phases 4 and Phase 5

(objectives 2 and 4); the possible iron shod plough share and yoke suggesting an agricultural focus.

4.7 Coins

Although relatively small, the coin assemblage could contribute to research objectives 2, 3 and 5. A comparison of the Roman assemblage could be made with other groups from Romano-British rural sites in the region and a discussion of the coins' archaeological context, concentrating on the nature of the deposits from which the coins were recovered may be useful.

4.8 Other artefacts

The Other Artefacts assemblage has potential to directly contribute to three of the original objectives; settlement character and its chronological, spatial and economic development (objectives 2 and 3) and regional artefact studies (objective 5). The extent of this potential however varies between phases. The Phase 1 assemblage has no potential to contribute to any of the objectives, being confined to a residual flint and burnt stone. The assemblages from Phases 2 through 7 have moderate potential to contribute to these objectives while the assemblages from Phase 8 onwards have no potential.

From the middle Iron Age onwards, there is evidence of small scale craft activity, in particular metalworking and textile working in Area 1. There is evidence from Phases 3, 4 and 5 indicative of small-scale smithing on a domestic level to meet the occasional needs of the inhabitants.

Textile working is attested in Phase 2 by the presence of a spindle whorl, and weaving was undertaken in the late pre-Roman Iron Age (Phase 3), and late Iron Age – early Roman period (Phase 4). The absence of textile working implements in the Roman period could suggest a shift away from a home-based craft, presumably in favour of traded or purchased goods. Secure evidence for a home-based textile production does not reappear until the Saxon phase.

During the Iron Age and Roman periods a substantial proportion of tools and implements were made of iron. However, the poor state of preservation and incomplete nature of most of the ironwork does lower the potential of the assemblage to contribute to understanding of the site economy. The evidence for grain processing, textile and iron-working from Iron Age deposits suggests that the settlement was probably mixed farming with small scale, home-based crafts undertaken to meet the needs of the occupants. The stone artefacts do indicate at least a degree of access to markets or trade links outside the local region, the small number of stones from different source areas would suggest these links were not exclusive or constant. The brooches from the late Iron Age/ transitional early Roman period cremation cemetery in the area south of Elstow Brook (L103) and the Hod Hill brooch from L27 from north of the Elstow Brook also attest to access to markets and suggest a degree of disposable wealth. Comparison with brooches from other sites has good potential to contribute to both regional and national artefact studies.

The assemblage from Phase 5 contains a wider range of imported or purchased goods, including the first instances of glass vessels and leather shoes. The

shoes, combined with the hairpin from L30, indicate at least some of the inhabitants were willing to adopt aspects of Roman style of dress. There is also an increased occurrence of iron items which suggests that these were more readily available/affordable. Seven querns/millstones were recovered, three are bun-shaped, and probably relate to activities in Phase 4. Of the four other examples, of Millstone Grit and lava, two were either large querns or small millstones (diameters from 600-610mm) and one a sizeable upper millstone (diameter 840mm) which may have had some form of turning mechanism. This might suggest that grain processing at Marston Park catered for more than the needs of its inhabitants.

The absence of querns and millstones from Phase 6 deposits suggests a change in use or a shift in location for this activity. There are few closely dated Other Artefacts from this phase and the presence of an earlier Roman hair pin indicates some residuality.

Saxon activity (Phase 7) was restricted to Area 2 and although the assemblage is small it does attest to settlement and small scale textile working. The potential of this assemblage lies in the comparison with the larger assemblage of finds of early to middle Saxon date recovered from the adjacent excavations at the Millennium Park (Wells and Edwards forthcoming). The latter assemblage included not only further evidence of textile working, but also items of dress, toiletry and a spearhead. Prior to the Millennium Park excavations no evidence for early-middle Saxon activity had been found in the area; the additional evidence provided by the Marston Park investigations is therefore of importance.

4.9 Charred plant remains

The samples have good potential to provide information about the activities undertaken on the site. Samples derived from all the Iron Age and Roman phases so it should be possible to examine change and continuity over time. Some development seems to have occurred during the Iron Age but certainly the abundant remains from the Roman period suggest the development of agriculture and possibly agricultural expansion perhaps starting in Phase 4.

The distribution of remains on the site in each phase indicates some areas of domestic activity and some areas with cereal processing but the differences between phases seem to show greater variation than within phases. Consideration of the plant remains results together with the waterlogged remains and snails should assist in defining some pastoral activity in areas of the site. Some considerations about the diet and economy of the site will also be possible.

Most samples contained only tiny fragments of charcoal or flecks too small for identification. The samples with more abundant charcoal are recorded as xx and xxx on Table 29. Samples with abundant charcoal, such as the Phase 3 cremations, will enable the wood exploited to be identified.

There are sufficient productive samples to analyse at Marston Park to define crop processing activities and agriculture. It will be possible to compare the results with the early-middle Iron Age and late Iron Age/Roman settlements

within the Biddenham Loop (Pelling 2008; Giorgi in prep) and Marsh Leys (Robinson 2011). It will be possible to compare the results with sites which have a lower density of remains e.g. Great Barford (Monckton 2005), Brickhill (Hill 2008) and Whitsundoles Farm (Monckton 2009). In addition there is more abundant evidence in the late Iron Age/Roman periods at Stratton and Beauford Farm, Biggleswade (Hill 2006, 2007). Comparison with other local Roman sites (e.g. Timby et al. 2007) will be possible.

4.10 Molluscs

Analysis of these remains can provide information on the site environment and local land use (objectives 2 and 4). . However, they do not show change over time and the range of species is restricted.

4.11 Animal bone

The animal bone assemblage has the potential to address several of the research objectives. The hand-recovered bones number over 9000 specimens, with further material available from the sieved samples. Although the quantity of identifiable specimens only equates to a third of the total bones, this is still over 3000 bones - well in excess of the 300 suggested as a minimum for reliable analysis (Hambleton 1999).

The excavation area is of sufficient size to help address questions regarding the function of particular features, the location of activities such as butchery and consumption and disposal of waste (objective 3). Therefore time should be allowed to explore any potential spatial variations in the assemblage. Articulated bone groups have been identified in most phases and can indicate where fills have been less disturbed. In terms of interpretation, they may potentially provide evidence for joints of meat, natural mortalities and ritual activity.

Looking at a wider perspective, the animal bone can contribute particularly to objective 4. The bones will provide information on livestock raised and consumed on or near the site. It is also possible to consider the exploitation (or otherwise) of wild animals, which may give an indication of how the settlement interacted with the surrounding area.

Excavations in the county have resulted in a number of comparative sites, which will help place the current assemblage in its regional and temporal context. For the Iron Age, these sites include Stagsden (Roberts 2000) and a recent assemblage from Fairfield Park, Stotfold, which is the largest yet recovered from Bedfordshire (Holmes 2007a), as well as multi-period work on the A421 Great Barford bypass (Holmes 2007b) and an Iron Age and Roman landscape at Biddenham Loop (Maltby 2008).

The extent to which ‘Roman’ practices are reflected in rural settlements requires exploration (Dobney 2001, 43). One of the particular values of the material is the fact that it spans the Iron Age and Roman transition and offers an opportunity to investigate whether the Roman occupation had an effect on the diet and husbandry practices at the settlement. This could be assessed through comparison of Iron Age and Roman butchery practices; Roman butchery characteristically involves systematic chopping of bones (Dobney

2001, 40), while in the Iron Age knives are preferred and carcasses were careful disjointed. Initial analysis may suggest that the Iron Age style was more prevalent. Preliminary examination of the relative proportions of cattle, sheep and pig suggest a fluctuating, but possibly atypical pattern. Sheep are common in the middle Iron Age deposits, but in the late Iron Age and transitional period there is an increase in cattle, while sheep become the most important domestic animal in the Roman period (Phase 5). Most Roman sites see an increase in cattle through the period, so this is likely to be a trend worth exploring. Information on numbers of mandibles and ageable teeth, fused and unfused and measurable bones suggest that exploration of herd structures and husbandry might be limited in some phases, especially for pigs, although the presence of both adult and juvenile animals has been identified.

Avenues of particular interest in Roman zooarchaeological studies include tracking an increase in livestock size, especially for cattle, which has been observed at some Roman sites, but for which appropriate measurement data is often lacking (Dobney 2001, 38-39). This size increase may be an indication either of imported animals or breeding to produce a higher meat yield. While there are few whole bones at Marston Park, the use of the breadth and depth measurements of articular ends will produce a larger and more informative dataset. Unfortunately, small assemblage sizes for the later phases may make it difficult to follow these trends in the later Roman period.

The assessment has provided a crude indication of the composition of the assemblage, including species proportions, which can be used to highlight phases with the greatest potential for further analysis. This preliminary work suggests the rich assemblages of the Iron Age and Roman periods should be prioritised. The bones from Phases 2, 3, 4 and 5 therefore have the greatest potential to elucidate the nature of husbandry, diet and the role of animals at the site and analysis may also aid in the interpretation of individual features. Phases 1, 6 and 7 have less potential to explore husbandry but it would be desirable to include them in analysis, to obtain useful measurements and as particular features may be of interest.

4.12 Human remains

The human remains consist of bone recovered from twelve cremation burials (L1, L35 and L103) and two inhumations L105 (Table 39).

Phase	Landscape	Group	Wt (g)	Type
3	1	352	786	Un-urned
		353	36	Urned
			91	Urned
4	35	383	278	Urned
		384	455	Urned
	103	377	574	Urned
		378	485	Un-urned
		379	805	Un-urned
		380	1111	Urned
		381	801	Urned
			823	Urned
		382	684	Urned
5	105	385	n/a	Inhumation
		386	n/a	Inhumation

Table 39: Human bone recovered

Three cremations are assigned to Phase 3 and nine to Phase 4. An unusual occurrence is the apparent presence of two urns in two separate graves and the bones from these will need detailed examination to determine if they represent the same or two different individuals. The cremation burials contained small to moderate quantities of bone fragments. The two inhumations assigned to Phase 5 (L105) are fairly badly preserved being 25% complete. However, all of the material has the potential to address research objectives in relation to the regional pattern of Iron Age and Roman burial practices.

4.13 Summary of potential to address the original research objectives

Objective	Contextual	Pottery	Leather	Wood	Other Artefacts	CPR	Mollusc	Animal bone	Human remains
1. Accurate record archaeological remains	High	Medium	Medium	Medium	Medium	Medium	Medium	Medium	Medium
2. Settlement character and development	Medium	Medium	-	Medium	High	Medium	Medium	-	-
3. Chronology	Medium	High	Medium	Medium	High	Medium	-	Medium	Medium
4. Environment	Low	-	-	High	-	High	Medium	High	-
5. Regional artefacts studies	Medium	High	High	Medium	High	-	-	-	Medium
6. Methodological development	Low	Low	Low	Low	Low	Low	Low	Low	Low

Key

High	Data-set contains high quality, significant material, which can expand knowledge in this area.
Medium	Data-set contains moderately significant data, which is relatively standard for this chronological period and region.
Low	Data-set is of only minor relevance to the research objective or may help to add to a database of 'less significant evidence' which, when combined, is useful in recognising patterns, *e.g.* pottery assemblages, settlement types *etc*.
-	Data-set has no potential to provide useful information on this subject.

Table 40: Potential of recovered datasets to address the original research objectives

5. RESEARCH OBJECTIVES FOR ANALYSIS

5.1 Introduction

The following section discusses the research objectives for analysis based on the assessment of potential of the data-sets. They incorporate the original objectives with the exception of 1 and 7. Analysis will only take place on data-sets from the Iron Age, Roman and early Saxon periods as these have the potential to address local, regional and national research objectives. The discovery of burials and the potential presence of 'unusual' deposits means that a new objective has been added for Religious and Ritual (Objective 7). The nature of the data-sets means that another new objective has been added for 'Status' and 'Romanisation' of the inhabitants (Objective 8). Each of these objectives is briefly discussed below.

5.2 Settlement character (Objective 2) and chronological development (Objective 3)

It has been possible to establish a chronological sequence from the early Iron Age through to the post-medieval period. Area 1 contained a settlement which appeared to be continuously occupied from the early Iron Age through to the 3rd century AD. The evidence from Area 2 is more restricted because of the limited extent of the investigation area, but sufficient evidence was found to suggest it was located on the periphery of early Iron Age, late Iron Age/Roman and early Saxon settlements.

Such continuity of settlement between the Iron Age and Roman period is rare in the Great Ouse valley (Williams 1993, 213; Dawson 2000, 122) and even further afield such as within the Thames valley (Hingley and Miles 1984, 65). While the chronological sequence established for Marston Park will not change dramatically it is hoped that artefact analysis in conjunction with contextual analysis will enable the dating to become more precise. The latter is particularly important in a number of specific cases where the evidence is different from that found elsewhere (major ones mentioned below).

During the early-middle Iron Age (Phase 1), both Areas 1 and 2 were occupied by unenclosed settlement activity. These types of settlement are under-represented in the archaeological record and sites of this period have a high research priority (Haselgrove *et al*. 2001, 31). By the middle Iron Age (Phase 2) the settlement in Area 1 is enclosed within a large polygonal ditched enclosure. The enclosure contained a number of roundhouses, some with internal features such as hearths, a water pit and a range of other features. The ditched enclosure was maintained into the late pre Roman Iron Age (Phase 3) and an outer ditch was added. The layout and size of the settlement enclosure in both its original and revised form is particularly unusual. Nationally it has some similarities to the well-known Mingies Ditch, Oxon. (Allen and Robinson 1993). However, another similar enclosure was found nearby within site 4 of the A421 dualling investigations (Oxford Archaeology in prep.) leading to the possibility that this was a very local-specific form of settlement.

At Marston Park a number of roundhouses were identified defined by gulleys which may have served a drainage or structural function. Slightly unusually for

sites under modern arable cultivation internal features within the roundhouses survived including hearths and thus it is possible that the internal arrangement of some of them will be identified. The long and narrow entrance into the domestic a sub-enclosure in Phase 3 is unusual and no comparisons have yet been found in Bedfordshire. Elsewhere within the larger enclosure were possible post-built structures, water pits and a range of other features.

A major change in the character of the settlement too place in the late Iron Age/early Roman period (Phase 4). The polygonal enclosure went out of use and is replaced by a more rectilinear 'ladder' enclosure system. Within the wider region significant layout changes, including the creation of more extensive enclosure systems, have been identified but they usually occur in the late 1st century AD, (Williams *et al.* 1996, 83) or more rarely in the mid 2nd century AD *e.g.* Marsh Leys (Luke 2011, 141-2). Based on the present dating evidence the change at Marston Park could have began before the Conquest and therefore a key objective of analysis will be to establish better precision for this transformation. In contrast to the layout of the earlier settlements the domestic activity within the 'ladder' system appeared to be dispersed over a larger area.

Another major change in layout took place in the late 1st-late 2nd century AD (Phase 5). The settlement appears to have contracted and been located within a single sub-oval enclosure defined by large ditches with integral trackway. As mentioned above the majority of settlements at this time existed within rectilinear enclosure systems, so this is a curious development. A large water pit, redug on a number of occasions, was located within the enclosure.

Based largely on the absence of an obvious domestic focus and 4th century pottery it seems likely that the settlement had either been abandoned or shifted location to outside the excavation area by the end of the 3rd century. The reduction in the number of rural settlements from the early 4th century has been observed at a number of sites in the vicinity e.g. Marsh Leys (Luke 2011, 142), Biddenham Loop (Luke 2008, 56). Establishing when the 'end' happened will be a key part of the analysis although the problems of dating once coin supply ceases and large scale pottery production ends are well known.

No evidence for early Saxon (Phase 7) was found in Area 1, but it is clear that Area 2 was located over the periphery of a settlement. This comprised several sunken-featured buildings, post-built structures and pits. It is likely that the core of the settlement was to the south and has been partially investigated within the access road for the Millennium Country Park (Wells and Edwards forthcoming).

5.3 Economy and environment (Objective 4)

In terms of the economy the charred plant remains and animal bone assemblages from Iron Age and Roman phases will help characterise the nature of the mixed farming regime undertaken by the inhabitant of the settlements. Once analysed, the data will also enable changes through time to be identified. The nature of the charred plant remains and presence of quern/millstones demonstrate that crop processing was taking place within the settlement. The presence of one sizeable upper millstone suggests that grain processing at Marston Park catered for more than the needs of its inhabitants

and this possibility will be considered during the analysis of the charred plant remains. The spatial distribution of this evidence should enable areas where processing were undertaken to be identified. Based on the animal bone evidence it may also be possible to identify areas where butchery took place. The animal bone assemblage in general will reveal the type of livestock raised and consumed on the site as well as providing information on the exploitation of wild animals. As the charred plant and animal bone assemblages span the Iron Age and Roman transition once analysed the data will enable changes in the diet and farming practices of the inhabitants to be identified.

Evidence for craft activities are notoriously difficult to identify without structural remains like kilns and furnaces. However, there is sufficient information to suggest that small scale metalworking and textile working was being undertaken within the settlements. It may be possible to identify the location of such activity but whether it was undertaken by the actual inhabitants or itinerant craftsman is difficult to determine. Given the proximity of the Oxford Clay, a good source for pottery production, it seems odd that no firm evidence for pottery manufacture was identified. There is some oven/kiln furniture but this can be used in domestic and crop drying ovens. The detailed examination of the pottery assemblage will reveal whether pottery wasters are present.

Some information is available from the charred seeds, waterlogged samples, animal bone and molluscs for the local environment and land use. The assemblage of worked wood has the potential to contribute to the understanding of the environment and the management of the surrounding woodland.

5.4 Regional artefacts studies (Objective 5)

Pottery, in particular, has been used to characterise the status of sites (Evans 2001) and when fully quantified, the assemblages will have the potential to determine the status, cultural associations and access to markets of the inhabitants (see below). The middle Iron Age pottery in particular has some potential to help develop a more standardised Iron Age type series and assist in the refinement of the dating for Iron Age types.

The other artefacts of significance for regional artefact studies are the leather shoes and woodworking evidence from the Romano-British waterpits. Metallic artefacts such as the brooches have good potential to contribute to both regional and national artefact studies.

5.5 Methodological development (Objective 6)

It would be useful to examine any major shortcomings of the evaluation and the lessons learnt during the open area excavation, but based on the assessment this will not be significant part of the publication.

5.6 Religion and ritual (New Objective 7)

The majority of the firm evidence for ritual and religion associated with the inhabitants of the settlements derives from the fourteen formal human burials. They include late Iron Age/early Roman cremation burial including a small cemetery and later Roman inhumations reflecting the change in practice which occurred in the 2nd century AD. The grave goods associated with the cremation

burials were variable e.g. with/without urns, with/without pottery accessory vessels, with/without metallic grave goods. Of particular interest is the presence of two urns in two separate graves which is an unusual practice and will need to be examined in more detail. While the discovery of burials on Romano-British rural settlements is not unusual eg Marsh Leys (Luke 2011, 158-9) given the extensive scale of the investigations at Marston Park the low number is perhaps surprising and the reasons for this need to be considered during analysis. The actual burial practices and ways they changed over time will reveal much about the beliefs of the inhabitants of the settlements.

A number of partial animal skeletons were identified during the assessment. Analysis of these will concentrate on trying to determine whether these are debris from butchery or ritual depositions as observed on other sites.. It has long been recognised, especially in Iron Age studies, that certain deposits may be associated with ritual activity rather than representing random dumps of rubbish (Fulford 2001; Hill 1995; Cunliffe 1992). Consideration will therefore also be given during analysis to the deposits containing unusually large quantities of finds.

5.7 'Status' and 'Romanisation' of the inhabitants (New Objective 8)

Some evidence for the 'status' of the inhabitants of the Marston Park settlements can be derived from the contextual, artefactual and ecofactual data-sets. However, such evidence is never particularly clear-cut and cannot be directly equated with particular types of rural settlement (Taylor 2001, 50; Hingley 1989, 159–61). To some extent, the evidence discussed below for 'status' is inextricably linked to the occupants' adoption of Roman culture and the two may not necessarily be directly linked.

In terms of contextual data the switch from roundhouses to rectangular could represent 'the desire of individuals or families to acquire symbols of wealth and civilization' (Hingley 1989, 34). Unfortunately while there is plenty of evidence for roundhouses as is so often the case that for rectangular buildings is less obvious. Therefore, the identification or the latter will be a key objective of the contextual analysis.

The regional and continental components of pottery assemblages have sometimes been used to elucidate site status. The majority of the pottery assemblage is late Iron Age/early Roman and is primarily local in character and may therefore indicate a largely low-status. However, the transitional nature of the date of much of the assemblage makes it important in determining to what extent, and at what date, 'Romanisation' penetrated to the native rural population and how long native traditions continued alongside the Roman.

The presence of leather shoes shows an adoption of one element of Roman fashion. While not unknown such an occurrence on a rural settlement is significant because most of the evidence comes from urban and military sites. The presence of brooches from the late Iron Age attests to access to markets but also a degree of disposable wealth. They, along with the hairpin, indicate at least some willingness to adopt aspects of Roman styles of dress.

6. UPDATED PROJECT DESIGN

6.1 Introduction

The data sets from the Marston Park investigations have the potential to contribute to a number of regional and national research objectives. On this basis analysis and publication of the results is recommended.

The following sections present an Updated Project Design outlining the nature of the analysis and publication, project team and timetable. Detailed method statements are presented in Appendix 1.

6.2 Computer-based system of analysis

Albion operates a fully integrated computer-based system of analysis. All structural, artefactual and ecofactual information is entered onto an Access database. Feature/deposit plans are digitised using AutoCAD and all section drawings are scanned using a HP Scanjet. The databases and digital drawings are interfaced via a GIS system (Gsys) allowing all chronological, spatial and material groupings (and any combination thereof) to be viewed and manipulated. In addition all the site photographs are held in a digital format, allowing them to be viewed on screen with database records and digital drawings.

The system enables rapid and flexible analysis of the project data sets. It also facilitates the output of a series of text reports, supported by plan and other graphic forms. These will form the basis for the final publication report.

6.3 Final contextual hierarchy

The underlying framework for the analysis and subsequent publication of all data sets is the contextual hierarchy. Although this has bee created for the assessment stage and is used in this report, it will require refinement based on any anomalies and key issues identified during the assessment. In addition, detailed textual descriptions will need to be added for each hierarchical element.

6.4 Publication

The precise format of publication is uncertain as it is possible an Albion monograph series may exist by the time a publication draft is ready. All publication work will be undertaken to the standards and formats used in the *East Anglian Archaeology* monograph series. They are the preferred alternative publisher and have been responsible for a number of similar pieces of work by Albion e.g. Baldock Bypass (Phillips 2009), Biddenham Loop (Luke 2008).

The contextual hierarchy will provide the chronological structure for the site narrative. Within each Phase, text will be organised by Landscape and Group, with artefactual and ecofactual information integrated into the text as appropriate. The level of detail presented will be commensurate with the significance of the results e.g. roundhouse will be described in detail whereas small pits of uncertain function containing few finds will not.

The following publication synopsis sets out indicative word and figure counts.

Section 1: Introduction

Summary
Introduction

- Project background
- Topographical context
- Archaeological context
- Investigation methodology
- Layout of report

Approx. 4 pages and 4 figures

Section 2: Results in chronological order

- Early-middle Iron Age unenclosed settlement
- Middle Iron Age enclosed settlement
- Late pre Roman Iron Age settlement
- Late Iron Age-early Roman settlement
- Late 1st-2nd century AD settlement
- Early 3rd-4th century AD field system
- Early Saxon settlement
- Pottery
- Leather
- Worked wood
- Other artefacts
- Charred and waterlogged plant remains
- Animal bones
- Human remains

Approx.70 pages and 30 figures

Section 3: Discussion

The project's contribution to the research themes will be discussed with reference to comparative local sites.
Approx. 12 pages and 10 figures

Section 4: Bibliography

Approx. 4 pages

6.5 Archiving

The site archive is currently held at offices and stores of Albion Archaeology in Bedfordshire. On publication of the final report the archive of materials (where relevant, subject to the landowner's permission) and accompanying records will be deposited with Bedford Museum under accession number BEDFM 2009.60. This will be undertaken in line with MoRPHE (English Heritage 2006) and other relevant national standards.

The site archive currently comprises the elements listed in Table 41. It will increase in size with quantification of records and specialist reports, once these have been undertaken as part of the analysis programme.

Component	Quantity	Format
Management records	tbc	A4 folders
Contexts record sheets	4,298	A4 sheets
Section drawings	1,110	Permatrace sheets
Plan drawings	266	Permatrace sheets
Photographs	87 films and 7,584 images	Various
Pottery	8,092 sherds (160kg)	Cardboard boxes
CBM	39 fragments (4.5kg)	Cardboard boxes
Fired clay	605 fragments (27kg)	Cardboard boxes
Other artefacts	159	Plastic boxes
Inhumations	2	Cardboard boxes
Cremations	12	Cardboard boxes
Animal bone	9,376 fragments (162kg)	Cardboard boxes
Shell	67 fragments	Cardboard boxes
Ecofactual record sheets	134	A4 folders
Ecofactual flots and residues	54	Cardboard boxes
Database	1 relational Access	Digital
CAD drawings	1 all features	Digital

Table 41: Site archive components

6.6 The Project Team

Where possible the project team will comprise the individual who contributed to the assessment (Table 42). If changes are required the CAO will be informed.

Task	Organisation, Title and Name	Initials
Project executive/general editor	Mike Luke (Albion)	OM
Contextual	TBC (Albion)	PO
Ceramics	Jackie Wells (Albion)	FO
Leather	Quita Mould	QM
Other artefact	Holly Duncan (Albion)	AM
Worked wood	Damian Goodburn	DG
Animal bone	Jennifer Browning (ULAS)	JB
Plant remains	Angels Monckton (ULAS)	AM
Human remains	Harriet Jacklin (ULAS)	HJ
Molluscs	Angela Monckton (ULAS)	AM
Structural Illustration	Joan Lightning (Albion)	Ills
Archiving	Helen Parslow (Albion)	AO

Table 42: The Project Team

6.7 Timetable

6.7.1 Introduction

Following acceptance by the client and AO of the assessment and updated project design, Albion would like to proceed rapidly with analysis and publication of the results. This would minimise any loss of project momentum. Table 43 summarises the five key stages within the analysis and publication programme.

Detailed method statements, with task numbers are provided in Appendix 1.

6.7.2 Project review points

Table 43 sets out the six key stages or project review points (English Heritage 2006) within the analysis and publication programme. At each of these stages a project review document will be produced. These key stages and associated documents could serve as appropriate major monitoring points, if required.

Completion of	Description	Task no.	Time
Key stage 1	Quantification of data-sets and establishment of final phasing	Up to 208.12	**6 months**
Key stage 2	Analysis and specialist reports	Up to 208.27	**6 months**
Key stage 3	Editing and integration of specialist reports	Up to 208.28	**6 months**
Key stage 4	Completion of first draft of publication	Up to 208.30	**6 months**
Key stage 5	Circulation for comment and subsequent amendments	Up to 209.04	*
Key stage 6	Publication and archiving	Up to 210.02	*

Table 43: Provisional timetable to complete the project

*timescale out of Albion's control

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8. APPENDIX 1: METHOD STATEMENTS FOR ANALYSIS, PUBLICATION AND ARCHIVING

8.1 Analysis of contextual data

8.1.1 Liaison (Task 208.01)

On going discussion will take place between the principal members of the project team throughout the analysis and publication stages. These will involve discussion over the nature of the work required, commissioning of the work and addressing any queries that come up during the course of the project.

8.1.2 Subgroup and group analysis (Task 208.07)

Each context will be assigned to a Subgroup, consisting of one or more contexts that are closely related both stratigraphically and interpretatively. The Subgroup represents a single event determined by analysis of the primary contextual information, specifically context sheets and section drawings that were produced on site.

The subgroups will be assigned to Groups. These larger entities represent groups of chronologically and functionally related features, e.g.

- Pit groups
- Single features
- Enclosure ditches
- Furrows

When assigning contexts to Groups, the artefactual and ecofactual assemblage recovered from each context will be considered. This will identify any that contained significant assemblages which may need to be referred to in detail in the descriptive section of the publication text. Such contexts will be separated out at Group level.

The Group allocation for each context will be entered into the contextual database table. A Group text will then be written directly into the Group database table so that it can be easily accessed. The text will contain a factual, descriptive section as well as an interpretative section, setting out the rationale behind the definition of the Group. It will form the basis for any detail required in the descriptive section of the publication text. It is not envisaged that Group plans will be routinely produced, but this information will be available via the relational database tables.

8.1.3 Landscape and phase analysis (Task 208.11)

Any contexts which have limited or no further analytical value (*e.g.* features/deposits of geological origin) will not be subject to any further analysis. Each remaining Group will be assigned to a single Landscape representing a higher level of interpretation. Where the archaeological remains were complex it is likely that the Landscapes will comprise multiple Groups of chronologically related activity within a single area of the site. The Landscapes will form a unit for analysis for developments within individual site areas. In

areas where the archaeology was comparatively simple it is likely that some Landscapes will comprise a single Group.

The assessment of the data suggests that the Groups will be assigned to Landscape types including:

- ‘Significant’ ditched enclosures
- Domestic focus
- Field systems
- Cemeteries

The Landscape allocation for each Group will be entered into the Group database table. A Group text will then be written directly into the Landscape database table, so that it can be easily accessed. It will contain a descriptive section as well as an interpretative section. A plan will be produced for each Landscape, with the location of all relevant Groups marked.

Any Landscapes which have limited or no further analytical value (*e.g.* features/deposits of unknown date) will not be subject to any further analysis. The Landscapes will be assigned to a higher level of interpretation known as a Phase, which may contain one or more Landscapes. The Phases will be assigned on a site wide basis, each Phase representing the sum total of archaeological remains at a given stage in the site’s development.

The Phase allocation for each Landscape will be entered into the Landscape database table. A Phase text will then be written directly into the Phase database table so that it can easily be accessed. It will contain a descriptive section as well as an interpretative section, and will form the basis for the site narrative section of the publication text. A plan will be produced for each Phase, with the location of all relevant Landscapes marked.

The completion of the Phase analysis represents a key stage in the analytical programme, and is the precursor to the production of publication text and illustrations.

8.1.4 Final phasing/publication liaison (Task 208.12)

Once the final phasing has been established, the artefact and ecofacts specialists will be informed. They will receive detailed phasing information, the required format of their publication text, and any other information that they may require.

8.1.5 Site narrative text (Task 208.13)

The site narrative will form the basis of the descriptive section of the publication text. It will be organised by Phase and, where appropriate, Landscape and Group.

8.1.6 Illustration mockups (Task 208.14)

The digitised plan and section data will be interrogated via the relational database tables to produce mock-up publication illustrations. Plans will be produced to show all features in each Phase with Landscapes and Groups identifiable.

8.2 Analysis of pottery and ceramic building material

8.2.1 Quantification and recording of pottery (Task 208.08)

Pottery will be laid out in context order. Pottery will be quantified by minimum vessel and sherd count, and weight. Fabric identifications will be in accordance with the Bedfordshire Ceramic Types Series, currently maintained by Albion Archaeology. All attributes such as decoration, evidence of function (sooting, wear marks etc.), and manufacturing techniques (firing characteristics *etc*.) will be recorded. All quantified data will be entered on to the relevant table within the site database. An assemblage of samian pottery will be analysed by an external specialist.

8.2.2 Quantification and recording of selected CBM (Task 208.09)

Ceramic building material, restricted to fired clay associated with structures and oven/kiln furniture, will be laid out in context order. It will be quantified by fabric count and weight. Fabric identifications will be in accordance with the Bedfordshire Ceramic Types Series, currently maintained by Albion Archaeology.

8.2.3 Production of technical text for pottery (Task 208.16)

A detailed description will be produced of the pottery recovered, including fabric and form definitions.

8.2.4 Phasing/publication liaison (Task 208.12)

See contextual data analysis section

8.2.5 Pottery and CBM publication text (Task 208.16)

A specialist text will be produced summarising the pottery assemblage within appropriate chronological periods by fabric type, forms, 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.* Landscapes and Groups, will be discussed.

8.2.6 Pottery illustration (Task 208.17)

Illustration of the pottery selected for inclusion in the technical text will be carried out by the illustrator, in consultation with the finds officer.

8.3 Analysis of leather (b), coins (c) and wood (d)

8.3.1 Identification and recording (Task 208.10)

Re-examination of the shoes and wood from the waterpits to provide additional information. Consideration given to aspects of tree resources and woodworking technology used, with partial reconstruction of the tool kits employed and origins of the woodwork elements. Working drawings should be made to help aid the required illustrations. Coins will also be briefly re-examined using the x-rays.

8.3.2 Publication text (Task 208.22)

The text will be ordered by phase.

8.4 Analysis of other artefacts

8.4.1 Narrow term identification (Task 208.10e)

Each object will be assigned a narrow term, and where applicable, a date range. This 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

Full catalogue descriptions will be entered onto the project database.

8.4.2 Phasing/publication liaison (Task 208.12)

See structural analysis section.

8.4.3 Other artefact technical catalogues (Task 208.21c and e)

The full list of coin identifications will be produced using standard works of reference. A catalogue will be produced for significant other artefacts.

8.4.4 Publication text (Task 208.22e)

Following phasing confirmation, the artefact assemblage will be discussed by chronological periods. Discussions will include reference to published parallels, object function with reference to activities (e.g. crafts, agriculture), economic status and deposition patterns. Objects for illustration in phase groups will be selected at this juncture. Integration of external specialist report(s) will also be undertaken.

8.4.5 Illustration (Task 208.23)

Illustration of the material selected for inclusion in the publication will be carried out by the Illustrator in consultation with the artefact analyst. This task will include mock-ups and paste-ups for the final publication.

8.5 Analysis of animal bone

8.5.1 Quantification and recording (Task 208.24a)

All bones and teeth from selected assemblages will be recorded individually onto a relational database, which will form part of the site archive. This archive will be directly linked to the assessment archive created here. In the main table, where appropriate, 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; erosion; weathering; charring; calcification; concretions; fusion data; sexing data; animal bone group number; sieved sample number; other comments (including evidence for pathology). Separate tables linked to the main table by an individual identification number will be created for metrical, butchery and tooth ageing data.

8.5.2 Publication text (Task 208.24b)

The faunal evidence will be discussed within the site narrative, ordered by phase and landscape. The main aim will be to provide information on processing and deposition practices, whilst also providing some basic interpretations about animal exploitation and diet. The recording of metrical data will assist in broader studies into the history of the types of domestic stock that were kept in the region. The report will include relevant comparisons with other assemblages.

8.6 Analysis of human remains

The analysis of the cremations and inhumation burials including determinations, where possible, of age, sex and pathology . Cranial and post-cranial metrics, non-metric traits and stature were recorded where possible.

8.6.1 Analysis of human bone (Task 208.25a)

The human bone recovered from twelve cremations and two inhumations will be subject to full analysis. This will include assessment of age, sex and pathology. Cranial and post-cranial metrics, non-metric traits and estimation of stature will be recorded where possible.

8.6.2 Publication text (Task 208.25b)

The report will consist of results of analysis and a discussion relating the results to regional burial traditions.

8.7 Analysis of plant remains

8.7.1 Processing, quantification and recording (Task 208.26a)

Full analysis (including sorting and quantification) will be carried out on the best samples from each phase. Based on the assessment these are likely to be Phase 1 sample 556, Phase 2 samples 593 and 541, Phase 3 sample 561, Phase 4 samples 522, 533, 530 and 557, Phase 5 samples 504, 527, 544 and 575 and Phase 6 samples 535, 576 and 617 and sorting the residues for additional remains.

The remainder of the samples selected from Phase 2 sample 564, Phase 3 samples 511, 514, 529, 534, 536 and 572, Phase 4 samples 519 and 524, Phase 5 samples 501, 520, 547 and 548 and Phase 6 sample 553 albeit poorer will also be recorded and residues sorted to aid in interpreting activities on the site as domestic waste tends to be typified by a low density scatter of remains.

8.7.2 Publication text (Task 208.26b)

The charred plant remain text will be ordered by phase. It will discuss the range of plant foods used on the site and include information on crop husbandry (mainly the range of cereals and other possible cultivars) and processing activities.

8.8 Analysis of charcoal (Task 208.27a)

8.8.1 Processing, quantification and recording

Full analysis (including sorting and quantification) will be carried out on selected ‘good’ samples from each phase.

8.8.2 Publication text

The charcoal text will be ordered by phase and will concentrate on the nature of the woodland and hedgerow resources exploited during the different phase.

8.9 Analysis of molluscan remains (Task 208.27)

8.9.1 Identification and recording

Any further analysis of the molluscan remains identified during the assessment is not required as no further additional information can be gained.

8.9.2 Publication text

The molluscan text will provide evidence of the local environmental conditions of the site during the early-middle Iron Age through to the later Romano-British.

8.10 Overall publication, archiving and project management

8.10.1 Editing publication text including specialist reports (Task 208.28)

The entire publication will be read and edited to ensure a consistency in approach. The site narrative will form the basis of the descriptive section of the publication text. It will be organised by period, phase, land use area and, where appropriate, group. Publication text from all specialists/data-sets will be edited and fully integrated.

8.10.2 Production of synthetic text (Task 208.29)

A synthetic text will be produced discussing the key elements of the site, within the major chronological periods. This will address the updated research themes.

8.10.3 Publication illustrations (Task 208.30)

During the editing of the site narrative and writing of the synthesis a final list of illustrations required for the publication will be produced. It is anticipated that the majority of these will have been created as mock-ups.

8.10.4 Refereeing process (Task 209.03 and 209.04)

The draft publication text will be referred internally by Albion Archaeology and by the consultant. This task includes time for any required discussion with the referees. This task includes time for amendments to all sections of the text and illustrations

8.10.5 Publication production (Task 209.05)

This includes addressing issues with copyediting, proofs and page layout, before the final version is submitted to the printers.

8.10.6 Archiving and accessioning (Task 209.06 and 209.07)

Upon completion of the report, the written and material archives will be prepared for accessioning to Bedford Museum. The cost of transfer includes transport, liaison and storage charges.

8.10.7 Project management (Task 210.02)

All project tasks will be tracked on Albion's Time Recording System (TRS) so that expenditure and resources can be monitored throughout the life of the project. The management of the project includes monitoring the task budgets, programming tasks, checking timetables, and liaising with all members of the project team.

FIGURES

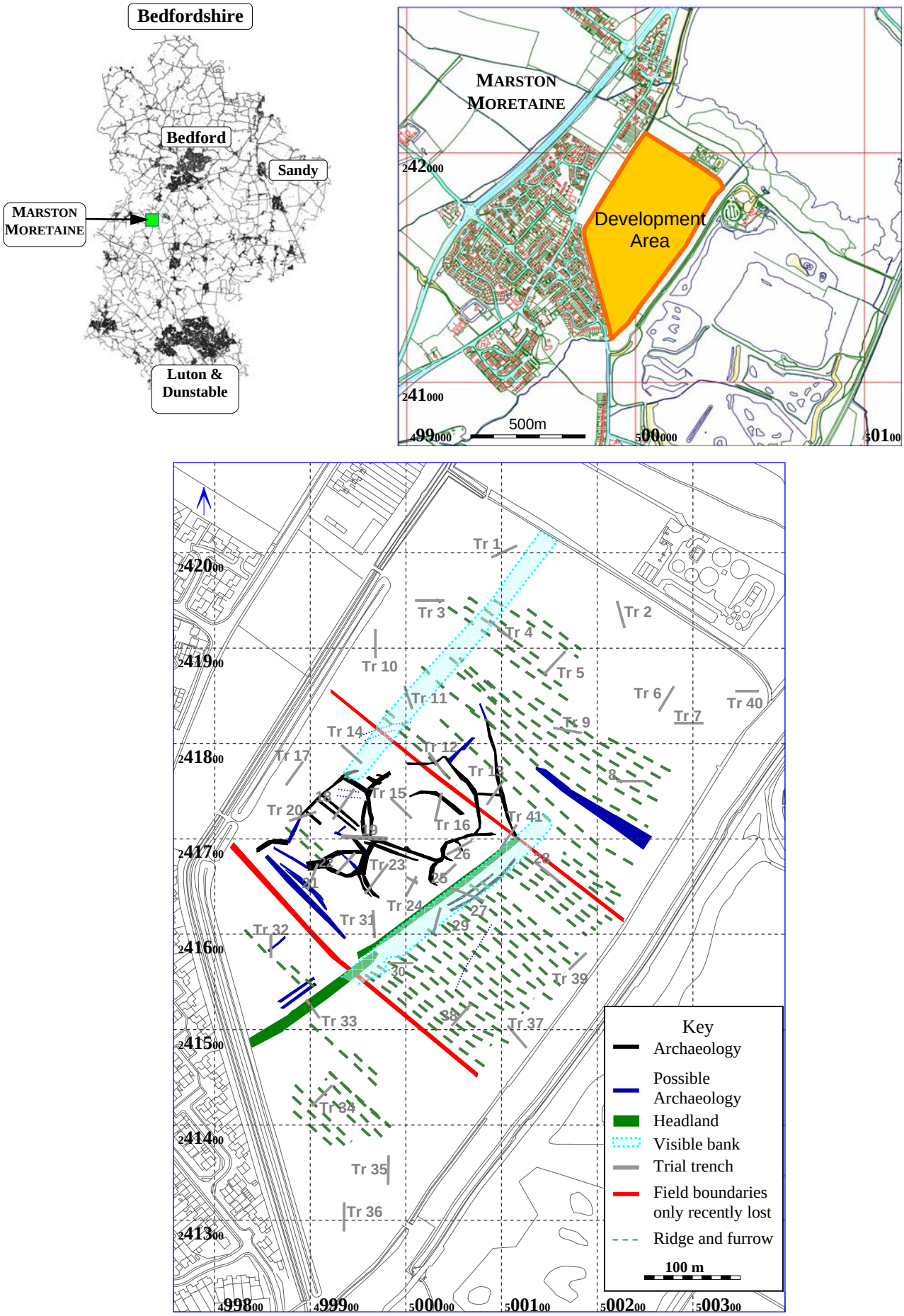

Figure 1: Site location and revised cropmarks and earthwork plan with trial trenches from the 2003 evaluation

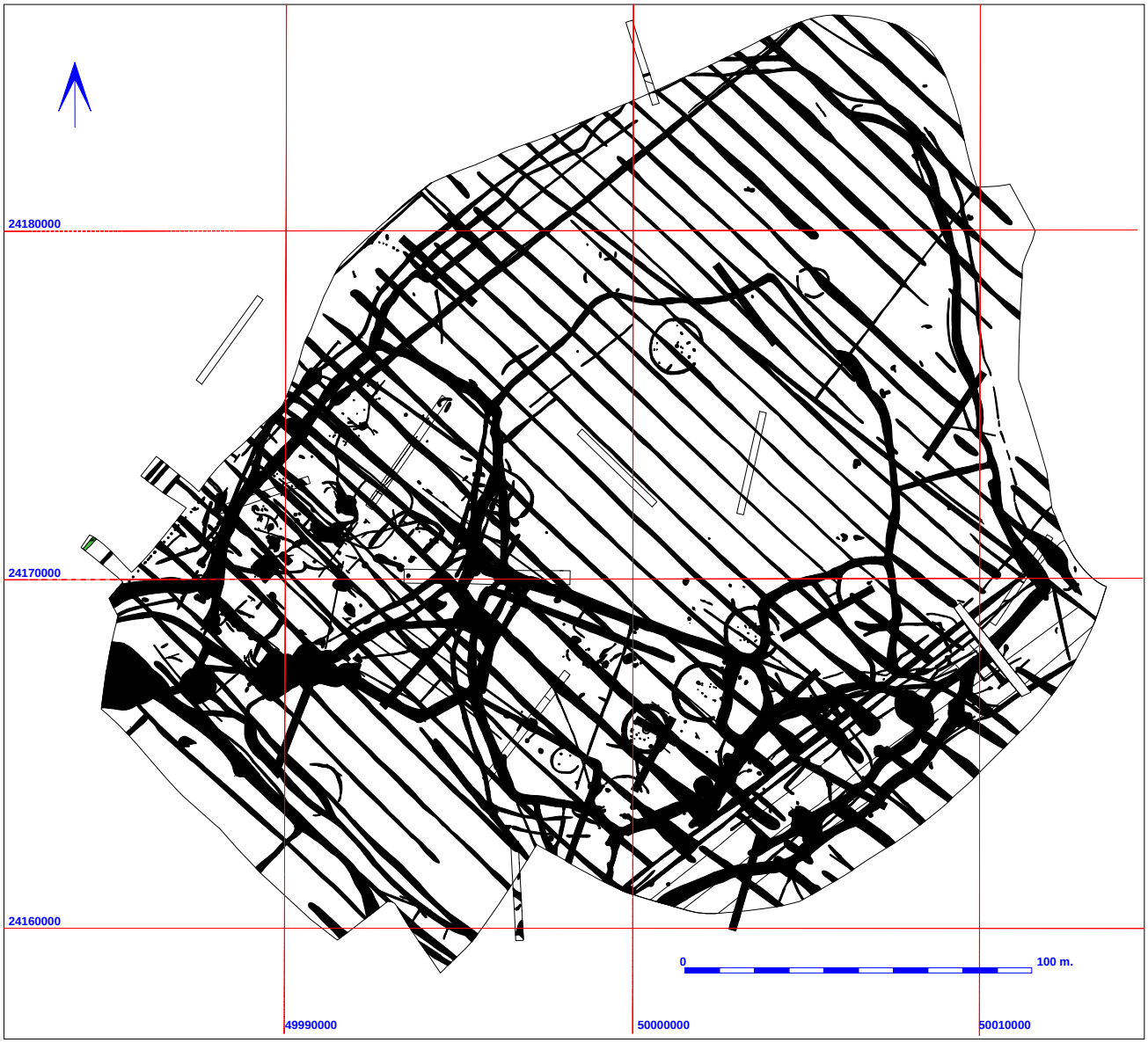

Figure 2: All features plan of Area 1

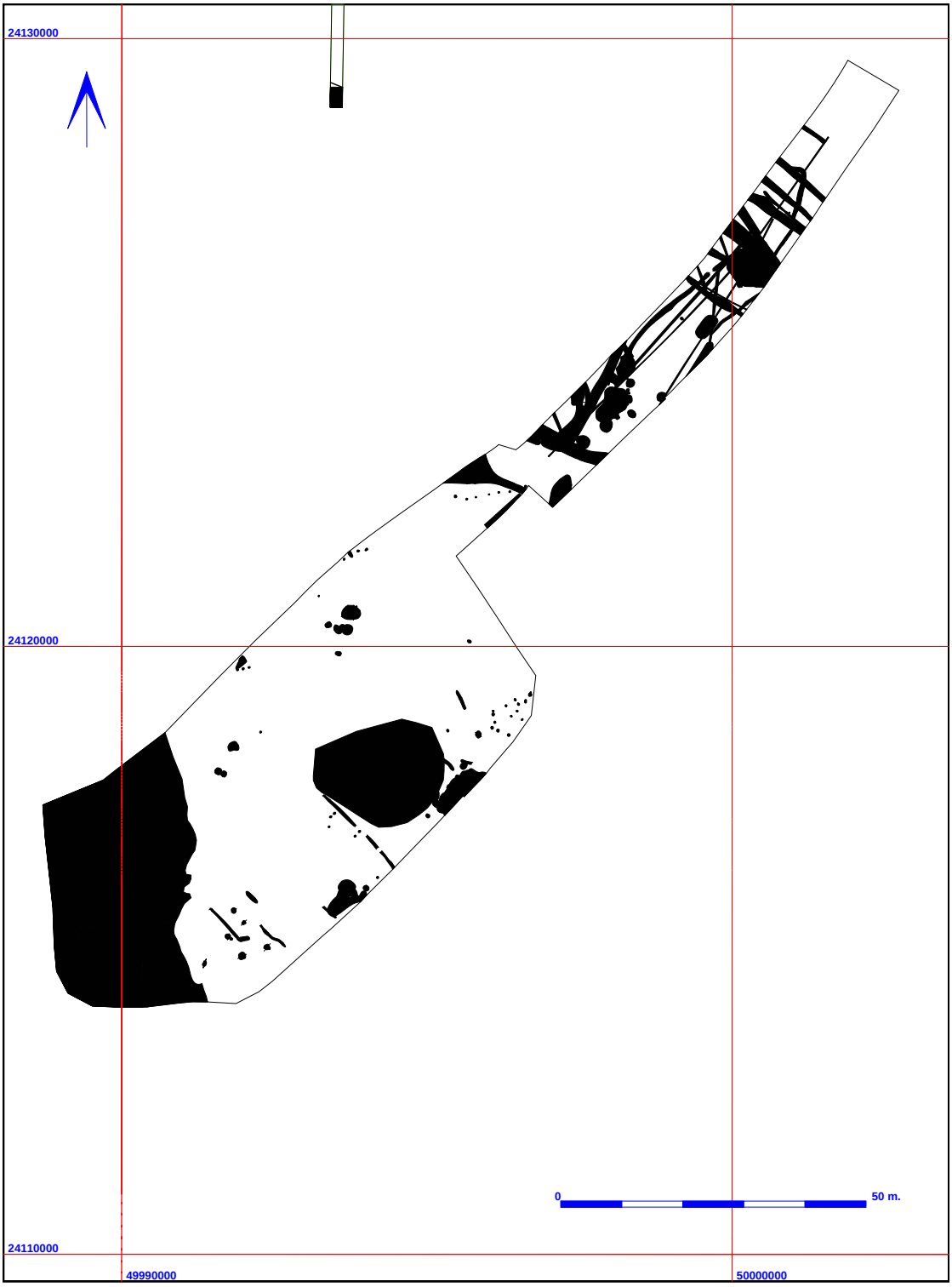

Figure 3: All features plan of Area 2

Figure 4: Phase 1; Early-middle Iron Age

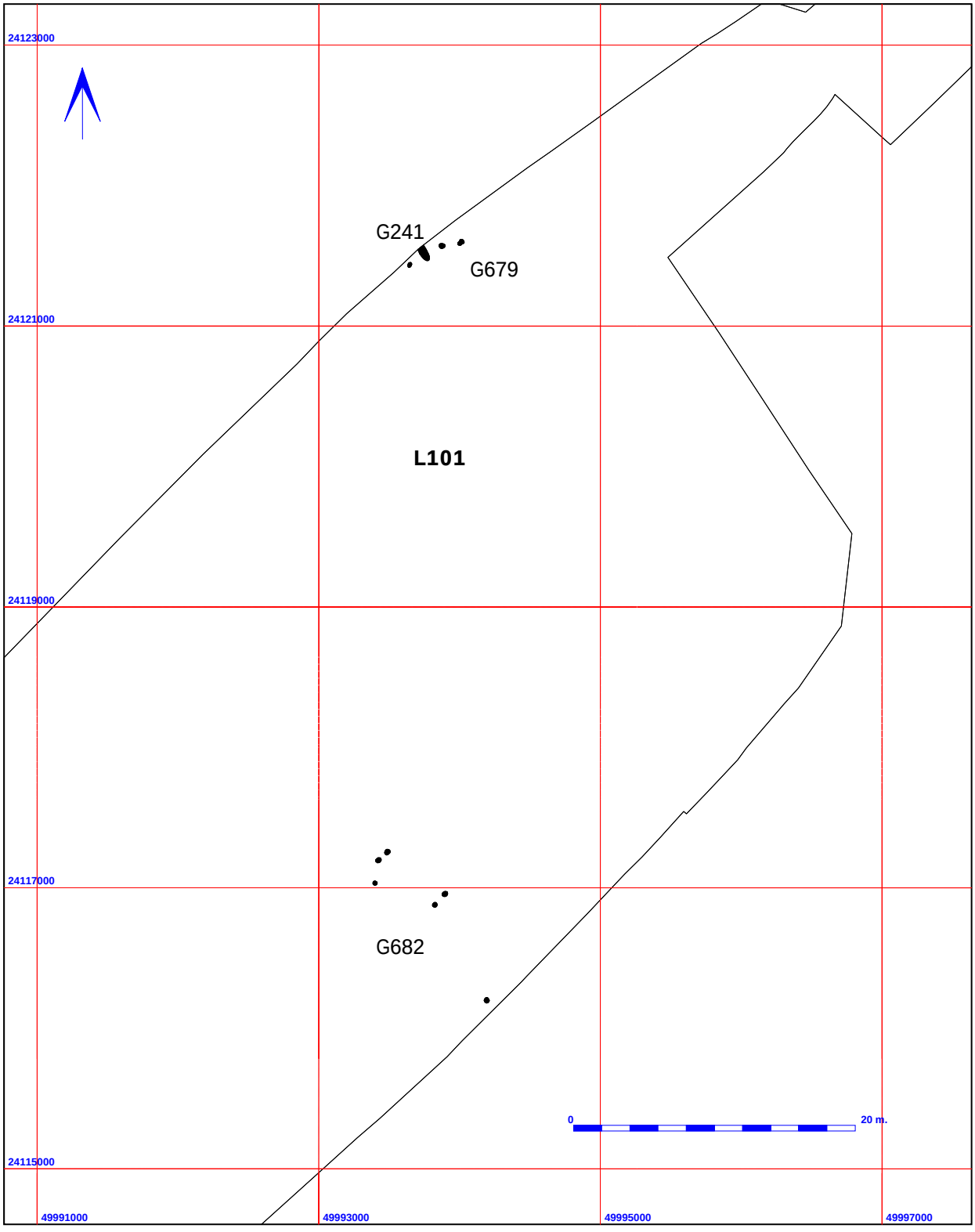

Figure 5: Phase 1; Early-middle Iron Age activity to south of Brook

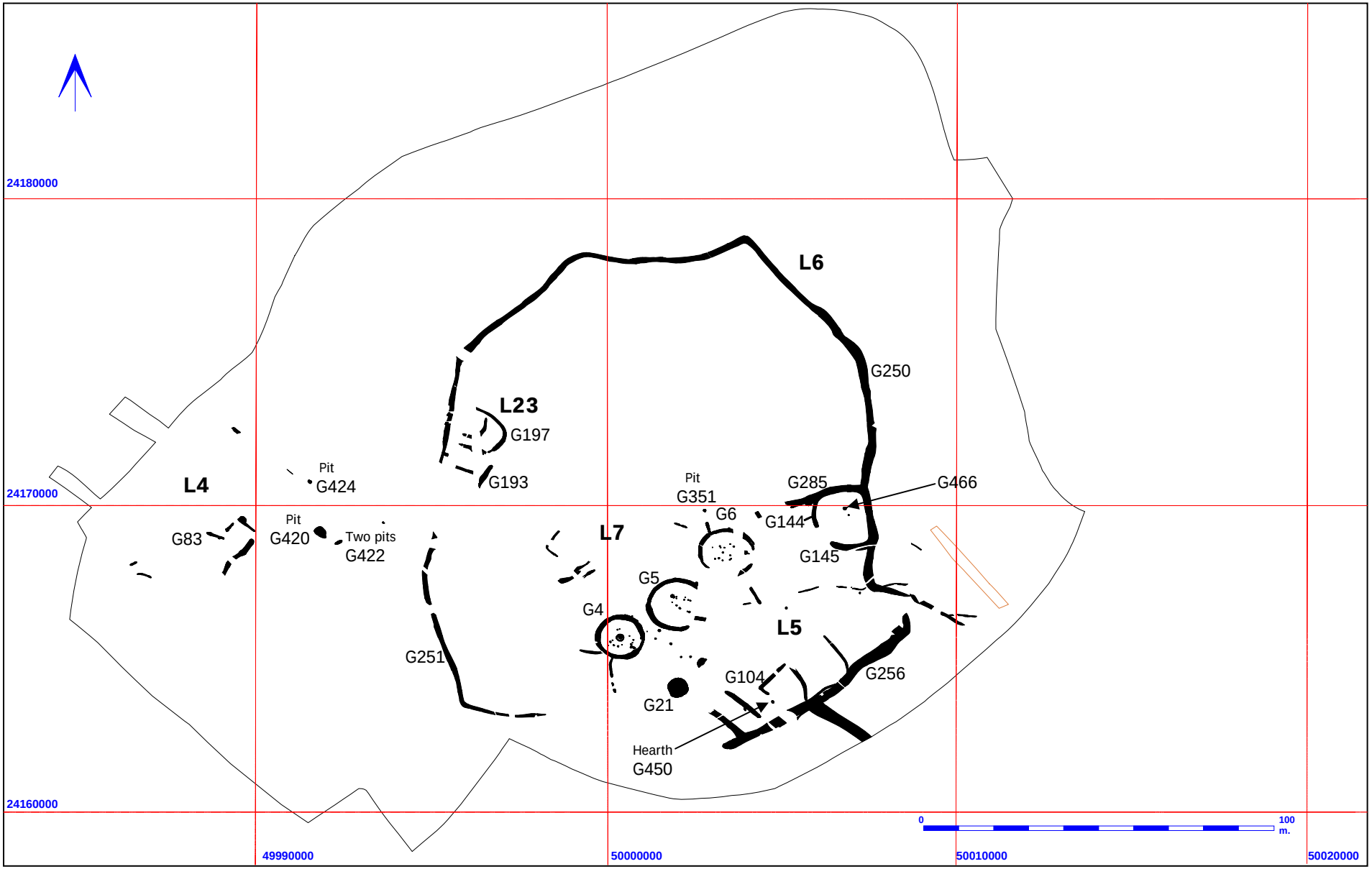

Figure 6: Phase 2; Middle Iron Age

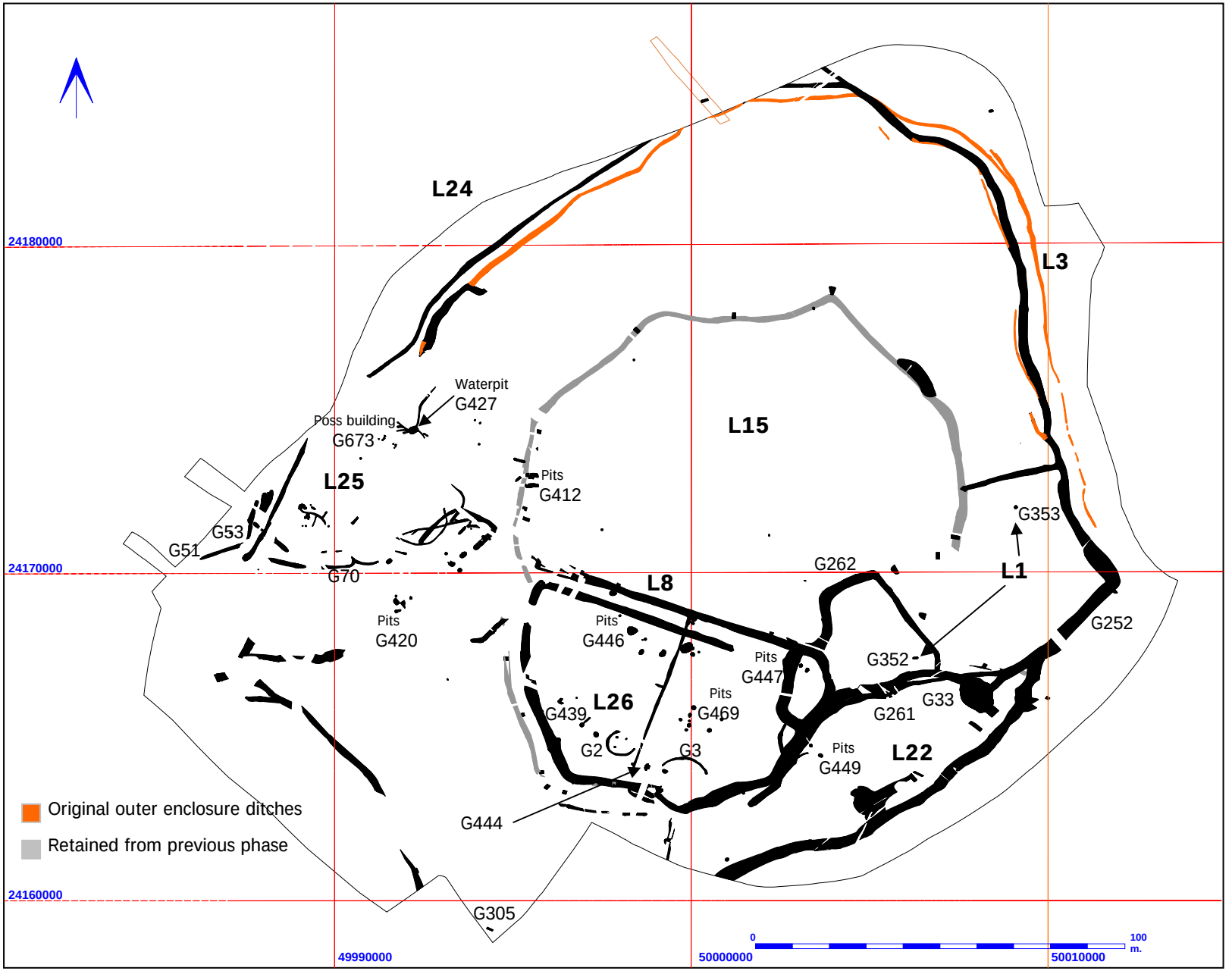

Figure 7: Phase 3; late pre Roman Iron Age

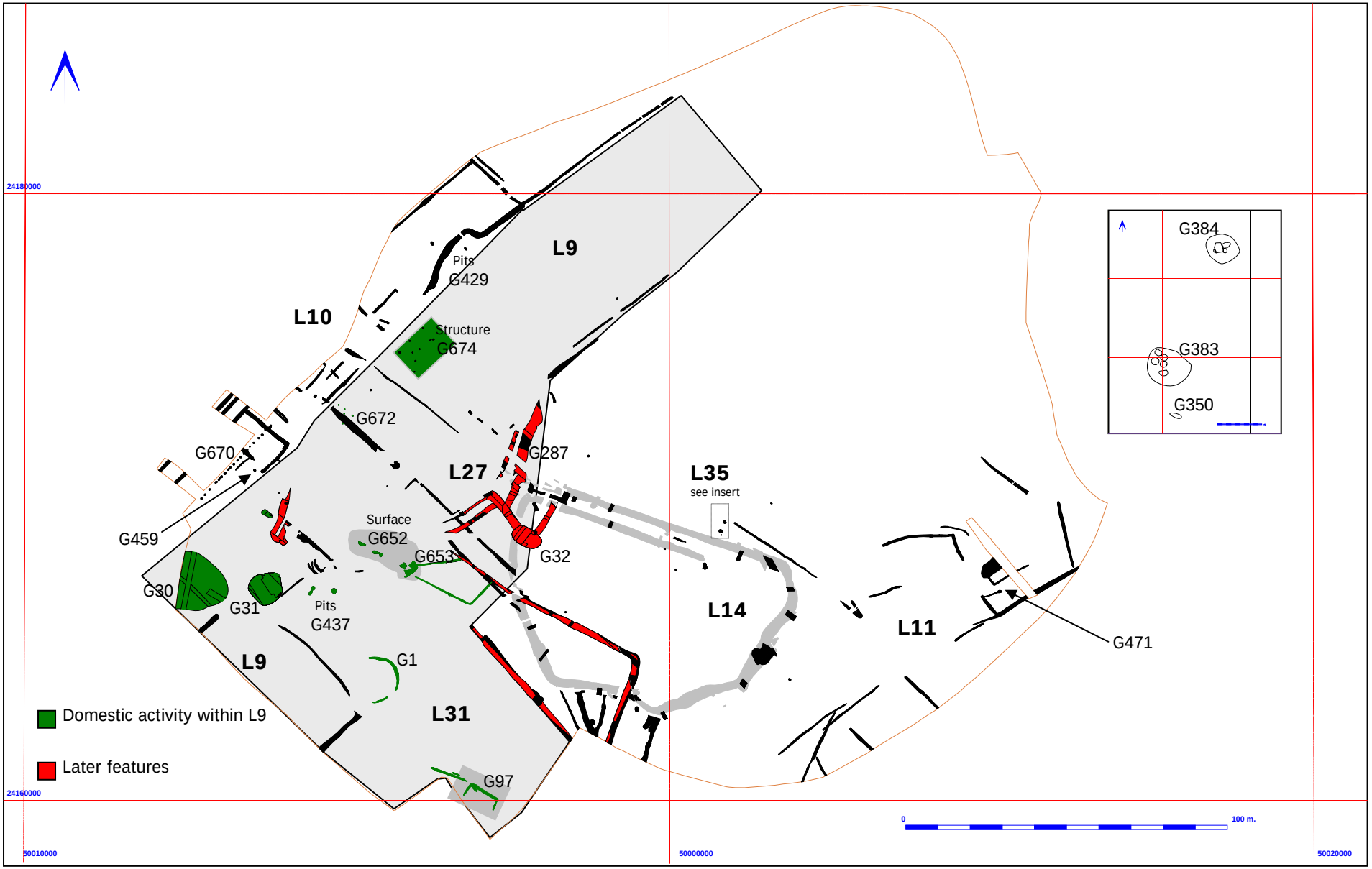

Figure 8: Phase 4; Late Iron Age/early Romano-British

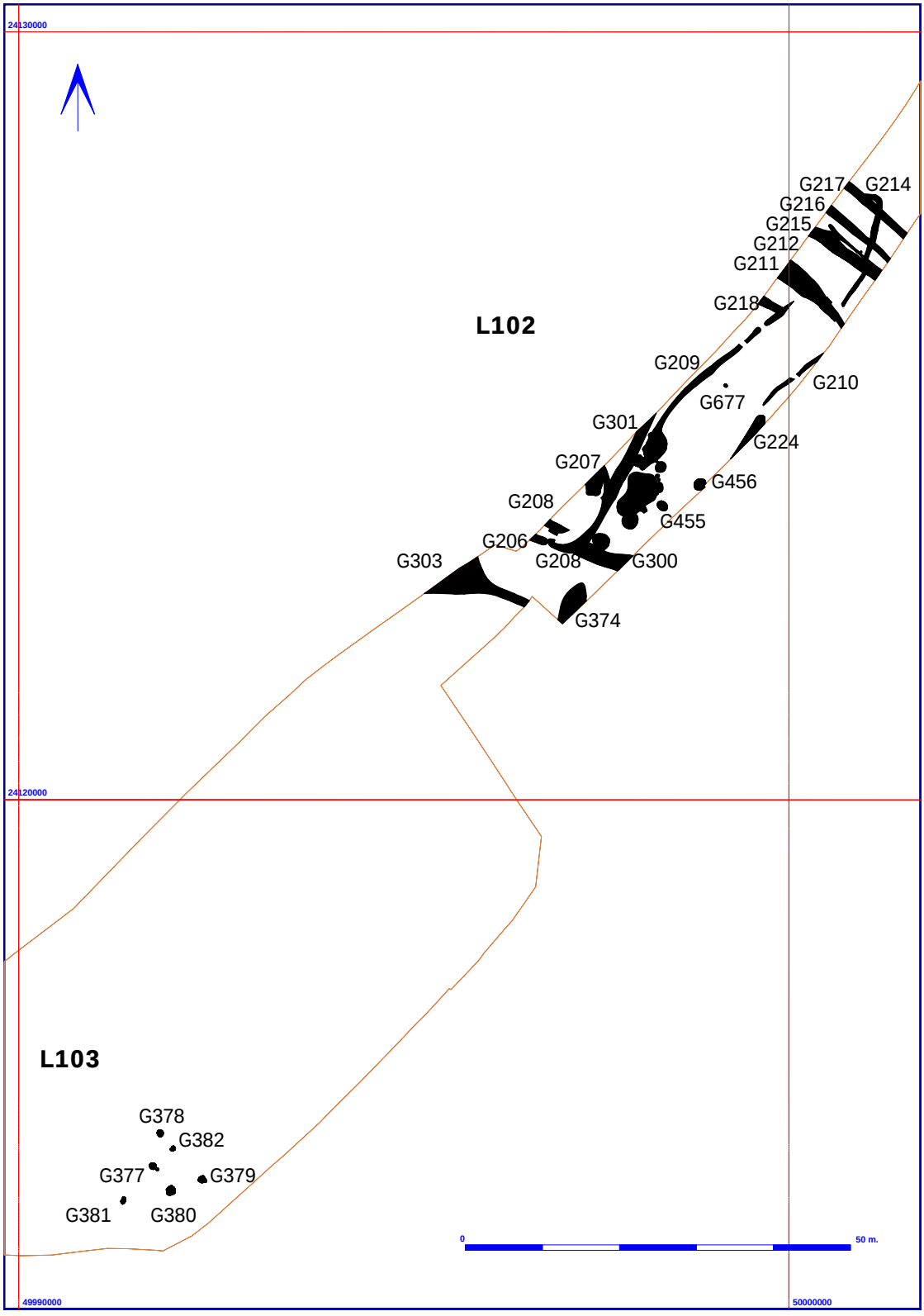

Figure 9: Phase 4; Late Iron Age/early Romano-British activity to south of Elstow Brook

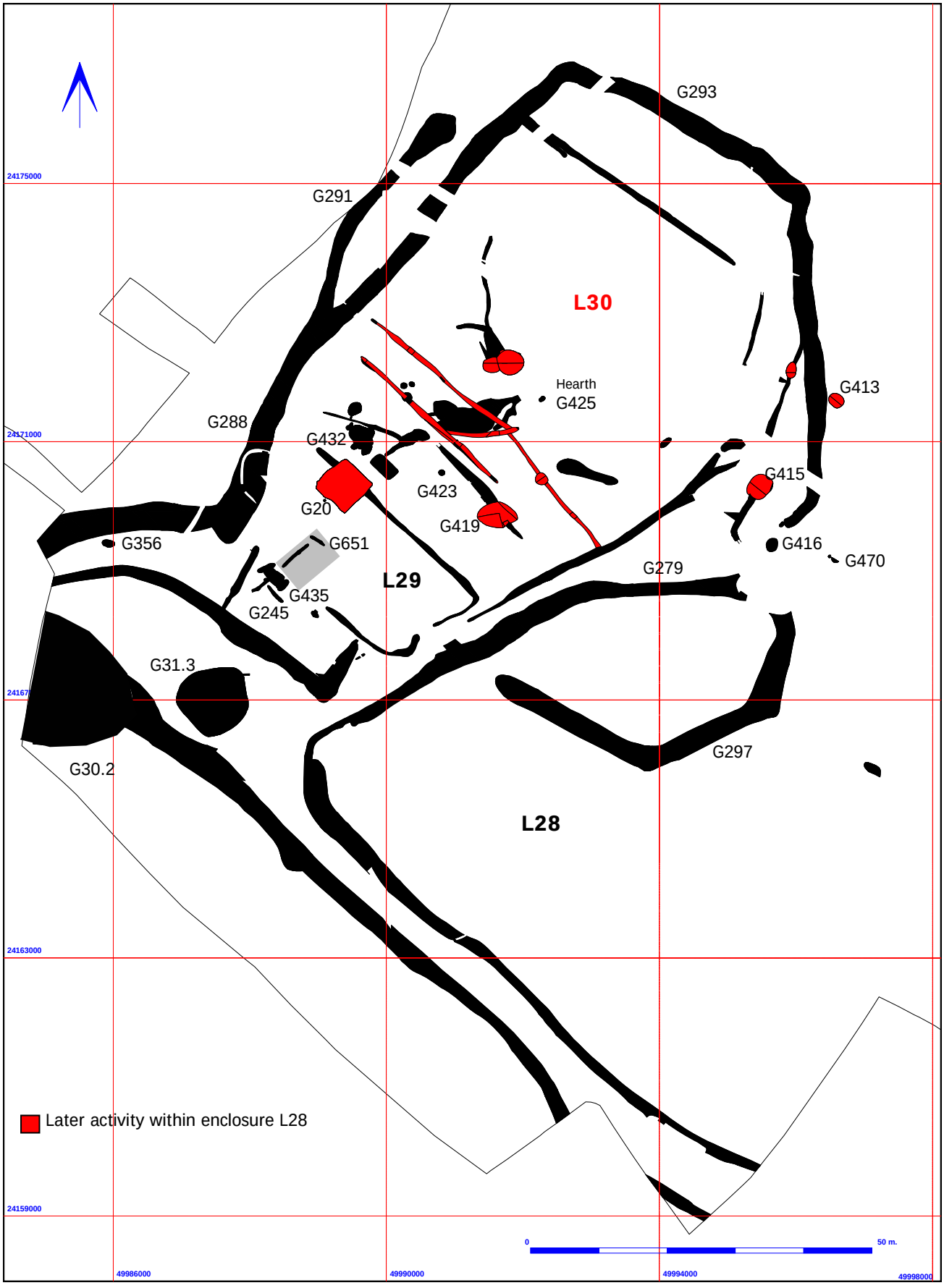

Figure 10: Phase 5; late 1st-late 2nd century AD

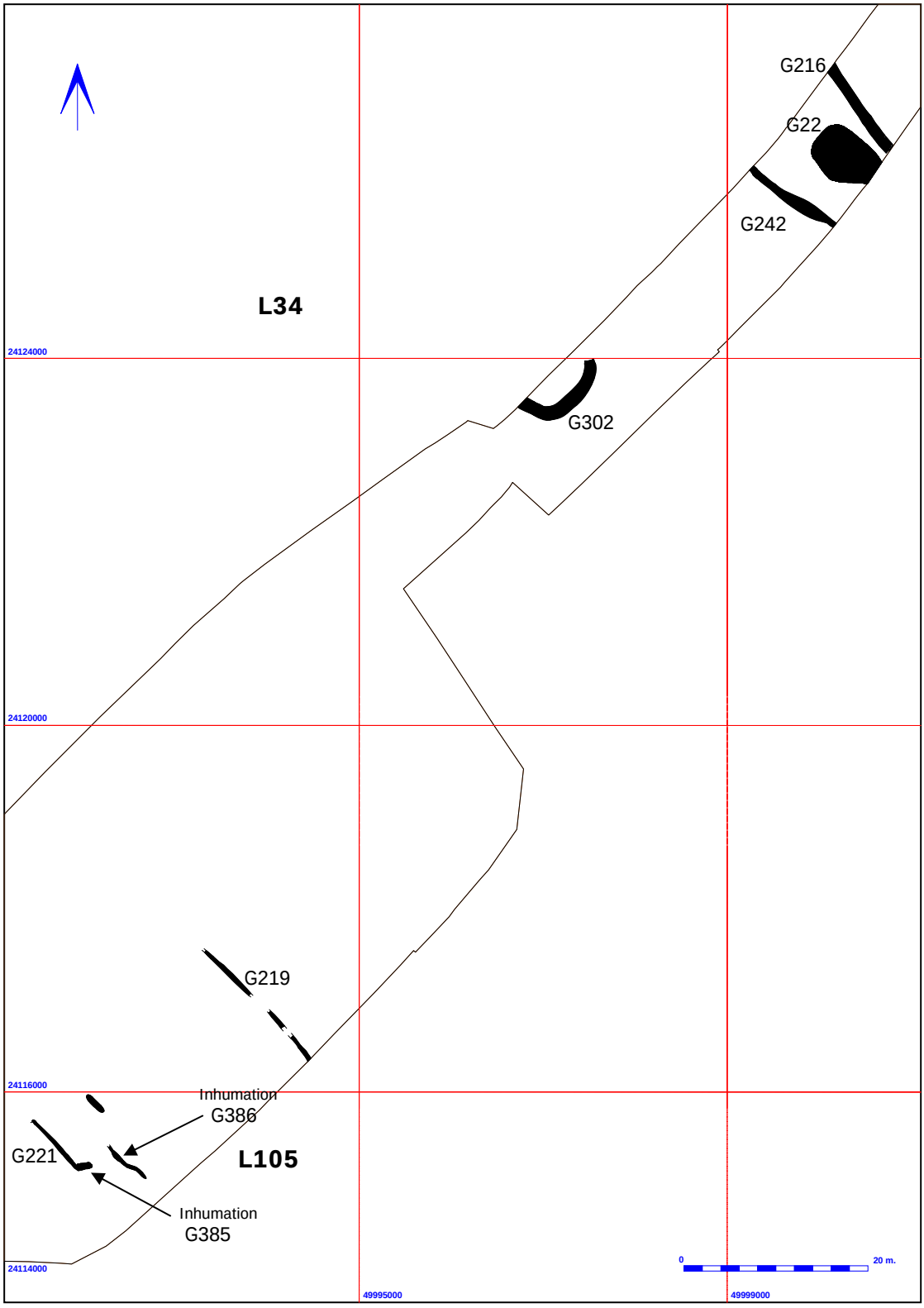

Figure 11: Phase 5; late 1st-late 2nd century AD activity to south of Elstow Brook

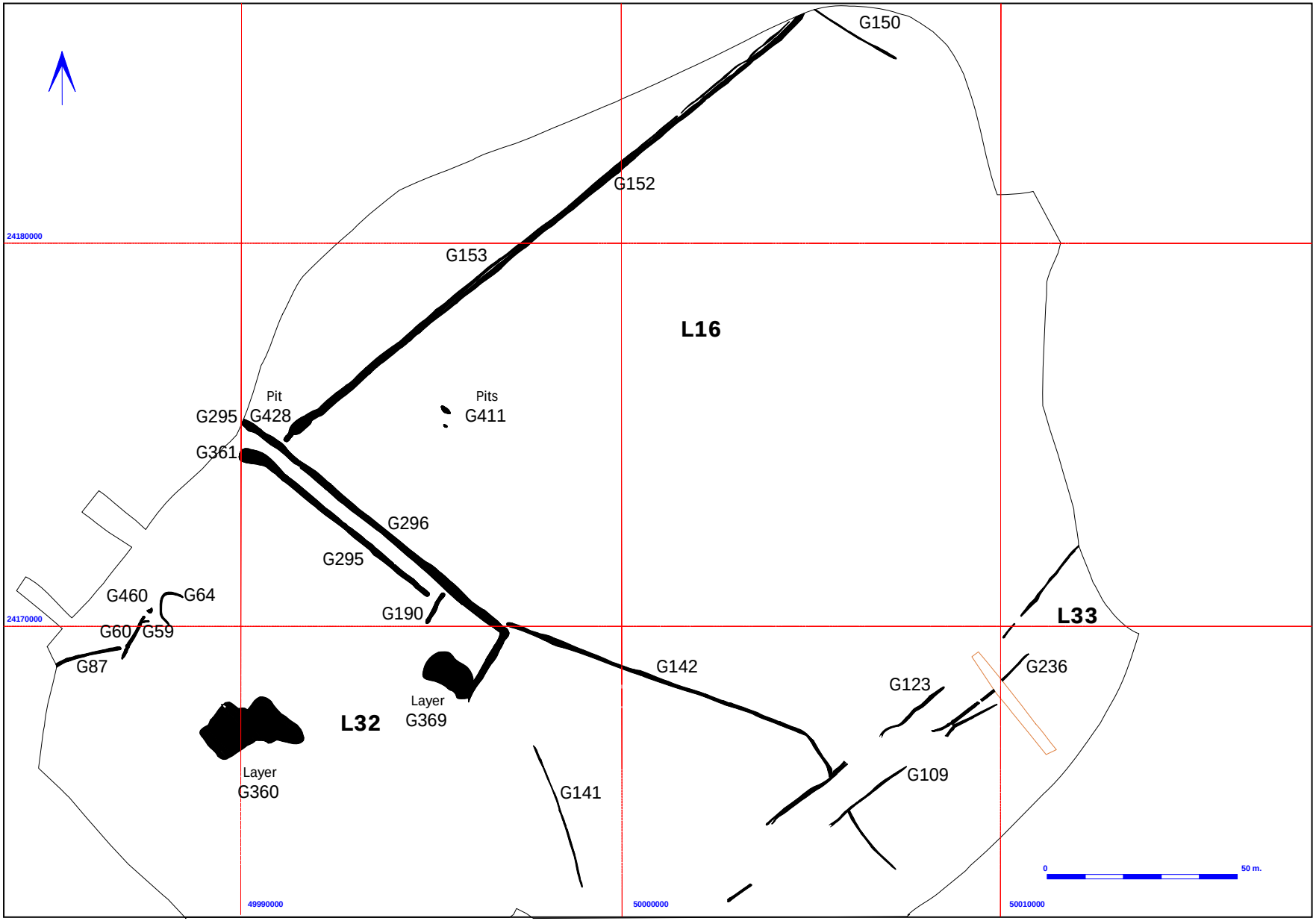

Figure 12: Phase 6; early 3rd-4th century AD

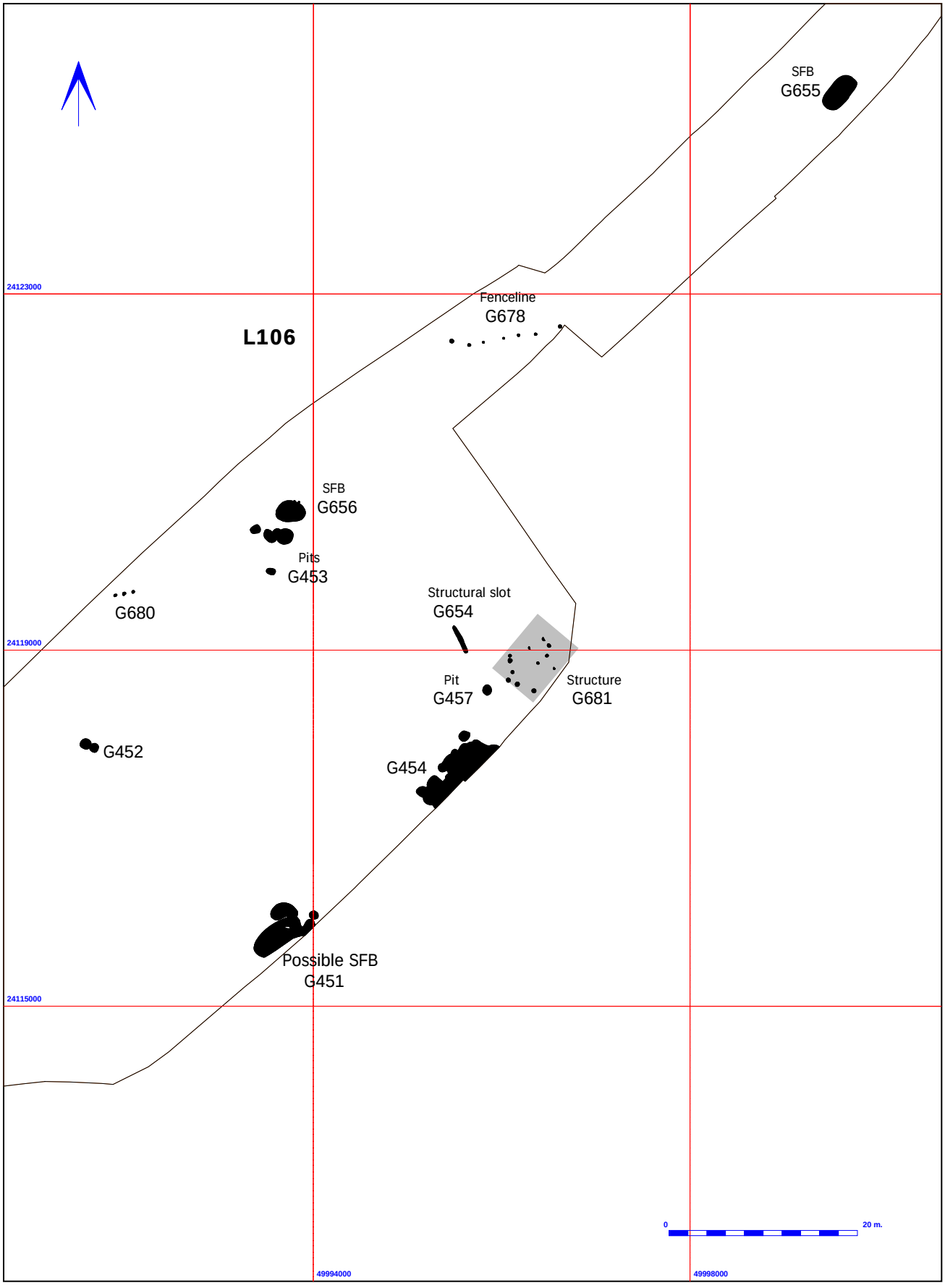

Figure 13: Phase 7; Early Saxon activity to south of Brook

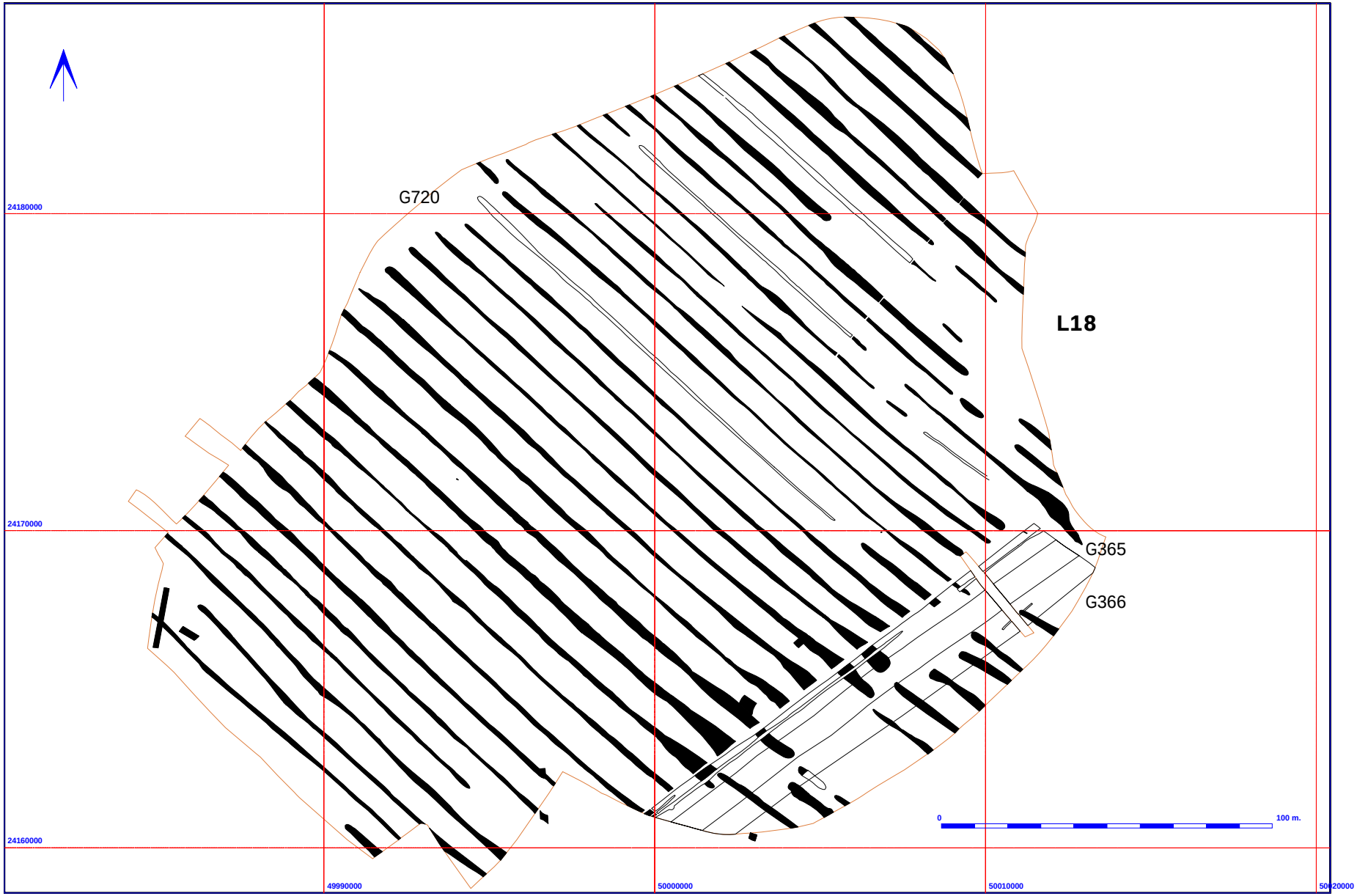

Figure 14: Phase 8; Medieval

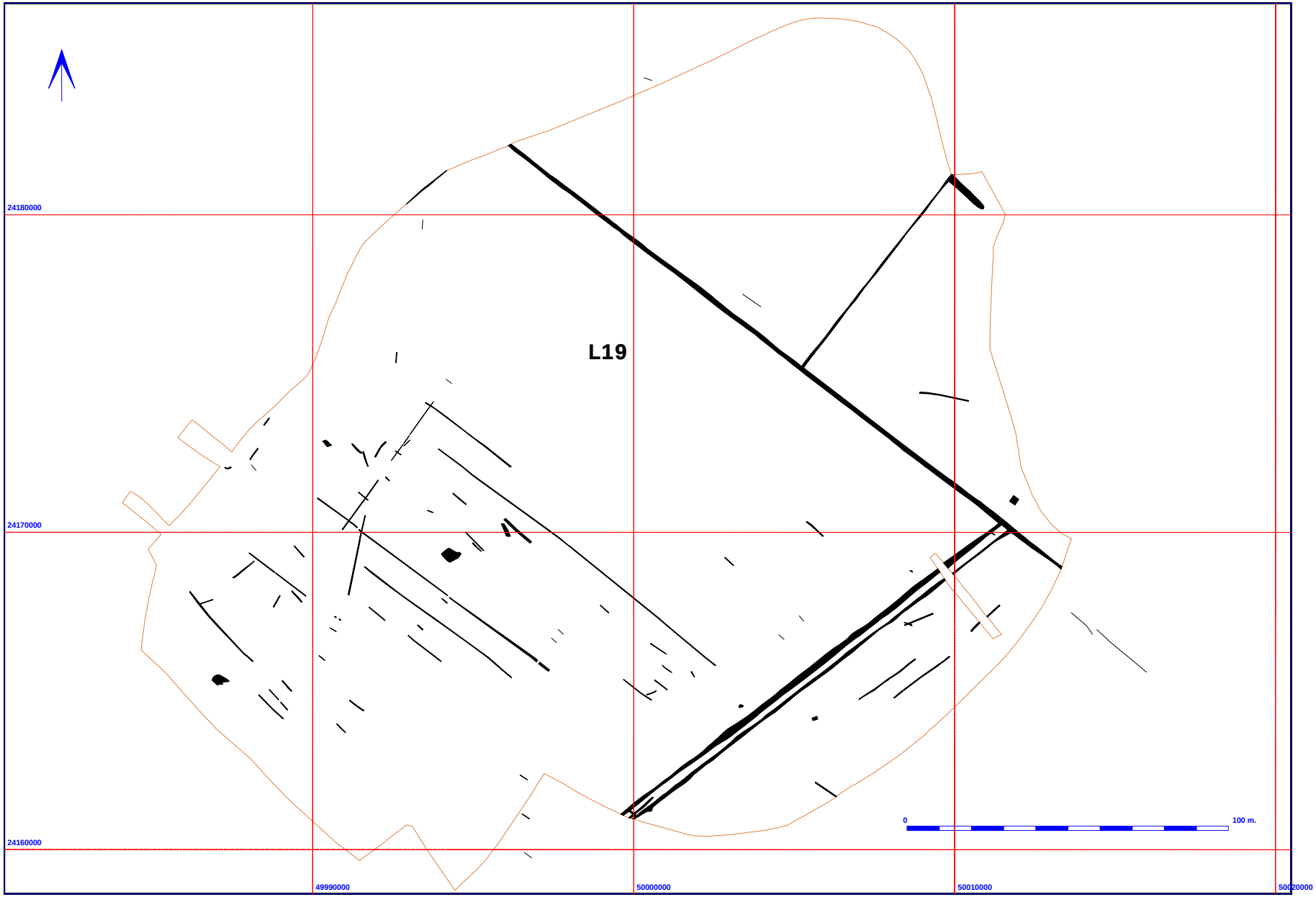

Figure 15: Phase 9: Post-medieval