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Roman Activity at the Former Allotment Site, Newmarket Road, Cambridge: A Post-Excavation Assessment

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Cambridgeshire County Council

Report No. PXA 39

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April 2003

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Roman Activity at the Former Allotment Site, Newmarket Road, Cambridge: A Post-Excavation Assessment (TL 4847 5931)

1 INTRODUCTION

An archaeological excavation was undertaken by the Archaeological Field Unit of Cambridgeshire County Council (AFU) at the former allotment site at Newmarket Road, Cambridge (TL 4847 5931) in spring 2002 (Casa Hatton 2001). The work was commissioned by Willmott Dixon Housing Ltd in advance of residential development proposed by Granta Housing Association.

The development area comprises a rectangular plot of 1.28ha that was formerly part of Newmarket Road Cemetery and used for allotment gardens until recently. It is located on the eastern edge of the historic city of Cambridge, near the boundary of the parish of Fen Ditton and north of Teversham. In relation to Cambridge, the site lies on the eastern side of the town, between Newmarket Road Cemetery to the west and Marshals Works to the east (Fig. 1). To the north is the modern housing estate of Jack Warren Green, Fen Ditton.

This report presents the data collected during the course of these excavations and revises the earlier objectives as a result of the initial analysis of the excavated assemblage. The report also outlines the approach that will lead these excavations through to publication and thereby fulfil the requirements of the original Brief (Thomas 7/1/2002) for excavations at the former Allotment site, Newmarket Road, Cambridge.

1.1 Archaeological Background

The content of this paragraph draws upon the desktop assessment undertaken prior to the commencement of the fieldwork (Casa Hatton 2001).

Iron Age

The Iron Age is well represented in the area. In particular, there is evidence for occupation in the form of scatters of pottery and bone found some 0.5km to the east of the development site, near Green House Farm (Paul Firman, Notes, AFU Archive).

Recent archaeological work undertaken at Green House Farm (TL/4900/5940) has uncovered evidence for occupation spanning the entire Iron Age (*c.* 600 BC-AD 43). During an evaluation conducted in 1996 evidence for an early Iron Age occupation site and, further to the south, a later focus of activity dating to the Mid to Late Iron Age were uncovered (Mould 1996, *passim*).

Later excavations in the southern part of the evaluation area at Green House Farm confirmed the presence of Mid to Late Iron Age domestic and 'ritual' activities (Hinman, forthcoming).

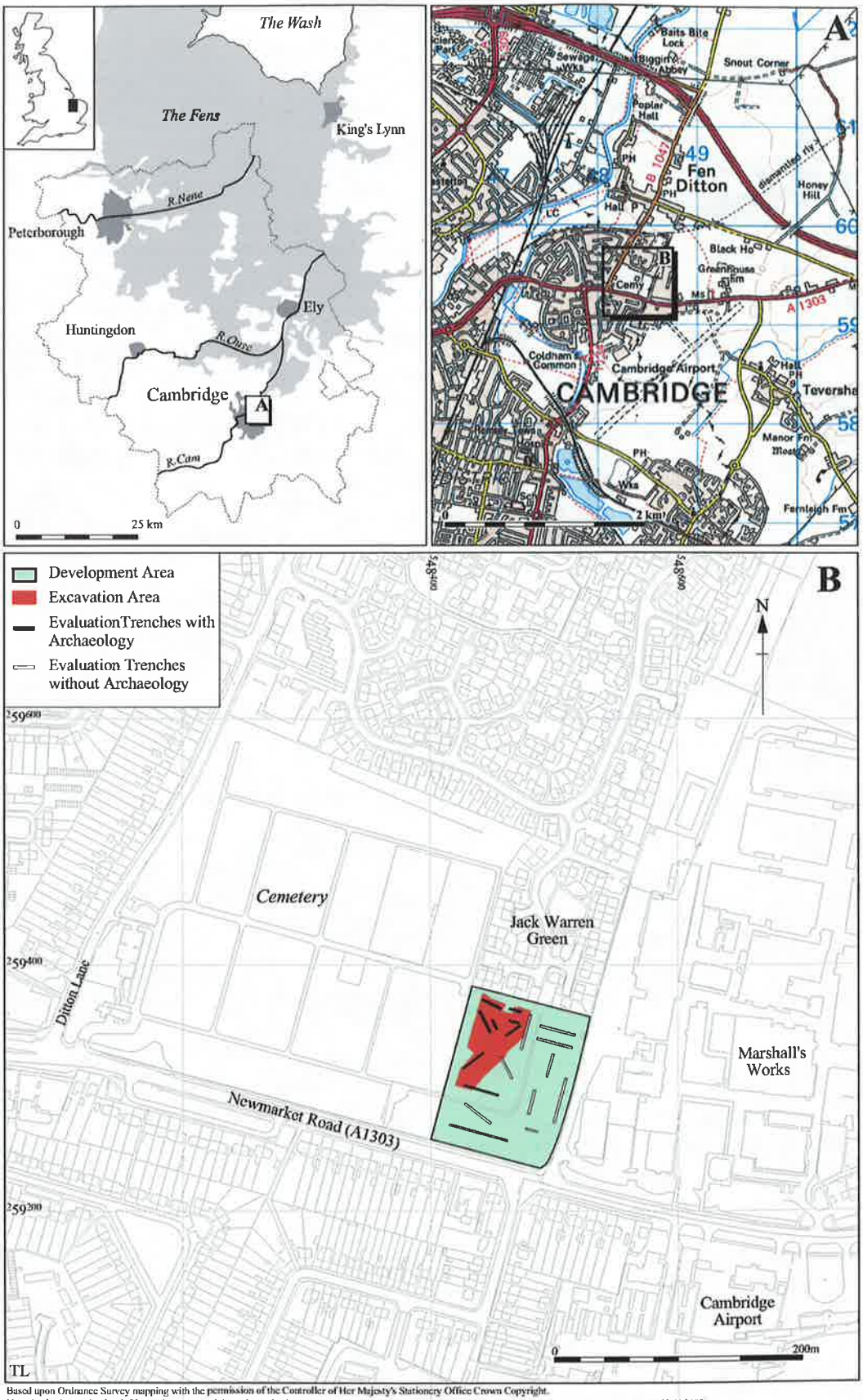

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Figure 1 *Location of Development Area, Assessment Trenches and Investigation Site.*

To the west of the 1996 evaluation/excavation areas, further archaeological work conducted in 1997 revealed the presence of an Early Iron Age open settlement set within ditched fields. To the north of it, a Late Iron Age/Early Roman phase of activity was characterised by the presence of droveways and enclosures for stock management, and short-lived pottery kilns (Mortimer, 1997; Gibson & Lucas 2000; Gibson & Lucas 2002).

As a whole, the evidence from the investigations at Greenhouse Farm would suggest the presence of two distinct and separate areas of settlement-related activities, one dating to the early Iron Age, the other showing possible continuity from the Mid Iron Age to the Late Iron Age/Early Roman period (Hinman, *Pers. Comm.*).

Roman Period

Roman activity in the area is well known through scattered finds and archaeological excavations. The SMR records lie within 1km radius.

Recent excavations at Greenhouse Farm revealed evidence for early Roman occupation, with industrial and agricultural activities (Mortimer, 1997; Gibson & Lucas 2000; Gibson & Lucas 2002).

Evidence for occupation was also uncovered on land adjacent to Airport Way, at TL/4976/5909 (Heawood 1997). There, excavations revealed the presence of late Roman timber-built structures and ditches that may have been part of a villa-estate located some 1.5km to the south, and probably occupied during the middle of the fourth century (Pullinger & White 1991).

1.2 Planning and Report Background

The general potential of the site was defined in an archaeological desktop assessment (Casa Hatton 2001) undertaken as part of the conditions attached to the planning application (-Thomas 03/01/01). Following the desktop, the Planning Archaeologist of the Archaeological Office of Cambridgeshire County Council (CAO) made recommendations to the Planning Authority for an evaluation to be undertaken.

A Design Brief for Archaeological Evaluations was issued by Andy Thomas, Planning Archaeologist of the CAO (Thomas 01/2001). In response to the Brief a Specification for an archaeological evaluation of the site was produced by Stephen Kemp of the AFU (Kemp 10/2001).

The results from the evaluation were seen as a rare opportunity to investigate Roman occupation in the Cambridge area prior to post-medieval and modern expansion of the town. Hence, the Planning Officer of the CAO made recommendations to the Planning Authority for further archaeological work to be undertaken in the north-western quadrant of the development site.

The structure and programme of the proposed excavation were set out in a Brief for archaeological excavations (Thomas 7/1/2002) in accordance with the guidelines and procedures outlined in PPG 16 (English Heritage 1990) and MAP 2 (English Heritage 1991). In response to this, a Specification for

archaeological excavations was produced by Stephen Kemp (4/03/2002) with the aim to recover, understand and publish the archaeological remains encountered in the development area.

The mitigation strategy for open excavation, as outlined in the Brief by the CAO Officer, requested a post-excavation assessment of the research potential of the site, together with an updated project design and post-excavation analyses. The post-excavation assessment leads the project through to successful production, submission and publication of the archive report. The Assessment also recommends the appropriate level of publication.

The post-excavation assessment follows the guidelines set out by English Heritage in MAP 2 (1991) and includes a summary of the results from the archaeological investigations.

2 OBJECTIVES

The original research framework for the excavation, analysis and reporting of archaeological remains at Newmarket Road was defined in the Brief issued by the CAO (Thomas 7/1/2002). The following extracts from the Brief include the original paragraph numbering (in brackets):

Objective 1 *(4.1.1) the primary objective is to preserve the archaeological evidence contained within the site by record and to attempt a reconstruction of the history of the site. Attention is drawn to the issues raised in Glazebrook, J. (ed.) 1997, Research and Archaeology: A Framework for the Eastern Counties 1: Resource Assessment, East Anglian Archaeology Occasional Paper 3, and Brown, N. and Glazebrook, J. 2000, Reasearch and Archaeology: A Framework for the Eastern Counties. Research Agenda and Strategy, East Anglian Archaeology Occasional Paper 8.*

Objective 2 *(4.2.1.1) to contribute to the understanding of the morphology and development of the nearby Roman settlement.*

Objective 3 *(4.2.1.2) to contribute to an understanding of the domestic economy and industry in South Cambridgeshire*

Objective 4 *(4.2.1.3) to investigate the relationship between the Roman and late Saxon activity on this site.*

These objectives were refined prior to the commencement of the excavation and were outlined in the Specification (Kemp 4/03/2002). The following extracts from the Specification include the original paragraph numbering and headings (both in brackets). The refined objectives are referred to as Research Priorities to distinguish them from the original objectives outlined in the Brief.

Roman

(3.5) The key Regional research elements which this project may feed into are:

Research Priority 1 *(i) characterising the rural settlement and particularly the activities undertaken on the margins of such settlement.*

Research Priority 2 *(ii) characterising the progression from Iron Age settlement patterns to those of the Roman period as shown in the local landscape.*

(3.6) The key local and site specific research objectives that this excavation needs to consider are:

Research Priority 3 *(i) which activities are represented and what do they imply about the character of the local settlement*

Research Priority 4 *(ii) what do the artefacts deposited in the quarry pits tell us about the character of the local settlement, particular building styles and economy.*

Saxon

(3.7) The site is likely to only have local significance for the Saxon period in terms of the potential research agenda and quality of archaeology. Saxon remains are extremely sparse on this site amounting to two ditches with a couple of sherds of pottery. No specific research objectives can as yet be defined. If further remains are discovered and they can be linked to adjacent remains in the Saxon landscape, it is possible that research questions relating to the agricultural system and transport networks within the local landscape will need to be addressed.

(3.8) Undated features probably only have local and site significance and are probably associated with the remains and research opportunities presented above. If not they will be considered in the light of any new evidence.

3 EXCAVATION METHODS

The site consisted of an area of some 0.2ha that was stripped, under archaeological supervision, using a 360° mechanical excavator with a flat bladed ditching bucket. The modern ground surface and subsoil (when present) were removed to the depth of the natural gravel deposits. Two modern land drains running north-south across the excavation area had disturbed the uppermost fills of some of the archaeological features.

The excavated area was hand-cleaned to facilitate the identification of archaeological features and buried soils.

The overall size of the excavation sample was sufficient to fulfil the project research aims, as outlined in the Brief (Thomas 07/01/2002). Discrete features were 50% sample-excavated and malting ovens were fully excavated. Each linear feature was excavated to such an extent as to allow interpretation of function, stratigraphy and the recovery of any dating evidence. Particular attention was paid to stratigraphic relationships between inter-cutting ditches and clusters of pits.

All features were mapped onto a base plan at 1:50, which was in turn related to the Ordnance Survey National Grid. All heights used on site were linked to the Ordnance Datum.

All features and deposits were recorded using the AFU single-context recording pro-forma, and drawn in section at 1:10 and 1:20 scale, as appropriate. Monochrome and colour photographs and colour slides were taken to supplement the site records.

Bulk samples were taken by the excavators, in consultation with an environmental specialist, to test for the presence of macro-botanical environmental and economic indicators. The sampling strategy was determined at the first monitoring meeting with the CAO Officer. The results of the environmental analysis have been included in this report (*Appendix 5).*

The spoil heaps and exposed deposits were scanned visually and with a metal detector to facilitate recovery of artefacts.

All excavation and post-excavation procedures followed the standard AFU practice, and are in compliance with IFA guidelines.

The CAO Officer was kept informed of the progress of works to allow monitoring meetings to be held as appropriate.

4 EXCAVATION SUMMARY

The site is located on the Fourth Terrace of the River Cam, at an average height of 15m AOD. The local geology consists of chalk marl beneath gravel and green sand (Worssam 1969).

4.1 Evaluation Results 2001

The evaluation was carried out by the AFU during the autumn of 2001 (Casa Hatton 2001). Eighteen trenches were located across the site in order to obtain maximum coverage. The length of trenching was 412m, totalling 659sqm, i.e. a 5.15% sample of the whole area (Figs 1 and 2).

The removal of the modern topsoil and subsoil (where present) exposed Roman, possible 'Saxon' and undated archaeological features in the north-western quadrant of the development site.

The preliminary evidence gathered during the evaluation appeared to be consistent with Roman industrial/agricultural activities in an area peripheral to a core settlement. This settlement was not identified during the evaluation, and is not known from earlier archaeological work in the area.

Roman activity was identified in the form of a beam-slot and postholes, which may have formed part of a building, and also a large quarry pit. The main fill of the pit produced finds consistent with domestic occupation, namely pottery and animal bone of large and small mammals, together with large flint nodules and fragments of floor tile from a dismantled building that may have stood nearby. The fill also contained charcoal and burnt matter that had been discarded into the pit. Small fragments of iron slag from the beam-slot were interpreted as residues from industrial activity in the vicinity of the development site.

Two parallel ditches of uncertain function (field boundaries or part of a droveway) produced a sherd of abraded pottery that was tentatively assigned to the late Saxon period. No other Saxon features were positively identified during the evaluation.

Finally, a series of shallow and small linear features of uncertain function (beam slots?) produced no finds.

4.2 Excavation Results 2002

The evidence from the excavation confirmed the evaluation results, pointing to light industrial and agricultural activity peripheral to the core settlement. The settlement was not identified during the excavation.

An area of 0.2ha was stripped of topsoil for the excavation (Figs. 1-3).

The depth of the topsoil ranged between 0.25m (north perimeter) and 0.42m (south perimeter). The depth of the subsoil, where present, ranged between 0.10m (north perimeter) and 0.35m (south perimeter). The underlying geology comprised gravel and sand deposits. Periglacial features were also present cutting into the natural deposits.

The excavation area contained a number of cut features, namely pits of varying sizes and functions, including quarry pits, linear ditches, enclosures defined by ditches, slots and post alignments, and two malting-ovens/corn-dryers. The highest density of features occurred in the central and southern part of the site where the majority of excavated remains produced sherds of Roman pottery.

Two inter-cutting small pits of uncertain function near the southern perimeter produced abraded sherds of mid-late Iron Age pottery, and a residual Late Neolithic/Early Bronze Age flint artefact, respectively. The pit had been truncated by a Roman ditch that contained a sherd of residual mid-late Iron Age pottery (below).

Residual prehistoric worked flint was recovered from the fills of other Roman features throughout the site.

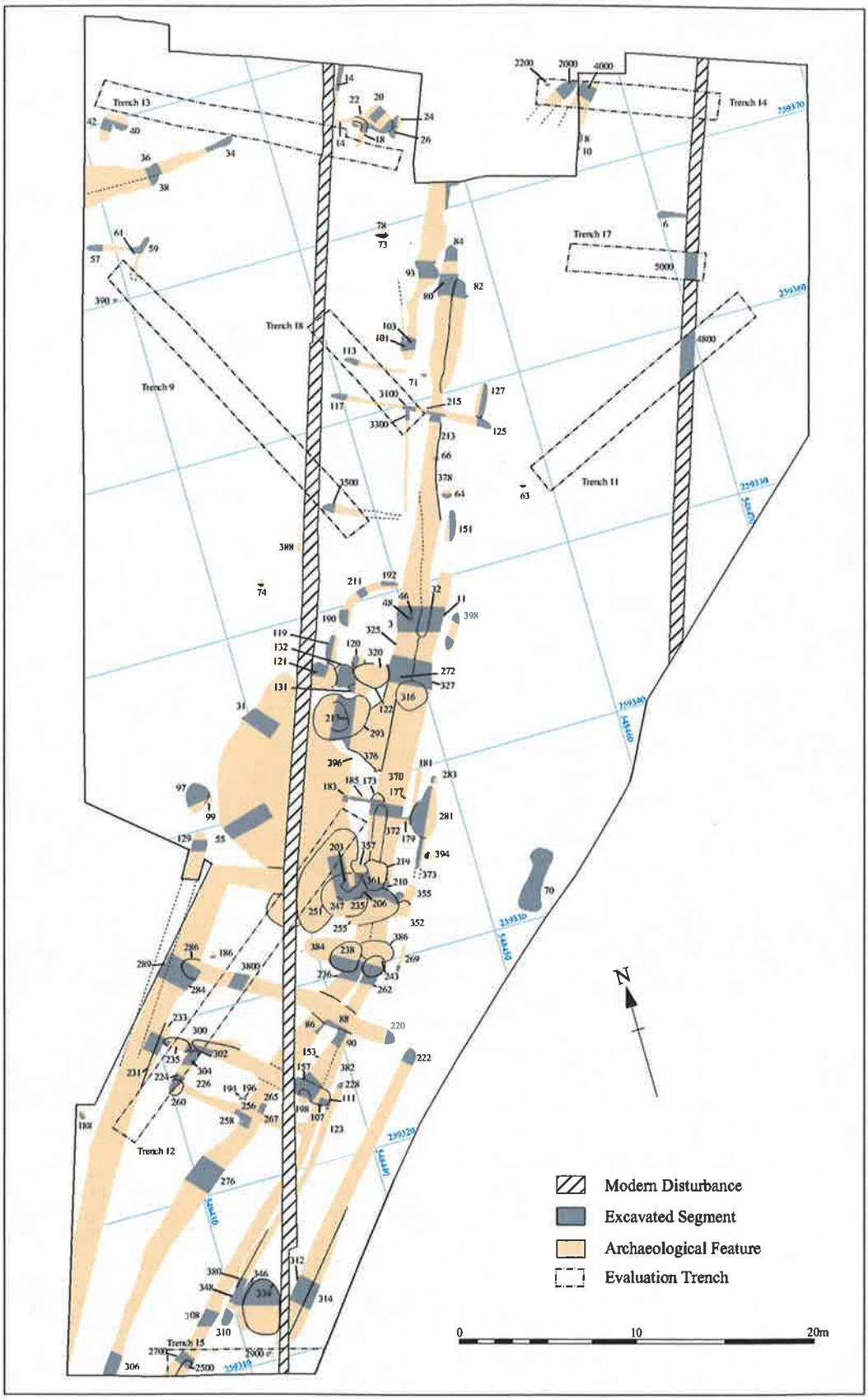


***Figure 2** Site Plan*

Based on direct stratigraphic relationships, quarrying seems to have represented an early activity on site. At a later stage, a north-south ditch was excavated, possibly to act as a boundary between the quarry area to the west and an area occupied by a malting oven to the east. The boundary was maintained and re-cut at least three times. In the southern half of the site its alignment appeared to change slightly, possibly implying a separate phase of use or land management restrictions.

One of the ditches of the boundary feature appeared to truncate an earlier posthole, one of several postholes identified across the site. These seemed to belong to two lines of parallel fencing defining plots of land. They were possibly associated with access trackways on north-west/south-east and north-east/south-west alignments. The relationship between the post-built fences and the quarry pits is uncertain, due to lack of conclusive evidence from the pottery and from the stratigraphy. However, the fence lines appeared to respect the location of the quarry pits and *vice-versa*, suggesting that the quarry pits and the post-built fences may relate to the same period of activity.

The boundary feature may have also truncated the remains of a curvilinear ditch of which only 30% survived. The estimated internal diameter was approximately 7m. The ditch was discontinuous and appeared to have had one or more entrances. One of the excavated segments contained Roman pottery and carbonised remains.

While the boundary was still in use a 'key-hole' shaped malting oven was excavated at the base of one of the ditches, which had just begun to silt-up. It is possible that the oven was placed at the base of the ditch to take advantage of the shelter offered by the ditch itself. The oven had been used at least twice. It contained charred seeds that were collected for environmental analysis. A second oven of similar shape was located immediately to the east. This had been used at least twice and was then cleaned out. No organic material was preserved *in situ*.

The oven at the base of the ditch had been truncated by a series of small and relatively shallow sub-circular pits filled by a rich organic soil. Similar clusters of pits had been excavated into the ditches of the boundary. Their function is uncertain, although the location and spacing of some of the pits would suggest boundary markers. The pits appeared to have belonged to at least two phases, being cut into and being sealed by remains of a thin and uneven midden deposit that contained sherds of Roman pottery. The midden might have resulted from rubbish brought to the site from a settlement nearby.

The north-south boundary feature pre-dated a series of short ditch segments running perpendicular and parallel to it, and forming a series of small enclosures. Some of the east-west segments were very shallow and might have been truncated by medieval and post-medieval ploughing. In one instance a large post-setting marked the corner (entrance?) of one of the enclosures. In all the other cases, absence of entrances would indicate that the enclosures were maintained (and altered) over a long period of time, with successive re-cuts obliterating earlier entrances. It is interesting to note that the enclosures were located in the southern half of the site where the orientation of the north-south ditches of the boundary feature was shifted slightly to the west.

Modern activity was represented by two drains that ran north-south across the site and had truncated the uppermost fills of the archaeological features into which they had been cut.

Finally, undated features included pits clustered in the north-western corner of the site, two very shallow ditches on a east-west alignment, and a series of slots running parallel and perpendicular to each other.

The slots may have marked small enclosures and/or droveways on north-north-east/south-south-west and north-north-west/south-south-east alignments. They spread across the north-western quadrant of the site.

The pits displayed similarities in terms of size and fill composition (leached silt). One of them had been cut by one of the undated slot.

Finally, to the west of the cluster of pits were the remains of two discrete inter-cutting shallow ditches, which also contained leached silty fills. The two ditches were not on the same alignment as the slots, suggesting that they may have belonged to a different phase/period of activity on site.

Other undated features included discrete small pits and a series of shallow (truncated?) aligned ditch segments that ran parallel to, and were probably associated with, the Roman ditched boundary.

5 PERIOD SUMMARY

5.1 Dating and Stratigraphy

The excavated features comprised inter-cutting pits and ditches and discrete postholes and slots. One of the two excavated ovens was also discrete.

Approximately 25% of excavated deposits could be dated by pottery to the Roman period. Of the remaining deposits more than 50% could be stratigraphically attributed to the Roman period and the remaining 18% could not be attributed to any specific period due to the absence of artefactual remains and direct stratigraphic relationships. Despite the lack of dating evidence, at least 10% of these undated features could be placed within a stratigraphic sequence or be associated by feature typology and spatial proximity. Only 8% of archaeological features were discrete and produced no finds.

Only two deposits contained Iron Age pottery in primary context.

Other prehistoric material (worked flint) was found in the fills of Roman features as the result of disturbance of earlier deposits. Other residual materials had formerly lain within the topsoil.

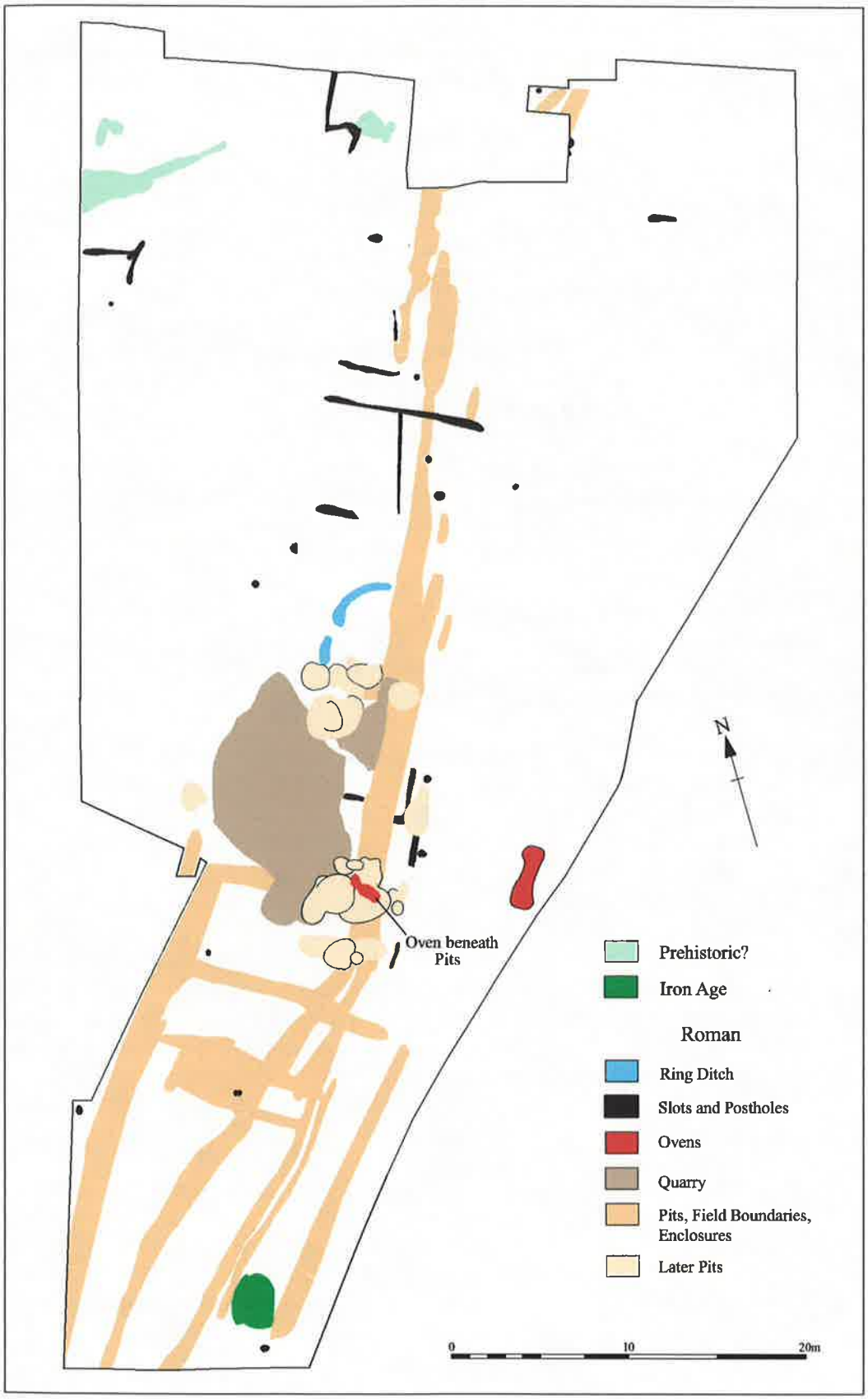


Figure 3 *Site Phasing*

5.2 Period Summary and Phasing

Besides the presence of residual prehistoric worked flint, three main periods of activity were identified through analysis of stratigraphic relationships and diagnostic artefacts:

- Period 1: Iron Age
- Period 2: Roman
- Period 3: Modern

Period 1: Mid-Later Iron Age (Fig. 3)

The Iron Age period was represented by two inter-cutting pits of uncertain function near the southern boundary of the excavated area, suggesting at least one pre-Roman phase of activity in the area.

The site produced very little Belgic pottery. Almost complete absence of Belgic fabrics would suggest absence of activity in the period up to AD 60-70 (*Appendix 1*), and a gap in the sequence of occupation until the second century.

Period 2: Roman (Fig. 3)

Based on the pottery assemblage from the excavated features, the site was probably re-occupied at the beginning of the second century.

The majority of the excavated features produced pottery from stratified contexts. Other finds from the site included fragments of querns and disarticulated animal bone.

As a whole, the typology and size of the finds' assemblages from the excavated contexts are consistent with domestic refuse.

The pottery assemblage consisted of Horningsea Greywares and Horningsea Blackwares and, in particular jars dating to the second-mid fourth century AD. The Samian included four pieces with a date range within the first half of the second century. The composition of the assemblage is consistent with a very basic level rural site. It would seem that most of the pottery was deposited in the first half of the second century. It is unlikely that the site continued in use after the mid third century (*Appendix 1*).

Based on the pottery evidence, Roman occupation appears to have been relatively short-lived.

Two main uses of the site were identified:

- Industrial (quarrying)
- Rural (livestock management and crop processing including malting)

Phase 1: Enclosures
Post-Built Enclosures and Trackways

In term of chronological phasing, post-built parallel fences defining large

enclosures and access trackways in the northern half of the site appear to be among the earliest features on site. The enclosures may represent remains of a field system which, on stratigraphic evidence, pre-dated the excavation of a multi-ditched boundary running north-south throughout the site.

Fence/Palisade-defined Enclosures

The early enclosures were later replaced by a series of fences/palisades on a different alignment, which survived as narrow slots.

Phase 2: Quarrying

Quarrying also seems to have been an early activity on this site as one of the extraction pits had been truncated by the multi-ditched boundary.

The location of the pits in relation to the local geology points to the extraction of gravel and sand generally used in road construction. There was no evidence for metalled roads/tracks on site, although it is reasonable to assume that these existed nearby.

Quarrying was not widespread and could have been contemporary with the use of the northern portion of the site.

Phase 3: North-South Boundary

The north-south boundary was re-cut at least three times and probably extended southwards. Maintenance of the boundary could explain the apparent absence of entrances, as these would have been obliterated by subsequent re-cuts. Some could have also lay outside the excavation area.

Phase 4: Ovens

Two malting ovens were identified during the excavation one of which was located near the eastern boundary of the site. The second was cut into the basal fill of one of the ditches associated with the major north-south boundary. It contained a mixture of malting waste and fuel debris which suggest that the feature had functioned as a malting oven.

The north-south orientated boundary might have originally defined areas of activities, with the quarry area to the west being separated from the crop processing area (malting ovens) to the east. The north-south boundary went through several phases of use, and when it finally went out of use an oven was excavated within it. The ditch in which the oven was cut was only partially silted, indicating that the oven was dug immediately after at least one of the boundary ditches had gone out of use.

Phase 5: Small Pits

The latest phase of Roman occupation consisted of a series of small pits of varying depth cut into the ditches of the boundary feature, into the oven at the base of one of these ditches and also into one of the quarry pits. They were clustered in the central part of the site, being sealed by, and cutting into a thin midden type deposit probably associated with an episode of manuring. The pits were characterised by a dark fill consistent with the presence of organic matter which could have resulted from the cleaning out of the malting ovens. Their original function was not established. At some stage they were used as rubbish pits for the disposal of material that might have originally come from a

settlement nearby.

Uncertain
Uncertainty rests on the interpretation and phasing of a possible curvilinear ditch of which only the western half survived. Its fill contained sherds of Roman pottery. The ditches associated with the north-south boundary had probably truncated the eastern portion of this feature providing a *terminius ante quem.*

Period 3: Modern (Fig.3)

Modern activity was represented by two north-south oriented drains that ran across the whole of the excavated area. The drains are likely to have been associated with the recent use of the site for allotments

6 STATEMENT OF MATERIAL AND POTENTIAL

6.1 Site Data

6.1.1 Quantification of the Archives

Documentary Archive

The documentary archive of the excavation phase comprises the following:

- 15 pages of context list
- 451 context record sheets
- 2 pages of plan register
- 34 pencil-drawn plans at 1:50 and 1:20 and 1 pencil-drawing at 1:500
- 4 pages of section register
- 97 pencil-drawn sections at 1:10 or 1: 20
- 126 monochrome prints, 158 colour prints and 16 colour slides
- 1 page of sample register
- 10 environmental sample record sheets
- 1 page of site object register
- 1 registered object
- 5 pages of site levels

Material Archive

The material archive of the excavation phase comprises the following:

- 1 'long bone' box and half 'skull box' of pottery
- 1 'long bone' box and half skull box of animal bone
- 1 'long bone' box and 2 'skull boxes' of lithics
- 1 'skull box' of ceramic *miscellanea* (clay pipes and fired clay)

6.1.2 Feature Types

Feature types of all periods were almost entirely confined to cut features containing one or more deposits. In addition, a thin layer of dark organic soil was interpreted as representing the remains of a Roman midden deposit

ploughed away during the medieval and post-medieval period.

The Roman period was represented by the following features:

- Pits (negative features)
- Ditches (negative features)
- Postholes (negative features)
- Slots (negative features)
- Midden/manuring (positive features)

The Iron Age period was represented by the following features:

- Pit (negative feature)

Negative Features of all periods

Type of Features	Ditches/Gullies	Slots	Stake/postholes	Pits	Heaths/Oven
No. of Cuts	66	17	18	43	2

Positive Features of all periods

Type of Features	Midden/Manuring	Subsoil	Topsoil
No. of Deposits	1	1	1

The period range of features showed a bias towards the Roman period. The range identified is consistent with a rural site.

6.1.3 Condition of the Excavated Area

The condition of the archaeological features and deposits had been affected by continued use of the site over a long period. In particular, medieval/post-medieval and modern agricultural practices had caused a degree of truncation. There was no evidence for ridge and furrow, although the site appeared to have been levelled prior to its use for garden plots. Disturbance had been caused by two modern drains. The degree of contamination was negligible. There was no evidence for modern building or quarrying works affecting the archaeology.

6.1.4 Primary Excavation Sources

The site records for all stages of work were checked and cross-referenced for internal consistency. A draft *matrix* of the site was produced to assist interpretation, the results of which are outlined above under the period discussion. Plans and sections were drawn in pencil on clear film. They were annotated and fully indexed. Photographs were labelled and cross-referenced with the context records.

Pencil drawings from the evaluation were digitised and published in the evaluation report (Casa Hatton 2001), together with a site location plan and a plan showing the position of the trenches within the evaluation area.

Finds were labelled and entered in the database.

All records and materials are identified by the site code CAM NR 01 (evaluation stage), and CAM NR 02 (excavation phase). The documentary and material archives are currently held at the AFU offices in Fulbourn.

6.1.5 Statement of Potential

The contextual record represents the main component of the excavation data and form the foundation of the site narrative, with particular reference to the period of Roman occupation. It is also sufficient to fulfil the majority of objective in the context of the original framework for the excavation as outlined in the Brief (Thomas 7/1/2002).

Objective 2 *to preserve the archaeological evidence contained within the site by record and to attempt a reconstruction of the history of the site.*

Objective 3 *to contribute to the understanding of the morphology and development of the nearby Roman settlement.*

Objective 4 *to contribute to an understanding of the domestic economy and industry in South Cambridgeshire*

6.2 Documentary Studies

All the relevant records for background research are held by Cambridgeshire County Council at the SMR Office and Cambridge Records Office in Cambridge. These records consist of Monuments and Events, and range from the description of stray finds to the summary of recent archaeological work conducted in close proximity to the study area. Historic maps, tithe, enclosure and Ordnance Survey, showing the modern development of the land under investigation during the nineteenth and twentieth centuries are also available for further analysis.

Monographic and regional studies provide further documentary research background.

All available sources have been described in the desktop assessment undertaken prior to the commencement of the fieldwork (Casa Hatton 2001).

6.3 Artefact Studies

The excavation of features aimed at the recovery and collection of artefactual and ecofactual materials from stratified contexts. The chance of recovery was increased by using means of manual excavation (hand-tools) appropriate to the size, type and period of the excavated feature, and the types of artefactual material likely to be recovered.

The artefactual sample was conditioned by the following factors:

extent of the excavation sample
typology of the excavated features
artefact typology

artefact date

The artefactual materials from the features on site include worked flint (Neolithic/Bronze Age), pottery (Iron Age and Roman), and quern stones (Roman). The period range of the artefacts showed a bias towards the Roman period which was represented by more durable ceramic finds.

All artefacts were quantified (counted by number and/or weighed) by relevant specialists or by the Finds Supervisor of the AFU.

The following paragraphs contain extracts from the relevant specialist reports.

6.3.1 Pottery

The pottery was assessed by Jeremy Evans, with contributions by Margaret Ward (*Appendix 1*).

Only two contexts contained sherds of Iron Age pottery, totalling 2 sherds. The near absence of class E (Belgic) fabrics suggests an absence of activity in the period up to AD 60/70.

During excavation a total of 463 sherds of Roman pottery were recovered from the site. The vast majority of the assemblage consisted of Horningsea greyware. The Samian list included only four pieces with restricted date ranges within the second century. The latest piece from the site would seem to be a Nene Valley whiteware *mortarium* of third-fourth century date.

As a whole, most of the pottery seems to have been deposited in the second century. It is most unlikely that the site continued in use after the mid third century.

The assemblage was dominated by jugs, with a much lower percentage of tableware (dishes and bowls). The composition of the assemblage is consistent with a basic rural site.

•

Despite limitations, the pottery represents the main source of dating for this site. Together with the stratigraphic *matrix*, it will help to understand phasing and spatial patterning in relation to activity zones on site.

6.3.2 Lithic Material

Flint

The lithic assemblage was assessed by Stephen Kemp (*Appendix 2*).

The assemblage collected during the course of the excavation amounted to 6 flint artefacts. These consisted of two tools, i.e. a serrated and heavily reworked flint flake and a rough thumbnail scraper probably of late Neolithic or Bronze Age date. Four undiagnostic flint flakes were also recovered.

The presence of worked flint on site suggests 'invisible' prehistoric activity in the area and as a result no further work is recommended.

Quern Stone and Building Material

The quern/millstone was assessed by Carole Fletcher, with contributions by Stephen Kemp (*Appendix 3*).

Several fragments of Roman rotary querns were found during the excavation. These were made from millstone grit, sandstone, puddingstone and imported lava quern.

A fragment of upper sandstone quern had been reworked for use as building material. In fact, its edges appeared to have been roughly dressed to produce a more rectangular shaped stone.

Fragments of building material (limestone floor tiles) were retrieved during the evaluation and during the subsequent excavation. It was originally suggested that these fragments might have belonged to a dismantled building located in proximity to the development site (Casa Hatton 2001). No structures were identified during these excavations.

6.3.3 Faunal and Macrobotanical Materials

The organic material included animal bone and macrobotanical remains from environmental samples collected during the excavations.

Faunal Remains

The faunal remains were assessed by Ian Baxter (*Appendix 4*).

The assemblage from Newmarket Road comprised 20 countable animal bone fragments that were hand collected. Even though faunal remains were collected both through hand excavation and bulk sampling preliminary analysis has shown that there is an under-representation of bones from smaller species.

The assemblage is typical to larger Romano-British assemblages from other sites in Cambridgeshire. Cattle are the most frequent taxon by number, followed by horse remains. Sheep, goat and pigs are also present within the assemblage, but at much lower frequency.

Cattle are generally the dominant taxon on Romano-British sites in Cambridgeshire, where 'ranching' was practised from the Iron Age until the end of the Roman period. The cattle specimens are adult, suggesting that they were slaughter for consumption of meat.

In spite of a bias towards larger mammals, which in itself may be significant, the faunal assemblage is important for understanding the local rural economy and diet.

Macrobotanical Remains

The environmental remains were assessed by Val Fryer (*Appendix 5*).

Ten samples for the extraction of the plant macrofossil assemblages were taken from across the excavated area and eight were processed (flotation) and submitted for assessment. All plant remains were preserved by charring.

Cereal grains/chaff and seeds of common weed species were present at varying densities in all samples. The degree of preservation was variable.

The assemblage from one of the oven features is almost certainly derived from a mixture of malting waste and fuel debris, and may indicate that the oven from which it was taken functioned as a malting oven.

Although the samples were taken from features peripheral to any settlement, the assemblages gathered are significant for the interpretation of contemporary agricultural production and associated activities. Cereals, which were probably locally produced, were processed on or near the site before being malted and dried in specifically built ovens. Waste products from the processing may have been used as fuel for the later processes.

6.4 Integrated Statement of Potential

The original research objectives may have sounded ambitious in the context of a small-scale excavation. However, the assessment has demonstrated the archaeological potential of the investigation area. It has also demonstrated that a suitable level of information was gathered to fulfil many of the original objectives and research priorities, as outlined in the Brief and Specification.

6.5 Statement of Potential

The contextual record represents the main component of the excavation data and form the foundation of the site narrative, with particular reference to the period of Roman occupation. It is also sufficient to fulfil the majority of objectives in the context of the original framework for the excavation as outlined in the Brief (Thomas 7/1/2002).

Objective 1 *to preserve the archaeological evidence contained within the site by record and to attempt a reconstruction of the history of the site.*

The assessment has shown that a suitable level of information has been collected from excavation data and from artefactual and environmental evidence, which allows us to reconstruct the history and function of the site through phasing and spatial development.

Objective 2 *to contribute to the understanding of the morphology and development of the nearby Roman settlement.*

Research Priority 1 *to characterise the rural settlement and particularly the activities undertaken on the margins of such settlement.*

Research Priority 3 *which activities are represented and what do they imply about the character of the local settlement.*

The assessment has shown that a suitable level of information has been collected from excavation data and from artefactual, faunal and botanical evidence, which should allow to characterise activities peripheral to a rural settlement. This settlement is likely to have been partly, if not entirely, obliterated by modern housing development schemes affecting most of the surrounding areas. Therefore, further research work on the data from the excavation, with particular reference to the botanical evidence, would offer the opportunity to better characterise the site and understand its relationship with the settlement core nearby.

Objective 3 *to contribute to an understanding of the domestic economy and industry in South Cambridgeshire*

Research Priority 2 *to characterise the progression from Iron Age settlement patterns to those of the Roman period as shown in the local landscape.*

The assessment has shown that a suitable level of information has been collected from excavation data and from artefactual, faunal and botanical evidence which should allow to characterise the rural activities on site. Further work on the current environmental assemblages would add significantly to our present knowledge of local and regional agricultural activities on Roman sites, with particular reference to the little known practise of malting barley.

The assessment has shown that a suitable level of information has also been collected from excavation data and from artefactual, faunal and botanical evidence for an assessment to be made concerning the origin and development of the site within a broader Iron Age/Roman landscape. The combination of site data, specialist analyses and available documentary sources will allow to study dynamics of change in settlement pattern in relation to the immediate context, including the Iron Age and Roman sites at Green House Farm.

7 UPDATED RESEARCH PRIORITIES

Completion of the post-excavation assessment has shown that many of the original objectives and research priorities can be met through the analysis of the collected data, with particular reference to the Roman period.

Attention is drawn to the issues raised by Going C and Ploviez J, 'Roman' in Brown, N. and Glazebrook, J. 2000, *Research and Archaeology: A Framework for the Eastern Counties. Research Agenda and Strategy*, East Anglian Archaeology Occasional Paper 8, and Bryant S. 'The Iron age', *ibidem.* This

document has been used to re-evaluate the research priorities defined prior to the excavation.

The updated research priorities for each of the periods of archaeological evidence found within the excavation area and which analysis has paid consideration to are listed below as Research Aims

7.1 Iron Age

7.1.1 Local

The paper by Bryant (*cit.*) highlights gaps in knowledge regarding, economy and agriculture, location and distribution of settlement and related industries in the later prehistoric periods. However, given the poor state of preservation of Iron Age features and the problems caused by absence of dating evidence, the site is likely to be only of local significance.

There is limited opportunity to progress Iron Age studies in this area using the results from these excavations. Therefore no further spatial analysis of the data and finds will be continued except where they have specific implications to studying the Roman archaeology.

7.2 Roman

7.2.1 Regional Research Aims

The paper by Going and Ploviez (*cit.*) highlights the need to examine rural activity and the agriculture and industry associated with it.

Research Aim 1 To contribute to an understanding of the domestic economy and industry in South Cambridgeshire (formerly **Objective 1**).

Although the excavation was shown to be peripheral to the main Roman settlement the artefactual and faunal data recovered will provide some opportunity to contribute to the study of ranching and mixed farming economies in Cambridgeshire.

7.2.2 Local Research Aims

Research Aim 2 to look at peripheral/suburban activities in the context of Roman Cambridge, with emphasis on industrial activities and processing of agricultural produce in rural locations. Formerly **Objective 3** and **Research Priority 1**.

The analysis of quarrying and malting activities, industrial and agricultural may provide further information which feeds into this research priority on understanding activities peripheral to a Roman settlement.

By understanding the site activities and relationships to local settlement it is

expected that there will be some feedback into understanding the local economy of local Roman settlement.

Research Aim 3 to determine the nature of Roman activity within the proposed development area and to characterise any such activity in relation to the known Roman sites in the area. Formerly **Research Priority 3**.

Research Aim 4 the shift of settlements/occupation areas from the Iron Age to the Roman period, as shown in the local landscape. **Formerly Research Priority 2**.

There is an opportunity to study the site against a wealth of data resulting to a decade of analysis of Iron Age and Roman activity discovered along the course of the Newmarket Road and at Greenhouse Farm.

7.2.3 Site Specific Research Aims

Research Aim 5 to determine patterns of continuity and change on site, and to determine its spatial organisation.

Analysis of the spatial organisation of features and artefacts will assist in understanding the evolution of land use in this area.

Research Aim 6 to characterise the rural activities on site in the general context of the economy of the core settlement nearby. Formerly **Objective 4** and **Research Priority 3**.

Characterisation and analysis of the rural activities will help us understand part of the economic basis for Roman settlement in this part of Cambridge.

Research Aim 7 to characterise the industrial activities on site in the general context of the economy of the core settlement nearby. Formerly **Objective 3** and **Research Priority 3**.

Characterisation and analysis of the industrial activities will help us understand part of the economic basis for Roman settlement in this part of Cambridge.

7.3 Saxon

The excavation produced no Saxon remains and the sherd of 'Saxon' pottery found during the evaluation was re-assigned to the Roman period.

As a result, the original research questions set up in potential and relating to the agricultural system and transport networks within the local landscape (Kemp 04/03/2002) will no longer need to be addressed.

8 METHOD STATEMENT

In order to meet both the revised and updated project objectives, the following data have been selected for further analysis.

Key for abbreviations used in the following paragraphs:
ILL Illustrator
SA Site Assistant
SS Site Supervisor

8.1 Contextual Database

The contextual data should provide a solid foundation on which to build the site narrative. The structural data study will help to meet all project objectives, with particular reference to those aimed at the spatial analysis of the site (Research Aims 5-7).

- It is crucial that the site database is properly stored onto an Access Database (SA) and verified (SS). The database will allow the integration of all available site data in relational formats.
- The integrated data will be used to produce a site base map through Autocad (ILL).
- Relevant detailed plans and section drawings will also be digitised (ILL.)
- Preliminary grouping of contexts by typology and spatial association was undertaken, together with stratigraphic phasing of inter-cutting features (*matrix*). Preliminary interpretations of phases need to be integrated with artefact data (SS).
- Text sections for all features need to be written and grouped by periods and phases in order to enable interpretation of the site narrative (SS).
- Period and Phase plans will be produced to illustrate the development of the site (ILL).

8.2 Documentary Studies

The documentary study will help to meet the objectives aimed at the definition of the general background of the study area within a contextualised landscape (Research Aims 1-4).

- The study of the available archaeological sources will contribute to achieve a better understanding of the function and development of the site, with particular reference to the evidence for rural activities.
- Emphasis will be placed on landscape analysis in order to detect patterns of settlement continuity and change, with particular reference to the Iron Age and Roman contexts.

- Comparative analysis of relevant published sites will be undertaken, with particular reference to Green House Farm.

- Regional monographic studies will be consulted in order to place the site narrative in the context of the Roman Cam Valley.

8.3 Artefact Studies

8.3.1 Ceramic (*Appendix 1)*

The pottery analysis will be organised in catalogue form for easy consultation. Specialists have advised that further analysis of the material will not add to our present knowledge of the site.

The assemblage represents a very basic level rural site. It is very small and its potential limited. The only worthwhile further work would be for the publication of pieces of chronological significance for the structural sequence.

The Samian will be drawn for archive purposes.

8.3.2 Lithic

Flint (*Appendix 2*)

The specialist has advised that further analysis of the flint material will not help to meet any of the research objectives.

The presence of worked flint on site suggests prehistoric activity in the area. However, given the small size of the assemblage and the high degree of residuality, no further work is recommended.

Quern (*Appendix 3*)

The specialist has advised that further work on the identification and type of quern will not help to identify the character of the agricultural/processing activities on site, as no residues were associated with the quern stone.

No detailed analysis of the quern stones is proposed other than to refine the typology and provenance of these artefacts. Provenance will be assessed by a geologist from Cambridge University.

Building materials (*Appendix 2*)

The specialist has advised that further work on the identification and type of building materials will not help to identify the character of the activities on site.

Only a small amount of ceramic building material was recovered and this was found within the quarry pits. It is therefore unlikely that the we can be specific about the source and function of these materials.

8.4 Faunal and Macrobotanical Remains

Faunal Remains (*Appendix 4*)

The specialist has advised that further analysis of the faunal assemblage will not help to meet the research objectives.

The animal bone assemblage from Newmarket Road, although very small, is typical in its composition to larger Romano-British assemblages from other sites in Cambridgeshire.

No further work is recommended.

Macrobotanical Remains (*Appendix 5*)

Further work on the current environment assemblage will help to meet those objectives that focus on processing of agricultural produce in rural locations particularly Reasearch Aims 2, 3,5 and 6.

Further work will also add significantly to the present knowledge of local and regional agricultural activities on Roman sites, with particular reference to the little known practise of malting barley.

Following specialist advice, the environmental samples will be submitted for full quantitative analysis.

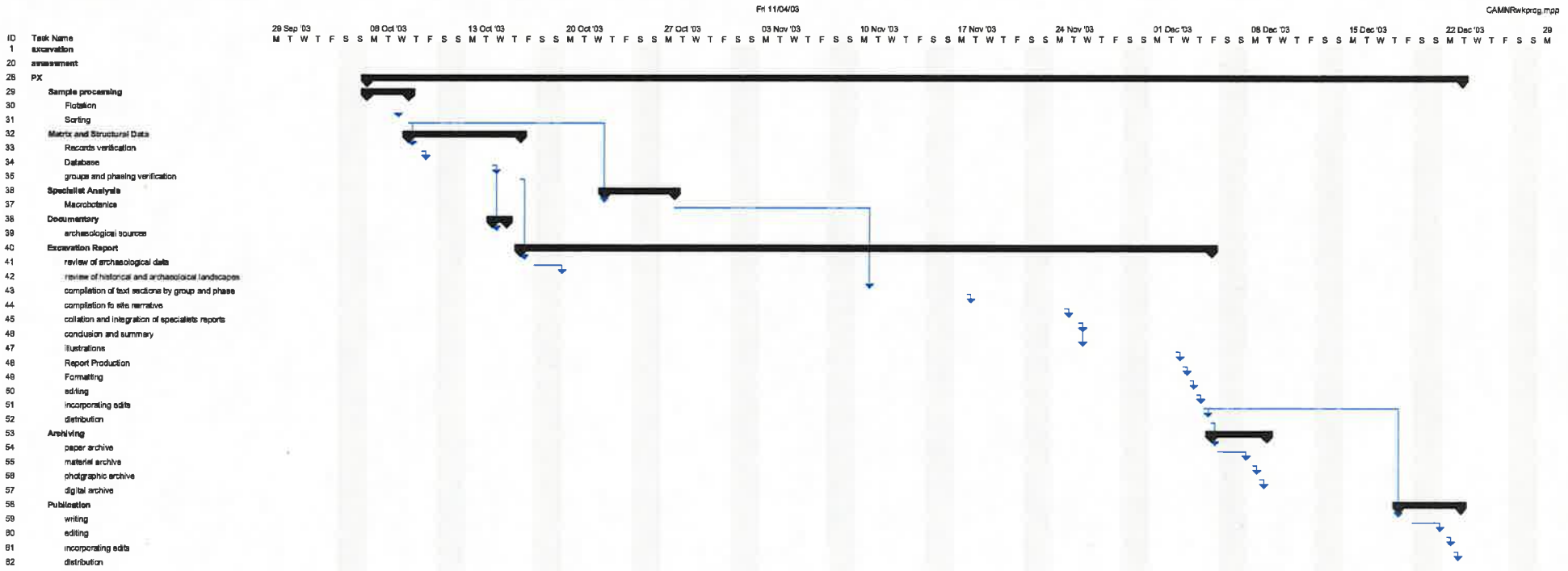
9 WORK PROGRAMME

The following paragraphs provide details of tasks to be completed for the site analysis and report writing phases.

9.1 Research Team

Initials	Role	Establishment	Name
FS	Finds Supervisor	CCCAFU	Carol Fletcher
FUM	Field Unit Manager	CCCAFU	Paul Spoerry
ILL	Illustrator	CCCAFU	Jon Cane, Crane Begg
PO	Project Manager	CCCAFU	Stephen Kemp
SA	Site Assistant	CCCAFU	Other members of staff
SS	Site Supervisor	CCCAFU	Rebecca Casa Hatton
SP	Enviro Specialist	Free Lance	Val Fryer
EA	Enviro Assistant	CCCAFU	Rachel Fosberry,

CAMNR01 Gantt Chart



10 REPORT WRITING AND ARCHIVING

10.1 Report Structure

The final report will combine site data and specialist reports. It will not be written until all specialist analyses are completed. The report will include reference to, and comparison with, other sites of similar period and type.

The aim is to produce a report that will meet standard AFU criteria applied to the production of the Archive Reports. The results of the Analysis as detailed in the Archive Report will indicate the appropriate level of future publication. At least a summary of the site will be published in *PCAS*.

The provisional layout for the site report will be:

Table of Contents
List of *Appendices*
List of Illustrations

Summary

1 Introduction
2 Site and Planning Background
3 Topography and Geology
4 Archaeological and Historical Background
5 Research Aims
6 Methodology
7 Results
Feature descriptions
Group and Phase descriptions
8 Discussion
Site
Local
Regional
9 Conclusions

Acknowledgements

Bibliography

Appendices

10.2 Storage and Curation

On completion of the site analyses, the site materials and documentation will be fully archived according to current guidelines for storage and curation, under the supervision of the Finds Specialist of the AFU.

The AFU Find Supervisor with liase with the Principal Archaeologist of the

CAO concerning the following:

- Immediate and long-term conservation and storage of materials
- Recommendations about discarding materials from mixed, contaminated or unstratified contexts, as appropriate

Unless otherwise specified, the archives will be stored in designated areas of the AFU Offices until analysis and report writing have been completed. Once full investigation has been completed arrangements will be made for the complete archive to be transferred to a County recognised store.

ACKNOWLEDGEMENTS

The author would like to thank the following people for their specialist contributions to this report: Jeremy Evans (pottery), Stephen Kemp (flint), Carole Fletcher (quern stone and ceramic building materials), Ian Baxter (faunal remains) and Val Fryer (macro-environmental analysis).

Thanks are also due to Rachel Fosbury who sorted the environmental samples and liased with the relevant specialist.

Finally, special thanks go to the staff of the AFU, Tony Baker, David Crawford-White, Graham Clarke, John Clarke, Steve Clarke and Zoe Clarke.

All stages of the project were managed by Stephen Kemp.

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Appendix 1: The Pottery (by Jeremy Evans with contributions by Margaret Ward)

Some 463 sherds of Roman pottery were recovered from the site.

Date

The vast majority of the assemblage consists of Horningsea sherds, which makes it consequently somewhat difficult to date individual contexts, as the dates of Horningsea products are not well known. However, the assemblage as a whole is reasonably datable. Only two contexts, CAMNR02 311 and 337, appear to be of Iron Age date. Amongst the rest the near absence of class E ('Belgic') fabrics suggests an absence of activity in the period up to AD 60/70. The samian list is small, but the absence of any South Gaulish samian is notable, the earliest piece being two Les Martres flakes from CAMNR02 context 347 dated AD 100-125, similarly there is a micaceous greyware poppyhead beaker of early 2nd century date (from contexts CAMNR01 42, CAMNR02 30, 112, 159). A Trajanic start date for the site would seem probable.

The samian list includes four pieces with restricted date ranges within the 2nd century, and all belong to the earlier part of the century, with no piece dated to after cAD 150, ie no Dr31s. The list is too small for this to be very significant, but it does tend to suggest an emphasis on the early-mid 2nd century. A Hadrianic-Antonine Horningsea flange rimmed dish/bowl comes from CAMNR02 context 159 and Antonine-early 3rd century Horningsea BB2 copy dishes/bowls come from CAMNR01 context 42 and CAMNR02 contexts 141 and 147. A Nene Valley colour-coated ware sherd with barbotine decoration comes from CAMNR02 context 89, dated cAD 160-250.

The latest piece from the site would seem to be the Nene Valley whiteware mortarium from CAMNR02 context 136, which must be of 3rd-4th century date, and might not date before the mid 3rd century. This seem to be a late outlier, and it would seem that most of the pottery was deposited in the 2nd century, and probably most of it arrived in the first half of that century, given the very poor representation of Nene Valley colour-coated wares here. It is most unlikely that the site continued in use after the mid 3rd century.

Nature of the assemblage

Table 1 shows the fabric proportions in the assemblage from Newmarket Road. Amphora sherds are absent from the assemblage and BB1 is barely present at 0.2%, the only form represented being a dish, as might be expected in Cambridgeshire. Shell-tempered wares are also barely present at 0.2%. There are a few sherds in a handmade grog-tempered ware, some rilled, which may be pre-conquest class E sherds, although they could be later. Finewares are limited to a couple of sherds of Nene Valley colour-coated ware, which must date to after cAD 160, and a Nene Valley black-slipped sherd, which could be earlier. Even for a rural site the level of Nene Valley wares is very low, and this (as noted above) tends to suggest that much of the pottery was deposited on the site before Nene Valley wares became available.

No early mortaria are present on the site, and the only piece is a lower Nene Valley whiteware mortarium of 3rd-4th century date. Rush (1997) has suggested that on many southern rural sites mortaria are scarce in the early Roman period.
Oxidised wares are also rare, comprising only 3.9% of the assemblage, some might possibly have a Horningsea origin.

A few sherds of Iron Age fabrics are all flint-tempered, but only amount to 0.7% of the assemblage. White slipped oxidised wares amount to 1.3% and represent a few flagon bodysherds.

The vast majority of the assemblage comprises greywares, some 88.5% of the assemblage. Most of these are Horningsea greywares and Horningsea blackware, which together represent 77.5% of the assemblage. Other greywares represent 11% of the group, many of these are probably early 2nd century, representing material which might precede the arrival, or greatest dominance of Horningsea material.

Table 1: Fabric proportions in the assemblage from Newmarket Road, Cambridge

Fabric class	% by count	Fabric class	% by count
Amphora	0	Class O, oxidised	3.9%
BB1	0.2%	Class P, IA	0.7%
Class C, shelly	0.2%	Class Q, oxidised white-slipped	1.3%
Class E, grog tempered	1.3%	Class R - Horningsea	74.9%
NVCC	0.7%	Class R - Horningsea blackware	2.6%
NV black slip	0.2%	Class R - other fabrics	11.0%
Class M, mortaria	0.2%	Class S, CGS	1.7%
		Class W - whitewares	1.1%

Table 2 shows the functional analysis of vessels in Horningsea greyware. This shows that storage jars are quite common, but that the assemblage is very jar dominated, with just 15% of tablewares. Only four vessels are represented amongst the Horningsea blackwares, two jars and two bowls, reflecting the fact that this fabric is used for Horningsea BB copies, which are usually dishes and bowls, as might be expected since they generally follow the BB2 repertoire.

Table 2: Functional analysis of Newmarket Road Horningsea wares

	Storage jars	Jars	Bowls	Dishes	N
Horningsea greyware	15.2%	69.7%	0	15.2%	33 rims

Samian wares are also rare on the site, all are Central Gaulish pieces as noted above. They represent 1.7% of the assemblage. Whitewares are similarly rare at 1.1% of the group.

Table 3 shows a functional analysis of the Roman pottery from the site. As might be expected for a basic level rural site (Evans 1993) the assemblage is massively jar dominated, with 73% jars, and just 22% tablewares (dishes and bowls). Beakers are unsurprisingly poorly represented.

Table 3: Functional analysis of vessels from Newmarket Road, Cambridge (by minimum numbers of rims)

Storage jars	Jars	Beakers	Bowls	Dishes	Mortaria	N
11.1%	62.2%	2.2%	6.7%	15.6%	2.2%	45 rims

Just as the functional analysis suggests this assemblage represents a very basic level rural site, so does the fineware level, a mere 2.6%, a level within the 1-3% range typical for such rural sites which are not close to major late fineware industries.

Potential

The assemblage is small and its potential is very limited and the only worthwhile further work would be for the publication of pieces of chronological significance for the structural sequence.

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Spot Dating Catalogue CAMNR01

Context 36

A Horningsea greyware bodysherds, **2nd-mid 4th century**.
Three Horningsea greyware storage jar rim fragments, **2nd-mid 4th century**.

Context 39

Three Horningsea greyware bodysherds, **2nd-mid 4th century**.
A Horningsea blackware jar rim fragment, **2nd-mid 4th century**.

Context 42

Two CG samian bodysherds, both of form Dr 18/31R, one from the footring and one from the wall/base junction, c **AD 120-60**.
Three Horningsea greyware jar bases, **2nd-mid 4th century**.
A handmade reduced grog and sand tempered sherd, **1st century**?
Three greyware bodysherds, Roman.
A micaceous greyware bodysherd, **later 1st-early 2nd century**.
A handmade reduced shell-tempered sherd.
46 Horningsea greyware bodysherds, **2nd-mid 4th century**.
A Horningsea rilled necked jar with an everted rinsing rim and cordon at the base of the neck.
A Horningsea jar with an everted, rising rim.
A Horningsea dish rim with a triangularly-sectioned, beaded rim, **Antonine(-early 3rd century)**.
Three joining jar rim fragments and a bodysherd in Horningsea blackware.
12 sandy oxidised bodysherds (not Horningsea).
A sandy oxidised bead rimmed bowl rim, perhaps a Dr 31 copy, probably **2nd century**.
A whiteware jar base.
A whiteware bodysherd.
A whiteware jar rimsherd.

Date - **Antonine**

Context 43

A Horningsea greyware jar base, **2nd-mid 4th century**.
Six Horningsea greyware bodysherds, **2nd-mid 4th century**.
Three oxidised sandy bodysherds.
A white-slipped oxidised bodysherd, **1st-2nd century**.

Spot Dating Catalogue CAMNR02

Context 4

Six Horningsea greyware bodysherds, **2nd-mid 4th century.**
A greyware bodysherd, Roman.

Context 12

Four Horningsea greyware bodysherds, **2nd-mid 4th century.**
A Horningsea necked jar rim, beaded and undercut.
A greyware bodysherd, Roman.
A buff bodysherd, Roman.

Context 21

A Horningsea greyware bodysherd, **2nd-mid 4th century.**

Context 27

Two Horningsea greyware bodysherds, 2nd-mid 4th century.
A Horningsea greyware groove rimmed dish (or bowl) with a simple rim, **2nd century?**

Context 28

An indet samian bodysherd, CG, AD 120-200.
Two Horningsea greyware bodysherds, 2nd-mid 4th century.
A greyware bodysherd, Roman.

Context 30

A micaceous greyware bodysherd with barbotine dot lozenge, **later 1st-early 2nd century.**

Context 51

Fourteen Horningsea greyware bodysherds, **2nd-mid 4th century.**
Two Horningsea greyware storage jar bodysherds, 2nd-mid 4th century.
A Horningsea storage jar rim with bifid rim with piecrust decoration on lower cordon.

Context 52

Two Horningsea greyware bodysherds, **2nd-mid 4th century.**
Three Horningsea greyware storage jar bodysherds, 2nd-mid 4th century.

Context 53

Seven Horningsea greyware bodysherds, **2nd-mid 4th century.**
A Horningsea greyware simple rimmed dish rim, 2nd-mid 4th century.
A Horningsea greyware storage jar rimsherd with bifid rim.

Context 54

An oxidised flagon footring base with fine chalk sand, possibly Cherry Hinton, **1st-2nd century**.

Context 68

A Horningsea greyware bodysherds, 2nd-mid 4th century.
A CG samian bodysherd, a slightly burnt fragment from the wall/base junction, Dr 33, **c AD 120-200 but probably before c AD 160.**

Context 69

A Horningsea greyware bodysherd, **2nd-mid 4th century.**

Context 87

A Horningsea greyware bodysherd, **2nd-mid 4th century.**
A Horningsea greyware necked jar rim with beaded, undercut rim, 2nd-mid 4th century.

Context 89

Four Horningsea greyware bodysherds, 2nd-mid 4th century.
A Nene Valley colour-coated ware bodysherd with barbotine decoration, **cAD 160-250.**

Context 91

A Horningsea greyware jar base, **2nd-mid 4th century.**
A handmade grog tempered bodysherd, possibly Teversham.

Context 98

Two Horningsea greyware bodysherds, **2nd-mid 4th century.**

Two Horningsea greyware storage jar bodysherds, 2nd-mid 4th century.
A white-slipped oxidised flagon bodysherd.
A Horningsea greyware dish/bowl base.
A Horningsea jar rim, necked with everted, rising rim.

Context 112

A micaceous greyware bodysherd, **1st-early 2nd century.**

Context 133

Three joining rimsherds and six bodysherds and a base from a carinated necked jar with everted rising rim in Horningsea greyware, **2nd century.**

Context 136

Two Horningsea greyware bodysherds, 2nd-mid 4th century.
A greyware bodysherd, Roman.
Five Horningsea greyware bodysherds, 2nd-mid 4th century.
A Nene Valley whiteware mortarium rim, **3rd-4th century.**

Context 137

A Horningsea greyware bodysherd, **2nd-mid 4th century.**
A white-slipped oxidised bodysherd, perhaps 1st-2nd century.

Context 138

A Horningsea everted, rising rimmed jar rim fragment, **2nd-mid 4th century.**

Context 141

A Horningsea greyware bodysherd, 2nd-mid 4th century.
A Horningsea greyware storage jar bodysherd, 2nd-mid 4th century.
A bodysherd and three rimsherds from a Horningsea Blackware bead rimmed bowl, **Antonine(-early 3rd century**).
A Horningsea jar? rimsherd.

Context 143

Three Horningsea greyware bodysherds, **2nd-mid 4th century.**
A Horningsea blackware bodysherd, 2nd-mid 4th century.

Context 144

A Nene Valley black slipped bodysherd, **2nd century.**
Nine Horningsea greyware bodysherds, 2nd-mid 4th century.
Two joining Horningsea greyware large necked jar rimsherds with everted, rising, squared rim and cordon at the base of the neck, 2nd-mid 4th century.

Context 147

Three Horningsea greyware bodysherds, 2nd-mid 4th century.
A Horningsea blackware bodysherd, 2nd-mid 4th century.
A Horningsea blackware triangularly-sectioned dish/bowl rim, **Antonine-early 3rd century.**
A BB1 simple rimmed dish rim with intersecting arcs on exterior, **cAD 180+**

Context 148

A Horningsea jar base

Context 155

Three Horningsea greyware bodysherds, **2nd-mid 4th century**.
Two greyware bodysherds, Roman.
A greyware dish/bowl base, Roman.
A Horningsea necked jar rim fragment.

Context 159

A Horningsea greyware bodysherd, 2nd-mid 4th century.
A Horningsea blackware flange rimmed bowl rim, **Hadrianic-Antonine.**
A micaceous greyware shoulder sherd and a poppyhead beaker rimsherd, **later 1st-early 2nd century.**

Context 172

Eight Horningsea greyware bodysherds, **2nd-mid 4th century**.

Context 174

Three Horningsea greyware bodysherds, **2nd-mid 4th century**.

Context 176

Three Horningsea greyware bodysherds, **2nd-mid 4th century**.
Three greyware bodysherds, Roman.

Context 179

A handmade, reduced grog tempered bodysherd, **1st century?**

Context 191

Fifteen Horningsea greyware bodysherds (four rilled), **2nd-mid 4th century**.
A Horningsea necked jar rim with everted, rising, slightly beaded rim and cordon at the base of the neck.
A Horningsea necked jar rim, beaded.
A Horningsea everted rising rimmed jar rim.
A clay plate edge/tile.

Context 200

Two Horningsea greyware storage jar rims, everted, rising plain, **2nd century?**
Nine Horningsea greyware bodysherds, 2nd-mid 4th century.
A Horningsea blackware everted, rising, necked jar rim, 2nd-mid 4th century.
A Horningsea greyware jar rim fragment.

Context 201

Two Horningsea greyware bodysherds, **2nd-mid 4th century.**

Context 202

39 Horningsea greyware bodysherds, **2nd-mid 4th century.**
Two Horningsea blackware bodysherds, 2nd-mid 4th century.
An oxidised bodysherd, Roman.
Two joining white-slipped oxidised ware, sandy, jar rims, of triangular, undercut form, similar vessel at Little Paxton, possibly Horningsea?

Context 207

A Horningsea greyware bodysherd, **2nd-mid 4th century.**
A Horningsea greyware everted, rising rimmed necked jar rim, 2nd-mid 4th century.

Context 212

Six Horningsea greyware bodysherds, **2nd-mid 4th century.**

Context 213

Two Horningsea greyware bodysherds, **2nd-mid 4th century.**

Context 218

A Horningsea necked jar rimsherd with everted rising rim, **2nd-mid 4th century.**

Context 225

A Horningsea greyware bodysherd, **2nd-mid 4th century**.

Context 230

Two Horningsea greyware bodysherds, **2nd-mid 4th century**.

Context 245

A CG samian Dr 18/31R or 31R bodysherd, a basal piece which is splintering, **cAD 120-200 probably cAD 120-60 or 80 at latest.**
Eleven Horningsea greyware bodysherds, 2nd-mid 4th century.
A Horningsea greyware jar base, 2nd-mid 4th century.
Three Horningsea greyware storage jar bodysherds, 2nd-mid 4th century.
A Horningsea greyware simple rimmed dish rim, 2nd-mid 4th century.
A Horningsea greyware necked jar rimsherd with everted, slightly rising rim.
A Horningsea greyware jar rim with everted rising rim.
A Horningsea greyware jar rim fragment.
A Horningsea blackware dish/bowl bodysherd with acute lattice decoration, Hadrianic-Antonine.

Context 246

A Horningsea greyware jar base, **2nd-mid 4th century**.

Context 249

A Horningsea greyware storage jar bodysherd, **2nd-mid 4th century.**
Five Horningsea greyware bodysherds, 2nd-mid 4th century.
A Horningsea jar rim, slipped, a carinated necked form with everted rising rim.

Context 252

A Horningsea beaded storage jar rimsherd, rim beaded and slightly undercut, **2nd-mid 4th century.**

Context 260

A Horningsea greyware bodysherds, **2nd-mid 4th century**.
A Horningsea greyware necked jar rim with beaded slightly rising rim, **2nd-mid 4th century.**

Context 280

A whiteware? jar base, **1st-2nd century.**
A greyware bodysherd, Roman.

Context 288

A CG samian Dr 18/31 or 18/31R rim fragment, cAD 120-60.
An oxidised white-slipped bodysherd.
Two NVCC bodysherds, **AD 160+**
10 greyware bodysherds, Roman
A greyware jar base, Roman.
A greyware simple rimmed dish rim, Roman.

Two Horningsea greyware storage jar bodysherds, 2nd-mid 4th century.
Eighteen Horningsea greyware bodysherds (3 rilled), 2nd-mid 4th century.
A Horningsea greyware jar base.

Context 291

A greyware bodysherd, vertically combed, Roman.
A Horningsea greyware necked, rilled jar with everted, slightly rising rim, **2nd century?**

Context 294

A Horningsea greyware bodysherd, **2nd-mid 4th century.**
A rilled, handmade, grog-tempered bodysherd, **1st century**?

Context 295

A greyware jar rim fragment and 14 bodysherds from a jar with a sharply carinated/cordoned shoulder, probably **1st-2nd century**.
A Horningsea greyware bodysherd, **2nd-mid 4th century**.

Context 296

A Horningsea greyware bodysherd, **2nd-mid 4th century**.

Context 307

A greyware bodysherd, **Roman.**

Context 309

A Horningsea storage jar bodysherd, **2nd-mid 4th century**.
Two Horningsea greyware bodysherds, **2nd-mid 4th century**.

Context 311

Two bodysherds in a handmade reduced flint-tempered fabric, **mid-later Iron Age**.

Context 315

Five daub fragments.
Two Horningsea greyware bodysherds, **2nd-mid 4th century.**

Context 316

A greyware jar base, Roman.
A Horningsea greyware bodysherd, **2nd-mid 4th century.**

Context 317

A Horningsea storage jar bodysherd, **2nd-mid 4th century.**
Two Horningsea greyware jar base sherds, **2nd-mid 4th century**.
Eleven Horningsea greyware bodysherds, **2nd-mid 4th century**.
A Horningsea greyware everted rising rimmed jar rim.

Context 318

A Horningsea greyware storage jar bodysherd, **2nd-mid 4th century.**

Context 323

Three Horningsea greyware bodysherds, **2nd-mid 4th century**.

Context 326

Three Horningsea greyware bodysherds, **2nd-mid 4th century**.
A greyware bodysherd, Roman.

Context 332

A Horningsea greyware bodysherd, **2nd-mid 4th century**.

Context 337

Three handmade oxidised grog-tempered bodysherds.
A handmade reduced flint-tempered bodysherd.
A fired clay fragment, oxidised, grog-tempered, perhaps a 'chapati disc'.
Mid-later Iron Age (pre-conquest).

Context 347

Two Les Martres samian flakes, form indet., **cAD 100-125.**

Context 351

A greyware bodysherd, **Roman.**

Context 353

Two Horningsea greyware bodysherds, **2nd-mid 4th century.**
A Horningsea greyware everted rising rimmed large jar, 2nd-mid 4th century.

Unstratified

One oxidised **modern** bodysherd.
A Horningsea greyware bodysherd.

*Appendix 2: Report on the Flint from Newmarket Road, Cambridge by Stephen Kemp ****

No flint or lithic artefacts were recovered during the evaluation on 2001.

No flint or lithic artefacts were recovered during the evaluation on 2001.

The assemblage collected during the course of these excavations amounted to 6 flint artefacts, several small quern fragments, 1 sandstone floor tile and 1fossiliferous limestone honing (?) stone.

Flint

Apart form one flint tool found unstratified, all the flint artefacts were residual, being found in Roman contexts (pits and one ditch) and in Iron Age features (pits).

The flint artefacts consisted of two tools a serrated and heavily reworked flint flake and a rough thumbnail scraper probably of late Neolithic or Bronze Age date. Four other flint flakes were also recovered.

All of the flint used in the knapping was from river gravel flints with some pieces showing as much as 80% cortex. Except for the serrated flake all of the chips and flakes are under 40mm maximum length. Technological aspects include evidence for hard hammer flaking, plunging blades, and notches on the serrated flake. There is no obvious traces of polish or use wear on any of the artefacts and given that the serrated flake one of only two positively identified tools was found in an unstratified position this is not unsurprising.

Due to the small size of the assemblage (only six pieces, only two of which could be described as formal tools) and given the presence of a late Neolithic or Bronze Age scraper associated with Iron Age pottery which may suggest the high probability of either curation of artefacts or a mixing of lithic assemblages, it is recommended that no further analysis of this excavated assemblage is necessary.

Quern (see *Appendix 3*)

Several small fragments of rotary querns were recovered during the excavation:

- 1 fragment of flat quern made from old red sandstone (see *Appendix 3*)
- 1 fragment of beehive type made from pudding stone (see *Appendix 3*)
- 4 small fragments of millstone grit
- Very small fragments of lava quern

No residues were associated with the quern stones, one of which was found in a ditch the other in a pit. No detailed analysis of the quern stones is proposed other than to refine the typology and provenance of these artefacts.

Appendix 3: Querns/Millstones, by Carole Fletcher, HND, BA
(Geological identifications by Stephen Kemp)

Context 141 (pit fill) produced approximately half of an upper stone from a (East Anglian Type) Hertfordshire Puddingstone (Beehive) quern. The Quern is badly broken around the edges and surface, and has also lost some of the pebbles from the conglomerate. Little of the rim survives so the diameter is an approximation at 280mm. The grinding surface survives and shows some traces of polishing towards the edge and is worn unevenly, being slightly concave on one side. Remains of a tapered, circular, downward angled handle hole survives on the side of the quern. The hole penetrates through to the grinding surface; this is due to the grinding face having been worn away through use.

Weight 3200grams, surviving height 94mm. Diameter of eye at grinding surface 30mm, diameter of eye at upper edge approx 70mm though it is somewhat u-shaped.

Context 257 (ditch fill) produced a fragment of a coarse Old Red Sandstone quern/millstone. This is a large quern or a small millstone. It appears to be a fragment of an upper stone, the outer edges of which are broken so no part of the rim survives. The Upper surface of the stone is in poor condition and it is unclear if the surface is pecked. Part of the grinding surface survives but it is somewhat irregular with the area closest to the eye being more convex that the rest of the surface. The flatter surface area retains traces of annular grooves. The arc of these suggests that the diameter was large. The distance between the eye and the broken edges of the fragment is 220mm suggesting a diameter in excess of 440mm. The diameter of the eye at the upper surface is approximately 60mm but as the hole slopes towards the grinding surface the portion of the edge surviving diminishes and here the diameter is unclear.

The fragment weighs 3763 grams; thickness varies between 74mm at the eye and 63mm at the edge, length 220mm.

The quern/millstone fragment may have been reworked for use as building material as the edges appear to have been roughly dressed to produce a more rectangular shaped stone.

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Appendix 4: Report on the Mammal Bones from Newmarket Road, Cambridge by Ian L. Baxter BA MIFA

Introduction

A total of 20 "countable" (see below) animal bone fragments were hand-collected from Romano-British contexts at the site (Table 1). This is a tiny assemblage and any conclusions to be drawn regarding husbandry regimes will be very tentative. The condition of the bones is fair, with the surface affected by alkalinity in the soil.

Methods

All of the animal bones from Newmarket Road were hand-collected. Consequently an under-representation of bones from the smaller species is to be expected.

The mammal bones were recorded following a modified version of the method described in Davis (1992) and Alberalla 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: horncores with a complete transverse section, skull (zygomaticus), atlas, axis, scapula (glenoid articulation), distal humerus, distal radius, proximal ulna, 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.

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.

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. Tooth wear stages follow Grant (1982).

The only measurements taken were on an equid metatarsal using the methods of Eisenmann (1986) and a cattle metatarsal (GL only). These are retained on the Access database.

Discussion

The assemblage is typical to larger Romano-British assemblages from other sites in Cambridgeshire. (King 1978). However, cattle are generally the dominant taxon on Romano-British sites in Cambridgeshire, where ranching was practised from the Iron Age until the end of the Roman period (Baxter 2000 and Forthcoming). Such sites are also typified by a relatively high frequency of horse remains and Newmarket Road is no exception in this respect. Sheep/goat and pig are also present within the assemblage but at very low frequency (Table 1). The available cattle teeth derive from mature beasts, suggesting that they were slaughtered for human consumption when fully adult. A metatarsal from (19) came from a beast 117 cm high at the shoulder based on the multiplication factors of Matolcsi (1970).

Two specimens are worthy of further consideration: an equid third metatarsal with associated first phalanx from ditch (12) and a pig mandible from pit (140).

The equid bones are very gracile and the metatarsal has been compared with a range of equid species in Figure 1. The graph demonstrates the caballine affinities of this animal, particularly with regard to measurements 12 and 13. In the metatarsal the principal differences between species are in the proportions of the distal end: the least depth of the medial condyle (measure 13) is relatively smaller than the depth of the sagittal ridge (measure 12) in horses than it is in asses (Eisenmann and Beckouche 1986, 126). This animal was a small pony with a withers height of approximately 119-cm or 12 hands based on the multiplication factors of Kiesewalter (1888). All the other equid bones recovered from the site are also attributable to horses or ponies (*Equus caballus*).

The anterior pig mandible from (140) belonged to a large male on the basis of the canine alveolus. It is significantly larger than that of a modern adult female in the collection of the author and it is not

impossible, but unfortunately not demonstrable, that this animal was a wild boar (*Sus scrofa*). Modern domestic pigs typically grow to much greater adult size than those from earlier periods.

Summary and conclusion

The animal bone assemblage from Newmarket Road, although very small, is typical in its composition to larger Romano-British assemblages from other sites in Cambridgeshire and is dominated by the remains of cattle and horses with sheep/goat and pig present at much lower frequency.

Table 1: Number of hand-collected mammal bones (NISP).

Taxon	**Period/Total**
	Romano-British
Cattle (*Bos* f. domestic)	13
Sheep/Goat (*Ovis/Capra* f. domestic)	1
Pig (*Sus* f. domestic)	1
Equid (*Equus* sp.)	5
Total	**20**

Fig. 1a: Ratio diagrams of mean values for equid metatarsals (based on Eisenmann and Beckouche 1986)

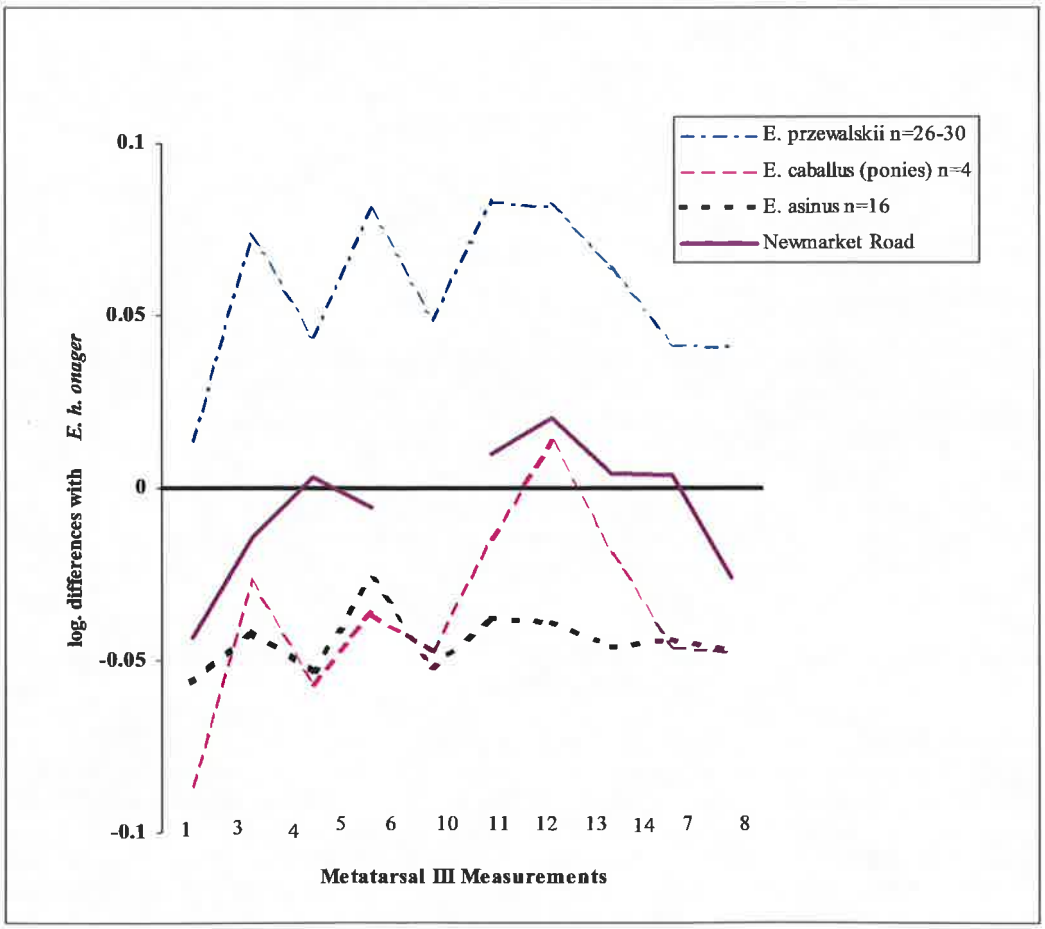

Fig. 1b: Equid third metatarsal measurements: log difference with *E. hemionus*

E. przewalskii n=26-30		*E. caballus* n=4		*E. asinus* n=16		*Newmarket Rd*	
1	0.014	1	-0.086	1	-0.056	1	-0.04333
3	0.073	3	-0.027	3	-0.042	3	-0.01407
4	0.044	4	-0.057	4	-0.053	4	0.00342
5	0.081	5	-0.036	5	-0.027	5	-0.0054
6	0.049	6	-0.047	6	-0.053	6	
10	0.083	10	-0.015	10	-0.038	10	0.010113
11	0.082	11	0.013	11	-0.039	11	0.02048
12	0.064	12	-0.019	12	-0.046	12	0.004307
13	0.042	13	-0.046	13	-0.044	13	0.00365
14	0.041	14	-0.047	14	-0.047	14	-0.0256
7	0.068	7	-0.033	7	-0.027	7	0.004799
8	0.161	8	0.043	8	0.038	8	0.042752

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Appendix 5 Charred Plant Macrofossils and other Remains from Newmarket Road, Cambridge, by Val Fryer

Introduction

Excavations at Newmarket Road, Cambridge were undertaken by the Cambridgeshire County Council Archaeological Field Unit. Features of Late Iron Age/Roman date were recorded including pits, ditches and two small kilns or ovens, the latter being constructed at the base of a boundary ditch. All contexts appeared to be peripheral to any central focus of settlement activity.

Samples for the extraction of the plant macrofossil assemblages were taken from across the excavated area and eight were submitted for assessment.

Methods

The samples (or sub-samples thereof) were processed by a member of the Archaeological Field Unit team, collecting the flots 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 Table 1. Nomenclature within the table follows Stace (1997). All plant remains were preserved by charring. Modern contaminants including fibrous and woody roots, seeds/fruits and arthropods were present in all samples.

Results of Assessment

Plant Macrofossils

Cereal grains/chaff and seeds of common weed species were present at varying densities in all samples. Preservation was variable; a moderate density of the grains and some seeds had become puffed and distorted during charring, and some chaff elements were very fragmented.

Cereals

Oat (*Avena* sp.), barley (*Hordeum* sp.) and wheat (*Triticum* sp.) grains were recovered with wheat being predominant. 'Drop-form' grains typical of spelt wheat (*T. spelta*) were common and spelt chaff was abundant. Whole spelt spikelets were recorded from sample 8. A single emmer (*T. dicoccum*) glume base was noted in sample 1. Barley, including asymmetrical lateral grains of six-row barley (*H. vulgare*) was particularly common in sample 8.

Wild flora

Seeds/fruits of common weed species were present or common throughout. Segetal taxa were predominant and included stinking mayweed (*Anthemis cotula*), black bindweed (*Fallopia convolvulus*), goosegrass (*Galium aparine*), indeterminate grasses (Poaceae), dock (*Rumex* sp.) and vetch/vetchling (*Vicia/Lathyrus* sp.).

Other plant macrofossils

Although charcoal fragments were present or common throughout, other plant macrofossils were rare. However, pieces of charred root, rhizome or stem and indeterminate culm nodes, inflorescence fragments and seeds were recorded.

Other materials

Fragments of black porous 'cokey' material or black tarry material were present or common in all but sample 9. All are probably derived from the combustion of organic materials (including cereal grains) at extremely high temperatures. Other materials included burnt bone and eggshell fragments and small pieces of coal. The latter may be intrusive within the contexts.

Discussion

In the following section, the samples have been sub-divided by context type.

Kiln fills

Samples 1, 2, 7 and 8 were taken from the burnt fills of the kilns/ovens. The assemblage from sample 1 contains a moderate density of chaff and weeds seeds, but few cereal grains, and it would appear most likely that this material is derived from fuel waste. Spelt chaff was widely used during the Roman period as a fuel for a variety of light industrial processes including cereal drying/malting and pottery production. Samples 2 and 7 are also possibly derived from fuel waste, although the density of material present is very low and may be indicative of wind-blown detritus.

The assemblage from sample 8 is almost certainly derived from a mixture of malting waste and fuel debris, and may indicate that the 'kiln' from which it was taken functioned as a malting oven. Detached cereal sprouts and sprouted grains of both barley and wheat are present along with large quantities of cereal chaff. Barley and wheat grains are present in approximately equal proportions which is unusual, as the Romans considered barley to be an inferior grain, suitable only for animal fodder. In many contemporary granary/malting deposits (for example Beck Row, Mildenhall, Suffolk (Fryer, in prep. a) wheat is predominant with barley being present as an accidental contaminant. However, a recent site from the centre of St. Albans, Hertfordshire (Fryer, in prep. b) produced a barley predominant deposit, probably associated with brewing.

Pit fills

Samples 4 and 10 were taken from pit fills. Although cereal grains (predominantly wheat) are common in sample 4, chaff elements and especially weed seeds are also present at a moderate density, possibly indicating that the material is derived from burnt processing/storage waste. Sample 10 contains an extremely low density of material which may, as with samples 2 and 7 above, be derived from wind-blown refuse.

Other feature

Sample 5 was taken from the terminus of a ring ditch and sample 9 was taken from an unspecified feature fill. Although both assemblages are similar in composition (containing charred cereals, chaff and weed seeds) it is not known whether the material is related to primary use of processing waste as fuel or secondary (accidental) deposition of charred refuse.

Conclusions and recommendations for further work

In summary, although the samples were taken from features peripheral to any settlement, the assemblages gathered are significant for the interpretation of contemporary agricultural production and associated activities. Cereals, which were probably locally produced, were processed on or near the site before being malted and dried in specifically built ovens. Waste products from the processing may have been used as fuel for the later processes.

Discussions with the excavator have indicated that other malting residues have been found in previous excavations in the immediate area. As further work on the current assemblages from samples 4 and 8 would add significantly to this and other existing data about local and regional agricultural activities, full quantitative analysis of this material is recommended. Sample 8 is especially important, as it represents further evidence for the little known practise of malting barley during the Roman period.

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