



**University of
Leicester**

Archaeological Services



**An Archaeological Excavation
On Land to the West of
South Meadow Road, Upton,
Northamptonshire**

NGR: SP 70921 60905

Gavin Speed

ULAS Report No 2013-150

©2013

**An Archaeological Excavation
On Lane to the West of South Meadow Road, Upton,
Northamptonshire**

SP 70921 60905

Gavin Speed

For: RSK Environment Ltd

Approved by:

Signed:



Date: 11.09.2013

Name: Patrick Clay

**University of Leicester
Archaeological Services**
University Rd., Leicester, LE1 7RH
Tel: (0116) 2522848 Fax: (0116) 2522614
www.le.ac.uk/ulas

**ULAS Report Number 2013-150
©2013
Accession Number NH_SMD.2010.**

Contents

Summary	1
1. Introduction	1
2. Site Description, Topography and Geology	1
3. Historical and Archaeological Background	3
3.1 Historical Background	3
3.2 Archaeological background	3
3.3 Geophysical Survey	4
3.4 Trial Trench Evaluation	4
4. Aims and Objectives	7
5. Methodology	8
6. Excavation Results	8
6.1 Phase A: Field Boundaries	11
6.2 Phase B: Iron Age Enclosure Settlement and Pit Alignment	13
6.2.1 Enclosure	13
6.2.2 Pit Alignment	20
6.2.3 Other Ditches	26
6.2.4 Other Scattered Pits and Gullies	26
6.3 Phase C: Parallel Trenches	30
6.5 Phase D: Later Activity	35
7. The Finds	36
7.1 Iron Age Pottery by Elizabeth Johnson	36
7.2 Worked Flint by Lynden Cooper	42
7.3 Animal Bone by Jennifer Browning	43
7.4 Environmental Remains By Anita Radini	50
7.5 Vitrified Clay by Graham Morgan	53
8. Discussion	55
8.1 Iron Age Settlement	56
8.2 Iron Age Pit Alignment	59
8.3 Parallel Trench System	60
8.4 Later Activity	61
9. Conclusion	61
10. Archive	62
11. Publication	63
12. Bibliography	63
13. Acknowledgements	67
Appendix: Context List	68

FIGURES

Figure 1: Location plan within the UK and region	2
Figure 2: Site location (shaded)	2
Figure 3: Geophysical survey greyscale results (from Bartlett 2010)	4
Figure 4: Plan showing location of trial trenches in relation to subsequent excavated area	6
Figure 5: All areas of archaeological investigation: open area excavation, trial trenches (T), and watching brief area.	9
Figure 6: Phase plans (fore Phase D see Figure 31)	10

Figure 7: Section of ditch [205]	11
Figure 8: Plan of pits and ditches / gullies around ditch terminal of [205] and [233] (note: includes features from all phases)	12
Figure 9: Enclosure plan	14
Figure 10: Enclosure ditch sections	15
Figure 11: Enclosure ditch extension sections	16
Figure 12: Enclosure entrance looking south, scale 2m and 1m.....	16
Figure 13: View of enclosure. Ditches can be seen as dark lines, the two people are standing in the double enclosure entrance, looking west (photos merged)	17
Figure 14: Plan and section of roundhouse within enclosure	18
Figure 15: Plan and sections of linear gully within enclosure	19
Figure 16: Plan of pit alignment	22
Figure 17: View of pit alignment, with archaeologists standing in the pits, looking NE. Photo by Aerial Cam.	22
Figure 18: Pit alignment sections.....	23
Figure 19: Further pit alignment sections	24
Figure 20: View of pit alignment, with archaeologists standing in the pits, looking SE. Note the curving ‘alignment’	24
Figure 21: View of fully excavated pit [126] in alignment, scale 1m	25
Figure 22: View of fully excavated pit [170] in alignment, scale 1m	25
Figure 23: Plan and section of pits [88], [125], and [216].....	28
Figure 24: Plan and section of large pit [129].....	29
Figure 25: View of a section of the parallel trenches, looking west, photo by Aerial Cam.....	31
Figure 26: Plan of parallel trenches	32
Figure 27: Sections of parallel trenches.....	33
Figure 28: View of trench [64] with possible stone packing.....	33
Figure 29: Plan and sections of smaller parallel trenches.....	34
Figure 30: View of parallel ditches [202] (left) and [131] (right), scale 1m and 0.5m.....	34
Figure 31: Plan of furrows (red dashes).....	35
Figure 32: Proportion of fabrics present by % sherd count.	37
Figure 33: View of South Meadow within its landscape setting. Red = excavated Iron Age settlements, orange = cropmarks, green = Roman	55
Figure 34: Column chart showing South Meadow enclosure size compared to other contemporary Nene Valley enclosed sites (data from Speed 2005)	56
Figure 35: South Meadow Iron Age enclosed settlement compared to a selection of others in the Nene valley (drawn by author, after Speed 2005).....	57
Figure 36: Panoramic view from enclosure entrance looking out down into the valley.	58
Figure 37: Enclosure ditch terminus with excavated backfill used as internal bank with ironstone revetment.....	58
Figure 38: Landscape view showing pit alignments to the south in relation to South Meadow.....	59
Figure 39: Most of the excavation team (L-R: G. Speed, J. Harvey, A. Hyam, W. Jarvis, J. Thomas, J. Browning, S. Baker, S. Clarke), 19 th April 2011. On line of the pit alignment looking SW.	67

An Archaeological Excavation on Land to the West of South Meadow Road, Upton, Northamptonshire.

Gavin Speed

Summary

University of Leicester Archaeological Services (ULAS) carried out an archaeological excavation on land to the west of South Meadow Road, Upton, Northamptonshire (SP 70921 60905) on behalf of RSK Environment Ltd.

The excavation revealed evidence for a mid to late Iron Age (2nd century BC or early 1st century BC) enclosed settlement, pit alignment, and associated pits and ditches. This was followed by a later arrangement of parallel ditches that may be evidence for possible Roman cultivation trenches.

The site archive will be held by ULAS, accession no. SMD.2010, until a recipient organisation for Northamptonshire has been established.

1. Introduction

An archaeological excavation was carried out by ULAS for RSK Environment Ltd from February to April 2011 on land to the west of South Meadow Road, Upton, Northamptonshire (SP 70921 60905). This was undertaken in advance of the proposed residential development consisting of 80 residential dwellings with associated garages, roads, and sewers (planning application number 10/0039/FULWNN).

The Desk-Based Assessment (RSK 2010) and the geophysical survey (Bartlett-Clark Consultancy 2010) identified the presence of an enclosure of possible Iron Age or Roman date. The enclosure was confirmed by trial trenching (Browning 2010) along with other activity to the north-west. Finds suggested a date in the middle to late Iron Age for the features, and indicated prehistoric settlement.

Northamptonshire County Council as archaeological advisors to the planning authority requested an archaeological excavation to identify, locate and record these archaeological remains of significance, in advance of the development and detailed in their 'brief' (NCC 2010).

This report presents the results of the archaeological excavation that took place from 23rd February to 20th April 2011. The fieldwork follows the Written Scheme of Investigation (WSI), as detailed in Score 2011.

2. Site Description, Topography and Geology

The site is located to the west of South Meadow Road, Upton, Northamptonshire (NGR SP 70914 60940), west of Duston and on the edge of an existing residential development (Figure 1 & 2). It covers an area of approximately 5ha and as of early 2011 was in use as agricultural land with a construction compound. The site is located on a relatively high position with views over the Nene Valley and surrounding undulating countryside to the

south and west. Immediately east of the site is a recently-built group of houses, and the area is bordered by fields to the north, south and west. A bridleway stretches down the western boundary. The lowest part of the site is the northern portion (102m O.D.) rising steeply towards the centre of the site. From this highest point (112m O.D.) the land slopes more gently to the west and south. The geology of the site is predominantly Rutland Formation mudstone, with overlying geology of mid-Pleistocene diamicton till (Browning 2010).

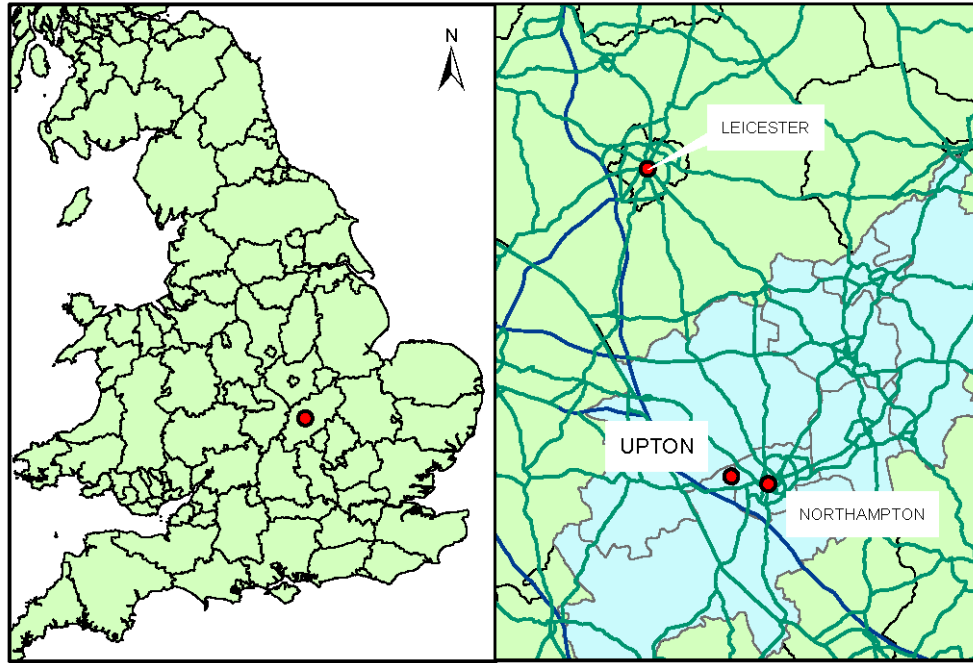


Figure 1: Location plan within the UK and region

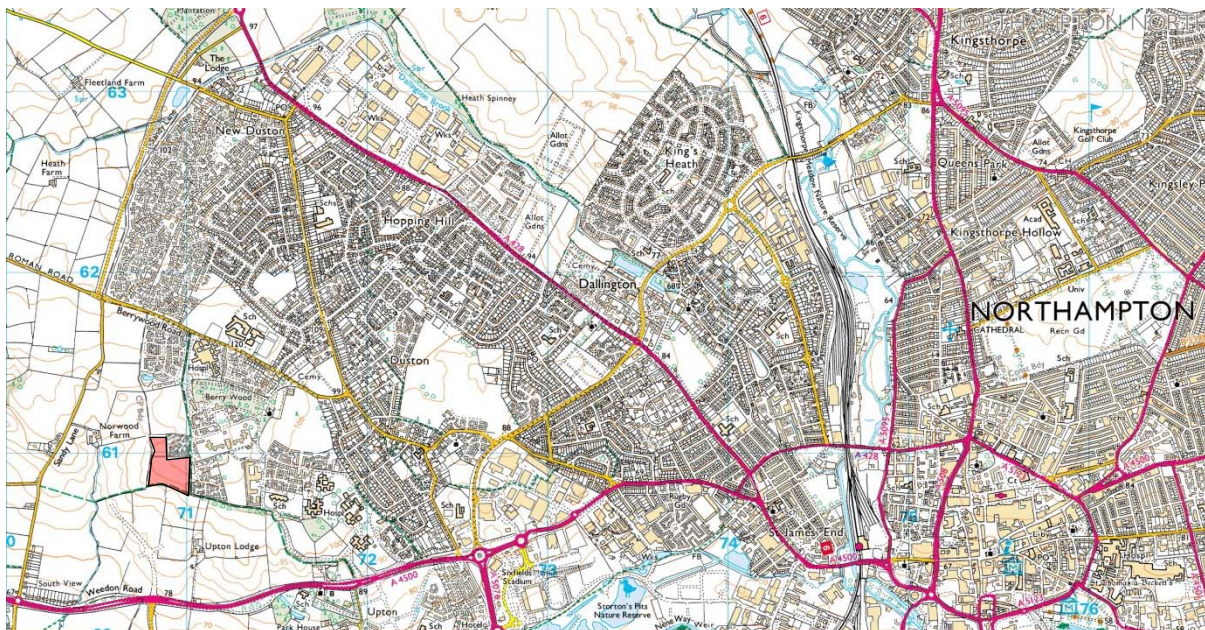


Figure 2: Site location (shaded)

Reproduced from Explorer 1:25 000 map by permission of Ordnance Survey on behalf of The Controller of Her Majesty's Stationery Office. © Crown Copyright 2005. All rights reserved. Licence number AL 100029495

3. Historical and Archaeological Background

3.1 Historical Background

The desk-based assessment recorded that: “Upton [Optone] records a sizeable village, as follows: ‘The King holds Upton. There are two hides. There is land for 10 ploughs... There is a mill... and six acres of meadow’. Earthwork features to the south of present-day Upton suggest shrunken medieval components (NMR343300), probably of 12th century origin, consisting of a central hollow way bounded by low scarps on both sides most of which have traces of building platforms within them. The abandonment and depopulation of these areas largely appears to be due to the introduction of sheep enclosures throughout the 15th and 16th centuries. Nucleated villages are the dominant settlement pattern in this area, and shrunken and deserted medieval villages are common. Such remains demonstrate that a much more complex pattern of settlement existed in the medieval period than does today. The area of the proposed development comprises a field pattern that appears to be predominantly of parliamentary enclosure origin. This has however, been fragmented by the removal of some field boundaries to create larger fields, during the 20th century. The majority of the fields were enclosed under parliamentary acts of enclosure dated from 1760 and 1780” (RSK 2010: section 3.2).

3.2 Archaeological background

The archaeological desk-based assessment produced by RSK Environment (2010) examined the potential impact of the development by assembling data from available sources such as the National Monuments Record (NMR), the Historic Environment Record (HER), aerial photographs and maps of the site.

There are no Scheduled Monuments within or near to the site; the desk-based assessment identified 32 archaeological fieldwork events in a 500m study area encompassing the site, with four actually within the site boundaries. Two cropmarks suggesting an enclosure (MNN129682) and a linear feature (MNN129687) were observed on the site during an aerial photographic survey in 1996. During the same survey, extensive cropmarks indicative of prehistoric settlement activity were identified south of the site boundary (MNN129689). In the field directly to the west a Bronze Age spearhead and worked flints were discovered (MNN25158). A Roman road, thought to follow the line of Berrywood Road, runs to the north of the site and Roman finds have been recovered from the vicinity. An Anglo-Saxon brooch, dating to the 6th-7th century, was recovered from the north-west corner of the development site (MNN25170), hinting at Saxon activity in the locality.

The desk-based assessment therefore indicated that potential for prehistoric remains within the site boundaries was high but is moderate for archaeology of the Roman and Anglo-Saxon period. The site is thought to have been used for agriculture in the medieval and subsequent periods.

3.3 Geophysical Survey

A geophysical survey was carried out over the site (Bartlett 2010, see Figure 3). Two techniques were employed, magnetic susceptibility and magnetometry; the survey revealed the presence of archaeological features, as well as evidence of cultivation and non-archaeological anomalies, possibly representing natural features in the underlying strata (Figure 3). Several linear features were identified in the eastern part of the site and interpreted as likely to relate to the previously identified (through aerial photographs) cropmark enclosure. The geophysical survey suggests that subsurface features related to this cropmark may be more extensive than previously thought.



Figure 3: Geophysical survey greyscale results (from Bartlett 2010)

3.4 Trial Trench Evaluation

An archaeological trial trench evaluation was undertaken by ULAS was carried out between the 14th and 22nd April 2010. Eleven trenches were excavated by machine to the top of archaeology or undisturbed natural substratum (Browning 2010).

Eleven trial trenches, totalling 670m², were excavated in order to establish the presence or absence, nature and extent of any archaeological features in the development area. The trenches were positioned to target and sample anomalies previously identified through desk-based assessment and during geophysical survey. Five of the trenches produced evidence for archaeology, which appeared to be concentrated in two main areas close to the ridge of a natural slope. The features were generally well defined and produced finds

dating to the Iron Age, indicating the presence of prehistoric settlement within the development area.

The excavations recorded both the western side of the previously interpreted enclosure ditch as well as a curving linear feature to the west of the enclosure. The evidence demonstrated that the enclosure towards the east of the site, suggested by the cropmark and geophysical evidence, is present and well-preserved. The pottery suggested a mid – late Iron Age date of the 2nd to early 1st century BC. The pottery, animal bones and presence of fire-cracked pebbles suggested domestic settlement activity. The profile of the curving linear feature suggested at least one re-cut implying that it may have been in use for some time.

A second area of archaeological activity was noted in Trenches 3 and 4 towards the centre of the site. The finds suggest a mid-late Iron Age date and the presence of ditches, gullies and pits indicated settlement. These interpretations are consistent with known archaeology in the vicinity, including the findings of the desk-based assessment which noted the proximity of extensive cropmarks thought to represent an Iron Age or Bronze Age settlement directly to the south of the site (MNN129689).

Table 1: Summary of trial trench details

Trench	Orientation	Length (m)	Width (m)	Min. Depth (m)	Max. Depth (m)	Archaeology identified?	Context numbers
1	E-W	25	2	0.30	0.70	No	-
2	E-W	20	2	0.30	0.50	No	-
3	N-S	30	2	0.46	0.80	Yes	[011],(012); [013], (014);
4	WNW- ESE	30	2	0.41	0.64	Yes	[020], (021); (022); [023],
5	N-S	30	2	0.30	0.45	No	-
6	E-W	30	2	0.33	0.45	No	-
7	ENE- WSW	40	2	0.19	0.47	No	-
8	ENE- WSW	30	2	0.30	0.50	No	-
9	ENE- WSW	30	2	0.30	0.56	Yes	[009], 010);
10	ENE- WSW	30	2	0.33	0.55	Yes	[001], (002); [004],
11	NNW-SSE	30	2	0.20	0.50	Yes	[005], (006);

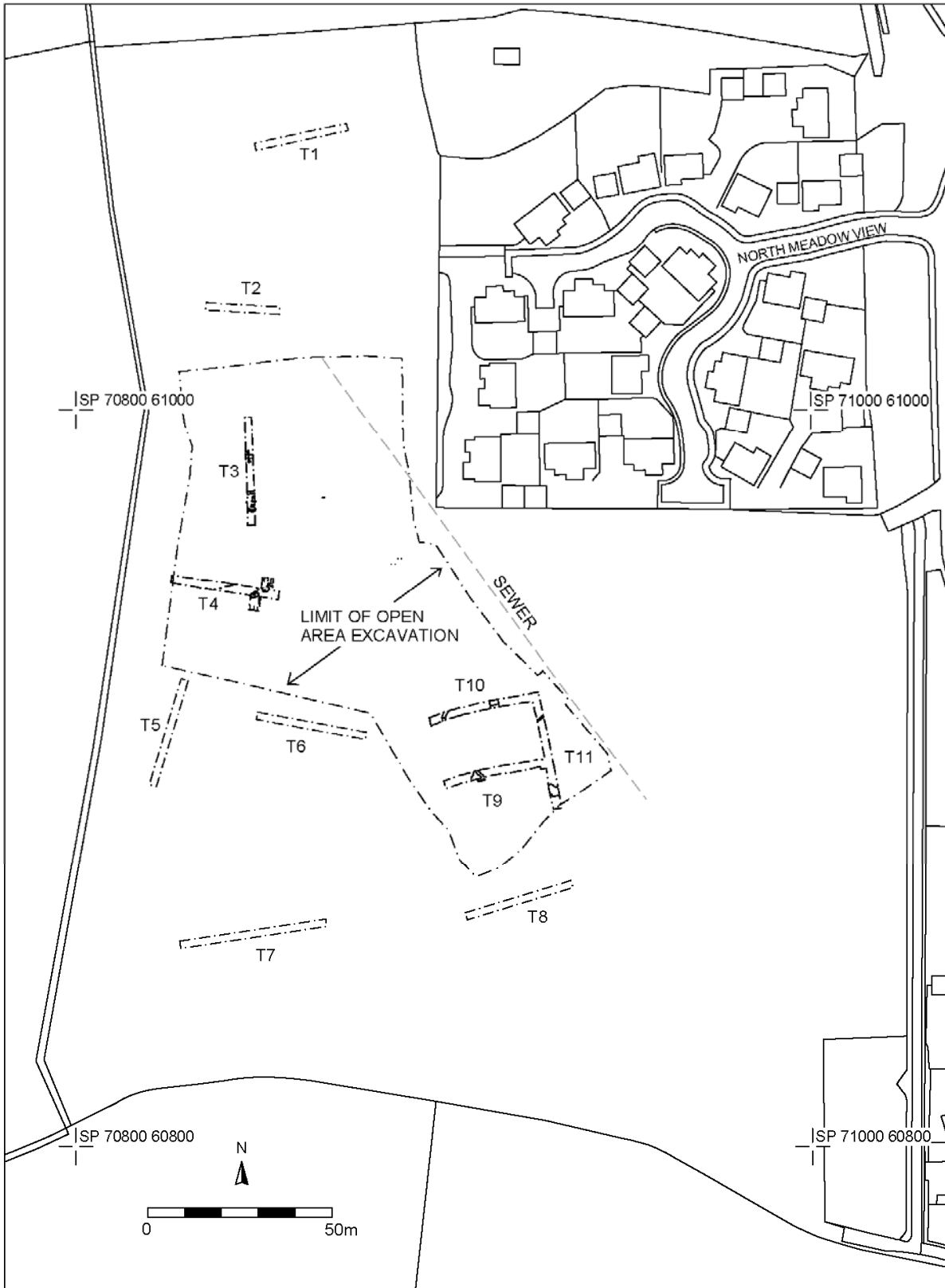


Figure 4: Plan showing location of trial trenches in relation to subsequent excavated area

4. Aims and Objectives

The principal aims of the archaeological excavation were:

- To determine and understand nature and extent of surviving archaeological remains on the site in their cultural and environmental setting
- To characterise more fully the date range and significance of any archaeological deposits to be affected by the development proposals
- To excavate and record significant archaeological deposits which will be destroyed or damaged by groundworks associated with the development.
- To excavate and record significant archaeological deposits whose future integrity may be compromised by groundworks associated with the construction of the development.
- To consider the effectiveness of the evaluation phase
- To produce an archive, report and publication of the results.

All work was undertaken in accordance with the national research context (English Heritage (1991, 2009) and the regional research agenda (Cooper 2006).

The results of the excavation have the potential to address the following research themes:

- *The study of settlement patterns in the Iron Age.* The development and evolution of Iron Age rural settlements is an on-going national research aim. Phasing settlement sequences is key, as well as analysing the distribution of remains on a site (Haselgrove *et al.* 2001: 30).
- *The study of Iron Age buildings.* The evolution of building types forms part of on-going research into the period. The site has the potential to examine questions such as the particular use of buildings, and the perceived importance of the orientation (Willis 2006: 111-112).
- *Linear monuments and other land divisions* - The investigation of field systems and their development, relationships to settlements and potential for environmental data (Willis 2006, 132): Some of the features may represent field systems and the relationship between these and the enclosure and other settlement features and whether they are contemporary will be studied. This is a national (Theme PR1, Topics 1,6,7 – English Heritage 2011; 11111.510– SHAPE 2008), and regional research objective (Objective 4C and 4F – Knight *et al.* 2012: 65).
- *The agricultural economy* – sampling for environmental evidence to provide data on animal husbandry, cereals and the relationship between agricultural development and processes of settlement and social change: Recovery of environmental indicators for the Iron Age has been identified as a particularly important research goal in that period's Resource Assessment (Willis 2006, 132-3). An environmental sampling programme will look at whether there is any evidence for settlement, land use and agriculture related to the features. A small amount of animal bone was recovered from the evaluations – recovery of further bone would add to current knowledge concerning the use of animal resources at the site and, possibly, the region.
- *Finds: craft, industry and exchange* – evidence for trade and exchange networks across the region: Pottery from the site is typical of the period and region. Research and consideration of the chronology within the regional Iron Age and the range of sub-regional pottery production

'traditions' (Willis 2006, 133-4) will be looked at. Artefacts will be analysed and compared with other sites to provide evidence for any industry represented on site and possible exchange networks.

- *Social relations and society in the first millennium BC* – evidence for settlement morphology: Excavation will aim to identify how far the enclosure and associated features extended. Information on the sequence and chronology of the features and their relationship may be recovered and their date range (the evaluation provided little evidence for more than one phase). It will also look at whether the two groups of features indicate separate, concurrent or contemporary settlement.
- *Landscape context of rural settlements*. The size of the site is significant enough to allow it to be placed within the wider landscape context of late Iron Age rural settlements in the region. A comparison to neighbouring sites may demonstrate close links with ditch boundaries and pit alignments. This is a national (Theme PR1, Topic 6 – English Heritage 2011; 11111.310–SHAPE 2008), and regional research objective (Objective 5H – Knight *et al.* 2012: 65).

5. Methodology

Prior to any machining general photographs of the site areas were taken. The areas were excavated using a Hymac 360 mechanical excavator equipped with a 1.8m wide toothless ditching bucket. The topsoil and overlying layers were removed under full archaeological supervision until either the top of archaeological deposits or the natural undisturbed substratum was reached. The areas were examined for archaeological deposits or finds by hand cleaning. The quantity of archaeological features excavated and recorded follows the percentages outlined in the WSI (Score 2011). The areas were tied into the Ordnance Survey National Grid.

The work followed the approved design specification (Score 2011) and adhered to the Institute for Archaeologists (IfA) *Code of Conduct* and their *Standard and Guidance for Archaeological Excavations* (2010).

6. Excavation Results

The excavation consisted of an open-area excavation undertaken in an area of higher archaeological potential (based on the evaluation results) around trenches 3, 4, 9, 10 and 11 covering approximately 1.2ha (Figure 5).

A subsequent archaeological watching brief was undertaken during groundworks in May 2011, in areas of the former compound to the east of main stripped area (Figure 5), but no archaeological finds or deposits were revealed, possibly due to earlier truncation.

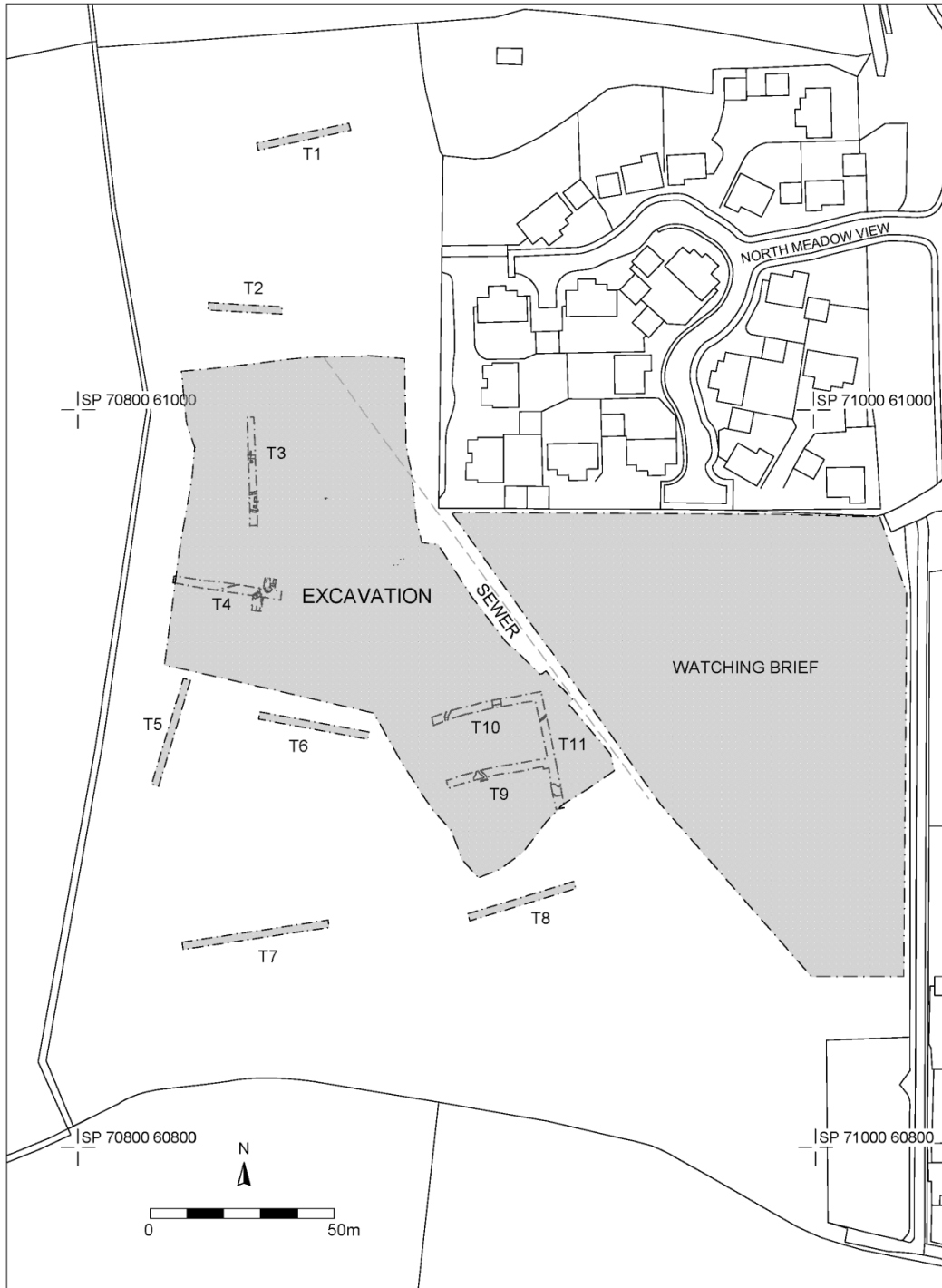


Figure 5: All areas of archaeological investigation: open area excavation, trial trenches (T), and watching brief area.

The archaeological activity discovered at South Meadow can be broadly broken down into four phases (Figure 6); these are based largely on stratigraphic relationships rather than finds data (all the pottery was Iron Age). Phase A consisted of Iron Age field boundaries. Phase B consisted of an Iron Age enclosed settlement, pit alignment, and further ditches and pits. Phase C saw the construction of a large parallel ditch system, of probable Roman date. Phase D consisted of medieval and more recent ploughing activity (Figure 31).

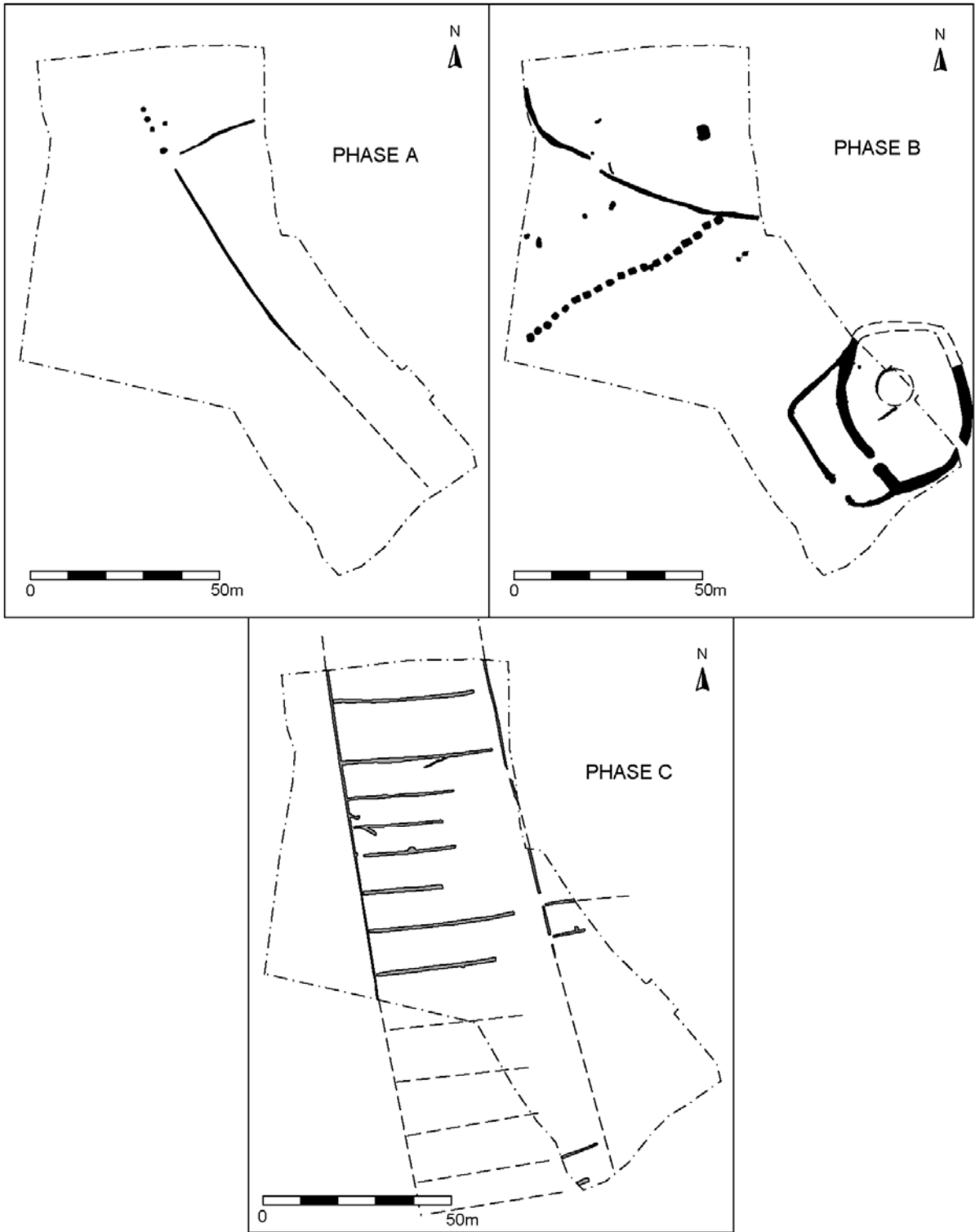


Figure 6: Phase plans (fore Phase D see Figure 31)

6.1 Phase A: Field Boundaries

The earliest (stratigraphic) archaeological features consist of two ditches: [205] and [233], and a (probably contemporary) cluster of pits (Figure 6).

Ditch [205] was at least 60m long, 0.48m wide, and was orientated NW-SE (see Figures 6 & 7). It had a clear terminal at the north-end, but at the southern end it appeared to slowly fade out, getting increasingly shallower, it probably suffered from plough truncation. It had concave sides and an uneven, curving base. It was cut by parallel ditches [131], [86], and [64] ditches [149] and [207] and pit [155].

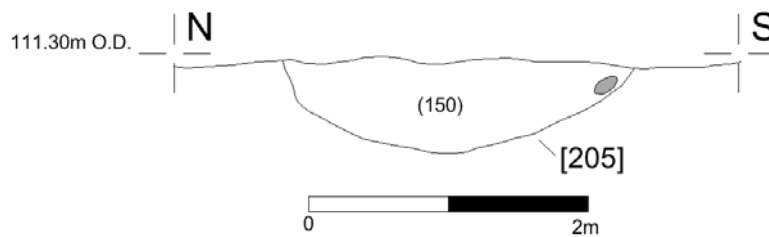


Figure 7: Section of ditch [205]

Ditch [233] was orientated SW-NE, measuring at least 22m long and 0.25-0.3m wide. It was very shallow (0.05m deep), with gradually sloping sides (see Figure 27 for section). It contained a firmly compacted mid grey-brown sandy-clay (232) and was cut by a parallel trench [229] and large pit [129]. Truncated by a sewer and cut by ditch [215], it was not observed further east. Given that ditches [205] and [233] were positioned at a right angle to one-another and that both terminate leaving a gap of 4m, it is possible that these are contemporary ditch boundaries.

A group of four pits ([101], [109], [116], [128]) lay between parallel trenches [229] and [120]. Pit [102] lay 5m south-east of pit [116]. All were regularly spaced, broadly circular and on the same alignment as ditch [205]. They could therefore be contemporary to the ditch, although this is not certain. A large proportion of the animal bone assemblage from the site came from these pits, the animals represented including cattle, sheep/goat, horse, and deer.

Pit [128] had a diameter of 1m and depth of 0.2m with vertical sides and a flat base. It contained a single deposit of dark grey-brown silt-clay (84), which contained Iron Age pottery and animal bone. Pit [101], 1.5m to the SE, had steep sides and a flat base, and was 0.18m deep. It contained a single deposit of dark orange-brown silt-clay (83), within which were seven sherds of Iron Age pottery. Pit [116], 2m SE, had a diameter of 1.12m and depth of 0.17m with almost vertical sides and a flat base. Its single deposit of dark grey-brown silt-clay (117) contained four sherds of Iron Age pottery. Pit [109], 2.7m NE, had a diameter of 1.2m and depth of 0.4m, with near-vertical sides and a flat base. It contained a primary deposit of dark grey-brown clay (11), with charcoal flecks. A secondary deposit of looser dark grey-brown clay (118) was more sterile. Twenty sherds of Iron Age pottery were recovered from this, along with large quantities of charred animal bone, indicating cooking activities. Charred remains of hulled barley grains and glume wheat were found in samples from pits [101], [109] and [116] associated with cleavers, vetches and grasses. These could be the result of a final cleaning of the crop before consumption. All samples also had seeds of goosefoots and sorrels, which could have been weeds or being consumed as edible leaves.

Pit [102] lay 5m south-east of pit [116], and was broadly on the same alignment as ditch [205] and pits [128], [101], and [116]. It was 1.5m long, 1m wide and 0.26m deep, sub-circular with gradual sloping sides and a flat base. Containing two fills, the primary deposit (104) comprised a dark grey-brown silt-clay, probably re-deposited natural substratum. Overlying this was (81) a dark grey black-brown silt-clay, which contained 36 sherds of Iron Age pottery and animal bone.

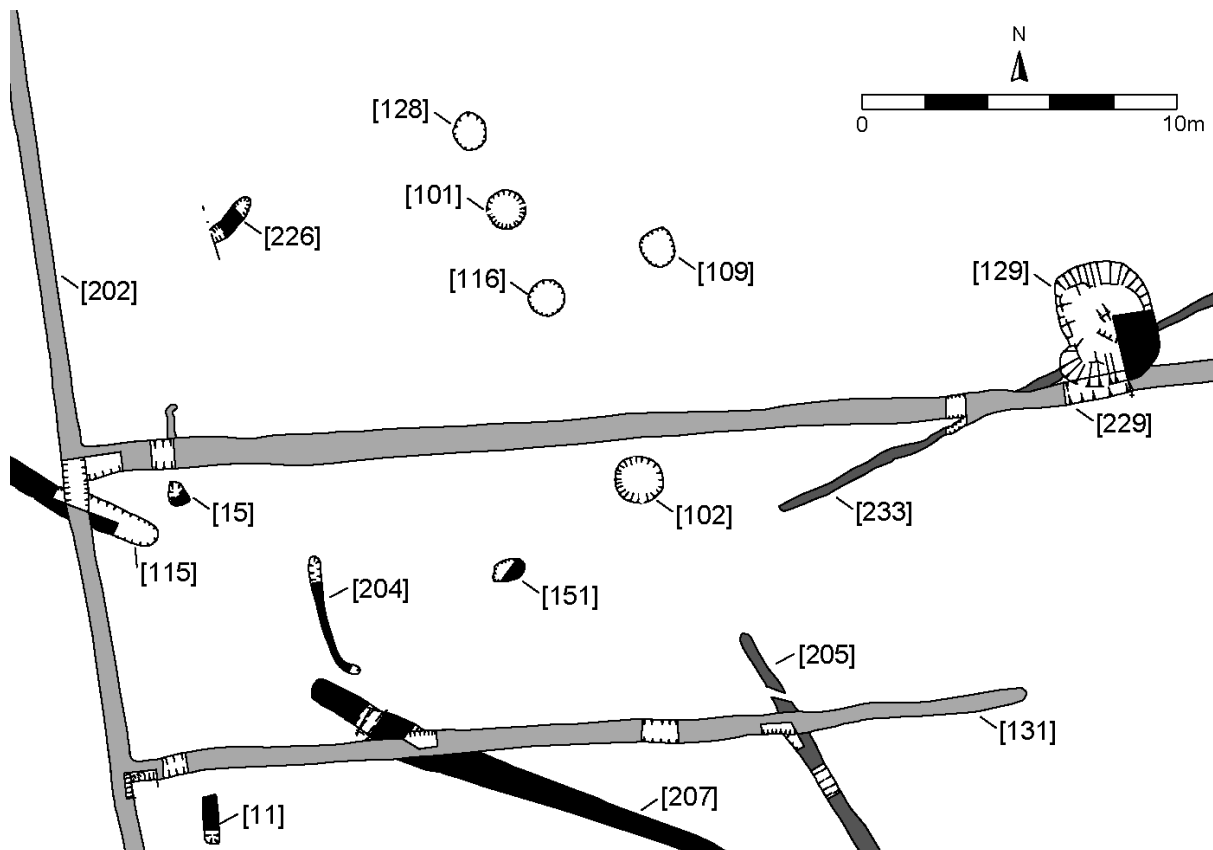


Figure 8: Plan of pits and ditches / gullies around ditch terminal of [205] and [233] (note: includes features from all phases)

6.2 Phase B: Iron Age Enclosure Settlement and Pit Alignment

6.2.1 Enclosure

Part of an Iron Age enclosure was located in the central area of the development site ('Group 1'). This had been previously discovered via aerial photography (listed in Northamptonshire HER as MNN129689), a geophysical survey (Bartlett 2010), and in Trenches 9, 10, and 11 of the trial trench evaluation (Browning 2010, 12-15). It was truncated on the east-side by a modern sewer. The eastern-edge lay outside the excavated area and was not observed during the watching brief. Based on the aerial photography and geophysical survey results the enclosure was likely to have been oval or sub-rounded, and enclosed c.1500m².

The enclosure had a double entrance (Figure 13), the inner entrance, defined by a large ditch ([37]) with later recut [1] & [39]. It ranged in width from 2.4m to 2.9m, being wider at the south-west orientated entrance (Figure 12). It also ranged in depth from 1.2m to 2m at the ditch terminal. The gap between the ditches at the inner entrance was 2.45m.

The primary cut [37] was mainly truncated away by the later recut [39], but where visible had almost vertical sides and a flat base (S.37.01 on Figure 10). It contained a firmly compacted mid grey-brown silt-clay (38) with no finds.

The recut ditch [1] & [39], had gradual sides with a slight step to much sharper, almost vertical sides, with a tapered rounded base (Figure 10). The ditch generally contained two deposits, the lower consisting of a firm dark grey-brown silt-clay (40). Within this were 58 sherds of Iron Age pottery and worked flint (a secondary flake). Over this lay a slightly darker upper deposit of dark grey-brown silt-clay (41). This contained slightly more charcoal flecks than the lower fill with small quantities of pottery, animal bone and a worked flint (secondary flake). The ditch terminal sections contained large quantities of sandstone fragments, especially in the lower fill. These could represent evidence for a stone revetment (see discussion. Section 8).

A further smaller ditch ([9] & [26]) had been added as an extension to the main enclosure. It also had a south-west orientated entrance 4.89m wide. It was generally 1m wide, being slightly wider at the terminal (1.4m) and also ranged in depth from 0.56 – 0.78m (Figure 11). It had sharp sides and a slightly pointed base and contained two deposits: a primary deposit of mid grey-brown silt-clay (49), and a secondary deposit of dark grey-brown silt-clay (50). The latter was far darker, with numerous fire-cracked pebbles, some charcoal, and 25 sherds of Iron Age pottery.

There were three internal features within the main enclosure: a possible roundhouse [59], a linear gully [5], and a small pit [74]. This area had thin topsoil and clearly had suffered some significant plough truncation. It is possible, therefore, that more discrete features (such as post-holes) may not have survived.

A 9.17m length of curvilinear gully [59] was located towards the northern end of the enclosure (Figure 14). The gully was c.0.35m wide, and was 0.05m – 0.1m deep and was disturbed by a modern sewer on the east-side, and truncated by plough damage on the south-side. With concave sides and a flat base, it contained a single deposit of a firmly compacted mid grey-brown silt-clay (60) with a single sherd of Iron Age pottery and animal bone. It likely represents the very truncated remains of a roundhouse.

Around 6m to the south-east of the enclosure was a linear gully (Figure 15), 5.8m long, and ranging in width from 0.22-0.5m. It had vertical sides and flat base and was 0.2m deep. Its mid-grey-brown silt-clay fill (33) contained 30 sherds of Iron Age pottery and animal bone. This have may be the remains of a beam-slot.

A single circular pit [73] was located close to the enclosure ditch. This measured 0.58m in diameter, and 0.16m deep and it contained a dark yellow-brown clay (72) with no finds.

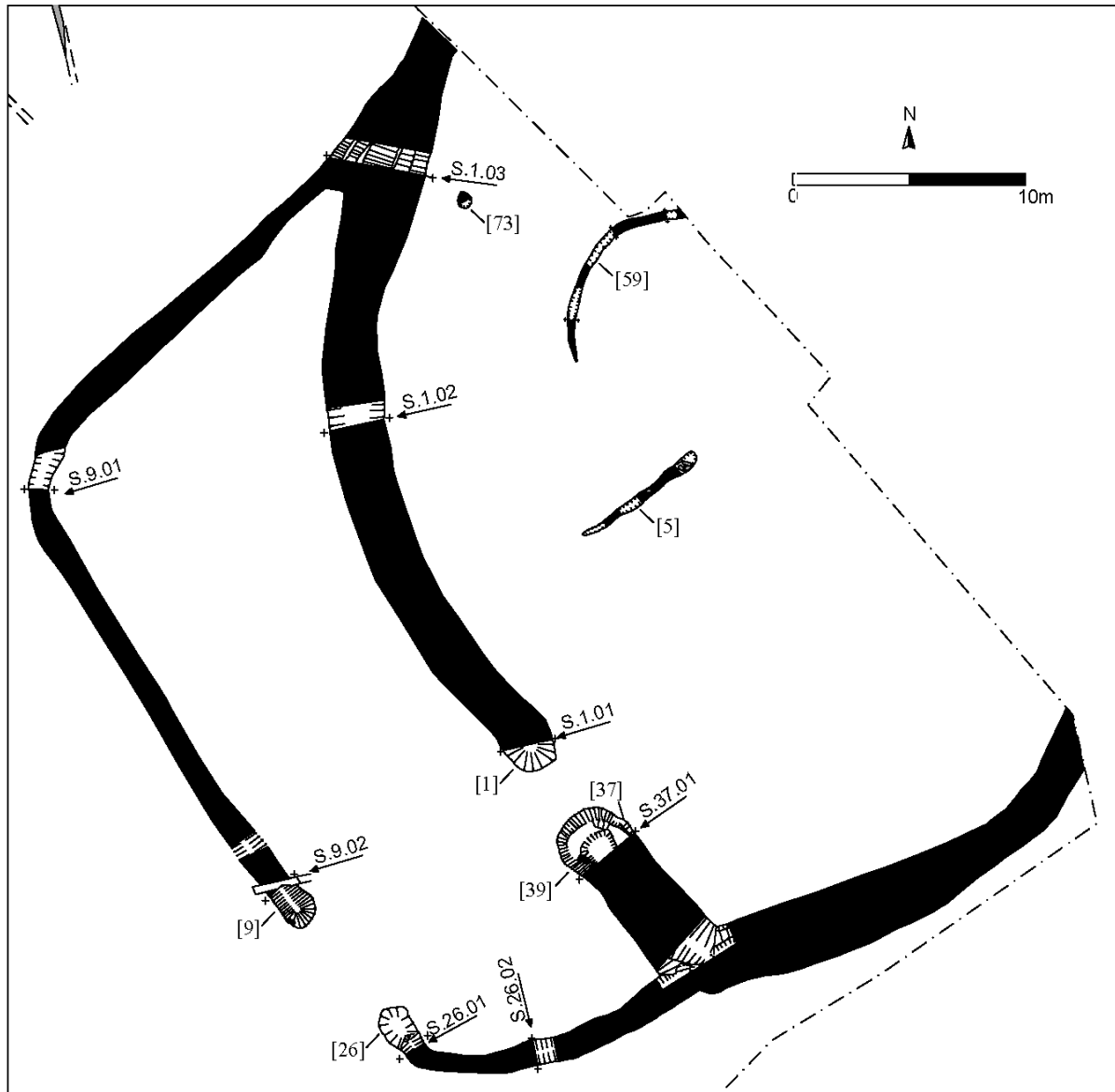


Figure 9: Enclosure plan

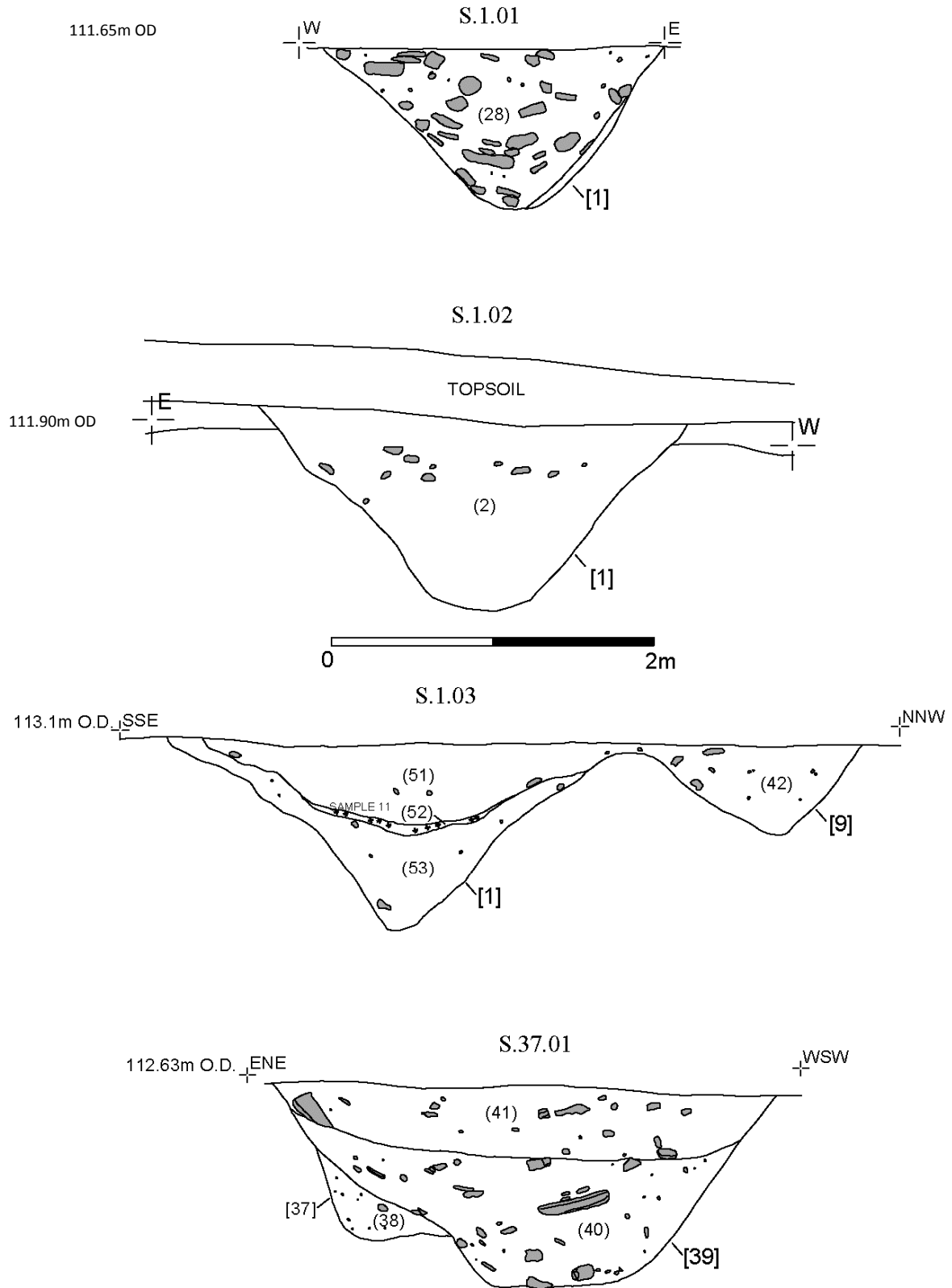


Figure 10: Enclosure ditch sections

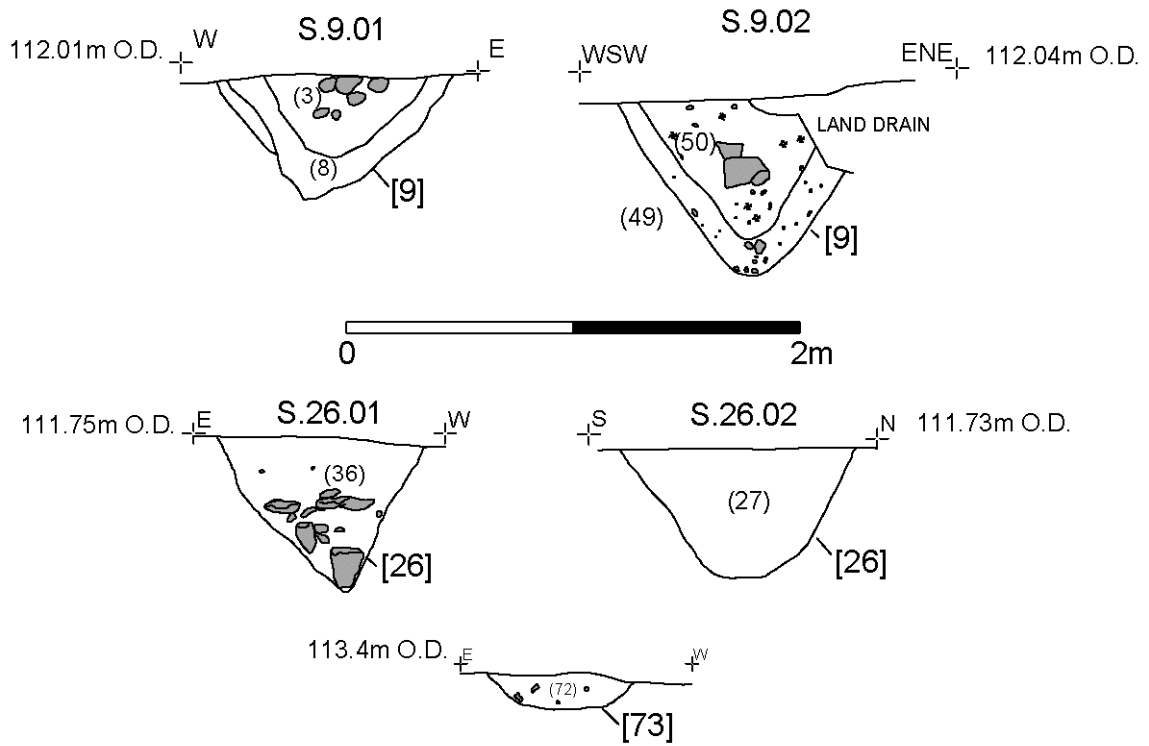


Figure 11: Enclosure ditch extension sections



Figure 12: Enclosure entrance looking south, scale 2m and 1m



Figure 13: View of enclosure. Ditches can be seen as dark lines, the two people are standing in the double enclosure entrance, looking west (photos merged)

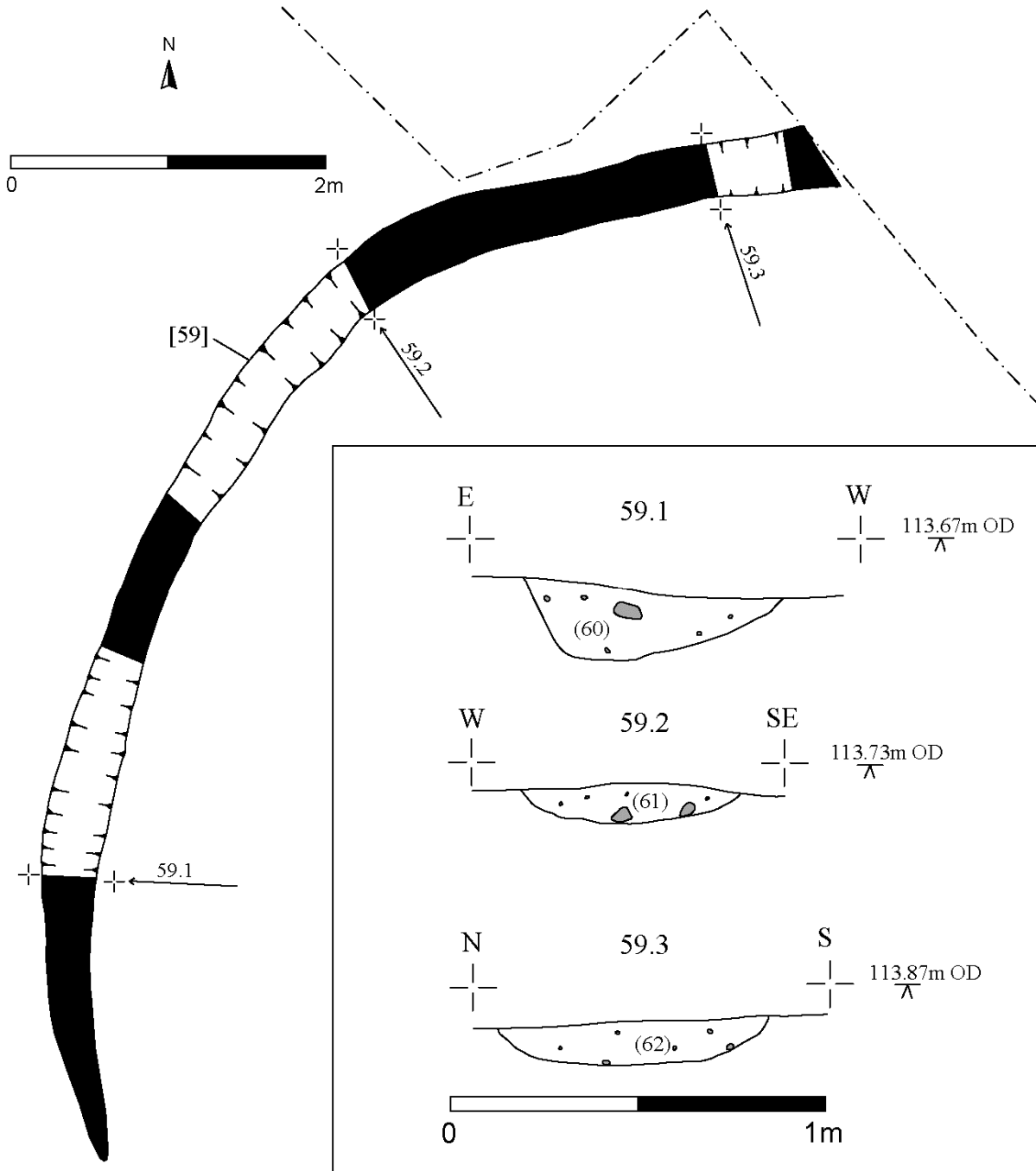


Figure 14: Plan and section of roundhouse within enclosure

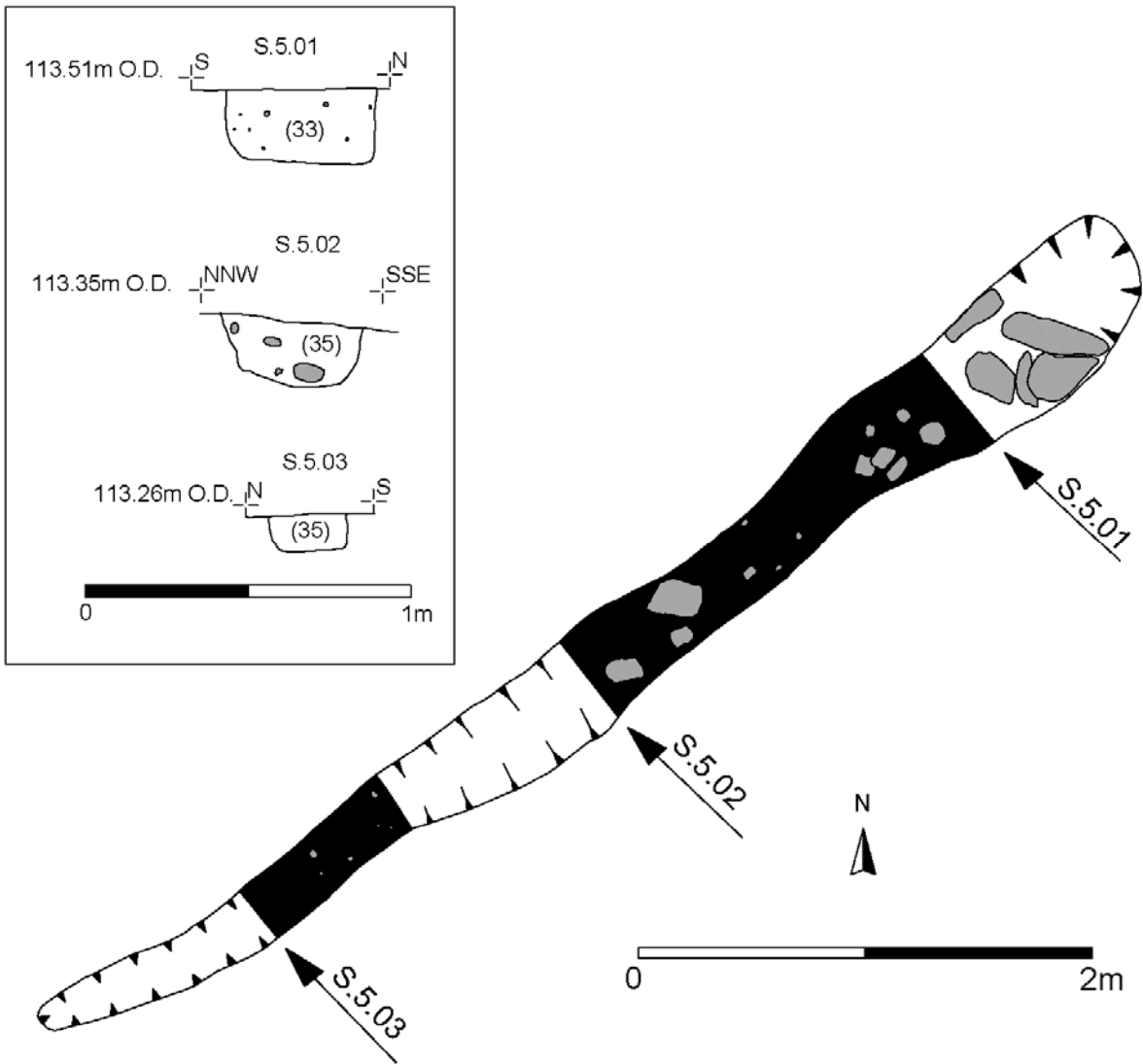


Figure 15: Plan and sections of linear gully within enclosure

6.2.2 Pit Alignment

A pit alignment of 20 pits was located 46m north-west of the Iron Age enclosure ('Group 2'). The alignment ran for 61m, and was orientated north-east to south-west, following the slope of the hill down from *c.*112.3m to *c.*109.5m OD. The alignment terminated at the north-east end adjacent to a ditch [207], which may have been contemporary. Like the pit alignment [207] is also cut by (and therefore earlier than) the parallel trenches. The south-west end of the pit alignment may be a genuine terminal, although a deep furrow may have removed all trace of a pit, and the alignment may continue beyond the limit of the excavation further south-west, although there was no indication of this from the geophysical survey. The pit alignment was earlier than the cultivation trenches (pits [20], [23], [155] were cut by these). Six pits were 100% excavated, the remaining being 50% excavated (detailed in Table 2). The pit alignment was not completely straight having a slight 'wobble' in the middle section (see Figure 20), while there were no signs of recuts.

The 20 pits had some general consistency in their morphology, most being sub-rectangular (11), and others sub-square (6) or sub-circular (3). However, these differences in shape probably reflect the differing levels of plough and furrow truncation, as those less truncated tended to be sub-rectangular, and those with more significant truncation appeared more sub-circular in plan.

The average length and width was 1.83m x 1.57m, although the less truncated pits indicate an average size of 2m x 1.65m. The average depth was 0.73m, though once again the less truncated examples were generally *c.*1m deep. The gap between each pit was fairly consistent, with an average from each pit edge of 1.31m, and 3.28m from the centre.

The profile of each pit was also relatively consistent, being steep-sided, with a break of slope to near vertical towards the flat base (see Figure 18 and Figure 19). Almost all the pits contained two deposits, the primary fill often consisting of a light yellow-brown silt-clay, while the upper deposit was mainly a mid-grey-brown silt-clay.

Fifteen pits contained finds (pottery, flint, or animal bone), a particularly high proportion (75%) compared to those from other excavated pit alignments. Pit alignments rarely produce significant quantities of artefacts (Thomas 2008, 150), as they are often located away from settlement foci. If they do contain objects these are often thought to be deliberately placed 'special' deposits. However, the artefacts from the pit alignment here were recovered from secondary fills, none from primary deposits or the base of the pits. The pottery consisted of 83 small, often fragmentary, sherds of entirely mid to late Iron Age vessels, and 13 pits contained animal bone (amounting to 70 bone fragments). These objects likely indicate reuse of the pit alignment for refuse disposal once the pits had already partly filled and lost their primary purpose (see Section 7.3).

Table 2: Details of each pit within alignment, from NE to SW (sh POT=sherds of Iron Age pottery, FLINT=worked flint, AB=animal bone)

CONTEXT NO	LENGTH (m)	WIDTH (m)	DEPTH (m)	GAP TO NEXT PIT (EDGE)	GAP TO NEXT PIT (CENTRE)	SHAPE	FINDS?	PERCENTAGE EXCAVATED
196	2.06	1.9	0.89	-	-	sub-square	POT (2sh)	100
163	1.99	1.66	0.95	1.31	3.6	sub-rectangular	FL (flake), AB	50
155	1.93	1.65	0.96	1.48	3.8	sub-rectangular	AB	50
80	2.42	1.71	1	1.2	3.2	sub-rectangular	POT (1sh), AB	50
171	2.08	1.58	0.7	1	3.6	sub-rectangular	POT (3 sh), AB	50
164	1.64	1.51	0.75	1.34	3.1	sub-square	POT (45sh), FL (flake)	50
170	1.68	1.53	0.65	1.59	3.4	sub-square	None	100
187	0.76	0.72	0.15	-	-	sub-circular	None	50
185	1.57	1.91	0.74	-	3.3	sub-rectangular	None	50
141	1.92	1.45	0.74	1.48	3.3	sub-rectangular	POT (8sh), FL (bladelet), AB	100
105	1.75	1.51	0.93	1.3	3.2	sub-square	None	100
23	1.77	1.37	0.49	1.2	3.1	sub-square	POT (4sh)	50
20	1.85	1.24	0.45	1.69	3.6	sub-rectangular	AB	50
183	1.7	1.6	0.65	1.4	3.2	sub-rectangular	POT (14sh), AB	50
126	2.09	1.41	0.6	1.1	3	sub-rectangular	POT (1sh), AB	100
179	1.74	1.41	0.67	1.6	4	sub-rectangular	POT (5sh), AB	50
159	1.65	1.48	0.7	1.5	3.1	sub-rectangular	FL (bladelet), AB	50
173	1.94	1.14	0.7	1.4	3.1	sub-circular	FL (flake x2), AB	50
192	1.94	1.63	0.35	1	3	sub-circular	none	50
69	2	1.8	0.7	0.7	2.6	sub-square	FLINT (flake), AB	100

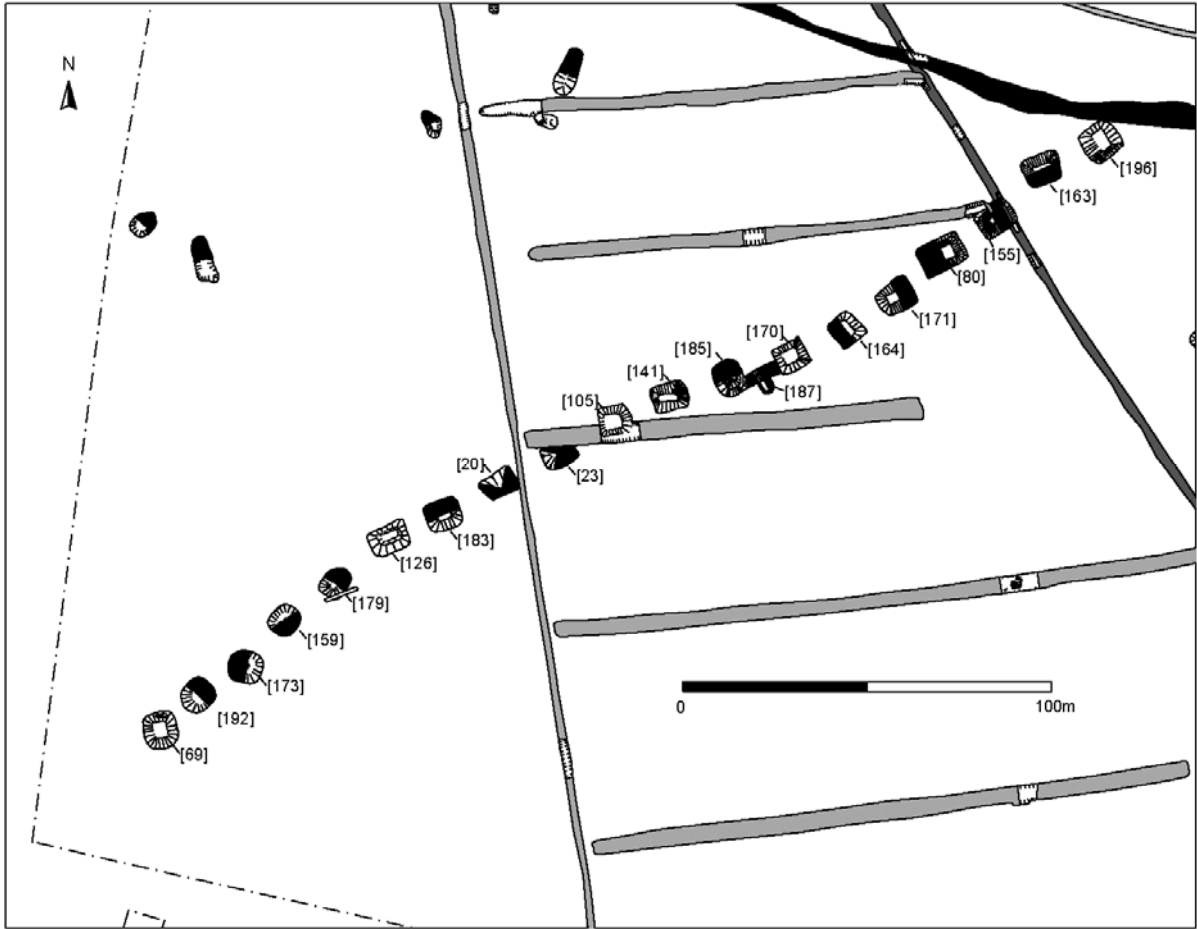


Figure 16: Plan of pit alignment



Figure 17: View of pit alignment, with archaeologists standing in the pits, looking NE. Photo by Aerial Cam.

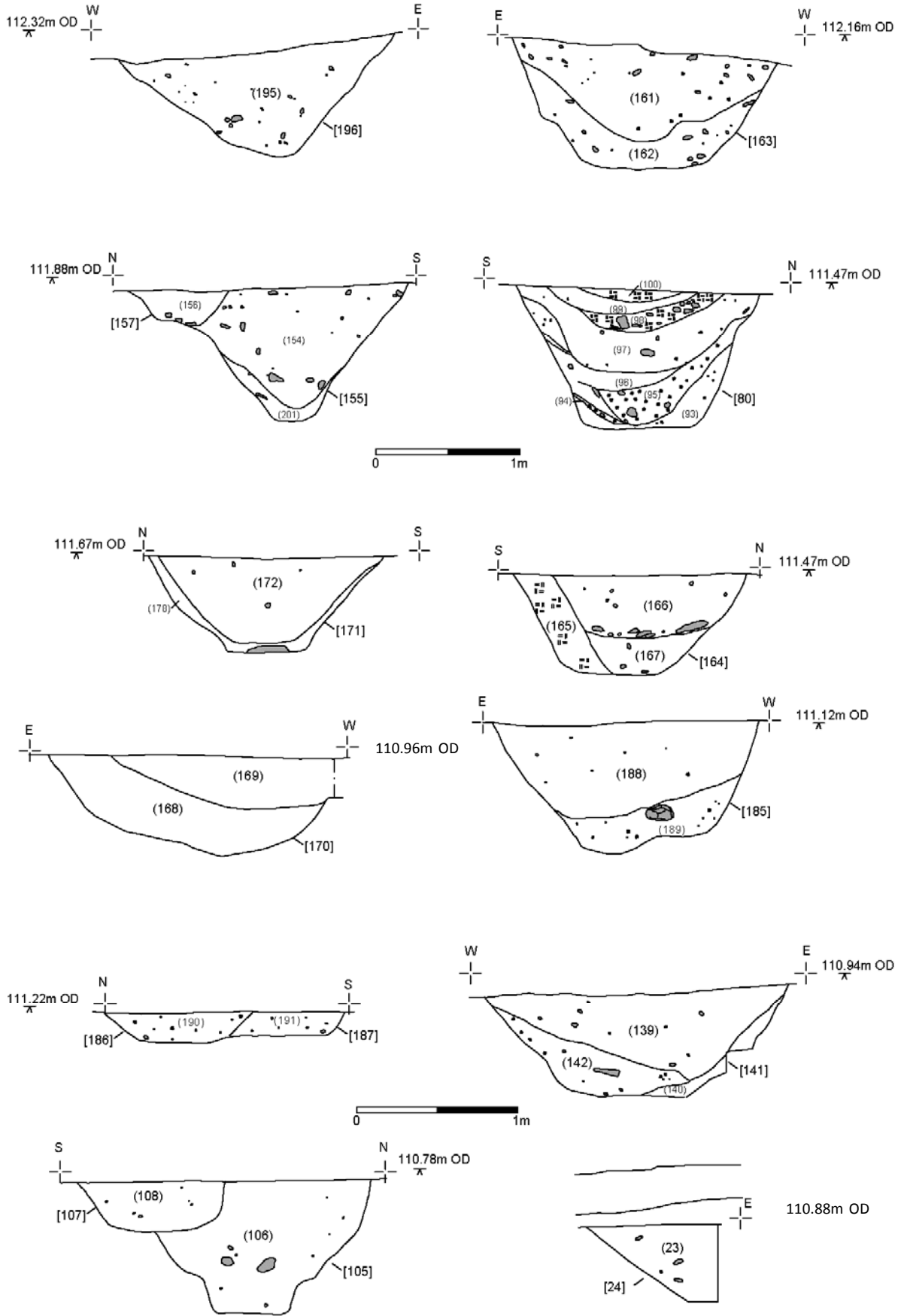


Figure 18: Pit alignment sections

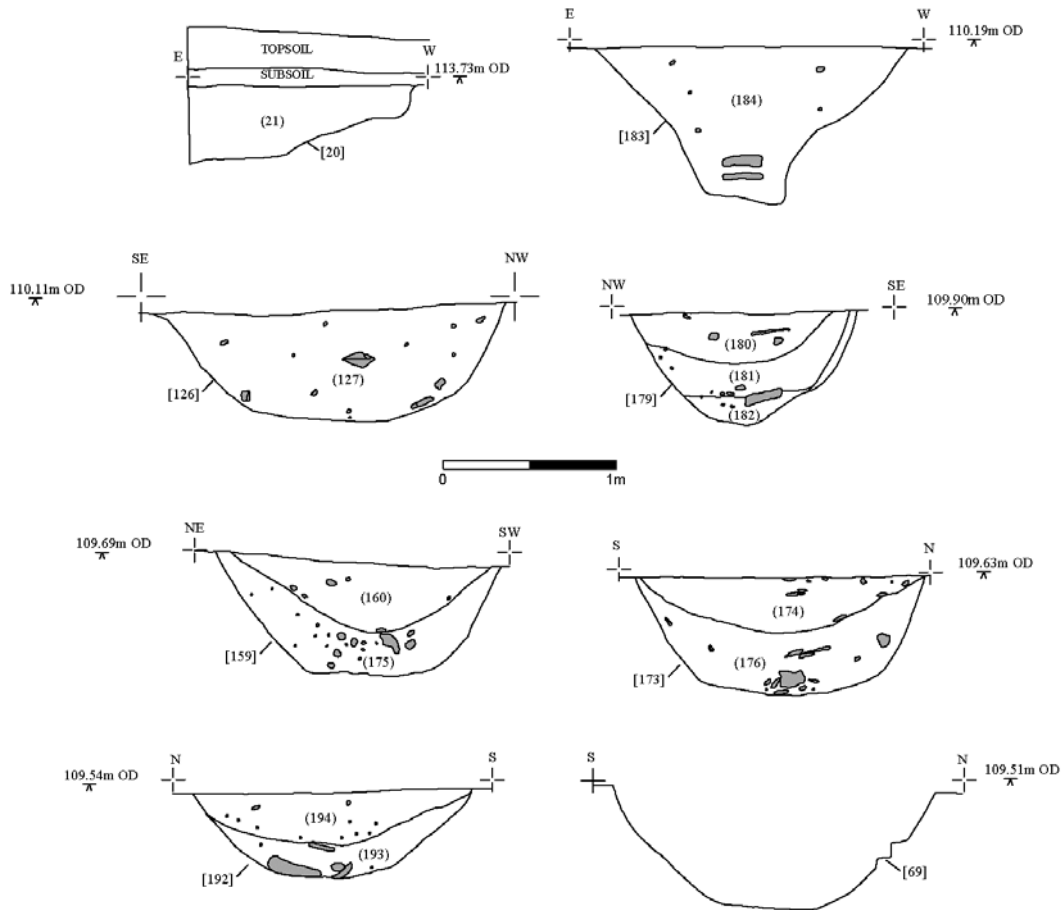


Figure 19: Further pit alignment sections



Figure 20: View of pit alignment, with archaeologists standing in the pits, looking SE. Note the curving 'alignment'.



Figure 21: View of fully excavated pit [126] in alignment, scale 1m



Figure 22: View of fully excavated pit [170] in alignment, scale 1m

6.2.3 Other Ditches

Ditch [207] (Figure 26) was broadly linear with a slight curve running north-west to south-east. It may have been contemporary with the pit alignment. It was 43m long, with a 6.8m gap, before it continued on the same alignment for a further 30m where it turned more sharply to the north-west([115]).

6.2.4 Other Scattered Pits and Gullies

Along with the larger features, numerous small pits and other gullies were also present. These are described from north to south, using the parallel trenches to describe the locations of the features.

To the north of parallel trench [120] lay a single pit [228] (on Figure 26). This was broadly circular being 0.55m in diameter and 0.3m deep. It had vertical sides and a flat irregular base, with a firmly compacted mid grey-brown silt-clay (227) and no finds.

Between parallel trenches [229] and [120], Phase B features consisted of a large pit [129] and a small gully [226] (Figure 8 and 24).

A large oval pit [129], measuring 3.9 x 2.9m and 1.3m deep, cut into ditch [233], and was cut by parallel ditch [229]. It contained a primary deposit of mid-light grey-brown silt-clay (130). Over this lay a mid grey-brown silt-clay (234). A thin layer of re-deposited natural (235) overlay this, followed by a mid grey-brown silt-clay (130). Within these deposits was a small amount of fire-cracked pebbles and low quantities of small charcoal flecks. The pit contained 103 sherds of Iron Age pottery (the single largest group of pottery from the site), and quantities of animal bone including antler from a mature deer. The presence of the antler is suggestive of bone-working and object manufacture. It also contained 100 amorphous lumps of vitrified clay. The material was subjected to temperatures in excess of 900 degrees although the precise high temperature activity to which it relates is uncertain (see Section 7.5). The pit could have acted as a water-hole, later reused as a rubbish pit. It pre-dates the parallel ditch system and may be contemporary with the Iron Age enclosed settlement and pit alignment.

An oval pit or gully [226] was truncated by evaluation Trench 3 on its west-side and measured 1.6m long, 0.6m wide, and 0.28m deep. It contained a dark grey-brown silt-clay (225); within this were seven sherds of Iron Age pottery and charred sheep/goat bone.

Between parallel trenches [131] and [229], Phase B features consisted of pit [151], gully [204], and pit [15].

Around 0.5m north of ditch [207] terminal was linear gully [204]. This was 4m long and 0.31-0.46m wide, and 0.03-0.12m deep. It contained two deposits: a primary (fairly sterile) mid orange-brown silt-clay (209), and an upper deposit of mid orange-black silt-clay (158). The latter contained frequent charcoal flecks and Iron Age pottery with notable concentrations at the gully termini. There was more truncation at the southern-end of the gully (which accounts for its shallow depth). The gully could be evidence for a beam-slot, perhaps related to the entrance between the larger ditches [115] and [207], perhaps forming part of a livestock control system?

Sub-rectangular pit [151] (Figure 8), 15m to the east of gully [204], measured 0.5m long, 0.3m wide, and 0.09m deep. Its friable dark grey-brown silt-clay (152), contained four sherds of pottery.

Oval pit [15] was identified and excavated in Trench 3 of the evaluation. It measured 0.85m by 0.6m, and 0.1m deep and contained a firm grey-brown sandy-silt clay (16) but with no finds.

Phase B features that lay between parallel trenches [86] and [131] consisted of a gully [11] and pits [216], [88] and [125] (Figure 23).

Gully [11] was identified and excavated in Trench 3 of the evaluation. It was 0.45m wide and 0.25m deep with steeply sides and rounded base and contained a dark grey-brown sand-silt (12) with no finds.

Pit [216] was oval-shaped, and measured 2.45m by 1.1m, and 0.28m deep (Figure 23). It had concave sides and a curved base. It contained a primary deposit of mid orange-brown clay (217). Overlying this was a dark orange-brown silt-clay (218) with a concentration of burnt clay that could indicate *in situ* burning. The burnt clay patches could be evidence for collapse of a clay superstructure, the feature perhaps being used for a oven or dryer. However, the largest portion of the archaeobotanical material from this pit consisted of small fragments of charcoal and charcoal flecks, with only a low amount of badly damaged charred grained of barley and small wild grasses seeds. No chaff was found in this feature to confirm its use as an oven or dryer (see Section 7.4).

Pit [88] was a small oval cut; its relationship with parallel trench [86] is uncertain. It measured 0.48m wide and 0.26m deep and contained a mid to dark brown-grey silt-clay (87), within which were three worked flints (Figure 23; section on Figure 27).

Pit [125] was sub circular/oval located immediately to the west of parallel trench [202] (Figure 23). It had concave sides and a concave base and contained a friable mid-dark grey-brown silt-clay (124) within which were no finds.

To the south-west of [207] lay two pits, [144] and [146] (Figure 26). Pit [144] was sub-oval with irregular sides and a wavy base and contained a mid grey-brown silt-clay (143). Pit [146] was slightly irregular / oval with irregular sides and a flattish base and contained a friable mid grey-brown silt-clay (145). Both pits may be naturally occurring geological features.

To the east of parallel ditch [205] lay two poorly-defined pits [219] and [221] (Figure 26).

Pit [219] was oval with gradual sides and flat base (Figure 24). It measured 1.35m long, 0.85m wide, and 0.15m deep and contained a firm mid blue-grey silt-clay (220). Pit [221] was a sub-circular pit with concave sides and a flattish base, containing a firmly compacted dark grey-brown silt-clay (222). Again both may be naturally occurring geological features.

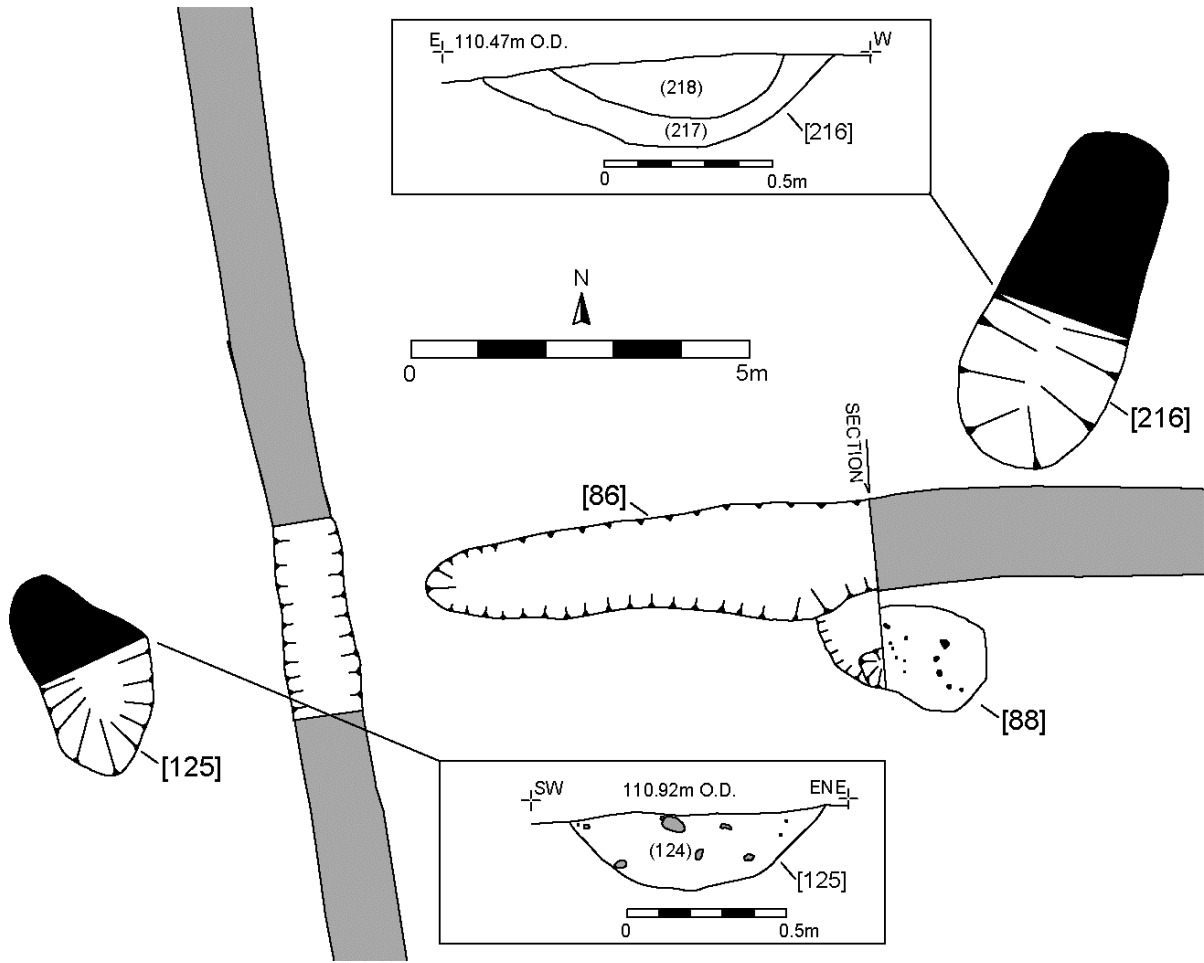


Figure 23: Plan and section of pits [88], [125], and [216]

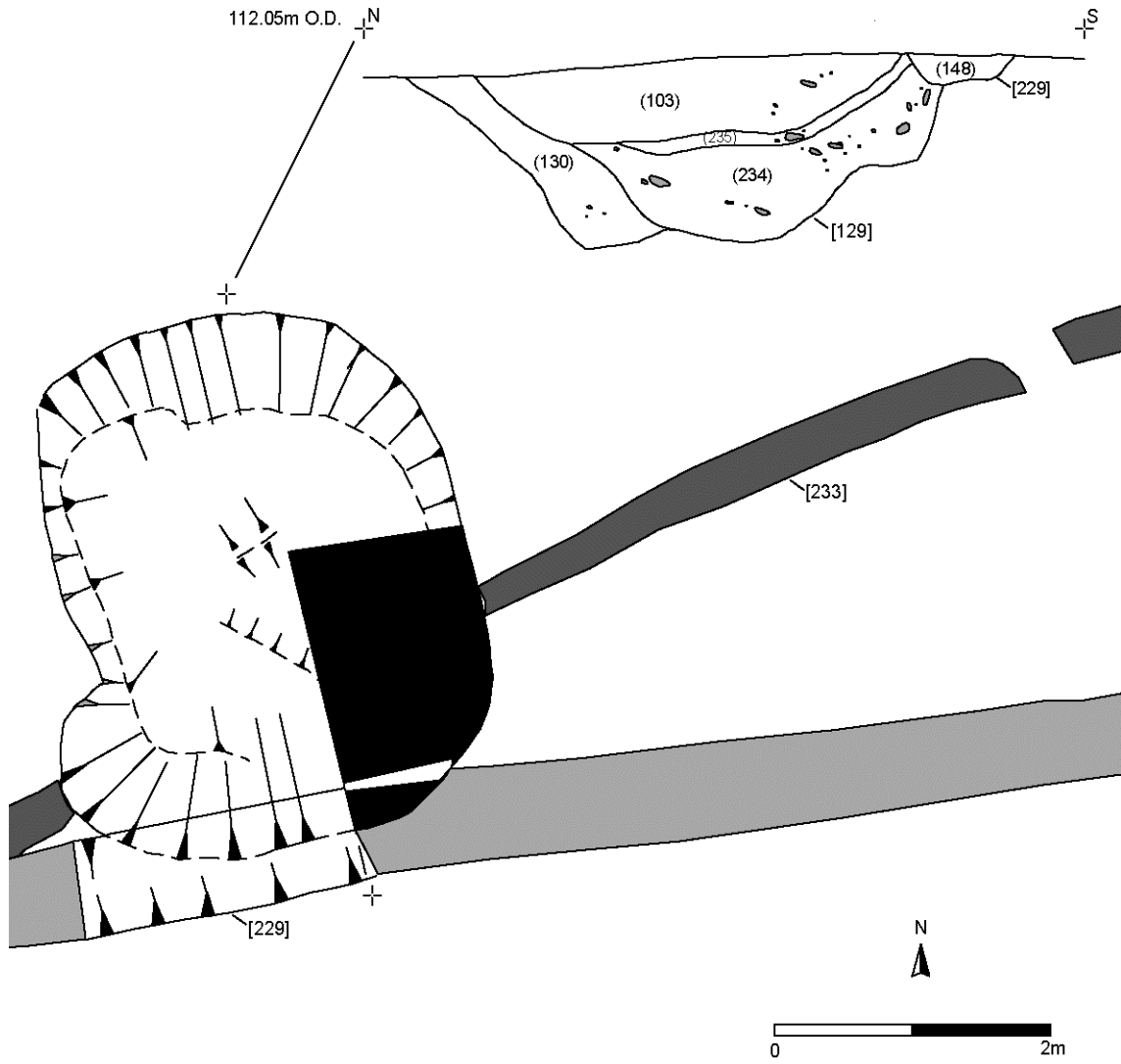


Figure 24: Plan and section of large pit [129]

6.3 Phase C: Parallel Trenches

A series of (at least) eight parallel trenches extended over an area of 4200m² (Figure 26; ‘Group 4’). The trenches were orientated east-west (up/downslope) and ranged in length from 21m to 40m. They were confined between two further parallel north-south ditches: [202] on the west-side (89m long), and [215] on the east-side (c.83m long). Six of the east-west ditches terminated just before ditch [202], and the remaining two joined the ditch and appear to have been contemporary features. The eastern end of the east-west gullies saw much variation; none joined or got close to the north-south ditch [215].

Most of the ditches were steep-sided (almost vertical), with a flat base (Figure 27), two having far more gradual sides ([120] & [157]), were much shallower and may have suffered from more plough truncation. Most ditches contained a single backfill consisting of a mid-dark grey-brown silt-clay. No post-holes were located in the excavated slots, although in one excavated section (ditch [64]) ironstone in the base of the trench may be evidence for post-packing (Figure 28). The gap between trenches varied between eight and 16 metres.

A further set of ditches were located to the east of north-south ditch [215] (Figure 29). A north-south ditch [68] was positioned on the same alignment as [215], and may have been part of the same boundary. Ditches [78] and [63] were orientated east-west and were of very similar dimensions to the other parallel ditches.

Two further ditches were located in the far south of the excavated area, [30] and [48]; Figure 31). Both were on the same alignment as the main area of parallel ditches, and were of similar dimensions. These could be part of the same parallel ditch system located to the north.

Dating the construction and use of the ‘parallel trenches’ is limited to 26 sherds of Iron Age pottery, four pieces of lithic debitage, and animal bone fragments, all from the backfill. The parallel ditches were later than the Iron Age pit alignment (three of the ditches cut pits within the alignment), and later than an earlier Iron Age ditch [207]. They were earlier than the medieval ridge and furrow (the furrows cut many of the ditches). Stylistically, these could be Roman in date and similar examples are known from Grendon and Wollaston in Northamptonshire (Brown and Meadows 2000). The function of these ditches is uncertain, they could have been used as cultivation / irrigation trenches (see discussion, Section 8, for full analysis and comparison below).

Table 3: Details of each parallel trench, from north to south (POT=Iron Age pottery, FLINT=worked flint, AB=animal bone)

FEATURE NO.	LENGTH (m)	WIDTH (m)	DEPTH (m)	GAP TO NEXT TRENCH (m)	FINDS?	ORIENTATION
120	37.5	1	0.14	16	None	E-W
229	40	0.7	0.34	10	POT, FL	E-W
131	28.5	0.72	0.27	8	POT	E-W
86	25	0.69	0.26	8	AB	E-W

157	25	0.88	0.17	10	None	E-W
107	21.5	1	0.32	10	None	E-W
64	39.5	0.9	0.37	11	None	E-W
197	32	0.84	0.33	-	None	E-W
30	10	0.58	0.15	8	POT, AB	E-W (far south-end)
48	3	1	0.4	-	FL	E-W (far south-end)
67	8	0.56	0.27	-	FL	N-S on east-side
78	8	0.61	0.19	9	POT	E-W (same as [64]?)
63	9	0.61	0.16	-	None	E-W on east-side
202	89	0.49	0.16	-	None	N-S on west-side
215	65	0.66	0.25	-	None	N-S on east-side
67	8	0.56	0.27	-	FL	N-S on east-side (same as [215]?)



Figure 25: View of a section of the parallel trenches, looking west, photo by Aerial Cam

1

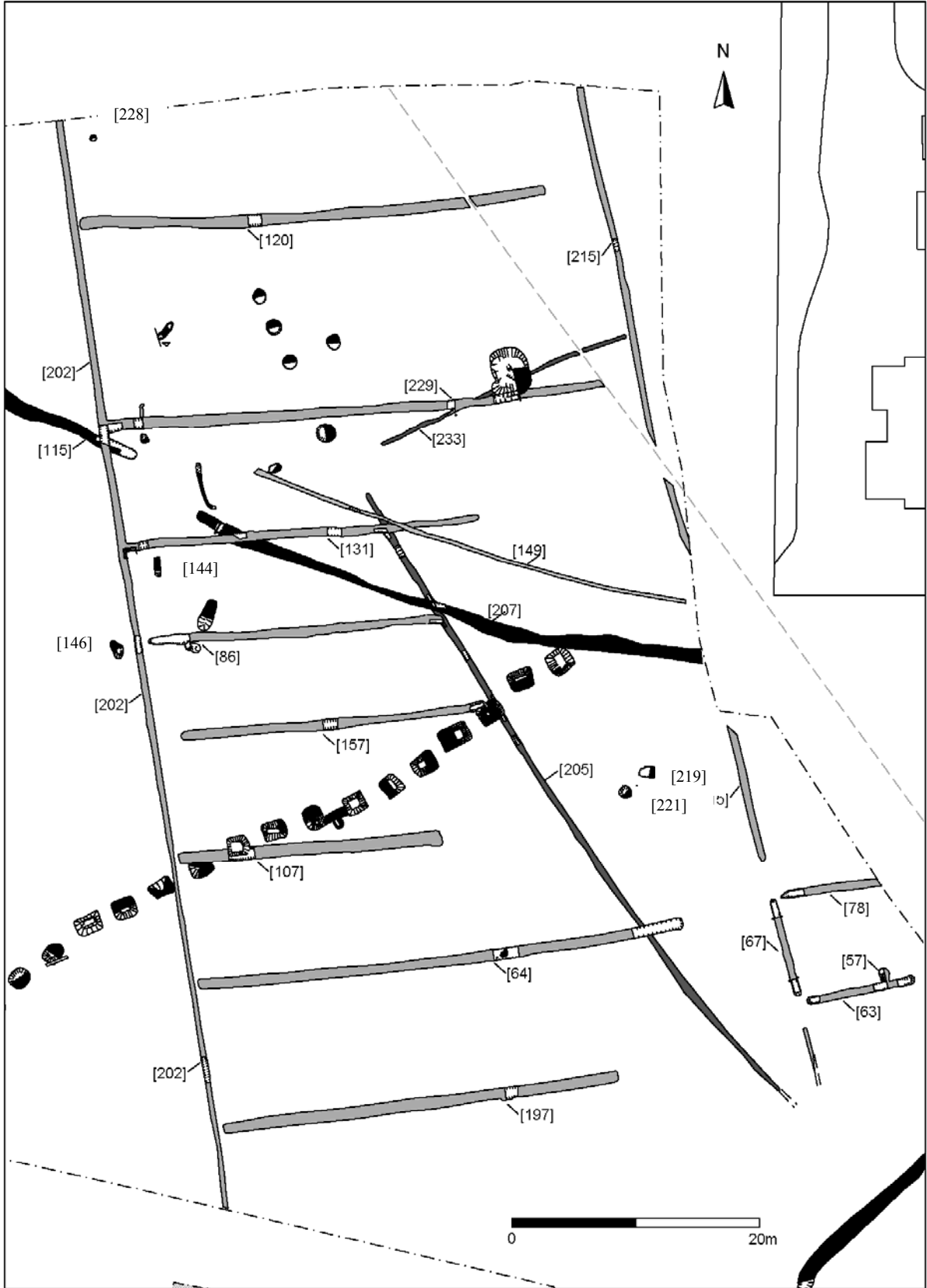


Figure 26: Plan of parallel trenches

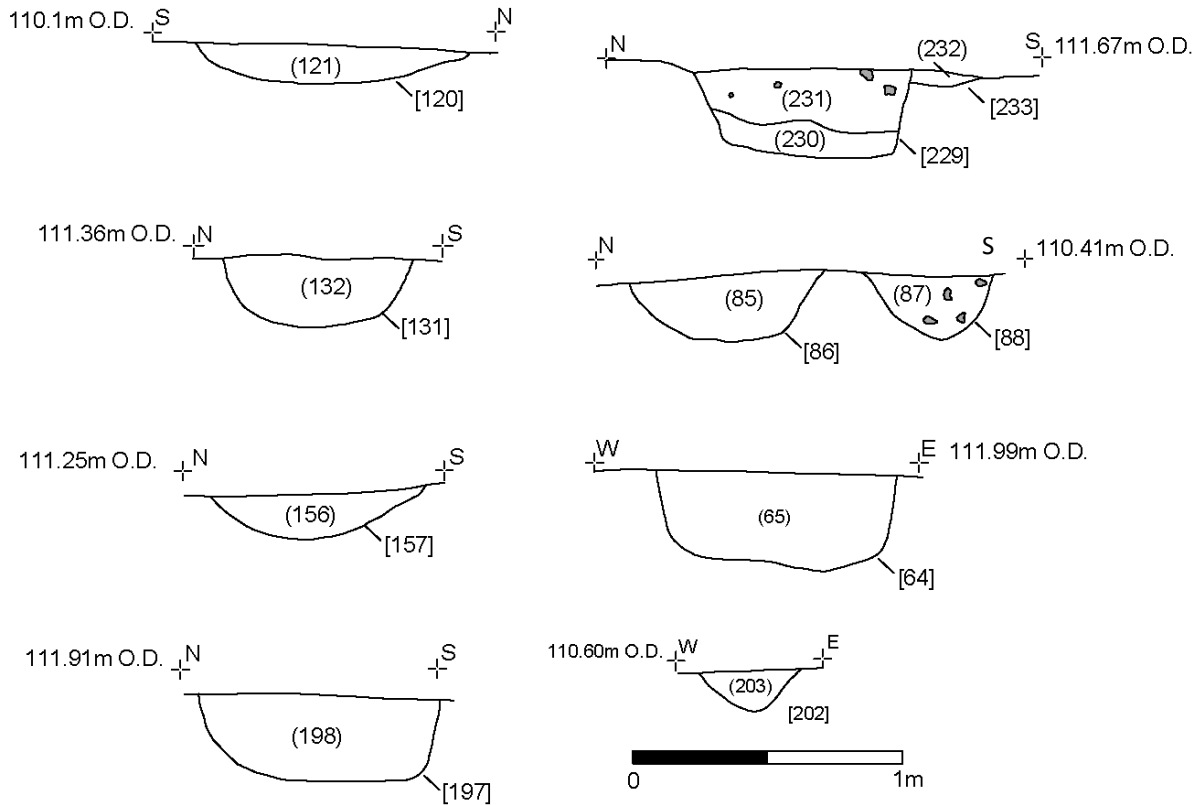


Figure 27: Sections of parallel trenches



Figure 28: View of trench [64] with possible stone packing

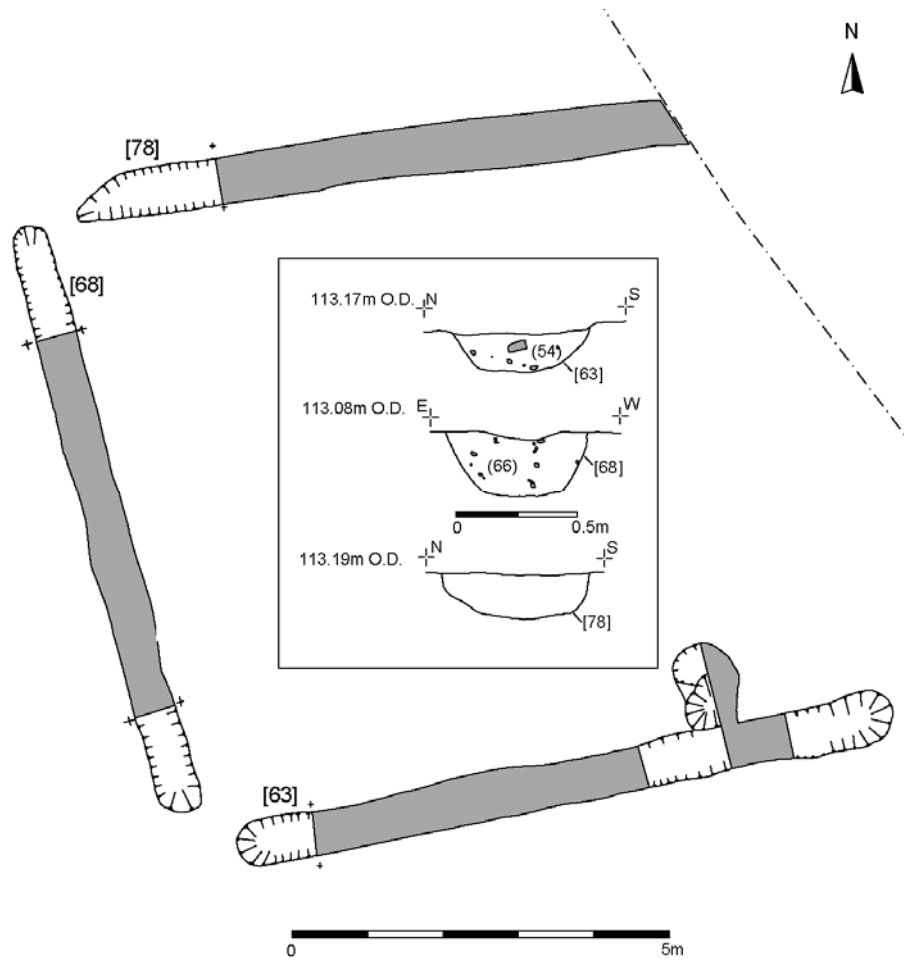


Figure 29: Plan and sections of smaller parallel trenches

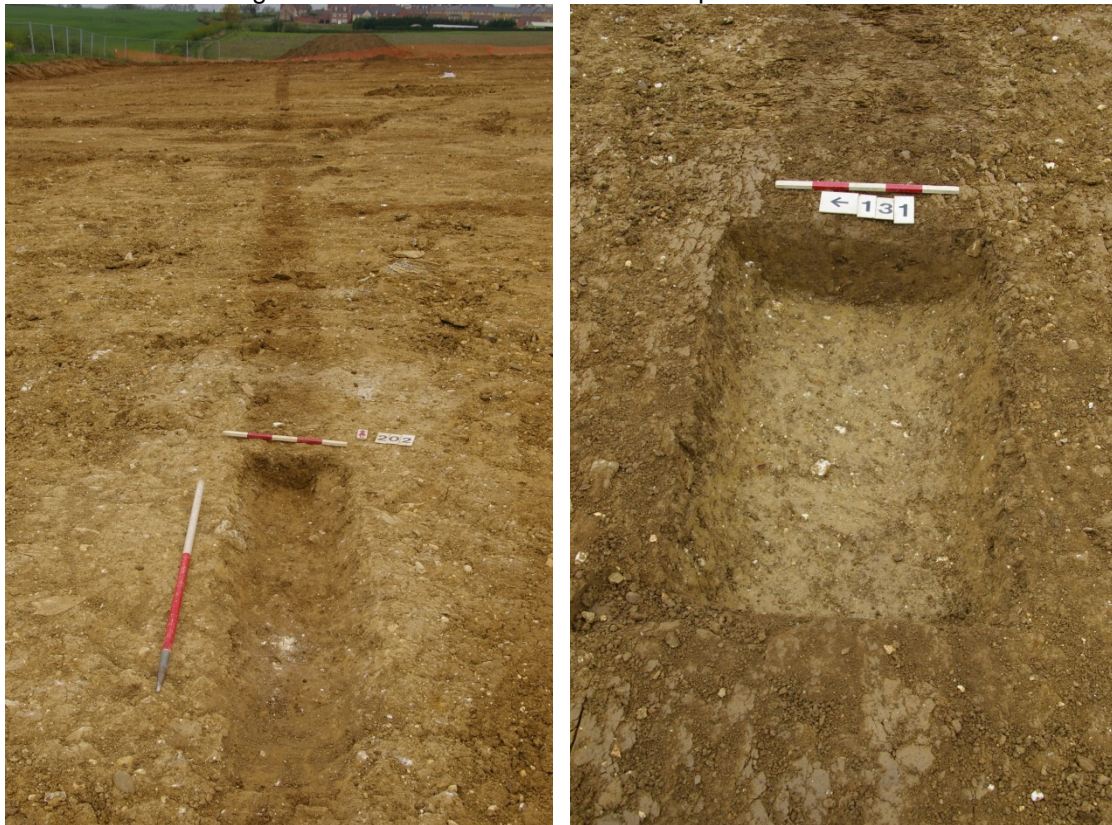


Figure 30: View of parallel ditches [202] (left) and [131] (right), scale 1m and 0.5m

6.5 Phase D: Later Activity

The latest activity on the site, prior to modern housing development in 2011, was evidence for the pre-enclosure farming system of ‘ridge and furrow’. The base of furrows (medieval or post-medieval) were located across the open-area excavation. These were orientated north-north-east to south-south-west, and spaced every 9-10m (centre to centre). They cut into many earlier archaeological features, notably causing significant disturbance to the south-western-end of the pit alignment, and the southern end of gullies [205] and [215] (Figure 26).

Linear feature [149] (Figure 26), lay parallel with ditch [207], cutting into ditches [205] and [131], and appeared to be a fairly recent (modern) plough damage / disturbance.



Figure 31: Plan of furrows (red dashes)

7. The Finds

The excavated archaeological features contained a range of artefacts and environmental remains.

7.1 Iron Age Pottery by Elizabeth Johnson

Introduction

The archaeological excavations produced a stratified pottery assemblage comprising 542 sherds weighing 3.267kg, with an estimated vessel equivalent (EVEs) value of 1.83. All the material dates to the middle-late Iron Age. The average sherd weight (ASW) of 6g reflects the generally poor condition of the assemblage, with many small and abraded sherds present.

Methodology

The pottery was examined using a binocular microscope at x15 magnification and classified using Knight's fabric groups from Bancroft (Knight 1994), with reference to Marsden's Iron Age pottery series (Marsden 2011) and the Prehistoric Ceramic Research Group's Guidelines (PCRG 1997). A summarised version of the fabric descriptions is given in Table 4 below.

Table 4: Summarised fabric descriptions based on Knight (1994) and Marsden (2011).

Fabric	Description
<i>Shelly</i> S1 Fine shelly ware S2 Moderately coarse shelly ware S3 Coarse shelly ware	Sparse to moderate fine to medium plate-like fossil shell, combined with a similar density of fine to medium angular to rounded quartz, with some quartzite. Generally moderately well sorted inclusions. Moderate to common (occasionally abundant), generally coarse plate-like fossil shell, combined with sparse to moderate quartz, with some quartzite. Generally moderately well sorted inclusions. Moderate to common very coarse plate-like fossil shelly (up to 10mm) commonly protruding through the surfaces and usually poorly sorted, combined with sparse to moderate angular to rounded quartz, with some quartzite.
<i>Sandy</i> Q1 Fine sandy ware	Common to abundant sub-angular to rounded fine to medium quartz, with some quartzite. Generally well sorted inclusions.
<i>Grog</i> G1 Grog in shelly and sandy fabric G2 Grog in sandy fabric	Shelly and sandy fabric similar to S1 and S2 above, with sparse to moderate rounded grog. Sparse to moderate rounded grog in fine sandy fabric similar to Q1.

Quantification was by sherd count, weight (grams) and estimated vessel equivalents (EVEs based on rim values). Vessel forms were assigned where diagnostic sherds allowed. The dataset was recorded and analysed within an Excel workbook, which comprises the archive record (Table 6).

Fabrics and Forms

Table 5 below provides a quantified summary of the fabrics present within the assemblage, with the chart illustrating the proportions of each fabric by sherd count.

Table 5: Summary of pottery fabrics present

Fabric	Sherds	% Sherds	Weight (g)	% Weight	EVEs	% EVEs	ASW (g)
G1	107	19.8%	568	17.4%	0.435	23.8%	5.3
G2	69	12.6%	533	16.3%	0.165	9.0%	7.8
Q1	60	11.1%	424	13.0%	0.62	33.9%	7.1
S1	169	31.2%	683	20.9%	0.4	21.9%	4.0
S2	69	12.8%	497	15.2%	0.1	5.5%	7.2
S3	68	12.6%	562	17.2%	0.11	6.0%	8.3
Total	542	100.00%	3267	100.0%	1.83	100.0%	6.0

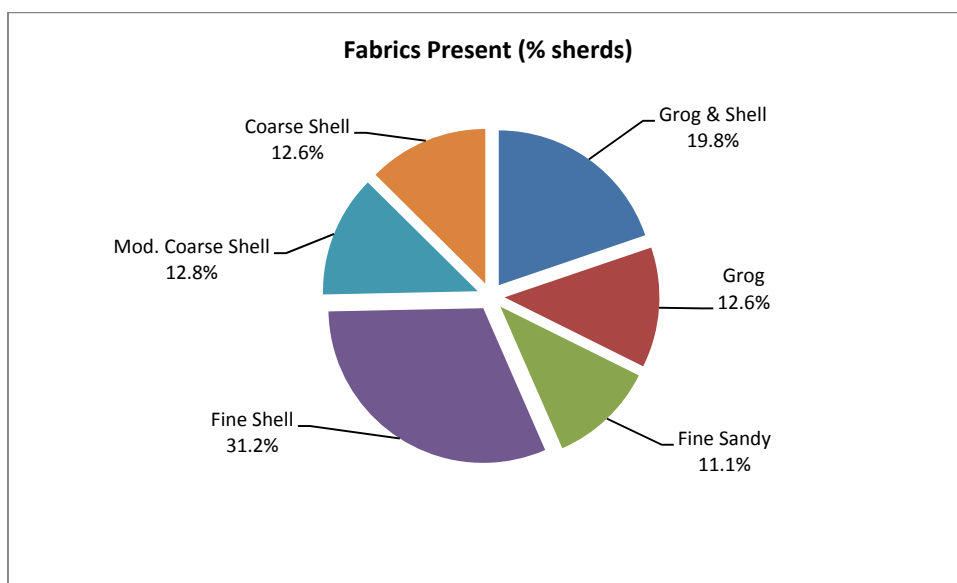


Figure 32: Proportion of fabrics present by % sherd count.

Shell-tempered fabrics are the most common, accounting for 56.6% of the assemblage with the grog and shell G1 fabric forming a further 19.8%. The dominance of shell-tempered wares is typical of Iron Age material from Northamptonshire, as evidenced from sites such as Twywell (Harding 1975), Weekley (Jackson and Dix 1987) and Mawsley (Johnson 2012). Most of the assemblage comprises plain body sherds however 25 jar rims, two handles and 59 body sherds with scored decoration were recovered. The rim forms present comprise upright and upright flattened, flattened, slightly flared or outcurved and plain rim forms, probably from barrel-shaped or slightly shouldered jars, suggesting the assemblage fits within the East Midlands Scored Ware tradition dating from the 4th century BC to the early 1st century AD (Elsdon 1992, 83-85, fig.1.4-6). The first three rim types are present in fairly equal proportions, with plain rims occurring with least frequency.

Upright jar rims were found in (2), (3), (50), (103) and (152). One of the rims from (2) has notched/oblique slashed decoration along the top comparable to a jar from Twywell (Harding 1975, 74-75 fig.21.16) and Elsdon's fig.1.5 (Elsdon 1992, 85 fig.1.5). Rims from (3), (50), (103) and (152) are flattened, the example from (103) also having notched decoration.

Flattened jar rims were found in (43), (62), (81), (110) and (117), all of which were without any kind of notched or finger-tip decoration. With the exception of that from (43), the rims were also slightly flared or outcurved. Outcurved or slightly flared rims with a rounded end were recovered from (43), (81), (84), (103) and (110). The vessel from (81) was burnished, the remainder were plain. Finally, two plain rims were retrieved from (50) and (103). The example from (50) is in-turned, most likely from an ovoid or ellipsoid barrel-shaped jar.

Two lug handles were found in (3) and (40). The example from (3) still has the peg-end surviving. These are comparable to examples from Twywell (Harding 1975, 76-77, fig.22.17) and Rushton (Jackson 1976, 86, fig.9.12-13), both of which date to the 2nd or early 1st century BC.

Feature Groups

Enclosure ditch and internal features (Group 1)

An assemblage totalling 213 sherds (1379g) of pottery was recovered from features within Group 1, accounting for 39.3% of the whole assemblage by sherd count and 42.2% by weight. The notable groups were recovered from the enclosure ditch, linear gully and roundhouse.

Enclosure Ditch, contexts: [1] (2), (28), (51), (52); [9] (10) (29) (50); [39] (40) (41); [44] (43). Forty-three sherds (385g) of pottery were recovered from [1] including two upright rimmed jars, one of which had notched decoration, and some scored body sherds. Twenty-five sherds (167g) from [9] also included scored ware, an upright flattened jar rim and the only example within the whole assemblage of an in-turned rim from an ovoid or ellipsoid jar. Fifteen sherds (155g) from [39] included a flattened rimmed jar and one of the two lug handles found on the site. A further 48 sherds (303g) from [44] (43) include scored body sherds, a flattened rimmed jar and a slightly flared jar rim.

Linear Gully, contexts: [4] (3), same as (33).

Thirty sherds (133g) of pottery were recovered from a linear gully within the enclosure. The forms present include two upright rimmed jars, one of which was flattened, and the other lug handle.

Roundhouse, contexts: [59] (62).

A single sherd weighing only 3g from a flattened jar rim was recovered from the roundhouse within the enclosure.

Pit Alignment, other ditches, parallel trenches (Groups 2, 3 and 4)

A much smaller amount of material was recovered from Groups 2, 3 and 4, comprising 62 (314g), two (4g) and 26 sherds (141g) respectively. One slightly flared rim was found in pit [128] (84) forming part of the pit alignment within Group 2, whilst another slightly flared rim was recovered from the surface of a cultivation ditch [131] (75), close to its intersection with ditch [202].

Other pits and gullies (Group 5)

An assemblage totalling of 239 sherds (1429g) of pottery was recovered from features within Group 5, accounting for 44.1% of the whole assemblage by sherd count and 43.7% by weight. All the notable groups of pottery were recovered from pits.

Thirty-six sherds (348g) of pottery were recovered from a large pit [102] (81), south of cultivation ditch [229]. The forms present include scored body sherds, a burnished outcurved slightly flared rim and a flattened flared rim. A further 20 sherds (87g) were found in pit [109] (110) (118), including a flattened jar rim and slightly flared rim.

The largest single group of pottery from the site was recovered from a very large pit [129] (103) (130), which cut cultivation trench [147]. In total 103 sherds (622g) were retrieved, 95 (613g) of which were from (103). This constitutes 19% of the whole site assemblage by count and weight. The six jar rims comprise upright, flared, plain and flattened forms, the latter having a trace of notched decoration on the surface. Two rims show signs of burning, the plain rim having been burnt to the point of vitrification. All the rims were recovered from (103). The pottery from (130) is very fragmentary and all eight sherds are in the same G2 grog fabric, suggesting they probably represent a single vessel.

Discussion

The assemblage is relatively small and in fairly poor condition, however the fabrics and forms present are consistent with other middle-late Iron Age assemblages from Northamptonshire such as Twywell (Harding 1975), Rushton, (Jackson 1976), Weekley (Jackson and Dix 1987) and Mawsley (Johnson 2012). Deposition of pottery appears to concentrate within the enclosure and associated features, or within large pits (Groups 1 and 5).

The presence of scored ware suggests activity during the middle-late Iron Age from possibly as early as the 4th or 3rd century BC to the 1st century BC (Elsdon 1992, 88-90). It has been suggested that in Northamptonshire scored ware may have reached its high point during the later 2nd and 1st centuries BC, just before the introduction of wheel-thrown 'Belgic' style wares (Jackson and Dix 1987, 73-77). Whilst scored ware most probably continues into the 1st century AD elsewhere in the East Midlands, in the middle/upper Nene Valley it appears to go out of use as soon as wheel made 'Belgic' styles of pottery appear (Elsdon 1992, 88-90). This is supported by evidence from sites in Northamptonshire such as Aldwinle (Jackson 1977), Wakerley (Jackson and Ambrose 1978) and Weekley (Jackson and Dix 1987), where scored wares and late Iron Age wheel-thrown wares are replaced completely by 'Belgic' wares during the first half of the 1st century AD.

The scored ware element here is not particularly dominant and there is no evidence for later Iron Age wheel-thrown wares or 'Belgic' wares dating into the 1st century AD. This would suggest a similar date range to the sites at Twywell and Rushton, that is, around the 2nd century BC or early 1st century BC.

Table 6: Pottery catalogue (all mid-late Iron Age)

Cut	Cont	Fabric	Form	Sherds	Weight (g)	Diam (cm)	EVEs
1	2	S3	Jar	1	50	14	0.11
1	2	Q1	Jar	2	9	13	0.075
1	2	S2	Jar	7	65		
1	2	S2	Jar	7	16		
4	3	S1	Jar	2	11	11	0.07
4	3	S2	Jar	1	46		
4	3	S3	Jar/bowl	17	50		
4	3	Q1	Jar	6	20	12	0.05
4	3	G1	Jar/bowl	4	6		
5	6	S3	Jar/bowl	1	6		
9	10	S2	Jar	1	37		
17	18	G2	Jar/bowl	2	13		
23	24	G2	Jar/bowl	1	1		
26	27	S1	Misc	1	1		
1	28	S2	Jar	16	152		
1	28	G1	Misc	3	51		
1	28	Q1	Misc	2	9		
9	29	G2	Jar/bowl	1	4		
9	29	G1	Jar/bowl	1	3		
9	29	S1	Jar/bowl	2	5		
30	31	S1	Jar/bowl	1	2		
5	33	S3	Jar/bowl	22	171		
5	33	Q1	Jar/bowl	4	12		
5	33	G1	Jar/bowl	7	20		
5	33	G2	Jar/bowl	7	13		
5	35	S1	Jar/bowl	3	5		
26	36	S1	Jar/bowl	1	1		
39	40	S1	Jar	1	32		
39	40	Q1	Jar/bowl	2	2		
39	40	S2	Jar/bowl	2	31	16	0.1
39	40	S3	Jar/bowl	2	20		
39	41	S2	Jar/bowl	8	70		
44	43	S3	Jar	15	217		
44	43	G1	Jar	4	19	12	0.05
44	43	S1	Jar	4	32	20	0.075
44	43	Q1	Jar/bowl	2	3		
44	43	S1	Jar/bowl	23	32		
46	45	S1	Jar/bowl	4	1		
9	50	G1	Jar/bowl	12	52		
9	50	S1	Jar	3	23	14	0.05
9	50	S1	Jar	2	13		
9	50	S3	Jar/bowl	1	2		
9	50	S1	Jar	2	28	18	0.075
1	51	G2	Jar/bowl	1	13		
1	52	S1	Jar	1	8		
1	52	S2	Jar	3	12		
59	62	S1	Jar	1	3	14	0.03
59	62	G2	Jar	1	3		

131	75	G2	Jar	1	14	20	0.075
78	79	S1	Jar/bowl	1	1		
102	81	Q1	Jar	1	48	14	0.08
102	81	Q1	Jar	1	25	14	0.075
102	81	Q1	Jar	1	33	12	0.1
102	81	Q1	Jar	9	94		
102	81	S1	Jar	2	58		
102	81	S1	Jar	22	90		
229	82	G1	Jar	4	46		
229	82	Q1	Jar	2	26		
101	83	S1	Jar	6	68		
101	83	Q1	Jar	1	5		
101	83	G2	Jar	1	7		
128	84	G1	Jar	1	38		
128	84	G2	Jar	2	23	16	0.09
128	84	G2	Jar	5	105		
128	84	S2	Jar	12	46		
128	84	Q1	Jar	5	15		
80	97	Q1	Jar/bowl	2	1		
129	103	S1	Jar	2	44	20	0.1
129	103	Q1	Jar	1	15	20	0.075
129	103	Q1	Jar	1	13	12	0.05
129	103	Q1	Jar	7	20	12	0.04
129	103	S2	Misc	12	22		
129	103	G2	Jar	15	98		
129	103	S3	Jar/bowl	8	44		
129	103	Q1	Jar/bowl	1	27		
129	103	S1	Jar/bowl	26	102		
129	103	G1	Jar/bowl	4	28		
129	103	G1	Jar/bowl	18	200		
109	110	G1	Jar	1	16	12	0.06
109	110	G1	Jar	6	43		
109	110	S1	Jar/bowl	2	3		
109	110	S1	Jar/bowl	1	4		
109	110	Q1	Jar/bowl	1	3		
111	112	S1	Jar/bowl	2	4		
116	117	G2	Jar/bowl	3	20		
116	117	Q1	Jar	3	16	12	0.075
109	118	S1	Jar/bowl	9	18		
126	127	G2	Jar/bowl	1	6		
129	130	G2	Jar/bowl	8	9		
131	132	G2	Jar/bowl	1	1		
141	139	S1	Jar/bowl	3	2		
147	148	S1	Jar/bowl	1	1		
151	152	G1	Jar	45	203	12	0.325
151	153	Q1	Jar/bowl	1	2		
204	158	Q1	Jar	2	22		
204	158	G1	Jar/bowl	5	13		
164	166	S1	Jar/bowl	14	45		
171	172	S1	Jar/bowl	2	9		
171	172	Q1	Jar/bowl	2	3		

204	177	S1	Jar/bowl	6	9		
179	181	S1	Jar/bowl	7	9		
183	184	S1	Jar/bowl	4	9		
196	195	S3	Jar/bowl	1	2		
197	198	S1	Jar/bowl	1	3		
224	223	Q1	Jar/bowl	1	1		
224	223	G2	Jar/bowl	1	3		
226	225	S1	Jar/bowl	7	7		
229	231	G1	Jar/bowl	10	30		

7.2 Worked Flint by Lynden Cooper

The collection comprised 41 pieces of lithic debitage, nearly all of which was patinated. The raw material is local till-derived flint. There is some bladelet technology of Mesolithic date while the vast majority is flake technology of a general Neolithic/Bronze Age date.

Table 7: Details of worked flint by context

Context	Description
33	2 x 2ry flake
40	2ry flake
41	2ry flake
43	Flake frag
47	3ry blade
66	2ry flake
70	2ry flake
81	2 x 2ry flake
81	3ry flake
83	3ry flake
84	2 x flake frags, calcined
84	2ry bladelet
95	Natural piece, discarded
103	3 x 2ry flake
103	2 x 3ry flake
110	3ry bladelet, calcined
110	4x 2ry flakes
117	3ry flake (Wolds flint)
117	2 x 2ry flake
139	2ry bladelet
148	3ry flake
160	3ry bladelet
161	2ry flake
166	3ry flake
174	2ry flake
174	3ry flake
218	2 x 2ry bladelets, calcined
218	chip
223	2 x 2ry flake
230	2ry flake

7.3 Animal Bone by Jennifer Browning

7.3.1 Introduction

A total of 628 fragments of bone was recovered from the excavations although re-assembly of conjoining fragments reduced the number to 510. Although excavation indicated that there were different stratigraphic episodes, it was not possible to separate the material into coherent phases in conjunction with pottery dates. The assemblage is therefore discussed together as a single phase, dating to the mid-late Iron Age.

7.3.2 Methods

Specimens were identified with reference to comparative modern and ancient skeletal material held at the School of Archaeology and Ancient History, University of Leicester. Information was compiled directly into a spreadsheet with facility for recording data on species, bone element, state of epiphysal fusion and completeness to elicit information on species proportions, skeletal representation, age and condition. Where possible, the anatomical parts present for each skeletal element were recorded using the 'zones' defined by Serjeantson (1996), with additional zones ascribed to mandibles based on Dobney and Reilly (1988) and a simple system applied to skulls by the author (four commonly found recordable points were defined on each side of the skull to make assessment of zones present rapid and comparable: pre-maxilla; upper and lower orbit; and occipital condyle). Condition was assessed on a 4-point scale, following Harland et al (2003) (see Table 8):

Table 8: Preservation categories (after Harland *et al.* 2003)

Excellent	majority of surface fresh or even slightly glossy; very localised flaky or powdery patches.
Good	lacks fresh appearance but solid; very localized flaky or powdery patches.
Fair	surface solid in places, but flaky or powdery on up to 49% of specimen.
Poor	surface flaky or powdery over 50% of specimen.

Joining fragments were re-assembled and the resulting specimen counted as a single fragment, reducing the total to 510. The location and nature of modifications such as burning, gnawing and pathologies were recorded. Butchery marks were located by zone, where feasible, categorised using simple codes, and described. Measurements were taken as appropriate, following von den Driesch (1976), Payne (1969) for sheep/goat metacarpals and Payne and Bull (1988) for pigs. Sheep and goat are frequently difficult to distinguish post-cranially, but attempts were made to separate the species using criteria defined by Boessneck (1969). Although no goats were confirmed, their presence cannot be excluded, as it is possible that post-cranial goat bones remained unrecognised due to the fragmentation of the assemblage. Age analysis was attempted by both epiphyseal fusion for post-cranial bones and tooth eruption and wear on mandibular teeth, following Grant (1982), then mandibles were grouped into broader age stages after O'Connor (2003).

Where a positive identification could not be made, the bone was characterised as large mammal (likely to belong to cattle or possibly horse or red deer) or medium mammal (sheep or pig size) based on features such as size and cortical thickness. All fragments were counted.

7.3.3. The Assemblage

Preservation and Fragmentation

Table 9: Preservation of the bone. Categories after Harland *et al.* 2003

Preservation	N	%
Good	1	<1
Fair	74	15
Poor	435	85
Total	510	100

Bone surfaces were generally in poor condition across the assemblage, inhibiting examination for butchery marks and pathologies. Additionally, the high proportion of undiagnostic specimens (86%) clearly illustrates the degree of fragmentation within the assemblage.

Burning

Bones were either charred or calcined; while the former could have occurred during normal cooking activities, the latter must have been exposed to temperatures exceeding 800 degrees Celsius, after which calcination occurs (Nicholson 1993, 425). Most of the fragments were found within Group 5, feature 109, within contexts 110 and 118 and were predominantly charred. One fragment was identified as part of a cattle metapodial, while the remainder were shaft fragments belonging to large and medium-sized mammals.

Charring was noted on the shaft of a proximal sheep/goat tibia found within a gully at the north end of the site (context 225). A charred medium mammal shaft fragment was recovered from another gully (context 158).

Species representation

Table 10: Species representation based on Number of Identified Specimens (NISP) in rank order. Eighty-seven fragments of antler recovered from the same context are counted as '1' to avoid skewing the results

Taxa	N	%
cattle	32	53
sheep/goat	13	22
horse	11	18
pig	2	3
red deer	1	2
deer	1	2
Total identified	60	100
large mammal	217	
medium mammal	30	
indeterminate	117	
Grand Total	424	

Cattle bones occurred most frequently in the assemblage, followed by sheep/goat and horse. The poor preservation will undoubtedly have had an effect, since larger mammals tend to be better represented in such assemblages. Pigs are particularly under-represented; only fragments from the maxilla and mandible were present; it has been noted in other assemblages that the cranial elements tend to survive better (Albarella 2006, 84).

The antler was very fragmented and it was not possible to re-assemble all the pieces, however, they represent a minimum of one antler, possibly two. The antler was branched, indicating that it was from a mature animal several years old (Corbett and Harris 1991, 495). Some cut marks are apparent but no tines had been clearly removed. Since the burr was not present, it was not possible to determine whether the antler was collected after being shed or was from a hunted animal. No other deer bones were recovered

Skeletal representation

The small sample size for each species makes it difficult to discuss body part representation; taphonomic reasons are as likely as cultural ones to explain the various abundances of elements represented. A rudimentary examination suggests an emphasis on robust limb bones, metapodials, teeth and mandibular fragments for cattle, sheep/goat and horse, which can probably be attributed to preservational factors.

Ageing

The limited available data allows only brief comments to be made on slaughter age and does not permit comment on husbandry patterns. There were insufficient post-cranial bones with epiphyseal surfaces to allow analysis and porous. Fused cattle and horse epiphyses were present in small numbers (cattle n=3 and horse n=1) and none were noted for sheep/goat, pig or deer. However, it should be noted that juvenile bones are likely to be under-represented because they are more susceptible to fragmentation.

Three age-able mandibles for cattle and three for sheep/goat were present. The cattle mandibles suggest that the animals were mature adults who died at similar ages (Table 11). Two of the sheep/goat mandibles are of a similar age, possibly 2-4 years of age (Moran and O'Connor 1994, quoted in O'Connor 2003, 162), while a third animal was younger.

Table 11: Mandible Wear Stages for cattle and sheep/goat (after Grant 1982)

ID	Context	Species	Bone	dp4	p4	m1	m2	m3	Notes
76	103	cattle	mandible				k	g	
90	110	cattle	mandible				k		
95	50	cattle	mandible				j	g	
75	103	sheep/goat	mandible			h	g	d	
89	33	sheep/goat	mandible			h	g		
94	50	sheep/goat	mandible	g		d			

Butchery

Cut marks were noted on two bones; a horse metapodial (36), indicating skinning and a large mammal shaft fragment (2), where filleting is suggested.

Biometry

Measurements were taken on 22 teeth, and three post-cranial bones (see Table 14).

Other observations

No bones exhibiting pathologies were observed in the assemblage. No articulated bones were evident.

Provenance

Table 12: Distribution of assemblage within feature type

Feature type	N	%
ditch	84	16
gully	14	3
pit	380	75
Cultivation trench	32	6
Total	510	100

The majority of the assemblage was recovered from pits. However, distribution was not homogenous across the site. The pits of the alignment ('Group 2') clearly had a low density of bone; 13 features produced 70 specimens (Table 15). The remains consisted mostly of undiagnostic shaft fragments (89%), with cattle the only identified species. By contrast, the four non-alignment pits west of South Meadow Road produced a total of 310 specimens of which 34% was identified, including elements from cattle, sheep/goat, horse and deer. It therefore seems likely that these features were used to deposit rubbish from the settlement. Even within non-alignment pits, bones were not evenly distributed but were predominantly from features [109] and, particularly, [129], although the quantity of bones was inflated by a large number of antler fragments in this feature (n=87).

The nature of the faunal remains in the enclosure ditches ('Group 1') is also indicative of domestic rubbish, although bones found in smaller concentrations than the pits. However, there is some evidence from other sites, including Manor Farm, Humberstone that bones are unevenly distributed within linear features, sometimes occurring as dumps (Browning 2011, 119). Therefore, since ditches are not 100% excavated, it can be difficult to confidently assess patterns of deposition within ditch assemblages.

Although still a factor, the smaller size of gullies means that this problem is not quite so acute. West of South Meadow Road, few faunal remains were found within gullies, suggesting that these were kept clean and were not intended for the disposal of domestic waste. Similarly the cultivation trenches contained little in the way of identifiable faunal remains.

Discussion

The faunal assemblage from the site west of South Meadow Road has been badly affected by poor preservation and fragmentation, which has unfortunately limited the available information from the site. It is notable that large and robust bones are particularly common since these are most likely to have survived. Cattle, sheep/goat, pig, horse and deer were represented in the assemblage and the bones are likely to derive from domestic settlement activities. Very few butchery marks were present; the examples noted indicate both skinning and filleting. Burning noted in some contexts is likely to have largely occurred through cooking activities. The presence of the antler is suggestive of bone-working and object manufacture. Groups of antler are not infrequently found on Iron Age sites, for example a large cache of worked and unworked antler was found dumped in a ditch at Manor Farm, Humberstone (Browning 2011). An assemblage from a nearby extensive Iron Age and Roman site at Upton, was described as poor to moderately preserved and it was noted that fragmentation was high (Vann 2010, 45). Cattle were similarly the most common species in

the Upton assemblage, followed by sheep and horse, with poor representation of pig (Vann 2010, 45).

The site west of South Meadow Road assemblage adds further support to the current consensus that pit alignments were not intended for the disposal of domestic waste, which was evidently concentrated in pits outside the alignment and, to a far lesser degree, in the enclosure ditches. A recent report on a nearby Iron Age pit alignment in Upton (Carlyle 2010) does not record any faunal remains. Thomas (2008, 150) noted that assemblages of artefacts in pit alignments are rare but where they occur, the remains are often unusual. In faunal terms this often means articulated limbs or bones apparently ‘placed’ (*ibid.*). Unfortunately, no comparable remains were seen at South Meadow Road. It was noted that faunal remains were found only within the upper fills and could therefore be associated with later backfilling or re-use (G. Speed pers. comm.). However, the sparse number of identifiable fragments and lack of butchery marks make it difficult to be certain that this is deliberately-deposited domestic waste.

Table 13: Skeletal representation for each taxon. This is a raw quantification of specimens attributed to each element and species. No corrections have been made for MNE or number of times an element occurs in the body.

cattle	32	lateral metapodial	1
astragalus	1	mandible	2
dp4	1	maxilla	1
horncore	1	metacarpal	1
humerus	2	scapula	1
mandible	7	skull fragments	2
metacarpal	2	tooth	1
metapodial	1	ulna	1
metatarsal	1	large mammal	217
molar	7	femur	1
pelvis	2	hyoid	1
radius	2	mandible	1
scapula	1	radius	1
tibia	3	rib fragment	7
tooth	1	shaft fragments	200
sheep/goat	13	skull fragments	2
femur	1	tooth	1
mandible	5	thoracic vertebra	3
metacarpal	1	medium mammal	30
metatarsal	1	shaft fragments	29
molar	1	indeterminate	117
radius	1	shaft fragments	117
tibia	2	ulna	1
tooth	1	Total	510
pig	2		
mandible	1		
maxilla	1		
deer (probably Red deer)	88		
antler	88		
horse	11		
humerus	1		

Table 14: Measurements taken on bones and teeth (Key m=molar; p=premolar; dp=deciduous premolar; l=lower; u=upper)

Record	Context	Bone	Species	GL	Bp	Bd	Dd	GLI	L	B	H
74	103	um3	sheep/goat						16	10.3	
75	103	lm3	sheep/goat						18.2	6.9	
75	103	lm2	sheep/goat						12.8	7	
75	103	lm1	sheep/goat						9.1	6.5	
76	103	lm3	cattle						32.5	14.6	
76	103	lm2	cattle						24.3	13.3	
6	103	astragalus	cattle					62.5			
81	36	metacarpal	horse	199	44.2	41.4					
84	41	tibia	sheep/goat			19.7	16.8				
86	41	lm3	cattle						34.2	12.7	
86	41	lm2	cattle						25	13.4	
86	41	lm1	cattle						22.4	13.4	
88	52	lm3	horse						29.8	15.4	36.9
89	33	lm1	sheep/goat						11.3	6.6	
89	33	lm2	sheep/goat						13.9	7.5	
90	110	lm2	cattle						25.3	16.4	
92	52	p2	horse						30.4	15.2	36.2
94	50	m1	sheep/goat						13.7	7.1	
94	50	ldp4	sheep/goat						17.3	6.1	
95	50	lm2	cattle						24.8	13.7	
95	50	lm3	cattle						36.2	15.6	
117	2	lm3	horse						24.6	20	64.2
117	2	lm3	horse						24.6	20.2	63.4
117	2	p2	horse						32.7	23.1	51.8
117	2	p2	horse						33	22.9	54.3

Table 15: Quantity of bones within each feature (raw counts (N) in rank order)

Feature Number and Feature Description	Feature Type				
	ditch	gully	pit	trench	Total
129			226		226
Very large pit, cuts cultivation trench [147]			226		226
109			76		76
Pit, part of pit group			76		76
39	34				34
Enclosure ditch, south side	29				29
Enclosure ditch, south-side entrance. Re-cut.	5				5
86				28	28
Cultivation trench				28	28
9	24	2			26
Enclosure ditch extension	1				1
Enclosure ditch extension (trench 10)	1				1
Enclosure ditch extension (trench 9)	2				2
Enclosure ditch extension, north side	20				20
Linear gully within enclosure (trench 10)		2			2
1	24				24
Enclosure ditch (trench 10)	15				15

Enclosure ditch at north-side entrance	3				3
Enclosure ditch, north side	6				6
80			16		16
Pit within pit alignment			16		16
155			12		12
Pit within pit alignment			12		12
159			12		12
Pit within pit alignment			12		12
163			10		10
Pit within pit alignment			10		10
141			6		6
Pit within pit alignment			6		6
102			6		6
Large pit, just south of cultivation ditch [229]			6		6
226		5			5
Gully, north-end of site, truncated by evaluation trench		5			5
30				4	4
Cultivation trench (in far south corner near to enclosure)				4	4
59		4			4
Roundhouse.		4			4
173			3		3
Pit within pit alignment			3		3
20			3		3
Pit within pit alignment (eval trench 4)			3		3
128			2		2
Pit within pit alignment			2		2
5		2			2
Linear gully within enclosure		2			2
179			2		2
Pit within pit alignment			2		2
26	2				2
Enclosure ditch extension	2				2
116			2		2
Pit, part of pit group			2		2
183			1		1
Pit within pit alignment			1		1
171			1		1
Pit within pit alignment			1		1
204		1			1
Curvilinear gully, north of terminus of ditch [207]		1			1
126			1		1
Pit within pit alignment			1		1
69			1		1
Pit within pit alignment			1		1
151					
Pit, part of pit group					
Total	84	14	380	32	510

7.4 Charred plant remains and pollen analysis by Anita Radini

7.4.1 Introduction

Excavations were carried west of South Meadow Road, by ULAS directed by Gavin Speed. Iron Age and a possible early Roman features were investigated which included mainly ditches, gullies and pits. Samples were taken from features with the potential to contain charred plant remains, which may indicate activities on the site associated with agriculture or occupation. Additionally, palynological samples were taken from the Roman cultivation trench system, which extended over an area of 4200m², to see if it might relate to viticulture as previously recognised in the Nene Valley (Brown and Meadows, 2000).

7.4.2 Materials and methods

Forty one bulk samples from features, which had the potential to contain environmental remains, were processed. The sediments were mainly of solid clay or silty-clay, which needed soaking in water before they could be wet-sieved. Few remains were recovered by flotation so the residues were examined and those with any charred material were refloated by bucket flotation, but produced no further remains.

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 transferred into plastic boxes and air dried. The residues were also air dried and the fraction over 4mm sorted for all finds. The fraction of the residues below 4mm were reserved and refloated if charred material was still present and submitted for analysis.

The flots and reflots were sorted for plant and animal remains using a x10-40 stereo microscope and the remains were removed to glass specimen tubes. The plant remains were identified by comparison with modern reference material at ULAS and were counted and tabulated below (table 1) in the order in which they are discussed in the text. The plant names follow Stace (1991), both botanical and common names.

Scanning for pollen was conducted at the laboratory of starch analysis in the School of Archaeology and Ancient History. A total of 10 samples, top and bottom, of the following cultivation trenches/ditches, were examined for the presence of the pollen of grapevine: [90], [131], [197], [215] and [229].

7.4.3 Results and discussion

The charred plant remains

Almost all of the 41 samples available for analysis contained very small amounts of charcoal flecks and small rootlets, but only 16 (about a third of the total) produced identifiable plant remains, in very low concentrations.

Samples with over 50 items are required for the interpretation of specific crop processing activities, by considering the proportions and ratios of the different types of remains (van der Veen 1992). Unfortunately, insufficient remains were recovered for this analysis but all the

remains retrieved are described below and the best samples with plant remains were tabulated in Table 16 below.

Cereal grains were few in number poorly preserved; many in fact were broken and/or abraded, which could suggest some degree of soil shifting or disturbance in the past. The identifiable cereal grains were of glume wheat (*Triticum dicoccum/spelta*) and barley grains (*Hordeum vulgare*). The barley was the hulled form, but it was not possible to confirm if the grains were twisted, as in six-row barley, due to the poor preservation. Occasional chaff fragments (glumes) were found and most were not identifiable to species level. They were broken and/or too short to distinguish the features necessary for identification. They were either emmer or spelt (*Triticum dicoccum/spelta*). No other food plants were recovered in this analysis.

Weed seeds were mainly of plants of arable or disturbed ground. Seeds of large grasses including brome grass (*Bromus* spp.) were recovered in almost all samples with plant remains. Brome grass is a very common weed in the Late Iron Age and the Roman periods. The second most common weed seeds belonged to goosefoots (*Chenopodium* spp.) and sorrels (*Rumex* spp.), which are both weeds of crops and grow on disturbed ground. Leaves of the species are also edible. Other weeds were very few including vetch type (*Vicia* spp.), which can also grow as a grassland plant, and cleavers (*Galium aparine* L.), which is usually associated with autumn sown cereals. A few grass stem fragments and seeds of smaller grasses were also present, perhaps from nearby vegetation and possibly used as fodder, or flooring or roofing, or burnt as kindling. Roots, rootlets, earthworm egg cases and occasional un-charred seeds were present in some samples, indicating some degree of modern disturbance.

The plant remains by feature

Samples from ditches [9], sample **9** (50), [44], sample **7** (43), [46], sample **8** (45) and [64], sample 17 (65) had a very low concentration of charcoal flecks and a few seeds of wild grasses. The only charred cereal debris was too damaged to be identified with confidence, but they were consistent with hulled barley. The presence of highly deteriorated organic matter was also observed. Plant remains consistent with vetch type seeds, wild grasses and sorrels were found in gully [68], sample **16** (66). The only samples from this type of feature where identifiable plant remains survived.

A group of three pits [101], [109], [116], had a large amount of animal bone represented included cattle, sheep/goat, horse, and deer (see Speed and Browning, this report). The bulk of the plant remains came too form these three pits, however not in the same quantity or quality of preservation as the animal bone. Sample **25** (83) ([101], **29** (110) [109] and sample **28** (117) [116] had very similar archaeobotanical assemblages indicating the disposal of domestic waste or food spillage. Charred remains of hulled barley grains and glume wheat were found in all samples associated with cleavers, vetches and grasses. These could be the result of a final cleaning of the crop before consumption. All samples also had seeds of goosefoots and sorrels, which could have been weeds or being consumed as edible leaves.

Pit [216], sample **40** (218) was investigated due to a concentration of burnt clay that could indicate *in situ* burning suggesting possible use as an oven or corn dryer. However, the largest portion of the archaeobotanical material from this pit consisted of small fragments of charcoal and charcoal flecks, with only a low amount of badly damaged charred grained of

barley and small wild grasses seeds. No chaff was found in this feature to confirm its use as an oven or dryer.

An even lower quantity of charred seeds belonging to both barley and glume wheat, and few arable weeds were retrieved from the following samples/pits: **23** (95) [80], **33** (103) [129], **34** (160) [159], **35** (161) [163], **36** (174) [173], **37** (194) [192], **41** (225) [226], see Table 16.

The pollen

Pollen grains of grapevine are distinctive and if present can be identified. The analysis of the 10 samples did not retrieve any grapevine pollen to positively support the hypothesis that the cultivation trenches may have been connected with viticulture. However, this could be due to the conditions of preservation in the ground, as the organic matter present in the samples appeared very degraded and few other pollen species, such as birch (*Betula* spp.), alder (*Alnus* spp.) and wild grasses (Poaceae), normally very common in pollen spectra, are present here only in very low number. Modern studies have in fact shown that even underneath vines the pollen concentration can be low (Turner and Brown, 2004).

Conclusions

Charred cereal remains were sparsely represented on the site and, overall, the archaeobotanical assemblage was very poor. The samples contained only a few identifiable charred grains of glume wheat and barley, in equal proportion, which suggests food waste or food spillage from domestic activity. It is also possible that the area of the site sampled were not concerned with cereal processing. The assemblage is very similar to that from contemporary sites at Mawsley, Northamptonshire (Monckton and Radini 2012), Castle Donington, Leicestershire (Radini forthcoming), in terms of preservation and quantity of remains, and it is also similar to other sites in the region (Monckton 2006).

Table 16: Charred plant remains and snails from samples in the order in which they are discussed in the text.

Samp No.	Cont No.	Feat Type	Samp Vol. litres	Gr Ch Ba	Gr Ch Wh	Chf	Ch Se	Chc and Flk	Further information
9	50	Ditch 9	15	2		-	4	+	Roots ++, Earthworm egg case, charred wild grasses seeds
7	43	Ditch 44	12	1	-	-	1	+	Roots ++, Earthworm egg cases, elder seeds (modern), one charred seeds of wild grass
8	45	Ditch 46	15	3	-	-	-3	+	Roots ++, elder seeds (modern), charred wild grasses seeds
17	65	Ditch 64	12	1	-	-	1	+	Roots +, Uncharred sorrel seeds and charred small grass seed
16	66	Gully 68	14	1	-	-	4	+	Roots ++, Earthworm egg cases, one charred seeds of sorrel and the rest charred small grasses seeds
25	83	Pit 101	13	7	11	1	7	+++	Roots ++, wild grasses, sorrel, goosefoots, cleavers and vetch type seeds, Earthworm egg cases

29	110	Pit 109	15	8	9	1	8	++	Roots ++, Earthworm egg cases, wild grasses, sorrel, goosefoots, cleavers and vetch type seeds, elder seeds (modern)
28	117	Pit 116	15	4	7	2	9	++	Roots x, Earthworm egg cases, wild grasses, sorrel, goosefoots, cleavers and vetch type seeds
40	218	Pit 216	8	3	2	-	8	+	Roots x, modern seeds, small grasses
23	95	Pit 80	13	-	1	-	5	+++	Roots x, modern seeds, sorrel and vetch types seeds
33	103	Pit 129	14	1	-	1	4	++	Roots x, Earthworm egg cases, charred wild grasses seeds
34	160	Pit 159	15	-	3	-	3	++	Roots x modern uncharred seeds fragments, charred sorrels and goosefoots seeds
35	161	Pit 163	14	1	4	-	5	++	Roots x Roots x, modern seeds, charred sorrel and wild grasses seeds
36	174	Pit 173	16	1	-	-	4	++	Roots x, modern seeds, charred sorrel and wild grasses seeds
37	194	Pit 192	10	1	-	1	3	++	Roots x, modern seeds, charred goosefoot and wild grasses seeds
41	225	Pit 226	10	-	2	-	1	++	Roots x, modern seeds, charred sorrel seed

Key: Gr = cereal grain, Cf = chaff, Ch Se = charred seed, Chc and Flc = charcoal and charcoal flecks, + = present, ++ = moderate amount, +++ = abundant.

7.5 Vitrified Clay by Graham Morgan

Approximately 100 amorphous lumps of vitrified clay weighing 5.3kg were recovered from pit fill (103) [129] and two further lumps weighing 180g came from (122) [123]. The material was visually examined and fragments were sawn in half to reveal their internal structure and viewed using low power microscopy.

The individual lumps are mainly between 30-70mm in length with irregular surfaces and rounded edges; there are no flat or smoothed surfaces and no perforations indicative of them being part of a wattle and daub structure, a hearth or a kiln for example. The extent of vitrification, evidenced by the vesicular structures seen in section, indicates that the material was subjected to temperatures in excess of 900 degrees C. All the material from both contexts is very similar in character, reduced to a dark grey colour throughout and there is no indication of any metallic content or any associated metalworking slags. The material does

not therefore appear to be related to high temperature metalworking activity or to the destruction of daub built structures, unless very highly fragmented. The precise high temperature activity to which it relates remains uncertain.

8. Discussion

The excavation to the west of South Meadow Road, Upton, revealed significant archaeological evidence of the Iron Age and possibly Roman periods. As Figure 33 shows, a range of Iron Age and Roman settlements are known within the immediate surrounding area. What follows is a discussion of the key results and a comparison to other sites, to place the results of the excavation within the wider landscape context.

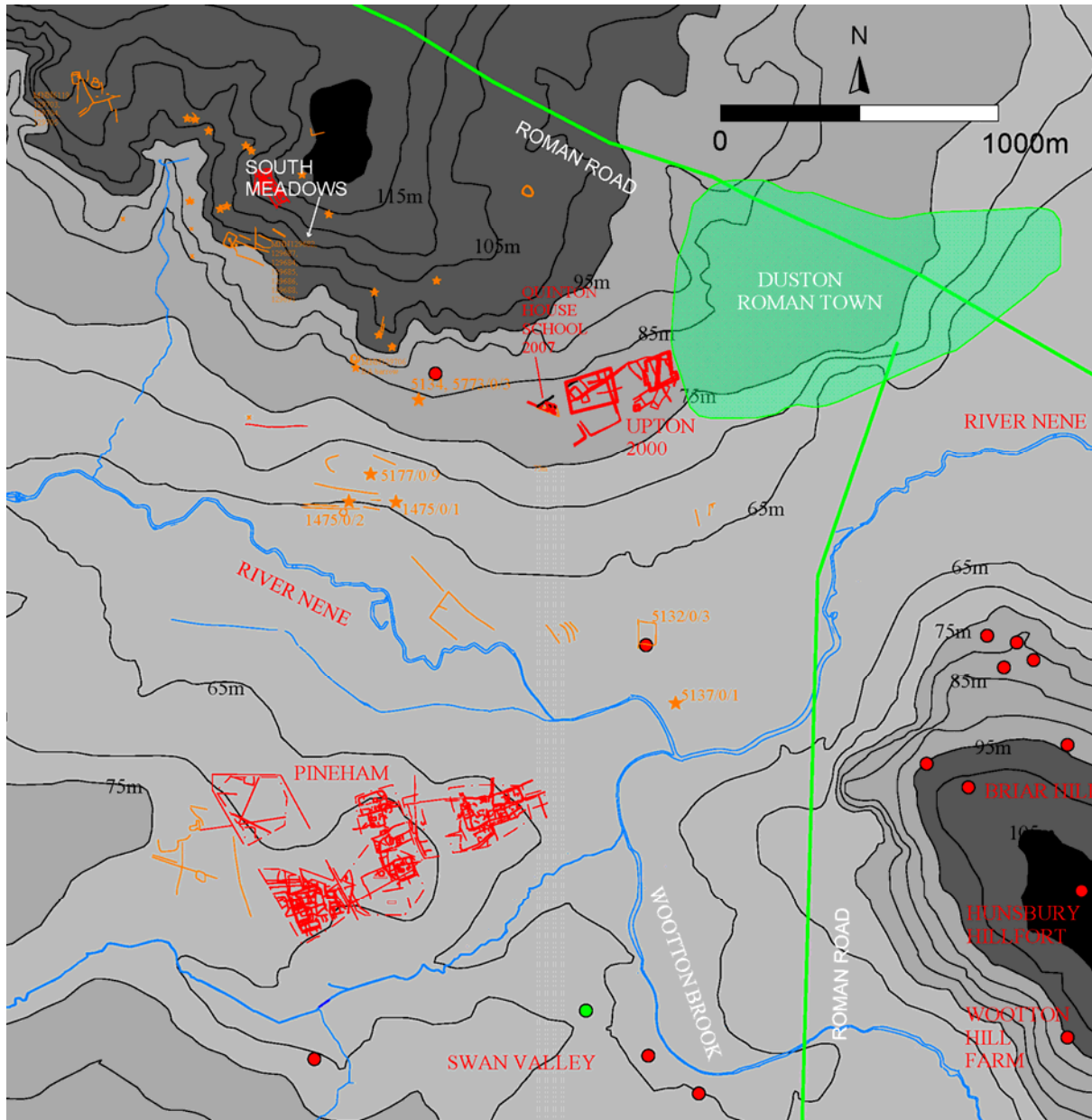


Figure 33: View of South Meadow within its landscape setting. Red = excavated Iron Age settlements, orange = cropmarks, green = Roman

8.1 Iron Age Settlement

The Iron Age settlement located west of South Meadow Road is broadly dated to the mid to late Iron Age, probably of the 2nd century BC, or into the early 1st century BC.

Part of an Iron Age enclosure was located in the central area of the development site. This had been previously interpreted via aerial photography (listed in Northamptonshire HER as MNN129689), a geophysical survey (Bartlett 2010), and the trial trench evaluation (Browning 2010, 12-15). It was truncated on the east-side by a sewer. The eastern-edge lay outside the excavated area.

The enclosure was likely to have been a curvilinear form (oval or sub-rounded). Curvilinear enclosures are generally seen in areas that do not have large field systems (Speed 2010, 37). The enclosure likely enclosed a space of *c.*1500m², this corresponds closely to the median size of curvilinear enclosures (1531m²) from a wider study of Iron Age enclosed settlements in the East Midlands (Speed 2010, 39). These enclosure forms are generally the smallest-type (behind rectilinear and D-shaped – Speed 2010, 40). The enclosure morphology reflects its position within the landscape, it is situated in high ground overlooking the Nene valley, its shape reflects differing methods of landscape use and farming practices, compared to the valley basin where enclosures are more often large and rectilinear in form (such as the Pineham sites located 2km to the south of Upton shown on Figure 33).

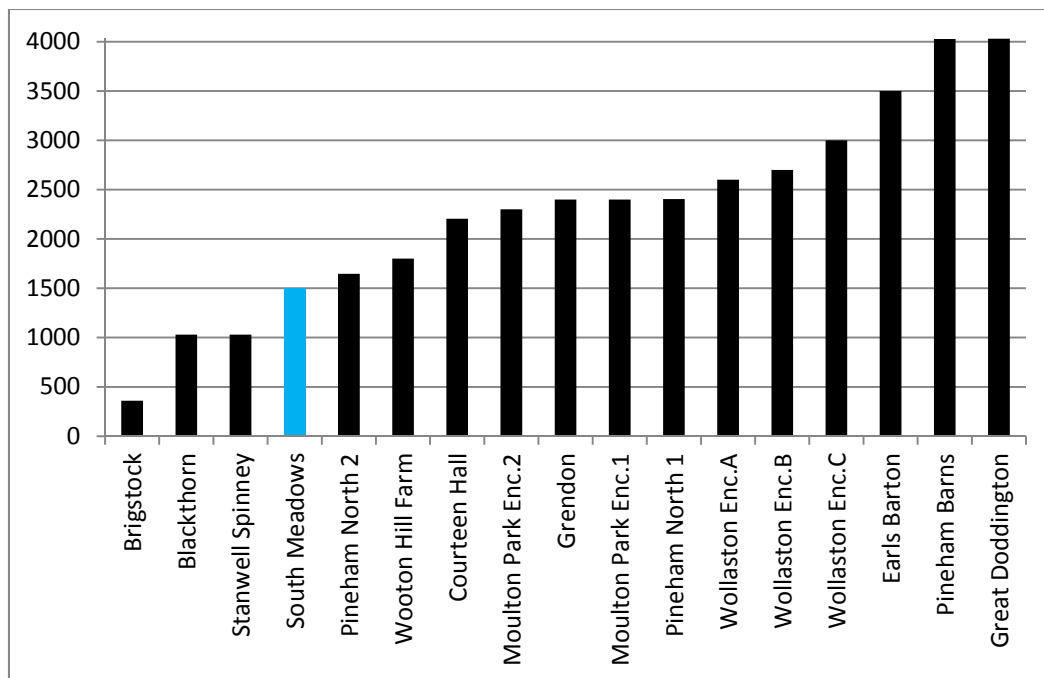


Figure 34: Column chart showing South Meadow enclosure size compared to other contemporary Nene Valley enclosed sites (data from Speed 2005)

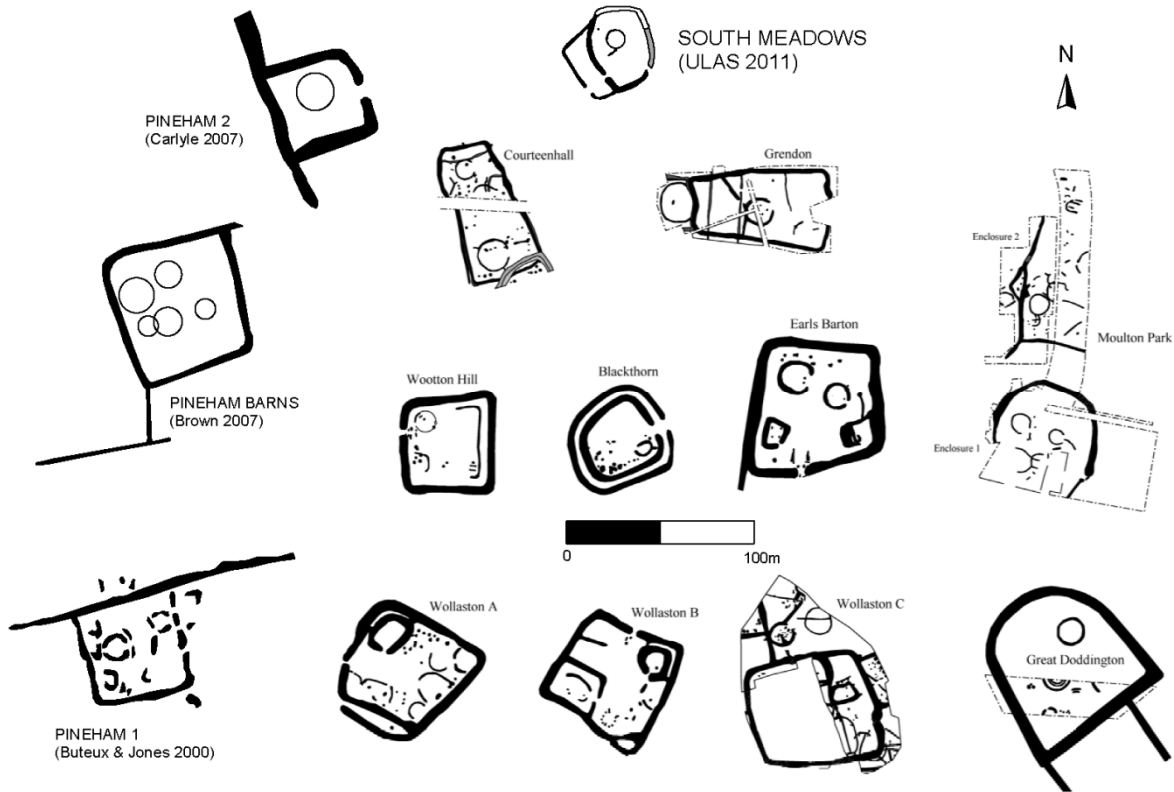


Figure 35: South Meadow Iron Age enclosed settlement compared to a selection of others in the Nene valley (drawn by author, after Speed 2005)

The double-entrance to the enclosure was orientated south-west, unlike the majority of enclosed Iron Age settlements in the county, most have entrances that are easterly orientated (Speed 2010, 41). The entrance to the west fits geographically with good views across the valley (Figure 36), and although there could have been a further entrance located on the east side that has since been truncated, the geophysical survey results suggest not.

Usually when enclosures do not face east, there are contextual interpretations available to explain the reason. At Wollaston the enclosure settlements are built at regular intervals along a pre-existing ditch boundary (Northamptonshire Archaeology 1995, 3). The entrances, therefore, either open onto this 'route-way', or face its neighbour. A similar respect for pre-existing boundaries can also be seen at an enclosure in area 6 from Courteenhall (Buteux 2001; Buteux *et al.* 2005).

The enclosure ditch extension had a much wider entrance than the enclosure itself (4.89m compared to 2.45m). Perhaps the area enclosed by the outer ditch was used for storing/housing livestock (needing a wider entrance), and the inner enclosure used purely for domestic purposes. It is unknown if there was an internal enclosure bank. There were substantial quantities of ironstone fragments from the inner ditch, particularly at the ditch termini. This could be evidence for a stone revetment, as reconstructed in Figure 37. If there were earthwork banks then the enclosed settlement would have been prominent in the landscape.



Figure 36: Panoramic view from enclosure entrance looking out down into the valley.



Figure 37: Enclosure ditch terminus with excavated backfill used as internal bank with ironstone revetment

Within the enclosure was tentative evidence for a roundhouse and beam-slot feature. This area had thin topsoil and significant plough truncation, and it is possible that more discrete features (such as post-holes) may not have survived. The possible roundhouse was approximately centrally-placed within the enclosure, and it may have had a diameter of *c.*9.25m, an average roundhouse size (Speed 2005: 45). The entrance appears to have been on the east-side, like the majority of Iron Age roundhouses in Britain (Fitzpatrick 1997, 77).

8.2 Iron Age Pit Alignment ('Group 2')

The pit alignment of 20 pits ran for 61m, on a north-east to south-west alignment, following the slope up/downhill. The pits were mostly sub-rectangular when not truncated by later ploughing or furrows, taking this into account they had an average size of 2m x 1.65m, and depth of *c.*1m. The gap between each pit was on average 1.31m (from each pit edge), and 3.28m (from the centre). Hingley suggests alignment pit forms vary by date, with this shape tending to date to the late Bronze Age to middle Iron Age (Hingley 1989, 1-2). The pit alignment was not completely straight; it had a slight 'wobble' in the middle section (see Figure 20). This could be evidence for 'gang-work' during the construction of the pit boundary. Similar examples can be paralleled at Aldwinckle (Jackson 1978, 46), and Gretton (Jackson 1974). Seventy-five per cent of the pits contained finds, although all were from the secondary fills and dated to the mid to late Iron Age. There was no evidence for 'special deposits' or structured deposition.

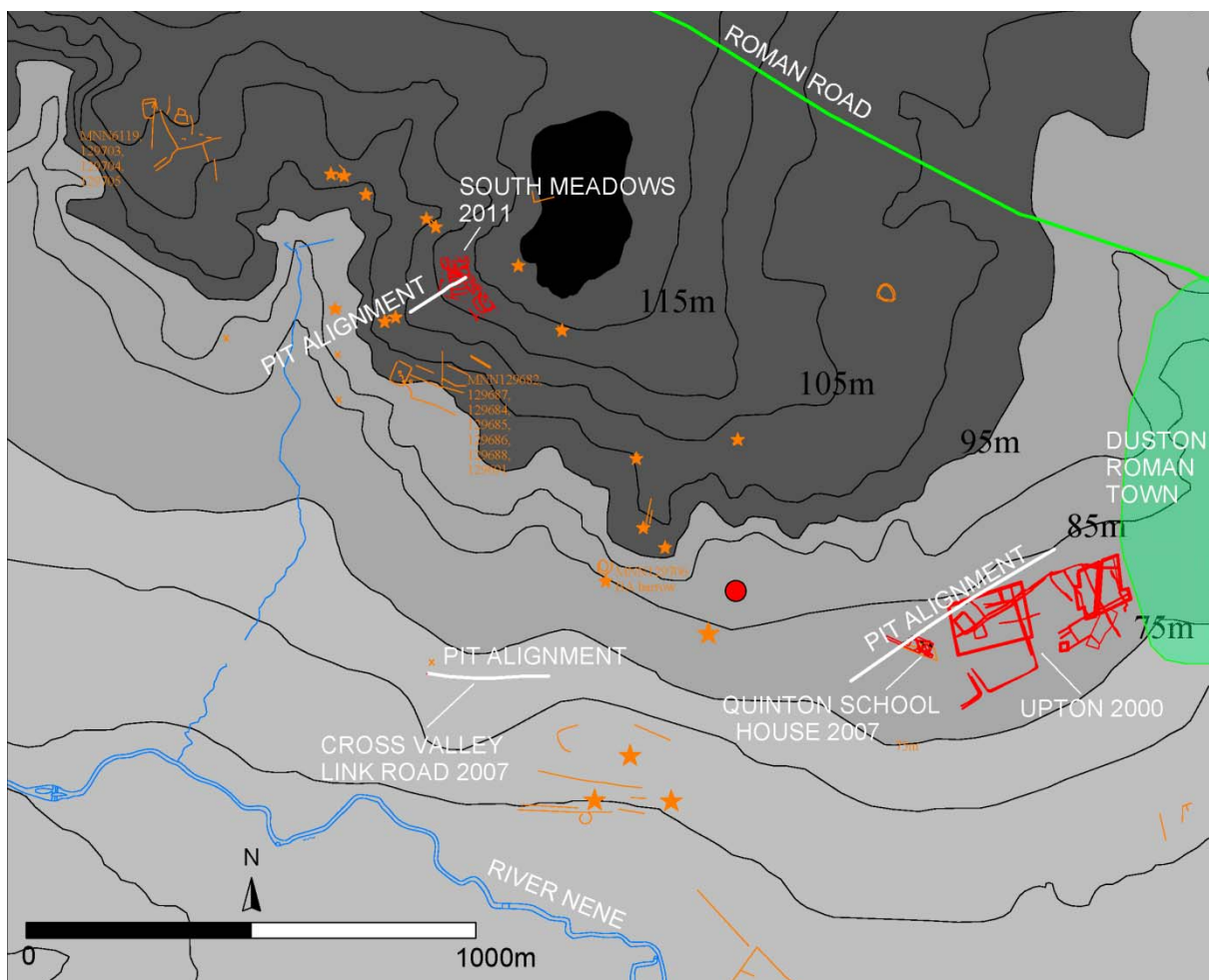


Figure 38: Landscape view showing pit alignments to the south in relation to South Meadow

Pit alignments are a widespread prehistoric landscape feature, known throughout the country. Within Northamptonshire 25 pit alignments were known in 1974 (Jackson 1974, 44), and by 2007, 144 had been mapped (Deegan 2007, 84). The closest excavated pit alignments to South Meadow Road lie 800m south at Cross Valley Link Road (Carlyle 2010), and 1200m south-east south of the A4500 Weedon Road at Upton (Walker and Maull 2010; Foard-Colby and Walker 2010). The latter was dated to 400-210 BC (pottery and radiocarbon dated). These two are considered to be part of the same pit alignment running for 1.3km (ibid, 21). If so then the orientation of the alignment had changed (see landscape view above). The South

Meadow Road and Weedon Road pit alignments (Walker and Maull 2010; Foard-Colby and Walker 2010) share similarities. They are on the same orientation (north-east to south-west), both are spaced *c.*3m centre-to-centre, although the Weedon Road pit alignment are thought to be square pits, and are far more regular in form. The Cross Valley Link Road pit alignment is more closely similar to South Meadow, being rectangular in form (Carlyle 2010).

The primary function of pit alignments was as a landscape division. The purpose of choosing to construct a pit alignment (as opposed to continuous ditch-digging) is not understood, and a wide variety of reasons why these were constructed have been offered in past (to hold posts, trees, or hedges – Thomas 2003, 79; Thomas 2008). It is possible that there may have been a bank associated with pit alignments, although there is little evidence for this from other sites (*ibid*, 80). Pit alignments may have only been built for important land boundaries between farms or settlements, or else were deliberately sited within the natural landscape, often at right angles to streams or river courses (Hingley 1989; Thomas 2003, 83-84). Clearly then, pit alignments, such as the one discovered here west of South Meadow Road, formed an important part of the wider prehistoric landscape physically defining and segregating land.

The presence of artefacts (pottery and animal bone) from the upper backfills of 15 pits west of South Meadow Road indicate that the pit alignment had lost its primary role, and the pits were allowed to be backfilled with soils containing domestic debris. These objects perhaps indicate reuse of the pit alignment for refuse disposal once the pits had already partly filled and lost their primary purpose.

8.3 Parallel Trench System ('Group 4')

Similar arrangements of parallel trenches have been found previously at a few other sites in the region, notably at Wollaston (Jackson 1991), Grendon (Jackson 1995, 11), Mawsley (Hull and Preston 2002), and Thistleton (Higgins 2011) and offer useful comparisons and interpretations.

At this site west of South Meadow Road the trench system extended over an area of 4200m², and if the two further parallel ditches to the south are also part of the same ditch system, the total area covered could have been at least *c.*8000m². The size is comparable to those at Grendon and Wollaston. However, there are far fewer trenches at the site west of South Meadow Road than the other similar sites, because the interval between the trenches is much greater (8-10m on average). At Grendon and Thistleton they were much more closely spaced (3-4 metres). The trench profiles across all four sites are broadly similar, being steep-sided (almost vertical), with a flat base and 0.8m to 1m wide. At other sites post-holes (Wollaston - see Brown and Meadows 2000, 491) or stake-holes (Thistleton see Higgins 2011, 6) have been found, apparently located randomly along the base of the trenches. No post-holes were located in the excavated sections at the site west of South Meadow Road, although in one excavated section (ditch [64]) ironstone pieces in the base of the trench may be evidence for post-packing.

Although the South Meadow Road parallel trench system is poorly dated, it is known to post-date an Iron Age pit alignment, and predate medieval ridge and furrow ploughing. The other comparative sites offer similar unclear dating. Grendon is vaguely dated to pre-medieval, as is Mawsley (Hull and Preston 2002, 9), whilst at Thistleton and Wollaston they are more certainly Romano-British in date (probably 2nd to 3rd century AD).

Table 16: Size of the parallel trench systems compared

Site	Area (ha)	No. of trenches	Average trench width	Average space between trenches (metres)
South Meadow, Upton	4.2	8	0.58 - 1	8 - 10
Grendon	4	27	0.8 - 1	3 - 3.7
Mawsley New Village	7.5	10	0.6 - 1.3	6.4
Thistleton, Rutland	0.9	13	0.7 - 1	3 - 4
Wollaston	7.5	35+	0.8	5 - 8

The function of these ditches is uncertain, given the regular layout and lack of artefacts within them, but seems probable that they served as cultivation plots (as open drainage or irrigation channels such as a bedding trench or a 'lazy-bed'). The cultivation plots at South Meadow Road may have served the Roman small town of Duston (1.5km east), or produced goods for further afield. Pollen samples were extensively taken at Wollaston where a number contained *Vitis* pollen (from grape vines). This is a rare occurrence in Britain, and led the excavators to propose that this was a Roman vineyard (Brown *et al.* 2001), as was Grendon, indicating that the Wollaston area of the Nene Valley was one of the main wine-producing areas of Roman Britain. These differ in form to Italian examples that are far more densely spaced (2.7m) (Arthur 1991, 76-77). To test the hypothesis that the South Meadow Road trenches may have been connected with Viticulture pollen samples were taken in an attempt to distinguish what was being cultivated. Unfortunately the analysis of the 10 samples did not retrieve any grapevine pollen to positively support the hypothesis. Unlike other sites, west of South Meadow Road the parallel ditches had smooth flat bases, and no evidence for post-holes, indicating that if plants were grown within them they had shallow roots.

8.4 Later Activity

At some point after the disuse of the cultivation plots the area was then in use as open farmland. The latest activity on the site was evidence for the pre-enclosure farming system of 'ridge and furrow'. The base of furrows (medieval or post-medieval) were located across the open-area excavation. These were orientated north-north-east to south-south-west, and spaced every 9-10m (centre to centre). They cut into many earlier archaeological features, notably causing significant disturbance to the south-western end of the pit alignment.

The site was redeveloped in May 2011 for residential housing.

9. Conclusion

University of Leicester Archaeological Services (ULAS) carried out an archaeological excavation on land to the west of South Meadow Road, Upton, Northamptonshire (SP 70921 60905) on behalf of RSK Environment Ltd. The excavation revealed evidence for a mid to late Iron Age (2nd century BC or early 1st century BC.) enclosed settlement, pit alignment,

and associated pits and ditches. This was followed by a later arrangement of parallel ditches that may have been Roman cultivation trenches.

10. Archive

The site archive will be held by ULAS under accession number NH_SMD2010 until an appropriate recipient organisation is established for Northamptonshire.

The archive contains:

- Context summary records
- 235 context sheets
- Photographic recording sheets
- Drawing Index sheet and drawings (x36 sheets)
- CD containing digital photographs and report
- Survey data
- Unbound copy of this report
- Thumbnail print of digital photographs
- 33mm black and white contact sheet and negatives

The report is listed on the Online Access to the Index of Archaeological Investigations (OASIS) held by the Archaeological Data Service at the University of York. Available at: <http://oasis.ac.uk/>

ID	OASIS entry summary
Project Name	Land to the west of South Meadow Road, Upton, Northamptonshire
Summary	University of Leicester Archaeological Services (ULAS) carried out an archaeological excavation on land to the west of South Meadow Road, Upton, Northamptonshire on behalf of RSK. The excavation revealed evidence for a mid to late Iron Age (2nd century BC or early 1st century BC). enclosed settlement, pit alignment, and associated pits and ditches. This was followed by a later arrangement of parallel ditches may be evidence for Roman cultivation trenches.
Project Type	Excavation
Project Manager	Vicki Score
Project Supervisor	Gavin Speed
Previous/Future work	Previous: DBA, geophysics, evaluation / Future: unlikely
Current Land Use	Field
Development Type	Residential
Reason for Investigation	PPS5
Position in the Planning Process	Condition
Site Coordinates	SP 70921 60905
Start/end dates of field work	23/02/2011-20/04/2011
Archive Recipient	To be arranged
Study Area	5ha
Associated project reference codes	Project ID: NH_SMD2010 OASIS form ID:

11. Publication

A summary of the work will be submitted for publication in the local archaeological journal *Northamptonshire Archaeology* in due course. The report has been added to the Archaeology Data Service's (ADS) Online Access to the Index of Archaeological Investigations (OASIS) database held by the University of York.

12. Bibliography

- Arthur, P., 1991, *Romans in Northern Campania: Settlement and Land-use Around the Massico and the Garigliano Basin*. British School at Rome, London.
- Bartlett, A., 2010, *South Meadow Road, Northampton. Report on Archaeogeophysical Survey 2010*. Unpublished report.
- Boessneck, J., 1969, 'Osteological differences between sheep (*Ovis aries* Linne) and goat (*Capra hircus* Linne)', in D. Brothwell *et al.* *Science in Archaeology*. Thames and Hudson, 331-358.
- Brown, A.G., and Meadows, I., 2000, 'Roman vineyards in Britain: finds from the Nene Valley and new research'. *Antiquity* 74, 491 – 492.
- Brown, D., 2008, *Standard and Guidance for the Preparation of Archaeological Archives*. Institute for Archaeologists.
- Browning, J., 2010, *An Archaeological Evaluation by Trial Trenching on land off South Meadow Road, Northampton*. University of Leicester Archaeological Services unpublished report 2010-089.
- Browning, J., 2011, 'The animal bone', in J. Thomas 2011, 102-121.
- Buteux, S., (ed.) 2001, *Grange Park, Courteenhall, Northamptonshire. Archaeological Investigations 1999*. Post-excavation assessment and research design (*unpublished*). Birmingham University Field Archaeology Unit (BUFAU).
- Buteux, S., Jones, L., and Woodward, A., 2005, *Country life on the margins. Iron Age, Roman and Saxon occupation at Grange Park: Excavations at Courteenhall, Northamptonshire, 1999* (*unpublished draft text*). Birmingham University Field Archaeology Unit.
- Carlyle, S., 2010, 'An Iron Age pit alignment near Upton, Northampton', *Northamptonshire Archaeology*, **36**, 75-87.
- Cooper, N., 2006, *The Archaeology of the East Midlands: an archaeological resource agenda*. Leicester Archaeology Monograph 13.
- Deegan, A., 2007, 'Late Bronze Age, Iron Age and Roman settlements and landscapes', in A. Deegan and G. Foard *Mapping Ancient Landscapes in Northamptonshire*. English Heritage, 81-124.
- Dobney, K., and Reilly, K., 1988, 'A method for recording archaeological animal bones: the use of diagnostic zones', *Circaea* **5**, 79-96.
- Elsdon, S. M., 1992, 'East Midlands Scored Ware', *Transactions of the Leicestershire Archaeological and Historical Society* **66**, 83-91.

- English Heritage, 2001, *Exploring Our Past*
- English Heritage, 2009, *Management of Research Projects in the Historic Environment (MoRPHE)*. MoRPHE Project Planning Notes.
- English Heritage 2010, *English Heritage Thematic Research Strategies. Research Strategy for Prehistory*. Consultation Draft June 2010.
- Fitzpatrick, A., 1997, 'Everyday life in Iron Age Wessex', in Haselgrove, C.C. & Gwilt A. (eds.) 1997. *Reconstructing Iron Age societies*. Oxbow Monograph 71, 73-86.
- Foard-Colby, A., and Walker, C., 2010, 'Iron Age settlement and medieval features at Quinton House School, Upton, Northampton', *Northamptonshire Archaeology*, **36**, 53-73.
- Grant, A., 1982 'The use of toothwear as a guide to the age of domestic ungulates', in Wilson, B., Grigson, C., and Payne, S., (eds.) *Ageing and Sexing Animal Bones from Archaeological Sites*. Oxford: BAR British Series 109, 91-108.
- Harding, D. W., 1975 'The Pottery'. 69-84 in D. Jackson, An Iron Age site at Twywell, Northamptonshire. *Northamptonshire Archaeology* **10**, 31-93.
- Harland, J. F., Barrett, J. H., Carrott, J., Dodney, K. and Jaques, D. , 2003, The York System: an integrated zooarchaeological database for research and teaching. Internet Archaeology 13: (http://intarch.ac.uk/journal/issue13/harland_toc.html).
- Higgins, T., 2011, *An Archaeological Watching Brief and Recording at Top Yard, Silverwood Farm, Thistleton, Rutland*. University of Leicester Archaeological Services unpublished report 2011-152.
- Hillman, G. C., 1981 Reconstructing crop processing from charred remains of crops, in R. Mercer (ed), *Farming Practice in British Prehistory*. Edinburgh University Press.
- Hingley, R., 1989, *Monuments Protection Programme Single Monument Class Descriptions: Pit Alignment Boundaries*. English Heritage.
- Hull, G., and Preston, S., 2002, 'Middle Iron Age occupation at Mawsley New Village, Cransley Lodge, Kettering, Northamptonshire', *Northamptonshire Archaeology*, **30**, 1-20.
- IfA 2008, *Standard and Guidance for Archaeological Field Evaluation, Excavations, and Watching Briefs*. Institute for Archaeologists.
- IfA 2010, *Code of Conduct*.
- Jackson, D.A., 1974, 'Two new pit alignments and a hoard of currency bars from Northamptonshire', *Northamptonshire Archaeology*, **9**, 13-45.
- Jackson, D.A., 1976, 'Two Iron Age Sites North of Kettering, Northamptonshire', *Northamptonshire Archaeology* **11**, 71-88.
- Jackson, D., 1977, 'Further Excavations at Aldwincle, Northamptonshire, 1969-71', *Northamptonshire Archaeology* **12**, 9-54.
- Jackson, D.A., 1978, 'Further excavations at Aldwincle, Northamptonshire, 1969-71', *Northamptonshire Archaeology*, **12**, 9-54.
- Jackson, D.A., 1991, 'An archaeological evaluation at Wollaston', *Northamptonshire Archaeology*, **23**, 82-85.

- Jackson, D.A., 1995, 'Archaeology at Grendon Quarry, Northamptonshire Part 2: Other prehistoric, Iron Age and later sites excavated in 1974-75 and further observations between 1976-80', *Northamptonshire Archaeology*, **26**, 3-32.
- Jackson, D., and Ambrose, T. M., 1978, 'Excavations at Wakerley, Northants, 1972-75'. *Britannia* **9**, 115-242.
- Jackson, D., and Dix, B., 1987, 'Late Iron Age and Roman settlement at Weekley, Northants'. *Northamptonshire Archaeology* **21**, 41-93.
- Johnson, E., 2012, 'The Pottery', 94-123 in J. Harvey, J., *Archaeological Excavations within Housing Area 6C/D, Mawsley New Village, Great Cransley, Kettering, Northamptonshire*. Unpublished ULAS Report 2012-083.
- Knight D., 1994, 'The Late Bronze Age and Iron Age Pottery', in R.J. Williams and R.J. Zeepvat Bancroft, *a Late Bronze Age/Iron Age Settlement, Roman Villa and Temple-Mausoleum. Volume 2: Finds and Environmental Evidence*. Aylesbury: Buckinghamshire Archaeological Society Monograph 7, 381-398.
- Knight, D., Vyner, B., and Allen, C., 2012, *East Midlands Heritage. An Updated Research Agenda and Strategy for the Historic Environment of the East Midlands*. Nottingham Archaeological Monographs 6, University of Nottingham and York Archaeological Trust.
- Marsden, P., 2011, 'The Prehistoric Pottery and Briquetage', in J. Thomas 2011, 61-74.
- Monckton, A., 2006 'Environmental Archaeology in the East Midlands', in N. Cooper (ed) *The Archaeology of the East Midlands: an archaeological resource assessment and research agenda*. Leicester Archaeology Monograph 13, 2006, 259-286
- Monckton, A., and Radini, A., 2012 'The charred plant remains' in J. Harvey, *Archaeological Excavations within Housing Area 6C/D, Mawsley New Village, Great Cransley, Kettering, Northamptonshire (NGR SP 811 764)* ULAS Report 2012-083
- NCC 2010, *Brief for a Programme of archaeological excavation, recording, analysis and publication of Land at South Meadow Road Road, Upton, Northamptonshire*.
- Northamptonshire Archaeology 2005, *Archaeological Evaluation: Stage 1. Land south of Hardwater Road, Wollaston*. Northamptonshire County Council, Northamptonshire Archaeology.
- O'Connor, T. P., 2003, *The Analysis of Urban Animal Bone Assemblages*. The Archaeology of York: Principles and Methods Vol 19/2. York Archaeological Trust London: Council for British Archaeology.
- Payne, S., 1969, 'A metrical distinction between sheep and goat metacarpals', in P. J. Ucko and G. W. Dimbleby (eds.) *The Domestication and Exploitation of Plants and Animals*. London: Duckworth and Co., 331-358.
- Prehistoric Ceramics Research Group, 1997, *The Study of Later Prehistoric Pottery: General Policies and Guidelines for Analysis and Publication*. PCRG Occasional Papers 1 and 2.
- RSK Environment Ltd 2010, *South Meadow Road, Upton, Northamptonshire: Archaeological Desk-Based Assessment*. P41313, 5th March 2010.
- Radini, A., forthcoming 'The charred plant remains' in R. Kipling, *Archaeological Excavations at Park Lane, Castle Donington, Leicestershire* ULAS Report

- Score, V., 2010, *Written Scheme of Investigation for Archaeological Excavation. South Meadow Road, Northampton, Northamptonshire. 11-317, 23/11/2010.*
- Serjeantson, D., 1996. 'The animal bones', in S. Needham and T. Spence *Refuse and disposal at Area 16 East Runnymede Vol. II Runnymede Bridge Research Excavations.* British Museum Press, 194-223.
- Silver, I. A., 1969 'The ageing of domestic animals', in D. Brothwell and E.S. Higgs *Science in Archaeology.* London: Thames and Hudson, 283-302.
- Speed, G., 2005, *An Unwritten Architectural Language? A Comparative Analysis of the Spatial Syntax of Iron Age Enclosure Settlements in Leicestershire and Northamptonshire.* Unpublished M.A. dissertation, University of Leicester.
- Speed, G., 2010, 'Everything in its right place? An unwritten architectural language of late Iron Age enclosed settlements in the East Midlands', in M. Sterry, A. Tullett, and R. Ray (eds.) *In Search of The Iron Age. Proceedings of the Iron Age Research Student Seminar 2008, University of Leicester.* Leicester Archaeology Monograph 18.
- Stace, C., 1991, *New Flora of the British Isles.* Cambridge University Press
- Thomas, J., 2003, 'Prehistoric pit alignments and their significance in the archaeological landscape', in J. Humphrey (ed.) *Re-searching the Iron Age.* Leicester Archaeology Monograph No. 11, 79-86.
- Thomas, J., 2008 'An empty hole, or a meaningful whole? Approaches to the study of pit alignments', in A. Chadwick (ed.), *Recent Approaches to the Archaeology of Land Allotment.* BAR International Series 1875, Oxford: Archaeopress, 144-158.
- Thomas, J., 2011 *Two Iron Age 'Aggregated' Settlements in the Environs of Leicester: Excavations at Beaumont Leys and Humberstone.* Leicester Archaeology Monograph 19.
- Turner, S. D., & Brown, A. G. (2004). 'Vitis pollen dispersal in and from organic vineyards: I. Pollen trap and soil pollen data'. *Review of Palaeobotany and Palynology*, 129(3), 117-132
- Vann, S., 2010 'The Animal Bone' in C. Walker and A. Maull, 2010, 44-45
- Veen, van der M., 1992 *Crop Husbandry Regimes*, Sheffield Archaeological Monographs 3, J. R. Collis Publications, University of Sheffield 1992
- von den Driesch, A., 1976, *A Guide to the Measurement of Animal Bones from Archaeological Sites.* Cambridge, Mass., Peabody Museum of Archaeology and Ethnology, Bulletin no. 1.
- Walker, C., and Maull, A., 2010, 'Excavation of Iron Age and Roman settlement at Upton, Northampton', *Northamptonshire Archaeology*, **36**, 9-52.
- Willis, S., 2006 'The Later Bronze Age and Iron Age in N. J. Cooper (ed) 2006 89-136

13. Acknowledgements

The fieldwork was undertaken for RSK Environment Ltd, and was carried out by Gavin Speed, Steve Baker, Jen Browning, Sophie Clarke, James Harvey, Tim Higgins, Andrew Hyam, Harriet Anne Jacklin, Wayne Jarvis, Roger Kipling, Gerwyn Richards, and John Thomas. The finds were analysed Elizabeth Johnson, Jen Browning, Lynden Cooper, the environmental remains by Anita Radini, all of ULAS. The vitrified clay was examined and reported by Graham Morgan. Aerial Cam produced the overhead photographs of the pit alignment. Vicki Score managed the project. ULAS would like to thank Owen Raybould from RSK Environment Ltd, and on-site staff of Taylor Wimpey Ltd for their help and assistance during the fieldwork. Lesley-Ann Mather (County Archaeological Advisor of Northamptonshire County Council) monitored the work on behalf of the planning authority.



Figure 39: Most of the excavation team (L-R: G. Speed, J. Harvey, A. Hyam, W. Jarvis, J. Thomas, J. Browning, S. Baker, S. Clarke), 19th April 2011. On line of the pit alignment looking SW.

Author contact details:

.....
Mr Gavin Speed BA MA MifA
Senior Archaeological Supervisor
University of Leicester Archaeological Services,
School of Archaeology & Ancient History,
University of Leicester, LE1 7RH.
Tel: 0116 252 2836
Fax: 0116 252 2614
E-mail: gs50@le.ac.uk



10/09/2013

Appendix: Context List

KEY

AB = Animal Bone

D = Daub

M = Metal

RB = Roman pottery

S = Slag

CONTEXT NO	CUT NO	FEATURE NO.	PHASE	cut / fill / layer	DESCRIPTION	POTTERY?	FLINT?	OTHER FIND?
1	1	1	B	C	Enclosure ditch (trench 10)			
2	1	1	B	F	Enclosure ditch (trench 10)	Y	Y	AB
3	4	9	B	F	Linear gully within enclosure (trench 10)	Y	Y	AB
4	4	9	B	C	Enclosure ditch extension (trench 10)			
5	5	5	B	C	Linear gully within enclosure (trench 11)			
6	5	5	B	F	Linear gully within enclosure (trench 11)	Y		
7	-	-	B	F	Enclosure ditch (unexcavated in evaluation, trench 11)			
8	4	9	B	F	Enclosure ditch extension (trench 10)			
9	9	9	B	C	Enclosure ditch extension (trench 9)			
10	9	9	B	F	Enclosure ditch extension (trench 9)			AB
11	11	11	B	C	Small linear gully, next to cultivation trench [131] trench 3)			
12	11	11	B	F	Small linear gully, next to cultivation trench [131] (trench 3)			
13	13	131	C	C	Cultivation trench (evaluation trench 3)			
14	13	131	C	F	Cultivation trench (evaluation trench 3)			
15	15	15	B	C	Pit, next to cultivation trench (evaluation trench 3)			
16	15	15	B	F	Pit, next to cultivation trench (evaluation trench 3)			
17	17	229	C	C	Cultivation trench (eval trench 4)			
18	17	229	C	F	Cultivation trench (eval trench 4)	Y		
19	-	-	B	F	Short gully, next to cultivation trench [229] (trench 3)			
20	20	20	B	C	Pit within pit alignment (eval trench 4)			
21	20	20	B	F	Pit within pit alignment (eval trench 4)			AB
22	202	203	C	F	N-S gully, part of cultivation trenches (eval trench 4)			
23	23	23	B	C	Pit within pit alignment (eval trench 4)			
24	23	23	B	F	Pit within pit alignment (eval trench 4)	Y		
25	25	107	C	C	Cultivation trench (eval trench 4)			
26	26	26	B	C	Enclosure ditch extension			
27	26	26	B	F	Enclosure ditch extension	Y		
28	1	1	B	F	Enclosure ditch at north-side entrance	Y		coke

29	9	9	B	F	Enclosure ditch extension	Y		
30	30	30	C	C	Cultivation trench (in far south corner near to enclosure)			
31	30	30	C	F	Cultivation trench (in far south corner near to enclosure)	Y		AB
32	30	30	C	F	Cultivation trench (in far south corner near to enclosure)			
33	5	5	B	F	Linear gully within enclosure	Y	Y	AB
34	1	1	B	F	Enclosure ditch at north-side entrance			
35	5	-	B	F	Linear gully within enclosure	Y		
36	26	26	B	F	Enclosure ditch extension	Y		AB
37	37	37	B	C	Enclosure ditch, south-side entrance. Earliest cut.			
38	37	37	B	F	Enclosure ditch, south-side entrance.			
39	39	39	B	C	Enclosure ditch, south-side entrance. Re-cut.			
40	39	39	B	F	Enclosure ditch, south-side entrance. Re-cut.	Y	Y	
41	39	39	B	F	Enclosure ditch, south-side entrance. Re-cut.	Y	Y	AB
42	9	9	B	F	Enclosure ditch extension			AB
43	44	39	B	F	Enclosure ditch, south side	Y	Y	AB
44	44	39	B	C	Enclosure ditch, south side			
45	46	26	B	F	Enclosure ditch, south side	Y		
46	46	26	B	C	Enclosure ditch, south side			
47	48	48	C	F	Cultivation trench		Y	
48	48	48	C	C	Cultivation trench (in far south corner near to enclosure)			
49	48	48	C	F	Cultivation trench			
50	9	9	B	F	Enclosure ditch extension, north side	Y		AB
51	1	1	B	F	Enclosure ditch, north side	Y		
52	1	1	B	F	Enclosure ditch, north side	Y		AB, D
53	1	1	B	F	Enclosure ditch, north side			
54	55	63	C	F	Cultivation trench (east of most cultivation trenches)			
55	55	63	C	C	Cultivation trench (east of most cultivation trenches)			
56	57	57	C	F	Pit next to cultivation trench (east of most cultivation trenches)			
57	57	57	C	C	Pit next to cultivation trench (east of most cultivation trenches)			
58	58	63	C	C	Cultivation trench (east of most cultivation trenches)			
59	59	59	B	C	Roundhouse			
60	59	59	B	F	Roundhouse.			AB
61	59	59	B	F	Roundhouse.			
62	59	59	B	F	Roundhouse.	Y		AB
63	63	63	C	C	Cultivation trench (east of most cultivation trenches)			
64	64	64	C	C	Cultivation trench			
65	64	64	C	F	Cultivation trench, 6 large ironstone fragments in base - appear to be post-packing			
66	67	67	C	F	Cultivation trench (east of most cultivation trenches)		Y	

67	67	67	C	C	Cultivation trench (east of most cultivation trenches)			
68	68	67	C	C	Cultivation trench (east of most cultivation trenches)			
69	69	69	B	C	Pit within pit alignment			
70	69	69	B	F	Pit within pit alignment		Y	AB
71	69	69	B	F	Pit within pit alignment			
72	73	73	B	F	Post-hole within enclosure			
73	73	73	B	C	Post-hole within enclosure			
74	69	69	B	F	Pit within pit alignment			
75	131	131	C	F	Pottery recovered from surface of cultivation ditch, near to intersection with ditch [202]	Y		
76	69	69	B	F	Pit within pit alignment			
77	69	69	B	F	Pit within pit alignment			
78	78	78	C	C	Cultivation trench (east of most cultivation trenches)			
79	78	78	C	F	Cultivation trench (east of most cultivation trenches)	Y		
80	80	80	B	C	Pit within pit alignment			
81	102	102	A	F	Large pit, just south of cultivation ditch [229]	Y	Y	AB, D?
82	229	229	C	F	Pottery recovered from surface of cultivation ditch, near to pit [102]	Y	Y	
83	101	101	A	F	Pit, part of pit group	Y	Y	
84	128	128	B	F	Pit within pit alignment	Y	Y	AB, S?
85	86	86	C	F	Cultivation trench			
86	86	86	C	C	Cultivation trench			
87	88	88	C	F	Pit next to cultivation trench [86]			
88	88	88	C	C	Pit next to cultivation trench [86]			
89	90	64	C	F	Cultivation trench			
90	90	64	C	C	Cultivation trench			
91	92	205	A	F	Ditch cut by all other features			
92	92	205	A	C	Ditch cut by all other features			
93	80	80	B	F	Pit within pit alignment			
94	80	80	B	F	Pit within pit alignment			
95	80	80	B	F	Pit within pit alignment	Y	Y	AB
96	80	80	B	F	Pit within pit alignment			
97	80	80	B	F	Pit within pit alignment	Y		AB
98	80	80	B	F	Pit within pit alignment			
99	80	80	B	F	Pit within pit alignment			
100	80	80	B	F	Pit within pit alignment			
101	101	101	A	C	Pit, part of pit group			
102	102	102	A	F	Large pit, just south of cultivation ditch [229]			
103	129	129	B	F	Very large pit, cut by cultivation trench [147]	Y	Y	AB, D, coal
104	102	102	A	F	Large pit, just south of cultivation ditch [229]			
105	105	105	B	C	Pit within pit alignment			
106	105	105	B	F	Pit within pit alignment			

107	107	107	C	C	Cultivation trench, cuts pit within pit alignment			
108	107	107	C	F	Cultivation trench, cuts pit within pit alignment			
109	109	109	A	C	Pit, part of pit group			
110	109	109	A	F	Pit, part of pit group	Y	Y	AB, Q, D
111	111	229	C	C	Cultivation trench, contemporary with [202]			
112	111	229	C	F	Cultivation trench, contemporary with [202]	Y		
113	113	202	C	C	Cultivation trench, N-S ditch			
114	113	202	C	F	Cultivation trench, N-S ditch			
115	115	115	B	C	NW-SE ditch, cut by cultivation trench [202]			
116	116	116	A	C	Pit, part of pit group			
117	116	116	A	F	Pit, part of pit group	Y	Y	AB, D
118	109	109	A	F	Pit, part of pit group	Y	Y	AB
119	115	115	B	F	NW-SE ditch, cut by cultivation trench [202]			
120	120	120	C	C	Cultivation trench			
121	120	120	C	F	Cultivation trench			
122	123	202	C	F	Cultivation trench, N-S ditch			S
123	123	202	C	C	Cultivation trench, N-S ditch			
124	125	125	B	F	Pit, next to cultivation trench [202] & [86]			
125	125	125	B	C	Pit, next to cultivation trench [202] & [86]			
126	126	126	B	C	Pit within pit alignment			
127	126	126	B	F	Pit within pit alignment	Y		AB
128	128	128	A	C	Pit within pit group			
129	129	129	B	C	Very large pit, cut by cultivation trench [147]			
130	129	129	B	F	Very large pit, cut by cultivation trench [147]	Y		
131	131	131	C	C	Cultivation trench			
132	131	131	C	F	Cultivation trench	Y		
133	133	205	A	C	Ditch / gully cut by pit alignment and cultivation trenches			
134	133	205	A	F	Ditch / gully cut by pit alignment and cultivation trenches			
135	131	131	C	C	Cultivation trench			
136	131	131	C	F	Cultivation trench			
137	137	202	C	C	Cultivation trench, N-S ditch			
138	137	202	C	F	Cultivation trench, N-S ditch			
139	141	141	B	F	Pit within pit alignment	Y	Y	AB
140	141	141	B	F	Pit within pit alignment			
141	141	141	B	C	Pit within pit alignment			
142	141	141	B	F	Pit within pit alignment			
143	144	144	B	F	Pit at west-end of site, just north of pit alignment			
144	144	144	B	C	Pit at west-end of site, just north of pit alignment			
145	146	146	B	F	Pit at west-end of site, just north of pit alignment			
146	146	146	B	C	Pit at west-end of site, just north of pit alignment			
147	147	229	C	C	Cultivation trench, cut by very large pit			

148	147	229	C	F	Cultivation trench, cut by very large pit	Y	Y	
149	149	149	D	C	Ditch / gully cuts cultivation trench			
150	149	149	D	F	Ditch / gully cuts cultivation trench			
151	151	151	A	C	Pit, part of pit group			
152	151	151	A	F	Pit, part of pit group	Y		AB
153	151	151	A	F	Pit, part of pit group	Y		
154	155	155	B	F	Pit within pit alignment			AB
155	155	155	B	C	Pit within pit alignment			
156	157	86	C	F	Cultivation trench			AB
157	157	86	C	C	Cultivation trench			
158	204	204	B	F	Curvilinear gully, north of terminus of ditch [207]	Y		D
159	159	159	B	C	Pit within pit alignment			
160	159	159	B	F	Pit within pit alignment		Y	AB
161	163	163	B	F	Pit within pit alignment		Y	AB
162	163	163	B	F	Pit within pit alignment			
163	163	163	B	C	Pit within pit alignment			
164	164	164	B	C	Pit within pit alignment			
165	164	164	B	F	Pit within pit alignment			
166	164	164	B	F	Pit within pit alignment	Y	Y	
167	164	164	B	F	Pit within pit alignment			
168	170	170	B	F	Pit within pit alignment			
169	170	170	B	F	Pit within pit alignment			
170	170	170	B	C	Pit within pit alignment			
171	171	171	B	C	Pit within pit alignment			
172	171	171	B	F	Pit within pit alignment	Y		AB
173	173	173	B	C	Pit within pit alignment			
174	173	173	B	F	Pit within pit alignment		Y	AB
175	159	159	B	F	Pit within pit alignment			
176	173	173	B	F	Pit within pit alignment			
177	204	204	B	F	Curvilinear gully, north of terminus of ditch [207]			
178	171	171	B	F	Pit within pit alignment			
179	179	179	B	C	Pit within pit alignment			
180	179	179	B	F	Pit within pit alignment			AB
181	179	179	B	F	Pit within pit alignment	Y		
182	179	179	B	F	Pit within pit alignment			AB
183	183	183	B	C	Pit within pit alignment			
184	183	183	B	F	Pit within pit alignment	Y		AB
185	185	185	B	C	Pit within pit alignment			
186	186	186	B	C	Gully connecting two pits within pit alignment			
187	187	187	B	C	Pit within pit alignment			
188	185	185	B	F	Pit within pit alignment			
189	185	185	B	F	Pit within pit alignment			
190	186	186	B	F	Gully connecting two pits within pit alignment			

191	187	187	B	F	Pit within pit alignment			
192	192	192	B	C	Pit within pit alignment			
193	192	192	B	F	Pit within pit alignment			
194	192	192	B	F	Pit within pit alignment			
195	196	196	B	F	Pit within pit alignment	Y		
196	196	196	B	C	Pit within pit alignment			
197	197	197	C	C	Cultivation trench			
198	197	197	C	F	Cultivation trench			
199	199	157	C	C	Cultivation trench			
200	199	157	C	F	Cultivation trench			
201	155	155	B	F	Pit within pit alignment			
202	202	202	C	C	Cultivation trench, N-S ditch			
203	202	202	C	F	Cultivation trench, N-S ditch			
204	204	204	B	C	Curvilinear gully, north of terminus of ditch [207]			
205	205	205	A	C	Ditch cut by all other features			
206	205	205	A	F	Ditch cut by all other features			
207	207	207	B	C	Ditch cut by cultivation trench			
208	207	207	B	F	Ditch cut by cultivation trench			
209	204	204	B	F	Curvilinear gully, north of terminus of ditch [207]			
210	210	86	C	C	Cultivation trench			
211	210	86	C	F	Cultivation trench			
212	212	207	B	C	Ditch cut by cultivation trench			
213	212	207	B	F	Ditch cut by cultivation trench			
214	215	215	C	F	Cultivation trench on east-side, probably same as [67]			
215	214	215	C	C	Cultivation trench on east-side, probably same as [67]			
216	216	216	B	C	Oval-shaped pit close to cultivation trench [86]			
217	216	216	B	F	Oval-shaped pit close to cultivation trench [86]			
218	216	216	B	F	Oval-shaped pit close to cultivation trench [86]		Y	
219	219	219	B	C	Pit, close to pit [221], to east of gully [205]			
220	219	219	B	F	Pit, close to pit [221], to east of gully [205]			
221	221	221	B	C	Pit, close to pit [219], to east of gully [205]			
222	221	221	B	F	Pit, close to pit [219], to east of gully [205]			
223	224	115	B	F	NW-SE ditch, cut by cultivation trench [202]	Y	Y	
224	224	115	B	C	NW-SE ditch, cut by cultivation trench [202]			
225	226	226	B	F	Gully, north-end of site, truncated by evaluation trench	Y		AB
226	226	226	B	C	Gully, north-end of site, truncated by evaluation trench			
227	228	228	B	F	Pit at far north-end, to east of N-S cultivation trench [202]			
228	228	228	B	C	Pit at far north-end, to east of N-S cultivation trench [202]			
229	229	229	C	C	Cultivation trench, cuts gully [233]			
230	229	229	C	F	Cultivation trench, cuts gully [233]		Y	
231	229	229	C	F	Cultivation trench, cuts gully [233]			

232	233	233	A	F	Gully cut by cultivation trench [229] and large pit [129]			
233	233	233	A	C	Gully cut by cultivation trench [229] and large pit [129]			
234	129	129	B	F	Very large pit, cut by cultivation trench [147]			
235	129	129	B	F	Very large pit, cut by cultivation trench [147]			

Contact Details

Richard Buckley or Patrick Clay
University of Leicester Archaeological
Services (ULAS)
University of Leicester,
University Road,
Leicester LE1 7RH

T: +44 (0)116 252 2848

F: +44 (0)116 252 2614

E: ulas@le.ac.uk

w: www.le.ac.uk/ulas



INVESTOR IN PEOPLE

