



Northamptonshire Archaeology

Excavation of a late Iron Age and Roman settlement at
Alconbury Hill, Cambridgeshire
July 2009



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QUALITY CONTROL

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OASIS REPORT FORM

PROJECT DETAILS OASIS No: 159689	
Project name	Excavation of a late Iron Age and Roman settlement at Alconbury Hill Cambridgeshire, July 2009
In July 2009, an archaeological excavation was conducted by Northamptonshire Archaeology in advance of a water mains replacement between Sapley and Sawtry, at Alconbury Hill Cambridgeshire. The investigation targeted the site of a late Iron Age and Roman settlement that had been identified by trial trench evaluation. The excavated evidence comprised a large enclosure ditch, with a possible return or internal division to the south, several smaller ditches and gullies, and four small pits. Pottery from the features dated from the 1st century BC to the late 2nd century AD. Ridge and furrow cultivation remains were also identified.	
Project type	Strip & map excavation
Site status	None
Previous work	Trial trench evaluation (CAMARC 2008)
Current land use	Arable
Future work	None
Monument type/period	Late Iron Age and Roman rural settlement
Significant finds	Pottery, animal bone and fired clay
PROJECT LOCATION	
County	Cambridgeshire
Site address	A1(M), Alconbury Hill, near Upton
Study area	0.07ha
OS NGR	TL 1850 7905
Height a OD	c49m above Ordnance Datum
PROJECT CREATORS	
Organisation	Northamptonshire Archaeology
Project Brief originator	Eliza Gore, Cambridgeshire County Council
Project Design originator	Simon Carlyle, Northamptonshire Archaeology
Director/Supervisors	Simon Carlyle, Northamptonshire Archaeology
Project Managers	Simon Carlyle & Jim Brown, Northamptonshire Archaeology
Sponsor or funding body	Anglian Water Services
PROJECT DATE	
Start date	2nd July 2009
End date	16th July 2009
ARCHIVES	Location (Accession no) Content (eg pottery, animal bone etc)
Physical	Cambridgeshire County Store ECB3220 Pottery, animal bone and fired clay
Paper	Context sheets, permatrace plans & sections, site registers, photographic archive, background documents
Digital	Client PDF report
BIBLIOGRAPHY	Journal/monograph, published or forthcoming, or unpublished client report
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Contents

1	INTRODUCTION	
2	ARCHAEOLOGICAL BACKGROUND	
2.1	Historic Environment Record (HER) data	
2.2	Aerial photographic evidence	
2.3	Topography and geology	
3	EXCAVATION STRATEGY	
3.1	Objectives	
3.2	Methodology	
4	THE EXCAVATED EVIDENCE	
4.1	Summary of the site chronology	
4.2	Late Iron Age and Roman settlement	
4.3	Ridge and furrow cultivation	
5	THE FINDS	
5.1	Iron Age pottery	by Andy Chapman
5.2	Roman pottery	by Tora Hylton
5.3	Fired clay	by Pat Chapman
6	THE ENVIRONMENTAL EVIDENCE	
6.1	Faunal remains	by Karen Deighton
6.2	Plant macrofossils and molluscs	by Karen Deighton
7	CONCLUSIONS	
	BIBLIOGRAPHY	

Tables

Table 1:	Historic Environment Record data
Table 2:	Site chronology
Table 3:	Roman pottery quantification by fabric, context and weight (g)
Table 4:	Animal species present by context
Table 5:	Animal bone recovered from sieved samples by context
Table 6:	Metric and age determination data available by animal species
Table 7:	Plant macrofossils by context and sample
Table 8:	Molluscs by context and sample

Figures

Front cover:	Archaeological strip, looking south
Fig 1:	Site location
Fig 2:	Aerial photograph, Cambridge University Library BNG41-43, 1973-06-14
Fig 3:	Digital rectification of cropmarks with excavated features
Fig 4:	Plan of excavated features
Fig 5:	Ditch 38, looking north-east
Fig 6:	Sections of Roman ditches
Fig 7:	Ditch 14, looking north-west
Back cover:	Archaeological strip, looking north

**EXCAVATION OF A LATE IRON AGE AND ROMAN SETTLEMENT AT
ALCONBURY HILL, CAMBRIDGESHIRE
JULY 2009**

Abstract

In July 2009, an archaeological excavation was conducted by Northamptonshire Archaeology in advance of a water mains replacement between Sapley and Sawtry, at Alconbury Hill, Cambridgeshire. The investigation targeted the site of a late Iron Age and Roman settlement that had been identified by trial trench evaluation. The excavated evidence comprised a large enclosure ditch, with a possible return or internal division to the south, several smaller ditches and gullies, and four small pits. Pottery from the features dated from the 1st century BC to the late 2nd century AD. Ridge and furrow cultivation remains were also identified.

1 INTRODUCTION

Northamptonshire Archaeology (NA) investigated part of an Iron Age and Roman settlement in July 2009, which extended across the route of a new section of water main constructed by Anglian Water Services. The route extends northwards from Sapley to Sawtry, via Alconbury Hill (NGR TL 18768 76380 to TL 18208 80138) and the archaeological remains lay to the north of Alconbury Hill, adjacent and to the east of the B1043 at NGR TL 1850 7905 (Fig 1).

The settlement had been identified by an archaeological evaluation, undertaken by Cambridgeshire Archaeology in February 2008 (Gilmour 2008). In order to mitigate against the impact of the pipeline on the buried archaeological remains, Cambridgeshire Archaeology Planning and Countryside Advice (CAPCA) requested an archaeological investigation of the settlement and a brief was issued for the work in April 2008 (Gore 2008). The ensuing excavations were carried out in accordance with the brief (*ibid*) and a Project Design prepared by NA (Carlyle 2009).

Following the completion of the fieldwork an assessment report and updated project design (UPD) was prepared in accordance with the English Heritage procedural documents (Carlyle 2010; EH 1991; 2006; 2008). All work was completed to the standards and guidelines recommended by the Institute for Archaeologists (IfA 2008a-c), and the guidelines for the East of England (Gurney 2002). Following issue of the UPD a period of review was undertaken by CAPCA, prior to the project moving to final report and archive deposition. The present report represents the culmination of this process.

2 ARCHAEOLOGICAL BACKGROUND

2.1 Historic Environment Record (HER) data

The following information has been drawn from the Cambridgeshire Historic Environment Record database (Table 1). The data search covered an area within a 2km radius of the excavation site (Fig 1).

The earliest remains are those of a Bronze Age saucer barrow, Monks Hole Barrow, located approximately 1km to the north-east of the site (HER 819; SAM 27165).

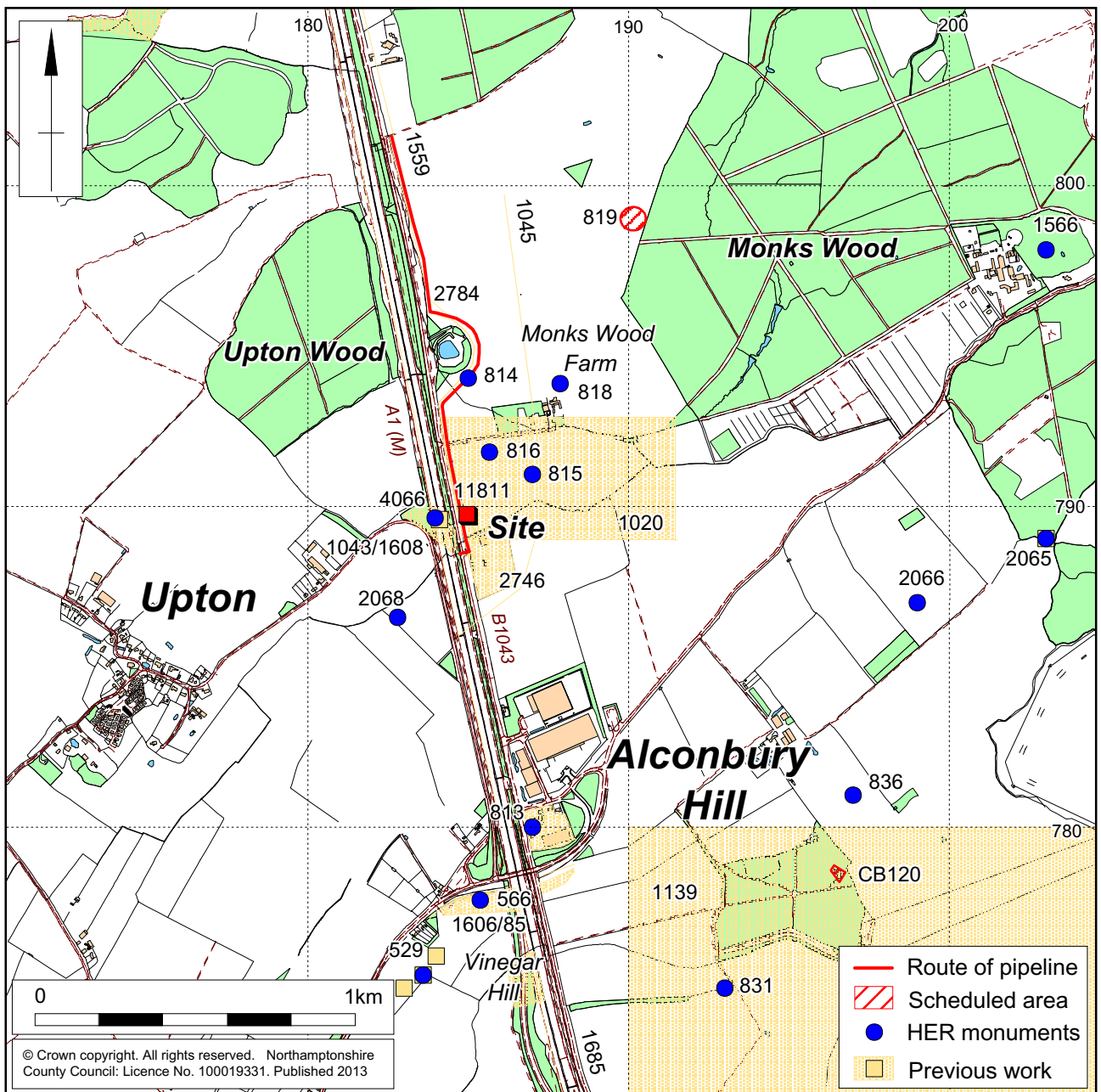
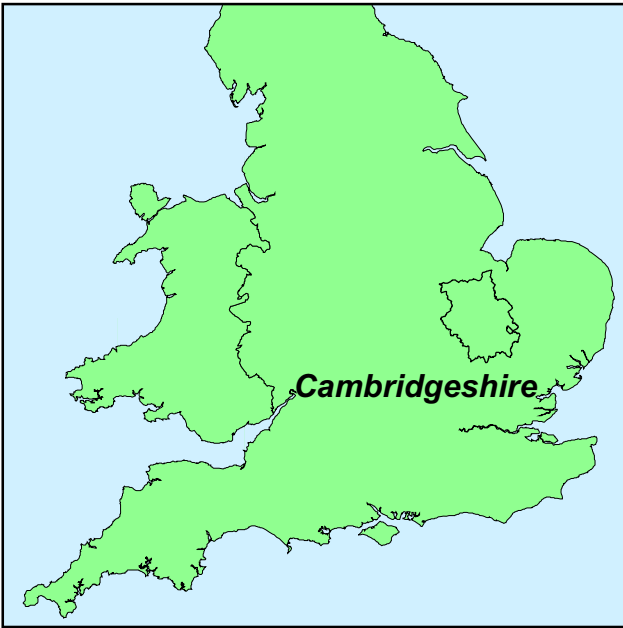
The late Iron Age and Roman settlement, the subject of this report, was identified from cropmarks and investigated as part of a programme of trial trench evaluation in 2008 (HER11811; Gilmour 2008). The settlement extends across the field to the east of the site and comprises multiple enclosures (HER815). One half of an Iron Age beehive quern was found less than 150m to the north of the site (HER816), and a field system, possibly associated with the settlement, has been identified 600m to the north (HER814). The Roman settlement was situated adjacent to Ermine Street (HER HER813), the major Roman road leading northwards from London (*Londinium*) to York (*Eboracum*). This section of the Roman road lies between the Roman towns at Water Newton and Godmanchester. Further evidence for Roman settlement and activity nearby has been identified 300m to the west of Ermine Street at South Farm, Upton, where sherds of Roman pottery and several features have been investigated (HER2068). Roman pottery has been found to the north of Monk's Wood Farm (HER818), and a coin of Faustina II (HER4066) was discovered close to the B1043.

In the wider area, extensive Roman remains have been investigated during several episodes of excavation in the vicinity of Vinegar Hill, 1km to the south (ECB529; 566; 1563; 1606; 1685). Other Roman discoveries in the vicinity include a pit (HER831), building (HER836), ditch (HER2066) and stratified finds (HER2065).

A late medieval enclosure lies at Stocking Close (HER1566), whilst open field cultivation has been identified near Alconbury Hill and around the village of Upton.

Table 1: Historic Environment Record data

Period	HER Ref	Event or monument
Bronze Age	819	Monks Hole Barrow, Scheduled Monument 27165
Late Iron Age	813	metalled surface, <i>Ermine Street</i>
to Roman	814	enclosure, cropmark
	815	field systems, cropmark
	816	find, beehive quern
	818	find, pottery
	831	feature, pit
	836	remains, building
	2065	finds, pottery, animal bone, coins etc
	2066	feature, ditch
	2068	settlement, cropmark evaluation
	4066	find, coin
	11811	field systems, cropmark evaluation
late medieval	1566	enclosure, Stocking Close
post-medieval	120	duck decoy, Hermitage Wood, Scheduled Monument CB120
recent work	529	Excavations at Alconbury Hill, 1938-39
	566	Evaluation at Alconbury Hill & Vinegar Hill, 1996
	1020	Aerial Photograph Assessment, Monks Wood Farm, 1995
	1043	Evaluation at South Farm, Upton, 1995
	1045	Watching brief along Government Oil Pipeline, Sawtry, 1993
	1139	Aerial Photograph Assessment, Alconbury Airfield, 1998
	1559	Watching brief along A1 water pipeline, Sawtry, 1993
	1606	Evaluation at Vinegar Hill, 1996
	1608	Excavations at South Farm, Upton, 1996
	1685	Preliminary Assessment A1 widening, Alconbury to Fletton, 1991
	2746	Evaluation at Stangate Business Park, Alconbury, 2007
	2784	Evaluation along Sapley to Sawtry water pipeline, 2008



Scale 1:20,000

Historic Environment Record data Fig 1

2.2 Aerial photographic evidence

Cropmark evidence for the site was examined on aerial photographs, held by the Cambridge University Library in the Aerial Photographic Collection (CUAP BNG41-43). The images depict an extensive layout of small inter-connecting enclosures and paddocks with a rough north-east to south-west axial orientation, which is eccentric to *Ermine Street* (Fig 2).



Aerial photograph, Cambridge University Library, BNG41-43, 1973-06-14 Fig 2

The extent of the visible cropmark lies mainly within the field to the south of Monks Wood Farm, however, its general density and layout implies that the buried remains probably extend further south, into the fields behind Stangate Business Park (Fig 2, right of image). Several linear boundaries extend from the enclosure complex in the main field, which appear to connect with other features in the field directly west of Monks Wood Farm and may be associated with a possible sub-rectangular enclosure, which is also visible as a cropmark (HER814; Fig 2, left of image). The cropmark complex as a whole is faint and difficult to discern with confidence, however, attempts to digitally rectify the layout of the features suggest that the site contains a dense concentration of features, probably associated with stock movements rather than crop cultivation (Fig 3). The correlation between excavated features and cropmarks is good.

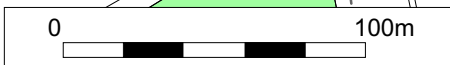
Monks Wood Farm

815

Ermine Street (A1 M)

790

- Excavated features
- Cropmarks

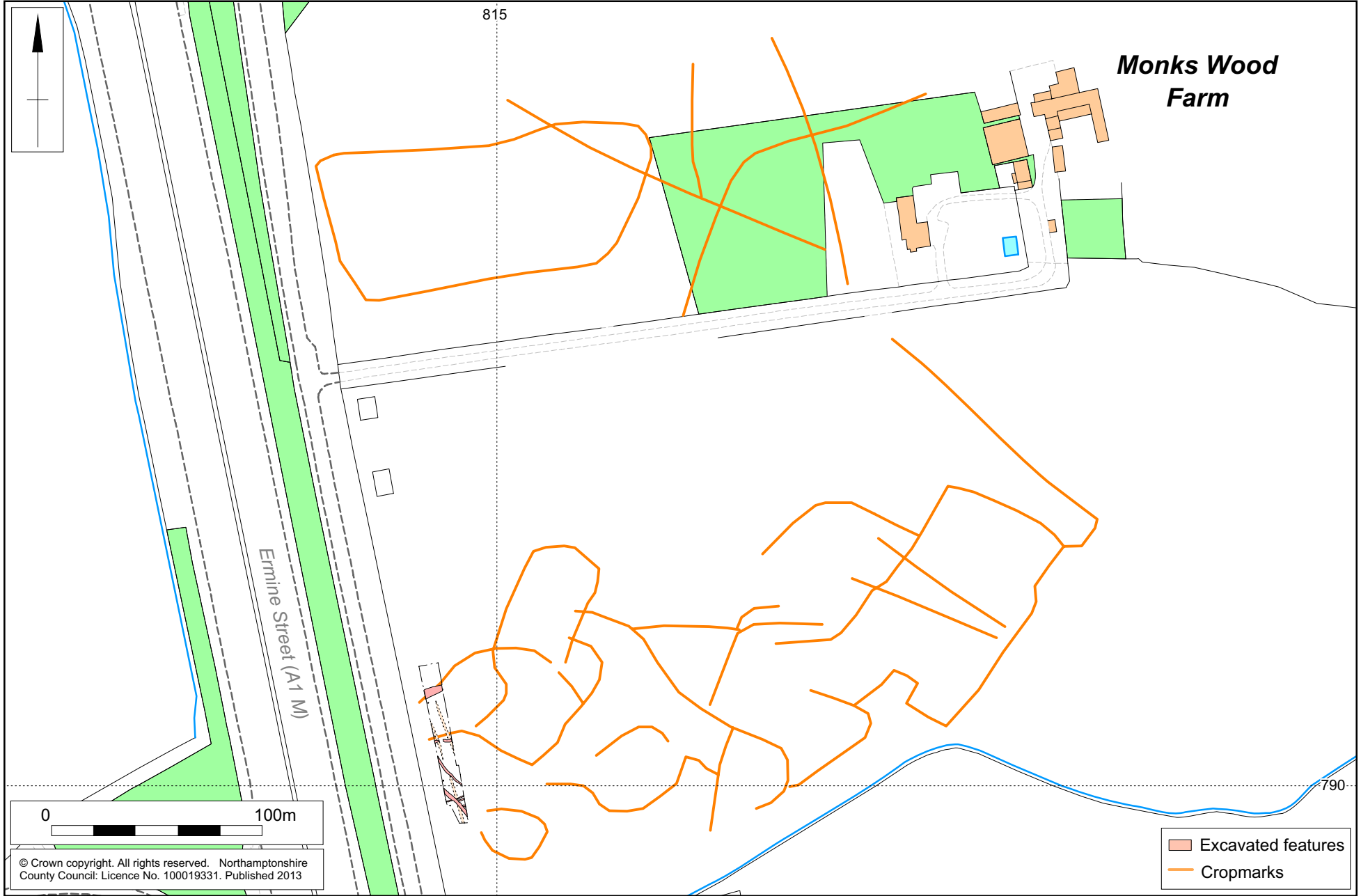


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Scale 1:2,500 (A4)

Digital rectification of cropmarks with excavated features

Fig 3



2.3 Topography and geology

The area of excavation was 0.07ha in area and lay 300m to the south-west of Monks Wood Farm, in an arable field adjacent to the B1043 and A1(M), along Roman *Ermine Street* (Fig 1).

The excavation was situated upon level ground at the top of a ridge on the north side of Alconbury Hill, at approximately 49m above Ordnance Datum, with extensive views to the north across the fen. To the east the ridgeline continues at approximately the same height towards Abbots Ripton and to the west it rises slightly towards Upton, whilst to the south the slope descends toward Alconbury Brook and the town of Alconbury.

The underlying geology comprises Oxford Clay overlain by glacial till (www.bgs.ac.uk/geoindex). Soils on the site belong to the Evesham 3 (411c) soil association, comprising slowly permeable calcareous clayey and fine loamy over clay soils (LAT 1983).

3 EXCAVATION STRATEGY

3.1 Objectives

The main aim of the investigation, as originally outlined in the brief issued by CAPCA (Gore 2008), was to preserve the archaeological evidence contained within the site by record and to attempt a reconstruction of the history and use of the site.

The specific objectives of the project were to:

- identify the character and extent of Iron Age activity within the area, including evidence for or against the continuity of land use into the Roman period;
- fully record the ditches recorded in the evaluation in order to plan their alignments and determine their function and purpose;
- attempt to model the landscape and its transformation brought about by the settlement's inhabitants and due to natural events, using appropriate environmental techniques.

The excavation broadly succeeded in achieving these aims, although assessment showed that the small assemblage of finds and ecofacts from a limited number of archaeological features had an overall low research potential. This was particularly the case when considering the environmental objectives.

Following the recommendations of the regional research frameworks and English Heritage (EH 1997; Glazebrook 1997; Brown and Glazebrook 2000), several revised research objectives were defined:

- Conduct a comparison of environmental evidence with other late Iron Age and Roman rural settlements nearby;
- Place the settlement in the context of the local and regional late Iron Age and Roman rural landscape in order to understand the site in terms of its economic base and its organisational structure;

- Attempt to produce an overall plan of the settlement using aerial photographic evidence of cropmarks to assist in the interpretation of how the settlement may have functioned and developed over time, taking into account the limitations of the cropmark evidence.

No further work was required for any of the artefactual or environmental assemblages.

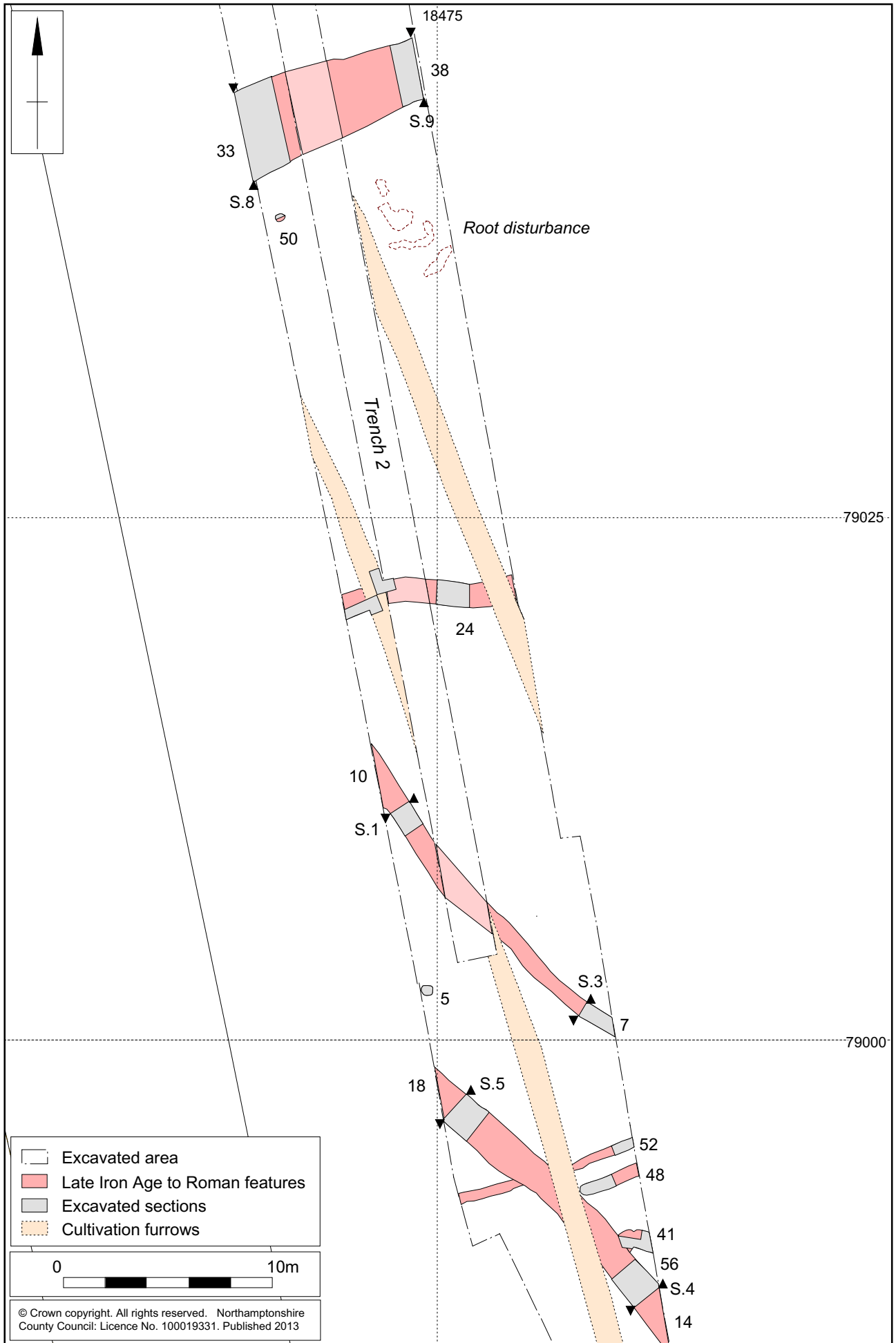
3.2 Methodology

The easement was marked out by the principal contractor and the excavation area, centered on Trench 2 of the evaluation, was located by NA using Leica System 1200 GPS surveying equipment. The area was stripped under archaeological supervision using a 360° tracked mechanical excavator fitted with a toothless ditching bucket. The topsoil and subsoil were removed in separate operations and stored in temporary bunds along the eastern edge of the easement and at either end of the site. Mechanical stripping continued to the north and south of Trench 2 until no further archaeological features were uncovered for a distance of c10m. Movement of machinery during site preparation was conducted in such a manner as to avoid impact on the archaeology.

Once the archaeological surface had been cleaned sufficiently to enhance the features, a grid was established and a digital base plan was produced using GPS, with the grid and site datum related to the Ordnance Survey. A general site plan was hand drawn at a scale of 1:50.

Representative samples of all exposed archaeological features were excavated using sections a minimum of 1.0m wide and allowing them to weather to expose smaller variations within them. All pits were 50% excavated and a representative portion of all linear boundaries were excavated. Greater sampling was undertaken where features contained deposits or artefacts of particular value or were likely to hold significant artefact or environmental assemblages. Unusual or burnt features were 100% excavated and samples recovered for environmental processing. Intersections were investigated to establish stratigraphic relationships and sections of linear and curvilinear features were also excavated away from intersections with other features or deposits, to obtain unmixed samples of material. Features such as furrows or tree throws were investigated to characterise their form and function. Spoil and the surface of archaeological features were scanned with a metal detector to ensure maximum finds retrieval.

Each excavation area was cleaned sufficiently to enable the identification and definition of archaeological features. All archaeological deposits and artefacts encountered during the course of excavation were fully recorded. The recording followed the standard NA context recording system with context record sheets using unique numbers drawn from a central register for each feature or deposit, cross-referenced to scale plans, section drawings and photographs in digital, and both 35mm monochrome and colour film (NA 2006). Deposits were described on *pro-forma* record sheets to include measured and descriptive details of the context, its relationships, interpretation and a checklist of associated finds. Archaeological sections of sampled features were drawn at scale 1:10 or 1:20, as appropriate, and all levels were related to Ordnance Survey datum. Spot heights were measured in across the site.



Scale 1:250

Plan of excavated features Fig 4

Bulk soil samples were collected for archaeobotanical remains from principal contexts and from all cremated deposits in accordance with recommended guidelines (EH 2002). Sample sizes were 40 litres or the entire context for smaller deposits. Soil was stored in sealable buckets from securely stratified deposits considered to have the minimal risk of contamination. Bulk soil for archaeobotanical remains were processed at NA by specialist staff using the flotation technique to retrieve seed, charcoal and other remains. The resultant residues were hand sorted to retrieve bones and other finds.

Artefacts were collected by hand and from sieved samples. Unstratified animal bones and modern material were not collected. All finds have been boxed by material type. The field data has been compiled into a site archive with appropriate cross-referencing in accordance with best practise (IfA 2008b; MGC 1992) and the finds have been prepared for long term storage in a stable environment (Walker 1990; Watkinson and Neal 1998).

4 THE EXCAVATED EVIDENCE

The natural substrate, 3, was glacial till (Oxford Clay). At the surface it occurred as light to mid orangey-yellow silty clay and contained occasional sub-angular to rounded flint pebbles. At a depth of c0.4m below the surface of the natural substrate the colour of the till changed to mid-greyish-blue. In places there were patches of gritty, fine angular gravel in a silty clay matrix. Drainage of surface water was poor to moderate. The archaeological and surface deposits were distributed above this geological horizon, with principal features cut into the clay and gravel.

The substrate was overlain by up to 0.2m of mid-brown silty clay subsoil with moderate pebbles and up to 0.3m of mid- to dark brownish-grey clayey silt loam topsoil. Few finds were retrieved during machine excavation, spoil heaps were scanned by metal detector during the strip and it would seem that the general scatter of finds was at a normal distribution.

4.1 Summary of the site chronology

Table 2: Site chronology

Period	Nature of activity
late Iron Age and Roman (mid-1st century BC to early 2nd century AD)	ditches and pits, which probably form part of a wider network of enclosures beyond the excavated area
medieval and post-medieval	furrows, aligned north-west to south-east, part of the open fields of the village of Upton

4.2 Late Iron Age and Roman settlement

Part of a late Iron Age and Roman settlement was exposed within the easement of the pipeline corridor, with the greater part of the settlement extending into the field to the east (Fig 3). All of the features identified in the forgoing trial trench evaluation were located and investigated further (Fig 4; Gilmour 2008).

Principal boundaries extending from Ermine Street

The northernmost feature was a large steep-sided enclosure ditch, 33/38, aligned south-west to north-east, 4.6m wide by 1.11m deep at its greatest extent and narrowing to 3.0m wide by 1.0m deep to the north-east (Figs 5-6, S8-9). The ditch contained a

sequence of fills, with the majority of the material comprising mottled orange and greyish-orange clay silt derived from the weathering of the ditch sides and gradual soil accumulation. Late Iron Age pottery, probably from a single vessel, was recovered from the lower fills and Roman pottery from the upper, indicating that the ditch could have been cut in the 1st century BC. The ditch continued to silt gradually, however, since it was filled in sometime between the late 1st to 2nd centuries AD, with darker silty clay loam soil at the surface. Such a long period of silting without apparent recuts seems unlikely and it is suggested that the late Iron Age pottery in the secondary fill of ditch 33 is probably residual as the secondary fill in ditch 38 produced Roman pottery.



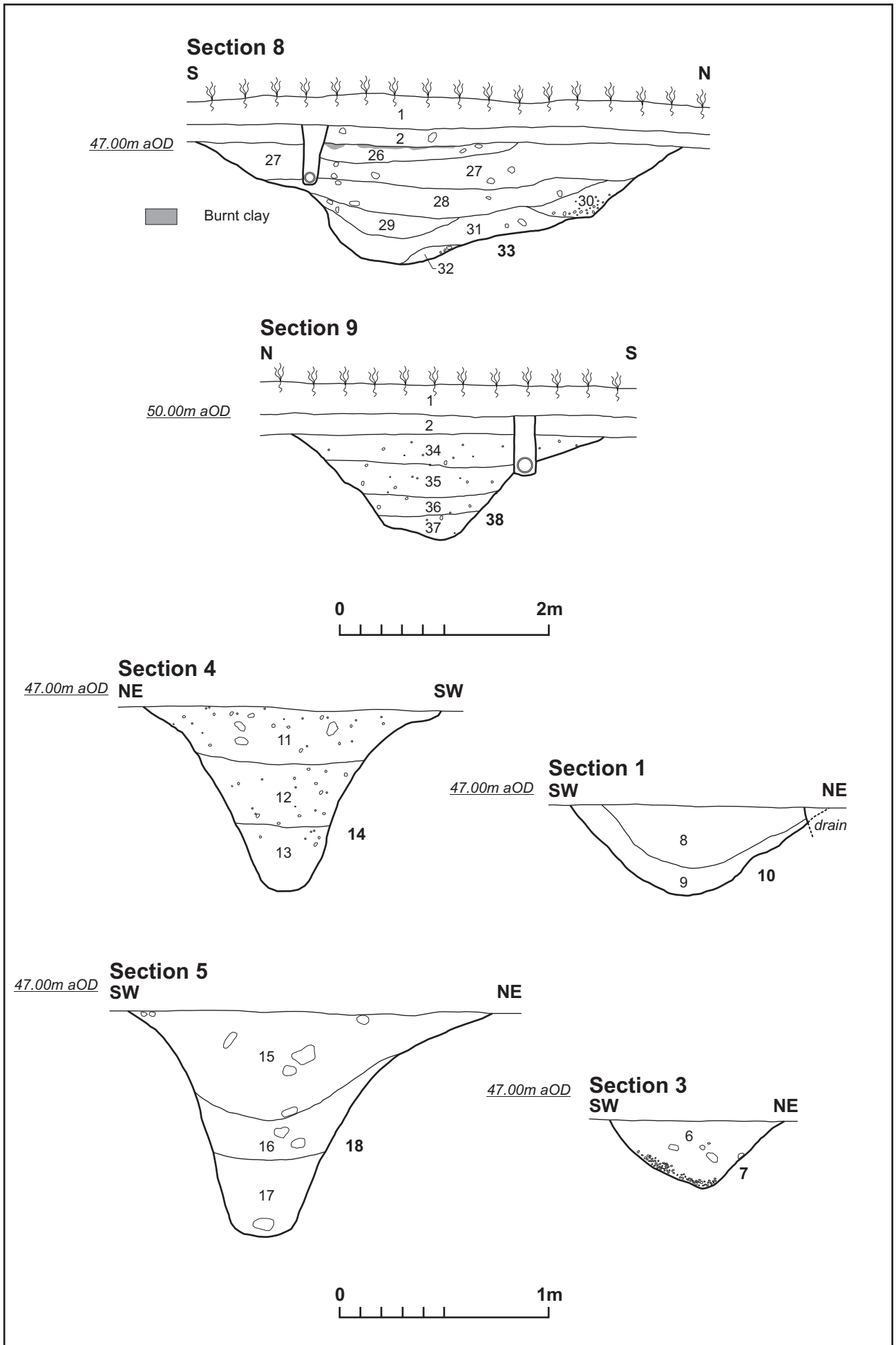
Ditch 38, looking north-east Fig 5

Situated 21.5m to the south of ditch 33/38 was a further boundary on the same alignment, albeit slightly crooked in plan. Ditch 24 was 1.31m wide by 0.66m deep and had a steep-sided, V-shaped profile with a narrow rounded base. The bottom of the ditch indicated in-wash material comprising soft dark grey clay silt containing charcoal flecks, with firm mid-brownish-grey silty clay making up the bulk of the material above. The fills produced two sherds of Roman pottery.

A further 26.5m to the south of ditch 24 were two parallel gullies, 48 and 52, which were 0.8m apart on the same alignment as the ditch to the north, 33/38. Gully 48 was 0.54m wide by 0.11m deep, whilst gully 52 was 0.35m wide by 0.09m deep; both gullies exhibited a shallow rounded profile. The fills comprised hard dried yellowish-brown and greyish-brown silty clay and were probably silt deposits. The shared alignment with ditch 33/38 and ditch 24 suggests a formal layout of land divisions. All of these boundaries were perpendicular to *Ermine Street*.

Possible later boundaries

Given the general lack of dating material and physical relationships between features, it is not possible to ascribe the features to specific phases with any certainty. However, it is possible that two of the boundaries represent a later rearrangement, which is an eccentric alignment to *Ermine Street*.



Scales 1:25 & 1:50 (A4)

Sections of Roman ditches Fig 6

Two further parallel ditches, 14/18 and 7/10, were aligned north-west to south-east. These ditches cut across the alignment of gullies 48 and 52, although only gully 52 could be identified across the full width of the excavated area. Ditch 14/18 had a steep V-shaped profile with a narrow concave base, 1.72m wide by 1.07m deep (Figs 6-7, S4-5). The lower fills were firm orange-brown and light greyish-brown clay silt with chalky flecks, the product of natural accumulations. The uppermost fill contained pottery of late 2nd century AD date and was darker greyish-brown silty clay loam, the product of infilling. By comparison ditch 7/10 was smaller, 1.26m wide by 0.44m deep, the sides less pronounced and profile generally shallower and more rounded (Fig 6, S1 and S3). Whilst there was some evidence for silting towards the base, the larger bulk of the fill constituted darker silty clay loam soils. Late Iron Age pottery was recovered from the fill, but this was probably residual.



Ditch 14, looking north-west Fig 7

Pits

On the southern side of gully 48 were two shallow pits, 41 and 56. Pit 41, the earlier of the two, was at least 1.1m long by 1.0m wide and 0.26m deep. The fill comprised compact dark reddish-grey silty clay with charcoal flecks. This earlier pit had been cut by pit 56, which was 0.9m long by 0.8m wide and 0.14m deep, its western end having been truncated by ditch 14. The fill was hard dry greyish-brown silty clay. Neither pit was particularly remarkable in shape; both were shallow, rounded and asymmetrical. There was no evidence for *in situ* burning.

In addition, there were two further discrete pits, which were undated. Pit 5, which lay between ditches 7/10 and 14, had a diameter of 0.8m and a depth of 0.08m. The fill comprised hard dry blackish-brown silty clay within a shallow bowl-shaped scoop. Pit, 50 was located approximately 2m to the south of ditch 33/38 and was 0.4m wide by 0.12m deep. The fill comprised firm dark greyish-black silty clay loam, also within a shallow bowl-shaped hollow. Neither pit exhibited burning or structural elements.

4.3 Ridge and furrow cultivation

Extending down the length of the excavation area on a north-west to south-east alignment were two shallow furrows, spaced approximately 4m apart. They measured c1.0m wide by 0.12m deep. Their spacing and general appearance was consistent with open field cultivation and their alignment was roughly parallel to Ermine Street and perpendicular to the road extending north-east from Upton. Upton is the nearest medieval manorial centre and it is probable that the furrows lay within its open fields.

5 THE FINDS

5.1 Iron Age pottery by Andy Chapman

Three contexts produced hand-built vessels dated to the late Iron Age, a total of 30 sherds weighed 95g with an average sherd weight of only 0.32g. Each group is from a single sherd family, and the sherds from fills 28 and 29 of ditch 33 are probably from the same vessel. The sherds from fill 8 of ditch 10 provide the only dating evidence for this feature. While Iron Age pottery is present in the fills of ditch 33, the upper fills have produced Roman pottery.

All the sherds are in a fabric containing dense inclusions of crushed shell. In fill 8 from ditch 10, the sherds contain finely crushed shell, with the platelets no more than 2mm in diameter, while in the material from ditch 33 the platelets are frequently up to 5mm diameter, and the soft fabric has laminated and crumbled. The core is brown to grey in colour, and the inner and outer surfaces are similarly grey with brown mottling.

The sherds from ditch 10 are body sherds from a thin-walled vessel, 4-6mm thick, well finished, with smoothed surfaces. The sherds from ditch 33 are from a vessel with a well-developed square rim. The body sherds are not exceptionally thick at 8mm, suggesting that this was a smaller jar or bowl form and not a large storage jar.

The lack of diagnostic features makes it impossible to propose a definitive date for this material, but the developed rim of the vessel from ditch 33 might suggest a late Iron Age date in the 1st century BC.

5.2 Roman pottery by Tora Hylton

A total of 43 sherds with a combined weight of 137g were recovered from seven individual fill deposits. The pottery was concentrated in the upper fills of enclosure ditch 33/38 and ditch 14/18. Although the quantity of Roman material is small, its presence indicates that there was activity in the area during the late 1st to early 2nd century AD. In general terms the assemblage is not well preserved, the sherds are small and abraded and there are few diagnostic features; this is reflected in the overall average sherd weight of 3.1g. The analysis included a sherd count and weighing by fabric type.

With the exception of one sherd of Samian, all the pottery appears to be of local origin, mainly sherds in greyware fabrics. Diagnostic forms and features include necked jars, one with a cordoned neck and girth groove.

Imported wares are represented by a rim sherd from a Samian hemispherical bowl (Drag 37), dating from the late 1st to late 2nd century AD (Webster 1996, 47).

Table 3: Roman pottery quantification by fabric, context and weight (g)

Fabric	fill 11	fill 15	fill 26	fill 28	fill 34	fill 35	fill 44
	ditch 14	ditch 18	ditch 33	ditch 33	ditch 38	ditch 38	ditch 24
Grog tempered ware	-	1 (12)	-	-	-	-	-
Greyware	-	2 (18)	1 (5)	-	25 (42)	7 (30)	2 (11)
Misc. sandy wares	2 (9)	-	-	-	-	-	-
Samian	-	-	-	1 (2)	-	-	-
Shell-gritted ware	-	2 (8)	-	-	-	-	-
Total	2 (9)	5 (38)	1 (5)	1 (2)	25 (42)	7 (30)	2 (11)

weight (g) in brackets

5.3 Fired clay by Pat Chapman

One fragment of fired clay was recovered from fill 23 of ditch 24; it has a 30mm long semicircular wattle impression of 15mm diameter. The clay is hard, pale pink and white. The surrounding surfaces are very smooth including those adjacent to the impression and it has the appearance of being a single object, but is most likely a fragment from some structural debris.

6 THE ENVIRONMENTAL EVIDENCE

6.1 Faunal remains by Karen Deighton

A total of 3.3kg of animal bone was collected by hand during excavation and from sieved samples. The material was analysed to ascertain the level of preservation, the species present and the potential to contribute to the understanding of the site.

The animal bone was scanned and identifiable elements were noted (Halstead 1985; Watson 1979). Preservation and modification were also noted (Binford 1981). Any available biometrical data was noted as was any available ageing data, including the state of fusion and tooth eruption and wear (Silver 1969; von den Driesch 1976; Payne 1973; Halstead 1985; Levine 1982).

Table 4: Animal species present by context

Cut/fill	Feature	Horse (<i>Equus</i>)	Cattle (<i>Bos</i>)	Sheep/goat (<i>Ovicaprid</i>)	Pig (<i>Sus</i>)	Dog (<i>Canid</i>)	Large ungulate*	Total
14/11	Ditch	3	-	-	-	-	-	3
14/12	Ditch	2	-	-	-	-	-	2
14/13	Ditch	-	2	-	-	-	-	2
18/15	Ditch	-	1	-	-	-	-	1
24/23	Ditch	-	4	-	1	-	-	5
33/27	Ditch	-	-	1	-	-	-	1
33/28	Ditch	-	1	-	-	-	-	1
33/29	Ditch	-	1	1	-	1	-	3
33/31	Ditch	-	3	1	-	-	-	4
37/38	Ditch	-	3	-	-	-	1	4
24/44	Ditch	-	2	3	-	-	-	5
Total		5	17	6	1	1	1	31

* hoofed animal

Fragmentation and surface abrasion were heavy, which adversely affected identification and the collection of ageing and metrical data. Cut marks were seen on a single bone from fill 31 of ditch 33 and only three examples of canid gnawing were noted. The apparent paucity of both butchery evidence and canid gnawing could be due to the high level of bone surface abrasion. It would seem that the poor preservation is due to soil conditions. A single fragment of burned bone was observed from fill 44 of

ditch 24, possibly suggesting that this was not a preferred method of disposal. A summary of the animal bone recovered by hand from the late Iron Age and Roman features on the site is presented in Table 4 and the bone recovered from sieved samples taken from the ditches is presented in Table 5 (mesh sizes: 3.5mm, 1mm and 500microns).

Table 5: Animal bone recovered from sieved samples by context

Species	fill 17 ditch 18	fill 44 ditch 24	fill 45 ditch 24	fill 28 ditch 33	fill 29 ditch 33
cattle (bos)	-	1	-	-	-
sheep/goat (ovicaprid)	-	1	3	-	-
field vole (<i>microtus agrestis</i>)	-	2	-	-	1
bank vole (<i>clethrionomys glareolus</i>)	-	1	-	2	-
water vole (<i>arvicola terrestris</i>)	2	-	-	1	-
house mouse (<i>mus musculus</i>)	-	1	-	-	-
rodent sp	-	5	-	-	16
small mammal	1	11	3	3	-
amphibian sp	-	-	-	-	1
Total	3	22	6	6	18

Ageing and metrical data

The number of bones suitable for metrical analysis and age determination are shown in Table 6 below.

Table 6: Metrical and age determination data available by animal species

Data type	Horse (<i>Equus</i>)	Cattle (<i>Bos</i>)	Sheep/goat (<i>Ovicaprid</i>)	Pig (<i>Sus</i>)
Fusion	2	8	1	1
Tooth wear	3	-	-	-
Measurements	6	2	-	-

Conclusions

Little can be gleaned of the economy or function of the site from the animal bone due to the poor preservation and scarcity of identifiable material. It can be stated that a small range of common domesticates were utilised at the site and that the taxa present are typical for the period. The potential for further analysis is severely limited by the paucity and poor preservation of the material.

6.2 Plant macrofossils and molluscs by Karen Deighton

Seven soil samples, each 40 litres in size, were assessed to establish the presence, nature and state of preservation of plant macrofossils and molluscs. The sampling strategy and procedures followed English Heritage guidelines (EH 2002). The samples were processed using a modified siraf tank fitted with a 500-micron mesh and 250-micron flot sieve. The resulting flots and residues were dried and sorted for ecofacts using a binocular microscope at 10x magnification. Charred seed and cereal grain identifications were made with the aid of the author's reference collection and a seed atlas (Cappers *et al* 2006). Kerney and Cameron (1994), Glöer and Meier-Brook (2003) and the Conchological Society website were consulted for mollusc identifications.

Results

The results of the assessment are presented in Tables 7-8. Preservation was fair, although the charcoal was heavily fragmented. Two of the samples were entirely sterile.

Table 7: Plant macrofossils by context and sample

Type	fill 44 ditch 24	fill 45 ditch 24
charcoal	500+	500+
cereal grains	6	3
wild/weed seeds	4	-

Table 8: Molluscs by context and sample

Species	fill 17 ditch 18	fill 44 ditch 24	fill 45 ditch 24	fill 28 ditch 33	fill 29 ditch 33
<i>Cochlicopa lubrica</i>	-	42	19	3	13
<i>Discus rotundatus</i>	1	23	10	1	2
<i>Pupilla muscorum</i>	4	5	1	7	1
<i>Carychium minimum</i>	20	81	4	27	16
<i>Cepaea nemoralis</i>	-	-	-	4	4
<i>Vallonia</i> sp	2	42	20	-	-
<i>Clausillia</i> sp	-	1	-	-	1
<i>Trichia</i> sp	-	7	-	-	-
Indeterminate snails	13	150	50	20	25
<i>Galba truncatula</i>	-	24	9	43	14
<i>Radix balthica</i>	1	72	36	11	100
<i>Anisus leucostoma</i>	-	31	1	1000+	1000+
Sphaeriidae sp	1	-	1	1	-

Conclusions

The weed seeds were fat hen (*Chenopodium album*), a ubiquitous taxon of disturbed ground. Cereal grains were wheat and barley.

The freshwater mollusc taxa suggest the presence of standing water which possibly dries up in summer as both *G Truncatula* and *R Balthica* can be amphibious. The land taxa are largely indicative of a damp environment, although the presence of *Pupilla muscorum* could suggest some drier areas such as stone walls.

Assessment suggested that further analysis of charred plant remains would add little to the understanding of the site due to the lack of charred seeds and grains and the poor preservation of the charcoal. Similarly there was little additional data to be gleaned from the mollusc analysis.

7 CONCLUSIONS

The information gained from excavation of the late Iron Age and Roman rural settlement at Alconbury Hill was unexceptional and, when compared with those other sites which have been investigated extensively near to *Ermine Street*, it fits a variable pattern of preservation. Excavations at Gidding Road, Sawtry, produced insufficient charred plant remains in the form of cereal and weed seeds for detailed analysis to be meaningful (Fryer 2011), and no animal bone at all. Samples retrieved during evaluation from Alconbury Airfield were largely sterile (Macauley 2000). Quantities of animal bone are not always well preserved, at Mill Lane, Water Newton, there was very little material that could allow a statement more detailed than acknowledging the presence of all major domesticates (Baxter 2003). At Christie Drive, Hinchingsbrooke,

the preservation was moderate to poor, cattle bones dominated over other species but little could be concluded (Raykovača 2012). Sometimes the low levels of material are blamed upon the levels of sampling or the methodology, and yet at Silver Street, Godmanchester, a total of 46 bulk samples still produced only a low to moderate density of cereals, chaff, weeds and nutshell from which few positive statements could be raised (Fryer 2009). The margins of the present site have been comparable in their low level of environmental data and this is not uncommon.

Occasionally excavations have been more successful. Work undertaken at Black Horse Farm, Sawtry, produced low density remains comprising spelt wheat, barley and oats alongside plants indicative of crop contaminants upon wetland margins; brome, trefoil, buttercup, cinquefoil, knotgrass, sedge and spike-rush (Fryer 2008). The overall quantification indicated that there was no significant increase in arable land use between the Iron Age and Roman periods. The animal bone from the same site showed a 71% proportion of sheep/goats compared to only 20% cattle, 5% horse and 3% pig, with cat, dog, goose, roe deer and duck forming less than 1% of the remainder (Phillips 2008). The age of the animals at slaughter indicated that most were kept for meat production and that butchery marks were underrepresented owing to the likely export from site of animal carcasses. There was little evidence for fenland exploitation.

Excavations at Mill Common, Huntingdon, were also very productive in terms of environmental data, although the presence of a sizable inhumation cemetery necessitated a much more detailed approach to sample analysis and methodology (Nicholson 2004). On this site the animal bone was also dominated by sheep/goat, however, their age at slaughter indicated they were probably farmed for wool. The cattle, which were fewer, died younger and were probably reared for meat, as were the pigs. The horses exhibited pathological conditions indicative that they had been used for heavy labour, probably for transporting materials. There was also evidence for the consumption of rabbit, red deer, roe deer and the keeping of dogs. The extensive sieving undertaken recovered a wide range of bird bones, particularly ravens, crows and jackdaws, but also duck, wigeon, goose, swan, red kite and domestic fowl, together with one unidentifiable fish bone. There are, therefore, sites close to *Ermine Street* that provide very good environmental data, but the margins of the present site are not amongst them.

The presence of fresh water snails at Gidding Road, Sawtry, suggested some standing water in the features (Deighton 2008). There was a similar observation from Black Horse Farm, with the inclusion of duckweed amongst the seeds (Fryer 2008). It is likely that the wet nature of the present site might be expected to yield similar evidence and would also have been subject to periods where features accumulated standing water.

At the settlement site to the east of Tort Hill, Sawtry, although little environmental sampling was undertaken the features were indicative of a ribbon development extending from the roadside of *Ermine Street* to form a principally agricultural network of enclosures (Roberts 1995). The general form and layout was indicative of a settlement site that was in existence prior to the Roman road being established as a formal route, and the eccentricity of the present site to *Ermine Street* would be consistent with this view (Welsh 1994).

The extent of archaeological work necessitated by the scale of the development for the water pipeline was small and would never have yielded sufficient data to establish conclusive arguments, even in a state of moderate to high potential. The ground conditions at the top of the ridge may have dried out significantly and this has meant the preservation of bone, seed and charcoal is generally poor. However, it is equally likely that the marginal location at the edge of the cropmark distribution is located away

from the principal deposits that contain the better preserved and more representative environmental materials.

The site lies beside *Ermine Street*, between the Roman towns at Water Newton and Godmanchester. This was a major arterial road of Roman Britain and, locally, would have had a significant impact on the economic activities of the small towns and those settlements within their hinterlands. The settlement was certainly well connected, and there is every reason to suppose that it would have both benefitted and taken advantage of this situation. However, the excavated evidence identified only a few features that were a part of a much wider distribution of enclosure, seen through cropmark evidence, and these were peripheral to the central focus of the occupation. The quantity, type and variety of finds indicated that the domestic focus was probably situated some distance from the excavation area. The majority of material represented abraded artefacts that were deposited as part of the filling process of the ditches, rather than steady accumulations, dumping episodes, placed deposits or casual losses. A dominance of small mammalian remains, particularly voles, indicates that the enclosures were probably not busy working areas for people. The enclosures probably supported pastoral activity rather than arable, given a complete lack of crop processing evidence and a trend towards damp grassland species amongst the molluscs. On this basis it would seem that the excavated features formed part of the extended agricultural field system, rather than principal enclosures and that whilst activity should be expected beside the road, the domestic and agricultural foci were probably set back from the road where they could be more central to the field systems. However, since very little additional evidence was recovered from the excavated area, it is impossible to demonstrate the nature of the agricultural regime.

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