37645

MYRTLE ROAD
Hethersett, Norfolk:
Archaeological Trial Trenching

Anwen Cooper

CAMBRIDGE ARCHAEOLOGICAL UNIT
UNIVERSITY OF CAMBRIDGE

Myrtle Road, Hethersett, Norfolk

Archaeological Trial Trenching

37645HETT

Anwen Cooper

With contributions from
Emma Beadsmoore, Adrian Challands, Gwladys Monteil,
Kate Roberts and Chris Swaysland

Cambridge Archaeological Unit
University of Cambridge
February 2003

Report Number 534

An archaeological evaluation by trial trenching was undertaken by a team from Cambridge Archaeological Unit on land at Myrtle Road, Hethersett, Norfolk (TG 1492 0545) in January 2003. This followed an initial geophysical assessment that revealed several ditches surrounding a large, irregular feature on the western side of the site (Hancock 2003). The trial trenches confirmed the archaeological character of these geophysical anomalies. In addition, it revealed several substantial pits, an additional ditch and two smaller, shallow pits. All of these features were dated to the mid to late Romano-British period. Together the evidence appeared to represent quarrying, arable cultivation and midden accumulation at the edge of the fairly substantial 2nd to 4th century AD Romano-British settlement that was identified previously during field survey and observations further to the west.

Introduction

An archaeological evaluation by trial trenching was undertaken by a team from Cambridge Archaeological Unit on land at Myrtle Road, Hethersett, Norfolk in January 2003. The work was commissioned by CPM environmental planning and design in relation to a planning application for residential development. It followed an initial evaluation of the site by geophysical survey (Hancock 2003). The investigation was carried out in accordance with a project design specification approved by D. Gurney, Principal Landscape Archaeologist at Norfolk Landscape Archaeology. The County Number allocated for the project in consultation with the Norfolk Heritage Environment Record was 37645HETT.

Several factors had a significant impact on the implementation of the investigation. A high voltage power line that crossed the centre of the site from east to west limited the positioning of trenches. In addition, extreme weather and ground water conditions during the fieldwork (most of the features were under at least 0.35m of water following machine excavation of the trenches), affected the methodology employed. As a result, the archaeology was tested using a combination of sample excavation and auguring.

Site Location and Topography

The area of investigation comprises 3ha of land located on the northwestern edge of Hethersett at TG 1492 0545 (Figure 1). It lies on a very gradual, north-facing slope at a height of c.50m OD, 600m to the east of a tributary of the River Yare. The underlying geology is boulder clay overlying solid chalk. The eastern part of the site is currently used as rough pasture; the western part has been landscaped and includes a series of fishponds in the northwestern corner and rough grassland and trees to the south. The northwestern part of the site (c.0.5ha) was inaccessible and could not be included in the assessment.

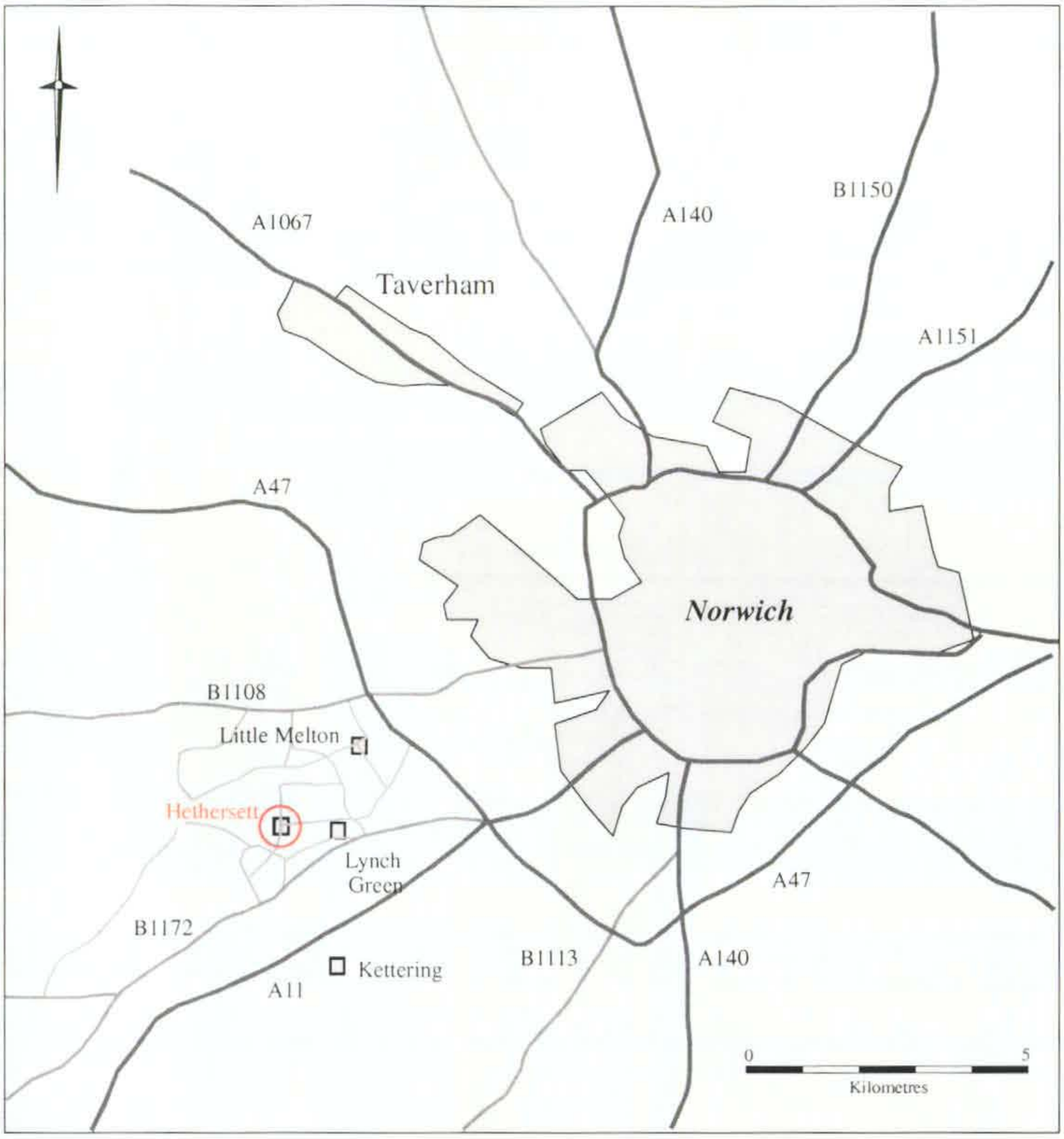


Figure 1: Site location

Archaeological Background

The Norfolk Heritage Environment Record shows evidence for significant archaeological activity in the area. Field walking and metal detecting has revealed a broad swathe of flint scatters and find spots dating from the Palaeolithic period onwards to the north and west of the site as well as a lower density to the south and east.

Evidence for prehistoric occupation includes numerous flint scatters along the valley sides to the north and east of the site, dating mainly to the Neolithic.

The most significant evidence in relation to the current project is an extensive area of Romano-British material investigated over the two fields immediately to the west of the site. The land here has been field walked and metal detected over many years and the westernmost field underwent more systematic investigation during

the insertion of drainage channels in 1985 (Gregory 1985). During the latter investigation, several walls with flint footings, ditches and an array of pottery and metalwork dating from the 2nd to 4th century AD were recovered as well as a lead coffin containing a 12-14 month old child. Romano-British metalwork, coins, tile and pottery (along with prehistoric lithics and Medieval and Post Medieval metalwork) have also been discovered in the field immediately to the west of the site. The nature, density and extent of this material are indicative of a substantial mid to late Romano-British settlement. Lower concentrations of Romano-British material have been found over a wide area around the site.

Saxon, Medieval and Post Medieval occupation appear to have focussed around Great Melton 1km to the northeast and at Lynch Green and Hethersett to the southeast of the site. An earthwork enclosure and quantities of early and late Medieval pottery have been found along with prehistoric and Romano-British material to the south east of the upstanding church at Great Melton. Small concentrations of Saxon and Medieval material have also been found both within and around the hamlets of Lynch Green and Hethersett. This includes the discovery of a Saxon brooch during field walking on the land immediately to the west of the site. In addition, a possible Saxon cemetery has been identified about 500m to the east of the site. The land within the investigation area has been in agricultural use since at least the late 18th century when it lay in an open field immediately to the northwest of a scattering of dwellings around Lynch Green. The area was enclosed by the late 19th century when it included three, small fields (First Edition 1:10560 County Series 1890).

Methodology

The assessment trenches were located in order to assess the features identified by geophysical survey (Hancock 2003) and to provide coverage across the extent of the available investigation area. One 75m, four 50m and three 25m trenches (2m wide) were machine excavated, with two subsidiary lengths added judgementally, bringing the total excavation area to 750 square metres (3% of the total accessible area of 2.5ha). Overburden and the stripped surface of the trenches were scanned by eye and with a metal detector.

All archaeological features were base-planned at 1:50; sections were drawn at 1:10 and 1:20. The Unit-modified version of the MoLAS recording system was employed throughout. Excavated stratigraphic entities (e.g. a cut, a fill) were recorded as individual contexts, with interrelated stratigraphic events (e.g. a ditch cut and its fill) assigned feature numbers. Environmental samples were taken from a selection of features.

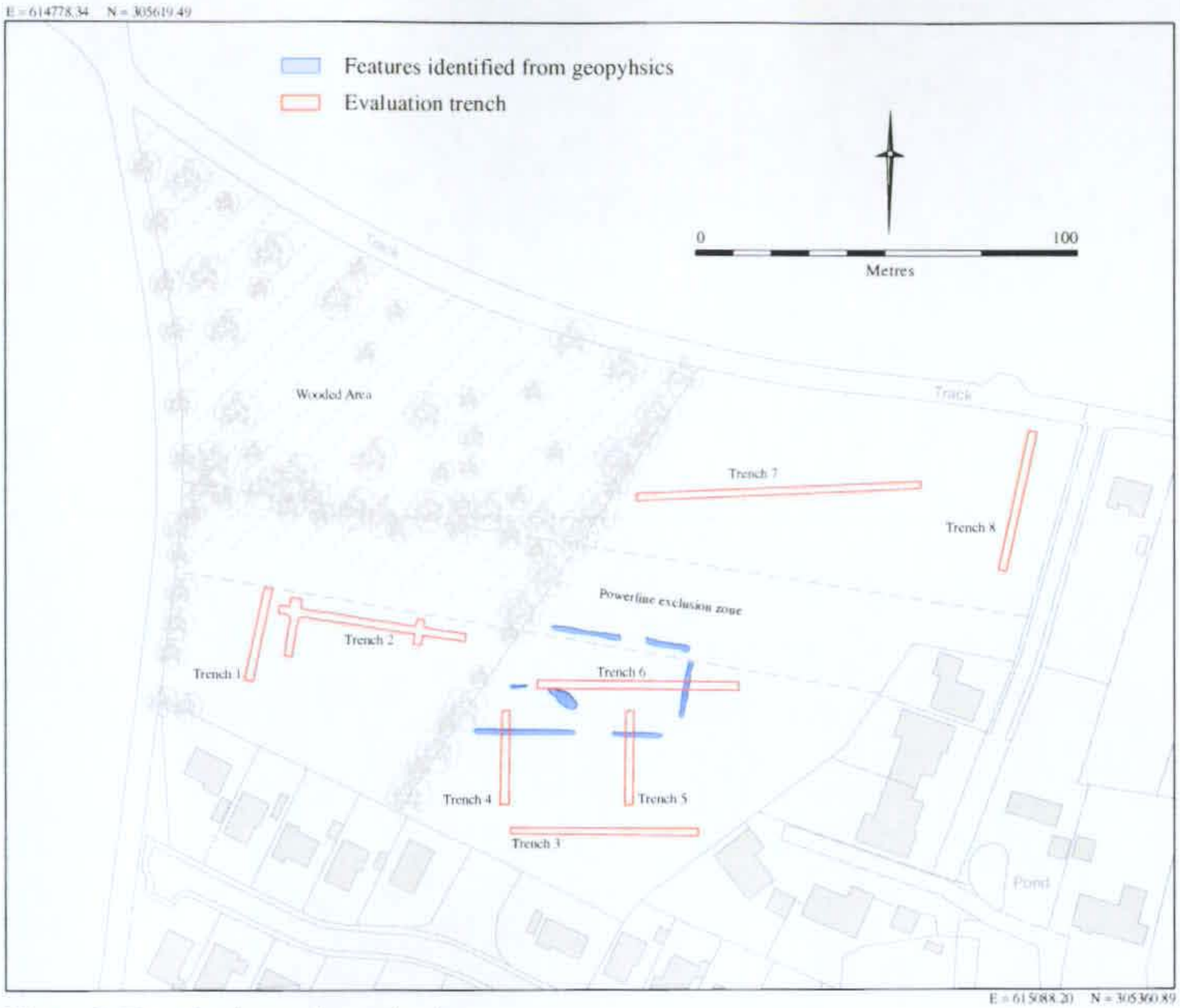


Figure 2: Trench plan and geophysics

Results (Figure 3)

Trench 1

No archaeological features were identified.

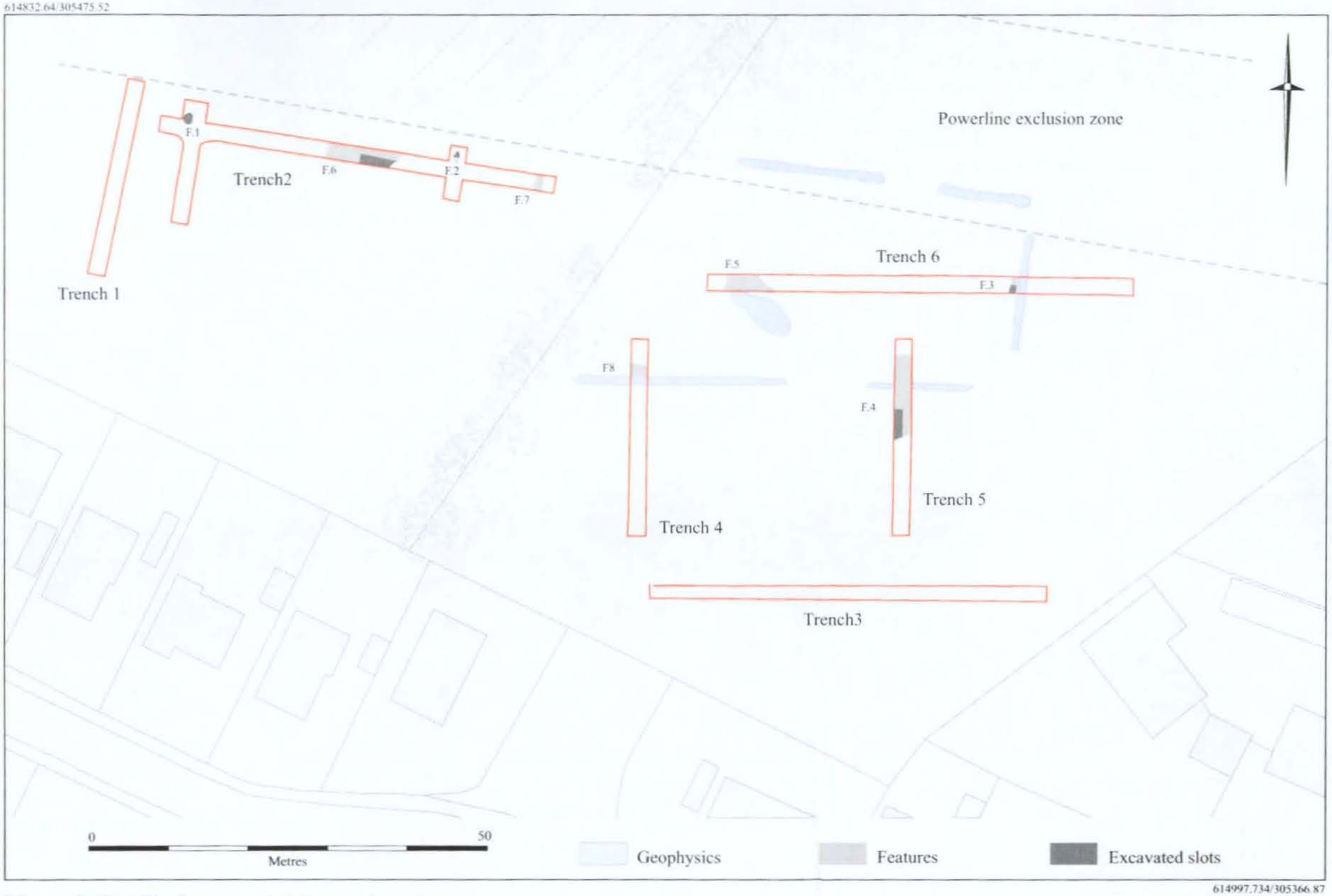
Trench 2

Trench 2 contained two pits, a ditch and a possible quarry.

The pits (Fs.1 & 2) were alike in form and fill and both were located towards the northern side of the trench. Each contained sherds of both very abraded and freshly broken, Romano-British pottery, probably of local origin. Additional areas were machine excavated to either side and to the south of these pits in order to locate any associated features. None were identified. The area to the north of the pits was inaccessible due to the electricity pylons.

The ditch (F.7) was located towards the eastern end of the trench and orientated north-south. The trench around this ditch flooded with water immediately upon machine excavation, making hand excavation impossible. However, an augured section across the ditch allowed its fill and depth to be characterised (see below).

614832.64/305475.52



614997.734/305366.87

Figure 3: Detail of area containing archaeology

The possible quarry (F.6) was located centrally within the trench and extended beyond it to the north and south. Once again, the trench around this feature flooded immediately upon excavation. However, using a combination of sample excavation and auguring, its fill and form were characterised. The sample excavation was terminated once the maximum Health and Safety depth of 1.2m from the trench side had been reached. This sampling revealed a deep, steep-sided profile (maximum depth 1.9m) and a charcoal-rich fill. Whilst only one fill was visible upon excavation, there was evidence of sorting within this fill, with sparse, small, abraded sherds of pottery and tile towards the top and a greater density of large, unabraded fragments of tile and cattle bone further towards the base. This could suggest that the pit lay open for some time, during which midden material accumulated within it and was backfilled at a later date. The irregular form and substantial size of this feature suggest that it is most likely to represent quarrying for clay.

F.1 - Pit (N-S). Fill [001], mid grey, silty clay with occasional orange mottling, small charcoal flecks and large pebbles. Cut [002], oval in plan, gently sloping sides, rounded base. Maximum length, 1.45m, maximum width 1.1m, maximum depth 0.24m.

F.2 - Pit (N-S). Fill [003], medium grey, sandy clay loam with frequent large pebbles. Cut [004], oval in plan, gradual sloping sides, rounded base. Maximum length 1.7m maximum width 0.78m, maximum depth 0.22m.

F.6 - ?Quarry. Fill [010], dark greyish brown, sandy clay loam with lots of charcoal and occasional flint pebbles. Cut [013], extends beyond the trench to the north and south. Augured section suggested steeply sloping sides and irregular base. Maximum width 8m, maximum depth 1.9m.

F.7 - Ditch (N-S). **Not excavated.** Fill [012], pale to mid greyish orange-brown, sandy clay loam. Cut [016], not excavated. Maximum width 1.2m, maximum depth 0.35m.

Trench 3

No archaeological features were identified.

Trench 4

This trench included a single east-west orientated ditch (F.8) at the northern end. The trench around the ditch flooded with water immediately upon machine excavation, however an augured section across it allowed its fill and depth to be characterised. The ditch contained a similar charcoal-rich fill to ditch F.3 in Trench 6. It was also perpendicular to this ditch and probably formed part of the same enclosure system.

F.8 - Ditch (E-W). **Not excavated.** Fill [011], medium brown, sandy clay loam with mottled orange and grey patches and occasional charcoal. Cut [015], not excavated. Maximum width 1.6m, maximum depth 0.45m.

Trench 5

This trench included a single, substantial feature (F.4) that appeared to be some sort of quarry. Once again, the trench around this feature flooded immediately upon excavation. However, using a combination of sample excavation and auguring its fill and form were characterised. This revealed a fairly shallow (maximum depth 0.6m), irregular profile with steep sides and a charcoal rich fill. The profile suggested that it was a cut feature rather than being a natural hollow in which cultural material had accumulated. The few finds retrieved included a fragment of 3rd to 4th century Nene Valley mortarium as well as a copper alloy ferrule and abraded pieces of Romano-British tile. Like the large quarry feature in Trench 2, only one fill was observed during excavation, however F.4 was less rich in finds and showed no evidence of sorting.

F.4 - ?Quarry. **Not excavated.** Fill [007], very dark greyish brown sandy clay loam with lots of charcoal and large flint pebbles. Cut [014], extends beyond the trench to the east and west. Augured section suggests fairly steep sides and irregular base. Maximum width 10.9m, maximum depth 0.6m.

Trench 6

Trench 6 included a ditch and a large, amorphous feature.

The ditch (F.3) was located towards the eastern end of the trench and orientated north-south. No datable material was retrieved, however an environmental sample taken from its primary fill was extremely rich in charred cereal remains, with very few weed seeds; a character compatible with the remains of Romano-British arable cultivation (Roberts, Appendix 5).

The large, amorphous feature flooded immediately upon machine excavation and could only be tested by auguring. This revealed a charcoal-rich fill and an irregular profile that sloped gradually, then steeply into a pointed base. It could represent a large pit or further evidence of quarrying. Whilst no artefacts were retrieved, the character and fill of this feature were comparable with those from features in the surrounding trenches and it seemed likely to be part of the same phase of activity.

F.3 – Ditch (N-S). Fill [009], dark grey to black sandy clay loam with lots of charcoal. Fill [005], medium brown, sandy clay loam with mottled orange and grey patches and occasional charcoal. Cut [006], sides slope gently at first, then steeply into a flattish base. Maximum width 0.98m, maximum depth 0.47m.

F.5 - ?Quarry. **Not excavated.** Fill [008], very dark greyish brown sandy clay loam with lots of charcoal and large flint pebbles. Cut [017], extends beyond the trench to the north and south. Augured section suggested irregular profile with gradual sides at first (especially to the west) then sloping steeply towards the centre. Maximum width 6.9m, maximum depth 1.7m.

Trenches 7 & 8

No archaeological features were identified.

Topsoil finds

In addition to the sampling features within the trenches, the topsoil was scanned by eye and with a metal detector in order to retrieve datable material that might help to characterise the site. This process revealed an unusually low quantity of metal finds all of which were dated to the Post Medieval or Early Modern periods. According to a local metal detecting archaeologist, this scarcity of metal finds (other than coins) was also a characteristic of the main settlement site identified by field survey to the west of the investigation area (Derek Woollestone, pers. comm.). The pottery retrieved included the handle of a large, course vessel, possibly of Iron Age origin as well as sherds of local, sandy-tempered Romano-British wares.

It was also observed that the topsoil contained an unusually high density of worked prehistoric flint. Several refitting waste flakes were retrieved from the southern end of Trench 1 and a number of scrapers and waste flakes were collected from the easternmost field. Most of this material was characteristic of Bronze Age flint working (Beadsmoore, Appendix 2). Given that no cut features of this date were revealed in the evaluation trenches, it is possible that this material forms part of a prehistoric flint scatter.

Discussion

The earliest archaeology on the site was a flint scatter of probable Bronze Age date. The nature, form and extent of this scatter could not be assessed during the investigation, however it adds to the already extensive evidence of prehistoric activity that has been recorded in the form of flint scatters to the north and west of the site.

The remaining evidence related to activity at the edge of what was probably a fairly substantial Romano-British settlement. This included three ditches on a north-south or east-west alignment, three large pits, possibly the result of quarrying for clay, and two smaller, oval pits. The material retrieved from these features, suggested that they, like the main settlement 300m to the west, related to occupation during the 2nd to 4th centuries AD.

At a local level, these findings provide an important context for the main settlement area that has been subject to field survey and small-scale excavation over many years. They imply that this settlement was more extensive than was previously understood. The rich palaeobotanical material from one of the ditches provides evidence of arable cultivation on the land around the settlement. The tile retrieved supports earlier evidence that the settlement included substantial stone-built structures. In addition, the unabraded condition of some of this tile may indicate that either such buildings stood close to the investigation area; that debris from them was immediately deposited in outlying pits, rather than left lying around the settlement; or that tiles were perhaps being produced nearby. Whilst the pottery retrieved was generally of local origin, imported material was found during field survey to the west and the status and character of the settlement remain unclear.

Finally, in spite of the modest scope of these findings, they can also be seen to contribute more widely to our understanding of Romano-British rural settlement in Norfolk. Whilst there is extensive evidence for this period from field survey, excavations have often focused upon settlement structures rather than their surroundings. This topic has been highlighted as a research priority at a regional level (Going & Plouviez in Glazebrook & Brown 2000).

Acknowledgements

The evaluation was coordinated by Ben Stephenson of CPM environmental planning and design and funded by the developer. Thanks to the staff at Norfolk Heritage Environment Record for their assistance with preliminary research on the site and to David Gurney of Norfolk Landscape Archaeology for monitoring the investigation. The metal detecting was kindly undertaken by Derek Woollestone, who along with David Arnall and members from the Hethersett Local History Society also provided invaluable background information on the local context of the site. The archaeology was excavated and interpreted by Emma Beadsmoore, Dave Brown, Anwen Cooper, Vicky Donnelly, Dominic Bruno, Chris Swaysland and Will Whalley. The trenches were surveyed by Marcus Abbott and machine excavated and backfilled with great care by Robin from M Dickerson Ltd. David Gibson managed the project, Norma Challands sorted and catalogued the finds and Marcus Abbott provided the illustrations.

Appendices

1) Trench descriptions

Trench number	Orientation	Length (m)	Maximum depth (m)	Minimum depth (m)	Depth of subsoil (m)
1	N-S	25	0.45	0.35	n/a
2	E-W	50	0.60	0.40	n/a
3	E-W	50	0.60	0.45	n/a
4	N-S	25	0.50	0.40	n/a
5	N-S	25	0.70	0.50	n/a
6	E-W	50	0.70	0.60	n/a
7	E-W	75	0.95	0.55	0.3-0.95
8	N-S	50	0.50	0.30	0.2-0.5

Table 1 – Trench descriptions

2) Flint *Emma Beadsmoore*

A total of 42 lithics were recovered from the site. Flint was the only raw material used; 32 of the flints were unburnt and worked and 10 were burnt. All of the material was residual as it was recovered from either Romano-British features or topsoil. The results of the analysis are consequently presented as a whole rather than by context.

Unburnt flint

Type	Quantity
Chunks	4
Primary flakes	3
Secondary flakes	13
Tertiary flakes	6
End and side scrapers	2
Miscellaneous retouched flake	1
Retouched and worn flake	1
Irregular cores	2

Table 2 – Unburnt flint types

The types of flints recovered are listed in Table 1. The only tools were two scrapers that are likely to be of Bronze Age date. Two other flakes were utilised; one worn, probably Earlier Neolithic flake and an irregular, retouched, probably Bronze Age chunk. Two irregular cores provided evidence for flint working. The cores were expedient with no signs of structured or controlled working. These types of cores are found in both Neolithic and Bronze Age assemblages, although they are usually linked to the less structured flint working of the Bronze Age.

The rest of the assemblage comprised of chunks, primary, secondary and tertiary flakes. The majority of the flakes had been worked off multiple platform cores without preparation and probably with a hard hammer; characteristics that link them to the Bronze Age. Over half of the flakes also had stepped or hinge fractured terminations, which are signs of less skilful flint working. There were however, a few flakes with low angle, prepared platforms, single direction scars and feathered terminations, which are characteristics of Earlier Neolithic flakes. Many of the flints had retouch, bashed or shattered edges. The damaged edges of the flints suggested that the retouch was spontaneous rather than deliberate.

Burnt flint

There were ten pieces of burnt flint; these are listed in Table 2. All of the burnt flint was burnt thoroughly and had probably been heated, cooled and reheated. The presence of unworked, burnt flint indicates activities other than flint working.

Type	*Quantity*
Chip	4
Worked chunk	3
Unworked chunk	3

Table 3 – Burnt flint types

Summary

The flint recovered from the site was residual. There was no chronologically diagnostic material, yet the characteristics of the flakes suggested that the bulk of the assemblage was Bronze Age with a few earlier flakes. Most of the flints were the result of comparatively unstructured, expedient working practices.

3) Romano-British pottery *Gwladys Monteil*

14 sherds were assessed in order to provide basic identification and date. All of the pottery dated from between 120 AD and the late 4th century AD. The composition of the assemblage was rather meagre with local coarse sandy grey wares being dominant alongside a Nene Valley grooved flange mortarium, a Black-Burnished Two dish or bowl base fragment and a Hadham Red Ware imitation of the bowl Dragendorff 38. The complete lack of amphorae and imported fine wares gave an overall impression of a small, basic rural site. A summary by context is given below.

[001] 1 shell-tempered cooking jar rim
1 coarse sand-tempered oxidized ware, burnt outside
2 fine, sand-tempered calcareous, reduced wares
1 coarse sand-tempered reduced fabric, jar shoulder fragment

[003] 1 coarse, sand-tempered flat flange fragment

[007] 1 Nene Valley grooved flange mortarium (200-400 AD)
1 fine micaceous oxidized fabric fragment.

[010] 1 Hadham Red ware flange fragment probably from an imitation of the samian bowl Dragendorff 38 (270-400 AD).

Topsoil
1 coarse sand-tempered reduced fabric, jar base fragment
1 black-slipped jar rim fragment (with oxidized sand-tempered core)
1 Black-Burnished Two dish base (120 AD+)
1 abraded coarse sand-tempered reduced fabric
1 large coarse thick round handle from a large vessel. Not an import and possibly of local or Iron Age origin

4) Metalwork *Adrian Challands*

The miscellaneous assemblage of small finds is predominantly of Post Medieval and Early Modern date and largely consists of lost/discarded personal items with a small percentage of artefacts of agricultural origin. One metal object of Romano-British date was retrieved from a large possible quarry pit (F.6). This appears to have been some form of binder, perhaps enclosing a wooden stake. This material is listed by context and catalogue number below:

Context	Catalogue no.	Description	Date
[007]	042	Cu alloy ferrule	?Romano-British
[010]	038	3 Fe fragments, possibly from wooden agricultural implement.	Post Medieval
	039	Cu alloy curtain rail support.	Early Modern
Topsoil	029	Cu alloy sheet, cut to an oval shape with two small perforations, possibly for sewing on to a garment.	Post Medieval
	030	Pb pipe, short-cut section.	Early Modern
	031	Cu alloy thimble.	Post Medieval
	031	Cu alloy coin, illegible but thickness and shape suggest a farthing of the mid-17th century.	Post Medieval
	032	3 Pb items; 2 weights and a twisted strap.	Med/Post Med.
	033	Cu alloy curtain ring.	Early Modern
	033	Cu alloy token dated 17(8/9)7, Arabic inscription on obverse.	Post Medieval
	033	Lower half of Cu oval match case, striker at base.	Early 20th century
	034	3 fragments of scrap Pb.	?Post Medieval
	035	Dog Tag	Modern
	036	2 Fe fragments, possibly from wooden agricultural implement.	Post Medieval
	037	Cu alloy curtain rail support.	Early Modern
	040	Fe patten with slots for leather strap.	19th century
	041	Sn puffer tin (for insecticide?)	Early Modern

Table 4 – Summary of metal finds

5) Ceramic building material and burnt clay

Ceramic building material in the form of tile was retrieved from four excavated contexts ([005], [007], [008], and [010]) and from the topsoil. A total of 24 fragments (3057g) of tile were recovered, all of which dated to the Romano-British period.

The tile fabric was fairly homogenous, being hard and smooth, of pinkish-orange colour, and sandy-tempered with small voids and small to medium inclusions of flint, chalk and occasionally grog. The degree of firing varied and some pieces had reduced cores. Much of the assemblage was undiagnostic and could represent either floor or roof tile. However a large, unabraded fragment of tegula was retrieved from one of the quarry pits (F.6); smaller, abraded fragments of tegula and imbrex were retrieved from this feature, another large pit (F.4) and a ditch (F.3); and a large fragment of floor tile was retrieved from possible quarry pit, F.5.

Four pieces of burnt clay were retrieved from Fs. 3 & 6. Two of these were tiny, similar in fabric to the tile and undiagnostic. The other two were of a slightly different fabric that was rougher in texture with larger voids and a higher proportion of inclusions. These probably represent daub.

Together the evidence supports the findings from earlier field survey to the west of the site that identified Romano-British settlement including substantial structures with flint wall footings. The mixed condition of the material made it unclear

whether such structures stood close to the excavated features or if the waste building material was treated differentially before being deposited away from the main settlement area.

6) Animal bone *Chris Swaysland*

A small animal bone assemblage numbering 42 fragments was recovered from the site. 18 bones (43%) were identified to species. The condition of this material varied both within and between contexts. The small size of the assemblage limited any interpretation that could be made.

The bone was analysed in order to gain an insight into the species present and to highlight any patterns evident in element distribution, age profiles, butchery and spatial distribution. It was identified using the reference collection of Cambridge Archaeological Unit and Schmid (1972). No attempt was made to distinguish between the remains of sheep and goats. These bones are quoted as sheep/goat. Five bones were identified as cattle/horse size; these were vertebra and ribs that could not be confidently ascribed to either species. The results are quantified by number of identified specimens (NISP). Any fragments that refitted as a result of fresh breaks were only counted once.

Results

Four contexts containing animal bone were recovered [001], [004], [005] and [010].

Species	001	004	005	010
Cattle	5	1	1	7
Sheep/goat	2	0	0	2
Cattle/horse size	0	0	0	5
Unidentified	3	13	0	3
Total	10	14	1	17

Table 5 – Number of identified specimens by species by context

Two species were identified; sheep/goat and cattle.

Four sheep/goat bones were recovered; all were major meat bearing elements and all were fully fused.

Fourteen cattle bones were recovered. A further five bones were identified as cattle/horse size. Most elements were major meat bearing bones or bones closely located to meat bearing bones. Only one element was not fully fused however this was the sacrum and can remain un-fused throughout the lifetime of the animal (Silver 1969). Therefore it would appear that all cattle were mature at death.

7) Palaeoenvironmental remains *Kate Roberts*

Five samples from two pits, a ditch and possible quarries were submitted for analysis. All were floated by hand using bucket flotation over 300μm mesh, and the residue washed over 1mm mesh. The flots were dried, prior to examination under a low-power binocular microscope. Identifications were made with the aid of the reference collection of the Pitt-Rivers Laboratory, Department of Archaeology, University of Cambridge. Plant nomenclature follows Stace (1997). The results are summarised in table form at the end of this report. The heavy residues were not examined.

There was a clear distinction between those samples with large amounts of well preserved cereal, chaff and small amounts of wild taxa, and those with virtually no plant remains, other than large amounts of charcoal and some badly preserved wild taxa and cereal. All preservation was by charring. In the richer samples the surface condition of the charred remains was also much better. Moderate amounts of modern, uncharred weed seeds and roots suggest a partially dynamic burial environment.

The two rich contexts ([009], from a ditch, and [007], from a shallow quarry pit) had a very similar profile. Both were dominated by huge numbers of spelt wheat (*Triticum spelta*) glume bases (chaff) and even some complete spelt wheat spikelet forks (chaff). There were also large amounts of spelt wheat grains (*Triticum spelta*), some cereal grains that were only identifiable as wheat (*Triticum* sp.), some barley (*Hordeum vulgare **sensu lato***) and a small amount of oats (*Avena* sp.). Wheat was the dominant cereal. The chaff points to it being mostly spelt wheat. In [009] there was a single barley rachis internode (chaff), and in [007] a cereal culm node. Wild plant remains were not common. There were moderate amounts of curled dock (*Rumex crispus*), stinking chamomile (*Anthemis cotula*) and brome grass (*Bromus* spp.). There were also smaller amounts of vetch (*Vicia* sp.), vetch/wild pea (*Vicia/Lathyrus* sp.), scentless mayweed (*Tripleurospermum inodorum*), great fen sedge (*Cladium mariscus*), lesser cat's tail (*Phleum bertiloni*), and indeterminate grasses. These two samples only contained moderate amounts of charcoal.

Of the remaining samples, that from [001], a pit, only contained indeterminate cereal, dock (*Rumex* sp.), and large amounts of charcoal. [010], from a 1.9m deep quarry pit contained small amounts of wheat/barley grain (*Triticum* sp./*Hordeum vulgare **sensu lato***), spelt wheat glume bases (chaff, *Triticum spelta*), scentless mayweed (*Tripleurospermum inodorum*), oat (*Avena* sp.) and indeterminate grasses. This sample also included large amounts of charcoal as well as large pottery fragments and animal bone remains. [003], from a pit, contained a wheat grain (*Triticum* sp.) and an indeterminate grass, as well as a moderate amount of charcoal.

The composition of the richer samples, with high numbers of glume bases and a small amount of small weed seeds, appear to represent the cleanings from cereal processing. However the small amount of wild plant remains, compared to the high chaff content, may mean that this was already a well cleaned crop before these remains were discarded.

The two richer samples correspond very well with other Romano-British period sites in the region. For example at Vicar's Farm, Cambridge (Ballantyne, forthcoming) a similar pattern of a high ratio of chaff to cereal was observed. There was also a virtually identical weed flora and a very small proportion of wild plant seeds in comparison to the high number of glume bases and cereal grains, as was observed at Hethersett.

It is possible that the poorer samples only contained residual plant remains as they were less well preserved and found in such comparatively small quantities. The contents of these samples can only be used to infer cultivation of cereals in the area, rather than any more specific information.

Key '-' 1 or 2 items, '+' <10, '++' 10 – 50, '+++' > 50

sample number		<1>	<2>	<3>	<4>	<6>
context		[9]	[1]	[10]	[3]	[7]
type		ditch	pit	quarry spread	pit	quarry spread
phase		Roman	Roman	Roman	Roman	Roman
sample volume/ litres		8	5	10	10	10
flot fraction examined		3/4	1/1	3/4	1/1	3/4
Hordeum vulgare sensu lato grain	barley grain	++				++
Triticum c.f. *spelta* grain	spelt wheat grain	++				++
Triticum sp. grain	wheat grain	++				++
Triticum/Hordeum sp. grain	wheat/barley grain	++		+		++
Secale cereale grain	rye grain					-
cereal grain indet.			-			
Hordeum vulgare sensu lato rachis internode	barley chaff	-				
Triticum spelta spikelet fork	spelt wheat chaff	++				+
Triticum spelta glume base	spelt wheat chaff	+++		-		+++
Avena sp. awn fragment	oat 'hairs'	+				-
cereal indet. culm node	straw joint					-
Fallopia convolvulus	black-bindweed					-
Rumex c.f. *crispus*	curled dock	++		-		+
small *Rumex* sp.	small-seeded dock type		-			-
Vicia sativa	common vetch	+				
medium *Vicia/Lathyrus/Pisum* sp. (2-4mm)	vetch/wild pea/pea	+				-
Anthemis cotula	stinking chamomile	++				+
Anthemis cotula seed head	stinking chamomile	-				
Tripleurospermum inodorum	scentless mayweed	+		-		
Cladium mariscus	great fen sedge	-				
Avena sp.	wild/cultivated oat	+		-		+
Phleum bertolonii	lesser cat's-tail	+				
Bromus spp.	brome	++				+
Bromus/Avena sp.	brome/oat					++
medium Poaceae indet. (c. 4mm)	medium Grass Family seed	+++		-		
small Poaceae indet. (c.2mm)	small Grass Family seed			-	-	+
small charcoal (<2mm)		+++	+++	+++	+++	+++
med. charcoal (2-4mm)		++	+++	+++	++	+++
large charcoal (>4mm)		++	++	+++	+	++
bone fragments				+		
intrusive roots		++	++	++	++	+++
uncharred seeds, probably intrusive		+	++	++	+	++

Table 6 – Summary of palaeoenvironmental remains

Bibliography

ads.ahds.ac.uk/project/oasis

Arnall, D.C. *History of Myrtle Cottage, Lynch Green, Hethersett, Norfolk.* Unpublished report

Ashwin, T. and Bates, S. 2000 *Excavations on the Norwich Southern Bypass, 1989-91.* East Anglian Archaeology 91

Ballantyne, R. 2001 'The plant remains' in G. Lucas, *Vicar's Farm, Cambridge. Post Excavation Assessment Report.* CAU Report 425

Brown, A. E. 1995 *Roman Small Towns in eastern England and Beyond,* Oxbow Monograph 52

Brown, N. and Glazebrook, J. 2000 *Research and archaeology: a framework for the eastern counties, 2. Research agenda and strategy.* East Anglian Archaeology Occasional Paper No. 8

Cooper, A. 2003 *Archaeological Project Design Specification for an Archaeological Evaluation by Trial Trenching on Land At Hethersett, Norfolk*

Dobinson, C. and Denison, S. 1995 *Metal detecting and archaeology in England. English Heritage and Council for British Archaeology*

English Heritage 2002 *Environmental Archaeology: A guide to the theory and practice of methods, from sampling and recovery to post-excavation*

Gurney, D. 1986 *Settlement, religion and industry on the Fen edge: three Romano-British sites in Norfolk.* Norwich: East Anglian Archaeology Report No. 31

Gurney, D. 1995 'Small towns and villages of Roman Norfolk. The evidence of surface and metal detector finds', in A. E. Brown (ed.) *Roman Small Towns in eastern England and Beyond,* Oxbow Monograph 52

Gurney, D. 2002 *Standards for Field Archaeology in the East of England.* Association of Local Government Archaeological Officers East of England Region

Hancock, A. 2003 *Land at Hethersett, Near Norwich, Norfolk. Geophysical Survey.* WYAS Archaeological Services

Hingley, R. 1989 *Rural Settlement in Roman Britain.* London: Seaby

Lucas, G. 2001 *Vicar's Farm, Cambridge: Post Excavation Assessment Report.* CAU Report 425

Schmid, E. 1972 *Atlas of Animal Bones for Prehistorians, Archaeologists and Quaternary Geologists.* Amsterdam. Elsevier Publishing

Silver, I.A. 1969 'The ageing of domestic animals' in D. Brothwell and E.S. Higgs (eds.) *Science in Archaeology*. London. Thames and Hudson, 283-302

Stace, C. 1997 *New Flora of the British Isles*. Cambridge: Cambridge University Press