LAND NORTH OF NORSE ROAD
BEDFORD

ASSESSMENT AND UPDATED PROJECT DESIGN

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Preface

Every effort has been made in the preparation of this document to provide as complete an assessment as possible, within the terms of the brief and written scheme of investigation. 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.

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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 fieldwork results. The potential of the data to address the original and new research objectives is discussed in Section 4, and these new research objectives are given in Section 5. Section 6 provides an Updated Project Design, which includes detailed method statements for analysis, publication and archiving of the data recovered during the fieldwork. Section 7 is a bibliography. Appendices appear in Section 8.

Key Terms

Albion	Albion Archaeology
AO	Bedford Borough Council Archaeological Officer
Client	Orbit Group Ltd.
EH	English Heritage
IfA	Institute for Archaeologists
LPA	Local Planning Authority
ULAS	University of Leicester Archaeology Service
WSI	Written Scheme of Investigation
HER	Historic Environment Record

Non-Technical Summary

Orbit Group Ltd are developing a c. 12ha piece of land north of Norse Road, Bedford for housing. Following archaeological evaluation work, Orbit Group Ltd commissioned Albion Archaeology to undertake a scheme of archaeological investigation, as required by the Local Planning Authority (LPA). This comprised open area excavation of an area measuring c. 1.1ha. The work took place between December 2010 and January 2011.

The excavations revealed evidence for an early to middle Iron Age settlement, characterised by a series of enclosures strung out over a distance of c.150m along the western bank of a tributary of the Renhold Brook. It is likely that they represent settlement and animal enclosures within a pastoral landscape.

In a later phase a series of pits was established, truncating some of the enclosures, but possibly contemporary with others. The pits most likely represent quarry pits for clay for building material or water pits. They were backfilled with mainly sterile material mixed with small quantities of animal bone and pottery which represent refuse from the Iron Age enclosures or a settlement nearby.

The last phase within the site is defined by a small post-built structure of uncertain form. Its central posthole contained a possible ritual deposit of a dog skull and skin with four paws.

Remnants of medieval agriculture in the form of sub-surface furrows were identified across the entire excavated area. Two of these 'furrows', on a different alignment, may form a possible trackway.

This document presents an assessment of the archaeological remains revealed during the investigations; they have the potential to address a number of national and regional research agendas. The document also contains proposals for further analysis, publication and archiving of the data, setting out the methodologies and resources required to complete the project.

The end product will be the publication of the results in the county journal, Bedfordshire Archaeology*, and the deposition of the project archive with Bedford Museum.*

1. INTRODUCTION

1.1 Planning Background

Orbit Group Ltd is developing a *c*. 12ha piece of land north of Norse Road, Bedford for housing. Following archaeological evaluation in 2006 (Albion Archaeology 2006), the Local Planning Authority (LPA) placed a condition on the planning permission, requiring a scheme of archaeological investigation.

This investigation was to be undertaken in accordance with a scheme of works approved in writing by the LPA. In this instance, the LPA's advisor is the Bedford Borough Council Archaeological Officer (AO). The AO advised (November 2010) that a brief prepared by their predecessor at Bedfordshire County Council (BCC 2006) provided an acceptable basis upon which to draw up that scheme of works.

Orbit Group Ltd commissioned Albion Archaeology to prepare a WSI (Albion Archaeology 2010) and to undertake a programme of archaeological investigation, recording, assessment, analysis and publication.

The investigations took place between December 2010 and January 2011. This document represents an assessment of the results of the excavation and sets out their potential for further analysis and publication.

1.2 Site Location and Geology

The development area lies to the south-west of Renhold and to the immediate north of Norse Road, Bedford. It is bounded to the east by a south-flowing stream - a minor tributary of the Renhold Brook. The investigation area (Area 2) is located on the tributary's eastern fringes (Figure 1). It lies at *c*. 25m OD, sloping gradually downwards from north to south. It is centred on TL 0877 5204 and covers an area of *c*. 1.1 ha. The underlying geology comprises Oxford clay overlain by boulder clay.

1.3 Archaeological Background

The development area lies in a landscape rich in remains dating to the Iron Age and Roman period.

The earlier evaluation, which also covered land to the immediate north, had already provided evidence for the existence of an early to middle Iron Age farmstead, occupying an area of *c*. 0.6ha (Albion Archaeology 2006).

Pottery, animal bone and other domestic debris, e.g. burnt stone and fired clay, were recovered during the evaluation and these artefacts and ecofacts demonstrated good potential for the recovery of dating, economic and environmental data. Environmental samples produced carbonised plants and molluscan remains. On the basis of this information, it was decided that a full investigation of the farmstead was necessary prior to development taking place.

This site does not occur in isolation and a number of prehistoric and Roman farmsteads have been recorded at Norse Road. Similar evidence for late

prehistoric occupation has been discovered at Riverside Meadows, Willington, Cople, Eastcotts, Octagon Farm and Mill Farm all within 3 kilometres of Norse Road (Edgeworth, 2001).

These sites provide evidence for agricultural and settlement activity from the early Iron Age onwards, with the creation of new land divisions and the emergence of new forms of cultural practices. It is also of particular relevance that "*at Norse Road, Bedford a promontory above the River Great Ouse"* was *"occupied, possibly episodically, from the early Iron Age until as late as the 4th* century AD" (Dawson 2007, 73-74). The farmstead to which Dawson refers (HER1380) lies to the south of the development area. Excavations at HER1380 revealed a farmstead and associated enclosure and boundary ditches related to agricultural occupation.

The 2006 brief (BCC 2006 Section 3.6) highlighted the need to investigate such remains.

Recent investigation on land immediately north of the DA have revealed evidence for Roman field systems as well as dense clusters of intercutting pits dating to the late Saxon period. The pits were most likely water pits and a large number of them had been backfilled with burnt waste material (Albion Archaeology 2011). No settlement evidence as such was revealed in the excavation but the evidence suggests late Saxon occupation in the close vicinity.

1.4 Purpose of this Report

This report presents an assessment of the results of the archaeological investigations at Norse Road, Bedford. An updated project design is included listing all tasks that will be required to analyse, publish and archive the results of the fieldwork. The completion of these tasks will fulfil the criteria stipulated in the brief (BCC 2006).

2. ORIGINAL AIMS AND OBJECTIVES OF THE INVESTIGATION

2.1 Introduction

A series of research aims were established in the WSI (Albion Archaeology 2010). These were necessary to ensure that the investigation was appropriately targeted in accordance with local, regional and national research priorities.

2.2 National and Regional Research Framework

Broad national research priorities have been formalised by English Heritage in *Exploring our Past* (1991), updated in their draft Research Agenda (1997).

Regional Research Frameworks have been developed based on an initiative promoted by English Heritage in collaboration with local authorities, in order to provide an effective yet flexible structure for decision making regarding archaeological research.

One of the first regional research frameworks that was developed was the framework for the eastern counties, which include Bedfordshire. This consisted of a resource assessment (Glazebrook 1997) and a subsequent research agenda and strategy (Brown and Glazebrook 2000). It was updated in 2008 (Medlycott and Brown 2008).

Furthermore, a resource assessment and research agenda is now available for the county of Bedfordshire (Oake *et al* 2007). This county-based source of reference has been key to deciding research aims for this project.

2.3 Original Research Objectives

A number of research objectives, both generic and period-specific, were considered relevant to the work within the DA and were set out in the WSI (Albion Archaeology 2010). They are stated below.

Objective / Theme	Research Aims/Themes
1	**Iron Age** - Evidence for an Iron Age farmstead at Land North of Norse Road would add to the knowledge of similar sites in the area. This would directly contribute to regional research objective 'Social organisation and settlement form and function in the Early and Middle Iron Age' (Bryant in Brown and Glazebrook 2000, 17). Oake also states that in Bedfordshire there is a need for more detailed work on the characterization of rural settlements in the Iron Age period (Oake 2008, 11). The string of early to middle Iron Age settlement sites along the brook at Norse Road (Albion Archaeology 2006, Edgeworth 2001) has clear potential to add useful data regarding stream/brookside settlements of the period. Objective 1 seeks additional data on settlement forms of that period.

Objective / Theme	Research Aims/Themes
2	**Medieval** – During trial trenching (Albion 2006) and geophysical survey (Smalley 2006) the remains of ridge and furrow field systems were recorded and this pattern is expected to continue throughout the excavation area. During the medieval period, the development area would have formed part of the open fields of Renhold township. The ridge and furrow plough marks were the only remains encountered which dated to these periods. They were formed as a result of ploughing in a field under strip cultivation. The furrows occur over much of the development area and correspond to historical map evidence (Browning 2006). The remains of field systems are of local interest, assisting in our understanding of settlement patterns and land-use during these periods. This is stated as a research aim in the Bedfordshire research agenda (Oake 2008, 14). Objective 2 seeks to map remains of this type. The results will form part of the site archive.
3	**Generic** – Objective 3 seeks to investigate all archaeological deposits and features to a level where they can be dated and an interpretation of their function can be made. The aim is also to retrieve artefact and ecofact material that can add to our understanding of the material culture and environment of the given period.

Table 1: Summary of original research objectives and themes

3. PROVISIONAL SUMMARY OF RESULTS

3.1 Introduction

3.1.1 Methodological approach to assessing contextual data

The contextual data were rapidly assessed in order to establish whether they would provide a coherent spatial and chronological framework. Trenches 16–19 of the evaluation lay within the boundaries of the excavated open area and are included in the assessment. Trench 19 contained no archaeological features.

A total of 274 contexts were assigned to provisional Groups, *e.g.* boundary ditches, pit groups, *etc*. (Table 2). The allocation of individual contexts to specific Groups was made on the basis of the following criteria:

- Do the contexts form a coherent spatial unit *e.g.* ditch length, pit group *etc.*?
- Do the contexts represent key positions within the stratigraphic sequence?
- Do the contexts contain suitable dating material?

Groups were then assigned to a number of distinct Land-use areas, corresponding to larger coherent and contemporaneous spatial units. These Land-use areas were then assigned to a number of episodes (Phases) of human activity, based on their stratigraphy and artefactual assemblages. Where more than one distinct episode of human activity was apparent within a chronological period, they were assigned to separate Phases.

The following text is structured by chronological period, and discussed by (assessment) Phase, Land-use area (L*) and Group (G*).

Period	Phase	L no	G no	Description	Number of contexts
Natural	*0*	1	1	Natural clay geology.	6
Iron Age	*1 Enclosures*	2	2	NW-SE enclosure or drainage ditch.	9
			3	Isolated pit.	2
		3	4	Annular ditch c 20m in diameter.	74
			5	Rectangular enclosure.	15
			6	Curvilinear gully.	8
			7	Sinuous NE-SW enclosure ditch.	17
			8	Rectilinear enclosure ditch.	13
			9	E-W enclosure or boundary ditch.	16
		4	10	Shallow ditch on E-W alignment.	4
			16	Ditch on a NW-SE alignment.	11
	2 Pitting	5	11	Isolated pit.	2
			12	Isolated pit.	2
			13	Cluster of three intercutting pits.	10
			14	Cluster of eleven intercutting pits.	27
			15	Cluster of three intercutting pits.	9
	3 Structure?	6	17	E-W gully.	4
			18	Six post-holes, possible structure.	13
Medieval	*4 Furrows*	7	19	N-S aligned furrows.	20
			20	E -W aligned furrows.	4
Modern	*5*	8	21	Topsoil and subsoil.	8
				Total	**274**

Table 2: Summary of provisional phasing

3.2 Structural Illustrations

This is a relatively simple site in stratigraphic terms and the results are presented on all-feature plans (Figures 2 and 3). These also show all phases of activity on the same plan, allowing the reader to appreciate the story of the site in a small number of images. Sections are illustrated on Figures 3 and 4.

3.3 Early to Middle Iron Age Settlement

3.3.1 Phase 1: Enclosure L3 and boundary ditches L2 and L4

The early to middle Iron Age settlement is characterised by a series of enclosures L3 that are strung out along the western bank of the Renhold Brook tributary over a distance of *c.*150m. Artefactual material provides a broad dating framework from the early to the middle Iron Age (800-300 BC) for the site.

The stratigraphically earliest feature on the site was ditch G2. Its irregular alignment suggests it may represent a drainage ditch, which utilised a natural drainage channel into the brook. It produced no finds, apart from a very small fragment of animal bone. It may have remained in use to later subdivide the much larger settlement enclosure G7/G9.

The western limit of the settlement may be defined by boundary ditch G7. A pipeline running along the eastern edge of the site necessitated a 15m standoff between the limit of excavation and the Renhold Brook tributary, which could not be investigated, so the eastern limits of the settlement are unclear.

Boundary ditch G7 followed a long sinuous NE-SW alignment for *c*. 60m. It was up to 1.3m wide and 0.42m deep. It produced 29 fragments of early to middle Iron Age pottery and a sizable assemblage of animal bone. The ditch was parallel with the brook so that together they would have enclosed a long, thin parcel of land. It is possible that ditch G9 on an east-west alignment in the northern part of the site represents a continuation of G7 and thus a northern boundary to the settlement.

It is interesting that both ditches had distinctive termini, G7 in the south and G9 in the east. Both termini lined up with the corners of two sub-rectangular enclosures, G5 in the south and G8 in the north, leaving a gap of *c.* 10m and 25m respectively.

The nature of sub-rectangular enclosures G5 and G8 is unclear. Both were substantial ditches, up to 2m wide and 0.64–0.94m deep with stepped sides and a concave base. Again, both enclosures had distinctive termini. In the case of enclosure G8 this may represent an entrance to the north; however, the full extent of the enclosure lay outside the limit of excavation. Enclosure G5 was open to the south but small ditch G6 may represent its continuation to the south-east.

Both G5 and G8 most likely represent smaller settlement or animal enclosures which are part of the bigger settlement complex. G8 produced a relatively large

amount of early to middle Iron Age pottery and animal bone, suggesting it may be more closely related to settlement.

G5 produced less pottery and animal bone but did contain a small fragment of fired clay which may be related to a hearth or wattle-and-daub structure. Also, the terminus of ditch G7, *c*.10m to the north of enclosure G5, produced a relatively large amount of animal bone and five fragments of pottery. This could conceivably be refuse material originating form the occupational enclosure G5 and deposited a short distance away.

A similar, mixed Iron Age pottery assemblage was also retrieved from small, curvilinear ditch G6 in the southern corner of the excavated area. The nature of G6 is unclear. It may represent a continuation of enclosure G5. However, the fact that it is narrower and shallower than G5 suggests that it may represent part of a (later?) penannular enclosure similar to G4.

No structural features were revealed within the enclosures. The eastern part of a large penannular enclosure G4 was excavated in the northern part of the settlement enclosure G7/G9. Its western part was most likely removed by medieval and modern ploughing. Ditch G4 was narrower and shallower than the larger enclosure ditches and could conceivably represent a roundhouse gully. However, with a diameter of nearly 20m it would be a very large structure and, therefore, is more likely to represent a further subdivision within the settlement. It produced a mixed assemblage of early to middle Iron Age pottery suggesting that it could be slightly later in date. A small fragment of fired clay, again, may point to its domestic nature.

Two ditches were situated to the north-west of settlement enclosure G7/G9. Ditch G10 was on an east-west alignment and *c*. 10m long. In the east it was truncated by ditch G16 on a NW-SE alignment. This ditch was 21m long with a definite terminus in the south; in the north it continued beyond the limit of excavation. Both ditches produced early to middle Iron Age pottery and animal bone, suggesting that they were contemporary with the settlement L3 to the east. They have been assigned to a separate Land-use area due to their position to the west of or 'outside' the main settlement.

3.3.2 Phase 2: Pitting L5

Three pit clusters were revealed, spread out along the south-eastern edge of the site and extending beyond the limit of excavation. Cluster G14 was the largest, consisting of eleven mostly intercutting pits, three of which truncated ditch G2 in the centre of the site (see above). The pits were up to 9.4m long, 3m wide and 1.2m or more deep. They had 45 degree or concave sides with concave or uneven bases.

Pit cluster G13 was located *c*. 13m to the south of G14 and consisted of three intercutting pits up to 4.4m long, 1.25m wide and 0.59m deep. Pit cluster G15 in the south of the site and truncating possible enclosure ditch G6, also consisted of three pits up to 1.75m long, 0.8m wide and 0.25m deep. All pits had concave profiles with sides sloping at 45 degrees or less to a concave base.

The pit fills generally consisted of firm, mid yellow grey to dark grey silty clay with occasional small to large stones and occasional flecks of charcoal. They represent a mixture of natural silting, rubbish deposition, and in the case of large pit group G13, some trampling layers. All pits contained early to middle Iron Age pottery and animal bone, suggesting domestic rubbish from the settlement nearby.

The precise function of the pits and their relationship with the Phase 1 settlement are unclear. Stratigraphically, they were later than two of the Phase 1 ditches — albeit the earliest ditch L2/G2 but also later ditch G6. It is possible that once parts of the settlement fell out of use the area was used for quarrying.

It is also conceivable that the pits were related to an earlier component of settlement establishment. As the geology of the area consists of clay, it is possible that the pits were dug to extract material for the construction of roundhouses within the enclosures. They were subsequently backfilled with domestic rubbish during the lifetime of the settlement.

3.3.3 Phase 3: Possible structure L6

A cluster of six postholes, forming a possible structure G18, was located near the eastern boundary of the site. Four postholes were on a 7m long NNE-SSW alignment with a further posthole pair situated centrally on a perpendicular alignment *c*. 2.5m to the west. The postholes were generally *c*. 0.30m in diameter and 0.15–0.22m deep with steep sides and a concave base.

The precise form and function of the structure is unclear. The postholes truncated pits G13 (L5) and also ditch G2 (L2). They produced a small quantity of animal bone and a single fragment of early to middle Iron Age pottery. The centrally located posthole, that also truncated pit G13, contained the remains of a dog skull and possible skin (see Section 4.6 and Appendix 2), which may represent a ritual deposit.

An environmental sample taken from the same posthole also proved to be the most productive sample from the site. It contained mostly charred cereal grain, representing cleaned grain ready for consumption and probably spilled during food preparation or cooking. It may have accumulated near to where these activities were being carried out (see Section 4.5 and Appendix 1).

Gully G17 was located *c*. 11m to the north of structure G18. It was on an east-west alignment, 5m long and 0.5m wide with a shallow profile. It truncated ditch G2 and an isolated pit that belongs to G13. The gully has been related to the structure G18 on stratigraphic grounds only; its precise function is unclear.

3.4 Medieval Agriculture

3.4.1 Phase 4: Ridge and furrow cultivation

The remnants of medieval agriculture were identified across the entire excavated area in the form of distinctive furrows which survived as regularly spaced linear

gullies. These features characterise medieval arable cultivation and are indicative of strip ploughing during this period.

The furrows followed two distinct orientations. The majority G19 were on a north-south alignment. Two furrows G20 in the north-eastern part of the site were on an east-west alignment. This may illustrate two different lay-outs of medieval strip fields, even though no obvious boundary ditch or headland was distinguished. The available cartographic evidence from 1680 onwards also shows no field boundaries that might explain this change in alignment (ULAS 2006). However, it is possible that G20 may represent ditches defining a trackway that traversed the fields at this point.

The fills of the furrows consisted of light yellowish brown silty clay and were virtually sterile.

4. ANALYTICAL POTENTIAL OF THE DATA

4.1 Introduction

The following discussion reviews the potential of the each dataset based on their individual specialist assessments. Each includes relevant information on quantification, spatial, chronological provenance and condition. Each is also discussed in relation to its potential to address the original research objectives, derived from the WSI (Albion Archaeology 2010).

Certain data-set specific objectives (e.g. even a small pottery assemblage can augment knowledge of local pottery types) are also alluded to in this section and then linked to revised research objectives in Section 5.

The datasets recovered during the investigations have been divided into three main classes: contextual; artefactual; and ecofactual.

- ***Contextual*** data relate to the identification of individual events such as the digging of a ditch, its primary infilling *etc*. These have been recorded as context records during the evaluation and open area excavation. All contexts have a detailed record sheet; many have a plan and section drawing along with photographs.

- ***Artefactual*** data comprise manmade objects recovered during the open area excavation. These have been divided for ease of discussion into pottery, fired clay and other artefacts (including registered artefacts and bulk finds, such as industrial residues).

- ***Ecofactual*** data comprise natural materials found within excavated deposits. These are able to yield information on the nature of past human activity and its environmental setting. They include animal bones and information obtained from environmental samples (*e.g.* plant remains and molluscs).

Contextual data are discussed first in the following sections, as they have provided the framework for the preceding summary of results and the subsequent artefactual and ecofactual dataset discussions.

4.2 Contextual Data

4.2.1 Quantity of records

Table 3 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	Photographs
274	30	58	168

Table 3: Quantity of records

4.2.2 Survival and condition of remains encountered

Significant remains comprise the remnants of a probable early to middle Iron Age settlement enclosure with internal subdivisions and possible further animal or domestic enclosures. Evidence of pitting activity and a possible post-built structure also survived.

These remains were truncated by ploughing during the medieval/post-medieval period and in modern times. Indeed, medieval ridge and furrow cultivation had caused significant truncation of earlier remains (Figure 2). In turn, ridge and furrow earthworks were swept away in modern times, through mechanised deep ploughing.

The components of the Iron Age landscape that survived best were relatively deeply cut negative features such as enclosure ditches G5, G7 and G8, and pit clusters L5. Few smaller, shallower features such as post-holes survived. Shallower enclosure G4 was also most likely partially truncated by ploughing (Section 3.3.1). As a result little evidence of structures was recorded (G18 is one possible exception, Section 3.3.3). This may not be because structures were not present at the site.

For similar reasons, no positive features such as hearths, floor layers, or banks to accompany the deep ditches survived. It is likely that archaeological remains identified during these investigations represent only the basal remains of larger and more numerous features.

4.2.3 Potential for analysis

The contextual data-set has low to medium potential to add to our knowledge of settlement form and function in the early to middle Iron Age (**Objective 1**). A small enclosed settlement certainly existed on the banks of the Renhold Brook tributary, but the recovered data can provide only limited insights into settlement function, internal spatial layout or social organisation.

However, the site does add to our understanding of the stream/brookside settlement pattern within the Ouse Valley, particularly on the more marginal clay soils away from the main river terraces. In conjunction with the known neighbouring Iron Age (Edgeworth 2001) and Roman/late Saxon sites (Albion 2011), and comparative sites within the area, there is moderate potential to build a more complete picture of settlement distribution and development within the region. This fulfilled the aim of the second part of **Objective 1**.

For the medieval period the revealed furrows were mapped and recorded. This fulfilled the aim of **Objective 2**. There is no further potential for analysis.

In terms of **Objective 3**, all features were investigated to a level where they could be reliably dated and interpreted by function. Artefact and ecofact material was retrieved from a variety of features. Artefactual material is only able to provide a broad dating framework from the early to middle Iron Age (800-300 BC) for the site. However, there is potential to obtain a C14 date from the bones surviving as part of the deliberately placed animal skin (with skull and paws)

within a post-hole of structure L6 in Phase 3. The results of a hopefully more precise date would feed into questions asked as part of **Objective 1**.

4.3 Pottery and Fired Clay

Jackie Wells

4.3.1 Methodology

For each context, pottery and fired clay was recorded by fabric type and quantified by minimum sherd count and weight. This information was entered onto the Context Assemblage Table in the project database. Pottery was also spotdated by individual fabric type, and the date of the latest sherd used in the provision of an overall context spotdate. The latter has been used to assist in the establishment of the provisional phasing structure.

4.3.2 Quantification

A total of 198 pottery sherds, weighing 2.1kg, and two amorphous fired clay fragments (27g) was collected, the majority deriving from Phase 1 features.

4.3.3 Range and variety: pottery type series

Pottery fabrics are listed below (Table 4) in chronological order, using common names and type codes in accordance with the Bedfordshire Ceramic Type Series, currently maintained by Albion Archaeology.

Fabric Type	Common name	Sherd No.
Early to middle Iron Age		
F03	Grog and sand	12
F14	Fine mixed	2
F16	Coarse shell	39
F17	Grog	42
F18	Fine sand and shell	26
F19	Sand and organic	1
F27	Shell and grog	38
F30	Sand and calcareous	13
F32	Sand and flint	8
F37	Calcareous mixed	11
Post-medieval		
P01	Glazed red earthenware	1

Table 4: Pottery type series

4.3.4 Provenance, Phasing and Date Range

With the exception of an intrusive sherd of post-medieval glazed earthenware (6g) recovered from pit cluster G5, the pottery is consistently datable to the early to middle Iron Age period (*c.* 800-300 BC). The fragmented nature of the material is indicated by a low average sherd weight of 11g, and further reflected by the poor and abraded condition in which the sherds survive. Approximately 6% of the assemblage (by weight) was recovered from the sieved residues of environmental samples.

The assemblage comprises hand-made pottery tempered with a range of sand (types F03, F32), organic (F19), grog (F17) and calcareous/shelly inclusions

(F14, F16, F18, F27, F30, and F37), the latter types predominating. Diagnostic forms are relatively scarce and comprise thin-walled (*c*. 5mm), round-shouldered vessels with rounded, flat, or tapering rims. No bases survive. Thicker-walled sherds in grog (F17) and coarse shell (F16) tempered fabrics, some ranging up to 20mm, attest the presence of larger vessels, some possibly used for storage. Decoration is rare, and comprises finger nail and finger tip impressions around vessel shoulders and rims, and faint random combing. Internal and/or external sooting preserved on several sherds indicates their use as cooking vessels.

The majority of the assemblage derives from enclosures L3 (Table 5), principally rectilinear enclosure ditch G8, which yielded 904g. Two amorphous sand tempered fired clay fragments (27g) derived from the same landscape.

Phase	L. No.	Landscape description	Sherd No.	Wt (g)
1	3	Enclosures	99	1492
	4	Two ditches to NW of L3	10	71
2	5	Three pit clusters	78	582
3	6	Putative structure and small gully	11	43
			198	**2188**

Table 5: Pottery quantification by phase and landscape

4.3.5 Potential for further analysis

Bryant (2000, 14) has drawn attention 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), and, to date, little or no petrological analysis has been undertaken.

The pottery has low potential to help promote the development of a more standardised Iron Age type series, and perhaps assist in the clarification and/or refinement of the dating for Iron Age types (**Objective 3**).

4.4 Other Artefacts

Holly Duncan

Pit cluster G13, L5, yielded a small, shell-tempered ceramic fragment (11g) deriving from either a triangular loom weight or spindle whorl. The fragment comprises approximately one third of the edge of a rounded perforation. As the piece is lacking the reverse surface, it is impossible to determine the original form of the artefact.

A secondary flint flake (9g) with an oblique striking platform was recovered from rectilinear enclosure ditch G8, L3. The latter also yielded 7g of fuel ash slag.

The assemblage has no potential for further analysis.

4.5 Ecofacts

Angela Monckton (ULAS)

4.5.1 Introduction

Only a summary of the ecofact report is giving in this section; the full report is reproduced in Appendix 1.

Twelve samples were taken from features including ditches, pits and post-holes for the recovery of charred plant remains which may give evidence of diet, agriculture or activities on sites in the past. The site was investigated for the presence of cereals and other remains to add to results from other sites in the region. Very few remains were found in the samples.

4.5.2 Discussion

The remains found may represent a scatter of domestic waste as found at some other Iron Age sites which typically includes spelt chaff with some wheat and barley grains and weed seeds interpreted as food preparation waste (Monckton 2004). Spelt and barley are the common cereals of this period (Greig 1991), and both are represented here in the early to middle Iron Age. There were too few remains to suggest change over time.

It is possible that the sparse plant remains from the area of the ditches (Phase 1) and pits (Phase 2) resulted from the features being at some distance from occupation or other cereal-related activities. However, the remains from the posthole 5076, sample 5005 (Phase 3, posthole structure L6) represent cleaned grain. After threshing spelt requires additional processing by parching and pounding to remove the chaff and in the Iron Age this is thought to have been done in small batches so this could have resulted from grains spilled during processing or perhaps cooking spills. These grains may have accumulated near to where this was being carried out as food preparation waste.

4.5.3 Potential for further analysis

Charred cereals are present on the site, although not abundantly, and they show the use of the typical cereals of the Iron Age, spelt and barley, and the occurrence of cleaned grains in a post hole may indicate where domestic activity was taking place. These results, although sparse, contribute towards the distribution of plant remains in the area (**Objective 3**).

There is no potential for further analysis.

4.6 Animal Bone

Jennifer Browning (ULAS)

4.6.1 Introduction

Only a summary of the animal bone report is given in this section; the full report is reproduced in Appendix 2.

4.6.2 Discussion

Bones from 43 different contexts were recovered, weighing a total of c. 2.5kg. The majority of the assemblage dated to the early to middle Iron Age.

The assemblage is quite fragmented and unfortunately the small sample size does not support detailed analysis or discussion of animal husbandry regimes at the site. However, cattle, sheep/goat, pig, horse and dog were represented. An increase in the proportion of sheep/goat relative to cattle was noted between Phase 1 (enclosures) and Phase 2 (pitting).

The Phase 3 (posthole structure) assemblage was dominated by a single partial dog skeleton, which is of interest and is most likely to represent a skin with head and feet attached. The position of the deposit in a central post hole suggests that it held some non-functional significance, rather than just a discarded skin and the excavators have suggested a possible ritual interpretation. 'Placed' burials of dogs and horses were recorded at Stagsden (Roberts 2000 quoted in Dawson 2007, 71).

Little archaeological value can be attached to the medieval bones from Phase 4, which were recovered from furrows.

4.6.3 Potential for further analysis

The occurrence of the dog skin burial has wider significance in the study of ritual or structured deposits in the Iron Age and therefore feeds into **Objective 1**. Obtaining a radiocarbon date on the bone would place the deposition of the animal burial, and by association the ritual of its deposition, into a tighter dating framework and further inform questions on social organisation and ritual activity which are part of **Objective 1**.

The animal bone from the site contributes in a minor way to the growing number of Iron Age assemblages known from the county (**Objective 3**).

No further work is required on this material beyond what is contained in the present report (Appendix 2).

	Objective	Contextual	Pottery	Other Artefacts	Animal Bone	Charred Plant Remains
1	Social organisation and settlement form and function in the early to middle Iron Age	Medium - Low	Low	Low	Medium - Low	Low
2	Nature of medieval field systems	Medium	-	-	-	-
3	Artefactual type series/nature of environment	-	Low	Low	Low	Low

High	Dataset is able to contribute direct, significant data which can expand our knowledge in this area.
Medium	Dataset can contribute direct data which will be relatively standard for this chronological period and region.
Low	Dataset has a relatively low potential to augment our knowledge of this subject. It may be of only minor relevance to the research aim, 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.
-	Dataset has no potential to provide useful information on this subject.

Table 6: Potential of recovered datasets to address the original research objectives

5. RESEARCH OBJECTIVES FOR ANALYSIS

5.1 Introduction

Following the assessment of potential of the various datasets, it has become apparent that the original research objectives were of an adequate format for the scope and nature of the investigations.

The research objectives have been slightly reformulated in the light of the recovered data, and the ways in which these objectives will be addressed are listed below with reference to national and regional research frameworks and three broad themes (Character and Development, Economy and Landscapes).

The nature of the evidence is such that it mainly serves to address the local and regional research agenda. The potential of all data sets to address the research objectives is low to moderate.

In terms of the artefact and ecofact data the analysis undertaken as part of the assessment was on a sufficient scale that no further analysis of the material is required, apart from obtaining a radiocarbon date on the deliberately placed animal skin burial within L6. The final report will concentrate on drawing all available data together in order to address the research objectives.

Table 7 summarises the potential (Low, Medium, High) of each data-set to contribute to the revised research objectives for analysis.

5.2 Character and Development

5.2.1 What evidence is there for the character of the settlement? Is there any evidence as to its development and change of character over time?

The excavated evidence consists of a series of boundary ditches, pit groups and a possible structure. Ceramic evidence indicates that the settlement is dated to the early to middle Iron Age, with stratigraphic evidence suggesting changes in function within that period.

The relative lack of structural, artefact and ecofact material could suggest that the character of the settlement may only ever have been peripheral and consisted largely of a number of stock enclosures within a pastoral landscape. There is some artefactual evidence for possible occupational activity in the more substantial enclosures G5 and G8. More significant plant remains have been retrieved from the latest Phase 3, possible structure L6 (G18), and this may denote a change in function.

The deposition of a partial dog skeleton and skin within Structure G18 also provides an interesting highlight within the data; it represents a rare example of a possible ritual deposit within an Iron Age structure. Obtaining a radiocarbon date from its remains would hopefully anchor the site more firmly within the early or middle Iron Age period and aid in placing it within the chronology and site types of the period.

Settlement characterisation for the Iron Age and Roman periods is part of the local and regional research framework (Oake 2007, 11 - Late Bronze Age to Roman Period). Analysis will focus on refining this picture. This will be achieved using contextual data (medium potential), animal bone and plant remains (low potential) and artefactual (low potential) data.

5.3 Environment

5.3.1 What was the economic basis, including possible crop regimes, diet and the arable/pastoral balance?

In the eastern region, understanding of the agricultural economy of the period is a key research objective (Murphy 2000, 25). The ecofact and animal bone assemblages were very small and both have a low potential to add to this research aim. However, they do add to the wider artefact assemblages retrieved within the region and help to consolidate statements on crop and animal husbandry typical within the early to middle Iron Age.

The contextual data (low potential) will be used to assist in these aims.

5.4 Landscapes

5.4.1 How do the results of these archaeological investigations augment our understanding of Iron Age land-use in the local area?

Our understanding of the character of Iron Age sites in rural and urban settings has grown in recent years as a result of developer-led investigations (Oake et al 2007). Comparisons will be made with broadly contemporary sites in order to see whether the settlement fits a pattern of similar remains, known on other local sites.

The contextual data-set has a low to moderate potential to contribute useful information to this research aim, while the relatively small artefactual and ecofactual data-sets all have a low potential to contribute to this aim.

5.4.2 Is there any evidence to denote settlement shift or change in local landuse over time?

The site at Norse Road is part of a series of settlements, or parts of settlements, that have been excavated in the Norse Road area in recent years (Edgeworth 2001 and Albion 2011). Building a composite picture of the sites in the vicinity of the Renhold Brook and looking in detail at the micro landscape level will allow a more detailed picture to be drawn of the nature of the landscape from the prehistoric to medieval period in this part of the Ouse Valley.

This is a research aim that is clearly stated in the local research agenda for Bedfordshire (Oake *et al* 2007). The establishment of regional chronologies is also stated as a specific national research aim (EH 1997, 55. L3).

The contextual data-set has a low to moderate potential to contribute useful information to this research aim, while the relatively small artefactual and ecofactual data-sets all have a medium-low potential to contribute to this aim.

5.4.3 Increased record of field systems in the medieval township of Renhold

During the medieval period, the development area would have formed part of the open fields of Renhold township. During trial trenching (Albion 2006) and geophysical survey (Smalley 2006) the remains of ridge and furrow field systems were recorded. The contextual data-set had a medium potential to contribute to this research aim. These were the only remains encountered which dated to these periods. They were formed as a result of ploughing in a field under strip cultivation. The furrows occur over much of the development area and correspond to historical map evidence (Browning 2006).

The remains of field systems are of local interest, assisting in our understanding of settlement patterns and land-use during these periods. Remains of this type have been mapped and the results will form part of the site archive. The contribution of remains within the site is modest in terms of the whole township of Renhold, nevertheless, the information will augment the maps already submitted to the HER (Albion Archaeology 2006, Smalley 2006, Browning 2006) and will add to existing data held within that resource and can be utilised by researchers as appropriate.

	Category	Objective	Contextual	Other Artefacts	Pottery	Animal Bone	Plant Remains
1	**Character and development**	What evidence is there for the character of the settlement? Can we discern any changes in the type of use through time? What significance does the ritual deposit (animal skin) have?	Medium	Low	Low	Medium	Low
2	**Economy**	What was the economic basis, including possible crop regimes, diet and the arable/pastoral balance?	Low	-	-	Low	Low
3	**Landscapes**	How do the results of these archaeological investigations augment our understanding of Iron Age land-use in the local area?	Medium	Low	Low	Low	Medium
		Increased record of field systems in the medieval township of Renhold.	Medium	-	-	-	-

High Dataset is able to contribute direct, significant data which can expand our knowledge in this area.

Medium Dataset can contribute direct data which will be relatively standard for this chronological period and region.

Low Dataset has a relatively low potential to augment our knowledge of this subject. It may be of only minor relevance to the research aim, 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.

- Dataset has no potential to provide useful information on this subject.

Table 7: Potential of recovered datasets to address the updated research objectives

6. UPDATED PROJECT DESIGN

6.1 Introduction

This section provides a task list for the analysis, publication and archiving programme. A report will be submitted to the AO that is suitable for inclusion in *Bedfordshire Archaeology*. The chronological phased development of the site will provide the basic structure for the site narrative. Within each Phase, text will be organised by Land-use area and Group, with artefactual and ecofactual information integrated into the text as appropriate.

The discussion will concentrate on an overview of the Iron Age settlement and its associated phases of enclosure, pitting activity and possible structure with ritual deposition. The settlement will be set into its wider chronological and landscape context.

Table 8 summarises the tasks associated with publication, archiving and overall project management. Table 9 describes the project team and lists their initials, and Table 10 details the proposed timescale for completion of each key stage in the project.

6.2 Analysis of Contextual Data

6.2.1 Liaison / Meetings

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, as well as commissioning the work and addressing any queries that arise during the course of the analysis.

6.2.2 Digitisation

The size of the datasets means that they would benefit from digitisation. Albion operates a fully integrated computer-based system of structural analysis using databases (through Access) and a mini GIS (G-sys) for interrogation. Basic contextual information has been entered into a database table and has been successfully utilised within this report.

The digitised all-features drawing produced for the assessment will require checking and correcting to ensure it is linked correctly with the contextual database. Once this is complete, the drawings can be fully interrogated and manipulated by any database table.

Once this is achieved, it will be possible to rapidly interrogate datasets within the G-sys programme. For example, it would be possible to plot the distribution of specific find types, or all features which are considered to be contemporary. This type of interrogation will greatly enhance the analysis of data and is, therefore, likely to assist in the interpretation of the archaeological remains. It also provides a basis for publication figures to be produced rapidly.

6.2.3 Group, Land-use Area and Phase analysis

Each context will be assigned to a single Group, consisting of one or more (usually several) contexts that are closely related both stratigraphically and

interpretatively. The Group to which each is assigned will be determined by analysis of the primary contextual information, specifically context sheets and section drawings that were produced on site.

The assessment of the Norse Road data suggests that contexts will be assigned to Group types including:

- Post-hole
- Pit
- Enclosure ditch

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 is not envisaged that Group plans will be routinely produced, but this information will be available via the relational database tables.

The same database procedure will be followed for Land-use groups and Phases (see below). The group descriptions from the database will form the basis for any detail required in the descriptive section of the publication text while the land-use group and phase descriptions will form the basis for the site narrative section of the publication text.

Any Sub-Groups 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 Land-use Area representing a higher level of interpretation. It is likely that most Groups will comprise multiple Groups that are all similar both stratigraphically and interpretatively.

The assessment of the Norse Road data suggests that the Groups will be assigned to Land-use Area types including:

- Enclosure system
- Structural and pitting activity
- Agricultural activity

Land-use Areas will be composed of Groups that are stratigraphically similar, and which combine to form a coherent unit of contemporary activity. It is not envisaged that separate Land-use area plans will be produced for each Land-use group as most Land-use groups are part of only a very small number of easily distinguishable phases.

Each Land-use Area will be assigned to a higher level of interpretation known as a Phase, which may contain one or more Land-use Areas. Each Phase will be composed of Land-use Areas that are broadly contemporary, and will represent the sum total of archaeological remains at a given stage in the site's development. Each Phase will, in turn, be assigned to a chronological Period. A plan will be produced for each Phase, with the location of all relevant Land-use Areas marked.

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

6.2.4 Analysis of plant remains and animal bone

Given the nature of the datasets, all necessary analysis was undertaken during the assessment. The full, unedited specialists' reports are included in Appendix 1 and Appendix 2 of this report. The results of the specialists' analysis will be incorporated into the publication text (Key Stage 2) and the material will be prepared for accessioning to Bedford Museum.

A radiocarbon date from two samples of the animal skeleton deposited in possible structure L6 of Phase 3 will be obtained. Otherwise, no further analysis of the material is required.

♦KEY STAGE 1

6.2.5 Final phasing/publication liaison

The phasing established during the assessment phase will be double-checked against the results of the specialists' reports and any final necessary amendments undertaken. Queries will be discussed with specialists and results integrated into the site narrative.

6.2.6 Integration of all specialist reports and production of synthesis

All the specialists' reports will be read and edited to ensure a consistency in approach. The key conclusions of the reports will be fully integrated into the synthetic publication text.

6.2.7 Site narrative text

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

6.2.8 Structural illustration

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 Land-use Areas and Groups identifiable.

♦KEY STAGE 2

6.2.9 Albion refereeing process

It is Albion policy to circulate the first draft of articles intended for publication to the client, AO and any other interested parties. This task includes time for any required discussion with the referees.

♦KEY STAGE 3

6.2.10 Submission of article to *Bedfordshire Archaeology* and amendments resulting from editor's comments to publication text and figures

Amendments to publication text and figures based on comments received from Albion's refereeing process, following submission of the publication article to the editor of *Bedfordshire Archaeology.*

6.2.11 Printing and proof reading

The printing of the article will be arranged by the editor of *Bedfordshire Archaeology*, but proof reading will be necessary.

♦KEY STAGE 4

6.2.12 Archiving and accessioning

Upon completion of the report, the written and material archives will be prepared for accessioning to Bedford Museum.

6.2.13 Project management

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.

♦KEY STAGE 5

Description	Title/ Organisation initials	Days
Analysis of contextual/specialist data		
Group, Land-use area and Phase analysis	PO/S	10
Obtaining radiocarbon date liaison	PO	1
Radiocarbon dating	External	1
Digitisation	S/Ills	2
KEY STAGE 1		
Completion of publication 1st draft		
Structural analysis liaison/meetings	PO	2
Integration of specialists' reports	PO	2
Site narrative text	PO	10
Structural illustration	Ills	2
Editing of publication text	OM/PO	2
KEY STAGE 2		
Albion's refereeing process		
Liaison with interested parties	OM/PO	1.5

Description	Title/ Organisation initials	Days
KEY STAGE 3		
Submission to *Bedfordshire Archaeology*		
Amendments resulting from editor's comments	PO	1.5
Printing	External	1
Proof reading	PM	1.5
KEY STAGE 4		
Archive preparation		
Archive preparation (Structural)	PO	0.5
Archive preparation (Artefacts)	FO/AM	0.5
Archive preparation and liaison with Museum	AM/AO	0.5
Archive microfiching	External	1
Archive transfer (storage costs)	External	1
Archive transfer	PO	0.5
Project management (Overall)	OM	0.25
Project management (Albion)	PM	1
KEY STAGE 5: End of project		

Table 8: Overall Publication, Archiving and Management tasks

6.3 Publication Synopsis

The article resulting from this project will be submitted to the editor of *Bedfordshire Archaeology*. The suggested format is set out below with indicative word and figure counts. The outline of the publication should be considered as only a guideline, and may be altered during the analysis and pre-publication stages if the results warrant it.

Overall length, including front papers: approx. 11 pages (including *c.*8 tables). All text and illustrations will be submitted in electronic format.

- **Section 1: Background**

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

  Approx. 1 page and 1 figure

- **Section 2: Results in chronological order**

  Contextual data will be discussed in order to explain the character and stratigraphic relationships of archaeological remains identified at the site.

  Approx. 3 pages and 4 figures

- **Section 3: Pottery**

  Approx. quarter page

- **Section 4: Other Artefacts**

  Approx. eighth page

- **Section 5: Animal Bone**

  Approx. half page

- **Section 6: Charred plant remains**

  Approx. half page

- **Section 7: Discussion**

  The projects contribution to six broad themes will be discussed.
  - Character and Development
  - Environment
  - Economy
  - Landscapes
  - Evaluation Methodology
  - Typology

  Approx. 3 pages

- **Bibliography**

  Approx. 2 pages

6.4 Archiving

On publication of the final report the archive of materials (subject to the landowner's permission) and accompanying records will be deposited with Bedford Museum (Accession Number BEDFM:2010.14).

6.5 The Project Team

To ensure a consistency of approach, the same specialists will be used (as far as possible) who have been involved in the assessment stage of the project.

Task	Organisation, Title and Name	Initials of Title
Overall management	Albion, Operations Manager, Drew Shotliff	OM
Structural analysis and daily management	Albion, Project Officer, Christiane Meckseper	PO
Other artefact analysis	Albion, Artefacts Manager, Holly Duncan	AM
Pottery analysis	Albion, Finds Officer, Jackie Wells	FO
Animal Bone	University of Leicester Archaeological Service, Jennifer Browning	ULAS
Plant remains	University of Leicester Archaeology Service, Angela Monckton	ULAS
Radiocarbon dating	External laboratory tbc	tbc
Structural Illustration	Albion, Joan Lightning	Ills
Archiving	Albion, Archives Officer, Helen Parslow	AO

Table 9: The Project Team

6.6 Timetable

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 ensure that project momentum is maintained. Table 10 sets out the five key stages within the analysis and publication programme.

Task	Anticipated date of completion
Structural Analysis	Late 2011
Quantification and recording by specialists	Late 2011
Obtaining c14 dates	Late 2011
Completion of KEY STAGE 1	
Compilation of 1st draft	Late 2011
Completion of KEY STAGE 2	
Refereeing	Late 2011
Completion of KEY STAGE 3	
Publication of report*	Early 2012
Completion of KEY STAGE 4	
Deposition of archive	Early 2012
Completion of KEY STAGE 5	

Table 10: Provisional timetable to complete the project

*Publication, and therefore deposition of the archive with Bedford Museum, will be dependent on the publication timetable of *Bedfordshire Archaeology.*

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8. APPENDICES

8.1 Appendix 1: Ecofacts

Angela Monckton

8.1.1 Introduction

Samples were taken from features including ditches, pits and post-holes for the recovery of charred plant remains which might give evidence of diet, agriculture or activities on sites in the past. The site was investigated for the presence of cereals and other remains to add to results from other sites in the region. Very few remains were found in the samples.

8.1.2 Methods

Bulk samples were taken from datable features and processed to recover plant and animal remains. Samples from 12 contexts were processed in parts of 10 litres each in size.

Samples were wet sieved in a York tank using a 0.5mm mesh with flotation into a 0.3mm mesh sieve. The residues were air dried and then separated on a 4mm riddle and the fractions over 4mm, the coarse fractions, were sorted for all finds. The fractions below 4mm were and reserved. The flotation fractions (flots) were transferred to plastic boxes and air dried and then packed carefully in self-seal polythene bags and submitted for sorting for charred plant remains. This work was carried out at Albion Archaeology Ltd.

All the flots were examined and sorted using a low power stereo microscope and any plant remains were removed to glass specimen tubes. The plant remains were identified by comparison with modern reference material. Charred remains including charcoal was poorly represented in most of the samples. A few snail shells were also recovered but these were mainly of the burrowing snail as modern intrusive material. The remains were noted with an estimate of quantity and tabulated below (Table 11). Plant names follow Stace (1991).

8.1.3 Results

Charred cereal remains excluding charcoal were found in seven of the 12 samples in only single numbers except in sample 5005. A couple of wheat chaff fragments, glume bases, were of spelt (Triticum spelta) in one sample 5006. In sample 5005 a group of cereal grains were mainly of glume wheat, either emmer or spelt, with some indeterminate cereal grains and a couple of grains of barley. Other samples contained single numbers of cereal grains, most of which could not be identified further as they were incomplete and abraded. The only other chaff fragments were a couple of free-threshing wheat rachis fragments of bread wheat (Triticum aestivum s.l.) which is likely to be intrusive medieval material. Charred seeds were very few including only large grass seeds (Poaceae) and a fragmentary seeds of vetch or vetchling (Vicia/Lathyrus) both of which are known as arable weeds. Occasional uncharred, probably modern, seeds were sparsely present. Charcoal was only

present as small fragments in a few samples with occasional charcoal flecks in most of the samples.

8.1.4 Phase 1: Enclosure L3

Four of the six samples examined contained single cereal grains with single weed seeds of vetch and black bindweed. The remains were poorly preserved and too sparse for any conclusions. One sample, 5008, contained charred fragments of bread wheat rachis which was probably intrusive from the medieval period as there were medieval features in the area.

8.1.5 Phase 2: Pitting L5

Samples from pits included a sample with a barley grain, and a sample with three glumes of spelt; these are characteristic Iron Age cereals. Occasional weed seeds were only of small grasses as found in samples of most periods. These remains may represent a very low density scatter of cereal remains from food preparation, as found on many Iron Age sites.

8.1.6 Phase 3: Possible structure L6

Two post-holes were sampled. One contained very abundant charcoal with a few cereal grain fragments. The second sample was the most productive from the site consisting of mainly charred cereal grains. The grains included glume wheat, either emmer or spelt, probably spelt with some indeterminate cereal grains and a couple of grains of barley. Only two weed seeds of large grasses were present, these seeds are of a similar size to grains and stay with the grain after cleaning by sieving. These remains, therefore, represent cleaned grain ready for consumption; they were probably spilt during food preparation or cooking.

8.1.7 Discussion

The remains found may represent a scatter of domestic waste as found at some other Iron Age sites which usually includes spelt chaff with some wheat and barley grains and weed seeds interpreted as food preparation waste (Monckton 2004). Spelt and barley are the common cereals of this period (Greig 1991), and both are represented here in the early to middle Iron Age. There were too few remains to suggest change over time.

There was a very low density of remains in the enclosure ditches L3 (maximum density of 0.2 items per litre of soil), and a similar low density in the pits L5 (0.5 items per litre), with only three chaff fragments in one sample and single numbers of charred plant remains in each context sampled. The most abundant remains were found in the structure L6 where one posthole contained abundant charcoal and another contained a moderate number of cleaned cereal grains, representing either waste from cereal cleaning or food preparation. The density of 4.1 items per litre was still quite low but was the maximum for the site.

Remains are often at a low density in Iron Age samples, although a scatter of charred cereal grains, spelt wheat chaff and weed seeds is usually found as

domestic waste from food preparation burnt in hearths and dumped or accumulated in features (Monckton 2004).

It is possible that the sparse plant remains from the area of the ditches and pits resulted from the features being at some distance from occupation or other cereal-related activities. However, the remains from posthole (5077) (sample 5005) represent cleaned grain. After threshing, spelt requires additional processing by parching and pounding to remove the chaff. In the Iron Age this is thought to have been done in small batches. The material from sample 5005 could have resulted from grains spilled during processing or perhaps cooking spills. These grains may have accumulated near to where this was being carried out as food preparation waste.

8.1.8 Conclusions

Charred cereals are present on the site, although not abundantly. They show the use of the typical cereals of the Iron Age, spelt and barley, and the occurrence of cleaned grains in a posthole may indicate where domestic activity was taking place. These results, although sparse, contribute towards our understanding of the distribution of plant remains in the area.

Samp No.	Cont No.	Land-use No.	Samp Vol. litres	Flot Vol. mls	Gr Ch	Cf ch	Se ch	Se un	Chc	Comments. Plant remains.
5000	5012	L3 D	10	7	1	-	-	+	+	A cereal grain frag.
5001	5030	L3 D	10	5	1	-	1	+	+	A cereal grain frag, a seed frag of vetch.
5002	5035	L5 Pit	10	5	2	-	1	+	+	A barley grain, a cereal grain, a grass seed. Modern seeds.
5003	5018	L5 Pit	10	5	-	-	1	+	Fl	A small grass seed. Flecks of charcoal only.
5004	5073	L2 D	10	2	-	-	-	-	Fl	Roots, modern snails.
5005	5077	L6 P-H	10	10	39	-	2	-	+	Grains of glume wheat, cereal grains, two barley grains, 4 seeds of large grasses.
5006	5140	L5 Q-Pit	10	4	1	3	1	+	Fl	A cereal grain, a small grass seed, three glumes of spelt.
5007	5164	L3 Gu	10	2	-	-	1	+	+	A frag of vetch seed.
5008	5176	L3 Gu	10	7	1	2	1	+	+	A wheat grain, a seed of vetch, bread wheat rachis frags (?medieval).
5009	5061	L3 D	10	7	1	-	1	+	+	A cereal grain frag, a seed of black bindweed.
5010	5114	L3 Gu	10	3	-	-	-	+	-	Roots, modern insect parts, modern seeds.
5011	5099	L6 P-H	10	50	1	-	-	-	+++	Abundant charcoal, a frag of cereal grain.

Table 11: Remains from flots

Key: Gr = cereal grain, Cf = chaff, Se = seed, ch = charred, un = uncharred, Chc = charcoal, fl = flecks, frags = fragments, + = present, ++ = moderate amount, +++ = abundant. D = ditch, P-H = posthole, Q-Pit + Quarry pit.

8.2 Appendix 2: Animal Bone

Jennifer Browning

8.2.1 Introduction and methodology

A small faunal assemblage was recovered from the site. Bones from 43 different contexts were recovered, dating from the early to middle Iron Age to the medieval period. The work follows previous analysis of Roman, Saxon and medieval animal bones from a site located to the north-east of the current intervention.

Bones were identified with reference to the skeletal collection housed at the School of Archaeology and Ancient History, University of Leicester. Information on element, completeness, species, state of fusion and condition was recorded for each specimen, while butchery, burning, pathologies and tooth eruption and wear were noted where present. Condition was assessed with reference to Harland *et al*. (2003).

A zoning method (Serjeantson 1996) was used to assess completeness: as a general principle, each bone element is divided into eight diagnostic zones, the presence or absence of which can quickly be determined. Joining fragments were counted as a single specimen. Measurements were taken when bone completeness permitted, following von den Driesch (1976) and Payne and Bull (1988). Recording of tooth eruption and wear for cattle, sheep and pig followed Grant (1982), but assignment of age categories followed O'Connor (2003). The sheep/goat distinction was attempted on mandibles and teeth using the criteria of Halstead *et al*. (2002).

Data were recorded into a *pro forma* Microsoft Excel spreadsheet. Where fragments were not sufficiently diagnostic to identify to species, they were assigned to one of the following categories, based on characteristics such as size and the thickness of the cortical surface. 'Large mammal' represents indeterminate fragments, likely to derive from animals such as cattle, horse or possibly red deer, while 'medium mammal' bones belonged to sheep, goat, pig or possibly roe deer or dog. Where even this level of classification was not possible, the bones were recorded as 'indeterminate mammal' or 'indeterminate bird'.

8.2.2 Condition and taphonomy

The assemblage was heavily fragmented; whole bones were rare and both old and modern breaks were noted. The surface condition of the bones was predominantly good or fair (Harland *et al*. 2003); some surfaces were well preserved, enabling examination for butchery and other modifications but many bones were eroded and also exhibited evidence for root etching. Gnawing occurred rarely in the assemblage suggesting that bones were rapidly buried.

Preservation/Phase	1	2	3	4
Good: lacks fresh appearance but solid; very localized flaky or powdery patches	52	40	96	
Fair: surface solid in places, but flaky or powdery on up to 49% of specimen	43	59	4	100
Poor: surface flaky or powdery over 50% of specimen	5	1		
	100	100	100	100

Table 12: State of preservation for each phase (after Harland *et al.* 2003) (%)

8.2.3 Results

Bones were recovered both by hand-collection and sorting of sieved residues (5.6mm) and the results are detailed in the following tables.

Phase	Date	Land-use no.	Description	Total (n)	% (of assemblage)
1	Iron Age	2,3,4,		**215**	**51%**
1	Iron Age	2	Boundary ditch	1	
1	Iron Age	3	Enclosures	212	
1	Iron Age	4	Boundary ditch	2	
2	Iron Age	5	Pitting	**121**	**29%**
3	Iron Age	6	Structure	**83**	**20%**
4	Medieval	7	Ridge and furrow	**2**	**1%**
Total				**421**	

Table 13: Assemblage size from each phase and landscape

Phase	L no.	G no.	cattle	sheep/ goat	pig	dog	horse	lge mml	med mml	indet.	Ttl
1	**2**	**2**	1								1
1	**3**	**4**	2	2				5	2		11
1	**3**	**5**	1	1				3	2		7
1	**3**	**6**	1							3	4
1	**3**	**7**	17	5	1		6	18	12		59
1	**3**	**8**	11	2	2		2	38	6		61
1	**3**	**9**	1					5	2		8
1	**4**	**16**	1	1							2
2	**5**	**13**	6	6	2		1	23	15	2	55
2	**5**	**14**	3					1			4
2	**5**	**15**	1	3	1			3	4	2	14
3	**6**	**17**						1			1
3	**6**	**18**	1			77			1		79
4	**7**	**20**						1	1		2
Ttl.			**46**	**20**	**6**	**77**	**9**	**98**	**45**	**7**	**308**

Table 14: Hand-recovered fragments by Phase, Landscape and Group

Key: Lpe= landscape; Gp=Group; s/g=sheep/goat, lge mml= large mammal; med mml= medium mammal; Indet= indeterminate; Ttl=total)

Phase	G and Sample No.	cattle	s/g	pig	lge mml	med mml	indet.	Total
1	**4**							
	5007		2			2	5	9
	5008					9	1	10
1	**5**							
	5000		2	1	2	1	5	11
1	**7**							
	5001			1	1	5		7
1	**8**							
	5009						5	5
1	**9**							
	5010	1		1	2		16	20
2	**13**							
	5002		2				17	19
2	**14**							
	5006	1	1	1			16	19
2	**15**							
	5003						10	10
3	**18**							
	5011						3	3
Total		**2**	**7**	**4**	**5**	**17**	**78**	**113**

Table 15: Sieved fragments by Phase, Group and Sample No.

(Key as Table 14)

8.2.4 Phase 1: Enclosure L3 and boundary ditches L2 and L4

Phase 1 features produced the largest numbers of bones, 51% (Table 16) and these were all recovered from the fills of boundary ditches or enclosures. A total of 37% of the hand-recovered bones were identifiable to species.

	HR	Sieved	Total	%
cattle	35	1	36	56
s/g	11	4	15	23
pig	3	3	6	9
horse	8	0	8	12
Total identified	*57*	*8*	*65*	*100*
Lge. mammal	69	5	74	
Med. mammal	24	17	41	
Indet.	3	32	35	
Total	**153**	**62**	**215**	

Table 16: Faunal remains from Phase 1 (Number of Identified Specimens NISP)

HR = hand recovered

Phase	Cut	Canid Gnawing	Digestion	Burnt	Total bones
cattle	3 (8%)	5 (14%)		1 (3%)	36
sheep/goat		1 (6%)			15
horse		1 (12.5%)			8
large mammal				5 (7%)	74
medium mammal			2 (5%)		41
indeterminate			5 (14%)	3 (9%)	35
Total	**3 (1%)**	**7 (3%)**	**7 (3%)**	**9 (4%)**	**215**

Table 17: Modified Phase 1 bones (prevalence in brackets %)

Cattle bones were most common and their bones were more than twice as common as sheep/goat. All diaphyses with epiphyses were fused but there were two unfused proximal epiphyses, both from tibiae which fuse at 3 ½ – 4 years (Silver 1969, table A). A cow third molar with all three cusps in wear was from a mature adult (O'Connor 2003, 160, table 31). Two sheep mandibles with first and second molars at wear stages 'gg' and 'hg' (after Grant 1982) may have derived from animals aged two to four years, based on modern comparisons (Moran and O' Connor 1994; O Connor 2003, 162). Two juvenile sheep/goat bones were also recovered, indicative of young animals on the site. Where it was possible to tell, the bones were sheep rather than goat.

A small number of pig bones were also recovered, mostly tooth and mandibular fragments. These included a lower third molar in light wear, indicative of an animal over 2 years of age. *Equid* (probably horse) bones were retrieved from features (5058), (5117) (5106) and (5118); all enclosure ditches. The mixture of elements comprised teeth, long-bone fragments and a phalanx. A lower second and third molar, with heights of 27mm and 25mm, respectively indicate a horse of around 15 years of age based on height-wear curves (Levine 1982, 249, Appendix iiia).

It is not possible to explore patterns of carcass distribution with such a small sample. Cattle were the only species whose bones exhibited butchery marks and in all three cases these were knife cuts. Cuts on a metacarpal probably related to skinning, while marks on a femur suggested filleting and on a humerus might indicate either disarticulation or filleting.

Gnawing by dogs or other scavengers was noted on bones belonging to cattle, sheep/goat and horse and some small bone fragments had an eroded appearance, possibly indicative of digestion. Four percent of bones (n=9) were burnt, exhibiting a mixture of calcination and charring. A cattle metacarpal exhibited broadening of the distal epiphysis, which is sometimes associated with traction (Bartosiewicz *et al*. 1997).

8.2.5 Phase 2: Pitting L5

The Phase 2 animal bones were recovered from a group of pits. A slightly smaller proportion of the hand-recovered bones than in Phase 1 (32%) were

identifiable to species, which is consistent with the fact that the bone was in a marginally worse condition than in the previous phase (Table 12).

	HR	Sieved	Total	%
cattle	10	1	11	39
sheep/goat	9	3	12	43
pig	3	1	4	14
horse	1	0	1	4
Total identified	*23*	*5*	*28*	*100*
large mammal	27	0	27	
medium mammal	19	0	19	
indeterminate	4	43	47	
Total	**73**	**48**	**121**	

Table 18: Faunal remains from Phase 2 (Number of Identified Specimens NISP)

HR= hand-recovered

There was a larger proportion of sheep/goat than in the preceding phase. While this is too small a sample to suggest preference rather than taphonomy, it may be due to the fact that the material was from pits rather than ditches. Investigation at other sites, including Manor Farm, Humberstone (Browning 2011) has indicated that larger bones such as cattle and horse are more prevalent in features such as ditches, towards the outskirts of a settlement than bones from smaller animals (Wilson 1996, 14).

There were no unfused cattle or sheep/goat bones, but an unfused distal trochlea from a pig humerus was evidence for an animal aged less than 12 months old. Age-able teeth were rare but a sheep deciduous fourth premolar was recovered. Two molars which almost certainly derived originally from the same mandible were from a mature adult sheep/goat, while a pig mandible was from a sub-adult (O'Connor 2003, 160). The single horse bone was a tooth from pit (5033). No butchery marks were observed and gnawing was only seen on one bone, a cattle metatarsal.

8.2.6 Phase 3: Possible structure L6

	F5076	Other features	Total
cattle		1	1
dog	77		77
large mammal		1	1
medium mammal		1	1
indeterminate		6	3
Total	**77**	**1**	**83**

Table 19: Faunal remains from Phase 3

The vast majority of Phase 3 bones were from a single, partially articulated dog skeleton recovered from feature (5076), G18. The bones consisted of a

highly fragmented cranium and both maxillae, atlas, cranial part of left and right mandibles. Both hind and fore-feet were represented by the metacarpals and metatarsals, as well as carpals and tarsals. Not all of the phalanges were present (first phalanx 15 of 16; second phalanx 13 of 16 and third phalanx 11of 16) but the number was sufficient to suggest that all four paws were originally represented. There were no unfused bones and the animal had adult dentition. The head and the feet, together with the absence of limb bones, ribs or vertebrae suggest that the bones represent a skin rather than a burial. Fine cut marks were noted on the dorsal side of the atlas as well as a first phalanx and a metacarpal — typical locations for skinning marks.

An unusual feature was noted on both mandibles; there was space for a supernumerary tooth at the distal end of the tooth-row, behind the third molar (figures 1 and 2).This was *in situ* in the right mandible but only the socket was present in the left. Hillson (2005, 281) noted that supernumerary teeth are not uncommon in carnivores and that domestic dogs exhibit this trait more often than wolves. Measurements taken on the complete metapodials after Clark (1996), suggest a shoulder height of 0.49m (table), which is well within the 0.40-0.60m range observed for Iron Age dogs (Harcourt 1974, 151; Clark 1996, 12).

Element	L/R	GL	SH
mc4	r	61.1	48.7
mc4	l	60.4	48.1
mc5	l	51.7	49.1
mc5	r	51.9	49.3
mc2	r	54.3	49.5
mc3	r	60.6	48.3
mt3	i	68.0	50.1
mt2	l	59.5	49.1
mt4	r	67.1	47.6
mt4	l	67.2	47.7
Average			48.8

Table 20: Dog metapodial greatest lengths (GL) and shoulder heights (SH), calculated after Clark (1996)

With the exception of the partial skeleton, the only other identified bone was a fragment from a cattle humerus in feature (5183).

8.2.7 Phase 4: Furrows L7

Only two bones were recovered from the medieval phase of the site, which was defined by furrows. These were in fair condition and consisted of shaft fragments from a large and a medium mammal, neither of which were identifiable to species level.

8.2.8 Discussion

The bones in this assemblage were predominantly recovered from features dating to the early to middle Iron Age. An assemblage dating from Roman and medieval contexts was previously examined located north east of the current

site. Earlier investigations at Norse Road uncovered a small-scale rural farmstead dating from the middle Iron Age to the Romano-British period. There was no clear settlement focus rather the enclosures suggest compounds which were renewed successively (Edgeworth 2001, 16). Most of the fragmentary bones were from a late Iron Age enclosure. Cattle horse pig, sheep/goat and dog were represented and were present in the same proportions in the Roman as the Iron Age. Cattle were the most frequent, while dogs were rare (Roberts 2001).

The majority of bones from the current assemblage also date from the Iron Age period. The assemblage is quite fragmented and unfortunately the small sample size does not support detailed analysis or discussion of animal husbandry regimes at the site. However, cattle, sheep/goat, pig, horse and dog were represented. An increase in the proportion of sheep/goat relative to cattle was noted between Phases 1 and 2.

The Phase 3 assemblage was dominated by a single partial dog skeleton, which is of interest and is most likely to represent a skin with head and feet attached. The position of the deposit in a central post hole suggests that it held some non-functional significance, rather than just a discarded skin and the excavators have suggested a possible ritual interpretation. 'Placed' burials of dogs and horses were recorded at Stagsden (Roberts 2000 quoted in Dawson 2007, 71). Little archaeological value can be attached to the medieval bones from Phase 4, which were recovered from furrows.

The animal bone from the site contributes in a minor way to the growing number of Iron Age assemblages known from the county, and the occurrence of the dog skin burial has wider significance in the study of ritual or structured deposits and therefore furthers Bedfordshire's research strategy for the period (Dawson 2007). In light of this, no further work is required on this material beyond what is contained in this report.

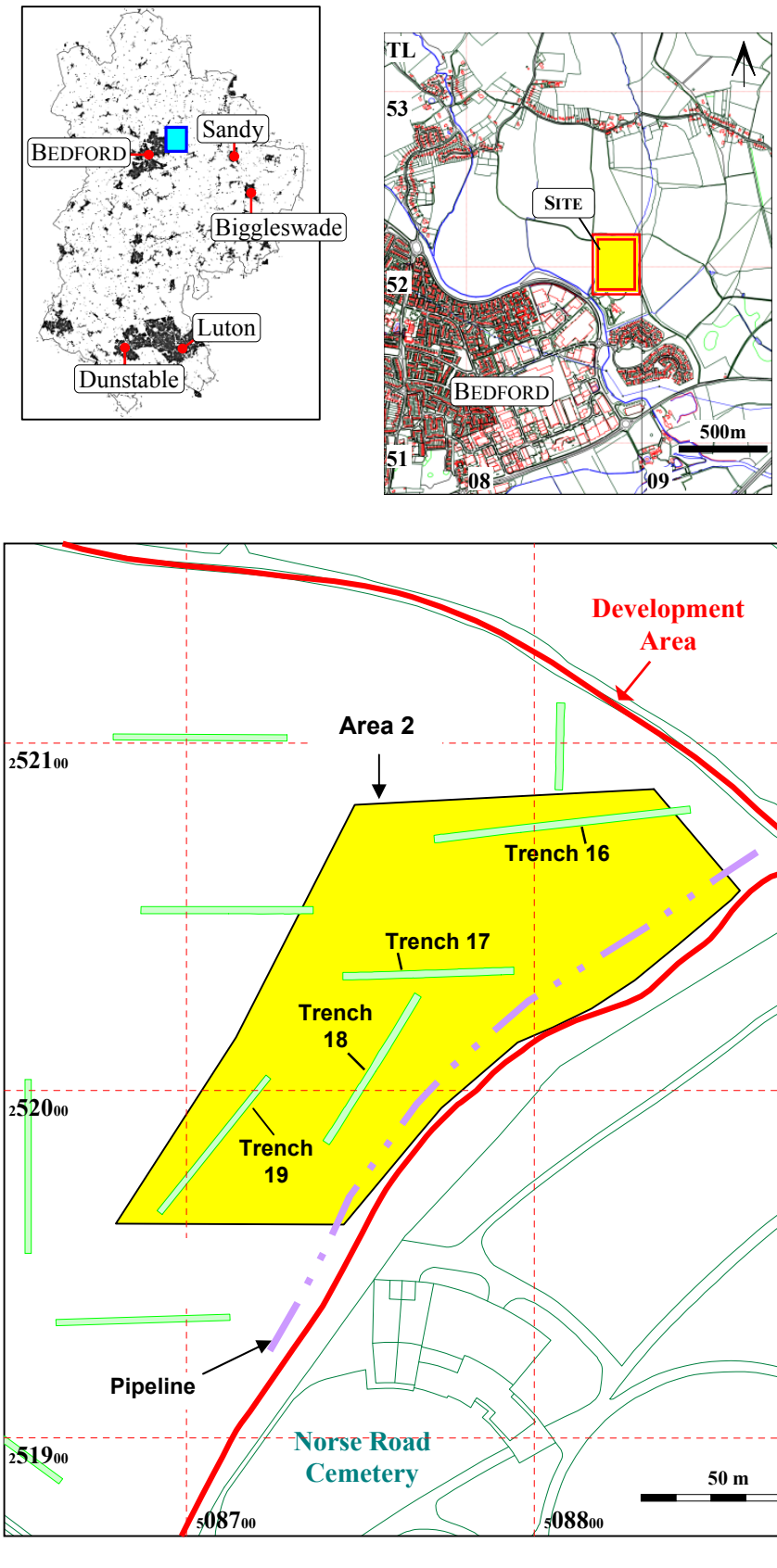

Figure 1: Site location and extent of Area 2

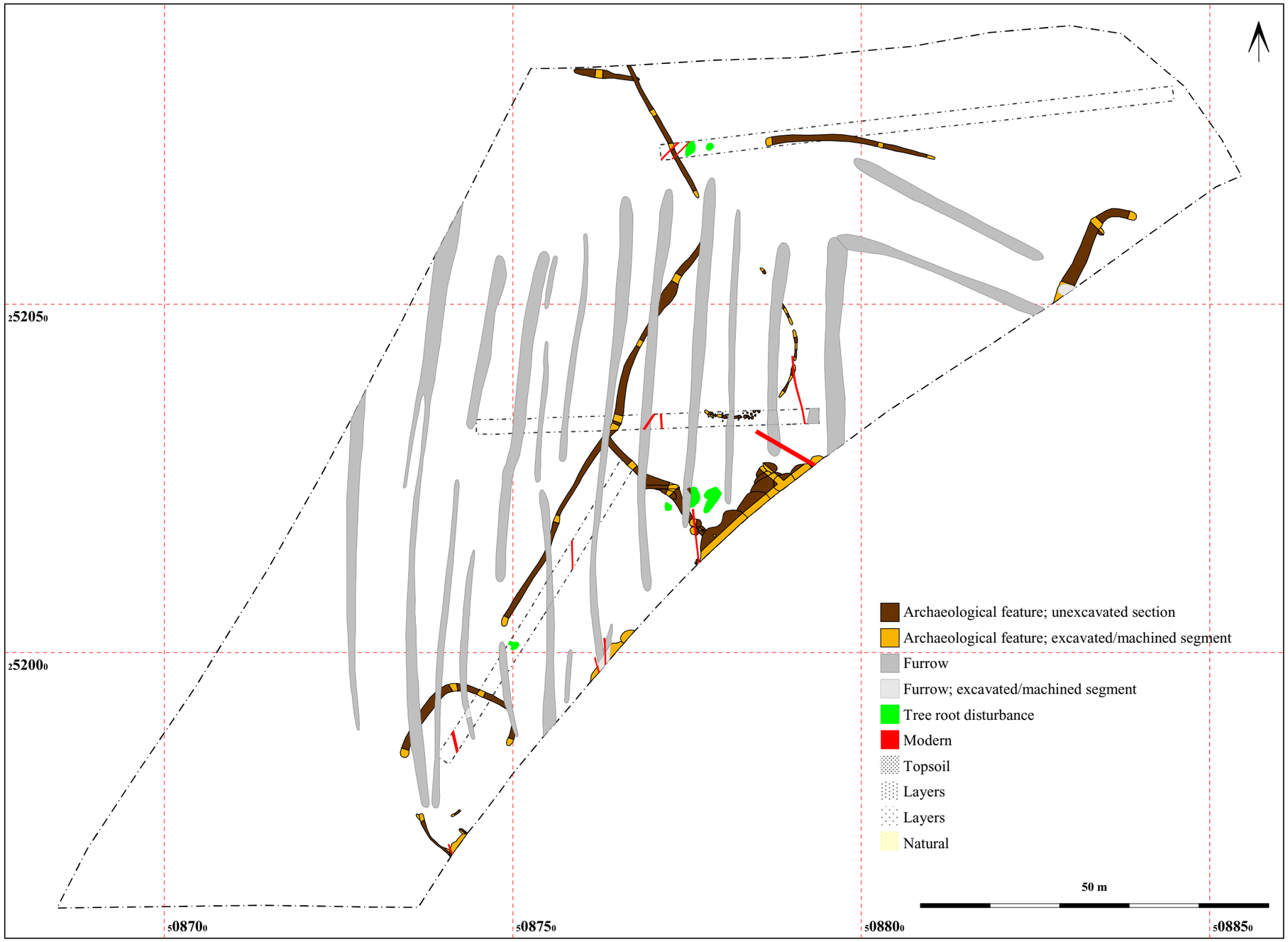

Figure 2: All features plan

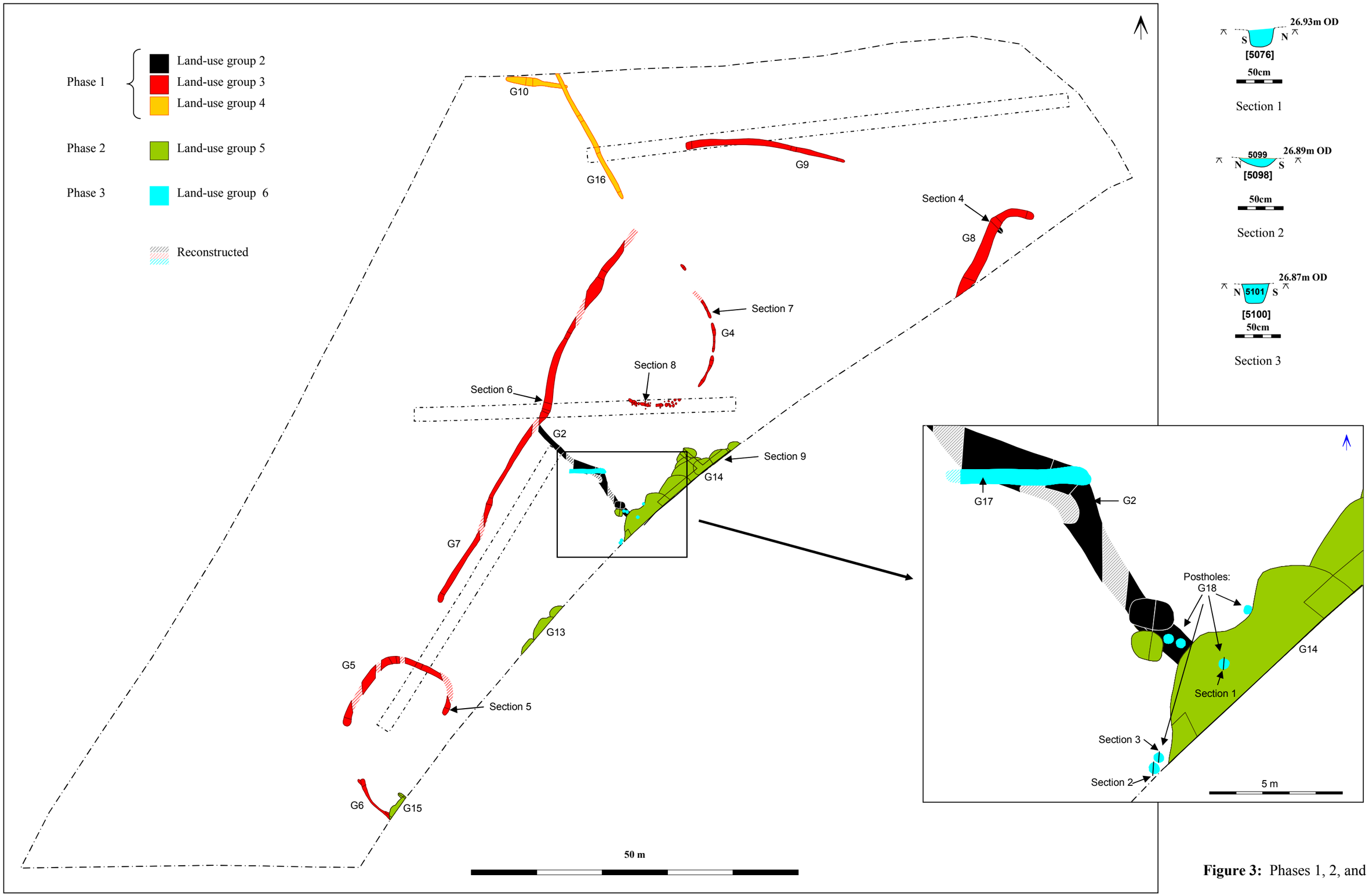

Figure 3: Phases 1, 2, and 3

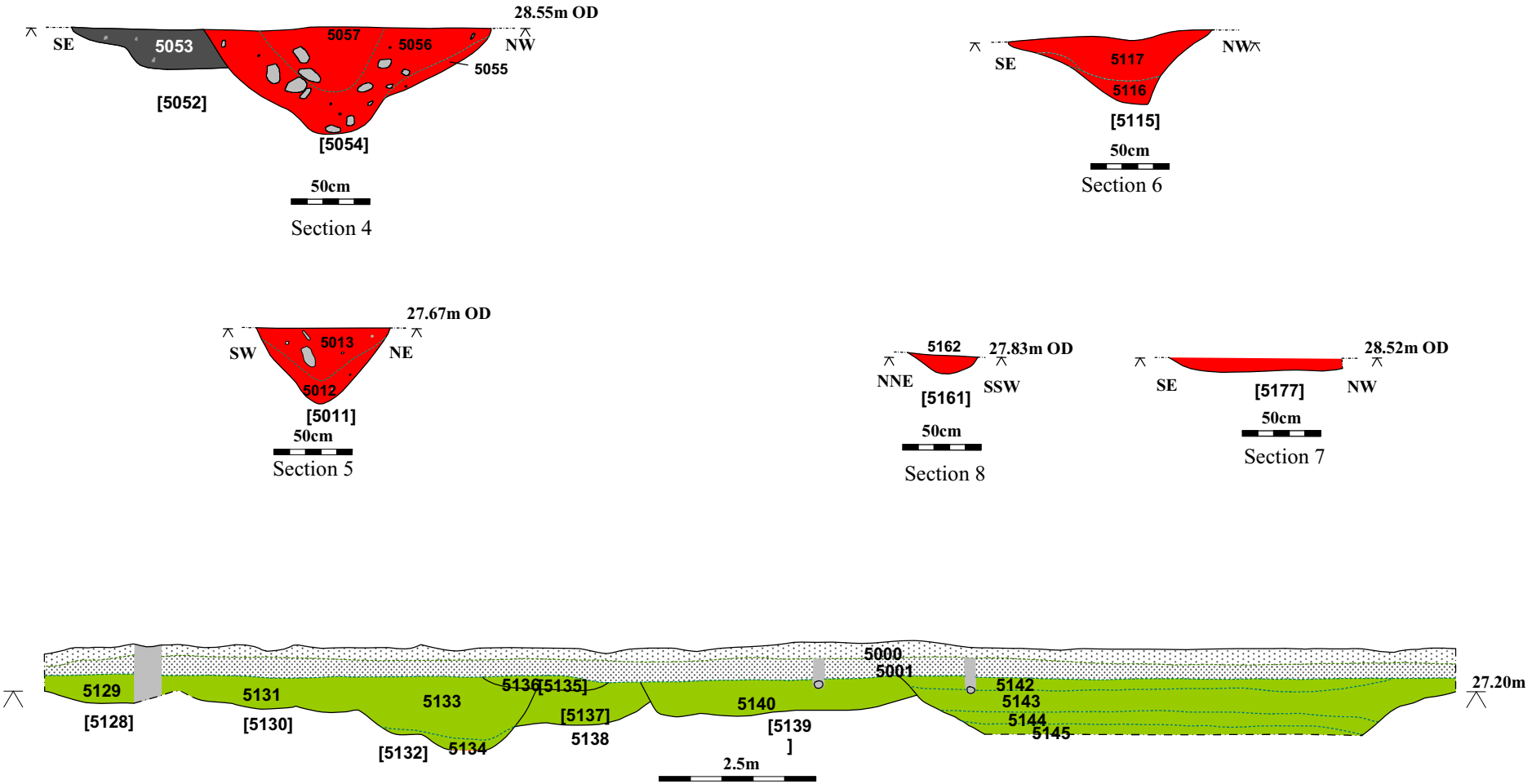

Figure 4: Sections