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Archaeological Field Unit

**Prehistoric landscape at Stowe Farm, West Deeping, Lincolnshire.
Phase 3 ~~3~~ 2**

S.N. Kemp

1999

Cambridgeshire County Council

Report No. N008

Commissioned by Lafarge Redlands Aggregates Ltd.

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Archaeology Section

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Prehistoric landscape at Stowe Farm, West Deeping, Lincolnshire.
Phase 3a

Stephen Kemp BA MSc AIFA

1999

Editor: William Wall BA
Illustrator: Jon Cane BA

With Contributions by James Rackham



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©Archaeological Field Unit
Cambridgeshire County Council
Fulbourn Community Centre
Haggis Gap, Fulbourn
Cambridgeshire CB1 5HD
Tel (01223) 881614
Fax (01223) 880946

Arch.Field.Unit@libraries.camcnty.gov.uk
<http://www.camcnty.gov.uk/library/afu/index.htm>

SUMMARY

Archaeological excavations at the aggregate quarry of Stowe Farm, West Deeping, Lincolnshire in September 1998 were undertaken by the Archaeological Field Unit of Cambridgeshire County Council (CCC AFU) on behalf of Lafarge Redland Aggregates Ltd.

The site is located at TF 100111 and consists of a 17.5 ha extraction area where the gravel is systematically excavated and the land restored to agricultural use. This document reports on the excavations undertaken in advance of phase 3A extraction and follows archaeological investigations which began in 1994. Phase 3A (TF 0997/1097) was located to the west of phase 1 and south of phase 2B and consists of an area of 0.78 ha.

The Archaeological Field Unit was commissioned to undertake an enhanced recording brief within the area of phase 3A. This work consisted of a pre-excitation site survey on the basis of which groups of archaeological features were prioritised for excavation. Four groups of features were identified and included a post-built structure with adjacent pits, the southernmost termination of the Celtic enclosures originally identified in phase 1, and a complex ditch arrangement which forms part of the prehistoric boundary feature which extends north-southwards through the whole extraction area.

The results of excavations undertaken within the extraction area since 1994 seem to suggest a generally open Neolithic and Bronze Age landscape with a major north-south landscape division and a scatter of buildings related to agricultural activity. If Pryor's model for livestock management for the area is appropriate to this site the major landscape boundary may have divided the landscape for agricultural purposes and possibly directed livestock access through to 'community stockyards' of the type identified within Fengate, Peterborough. Although at present the post-structures which are undated have been interpreted as circular and, possibly, rectangular huts they are also believed to date to this period and suggest dispersed activity areas where the small quantities of charred grain and animal bone indicate very low intensity agricultural production was undertaken. These activity areas seem to have continued as landscape focus points into the early Iron Age. A number of ritual sites including ring ditches have also been identified which indicates that some of the major components of the Bronze Age landscape are identifiable within the extraction area.

During the Iron Age the landscape shows greater structure and organisation with pit- and post-defined enclosures developing into the major enclosed fields with associated huts which were identified in the phase 1 excavation area. By the later Iron Age and early Roman period these prehistoric ditch systems appear to have become obsolete and Roman trackways and boundary ditches cut across the earlier fields. Sometime between the late Roman and early medieval periods narrow ditches were excavated on an alignment which was to be continued within the medieval field system. This landscape structure continued until enclosure when although the field layout changed the domination of arable cultivation continued until quarrying began.

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Archaeological Excavations within the Prehistoric Landscapes of Stowe Farm, West Deeping, Lincolnshire. TF100111. Phase 3A.

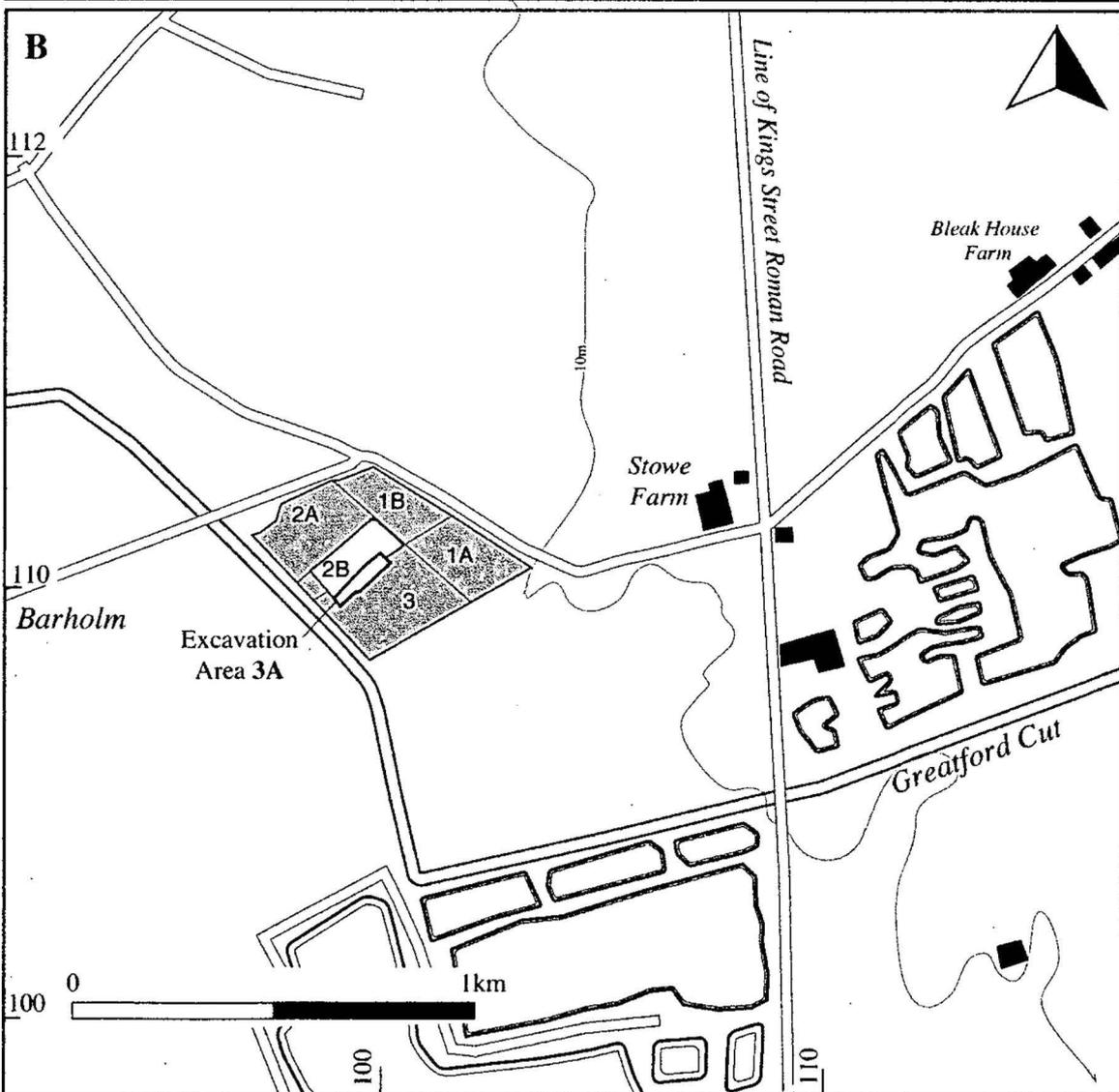
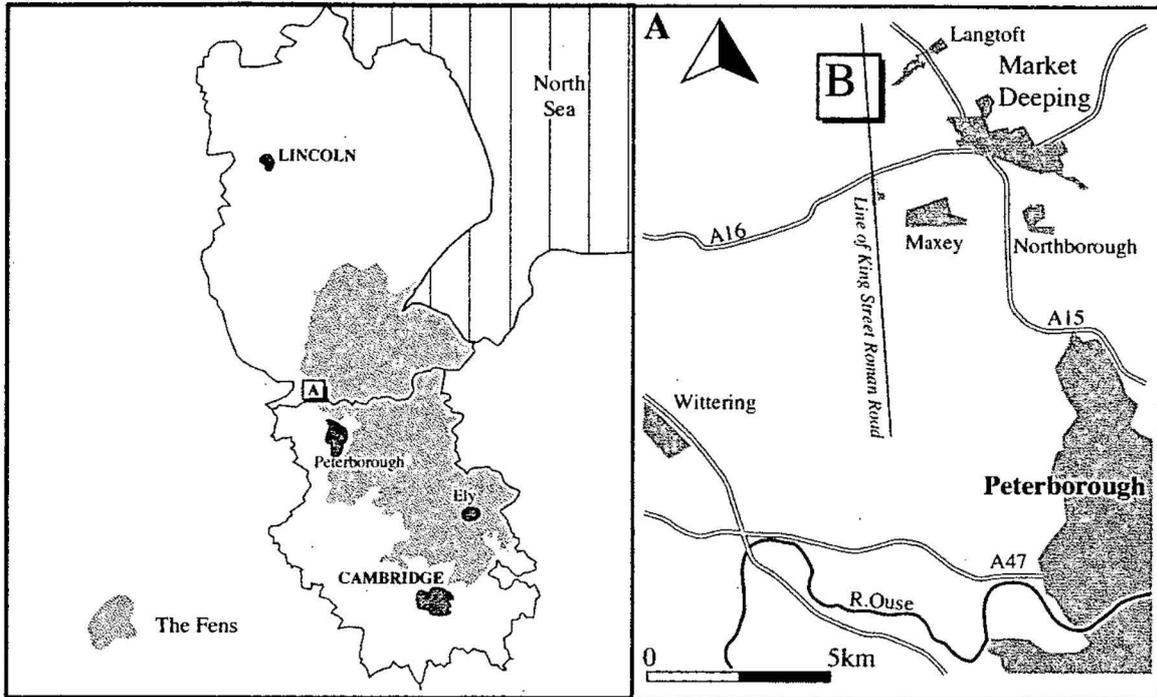
1 INTRODUCTION

Archaeological excavations at the Lafarge Redland Aggregates quarry of Stowe Farm, West Deeping, Lincolnshire were undertaken by the Archaeological Field Unit of Cambridgeshire County Council (CCC AFU) in 1998. Excavations were commissioned by Lafarge Redland Aggregates Limited and were carried out according to a specification drawn up by their archaeological consultant Dr C.E. Howlett of Phoenix Consulting (Howlett 1995). The work was monitored by J. Bonner on behalf of Lincolnshire County Council.

The site lies to the north-west of the existing Redland Aggregates West Deeping quarry and offices, to the south and west of the Barholm and Greatford Roads and immediately to the west of the Greatford Cut. To the east of the site lies King Street, a former Roman Road. The site consists of a 17.5 ha extension to the existing quarry (Figure 1). Four phases of gravel extraction have taken place across this area since 1995 with archaeological work preceding each phase.

Prior to 1997 archaeological work at Stowe Farm, which included a desk-top assessment, non-intrusive survey, field evaluation and excavation, was undertaken by Tempus Reparatum. In 1995 Tempus Reparatum undertook excavations in advance of phases 1A and 1B extraction, this was followed in 1996 by excavations in advance of phase 2A extraction. In 1997 the CCC AFU was commissioned to undertake an enhanced recording brief within phase 2B.

This document reports on the excavations undertaken by the CCC AFU in 1998 in advance of phase 3A extraction. Phase 3A (TF 0997/1097) was located to the west of phase 1 and south of phase 2B and consisted of an area of 0.78 ha (Figure 1). This phase of work entailed the excavation of selected archaeological features and environmental sampling which would continue the recovery of the prehistoric archaeology at Stowe Farm and enhance the results of the work undertaken by Tempus Reparatum. The main aim was to recover the plan-form of the archaeological remains within the extraction area, with sample excavation taking place only in special circumstances, which were outlined in an amendment to the original specification drawn up by Dr Howlett (Howlett 1998).



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Figure 1 Site location

2 GEOLOGY AND TOPOGRAPHY

The site lies to the north of the Welland River and immediately to the west of the Greatford Cut. The surrounding area lies at about 10m OD. Within the excavation area lie terrace gravels which are in the process of extraction. The topsoil is used to reinstate previous extraction areas as low level arable farmland.

Prior to the extraction the land-use for this area was arable whilst pasture lies on the eastern side of the Greatford Cut.

3 ARCHAEOLOGICAL AND HISTORICAL BACKGROUND

Archaeological investigations into the development of the local landscape at Stowe Farm began in 1989 with a review of the archaeological potential of the proposed quarry. Since then non-intrusive and intrusive methods of investigation have been used to evaluate the area. In 1995 the first phase of excavations were undertaken and followed, in 1996, with phase 2A and then phase 2B in 1997.

The terrace gravels of the Lower Welland valley are rich in archaeological remains and particularly of those dating to the prehistoric period as shown by excavations at Bainton, Barnack and Maxey (Pryor et al 1985, Reynolds 1992).

Sites of prehistoric date known to surround the extraction area include ring-ditches and barrows which are visible as cropmarks. One of these ring ditches lay within the extraction area and was excavated by Tempus Reparatum. Iron Age and Roman remains include an agricultural settlement at Greatford (Scheduled Ancient Monument 327), and SAM 160 a Roman settlement which lies about 300m to the north-west of the extraction area. Cropmarks extend throughout the parishes of Barholm and Greatford indicating the archaeological importance of this area and its wider importance as part of the prehistoric and historic landscapes of the Welland valley (RCHM 1960).

Surveys specific to the extraction area include an aerial photographic assessment which identified the presence of two ring ditches, several large pits and a number of ditches within the site. Fieldwalking failed to locate any dense artefact scatters with only 1 artefact occurring every 9 ha; this evidence was used to suggest the absence of prehistoric settlement and therefore the format of future archaeological work (Howlett 1994). The geophysical survey proved to be inconclusive due to the low magnetic variability. The cartographic survey was used to indicate that the area has been under continuous plough during the historic period (Howlett 1994). Further investigations by Tempus Reparatum suggested a period of tree cover during the Anglo-Saxon period which the excavator related to a great forest which lay between Peterborough and Stamford (Kiberd 1996a; 32).

Trial trenching was undertaken to verify the results of the non-intrusive survey techniques. A complex of prehistoric ditches and pits were identified. The evaluation highlighted the potential of the area and subsequently Tempus Reparatum designed a mitigation strategy to recover the archaeology. A complex multi-period site emerged from the 1995 excavations (Kiberd 1996a). The archaeology consisted of features which have been interpreted as houses, agricultural structures, animal pens and pits of Bronze Age and/or Iron Age date.

The evidence for intense prehistoric occupation continued into phase 2A with an increase in the number of pits and structural elements as opposed to boundary features seen in the phase 1 area. There was also an increase in animal bone and pottery which may be associated with domestic activities. Whilst pits and post-holes were present throughout the excavation areas Tempus Reparatum suggested that the apparent increase in structural elements to the north-east of the site indicated that the main settlement lay in this position; however, the report also suggests that the settlement evidence was concentrated in the west and the field systems lay in the east (Kiberd 1996, 21). Larger pits were found to contain waterlogged remains and have been interpreted as wells. They were dated to between 1600 and 1200 BC by radiocarbon dating of wood retrieved during the excavation (Kiberd 1996b).

Phase 2B which was investigated in 1997 was the first stage of work undertaken by the Archaeological Field Unit of Cambridgeshire County Council. Although this phase of works identified a continuation of the archaeology encountered in previous excavations the quantity and intensity of remains was much reduced. The excavations recognised the remnants of a Bronze Age agricultural system which included three discrete post structures. The presence of a number of other post-holes within the 2B area makes it possible that other structures existed in a less intact state within the area and were therefore not so readily defined and investigated. The north-south boundary was initiated in the late Neolithic or early Bronze Age based on the Tempus Reparatum chronology. The 1997 excavations showed that the north-south boundary ditch identified as of late Neolithic or early Bronze Age date by Tempus Reparatum was finally infilled during the late Iron Age or early Roman period. Stratigraphic evidence from this phase of works suggests that the ditch in its final form was unlikely to predate the late Bronze. A large number of undated features were identified and as no period has yet been characterised by a particular type of feature or fill they can at the present only be thought of as components of a more general prehistoric landscape.

4 PREDICTED ARCHAEOLOGICAL REMAINS

A number of features or landscape units identified as lying adjacent to phase 3A were likely to appear in this phase of work. Unfortunately a number of immediate problems existed which hindered the analysis of features lying on the fringe of phase 3A:

As discussed in the report on phase 2B (Kemp 1997), it has proved difficult to integrate accurately the various surveys undertaken during different phases of work by the different archaeological contractors. Figure 2 therefore only shows the integrated surveys undertaken by the CCC AFU and it is expected that feature matching over the whole site will only occur as part of the final post-excavation analysis and on the completion of all levels of archaeological fieldwork.

Because of the absence of integrated site surveys and the targeted nature of the archaeological investigations it remains possible that some landscape groups may not have been sample excavated, in particular the discrete pits which are ubiquitous to the site. Prior to undertaking any excavations it was necessary to rapidly assess the types of features excavated in former years and how these features would impact on future work in order to prioritise excavations within the extraction zone. An outline of the types of features excavated in previous years and expected to extend into the phase 3A area has been outlined below.

Evaluation Trenches

At the evaluation stage Trench 8 cut across part of the phase 3A excavation area. This trench exposed an area covered by ditch and pit activity (Hatton 1994). Owing to the problems of integrating our surveys with those of the previous contractor, this earlier work is not shown on Figure 2.

Excavation

Phase 1 features

A Medieval northwest-southeast orientated furrow (H195) divided the phase 1 excavations from phase 2B. To the north of the furrow lay a complex of farmsteads (A183, E178, E156) marked by round houses and outhouses. E156 was bounded to the south by a trackway, whilst A183 was bounded by ditch Y217 (marked as Y213 in phase 1B Figure 5). Unspecified agricultural workings have been identified (A158 and A173). Ditch Y163 was part of the Celtic field system or trackway and lay beneath the medieval headland which ran northeast-southwest into phase 2B and 3A.

Any features in the northern part of the phase 3A excavation area would be expected to be part of landscape element U010 as defined in the phase 1A and 1B excavation reports. This is defined as an area of a house /farmstead with the presence of water pits which are seen as late early Bronze Age or early middle Bronze Age (Kiberd 1996 A).

Phase 2B features

Features likely to occur in the 1998 excavations which were identified in 1997 include the parallel north-south boundary ditches (G3, G4, G5 and G6) which were found to contain a late Iron Age/early Roman Loom weight, and G11 the east-west ditch with associated post alignment which is presumed to be of historic date due to its alignment, which corresponds to the medieval ridge and furrow. No areas of complex pitting were identified as extending into the area.

5 AIMS AND OBJECTIVES

The CCC AFU was commissioned to undertake an enhanced recording programme within the phase 3A extraction area. phase 3A is a sub area of phase 3 as defined in the original brief. The area to be stripped and recorded was defined by Lafarge Redland based on their proposed extraction requirements for the next year.

Both the 1997 works (phase 2B) and the present project were carried out in accordance with a specification drawn up by Dr Chris Howlett of Tempus Reparatum (Howlett 1995). For the work carried out in 1998, however, this specification was amended, following discussions between Dr Howlett and the Lincolnshire County Council curatorial authority. In 1998, the work was to be primarily a surveying and watching-brief exercise, designed to recover the plan-form of the archaeological remains within the extraction area, with sample excavation taking place only in special circumstances. This was to be undertaken on the following types of remains:

1. Features similar to those sample excavated in previous seasons, which, when exposed by soil stripping, demonstrate clear evidence that they might, if sample excavated, make a significant contribution to interpretation of the economy and use of the site.
2. Features that may be related to the possible settlement identified in phase 1A and the subsoil dumping area.
3. Potential ceremonial or funerary remains.

4. Other features that appear untypical of the archaeological remains found generally across the Stowe Farm extension area.

These amendments took account of the fact that by 1998, a considerable proportion of the extraction area had already been stripped, planned and excavated, and several examples of every type of archaeological feature occurring in the area had been sampled excavated. The changes were embodied in an amendment to the original specification drawn up by Dr Howlett and agreed with the Lincolnshire County Council curatorial authority (Howlett 1998)

The overall aim of the project has been to reconstruct the components of the prehistoric and historic landscapes surviving within the extraction area. The ultimate aim is that the recorded landscape components will be integrated with settlement evidence, field systems and ceremonial monuments and built into the broader landscape models of the Welland Valley. However, the intention has been that this landscape research would only progress once the excavation phase has been completed. The aim of this report is therefore to describe the archaeology and provide a provisional interpretation of the remains recovered during the phase 3A excavations.

6 METHODOLOGY

Overburden which consisted of topsoil and subsoil were removed to a level where the archaeology was clearly visible. In all cases this proved to be at the junction between the topsoil/subsoil and the terrace gravels. Machining was undertaken with a 360° tracked excavator equipped with a toothless ditching bucket which was supplied by Lafarge Redland Aggregates. Spoil was removed from the excavation area using a pair of six wheel 20 tonne dumper trucks.

The area available for analysis during phase 3A was 0.78 ha .

All stripping of the overburden was supervised in order to maintain a suitable depth of machining, whilst also monitoring for the presence of fragile archaeological remains.

Hand excavation of features was undertaken within the excavation area. Segments between 1m and 2m in length were hand dug through ditches, whilst pits and post-holes were half sectioned. A sample of exposed features were excavated in order to characterise features in terms of form, fills, and date. Where structural remains were identified these and associated features were targeted for a higher level of excavation in order to define the nature of the archaeology and recover additional dating evidence.

All potential archaeological features were then planned using a total station to a level of accuracy equivalent to a 1:100 hand drawn plan. Site plans were generated on computer at our Fulbourn offices and verified on-site.

Following the construction of the site survey, areas of archaeological interest were defined. The discrimination criteria were based on spatial associations, or, in the case of ditch boundaries, whether segments of the feature had previously been excavated and whether dating or environmental material were likely to be recovered. Four areas of interest were defined which were:

1. post structure with adjacent pits.
2. pit alignment.
3. north-south ditch system.
4. termination of the Celtic enclosure system identified during phase 1 excavations.

Field records were made for excavated and unexcavated features of probable archaeological origin. Where features were excavated 1:10 sections were drawn in order to record the depositional sequence. A photographic record of all excavated archaeological features was completed.

Environmental samples were recovered from the features during excavation following advice from Dr James Rackham of the Environmental Archaeology Consultancy. The decision to sample was markedly affected by the surviving depth of the feature, fill type and its presumed date. Sampling therefore tended to concentrate on the deeper prehistoric pits where environmental remains were most likely to survive. The results from this work are detailed in Appendix B.

Finds analysis was undertaken by members of the CCC AFU, whilst the pottery was assessed by Dr Paul Sealey of Colchester Museum.

Due to the requirements of our archaeological specification, which was to recover, record and report on the archaeology in phase 3A prior to the formulation of a comprehensive post-excavation strategy, this report is an interim statement. As an interim report the earlier archives have not been accessed to resolve the problem of the integration of the site results; the specification (para. 6.2.1) indicates that this will occur at a later date.

7 RESULTS

Twenty nine percent of the sixty-six potential archaeological features identified in the stripped area were excavated; these features included ditches, pits and post-

holes. Additional features were excavated but are not described below as they were of natural origin.

On account of the limited dating evidence retrieved from the excavated features it is difficult to continue exactly with the methodology of spatial analysis and phasing employed in previous reports by *Tempus Reparatum*. Instead it is proposed initially to describe the spatially restricted groups where they exist i.e. sets of post-holes; this will then be followed by the more dispersed elements of post-holes and pits which do not form particular groupings. Artefactual, dating and environmental evidence will be summarised within the text section of the appropriate feature.

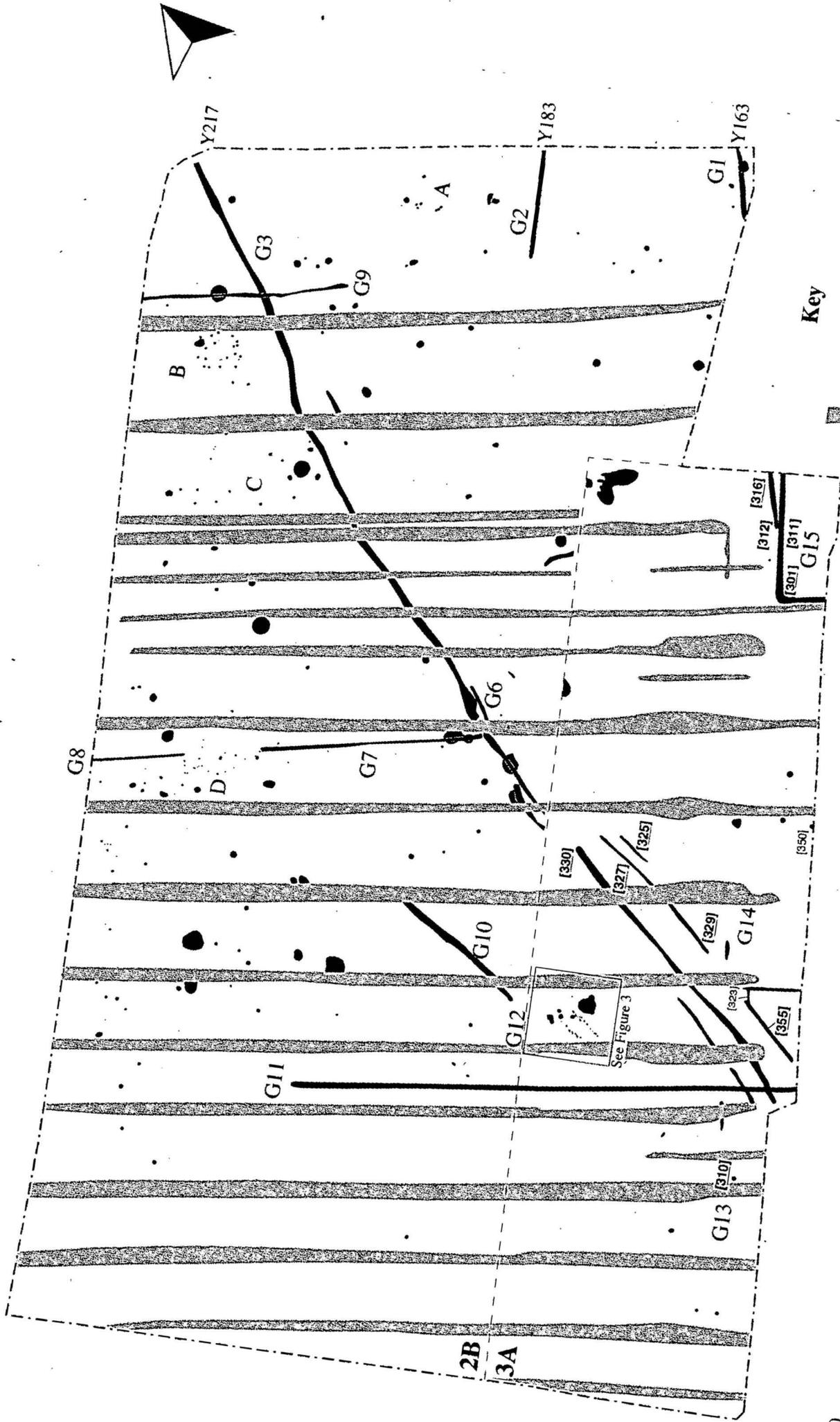
Because of the limits of the dating evidence subsequent work may prove that the spatial groupings highlighted for discussion are not the contemporary features which they are presently assumed to be. In addition, the archaeological evidence for certain periods may prove to be more dispersed than at others because of differences in the way that the landscape was utilised and the structure of settlement and activity zones. Because of the different forms in which occupation and activity areas can be reflected in the archaeological record, compounded by our existing lack of temporal control in this case, landscape groups cannot solely be based on spatial association.

As a result, temporal phasing of the archaeological remains will remain at a very broad level. It is hoped that further analysis, following the completion of all archaeological excavations within the extraction zone, will target areas which require a refinement of the phasing in order fully to understand the complexity of the site.

The archaeological remains and natural features consist of:

Natural

In the main the natural features could be distinguished on the basis of their morphology and a higher sand component within their fills. This method was not fool-proof as these natural features were very variable. Many of the features tentatively identified as components of a post alignment were shown during the course of the excavation to be natural. Sediment descriptions were made of all features which had a possibility of being archaeological during the course of the excavation. The initial field observations and judgements have been used to separate the archaeological from the natural features, although it is possible, given the similarity between the infill sediments, that some of the natural features have been introduced into the archaeological record. It is unlikely that archaeological features have been misinterpreted as natural as the archaeological features are commonly regular in form.



0 50m

Figure 2 Plan of Area 2B and 3A

[345] Feature section on Figure 4

In addition, just as the archaeological features are generally found in discrete groups within the excavation area, natural features tended to have a similar association, particularly those associated with tree root activity. This can both aid and confuse the picture when due to the shallow condition of many of the features, they cannot be categorically described as archaeological.

Natural features within the excavation area consisted of tree root activity and periglacial features such as ice wedges and frost heave structures. No tree throw structures were observed and although there was plenty of evidence for tree root activity all of these features appear to predate the archaeology. There was no evidence within phase 3A for the extensive medieval forest postulated by Tempus Reparatum (Kiberd 1996a).

A large number of the features interpreted as post-holes and small pits on the site are very shallow with a small diameter and may represent pockets of subsoil within the surface of the gravel; alternatively, where extensive excavation has not been undertaken to show otherwise, they may represent root disturbance. A degree of caution is therefore required when reading the archaeological record, particularly as it relates to unexcavated features. At the discretion of the author suspect features have been removed from the report illustrations.

Archaeology

Group. Contexts and Description.

(Fill No. and [Cut No.])

(NB. Group numbers have been continued in the same series as was established by the 1997 excavations. Hence the first group number in this report is group 12)

G12. Pit and Post-hole group (figure 3)

Only one area of post-holes was defined and partially excavated during the course of the phase 3A excavations. This may represent one or more buildings.

a Post-Hole Alignment and Pits

Alignment of Post-hole 399, 398, [343]; 400, [344]; 401, [345];; 404, [347]; 405, [348]; 406, [349].

b Pits and Post-Holes: 334, 333, 335, [342] pit; 341, 336, 337, 339, 340, 338, 320 [317] pit; 403, [346] pit; 353, [408], post-hole; 394, [352]/[392] pits; 395, 396, [393] pit/post-hole?

Group 12 consisted of twenty five post-holes forming two parallel lines. The majority of the post-holes were between 0.19 and 0.24m in diameter, although three larger post-holes, of which [343] and [346] were excavated lay on the

northern limit of the alignment. Post-holes [343] and [346] were 0.74 and 0.96m in diameter respectively. The maximum surviving depth of the small post-holes was 0.19m as opposed to 0.25m of the two larger post-holes. The surviving form of the deeper post-holes seemed to suggest that the posts were all upright. All of the post-holes were filled with similar yellow brown sandy silts.

On the northern side and slightly to the west of the post-hole alignment lay pit [352] which was cut by post-hole [393]. [393] was 0.45m in diameter and 0.55m in depth and appeared to have contained a post pitched at an angle of

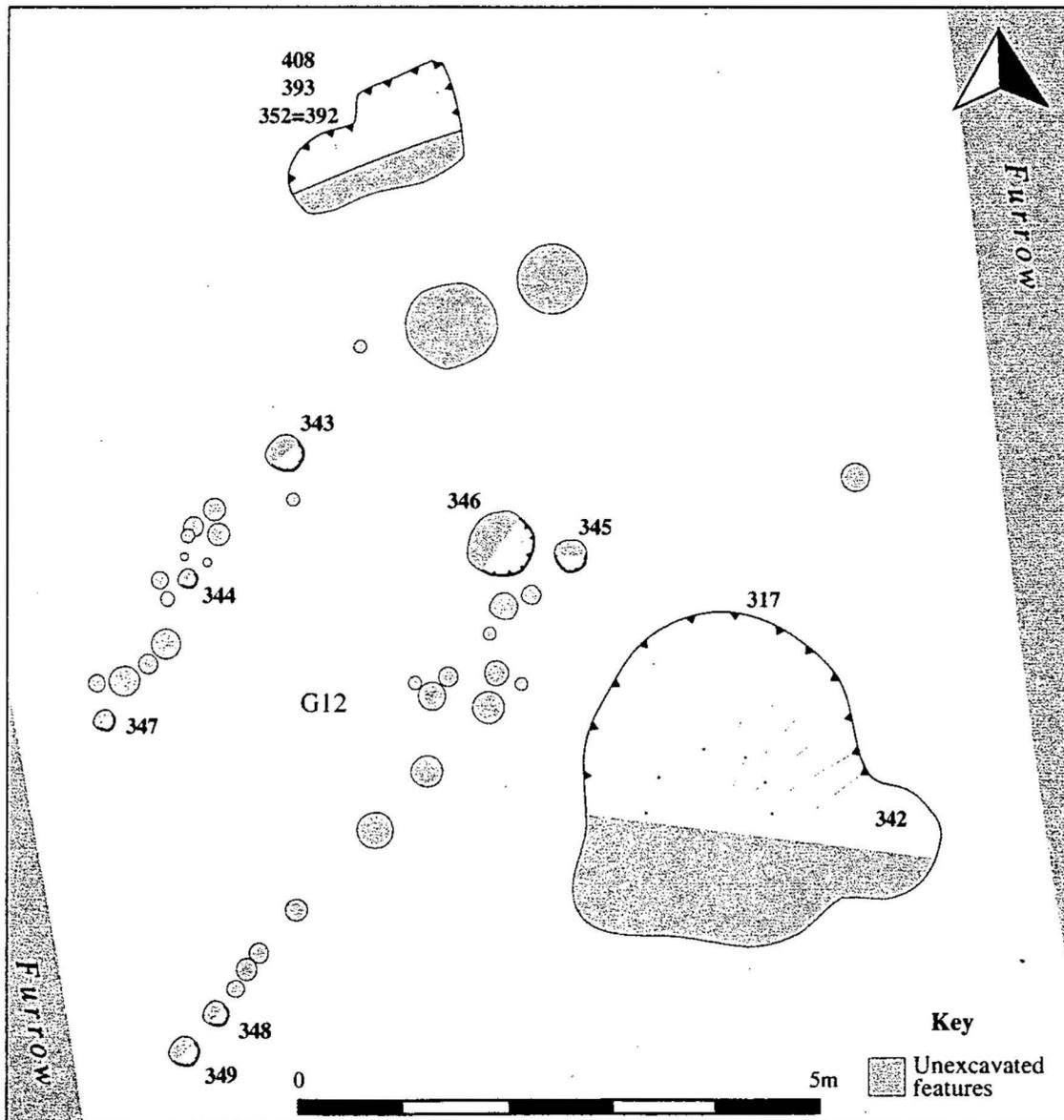


Figure 3 G12 features

30° to the vertical and pointing to the north-east. The post-hole was filled with light olive brown sandy silts and silty sands with flint pebble inclusions. The post would appear to have been dug out ([408]) and the subsequent hollow infilled with dark greyish brown silty sands. However, the concentration of gravel shown on the photographs as lying within the pit and directly above the post-hole may indicate that the post-hole cut through the upper fills to the pit (deposit 353) and that the cut was not definable during the course of the excavation and recording. If so the post-hole was more recent than the episode of pit excavation.

A small pit [342] lay on the northern side of pit [317] which was 1.14m in diameter and 0.28m in depth. The pit was filled with olive brown clayey silts. This cut through the upper infill deposits of [317]. Pit [317] was 2.70m in diameter and 1.02m in depth and was filled with deposits representing two infilling episodes. About 75% of the deposits consisted of lensed sediments indicative of rapid infilling from the southern side of the pit. These deposits were made up of olive brown silty sands and clayey silts with frequent pebble inclusions, charcoal and the occasional fragment of burnt wood. The upper fills of the pit consisted of olive brown silty sands with occasional flint pebbles.

A sparse quantity of early Iron Age sherds of pottery was recovered from pits [408] and [317] (Dr Paul Sealey pers. comms.). The presence of early Iron Age sherds within the lower 'rapid' infill deposits of pit [317] may indicate that the collection and deposition of these deposits occurred at about this time. The pottery within feature [408] occurs within the upper fill of the sequence of pit/post-hole infill sequence and may have been introduced to the area at the same time as the early Iron Age pottery in pit [317]. This could suggest that the post structures pre-date the pit [317].

A single piece of carbonised wood was found in the basal fill of pit [317]. This was dated to 3250 ± 60 BP cal BC 1660 to 1405 (2 sigma, 95% probability) (Beta - 125856)

Environmental samples were taken from pits [317] and [352]. Previous environmental results had shown that systematic sampling of the post-holes had not been worth while and therefore sampling was more selective than in previous years. The environmental evidence from the group 1 features included a small quantity of eroded animal bone, and aquatic and land snails. A single charred cereal grain was recovered from pit [352].

G13. Pit
309, [310] pit.

One of the pits of the provisional pit alignment was excavated. Pit [310] was circular in plan, 0.81m by 0.82m and 0.14m in depth with a concave base. It was filled with a light olive brown silty sand with 15-25mm diameter flint.

One charred cereal grain was recovered from this pit.

On closer inspection all of the other features which were provisionally assigned to the pit alignment proved to be natural.

G14. North-south Boundary

In previous phases of the Stowe Farm excavations the north-south boundary was marked by a single ditch or a pair of ditches. In the present area four parallel ditches were recognised which included the continuation of the primary alignment seen in the phase 1 and 2B areas.

a. 324, [325] ditch

[325] lay on the eastern side of the primary ditch and extended from the phase 2B excavation into this area. One segment was excavated at the northern termination of this feature. The excavated segment revealed a ditch which was 0.36m wide and 0.11m deep with concave sides and a flat base and filled with yellowish brown clayey silts with occasional flint gravels.

b. 326, [327], 328, [329], 354, [355] ditch

Three terminals of ditches from the central and primary alignment were excavated. This alignment was intermittent occurring in two units within the phase 3A excavation area. [327] and [329] represent segments of the same ditch; [327] was 0.33m wide and 0.09m deep whilst [329] is 0.45m wide and 0.13m in depth with slightly concave sides and base. Both segments were filled with silts/clayey silts and gravels. [355] was a slightly wider and deeper ditch at 0.63m in width and 0.21m depth. The northern termination of [355] was excavated. It was steep sided with a concave base and was filled with clayey silts with infrequent gravels.

c. 331, 332, [330]

The third ditch in the alignment continues the former boundary seen in previous years.

The northern termination of the interrupted ditch was excavated in 1998. Here the ditch was 1.10m wide and between 0.34m and 0.52m in depth being deeper at the termination. It was very steep sided and symmetrical in profile with slightly concave sides and base. Two fills were identified, a lower sandy silts with clays with frequent gravels which was overlain by a clayey sandy silt with occasional gravels.

d. Unexcavated

The fourth ditch in the alignment, the westernmost, remained unexcavated.

Environmental samples were all taken from ditch segment [330]. A single possible charred cereal grain and a single weed seed were recovered. Ostracods, crustaceans and snails indicate a damp long grassland or marshy habitat in the vicinity and that the ditch contained water.

Associations

322, [323] gulley

[323] was a small gulley which cut through the fills of [355] which was one of the group 14 ditches. This gulley was 0.46m wide and 0.26m in depth and filled with yellowish brown sandy silts with gravels. The relationship with the Roman (?) east-west gulley which lay directly to the north-east was difficult to define due to the similarity between the two fills. [323] was twice the depth of the Roman ditch and is therefore presumed at present to represent a separate phase of activity.

G15. Celtic Enclosure

302, [301], 313, [311] ditch

Two segments were excavated through the continuation of the Celtic enclosure identified and dated by *Tempus Reparatum*. The ditch was found to be 1.09 and 1.26m in width and 0.22 and 0.20m in depth. In both segments the ditch was steep sided with a slightly concave base. The segments were filled with silts with clay and sand components. Gravels were sparse to rare.

Although features were identified close to the enclosure no archaeological features were identified within or immediately adjacent to the enclosure

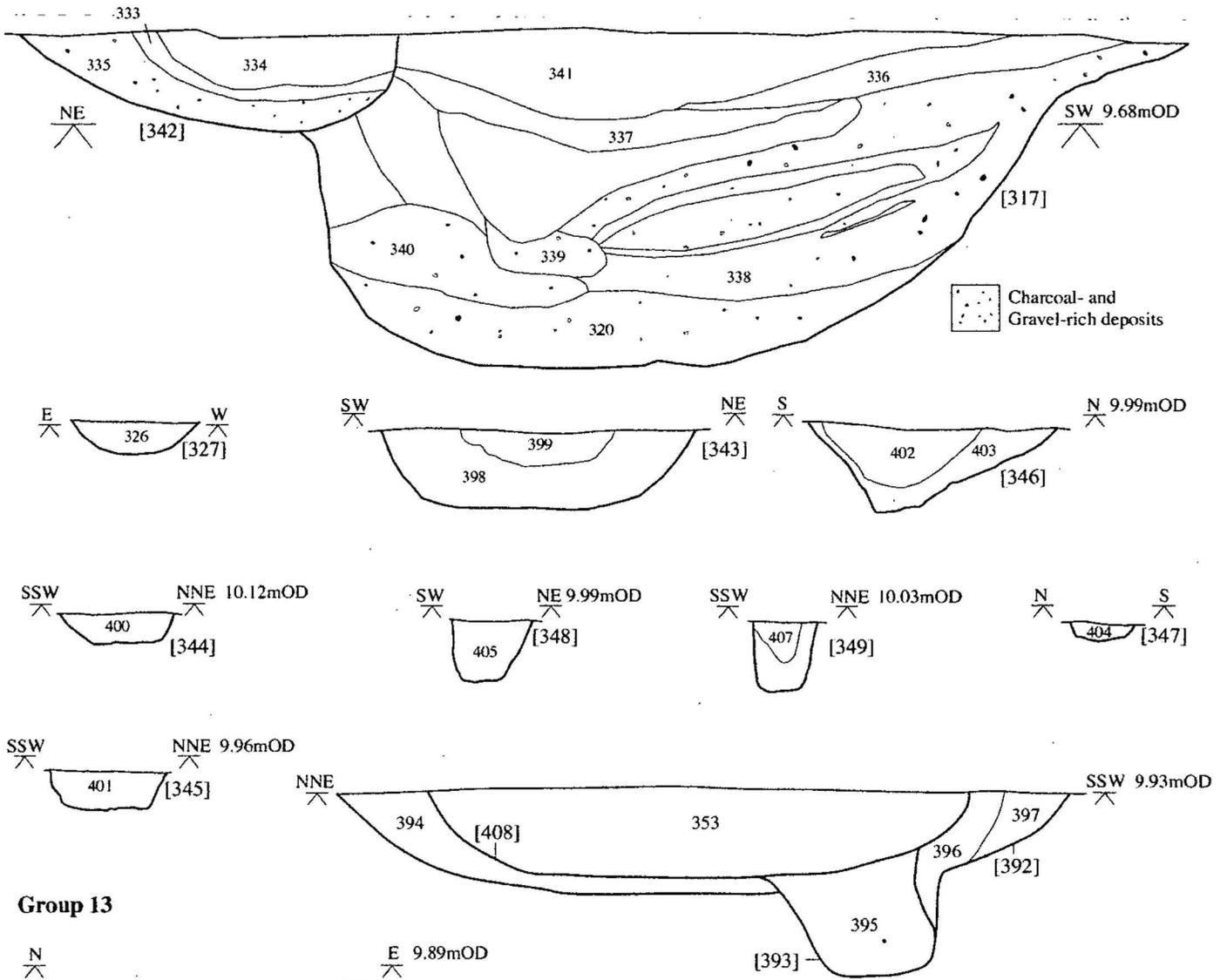
Associations 314, [312], 315, [316] Ditch

The infilled Celtic enclosure ditch was cut by ditch [312]/[316] a segment of which had been excavated in 1997. Two segments of this ditch were excavated which included the termination of this alignment. At its termination [312] was 0.78m wide and 0.23m in depth with a flat base and steep, concave sides. The ditch segment [316] was steeper sided and also had a concave base. Here the ditch was 0.88m wide and 0.29m in depth. Both segments were filled with a deposit composed largely of yellowish brown silts and sands.

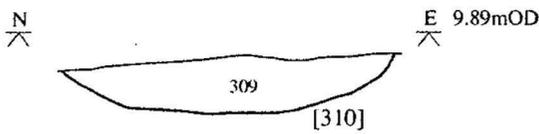
Two sherds of early Iron Age pottery were recovered from the fill of segment [312] (Dr Paul Sealey pers. comm.).

Environmental samples from segment [316] contained a single charred cereal grain.

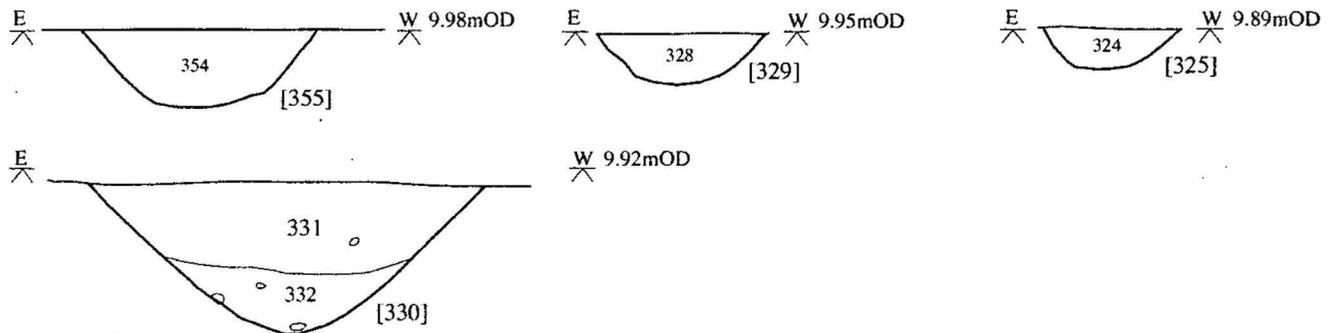
Group 12



Group 13



Group 14



Group 15

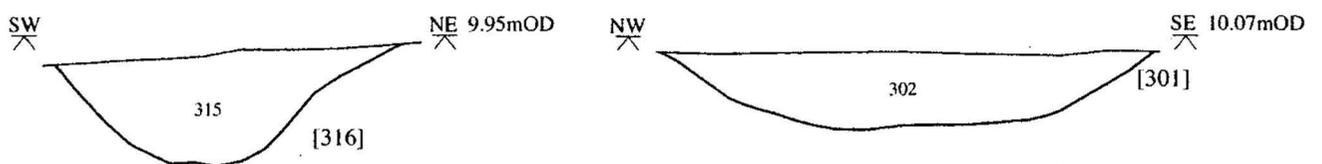


Figure 4 Sections



Other Features

In addition to the four main areas of interest highlighted during the survey the excavation of one other feature became appropriate during the course of these excavations.

351, [350] pit

Pit [350] was a single small pit situated next to the eastern baulk and in plan appeared to be rich in charcoal. Excavation revealed a shallow ovate pit of 0.60m width and 0.10m depth with concave sides and base. The pit was filled with brown to yellowish brown sandy silts with <1% gravels of flint and degraded sandstone. There was no evidence for any of the flint or sandstone being burnt. Charcoal was present and the deposit was sampled.

Eleven sherds of conjoinable early Iron Age pottery were recovered from this feature during wet sieving (Dr Paul Sealey pers. comm.).

A single charred cereal grain was recovered from the environmental sample.

Ridge and Furrow.

A large number of shallow northwest-southeast orientated furrows crossed the area cutting through the earlier archaeology. In general these furrows were set at 12m apart, however, in areas traces of furrows occurred at intervals of 7m apart and indicated that the layout of cultivation strips within the medieval system changed over time.

The headland was not positively identified during the course of stripping. Many of the furrows were vague and difficult to define in the south-eastern corner of the phase 3A excavation area and it is likely that the headland continues across this corner of the site.

The alignment of these remnants of the medieval field system and the earlier similarly aligned ditches indicates an evolving agricultural landscape which respected earlier historic landscape structuration.

8 DISCUSSION OF GROUPS

The phase 3A excavations would appear to indicate a continuation of the types of Neolithic and Bronze Age activity which were widespread throughout the whole area of the Stowe Farm quarry extension. As in phase 2B, the excavations focused on the identifiable prehistoric activity areas.

The complex of features contained within Group 12 appear to represent at least three phases of constructional activity and abandonment. However, few of these features have stratigraphic relationships and the scarcity of finds or dateable materials means there is very little chronological control.

Pottery from pit [317] would appear to indicate that this feature was infilled during the early Iron Age, however, wood found in the lower fill of the pit has been radiocarbon dated to the middle Bronze Age between 1660 and 1405 BC. This discrepancy could possibly result from the curation of building timbers which were eventually thrown in to the pit. Alternatively, given the degraded nature of the few sherds of pottery recovered it is more likely that the pottery needs to be re-assessed by a prehistoric pottery specialist familiar with the local type series when larger samples become available.

The presence of burnt wood, charcoal, burnt flint pebbles and charred grain within the fills may indicate that the deposits within pit [317] have been collected together during the clearing out of a bonfire or occupation area. The features and their fills within phase 3A show little evidence for the intensive burning required to create such deposits. It is likely that these deposits have been brought in from elsewhere to be dumped at this spot, and that the related settlement or processing area is not at any great distance from the pit.

As the geomorphological structure of the infill sediments would suggest that infilling of the pit was undertaken from the southern side of the pit and given the proximity of the post-holes to the pit it is unlikely that the Group 12 walled structure and the first phase of infill activity coexisted. The parallel walled structure, however, could either pre or post-date the pits primary infill event.

Group 12 probably consisted of least two structures are likely to have been sited in this area; as shown by the parallel alignment of small post-holes, the group of larger post-holes, and post-hole [393] which contained an angled post as opposed to the upright posts used elsewhere in Group 12. These may represent synchronous structures and activity related features or, two or three entirely separate events occurring in restricted area. Alternatively they could be indicative of a singular evolving workspace. The small pits can be seen to post-date the very large pit as in the case of [342] which cuts 317 and because of the spatial layout of the area probably predates the post-structures. Because of the paucity of finds recovered during the excavation of these features it is suspected that the early Iron Age pottery found within the fills of pit [408] originated from the activities associated with the infilling of pit [317] providing that [408] remained only partially infilled at the time of the use and infilling of [317]. Alternatively, both sets of activities could be of early Iron Age and indicate an evolving workspace. The post structures appear to have formed some of the earliest archaeology and could be early Iron Age or earlier in date. In any case the area seems to have been

of long-standing interest to the occupiers of this prehistoric landscape and adapted to the requirements of the time.

As in areas examined in previous years we appear to be looking at a discrete working area where particular activities are concentrated within the landscape. It would seem from the feature relationships within this area that this focus point was not always defined by the presence of a structure and the use of the structure may have been one of the later events in the activity sequence. Once again it is apparent from the limited depth of many of the features and the isolated nature of many of the posts that the picture within these zones of archaeology is incomplete and only a small percentage of the original activity area has been preserved until the present day.

The environmental results from the pit are considered to be poor (see Rackham: Appendix A). They do however support the idea of an open country or grassland habitat during the early Iron Age seen during earlier phases of investigation. However, pit [350] contained the shells of two snails typically associated with shaded habitats. There was no evidence for occupation or crop processing from any of the samples from this area.

Group 13 was the presumed east-west pit-alignment identified during soil stripping. Only one of the four possible pits proved to be archaeological and thereby discounting the original notion. As in areas examined in previous years the pattern of archaeology is much diminished to the south of the excavation area.

Group 14 consisted of a pair of parallel ditches of which the southernmost excavated as segment [330], continues the trajectory of the Bronze Age (?) alignment seen in phases 1B and 2B. An entranceway through the boundary occurs between segment [330] and the phase 2B excavations, and is replicated in the northern alignments of [327/329] and [355] and the gully [325]. A further interruption in the [327/329] and [355] alignment was also recognised, however, in this case no corresponding routeway cuts through the southernmost ditch [330]. The main alignment begins to turn south-westerly near the southern edge of the stripped area, whilst [327/329] and [355] continue on the north-south alignment. To the west of the main [330] alignment lies a similarly aligned ditch of which no segments were excavated. This begins adjacent to the break between [329] and [355].

The complimentary alignment of these ditches and particularly the interruption on the northern side of phase 3a excavations suggests a degree of contemporaneity between these boundaries. No features were identified within the terminals of the ditches or within the immediate vicinity to suggest that entrance structures existed in these areas or that post-set fencing lay along any part of the ditch system. Dating from previous works suggests that this feature was in existence between the Neolithic and late Iron Age/early Roman period.

By using aerial photographs Pryor has identified an extensive network of ditched enclosures throughout the West Deeping area (Pryor 1996). Based on the Fengate material this evidence has been used to argue for an intensive Bronze Age sheep management strategy adjacent to the Fens where at certain times of the year 'community stockyards' would be pending on the exact function of the boundary. The ditch system of Group 3 does not exhibit the complexity of arrangement seen at Storey's Bar Road or the Newark Road sites of Fengate, but they could represent an extension of the sheep management system into the wider prehistoric landscape where flocks were divided and moved between pasture areas. Given the surviving condition of the ditch system one might expect that it was necessary to reinforce the ditch boundary with permanent or temporary fencing depending on the exact function of the boundary. No such evidence has been identified during these excavations.

If Pryor's spatial linkages and interpretations are correct further investigation of the Celtic enclosures may be warranted as these may be of an earlier date than originally suspected. These enclosures could be the Bronze Age stockyards where herds were divided for breeding, culling and exchange identified by Pryor, and they presumably formed an important cultural and economic focus for Bronze Age populations. If so subsequent alteration and adaptation by Iron Age populations may be suggestive of a degree of landscape and cultural continuity which may be reflected in the activities and artefacts preserved within these areas.

The environmental evidence from these ditches suggests that when they were originally constructed and during their initial infill the ditches were wet. If these ditches are Bronze Age then the immediate environment at that time was of damp long grassland or a marshy habitat.

Group 15 lay in the north-eastern corner of the excavation area. This covered the southernmost extent of one of the Celtic enclosures identified by Tempus Reparatum. Excavation revealed a single phase ditch boundary with no surviving archaeological evidence for contemporary internal or external activity. The Iron Age ditch which lies to the north of the enclosure at its termination cuts into the Celtic enclosure ditch. Features which were initially defined as post-holes lying along the course of this ditch proved to be natural.

9 CONCLUSION

Our view of the Stowe Farm quarry area at present would seem to suggest a generally open country Neolithic and Bronze Age landscape, within which lay a major north-south landscape division which may have divided pasture areas and possibly defined access points to a 'community stockyard' of the type identified within Fengate, Peterborough. Phase 3A has shown this boundary to be more

complex in design than in earlier phases, however, as it largely consists of a series of parallel boundaries with the occasional routeway providing access or egress between the two systems. Although at present largely undated, the post-structures found are believed to date to this period (Neolithic and Bronze Age) and suggest dispersed activity areas where the small quantities of charred grain and animal bone suggests low intensity agricultural production was undertaken.

During the Iron Age the landscape evidences greater structure and control with the pit and post defined enclosures developing into the major enclosed field and associated structure systems located in the phase 1 excavation area. Although it is interesting to note that early Iron Age pitting was focused on areas of earlier prehistoric activity.

By the later Iron Age and early Roman period earlier ditch systems appear to have become obsolete, the prehistoric north-south boundary alignment had become infilled. The Iron Age system was replaced and a Roman trackway and boundary ditches cut across the earlier fields. Sometime in the late Roman, Saxon or early medieval periods narrow ditches were excavated on an alignment which was to be continued within the medieval field system. This landscape structure continued until enclosure when although the field layout changed the domination of arable cultivation continued until quarrying began.

Further excavation has helped us to refine the landscape phasing evidenced in earlier excavations on the site, although a fuller analysis of the stratigraphic sequence and particularly the dating of the landscape is required to substantiate many of the statements made and piece together the activity types representative of each phase.

Our expectation for phase 3B is for the continuation and possibly further development of the complex prehistoric boundary which will run north-south through the excavation area. Additional structures and pitting are likely to be present on a similar level to those seen in recent years. Along the north-eastern side of phase 3B will be found the termination of the Celtic enclosures where it is hoped that identifiable activity areas will be found and an opportunity will occur to undertake further investigations within these enclosures.

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APPENDIX 1

Stowe Farm, Lincolnshire - LINWDSF98 Environmental Archaeology Assessment

Introduction

The fieldwork for this project was carried out by the Archaeological Field Unit of Cambridgeshire County Council (AFU) under the supervision of Stephen Kemp. The Environmental Archaeology Consultancy was commissioned to carry out the environmental work in conjunction with the AFU and a programme of sampling was instituted that concentrated upon dated features, or groups of features, and samples from the fills of linear features where these were sectioned (see Fig. 2 - site plan). The site yielded features of probable Bronze and Iron Age date, although two sampled features are undated. A total of 12 samples were collected (Table 1). No animal bone was recovered by hand during the excavation, probably due to its failure to survive in these sediments.

Of the twelve samples collected one was for radiocarbon analysis and the remaining eleven were for flotation and the extraction of plant and animal macrofossils.

Methods

The soil samples were processed in the following manner. Sample volume and weight was measured prior to processing. The samples were washed in a 'Siraf' tank (Williams 1973) using a flotation sieve with a 0.5mm mesh and an internal wet-sieve of 1mm mesh for the residue. Both residue and float were dried, and the residue subsequently re-floated to ensure the efficient recovery of charred material. The dry volume of the combined 1st and 2nd flots was measured, and the volume and weight of the residue recorded. A total of 271 litres of soil was processed in this way.

The residue was sorted by eye, and environmental and archaeological finds picked out, noted on the assessment sheet and bagged independently. A magnet was run through each residue in order to recover magnetised material such as hammerstone and prill. The residue was then discarded. The float of each sample was studied under a low power binocular microscope. The presence of environmental finds (ie snails, charcoal, carbonised seeds, bones etc) was noted and their abundance and species diversity recorded on the assessment sheet. The float was then bagged. The float and finds from the sorted residue constitute the material archive of the samples.

The individual components of the samples were then preliminarily identified and the results are detailed below in Tables 2-4.

Table 1: List of soil samples collected

sample	context	cut	vol in l.	weight in kg.	description	date	sample type
1	320	317			charcoal from pit fill	BA?	C14
2	315	316	28	36	ditch fill	IA	flotation
3	313	311	30	37	enclosure ditch fill	IA	flotation
4	309	310	20	26	pit fill	undated	flotation
5	319	317	25	34	pit fill	BA?	flotation
6	320	317	30	46	pit fill	BA?	flotation
7	321	317	25	36	pit fill	BA?	flotation
8	331	330	30	40	ditch fill	BA?	flotation
9	332	330	28	35	ditch fill	BA?	flotation
10	339	317	8	9	pit fill	BA?	flotation
11	351	350	17	21	pit fill	undated	flotation
12	353	352	30	35	post pit fill?	BA?	flotation

Results

The results have been summarised within feature group and date (Tables 2 and 3). The phasing utilised in this draft is preliminary only and may be expected to change with subsequent work and analysis. Modern or recent plant rootlets, uncarbonised seeds (most commonly *Chenopodium* sp and *Polygonum* sp.) and shells of the burrowing snail *Cecilioides acicula* occur in most of the samples. These clearly could be, or are, of recent origin and indicate that there is some movement of material down through the soil. These elements have been ignored in the discussions below and indicate that one or two of the smaller finds may not be secure.

Bronze Age

A series of samples were taken from the fills of a large pit, 317, in the centre north of the site and include the charcoal sample submitted for radiocarbon dating. Archaeological finds from the 88 litres of fill processed were extremely limited and apart from a single indeterminate fragment of what appears to be abraded pottery only burnt flint and firecracked pebbles were recovered, the latter from context 339, one of the lower fills (Table 2). The very high proportion of limestone gravel in the lower to middle fills (contexts 320 and 321), approximately 50% of the sample, suggests substantial erosion and collapse of the pit walls, intentional backfilling or erosion of the original upcast, and this may be the reason for the absence of archaeological material in these contexts.

Table 2: List of material from the flotation samples

Probable Bronze Age features

Pit 317

samp.	context	vol. in l.	description	date	residue wt. kg	pot wt in g.	firecracked pebble	burnt flint	fired earth	other
5	319	25	pit fill	BA?	3.8					
6	320	30	pit fill	BA?	21			1		
7	321	25	pit fill	BA?	17.5					
10	339	8	pit fill	BA?	2.15	<1 ?	137g			

Ditch 330

8	331	30	ditch fill	BA?	6.75					
9	332	28	ditch fill	BA?	7.75		10g			

Others

12	353	30	post pit fill?	BA?	2.55	5	147g	5		
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Iron Age and undated samples

2	315	28	ditch fill	IA	3.3						
3	313	30	encl ditch fill	IA	1.95						
4	309	20	pit fill	?	3.65				1		
11	351	17	pit fill	und.	2.5	42				? 10g	modern nail

The environmental evidence from the pit is equally poor. Small quantities of charcoal were recovered from contexts 319 and 320, although much larger samples were obtained from 339 and 320 (Table 3), the latter a possible re-cut. No charred cereal or weed remains were present. A single fragment of eroded bone, a zygapophyseal fragment of a cervical vertebra, probably of a cow, was recovered from 321. In addition to the fairly ubiquitous *C. acicula* context 319 produced a fairly large snail assemblage including shells of *Helicella* sp., *Pupilla muscorum*, *Hygromia hispida*, *Vallonia* sp., cf *Vertigo substriata* and *Vertigo* sp. This fauna is suggestive of an open country or grassland habitat (Evans 1972). There are slight changes in this assemblage in the lower fills, contexts 321 and 339, where both aquatic and snails more typical of woodland habitats are present (Table 4). These variations may reflect the local environment of the pit rather than a broader pattern of change on the surrounding land.

Two samples were taken from the fills of ditch 330, at an apparent terminal (see Fig. 00 - site plan). The lower of these two fills produced a single fragment of fire-cracked pebble, but no other archaeological finds were recovered. Charcoal was very sparse, and although a possible fragment of charred cereal grain and a charred weed seed were recorded in the flot there was little evidence for occupation debris. The environmental evidence indicates that the ditch contained water since paired valves of ostracods, freshwater crustaceans, were present along with shells of *Lymnaea truncatula* a mollusc of wet habitats (Table 4). The presence of shells of *Vertigo angustior* and *Carychium* sp. may also indicate a damp long grassland or marshy habitat, not untypical of ditch environments.

Table 3: List of environmental material from the flotation samples**Probable Bronze Age features****Pit 317**

samp.	context	vol. in l.	flot vol.	charcoal #	charcoal wt \$	char'd grain #	char'd seed #	snails *	bone #	ostracod #	
5	319	25	18	3	10			4/2			
6	320	30	6	3	5			2/1			
7	321	25	120	5	36			2/2	1		csz cev
10	339	8	180	5	48			1/1			

Ditch 330

8	331	30	2	2		?	1	4/2		1	
9	332	28	2	2				3/2		1	

Others

12	353	30	20	4	15	1		3/2			barley?
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Iron Age and undated samples

2	315	28	6	1		1		4/2			wheat
3	313	30	15	1				5/2			
4	309	20	70	5	26	1		4/2			
11	351	17	20	3	15	?	1	3/2	1		calcined bone

frequency of items: 1=1-10; 2= 11-50; 3=51-150; 4=151-250; 5=>250

* frequency/diversity - frequency as above and diversity as follows: 1=1-3; 2=4-10; 3=11-25; 4=26-50 taxa.

\$ approximate weight in grammes

The final sample assigned to the Bronze Age derives from a possible post-pit fill adjacent to the post structure in the centre north of the site. This sample produced a single sherd of pottery, a few fragments of burnt flint and 147 grammes of firecracked pebble. Charcoal was relatively abundant and a single charred cereal grain, probably barley, was recovered. The snail fauna is relatively unspecific, including catholic species, taxa typical of grassland, and shells of *Carychium* sp..

Iron Age and undated features

The sampled ditch and enclosure ditch fills assigned to the Iron Age are almost lacking in any archaeological material. Charcoal was almost absent from both samples, and the only archaeological evidence is indicated by a single charred cereal grain, preliminarily identified as wheat. Snails were relatively abundant in both fills and suggest an open country or grassland habitat (Table 4) with *Vallonia* sp., *Pupilla muscorum* and *Helicella itala* present along with species of more catholic habit.

Two samples were taken from the fills of as yet undated pits (pits 310 and 350), although the pottery from 351 will rectify this for pit 350. Context 309 produced a single piece of burnt flint, while 351 produced 8 sherds of decorated pottery, all apparently from the same vessel, and a few pieces of what appear to be 'fired earth'. Charcoal is relatively abundant in 309, and less so in 351, and single charred cereal grains or fragments were recorded from each sample, with 351 also producing a single charred weed seed. One very small unidentifiable fragment of calcined animal bone was sorted from the residue of 351. Molluscs were again the most abundant remains (Table 4), but species diversity was low, although shells of *Vallonia* sp. were the most abundant after *C. acicula* and probably reflect an open country environment, despite the occurrence of one or two shells of *Clausilia* sp. and *Oxychilus* sp. more typically associated with shaded habitats.

Table 4: Mollusc taxa recorded during the preliminary scan of the samples

sample	5	6	7	10	8	9	12	2	3	4	11
context	319	320	321	339	331	332	353	315	313	309	351
<i>Cecilioides acicula</i>	+++	+	+	+	+++	+++	++	++	+++	++	+++
<i>Hygromia hispida</i>	+		+	+			+	+	+		
<i>Cochlicopa</i> sp.		+					+				
<i>Helicella</i> sp.	+				+	+	+	+	+	+	+
<i>Helicella itala</i>								+			
<i>Pupilla muscorum</i>	+				+			+			
<i>Vallonia</i> sp.	+				+	+	+	+	+	+	+
<i>Vallonia excentrica</i>					+			+	+		
<i>Pyramidula rupestris</i>					+						
<i>Vertigo</i> sp.	+		+		+			+		+	+
<i>Vertigo angustior</i>					+						
<i>cf Vertigo substriata</i>	+										
<i>Clausilia</i> sp.											+
<i>Retinella radiatula</i>			+								
<i>Oxychilus</i> sp.											+
<i>Discus rotundatus</i>			+	+							
<i>Carychium</i> sp.			+		+	+	+				
<i>Lymnaea truncatula</i>					+	+				+	
<i>Planorbis contortus</i>			+								

Discussion

The most frequent environmental remains are the molluscs, a pattern that was observed in a previous assessment of the site (Rackham 1997). The burrowing snail *Cecilioides acicula* is abundant throughout the deposits, occurring in all the samples, often in considerable numbers. Although some of these specimens may have been contemporary with the formation of the sediments it is assumed that many derive from later intrusion into the deposits, particularly since this species is believed to be an introduction (Evans 1972). The other elements of the molluscan fauna are more secure. Both pit and ditch fills include freshwater species and semi-aquatic taxa, the Planorbid, *Lymnaea truncatula* and ostracods, but most deposits produced specimens of the genus *Vallonia*, and a suite including *Carychium* sp., *Pupilla muscorum*, *Cochlicopa* sp., *Hygromia hispida*, *Helicella* sp. with less frequent occurrence of *Clausilia* sp., *Retinella* sp., *Oxychilus*, *Pyramidula rupestris*, and *Discus rotundatus*. This is an assemblage very similar to that from the 1997 excavations and again suggests a largely open country fauna in the Bronze and Iron Ages.

There was little evidence for human activity within the fills of most of these features, although post-pit fill 353, pit fill 351 and pit fill 339 did yield some evidence for occupation nearby in the form of pottery, charcoal, firecracked pebbles and the odd charred grain. Charcoal was the most abundant material derived from human activity and this was concentrated in the lower fills of the large pit 317, post pit 352 and pit fills 309 and 351. Most of this charcoal appears to be wood or timber charcoal rather than twig or small roundwood but this will require specialist analysis to confirm. There was no evidence for any crop processing or even grain parching in the botanical material from these samples with charred seeds even rarer than in the samples from the 1997 excavation.

Potential of the samples

The potential for further work on these samples is limited.

There is sufficient charcoal in a number of the samples to produce a radiocarbon date (Table 3) and a more precise chronology for the site may be possible with radiometric dating. Bronze Age contexts that have produced samples adequate for standard radiometric analysis are 321 and 339 all from pit 317 which is already being dated. Of the other samples contexts 353, 309 and 351 have produced enough charcoal for radiocarbon analysis. All these samples are from fragmented charcoal where much of the sample may be heartwood, and therefore potentially somewhat older, by between several decades up to perhaps 200 years, than the events that resulted in the production of the charcoal. They may nevertheless permit the establishment of a general chronology for the site features.

Most of this charcoal is very fragmented but in a few of the contexts larger identifiable pieces are present. Since the archaeological context for much of this material is not readily interpretable detailed analysis is probably not warranted. For the larger samples of charcoal from the Bronze Age pit, however, where the charcoal is associated with fire-cracked pebbles and may reflect waste from occupation fires, identification may be justified to indicate the fuel resource of the occupation at this time. This is of particular interest since the snail evidence appears to suggest an open landscape and the wood species may reflect or

contradict this picture. The apparent absence of small roundwood in the samples should be checked and confirmed by specialist analysis.

The charred seed evidence is extremely limited and the only further work that can be recommended is the identification, where possible of the three or four charred cereal grains in the dated contexts. This is of interest only in so far as it adds to the database for the chronology and geographical use of individual cereal varieties during the history of the site.

The molluscan assemblages afford the only significant environmental potential. Apart from the ubiquitous occurrence of the snail *Cecilioides acicula* a number of the samples include reasonably large groups of shells with a number of individual taxa. This category of data may give us both some indication of the local environment on the site and evidence for any change through time and should compliment the samples recovered from previous work at the site. A detailed analysis of a selection of the larger assemblages from the well dated contexts across the whole site should permit these questions to be addressed with confidence.

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CALIBRATION OF RADIOCARBON AGE TO CALENDAR YEARS

(Variables: estimated C13/C12=-25; lab mult.=1)

Laboratory Number: Beta-125856

Conventional radiocarbon age*: 3250 ± 60 BP

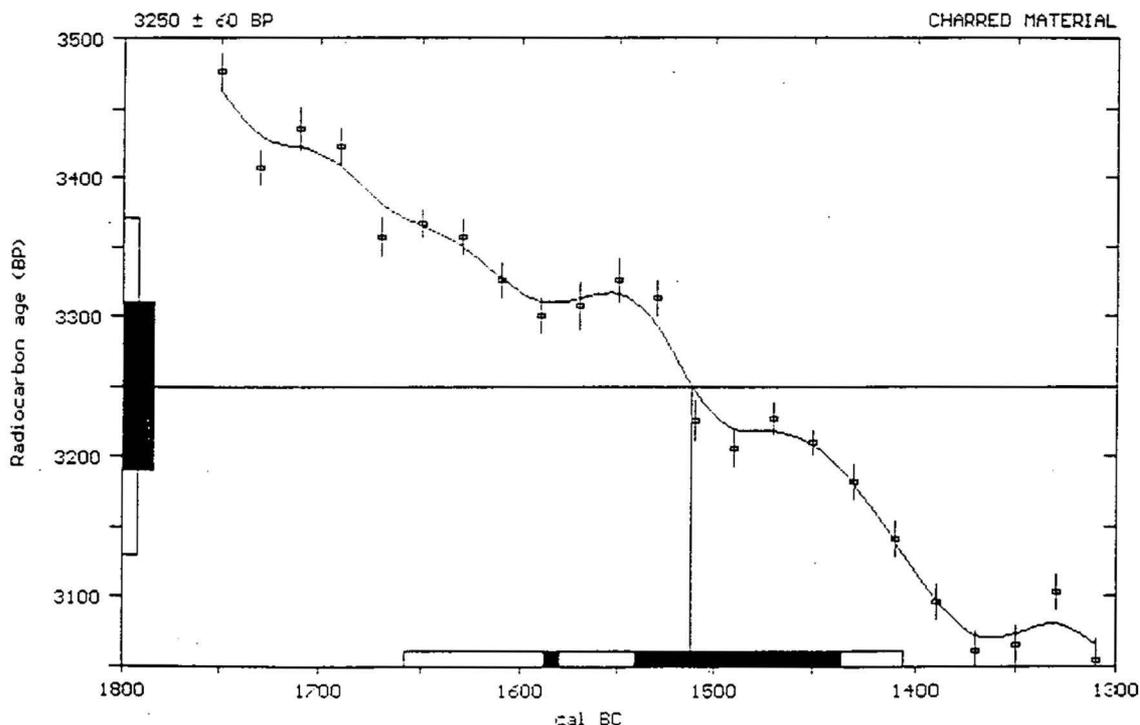
Calibrated results: cal BC 1660 to 1405
(2 sigma, 95% probability)

* C13/C12 ratio estimated

Intercept data:

Intercept of radiocarbon age
with calibration curve: cal BC 1510

1 sigma calibrated results: cal BC 1590 to 1580 and
(68% probability) cal BC 1540 to 1435



References:

Pretoria Calibration Curve for Short Lived Samples

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Beta Analytic Radiocarbon Dating Laboratory

4985 S.W. 74th Court, Miami, Florida 33155 ■ Tel: (305)667-5167 ■ Fax: (305)663-0964 ■ E-mail: beta@radiocarbon.com



Cambridgeshire
County Council

Archaeology

The Archaeological Field Unit
Fulbourn Community Centre
Haggis gap
Fulbourn
Cambridge CB1 5HD
Tel (01223) 881614
Fax (01223) 880946