



Archaeological Field Unit

**Evaluations on the site of the lost medieval settlement
of Densett, Bourn, Cambridgeshire**

(TL 331 574 to TL 328 566)

Paul Spoerry

June 2005

Cambridgeshire County Council

Report No. 807

Commissioned by Caxton Historical Society

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Editor: Elizabeth Shepherd Popescu

Illustrators: Crane Begg, Alex Howe, Emily Oakes and Carlos Silva

With contributions by
David Baxter and Rachel Clarke



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©Archaeological Field Unit
Cambridgeshire County Council
Fulbourn Community Centre
Haggis Gap, Fulbourn
Cambridgeshire CB1 5HD
Tel (01223) 576201
Fax (01223) 880946

arch.field.unit@cambridgeshire.gov.uk
<http://www.cambridgeshire.gov.uk/archaeology>

SUMMARY

As part of a research project into a previously unknown rural medieval iron industry based in West Cambridgeshire, a programme of fieldwalking, geophysical survey and trial trenching was carried out on the lost settlement of Densett in Bourn parish. Fieldwalking and documentary research by David Baxter had identified abandoned medieval properties and concentrations of surface finds including domestic material and industrial waste from both smithing and smelting. During August 2004 a magnetometer survey was carried out across the whole settlement landscape supplemented by smaller amounts of resistivity. From these results and other landscape data, a trenching strategy was designed to investigate domestic remains and putative industrial features including possible smelting or smithing hearths and areas of features associated with characteristic bloomery slags.

Eight linear evaluation trenches were excavated during late September and early October 2004. A putative concentration of domestic properties fronting onto Densett Street at the northern end of the survey area was confirmed, identified as being well preserved, and assigned dates from the 12th to late 14th or 15th centuries. Only limited evidence for metalworking was identified. In this same group of properties and in a second area around 100m to 150m to the south magnetic anomalies preliminarily interpreted as perhaps being industrial hearths were found to be for the most part recent burnt material and dumped rubbish backfilled into former ponds, that themselves may have had an origin in extractive industry.

At the southern end of the survey area adjacent to known mill sites along the Bourn Brook in one trench a dense and well-preserved group of features were located that proved to be 13th to 14th century in date. These yielded significant quantities of ironworking waste, including slag that probably derived from a later medieval water-powered bloomery. A second trench produced a colluvial profile that contained substantial ironworking waste material along with burnt ceramic and vitrified brick that probably represents smelting hearth material displaced from working areas located slightly further upslope.

In conclusion medieval ironworking has been confirmed at Densett, representing both smithing and smelting. It has been found to survive in association with well-preserved settlement remains and to some extent differentiation of activities can be seen across the landscape. The findings of this evaluation will be used to plan highly selective further investigations in 2005.

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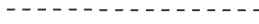








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
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Drawing Conventions

Sections

Limit of Excavation	
Cut	
Cut - Conjectured	
Soil Horizon	
Soil Horizon - Conjectured	
Intrusion/Truncation	
Top of Natural	
Top Surface	
Break in Section	
Cut Number	
Deposit Number	117
Ordnance Datum	 18.45m ODN

Plans

Limit of Excavation	
Deposit - Conjectured	
Natural Features	
Intrusion/Truncation	
Sondages/Machine Strip	
Illustrated Section	
Modern Feature	
Archaeological Feature	
Archaeological Deposits	
	
Cobbled surface	
Cut Number	118
Deposit Number	11

Evaluations on the site of the lost medieval settlement of Densett, Bourn, Cambridgeshire

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1 INTRODUCTION

In 2002 David Baxter presented to Paul Spoerry (Cambridgeshire County Council Archaeological Field Unit; CCC AFU) the first indications of what he believed was evidence for ironworking in the area of Crow End (formerly Densett) in Bourn parish (Fig.1). Subsequent meetings confirmed the initial findings and led to a more extensive and systematic campaign of fieldwalking to better define and characterise the industry. This was carried out alongside substantial work on surviving medieval documents located in the collection of Christ's College, Cambridge, which in many cases further demonstrate the presence of this rural industry.

Participation in David Baxter's fieldwork was widened under the auspices of the Caxton Historical Society and in 2004 the Society was successful in securing grant aid from the Local Heritage Initiative lottery fund to support further fieldwork and research. This report is the first major output from that campaign and details fieldwalking, geophysical surveys and evaluation trenching, the major elements in a staged multi-technique investigative programme designed by the author.

David Baxter's fieldwalking programmes had defined key locations within the former settlement of Densett where concentrations archaeological material were present in the ploughsoil. Although fieldwalking was only possible on that part of the settlement currently under arable cultivation, the portion available was large and represents perhaps 50% of the historic settlement. Pottery recovered from these locations was dated by the author, indicating activity in the 13th to 15th centuries, and Baxter was able to identify a range of ironworking waste products including material from both smelting and smithing.

A subsequent programme of geophysical survey including both magnetometry and resistivity was undertaken in late summer 2004. The former technique was contracted to GSB Prospecting whilst the latter was carried out through use of volunteers including members of the Caxton Historical Society and the Thriplow Society, who kindly lent the necessary equipment and provided much needed technical assistance.

Analysis of the results of the geophysical survey allowed an evaluation trenching scheme to be devised that was intended to investigate those areas most likely to yield good evidence for archaeometallurgy and associated settlement. The trenching was carried out by the author and Rachel Clarke of CCC AFU in late September 2004.

2 GEOLOGY AND TOPOGRAPHY

The lost settlement of Densett lies in a north to south aligned 'dene'; a side valley of the west to east flowing Bourn Brook. The study area lies on boulder clay, where a tributary of Bourn Brook cuts a valley through the 60m clay plateau. The tributary is a 'winterbourn', dry in the summer, but swift-flowing for part of the year. The lower 200 metres of the stream, known as Water Lane, appear to have been deepened and straightened to form a millpond. The confluence of the stream with Bourn Brook is the focus of two man-made watercourses, both called Water Lane on the earliest edition of the Ordnance Survey. A watermill probably stood near the confluence.

Iron-bearing Lower Greensand outcrops in Bourn Brook, about 800m west of Densett, and further west near Caxton village. Limonite occurs sparsely in ploughsoil in both parishes, in the form of crystalline nodules and 'boxes' of clay ironstone. Concentrations of limonite, included roasted pieces, found in Densett, could have been brought to the site from a local source.

3 ARCHAEOLOGICAL AND HISTORICAL BACKGROUND

by David Baxter

The medieval settlement of Densett comprised ten or more crofts, with house sites fronting on to the east side of Densett Street. The crofts were owned by the Manor of Bourn in Bourn, which belonged to Barnwell Priory from 1093, and after the Reformation to Christ's College Cambridge. Manorial documents from 1295 to 1660, and later estate maps, preserved in Christ's College muniments, chart the decline of the settlement after 1350, with records of ruinous houses and empty plots. Ten crofts were occupied in 1427/8; by 1553 the street was largely depopulated; and the four cottages and two farmhouses now standing all date from the 17th century. The name Densett, first recorded in 1367, was still current in 1820, and occurs in the Inclosure Award of that date. By 1850 the name Crow End had supplanted Densett. The street survives as a track, and as a footpath alongside the north to south stretch of Water Lane. The 13th-century hall of Bourn Manor still stands in its original *curia*, some 200m from the southern end of Densett Street, and Manor Farm still cultivates the field where the Densett crofts were sited. The northern part of the settlement was preserved under pasture until 1985, when it was ploughed for the first time with modern machinery.

3.1 General Background and the 'Discovery' of the Settlement of Densett

by David Baxter

The chance discovery of smiths' tools, together with iron waste and medieval pottery found in a ditch at Blue Cottage in 2001, led to a programme of fieldwalking on Manor Farm. Four seasons of fieldwalking have plotted scatters of occupational debris along the east side of Densett Street, and scatters of iron residues near the croft boundaries and in the open field further east, towards Caldecote. The parishes of Caldecote to the east and Caxton to the west, contain former medieval crofts, now ploughed, which show iron residues and occupational debris similar to the Densett material.

There is little sign in the documentary record that Barnwell Priory interested itself directly in the production of iron. Evidence of industrial activity on Barnwell's tenements is seen mainly in exceptionally high rents. For example, one peasant family paid nearly ten times the going rate for two and a half acres which they held with licence to *strip* the land, between 1295 and 1320. The quarry which the family worked is still visible near the parish boundary between Bourn and Caldecote. Routine entries in the manor accounts show Bourn smiths working in lead-tin and copper alloy, as well iron.

3.2 Fieldwalking programme, 2001 – 2005

by David Baxter

The ploughed fields between Densett Street and the parish boundary with Caldecote were walked in the winter of 2001/2, to locate scatters (Fig.2). A baseline was set up at the edge of each field and lines walked at 10m intervals, with collecting points every 30m. The average density of finds was low, with one artefact for every 180m walked, and the sites of houses and workshops, where densities were many times higher, could therefore readily be plotted.

In 2002/3 each scatter was gridded in 10m squares and all visible artefacts collected. The clay in these fields breaks down slowly and repeated forays were necessary to recover iron slag and burnt clay, which are barely visible until the soil breaks down to an even tilth. At the end of the season the pottery sherds collected from each 10m square were counted and weighed, with a chart drawn to show the quantities of medieval and post-medieval pottery in each house site along Densett Street. The chart also indicated 'quiet areas' between sites, indicating the boundaries between crofts. Paul Spoerry distinguished the main classes of medieval and later pottery, and his categories were used to locate those crofts which were built on from the 17th century onwards (in every case the buildings appeared on 19th-century maps).



Figure 2 Re-drawing of 1st Edition Ordnance Survey 25" Map (without tree symbols) showing Slag (in grey) and Pottery Scatters (in blue) .

In 2003/4 finds by local historians in Caldecote and Caxton showed that there were medieval sites in both villages yielding similar material to that found in Densett. Colin Bibby discovered a line of former crofts all containing iron slag in the ploughsoil in the field opposite Clare Farm in Caldecote. Robert Millard reported iron slag and medieval pottery in a field to the west of Green Ditches Lane, Caxton. The Caxton sites were gridded and walked in 2004/5, and four house or workshop sites were located. All the pottery from these sites dates from c.1150 – 1350. The former crofts in Caldecote have not yet been systematically walked.

Plate 1 is presented here as an example of some of the artefact types that were recovered during the fieldwalking programme at Densett. This group includes a range of tools and, in the top right hand corner a group of pieces of partly-fashioned iron rod that were utilised for tool-making. Most of the tools are not easily dated, although other material includes buckles, fittings and knives dateable to the medieval period, including incompletely fashioned items that were clearly not for sale..

Plate 2 shows two items. The lower is an iron crowbar or wedge that is not technologically or stylistically dateable and therefore might be medieval or much later. Above this is an iron 'pig' that is u-shaped in section and is clearly a piece of smelted iron cast into bar form for storage, transport or sale. This item will almost never be found a any great distance from a primary smelting site.

Plate 3 shows a plano-convex smithing hearth bottom, a classic item recognisable from smithing sites.

Table 1 summarises the range of materials found on fourteen sites in Densett and the clay plateau east of the settlement, on four sites in Caxton and in the area of iron debris in Caldecote. No attempt has been made to quantify the finds exactly. What is significant is the presence of the same industrial materials on nineteen sites: limonite, bloomery slag, coal ash, vitrified brick and reduced core tile. Another range of materials occurs in nearly all the scatters: coal slag, roasted limonite, iron (including iron tools), sharpening stones and hones, burnt clay and pitch. Also found on nearly all sites is medieval pottery in sufficient quantity to indicate date, and lava quernstone. Other iron residues are found on some sites and not others: magnetic slag, partly-worked iron, partly-worked copper alloy and lead alloy, and burnt clay. Over 100 sharpening stones and hones have been found, most of them made from stones that occur locally in boulder clay, rather than imported stone.

The presence of the same industrial residues across so many sites in three parishes appears to demonstrate that the iron industry in west Cambridgeshire was extensive, and associated pottery indicates the high medieval period as the probable date. The presence, mostly in large quantities, of vitrified brick and tile, indicates that the workshop structures were substantial. There are also indications that they were deliberately destroyed after use: the vitrified brick is

found in small fragments, typically split into five-sided pieces with sharp conchoidal fracture suggesting repeated hammer blows on a solid block of masonry. The presence of coal ash shows that all of these are smithing sites, since coal could not be used for smelting iron in primitive furnaces. The presence of limonite, some of it roasted, suggests that most if not all the slag scatters are also smelting sites.

Plate 4 shows an example of the typical five-sided (deliberately broken) vitrified brick fragments that were found in parts of the southern fieldwalking area at Densett. This example was excavated in Trench 7.



Plate 1 A selection of ferrous fieldwalking finds from Densett

Sites	Field Slag	Magnetic Slag	Coal Slag	Coal Ash	Limonite	Roasted Limonite	Iron	Partly-worked Iron	Partly-worked cu, pb etc	Tools	Sharpening Stones and Hones	Burnt Clay	Vitrified Brick	Pitch	Reduced Core Tile	Medieval Pottery	Lava Quernstone
Densett 1-70	1	1	1	1	1		1	1	1	1	1	1	1	1	1	3	1
Densett 70-130			1	1	1	1	1		1	1	1		1	1	1	2	1
Densett 130-200	2		1	1	1	2	1	1	1	1	1	1	1	1	1	2	1
Densett 200-280			1	1	1		1	1		1	1		1	1	1	2	1
Blue Cottage	1		1	3	1	1	3	2	1	2	1	1	1	1	1	1	
South Close	2		1	1	1	1	1	1	1	1	1	1	1	2	1	3	1
Raymond's Close	2		1	1	1	1	1	1		1	1		1	1	1	2	1
Cottage Close	1	1	3	3	1		3	2	1	2	1		3	1	2	3	1
Brook site	1		1	2	1	1	1				1	1	3	1	1	1	1
Mill Barn	1		3	3	1	1	3	2	1	2	2		3	1	3	1	1
60m plateau	3		1	2	1		1		1	1	1		1	2	1	1	
Mill Piece	2		1	1	1	1	1	1	1	1	1	1	1	1	1	1	3
Depden NW	1				1							3					
Depden	1		1	1	1	1	1					3	1	1			
Caxton site 1	1		1	1	1	1	1	1		1	1	1	1		1	3	1
Caxton site 2	1		1	1	1	1	1				1	2	1		1	2	1
Caxton site 3	1		1	1	1		1				1	1	1		1	2	1
Caxton site 4	1		1	1			1	1					1		1	1	
Caldecote	3		1		1	1	1				1				1	2	1

Table 1 Fieldwalking results (1=material present, 2=material plentiful, 3=material abundant)



Plate 2 Iron 'pig' or ingot and iron bar or wedge; fieldwalking finds from Densett



Plate 3 Plano-convex hearth bottom; fieldwalking find from Densett



Plate 4 Over-fired brick fragment showing vitrified fabric on former surface and characteristic five-sided splintered form (from Trench 7).

4 METHODOLOGY

4.1 Geophysical Survey

Analysis of the fieldwalking results enabled a structured investigative programme to be designed. The continuation of a staged programme was proposed, with geophysical survey forming the next phase.

It was decided that survey should concentrate on areas where fieldwalking data suggested the presence of both domestic occupation and archaeometallurgical processes. In addition locations where basic landscape interpretation and cartographic evidence also implied the presence of occupation would be preferred.

The northernmost field within the Densett study area was deemed a prime location using these criteria (and in particular for domestic material recovered through fieldwalking), and also because it was known that this parcel had not been subject to the damaging forces of arable cultivation until the 1980s. Within this field locations along the frontage where artefact scatters had been recovered were selected for geophysical survey, although in fact the whole of this field was covered by magnetometry (Figs 3 and 4). Groups of backfilled ponds known here were deemed to be of interest due to their probable association with extractive industry.

The second area preferred for geophysical investigation was the southernmost part of the Densett landscape, adjacent to and north of the Bourn Brook. Here discrete artefact scatters included medieval domestic material and also a wide range of archaeometallurgical waste including characteristic water-powered bloomery slag (J.McDonnell, pers. comm.) and vitrified and broken-up local brick. As previous landscape interpretation had suggested a mill site here, with Water Lane possibly being managed as a leat as well as there being perhaps a similar arrangement alongside the Bourn Brook in the valley bottom, the possibility of a later medieval bloomery was deemed very realistic (Figs 5 and 6).

4.1.1 *Magnetometer Survey (see Appendix 1)*

GSB Prospection were commissioned to carry out magnetometer (fluxgate gradiometer) survey across part of the study area as outlined in 4.1 above. Their full survey results are presented in Appendix 1.

It was decided that this relatively fast technique would be applied to the whole of the northern field where pasture had survived until very recently in a land parcel that appeared to preserve the boundaries of former medieval tenements. A greyscale representation of the data is presented here as Fig.3, with interpretation as Fig.4.



Figure 3 *Magnetometry results, central and northern areas*

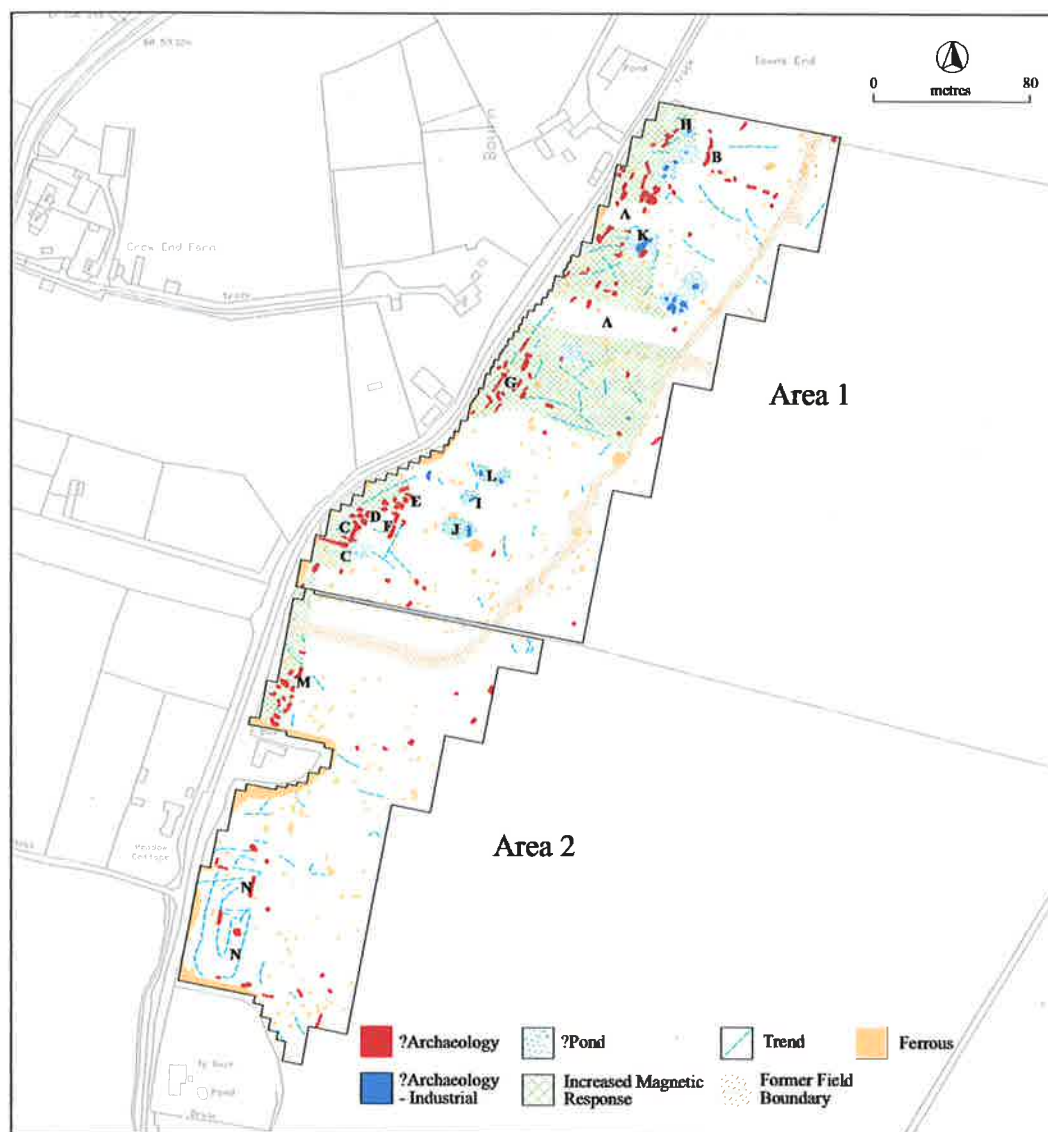


Figure 4 Magnetometry interpretation, central and northern areas

It is immediately apparent that there are easily recognisable areas of magnetic noise that reflect the expected position of medieval tenements lying along the frontage of the north to south track, called here by its old name 'Densett Street'. In addition the rear boundary of the land parcel that until recently preserved these tenements as a single block is also easily identifiable. Along the frontage a number of gaps strengthen the interpretation of individual house sites and associated activity for the areas of 'noise', whilst behind and to the east of the frontage zone lie a number of large magnetic anomalies, some perhaps containing metallic material. These appear in some cases to match the position of ponds known to have been backfilled in living memory and visible on early Ordnance Survey maps. These were given an alternative explanation as possible furnace or hearth sites. In conclusion, the magnetometry results appear to reveal all of the key elements anticipated in a landscape of rural medieval industrial tenements.



Figure 5 Magnetometry results, southern area

In the southern area a smaller zone was surveyed, covering discrete scatters of domestic artefactual material (Figs 5-6). The southerly scatter alongside the Bourn Brook produced medieval and recent material, the latter including a range of modern building debris. On the eastern edge of this area two further scatters of artefacts were recovered from fieldwalking, the more northerly was of medieval date, whilst the more southerly included recent material and lay adjacent to a cottage site known from modern maps. As indicated in Section 4.1 above this area also included significant amounts of vitrified brick and some bloomery slag. Results of the magnetometer survey show clusters of anomalies consistent with the distribution of surface finds, some of these anomalies in the northern cluster showing distinct linearity of form and many having a degree of magnetic enhancement consistent with archaeological features containing remains associated with industrial activity. The southern group in particular showed strong anomalies not unlike those seen from the possible ponds in the northern survey area.

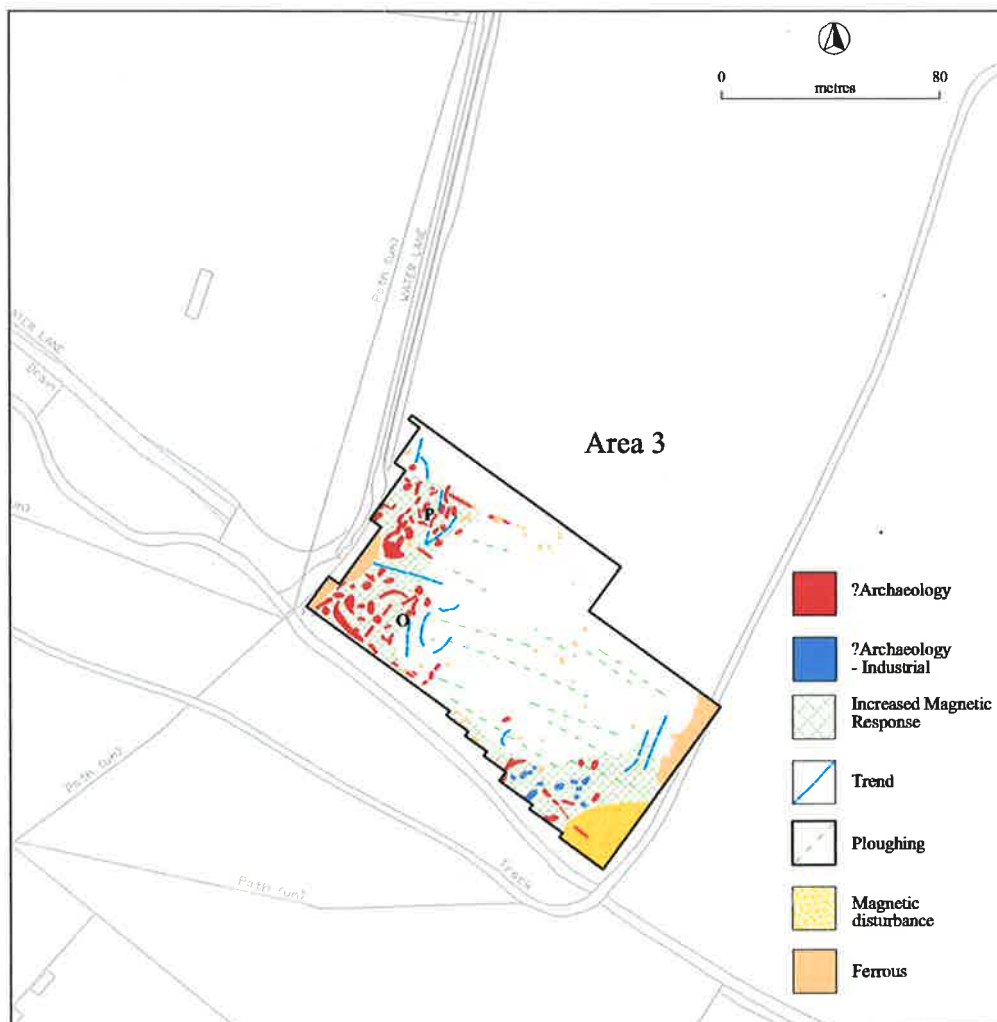


Figure 6 Magnetometry interpretation, southern area

4.1.2 *Resistivity Survey*

To complement the results of the magnetometry, soil resistivity survey was conducted in smaller blocks of land focussing on specific groups of magnetic anomalies. This work was carried out by volunteers including members of the Caxton Historical Society and the Thriplow Society. The latter group supplied the equipment, considerable expertise, and much enthusiasm for a project well outside of their own research area, for which they are warmly thanked.

A TR Systems Ltd TR/CIA resistance meter with integral data logger was used, along with a twin probe array with 0.5m inter-probe separation, and measurements were taken at 1m intervals. The data was manipulated using the TR Systems Resistance Meter Interface Software program (V1.32) and greyscale plots thus produced have been overlaid onto the Ordnance Survey map base and the magnetometry results.

In the northern magnetometer survey area four zones were identified for resistivity survey, the northerly two being clusters of magnetic anomalies apparently associated with occupation on the frontage of medieval tenements, with infilled 'pond' features to their rear (Fig.7). The central area may also have shown a cluster of anomalies near the frontage, but also provided the best group of discrete pond or hearth-like anomalies 20-40m from Densett Street. The southerly area showed magnetic anomalies of apparently linear (north to south) form. The resistivity survey results (Fig.8) did not greatly add to clarity of interpretation already achieved, with many soil resistance variations being very evidently a result of changes in the modern cultivation already visible on the field's surface. The most obvious of these were linear low and high resistance anomalies that echoed the tractor's cultivation access tracks on the field surface. Some exceptions were found in the most central area where a succession of east to west aligned linear variations in resistance might have been a product of an earlier, lost phase of arable cultivation (marked B on Fig. 8). Within and around these linear features, higher resistance nodes were evident in one or two places where large magnetic anomalies had also been identified (marked A on Fig.8). Gullies in this general location and on a similar alignment to the resistance anomalies, are remembered locally from the pre-modern ploughing pasture landscape. Individually they had the appearance of hollow ways or boundaries, but as a group can really only be attributable to features at least in part utilising and deriving from old ridge and furrow. In the northerly survey areas further anomalies (also marked A) may represent similar infilled pond features, with the early Ordnance Survey maps attesting to the presence of ponds here. The most southerly of the four resistivity survey zones in the northern area showed two low resistance east-west anomalies that may be related to earlier field or property boundaries, but this is not certain.

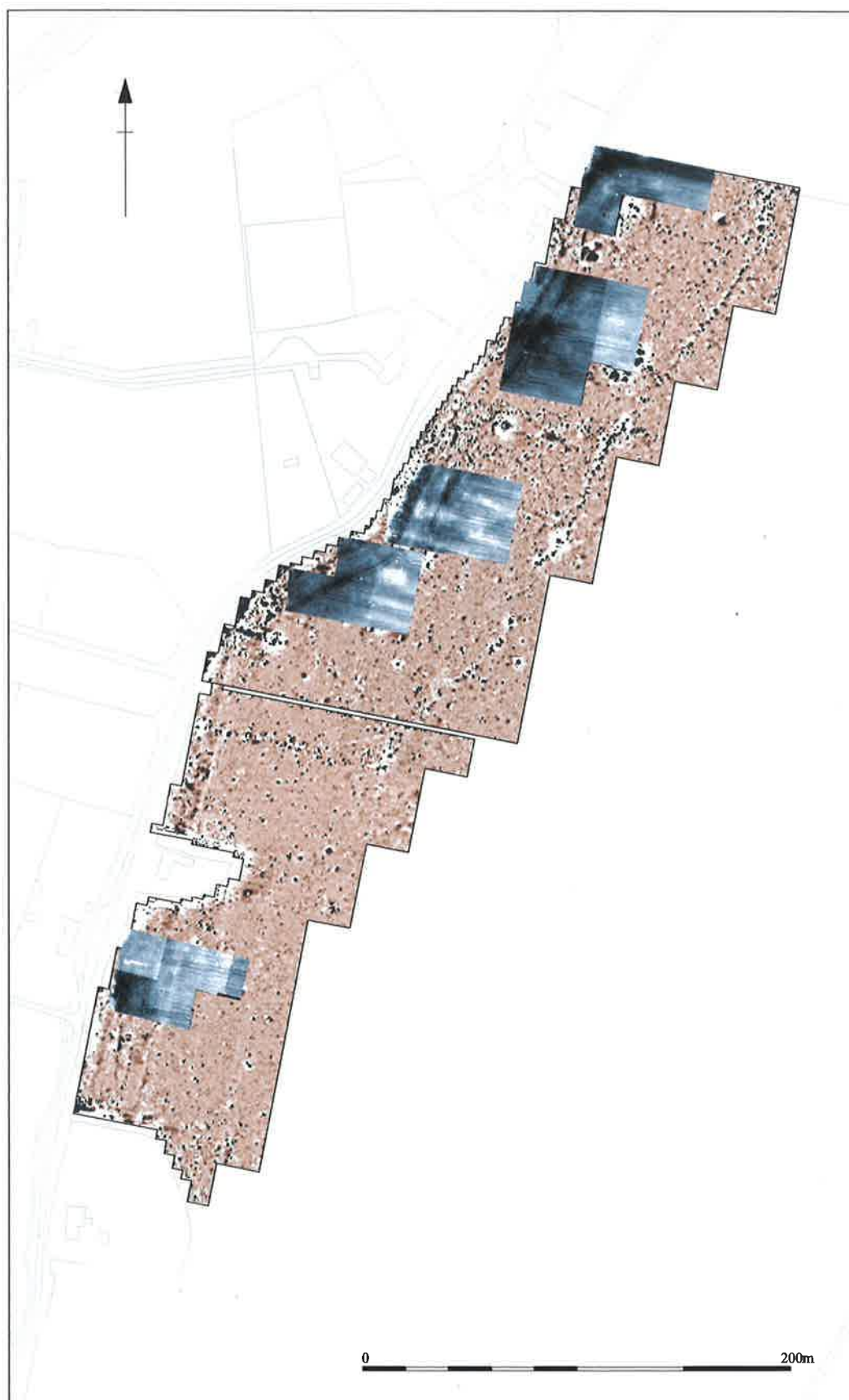


Figure 7 Resistivity results, central and northern areas



Figure 8 Resistivity interpretation, central and northern areas

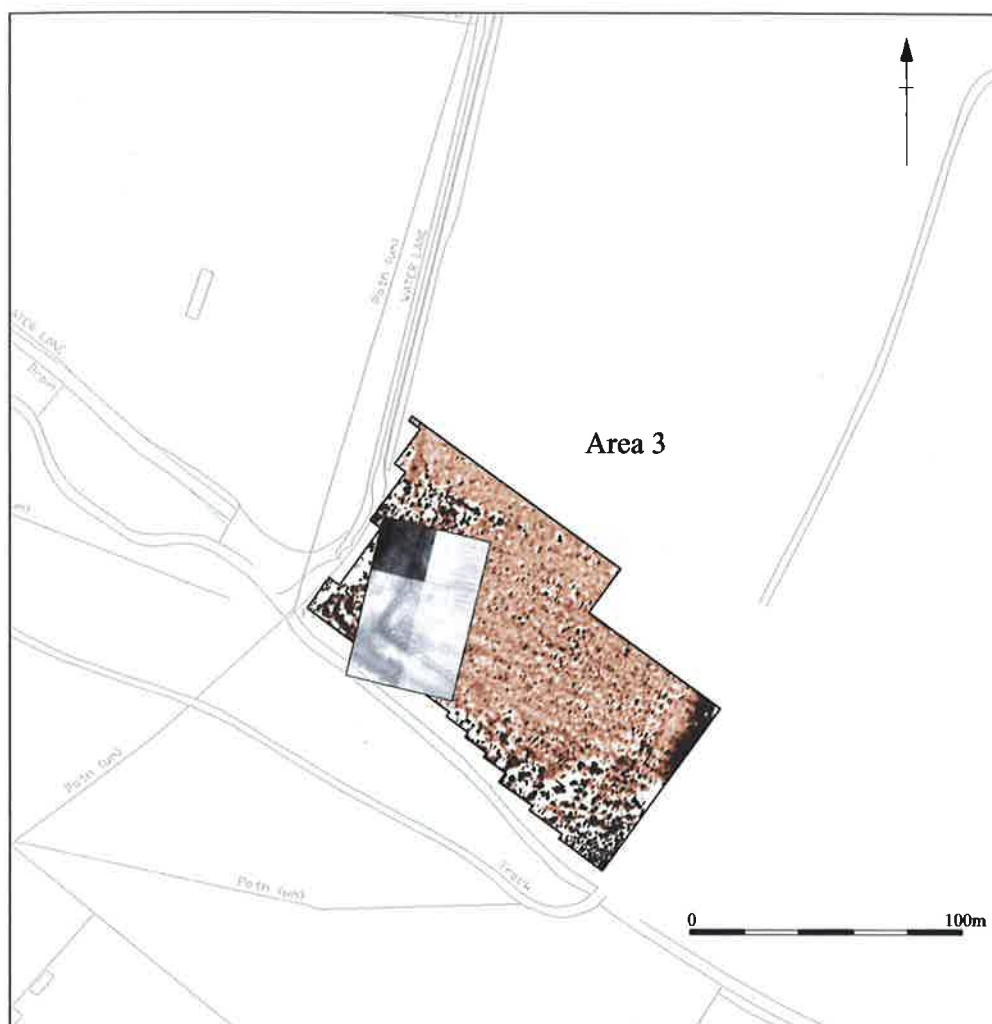


Figure 9 Resistivity results, southern area

In the southern magnetometer survey area a single block of resistivity survey was placed over part of the groups of magnetic anomalies deemed to have a domestic and industrial origin, as suggested in Appendix 1 (here Figs 9 and 10). These zones also proved relatively 'noisy in soil resistance measurements', but no form attributable to anthropogenic agency could be detected other than a general area of higher resistance marked A on Fig.10 that may echo the area of magnetic noise deemed to be perhaps archaeological and industrial in origin. As before, the most obvious changes in moisture content in the soil derived from the modern tractor paths and set-aside margins.

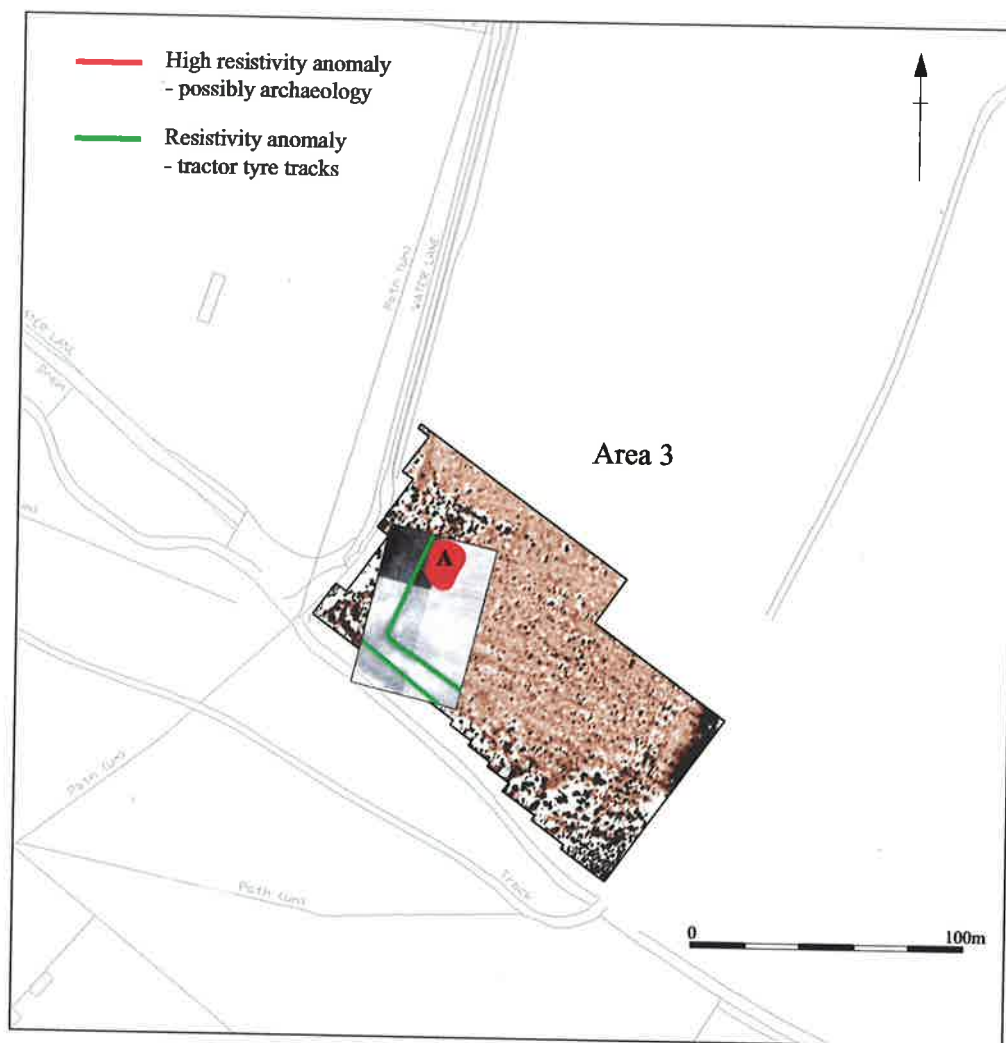


Figure 10 *Resistivity interpretation, southern area*

4.2 Proposed Location of Evaluation Trenches

Following assimilation of all of the survey data the author and David Baxter attempted to identify those locations that would best yield information regarding medieval occupation and industrial processes. In addition to this basic aim, it was deemed desirable to ensure that different types of anomalies and artefact scatters were investigated, and that samples of different parts of this landscape were contrasted.

It was concluded that trial trenching would be conducted over both 'busy' and empty frontage areas in the northern field, thus contrasting more than one probable tenement and including areas towards the centre and rear zones of the tenements. The latter would include trenches sited over large magnetic anomalies that might relate to the ponds surviving in 19th-century maps. These same anomalies might also represent hearth sites and the best and most discrete examples of these were included in the trenching scheme.

In the southern area adjacent to the Bourn Brook it was decided to sample clusters of magnetic anomalies putatively of both industrial and domestic character. In addition the choice of the latter would be sited where the most regular structure was visible in the anomalies, which was coincidentally over an artefact scatter of purely medieval date.

The trenching plan thus derived, with slight alterations as result of problems encountered and decisions made during the fieldwork phase, is presented in relation to the magnetometry survey in Fig.11.

4.3 Evaluation Methodology

Trench location was governed by previous work as described in Section 4.2 and is illustrated in Fig.1. The evaluation was conducted with the intention of recovering information regarding the date, nature and location of domestic and industrial processes. The large number of medieval features revealed in some trenches precluded sampling of anything but a small selection of remains, however, the collection of large amounts of cultural material from the surface of feature fills and layers assisted the achievement of the aims of the exercise without further and perhaps unnecessary impact on surviving remains.

The planned trench positions were located over the survey grid using a Total Station EDM. Unfortunately confusion in the identification of one fixed point meant that Trenches 3 and 4 were incorrectly positioned, necessitating the opening of Trench 8 in the correct position a few days later.

Trenches were opened by 360° excavator using a 2m wide flat-bladed bucket, except for Trench 8 for which a JCB with a 1.8m bucket used.

The fieldwork was largely carried out by Rachel Clarke and Paul Spoerry of CCC AFU, and David Baxter, along with several volunteers including members of Caxton Historical Society.

Plate 5 is a view south across the central part of the survey area at Densett, showing trenches 3, 4 and 8. This photograph conveys the separateness of Densett in relation to the parent village on the distant hillside. This type of settlement landscape is typical of villages in this part of Cambridgeshire that are characteristically made up of several foci, usually known as 'ends', that in many cases have barely coalesced since the medieval period. Densett, in common with a minority of 'ends' in most settlements, was significantly depopulated from the late medieval period onwards.



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Figure 11 Location of trenches in relation to magnetometry survey



Plate 5 Bourn village in the distance to the south, with Trenches 3, 4 and 8 visible in the middle foreground, showing the valley dividing Densett from the main parochial settlement.

5 RESULTS

[The following text is authored by Paul Spoerry, except where stated otherwise.]

All trenches were excavated in agricultural fields that had recently been ploughed and harrowed following the harvesting of cereal crops. All topsoil therefore included much straw. Artefactual distributions across the topsoil partially dictated trench location (see 3.3 and 4 above) and some concentrations were thus observed during the excavation of trenches.

The topsoil (ploughsoil) profile was not recorded in detail, but it varied for the most part only in depth.

5.1 The North Area: Densett Street

5.1.1 Trench 1

This trench was located at right angles to the north to south running track (former Densett Street) at the extreme northern end of the study area. The magnetometer survey had suggested the presence of a complex of occupation features in this locality, apparently clustered within a medieval property and as a recognisable zone close to the frontage. The trench was linear in plan, 29m long and aligned roughly east to west (Fig. 12).

Machine excavation immediately revealed a cobbled surface at the trench's western end (2). After preliminary cleaning a number of other archaeological deposits were identified throughout the length of the trench. Context numbers (starting at 1) were assigned to the various features and deposits in the trench, although time and circumstances permitted the investigation of only three features.

Quarry Fills

A grey brown clay silt with occasional small flints and chalk flecks (7) extended for at least 6m along the trench. At its eastern end it was cut by two pits (18 and 19) and merged into another deposit (8), although the relationship between the two was not investigated. It was overlain by further deposits (3 and 16) at its eastern end and was cut by a ditch or quarry (21). The fill in question (7) was at least 0.24m deep which, coupled with its great extent, may suggest that the deposit was the fill of a large quarry.

Further west, a grey brown clay silt (8) may equate, although it included abundant chalk flecks and flints up to 0.2m, especially at its western end. It was cut by a pit (19) and a possible quarry (20) and its relationship with further deposits to the east (9 and 15) was not investigated.

Trench 1

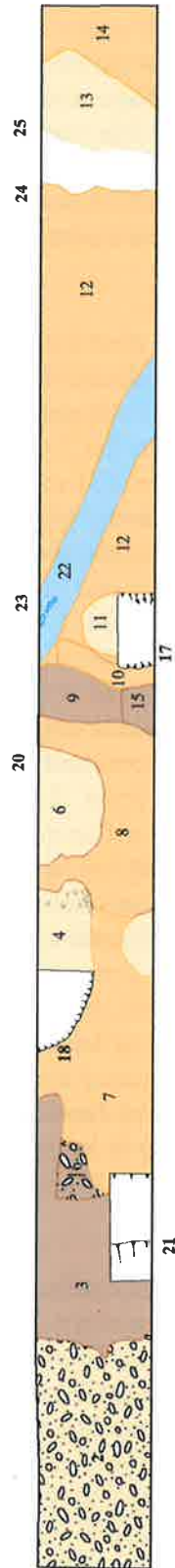


Figure 12 Plan of Trench 1

Ditch/Quarry

Cutting into an earlier quarry fill (7), the eastern side of a ditch or quarry (21) was revealed, although much of its shape and extent were obscured by an overlying cobbled surface (2) and its own upper fill (3) which appeared to spill out of the related feature. The partial cut was steep-sided, but only excavated to a depth of c.0.16m. In addition to this, however, 1.25m to the east was a further step upwards of 0.08m that may be a further cut, or part of this feature.

The upper fill of very dark greyish brown silty clay (3) contained very occasional flints up to 0.03m that produced 67 sherds of medieval pottery dating to the period 1150-1350, animal bone and fired clay. An environmental sample produced food plant remains in the form of wheat, oat/rye and pea along with charcoal, magnetic residues and micro slag pieces that indicate metalworking occurred within the vicinity (Appendix 6). A tiny (10mm) fragment of worked bone with an incised ring and dot pattern was also recovered.

Quarry Complex

A large feature (24) covered a distance of 8.6m within the trench, starting 3.5m from the eastern end. At its eastern edge it cut into the only natural deposit visible in the trench, which consisted of orange-brown clay. The quarry was bisected by a later field drain (23) and at its western edge a confusion of deposits may represent later features or layers. The depositional sequence was problematic here, although it appears that – to the west – a deposit of grey clay silt (10) with occasional flints and chalk pebbles may have formed another fill, with a pit (17) and adjacent ?ditch fills (9 and 15) being later.

The upper fill of the quarry consisted of loose dark grey and orange-brown mottled sandy clay silt (12) with abundant flint cobbles up to 0.2m. This deposit appeared to consist primarily of Boulder Clay, but the presence of charcoal flecks and finds incorporated in to its matrix, alongside the sharp edge of the cut on the eastern side, point to it being reworked material.

Ditch or Quarry

At the eastern end of the trench two deposits may have lain within the western boundary of a ditch or quarry (25), the eastern edge of which was outside the trench. The earliest recorded fill was an olive clay with some silt and occasional small flints (13) which merged into another fill (14) to the east. The latter was a dark olive and grey mottled clay silt with occasional chalk and flint pebbles.

Cobbled Surface

Overlying the earlier phase of quarrying at the western end of the trench, a cobbled surface (2) extended 4.2m within the trench and continued beyond its confines. It consisted of a layer of flint cobbles (mostly up to 0.1m, but in some areas only up to 0.05m), with some sandstone (up to 0.2m) and occasional erratics from the boulder clay. The cobbles were firmly set into

Context 3 below, except where they had been loosened by machine excavation or ploughing. The looser fine component intermingled with, but essentially 'above' the deposit, was composed of topsoil. Medieval pottery was recovered from the surface of Context 2.

Just to the east a very stony (flint cobbles up to 0.1m) grey clay silt (16) may have formed a stony patch within the same surface. It overlay layer 7 and merged into deposit 3.

This cobbled layer is may have been a yard surface rather than a track as it was not apparent in Trench 5 c.40m to the south, which is the most likely position for a continuation of this surface if it functioned as a trackway.

Shallow Pit

Cutting into earlier quarry fills and lying just to the east of the cobbled area, a shallow feature (0.09m deep) with straight sides and a flat base (18) extended at least 3.2m along, and 1.2m across, the trench. It may have formed half of an oval feature, with a rounded western end: its eastern end was not investigated and its shape here remained obscure. The pit fill consisted of a moderately compact very dark greyish brown silty clay (4) with occasional flints up to 0.03m. It contained no finds and the whole feature appeared to have been heavily truncated.

Pit/Quarry

Immediately to the east of pit 18, a probable quarry pit complex consisting of multiple sub-circular cuts extended 1.85m along the trench and 1.25m across it from the northern edge, cutting into an earlier quarry fill (8). Its upper fill (6) was an orange brown clay sand with occasional flints that did not vary across the multiple lobes of the individual cuts.

Pit

A sub-round pit or the butt end of a ditch (19), 1.25m wide, projected 0.5m into the trench and extended beyond its southern edge. Its upper fill consisted of dark grey clay silt (5) containing flints.

Possible Ditch Fills

Roughly at the centre of the trench, between two of the areas of quarrying noted above, were two deposits which may have formed fills (or elements of the same fill) within a north to south aligned ditch. To the north an orange brown clay silt (9), 1.1m wide, contained occasional chalk fragments. Just to the south was a deposit of dark grey clay silt with occasional flints and chalk pebbles (15), 0.9m wide. Both deposits appeared to overlie an earlier quarry fill (10) to the east and deposit 9 was cut into by a later field drain. The relationship with a possible quarry fill (8) to the west was not clear, but the quarry fill may have overlain the possible ditch fills.

Pit/Ditch

A pit or rounded butt-end of a ditch (17), 1.26m wide, extended 1.27m into the trench and ran beyond its southern trench edge. Excavation revealed the cut to

have sloping sides which gradually flattened out to a flattish base, shelving east to west. In the base of the pit a sub-round stakehole was revealed, c.0.08m across and 0.05m deep. Its fill was not differentiated from that of the pit. The top of the pit indicated a slight slump, containing relict topsoil, although the remainder of the feature contained a single fill (11) of dark olive brown clay silt with occasional flint and chalk up to 0.05m that produced medieval pottery and animal bone. An environmental sample was found to contain wheat, chaff, weed seeds and charcoal (Appendix 6).

Field Drain

A field drain (23) ran from north-west to south-east across the eastern part of the trench. It contained ceramic drain pipes and the fill (22) was a mix of orange-brown and grey clay with many flint pebbles and some glacial erratics. To the north-east, this fill merged with the fill of an adjacent quarry (24).

Topsoil/Ploughsoil

The ploughsoil (1) was relatively shallow (0.25m-0.3m) and was loose with fairly frequent stones and chalk nodules. Finds were recovered from the topsoil/ploughsoil, as well as during machining and from the spoilheap. Items recovered include medieval pottery, bone, fired clay, lava quern stone, shell, a post-medieval nail (SF111) and building staple and a 12th to 14th century copper alloy buckle plate (SF 108). Some of these finds are likely to derive from underlying *in situ* deposits.

5.1.2 Trench 2

by Rachel Clarke

Trench 2 was located to the south of Trench 1, approximately parallel to the line of Densett Street to the west. The trench, which was 30m long and aligned north-east to south-west, was positioned to investigate a large anomaly identified on the geophysical survey (Fig.11).

Following removal of the ploughsoil, an extensive area of disturbed ground, c.23m across, was revealed within a large part of the trench (Fig.13). A chalky, stony natural clay was exposed at either end of the trench, between which was a very mixed area comprising dark grey and yellowish brown clay and redeposited natural deposits (40-45). Spreads of charcoal and ash, rotten wood, brick and tile fragments, modern pottery and rusty nails were noted on the surface. A machine-cut sondage was excavated through the disturbed area to a depth of 1.50m below the current ground surface, within which a sequence of similarly mixed deposits were recorded. Remains of branches and roots, in addition to several pieces of barbed wire, were noted within these deposits.

It is likely that this feature was a large pond or quarry that has been deliberately infilled relatively recently. The areas of charcoal, ash and iron objects in the backfill are likely to have produced the anomaly on the geophysical plot.

Trench 2



Figure 13 Plan of Trench 2



Figure 14 Plan of Trench 5



Plate 6 Bourn with Trench 1 and Densett Street in the background



Plate 7 Trench 1 from the west showing volunteer workers, cobbled surface and the position of the property in relation to the crest of the hill behind.

5.1.3 Trench 5

by Rachel Clarke

This was an additional trench located to the south of Trench 1 to establish whether the cobbled/stone surface identified in Trench 1 (see above) was a localised deposit or the remains of a more extensive feature such as a track. It was also hoped that the extra trenching would further define areas of domestic habitation and the apparently blank zones between the house plots, as indicated on the geophysical survey plots. The trench was T-shaped in plan and comprised a main north-east to south-west trench (a), 26m long, and a shorter (11.5m) length located at right angles to the south (b) (Fig.14).

After preliminary cleaning a number of archaeological deposits were identified, with an apparent concentration of domestic rubbish in the area of the trench located closest to the line of Densett Street. Context numbers (starting at 100) were assigned to the various features and deposits in the trench, although time and circumstances permitted only three features to be investigated.

Surfaces/Midden/Fills

A deposit of mottled dark grey/yellowish brown silty clay (101) with frequent flint and chalk nodules and occasional charcoal flecks was located against the southern edge of trench 5b and extending for approximately 4m east-west. This deposit was not excavated, although eighteen pottery sherds dating to the period 1350-1450, pieces of animal bone and several metal objects were recovered from the surface. The metal items (Appendix 2) mostly comprise iron objects and include a late 15th century buckle (SF 1), a 15th to 17th century ring/ ferrule (SF 2) and a nail (SF 3); a small, poorly preserved, copper alloy bell dating to the late 13th to early 15th centuries was also present (SF 4). The stony, compact nature of this deposit may suggest that it is the remains of a surface, or perhaps a levelling layer/dump in the top of a pit, or even a midden deposit.

Just to the north, another deposit (102) was very similar to layer 101 and may be a continuation of it. Domestic rubbish in the form of pottery sherds and animal bone were also visible on the surface of this deposit; an iron object (SF 5) of unknown function was also found with the aid of a metal detector. All the surface finds were retained for study.

In the same general area was a layer of mid-yellowish brown silty clay (103) with occasional small flints and stones and small to medium chalk nodules. This deposit was distinct from adjacent deposits (101 and 102) as it was darker in colour, with fewer stones and other inclusions. A small quantity of pottery was visible on the surface and those sherds recovered provided a date in the bracket 1150-1400. It is not possible to ascertain without further investigation whether 103 was the fill of a feature, a spread or perhaps the remains of a surface/floor.

At the northern end of the trench extension (Trench 5b) was a layer of yellowish brown silty clay (104) with very few stones or other inclusions and was notable for the high number of fine roots. This deposit could be contemporary with the other contexts to the east, or could equally be the result of later root activity, as it was confined to a 2m strip at the western limit of the trench, close to Densett Street where a number of trees, bushes and nettles grow.

Lying between deposits 103 and 104 was a concentration of pottery. Although this is likely to have been a dump within 103 rather than a separate deposit or feature it retains the context number 105. The pottery, which represents more than one vessel, and associated finds were removed for further study. Most of the pottery is from the kilns at Colne and Ely in Cambridgeshire and dates to the period 1350-1450. Animal bone and shell were also present.

Pit

To the south of the deposits detailed above was a pit (107), lying in the south-eastern corner of Trench 5b: approximately half of the exposed extent was excavated. The pit, which was cut into the natural chalky boulder clay, appears to have been sub-rectangular in plan, but its partial exposure within the trench hampers interpretation. It appears to have been at least 2m long, 1.6m wide and 0.5m deep. It is possible the pit, which had a fairly flat base and steep sides. The feature may have been cut for clay extraction, but appears to have been deliberately infilled with reworked clay containing relatively little domestic rubbish.

Two fills were identified. The main fill was a 0.3m thick mottled orangey yellow and mid grey silty clay (106) with frequent chalk flecks/pieces, small stones and occasional charcoal flecks overlain by a thinner deposit of yellowish brown silty clay with few inclusions (113). A 19th-century ceramic field drain cut through the northern edge of the pit. Thirty one sherds of pottery and several iron objects, including a medieval horseshoe (SF117) and knife blade (SF109), were recovered from fill 106, along with fragments of limonite, a piece of lava quern and a piece of burnt gritstone. The pottery is of interest because it is a mixed assemblage some of which dates to the period 1150-1250, the remainder being dateable to the period 1350-1450. The metal finds, however, are mostly indicative of a post-medieval date (Appendix 2).

Features in the Centre of Trench 5a

In the central part of Trench 5a was a small group of features. Furthest to the south was a small pit (110) which may have been sub-oval; it had moderately steep sides and a slightly concave base. The pit, which was approximately 0.3m deep and 1.3m wide appeared to cut into the natural clay. Its single fill consisted of mid brownish grey silty clay fill (109), with frequent chalk flecks and pieces, occasional small and medium angular flints and stones and occasional charcoal flecks. This deposit was fairly compact and contained forty sherds of pottery dating to the period 1150-1350 (and quite probably in the first 100 years in this bracket), along with shell and bone. The pottery might indicate a similar date of deposition to the earliest part of the ceramic

assemblage in the pit to the south (107). An environmental sample indicated the presence of wheat grains and chaff, plus legumes, weed seeds and charcoal (Appendix 6).

Just to the north was a possible narrow linear feature (112) the sides and base of which could not be defined by excavation. The fill was a mid yellowish grey/brown silty clay (111) with occasional stones, chalk and charcoal flecks, which contained a four sherds of medieval pottery dating to the period 1200-1350. This may simply have been a thin spread of material rather than the fill of a discrete feature.

Both of these features were overlain by shallow linear layer or deposit (108), 0.10m deep running diagonally across Trench 5a, which may have been the fill of the base of a furrow or a slump into the top of the underlying features. This deposit was c.3m wide and comprised dark yellowish brown silty clay. It contained 53 sherds of medieval pottery dating to the period 1300-1400, along with a small amount of animal bone, shell, fired clay and limonite.

Furrow/Ditch

Very few features or deposits were exposed in the northern part of Trench 5a. A c.2.5m wide band of yellowish brown clay (114), very similar in appearance to deposit 108, was noted several metres to the north, but was not further investigated. This may also be the base of a furrow, or perhaps a ditch, and may also be masking earlier features.

The absence of features in this part of the trench appears to support the geophysical results, which indicate gaps in activity between the house plots that once fronted onto Densett Street.

Topsoil

The ploughsoil (100) was again relatively shallow (0.25m-0.3m), loose with fairly frequent stones and chalk nodules. Finds, which were also recovered during machining and from the spoilheap, include 1.3kg of medieval pottery, dating to the period c.1200-1500 and a number of metal objects (e.g. SF12) as well as a fragment of mica schist whetstone. Some of these finds are likely to derive from *in situ* deposits in the trench (in particular 101, 103 and 105).



Plate 8 Trench 1 from the east showing cobbled surface and the property's relationship with the surviving/existing farm on the opposite frontage.

5.2 The Central Area

5.2.1 Trenches 3 and 4

by Rachel Clarke

Trenches 3 and 4 were located to the south-east of Trenches 1, 2 and 5, and to the north of a modern 'beetle bank' (Fig.15). These trenches were unfortunately not in the correct position (to identify additional anomalies on the geophysical survey plot) due to an error in the survey base. A further trench (Trench 8) was excavated at a later date to investigate one of the large anomalies (see below).

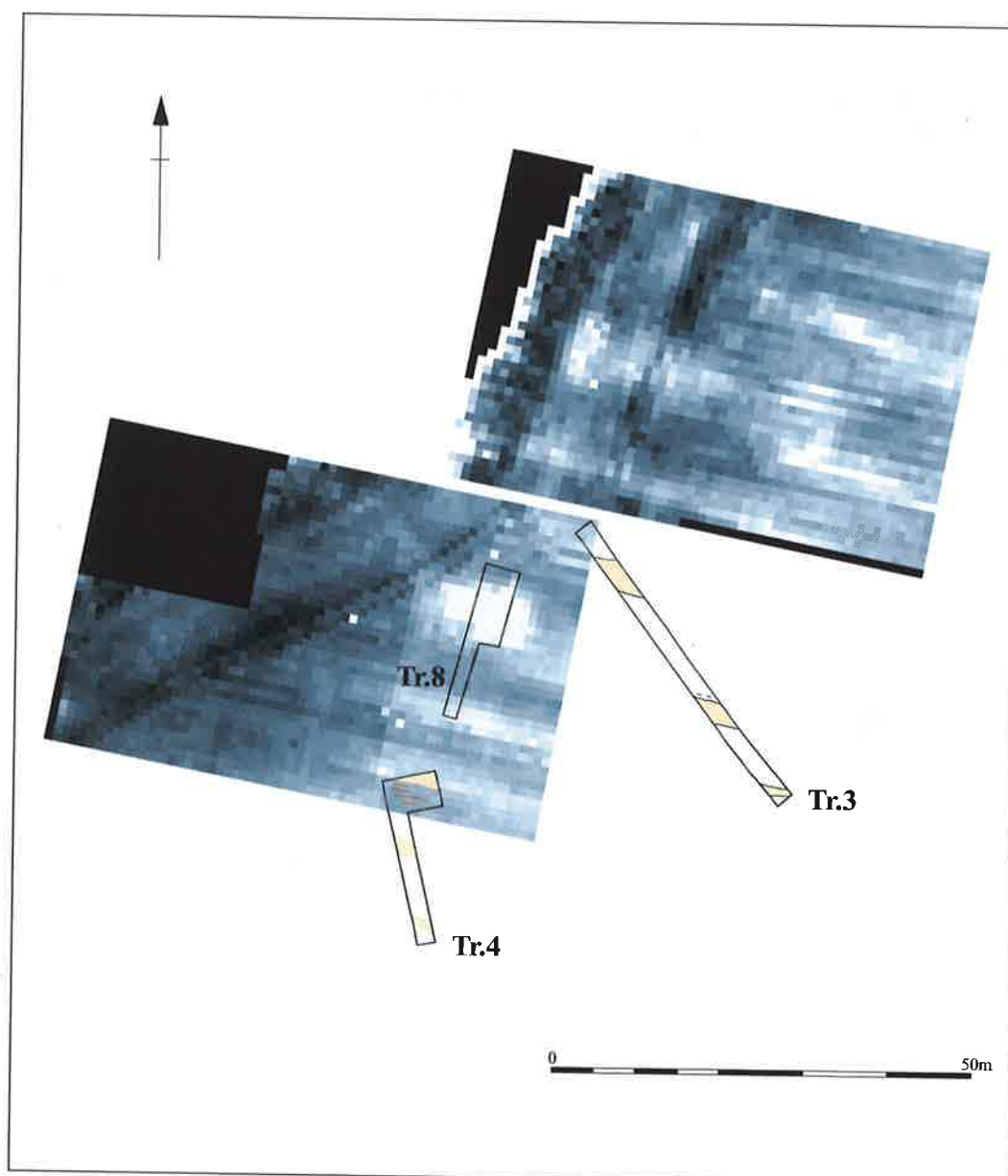


Figure 15 Trenches 3, 4 and 8 overlaid over magnetometry results

Trench 3 was orientated north-west to south-east and was approximately 40m long. Two broad, probably linear, features were recorded: one at the northern end (56), one towards the centre of the trench (53) and the third, a further narrow linear feature (57), at the south-eastern end. The features were parallel, aligned roughly east to west and all apparently cut into the natural yellowish brown clay. The northernmost feature contained a darker, siltier fill with few inclusions that on excavation produced a few small fragments of abraded medieval pottery, whilst the more southerly features seemed to contain redeposited natural clay.

These features could be the remains of furrows or drainage channels, although the largest to the north could be a former boundary ditch.

Trench 4 was located to the south-west of Trench 3 and was approximately 20m long, with an additional 4m x 4m area at the northern end of the trench, which was opened to expose a possible ditch. Three linear features, of varying widths, with similar fills and orientation to those identified in Trench 3, were recorded, none of which were investigated (46, 47 and 48). These may also be the remains of furrows or drainage channels.

5.2.2 Trench 8

Trench 8 was excavated four days after the other trenches, when it became apparent that Trenches 3 and 4 had been mis-located as a result of an error in identification of the fixed points used during the geophysical survey. Because of this the trench was only briefly investigated and not fully recorded.

Trench 8 was 19m long and aligned north-north-east to south-south-west. It was positioned where the northern half of Trench 3 had been intended, overlying magnetic and high resistance anomalies. These appeared from the surveys to have the form of three linear features west-north-west to east-south-east aligned, within which was at least one large and stronger anomaly. This latter was located within the northern half of Trench 8 and when it was found to be a backfilled hole of large size, the trench here was doubled in width to allow for safer deep excavation. The large magnetic and resistance anomaly was found to result from the backfilling of a large hole (called here 405, although the presence of a cut is not proven) that was perhaps a deeper section, within one of the gullies previously seen in Trench 3 (it aligned with the northernmost). This feature was also similar to the backfilled 'pond' observed in Trench 2.

Gully/Pond

In a deeper section within a gully, this feature (405) was at least 1.3m deep below the modern topsoil profile with stepped concave sides. It was a minimum of 5m across and was cut into Boulder Clay.

The infill sequence (Fig.18) appeared to be as follows:

The lowest fill recorded was a dark brown clay silt (404), containing burnt material (charcoal and heat-altered soil, but also possibly fragments of a clay structure) and pockets of boulder clay. It was at least 0.45m deep and seemed to be a deliberate backfill or dump.

Above this was a lens of old topsoil and boulder clay (403). Subsequent deposits were very mixed and included a later Boulder Clay and topsoil mix (402), along with massive organic deposits and voids, brick rubble, barbed wire and evidence for burning, all associated with the remains of a tree stump.

The sequence of infilling of this feature can be interpreted as a pre-modern dump of soil and burnt waste, followed by a topsoil stabilisation period, during which a tree existed next to the hollow. Following this, the tree was removed and rubbish, including burnt material was dumped in the hollow to level the field. This latter episode probably occurred in the early 1980s when the pasture was ploughed up. The burning in fill 404 and the modern backfill presumably explains the magnetic anomaly recorded here.

Trench 3

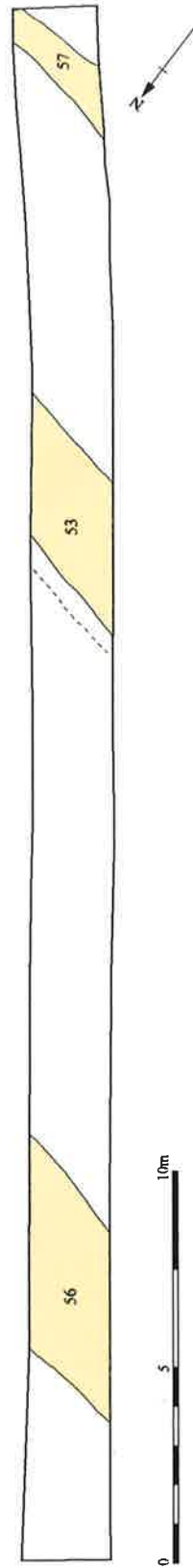


Figure 16 Plan of Trench 3

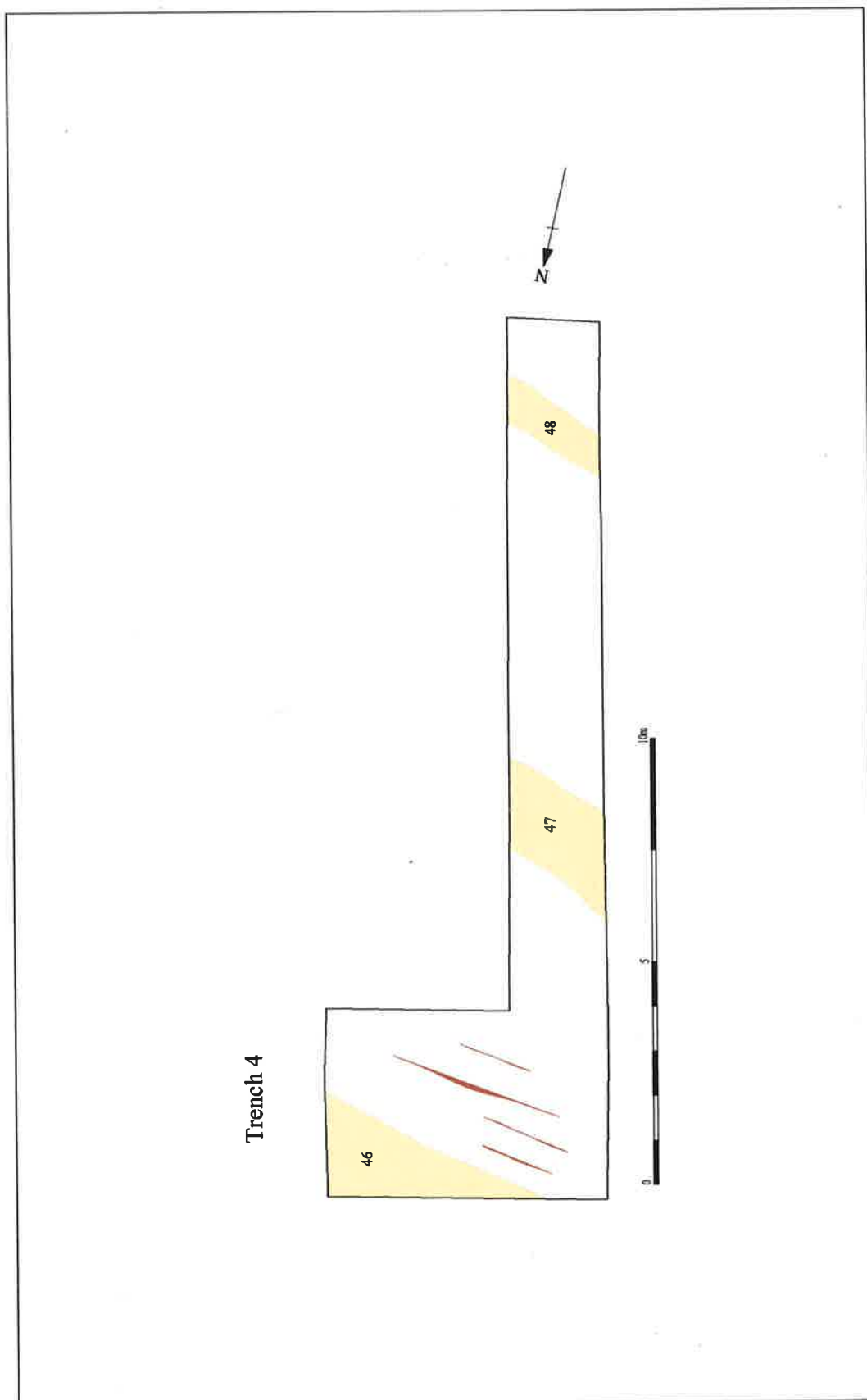


Figure 17 Plan of Trench 4

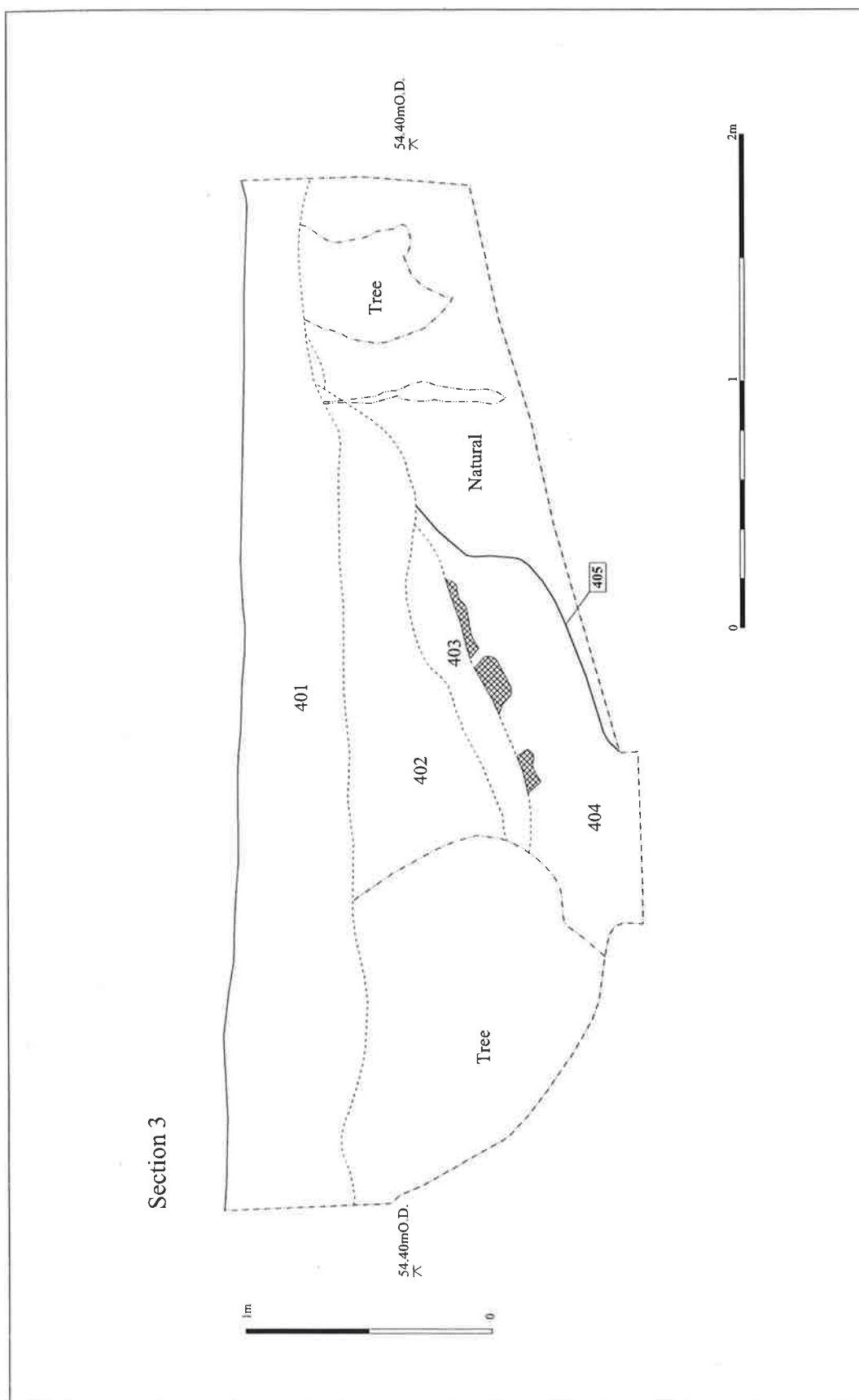


Figure 18 Section 3 from Trench 8

5.3 The Southern Area (by the Bourn Brook)

5.3.1 Trench 6

This trench was located approximately 40m upslope of and perpendicular to the Bourn Brook at the extreme southern end of the study area (Fig.11). This general area adjacent to the Brook was deemed significant as a result of the pottery and metalworking waste recovered during fieldwalking, as well as the presence 40m to the south-west of the probable site of a medieval watermill. The discrete pottery scatter here was almost exclusively of medieval date and contrasted sharply with a similarly discrete post-medieval assemblage lying immediately to the south. This latter can probably be associated with the site of a cottage still visible on the 1st edition Ordnance Survey map. The magnetometer survey had suggested the presence of a complex of features in this locality that possessed anomaly strengths indicative of occupation as well as perhaps industrial activity (Fig.6). These linear features imply the presence of boundaries and perhaps structures.

The trench was 29.75m long and aligned roughly north-north-east to south-south-west. (Fig.19). Machine excavation of the topsoil (301) and cleaning revealed a number of archaeological deposits throughout the length of the trench. Context numbers (starting at 301) were assigned to the various features and deposits in the trench, although time and circumstances permitted the investigation of only three features. The ground surface below the topsoil sloped down more than 4m from north to south.

Trench 6 was very densely covered with archaeological remains, with no exposure of the natural ground surface. The remains were characterised by dumped deposits that included burnt and archaeometallurgical material and features that may be related to occupation associated with craft/industrial processes.

Dumped Deposits

A compact olive brown clay with occasional flint pebbles and abundant chalk fragments (306) was located at the southern end of the trench and extended for at least 6m, interrupted by Ditch 313. It appeared akin to Boulder Clay but had finds and charcoal within its matrix. It may be the same as 307. Finds recovered from the surface of 306 include animal bone, a fragment of coal slag and 41 sherds of pottery dating to the period 1250-1350 (Appendix 4).

Further to the north was a very compact olive brown clay (307) with occasional flint pebbles to 0.07m and abundant abraded chalk of all sizes to 0.05m. This layer that was either the mixed top of the Boulder Clay or similar redeposited material. It was sealed on the northern side by cobbled surface 305, and under this deposit presumably ended in an unseen boundary with 304. To the south it was cut by 314, and where the fill of this ditch (309) was excavated it was difficult to see whether there was a boundary between it and the next context 306. It may be that it was in fact the same context as 306. Finds recovered from the surface from 307 include animal bone, shell, coal

ash and coal slag, an iron nail and 28 sherds of pottery dating to the period c.1270-1350.

A deposit of olive brown silty clay (304) with fine chalk (to 10mm) and flint to 0.05m may have been a layer adjacent to a quarry or ditch (312), or might alternatively have been a deposit within this feature. It produced animal bone, slag and six sherds of pottery dating to the period c.1270-1350.

To the north of a quarry or ditch (312) was a layer of orange brown clay silt (303) containing much burnt soil and/or clay (flecks and pieces up to 20mm plus a general staining) with occasional flints and chalk up to 30mm. It appeared to be a layer, overlain by 302 to the north and cut by quarry/ditch 312 to the south. It produced animal bone, shell, coal ash and coal slag and fourteen sherds of pottery dating to the period 1350-1450.

At the northern end of the trench, a deposit of dark brown silty clay sand (302) with occasional flints to 0.05m. It was probably a layer, but may be a ditch fill, and its relationship with 303 to the south was indistinct, but 302 may be the later context. Ten pottery sherds dating to the period 1200-1350 were recovered (Appendix 4) along with an apparently post-medieval iron nail and an annular shoe buckle of late 13th to 15th century date (Appendix 2). This group, along with several others, is best dated by the recognisable pottery types and the medieval metal object. In contrast the very general post-medieval date given in Appendix 2 for most building nails and other rather unidentifiable iron fragments must be viewed with caution where these consistently sit as the only later items in groups of otherwise consistently medieval finds.

Cobbled Surface

A cobbled surface (305), 2.9m across from north to south, and made up of river pebbles (mostly flint but also chalk and sandstone) up to 0.15m but mostly 0.1m or less. The matrix between the stones was a topsoil-like grey-brown deposit, but the stones were bedded into a clay deposit beneath, not unlike 307. The surface was one layer of stones thick and was either a yard or track surface, it being perhaps too rough to have been within a structure. The surface was quite damaged, many of the stones have been removed by ploughing, and it lay on top of deposits 304 and 307. A sizeable number of artefacts were recovered from the surface of 305 and from amongst the cobbles. Whether they were in fact derived from the topsoil above is uncertain. They include animal bone, shell, burnt brick, fired clay, coal ash, coal slag, magnetic slag and bloomery slag, iron nails and iron objects (SF121 and SF123), a variety of millstones and sharpening stones (see Appendix 3) and 108 sherds of medieval pottery, dating generally to the period 1250-1350. The iron objects were, however, given a post-medieval date (Appendix 2) and it is likely that this relates to later activity on top of the surface, which may itself be more properly dated to the medieval period by pottery fragments.

Ditch

Cutting into earlier deposits at the southern end of the trench was a ditch (313), the cut of which proved very difficult to see, and it was only through overcutting a sondage through it and into adjacent contexts that the profile was observed. Its edges were indistinct, but it seemed to be circa 0.95m across and 0.25m deep with concave sides gradually giving way to a hollow base. It contained one fill 308, a very dark greyish brown clay with flints and chalk flecks and lumps to 0.05m. It produced artefacts including animal bone, burnt brick, fired clay, three iron nails, charcoal, coal ash and coal slags (some magnetic), a piece of lava millstone and 51 sherds of pottery dating to the period 1200-1350. An environmental sample produced nothing but large amounts of charcoal (Appendix 6).

Ditch

A narrow, shallow ditch (314) 1.02m wide and 0.4m deep, with sloping sides giving way gradually to a slightly rounded base. The slope of the field meant the northern edge was 0.14m higher than the southern edge. It was filled by one deposit 309, a very compact olive brown clay with occasional flints to 0.07m and chalk lumps to 0.05m. On excavation 309 produced sixteen sherds of pottery dating to the period 1250-1350 and a small amount of animal bone. An environmental sample produced nothing except charcoal and a lava quern fragment (Appendix 6). Although its size might suggest that this is a beam slot for part of a timber structure, the sloping ground here may suggest that this is instead a property division. It was cut into deposits 306 and 307; which may in fact be the same context.

Posthole

A rectangular posthole (316) 0.45m x 0.3m remained unexcavated and had been cut into 304. Its upper fill 315 was an olive brown silty clay. This may be part of a fence line respecting the edge of Quarry 312 and Cobbled surface 305.

Quarry or Ditch

Running across the northern part of the trench was a quarry or ditch (312), only the northern edge of which was visible, located c.6m from the northern end of the trench cutting through deposit 303. It is probable that its southern edge was at least 7m further along the trench, and possibly further. This cut seems to contain deposits 310 and 311. Layer 304 may also be a fill of 312, but this is not certain. Its size suggests that it was a quarry, however, where excavated it was found to be only 0.15m deep with a straight, angled side and a flat base. The first fill on its northern edge was 310, an olive brown sandy clay mottled with red and black burnt soil and clay. It also contained flints to 0.05m and occasional slags and charcoal. It merged slowly into 311 to the south. This latter was a light olive brown silty clay with flints to 0.05m, also containing burnt red soil flecks and occasional charcoal.

Ploughsoil

The ploughsoil (301) was a relatively shallow (0.30m) 'loamy' clay silt containing flints, chalk, domestic and building debris and abundant straw. Fragments of animal bone, burnt brick and nineteen sherds of pottery dating to the period 1300-1400 were recovered. Finds were also recovered during machining and from the spoilheap.

Trench 6

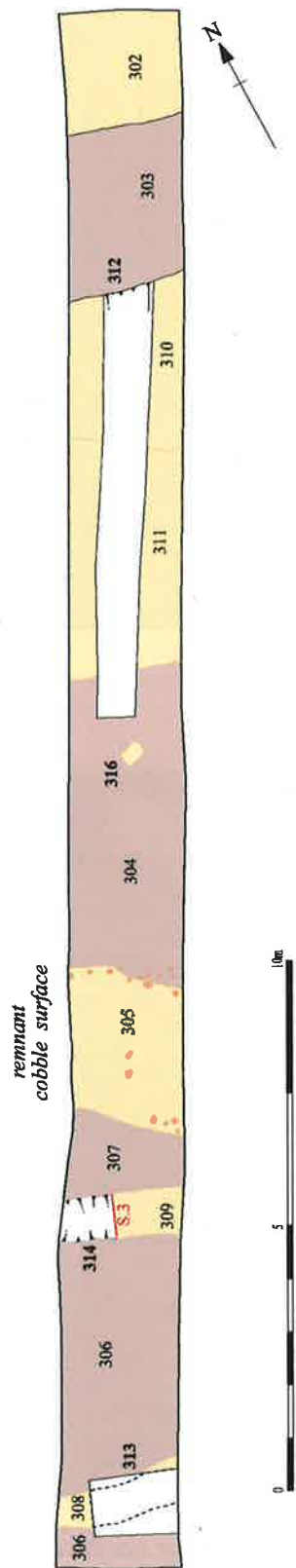


Figure 19 Plan of Trench 6



Plate 9 Cobbled surface 305 in Trench 6.



Plate 10 General view of Trench 7 from the northwest showing the depositional sequence with burnt material presumed to be from ironworking incorporated into late medieval colluvium.

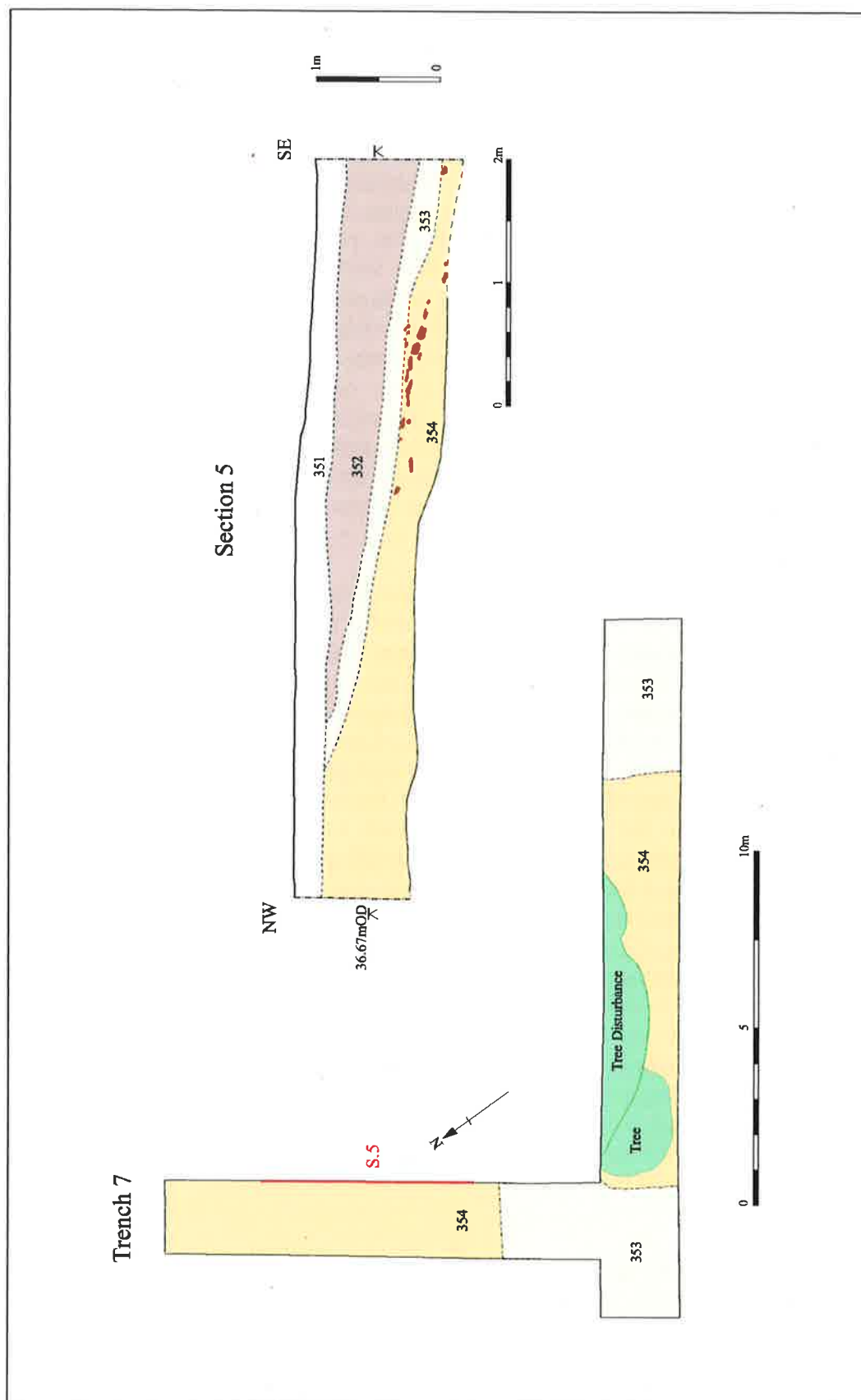


Figure 20 Section 5 and plan of Trench 7

5.3.2 Trench 7

This trench was located parallel with the Bourn Brook at the extreme southern end of the study area (Fig.11) in an area of land that slopes away southwards to the Brook. This general area adjacent to the Brook was deemed significant as a result of pottery and metalworking waste recovered during fieldwalking, but also because of the presence 100m to the north-west of the probable site of a medieval watermill. The magnetometer survey had suggested the presence of a complex of features in this locality that possessed anomaly strengths possible indicative of industrial activity as well as occupation (Fig.6). In addition fieldwalking in the vicinity and uphill of this location had produced a range of material indicative of metalworking including probable late medieval water-powered bloomery slag (J. McDonnell pers. comm.).

Being immediately adjacent to the Bourn Brook and close to a probable mill site the coincidence of indicators for medieval industrial activity could not be ignored. Although close to an area of known recent disturbance, including a possible backfilled pond, it was felt that the anomalies were distinct enough to be worth investigating.

The trench was intended to be linear in plan, orientated south-east to north-west, and 30m long (Fig.20). Machining started at the planned south-eastern end and very quickly a large area of recent backfill was identified and it became apparent that the backfilled pond known to have been in this general area had been located, albeit in a more westerly position than expected. A general backfill deposit was identified as of recent date, and this sealed a buried topsoil. Once a 20m length of trench had been excavated and the upper backfill deposits part-removed by machine it became apparent that the backfill was deepening to the west where the trench was due to be continued. A decision was made to extend the trench uphill and north-eastwards at this point. In this way it was hoped that area adjacent to and uphill of the former pond would quickly be revealed.

The trench was extended for a further 12.5m uphill at right angles to the initial orientation. The backfill deposits were found to thin out quickly as the shape of the pond edge and rising natural topography became apparent. The full sequence of deposits in this arm of the trench were then excavated by machine and by hand across a 6m long section as shown in Fig. 20 (Section 5). The sequence identified is described below. In summary, the sequence recorded in Trench 7 is one of hillwash containing possibly late medieval smelting waste, followed by a buried topsoil, pond backfill and modern topsoil.

?Hillwash

The earliest deposit identified lay above the sloping natural boulder clay and was a light yellowish brown (and orange-tinged) sandy silt (354), that was up to 0.7m deep at the uphill end of the trench, and thinned out within the former pond area to around 0.35m-0.40m. It is likely that much of the colour in this deposit resulted from the inclusion of soil that had been subjected to intense heat in an open/oxidising atmosphere. Along with occasional small flints and

chalk pieces, this deposit also contained lenses of burnt/vitrified brick or daub and clinker or slag, along with charcoal flecks: the most prominent of these are shown on Section 5 (Fig.20). These lenses and all visible inclusions in the deposit show a downhill trend indicative of downslope movement during deposition. Although this deposit thus has some characteristics of a hillwash, being also fine-grained and loose, the fact that it thinned out downslope and in the vicinity of the former pond is not explicable by natural agencies alone. It may be, however, that its apparent thinning out at the base of the slope is due to later truncation.

The evidence for burning is almost certainly industrially-derived and can probably be associated with the other evidence in the topsoil here for archaeometallurgy. All indications point to these remains having been displaced from further upslope, however, suggesting that debris from the raking out and/or dismantling of smelting hearths has been caused or allowed to cascade down the hillside. No artefactual dating evidence has been found associated with this deposit; an environmental sample produced coal and fired clay only (Appendix 6). A large vitrified brick fragment has been described, however, (Appendix 3, also Plate 4)) and this is thought to be late medieval in date.

Buried Topsoil

The subsequent deposit (353) was a dark yellowish-brown loose and friable sandy silt containing much root material and a high organic content. This is interpreted as a buried topsoil. It was generally around 0.15m thick, but up to 0.25m towards the former pond area. It lay largely beneath the pond backfill, but was truncated away upslope by the modern topsoil.

Pond Backfill

The backfill of the pond, known to have existed within living memory, lay above the buried topsoil. Its upslope edge can be seen on Section 5 (Fig.20) and it then rapidly deepened to 0.75m at the southern edge of the trench. It was an olive brown silty clay with many chalk fragments up to 0.10m but also containing modern artefacts and modern building rubble.

Ploughsoil

Above the pond backfill was ploughsoil (351), consisting of a very loose dark brown clay sand with high organic content and much straw (following harvest). This varied between 0.2m and 0.3m in depth, which is quite thin for this bottom of hill location, this being explained by its recent origin in this area.

6 DISCUSSION

6.1 The North Area (Densett Street)

A long period of medieval occupation is indicated alongside Densett Street in the northern area. The frontage activity, as demonstrated in Trenches 1 and 5, is very dense, although the findings from Trench 2 suggest that it does not extend a great distance from the frontage. The earliest features investigated were pits (**107** and **110** in Trench 5 and feature **21** in Trench 1) that may have been backfilled in the 12th or early 13th century. The latest deposits in Trench 5 may date to the 15th century. The presence of limonite and a few pieces of slag hint that metallurgical processes were taking place somewhere in the vicinity, but generally this occupation seems wholly domestic and agricultural. In keeping with this assertion, the environmental samples from the trenches in this area were found to contain carbonised cereal, legume and weed seeds and chaff, indicating that agricultural processing and domestic consumption occurred in the vicinity. The presence of small quantities of micro slag and magnetic fragments hinted at metallurgical processing. Animal bone was not abundant and derived from all of the common domesticates, with sheep/goat fragments most common.

The good state of survival evident in Trench 5 and, in particular Trench 1, implies that the last two decades of arable cultivation have not entirely wiped out the level of preservation sustained by perhaps five centuries of pastoralism on the site.

6.2 The Central Area

The remains here indicate that medieval occupation was not located very close by and are for the most part associated with agricultural activity. The backfilled linear hollows and pond may, however, be indicative of an extractive industry, but the evidence remains equivocal.

6.3 The Southern Area (by the Bourn Brook)

Trench 6 demonstrates that the group of magnetic anomalies in this area derive from a dense cluster of occupation features that also possess an industrial component. Bloomery slag is present, which should be late medieval in date. All of the features in this trench indicate a date in the 13th to 14th century for their active life. Whether earlier remains lie hidden remains unknown, although there is a strong suggestion of one period of exploitation only. Environmental samples, perhaps surprisingly, produced no magnetic fragments or micro slag, but coal was present and charcoal abundant. Of greater interest is the complete lack of any other carbonised plant remains, whether cultivars or weeds. This implies that domestic and agricultural

activities did not occur close by. The faunal remains were primarily sheep/goat and cattle fragments, with pig, dog and cat also present.

Trench 7 supports the general findings from Trench 6 by demonstrating that a wider landscape was utilised for iron smelting: the remains from this industry became incorporated into hillwash on its demise. The actual site of smelting hearths probably lies uphill of the trench.

Overall the southern area appears to have been a centre of medieval smelting, perhaps based around one or two properties, with a water-powered bloomery present at some point. This latter is likely to have been adjacent to the Bourn Brook at the putative mill site on the field boundary.

7 CONCLUSIONS

7.1 Understanding Medieval Archaeometallurgy in the Settlement of Densett at Bourn

The project aims were to confirm the presence, degree of survival and dating of occupation and activity believed to be associated with ironworking. It was also hoped that specific evidence demonstrating the structures and processes of archaeometallurgy would be identified. The recent work has undoubtedly achieved most of these aims although a primary location of smelting or smithing has yet to be located. In addition, there is little evidence from the evaluation trenches beyond the implication that archaeometallurgy was taking place in the northern, Densett Street area.

The northern area has, however, provided plentiful evidence from fieldwalking to suggest metalworking and thus the interpretation of the activity here ought to include an industrial function, even if this may be secondary to a general and standard agricultural base for the medieval properties represented here. Whatever the current conclusions, the very small sample size means all conclusions are indicative only, and the potential remains for further information and a better understanding to be revealed through longer-term investigation of surface finds and documentary evidence.

The southern area close to the Bourn Brook appears to have been associated with metalworking very close by, perhaps both smithing and smelting, the latter perhaps culminating in a water-powered bloomery. When added to information from fieldwalking, documents and landscape interpretation, the evaluation data here tends to imply settlement units that had much more of their economy associated with metallurgy. David Baxter's observations along Water Lane suggest that this was at some point remodelled to provide a head of water to power a mill, perhaps replacing the leet parallel to the Bourn Brook in the valley bottom, that from the documents appears to have silted up and become a lane itself during the medieval period (D. Baxter, pers. comm.).

The evaluation areas must be placed in a wider context of medieval occupation on the north side of the Bourn Brook as a whole, and in Bourn parish generally. To this end further survey work also includes the western half of the valley where a range of related and comparable landscape features and properties are becoming evident, including further possible medieval properties lying in the valley bottom, aligned east to west along the northern side of Water Lane parallel to the Bourn Brook. To this must be added the enigmatic mounds known as the Moulton Hills, a Scheduled Ancient Monument. It now seems impossible to view these as wholly unrelated to the medieval ironworking industry that surrounds them. Re-interpretation of the excavation report (Walker 1911) by both David Baxter and Paul Spoerry, including assessment of the small amount of finds still held in the Cambridge University Museum of Archaeology and Anthropology, suggests that these monuments have both a Roman and medieval component, the former being perhaps wholly derived from settlement lying beneath the mound structures themselves, and perhaps being therefore wholly unrelated. It seems highly likely that the Moulton Hills are not in fact Romano-British burial mounds, but industrial waste heaps of the medieval period.

Densett is recognisable as one of a number of former elements ('ends') in the wider settlement pattern that constituted the medieval 'place' that was Bourn. Bourn fits the model for polyfocal villages, although whether a multiplicity of 'ends' have Roman or Saxon origins in the manner suggested for Great Shelford, for example, (Taylor 1971, 1977) is not known. Densett itself may have been developed anew by the Manor of Barnwell Priory, or alternatively it may have been a pre-existing focus of occupation in this estate with much more ancient origins. Even if the latter is the case the apparent order and regularity of the property units may suggest elements of planning in the settlement's development in the 12th to 14th centuries.

It seems from these evaluations and from associated and ongoing documentary work not fully described here, that the settlement on the north side of the Brook in Bourn parish constitutes a comparatively well-preserved and unparalleled medieval rural industrial landscape. Although small in scale, and with an economy still based around agriculture, this phenomenon is extremely important for its rarity, particularly in rural Cambridgeshire.

7.2 Implications for Further Work

It has always been intended to supplement the evaluation trenching with sample excavation, targeted to answer outstanding and revised research questions. The next stage of the investigations is therefore a small excavation, funded in part from the Local Heritage Initiative Lottery Grant to Caxton Historical Society.

Further trenching will not in the first instance be planned for the northern 'Densett Street' area of the evaluation. The archaeology here was found to be

well-preserved and primarily related to agricultural settlement. Instead further investigations will concentrate on the southern area adjacent to the Bourn Brook, which appears to be close to surviving evidence for smelting and possibly smithing. Using the evaluation data, alongside further landscape assessment and possibly survey work, a primary zone for further work will be identified in the environs of Trench 6.

ACKNOWLEDGEMENTS

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APPENDIX 1: MAGNETOMETER (GRADIOMETER) SURVEY REPORT

by GSB Prospection

1 Survey Area

Approximately 6ha of gradiometer survey was carried out in three fields (Figs 3 and 5).

The survey grids were set out by GSB Prospection Ltd and were tied in to existing field boundaries and buildings. Detailed tie-in information has been lodged with the client.

2 Display

Figures 3-6 display the results as greyscale images and summary interpretations respectively. X-Y traces, dot density plots and accompanying interpretations were also produced.

Letters in parenthesis in the text refer to anomalies highlighted on the interpretation diagram.

3 General Considerations: Complicating factors

Conditions were good as the wheat crop had been recently harvested and the fields were under stubble at the time of survey.

Small, isolated ferrous-type responses are apparent in the data and are usually presumed to reflect modern debris in the topsoil; however, given the nature of the archaeology of this site it is possible that all or some of these anomalies have some archaeological significance; they are highlighted on the interpretation diagram, but they are not referred to in the text unless considered relevant.

4 Results of the Gradiometer Survey

4.1 Area 1

This area extends from Towns End in the north to a recently constructed field boundary in the south (see Fig.3). A prominent ridge is visible on the ground, approximately 80m to the east of, and running parallel to, the track which forms the western boundary of the survey area. The ridge is clearly visible in the data as numerous small ferrous anomalies, this type of response is consistent with a grubbed out hedge and it is likely that the boundary, noted

on the 1886 Ordnance Survey map, indicates the rear extent of the medieval plots, which fronted onto the track.

To the east of this boundary there are no anomalies of archaeological interest and the general background level is low. To the west of this boundary are distinct areas where the background responses are slightly elevated. The levels are more enhanced closer to the road and it is possible these areas represent individual plots, with houses and occupation debris situated adjacent to the road and more ephemeral, ancillary activities occurring at the back of the property. This theory is supported by the 'blank' land in between them; these magnetically quiet zones extend right up to the track, suggesting there is little modern debris accumulated at the edge of the field, and therefore enhancing the archaeological potential of the 'noisier' areas; this contrast is clearly visible in the areas labelled (A) (Fig.4).

Adjacent to the track there are many strong archaeological type anomalies, the majority of which fall within the areas of increased magnetic response. Although the greater number of them do not form any coherent pattern, it is possible that these responses indicate activities carried out within dwellings, such as pits and hearths, and structural remains as such have not been detected due to the nature or non-existence of the remains. It is suggested that (B) may represent a slot associated with a building, although this is a tentative interpretation.

In the southern part of Area 1 anomalies (C) clearly form part of a rectilinear enclosure; these can be aligned with features on a copy of a 19th-century map and are therefore presumed to indicate the remains of a building with associated boundaries, pond and gardens. Close by lie anomalies (D), (E) and (F); (D) and (E) constitute two groups of potential pits and (F), together with several trends, appears to form a rectilinear enclosure. While it is possible that they form part of the complex (C) mentioned above, the cartographic evidence does not suggest the remains extend beyond the boundary formed by (C); therefore it is possible that all or some of these anomalies predate the map evidence. A building is also noted at (G) on the old map, therefore these anomalies may correspond to post-medieval activity on the site, however, given their position within a region of increased magnetic response, it is possible the remains of earlier activity exist in this area.

Eleven large anomalies in the data have been identified as "ponds", this interpretation is due to the majority of these anomalies corresponding to ponds marked on a 19th-century map; anomalies (H), (I) and (J) do not appear to relate to any of the known ponds. All these anomalies are similar in nature and it has been suggested that the ponds were filled in during the later part of the 20th century with a combination of hardcore and soil, which was then ploughed through (Baxter 2004). The responses are coherent and well contained and if the recent pond fill had been highly magnetic a spread of debris, caused by ploughing, would be expected to surround the immediate vicinity. The clearly defined anomalies within each pond area are very strong, >100 nT, therefore it is possible that they indicate structures involved in

industrial processes, such as ore-roasting hearths or furnaces were located in these areas. Some of these anomalies are worthy of further mention: anomaly (J) has a well defined edge, anomaly (K) has the form of a furnace similar to one identified at Ewecote (Vernon *et. al.* 1998, 2002), and (L) may represent a kiln or oven, although all the 'ponds' are worthy of further attention; these interpretations are tentative and the true nature of these responses can only be confirmed by excavation. The groups of 'ponds' situated in the northern part of Area 1 are located within the areas of enhanced magnetic response increasing the archaeological potential of these anomalies and perhaps suggesting each plot carried out their own initial processing. As an alternative, some of these anomalies may relate to fireplaces or ovens in, or adjacent to, individual dwellings.

4.2 Area 2

Area 2 is separated from Area 1 by a modern field boundary and extends just over 200m to the south to cover the area surrounding Blue Cottage to Ty Gwyn. The old field boundary is clearly defined in the northern part of the data and extends into Area 1 and is discussed above.

Most of the anomalies of interest are located in two groups which lie adjacent to the track. (M) comprises a group of anomalies within a region of increased magnetic response, similar to those in Area 1. However, in contrast with Area 1, the archaeological type anomalies are weaker, suggesting that they contain less enhanced magnetic components, and it is therefore unlikely any industrial processing activities were carried out here.

In the southern half of the data a series of anomalies and trends (N) give the impression of a small field containing ridge and furrow cultivation. By way of contrast other trends and anomalies in the data do not form any coherent patterns and therefore it is likely they have a natural or agricultural origin.

4.3 Area 3

Area 3 is situated adjacent to Bourn Brook and Water Lane, over a potential mill site (Fig.5). It has not been possible to clearly identify a mill within this area, although there are two areas of archaeological potential.

A region of increased magnetic response (Fig.6) containing archaeological type anomalies, situated adjacent to Water Lane can be divided into two parts, (O) and (P). (O) is likely to represent the remains of a post medieval structure (D. Baxter, pers. comm.) and although (P) respects a boundary noted on the 19th-century map and may be related to (O), there is a clear space between the two groups of anomalies and it is possible (P) relates to a different phase of activity on the site.

In the southern corner of the data lies a second area of increased magnetic response. Within this area several anomalies have archaeological potential and some are industrial in strength and nature; the responses appear to respect

the stream and therefore it is possible their functions are related. There is a pond marked on the 19th century map in this corner and while there is no single anomaly in the data which corresponds to this feature some of the responses may be a result of backfilling the pond. It is also possible this 'pond' represents a similar feature to those mentioned in Section 4.1 above and the responses form part of a water powered bloomery.

An area of magnetic disturbance is presumed to have been caused by modern debris accumulating at the entrance into the field. In addition a telegraph pole and the edge of the track have caused a strong ferrous response along the south-eastern edge; this will have masked any weaker archaeological responses in the vicinity. Ploughing trends in the data align with the current ploughing action therefore they are considered to be modern in origin.

5 Conclusions

An old field boundary, noted on a 19th century map and visible on the ground surface as a slight ridge, has been identified in the data; within this area several plots of land can be discerned by areas of increased magnetic response. Most anomalies of archaeological interest are situated adjacent to the track, suggesting that they represent the remains of occupation, and less lasting activity occurred to the rear of the properties. At two points along the track archaeological type anomalies coincide with buildings noted on the 19th-century map, although medieval remains may be situated here it is likely the responses from the later constructions will have masked them.

Numerous highly magnetic anomalies in the data have been identified as ponds: these are purported to have been filled in during the 1980s and it is possible these strong responses are due to the modern fill material. However, given the evidence for ironworking on this site and the coherent, well-defined nature of these anomalies it is likely some or all of these ponds indicate ore-processing sites.

The survey area adjacent to Bourn Brook also revealed an area containing archaeological and industrial type responses. An area of increased magnetic response at the junction of Water Lane and Bourn Brook also contains responses of an archaeological nature. It is likely, however, that some of these correspond to a post-medieval structure known to have existed in this area.

Elsewhere there are few responses of interest and the background levels of noise can be seen to be very low, a potential medieval field has been identified close to Ty Gwyn.

Project Co-ordinator: F. Robertson
Project Assistants: J Lawton, B. Urmston & E. Wood
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Date of Report: 10th September 2004

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APPENDIX 2: METAL FINDS

by Chris Montague

1 Assemblage Summary

A small assemblage of four copper alloy and thirty-one iron objects was recovered. The group of copper alloy objects ranges in date from the late 12th to the mid 15th century. These items are equestrian or domestic nature, consisting of a strap end, buckle plate, annular buckle, rumbler bell and harness rings.

The iron objects indicate possible building remains or may derive from an agricultural workshop or smallholding dating from the 16th-18th centuries. The assemblage comprises building straps, nails, staples, right-angled hooks, pintles and a hinge strap.

Some of the small nails may come from horseshoes, perhaps indicating the presence of a stable or farrier nearby (related items include 13th- to 16th-century horseshoes and an iron buckle associated with horse bridle fittings).

2 Catalogue of Iron Objects

Trench 1

Context 1

SF 108 16th - 18th century, building staple

SF 111 17th -18th century, small building nail

Trench 5

Context 100

SF 112 c.15th -16th century, whittle-tang knife blade fragment

SF 118 15th -17th century, fragment of door hinge strap

SF 127 c.16th - 18th century, staple-tie

SF 128 c.16th- 18th century, small building nail

Context 101

SF 1 An iron buckle, oval frame with offset narrowed bar. Oval-shaped frame buckle with prominent buckle pin, c. 1450 - 1490. Most small iron buckles are associated with horse harness or bridle equipment. Towards the latter part of the 15th century these types of buckles were very often tin coated. L: 23.40 mm; W: 34.91 mm; T: 4.97 mm

SF 2 c.15th - 17th century, a circular tapered ferrule. D: 33.15 mm. Agricultural, domestic hand tool.

SF 3 c.16th - 18th century, medium building nail

SF 5 c.16th - 18th century, fragment rectangular rod, with attached flat plate. Agricultural, building, box fittings?

Context 106

- SF 109 c. 15th - 17th century, fragment of domestic-use knife (whittle – tang).
SF 110 c. 15th – 18th century, small building nail.
SF 113 c. 16th – 18th century, small building nail
SF 114 c. 16th – 18th century, Fe object?
SF 115 c. 16th – 18th century, large square-headed building nail
SF 116 c. 16th – 18th century, medium building nail
SF 117 c. 13th – 15th century, Guildhall type horseshoe: type 4, nail holes left – right 3 / 2

Context 109

- SF 7 c. 16th - 18th, Fragment, Fe object?

Trench 6

Context 301

- SF 131 c. 16th - 18th century, small building nail fragments

Context 302

- SF 125 c. 16th – 18th century, small - medium building nail.

Context 305

- SF 119 not located
SF 121 c. 16th - 19th century, Fe object?
SF 122 c. 18th - 19th century, small fragment of folded Fe, plate (modern).
SF 123 c. 16th - 18th century, one fragment Fe strapping, (furniture - box fitting).
SF 124 c. 16th - 18th century, medium building nail, and small nail fragment.

Context 307

- SF 120 c. 16th - 18th century, two small nail fragments.

Context 308

- SF 126 c. 16th - 18th century, one medium building nail.
SF 129 c. 16th - 18th century, one large round headed, building nail.
SF 130 c. 16th - 18th century, small building nail fragment.

Unstratified

- SF 132 c. 14th – 16th century, fragment of spade iron (digging shoe)
SF 133 c. 15th - 16th century, horseshoe fragment: type 4, right side, three holes, two nails remaining
SF 134 c. 14th – 16th century, (window – door) pintle, right angled hook; suspension hook (rounded bar with angled spike). Also building, box strap fittings?

3 Catalogue of Copper Alloy Objects

Trench 1

Context 1

- SF 108 Folded buckle plate, c. 12th - 14th century. Buckle: (Oval frame with offset, narrowed bar, and recessed bar). A tapering buckle plate (incomplete at back) with an off-centre pin slot, and five prominent rivets, with sub-spherical heads. The buckle plate shows traces of gilding. L: 42.03 mm; W: 25.08 mm Max; W: 22.82 mm; T: 5.42 mm

Trench 5

Context 100

- SF 6 Annular buckle, c. mid 13th – mid 15th century. A single loop circular buckle frame (strap attached directly to frame). A circular frame uninterrupted by a constriction for a pin, semi circular in section and slightly worn along one edge. These rings were also associated with horse harness and fittings. External Diam: 43.48 mm; Internal Diam: 32.29 mm; T: 4.00 mm

Context 101

- SF 4 Small rumbler bell, c. late 13th - early 15th century. These bells would have been worn as a dress accessory, and sometimes they were also attached to the collars of pets and hunting dogs, or to horse harnesses. Records that show that several hundred have been found attached to horse equipment associated with jousting tournaments. The bells were produced in four components cut from sheeting. A hollow body was made in two halves in by hammering into a round form. A loop was inserted upwards through a hole cut into the upper half of the body and the ends were bent outwards and then inwards in the manner of a staple, so that it remained rigid rather than swivelling. An aperture was then cut into the lower half of the body, the pea was inserted and lead tin solder was then used to solder the two halves together, leaving a flanged seam line. This seems to have been a design weakness in as many are found split in two. Top halves, Bottom Halve, Suspension loop, and Iron Pea. Top & bottom halves fragmented, suspension loop and pea missing. D: 25.62 mm

Trench 6

Context 302

- SF 107 Annular shoe buckle?, c. late 13th – 15th century. A single loop, circular frame (strap attached directly to frame). A circular frame uninterrupted by a constriction for a pin, semi-circular in section, poorly cast in manufacture. Frame irregular in thickness. May be a general unitarian, harness ring. External Diam: 22.50 mm; Internal Diam: 14.80 mm; T: 2.45 - 2.77 mm
- SF 125 c. 16th – 18th century, medium building nail

Context 303

- SF 131 c. 16th – 18th century, medium building nail

APPENDIX 3: ARCHAEOMETALLURGICAL MATERIAL

by David Baxter and Paul Spoerry

The range of material indicative of archaeometallurgy has been defined at Densett over several seasons of fieldwalking. General definitions are included below. The presence and distribution of the material types is evident in Table 1.

1 Catalogue From Evaluation Trenches

The evaluation trenches also produced a range of material indicative of archaeometallurgy. This is listed on a material by material basis for each trench.

Trench 5

Limonite:

Present in the spoil heaps and in contexts 106, 108 and 109.

Millstone:

106 Lava millstone quern fragment, Gritstone fragment, burnt on one side

Trench 6

Slag and fuel ash:

Most features contain coal slag and coal ash. Only context 305 contains magnetic slag and bloomery slag in addition to coal slag and coal ash.

303 Coal ash and coal slag (several pieces magnetic)

305 Coal ash and coal slag (30% of larger lumps magnetic). Magnetic slag with one flow of black glass, one rather worn lump of bloomery slag with typical dimpled flows and fused sandy clay on the underside.

306 One fragment of coal slag

307 Coal ash and coal slag

308 Charcoal, coal ash and coal slag (some lumps magnetic)

Limonite:

Present in 304, 305, 306, 307, 309

Millstone:

305 One piece of lava millstone used as a quern or grindstone, with one ground face.
One large piece of basalt, possibly used as a grindstone.
One further piece of basalt with naturally flat faces.
One small piece of gritstone used to sharpen needles or similar.
One piece of gypsum with a ground face.
Two pieces of mica schist (commonly used for hones).

308 Lava millstone quern fragment with typical rough, hackly lower surface and a ground upper surface.
One thin piece of dense lava millstone. Too thin for a quern, this was perhaps used for grinding tools.

Trench 7

Vitrified brick:

309 From Sample 4. A fragment of reduced vitrified brick, very light with flint inclusions and typical purple-brown fired surfaces. Also from Sample 4, a fragment of reduced red brick.

354 One large lump of reduced vitrified brick that could be mistaken for lava millstone: one face side, thickly sanded, one irregular sanded surface, parallel to the first but bulging out. Fractured sections show silica inclusions and many voids.

Unstrat. One fragment of worn, rusty, dimpled bloomery slag.

2 Definitions/Descriptions

Coal Ash is low in density, vesicular, with individual cells showing black and shiny in fracture. The geological streak test shows black. Coal ash is much harder than charcoal, but weathers in ploughsoil to rounded grey pebbles that can be mistaken for charcoal.

Coal Slag is black in section, with many purple-brown gas bubbles on the surface, which is pimpled with white grains of silica. Shale-like fragments of coal can be found partly burnt in about 25% of lumps. About a third of all lumps are magnetic.

Bloomery Slag is dense and homogenous, black in section, with voids, but no gas bubbles on the surface. Unweathered samples show tiny liquid runs that have cooled on the surface to form dimples. Patches of fused clay and sand adhere to the surface, and weathered lumps are rusty. About 30% of all lumps are faintly magnetic. The only sample of bloomery slag analysed to date shows a very similar chemical signature to the only sample of limonite analysed to date, but that would be so whether it was smelting slag or smithing slag if the primary raw material was indeed local limonite.

Magnetic Slag is very dense, with clear flow patterns resulting from liquid drops of slag. It has a grey fracture, and is homogenous apart from droplets of black glass that form on the surface, and make independent flows. The slag itself is highly magnetic; the black glass not at all magnetic. This material has so far been found only in and around Trench 6.

Mill Stones. Local smiths used a variety of stones for hones and grindstones, some of them imported, some apparently found locally in the boulder clay. Stones from the boulder clay include **gritstone**, **green schist** and **basalt**, which forms natural flat surfaces up to 25cm across. **Basalt** is dense, crystalline, with no voids in freshly broken pieces, though long-weathered surfaces are deeply pitted. Weathered basalt can be mistaken for **lava millstone** which occurs on all medieval house sites in the three parishes studied here by fieldwalking (Bourn, Caldecote, Caxton), some pieces being channelled to make querns. Lava millstone varies on these sites from vesicular to dense. Some dense pieces have clearly been used to sharpen flat blades such as plane irons. A light, vesicular variety of lava millstone has been found in quantity on the site of Caldecote Mill (a windmill active in the 14th century). Magnified x 25 lava millstone has grains of less than 0.1mm, with black, shiny inclusions up to 2mm in size and many elongated voids.

Dense, medium and light (vesicular) lava millstone samples have been thin-sectioned in the Open University laboratory and found to all derive from the same rock.

Where any of these stones occur in a slag scatter (or in an excavated trench) the problem is to identify whether they have been used for iron-working, or indeed gathered for the purpose. Most hones are unambiguous because of their shape and the total for Densett alone is so far more than sixty.

Vitrified Brick can easily be mistaken for lava millstone if it is uniformly grey and full of voids. Magnified x 25 the brick is distinguishable by densely packed grains of sand. In highly fired pieces the clay appears to melt to form a honeycomb-like network of mass and void, with a specific gravity of less than 1.

3 Discussion

The range and concentration of archaeometallurgical and related remains from the fieldwalking and evaluation trenching programmes is substantial and not in keeping with medieval domestic occupation only. Within the settlement at Densett, the key findings are as follows:

Evidence for iron smelting, in the form of magnetic slag and in particular bloomery slag is concentrated around and within Trench 6 along with much coal ash and coal slag. Within the trench a cobbled surface (305) and an associated ditch (314) are a focus for these remains. These deposits date from perhaps the late 13th to 14th century onwards and seem to represent primary structures associated with iron smelting, and perhaps part of a complex that included a water-powered bloomery by the Bourn brook a few metres away.

The large quantities of hones in a variety of stone types, along with iron rod and incompletely fashioned iron objects, suggest that iron smithing was carried out within many of the medieval property units investigated.

Fieldwalking results suggest that limonite is found in concentrations of twelve times the local norm within the medieval properties at Densett (twelve fragments, as opposed to one, for every 200m walked) and are even higher around Trench 6. This suggests collection of limonite for use in the smelting process at these properties.

Vitrified brick from kiln structures is present across most of this landscape, but is concentrated in medieval properties at the southern end of the settlement, where it was also found in Trench 7 incorporated into post-medieval hillwash.

APPENDIX 4: POTTERY SPOTDATING

by Paul Spoerry

1 Introduction

Pottery spotdating permits the initial identification and dating of pottery in context groups to facilitate the dating and interpretation of excavated contexts.

2 Methodology

Pottery is sorted by eye or hand lens into identifiable fabric and ware types and the amount present is quantified by sherd count and weight. Basic descriptive information is collated to enable further refinement of dating of fabric and vessel type where appropriate. All data is inputted onto a dedicated form in a pottery quantification relational database (using Microsoft Access). The data from this process is tabulated here as Table 2. Pottery recorded from previous fieldwalking campaigns is not included here.

3 Results

Table 2 shows the amount in sherds numbers and weight, of each pottery type recovered from each context. Pottery types are given code identifiers based around the common name or a fabric descriptive code. Provisional dates given to the identified sherds and groups of sherds within each context. It must be noted that the dates thus assigned cannot be simply translated into dates for the deposition of that context. A composite date for the context group is generated for this purpose that takes account of the amount of pottery of each datable type within a context group, alongside its relative state of fragmentation and abrasion. These context 'spotdates' are given here as Table 3.

Table 4 summarises the quantification and identification of pottery from the evaluation trenching by fabric type.

In all, the evaluation trenches produced 969 sherds (6.933kg) of pottery. More than 99% of this dates to the medieval period, specifically the 12th to 15th centuries.

4 Conclusions and Implications

4.1 Dating

It is immediately evident that this assemblage is almost exclusively medieval in date with little residual or intrusive material from other periods. Within this medieval assemblage there are a few contexts that suggest a residual pre-12th

century component present alongside slightly later material (primarily contexts 3 and 109, from Trenches 1 and 5 respectively). It is unlikely that these sherds, although in generically Late Saxon fabrics, are earlier than the 11th century. Other contexts that may date to the 12th century include 3 again, and contexts 103, 109 and 11 from Trench 5, although all of these could also be of 13th century date. Most of the remaining contexts are either dateable to the late 13th to early 14th centuries or the late 14th to 15th centuries, with both being represented in trenches at the northern end of the site (Trenches 1 and 5) and in the southern area (Trench 6), suggesting ongoing activity in both zones from the 13th to 15th centuries.

4.2 *Provenance*

Table 4 shows the amount of each pottery type (using fabric codes) present in the assemblage as a whole. These data can be further summarised to show the general geographic origin of pottery found at Densett. This exercise is, however, in this instance fraught with difficulty as some of the most common pottery found in the 12th to 15th centuries in south Cambridgeshire has not been provenanced to a broad geographical area, let alone individual production sites. The most significant of these are grouped here under fabric types SW (generic medieval sandy ware) and MICSW (micaceous sandy ware) that together constitute 43% of the excavated sherds. The situation is mitigated by the fact that much of MICSW is *very likely* to have been produced at several known industries in rural Essex, but that still leaves the 23% of sherds assigned to SW as unsourced. This material has affinities with pottery produced in both Essex and in Cambridgeshire, but latter option is perhaps more likely.

Overall statistics indicate that 35% of pottery at Densett was probably made in Cambridgeshire, 29% was probably made in Essex, 8% was probably made in a zone that includes parts of western Huntingdonshire and Northamptonshire, leaving 28% unsourced, the great majority of which is classified as SW (sandy ware).

One difference is apparent between the assemblages from the northern and southern parts of the settlement. Trenches 1 and 5 include many sherds that are identifiable as products of the Ely and Colne industries, and associated types from elsewhere in the Cambridgeshire Fenland, whereas Trench 6 has many more general sandy ware (SW) sherds.

Context	Material	Fabric	Number of Sherds	Weight in Grams	Earliest Date	Latest Date	Vessel Forms	rim/base/other	Comment
1	Mpot	MICSW	49	243	1150	1400			VARIOUS ABRADED
1	Mpot	SW	24	150	1150	1400			VARIOUS
1	Mpot	SHW	16	83	1150	1350			VARIOUS
1	Mpot	COLCHESTER TYPE WARE (FABRIC 21)	1	4	1200	1500			
1	Mpot	MEL	1	5	1150	1350	Jar	R	
1	Mpot	DEST	1	8	1150	1250	Jug		BS EXT GG
1	Mpot	COLCHESTER TYPE WARE (FABRIC 21)	2	78	1250	1400	Jug	H	EXT GG ROPE HANDLE
3	Mpot	NEOT	8	49	900	1150	Bowl	R	ROLLED RIM
3	Mpot	SHW	9	107	1150	1350	Jar		various incl base and ext thick rim
3	Mpot	SW	3	27	1150	1350			
3	Mpot	MICSW	37	197	1150	1400			
3	Mpot	MELT	10	160	1150	1350	Jar	R B	EXT THICK UPRIGHT RIM
11	Mpot	MICSW	4	5	1150	1400			TINY BS
52	Mpot	OSW	1	1	1200	1500	Jug		TINY LATE VESSEL
52	Mpot	MGF	2	13	1270	1350	Jug	B	
52	Mpot	NEOT	1	3	900	1150		R	RIM
52	Mpot	MICSW	5	15	1150	1350			ASSORT BS ORANGE AND BROWN
52	Xpot	UNK	1	1	1350	1800		H	TINY HANDLE IN UNK BUFF FABRIC
100	Mpot	MELT	1	62	1300	1500	Jug	H	strap handle, central finger groove
100	Mpot	MELT	5	97	1300	1500	Bowl	R	FLANGED RIMS
100	Mpot	MELT	3	28	1150	1350	Jug	R	ASSORTED RIMS
100	Mpot	MELT	1	14	1150	1350	Jar	R	
100	Mpot	MELT	36	385	1150	1500			ASSORTED BS
100	Mpot	SW	3	13	1150	1500			VARIOUS BS NOT MELT
100	Mpot	MEL	1	2	1150	1350			BS
100	Mpot	OSW	2	11	1350	1500			BS COULD BE EARLIER
100	Xpot	CSTN	1	13	1480	1600	Drinking Vessel		
100	Mpot	RAER	2	7	1480	1550	Drinking Vessel		
100	Mpot	SHW	4	35	1150	1350			

100	Xpot	PMR	2	12	1600	1800			STRAP HANDLE CENTRAL DEPRESSION
100	Mpot	MELT	1	62	1300	1500	H	Jug	
100	Mpot	MELT	5	97	1300	1500	R	Bowl	flanged
100	Mpot	MELT	3	28	1150	1350	R	Jug	
100	Mpot	MELT	1	14	1150	1350	R	Jar	
100	Mpot	MELT	36	385	1150	1500			
100	Mpot	SW	3	13	1150	1500			VARIOUS BS NOT MELT
100	Mpot	MEL	1	2	1150	1350			
100	Mpot	OSW	2	11	1350	1500			BS COULD BE EARLIER
100	Xpot	CSTN	1	13	1480	1600		Drinking Vessel	
100	Mpot	SHW	4	35	1150	1350			VARIOUS
100	Xpot	PMR	2	12	1600	1800			
100	Mpot	RAER	2	7	1480	1550		Drinking Vessel	
100	Mpot	SW	17	178	1150	1500			ASSORTED INCL JUG HANDLE, TWO JAR RIMS
100	Mpot	SW	1	40	1300	1500	R	Bowl	FLANGED BUCKET STYLE VESSEL RIM
100	Mpot	MELT	3	106	1200	1400		Jug	BASE AND RIM LEACHED
100	Mpot	SHW	1	6	1150	1350			
100	Xpot	BICR	1	20	1450	1600			
100	Xpot	RAER	1	6	1480	1550			
100	Mpot	OSW	13	159	1400	1600	B		MICACEOUS ORANGE SMOOTH ESSEX FABRIC
101	Mpot	MELT	1	54	1300	1500	H	Jug	STRAP WITH CENTRAL DEPRESSION
101	Mpot	MELT	1	15	1150	1400	R	Bowl	FLANGED
101	Mpot	MELT	5	42	1150	1400			BROWN BS
101	Mpot	OSW	2	58	1350	1500		Jug	
101	Mpot	MELT	1	54	1300	1500	H	Jug	strap handle, central finger groove
101	Mpot	MELT	1	15	1150	1400	R	Bowl	FLANGED RIM BROWN BS
101	Mpot	MELT	5	42	1150	1400			BROWN BS
101	Mpot	OSW	2	58	1350	1500		Jug	
103	Mpot	MELT	9	62	1150	1400		Bowl	FLANGED BOWLS - REDUCED
103	Mpot	SW	9	43	1150	1400			VARIOUS COLOURS
103	Mpot	SW	9	43	1150	1400			various colours

	Mpot	MELT	9	62	1150	1400	Bowl	flanged bowls - reduced
103	Mpot	MELT						VARIOUS BS BOWL AND JAR GREY FAB LIKE LMR
105	Mpot	COLN	49	317	1350	1500		
105	Mpot	COLN	5	100	1350	1500	Bowl	FLANGED B IN GREY FAB
105	Mpot	COLNC	2	9	1350	1550	CISTERN	BUNGHOLE
105	Mpot	SHW	2	7	1150	1350		
105	Mpot	MEL	13	147	1150	1500		
105	Mpot	MICSW	5	57	1150	1500		BS IN BUFF FAB SHORT UPRIGHT RIM IN BUFF FAB
105	Mpot	MICSW	1	17	1150	1500	Jug	R
105	Mpot	COLN	49	317	1350	1500		R
105	Mpot	COLNC	2	9	1350	1550	CISTERN	VARIOUS GREY FABRIC BUNGHOLE
105	Mpot	COLN	5	100	1350	1500	Bowl	R
105	Mpot	SHW	2	7	1150	1350		FLANGED B IN GREY FABRIC
105	Mpot	MEL	13	147	1150	1500		
105	Mpot	MICSW	5	57	1150	1500		
105	Mpot	MICSW	1	17	1150	1500	Jug	BUFF FABRIC SHORT UPRIGHT
106	Mpot	HEDI	1	3	1150	1300	Jug	G GLAZE
106	Mpot	ESMIC	7	15	1150	1350		SMOOTH MICACEOUS ASSORTED ABRADED ASSORTED ABRADED
106	Mpot	MELT	12	31	1150	1500		
106	Mpot	MEL	3	15	1150	1350		
106	Mpot	LMEL	2	20	1350	1500		HARD FIRED
106	Mpot	SHW	2	6	1150	1350		
106	Mpot	MICSW	3	11	1150	1350		VARIOUS GREY
106	Mpot	OSW	1	2	1350	1500		CLEAR GLAZE
106	Mpot	HEDI	1	3	1150	1300	Jug	G GLAZE
106	Mpot	ESMIC	7	15	1150	1350		ABRADED
106	Mpot	MELT	12	31	1150	1500		ABRADED
106	Mpot	MEL	3	15	1150	1350		
106	Mpot	LMEL	2	20	1350	1500		HARD FIRED
106	Mpot	SHW	2	6	1150	1350		
106	Mpot	MICSW	3	11	1150	1350		VARIOUS GREY
106	Mpot	OSW	1	2	1350	1500		CLEAR GLAZE
106	Mpot	HEDI	1	3	1150	1300	Jug	G GLAZE
106	Mpot	ESMIC	7	15	1150	1350		ABRADED
106	Mpot	MELT	12	31	1150	1500		ABRADED
106	Mpot	MEL	3	15	1150	1350		
106	Mpot	LMEL	2	20	1350	1500		HARD FIRED
106	Mpot	SHW	2	6	1150	1350		
106	Mpot	MICSW	3	11	1150	1350		VARIOUS GREY
106	Mpot	OSW	1	2	1350	1500		CLEAR GLAZE
106	Mpot	SHW	2	23	1150	1350	Jar	ROLLED RIM

[illegible]

303	Mpot	LMR	1	7	1350	1500	Jug	H	SMALL STRAP
303	Mpot	LMR	1	5	1350	1500			BS
303	Mpot	MELT	1	7	1150	1500			BUFF BS
303	Mpot	MICSW	5	19	1200	1500			VARIOUS BS MAY BE SW
303	Mpot	ESMICQ	4	26	1150	1500			ASSORTED BS
304	Mpot	MGF	1	20	1270	1350	Jug	B	THUMBED
304	Mpot	SW	2	3	1150	1500			COULD BE LMR
304	Mpot	MICSW	3	8	1150	1500			BS
305	Mpot	ESMIC	16	46	1150	1500			ASSORT BS
305	Mpot	ESMIC	2	19	1150	1500	Jar		rims
305	Mpot	SHW	1	3	1150	1350			
305	Mpot	HEDI	2	9	1200	1400	Jug		EARLY BALUSTER DECOR
305	Mpot	BRILL	2	34	1250	1500	Jug	B	GG
305	Mpot	MICSW	9	39	1150	1350			ASSORTED BS
305	Mpot	SW	5	63	1150	1350	Bowl	R	ASSORTED FLANGED
305	Mpot	SW	2	18	1150	1350	Jar	R	TWO RIMS
305	Mpot	SW	68	220	1150	1350			ASSORTED BS. SOME POSS
306	Mpot	SW	7	47	1150	1350			LMR OR MICSW
306	Mpot	MICSW	413	0	1150	1350			BS
306	Mpot	BRILL	1	11	1250	1500			GLAZED BS
306	Mpot	ESMIC	1	1	1150	1350			ORANGE BS W GLAZE
307	Mpot	MGF	5	19	1270	1350			ASSORT BS W GLAZE
307	Mpot	MICSW	5	17	1150	1350			BS
307	Mpot	SW	18	66	1150	1500			BS POSS SOME LMR
308	Mpot	SW	28	112	1150	1350			ASSRT BS
308	Mpot	ESMIC	1	13	1150	1350	Jar	R	THICKENED
308	Mpot	MICSW	8	42	1150	1350			DIFF TO SEPARATE FROM SW
308	Mpot	SHW	1	9	1150	1350			
308	Mpot	LYST	1	4	1150	1350	Bowl	r	flanged
308	Mpot	COLCHESTER TYPE							
308	Mpot	WARE (FABRIC 21)	11	35	1200	1400			various slip and glaze
308	Mpot	ESMIC	1	4	1150	1350	Jar	R	
309	Mpot	SW	4	15	1150	1350	Jar	R	ASSORT BS AND A RIM
309	Mpot	COLCHESTER TYPE	6	11	1200	1400	Jug		EXT MOTTLED GG AND RING

WARE (FABRIC 21)				STAMP				
309	Mpot	BRILL	1	5	1250	1500	Jug	EXT GG
309	Mpot	MICSW	8	58	1300	1500	Jar	SHORT EVERTED RIM OF LATE TYPE
							R	

Table 2 Spotdating data

Northern Area		Southern Area	
Context	Date Range	Context	Date Range
1	1250-1350	301	1300-1500
3	1150-1350	302	1200-1350
11	1150-1400	303	1350-1500
52	1270-1350	304	1270-1350
100	unstrat	305	1250-1350
101	1350-1450	306	1250-1350
103	1150-1400	307	1270-1350
105	1350-1450	308	1200-1350
106	1350-1450	309	1250-1350
108	1300-1400		
109	1150-1350		
111	1150-1350		

Table 3 Summary spotdates for each context

Fabric	No. Sherds	Weight (g)
BICR	1	20
BRILL	4	50
COLCHESTER TYPE WARE (FABRIC 21)	20	128
COLN	108	834
COLNC	4	18
CSTN	2	26
DEST	1	8
ESMIC	47	183
ESMICQ	4	26
HEDI	4	15
LMEL	4	40
LMR	5	37
LYST	1	4
MEL	58	390
MELT	164	1897
MGF	8	52
MICSW	606	1037
NEOT	25	192
OSW	24	302
PMR	4	24
RAER	5	20
SHW	50	368
STAM	1	10
\$W	223	1216
THET	4	22
UNK	1	1

Table 4 Summary data by fabric type

APPENDIX 5: FAUNAL REMAINS

by Ian L. Baxter

1 Introduction

A total of 202 animal bone fragments was recovered from the site. Of this total 82 or slightly less than 41% could be identified to species or broader taxonomic category (Table 5). All bone fragments are listed in the database (see site archive). This is a very small assemblage of animal bones and the information to be gleaned from it is necessarily limited. All the bones were hand-collected and derive from layers, pits and ditches dating from the 12th to the 15th centuries. The condition of the bones ranged from good to poor but was generally fair. Most of the unidentified material consists of small fragments. All of the bones recovered came from areas at the northern and southern parts of the site. Wear stages were recorded for all cattle and sheep/goat teeth and mandibles following Grant (1982). Horse incisors were aged following Barone (1980). No measurements were taken on the bones.

2 Discussion

All of the domesticated mammals are represented in this assemblage and sheep/goat fragments are twice as frequent as those of cattle. Pig bones are relatively infrequent. The bones of the domestic food species are general butchery waste.

2.1 *The Northern Area: Trenches 1 and 5*

Only 79 animal bone fragments were recovered from the northern end of the site (Table 5) in the vicinity of "Densett Street" (Trench 1) with an extension slightly to the south (Trench 5). In this area sheep/goat fragments were more than twice as frequent as those of cattle. Pig and horse occurred in Trench 5 but were absent from Trench 1. All of the cattle and sheep/goat teeth and mandibles seen belonged to adult animals. Three horse incisors probably belonging to the same animal aged twelve years or over were found in the topsoil in Trench 5 (100). Horse first phalanx fragments were found in Trench 5 layers (101) and (103).

2.2 *The Southern Area - Trench 6*

The assemblage from the southern end of the site in the vicinity of the Bourn Brook (Trench 6) produced more than half as many again bone fragments than the northern area (Table 5). Sheep/goat fragments are one and a half times as frequent as those of cattle. Again, all of the teeth seen are from adult animals with the exception of a lower dP4 fragment found in ditch 314 (309). No equid bones or teeth were present in this assemblage but dog and cat were

represented by one and two bones in the topsoil (301) and a surface (305) respectively.

✓ Bibliography

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Grant, A., 1982, 'The Use of Tooth Wear as a Guide to the Age of Domestic Ungulates', in Wilson, R., Grigson, C. and Payne, S. (eds.) *Ageing and Sexing Animal Bones from Archaeological Sites*, BAR British Series 109, 91-108

Taxon	Area			Total
	Trench 1 North	Trench 5 North	Trench 6 South	
Cattle (<i>Bos f. domestic</i>)	3	5	14	23
Sheep/Goat (<i>Ovis/Capra f. domestic</i>)	11	10	24	45
Pig (<i>Sus scrofa</i>)	-	3	3	6
Horse (<i>Equus caballus</i>)	-	6	-	6
Dog (<i>Canis familiaris</i>)	-	-	1	1
Cat (<i>Felis catus</i>)	-	-	2	2
Total	14	24	44	82
Large Mammal	2	-	5	7
Medium Mammal	-	1	-	1
Unidentified	7	31	74	112
Total	9	32	79	120
Total	23	56	123	202

Table 5 Faunal remains: number of Identified Specimens (NISP)

APPENDIX 6: PLANT MACROFOSSILS AND OTHER ENVIRONMENTAL EVIDENCE

by Rachel Fosberry

1 Introduction and Methods

Six bulk samples were taken from various features and 10 litres of each sample was processed by bucket flotation for the recovery of charred plant remains, dating evidence and any other artefactual evidence that might be present. Previous work had indicated that metalworking may have taken place in the vicinity. In order to ensure maximum recovery of metalworking evidence (in the form of hammerscale) the flot was collected in a 0.3mm nylon mesh and the residue was washed through a 0.5mm sieve. Both flot and residue were allowed to air dry. The dried residue was passed through 5mm and 2mm sieves and a magnet was dragged through each resulting fraction prior to sorting for artefacts. Any artefacts present were noted and reintegrated with the hand-excavated finds. The flot was examined under a binocular microscope at x 16 magnification and the presence of any plant remains or other artefacts are noted on Table 6.

2 Results

The results are recorded on Table 6.

Preservation is by charring and is generally poor to moderate. Archaeobotanical remains were recovered from three of the samples and include cereal grains (mostly wheat with some oats/rye) that are generally quite abraded. Charred seeds of a few common weed plants are also present in these samples. Charred fragments are present in all of the samples in varying quantities.

Items including pottery, fired clay and animal bone fragments were recovered from all of the samples except Sample 1 (109). A single piece of possible slag 7cm x 5cm was recovered from Sample 4 (309). It has a light, vesicular structure with lithic inclusions and is slightly magnetic but it does not resemble typical ironworking slag. A fragment of lava was also recovered from this residue.

All of the samples produce a magnetic residue, however when examined under the microscope, only Samples 1 and 3 actually contain any hammerscale.

Sample 3 also contains a small (1cm) piece of worked bone that is decorated with an incised dot and concentric ring pattern (Plate 11).



Plate 11 Decorated bone fragment from Sample 3, context 3, Trench 1 (scale in mm).

3 Conclusions and recommendations

The amount of metallurgical evidence recovered from these samples was quite disappointing considering the expected potential of the area. A few flakes of hammerscale were recovered from Samples 1 (109) and 3 (3). These flakes were, however, quite thick and could simply be flakes of iron oxide resulting from metalwork rusting. Sample 4 (309) did contain a few microscopic pieces of slag along with a single piece of possible slag. It is recommended that this item should be sent to a specialist (Gerry McDonnell) for identification.

The worked bone object is similar to larger examples seen at, for example Hinton Hall, Cambridgeshire, which have been identified as bone mounts from caskets or gaming boards and dated to the 10th century (Riddler unpub). The pottery recovered from this sample is of a later date and it is possible that the decorated bone is residual.

The archaeobotanical remains recovered from the flots of Samples 1, 2 and 3 indicate domestic refuse of food products including wheat, oat/rye and legumes all of which were presumably accidentally burnt during cooking. The few weed seeds recovered do not significantly add to interpretation of the

features sampled as they are generally weeds of disturbed/ arable ground. The presence of *Anthemis cotula* (stinking mayweed) is indicative of cultivation of heavy clay soils. *Eleocharis* sp. and *Scirpus* sp. are both wetland plants that grow within ditches.

Bibliography

Riddler, I., unpub., *Hinxton, Objects of Bone, Antler and Ivory*

Sample Number	Context Number	Cut Number	Feature Type	Sample Size	Flot Volume (ml)	Cereals	Chaff	Legumes	Weed Seeds	Modern Seeds	Hammerscale	Charcoal <2mm	Charcoal > 2mm	Flot comments	Residue Volume (ml)	animal bones	Pottery	CBM	Slag	Magnetic residues	Metal	Residue Comments
1	109	110	pit	10	35++	+	+	+	++	+		++	++	Several wheat grains (mostly abraded), rachis frags, Rumex, Eleocharis, small pea/vetch, Medicago/trifolium	400					Few flakes		nothing visible
2	11	17	pit	10	40+	+	0	+	+	0		++	+	Wheat grains and single rachis. Weed seeds include Hypericum, ?Plantago, ?Scirpus	500+	+				none		
3	3	21	ditch	10	30+	0	+	+	+	0		+	+	Some micro slag fragments. Wheat, oat/rye, pea coryledon, Anthemis cotula	450+	+				Few flakes		small piece of decorated bone with dot and ring design
4	309	314	ditch	10	150	0	0	0	0	0		++	+	nothing in flot other than charcoal = evidence of burning only	300	+		+		none		lava quern,
5	354		hill wash	10	100	0	0	0	0	0		+	+	Flot contains several small pieces of coal-like fragments	900			+		none		several pieces of fired clay
6	308	313	ditch	10	1100	0	0	0	0	0		+++	+++	Large amount of charcoal only	800+	+				none	Fe nail	

Table 6 Environmental samples

APPENDIX 7: FINDS QUANTIFICATION TABLE

Context	Bone	Brick	Ceramic	Charcoal	Cinder	Coal	Fired clay	Flint	Lava	Shell	Slag	Stone	Tile
1	0.164		0.627				0.009		0.075	0.005		0.567	
3	0.626		0.578				0.009					0.028	
11	0.001		0.005										
52	0.059		0.034									0.008	
100	0.189	0.026	1.272							0.088		0.121	0.043
101	0.035		0.174										
103	0.01		0.111							0.006			
105	0.188		0.551							0.005			
106	0.079		0.103	0.001			0.014		0.223	0.007		0.573	
108	0.021		0.251				0.002			0.019		0.012	
109			0.275				0.004			0.031		0.014	
111			0.038										
301	0.071	0.316	0.219										
302		0.07	0.055										
303	0.093		0.097		0.059	0.002				0.007	0.089		
304	0.052		0.033								0.025	0.126	
305	0.316	0.159	0.473	0.005	0.111	0.008	0.019		0.098	0.005	0.773	1.01	0.01
306	0.014		0.074					0.011			7	0.181	
307	0.044		0.107		0.002	0.002	0.006			0.012	0.003	0.019	
308	0.348	0.199	0.215	0.003	0.007		0.003		0.384	0.003	0.124	0.075	
309	0.007	0.082	0.094									0.067	
354		1.084	0.017						0.4				
404							0.093					0.376	
99999		0.093									0.058		



**Cambridgeshire
County Council**
Environment &
Community Services

The Archaeological Field Unit
Fulbourn Community Centre
Haggis Gap
Fulbourn
Cambridge CB1 5HD
Tel (01223) 576201
Fax (01223) 880946