CUTLER HAMMER SPORTSGROUND

ARCHAEOLOGICAL FIELD EVALUATION

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Preface

Every effort has been made in the preparation of this document to provide as complete an assessment as possible, within the terms of the specification and project design. All statements and opinions in this document 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.

This report has been prepared by Mike Luke (Project Officer), Gary Edmondson (Project Supervisor) and Jackie Wells (Artefacts Supervisor). All BCAS projects are under the overall management of Drew Shotliff (Project Manager). Joan Lightning undertook digitisation of site plans and produced all illustrations in this report.

Fieldwork was directed by Mike Luke with the geophysical survey undertaken by West Yorkshire Archaeology Service and trial excavation supervised by Gary Edmondson. Investigation and recording was undertaken by Ian Beswick, James Pixley and Julian Watters (Project Technicians). All artefacts were catalogued and analysed by Jackie Wells.

Bedfordshire County Archaeology Service would like to acknowledge the co-operation of the present tenants (The Cutler Hammer Sports Club), the Client's property consultant (Fuller Peiser) in particular Nicola White and the County Archaeological Officer (Martin Oake).

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Key terms

Throughout this project the following terms or abbreviations are used:

CAO	County Archaeological Officer (of BCC)
BCAS	Bedfordshire County Archaeology Service
BCC	Bedfordshire County Council
Client's Consultants	Fuller Peiser Property Consultants
IFA	Institute of Field Archaeologists
Project Design	Document: *Project Design and tender for archaeological field evaluation of land at Cutler Hammer Sportsground, Kempston.*
The Specification	Document: *Specification for Archaeological Field Evaluation of land at the Cutler-Hammer Sports Ground, Kempston, Bedfordshire.*

Non-Technical Summary

Prior to the recent evaluation the County Council's Historic Environment Record contained details of several archaeological sites adjacent to the proposed development area (Fig. 1). These included the extensive Roman settlement centred on Kempston Church End.

The evaluation has located and assessed the nature, date and extent of archaeological remains within the development area. This was undertaken through two investigative methods; geophysical survey and trial excavation. The geophysical survey was subject to a separate detailed document which is only summarised in this report. Appendix 2 (at the back of this report) contain a brief explanation of archaeological terms and procedures used during trial excavation recording and in this report

The earliest human activity identified comprised up to three Bronze Age burial monuments (known as ring ditches). Although no burials were located, these are frequently found within the interior, as part of the silting up of the ditches and adjacent of the monument. It is fairly unusual to find three monuments adjacent to each other.

It is likely early-middle Iron Age settlement is located within the development area as pottery of this period was identified. However, it is not until the late Iron Age/early Roman period that extensive settlement is present. This appears to have continued throughout the Roman period. Features including ditches, pits, postholes and a hearth are present. The artefactual assemblage includes pottery, a coin and a quernstone. The nature and arrangement of these features suggest the Kempston Church End settlement continued into the development area. If so this would extend over 16ha and with its regular layout would represent a significant settlement, possibly a large village or small town.

A number of features truncated alluvial deposits which are often believed to derive from river flooding in the later Roman period. These features including post-built structures may therefore be Saxon in date.

Although the burial monuments and settlement activity are not of schedulable quality, they do have the potential to address a number of national and regional research aims. Regionally the Roman settlement is of particular interest because it has only been partially examined by evaluation or salvage recording.

The medieval furrows within the development area represent evidence for agriculture and are only of local significance.

1. INTRODUCTION

1.1 Background to the project

Fuller Peiser (Property Consultants) have submitted a planning application for housing development over part of the Cutler Hammer Sportsground.

The *CAO* of *BCC* advised that the area under consideration was archaeologically sensitive. It was further advised that any planning application for the site would need to be accompanied by further information on the archaeology of the site. This is in line with Local Plan policy and the guidance contained in PPG 16 *Archaeology and Planning*. In order to assess the archaeological implication of the proposed scheme a *Specification* was issued by the *CAO* for an Archaeological Field Evaluation.

On 16th April 1998 *BCAS* were appointed by The Client's Consultant to undertake the evaluation. This would comprise geophysical survey and trial excavation (as stipulated in the *Specification*).

This report presents the results of the evaluation and their archaeological significance.

1.2 Site location (Fig 1)

The development area comprises the western part of the Cutler Hammer Sportsground (from now on referred to as the Study Area). This is located on the western edge of Kempston (part of Bedford) in central Bedfordshire. The Study Area is 2.2ha in extent centred on TL 0203 4737.

Topographically the Study Area is situated within the floodplain of the River Great Ouse. The river is located c. 125m to the north. The land is fairly flat at c. 30m AOD, although there is a very slight rise to the west and south.

The geology of the area is alluvium and valley gravels with occasional outcrops of Oolitic Limestone.

1.3 Archaeological background (Fig 1)

BCC has a catalogue of archaeological sites and historic buildings, the Historic Environment Record (HER), in which all known discoveries in Bedfordshire are recorded. The Study Area has not produced any archaeological finds or features, but it is "in an area of great archaeological interest" (*Specification* 3.1).

An extensive area of Roman settlement is known to the north west of the Study Area, possibly centred on Kempston Church End (HER 162). During the 2nd and 3rd Centuries AD this extended over an area of 10ha to the west of the River Great Ouse. Two possible Roman fords are recorded in the river (HER 814) and the backchannel (HER 10303). The former is a Scheduled Ancient Monument. The settlement comprised a system of rectangular enclosures

defined by ditches and gravel tracks. The enclosures contained buildings, pits, hearths, wells and burials. Although the western and eastern limits of the settlement have been generally defined the southern boundary is uncertain. Recent archaeological field evaluation revealed it continued to within, at least, 300m of the present Study Area (BCAS 1998). The discovery of Roman artefacts (including coins and broaches) to the north of Walnut Tree Cottages (HER 5974) suggests the settlement may have continued towards the present Study Area.

To the west, The Bury, is believed to be the site of one of the medieval manors of Kempston. Roman and medieval artefacts have been found in the vicinity of the present building (HER 163 and 7030). Recent archaeological field evaluation (BCAS 1998) located settlement type features of this date to the north-west of The Bury. A skeleton was found during building work immediately outside the present building (HER 11588).

During building work in Brook Drive 250m to the south a number of inhumations were uncovered suggesting the location of a cemetery (HER 16110). This may be medieval in date. Finds of prehistoric, Roman and early medieval material have been made at King William's Close (HER 14853) 400m to the east of the Study Area.

On the opposite side of the River Great Ouse within the Biddenham Loop Neolithic, Bronze Age, Iron Age and Roman burial and settlement is known. This has been partially investigated to the north in advance of house building. To the south of the Loop, opposite the present Study Area, a Roman villa has been suggested (HER 3663).

1.4 Project objectives

The *Specification* states that the Study Area is archaeologically sensitive but that insufficient information is available to assess the impact of the development. Therefore the following information is required from the field evaluation.

- the location, extent, nature, and date of any archaeological features or deposits that may be present (*Specification* section 4.3.1)

- the integrity and state of preservation of any archaeological features or deposits that may be present (*Specification* section 4.3.2)

1.5 Overall method statement

A detailed method statement accompanies the report on the two investigative methods utilised during this field evaluation. Throughout the project the standards set in the IFA *Standard and Guidance for Field Evaluation* have been adhered to. Also those standards outlined in the BCAS *Procedures Manual for Archaeological Fieldwork and the Analysis of Fieldwork Records* (1996), the IFA Code of Conduct, English Heritage's *Management of Archaeological Projects* (1991) and *Preparing Archaeological Archives for Deposition in Registered Museums in Bedfordshire* (1993) were adhered to.

1.6 Structure of the report

After the introductory Section 1 this report presents the results of the geophysical survey (Section 2) and trial excavation (Section 3). Section 4 presents a spatial synthesis of results combining evidence from both investigative techniques. A chronological synthesis of the results is presented in Section 5. The final section of the report discusses the significance of the results in light of known national and regional criteria. The detailed trench descriptions are placed at the back of the textual section of the report. All photographs and figures are bound at the very back of this report.

2. GEOPHYSICAL SURVEY

2.1 Introduction

A specialist contractor, West Yorkshire Archaeology Services (WYAS), undertook the geophysical survey on 29th and 30th April 1999. The full results are submitted in a separate report (WYAS 1999). For more detailed information, technical data and scaled plots of the results the specialist report should be consulted.

2.2 Method statement

Detailed geophysical survey was conducted over the entire Study Area. Geoscan FM36 fluxgate gradiometers with ST1 sample triggers (with automatic readings set for 0.5m) were used on zig-zag traverses 1m apart. Therefore eight hundred readings were taken within each 20m by 20m grid.

Office based computer software was used to display the data in a variety of formats. The specialist report includes X-Y trace plots which show the "raw" data with no additional processing. Greyscale (Fig 2) and dot density images show data where processing has removed spurious errors caused by instrument drift and inconsistencies caused by poor field conditions.

WYAS have interpreted the results of the geophysical survey and assigned the identified anomalies to various interpretations. These include:

- Dipolar, isolated- ferrous material in topsoil
- Area of magnetic disturbance- ferrous material in topsoil/subsoil
- Positive, isolated- archaeological/geological
- Area of magnetic disturbance- archaeological/modern ferrous
- Positive, linear- possible archaeological ditch
- Positive, isolated- pit/area of burning
- Area of magnetic enhancement- area of archaeological industrial activity
- Positive, linear- probable archaeological ditch

2.3 Limitations of the geophysical survey

At the time of survey the area comprised recently cut playing fields. This proved easy to walk over and will have ensured readings were consistent. The Study Area was bounded on two sides by wire mesh fencing. This and the presence of modern ferrous material along all three boundaries will have affected the results in these areas. A zone immediately adjacent to the boundaries was therefore not surveyed. Other areas which were avoided due to ferrous content were the goal posts and cricket nets.

Generally the Study Area contained a noisy and "spiky" background magnetic susceptibility. This may be a result of the underlying geology (river gravels) and modern ferrous material within the topsoil. Areas of magnetic disturbance

were located mainly along the northern and eastern site boundaries, next to the cricket nets and the goal posts (F on Fig. 3). Isolated positive responses adjacent to these areas are often caused by ferrous material buried at depth. They can however, also be caused by archaeological features.

2.4 *Results of the geophysical survey* (Fig 2 and 3)

The detailed results are presented in the separated report (WYAS 1999), the following represents a summary of those geophysical anomalies which WYAS suggested could be of human origin.

2.4.1 Probable archaeological anomalies

Linears

A number of linear anomalies are suggestive of backfilled ditches. These are mainly located to the north of the Study Area. They are usually aligned from south-west to north-east (A), but there are occasionally west north west to east south east alignments (B). The majority of the linear anomalies are intermittent (often less than 35m in length) although a number are on similar alignments suggesting they are part of the same ditch.

In at least two areas two linear anomalies are parallel and between 2m and 4m apart. This is suggestive of trackways defined by ditches.

The arrangement of linear anomalies is suggestive of rectilinear enclosures with sub-divisions and defined by trackways.

Curvi-linear anomalies

In the north-western corner of the Study Area three (very weak) positive curvi-linear/circular anomalies (D) were identified. Caution was attached to the interpretation of these as the stronger parts of responses often "play games" with the eye, forming shapes which are not really present. WYAS suggested the southern "circle" was the most convincing as it was clearly present on the X-Y plot. If of human origin the most likely interpretation would be "ring ditch" monuments, a type of Bronze Age burial monument.

Non linear anomalies

The majority of the "isolated" responses were interpreted as resulting from underlying geology and/or ferrous material in the topsoil. The majority of pit-type anomalies (E) were located close to the western linear anomaly (A). Three areas of magnetic disturbance (C) were located adjacent to probable linear anomalies and were therefore more likely to also be of human origin. WYAS postulated these may be caused by industrial activity.

2.4.2 Possible archaeological anomalies

Linear anomalies

A number of positive linear anomalies were either relatively weak or not associated with other anomalies to suggest a probable human origin. It is perhaps significant that these are on similar alignments to the stronger

anomalies assigned to probable archaeological origin. The possible circular ditches (D) have been discussed above.

Non linear anomalies

There are a number of isolated positive responses often close to areas of magnetic disturbance interpreted as of modern origin. These are not typical iron spikes and possibly may represent pits or areas of burning.

2.5 Summary

The geophysical survey has identified ditch type and pit type anomalies, many of which are likely to be of human origin. These were generally concentrated in the northern three quarters of the Study Area.

The noisy magnetic background caused by river gravels and modern ferrous material in the topsoil made interpretation difficult as many of the anomalies are weak. However, it is likely that at least one "ring ditch" and possibly two others were located to the north-west. Further ditches are linear and appear to form rectangular enclosures or field systems. Areas of magnetic enhancement may indicate industrial activity, and isolated responses may indicate pit type features.

3. TRIAL EXCAVATION

3.1 Introduction

Trial excavation was undertaken between 14th and 18th June in warm, at times very hot dry weather. A total of 10 trenches or areas were opened and investigated (Fig. 3). Details of all trenches and the deposits/features they contained are recorded in Appendix 1 at the end of this report.

3.2 The initial trench strategy (Fig. 3)

The location of the initial 8 trenches was determined from the results of the Geophysical Survey (Table 1). Prior to commencement the trench strategy was approved by the CAO and Client's Consultant. Trenches were positioned for the following reasons:

Tr. No	Investigative reason
1	Possible circular ditch-type anomalies (D)
2	Probable linear (A) and modern metallic debris
3	Probable ditch-type anomalies (A)
4	Possible trackway formed by probable ditch-type anomalies (B)
5	Possible trackway formed by probable ditch-type anomalies (A)
6	Area of possible industrial activity (C)
7	Possible ditch-type anomalies (A?) at southern extent of Study Area
8	South-eastern Study Area

Table 1: Initial trench strategy

3.3 Contingency trenches

Once examination of the initial trenches was complete a number of extensions and additional trenches were requested by the CAO (Table 2). This was in line with the contingency arrangements outlined in the *Specification*. These were undertaken after agreement from the Client's Consultant.

Tr. No	Nature	Reasons
2 and 6	Linear extensions to trenches	Clarify nature of features
3	Box extension at west	Clarify if posthole in this trench was isolated or part of a building.
4	Box extension centrally	Clarify if postholes in this trench was isolated or part of a building.
9	New trench	Investigate if features continue up to the western limit of Study Area.
10	New box	Investigate an open area to test for presence of smaller features.

Table 2: Contingency trench strategy

3.4 Method statement

- All aspects of trial excavation were carried out in accordance with the *Specification* and *Project Design* for the evaluation.

- The trenches were opened with a mechanical JCB excavator, fitted with a toothless ditching blade, operating under archaeological supervision.

- Topsoil and overburden were removed by machine down to the top of any natural subsoil (for example alluvial deposits), or archaeological deposits, whichever was encountered first. Alluvial deposits were examined and then removed by machine. The base of the majority of the trenches was therefore natural gravel.

- Topsoil was stockpiled on the opposite side of the trench to the subsoil. Backfilling took place in reverse order with deposits being compacted with the bucket of the JCB.

- Trenches varied in length from 10m to 35m. They were all 1.6m wide but of varying depth.

- Sufficient of archaeological features was excavated to examine the nature of the feature and filling deposits, provide an opportunity for the recovery of artefacts and ecofacts and examine the relationship with other features.

- To ensure the integrity of archaeological remains or features, the maximum possible pre-excavation recording was undertaken. Features such as hearths, and the key relationships were examined in the least destructive way possible.

- No human remains were encountered..

- All archaeological deposits were recorded using a unique recording number starting at 1.

- Generally the trenches were numbered in a continuous sequence from 1 to 8 in a clockwise direction from the north-west, with the exception of the contingency trenches.

- Each trench was allocated a block of recording numbers in a continuous sequence. Therefore feature 205 (a posthole) is located in trench 2, context 941 (a ditch fill) is located in trench 9 etc.

3.5 *Results of the trial excavation*

In the following discussion the results of the trial excavation have been grouped by broad feature type.

3.5.1 Topsoil

The thickness of the topsoil varied across the Study Area ranging from 0.13m in the south-west to 0.5m in the north-west. Generally the thickness appears to have been in the range 0.25 to 0.35m. In trench 1 it is likely that the 0.5m thickness included other material, perhaps alluvium, which was not readily distinguishable.

In five of the trenches (3, 4, 5, 7 and 10) deposits identified as subsoil were defined. The deposits occurred in trenches towards the centre and east of the Study Area. They ranged in thickness from 0.15 to 0.3m. The colour was variable ranging from mid brown to red brown and is likely to be the result of variations in the underlying material. Generally these deposits had moderate or frequent inclusions of stone. This material is likely to be derived from agricultural activity, possibly in the medieval period.

Pottery ranging in date from Roman to post medieval was recovered from the topsoil.

3.5.2 Modern disturbance.

There was little evidence of disturbance associated with the current use of the Study Area. A posthole [207] was located within the topsoil of trench 2 which appeared to have functioned as a goal post. A redundant small diameter electricity cable was also identified within topsoil layer (200). Modern artefacts including a concrete block within the upper deposits of trench 7,. were identified within the topsoil but not kept.

3.5.3 Alluvium

The only trenches which did not contain alluvial deposits were 3, 5 and 10, situated centrally and to the east. The material is classed as alluvial rather than subsoil due to the colour contrast with the underlying deposits and the absence of stone inclusions. This material would be deposited by low energy floodwater. The thickness of the material ranged from 0.15m (trenches 1 and 2) in the north, close to the present course of the River Great Ouse, to 0.9m in trench 7 near the southern boundary of the Study Area. In trench 7 two distinctive deposits were identified with an upper yellow brown matrix (702) and a more extensive red brown deposit (703). A flint core was recovered from (702). Within the lower deposit an area of heat affected alluvium was identified (704). A Roman coin (RA 1) was recovered from (101) and a small sherd of late Iron Age/early Roman pottery from (801).

The increase in thickness of the alluvial deposits away from the river may suggest that later higher energy flooding eroded such deposits in the north of the Study Area. Later agricultural activity will have mixed the upper portion of the remaining alluvium.

The alluvium usually sealed archaeological features, although in trenches 4 and 9 structural activity truncated such deposits.

3.5.4 Furrows (Figs. 4 and 5)

Nine features were interpreted as furrows due to their profile and dimensions. Eight were aligned north-south, parallel to the surviving furrows within the cricket pitch. In contrast [127] which had a similar profile and dimensions to the other features interpreted as furrow, was on a east-west alignment. If this is genuinely a furrow it may indicate a different landuse block to the others in the Study Area.

3.5.5 Natural strata

The gravelly deposits were variable within the trenches, with a mixture of red brown clayey gravel and patches of the underlying white oolitic gravel. Several of the trenches contained irregular pockets of stone-free silty material.

3.5.6 Ring ditches (Fig. 4)

Trench 1 was positioned to investigate two penannular geophysical anomalies (ring ditches). Ditches were located which correlated with the positions of the geophysical anomalies and therefore confirm the presence of two ring ditch monuments.

Situated at the northern end of the trench feature [111] would correlate with the southern ditch of one of these monuments. The ditch was concave in profile 2.75m wide and 0.65m deep. Of the three fills identified only the secondary (113) contained artefacts (three flint flakes). The geophysical survey suggest this ring ditch would be at least 22m in diameter.

Ditches [115] to the south, and [109] or [130] in the north form a southern ring ditch monument. Although it is presumed these form part of the same ditch their profiles were not consistent. For example [115] had a more irregular concave profile between 1.65m and 0.55 deep (Photo 1). In contrast [109] though truncated had a narrower and deeper more V-shaped profile measuring at least 0.8m wide and probably 0.87m deep (Fig 7 section 15). More than one fill was visible within ditch [115] (Fig 7 section 12). It is possible that a primary deposit (119) located against the upper northern edge of [115] was derived from internal mound material (Fig. 7 section 12). Within ditch [115] secondary fill (118) and tertiary fill (116) produced flint flakes. The geophysical anomalies suggest the southern ring ditch had a diameter of approximately 22m.

Generally the fills of the ring ditches had a more reddish brown colour that the others exposed in the trial trenches. It is therefore possible that pit [124] was associated with the northern ring ditch.

3.5.7 Boundaries (Fig 4 and 5)

Sixteen ditches were identified, trenches 7 and 10 being the exceptions in not locating such features. Three main alignments could be identified, which

accounted for fourteen of the features.

Tapering east-west ditch [121] had a concave profile and shallow depth (0.24m deep). The width narrowed from 1.70m in the west to 1.40m in the east suggesting it may have been tapering towards a terminal in the east. Although no artefacts were recovered its homogeneous brown fill was similar to that of the ring ditches.

Ditch [103] had steep sides and was 3.9m wide by at least 0.66m deep (Fig. 7 section 15). It was filled by a series of deposits, several of which contained animal bone and Roman pottery. The dark occupation rich tertiary fill (105) contained moderate charcoal flecks, which an environmental sample <1> was taken. The geophysical survey suggested this feature was at least 9m in length.

Three ditches within the Study Area had an east-west alignment. Within trench 4 ditch [405] was recut by [403] slightly to the south. The earlier ditch was slightly deeper with a more concave base (Fig. 8 section 5).

Five ditches located in the eastern part of the Study Area were aligned from north to south. Ditch [203] defined a substantial boundary 2.8m wide and 0.6m deep with a concave profile. The main fill (204) contained a single very small sherd of early to middle Iron Age pottery. The alignment of this ditch is similar to that of [803] 150m to the south. Only the eastern edge of [803] was excavated, but this again suggests a substantial feature (Fig. 9 section 3). A small sherd of late Iron Age pottery was recovered from the fill. The geophysical survey did not support the possibility that these were the same ditch. Another substantial ditch [503] was also on a similar alignment (Fig. 9 section 4). This contained a relatively occupation rich upper fill (505) which included late Iron Age pottery and iron slag. This corresponded with a geophysical anomaly to the north.

Ditch [308] similarly aligned from north to south measured 2.1m by 1.6m deep. Although only a small fragment of bone was recovered from the naturally accumulated fill it was stratigraphically earlier than hearth [305] which was actually dug into its disuse fill.

Ditches aligned from west-north-west to east-south-east were identified in trenches 6 and 9. These varied in size from 0.67m wide and 0.27m deep [605] to 3m wide and of unknown depth [905]. The three ditches in trench 9 were closely spaced and are therefore unlikely to be contemporary. They may indicate the re-establishment of the same boundary. It is likely that [907] is the continuation of [616] to the east. The unexcavated upper ditch fills of [903 and 905] contained both early-middle Iron Age and Roman pottery as did the tertiary and secondary fills of [616]. The tertiary fill (617) also contained frequent burnt stones.

Within trench 6, ditch [603] was recut to the north by [605]. This [603/5] appears to be parallel to ditch [616] 2.5m to the north, suggesting they may be contemporary and defining a narrow trackway. Two linear geophysical

anomalies suggest this continued to the east and may relate in some way to ditch [403/5].

3.5.8 **Gullies** (Fig. 5)

A number of linear features were sufficiently small in dimensions to suggest they did not function as boundaries. These are termed gullies purely on the basis they were less than 0.4m wide. In trench 6 two parallel gullies [612] and [614], 1.4m apart, were aligned from east-north-east to west-south-west. They had shallow concave profiles between 0.25m and 0.42m wide and 0.04 to 0.09m deep. These are truncated by furrows, and fill (617) contained late Iron Age pottery so are clearly not modern in origin. However, their purpose is uncertain. A similar feature [414] was on a similar alignment to the furrows but appeared to be sealed by alluvium (Fig. 8 section 8).

3.5.9 **Postholes** (Figs. 4 and 5)

Six of the trenches contained postholes ranging from one to fourteen in number.

Five postholes were recorded in trench 2. At the west two [205, 207] had similar dimensions but slightly different profiles. The fills did not contain dateable artefacts although [207] was partially truncated by ditch [203]. Further east in this trench three larger postholes [216, 218, 220] were identified. These were generally sub-rectangular in shape and were less than 0.6m in diameter.

A tentative L-shaped arrangement formed by three postholes [303, 311, 315] was identified in trench 3. These were less than 0.4m in diameter and were only 0.06m deep. The contingency box suggested these may have truncated the subsoil, but they were filled by very similar material which made identification very difficult.

The four postholes in trench 4 did not form an obvious pattern but were similar in nature and dimensions. These were generally 0.4m in diameter but the depth varied between those which had been identified truncating the alluvium and those which had not. Those not observed before the alluvium was removed [409 and 411] (Fig. 8 section 6 and 7) were considerably shallower than those which were recorded in section [407] (Photo 3). Only [411] was situated further than 1m from the others. This truncated the fill of ditch [403]. It is possible all the postholes originally truncated the alluvial deposits (402). None contained dateable artefacts.

Only one posthole [621] was located in trench 6 and this was truncated by ditch [616] which contained late Iron Age pottery.

The largest number of postholes (14) were recorded in contingency trench 9. All the postholes truncated the alluvium but had similar fills to it and were therefore difficult to distinguish. The postholes were generally less than 0.2m in diameter and were filled by a deposit very similar to the alluvium. Two parallel rows approximately 3.5m in length were identified [911, 915, 919,

923, 929] and [913, 917, 921, 925, 931] each of five posts c.0.7m apart and orientated north-north -east to south-south-west. The spacing and regularity of these posts would suggest they may have formed part of a timber building. The relatively short length of the alignments indicate these represented the ends or partitions rather than sides of the building.

Three other postholes in trench 9 did not conform to these alignments. For example [931, 933, 935] were more widely spaced and may form part of a north-south fence-line. Possibly unrelated to these alignments, feature [937] was more isolated and slightly larger (0.4m). Its fill (938) contained burnt stones but no charcoal possibly suggesting these stones could have been reused as packing material. Artefacts contained in the fill included later Iron Age and Roman pottery.

3.5.10 Pits (Fig. 5)

Five features were interpreted as pits, although the distinction with postholes was in some cases rather slight. Small pit [124] was situated within the interior of the northern ring ditch (see above) and its the upper fill (126) was similar in nature to that of the adjacent ditch [111].The two pits in trench 3 were located in the contingency boxed extension. These [313] and [319] were of contrasting form and both less than 0.7m in diameter. Although located in the vicinity of the possible posthole structure [313] was clearly not contemporary. This was truncated by posthole [311]. The significance of the single sherd of early-middle Iron Age pottery recovered from the surface of fill (314) is uncertain.

Contingency trench 9 contained two features interpreted as pits, both located to the south of the posthole alignments. Pit [909] was located only 0.5m south of the alignment and was 0.9m in diameter. Although no artefacts were recovered its fill contained frequent charcoal flecks. Pit [939] truncated the upper fills of ditch [905] and contained a lower quernstone (**ra 2**).

3.5.11 Hearth/burning (Figs. 5 and 6)

Two areas of burning were identified both very different in nature. Hearth [305] was oval in plan measuring 0.6m north-south by 0.5m (Photo 2). The edge of the feature was defined by small rounded cobbles (306) and horizontally placed Roman pottery sherds. Burnt clay within this feature was a mixture of *in situ* clay (307) towards the edges and mixed debris towards the centre. This hearth was constructed (possibly deliberately) in the upper fills of ditch [308].

An area of burning (704) measuring 0.8m by 0.48m was identified within the lower alluvial deposits (703) in trench 7. This occurred at a depth of 1m below the present ground surface and showed no conclusive indication it was of human origin. It may have been caused by a natural fire resulting in the scorching of the alluvial.

3.6 Artefact assemblage

3.6.1 Introduction

Evaluation produced an artefactual assemblage comprising mainly pottery and animal bone (Table 3). All artefacts collected were processed in accordance with the *Specification* and Project Design. The material was scanned to ascertain the nature, condition and, where possible, date range of the artefact types present.

Trench	Context	Feature	Date	Pottery	Animal Bone	CBM	Other Finds
				sherd:wt	*frag:wt*	*frag:wt*	*(mainly post-med or undatable)*
1	100	100	Roman, post-med	4:102			fe nails x5 (96g), ferrous slag
	101	101	?Roman				ca coin (ra 1)
	105	103	EMIA, Roman	22:390	19:169		fe nails x2 (16g), shell (12g)
	106	103	late Iron Age	2:13			flint blade & flake (2g)
	107	103	Roman	1:10			
	110	109	-		2:8		flint flake (7g)
	113	111	later prehistoric				flint flakes x3 (4g)
	116	115	later prehistoric				flint flake (2g)
	118	115	later prehistoric				flint blade (2g)
	128	127	Roman	1:4	6:29		
2	204	203	EMIA	1:3			fired clay (5g)
	206	205	-		1:3		
3	300	300	medieval/post-med	4:273		3:267	fe nails x2 (112g)
	307	305	Roman	2:134			fired clay (130g)
	310	308	-		2:7		
	314	313	EMIA	1:31			
4	400	400	post-med			1:27	
	404	403	Roman	2:12	4:69		flint flake (3g)
5	500	500	post-med/modern	2:43			fe nails x2 (11g)
	505	503	late Iron Age, Roman	6:84	12:108		ferrous slag (55g)
6	600	600	medieval/post-med	2:56		4:109	fe nails x2 (75g)
	604	603	Roman	4:5			
	606	605	late Iron Age	2:10	1:1		flint blade (11g)
	611	610	Roman	1:16			
	617	616	EMIA, late Iron Age	7:61			fired clay (94g)
	618	616	EMIA	3:38			
7	700	700	post-med/modern	1:11			vessel glass x1 (6g)
	701	701	-				fe nail (9g)
	702	702	-				flint ?core (31g)
8	800	800	post-med/modern	3:46		2:43	clay pipe (2g), fe nails x7 (45g)
	801	801	late Iron Age	1:10			
	804	803	late Iron Age	3:27			flint flake (1g)
9	900	900	Roman	1:10	1:14	1:98	fe nails x4 (28g), shoe iron (36g)
	904	903	EMIA, Roman	6:33	1:12		burnt stone (41g)
	906	905	EMIA, Roman	2:22	4:33		
	941	905	Roman	1:11			fired clay (322g)
	938	937	late Iron Age, Roman	4:9			
	940	939	Roman				quern fragment (ra 2)
10	1000	1000	post-med			1:27	vessel glass x2 (11g)
Total				89:1464	53:453	12:571	

EMIA - early-middle Iron Age CBM - ceramic building material

Table 3: Artefact Assemblage by Trench and Context (weight in grammes)

3.6.2 Ceramics

Pottery

A total of 89 pottery sherds, weighing 1.5 kg was recovered. This was examined by context and 26 fabric types identified, using common names and type codes in accordance with the Ceramic Type Series, held by BCAS. Fabrics are listed below (Table 4) in approximate chronological order. Bracketed figures represent sherd number, and bracketed italics denote vessels of regional (*r*) or continental (*c*) origin. Quantification was carried out using minimum sherd count and weight.

Ware	Common name	Form	Date Range
Early-middle Iron Age (12)			
13% total assemblage			
Type F14 (4)	Fine mixed inclusions	undiagnostic	*c.* 650-350BC
Type F15 (3)	Coarse mixed inclusions	undiagnostic	*c.* 650-350BC
Type F17 (1)	Grog	undiagnostic	*c.* 650-350BC
Type F19 (1)	Sand and Organic	undiagnostic	*c.* 650-350BC
Type F28 (2)	Fine sand	undiagnostic	*c.* 650-350BC
Late Iron Age (16)			
18% total assemblage			
Type F03 (1)	Grog and sand	undiagnostic	*c.* 50BC-100AD
Type F06B (2)	Medium Grog	undiagnostic	*c.* 50BC-100AD
Type F07 (8)	Shell	undiagnostic	*c.* 50BC-100AD
Type F09 (4)	Sand and Grog	undiagnostic	*c.* 50BC-100AD
Type F (2)	Non-specific Iron Age	undiagnostic	-
Roman (47)			
53% total assemblage			
Type R01A (3)	Central Gaulish Samian ware (*c*)	dish/shallow bowl	C2
Type R03C (1)	Smooth White ware (*r*)	undiagnostic	C2
Type R07B (4)	Sandy Black ware	flagon	C2-3
Type R07C (2)	Gritty Black ware	'dog' dish, bead rim bowl	C2-3
Type R06C (3)	Fine Grey ware	narrow necked jar, flagon	C2+
Type R13 (29)	Shelly	rectangular rim bowl, everted rim jar	C2+
Type R12B (3)	Nene Valley Colour Coat (*r*)	undiagnostic	C3-4
Type R (2)	Non-specific Roman	undiagnostic	-
Medieval (3)			
4% total assemblage			
Type C59A (1)	Coarse Sandy	undiagnostic	C12-13
Type C75 (1)	Micaceous	undiagnostic	C12-14
Type C10 (1)	Potterspury type (*r*)	undiagnostic	C13-15
Post-medieval/modern (11)			
12% total assemblage			
Type P01 (4)	Glazed Red Earthenware (fine)	dish	C17-18
Type P33 (1)	Tin-glazed Ware	undiagnostic	C17-18
Type P37 (1)	White salt-glazed Stoneware	cylindrical jar	C18-19
Type P48 (4)	English Stoneware	marmalade pot	C18-19
Type P100 (1)	miscellaneous modern	undiagnostic	C18+

Table 4: Pottery Type Series

Pottery was retrieved in variable quantities from all trenches. Approximately 20% of the material is unstratified, being derived from ploughsoil, subsoil or alluvium. Trench 1 produced the largest quantity of pottery, in particular the fills (105), (106) and (107) of ditch [103], which contained 28% of the total assemblage.

The pottery dates predominantly to the Roman period (47 sherds), with small proportions deriving from the late 'Belgic' Iron Age and early-middle Iron Age (16 and 12 sherds respectively). There are few diagnostic forms among the Iron Age material. Roman vessels, however, are indicative of a domestic assemblage, comprising tablewares, cooking pots and storage jars.

Iron Age

Early-middle Iron Age fabric types are consistent with those recovered from contemporary sites in the region, for example, Biddenham and Salford (BCAS in prep). Small quantities of early-middle Iron Age pottery occurring with later Iron Age and Roman vessels in ditches [103] trench 1, [616] trench 6, [903] and [905] trench 9, are clearly residual. Their presence suggests localised activity during this period.

Locally produced late 'Belgic' Iron Age vessels in grog tempered fabrics (types F03, F06, and F09) are present in small numbers. The predominance of shell tempered vessels in fabric F07 is unsurprising: they are likely to derive from one of a number of kiln sites known in the vicinity, such as Bromham and Stagsden (BCAS in prep).

Roman

The assemblage spans the entire Roman period, and comprises a comparable range of wares to those recovered from the Roman settlement centred on Kempston Church End to the north-west. Coarsewares are represented by local greywares (type R06C) and blackwares (types R07B and R07C). Diagnostic shell tempered forms are comparable to vessels produced at the Lodge Farm kilns at Harrold, in north Bedfordshire (Brown 1994), and constitute 62% of the Roman assemblage. Regional imports are represented by a single sherd of smooth whiteware from the Verluamium region (type R03C). The limited range of finewares of early Roman date are represented by Samian vessels from central Gaul (type R01A), and in the later period by imported colour coat vessels from the Nene Valley (type R12B).

Ceramic Building Material (CBM)

Twelve fragments of ceramic building material weighing 571g were recovered. These comprise unstratified flat roof tiles of late/post-medieval date.

Fired Clay

Eighteen fragments of fired clay, weighing 551g were identified. The fill (307) of hearth [305], produced 130g of partially *in situ* burnt clay. The remainder of the assemblage was redeposited in ditches of both Iron Age and Roman date within trenches 2, 6 and 9.

3.6.3 Non-Ceramics

Flint

Seven residual pieces of worked flint debitage, weighing 55g were recovered from late Iron Age and Roman features in trenches 1, 4, 6, 7 and 8. Four flakes and a utilised blade (total weight 8g) deriving from the otherwise sterile fills (113), (116) and (117) of ring ditches [111] and [115] confirms these features are of early prehistoric date. No tools are present. The material is largely patinated, but survives in good condition, with relatively little edge damage. A likely source for the raw material is the underlying river gravels.

Registered Artefacts (RA)

Registered artefacts comprise an unstratified copper alloy coin (**ra 1**) from alluvium (101), trench 1. This was unidentifiable but appearance would suggest that it is Roman in date. A complete lower stone from a rotary quern (**ra 2**) derived from the fill (940) of pit [939] trench 9. The stone has a diameter of 390mm, and retains part of an iron spindle in the central socket (Photo 4). Differential wear is evident around the edge, which varies in thickness between 25mm and 50mm. The quartz conglomerate, from which **ra 2** is made, is likely to derive from the Forest of Dean, Gloucestershire.

3.7 Ecofactual evidence

3.7.1 Animal Bone

Fifty-three fragments of animal bone, weighing 453g were recovered. The majority of the assemblage derives from Roman features in trenches 1, 4, 5 and 9. This material was redeposited within these features, and cannot be directly associated with their use. The bone survives in reasonable condition, with some surface erosion, but is highly fragmented. Cut marks are visible on a small number of bones. Diagnostic fragments comprise long bone and rib fragments, which cannot be identified to species.

3.7.2 Environmental sampling

One eight litre soil sample was taken from the tertiary fill (105) of ditch [103]. The sample was taken to ascertain the presence of charred plant remains from a dark relatively occupation rich deposit. This was processed in accordance with the Procedures Manual and floated onto a 0.5mm mesh and dried. The flot contained 9.9g of carbonised material which mainly consisted of wood fragments. These ranged in size from 22mm by 10mm to 10mm. There were frequent smaller pieces of carbonised wood (less than 1mm). Most of the wood fragments appear to have been from twigs. At least two carbonised seeds were identified from different species. Occasional snail shell fragments were also present.

3.8 Summary

Ten trenches were opened and a total of 190 contexts were investigated. These comprised 106 archaeological features, 65 of which were of the 'cut' type. Table 5 summarises the feature types by trench. Appendix 1 provides detailed descriptions of contexts arranged by trench.

Trench	Alluvium	Ditch	Gully	Furrows	Pit	Posthole	Hearth
1	Y	6		1	1		
2	Y	2		4		5	
3		2			2	3	1
4	Y	2	1			4	
5		1		1			
6	Y	3	2	3		1	
7	Y						1
8	Y	1					
9	Y	3			2	14	
10				10		2	

Y indicates presence of alluvium
Furrows 3 in trench 2 assigned to [210] and 2 in trench 6 assigned to [610]

Table 5: Feature summary by trench

A wide range of artefacts were recovered including pottery (Iron Age to post-medieval), ceramic building material (no Roman only late/post-medieval), fired clay, worked flint, a coin, a quernstone and animal bone.

4. PRESERVATION AND AREAS OF ARCHAEOLOGICAL REMAINS

The significance of archaeological remains within the planning process is dependent on their quality of preservation and their physical location within the development area.

4.1 Preservation

4.1.1 Archaeological features

The survival of archaeological features is dependent on the nature and intensity of previous landuse, especially ploughing. Although larger features such as ditches and pits often survive the most intensive farming regime, it is the smaller and relatively more fragile features such as post holes and hearths which are often truncated or destroyed completely. The presence and dimensions of these provide the best indication of the quality of archaeological survival.

Unfortunately, due to the similarities between the feature fills and subsoil/alluvium it was not always possible to identify the upper portion of features within the Study Area. In these cases the true level of survival is difficult to estimate. However, in trenches 4 and 9 postholes were located which truncated the alluvium. Post hole [407] was well defined and survived to a depth of 0.32m at only 0.3m below the present ground level (Fig. 8 section 5). In trench 9 the posts were visible at 0.35m below the present ground level. Hearth [305] survived 0.5m below the present ground level and had not been disturbed by later activity.

4.1.2 Artefactual assemblage

The survival of artefacts and ecofacts can be affected by both former landuse and the nature of the soil (specifically acidity). Although less vulnerable material such as ceramics and stone frequently survive, animal bone and metal can easily be destroyed. The recovery of metal artefacts and animal bone within the Study Area indicates that at least for the Iron Age and Roman deposits, preservation is good. It is uncertain whether the presence of only worked flint within the ring ditch fills is a reflection of the real situation, or an indication of poorer preservation within earlier features.

In general, the Iron Age and Roman ditches contained the majority of the artefacts. This may reflect the greater volume and preservation associated with the fills of such features. Pottery sherds from the upper fills of features such as (618) were often small and abraded. Although charcoal is relatively stable, only one deposit (105) had a large enough concentration to merit sampling. Other deposits such as (404) and (505) were dark suggesting organic rich material, although no charcoal was obvious.

4.2 Areas of archaeological remains

Archaeological features were concentrated in the central and northern parts of

the Study Area, extending across the full east-west extent. The two southern trenches (7 and 8) contained only one feature each, and burnt area [704] may not be of human origin.

The fills of many of the ditches contained artefacts and fills suggestive of occupation in the immediate vicinity. Trenches 2, 3, 4 and 9 contained sufficient structural features to suggest buildings of the Iron Age and Roman period may have been located in these areas.

5. CHRONOLOGICAL SYNTHESIS OF RESULTS

The following synthesis is presented in chronological order, based mainly on diagnostic artefacts recovered from feature fills.

5.1 Neolithic/early Bronze Age (c. 4000 – 2000BC)

No pottery of this period was recovered. The worked flint assemblage did not include any diagnostic tools and therefore can only be broadly dated to the Neolithic and/or Bronze Age. This material was recovered from topsoil, within features which contained later pottery and from the ring ditches in trench 1.

Ditches corresponding with anomalies located during geophysical survey were located, and these are likely to represent the quarry/boundary ditch of burial monuments (known as ring ditches). The geophysical survey suggests the two ring ditches positively identified within trench 1 would have internal diameters of approximately 19m and would only be located 6m apart. No burials were identified. These frequently occur within the interior of the monuments, but can also be found in the ditch fills. A third possible ring ditch is indicated by geophysical survey immediately to the east.

Ring ditches are usually dated to the Bronze Age period and are often interpreted as the remains of ploughed-out burial barrows. Although many of these monuments no longer contain *in-situ* mound material, as is the case within the Study Area, evidence for this often survives within the ditch fills, for example fill (119). At Roxton, manganese pan occurred within the ring ditches increasing in thickness towards the centre, indicating the position of a mound (Taylor and Woodward 1985). Within the Biddenham Loop to the north of the Study Area, approximately 34 ring ditches have been identified on aerial photographs and during geophysical survey. A number of these had comparable dimensions and all were situated on higher ground. None of the ring ditches within the Loop are situated closer than 35m, with the majority being well spread out. The concentration of possibly three ring ditches close together may indicate a family burial group and is relatively unusual.

Woodward (1978) in his survey of the Biddenham and Roxton ring ditches suggested that burials and settlements are situated in mutually exclusive locations. This was supported by the recent excavations within the Loop (BCAS in prep), where although isolated burials also occurred there was very little evidence for settlement in the immediate vicinity of the monuments.

5.2 Early-middle Iron Age (c. 650 – 350BC)

Early-middle Iron Age pottery (13% of the ceramic assemblage) was recovered from several features. In only three cases (trenches 2, 3 and 6) did this material occur without later pottery, suggesting these may genuinely be of this date, rather than residual. The only isolated feature to contain pottery of this period was pit [313] and this was a single sherd. The assemblage indicates human activity was taking place within the Study Area at this date.

The Kempston Church End Roman settlement may overlie an earlier settlement of early-middle Iron Age date (BCAS 1998), although this was only deduced from artefacts found during evaluation. Settlements of this period are relatively rare (English Heritage 1997). Within the Biddenham Loop, several farmsteads of this period, comprising a house, ditched enclosure and storage pit area were identified. They were not enclosed by a major boundary feature, and were spaced fairly regularly just above the floodplain to the east of the river. It is possible a similar farmstead was located within the Study Area.

5.3 Late Iron Age/early Roman (c. 50BC – AD100)

Evidence for this period within the Study Area is indicated primarily by pottery (18% of the ceramic assemblage). This is present within many of the features both on its own and residual with later Roman pottery. Only ditches in trench 6 produced pottery of this date without later material. The distribution of this material is generally towards the west of the Study Area (within trenches 5, 6 and 9) suggesting that this may be the focus of contemporary settlement. The majority of the pottery of this period came from ditch fills.

The Kempston Church End settlement is known to have expanded during this period (BCAS in prep). On the Biddenham Loop only one of the four early-middle Iron Age farmsteads identified continued into this period in the same location. These farmsteads were characteristic in having ditched boundaries. It is possible the evidence from the Study Area supports a similar change to ditched enclosures and fields.

5.4 Roman (c. AD100 – 410)

The majority of the pottery assemblage recovered from the trenches was Roman in date (53% of the ceramic assemblage). Roman material including pottery, a coin and quernstone were recovered from all trenches except 2, 7, 8 and 10 suggesting settlement was concentrated over the northern and central zone of the Study Area. Datable pottery spanned the entire Roman period and included small quantities of regional and continental imports. The majority of this material came from the fills of ditches, although a hearth (trench 3), pit and posthole (trench 9) also contained Roman artefacts.

The geophysical survey suggests a regular arrangement of ditches and possibly trackways defined by ditches. A number of the latter were recut on several occasions suggesting a relatively long period of use. No clear enclosures were identifiable, but the presence of post-built buildings and structures, hearths, pits and ditches indicates domestic activity. The regularity of the posthole alignments in trench 9 clearly suggests the location of a building which may be Roman or later in date. The narrow, shallow gullies 1.4m apart in trench 6, defined rectangular areas over 7m in length. They are similar to features discovered during excavation within the Kempston Church End settlement. The nature of the hearth in trench 3 is suggestive of domestic use, possibly associated with a post-built structure to the west.

The only major differences to the Kempston Church End settlement is the absence of Roman ceramic building material, and the apparent absence of pits

or wells within the Study Area.

A major element of the Kempston Church End settlement was a cambered gravel road with side ditches. If the alignment of this was extended, it would underlie "Ladies Walk" to the north of the Study Area. It may be significant that this is located to the north of the ring ditches and that Roman ditch [103] truncates the ring ditch, but not the interior. From this it might be inferred that some elements of these monuments, perhaps the mound, survived into the Roman period.

Evaluation associated with the Western Bypass has shown the Roman settlement centred on Kempston Church End continued southwards to within 300m of the present Study Area (BCAS 1998). Where investigated to the north-west, it comprised a regular rectangular system of ditched enclosures. At least two major north-west to south-east trackways were identified and a number of minor routeways. The enclosures contained buildings, other structures, yards, pits, wells and burials. The artefactual range and nature of features recovered from the present evaluation suggest it is likely they represent a continuation of this settlement.

Due to the limited nature of the archaeological investigations undertaken within the Kempston Church End Roman settlement, its nature and status are uncertain. If, as seems likely, the remains in the Study Area are part of the same settlement, this would extend over an area of at least 16ha. Its regular layout would suggest it might represent a large village or even a small town (Hingley 1989).

It is uncertain when the alluvial deposits were laid down, although they seal features of Roman date.

5.5 Saxon (c. AD410 - 1066)

No Saxon artefacts were recovered during the evaluation. It is possible however that the postholes truncating the alluvium could be Saxon in date.

5.6 Medieval (c. AD1066 – 1500)

Only 4% of the pottery assemblage was of medieval date, all recovered from the topsoil. No settlement features of this period were located and the pottery is likely to be the result of manuring of fields. Parallel furrows were located in several of the trenches and indicate the location of agricultural strips, commonly medieval in date. A number of ridge and furrow earthworks survive within the cricket pitch to the east.

5.7 Post-medieval and modern (c. AD1500 -)

Approximately 12% of the pottery assemblage was post-medieval in date and like the medieval pottery and ceramic building material was solely derived from the topsoil. This may reflect manuring processes. The use of the land for a sportsground has only had minimal impact and may have preserved some of the smaller features which would have been damaged by deep ploughing.

6. SIGNIFICANCE OF RESULTS

6.1 *The assessment of archaeological remains within the planning process*

The CAO's *Specification* specifically forbids this report discussing the potential implications for the development of any archaeological remains discovered during the evaluation. However, a discussion of the significance of the remains in terms of their national and regional archaeological research frameworks is appropriate.

Although archaeological remains are now a material consideration in the planning process, there is no single, "easy-to-use" guide to assessing the importance of a particular archaeological site.

A limited number of nationally important archaeological sites have been given the status of Scheduled Ancient Monuments (SAMs) to indicate their exceptional type, nature and state of preservation. The Study Area does not contain any SAMs, although one (HER 814) is located 160m to the north.

With the issuing of *Planning Policy Guidance Note 16; Archaeology and Planning (PPG16)* central government accepted the view that archaeological remains should be regarded as a finite, non-renewable resource, and that there should be a presumption in favour of the physical preservation of nationally important remains (whether Scheduled or not). The Bedford Borough Local Plan policy HA1 adopted this view. The creation of an archaeological record, through the mechanism of archaeological fieldwork, was indicated to be the second best option and a similar view was adopted in Local Plan policy HA2.

Central government, though English Heritage, addressed the issue of national research needs with the publication of *Exploring our past* in 1991 and a draft Research Agenda in 1997. The latter contains a number of research agendas, against which the archaeological resource of an area may be assessed.

On a more regional level, the County Archaeologists of East Anglia have published the first volume in a research framework for the eastern counties (Glazebrook 1997). Although this document covers the adjacent counties of Cambridgeshire and Hertfordshire, it does not specifically consider Bedfordshire. Nevertheless, topographical and historical similarities (at regional level) between these counties make the document a useful tool for assessing the significance of the archaeological remains at Cutler Hammer.

6.2 Assessment of the significance of the archaeological remains within the Study Area (late Neolithic/early Bronze Age)

Three ring ditches of the Bronze Age period are likely to represent the quarry ditches surrounding ploughed out burial mounds. These are not unique in the region, with a large number already, known including those situated within the Biddenham Loop. There is no evidence for an *in-situ* mound and therefore the preservation of the monuments may be considered to be only moderate. Accordingly they should not be considered of national significance or of schedulable quality.

However, they do appear to have the potential to address a number of national and regional research aims. Regionally, they are also important because it is relatively rare for three such monuments to occur immediately adjacent to each other. McKinley's (1997) recent survey of barrows, funerary rites and the rituals of cremation indicates the wealth of information which can be recovered from barrows and ring ditches.

6.2.1 English Heritage Research Agenda

Processes of change

Communal monuments into settlement and landscapes	The processes of change and regional variations from monument-dominated landscape of the Neolithic and early Bronze Age are still poorly understood. The three ring ditches and adjacent areas have a **high** potential to address this aim.

Chronological priorities

Territories and tenure in the 4th and 3rd millennium BC	There is little consensus regarding the nature and extent of farming during the later Neolithic and early Bronze Age. The balance between cereal and animal products within the economy needs to be explored in relation to broader issues of society and monument form. The ring ditch monuments at Cutler Hammer did not produce any environmental data and therefore, they only have a **low** potential to address this aim.

Site/area selection

Group value	The value of the investigation of a single site may be greatly enhanced by association with other contemporary sites. The Study Area is situated in an area of intense human activity. The probable presence of three ring ditches gives the Study Area a **high** potential to compare and contrast the variation between ring ditches which may be part of a single cemetery.
Survival/condition	This is a crucial consideration and has been assessed for the Study Area by identifying the potential of the archaeological data. Despite plough damage and the removal of the mound, smaller features such as postholes do survive. The site has a **moderately** well preserved set of archaeological data.
Potential	The potential for ecofactual information is **low**. Although no waterlogged material was located, the situation in the floodplain means there is potential for these to survive in deeper features.

6.2.2 East Anglian Research Framework

Prehistoric

Burial and ritual	In north-west Essex there are a series of cemeteries characterised by tight clusters of numerous ring ditches, with burials often placed between, rather than within the monuments. The ring ditches within the Study Area have **high** potential to address this previously under studied element of Bronze Age burial and ritual.

6.2.3 Local interest

Archaeological investigations nearly always arouse popular public interest and give people a sense of belonging. Public interest/concern is often heightened when there is the potential for human burials to be disturbed by development.

6.3 *Assessment of the significance of the archaeological remains within the Study Area (Iron Age and Roman)*

The archaeological remains of Iron Age and Roman date represent a number of farmsteads which may have evolved into a large settlement during the Roman period. However, these are not unique within the region. Their level of preservation, while good, is not exceptional; they are truncated to some degree by later agricultural activity. Accordingly, they should not be considered of national significance or of schedulable quality.

However, they do appear to have the potential to address a number of national and regional research aims. Regionally they are important, because although part of a larger settlement, the nature and status of this is poorly understood. It has only been partially investigated under either evaluation or rescue conditions.

6.3.1 English Heritage Research Agenda

Processes of change

Britain into Roman	The transition phase from the late Iron Age to Roman period. The evaluation at Cutler Hammer has shown this is the predominant period of activity. The archaeological remains therefore have **high** potential of addressing this issue.
Empire to kingdom	The nature of change in Romano-British society in the 3rd and 4th Century is poorly understood. There is evidence for settlement activity during the later Roman period, but no definite evidence for Saxon activity. The settlement therefore has **moderate** potential of addressing this aim.

Chronological priorities

Late Bronze and Iron Age landscapes	There is a paucity of settlement sites, particularly from the early Iron Age, and lack of information regarding the development of field systems and land boundaries. A priority for investigation must be colluvial and alluvial sequences, which offer the potential of stratified sequences over this period. The artefact assemblage suggests settlement occurred within the Study Area during this period, but the alluvial sequences appear to be later in date therefore there is only **moderate** potential of addressing this aim.

Themes

Settlement hierarchies and interaction	A basic understanding of settlement types and their distribution is needed. However, the study between an individual settlement and its environs is an important step towards formulating broader theories and research goals. The Study Area contains evidence for early-middle Iron Age, later Iron Age and Roman settlements. It therefore, has **high** potential to address this aim
Rural settlement	Settlement patterns are the key to understanding the economic, social and political structures of rural England. The Study Area contains rural settlements which will have varied and changed over time. It therefore, has **high** potential for addressing this aim.
Patterns of craftmanship and industry (including agriculture)	The study of industry and craftsmanship is a continuing area of research. Although the Study Area contains settlement primarily agricultural in character, the presence of slag and fired clay structures suggests some diversification may have occurred. It therefore, has **moderate** potential to address this aim.

Site/area selection

Group value	The value of the investigation of a single site may be greatly enhanced by association with other contemporary sites. The Study Area is situated in an area of intense human activity. These will have **high** potential to directly compare and contrast settlement types in one locality.
Survival/condition	This is a crucial consideration and has been assessed for the Study Area by identifying the potential of the archaeological data. Despite plough damage and a small number of modern disturbances the archaeological features are reasonably well preserved. Smaller features such as postholes survive, along with more fragile features such as hearths. The expected range of artefacts and ecofacts survive including metalwork and animal bone. The site has a **moderately** well preserved set of archaeological data.
Potential	The potential for ecofactual information is **good** with charred remains and seeds present. Although no waterlogged material was located, the situation of the floodplain means there is potential for these to survive in deeper features, such as pits and wells.

6.3.2 East Anglian Research Framework

Rural settlement

Non-villa settlement	Investigations over the last ten years have gone some way to address the imbalance between the number of investigations on villas, and other sites. However Glazebrook (1997) stated "study of other kinds of rural settlement has not progressed as rapidly as might be desired". The Study Area has **high** potential to address this aim.
Burials	Rural Romano-British burials and cemeteries, particularly long-used or later Roman sites, was identified as a particular weakness. Although no burials of this period were located within the Study Area, the pattern of burial within the rest of the settlement is known to include both cemeteries and burials placed adjacent to boundary features. Therefore, there is **moderate** potential to address this aim.

6.3.3 Local interest

Due to the obvious visual impact of Roman remains and artefacts, there is often great public interest in this period. This is increased by requirement

within the national curriculum for study of the Roman period. Kempston is an area of intense past activity and the public appetite for knowledge is highlighted by the demand for school visits and displays.

6.4 Assessment of the significance of the archaeological remains within the Study Area (Saxon and later)

The Study Area contains evidence for undated post-built structures which truncate the alluvial deposits. If these were to be Saxon in date they would be very significant. Saxon settlements are notorously difficult to identify, partly due to the limited artefact assemblage associated with them. Although there was no medieval settlement within the Study Area, some agricultural remains were located in the form of furrows. These are only of local significance.

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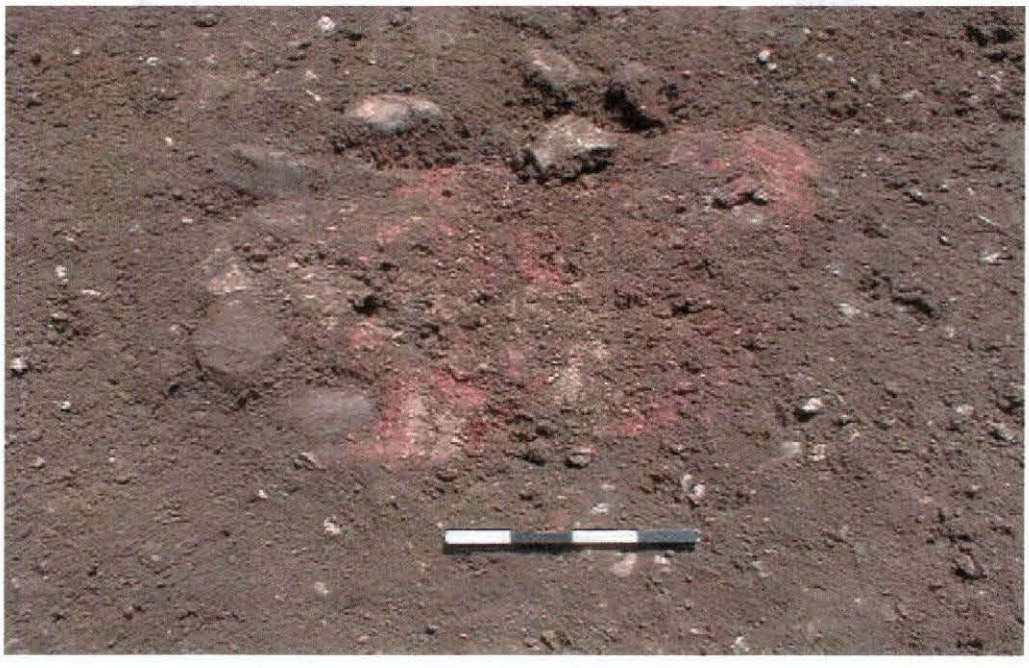
PHOTOGRAPHS

Photograph 1 Trench 1 possible ring ditch [115].



Photograph 2 Trench 3 hearth [305].

Photograph 3 Trench 4 posthole [407] truncating alluvium (402) in section and posthole [409] in foreground.

Photograph 4 Reused quernstone from (940) Trench 9

APPENDIX 1: TRENCH SUMMARIES

- "Contexts" are presented in numeric order.
- All measurements are given in metres.
- "Depth to archaeology" refers to the depth below ground level to the top of the deposit or cut.
- "OS Co-ordinates" grid references are given in centimetres.
- Context numbers in **bold** denote "cut" features.
- "Descriptions" are presented in a standard formalised manner, followed by additional information (where appropriate).
- "Excavated" refers to hand or machine excavation.
- "Finds present" refers to the recovery of any artefacts.

Trench: 1

Max Dimensions: **Length:** 33.00 m. **Width:** 1.60 m. **Depth to Archaeology Min:** 0.51 m. **Max:** 0.65 m.

OS Co-ordinates: **Ref. 1:** TL0201447419 **Ref. 2:** TL0202947451

Reason for trench: Possible circular ditch-type anomalies D (including D1)

Context:	Type:	Description:	Excavated:	Finds Present:
100	Topsoil	Mid grey brown loam occasional small stones.	☒	☒
101	Alluvium	Hard mid grey red sandy clay occasional small stones.	☒	☒
102	Natural strata	Compact light red brown sandy gravel frequent small stones, moderate medium stones. The natural strata was variable with patches of oolitic gravel.	☐	☐
103	**Ditch**	**Linear E-W profile: 45 degrees base: concave dimensions: max breadth 3.9m, min depth 0.66m, min length 1.6m. The ditch was not bottomed. This feature corresponds to a linear geophysical anomaly.**	☒	☐
104	Tertiary fill	Loose dark grey clay loam frequent small stones, occasional medium stones.	☒	☐
105	Tertiary fill	Dark grey clay loam frequent small stones, frequent medium stones, moderate flecks charcoal.	☒	☒
106	Secondary fill	Loose red brown clay sand moderate small stones.	☒	☒
107	Secondary fill	Loose mid grey silty clay occasional small stones. The full thickness of this deposit was not revealed.	☒	☒
108	Secondary fill	Compact red silty sand moderate small stones, moderate medium stones. The full thickness of this deposit was not revealed.	☒	☐
109	**Ditch**	**Linear NW-SE profile: stepped base: concave dimensions: min breadth 0.8m, min depth 0.65m, min length 1.6m. The feature was not bottomed, though probing was used to establish the approximate base of the cut which was at least 0.8 and probably 0.87m deep.**	☒	☐
110	Fill	Loose brown silty sand occasional small stones. A relatively stone-free deposit.	☒	☒
111	**Ditch**	**Linear profile: stepped base: concave dimensions: max breadth 2.76m, max depth 0.65m, min length 1.75m. A possible ring ditch identified in the geophysical survey.**	☒	☐
112	Tertiary fill	Loose red grey sandy clay frequent small stones, occasional medium stones. Probably the result of ploughing in the vicinity of the ring ditch.	☒	☐
113	Secondary fill	Compact red brown sandy clay moderate small stones, occasional medium stones.	☒	☒
114	Primary fill	Compact red brown sandy clay frequent small stones, moderate medium stones.	☒	☐
115	**Ditch**	**Linear E-W profile: stepped base: concave dimensions: max breadth 1.65m, max depth 0.55m, min length 1.6m. The southern element of a possible ring ditch. This feature corresponds to a penannular geophysical anomaly.**	☒	☐
116	Tertiary fill	Loose grey brown silty loam occasional small stones.	☒	☒
117	Secondary fill	Cemented dark grey brown silty sand frequent medium stones.	☒	☐
118	Secondary fill	Cemented red brown sandy clay moderate small stones, moderate medium stones, occasional flecks charcoal.	☒	☒
119	Primary fill	Red brown sandy clay frequent small stones.	☒	☐
120	Primary fill	Compact red brown clay sand frequent medium stones, frequent small stones.	☒	☐
121	**Ditch**	**Linear profile: concave base: concave dimensions: max breadth 1.7m, max depth 0.24m, min length 1.6m.**	☒	☐
122	Fill	Compact brown grey silty loam occasional small stones, occasional flecks charcoal.	☒	☐
123	Fill	Compact grey brown sandy clay frequent small stones.	☒	☐
124	**Pit**	**Sub-rectangular N-S profile: concave base: flat dimensions: min breadth 0.2m, max depth 0.13m, max length 0.6m. Only the western edge was within the trench. The feature was situated within the area defined by the northern ring ditch.**	☒	☐
125	Fill	Grey brown sandy clay frequent small stones, frequent medium stones. Lower possible pit fill.	☒	☐
126	Fill	Red brown sandy clay frequent small stones, frequent medium stones. Upper possible pit fill.	☒	☐

Trench: 1

Max Dimensions: Length: 33.00 m. Width: 1.60 m. Depth to Archaeology Min: 0.51 m. Max: 0.65 m.

OS Co-ordinates: Ref. 1: TL0201447419 Ref. 2: TL0202947451

Reason for trench: Possible circular ditch-type anomalies D (including D1)

Context:	Type:	Description:	Excavated:	Finds Present:
127	**Furrow**	**Linear E-W profile: concave base: concave dimensions: max breadth 0.55m, max diameter 0.2m, min length 1.6m. An isolated furrow with an unusual alignment.**	☒	☐
128	Fill	Loose brown red sandy silt occasional small stones.	☒	☒
129	Alluvium	Loose yellow brown clay loam . This appears to be similar to (101).	☒	☐
130	**Ditch**	**Linear NE-SW dimensions: min breadth 0.4m, min length 1.65m. The ditch was truncated by a later ditch to the south.**	☐	☐
131	Fill	Red brown clay silt moderate small stones. The nature of the fill, which is similar to the 'ring ditches' suggests that it is a prehistoric feature.	☐	☐

Trench: 2

Max Dimensions: **Length:** 15.00 m. **Width:** 1.60 m. **Depth to Archaeology Min:** 0.4 m. **Max:** 0.45 m.

OS Co-ordinates: **Ref. 1:** TL0207047440 **Ref. 2:** TL0208547440

Reason for trench: Possible ditch-type anomaly and area of ferrous responses

Context:	Type:	Description:	Excavated:	Finds Present:
200	Topsoil	Mid brown clay silt occasional small stones.	☒	☐
201	Alluvium	Firm mid red brown silty clay moderate small stones. Could be subsoil, though lacks stones of underlying gravel.	☒	☐
202	Natural strata	Red brown clay gravel .	☐	☐
203	**Ditch**	**Linear N-S profile: 45 degrees base: concave dimensions: max breadth 2.8m, max depth 0.6m, min length 1.6m. This may be the same feature as seen in the western limit of trench 8. This feature corresponds to a linear geophysical anomaly.**	☒	☐
204	Secondary fill	Plastic dark red brown silty clay moderate small stones, occasional medium burnt stones.	☒	☒
212	Primary fill	Firm red brown clay silt occasional small stones. The deposit sloped down the eastern side of the ditch.	☒	☐
213	Primary fill	Firm light yellow brown clay silt frequent small stones. The deposit sloped down the lower western side of the ditch	☒	☐
205	**Posthole**	**Circular profile: concave base: concave dimensions: max depth 0.14m. max diameter 0.45m.**	☒	☐
206	Fill	Plastic red brown silty clay occasional small stones.	☒	☒
207	**Posthole**	**Sub-circular N-S profile: concave base: concave dimensions: max breadth 0.27m, max depth 0.17m, min length 0.3m.**	☒	☐
208	Fill	Dark red brown silty clay occasional small stones, occasional flecks charcoal.	☒	☐
209	Modern disturbance	Frequent large stones. Packing for a modern hockey post which probable truncated topsoil (200). As modern the feature was only assigned a single context.	☐	☐
210	**Furrow**	**Linear N-S profile: concave base: concave dimensions: max breadth 0.65m, max depth 0.05m, min length 1.6m. Assigned to three features of similar form and alignment.**	☒	☐
211	Fill	Firm yellow brown clay silt occasional small stones. Fill assigned to three identical features.	☒	☐
214	**Ditch**	**Linear NNE-SSW profile: vertical base: flat dimensions: max breadth 0.8m, max depth 0.21m, min length 1.6m. Only eastern side was examined, indicating a very steep c.60 edge. Could be a furrow.**	☒	☐
215	Fill	Mid brown clay silt occasional small stones. Possibly the fill of a ditch rather than a furrow.	☒	☐
216	**Posthole**	**Sub-oval E-W dimensions: max breadth 0.3m, min length 0.45m. The feature was truncated to the east by [214].**	☐	☐
217	Fill	Firm mid brown clay silt occasional small stones.	☐	☐
218	**Posthole**	**Sub-rectangular N-S dimensions: max breadth 0.48m, min length 0.75m.**	☐	☐
219	Fill	Firm mid brown clay silt occasional small stones.	☐	☐
220	**Posthole**	**Sub-circular N-S dimensions: min breadth 0.3m, min length 0.6m. Only a part of the posthole was within the trench.**	☐	☐
221	Fill	Firm grey brown clay silt occasional small stones.	☐	☐
222	**Furrow**	**Linear NNW-SSE profile: concave base: concave dimensions: min breadth 1.m, max depth 0.1m, min length 1.6m.**	☒	☐
223	Fill	Firm yellow brown clay silt occasional small stones.	☒	☐

Trench: 3

Max Dimensions: **Length:** 20.00 m. **Width:** 1.60 m. **Depth to Archaeology Min:** 0.5 m. **Max:** 0.67 m.

OS Co-ordinates: **Ref. 1:** TL0207547363 **Ref. 2:** TL0209647463

Reason for trench: Linear anomalies (A)

Context:	Type:	Description:	Excavated:	Finds Present:
300	Topsoil	Mid brown clay silt occasional small stones.	☒	☒
301	Subsoil	Mid brown clay silt moderate small stones. Not clearly distinguishable from (300)	☒	☐
302	Natural strata	Brown red clay gravel frequent small stones, frequent medium stones.	☐	☐
303	**Posthole**	**Oval N-S profile: vertical base: flat dimensions: max breadth 0.2m, max depth 0.06m, max length 0.28m.**	☒	☐
304	Fill	Mid brown clay sand occasional small stones.	☒	☐
305	**Hearth**	**Oval N-S profile: vertical dimensions: max breadth 0.5m, max length 0.6m. Not excavated, though part of profile exposed by machining.**	☐	☐
306	Hearth	Frequent medium stones. Stones set around edge of cut to define the hearth.	☐	☐
307	Hearth	Hard red clay frequent medium fired clay, frequent small stones. Burnt clay above the stones of (306). In the north east the clay rests on pot sherds.	☐	☒
308	**Ditch**	**Linear N-S profile: 45 degrees base: concave dimensions: min breadth 2.1m, max depth 1.1m, min length 1.6m. The ditch predates hearth [305]. The western part of the feature was not investigated in order to preserve the later hearth. This roughly coincides with a linear north-south geophysical anomaly.**	☒	☐
309	Fill	Yellow brown clay silt occasional small stones.	☒	☐
310	Fill	Mid brown silty clay moderate small stones.	☒	☒
311	**Posthole**	**Sub-oval N-S dimensions: min breadth 0.25m. min length 0.4m. Truncated by pit [313].**	☐	☐
312	Fill	Dark grey brown clay silt occasional small stones.	☐	☐
313	**Pit**	**Sub-oval N-S dimensions: min breadth 0.7m, min length 1.35m.**	☐	☐
314	Fill	Yellow brown clay silt occasional small stones. Finds were recovered from the surface of the deposit.	☐	☒
315	**Posthole**	**Oval NNW-SSE dimensions: max breadth 0.2m, max length 0.3m.**	☐	☐
316	Fill	Grey brown clay silt occasional small stones, occasional flecks charcoal.	☐	☐
317	**Ditch**	**Linear NNW-SSE dimensions: max breadth 0.45m, min length 1.75m.**	☐	☐
318	Fill	Grey brown clay silt occasional small stones, occasional flecks charcoal. The fill merges into (301) above.	☐	☐
319	**Pit**	**Rectangular NW-SE dimensions: max breadth 0.65m, max length 1.25m.**	☐	☐
320	Fill	Yellow brown clay silt occasional small stones.	☐	☐

Trench: 4

Max Dimensions: **Length:** 10.00 m. **Width:** 1.60 m. **Depth to Archaeology Min:** 0.3 m. **Max:** 0.6 m.

OS Co-ordinates: **Ref. 1:** TL0203247347 **Ref. 2:** TL0203447357

Reason for trench: Possible trackway formed by ditch-type anomalies (B)

Context:	Type:	Description:	Excavated:	Finds Present:
400	Topsoil	Mid brown clay silt .	☒	☒
401	Subsoil	Red brown sandy clay moderate small stones, moderate medium stones.	☒	☐
402	Alluvium	Red brown moderate small stones.	☒	☐
403	**Ditch**	**Linear ENE-WSW profile: concave base: flat dimensions: max breadth 1.25m, max depth 0.4m, min length 1.6m. Later recutting of [405]. The profile was asymmetrical with a concave northern edge and a steeper southern edge. This coincides with a curvilinear geophysical anomaly which may continue to the north-west as [616].**	☒	☐
404	Fill	Dark red brown silty clay occasional small stones, occasional medium stones. The fill is thought to have been deliberate infilling. No charcoal was present to account for dark fill.	☒	☒
405	**Ditch**	**Linear ENE-WSW profile: concave base: concave dimensions: max breadth 1.2m, max depth 0.5m, max length 1.6m. The southern edge was truncated by another ditch on the same alignment [403]. This coincides with a curvilinear geophysical anomaly which may continue to the north-west as [616].**	☒	☐
406	Fill	Mid red brown silty clay occasional small stones.	☒	☐
407	**Posthole**	**Circular profile: vertical base: concave dimensions: max depth 0.32m, max diameter 0.5m. A post hole which truncates the subsoil (401) and 'alluvium' (402). This is similar to the stratigraphic position of the possible postholes in trench 9.**	☒	☐
408	Fill	Dark red brown silty clay . Although it was well defined in section, this feature was not identified during either phase of machining at the level of (402).	☒	☐
409	**Posthole**	**Circular base: concave dimensions: max depth 0.1m, max diameter 0.4m.**	☒	☐
410	Fill	Dark red brown silty clay .	☒	☐
411	**Posthole**	**Circular profile: vertical base: concave dimensions: max depth 0.44m, max diameter 0.5m. A posthole which truncates the disuse fill of ditch [403].**	☒	☐
412	Fill	Dark red brown silty clay occasional small stones.	☒	☐
413	Natural strata	Red sandy gravel . The natural strata was variable ranging from oolitic gravel in the north to extensive patches of of gravel in reddish brown matrix to the south. This may have created false geophysical responses.	☐	☐
414	**Gulley**	**Linear N-S profile: concave base: concave dimensions: max breadth 0.4m, max depth 0.06m, min length 3.15m. This is tentatively identified as a gully.**	☒	☐
415	Fill	Dark red brown sandy clay moderate small stones.	☒	☐
416	**Posthole**	**Circular dimensions: max diameter 0.3m.**	☐	☐
417	Fill	Dark red brown silty clay .	☐	☐

Trench: 5

Max Dimensions: **Length:** 12.00 m. **Width:** 1.60 m. **Depth to Archaeology Min:** 0.58 m. **Max:** 0. m.

OS Co-ordinates: **Ref. 1:** TL0201147384 **Ref. 2:** TL0202247380

Reason for trench: **Possible trackway formed by ditch-type anomalies (A)**

Context:	Type:	Description:	Excavated:	Finds Present:
500	Topsoil	Loose mid brown silty loam occasional small stones.	☒	☒
501	Subsoil	Mid yellow brown sandy clay frequent small stones. The nature of the deposit suggests that it is a subsoil rather than high energy alluvium.	☒	☐
502	Natural strata	Mid red brown sandy clay frequent small stones.	☐	☐
503	**Ditch**	**Linear NNE-SSW profile: 45 degrees base: concave dimensions: max breadth 2.3m, max depth 0.75m, min length 1.6m. The ditch was not bottomed, though the approximate depth was defined by probing. This feature would appear to be a continuation of a linear geophysical anomaly identified to the north.**	☒	☐
504	Fill	Plastic mid red brown sandy clay moderate small stones. This deposit is too thick to be considered a primary fill. Approximate thickness obtained by probing.	☒	☐
505	Fill	Dark brown silty clay occasional small stones.	☒	☒
506	**Furrow**	**Linear NNE-SSW profile: concave base: concave dimensions: max breadth 1.4m, max depth 0.1m, min length 1.6m. This would appear to be a continuation of an intermittent linear geophysical anomaly identified to the north and south.**	☒	☐
507	Fill	Firm mid brown loam occasional small stones.	☒	☐

Trench: 6

Max Dimensions: Length: 20.00 m. Width: 1.60 m. Depth to Archaeology Min: 0.55 m. Max: 0.57 m.

OS Co-ordinates: Ref. 1: TL0200247367 Ref. 2: TL0202147361

Reason for trench: Cluster of pit-type anomalies (C)

Context:	Type:	Description:	Excavated:	Finds Present:
600	Topsoil	Dark brown clay silt moderate small stones.	☒	☒
601	Alluvium	Yellow brown sandy silt occasional small stones. Interpreted as alluvium rather than subsoil, due to few inclusions compared to the underlying gravel.	☒	☐
602	Natural strata	Red brown clay gravel . The deposit was variable with patches of oolitic gravel being present. The oolitic gravel appears to have been sealed by the reddish brown gravel.	☐	☐
603	**Ditch**	**Linear ESE-WNW profile: 45 degrees base: concave dimensions: min breadth 0.6m, max depth 0.37m, min length 8.m. Earlier ditch was truncated by parallel feature [605] to north.**	☒	☐
604	Fill	Red brown silty clay moderate small stones. Small amount of pottery was recovered from the base of feature.	☒	☒
609	Fill	Yellow brown frequent small stones. Upper fill of ditch [603] which was not initially seen in section. This was located centrally above (604).	☒	☐
605	**Ditch**	**Linear ESE-WNW profile: 45 degrees base: concave dimensions: max breadth 0.67m, max depth 0.27m, min length 7.7m. Later recutting of boundary [603].**	☒	☐
606	Fill	Red brown silty clay occasional small stones. This deposit was slightly lighter and softer in texture than (604).	☒	☒
607	**Furrow**	**Linear N-S profile: concave base: concave dimensions: max breadth 1.6m, max depth 0.16m, min length 1.6m. The profile suggests that the feature was a furrow rather than a ditch.**	☒	☐
608	Fill	Yellow brown clay silt occasional small stones. This deposit merges into (601) above.	☒	☐
610	**Furrow**	**Linear N-S profile: concave base: concave dimensions: max breadth 0.96m, max depth 0.06m, min length 1.6m. This was assigned to two parallel furrows. The western furrow would appear to be a continuation of [506] to the north.**	☒	☐
611	Fill	Yellow brown clay silt occasional small stones. The western feature was excavated, with the inclusions clustered to the base of the cut.	☒	☒
612	**Gulley**	**Linear ESE-WNW profile: concave base: concave dimensions: max breadth 0.25m, max depth 0.04m, min length 6.6m. The feature is tentatively identified as a truncated gully rather than a modern feature. This is parallel to [614] situated 1.35m to the south west. No similar features were identified in the other trenches.**	☒	☐
613	Fill	Yellow brown clay silt occasional small stones. This deposit merged into the furrow fill (611) and the overlying 'alluvium' of (601).	☒	☐
614	**Gulley**	**Linear ESE-WNW profile: concave base: concave dimensions: max breadth 0.42m, max depth 0.09m, min length 8.m.**	☒	☐
615	Fill	Yellow brown clay silt occasional small stones. The inclusions were concentrated to the base of the cut. This is tentatively identified as the fill of a severely truncated gully rather than a modern drainage feature.	☒	☐
616	**Ditch**	**Linear ESE-WNW profile: 45 degrees dimensions: max breadth 1.3m, min depth 0.58m, min length 2.7m. Only the upper northern edge of the profile was exposed. The cut was not bottomed In the east the feature was masked by later activity. This may be the continuation of geophysical anomaly identified to the east.**	☒	☐
617	Tertiary fill	Grey brown silty clay frequent medium burnt stones, moderate small stones. A moderate quantity of pottery was recovered from the fill.	☒	☒
618	Secondary fill	Grey brown clay silt moderate small stones, occasional medium burnt stones. The deposit was darker than (617) above, though the boundary was merging.	☒	☒
619	Secondary fill	Brown silty clay frequent small stones. The distinctive deposit consisted of a band of dark material with frequent very small oolitic gravel inclusions. This material extended from the lower northern side of the cut to the centre of the feature.	☒	☐
620	Secondary fill	Yellow brown clay silt occasional small stones. Lowest of the the fills of ditch [616]. Neither the full width or thickness of this deposit was determined.	☒	☐

Trench: 6

Max Dimensions: **Length:** 20.00 m. **Width:** 1.60 m. **Depth to Archaeology Min:** 0.55 m. **Max:** 0.57 m.

OS Co-ordinates: **Ref. 1:** TL0200247367 **Ref. 2:** TL0202147361

Reason for trench: Cluster of pit-type anomalies (C)

Context:	Type:	Description:	Excavated:	Finds Present:
621	Posthole	Sub-circular profile: vertical dimensions: min breadth 0.27m, min depth 0.2m, min length 0.2m. Defined against the lower oolitic gravel on the north side of ditch [616]. The feature was truncated by [616] and continued to the west of the section. The northern extend was difficult to define as the fill was similar to the upper gravel.	☐	☐
622	Fill	Red brown sandy clay moderate small stones. The fill was very similar to the upper gravel, with a well defined lower eastern edge against the oolitic gravel.	☐	☐

Trench: 7

Max Dimensions: **Length:** 20.00 m. **Width:** 1.60 m. **Depth to Archaeology Min:** 1. m. **Max:** 0. m.

OS Co-ordinates: **Ref. 1:** TL0200047315 **Ref. 2:** TL0202047310

Reason for trench: Possible ditch-type anomalies (A)

Context:	Type:	Description:	Excavated:	Finds Present:
700	Topsoil	Mid brown clay silt occasional small stones, occasional medium stones. The topsoil was very rooty, with large roots from the poplar tree boundary to the southern limit of the land parcel.	☒	☒
701	Subsoil	Grey brown clay silt occasional small stones. Finds were recovered from the spoil. This deposit was more clayey than (700) above.	☒	☒
702	Alluvium	Yellow brown clay silt occasional small stones. Identified as upper alluvial deposit based on colour, texture and lack of inclusions.	☒	☒
703	Alluvium	Red brown clay silt . Lower alluvium, which was generally undifferentiated to the level of the underlying natural strata. This was artificially subdivided in the west due to the burnt area. This deposit had very few inclusions.	☒	☐
704	Hearth	Red brown silty clay occasional flecks fired clay, frequent large fired clay. An area of scorching with a figure-of -eight form in plan. The long axis was orientated north-east to south west with the larger element to the south. This was not seen in the preceding spit 100mm above.	☐	☐
705	Alluvium	Red brown clay silt . The artificial subdivision of the alluvium (703) in the west. This deposit was assigned to the unexcavated material below the area of burning (704). The deposit had very few inclusions.	☐	☐
706	Natural strata	Red brown clay silt frequent small stones, moderate medium stones. The natural strata was variable with irregular patches of stone free clayey silt.	☐	☐

Trench: 8

Max Dimensions: Length: 20.00 m. Width: 1.60 m. Depth to Archaeology Min: 0.57 m. Max: 0. m.

OS Co-ordinates: Ref. 1: TL0204947280 Ref. 2: TL0206947280

Reason for trench: South-western area of development area

Context:	Type:	Description:	Excavated:	Finds Present:
800	Topsoil	Mid brown silty loam occasional small stones.	☒	☒
801	Alluvium	Mid yellow brown sandy clay occasional small stones. The nature of the deposit suggests that it was derived from alluvium rather than the underlying gravelly parent material. This deposit was significantly less thick than the material in trench 7 to the west.	☒	☒
802	Natural strata	Firm mid red brown sandy clay frequent small stones. The natural strata was closer to the surface in the east.	☐	☐
803	**Ditch**	**Linear N-S profile: 45 degrees dimensions: max breadth 1.m, min depth 0.9m, min length 1.6m. Only the eastern side of the feature was within the trench. The cut was not bottomed, though probed to the underlying compact oolite gravel to give an idea of the depth.**	☒	☐
804	Fill	Firm mid brown sandy clay occasional small stones. Several small sherds were recovered from the upper portion of the fill.	☒	☒

Trench: 9

Max Dimensions: **Length:** 20.00 m. **Width:** 1.60 m. **Depth to Archaeology Min:** 0.35 m. **Max:** 0.6 m.

OS Co-ordinates: **Ref. 1:** TL0198047373 **Ref. 2:** TL0198647373

Reason for trench: **Contingency: to examine area close to the western boundary**

Context:	Type:	Description:	Excavated:	Finds Present:
900	Topsoil	Mid brown clay silt occasional small stones. The topsoil was very disturbed by roots from the poplar trees located close to the western boundary of the Study Area.	☒	☒
901	Alluvium	Yellow brown clay silt occasional small stones. This is tentatively identified as alluvium rather than subsoil.	☒	☐
902	Natural strata	Red brown clay silt frequent small stones, occasional medium stones. The stone inclusions constituted some 30% of the matrix.	☐	☐
903	**Ditch**	**Linear ESE-WNW dimensions: max breadth 1.m, min length 1.6m. The unexcavated feature was apparently sealed by (901).**	☐	☐
904	Fill	Red brown sandy clay moderate small stones.	☐	☒
905	**Ditch**	**Linear ESE-WNW dimensions: max breadth 3.m, min length 1.6m. In plan the unexcavated feature was roughly linear, though wider to the north west.**	☐	☐
906	Fill	Red brown sandy clay moderate small stones.	☐	☒
941	Fill	Dark brown clay silt frequent small fired clay, occasional flecks charcoal, occasional small stones. This appears to have been a relatively occupation rich fill of ditch [905] which was truncated by pit [939] rather than being associated with its reuse.	☐	☒
907	**Ditch**	**Linear ESE-WNW dimensions: max breadth 1.3m, min length 1.6m. The unexcavated feature was apparently sealed by (901). It is possible that this feature continued as [616] to the south-east - or less likely as [614].**	☐	☐
908	Fill	Red brown silty clay moderate small stones.	☐	☐
909	**Pit**	**Sub-circular E-W dimensions: min breadth 0.9m, min length 1.2m. The unexcavated feature was masked by (901) to the north and continued beyond the western limit of the trench.**	☐	☐
910	Fill	Red brown silty clay frequent flecks charcoal, moderate small stones.	☐	☐
911	**Posthole**	**Circular dimensions: max diameter 0.2m.**	☐	☐
912	Fill	Mid yellow brown silty clay occasional small stones. The deposit was noticeably darker than the surrounding deposit of (901). The deposit was disturbed by roots. The only inclusions were very small fragments of oolitic gravel.	☐	☐
913	**Posthole**	**Circular dimensions: max diameter 0.2m.**	☐	☐
914	Fill	Mid yellow brown silty clay occasional small stones. The deposit was noticeably darker than the surrounding deposit of (901). The deposit was disturbed by roots. The only inclusions were very small fragments of oolitic gravel.	☐	☐
915	**Posthole**	**Circular dimensions: max diameter 0.2m.**	☐	☐
916	Fill	Mid yellow brown silty clay occasional small stones. The deposit was noticeably darker than the surrounding deposit of (901). This deposit was disturbed by roots. The only inclusions were very small fragments of oolitic gravel.	☐	☐
917	**Posthole**	**Circular dimensions: max diameter 0.2m.**	☐	☐
918	Fill	Mid yellow brown silty clay occasional small stones. The deposit was noticeably darker than the surrounding deposit of (901). The deposit was disturbed by roots. The only inclusions were very small fragments of oolitic gravel.	☐	☐
919	**Posthole**	**Circular dimensions: max diameter 0.2m.**	☐	☐
920	Fill	Mid yellow brown silty clay occasional small stones. The deposit was noticeably darker than the surrounding deposit of (901). The deposit was disturbed by roots. The only inclusions were very small fragments of oolitic gravel.	☐	☐
921	**Posthole**	**Circular dimensions: max diameter 0.2m.**	☐	☐
922	Fill	Mid yellow brown silty clay occasional small stones. The deposit was noticeably darker than the surrounding deposit of (901). The deposit was disturbed by roots. The only inclusions were very small fragments of oolitic gravel.	☐	☐
923	**Posthole**	**Circular dimensions: max diameter 0.2m.**	☐	☐

Trench: 9

Max Dimensions: **Length:** 20.00 m. **Width:** 1.60 m. **Depth to Archaeology Min:** 0.35 m. **Max:** 0.6 m.

OS Co-ordinates: **Ref. 1:** TL0198047373 **Ref. 2:** TL0198647373

Reason for trench: **Contingency: to examine area close to the western boundary**

Context:	Type:	Description:	Excavated:	Finds Present:
924	Fill	Mid yellow brown silty clay occasional small stones. The deposit was noticeably darker than the surrounding deposit of (901). The deposit was disturbed by roots. The only inclusions were very small fragments of oolitic gravel.	☐	☐
925	**Posthole**	**Circular dimensions: max diameter 0.2m.**	☐	☐
926	Fill	Mid yellow brown silty clay occasional small stones. The deposit was noticeably darker than the surrounding deposit of (901). The deposit was disturbed by roots. The only inclusions were very small fragments of oolitic gravel.	☐	☐
927	**Posthole**	**Circular dimensions: max diameter 0.2m.**	☐	☐
928	Fill	Mid yellow brown silty clay occasional small stones. The deposit was noticeably darker than the surrounding deposit of (901). The deposit was disturbed by roots. The only inclusions were very small fragments of oolitic gravel.	☐	☐
929	**Posthole**	**Circular dimensions: max diameter 0.2m.**	☐	☐
930	Fill	Mid yellow brown sandy clay occasional small stones. The deposit was noticeably darker than the surrounding deposit of (901). The deposit was disturbed by roots. The only inclusions were very small fragments of oolitic gravel.	☐	☐
931	**Posthole**	**Oval NW-SE dimensions: max breadth 0.2m, max length 0.3m. A possible posthole rather than a pit.**	☐	☐
932	Fill	Mid yellow brown silty clay occasional small stones. The deposit was noticeably darker than the surrounding deposit of (901). The deposit was disturbed by roots. The only inclusions were very small fragments of oolitic gravel.	☐	☐
933	**Posthole**	**Circular dimensions: max diameter 0.2m.**	☐	☐
934	Fill	Mid yellow brown sandy clay occasional small stones. The deposit was noticeably darker than the surrounding deposit of (901). The deposit was disturbed by roots. The only inclusions were very small fragments of oolitic gravel.	☐	☐
935	**Posthole**	**Circular dimensions: max diameter 0.2m.**	☐	☐
936	Fill	Mid yellow brown silty clay occasional small stones. The deposit was noticeably darker than the surrounding deposit of (901). The deposit was disturbed by roots. The only inclusions were very small fragments of oolitic gravel.	☐	☐
937	**Posthole**	**Oval N-S dimensions: max breadth 0.3m, max length 0.4m. A possible posthole rather than a pit.**	☐	☐
938	Fill	Red brown sandy clay frequent small burnt stones, occasional medium burnt stones. No charcoal was associated with the burnt stones, which may suggest reuse as packing material?	☐	☒
939	**Pit**	**Circular dimensions: max diameter 0.43m. A distinctive pit which contained the inverted lower stone from a quern. This feature truncated the disuse fills of ditch [905].**	☐	☐
940	Fill	Red brown sandy clay frequent small stones. The matrix contained a considerable quantity of very small oolitc gravel, which may have acted as 'packing' around the quernstone. The deposit was partially examined when the quern was removed. A second large river cobble was directly below the quern.	☐	☒

Trench: 10

Max Dimensions: **Length:** 5.00 m. **Width:** 5.00 m. **Depth to Archaeology Min:** 0.4 m. **Max:** m.

OS Co-ordinates: **Ref. 1:** TL0203947399 **Ref. 2:**

Reason for trench: **Contingency: to examine area within ditches for settement**

Context:	Type:	Description:	Excavated:	Finds Present:
1000	Topsoil	Mid brown loam occasional small stones.	☒	☒
1001	Subsoil	Mid yellow brown sandy clay frequent small stones.	☒	☐
1002	Natural strata	Red brown sandy clay frequent small stones. Natural gravel strata.	☐	☐
1003	**Furrow**	**Linear N-S profile: concave base: concave dimensions: max breadth 1.25m, max depth 0.17m, min length 6.m. This corresponds to a geophysical anomaly**	☒	☐
1004	Fill	Mid brown loam moderate small stones.	☒	☐
1005	**Posthole**	**Circular profile: 45 degrees base: concave dimensions: max depth 0.1m, max diameter 0.2m.**	☒	☐
1006	Fill	Firm mid brown loam moderate small stones, occasional flecks charcoal.	☒	☐
1007	**Posthole**	**Circular profile: vertical base: concave dimensions: max depth 0.18m, max diameter 0.25m.**	☒	☐
1008	Fill	Firm mid brown loam occasional small stones, occasional flecks charcoal.	☒	☐
1009	Natural strata	Firm mid yellow brown sandy clay occasional small stones. This would appear to be a variation in the natural strata (1002).	☐	☐

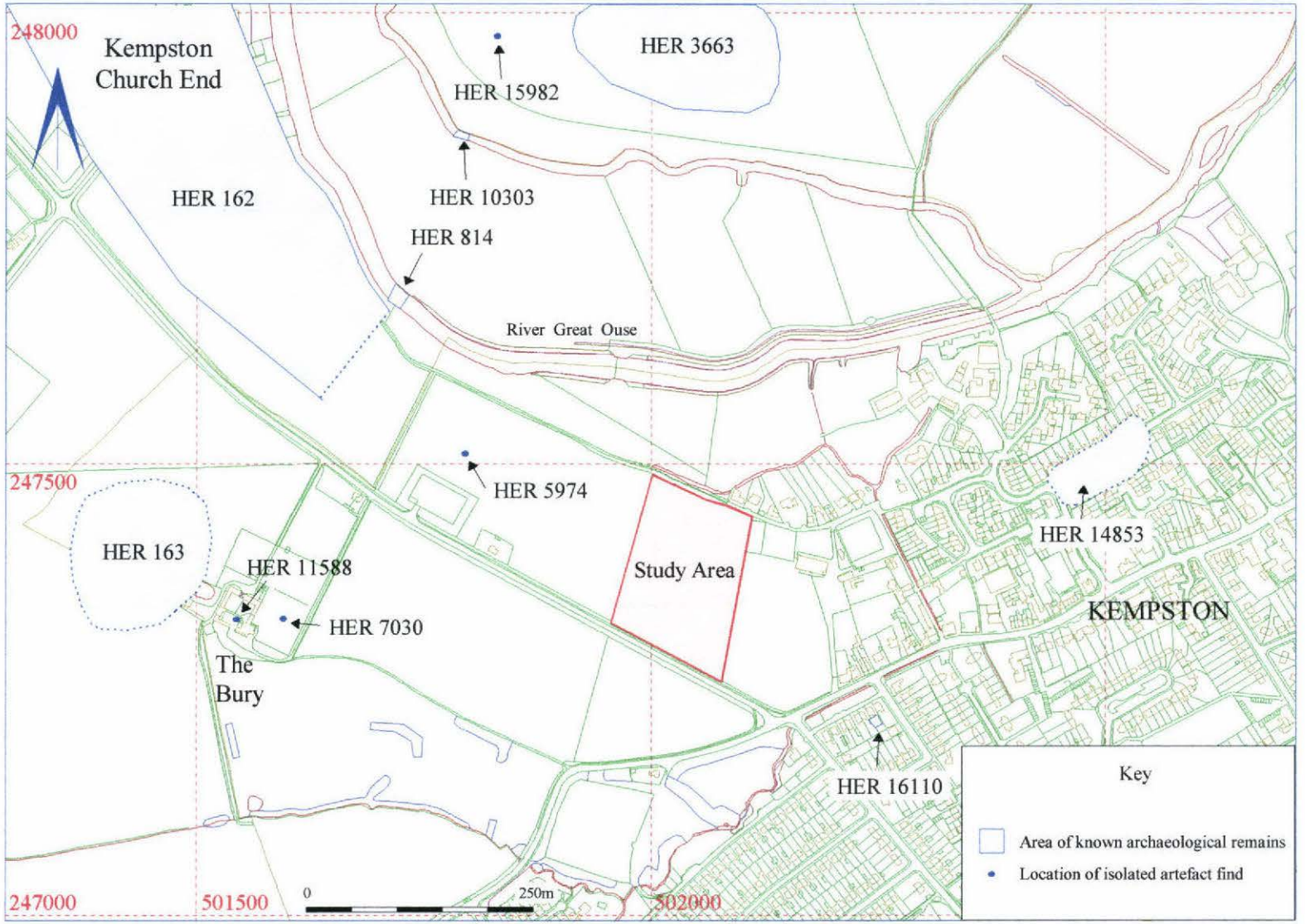


Fig. 1: Location of Study Area showing adjacent HER sites

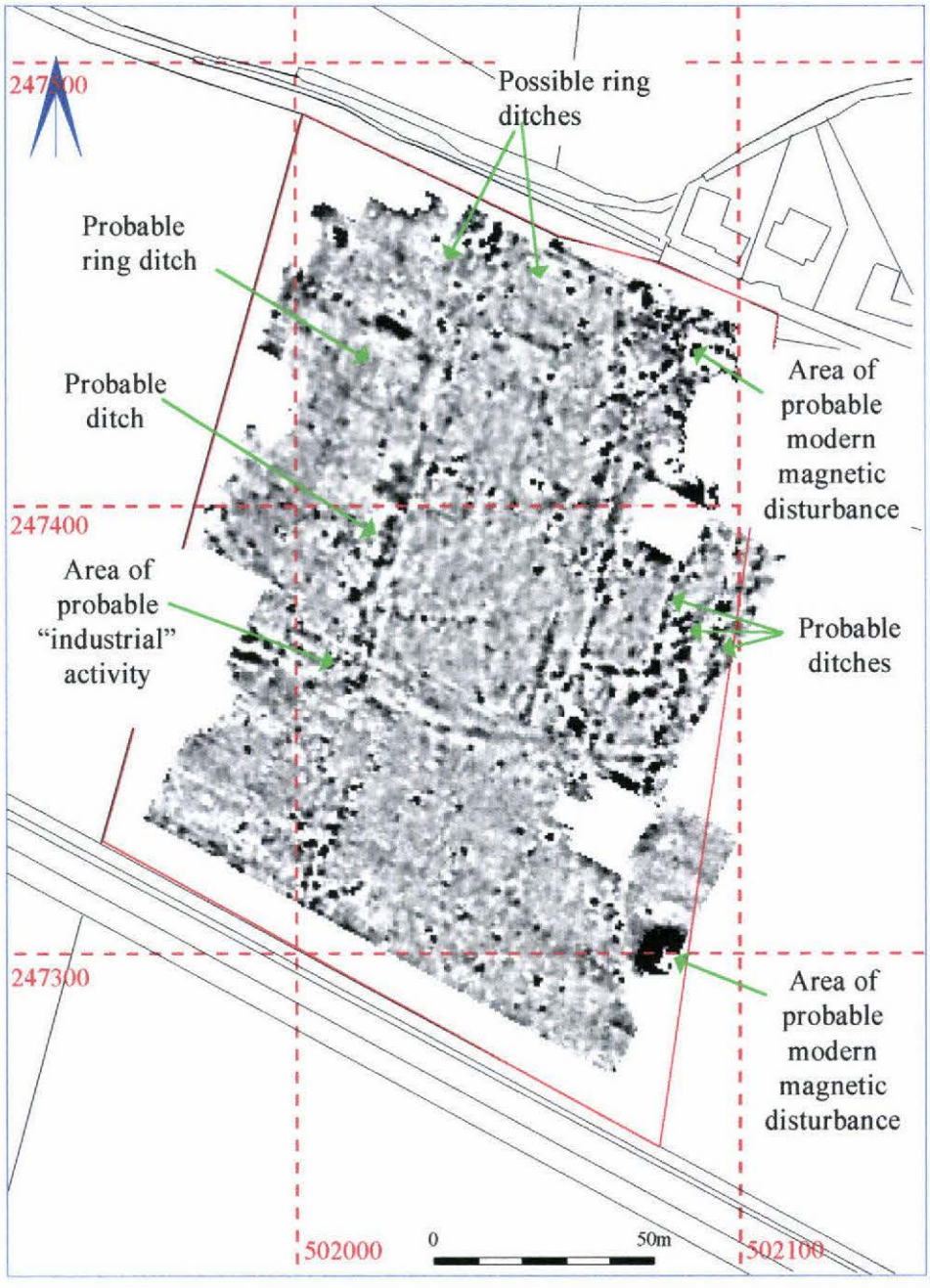


Fig. 2: Geophysical survey greyscale image with explanatory labels

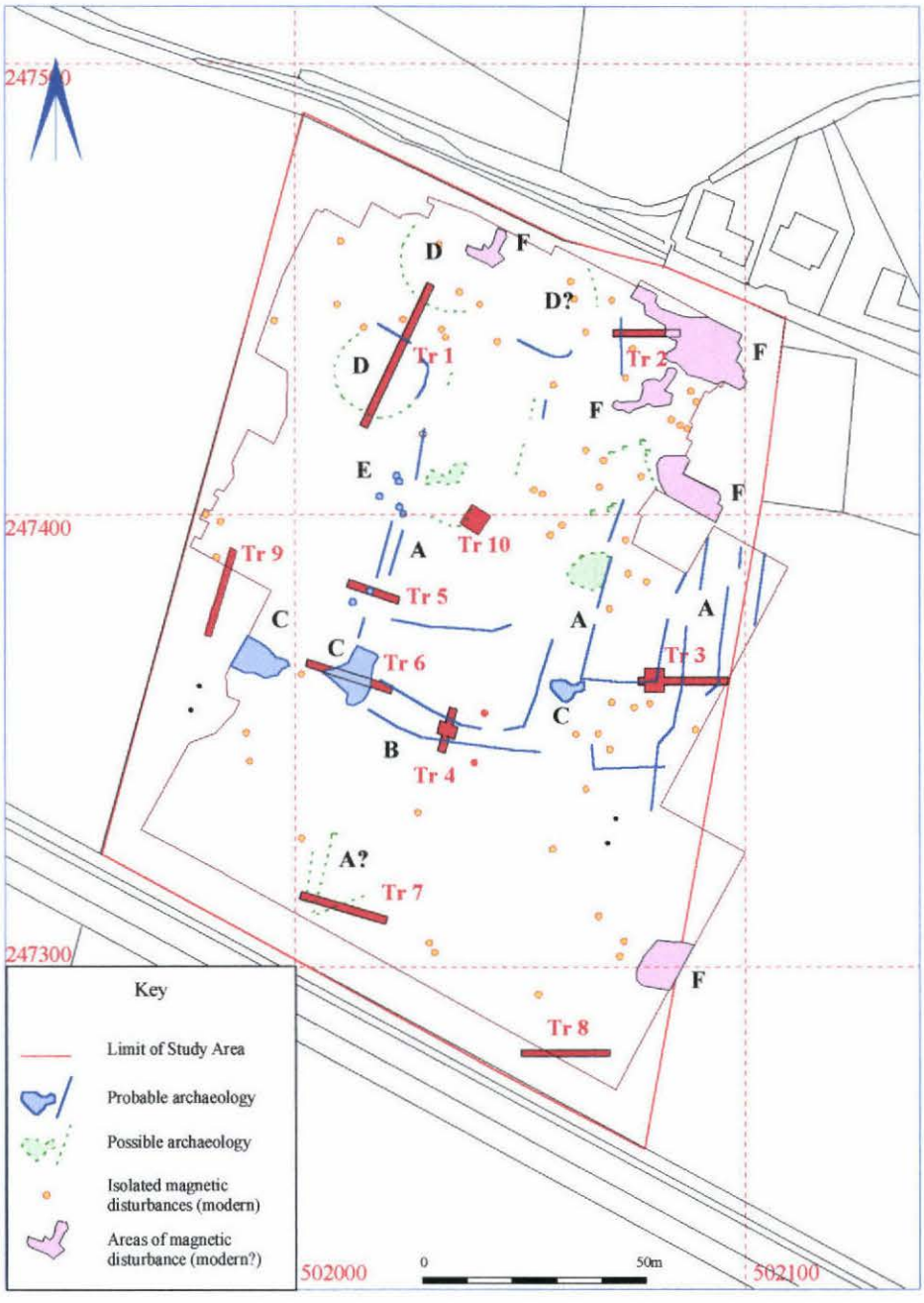


Fig. 3: Geophysical interpretation plan with trial trench locations

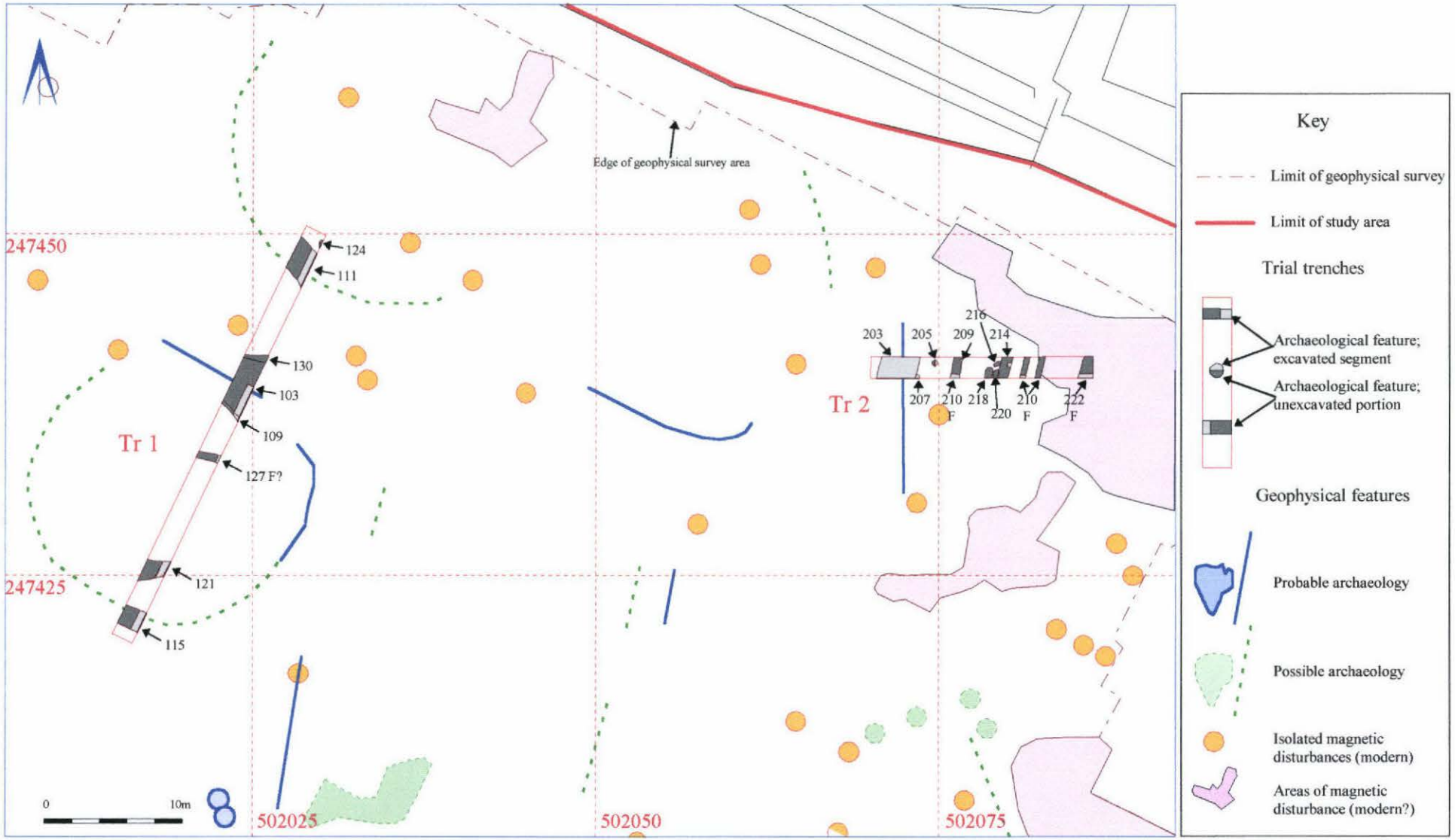


Fig. 4: Summary of results from trenches 1 and 2 with geophysical interpretation

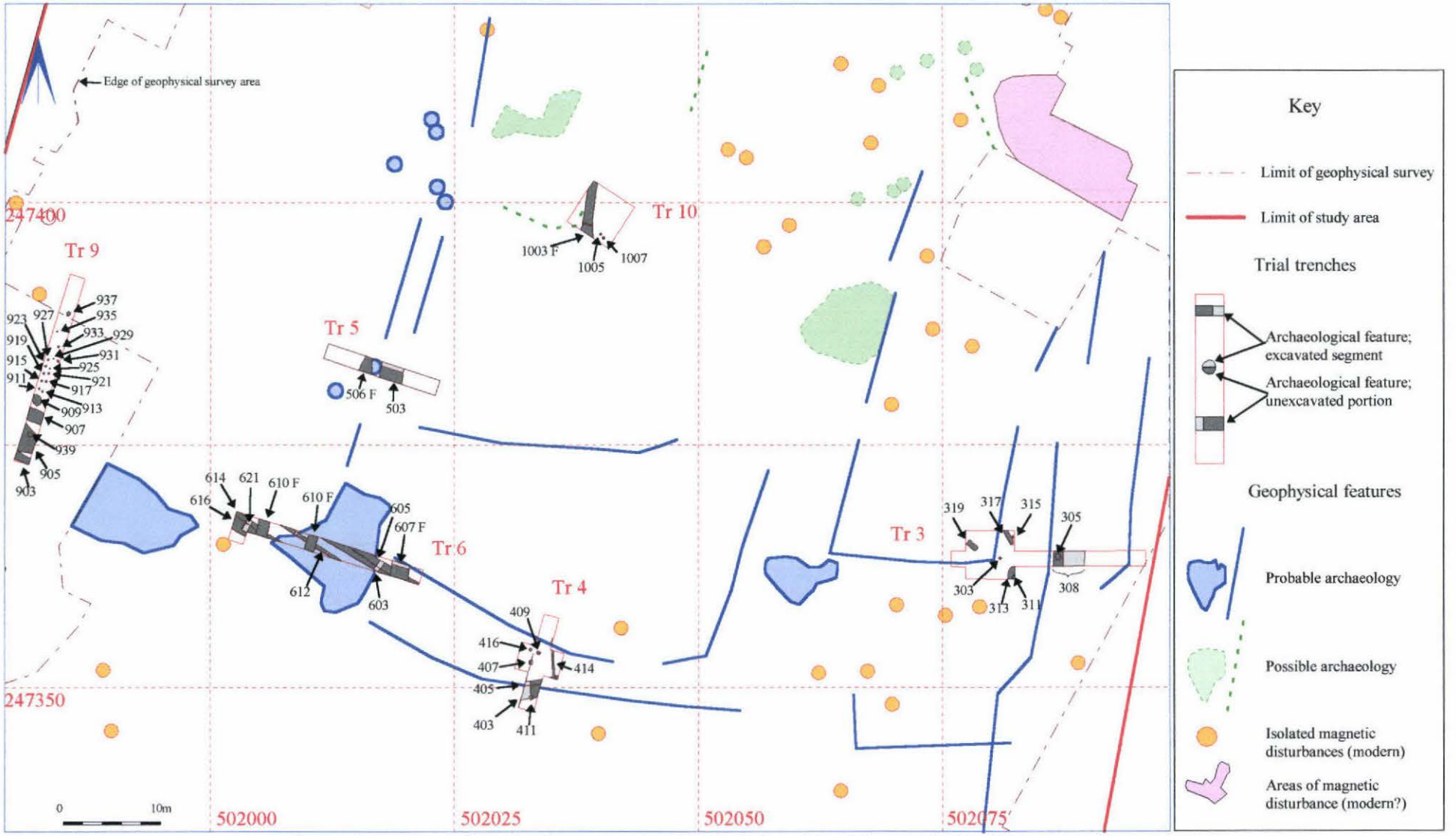


Fig. 5: Summary of results from trenches 3, 4, 5, 6 and 9 with geophysical interpretation

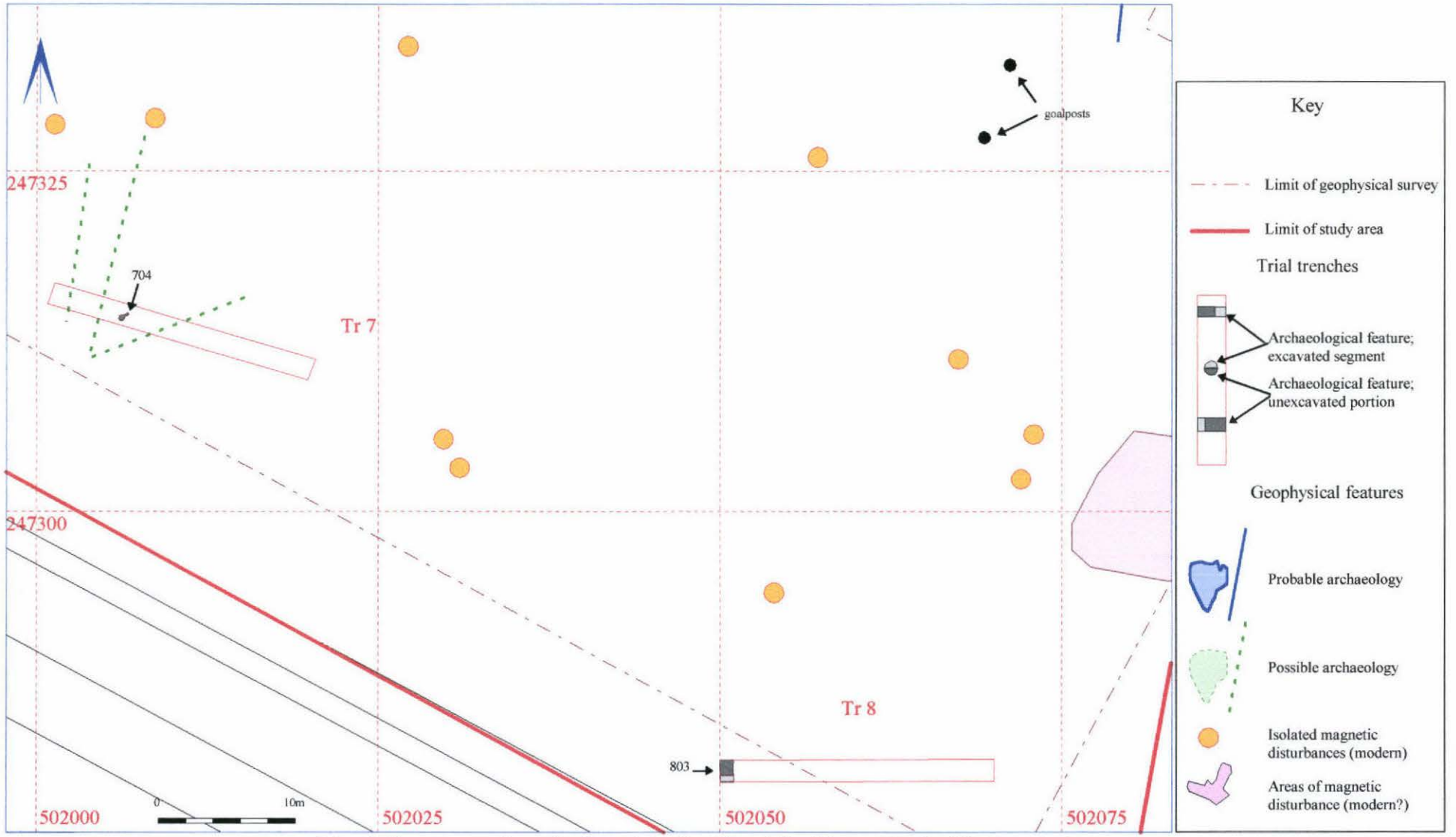
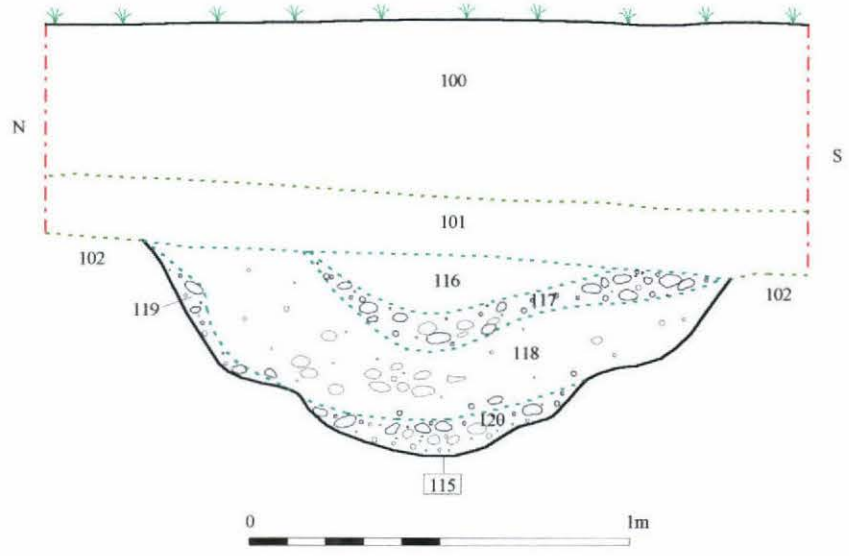
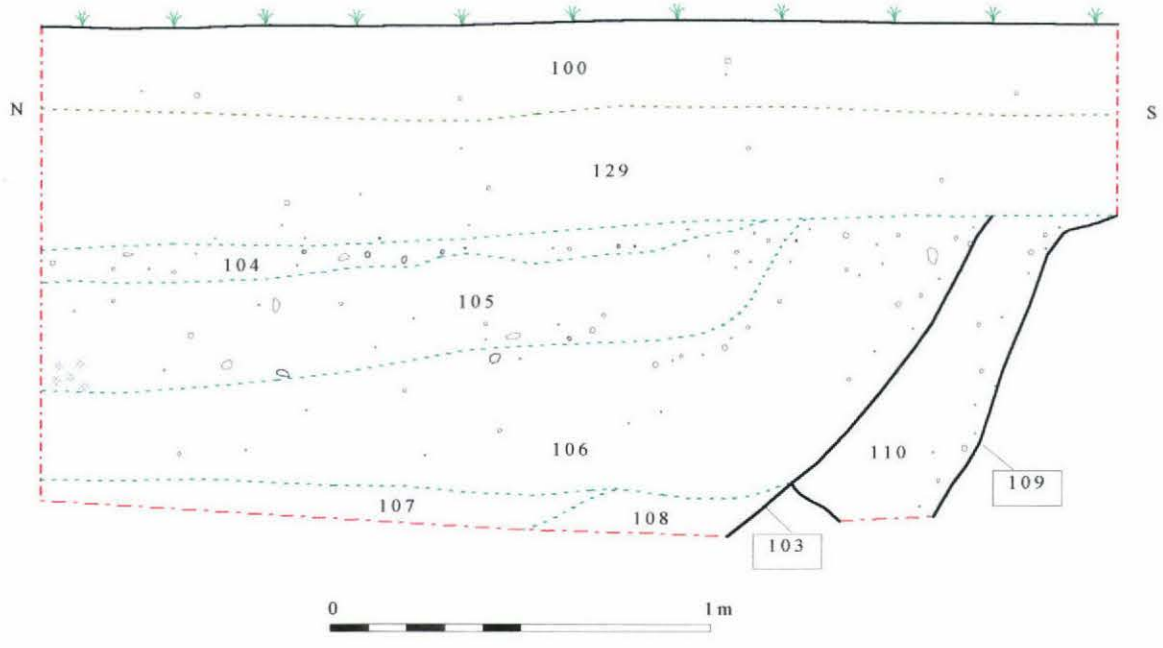


Fig. 6: Summary of results from trenches 7 and 8 with geophysical interpretation

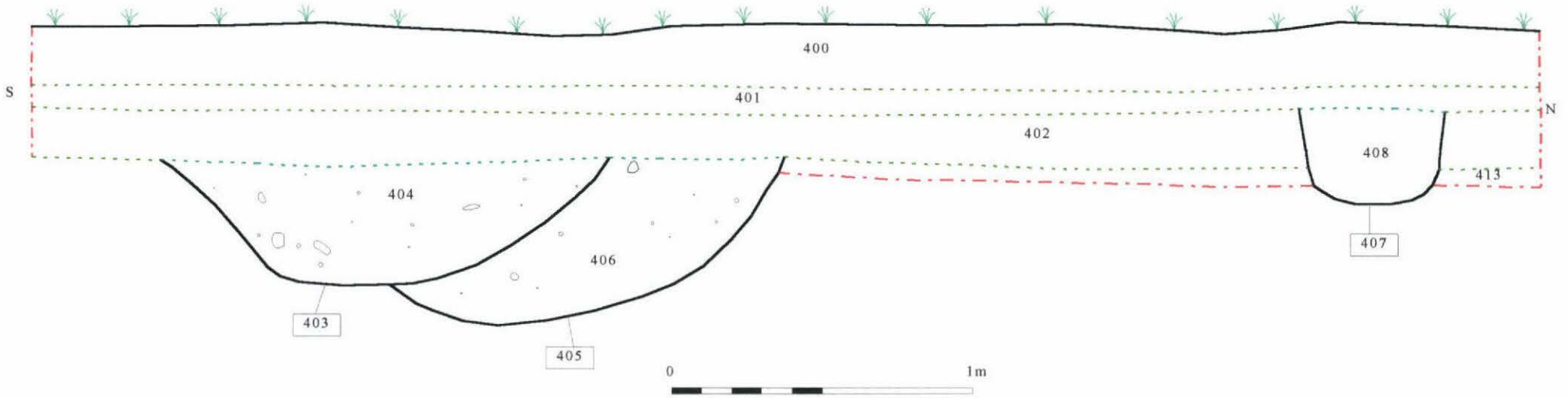


Section 12

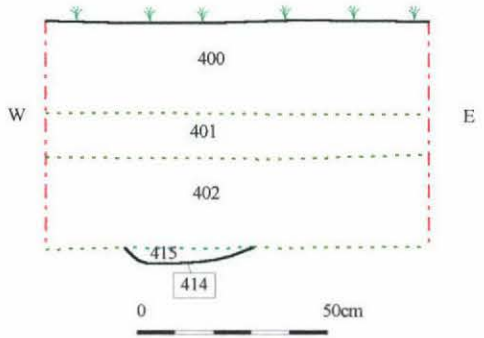


Section 15

Fig. 7: Selective sections from trench 1



Section 5



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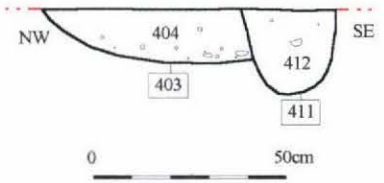

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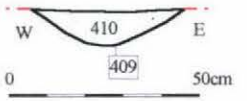
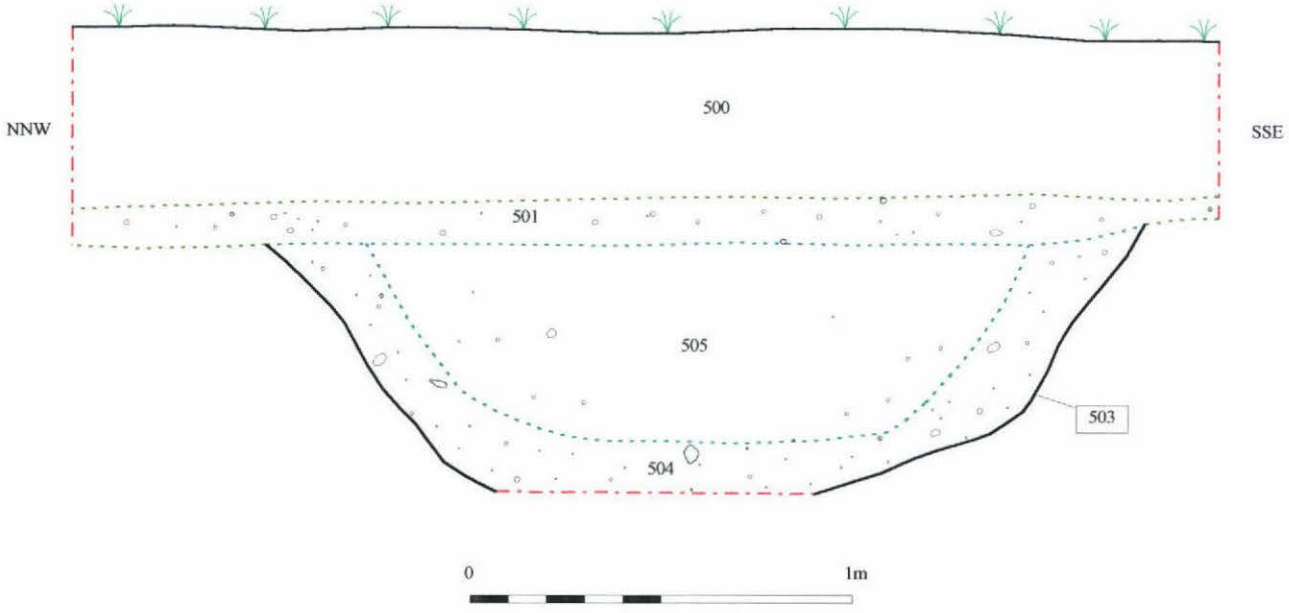
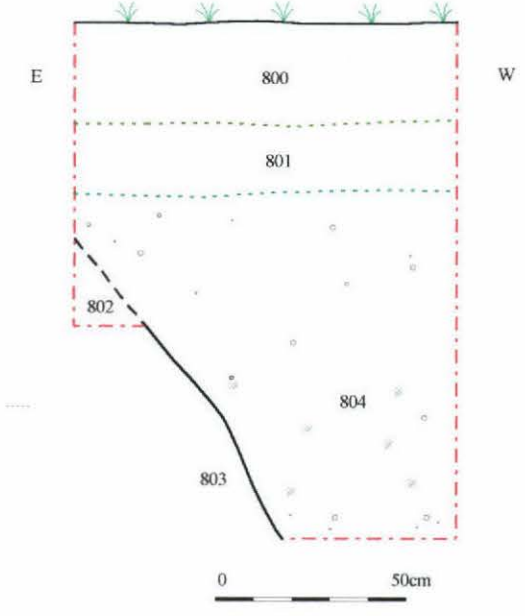


Section 7

Fig. 8: Selective sections from trench 4



Section 4



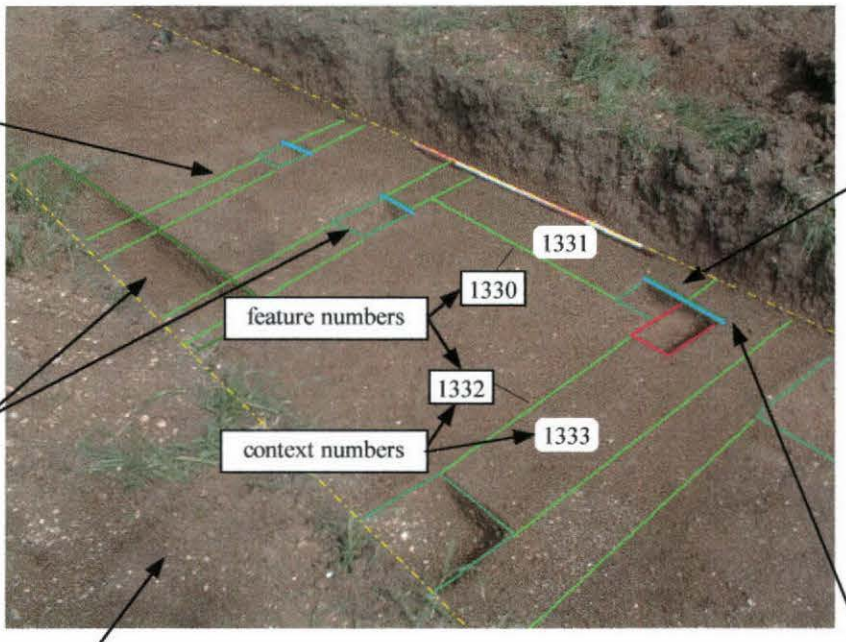
Section 3

Fig. 9: Selective sections from trenches 5 and 8

APPENDIX 2: EXPLANATION OF ARCHAEOLOGICAL TERMS AND PROCEDURES (NOT EXAMPLES FROM CUTLER HAMMER)

1, FEATURE IDENTIFICATION
After machining **features** such as gullies, post-holes, pits, tree-holes and animal burrows are often visible as darker areas of soil against the lighter undisturbed **natural**.

2, EXCAVATION AND RECORDING
All features are investigated. If they are archaeological a **segment** is excavated. The nature of the deposits is studied and any artefacts in the soil are recovered.

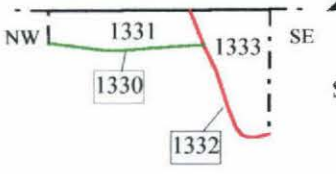


Photograph of gullies at the north-western end of trench 13

3, CONTEXT RECORDING
Descriptions and interpretations of all aspects of the identified feature (e.g. upper and lower fills, and the cut) are recorded as **contexts**. The **context number** given to the cut is also known as its **feature number**.
Written recording takes place on pro-formae sheets.

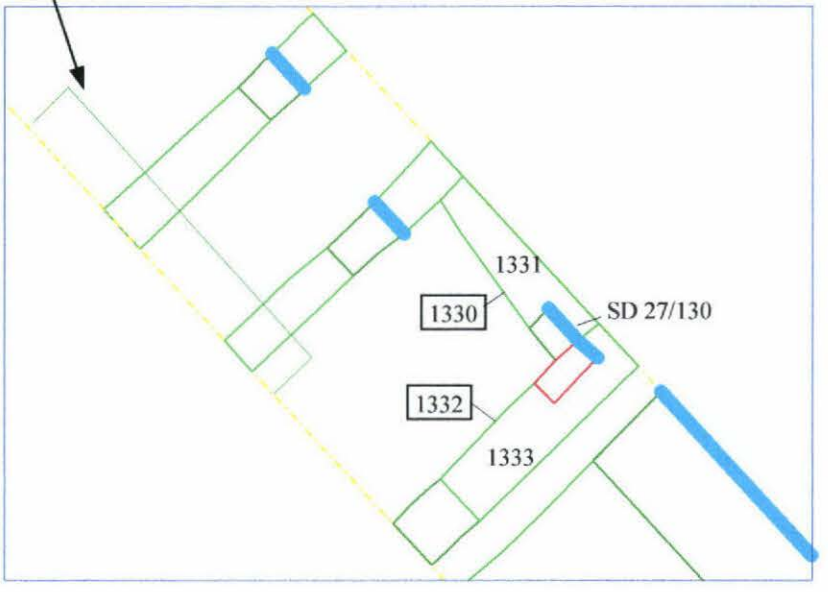
4, SECTION RECORDING
The profile of features and nature of their fills are recorded on scale drawings known as **sections**. These record the distributions of stones and other inclusions and also the relationships between features

5, PLAN RECORDING
The positions of all features are mapped on scale drawings known as **plans**. These show the spatial and stratigraphic relationships of all features, excavated or not. The relevent feature and section numbers are also shown



SD 27/130 ← section number
i.e. section drawing 130 on sheet 27

Section of excavated segment across two intercutting gullies



Plan of area of photograph