

**MARGETTS FARM, BUCKDEN,  
CAMBRIDGESHIRE  
TL204666  
ARCHAEOLOGICAL MITIGATION  
INTERIM SUMMARY  
  
M.D.WILSON**

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## Preface

*Every effort has been made in the preparation and submission of this document and all statements are offered in good faith. Bedfordshire County Archaeology Service (BCAS) cannot accept responsibility for errors of fact or opinion resulting from data supplied by a third party, or for any loss or other consequence arising from decisions or actions made upon the basis of facts or opinions expressed in this document.*

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## Key Terms

Throughout this project design the following terms or abbreviations are used:

|                          |   |
|--------------------------|---|
| <i>BCAS</i>              | Bedfordshire County Archaeology Service   |
| <i>CAO</i>               | County Archaeology Office (of CCC)  |
| <i>CCC</i>               | Cambridgeshire County Council   |
| <i>Client</i>            | Lafarge Redland Aggregates Ltd  |
| <i>IFA</i>               | Institute of Field Archaeologists   |
| <i>MAP 2</i>             | <i>Management of Archaeological Projects</i> , 2nd edition HBMC, London 1994.<br>Guidelines on the management of archaeology produced by English Heritage   |
| <i>MPA</i>               | <i>Mineral Planning Authority (of CCC)</i>  |
| <i>Procedures Manual</i> | <i>Procedures Manual Volume 1 Fieldwork</i> , 1996. Bedfordshire County Council   |
| <i>Project Design</i>    | 1999/52 MFB 587, Margett's Farm, Buckden, Cambridgeshire Project Design<br>For Archaeological Mitigation, 21st September 1999, Produced for Lafarge<br>Redland Aggregates Ltd, Central Service Centre |



## 1 INTRODUCTION

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### 1.1 Scope of the Report

This report provides a summary of the results of an archaeological investigation carried out by BCAS in the autumn of 1999 at Margett's Farm, Stirtloe, Nr. Buckden, Cambridgeshire. The first phase of the programme of investigation (*post* 1.2) was only partially completed due to climatic and logistical factors. The intention of this report is to summarise the results at this stage of the project.

### 1.2 The Mitigation Strategy

This comprises a scheme of archaeological works that is programmed to precede the extraction of mineral from the site in two phases (Fig 1). Evaluation of the application area in 1992 identified two Areas of Archaeological Significance (AAS 1 and 2) and their archaeological potential is summarised in the Project Design.

### 1.3 Site Description

The site lies approximately one kilometre south-east of Buckden at TL204666. It is approximately 12 ha in extent. The land surface is generally flat, varying from 12.22m O.D to 14.46m O.D. The underlying gravels are of the first and second Great Ouse terraces. The main channel of the river now lies approximately one kilometre to the east. Up until the commencement of investigations the land was under arable cultivation. Phase two will have an additional season's farming.

### 1.4 Project Aims and Objectives

These are addressed in the *Project Design* which emphasises National and Regional Research Frameworks for the Iron Age periods.

## 2 RESULTS OF THE 1999 SEASON

### 2.1 Fieldwalking survey

Fieldwalking was carried out following the post-harvest ploughing across both extraction Phases 1 and 2 (hereafter P1 and P2). Two resolutions of grid were used. A 20m spacing was employed over the whole study area. A further sample using 4m spacing was carried out over c.0.72 hectares. A small concentration of flint artefacts was identified towards the eastern side of the extraction area, but otherwise the results were not significant (*post* 2.7.4). Following the processing of fieldwalking results, the release for extraction of a 30m strip along the northern edge of P1 was negotiated with the CAO.

### 2.2 Phase 1 Archaeological Excavation.

Topsoil stripping was undertaken in the northern part of AAS2 identified in the *Project Design*.

Approximately 3,300m<sup>2</sup> were stripped, before bad weather halted further soil removal.

Approximately one third of the northern part of AAS2 and the whole of the Phase 1 part of AAS1 remain to be investigated in Spring 2000.

#### 2.2.1 The nature of the archaeological remains.

Well preserved Iron Age landscape and settlement evidence survived over the western two thirds of the stripped area. Two phases of archaeological activity were identified. The earlier phase contained settlement features. This was followed in the second phase by the construction of a rectangular enclosure, bounded by a substantial ditch; probably designed to



contain stock. All relationships between features or deposits were investigated and recorded and all features were examined by a percentage sample excavation dependent upon their type. An isolated large feature, interpreted as a well, was fully excavated.

### 2.2.2 Earlier Phase

Two curvilinear features were partially exposed at the southern limit of excavation, interpreted as the drip gullies of Iron Age dwellings. They have a projected diameter of c. 12-14m. The gully to the east was particularly well defined, with a V-shaped profile and measured 0.8m wide and up to 0.45m deep.

A substantial curvilinear feature ran from the southern limit of excavation between the buildings. This may have been a contemporary ditched boundary. It was visible for 16m, before terminating. It was 1.3m wide and 0.55m deep.

Other possible settlement features identified nearby, consisted of two possible pits and a small scatter of postholes. The nature of the fills of two isolated pits at c.grid 520130/266690 and 520080/266680 may suggest they may also belong to this phase of activity, despite the absence of artefactual dating evidence.

Generally the features excavated have produced good assemblages of finds and charred plant remains (*post* 2.8). The settlement evidence probably represents a rural farmstead of early to middle Iron Age date.

The remaining portions of the buildings extend southwards beyond the baulk into P2. Similar gullies were encountered in the evaluation excavation of 1992. These are targeted at AA1 in P1 in the *Project Design*.

### 2.2.3 Later Phase

The second main phase of activity involved the construction of a rectangular enclosure. It measured c. 46m x 33m, with an entrance c. 4m wide in its east side. The surrounding ditch had a generally V-shaped profile, with steep sides and a narrow flat or concave base. It was up to c. 2.4m in width and c. 1.0m in depth. The nature and aspect of the deposits within the ditch suggested the former presence of an internal bank. The enclosure clearly cut the earlier curvilinear ditch boundary (*ante*, 2.4) and thus indicates a continuity of land-use.

The enclosure was identified on aerial photographs<sup>1</sup>, but not found in the trial trench element of the evaluation<sup>2</sup>. The aerial photos also suggest at least a second enclosure of similar type and alignment in P2.

### 2.2.4 Well

A large elliptical feature, interpreted as a well, was fully excavated. It measured 4.95m x 3.90m x 1.22m deep from the level of the excavation area. Initially the south quadrant partially excavated in the 1992 evaluation was re-excavated to its full depth. The eastern quadrant of the feature was then excavated to provide a full section along its axis. Environmental samples were taken at all stages of the work including column and bulk pollen samples, and phosphate samples from the excavated section (*post*. 2.9). The northern half of the feature was then

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<sup>1</sup> Palmer, R, 1992, 'Cropmark Study and Replot: Margett's Farm, Buckden, Cambridgeshire' (*Tempus Reparatum* client report)

<sup>2</sup> Coxah, M, 1992, 'An Archaeological Evaluation at Margett's Farm, Buckden, Cambridgeshire' (*Tempus Reparatum* client report)



excavated to its full depth. Samples were taken for the recovery of bone and waterlogged plant and insect remains.

Two provisional phases of construction are identified. The deposits probably indicate differential silting of parts of the feature due to an internal timber structure. The form of the feature suggested the entrance was from the east side, with a platform or levelled area in the north-east quadrant, possibly for the temporary storage of pitchers or water containers. Well-preserved wood was recovered from the lower deposits, which will undergo analysis for species identification (*post.* 2.4.4) and possible dendrochronological dating (*post.* 2.5.2). These samples include part of a split plank which is believed to have formed the tread of a step into the well.

## 2.3 Artefact Summary

Artefact classes recovered are quantified below:

| Find Type                          | Sherd / frag count | Weight (g) |
|------------------------------------|--------------------|------------|
| animal bone                        | 468                | 7972       |
| burnt stone                        | 2                  | 621        |
| fired clay                         | 34                 | 472        |
| worked flint                       | 10                 | 73         |
| pottery                            | 298                | 4860       |
| registered artefact (spindlewhorl) | 1                  | -          |
| shell                              | 6                  | 6          |

### 2.3.1 Pottery

- Good assemblage comprising sizeable sherds (average sherd weight 16g), with many vessels represented by more than one or two sherds.
- Although a number of contexts yielded only single sherds, at least three features are notable for their ceramic assemblage: quadrants of the well produced 172 sherds weighing 2.3kg, and ditches [518], and [550] produced 1.5kg and 686g respectively.
- Consistent date range of early / middle Iron Age, probably with a larger middle Iron Age component. Small quantity of residual late Bronze Age / early Iron Age types.
- Relatively high proportion of diagnostic forms, including both rims and bases, some complete profiles.
- Limited range of fabric groups present comprising principally sand, shell and calcareous inclusions. Assemblage is dominated by the latter. Small quantities of calcareous vessels are known from early / middle Iron Age sites in Bedfordshire, but the prevalence of this type at Buckden may suggest a source in this area. Potential for thin section analysis.
- General absence of good early / middle Iron Age assemblages from Cambridgeshire makes the Buckden material significant.

### 2.3.2 Animal bone

- Moderately sized assemblage (7.9kg) surviving in fair to good condition; fragments from waterlogged features are particularly well preserved.
- The majority of the assemblage (6.5kg / 286 fragments) derives from quadrants of the well [617], [658] and [677] and comprises long bones, including a few complete examples, skull elements, teeth, vertebrae and rib fragments.
- Species present include sheep / goat, pig, cow and horse.
- Remainder of sample from non-well deposits is highly fragmented and largely undiagnostic.
- Limited potential for analysis beyond identifying the basics (species, ?age *etc*).



### 2.3.3 Fired clay

- Small assemblage, including some structural daub (with surfaces, edges etc), majority (26 fragments) deriving from the well.

### 2.3.4 Worked flint

- Small, residual assemblage, mainly debitage, comprising cores, flakes and blades, some retouched. Also a denticulate and possible broken tool. Largely undatable, but some elements of late Mesolithic / Neolithic / early Bronze Age.

## 2.4 Environmental Sampling

Various specialists were consulted to address the Project-specific aims and objectives (*Project Design 2.3.3*). Preliminary assessment reports included in this report concern soil micromorphology, palynology and palaeobotany.

### 2.4 1 Soil Evaluation I

(Richard I Macphail BSc, MSc, PhD Institute of Archaeology, University College London , 27-11-99)

**Introduction** Margett's Farm, Stirtloe was visited on the 27th of November 1999. The Iron Age site, composed of a well, enclosure, house drip gullies and likely pitfills was discussed the BCAS Project Team. The soils comprise two elements, the well and the soils.

**Well** The well had been examined and sampled by Dr.G.M.Cruise on the 24th (*post 2.4.2*). Its morphology and fills had been discussed with Dr.Cruise previous to the site visit of the 27th, and unexcavated remains were examined with BCAS staff.

**Soils** A number of questions were addressed, namely, origin of clean soil below the Iron Age house floor, shallow feature fills with commonly irregular margins, a palaeochannel that had shown up on the AP survey, and whitish, cemented horizons and surfaces, apparently present above the archaeology.

**Results** The Soil Survey of England and Wales have mapped typical argillic brown sands (Efford 1 soil association, Hodge *et al.*, 1983) across the site, with typical calcareous pelosols (Hanslope soil association) on chalky till on the slopes to the west of the site and pelo-alluvial gley soils (Fladbury 1 soil association) along the course of the River Great Ouse to the east. The Efford 1 soil association is composed of mainly typical argillic brown sands (Efford soil series), but also included in this soil association are the clayey soils of the Fladbury 1 soil series. This has given rise to some complications in the soil landscape of the site (see below). For example, Robinson reports rising water tables and flooding from the Roman period onwards along the River Ouse with major alluviation during the medieval period (Robinson, 1992). At Margett's Farm a large ditch contains a secondary fill of likely alluvial clay.

1. The c.0.10 m of clean yellowish brown (10YR5/6) medium sandy loam soil below Iron Age house floor levels is natural subsoil B (Bt) horizon soil over gravely parent material. This is consistent with representative soil descriptions of the Efford soil series (Jarvis *et al.*, 1984, 145). Any finds in this horizon likely relate to biological mixing, as recent ploughing has increasingly brought modern ploughsoils closer to ancient subsoils .

2. Shallow feature fills with irregular margins seem to occur as two types. Type one is a brown (10YR4/3) sandy fill with charcoal, and may be interpreted as Iron Age primary/secondary fills of a feature cut into sands. Type two is a yellowish brown clay loam fill that is apparently a sterile. This may possibly reflect alluvial flooding towards the end of the Iron Age occupation.





3. The “palaeochannel” picked out by aerial photography probably relates to a gravel body laid down during the Pleistocene. Whitish material in the soils above archaeology levels reacts strongly to dilute HCl and can be identified as secondary CaCO<sub>3</sub> precipitation. One area of the north baulk shows, 0-20 mm (Ap) Dark yellowish brown (10YR4/4) overburden and ploughsoil, 20-53 mm (2Bgk) Yellowish brown (10YR5/6) sandy clay loam that contains common chalk gravel, with frequent patches and channel fills of white (10YR8/2) secondary calcium carbonate; becoming mottled with ochreous mottles at depth. Here, the suffix “g” refers to the mottles of gleying and the suffix “k” refers to the presence of secondary calcium carbonate. Nearby, a deep subsoil feature contains similar areas of chalky subsoil and secondary calcium carbonate precipitation. This subsoil feature is a likely outlier of chalky till (patterned ground). It is also probable that colluvium from the chalky till soils to the west has in part buried the site, along with local sandy colluvium, wind blown sand and perhaps occasionally alluvium. The presence of patchy chalky areas of till and the occasional influence of chalky colluvium across the site probably produced the firm, calcium carbonate cemented recent soils when evapotranspiration exceeded precipitation during dry summers. This has been reported from groundwater calcaric gley soils on relic Pleistocene head deposits in Oxfordshire (Avery, 1990, 329-331). This CaCO<sub>3</sub> cementation probably adversely affected root penetration by modern crops.

**Conclusions** Soils at Margett’s Farm, Stirtloe are ground water influenced argillic brown sands, hence the location of well(s) here. Iron Age features occur in, now, thin loamy sands present over gravel. This sandy soil makes up much of the primary feature fills, while secondary and later fills are clay rich and obviously influenced by alluviation. The combination of chalky soil material, relic of till and more recent chalky colluvium, and groundwater, has produced secondary calcium carbonate features, some in colluvium and soils burying the archaeological levels.

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### 2.4.2 Soil Evaluation II (Fig 3; Table 1)

(G.M. Cruise, BSc., PhD Institute of Archaeology, University College London December 1999)

**Introduction** The site was visited on 22nd November with Martin Wilson (BCAS). The well is situated on a natural spring-line lying c. 1km from the River Ouse, on the edge of what may have been a substantial early to middle Iron Age settlement. There appears to have been two principal phases of use, the first possibly comprising exploitation of a natural/semi-natural spring-sap hollow, and the second involving shoring up with timbers which, it is hoped, will provide a dendrochronological date.

**Aims** A number of topics relating to the well and its deposits were discussed with Martin Wilson as follows:



1. Earliest phases of sedimentation and well-use. The well appears to have been positioned in a possibly natural spring-sap hollow. Evidence should be sought to establish whether the hollow would have been exploited as an animal watering-hole (dung beetles were recovered during excavation).
2. The well deposits consist of approximately 1 m of mainly humic clays and silts but an anomalous, band of sands and gravels partially cuts through some of the central deposits. One interpretation is that this central band could be the remains of a collapsed wall infill (M.Wilson, pers.comm.).
3. The potential of the well deposits to contribute towards discussions on the environment of the settlement and land-use around the well, should be established.

**Discussion** In previous studies of wells at Stratton, Bedfordshire, and a possible watering-hole at Haynes Park, the author together with R.I. Macphail, has found that these questions may be most effectively tackled using a variety of analytical techniques (*e.g.*, Cruise and Macphail, 1998; Macphail and Cruise, In press/2000). In those studies the authors applied a co-ordinated analysis of the various deposits using, not only palynology, but also soil micromorphology and chemical signature analysis (total phosphate, phosphate ratios, magnetic susceptibility, loss-on-ignition) (Engelmark and Linderholm, 1996; Macphail *et al.*, In press). In this way the authors were able to compare palynology with clearly identified features such as dung and ashes in the Stratton wells, and to suggest variations in land-use/stable management across the site. Sampling of the well at Margett's Farm, therefore, employed a variety of strategies. A complete sample list is provided in Table 1 and the approximate position of the samples is shown in the Fig.3.

**Earliest phases** The outermost parts of the well section indicated sediment disturbance and poor preservation at the western end. The eastern end on the other hand appeared to comprise possible undisturbed, organic deposits. The eastern end was therefore selected for detailed sampling. Two kubiena samples (1 and 2) were taken from the basal deposits along with bulk chemical samples (x1a, x1b, x2). As these are humic and may contain palynological evidence of the environment of this early phase, these contiguous kubiena samples may be subsampled for palynology, if required. One bulk sample (x8) was also taken from the western end for comparison.

**Characterisation of central sands and gravels** (Table 1) Kubiena sample 4 and associated bulk samples x4a and x4b were taken through the minerogenic central deposits and overlying humic material. For comparison, the basal sample 3 and x3 were also taken.

**Environment and land-use** The deepest and apparently, least disturbed, humic deposits through the inner well were selected for detailed sampling. Two 40 cm cores (5 and 7) were removed from the lowest and uppermost sections using plastic drainpipe. The central portion of the section included a hard iron-pan, so a 24 cm long, undisturbed "lump" of deposit (sample 6) was dug out by hand. These cores may be subsampled for both palynology and soil thin sections as required. Associated bulk chemical samples were also taken throughout the sequence.

The humic nature of the inner well deposits suggests that pollen may be preserved. The origin of such pollen grains, however, can be potentially complex. For example, while some pollen may be blown from the immediate vicinity of the well and would reflect the local environment and land-use, it may also include material that is used in the well construction or dumped in the well (*e.g.* dung etc). One important factor to be considered will be the origin of the clay



and silt in the well deposits. This material is clearly in contrast to the rest of the site which is mainly sandy (*ante* 2.8). Such clays and silts could have derived either from the spring itself or from the River Ouse, either on the feet of animals or as a result of alluvial activity. If the last, such alluvial material could represent serious re-working and contamination of the well deposits. This question in particular, will need to be addressed at the assessment stage. In addition variations in the water-table, as indicated by the presence of an iron-pan, should be considered.

**Proposed assessment** It is proposed that the assessment should be undertaken jointly with R. I. Macphail.

**Earliest phases** It is suggested that 2 (7.5cm long) thin sections are made from samples 1 and 2, and bulk sample x1b should be chemically analysed. Two subsamples from 1 and 2 should be assessed for palynology.

**Characterisation of central sands and gravels** One thin section (sample 4) can be assessed along with 2 chemical samples (x4a and x3).

**Environment and land-use** It is suggested that 6 samples from throughout the sequence represented by samples 5, 6 and 7 are assessed for palynology. These should be supported by 3 chemical analyses. Results from the palynological and chemical assessment can be used to determine the requirements for thin sections at a later stage. These could be processed at the analytical stage if required.

### References

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**Table 1. Margett's Farm Well, Stirtloe: sample list.**

| Sample no. | Sample type | Local depth (cm) | Description   | Theme   |
|------------|-------------|------------------|---|---|
|            | kubiena     | 87-95            | 87-91cm; dark brown (10YR3/2) humic clay with charcoal<br>91-97 cm; strong brown (7.5YR5/6) sands & gravels | Earliest phases of sedimentation and well use.        |
| x1a        | bulk        | 91-97            |   | " " " "   |
| x1b        | bulk        | 87-91            |   | " " " "   |
| 2          | kubiena     | 78.5-86.5        | 78.5-84 cm; mixed stony, humic clay; colour as below;<br>82-86.5 cm; dark brown (10YR3/2) humic clay        | " " " "   |
| x2         | bulk        | 78.5-84          |   |   |
| 3          | kubiena     | 90-99            | dark brown, mixed humic sands and gravels   | Comparison with sample 4                              |
| x3         | bulk        | "                |   |   |
| 4          | kubiena     | 77-85            | 77-78 cm; dark brown humic clay & silt;<br>78-85 cm; light, brownish grey (10YR6/2) sands                   | Characterisation of central band of sands and gravels |



| Sample no. | Sample type | Local depth (cm) | Description  | Theme   |
|------------|-------------|------------------|--|---|
|            |             |                  | & gravels  |   |
| x4a        | bulk        | 78-85            |  | " " " "   |
| x4b        | bulk        | 77-78            |  | " " " "   |
| 5          | column      | 54-94            | 54-78cm; dark grey (10YR4/1) humic silts & clay<br>78-94cm; dark grey stony humic silt & clay  | Environment & land-use around the well; composition of well deposits. |
| x5a        | bulk        | 78-94            |  | " " " "   |
| x5b        | bulk        | 54-78            |  | " " " "   |
| 6          | column      | 40-62            | 40-44cm; light, brownish grey clay & silt<br>44-46cm; dark yellowish brown (10YR4/6) iron pan<br>46-62cm; dark grey (10YR4/1) humic silt | "also changes in water table of well.                                 |
| x6a        | bulk        | 46-62            |  | " " " "   |
| x6b        | bulk        | 40-44            |  | " " " "   |
| 7          | column      | 0-40             | Light brownish grey (10YR6/2) clay & silt  |   |
| x7a        | bulk        | top of core      |  | " " " "   |
| x7b        | bulk        | base of core     |  | " " " "   |
| x8         | bulk        | c. 80-85cm       |  | Earliest phases of sedimentation and well use.                        |

### 2.4.3 Plant Macro and Invertebrate Analysis

Processing was undertaken in accordance with the *Procedures Manual* and the assessment report is currently being prepared by Dr. Mark Robinson (University Museum, Oxford).

### 2.4.4 Assessment of Waterlogged Wood

(Rowena Gale, *Folly Cottage, Chute Cadley, Andover, Hants SP11 9EB*)

Waterlogged wood was recovered from the waterhole. Thirty one samples (including 42 fragments of wood) were considered for species identification. The wood was in reasonably good structural condition and identification of most pieces should be possible. The samples mostly consisted of fragments measuring 30mm or more in width, although some pieces were larger and retained bark. At least two samples included narrow roundwood.

**The potential of the wood samples.** The condition of the material should allow most, if not all, of the wood fragments to be identified.

**The aims of the identification.** It is likely that the wood derives from both natural and artefactual sources. By examining the morphology and structure of the wood it may be possible to determine its origins. From this data it would be possible to provide environmental details and possibly information about regional woodland management (i.e. coppicing regimes: rotation, season of felling, etc.). The identification of worked wood may suggest likely uses and origins, e.g. hurdles, buckets, etc.

## 2.5 Scientific Dating

### 2.5.1 Potential for absolute dating.

An initial on-site assessment of the potential of independent and absolute dating mechanisms was discussed with Dr. Pete Murphy (University of East Anglia). Further discussions followed with Alex Bayliss (Ancient Monument Laboratory of English Heritage and Cathy Groves (University of Sheffield). For obvious reasons it was advised against attempting to acquire radiocarbon dates for the early-middle Iron Age periods (pers. comm. Alex Bayliss)



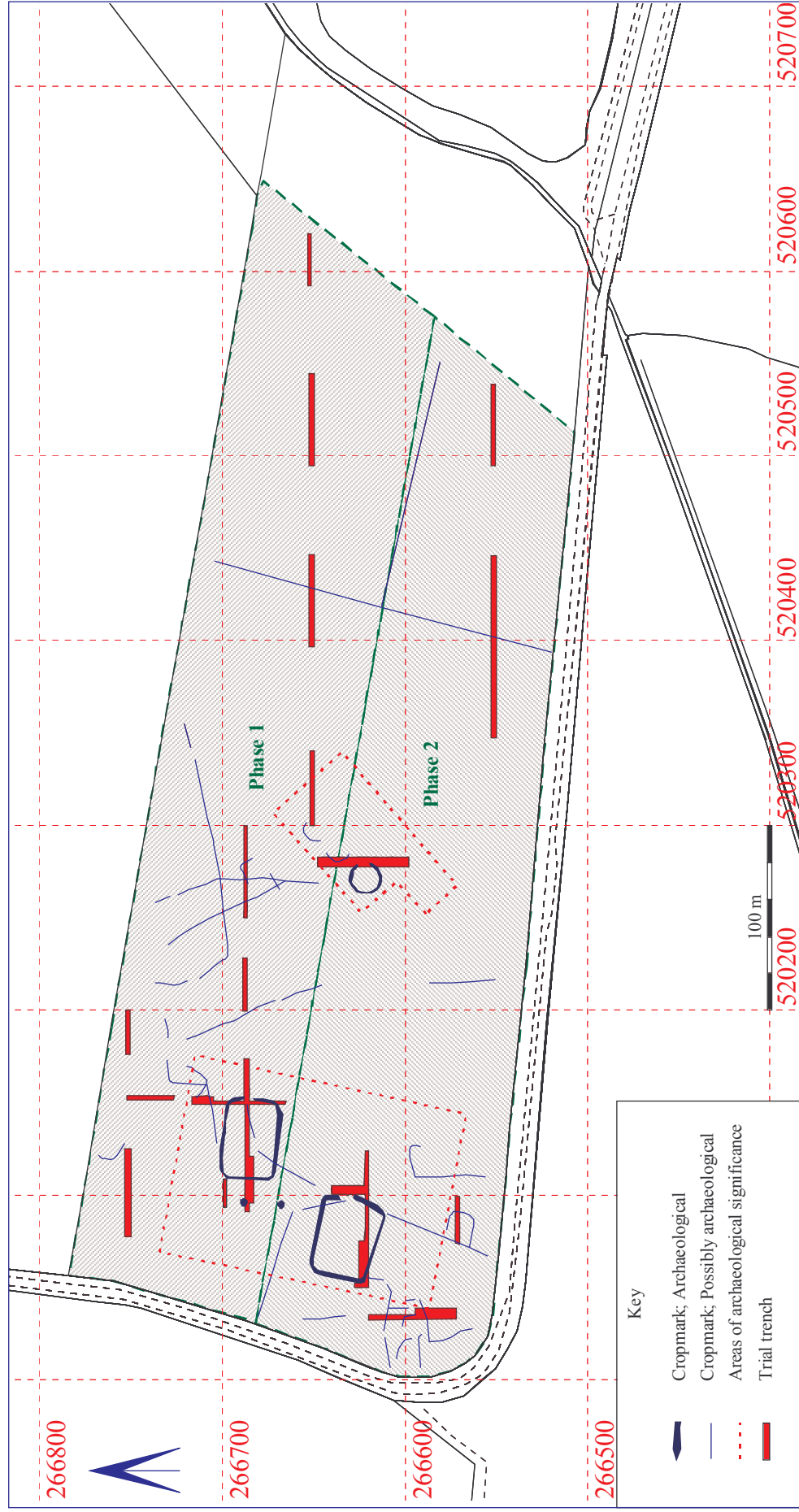
### **2.5.2 Dendrochronological dating.**

A suitable wood sample (context 1000, sample 130) contained 73 rings and the sapwood was submitted to the University of Sheffield for analysis. At the present time however, the network of well-replicated chronologies available for the Iron Age is very poor (pers. comm. Cathy Groves). Clearly, more data is required for this method of dating the Iron Age and in the long term the sample will probably assist in the creation of a dendrochronological reference for the region.

### **2.6 Archive Consolidation**

On completion of the 1999 fieldwork, the archive was consolidated and checked for internal consistency in accordance with *MAP2* and a computerised record of all field data was created.





**Fig. 1** Application area showing extraction phases, cropmarks, trial trenches and areas of archaeological significance.

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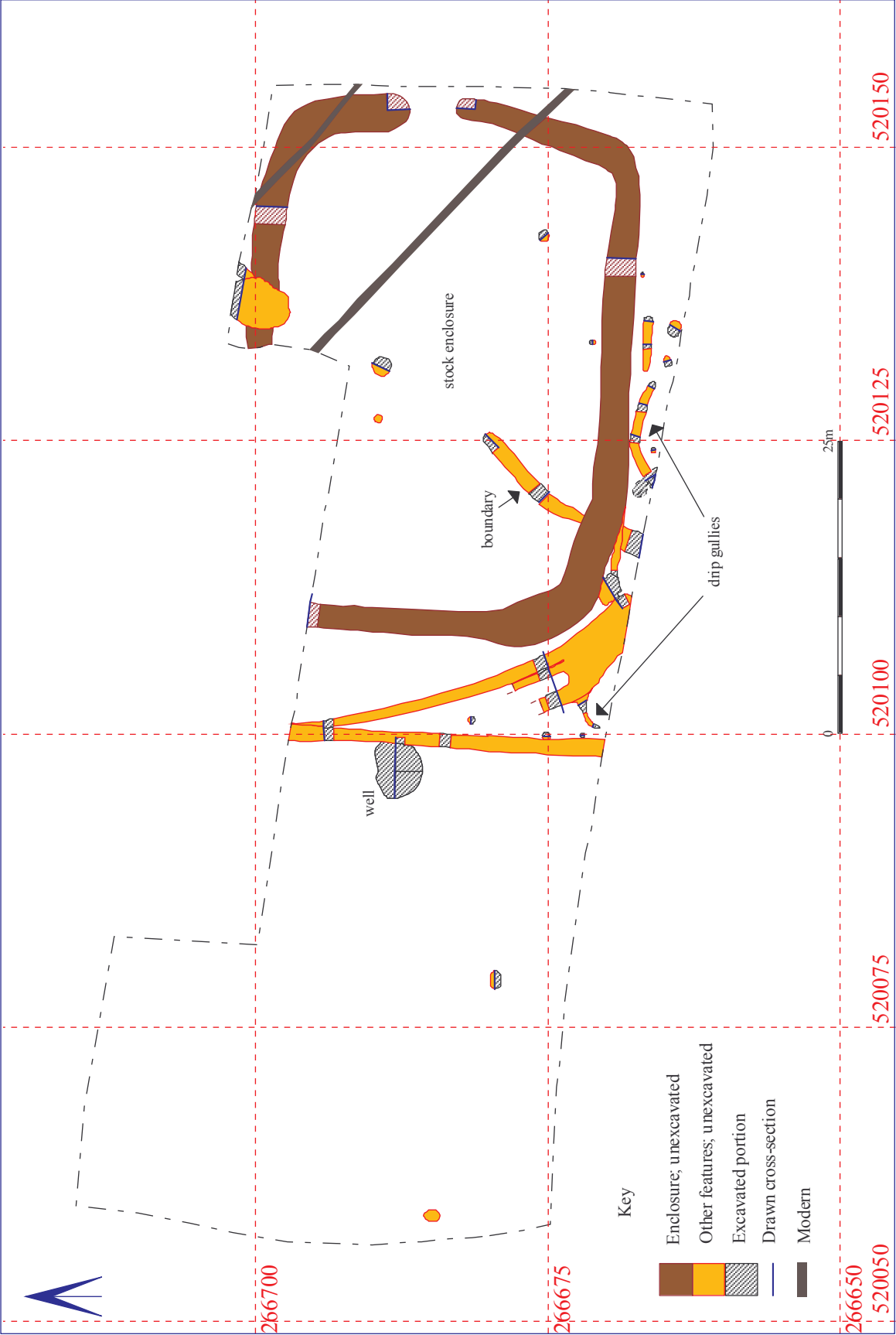


Fig. 2 Archaeological features in phase 1 (AAS2).





**Fig. 3** Section through well deposits showing location of soil samples and pollen samples.