

Northamptonshire Archaeology

Archaeological evaluation at Willow Hall Farm Thorney, Cambridgeshire August 2011



Northamptonshire Archaeology

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Edmund Taylor Report 11/190 October 2011



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QUALITY CONTROL

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OASIS report form

PROJECT DETAILS			
Project name	THORNEY, WILLOW HALL FARM		
Short description	Northamptonshire Archaeology carried out an archaeological evaluation comprising 19 trenches, on land at Willow Hall Farm, Thorney, Cambridgeshire, during August 2011. The evaluation found that the site had been outside of the settlement core, which lay to the north, during the Iron Age and Roman periods. Few of the archaeological features identified by aerial photographic assessment were found to be present, suggesting they had since been removed by ploughing.		
Project type	Trial trench evaluation		
Site status	None		
Previous work	Geophysical Survey (Bunn 2011) Aerial Photographic Assessment (APS 2009))		
Current land use	Arable		
Future work	Unknown		
Monument type/ period	-		
Significant finds	-		
PROJECT LOCATION			
County	Cambridgeshire		
Site address	Willow Hall Lane		
OS Easting & Northing	TF 249 020		
Area	53.36 ha		
Height aOD	0-1m		
PROJECT CREATORS			
Organisation	Northamptonshire Archaeology (NA)		
Project brief originator	Peterborough City Council		
Project Design originator	CgMs		
Director/Supervisor	Ed Taylor		
Project Manager	Adam Yates (NA) Mike Dawson (CgMs)		
Sponsor or funding body	-		
PROJECT DATE			
Start date	15/8/11		
End date	24/8/11		
ARCHIVES			
Archive location			
Archive contents	Pottery, animal bone, (1 box); site records and related documents (1 large archive boxes); digital photographs, digital report copies (1 CD)		
BIBLIOGRAPHY			
Title	Archaeological evaluation on land at Willow Hall Farm, Thorney, Cambridgeshire		
Serial title & volume	11/190		
Author(s)	Edmund Taylor		
Page numbers	36		
Date	11/10/11		

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ARCHAEOLOGICAL EVALUATION AT WILLOW HALL FARM, THORNEY, CAMBRIDGESHIRE AUGUST 2011

Abstract

Northamptonshire Archaeology carried out an archaeological evaluation comprising 19 trenches, on land at Willow Hall Farm, Thorney, Cambridgeshire, during August 2011. The evaluation found that the site had been outside of the settlement core, which lay to the north, during the Iron Age and Roman periods. Few of the archaeological features identified by aerial photographic assessment were found to be present, suggesting they had since been removed by ploughing.

1 INTRODUCTION

Northamptonshire Archaeology carried out an archaeological evaluation comprising 19 trenches (2845m²) on land at Willow Hall Farm, Thorney, Cambridgeshire during August 2011 (NGR TF 249 020, Fig 1). The work was commissioned by CgMs Consulting Ltd (Kettering) as part of a pre-application consultation on the potential impact of the development of the site as a sand and gravel quarry. The evaluation followed an approved Written Scheme of Investigation (WSI) produced by Northamptonshire Archaeology (NA 2011).

2 OBJECTIVES

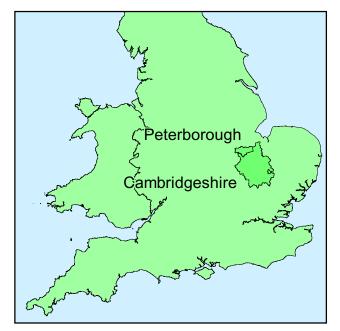
The objectives of the archaeological excavation as set out in WSI (NA 2011) were:

- to determine, the location, extent, date, character, condition, significance and quality of any surviving archaeological remains liable to be affected by the proposed development
- to provide a comprehensive, illustrated assessment of the regional context within which the archaeological evidence rests and should aim to highlight any relevant research issues within a national and regional research framework
- to provide a predictive model of surviving archaeological remains detailing zones of relative importance against known development proposals.
- to assess the impact of development

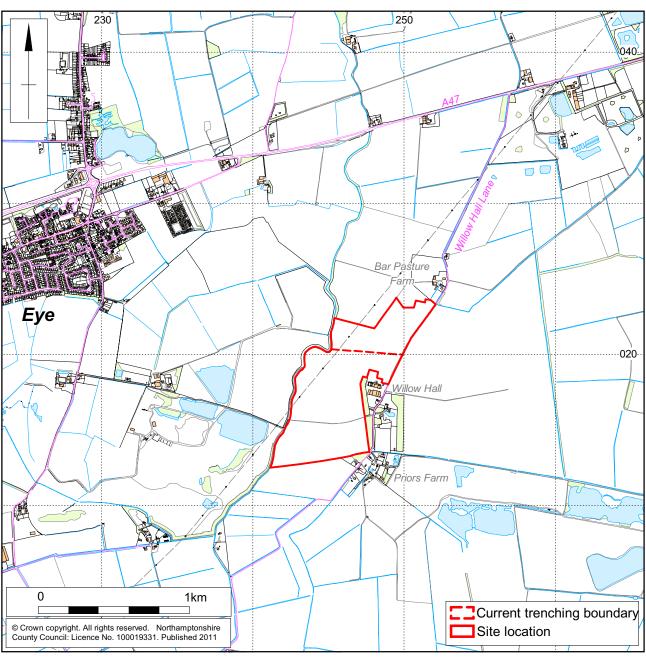
The research aims as set out in Research and Archaeology: A Framework for the Eastern Counties 1. Resource Assessment (Glazebrook 1997) and Research and Archaeology: A Framework for the Eastern Counties, 2. Research Agenda and Strategy (Brown and Glazebrook 20000) were also considered.

Given the sites close proximity to the Iron Age and Roman SAM (20803) to the north of the development area and the Bronze Age occupations at Tower's Fen, Thorney and Pode Hole occupation the following themes for Bronze Age, Iron Age and Roman were also considered:

- To gain information on the transition from Bronze Age monument centred landscapes to structured field systems;
- To address problems encountered in the secure dating of Iron Age sites, particularly the Late Bronze Age to Iron Age transition;
- To add to the knowledge of the development of the agrarian economy in the Iron Age;







Scale 1:25,000 Site location Fig 1

- To add to the knowledge of settlement chronology and dynamics in the Iron Age with particular reference to the apparent discontinuity of settlement between the Early and Late Iron Age;
- To provide information on the economic status of Romano-British rural settlement which may indicate subsistence or market economy;
- To provide information relating to changes of economic status between the Late Iron Age and the Early Romano-British period to assess the extent to which the conquest effected patterns of production:
- To provide information to enable reconstruction of the fen edge environment
- To gain information on the changes in the wider landscape in the Bronze Age, Iron Age, Late Roman and Post Roman periods.

3 BACKGROUND

3.1 Topography and geology

The site is situated east of Eye and north-east of Peterborough, on relatively flat arable land (*c.* 0-1m OD). The underlying geology comprises Kellaways Formation and Oxford Clay Formation (undifferentiated) – mudstone, siltstone and sandstone with superficial river terrace deposits (www.bgs.ac.uk/geologyviewer).

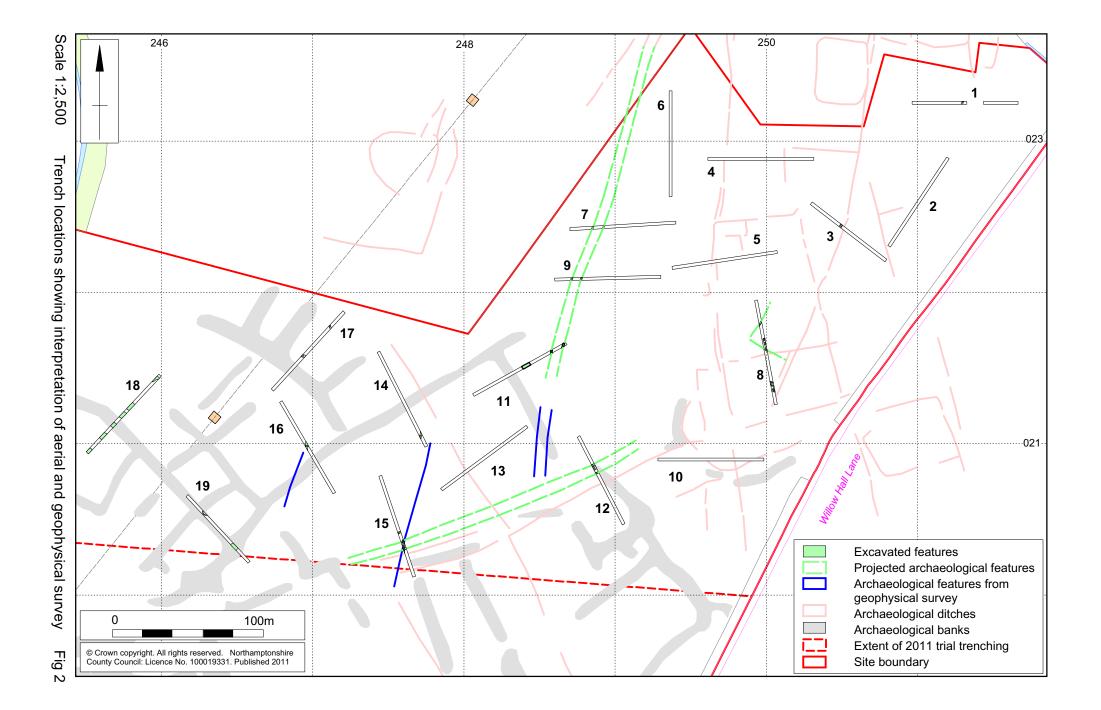
3.2 Historical and archaeological background

Previous work carried out on the proposed development area consisted of an aerial photographic assessment (Air Photo Services (APS) 2009) and a Geophysical survey (Bunn 2011). The aerial photographic assessment (with dating evidence from two Fenland Survey projects) mapped two possible Bronze Age ring ditches, Iron Age and Roman sites comprising an oval enclosure and two phases of ditch field systems, and undated features that could comprise further field systems and ditched sites including a possible ditched rectangular enclosure (APS 2009) (Fig 3).

The geophysical survey confirmed only a few of the cropmarks identified during the aeriall photographic assessment, likely due to poor magnetic contrast of the features with surrounding soils. However, the survey suggested additional archaeological features not noted on the photographs, the majority were recorded in the southern field. These included ditches, an L-shaped ditch possibly flanked by a trackway, and pits in Field 1. In Field 2 a curvilinear anomaly, two closely spaced and parallel potential ditches, and further linear and discrete anomalies possibly related to past quarrying activity were detected (Bunn 2011) (Fig 4).

Along the northern edge of the development is a part of an Iron Age and Roman settlement included in the SAM (No. 20803), south-east of Bar Pasture Farm. A Further SAM (No. 33396) is situated c 900m south-east of Bar Pasture Farm comprising two Neolithic or Bronze Age bowl barrows, apparent as low mounds (Bunn 2011).

Excavations carried out at Tower's Fen, Thorney, Peterborough, located east of Willow Hall Farm, revealed Bronze Age ditched enclosures and field system associated with waterholes and two ponds (Mudd and Pears 2008). The near-by excavations at Pode Hole also revealed a Bronze Age agricultural landscape (Daniel 2009)



4 EXCAVATION RESULTS

4.1 Introduction

The evaluation comprised 19 trenches (2845m²) all of which were 70m long by 2.10m wide, apart from Trenches 1, 3, 12 and 19 which were shortened by up to 10m to avoid overhead services.

The natural substrate across the site varied little, comprising light yellow and orange sand and gravel with occasional silty clay patches. All archaeological features cut the natural substrate and in the absence of subsoil, overlain by a dark brown silty clay loam topsoil, 0.30m-0.40m thick.

4.2 Methodology

The trenches were positioned using a Leica System 1200 GPS and were excavated, under continuous archaeological supervision, using a 360° tracked mechanical excavator fitted with a flat toothless bucket. The topsoil and subsoil were stacked separately and adjacent to the trenches. Mechanical excavation proceeded to the top of the archaeological deposits or to the natural substrate where no archaeology was encountered.

Archaeological excavation and recording followed the guidelines outlined in NA's *Archaeological Fieldwork Manual* (2006). Trenches containing archaeological remains were cleaned by hand, sufficient to define the features. Each feature or deposit was given a unique number consisting of the trench number and an individual context number (e.g. 402, Trench 4, context 2). The details of each context were recorded on *pro-forma* sheets. The trenches were planned (scale 1:50) and section drawings were made at an appropriate scale (1:10 or 1:20). Levels, which were related to Ordnance Datum, were taken on the trenches at appropriate points, on section datum and on all major features. Trench locations were related to the Ordnance Survey National Grid. A photographic record was made of the excavation, using 35mm black and white negative and colour slide film, supplemented by digital images.

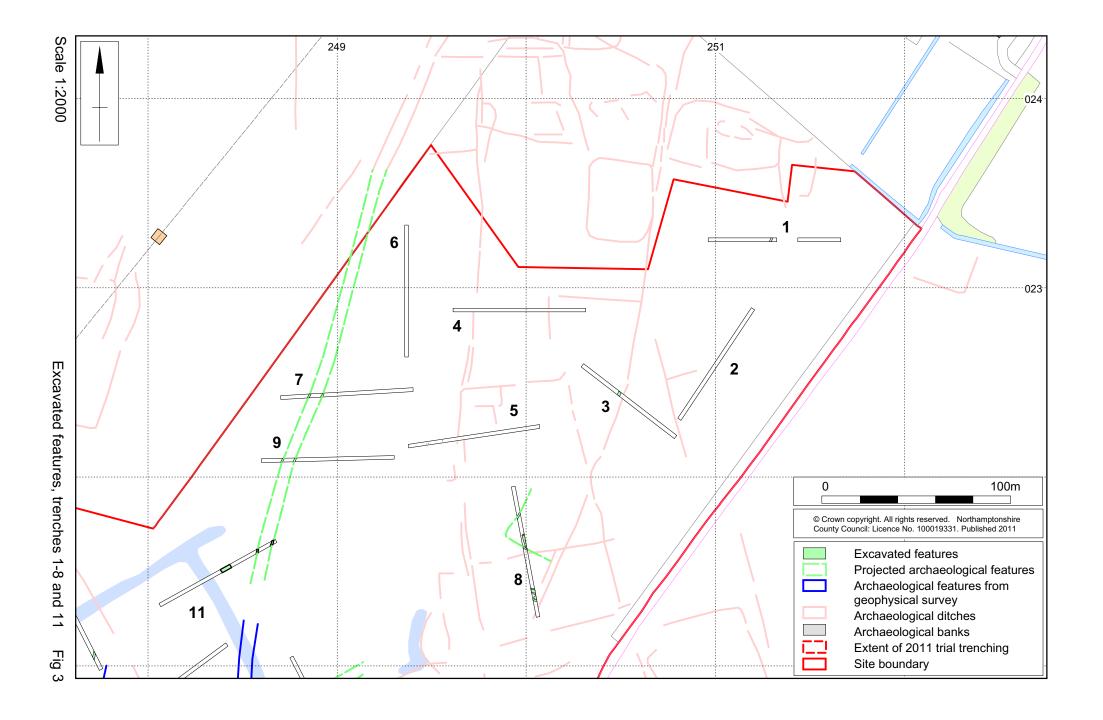
Artefacts were collected by hand and retained, receiving appropriate care prior to removal from site (UKIC 1998). The spoil heaps and features were scanned with a metal detector to ensure maximum finds retrieval. The archive will be prepared in accordance with the requirements of the Museums and Galleries Commission (MGC 1992).

All works were carried out accordance with the specification prepared by NA (2010), the *Standards for Field Archaeology in the East of England* (Gurney 2002), and the Institute for Archaeologists' *Code of Conduct* (1985, revised 2010) and *Standard and Guidance for Archaeological Field Evaluation* (1994, revised 2008). All procedures complied with Northamptonshire County Council Health and Safety provisions and Northamptonshire Archaeology's Health and Safety at Work Guidelines.

4.3 Summary of archaeological features by trench

Trench 1

Approximately 32m from the western end of the trench there was a ditch, [105], which was aligned north-east to south-west (Figs 3 and 4). It was 0.85m wide by 0.30m deep, with steep sloping sides and a broad concave base. The grey and dark orange compact sandy clay fills produced no finds



Trench 3

This was positioned to investigate a linear ditch, aligned north-north-east to south-south-west, which was detected by both the geophysical survey and the aerial photographic assessment (Figs 3 and 4). The ditch, [305], was 1.5m wide by 0.50m deep, with a steep north-west edge and a more gradual south-east edge. The base was broad and flat. The lower fill comprised a firm mid grey sandy clay whilst the upper fill comprised dark brown humic clay which produced two fragments of possible cattle bone and was sealed by the topsoil.

Trench 5

Within the south-west end of this trench there was a line of postholes, 10.5m long and aligned east-west, comprising six circular or sub circular postholes set at irregular intervals of between 1.1m to 2.6m apart (Figs 3 and 4). The postholes were generally 0.10m in diameter and no more than 0.02m to 0.05m in depth although one posthole, [504], was 0.24m in diameter and survived to a depth of 0.10m. They were all filled with a dark grey clay loam which was almost identical to the topsoil, suggesting they were of post-medieval origin.

Trenches 7, 9 and 11

A track or narrow droveway, aligned north-north-east to south-south-west and defined by two parallel ditches 4m-5m apart was revealed in Trenches 7, 9 and 11 (Figs 3, 4, 5 and 8). The western ditch [704], [907] (Fig 5, section 4) and [1107] was excavated in Trench 9. It was 0.60m-1.0m wide by 0.30m deep, with gradual sloping sides and a broad flat base. The primary fill comprised a mid grey silty clay whilst the upper fill comprised a dark brown humic silty clay.

The eastern ditch, [706], [904] (Fig 5, section 3) and [1105] was excavated in Trenches 9 and 11. It was narrower than the western ditch, 0.70m-0.80m wide and 0.20m-0.30m deep, with gradual sloping edges and a flat base. In Trench 11 the fills showed a sequence similar to the western ditch with silty clay overlain by humic material whilst in Trenches 7 and 9 the humic material was absent. No finds were recovered from either of the ditches.

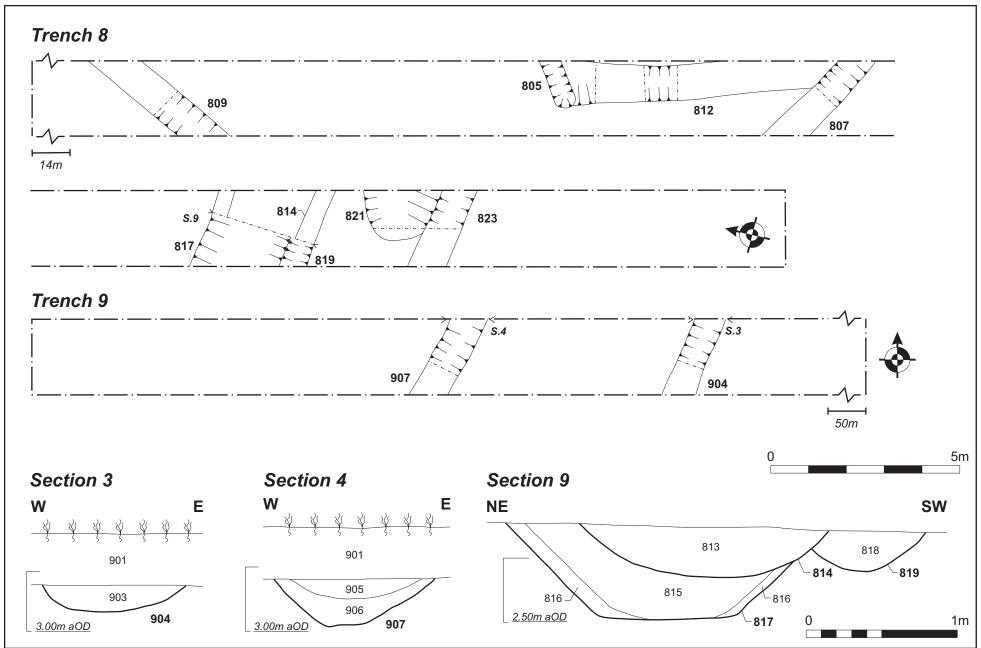
The parallel ditches are likely to be the continuation of a similarly aligned track or droveway which can be seen to the north of the current study area on the aerial photographic assessment plot. The geophysical plot also shows two parallel ditches in the area between Trenches 12 and 13 suggesting the droveway extended for at least 300m

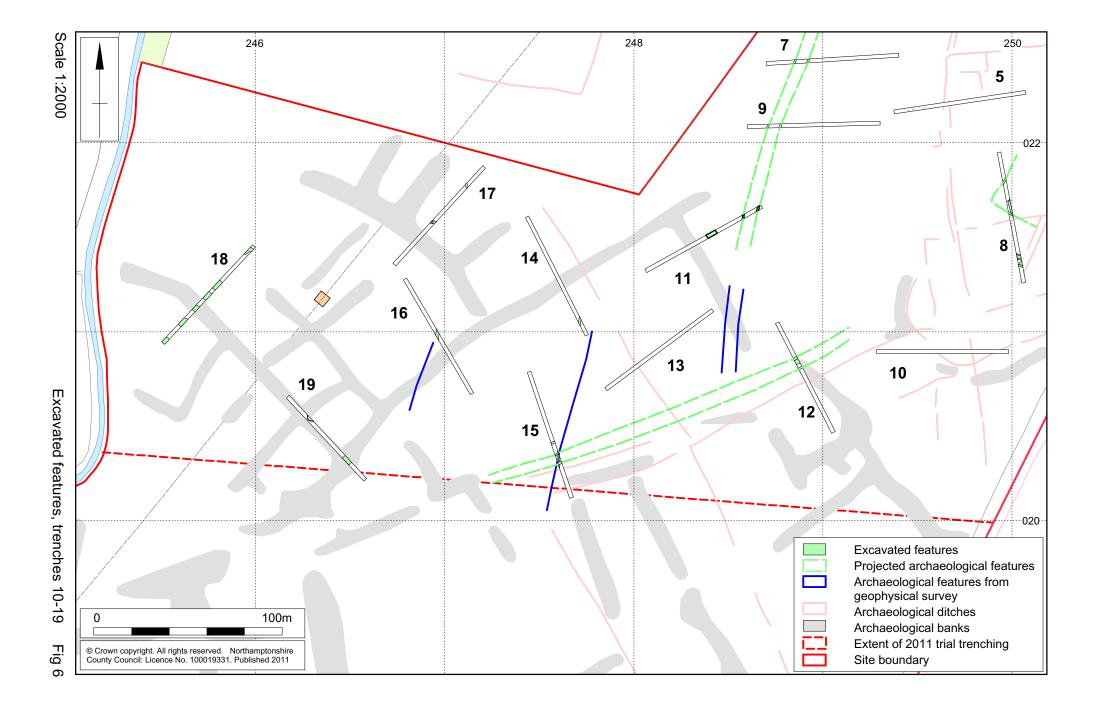
Trench 8

Within this trench there were eight linear ditches on varying alignments (Figs 3 and 5). Ditch [812], which was located approximately 27m from the north-west end of the trench, was aligned north-north-west to south-south-east and was 1.0m wide by 0.20m deep, with gradual sloping sides and broad flat base. The mottled light grey and orange silty clay fills produced a lead pot mend (see paragraph 5.2).

Cutting ditch [812] at its north-western end was a deeper, narrow ditch terminal [805], aligned east-north-east which was 0.50m wide by 0.50m deep, with steep sloping sides and a narrow concave base. The mottled grey and orange silty clay fill produced 37 sherds of pottery, over half of which were from mortaria dating from the 2nd to 4th centuries AD.

Fig 5





Ditch [807] cut the south-east end of ditch [812]. It was aligned north-west to south-east and was 0.70m wide by 0.34m deep, with steeply sloping sides and a flat base. The dark grey silty clay fill produced pottery dating from the 2nd to 4th centuries AD and fragments of cattle and sheep bone.

At the north-western end of the trench, ditch [809], aligned north-east to south-west was at an approximate right angle with ditch [807] suggesting they may have formed part of a rectilinear enclosure. The ditch was 0.90m wide by 0.15m deep, with gradual sloping sides and a broad, flat base.

At the south-eastern end of the trench there was a substantial ditch, [817] (Fig 5, section 9), which was aligned north-west to south-east. It was 2m wide by 0.60m deep, with straight, steep sloping sides and broad, flat base. The primary fill comprised a mid-brown sandy clay whilst the upper fill comprised a charcoal rich silty clay, indicative of intentional dumping. To the south-west there was a parallel, less substantial ditch, [819], which was 0.80m wide by 0.28m deep, with gradual sloping edges and broad concave base. The fill comprised a mid-brown silty clay with frequent gravel inclusions. Cutting both ditches [817] and [819] there was a similarly aligned ditch, [814], which was 1.65m wide by 0.35m deep, with gradual sloping, concave sides and a broad slightly concave base. The fill comprised a mid-grey and orange mottled firm sandy clay with frequent gravel inclusions and produced a single sherd of pottery dating from the 2nd to 4th centuries.

To the south-east of this ditch group a shallow irregular feature, [821], which was probably a tree bole, was cut by a modern field drain, [823].

Trench 12

In this trench there were two parallel ditches aligned north-east to south-west ditches, [1205] and [1209], 4.50m apart (Figs 6 and 8). The north-western ditch, [1205], was 1.50m wide by 0.40m deep, with gradual sloping sides and a flat base. It was filled with grey and brown silty clay. This ditch cut a broad and shallow linear feature, [1207], which was probably a variation in the natural substrate.

The south-eastern ditch, [1209], was 0.90m wide by 0.25m deep, with straight gradual sloping sides and flat base. It was filled with a firm, mid-grey sandy clay.

Trench 14

In the south-east end of this trench there was a gully, [1404], 1.20m wide, which was aligned north-north-east to south-south-west (Figs 6 and 8, section 16). The gully had very gradually sloping, almost imperceptible sides and a broad flat base. The fill comprised a pale grey sandy clay which had occasional gravel inclusions and looked very similar to the surrounding natural substrate. It is likely that this feature was not archaeological but rather geological in nature.

Trench 15

Ditch [1513], aligned north-south was at least 0.80m wide by 0.20m deep, with gradual sloping sides and a broad flat base (Figs 6 and 9, section 13). The grey-brown silty clay fill produced fragments of cattle bone. The ditch had a single recut, [1515], 1.0m wide by 0.30m deep, with steeper sloping sides and a narrow concave base. The fill comprised a mid to dark-brown sandy clay which produced fragments of undiagnostic ceramic material.

Two parallel ditches aligned east-north-east to west-south-west, [1508] and [1518] cut ditches [1513] and [1515]]. The northern ditch, [1508], was 0.80m wide by 0.25m deep, with steep sloping sides and a broad flat base. Its fills comprised mid to dark-

grey and brown silty clay. The southern ditch, [1518] was 1.0m wide by 0.50m deep, with steep sloping sides and a concave base. The fills comprised mid to light grey silty clay.

It is possible that these two ditches are the continuation of the parallel ditches seen in Trench 12 (Fig 6).

To the north, 5.5m from ditch [1508] there was a similarly aligned ditch, [1511], 1.20m wide, 0.30m deep, with an irregular profile. The primary fill comprised a firm, mid grey silty clay, the upper fill comprised a dark brown humic clay.



Trench 19, gully [1904], looking south-west

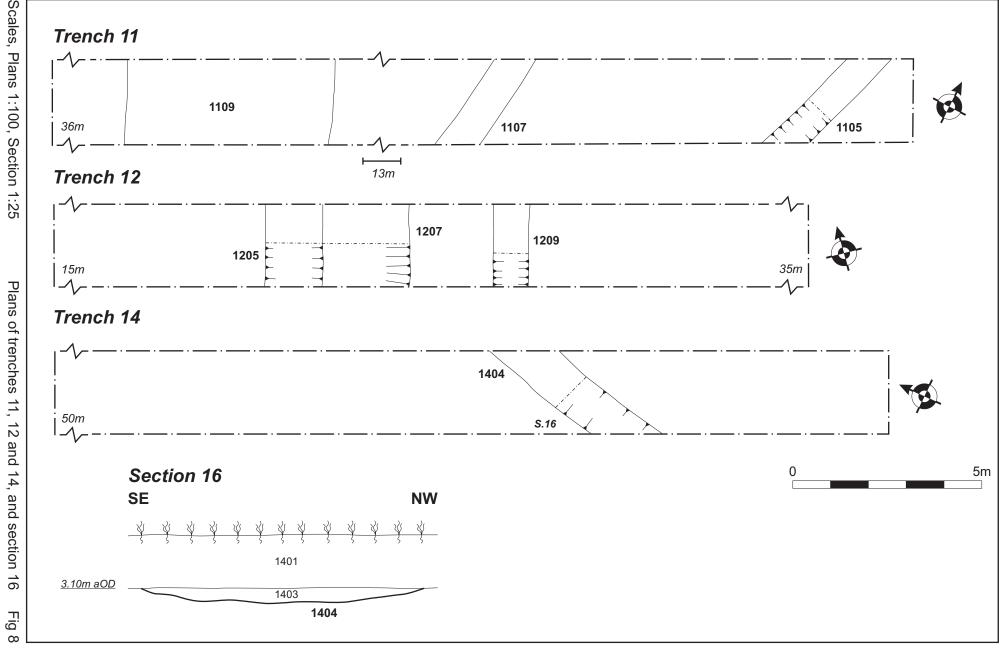
Fig 7

Trench 16

In the middle of this trench there was a 1.50m wide gully, [1604], aligned north to south (Figs 6 and 9). The gully was 0.05m deep with very gradually sloping, almost imperceptible edges with a broad flat base. The homogeneous light grey sandy clay fill produced no finds. The gully is likely to have been geological in nature.

Trench 17

Ditch [1707], 13m from the north-east end of the trench, was aligned north-north-west to south-south-east (Figs 6 and 9). It was 1.20m wide by 0.60m deep, with steep sloping sides and a narrow flat base. The fills comprised dark grey and orange sandy clay with frequent gravel inclusions. It had been recut once, [1704], which was 0.70m wide by 0.25m deep, with steeply sloping concave sides and a flat base. It was filled with dark orange silty clay with gravel inclusions.



To the south-west of this ditch group and 22m away was a substantial ditch, [1710], aligned west-north-west to east-south-east (Fig 9, section 17). It was 2m wide by 0.65m deep, with steeply sloping sides and a broad slightly concave base. The fills comprised orange and grey silty clay with frequent gravel inclusions. There was a single recut, [1712], which was1.10m wide by 0.40m deep, with a varying profile. Its fill comprised a mid-grey sandy clay.

Trench 18

There were six broad gullies in this trench, all aligned north-west to south-east (Fig 10). They were 3m-5m wide and similar in appearance to other features excavated in Trenches 12, 14 and 16 which were likely to be geological features. In Trench 18, two of these features were dug, [1806] and [1812]. They were up to 0.15m deep, with very gradual sloping sides, a broad flat base and were filled with a firm, sterile light grey clay with occasional gravel inclusions

Trench 19

Approximately 15m from the north-west end of the trench there was a narrow curvilinear gully, [1904], which enclosed an area in excess of 3.6m in diameter (Figs 6, 7 and 10). It was 0.30m-0.40m wide by 0.20m-0.45m deep, with steep to vertical sides and a narrow, flat base. In places, the mid grey silty clay fill contained frequent charcoal flecking.

Near the south-east end of the trench there was a 5m wide gully, [1906]. This was no more than 0.10m deep, with gradual sloping sides and a broad flat base. It was filled with sterile light grey sandy clay, and was likely to have been geological in nature.

5 THE FINDS

5.1 Romano-British pottery by Katie Anderson

A small assemblage of Roman pottery, totalling 45 sherds and weighing 1081g was recovered from the evaluation. All of the material was examined and details of fabric, form, decoration, usewear and date were recorded, along with any other information deemed important.

Assemblage composition

Pottery was recovered from three different contexts (see Table 1), the majority of which were recovered from context (804), representing 82% of the total assemblage. The pottery broadly dates to the 2nd-4th centuries AD, however, a small number of sherds could be more precisely dated, namely two hammerhead mortaria from context (804) ditch [805], which date to the 3rd-4th centuries AD and one greyware beaded bowl, dating to the 2nd-3rd centuries AD. The assemblage comprised a variety of different sized sherds, with several small sherds, but also a number of large sherds. The mean weight of the assemblage is relatively high at 24g, which can largely be attributed to material recovered from context (804) and in particular 20 sherds (872g) from a single Nene Valley parchment ware mortaria.

Table 1: Romano-British pottery by context

Context	No	Weight (g)
(804)/[805]	37	1011
(806)/[807]	7	66
(813)/[814]	1	4
TOTAL	45	1081

All of the vessels were coarsewares with no finewares recorded. This is however, likely to be a reflection of the size of the assemblage, rather than suggesting anything about the nature/status of the site. The assemblage was dominated by sandy greywares and although the sources of these could not be identified, it is likely that they were all produced locally. The two Nene Valley mortaria were the only sourced vessels.

Due in large to the nature of the assemblage, only a small number of vessel forms were identified. This comprised two mortaria (804), two greyware jars (804) and (806) ditch [807], and one fine sandy greyware beaded bowl (804). The level of abrasion throughout the assemblage was relatively high, with many of the sherds noted as having abraded surfaces. Only one sherd was decorated, comprising a grog-tempered sherd with a combed horizontal band and vertical combing, from context (804).

Discussion

The pottery recovered from the evaluation represents a Romano-British domestic assemblage, with a range of vessels for the preparation and storage of foodstuffs. The pottery suggests occupation between the 2nd-4th centuries AD, although there is not enough material to enable any further understanding in terms of 'peaks' in occupation.

5.2 Other finds by Tora Hylton

An oval lead repair patch measuring 26 x 22mm and weighing 42.8g was recovered from ditch [812] in Trench 8. The patch would presumably have been used to fill a hole in the base of a ceramic vessel, there is no ceramic evidence surviving in the recess around the outer edge. Lead repair patches are generally considered to be Roman in date.

6 ENVIRONMENTAL EVIDENCE

6.1 Animal bone by Philip Armitage

Introduction

Twenty-three hand recovered animal bone specimens from four ditch fills (303, 806, 813 & 1512) were submitted for identification. Specimens from 806 and 813 are dated to the Roman period; those from 303 and 1512 are undated.

Overall, the preservation of the animal bone is assessed as poor to fair with the specimens exhibiting the effects of leaching, cortical erosion, and mineralisation (iron-staining), probably resulting from contact with groundwater during burial. The conditions following burial appear also to have resulted in a tendency for the bones from context 1512 to become brittle and therefore greatly susceptible to fragmentation

Identifications of species and anatomy (part skeleton) were made using the author's modern comparative osteological collections. Measurements of the cattle teeth were made using DRAPER dial calipers (graduated 0.02mm), following the system of von den Driesch (1976) and a TRUWEIGH digital scale (graduated 0.01 g) was used to weigh all the bone specimens.

Catalogue

Context (303) ditch [305]

Two fragments are from a single unidentified mammal (cattle?) bone element, highly leached/eroded. Weight of bone = 5.78g.

Context (806) ditch [807]

One chopped piece of shaft is from a cattle long bone (wt. = 13.17g) showing evidence of water abrasion. A smaller, second fragment of cattle long bone shaft (wt. = 1.37g) is probably derived from the same bone element.

One sheep tibia shaft is represented by four fragments (wt. = 8.80g).

Context (813) ditch [814]

One cattle tooth is recognized as a left lower third molar (wt. = 23.12g). Measurements: length = 31.8 mm, breadth = 12.2 mm. Wear stage = adult A3 (criteria of Bond & O'Connor 1999).

Context (1512) ditch [1513]

One cattle long bone shaft is represented by 12 recently broken bone fragments (wt. = 65.48g), weathered/leached in antiquity. From the same context there are two pieces of a broken right lower third molar of cattle (wt. = 26.12g). Measurements: length = 35.8 mm, breadth = 14.0 mm; wear stage = adult A3.

Interpretation & Discussion

The bones are all from domestic livestock, probably killed, butchered and consumed at the site. In the cattle teeth recovered, one specimen (1512) is from an individual of slightly above average size for the Roman period, the other specimen (813) is from a very much smaller animal. As noted by Armitage (1982: 50) the excavated osteological evidence from sites throughout Britain shows there was a very wide size-range in Romano-British cattle, which included animals as small as those of the preceding Iron Age as well as much larger and more heavily built, improved cattle. The sheep tibia from (806) is from an animal of comparable size to the modern Soay sheep.

6.2 The plant macrofossils by Val Fryer

Introduction and method

Excavations undertaken by Northamptonshire Archaeology, recorded a limited number of features of possible Roman date. Samples for the evaluation of the content and preservation of the plant macrofossil assemblages were taken from ditch fills and the fill of a possible geological hollow, and eight were submitted for assessment.

The samples were processed by manual water flotation/washover and the flots were collected in a 300 micron mesh sieve. The dried flots were scanned under a binocular microscope at magnifications up to x 16 and the plant macrofossils and other remains noted are listed in Appendix 2. Nomenclature within the table follows Stace (1997). All plant remains were charred. Modern fibrous roots, straw, chaff, seeds and arthropod remains were present throughout.

The non-floating residues were collected in a 1mm mesh sieve and will be sorted when dry. Any artefacts/ecofacts will be retained for further specialist analysis.

Results

Although charcoal/charred wood fragments were present throughout, the assemblages were generally very limited. This may, in part, be a result of the heavy mineral concretions, which coated most macrofossils and possibly precluded full retrieval

during processing. The assemblage from sample 6, (ditch [1707]) included a single barley (*Hordeum sp.*) grain, one other indeterminate cereal, and what appeared to be a dogwood (*Comus sanguinea*) fruit, although the latter was again heavily encrusted. Other remains were also scarce, although small pieces of burnt or fired clay were recorded from four assemblages. The pieces of black porous and tarry material were all probable residues of the combustion of organic remains at very high temperatures.

Conclusions

In summary, because of the sparse content of the samples and the poor state of preservation of the macrofossils, it is difficult to ascertain how or why these assemblages formed. However, the presence of charcoal, burnt or fired clay fragments, cereals and possible hedge brush may all suggest that much of the material recorded is derived from scattered hearth waste, some or all of which was accidentally incorporated within the fills of the ditches and other features recorded.

Although the current assemblages are sparse, they do illustrate that plant macrofossils, preserved by charring, are present within the archaeological horizon in this area of Thorney. Apart from the mineral concretions, which could have occurred as a result of prolonged immersion in mineral rich water, there is nothing to indicate that the deposits have ever been waterlogged.

If any further interventions are planned in the future, it is suggested that additional plant macrofossil samples of approximately 20–40 litres in volume are taken from all dated and well-sealed features recorded during excavation.

6.3 Geoarchaeological Assessment by Mike Allen

A series of excavated features were considered to be of natural/geological origin. They were broad linear gullies, up to 5.5m wide, with very gradual sloping edges and broad flat bases, between 0.05m and 0.20m deep. They had fills of sterile material which looked very similar to the natural substrate.

The aerial photographic survey had detected a network of what was interpreted as archaeological banks, which in places coincide with these features, but trenching found no evidence of banks.

The aim of the geoarchaeological assessment was to determine, via examination of the character of the fills, (ie windblown, alluvial or anthropogenic), the nature of these features, and whether they were anthropogenic, geological or erosion features.

Methodology

One bulk sample (sample 8) comprising the fill (1811) of feature 1812, was supplied for examination. It comprised 4 litres of disturbed unprocessed sample and c 1 litre of >1mm residue derived from the flotation and processing of 18 litres of bulk sample.

The undisturbed bulk sample (sample 8.1) was sieved and the clasts fractioned into four coarse fractions: >20mm, >14mm >10mm, >5mm and less than 5mm. The deposits contained adhering sediment masses and cemented ferruginous lumps so some portions were subject to light crushing in a mortar and pestle. The residue (sample 8.2), was sieved through the same fractions but were not subjected to any crushing to break down ferruginous nodules The clasts were weighed, counted and examined (Appendix 3) and their roundedness (following Hodgson 1976) and lithology recorded.

Field records

A series of these features were recorded during the fieldwork. They can be summarised as follows:

F1804, fill 1803	unexcavated
F1806, fill 1805	light grey sandy clay (0.15m thick)
F1808, fill 1807	unexcavated
F1810, fill 1809	unexcavated
F1812, fill 1811	mid grey sandy clay 0.15m thick (sample 8)
F1814, fill 1813	unexcavated
F1906, fill 1905	light grey sandy clay (0.10m thick)

The fills were recorded archaeologically as 'light grey to mid grey sandy clays', which contrasts with the natural parent material (geology) comprising Kellaways Formation and Oxford Clay Formation (undifferentiated) – mudstone, siltstone and sandstone, which was described on site by the archaeologist as varying little across the site and '... comprising light yellow and orange sand and gravel with occasional silty clay patches'. This also contrasts with the fills of archaeological features which are ubiquitously described by the archaeologists as 'grey silt clay loam' or 'grey silty clay' (Appendix 1).

Geoarchaeological examination

No samples of the natural parent material were available for examination to contrast with the fill of the 'geological stripes'.

The matrix of the disturbed sample was a greyish-brown (10YR 5/2) coarse silt loam to coarse sandy silt loam with common small and medium stones, many small cemented ferruginous silt and sandy nodules of strong brown (7.5YR 5/6) to dark reddish-brown (5YR 3/3) and black. After crushing in a mortar and pestle the greyish brown (10YR 5/2) matrix became brown (10YR 5/3) to yellowish-brown (10YR 5/4) due to the inclusions of reddish-brown iron cemented iron fragments.

The clasts were predominantly small and medium subroutine flints and sandstone pieces (Appendix 3).

Discussion

Matrix: the matrix is dominated by coarse silt (with some fine sand) and very little clay or fine silt. This contrasts with the archaeologists' description of the parent material as 'sand and gravel'. This finer-grained material may well be, in part, aeolian in origin. A number of ferruginous nodules (typically to 3mm diameter) are present indicating the iron mobilisation and formation, in many cases around small stones or voids. The coarse silt may represent, in part, re-worked loess (cf Catt 1977; 1979), the grain-size of which is likely to be coarse in the south and east of England (Catt 1978) and/or be deflation of the course silt and fine sand element of the sandy facies parent material (Kellway's Formation) sorting the easily wind entrained particles.

Clasts: The stones are predominantly subrounded and rounded flint and sandstones, but contain a number of subangular elements of both flint and sandstone. The clasts are not well sorted but are typically small and medium (ie mainly <60mm), and are generally quite mixed, perhaps having derived from the parent material.

Inclusions: Although the environmental analysis indicates the presence of very little charred material (<0.1L from an 18 litre bulk sample), it was noted to contain small quantities of charcoal >2mm, charcoal <2mm, porous 'cokey' material, burnt stone and small coal fragments (Appendix 2). We assume that the majority of these small items are intrusive in these shallowly buried features. No anthropogenic material or artefacts

was noted in the fractionated material (sample 8.1) or the processed residues (sample 8.2).

Deposition and formation: There is no evidence of any anthropogenic components to these deposits, and they contrast markedly with those reported from the archaeological features. The fine moderately sorted coarse silty component may suggest an aeolian component and the mixed nature of the clasts suggest that these are largely derived from the parent material by weathering. There is no evidence of direct fluvial deposition. Although some of the clasts are clearly very water-worn and water-rolled, they are admixed with material showing little or no signs of water abrasion.

Conclusions

- No evidence of anthropogenic evidence was recorded.
- The fills contrast markedly with the archaeological fills recorded.
- The features and their fills (based on the examination of disturbed material from the context 1811) are unlikely to be anthropogenic. In all probability they present relict natural features possibly of glacial or periglacial origin.
- The features are not considered of archaeological significance.
- A voucher sample of the matrix has been retained should particle size analysis or mineralogy be considered useful.

7 DISCUSSION

The paucity of both archaeological features and finds does not allow for interpretation of the site's previous uses but does suggest that it lay outside of the settlement core, the Scheduled area to the north, during the Iron Age and Roman periods.

The evaluation confirmed the presence of only a few of the features detected by the aerial photographic assessment and the geophysical survey. It appeared that, given the shallow depth of soil across the site, much of what was visible of the air photos had since been removed by ploughing.

The ditch aligned north-east to south-west present in Trench 15, correlates well with a linear feature shown on the geophysical survey plot (Fig 6). The curving droveway between Trenches 15 and 12 was not detected by the geophysical survey but its alignment closely parallels two ditches to the immediate south which are shown on the aerial photographic plot and it is likely that these are the continuation of this feature (Fig 6).

The large rectilinear enclosure aligned north-north-west to south-south-east identified by air photo evidence was not detected by the trial trench evaluation but the long, north-east to south-west aligned ditch to the east was present in Trench 3 (Fig 2). The Roman ditches in Trench 8 may have formed an enclosure on the western side of this ditch (Fig 3).

The parallel ditches in Trenches 7, 9 and 11 are likely to be a continuation of the droveway seen leading from the western side of the Scheduled area to the north of the site on the aerial photographic assessment (Fig 3). These correlate well with two

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parallel ditches detected by the geophysical survey in the area between Trenches 13 and 12.

None of the features interpreted as archaeological banks in the aerial photographic assessment were encountered (Fig 6). Presumably ploughing of the shallow soils had removed any trace of these features. In a few instances they corresponded with likely geological or micro-topographical features comprising broad shallow, sandy clay filled gullies (Trenches 18 and 19). They were not located exclusively where an archaeological bank had been detected, so their occasional correspondence may be coincidental.

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APPENDIX 1: SUMMARY OF CONTEXTS AND FEATURES

Trench No	Length, width & alignment	NGR (centre)	Surface height	Depth & height of natural
1	60m x 2.2m E-W	525130/302325	3.05m aOD	2.65m aOD
Context	Context type Feature & type	Description	Dimensions	Artefacts/ Samples
101	Topsoil	Dark grey-brown clay loam.	0.30m-0.35m thick	-
102	Natural	Light orange/yellow sand and gravel	-	-
103	Fill of 105	Mid grey sandy clay	0.60m wide, 0.12m thick	-
104	Fill of 105	Orange and grey mottled sandy clay	0.85m wide 0.30m thick	-
105	Ditch	NE-SW, steep sides, broad base	0.85m wide 0.30m deep	-

Trench No	Length, width & alignment	NGR (centre)	Surface height	Depth & height of natural
2	70m x 2.2m NNE-SSW	525100/302260	20.95m aOD	20.43m aOD
Context	Context type Feature & type	Description	Dimensions	Artefacts/ Samples
201	Topsoil	Dark grey-brown clay loam.	0.30m-0.35m thick	-
202	Natural	Light orange/yellow sand and gravel	-	-

Trench No	Length, width & alignment	NGR (centre)	Surface height	Depth & height of natural
3	61m x 2.2m NW-SE	525055/302238	3.16m aOD	2.71m aOD
Context	Context type Feature & type	Description	Dimensions	Artefacts/ Samples
301	Topsoil	Dark grey-brown clay loam.	0.35m-0.40m thick	-
302	Natural	Light orange/yellow sand and gravel	-	-
303	Fill of 305	Dark grey humic clay	1.5m wide 0.20m thick	Sample 4, animal bone
304	Fill of 305	Mid-grey silty clay	2m, wide 0.30m thick	-
305	Ditch	NNE-SSW, varied profile, broad, flat base	2m wide 0.50m deep	-

Trench Length, width & NGR (centre) Surface Depth & height alignment of natural No height 70m x 2.2m 3.17m aOD 2.75m aOD 524997/302288 **NNE-SSW** Context Context type Description **Dimensions** Artefacts/ Feature & type Samples 401 Dark grey-brown clay 0.32m-0.35m Topsoil thick 402 Light orange/yellow sand Natural and gravel

Trench No	Length, width & alignment	NGR (centre)	Surface height	Depth & height of natural
5	70m x 2.2m WSW-ENE	524971/302220	3.25m aOD	2.78m aOD
Context	Context type Feature & type	Description	Dimensions	Artefacts/ Samples
501	Topsoil	Dark grey-brown clay loam.	0.32m-0.35m thick	-
502	Natural	Light orange/yellow sand and gravel	-	-
503	Fill of 504	Dark grey silty clay loam	0.10m thick	-
504	Posthole	Sub circular, gradual	0.24m Ø	-
		sides, concave base	0.10m deep	
505	Fill of 506	Dark grey silty clay loam	0.02m thick	-
506	Posthole	Sub circular, gradual	0.10m Ø	-
		sides, concave base	0.02m deep	
507	Fill of 508	Dark grey silty clay loam	0.05m thick	-
508	Posthole	Sub circular, gradual	0.12m Ø	-
		sides, concave base	0.05m deep	
509	Fill of 510	Dark grey silty clay loam	0.04m thick	-
510	Posthole	Circular, gradual sides,	0.10m Ø	-
		concave base	0.04m deep	
511	Fill of 512	Dark grey silty clay loam	0.05m thick	-
512	Posthole	Sub circular, gradual	0.11m Ø	-
		sides, concave base	0.05m deep	
513	Fill of 514	Dark grey silty clay loam	0.03m thick	-
514	Posthole	Circular, gradual sides,	0.10m Ø	-
		concave base	0.03m deep	

Trench No	Length, width & alignment	NGR (centre)	Surface height	Depth & height of natural
6	70m x 2.2m N-S	524936/302296	3.25m aOD	2.85m aOD
Context	Context type	Description	Dimensions	Artefacts/
	Feature & type			Samples
601	Topsoil	Dark grey-brown clay loam.	0.30m-0.36m thick	-
602	Natural	Light orange/yellow sand and gravel	-	-

Trench No	Length, width & alignment	NGR (centre)	Surface height	Depth & height of natural
7	70m x 2.2m E-W	524903/302244	3.34m aOD	2.94m aOD
Context	Context type	Description	Dimensions	Artefacts/
	Feature & type			Samples
701	Topsoil	Dark grey-brown clay loam.	0.32m-0.35m thick	-
702	Natural	Light orange/yellow sand and gravel	-	-
703	Fill of 704	Unexcavated	-	-
704	Ditch	NE-SW unexcavated	0.60m wide	-
705	Fill of 706	Unexcavated	-	-
706	Ditch	NE-SW unexcavated	0.90m wide	-

Trench No	Length, width & alignment	NGR (centre)	Surface height	Depth & height of natural
8	70m x 2.2m NNW-SSE	525000/302160	3.15m aOD	2.77m aOD
Context	Context type Feature & type	Description	Dimensions	Artefacts/ Samples
801	Topsoil	Dark grey-brown clay loam.	0.32m-0.35m thick	-
802	Subsoil	Mid grey brown silty clay	0.26m thick	-
803	Natural	Light orange/yellow sand and gravels	-	-
804	Fill of 805	Grey/orange silty clay	0.50m thick	Pottery 2nd-4th centuries AD, Sample 2
805	Ditch	ENE-WSW steep sides, narrow concave base	0.50m wide, 0.50m deep	-
806	Fill of 807	Dark grey silty clay	0.34m thick	Pottery 2nd-4th centuries AD, animal bone, Sample 3
807	Ditch	NW-SE, steep sloping sides, flat base	0.70m wide 0.34m deep.	-
808	Fill of 809	Mid grey silty clay	0.15m thick	Pottery 2nd-4th centuries
809	Ditch	NE-SW, gradual sloping slides, flat base	0.90m wide 0.15m deep	-
810	Fill of 812	Light grey/orange silty clay	0.10m thick	Lead pot mend
811	Fill of 812	Light grey silty clay	0.10m-0.20m thick	-
812	Ditch	NNW-SSE, gradual sloping sides, broad flat base	1m wide 0.20m deep	-
813	Fill of 814	Mid grey/orange sandy clay	0.35m thick	Pottery 2nd-4th centuries AD, animal bone
814	Ditch	NW-SE, gradual sloping sides, concave base	1.65m wide 0.35m deep	-

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815	Fill of 817	Charcoal rich silty clay	0.50m thick	Sample 1
816	Fill of 817	Mid brown silty clay	0.12m thick	-
817	Ditch	NW-SE, steep sloping sides, broad flat base	2m wide 0.60m deep	-
818	Fill of 819	Mid brown silty clay, frequent gravel inclusions	0.28m thick	-
819	Ditch	NW-SE, gradual sloping edges, broad concave base.	0.80m wide 0.28m deep	-
820	Fill of 821	Mid grey-brown silty clay	0.18m thick	-
821	Tree bole	Oval, gradual sloping sides, broad flat base.	1.20m Ø 0.18m deep	
822	Fill of 823	Dark grey clay loam	>0.20m thick	-
823	Cut of modern land drain	NW-SE vertical sides, base not excavated	1m wide >0.20m deep	-

Trench No	Length, width & alignment	NGR (centre)	Surface height	Depth & height of natural
9	70m x 2.2m E-W	524897/302209	3.36m aOD	2.91m aOD
Context	Context type Feature & type	Description	Dimensions	Artefacts/ Samples
901	Topsoil	Dark grey-brown clay loam.	0.35m-0.40m thick	-
902	Natural	Light orange/yellow sand and gravel	-	-
903	Fill of 904	Mid grey sandy clay	0.20m thick	-
904	Ditch	NNE-SSW, gradual sloping edges, flat base	0.94m wide 0.20m deep	-
905	Fill of 907	Dark brown humic clay	0.12m thick	-
906	Fill of 907	Mid grey silty clay	0.20m thick	-
907	Ditch	NNE-SSW, gradual sloping sides, broad flat base	1m wide 0.32m deep	

Trench No	Length, width & alignment	NGR (centre)	Surface height	Depth & height of natural
10	70m x 2.2m E-W	524962/302089	3.36m aOD	3.06m aOD
Context	Context type	Description	Dimensions	Artefacts/
	Feature & type			Samples
1001	Topsoil	Dark grey-brown clay loam.	0.30m-0.45m thick	-
1002	Natural	Light orange/yellow sand and gravel	-	-

Trench No	Length, width & alignment	NGR (centre)	Surface height	Depth & height of natural
11	70m x 2.2m NE SW	524836/302149	3.40m aOD	3m aOD
Context	Context type Feature & type	Description	Dimensions	Artefacts/ Samples
1101	Topsoil	Dark grey-brown clay loam.	0.35m-0.40m thick	-
1102	Natural	Light orange/yellow sand and gravel	-	-
1103	Fill of 1105	Dark brown humic clay	0.15m thick	Sample 5
1104	Fill of 1105	Light orange-grey silty clay	0.09m thick	-
1105	Ditch	NNE-SSW, gradual sloping edges, flat base	0.24m deep 0.80m wide	-
1106	Fill of 1107	Unexcavated	-	-
1107	Ditch	NNE-SSW , unexcavated	1m wide	-
1108	Fill of 1109	Unexcavated	-	-
1109	Geological feature	NW-SE, unexcavated	5.20m wide	-

Trench No	Length, width & alignment	NGR (centre)	Surface height	Depth & height of natural
12	62m x 2.2m NW-SE	524891/302074	3.42m aOD	3.02m aOD
Context	Context type	Description	Dimensions	Artefacts/
	Feature & type			Samples
1201	Topsoil	Dark grey-brown clay loam.	0.30m-0.40m thick	-
1202	Natural	Light orange/yellow sand and gravel	-	-
1203	Fill of 1205	Dark grey silty clay	0.0.40m thick	-
1204	Fill of 1205	Mid brown silty clay	0.09m thick	
1205	Ditch	NE-SW, gradual sloping	1.50m wide	-
		sides, flat base	0.40m deep	
1206	Fill of 1207	Light grey sandy clay	0.20m thick	-
1207	Geological	NE-SW, very gradual	1m wide	-
	feature	sloping sides, broad flat base	0.20m deep	
1208	Fill of 1209	Mid grey sandy clay	0.25m thick	-
1209	Ditch	NE-SW, gradual sloping sides, flat base	0.90m wide 0.25m deep	-

Trench No	Length, width & alignment	NGR (centre)	Surface height	Depth & height of natural
13	70m x 2.2m NE-SW	524812/302091	3.31m aOD	2.91m aOD
Context	Context type Feature & type	Description	Dimensions	Artefacts/ Samples
1301	Topsoil	Dark grey-brown clay loam.	0.35m-0.40m thick	-
1302	Natural	Light orange/yellow sand and gravel	-	-

Trench No	Length, width & alignment	NGR (centre)	Surface height	Depth & height of natural
14	70m x 2.2m NW-SE	524759/302129	3.43m aOD	2.93m aOD
Context	Context type Feature & type	Description	Dimensions	Artefacts/ Samples
1401	Topsoil	Dark grey-brown clay loam.	0.35m-0.40m thick	-
1402	Natural	Light orange/yellow sand and gravel	-	-
1403	Fill of 1404	Light grey sandy clay	0.10m thick	-
1404	Geological feature	NNE-SSW, very gradual sloping sides, broad flat base.	1.20m wide 0.10m deep	-

Trench No	Length, width & alignment	NGR (centre)	Surface height	Depth & height of natural
15	62m x 2.2m NW-SE	524756/302045	3.44m aOD	2.99m aOD
Context	Context type Feature & type	Description	Dimensions	Artefacts/ Samples
1501	Topsoil	Dark grey-brown clay loam.	0.30m-0.40m thick	-
1502	Natural	Light orange/yellow sand and gravel	-	-
1503	Unused context			
1504	Unused context			
1505	Unused context			
1506	Fill of 1508	Dark grey sandy clay	0.18m thick	-
1507	Fill of 1508	Mid grey silty clay	0.10m thick	-
1508	Ditch	ENE-WSW, steep	0.80m wide	-
		sloping sides, flat base	0.25m deep	
1509	Fill of 1511	Dark brown humic clay	0.18m thick	-
1510	Fill of 1511	Mid grey silty clay	0.14m thick	
1511	Ditch	ENE-WSW, irregular	1.20m wide	-
		profile	0.30m deep	
1512	Fill of 1513	Grey-brown silty clay	0.20m thick	Animal bone
1513	Ditch	N-S, gradual sloping	>0.80m wide	-
		sides, flat base	0.20m deep	

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1514	Fill of 1514	Mid brown silty clay	0.30m thick	
1515	Ditch	N-S, steep sloping sides, narrow base	1m wide 0.30m deep	-
1516	Fill of 1518	Mid grey silty clay	0.24m thick	-
1517	Fill 1518	Light grey silty clay	0.26m deep	-
1518	Ditch	ENE-WSW, steep sloping sides, concave base	1m wide 0.50m deep	-

Trench No	Length, width & alignment	NGR (centre)	Surface height	Depth & height of natural
16	70m x 2.2m NW-SE	524697/302097	3.54m aOD	3.09m aOD
Context	Context type	Description	Dimensions	Artefacts/
	Feature & type			Samples
1601	Topsoil	Dark grey-brown clay loam.	0.35m-0.40m thick	-
1602	Natural	Light orange/yellow sand and gravel	-	-
1603	Fill of 1604	Light grey sandy clay	0.05m thick	-
1604	Geological feature	NNE-SSW, very gradual sloping sides, broad flat base.	1.50m wide 0.05m deep	-

Trench No	Length, width & alignment	NGR (centre)	Surface height	Depth & height of natural
17	70m x 2.2m NE-SW	524699/302163	3.54m aOD	3.13m aOD
Context	Context type Feature & type	Description	Dimensions	Artefacts/ Samples
1701	Topsoil	Dark grey-brown clay loam.	0.35m-0.40m thick	-
1702	Natural	Light orange/yellow sand and gravel	-	-
1703	Fill of 1704	Dark orange silty clay	0.25m thick	-
1704	Ditch	NNW-SSE, steep sides,	0.70m wide	-
		flat base	0.25m deep	
1705	Fill of 1707	Dark grey silty clay	0.55m thick	Sample 6
1706	Fill of 1707	Mid orange sandy clay	0.05m thick	-
1707	Ditch	NNW-SSE, steep sloping sides, narrow flat base	1.20m wide 0.60m deep	-
1708	Fill of 1710	Mid orange silty clay	0.55m thick	-
1709	Fill of 1710	Dark orange-grey silty clay	0.10m thick	-
1710	Ditch	WNW-ESE, steep sloping sides, concave base	2m wide 0.65m deep	-
1711	Fill of 1712	Mid-grey sandy clay	0.40m deep	-
1712	Ditch	WNW-ESE, concave steep edges, concave base	1.10m wide 0.40m deep	-

Trench Length, width & Depth & height NGR (centre) Surface alignment height of natural No 18 70m x 2.2m 524574/302119 3.65m aOD 3.25m aOD **NE-SW** Context Context type Description **Dimensions** Artefacts/ Feature & type Samples 1801 0.35m-0.45m Topsoil Dark grey-brown clay thick loam. 1802 Natural Light orange/yellow sand and gravel 1803 Fill of 1804 Unexcavated 1804 Geological NW-SE, unexcavated >3.50m wide feature 1805 Fill of 1806 Light grey sandy clay 0.15m thick NW-SE, gradual sloping 5.5m wide 1806 Geological sides, broad flat base feature 0.15m deep 1807 Fill of 1808 Unexcavated 1808 Geological NW-SE, unexcavated 3.5m wide feature 1809 Fill of 1810 Unexcavated 1810 Geological NW-SE, unexcavated 4.5m wide feature Fill of 1812 0.15m thick 1811 Mid-grey sandy clay Sample 8 1812 Geological NW-SE, gradual sloping 5.5m wide sides, broad flat base feature 0.15m deep 1813 Fill of 1814 Unexcavated 1814 Geological NW-SE, unexcavated 5m wide feature

Trench No	Length, width & alignment	NGR (centre) Surface height		Depth & height of natural	
19	60m x 2.2m NW-SE	524636/302044	3.60m aOD	3.16m aOD	
Context	Context type Feature & type	Description	Dimensions	Artefacts/ Samples	
1901	Topsoil	Dark grey-brown clay loam.	0.30m-0.36m thick	-	
1902	Natural	Light orange/yellow sand and gravel	-	-	
1903	Fill of 1904	Mid grey silty clay with charcoal patches	0.20m-0.45m thick	Sample 7	
1904	Gully	Curvilinear, steep sides, concave base	0.30m-0.40m wide, 0.20m- 0.45m deep	-	
1905	Fill of 1906	Light grey sandy clay	0.10m thick	-	
1906	Geological feature	NE-SW, gradual sloping sides, broad flat base	5m wide 0.10m deep	-	

APPENDIX 2: TABLE OF PLANT MACRO FOSSILS

Sample No.	1	2	3	4	5	6	7	8
Trench No.	8	8	8	3	11	17	19	18
Context No.	815	804	806	303	1103	1705	1903	1811
Feature No.	817	805	807	305	1105	1707	1904	1812
Feature type	Ditch	Feat.						
Date	?Rom	Rom	Rom					
Plant macrofossils								
Hordeum sp. (grain)	-	-	-	-	-	Х	-	-
Cereal indet. (grain)	-	-	-	-	-	х	-	-
Cornus sanguinea L.	-	-	-	-	-	xcf	-	-
Charcoal <2mm	Х	Х	XXX	Х	Х	XXX	Х	Х
Charcoal >2mm	Х	Х	XX		Х	XX	Х	Х
Charred root/stem	XX	-	-	-	-	-	-	-
Indet.fruit stone/nutshell frag.	-	-	-	-	-	Х	-	-
Other remains								
Black porous 'cokey' material	-	Х	-	-	Х	-	-	Х
Black tarry material	-		х	-	-	-	-	-
Bone	-	-	-	-	-	xcf	-	-
Burnt/fired clay	XXX	XX	-	Х	-	-	Х	-
Burnt stone	-	-	-	Х	-	-		Х
Mineralised root channels	-	Х	-		-	-	-	-
Mineralised soil concretions	-	-	Х	XXX	-	-	-	-
Small coal frags.	Х	-	-	-	-	-	-	Х
Sample volume (litres)	28	25	28	26	28	28	25	18
Volume of flot (litres)	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
% flot sorted	100%	100%	100%	100%	100%	100%	100%	100%

APPENDIX 3: TABLE OF FRACTIONATED CLAST DATA

		Clasts								clast+matrix	
	Original	>20 mm		>14 mm		>10 mm		>5 mm		< 5mm	
Sample	Vol / wt	wt	no	wt	no	wt	no	wt	no	wt	no
8.1	4 L / 4528g	71g	4	54g	11	91g	33	95g	285	4217	n/r
Clast		Rounded & Subrounded &		Subrounded &		Subrounded &		-			
descriptions		subrounded subanugla		glar	subanuglar		subanuglar				
		flint and sts flint a		flint and	l sts	ts flint and sts		flint and sts			
8.2	18 L / -	130g	11	24g	39	358g	152	541g	n/r	475g*	n/r
Clast		Rounde	ed &	& Rounded &		Rounded &		Rounded &		_	
descriptions		subrour	nded &	d & subrounded & subroun		nded	subrounded				
		subang	ular	subangular flint and s		l sts	flint and sts +				
		flint and	l sts	flint and sts			many				
								ferruginous			
								nodules			

^{*&}lt;5mm and >1mm: includes cemented sediment not crushed in mortar and pestle



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