Archaeological Field Unit

Medieval Rural Settlement at Willow Brook Farm, Maxey, 2004: Post-Excavation Assessment

Steve Hickling

August 2005

Cambridgeshire County Council

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Medieval Rural Settlement at Willow Brook Farm, Maxey, 2004: Post-Excavation Assessment

(TF 1291 0846)

Steve Hickling

August 2005

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Report No. 800

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SUMMARY

Excavations in 2004 by Cambridge County Council Archaeological Field Unit (CCC AFU) were funded by Procon D.B. Ltd, following their acquisition of a former farmyard for residential development and in response to a brief issued by Ben Robinson (Robinson 2004) for archaeological investigations following an evaluation in 2003 (Hickling 2003).

Maxey is a dispersed settlement, with the modern focus being West End; Castle End lies to its north, focussed on a large medieval moated site. The recent excavations lie within this latter area and are related to properties along the Castle End Road frontage. The earliest features date to the 10th to mid 12th century, activity being characterised by small ditches, pits and postholes relating to backyards. Activity increased in the period 1150-1350, and a possible change in property alignments was noted. Settlement appears to have declined in the period c.*1350 to 1450. Pitting included a large quarry or water hole, while a possible stone-lined drain was also recorded. The late medieval period saw the appearance of stone buildings, a hearth or oven and another possible stone-lined drain. Few features dating to the post-medieval period were recorded, although they include ditches, pits and a second possible drainage feature.*

The ceramic assemblage confirms the largely domestic character of the settlement (with forms such as jugs, bowls, jars and a curfew or fish smoker), supplemented by environmental and artefactual evidence. The low densities of crop processing waste reaching the site indicate that cereals were probably imported as batches of prime grain. Some of the small group of metal objects may indicate craft activity (awls and punches having been found), while the faunal remains and bone objects may suggest horse knackering and working with hides and skins. Wildfowling was also evident.

Although this was a relatively modest excavation, when combined with recent work elsewhere in Maxey and supplemented by documentary evidence, the site has the potential to increase current knowledge of the medieval village substantially. In addition, the ceramic assemblage will contribute to an on-going research project into the medieval pottery industry of Cambridgeshire.

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LIST OF ABBREVIATIONS

CCC AFU	Cambridgeshire County Council, Archaeological Field Unit
PCC	Peterborough City Council
HER	Historic Environment Record
SAM	Scheduled Ancient Monument

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 118

Deposit Number 117

Ordnance Datum 18.45m OD N

Stone

Plans

Limit of Excavation

Deposit - Conjectured

Natural Features

Intrusion/Truncation

Sondages/Machine Strip

Illustrated Section S.14

Cut Number 118

Medieval Rural Settlement at Willow Brook Farm, Maxey, 2004: Post-excavation Assessment

(TF 1291 0846)

1 INTRODUCTION

The village of Maxey in north-west Cambridgeshire is quiet and rural. Expansion has been limited, although quarrying is taking place at its edges. The village itself is dispersed, the main modern focus being West End, with Castle End lying to its north, focused on a large medieval moated site.

Excavations by Cambridge County Council Archaeological Field Unit (CCC AFU) were funded by Procon D.B. Ltd, following their acquisition of a former farmyard for residential development and in response to a brief issued by Ben Robinson (Robinson 2004) for archaeological investigations following an evaluation in 2003 (Hickling 2003).

Archaeological investigations within Castle End, Maxey, began in 1999 with the excavation of the Coal Yard site (Aileen Connor pers. comm.) and continued in 2003 with the Willow Brook Farm evaluation and in 2004 with the excavation on the same site. This assessment concentrates on the 2004 excavation and is presented in order to assess the potential of the site for further analysis of the finds and records with the objective of publication. The brief and specification outlining the aims and concept of the project can be found in Robinson 2004 and Fletcher 2004.

2 ARCHAEOLOGICAL AND HISTORICAL BACKGROUND

Prehistoric, Roman, Saxon and medieval remains are recorded in the Peterborough City Council Historic Environment Record (HER) for the surrounding area and Maxey Castle, a Scheduled Ancient Monument (SAM 23404), lies some 300m to the north of the development site (Fig. 1).

Archaeological studies in the vicinity have indicated an Early Neolithic presence with an organised and ceremonial landscape nearby, between the Rivers Welland and Nene. There was considerable forest clearance in the area by the late 4th millennium BC with seasonal pastures and cereal growing. The extension of cleared areas allowed organisation of the land for the alignment and construction of monuments over a period of at least 1000 years. Extensive archaeological investigation in the surrounding areas, threatened by gravel extraction, has identified the archaeological importance of this region (Pryor *et al.* 1985).

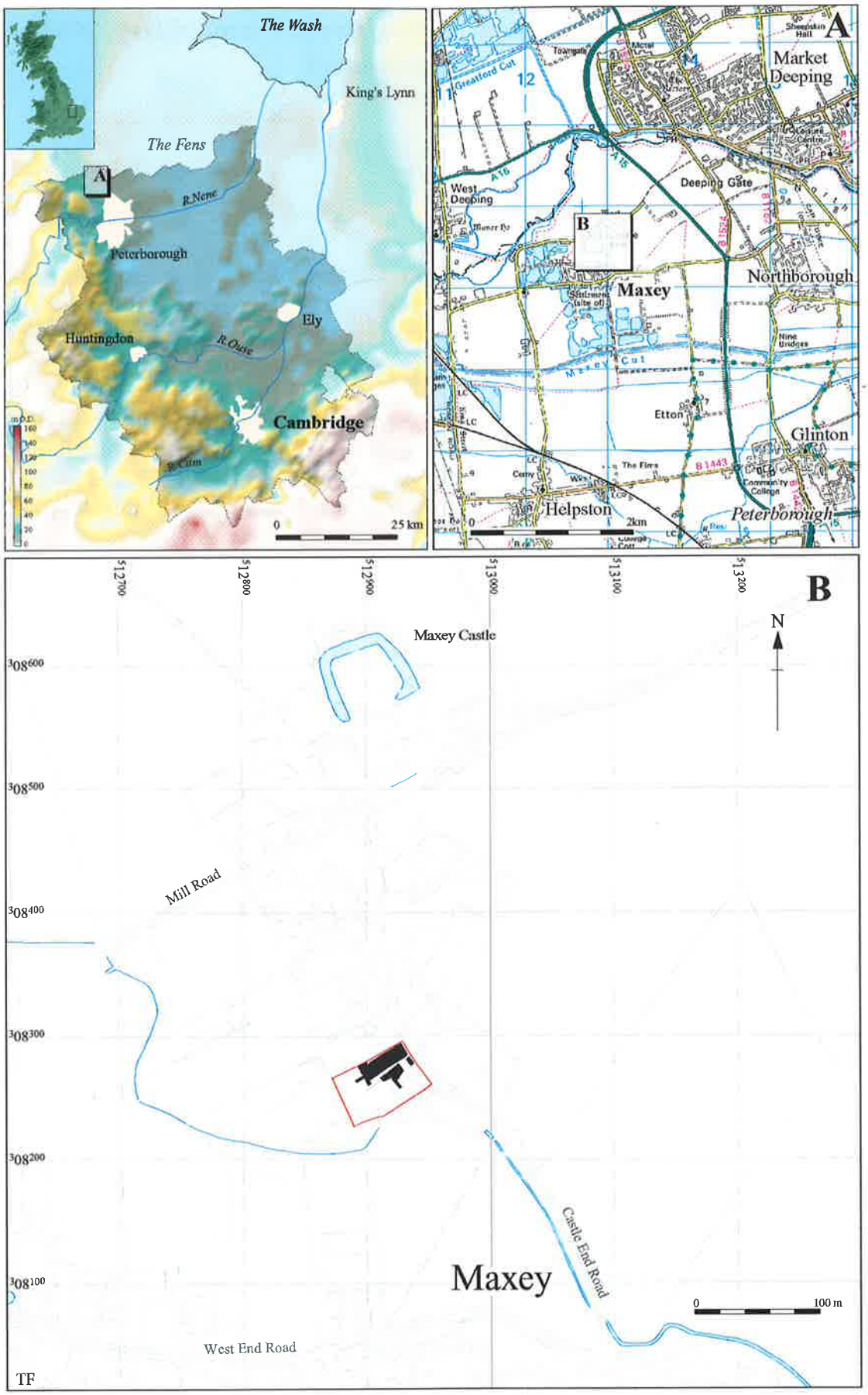

Figure 1 *Location of excavated area (black) and development area (red)*

The proximity of King Street to the west and the construction of Car Dyke (2km to the north-east) in the early 2nd century allowed greater movement of agricultural produce and other material between the fens and upland regions. Excavations in the area suggest a hierarchy of settlement types with local farmsteads (*e.g.* Maxey East Field, Lyndon Farm and Plant's Farm), villas (*e.g.* Helpston) and, on a regional scale, larger sites such as the settlement at Stonea, in the fens, and the expanding Roman town of *Dubobrivae* 11km to the south, on Ermine Street. Work at Maxey supports this settlement model, with evidence for small, rural, Iron Age and Romano-British settlements with local trade links evident in the ceramics. Excavations 150m to the north, at the Coal Yard (Connor forthcoming) revealed limited evidence for activity during the Roman period.

Two manors at Maxey are mentioned by an Anglo-Saxon charter. These were given by Bishop Aethelwold to the monastery at *Medeshamstede* (Peterborough) *c.*963. One has been suggested in the area between the church and the modern village (Addyman 1964). Early editions of the Ordnance Survey map show Lolham as a separate small settlement, with its own mill. Ezcavations at Lyndon Farm, Maxey (around the hamlet of Lolham) showed evidence of Roman settlement continuing into the early Saxon period (Roberts 2000). Likewise, fieldwalking by the Welland Valley Research Committee at Lolham produced Saxon pottery (HER 2151). Evidence for a 'dark age', possibly middle Saxon, settlement comes from excavations to the east of the church (Addyman 1964).

In the medieval period the north end of Castle End Road was one of the foci of settlement at Maxey. The other foci are located at Nunton and Lolham to the west, the area around the 11th-12th century St Peter's Church (now isolated to the west of the village), the modern village around High Street and West End Road, and at Deeping Gate, 2km to the north-east. Excavations at the Coalyard site (Connor forthcoming) show considerable activity in the vicinity of the present development site between the 11th and 15th centuries. Occupation at the Coalyard site consisted of timber buildings on at least two adjacent properties fronting onto Castle End Road. There was evidence for further timber buildings to the south, possibly associated with a second street, close to the present development site. There also appeared to be industrial or craft activities involving water on the site. There was evidence of burning and demolition followed by construction of stone buildings in the 13th and 14th centuries. It is not clear how extensively this may have occurred around Castle End.

The Historic Environment Record (HER 2251) indicates the presence of a chapel in the area to the south of the castle, which stood at least until 1549. The castle (SAM 23404) survives as a moated site with fishponds. It obtained a licence to crenallate in the late 14th century.

3 AIMS AND OBJECTIVES OF THE EXCAVATION

The aims and objectives of the excavation were outlined in the revised Specification for Archaeological Excavation of October 2004 (Fletcher 2004).

Excavation provided the CCC AFU with the opportunity to gather information about, and advance the debate on, village development and abandonment in the medieval and early post-medieval periods. The site offered the opportunity to contribute to local, regional and national research priorities.

The key published research priorities that this excavation can contribute towards are summarised below.

3.1 National

- Rural settlement (English Heritage 1991, 39; English Heritage 1997, 52).
- Transition from medieval to post-medieval traditions (English Heritage 1997, 45).

3.2 Regional

- Imbalance in the excavation of East Anglian deserted medieval settlement (Wade in Glazebrook 1997, 52).
- Shortage of rural medieval environmental evidence within the eastern region (ibid. and Murphy in Glazebrook 1997, 54).

In addition the following key themes may be considered:

- Lack of understanding of Late Saxon rural settlement diversity in the region.
- What are the key characteristics of the agrarian economy in the period, as recoverable through extensive sampling on large rural excavations on varying soil types?

3.3 Local

At the local level, no published general framework exists, but the excavation brief from PCC laid the basis for a site-specific research design (Robinson 2004). Utilising this document, additional points regarding local research priorities are suggested below.

3.3.1 Local Research Priorities

- Late Saxon to medieval settlement origins and/or continuity at Castle End, Maxey.
- Environment and economy in north-west Cambridgeshire.
- Study of integral rural property units.
- Study of well-preserved rural settlement remains.

3.4 Project Aims and Objectives

The main aim of the project was to preserve the archaeological evidence contained within the excavation area by record and to attempt a reconstruction of the history and use of the site.

There are a number of national, regional and local research priorities which English Heritage (1997) and regional archaeologists have identified (Brown and Glazebrook 2000). These provide a framework for investigations at Maxey.

The following research topics will be considered:

3.4.1 Process of Change/Transition

The Anglo-Saxon to medieval period (*c.*700-1300) and the transition from medieval to post-medieval traditions (*c.*1300-1700).

3.4.2 'Themes'

Settlement hierarchies and interactions, the understanding of rural settlements, patterns of craftsmanship and industry (including agriculture).

3.4.3 'Landscapes'

Medieval rural settlement patterns are the key to understanding the economic, social and political structures of rural England, and in extending our knowledge of change.

3.5 Medieval

The research priorities stated above apply in particular to the medieval remains which form the bulk of the archaeological deposits excavated at Willow Brook Farm Yard, Maxey. There are additional project research aims for this period.

3.5.1 To understand the nature of medieval settlement in the Maxey area

The development site is in the northern part of the village of Maxey, close to the castle. Medieval settlement remains have been identified on the site and to the north in the former Coalyard.

A key research aim is the investigation of medieval rural houses and farmsteads and associated features.

3.5.2 The determination of the agricultural regime and associated settlement

The excavation recovered domestic ceramic vessels, faunal and environmental remains. Further evidence for processing, storage and consumption will be sought through analysis of the excavated material.

3.5.3 Changing Settlement Patterns

Analysis and documentary research will investigate, as far as possible, why the medieval occupation of the development site apparently ceased in the 16th century, while elsewhere in the locality there was continuous occupation until the present day.

3.5.4 Local Comparisons

On completion of on-going fieldwork, the similarities and differences with the Coalyard site a little to the north will be examined. Comparison will also be made with excavated medieval sites in the Peterborough/north Cambridgeshire area.

3.6 Integration with Existing Archaeological Research

Records of previous evaluations and excavations in Maxey should be integrated to provide the fullest statement of settlement morphology and development that can be achieved.

Unfortunately most post-Roman excavations carried out in the Peterborough area in the past have not resulted in publications, nor are many of them likely to in the near future.

Paul Spoerry of CCC AFU has in recent years advanced the study of medieval ceramics, and the economic implications inherent in such data, for Peterborough (Spoerry in Spoerry and Hinman 1998). This site has great potential for development of hinterland comparison. Recent CCC AFU excavations of medieval buildings at the Coalyard, Maxey, West End Road, Maxey and Botolph Bridge near Peterborough, provide comparative rural data, both for structures and ceramic assemblages, as perhaps should Addyman's excavations to the east of the church (Addyman 1964).

3.7 Future Research Possibilities

The provision of a significant rural medieval ceramic assemblage from the Peterborough area provides a key element in any proposed regional medieval ceramic study.

The possible recovery and interpretation of medieval rural house plans may offer useful comparative data for a local / regional study.

4 SUMMARY OF RESULTS

4.1 The Excavations

Excavations were undertaken by field staff of the CCC AFU during October and November 2004.

The excavation area was defined by Ben Robinson. Excavation areas were stripped by a 360° excavator under the supervision of a member of the archaeological team. The topsoil was moved into adjacent areas where it was scanned by a metal detector. Three stripped areas were opened (Areas A-C), separated by mains water pipes. Area A contained most of the archaeological features, Area B contained mainly postholes, representing backyard activity, while Area C was devoid of any archaeological remains (Fig.2).

Pre-excavation plans were prepared, finds collected and hand excavation proceeded using the CCC AFU's recording system. On the phase plans (Figs. 2-5) features are defined as dated to a particular phase (reasonably firm finds or stratigraphic dating evidence), possibly dated to a particular phase (uncertain finds or stratigraphic dating evidence alone) and undated (no finds or stratigraphic dating evidence).

The following text provides a summary of some of the major features recorded; others are illustrated on the accompanying phase plans and will be fully discussed at the analytical stage.

4.1.1 Phase 1: Late Saxon to Norman (c.900-1150)
(Fig. 3)

The archaeology of this period is characterised by small ditches and postholes containing predominately Stamford ware pottery, dating to the 10th to mid 12th centuries (355 sherds; 2.223kg; see Appendix 2). The ditches were irregular both in alignment and profile, while the postholes were numerous with few definite alignments yet confirmed. The small ditches ran on a slightly different alignment to the later phases, suggesting an episode of replanning and realignment of this part of Castle End. Two small ditches running north to south through the centre of the site are firmly dated to this phase: they contained 21

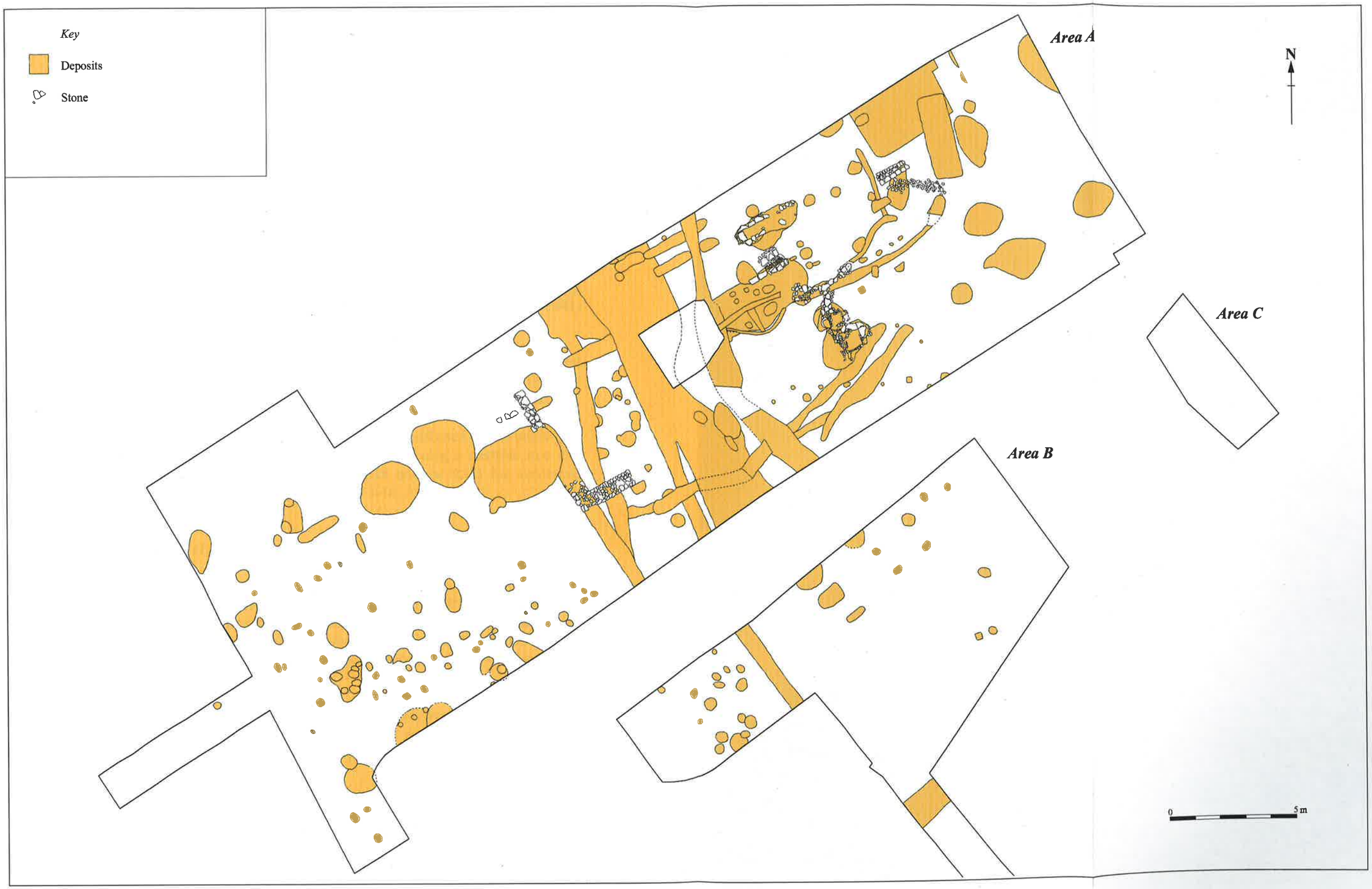

Figure 2 *Site Plan*

sherds of 10th- to 12th-century pottery (contexts 124, 178 and 191; see Appendix 2, Table 7). Ditch **123**, the westernmost of the two and was very irregular in form. Parts were shallow and other parts deep, suggesting that it may have been dug in a short period of time by a large workforce. Parallel to this feature, 11m to the east, was ditch **178**. This was not as extensively excavated, but appeared to be much more regular. Pit **308** in Area B may have formed the butt-end of this ditch. Ditch **123** did not appear to continue south into Area B, suggesting that it turned or terminated before reaching this point. To the west of these ditches was a plethora of postholes, some of which appeared to form fences or structural elements on a similar alignment to the ditches. For example,
postholes **389/507/510** and **542** formed an alignment roughly perpendicular to ditch **123**. This western area of the site also contained two features (**549** and **156**), which appeared to be shallow hollows containing postholes. Their function is at present unknown, but they may represent backyard activities.

To the east of the central ditches were a few postholes, in much lower density than to the west. There were, however, a number of shallow slots (features **441**, **590**), which may have been shallow drains flowing into the larger ditches.

To the south-east, Area B contained postholes and a north-east to south-west orientated ditch (**33**) dating to this phase. The postholes were not particularly dense, but there may have been two alignments in the eastern part of the area.

Only four Small Finds were recovered from deposits assigned to this phase (see Appendix 3, Tables 9 & 11), the only item of note being a possible iron awl (SF10). Two features were sampled (ditch **328** and pit **233**) but contained nothing of particular significance (see Tables 13-14, Appendix 5).

4.1.2 Phase 2: Medieval (1150/1200-1350)

(Fig. 4)

Although fewer features were assigned to this phase than the preceding one, a greater density of more pottery was evident (2.901kg; 210 sherds) which may suggest that occupation was more intensive. A further 11.689kg (593 sherds) could only be assigned to Phase 2 or 3 at assessment stage; this will be refined during analysis.

At the beginning of this phase, an earlier ditch (**123**) was replaced by a new ditch (**121**), which was much more regularly dug and aligned parallel to the modern road. This may represent a reorganisation and realignment of the property boundaries in this area.

Once ditch **121** had been infilled, a large gravel quarry or water hole was dug (**584**). This was backfilled with material including a considerable amount of pottery (501 sherds), dating to the mid 13th to mid 15th century and attributable to Phase 2 or 3. It also contained a bone awl or bodkin (SF11).

There was very little activity in the western part of the site, but the eastern part contained several pits (**637**, **322**, **439**, **575**, **116** and **241**) and a shallow gully, (**221**). A sample from pit **116** (Sample 4, Appendix 5) yielded a high density of legumes, possibly derived from burnt animal fodder. Pit **637** contained an iron knife tang (SF23).

Also present was a stone-lined pit (**357**), with a base of limestone slates set on edge. This fell out of use late in Phase 2 or early in Phase 3. Its use is uncertain, but it may have been a catchment tank or drain for surface water. A sample from its fill produced similar environmental remains to those from surrounding pits (Sample 2, Appendix 5). Similar features where excavated at The Still, Peterborough (Spoerry and Hinman 1998).

4.1.3 Phase 3: Late Medieval (1350-1450/1500)

(Fig. 5)

This phase coincides with a period of famine and plague, with the population falling drastically. This may be reflected by the reduced amount of pottery assigned to this phase (0.223kg; 24 sherds) and the fact that no Small Finds were recovered from this phase. Unmortared limestone walls were constructed, however, perhaps reflecting a rise in the inhabitant's status or economic/social stability. Two walls (**11** and **569**) found in the centre of the site and probably formed part of the same building. They were roughly built and unmortared with no foundations and were probably dwarf walls supporting a box-frame timber structure. Wall **337** in the eastern part of the site was similar in nature but probably belonged to a different structure. These walls were on the same alignment as the street frontage.

Also in this eastern part of the site, a stone hearth (**365**) may belong to this period.

A pit (**359**) located in the western part of the site was probably a gravel quarry or water hole and was backfilled late in Phase 2 or early in this phase, the later date is more likely since its fill yielded very few finds (bone and pottery dated to 1250-1450).

Also present was a small stone-lined pit (**358**), which appeared to be similar to a hearth or oven, but there was no evidence of burning. It is likely that this was a drainage feature.

4.1.4 Phase 4: Post-Medieval (1450/1500-1650/1700)

(Fig. 6)

In this period, the population appears to have been recovering from the first attacks of the Black Death, this phase yielding 7.484kg of pottery (mainly

characterised by Bourne D ware). The majority of the pottery spans the mid 15th to mid 17th centuries, with a few later sherds.

The archaeological remains consist of two new ditches in the central portion of the site, probably representing the rear of street front tenement plots (ditches **161** and **639**). Also in the eastern portion of the site were a number of pits (**101**, **109**, **120** and **107**). A stone-lined feature (**331**) fell out of use in this period; again it may have served as a drainage feature. Although environmental remains from its fill (Samples 1 and 11; Appendix 5) are similar to those from surrounding pits, a sample from the drain contained large legumes.

A large amount of demolition debris at the east end of the site probably belongs to this phase.

The majority of the Small Finds from the site came from this phase (14 items; Appendix 3). Of note amongst the metalwork is a post-medieval coin (SF4), a strap fitting (SF5), another strap, possibly from a box (SF3), a possible awl (SF10) and a knife blade (SF20). Possible craft activity is indicated by the presence of the awl and two iron? punches.

This phase also contained the largest proportion of animal bone (63 NISP), although this is a small assemblage (Appendix 6).

5 SUMMARY ASSESSMENT OF ARCHAEOLOGICAL POTENTIAL

This section includes summary results and statements on the research potential of archaeological materials recovered during the course of the 2003 and 2004 excavations at Willow Brook Farm. The completed assessment documents for artefactual and environmental studies appears as a series of appendices.

5.1 Stratigraphic and Structural Data

5.1.1 The Excavation Record

The excavation record consists of a total of 544 contexts.

Written Record:
Cut descriptions: 252
Fill descriptions: 272
Masonry and structural descriptions: 12
Layer descriptions: 8

Drawn Record:
Plans: 15
Sections: 73

Samples:
Flotation: 16 (Appendix 5)

Photographs:
4 films of 36 frames
65 digital photographs

Finds:
Pottery: Roman and medieval (Appendix 2)
Coins: post-medieval (Appendix 3)
Other metalwork: medieval (Appendix 3)
Bone artefacts (Appendix 4)
Animal, fish bone and shell (Appendix 6)
Lithics: medieval including building materials (three fragments)

5.1.2 Feature Types

Archaeological features generally consist of cut features such as postholes and ditches, but also include quarry pits, beam slots for walls and two long thin stone lined features, which were probably drains. Upstanding features are largely composed of limestone masonry, rarely worked, usually surviving to no more than one course high.

Deposits include feature fills and a gravel yard surface. Demolition deposits are recognisable at the eastern end of the site.

One hearth was excavated, although it is not known whether this was domestic or industrial.

5.1.3 Condition of the Excavation Area

The excavation areas had not been significantly truncated prior to the excavations. The latest phases of walling (although only surviving to one or two courses) were present 0.30m above the level of the natural subsoil. A study of the earliest OS map shows the site preserved under pasture. The modern farmyard had not impacted heavily on the buried remains, apart from contamination from bovine urine.

5.1.4 Primary Excavation Sources and Documents

The records for all of the excavated deposits are complete and have been checked for internal consistency. Written and drawn records have been completed on archival quality paper and are fully indexed. A provisional site matrix has been drawn up and checked with the pottery spot dates.

All primary records are retained at the AFU offices in Fulbourn under the site code MAX WBF 04.

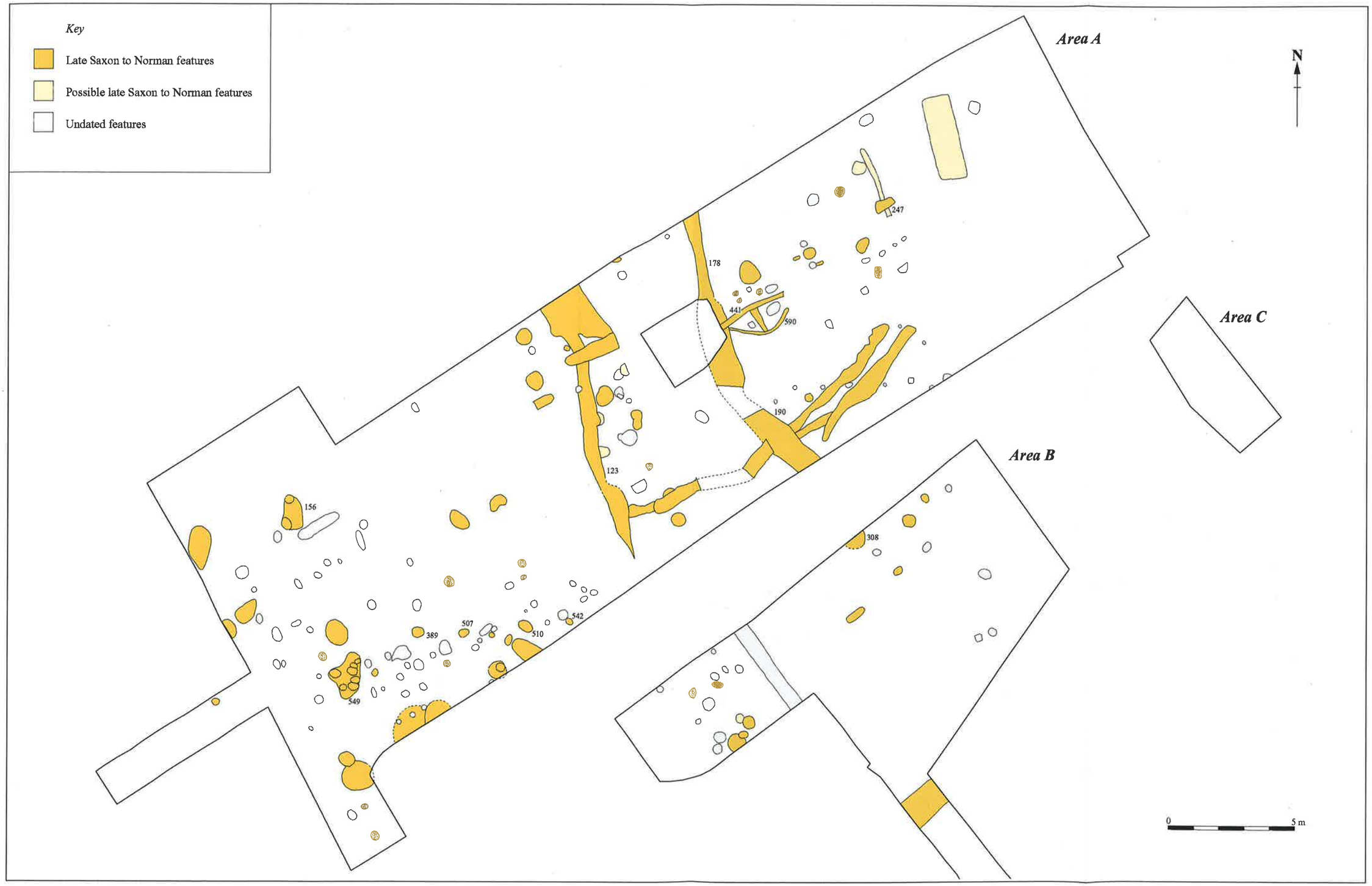

Figure 3 *Phase 1: 900 to 1150*

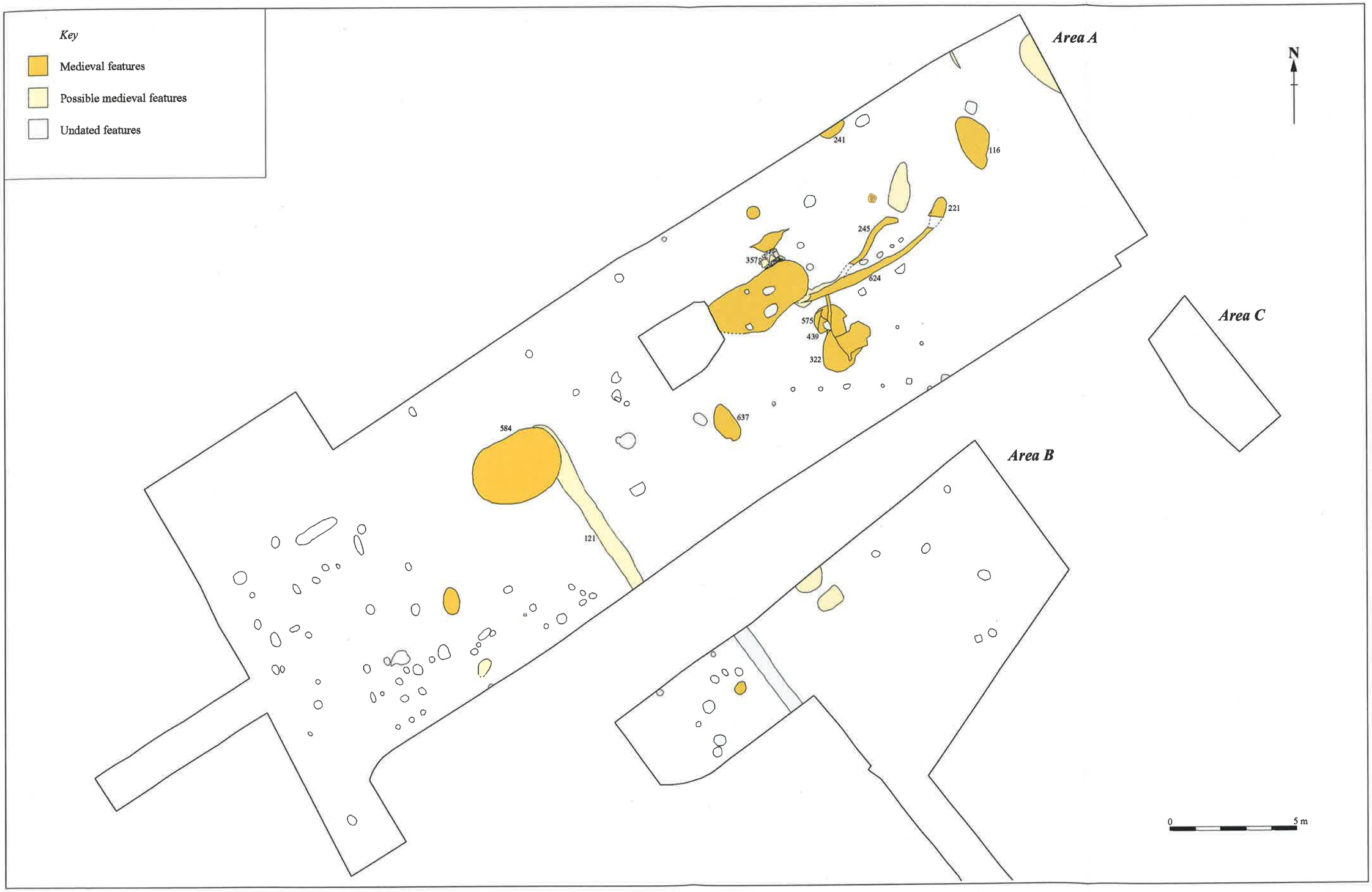

Figure 4 *Phase 2: 1150/1200 to 1350*

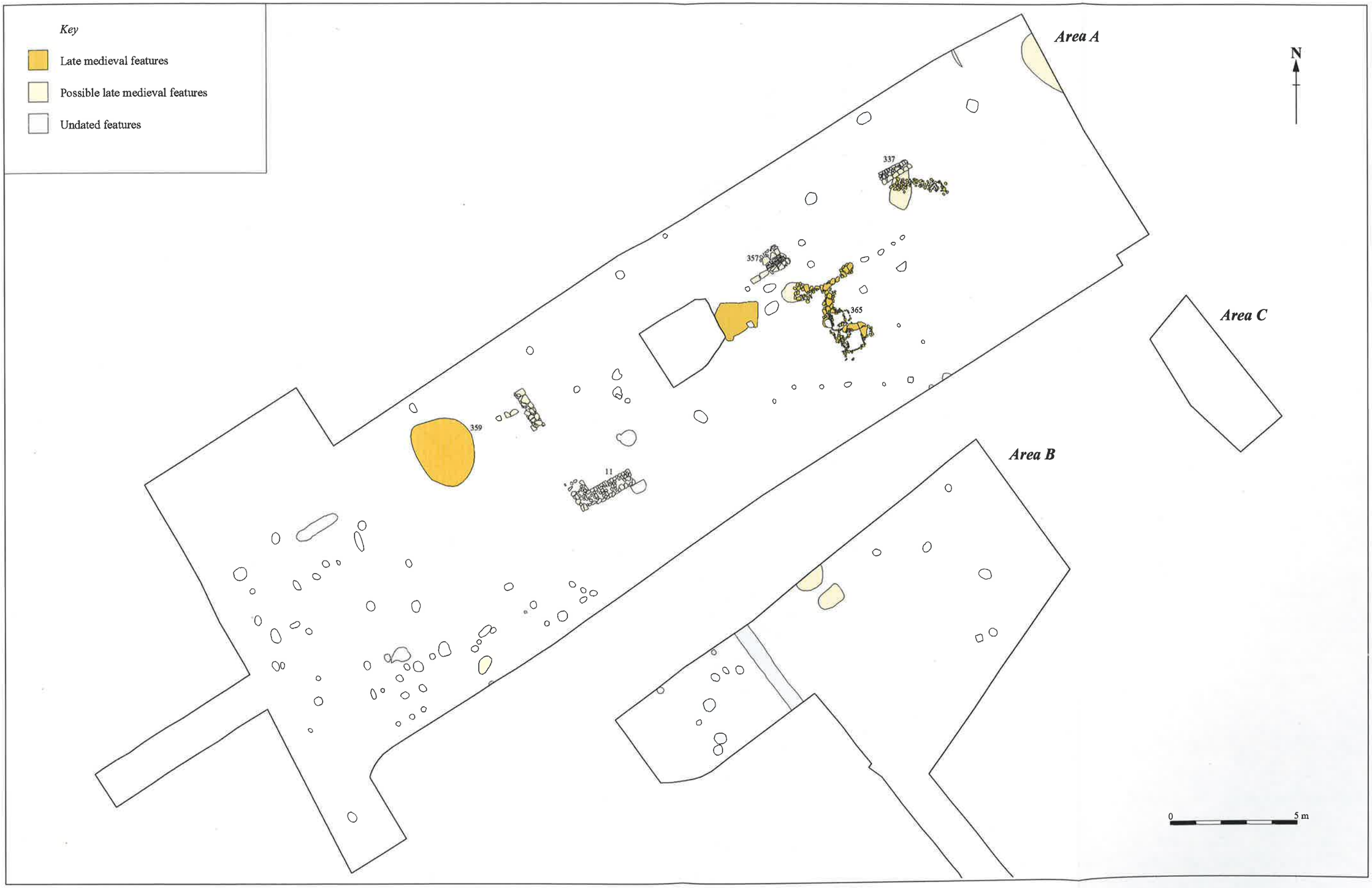

Figure 5 *Phase 3: 1350 to 1450/1500*

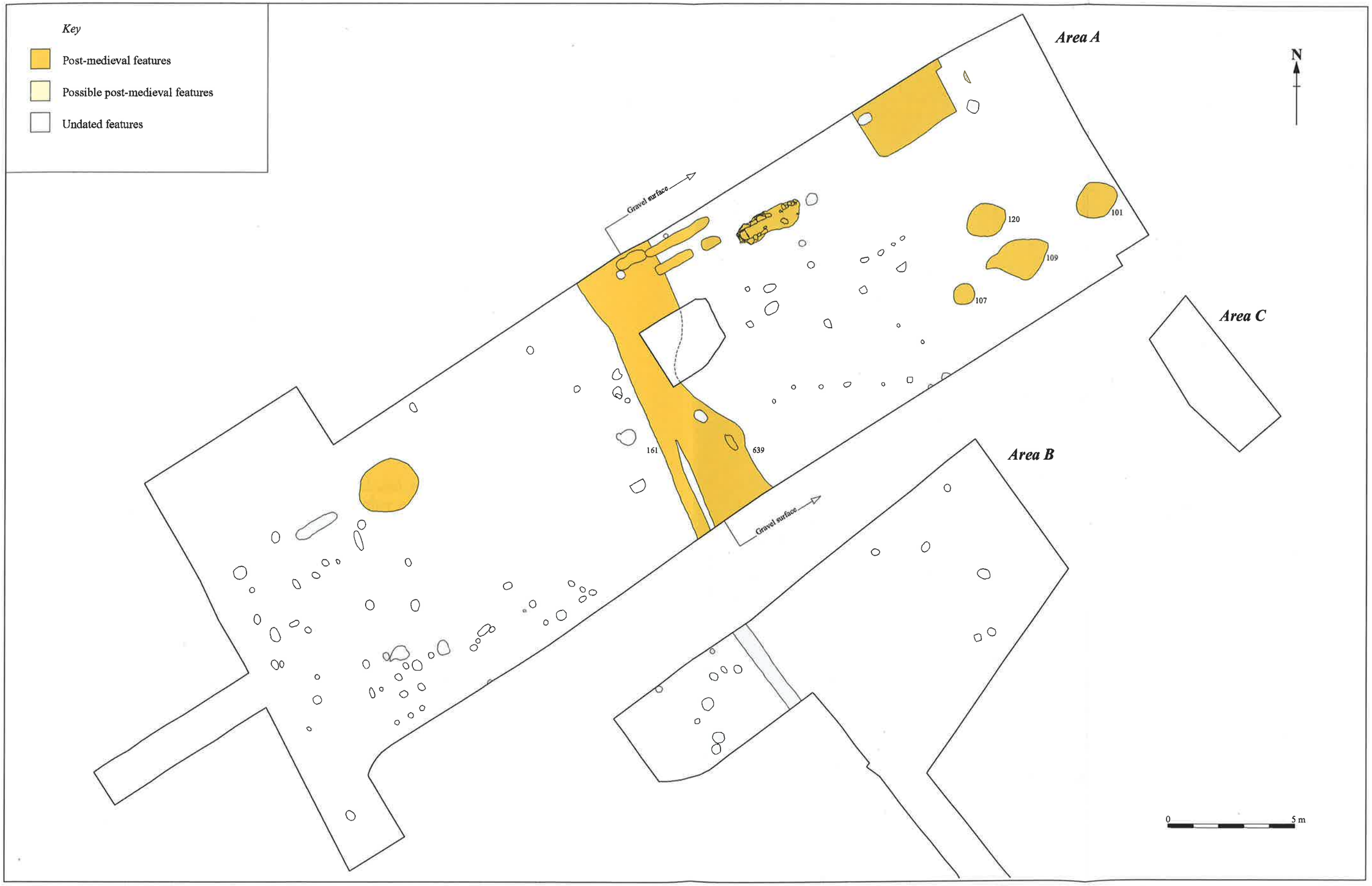

Figure 6 *Phase 4: 1450/1500 to 1650/1700*

5.1.5 Statement of Potential

The contextual record is the main component of the excavation data and will form the foundation of the site narrative.

The 2003-2004 record is sufficient to fulfil the majority of the aims and objectives related to the internal layout, morphological development and activity zones of the site, and for providing essential data to supplement artefact and environmental studies. Of particular relevance are the following research objectives:

1) understanding and interpretation of the ditches and their roles as boundary features. This will be significant to understanding the early historic layout and development of the landscape;
2) understanding the sources of deposits and fills as an indication of site function;
3) understanding the temporal and spatial analysis of site function by feature type;
4) understanding the local building patterns and techniques.

Dating and phasing can be achieved through further study of the ceramic assemblages.

5.2 Documentary Studies (see APPENDIX 1)

The documentary resource has been accessed and relevant parts copied in preparation for analysis and interpretation. Further work may include analysis of any documents relating to Maxey Castle and its influence within the parish.

Most of the easily accessible historic maps for the area around the settlement of Maxey have been studied and copied. Aerial photographs should be assessed for the area of the earthworks to determine their plan prior to late 20th-century damage. A full interpretation of HER data, find spots and more detailed records, should be attempted.

5.3 Artefact Studies

5.3.1 Pottery (see APPENDIX 2)

by Carole Fletcher

Pottery is the main source of dating on this site and the excavated assemblage, when combined with the stratigraphic evidence, will assist in the understanding of the temporal development of this part of the medieval village. An assemblage of 1,949 sherds (30.006kg) was recovered.

The relatively tight dating of large parts of the assemblage indicate three concentrations of activity on the site over a relatively limited period of time, commencing in the 10th to mid 12th century, after which levels of pottery deposition suggest that activity continued to increase until the mid 14th century. The site then appears to have gone into decline until the mid 15th century when pottery deposition again increased.

In general, study of the pottery will allow an understanding of morphology of the settlement and any temporal variations. It will also help to reveal any changes to internal spatial patterning and activity zones over time and allow comparison with the excavated material from elsewhere in the village. In addition the pottery could aid understanding of the site's place in communication, marketing and trade systems of the Peterborough area.

5.3.2 Small Finds (see APPENDIX 3)

by Nina Crummy

An assemblage of 26 registered finds was collected and assessed. Very few objects were of datable types; those that could be dated were medieval or post-medieval.

The objects are briefly listed in Appendix 3. Each has been assigned to one of the functional categories defined in Crummy 1983 and 1988. The categories represented in this assemblage are: dress accessories, transport, tools, general fittings and miscellaneous. Closer identification of some of the ironwork should be possible after X-radiography. A single coin of probably post-medieval date was recovered from pit **109** (Phase 4).

The assemblage has no distinct character and the number of metalwork finds is low, given the total number of excavated features. There is a noticeable lack of the small personalia generally associated with medieval occupation sites, such as buckles, strap-mounts, strap-ends, small dress pins and lace-ends.

The only coin is an illegible post-medieval issue, but conservation should enable more accurate dating. Most of the ironwork consists of nails and fragments of sheets or straps. The presence of a possible copper-alloy awl and two possible iron punches provides some indication of craft activity on the site, but accurate identification following conservation work and X-radiography is necessary to confirm this. The only other tool is a fragment of a knife blade. A horseshoe fragment is the only evidence for transport, though one of the nails may also prove to be from a horseshoe.

These registered finds, although small in number, may help with addressing some of the original project objectives. These finds also offer some potential for understanding the status of site and its occupants.

5.3.3 Conservation work

It is recommended that all the copper alloy and lead objects should be conserved.

5.4 Environmental and Faunal Remains

5.4.1 Archaeobotanical Material (see APPENDIX 5)

by Val Fryer

A total of 16 samples was taken for environmental analysis. In summary, the assemblages appear to be primarily composed of refuse, much of which may be derived from domestic hearth waste. However, it should be noted that without exception, the assemblages are very small (none more than 0.1 litre in volume), and there seems to be little or no evidence for the systematic disposal of refuse on the site. It would appear far more likely that material slowly accumulated from detritus scattered across the area, eventually being deposited in every feature, even within the stone-lined drains. Cereals, most particularly wheat, almost certainly formed a major component of the local diet, although possible pea and bean seeds were identified from one particular context (drain **331,** Phase 4). The low density of chaff and similar processing waste recovered from the assemblages probably indicates that the cereals were being imported on to the site as batches of prime grain, a practise commonly seen at other contemporary proto-urban settlements in the eastern region.

Although a number of the assemblages do contain sufficient material (*i.e.* 100+ specimens) for further quantification, analysis of such loosely defined refuse deposits would probably add little to the current interpretation of the site or its component features. Therefore, no further work is recommended, although a written summary of the assessment report should be included within the final publication of site data.

5.4.2 Faunal Remains (see APPENDIX 6)

by Ian L. Baxter

A total of 97 "countable" animal bone fragments was hand-collected from the site and a further 20 recovered from the sieved environmental sample residues. This is a very small assemblage of animal bones and can be expected to provide little detail regarding animal husbandry or the economy of the site in any period of occupation. Bones were recovered from ditches, pits, layers, postholes and slots. The bones were in generally good condition although some had been extensively butchered and others gnawed by dogs. A few burnt fragments are present in the assemblage.

This is a very small assemblage and the amount of information that can be derived from it is necessarily limited. The majority of the bones were recovered from the post-medieval deposits and there is some evidence to possibly suggest

horse knackering and working with hides and skins. There was also some wildfowling practiced at this time.

No further work is recommended, although a written summary of the assessment report should be included within the final publication of site data.

6 Integration with Existing and Future Research

Although large-scale archaeological investigation within the medieval village of Maxey has taken place before (the Coalyard, Connor forthcoming), this has yet to be published. Smaller scale work at West End Road is currently ongoing (Hickling 2005).

Paul Spoerry has in recent years advanced the study of medieval ceramics, and the economic implications inherent in such data, for Peterborough. The assessment has shown that the Willow Brook Farm site has the potential for development of hinterland comparison. The recent excavation of medieval buildings also in the Coalyard (Aileen Connor, pers. comm.) also provides comparative rural data for both structures and ceramic assemblages, as does the current work at West End Road (Hickling 2005).

In addition, Paul Spoerry has begun an English Heritage funded project for a synthetic study of medieval pottery production, distribution and usage in Cambridgeshire. There are good opportunities for integration with the ceramics elements of the Botolph Bridge post-excavation programme, which has also just commenced.

The potential for urban-rural comparisons using economic data generated from the Maxey excavations, comparing them with evidence published from The Still, Peterborough (Spoerry and Hinman 1998) is a valid avenue of future research.

The provision of another significant rural medieval ceramic assemblage from the Peterborough area provides a key element in a proposed regional medieval ceramic study.

Examination of the results from the excavation of the three recent archaeological sites in Maxey will add to current knowledge of the development of the medieval village.

7 METHODS STATEMENTS

In order to realise and disseminate information on the site's full significance, to meet the original project aims and revised research aims, as well as to

contribute to broader research topics, the data selected for further analysis is discussed below.

The appendices detail the requirements and the appropriateness of each of the artefactual and environmental studies to fulfil the aims of the project. The following section summarises which objectives will be met by each study and the methods required to fulfil the project objectives.

(See Section 9.1 for the identification of the initials of individuals given in brackets in the paragraphs below.)

7.1 Stratigraphic and Structural Data Studies

These will help meet all project aims and objectives, but particularly those related to temporal and spatial land use. The relevant tasks are noted below.

1) The completed matrix needs to be verified and integrated with the artefact studies to provide a date range for each of the features (SH).

2) Text sections for all features need to be written. They will then be placed within a hierarchical system of phases, groups and sub-groups to enable interpretation and discussion (SH).

3) Group, phases and site narratives will then be compiled (SH), and site phase and subgroup plans drawn to illustrate the development of the site (Ills).

7.2 Documentary Studies

Further documentary work will help to meet all objectives, in particular those relating to trade. Such analysis will be of great assistance in understanding land use beyond the limits of the settlement. The relevant tasks are summarised below.

1) Documentary studies of both the existing archaeological and historical resources have the potential to fill gaps within the excavated record particularly in respect of chance finds, along with unpublished excavations within Maxey (SH).

2) The documentary history of key properties within the vicinity of the site that offer useful data on the later development of the settlement require investigation (SH).

3) Comparative examples of published sites, standing structures *etc* need investigation alongside the documentary evidence (SH).

In order to complete this work access to records held by Lincolnshire, Northants and Peterborough Record Offices, and the University of Cambridge may be

organised in order to extract information on local economy, land organisation and ownership.

7.3 Artefact Studies

These will help meet all research objectives through implications of date, trade, economics, land-use and artefact function.

7.3.1 Pottery

In order to meet the research aims, full quantification of the excavated pottery assemblage is required. This data (which will include information on fabric, form, decoration, technology and function) will be entered into a Microsoft Access database. Macroscopic analysis will be used to source the production centres from which the pottery derived.

1) A full analysis of this assemblage on various field criteria, based on major stratigraphic units. This will clarify support the dating of structures, cut features and other materials recovered from the excavation. The 200 post-Roman pottery sherds from the evaluation need to be fully integrated (CF).

2) Macroscopic inspection (based on x20 magnification) of all major fabric types (CF).

3) Illustrations of new forms and traits, especially relating to local fabric types, which are otherwise unpublished to date (CF, Ills).

7.3.2 Small Finds

Further analysis and conservation of the registered finds will principally aim to enhance the existing catalogue descriptions and thereby facilitate other studies.

1) Additional x-radiography will be necessary for identification (NC, Col Mus).

2) Illustrate and/or photograph relevant pieces (NC & Ills).

7.3.3 Conservation

All copper alloy and lead items should be conserved. This will aid further identification and dating (Col Mus).

7.3.4 Environmental

The samples have been sieved, sorted and examined. No further work is necessary.

7.3.5 Animal Bone

Due to the small size of the assemblage, no further work is necessary.

8 REPORT WRITING, ARCHIVING AND PUBLICATION OUTLINE

8.1 Report Writing

Report writing is a multi-stage process that is itemised below in the task list that forms Section 9.2.

The stratigraphic text section, group and phase reports for all excavated areas need to be completed to provide a stratigraphic archive report. The work entailed in each of these tasks is itemised separately in Section 7.1.

All specialist contributions will result in the production of an archive report, elements of which will be integrated into the publication. The degree to which specialist reports are published will depend on the value of the conclusions in relation to the wider interpretation of the site as a whole.

Overall site synthesis will be conducted by SH. Synthesis of environmental data will be aided and/or completed by RF. Internal editing will be carried out by EP.

8.1.2 Publication

It is suggested that this work should be published as an article in *Proceedings of the Cambridge Antiquarian Society*. It would be desirable to integrate other recent work in the medieval cores of Maxey which has yet to be published (The Coal Yard and West End Road). This possibility is currently under consideration by relevant staff.

8.3 Archiving and Archive Deposition

1) Excavated material and records will be deposited with, and curated by, Peterborough City Council (PCC) at Peterborough Museum under the site code MAX WBF 04.

2) PCC require transfer of ownership of all items as a pre-requisite of acceptance of an archive. During analysis and report compilation CCC AFU will hold all material and reserves the right to send any material for specialist analysis elsewhere as necessary (through use of MAP2 procedures).

The archive will be prepared in accordance with the requirements of the PCC document *Standards for Archaeological Archive Preparation* (Green 1998) which is based in part on English Heritage recommendations. These same recommendations are standard CCC AFU practice.

9 RESOURCES AND PROGRAMMING

In order to realise the site's full significance, to meet the original project aims and revised research aims, as well as to contribute to broader research topics, the following resources and programming are required to complete the analysis and report writing phases.

9.1 Research Team

Initials	Specialist	Establishment
CF	Carole Fletcher Finds Supervisor	CCC AFU
Col Mus	Finds Conservation	Colchester Museum
Ills	Illustrator	CCC AFU
EP	Elizabeth Shepherd Popescu Post-Excavation Manager	CCC AFU
IB	Ian Baxter Faunal Remains	Freelance Specialist
NC	Nina Crummy Metalwork	Freelance Specialist
JR	Judith Roberts Project Manager	CCC AFU
RF	Rachel Fosberry Environmental Supervisor	CCC AFU
SH	Steve Hickling Project Supervisor	CCC AFU
VFR	Val Fryer Archaeobotanist	Freelance Specialist

Table 1: *Research Team*

9.2 Task List and Required Resources

Task No.	Sec. No	Written Record		
		Task	**No. days**	**Staff**

1	9.3	Project management and meetings	4	JR
2	9.3	Meetings and project management implementation	4	SH
3		Liaise with Staff and Specialists, send and receive all finds and environmental materials, package and maintain condition.	2	CF/SH
	7.1	**Stratigraphic and structural. MAXWBF03 & 04**		
4		Project contextual database and checking/verification	2	SH
5		Verification of matrix and integration with artefact data	2	SH
6		Write individual text sections, feature/deposit descriptions	8	SH
7		Group and phase descriptions	4	SH
8		Plan and sections of key groups	4	Ills
	7.3.1	**Pottery**		
9		Full analysis of the assemblage, to support the dating of structures, cut features and other materials recovered from the excavation. Full integration of the evaluation material	5	CF
10		Textual report on the above	3	CF
11		Macroscopic inspection of all major fabric types	1	CF
12		Tabular statistics of fabric and vessel data	1	CF
13		Illustration	3	Ills
	7.3.2	**Registered Finds**		
14		Conservation of copper alloy and lead objects	1	Col Mus
15		X-rays of iron objects	½	Col Mus
16		Small finds analysis and report	½	NC
17		Illustration of 4-9 objects	2	Ills
	7.3.4	**Environmental Remains**		
18		No further work required	0	VF
	7.3.5	**Animal Bone**		
19		No further work required	0	IB
	7.2	**Documentary**		
20		Archaeological docu. history (visits to archive, production of report *etc*)	2	SH
21		Investigate landscape documents	2-3	SH
	8.1	**Report Background and Report**		
22		Collate and review archaeological and landscape context data	2	SH
23		Investigate comparable sites, settlements and structures	3	SH
24		Write site narrative of group and phase discussions	5	SH
25		Write historical and archaeological background	3	SH
26		Read, review and analyse specialist reports and data	2	SH
27		Collate and integrate specialist reports	2	SH
28		Compile illustration material	1	SH/Ills
29		Write site narrative on settlement and context	1	SH
30		Write conclusions and summaries	2	SH
31		Produce phase plans representing artefactual and ecofactual distributions	2	SH/Ills
32		Produce general site plans, contextual maps and plans	1	Ills
	8.3	**Archiving**		
33		Compile paper archive	0.5	SH
34		Compile/check material archive and liaise with Peterborough Museum	0.5	CF

	8.1	**Report production**		
35		Mount up and format report to internal AFU spec.	2	CS
36		Internal Editing	2	EP
37		Complete internal textual edits	1	SH
38		Complete internal illustration/format edits	1	SH

Table 2: Task List

9.3 Project Management

Provision for general project management of 2 days per annum should be made (JR).

Implementation of internal team supervision, further liaison with external team members, setting-up meetings *etc*, are primarily tasks for SH. These will total approximately 1 day per month.

ACKNOWLEDGEMENTS

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APPENDIX 1: DOCUMENTARY AND LANDSCAPE HISTORY

by Steve Hickling

1 Introduction

Maps in the Local Studies Collection at Peterborough City Library have been assessed, and most that are of relevance have already been accessed. Documents located elsewhere have not been studied to date.

2 Documentary

While the settlement of Maxey itself is unlikely to figure much in medieval documentation, the Castle is of wider importance.

Records relating to Maxey may be found at the Northamptonshire Records Office, Lincolnshire Records Office and Lincoln Cathedral Library as well as perhaps Cambridge University Library. In each case it would be worth searching printed editions of medieval rolls.

3 Landscape

Most of the easily accessible historic maps for the area around the settlement of Maxey have been studied and copied. Aerial photographs should be assessed for earthworks to determine the plan of these prior to late 20th century damage. A full interpretation of SMR data, find spots and more detailed records, should be attempted.

4 Recommendations of Further Work

The further work required amounts to a total of 5 days, consisting of the following tasks:

Documentary historical research (set up)	0.5	SH
Visits to archives	1	SH
Compile report	0.5	SH
Investigate landscape historical documents	2	SH
Integration and interpretation	1	SH

APPENDIX 2: MEDIEVAL POTTERY

by Carole Fletcher

1 Factual Data

1.1 Introduction

This assessment considers pottery from the evaluation and excavation at Willowbrook Farm Yard, Maxey. Pottery recovered from the evaluation is also discussed in Hickling 2003.

Ceramic fabric abbreviations used in the following text are:

Baston	BAST
Bone China	BCHIN
Bourne B	BONB
Bourne D	BOND
Cistercian Type ware	CSTN
Colchester Type ware (Faric 21)	COLT
Developed Stamford	DEST
Essex Micaceous	ESMIC
Grimston ware	GRIM
Grimston–Thetford Type wares	GTHET
Lincolnshire Fine Shelled ware	LFS
Lincolnshire Sandy ware	LSW3
Lyvendon–Stanion	LYST
Medieval Ely or Ely type wares	MEL/MELT
Post–medieval Black Glazed ware	PMBL
Post–medieval Red ware	PMR
Shelly ware	SHW
Stamford ware	STAM
Thetford type ware	THET

1.2 Methodology

The basic guidance in *Management of Archaeological Projects* (MAP2) has been adhered to (English Heritage 1991). In addition the following documents act as a standard: Medieval Pottery Research Group (MPRG) documents *Guidance for the processing and publication of medieval pottery from excavations* (Blake and Davey 1983), *A guide to the classification of medieval ceramic forms* (MPRG 1998) and *Minimum Standards for the Processing, Recording, Analysis and Publication of Post-Roman Ceramics* (MPRG 2001).

Spot dating was carried out using the CCC AFU's in-house system based on that used at the Museum of London. Fabric classification has been carried out for all previously described types. New types have been given descriptive identifiers, but full fabric descriptions using binocular microscope and x20 magnification have yet to be carried out for these. All sherds have been counted, classified and weighed. Sherds warranting possible illustration have been flagged, as have possible cross-fits.

All the pottery has been spot dated on a context-by-context basis. This information was entered directly onto a full quantification database (Access 2000), which allows for the appending of quantification data.

The pottery and archive are curated by the CCC AFU until formal deposition.

1.3 Phase Dates

1.3.1 Ceramic Phases

Ceramic Phase	Stratigraphic Phase	No. Sherds	Weight (kg)
4	1	357	2.223
4/5	1/2	4	0.092
5	2	708	13.699
5/6	2/3	110	1.127
6	3	3	0.030
7	4	700	11.532
7/8	4	57	1.078
8	4	10	0.225
TOTAL		**1,949**	**30.006**

Table 3: *Pottery by ceramic phase from evaluation and excavation*

1.3.2 Site Phases

Spot dates by context appear in Table 7, while the total assemblages from each phase are summarised in the following table. Where attribution to a particular phase is uncertain at this stage, this is indicated.

Phase	No. Sherds	Weight (kg)
1	355	2.223
1/2	4	0.092
2	210	2.901
2/3	593	11.689
3	24	0.223
3/4	5	0.043
4	482	7.484
Unstratified	276	5.351
TOTAL	**1,949**	**30.006**

Table 4: *Pottery by site phase*

1.4 Quantification

The fieldwork generated 1,949 sherds of pottery, weighing 30.006kg, including unstratified material.

The majority of the relatively large assemblage, including unstratified material, is medieval with 890 sherds of pottery in the 1150 to 1450 bracket. Within this wide date range a distinct group can be identified, 708 sherds

(weighing 13.699kg) that fall within ceramic phase 5 which can be considered high medieval (1150/1200 to 1350). In addition 357 sherds (weighing 2.223kg) can be thought of as early medieval, ceramic phase 4. The remaining large group of material, 700 sherds can be dated to the mid 15th to late 17th century, (ceramic phase 7). There is little definite intrusive material in the assemblage and only 2 residual Roman sherds (0.016kg).

The relatively tight dating of large parts of the assemblage indicate three concentrations of activity on the site over a relatively limited period of time. The earliest activity spans the (late 9th) 10th to mid 12th century, after which levels of pottery deposition suggest activity continues to increase until the mid 14th century. The site then appears to go into decline until the mid 15th century when pottery deposition again increases.

The normal range of vessel types is present within the assemblage; these include jars, bowls in Saxo-Norman or early medieval Lincolnshire fabrics. The earlier phase of occupation producing early medieval SHW sherds and a large number of STAM jars. The medieval assemblage produced a very large number of BONB jugs, bowls and jars, a large quantity of medieval SHW jar sherds were also recovered. Some non-local fabrics were identified including LYST and GRIM jug sherds and Northamptonshire SHW jars. Beyond this normal range of medieval vessels the ceramic phase 5 assemblage also produced a number of sherds from one or more curfews or possibly fish smokers. In the post-medieval assemblage new vessel types appear including cups in CSTN type wares and BOND jugs, cisterns or bunghole pitchers and bowls.

The character of the assemblage suggests it derives from a domestic context. The assemblage appears to be generally indicative of rural activity and offers potential for further study which will add to our knowledge of medieval and post-medieval Maxey.

1.5 Provenance and Contamination

Basic statistics relating to source area for the assemblage are given in Table 5. This indicates the bulk of the assemblage is likely to have travelled less than 16 km.

General provenance	% of assemblage by count	% of assemblage by weight
Cambridgeshire	1.19	0.97
Essex	1.98	1.55
Lincolnshire	92.81	92.18
Norfolk	0.50	0.64
Northamptonshire	1.54	2.25
Staffordshire	0.19	0.11
Yorkshire	0.15	0.52
Imports	0.15	0.80
Unknown//Roman	1.49	0.98

Table 5: *General provenance areas for post-Roman assemblage*

Table 4 indicates the source for the bulk of the assemblage to be Lincolnshire. This dominance is due to the relative proximity of the production centres within Lincolnshire and good communications by road to those production centres, for example the Bourne kilns lie 15.4km to the north of Maxey and provide 53% of the assemblage by weight. Stamford lies only 15.3km to the west of Maxey providing more than 12% of the assemblage. Non-local suppliers of pottery make up approximately a quarter of the assemblage. In ceramic phase 4, the well fired and fine STAM wares provide the site's inhabitants with much all of their needs for jugs, bowls and jars for storage and cooking. Cook pots are also common in the shelly coarse wares again originating in Lincolnshire. Bourne products, bowls, jug and jars, dominate the medieval assemblage followed by coarse SHW jars. The dominance of Bourne products continues into the post-medieval period

Contamination of this assemblage is light with only 2 intrusive sherds in ceramic phase 4 (850 to 1150) medieval sherds of BONB weighing 11g. Residuality is not a serious problem, although there are over 200 residual sherds in ceramic phase 5, and nearly 300 more in ceramic phase 7. This level of residuality suggests that there was some disturbance of the material indicating that not all of the material excavated from the site was recovered from the features where it was primarily deposited.

1.6 Sampling Bias

The excavation was carried out by hand and selection made through standard sampling procedures on a feature-by-feature basis. There are not expected to be any inherent biases. Where bulk samples have been processed for environmental remains, there has also been some recovery of pottery. These are however only very small amounts and serious bias is not expected to result.

1.7 Condition

This assemblage is of a reasonable size, the average sherd size is small to moderate at 14.8g per sherd. The average size of sherds from ceramic phase 5 and 6 is slightly larger at 17g and 16g respectively. These weights suggest that the whole assemblage has been subject to reworking. No preservation bias has been recognised and no long-term storage problems are likely. This assemblage has several vessels that offer complete profiles for illustration a BONB jar and a CSTN cup, also partial vessels and sherds worthy of illustration, including the fragments of BONB curfew or fish smoker. It is a close grouped assemblage and the large size and date of the assemblage make full quantification and analysis of the main period groups desirable.

2 Statement of Research Potential

The pottery can help with definition and dating of all settlement phases on the site. The size of the main assemblage makes this achievable and it is possible to retrieve information on settlement function, including processing and storage. The assemblage has the potential to aid local, regional and national priorities.

3 Recommendations for Further Work

Stratified pottery from all phases of excavation described here has been quantified to a basic level. Further work is required to identify and quantify stratified pottery from excavation areas, recording all fields associated with fabric, form, decoration, technology and use.

Proposal for further work:

1) A full analysis of this assemblage on various field criteria, based on major stratigraphic units. This will clarify the dating of structures, cut features and other materials recovered from the excavation. The 200 post-Roman pottery sherds from the evaluation need to be fully integrated.

2) A textual report on the results of the above is required and will be up to 20 pages long, with a minimum of 5 tables and figures.

3) Macroscopic inspection (based on x20 magnification) of all major fabric types.

4) Tabular statistics of fabric and vessel data.

5) Illustrations of new forms and traits, especially relating to local fabric types, which are otherwise, unpublished to date. There are 9 vessels or fragments of vessels identified as suitable for illustration including 2 vessels with complete profiles (see following table).

Context	Fabric	Number of Sherds	Vessel Forms	rim/base/other	Date Range
16	Stam	4	jar/cookpot	jar/cookpot	AD1000-1150
106	BONB	1	Miscellaneous	rim or base	AD1250-1450
106	CSTN	5	Drinking Vessel	complete profile	AD1500-1600
338	SHW	1	Bowl	rim	AD1150-1350
425	BONB	23	Jar	Complete Profile	AD1250-1450
425	BAST	27	Jar	Rim & BS	AD1250-1450
425	BONB	10	Lighting and Heating	BS	AD1250-1450
425	BONB	1	Lighting and Heating	H/Base (top of vessel)	AD1250-1450
640	UNK	1	Bowl	complete profile dog dish type?	AD1250-1450

Table 6: *Pottery to be illustrated*

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Context	No. Sherds	Weight (kg)	Spot dating Date Range For Context	Stratigraphic Phase
3	21	0.447	late 15th to mid 16th	
8	8	0.023	14th	3
9	37	0.193	Mid 15th to early 17th	
10	46	0.922	Mid 15th to early 17th	4
12	13	0.17	14th to mid 15th	3
14	3	0.023	10th to mid 11th	1
16	4	0.126	10th to mid 11th	1
18	8	0.207	mid 18th to 1900	4
19	7	0.083	mid 12th to mid 13th	2
20	4	0.101	Mid 15th to early 17th	4
22	3	0.030	Late 14th to mid 15th	3
25	3	0.011	Late 9th to mid 12th	1
34	28	0.006	11th to mid 12th	1
42	17	0.103	10th to mid 11th	1
100	10	0.067	mid 15th-mid 17th	4
102	57	1.078	subsoil if BCHIN intrusive 17th if not late 18th	4
105	5	0.066	mid 13th-mid 15th	2-3
106	218	4.711	u/s some time after 1500	
108	13	0.075	16th unless BON/CSTN intrusive then earlier	4
110	6	0.058	16th unless BON/CSTN intrusive then earlier	4
112	23	0.443	16th unless BON/CSTN intrusive then earlier (1500-1550 with RAER)	4
113	2	0.065	16th (1500-1600)	4
115	28	0.309	if BOND intrusive (mid13-mid14th) if not mid15th	2
116	2	0.008	13th-end 14th	2
117	2	0.081	mid 15th-mid 17th	4
119	2	0.018	mid to late 18th	4
122	4	0.092	unsure stabed H suggests later but ?1100+	1-2
124	15	0.061	mid 11-mid 12th	1
126	5	0.023	10th-mid 12th	1
128	4	0.043	10th-mid 12th	1
130	1	0.058	mid 13th-mid 15th	2-3
131	6	0.182	mid 12th-mid 14th	2
134	6	0.028	mid15-mid17th	4
137	3	0.055	mid 13th-mid 15th	2-3
150	1	0.006	10th-mid 12th	1
153	2	0.018	10th-mid 12th	1
155	9	0.093	10th-mid 12th	1
158	1	0.007	10th-mid 12th	1
160	1	0.017	10th-mid 12th	1
162	8	0.120	if BOND not intrusive mid 15th -mid 17th	4
164	5	0.035	mid 13th-mid 15th	2-3
166	39	0.38518	mid 12th-mid 14th	2
167	13	0.066	mid 12th-mid 14th	2
168	1	0.004	10th-mid 12th	1
170	6	0.025	10th-mid 12th	1
174	4	0.042	mid 15th-mid 17th	4
176	1	0.003	mid 15th-mid 17th	4
178	1	0.001	10th-mid 12th	1
181	4	0.018	10th-mid 12th	1
187	1	0.002	10th-mid 12th	1
189	8	0.038	11th-mid 12th	1
191	5	0.023	10th-mid 12th	1
197	1	0.011	10th-mid 12th	1
197	2	0.016	10th-mid 12th	1
203	1	0.004	10th-mid 12th	1
205	1	0.011	10th-mid 12th	1
209	3	0.019	10th-mid 12th	1
219	2	0.006	10th-mid 12th	1
220	6	0.156	mid 12th-mid 13th	2
222	7	0.014	10th-mid 12th'	1
224	6	0.014	10th-mid 12th	1
232	14	0.155	10th-mid 12th	1
234	3	0.028	mid 12th-mid 14th	2

238	1	0.002	10th-mid 12th	1
240	1	0.008	mid 12th-mid 14th	2
242	2	0.057	mid 13th - 15th	2-3
253	1	0.007	10th-mid 12th	1
261	1	0.01	10th-mid 12th	1
269	12	0.093	mid 12th-mid 14th	2
273	1	0.006	10th-mid 12th	1
281	7	0.071	10th-mid 12th	1
286	6	0.014	10th-mid 12th	1
288	1	0.002	10th-mid 12th	1
292	3	0.012	10th-mid 12th	1
294	1	0.004	10th-mid 12th	1
296	1	0.002	10th-mid 12th	1
300	4	0.029	10th-mid 12th	1
303	4	0.008	10th-mid 12th	1
305	1	0.003	10th-mid 12th	1
307	5	0.023	10th-mid 12th	1
313	2	0.003	10th-mid 12th	1
321	14	0.097	13th-14th	2
323	12	0.066	10th-mid 12th	1
325	2	0.02	10th-mid 12th	1
327	34	0.319	10th-mid 12th	1
330	1	0.017	mid 12th-mid 14th	2
332	3	0.260	16th (1500-1600)	4
338	3	0.781	mid 12th-mid 13th	2
356	1	0.011	mid 13th-mid 15th	2-3
356	2	0.004	mid 13th-mid 15th	2-3
360	22	0.244	mid 13th-mid 15th	2-3
361	5	0.031	mid 13th-mid 15th	2-3
362	7	0.082	mid 13th-mid 15th	2-3
380	1	0.009	10th-mid 12th	1
388	1	0.004	10th-mid 12th	1
394	1	0.002	10th-mid 12th	1
410	1	0.002	10th-mid 12th	1
420	2	0.008	10th-mid 12th	1
423	9	0.035	10th-mid 12th	1
425	501	10.793	13th-late 14th?	2-3
426	6	0.044	mid 13th-mid 15th	2-3
428	6	0.024	mid 13th-mid 15th	2-3
430	4	0.025	mid 13th-mid 15th	2-3
434	1	0.013	10th-mid 12th	1
436	19	0.319	mid 13th-mid 14th	2
438	5	0.056	mid 12th-mid 14th	2
440	1	0.005	10th-mid 12th	1
442	2	0.017	10th-mid 12th	1
444	4	0.028	mid 13th-mid 15th	2-3
445	19	0.203	if BOND not intusive mid 15th - 17th	4
446	90	0.735	if BOND not intusive mid 15th - 17th	4
448	1	0.012	10th-mid 12th	1
452	1	0.001	10th-mid 12th	1
456	1	0.003	10th-mid 12th	1
458	9	0.051	10th-mid 12th	1
460	1	0.001	mid 12th-mid 14th	2
463	4	0.014	10th-mid 12th	1
464	5	0.043	15th	3-4
465	6	0.015	BONB intrusive? 10th-mid 12th	1
466	4	0.017	mid 12th-mid 14th	2
467	4	0.019	mid 12th-mid 14th	2
475	1	0.004	10th-mid 12th	1
480	1	0.006	10th-mid 12th	1
498	1	0.003	10th-mid 12th	1
503	3	0.017	13th-mid 14th	2
508	2	0.005	10th-mid 12th	1
509	4	0.017	10th-mid 12th	1
511	2	0.004	10th-mid 12th	1

513	1	0.001	10th-mid 12th	1
515	1	0.003	10th-mid 12th	1
523	1	0.004	10th-mid 12th	1
525	1	0.001	10th-mid 12th	1
541	1	0.003	10th-mid 12th	1
547	29	0.890	mid 15th -mid 17th	4
549	4	0.024	10th-mid 12th	1
550	1	0.003	mid 15th -mid 17th	4
552	1	0.001	mid 13th-mid 15th	2-3
555	89	1.415	late 15th -mid 16th (1480 to 1550)	4
556	8	0.082	if BOND not intusive mid 15th -mid 17th	4
558	9	0.051	if BOND not intusive mid 15th -mid 17th	4
568	3	0.046	10th-mid 12th	1
570	4	0.018	mid 12th-mid 14th	2
572	2	0.004	mid 12th-mid 14th	2
574	4	0.079	mid 12th-mid 14th	2
578	13	0.113	mid 13th-mid 15th	2-3
580	1	0.021	10th-mid 12th	1
586	1	0.011	10th-mid 12th	1
589	3	0.028	10th-mid 12th	1
593	2	0.012	10th-mid 12th	1
595	21	0.351	mid 15th -mid 17th	4
599	2	0.01	10th-mid 12th	1
601	3	0.011	10th-mid 12th	1
603	8	0.043	10th-mid 12th	1
605	12	0.154	10th-mid 12th	1
609	2	0.008	10th-mid 12th	1
613	5	0.018	mid 13th-mid 15th	2-3
615	2	0.053	10th-mid 12th	1
621	3	0.007	10th-mid 12th	1
623	2	0.014	10th-mid 12th	1
625	3	0.027	mid 12th-mid 14th	2
636	2	0.039	mid 15th -mid 17th	4
638	26	0.131	mid 13th-mid 14th	2
640	19	0.147	if BOND not intrusive mid 15th -mid 17th	4
642	2	0.004	10th-mid 12th	1
643	5	0.036	10th-mid 12th	1

Table 7: *Pottery spot dates*

APPENDIX 3: METALWORK

by Nina Crummy

1 Summary

A small assemblage of 26 objects was examined; some bags and boxes contained more than one object. Very few objects were of dateable types; those that could be dated were medieval or post-medieval.

2 Condition

The copper alloy and lead (alloy) objects are in fair condition. The ironwork is encrusted with corrosion products, making identification of many of the objects impossible or at best tentative, but all or most should produce clear images when X-radiographed.

The objects are packed to a high standard of storage in either polythene bags or small crystal boxes supported by pads of foam or acid-free tissue. The bags and boxes are stored in larger crystal boxes or airtight Stewart boxes with silica gel.

3 Assemblage

The assemblage consists of 4 copper alloy, 2 lead alloy and 20 iron items.

The objects are briefly listed in Tables 8-11. Each has been assigned to one of the functional categories defined in Crummy 1983 and 1988 and the results are shown in the table below. The only categories represented in this assemblage are: 1.dress accessories; 8.transport; 10.tools; 11.general fittings; 18.miscellaneous. Closer identification of some of the ironwork should be possible after X-radiography. Coins are treated as a separate, unnumbered, group.

The assemblage has no distinct character, and the number of metalwork finds is in general low, given the total number of excavated features. There is a noticeable lack of the small personalia generally associated with medieval occupation sites, such as buckles, strap-mounts, strap-ends, small dress pins and lace-ends.

The only coin (from context 112, pit **109**, Phase 4) is an illegible post-medieval issue, but conservation should enable more accurate dating. Most of the ironwork consists of nails and fragments of sheets or straps. The presence of a possible copper-alloy awl and two possible iron punches is some indication of craft activity on the site, but accurate identification following conservation work and X-radiography is necessary to confirm this. The only other tool is a fragment of a knife blade. A horseshoe fragment is the only evidence for transport, though one of the nails may on X-ray also prove to be from a horseshoe.

4 Recommendations for Further Work

1) All the copper alloy and lead (alloy) objects should be conserved (6 objects). All the ironwork should be X-radiographed (20 objects). This should facilitate dating of the non-iron objects and accurate identification of the corroded ironwork. It is recommended that the X-radiography be carried out at Colchester Museum.
2) A brief report on the coin and other metal objects should form part of the published site report, providing references to comparable items where possible.
3) A limited number of the items should be drawn and these are indicated in Tables 7-10. Given the corroded nature of the ironwork the precise number cannot be accurately given at this stage, but the maximum should be no greater than 6 objects.

Bibliography

Crummy, N., 1983 *The Roman small finds from excavations in Colchester 1971-9*, Colchester Archaeological Report 2 (Colchester)

Crummy, N., 1988 *The post-Roman small finds from excavations in Colchester 1971-85*, Colchester Archaeological Report 5 (Colchester)

Metalwork Catalogue

SF	Context	Feature	Phase	Material	Identification	Clean	Date
4	112	109	4	cu-al	illegible	y	post-medieval

***Table 8:** Coins*

SF	Context	Feature	Phase	Identification	Clean	Illustrate	Category	Date
5	110	109	4	strap-fitting	y	y	1?	medieval or post-medieval
32	232	233	1	small penannular ring	y	-	18	-
10	238	241	1	broken square-section shaft, possibly an awl	y	y?	10?	-

***Table 9:** Copper-alloy*

SF	Context	Feature	Phase	Identification	Clean	Illustrate	Category	Date
28	547	554	4	Disc fragment	y	-	18	medieval or post-medieval
30	547	554	4	Sheet fragment	y	-	18	medieval or post-medieval

***Table 10:** Lead or lead-alloy*

SF	Context	Feature	Phase	Identification	X-ray	Illustrate	Category	Date
2	112	109	4	2 sheet fragments (one piece originally?)	y	-	18	-
3	112	109	4	strap-fitting, with nails for attachment, probably from box	y	y	11	-
6	135	139		horseshoe fragment	y	-	8	medieval or post-medieval
7	135	139		?punch	y	?	10	-
9	174	175	4	?fitting fragment	y	-	18	-
17	174	175	4	4 strip fragments + small pieces	y	-	18	-
31	187	186	1	amorphous lump	y	-	18	-
29	332	331	4	3 amorphous fragments	y	-	18	-
20	332	331	4	knife blade	y	y	10	-
12	445	470	4	punch or nail	y	?	10?	-
15	509	510	1	strip fragment, ?+ rivet	y	-	18	-
16	511	512	1	nail (?hobnail or horseshoe nail)	y	-	11 (or 1, or 8)	-
18	547	554	4	nail; blade or strip fragment; sheet fragment	y	-	11 & 18	-
26	595	596	4	nail	y	-	11	-
19	555	597	4	2 sheet fragments	y	-	18	-
27	631	632		nail shank	y	-	11	-
23	638	637	2	knife blade fragment	y	-	10	-
1	106	-		2 rings, probably from chain or harness	y	-	18	-
8	106	-		nail shank	y	-	11	-
25	106	-		?hinge pivot fragment	y	-	11	-

***Table 11:** Iron*

APPENDIX 4: BONE ARTEFACTS
by Ian L. Baxter

Three worked bone objects were recovered from the site (Table 12). Two of these (an unstratified wedge or chisel shaped scraper and an awl or bodkin from pit **584**) could have been used in the preparation of animal hides.

SF number	Context Number	Feature	Description	Date (Phase)
22	106	U/S	Wedge or chisel made from a horse radius shaft. Also possibly a scraper used in the preparation of animal skins.	N/A
N/A	142	Posthole 143	Pin or needle made from a pig fibula shaft (?)	undated
11	425	Pit 584	Awl or bodkin made from a sliver of horse/cattle long bone shaft	2-3

Table 12: *Bone artefacts*

APPENDIX 5: ENVIRONMENTAL MATERIAL
by Val Fryer

1 Introduction

Excavations at Willow Brook Farm, Maxey revealed features of medieval and post-medieval date including a number of pits, two stone-lined? drains and a ditch. Samples for the extraction of the plant macrofossil assemblages were taken from across the excavated area, and sixteen were submitted for assessment.

2 Methods

The samples were bulk sieved by the Archaeology Field Unit, and the flots were collected in a 500 micron mesh sieve. The dried flots were scanned under a binocular microscope at magnifications up to x 16, and the plant macrofossils and other remains noted are listed on Tables 13 and 14. Nomenclature within the tables follows (Stace 1997). All plant remains were charred. Modern contaminants including fibrous roots and seeds were present throughout.

3 Results of Assessment

3.1 Plant macrofossils

Cereal grains/chaff, seeds of common weeds and wetland plants and tree/shrub macrofossils were present at varying densities in all sixteen samples. Preservation was poor to moderate with a significant proportion of the grains and seeds being heavily puffed and distorted, probably as a result of high temperatures during combustion.

3.1.1 Cereals and Other Food Plants

Oat (*Avena* sp.), barley (*Hordeum* sp.) and/or wheat (*Triticum* sp.) grains were recorded from all but Sample 16 (context 446, Phase 4), with wheat being predominant throughout. Although chaff was generally very scarce, rachis nodes of both bread wheat (*T. aestivum/compactum*) and rivet wheat (*T. turgidum*) types were noted within six assemblages, and a complete wild oat (*Avena fatua*) floret was present in Sample 9 (context 232, Phase 1). Silica skeletons of cereal awn were recorded within Sample 4 (context 131, Phase 2). A small number of large legumes were noted within Samples 1 and 11 (both context 332, Phase 4), and although none retained an intact hilum, both rounded forms (probably of pea (*Pisum sativum*)) and more angular forms (probably of field bean (*Vicia faba*)) were present.

3.1.2 Wild Flora

Although weed seeds were generally rare, specimens were recorded from all samples, with grassland species occurring most frequently. Vetch/vetchling (*Vicia/Lathyrus* sp.) seeds were recorded from ten samples, with 'pod' fragments present within the assemblage from Sample 4 (context 131, Phase 2). Other taxa noted included goosegrass (*Galium aparine*), medick/clover/trefoil (*Medicago/Trifolium/Lotus* sp.), indeterminate grasses (Poaceae) and dock (*Rumex* sp.). A small number of common cereal crop contaminants were also recorded, with the seeds of stinking mayweed (*Anthemis cotula*) possibly indicating that agricultural production was largely based on the local clay soils. A single flax (*Linum usitatissimum*) seed was noted in Sample 7 (context 338, Phase 2).

Wetland plant macrofossils, consisting of sedge (*Carex* sp.), spike-rush (*Eleocharis* sp.) and saw-sedge (*Cladium mariscus*) nutlets were recorded from only two samples, whilst small hazel (*Corylus avellana*) nutshell fragments and a single elderberry (*Sambucus nigra*) 'pip' were the sole tree/shrub macrofossils recovered.

Charcoal fragments were common or abundant in most samples, although other plant macrofossils were rare, consisting of pieces of charred root/stem and indeterminate culm nodes and seeds. Mineral replaced root channels were particularly abundant in Sample 4 (context 131, Phase 2).

3.2 Animal Macrofossils

The small fragments of bone, eggshell, fish bone and marine mollusc shell are all probably derived from the small-scale deposition of domestic/dietary refuse. Faecal concretions were abundant in Sample 4, although it is not possible to ascertain whether these were derived from human or animal ordure.

3.3 Other Materials

Fragments of black 'cokey' and tarry material were moderately common within thirteen of the assemblages studied. Many are probable residues of either the repeated burning of material or the combustion of organic remains (including cereal grains) at very high temperatures. Other remains were very rare, but did include pieces of burnt organic concretion, which may be derived from either burnt dung or burnt foodstuffs.

4 Discussion

A total of twelve samples was taken from pit fills (Table 13). All contain a moderate density of grains, charred grassland herb seeds, charcoal and some possible dietary refuse, and it would appear that most probably have a common source, namely domestic hearth waste. The grains may have been

spilled during culinary preparation, and as a high density are so severely puffed that they are barely recognisable, it would appear most likely that these were repeatedly burned within the hearths. Chaff elements are extremely rare and, combined with the low density of segetal weed seeds, this may indicate that the occupants of the site were primarily consumers rather than producers, with little or no processing of food occurring on site. The burnt grassland herb seeds could either be derived from material used as kindling for the hearths, or from burnt litter or bedding. The faecal residues within Sample 4 (context 131, pit **116**, Phase 2) were almost certainly dumped within the fill, as there is no evidence that the primary function of this feature was as a cesspit. The reason for the high density of legume seeds within the same assemblage is not clear at present, although they could possibly be derived from burnt animal fodder.

The assemblages from the stone-lined drains **331** (Phase 4) and **357** (Phase 2/3) and from ditch **328** (Phase1) (Table 14) are essentially similar to those from the pits although large legumes, including peas and beans, were recovered from drain **331**.

5 Conclusions and Recommendations for Further Work

In summary, the assemblages appear to be primarily composed of refuse, much of which may be derived from domestic hearth waste. However, it should be noted that without exception, the assemblages are very small (none more than 0.1 litre in volume), and there seems to be little or no evidence for the systematic disposal of refuse on the site. It would appear far more likely that material slowly accumulated from detritus scattered across the area, eventually being deposited in every feature, even within the stone-lined drains. Cereals, most particularly wheat, almost certainly formed a major component of the local diet, although possible pea and bean seeds were identified from one particular context. The low density of chaff and similar processing waste recovered from the assemblages probably indicates that the cereals were being imported on to the site as batches of prime grain, a practise commonly seen at other contemporary proto-urban settlements in the eastern region.

Although a number of the assemblages do contain sufficient material (*i.e.* 100+ specimens) for further quantification, analysis of such loosely defined refuse deposits would probably add little to the current interpretation of the site or its component features. Therefore, no further work is recommended, although a written summary of this report should be included within the final publication of site data.

Bibliography

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

Sample No.	3	4	5	6	7	8	9	10	13	14	15	16
Context No.	115	131	100	425	338	166	232	445	321	574	446	446
Feature No.	116	116	101	584	364	168	233	470	322	575	471	442

Cereals												
Avena sp. (grains)	xcf	x			x	x		xx	x	x	x	
A.fatua L. (floret)							x					
Hordeum sp. (grains)	xx	x					xcf	xx	x	x	x	
Triticum sp. (grains)	xx	xx	x	x	xxx	xx	x	x	x	xx	x	
(rachis node frags.)						x	x					
T. aestivum/compactum type (rachis nodes)	x	x			x							
T. turgidum type (rachis nodes)	xcf	x			xcf							
Cereal indet. (grains)	xxx	xx	x		xxx	x	x	xx	x	xx	x	x
(silica skeletons)		x										
Herbs												
Anthemis cotula L.					x				x	x	x	
Bromus sp.									x			
Chenopodiaceae indet.	x											
Fabaceae indet.		x				x		x			x	
Galium aparine L.	x				x							
Linum usitatissimum L.					x							
Medicago/Trifolium/Lotus sp.		x				x	x	x	x	x	x	x
Persicaria maculosa/lapathifolia	x									x		
Polygonum aviculare L.		x										
Small Poaceae indet.						x				x		
Large Poaceae indet.		x	x									
Ranunculus parviflorus L.		x										
Rumex sp.	x	x		x	x	x				x	x	
Scandix pecten-veneris L.				xcf	xcf							
Tripleurospermum inodorum (L.)Schultz-Bip	x											
Vicia/Lathyrus sp.	x	xxx			x	x			x	x	x	
('pod' fragments)		x										
Wetland plant macrofossils												
Cladium mariscus (L.)Pohl					x							
Tree/shrub macrofossils												
Corylus avellana L.					x						x	
Sambucus nigra L.					xcf							
Other plant macrofossils												
Charcoal <2mm	xx	xx	x	x	xxx	xx	xx	xx	xx	xxx	xx	xx
Charcoal >2mm	x	x	x		xx			xx	x	x	x	
Charcoal >5mm								x				
Charred root/rhizome/stem	x	x			x				x	x		
Mineral replaced root channels		xxx										
Indet.culm nodes		x										
Indet.inflorescence frags.		x										
Indet.seeds	x								x			x
Animal macrofossils												
Bone			x		xb					x xb		x
Eggshell	x				x xb			x		x		
Fish bone	x	x	x					x		x		
Marine mollusc shell frags.			x									
Mineralised /faecal concretions		xxx										
Small mammal/amphibian bone			x					x	x		x	
Other materials												
Black porous 'cokey' material	xxx	x	x	x	xxx			xx	x	x	x	
Black tarry material			x						x			
Burnt/fired clay	x				x	x	x	x		xx		
Burnt organic concretions		x										
Mortar/plaster/daub		x										
Small coal frags.			x							x		
Sample volume (litres)	**10**	**10**	**10**	**10**	**10**	**10**	**10**	**10**	**10**	**10**	**10**	**10**
Volume of flot (litres)	**<0.1**	**0.1**	**<0.1**	**<0.1**	**0.1**	**<0.1**	**<0.1**	**0.1**	**<0.1**	**<0.1**	**<0.1**	**<0.1**
% flot sorted	**100%**	**100%**	**100%**	**100%**	**1005**	**100%**	**100%**	**1005**	**100%**	**100%**	**100%**	**100%**

Table 13: *Plant macrofossils and other remains from pits*

Key to Tables

x = 1 = 10 specimens xx = 10 – 100 specimens xxx = 100+ specimens b = burnt

Sample No.	**1**	**11**	**2**	**12**
Context No.	**332**	**332**	**356**	**327**
Feature No.	**331**	**331**	**357**	**327**

Feature type	Drain	Drain	Drain	Ditch
Cereals and other food plants				
Avena sp. (grains)	x	xcf		x
Large Fabaceae indet. (cotyledon frags.)	x	x		
Hordeum sp. (grains)	xx	x		xcf
Pisum sativum L.	xcf	x		
Triticum sp. (grains)	xx	xx	x	xx
(rachis node frags.)			x	x
T. aestivum/compactum type (rachis nodes)	x			x
T. turgidum type (rachis nodes)			x	
Vicia faba L.	xcf	xcf		
Cereal indet. (grains)	xx	xx	x	xx
Herbs				
Anthemis cotula L.			x	x
Apiaceae indet.		x		x
Atriplex sp.				x
Chenopodiaceae indet.		x		x
Fabaceae indet.	xx	xx	x	x
Galium aparine L.		x		x
Medicago/Trifolium/Lotus sp.	x	x		
Small Poaceae indet.	x	x	x	
Rumex sp.	x	x	x	x
Silene sp.	x			
Vicia/Lathyrus sp.	x		x	x
Wetland plant macrofossils				
Carex sp.	x			
Eleocharis sp.	xcf			
Tree/shrub macrofossils				
Corylus avellana L.				x
Other plant macrofossils				
Charcoal <2mm	xxx	xxx	xx	xx
Charcoal >2mm	xx	xx	x	x
Charcoal >5mm		x	x	
Charred root/stem	x	x	x	x
Indet.culm nodes				x
Indet.seeds		x		x
Animal macrofossils				
Bone		xb		
Eggshell	x	x		
Fish bone	x	x		x
Small mammal/amphibian bone				x
Other materials				
Black porous 'cokey' material	x	x	x	xx
Black tarry material		x	x	x
Burnt/fired clay	x		x	x
Burnt organic concretions		x		
Sample volume (litres)	**20**	**10**	**10**	**20**
Volume of flot (litres)	**0.1**	**0.1**	**<0.1**	**<0.1**
% flot sorted	**100%**	**100%**	**100%**	**100%**

Table 14: *Plant macrofossils and other remains from other features*

Key to Tables

x = 1 = 10 specimens xx = 10 – 100 specimens xxx = 100+ specimens b = burnt

APPENDIX 6: MAMMAL, BIRD AND AMPHIBIAN BONES

by Ian L. Baxter BA MIFA

1 Introduction

A total of 97 "countable" (see below) animal bone fragments was hand-collected from the site and a further 20 recovered from the sieved environmental sample residues (Tables 15 and 16). This is a very small assemblage of animal bones and can be expected to provide little detail regarding animal husbandry or the economy of the site in any period of occupation. Bones were recovered from ditches, pits, layers, postholes and slots. The bones were in generally good condition although some had been extensively butchered and others gnawed by dogs. A few burnt fragments are present in the assemblage. Animal bones were recovered from the features dating from the following periods:

1) Phase 1: 850/900-1150
2) Phase 2: 1150/1200-1350
3) Phase 2-3: 1250-1450/1500
4) Phase 4: 1450/1500-1650/1700
5) Phase 4+: 17th to 18th century

2 Methods

Most of the animal bones from Willow Brook Farm were hand-collected. The few bones retrieved from the sample residues provide little in the way of further information on the faunal assemblage.

The mammal bones were recorded on an Access database following a modified version of the method described in Davis (1992) and used by Albarella and Davis (1994). In brief, all teeth (lower and upper) and a restricted suite of parts of the postcranial skeleton was recorded and used in counts. These are: skull (zygomaticus), atlas, axis, scapula (glenoid articulation), distal humerus, distal radius, proximal ulna, radial carpal, carpal 2+3, distal metacarpal, pelvis (ischial part of acetabulum), distal femur, distal tibia, calcaneum (sustenaculum), astragalus (lateral side), centrotarsale, distal metatarsal, proximal parts of the 1st, 2nd and 3rd phalanges. At least 50% of a given part had to be present for it to be counted.

Small rodents (murids and microtines) were identified to generic or species level on the basis of gnathic morphology following Lawrence and Brown (1968).

The presence of large (cattle/horse size) and medium (sheep/pig size) vertebrae and ribs was recorded for each context, although these were not counted. "Non-countable" elements of particular interest were recorded but not included in the counts.

For birds the following were always recorded: scapula (articular end), proximal coracoid, distal humerus, proximal ulna, proximal carpometacarpus, distal femur, distal tibiotarsus, and distal tarsometatarsus.

The ilium and main long bones were recorded and used in counts for anuran amphibians, with generic identification based on the morphology of the ilium following Gasc (1966). No attempt has been made to identify the anurans to species.

The separation of sheep and goat was attempted on the following elements: dP_3, dP_4, distal humerus, distal metapodials, distal tibia, astragalus, and calcaneum using the criteria described in Boessneck (1969), Kratochvil (1969), and Payne (1985). The shape of the enamel folds (Davis 1980; Eisenmann 1981) was used for identifying equid teeth to species. Equid postcrania were checked against criteria summarized in Baxter (1998).

Wear stages were recorded for all P_4s and dP_4s as well as for the lower molars of cattle, sheep/goat and pig, both isolated and in mandibles. Mandibular and tooth wear stages follow Grant (1982) and are retained on the Access database.

Measurements are retained on the Access database. These in general follow von den Driesch (1976). All pig measurements follow Payne and Bull (1988). Humerus HTC and BT and tibia Bd measurements were taken for all species as suggested by Payne and Bull (1988) for pigs.

Taxon	Phase					Total
	1 c.900-1150	2 1150/1200-1350	2-3 1250-1450/1500	4 1450/1500-1650/1700	4+ C17th/18th	
Cattle (*Bos* f. domestic)	6	3		20	2	**31**
Sheep/Goat (*Ovis/Capra* f. domestic)	1	3	2	13	2	**21**
Sheep (*Ovis* f. domestic)	(-)	(-)	(-)	(4)	(1)	**(5)**
Pig (*Sus scrofa*)	2	2	2	5	1	**12**
Horse (*Equus caballus*)	1	2	-	8	3	**14**
Dog (*Canis familiaris*)	1	-	-	+	-	**1**
Rabbit (*Oryctolagus cuniculus*)	-	-	-	1	-	**1**
Rat (*Rattus* sp.)	-	-	-	1	-	**1**
Fowl (*Gallus* f. domestic)	-	-	-	6	-	**6**
Goose (*Anser/Branta* sp.)	1	-	-	5	-	**6**
Duck (*Anas platyrhynchos*)	-	-	-	1	-	**1**
cf. Teal (*Anas crecca*)	-	-	-	1	-	**1**
cf. Woodcock (*Scolopax rusticola*)	-	-	-	1	-	**1**
Fish (*Pisces* sp.)	-	-	-	1	-	**1**
Total	**12**	**10**	**4**	**63**	**8**	**97**

Table 15: *Number of hand-collected mammal and bird bones (NISP)*

"Sheep/ Goat" also includes the specimens identified to species. Numbers in parentheses are not included in the total of the period. "+" means that the taxon is present but no specimens could be "counted" (see text).

3 Late Saxon to Medieval (Phases 1-3)

Only twenty-six "countable" animal bone fragments were recovered by hand from the medieval features and a further four fragments from the sieved samples. The main domestic mammals are all represented and fish is also present in the sieved material. The remains of the domestic food species consist of butchery waste. A perinatal cattle metatarsal metaphysis was found in Phase 2/3 pit **584** (425) but most of the cattle and sheep/goat bones and teeth seen belonged to adult animals. A very large pig lower canine tusk found

in Phase 2/3 pit **579** (578) may have come from a wild boar. A horse M_1 found in Phase 1 posthole **457** (456) came from an animal approximately 12 years old based on the comparative wear curves of Levine (1982). The mandible of a small dog was found in Phase 1 pit **156** (155). The jaw is fox-sized but the canine and M_1 identify it as belonging to a dog on account of their greater robusticity. The P_4 and M_1 are crowded and the M_3 absent. A goose carpometacarpus was found in a Phase 1 spread (286). This is of domestic size.

4 Post-Medieval (Phase 4)

The post-medieval assemblage is much larger than the medieval but still rather small. Cattle fragments outnumber those of sheep/goats. A third of the sheep/goat fragments are identifiable as sheep and no teeth or bones attributable to goat were seen in the assemblage. A cattle metatarsal found in 8 layer (102) has a broadened distal epiphysis typical of draught animals (Bartosiewicz *et al.* 1997). A perinatal calf humerus from pit **109** (110) has transverse chop marks on the posterior lateral surface. Pit **471** (446) produced a number of cattle and horse bones. A horse lower incisor from this context came from an old animal but the horse remains also included a perinatal tibia. A horse humerus from this pit had been chopped through the shaft. A complete horse metatarsal from (446) came from an animal approximately 15 hands high at the withers based on the multiplication factors of Kiesewalter (1888). The sample residues from pit **471** contained an equid lower deciduous premolar fragment, a rat (*Rattus* sp.) humerus, wood mouse (*Apodemus* sp.) maxilla fragment, mole (*Talpa europaea*) radius and several frog (*Rana* sp.) bones.

Ditch **554** (547) produced bones of goose (*Anser/Branta* sp.) and teal (*Anas crecca*). Ditch **597** (555) contained a woodcock (*Scolopax rusticola*) humerus and a rabbit (*Oryctolagus cuniculus*) mandible. The bones of domestic chickens were relatively frequent in the post-medieval deposits.

Taxon	Phase			Total
	1	2-3	4	
Sheep/Goat (*Ovis/Capra* f. domestic)	-	1	+	**1**
Pig (*Sus scrofa*)	1	+	-	**1**
Equid (*Equus* sp.)	-	-	1	**1**
Rat (*Rattus* sp.)	-	-	1	**1**
Wood Mouse (*Apodemus* sp.)	-	-	1	**1**
Mole (*Talpa europaea*)	-	-	1	**1**
Bird (*Aves* sp.)	-	1	-	**1**
Anuran Amphibian (*Rana/Bufo* sp.)	-	-	10	**10**
Frog (*Rana* sp.)	-	-	(1)	**(1)**
Fish (*Pisces* sp.)	-	1	2	**3**
Total	**1**	**3**	**16**	**20**

Table 16: *Number of mammal, bird and amphibian bones (NISP) in the sieved assemblage*
"Anuran Amphibian" also includes the specimens identified to species. Numbers in parentheses are not included in the total of the period. "+" means that the taxon is present but no specimens could be "counted" (see text).

5 Summary and Conclusion

This is a very small assemblage and the amount of information that can be derived from it is necessarily limited. More bones were recovered from the

post-medieval deposits and there is some evidence to possibly suggest horse knackering and working with hides and skins (see also Appendix 4). There was also some wildfowling practiced at this time.

No further work is recommended, other than to summarise this assessment for publication.

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