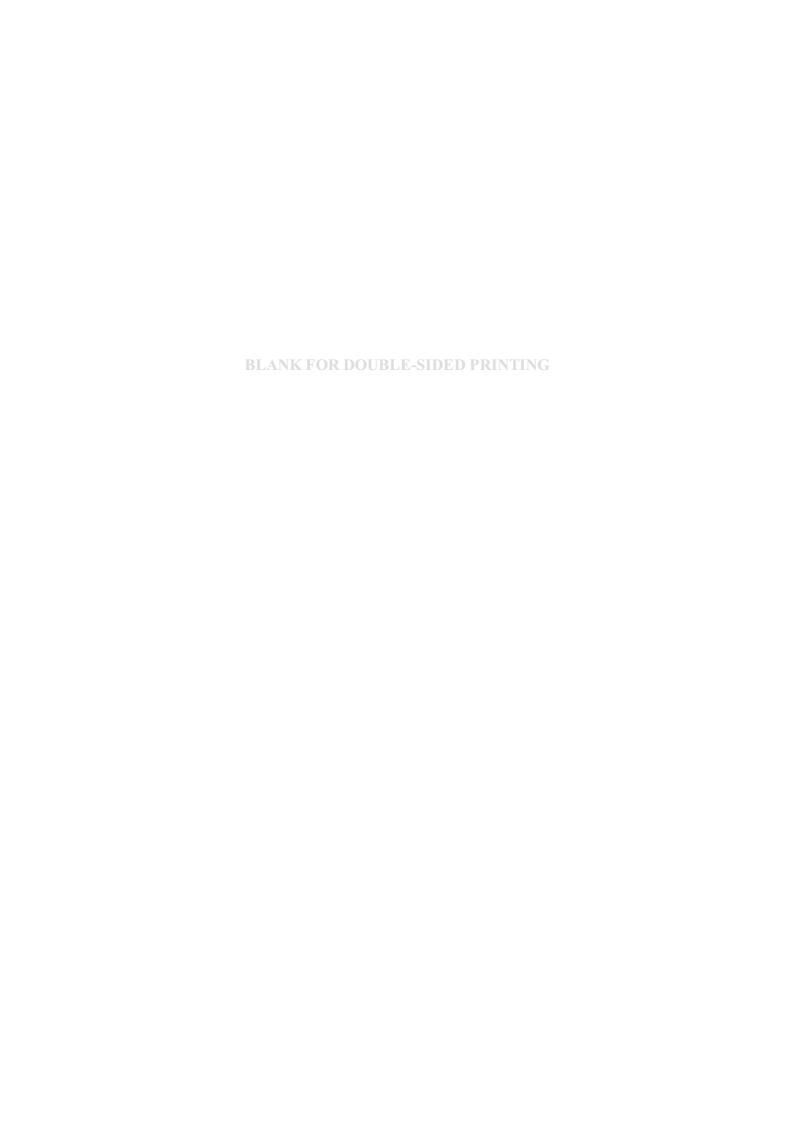
LAND WEST OF COPLE BEDFORDSHIRE ARCHAEOLOGICAL EVALUATION

Albion archaeology







LAND WEST OF COPLE BEDFORDSHIRE

ARCHAEOLOGICAL EVALUATION

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On behalf of: Bedford Girls' School

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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. All statements and opinions in this document are offered in good faith. Albion Archaeology 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.

The fieldwork was undertaken by Kathy Pilkinton (Archaeological Supervisor), Adam Williams and Tori Hainsworth (Archaeological Technicians). This report has been prepared by Kathy Pilkinton and Jeremy Oetgen, with figures by Joan Lightning (CAD Technician). Artefacts were identified by Jackie Wells (Finds Officer). Cropmark interpretation and plotting was undertaken by Joan Lightning. The project was managed by Jeremy Oetgen and all Albion projects are under the overall management of Drew Shotliff (Operations Manager).

Albion Archaeology would like to thank Paul Riley (Goodrich Consulting) for commissioning the work on behalf of Bedford Girls' School. Thanks are due to Morgan Taylor (Greengage) for advice on protected species. We are also grateful to Geoff Saunders, Archaeological Officer, Bedford Borough Council, for monitoring the work.

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1.1	27/01/2015	OASIS record inserted; references updated
2.0	05/02/2015	Minor amendments to Section 1.3 and 2.4 as requested by HET

Key Terms

Throughout this report the following abbreviations are used:

Client Bedford Girls' School

DCLG Department for Communities and Local Government
HER Historic Environment Record, Bedford Borough Council
HET Historic Environment Team, Bedford Borough Council
CIfA Chartered Institute for Archaeologists (formerly IfA)

NE Natural England
OS Ordnance Survey

Procedures Manual Procedures Manual Volume 1 Fieldwork, 2nd edn, 2001, Albion Archaeology

WSI Written Scheme of Investigation



Non-Technical Summary

An archaeological field evaluation was undertaken in accordance with Condition 12 of planning permission 14/00930/MAF, which was granted by Bedford Borough Council for provision of 6 no. grass sports pitches, a two-storey clubhouse building, access, car parking, a maintenance barn, and associated landscaping on land to the west of Cople.

The development area of c. 12.6ha is centred on TL 10110/48672 on land to the west of the village of Cople. The western side of the site lies on the floodplain of the Cople Brook, a tributary of the Elstow Brook, and the eastern part lies on the river gravel terrace.

The evaluation employed geophysical (gradiometer) survey and trial trenching, focusing on the areas of development impact (i.e. <7ha) within the development area. The detailed results of the geophysical survey are the subject of a separate report. The present report focuses on the trial trenching and provides an overall synthesis of the evaluation results.

Generally, the evaluation identified few archaeological features and there was a distinct lack of artefacts and food refuse from the excavated deposits, which suggests that these features were unrelated to settlement (despite their relative proximity to the centre of Cople village). The majority of the features probably functioned as drains and/or field boundaries — they are of negligible archaeological significance, reflecting the primarily agricultural use of the land.

However, the evaluation also identified elements of heritage assets of greater significance:

- A regionally significant, probably prehistoric pit alignment, visible as cropmarks running approximately north—south along the east side of the floodplain of the Cople Brook.
- Archaeological and topographical features relating to post-medieval management of the land as a water meadow. The remains were not well preserved, so are of only local significance.

A ditched boundary on an east—west alignment might tentatively be associated with the postulated Roman road (Viatores 124/HER738), but this identification is uncertain.



1. INTRODUCTION

1.1 Background

Planning permission (14/00930/MAF) has been granted by Bedford Borough Council for provision of 6 no. grass sports pitches, a two-storey clubhouse building, access, car parking, a maintenance barn, and associated landscaping on land to the west of Cople.

The development lies in an area of archaeological sensitivity and, as a result, Bedford Borough Council's Historic Environment Team (HET) advised that a negative condition requiring a programme of archaeological works should be attached to the planning permission. Condition 12 requires that: *No development shall take place until an archaeological strategy for evaluation and if necessary, a further mitigation strategy based on the outcome of the evaluation, have been submitted to and approved in writing by the Local Planning Authority.* The condition is in line with guidelines in the National Planning Policy Framework (NPPF, DCLG 2012) and in accordance with Saved Policies BE24 & BE25 of the Bedford Borough Local Plan 2002, Policy CP23 of the Bedford Borough Core Strategy and Rural Issues Plan (2008).

The scope of the archaeological field evaluation was set out in a brief issued by the HET (HET 2014). A Written Scheme of Investigation (WSI) was prepared on behalf of the client by Albion Archaeology (Albion Archaeology 2014b). The field evaluation strategy comprised detailed magnetometer survey of the whole development area, followed by trial trenching targeting the areas of greatest potential development impact.

The results of the evaluation will inform future decisions concerning the development of a strategy to mitigate any effects the development may have upon any significant heritage assets identified within the development area. These will be subject to a separate archaeological brief issued by the HET and a WSI detailing the strategy for archaeological mitigation.

1.2 Site Location, Topography and Geology

The development area is centred on TL 10110/48672 on land to the west of the village of Cople, (Figure 1). Cople is a linear settlement ranged along Willington Road with a single T-junction where it is joined by Grange Lane from the west. The site lies to the west of Willington Road and north of Grange Lane.

The development area covers c. 12.6ha. It is an irregular-shaped plot with maximum dimensions of 500m north-south by 360m east-west. The site is bounded to the north by a small nature reserve, known as Dog Field. To the east the boundary is formed by residential properties on Willington Road. At the south it is bounded by Grange Lane and properties on the north side of Grange Lane. The western side is bounded by Cople Brook, which flows north towards the Elstow Brook.



Within the development area the land is generally flat, ranging in level between c. 23.6m OD at the north to c. 25.3m OD at the south. However, the western part of the site — on the floodplain of the Cople Brook (Figure 1) — is c. 1m lower than the eastern part. The underlying bedrock consists of Oxford Clay. The superficial deposits comprise river terrace deposits of sands and gravels deposited in the valley of the river Great Ouse with a band of alluvium along the western part of the development area following the course of the Cople Brook.

1.3 Archaeological and Historical Background

Existing knowledge of the archaeology and history of the area was examined in detail in a Heritage Assessment (Albion 2014a) prepared to accompany the planning application for the development.

Evidence previously identified within the development area comprises:

- enclosure-type cropmarks (HER16718);
- the projected line of a Roman road (HER738);
- a Roman coin (HER14658);
- an elongated pond identified as a possible moat (HER8109);
- the inferred limits of the medieval settlement (HER17118) which extend into the south-west corner of the development area
- the location of a former sand pit (HER1358) marked on historic maps.

The enclosure cropmarks (HER16718) are comparable with other enclosures found in the surrounding landscape that typically date from the Iron Age or Roman periods. The Roman road (HER738) has been identified from an east—west alignment of cropmarks recorded c. Ikm south of Willington village. The recorded extent of the cropmarks does not reach as far as Cople, but the projected line runs across the south end of the development area. However, it is possible that the road would have deviated from its projected line in order to cross the Cople Brook. The road is likely to have been in the form of a green lane, defined by flanking ditches rather than a built-up agger. The possible moat (HER8109) is an elongated pond located towards the northern end of the development area. Historical maps show two or three projections on the eastern side of the pond which are no longer present. The feature is popularly referred to as a moat but its genuine origins are uncertain; it could be a moat, fish pond or gravel pit but is likely to have been modified by later gravel extraction.

Evidence from the surrounding landscape includes evidence for an extensive Neolithic/Bronze Age ritual landscape in this part of the Great Ouse valley, including a causewayed enclosure c. 500m to the west of the development area (Scheduled Monument 1005390).

Cropmarks (HER2840) to the south of Grange Road include a pit alignment (English Heritage Pastscape¹: DEFRA monument reference no.1410854) that runs approximately north—south, parallel with the Cople Brook. If it continues north on a similar line, the pit alignment would extend into the development area. This has

¹ http://www.pastscape.org.uk, online database (accessed 05/02/2015)



not been verified by excavation and is undated, but excavated alignments in the Great Ouse valley have been dated to the late Bronze Age / Iron Age.

Extensive enclosure cropmark complexes to the east (HER1861), south (HER2840) and west (HER585) indicate the presence of probable late Iron Age and Roman settlement sites.

1.4 Project Objectives

The general research aims of the archaeological evaluation were to:

- Establish the location, extent, date, character, condition, significance and quality of any surviving archaeological remains liable to be threatened by the proposed development;
- Establish the relationship of any remains found to surrounding contemporary landscapes.
- Recover palaeo-environmental remains to determine local environmental conditions.

Research frameworks that have been devised for the region are *Research and Archaeology: A framework for the Eastern Counties: Research Agenda and Strategy* (Brown and Glazebrook 2000), *Research and Archaeology Revisited: a revised framework for the East of England* (Medlycott 2011) and specifically for Bedfordshire: *Bedfordshire Archaeology. Research and Archaeology: Resource Assessment, Research Agenda and Strategy* (Oake *et al* 2007).

Previous investigations within the Cardington/Cople Neolithic and early Bronze Age monument complex have noted that some monuments do not show as cropmarks, due either to their small size or because they were obscured by alluvium (Oake *et al* 2007, 10). In relation to the later prehistoric and Roman periods the relationship of enclosure and settlement and also the function and landscape relationship of pit alignments are identified as research objectives (ibid. 11).

Specific objectives to be addressed in the evaluation of the development area were to:

- Determine the date and character of the enclosure cropmarks.
- Investigate evidence for the presence of the Roman road.
- Investigate evidence for the possible continuation of the pit alignment noted as cropmarks to the south of the development area.
- Investigate the inferred extent of medieval settlement at the south-west corner of the development area within the area of the planned car park.
- Investigate the date and character of the possible pond, if features or deposits relating to this extend into areas affected by the development (e.g. planned orchard).

Research objectives will be continuously reviewed during the project and new objectives formulated if the remains uncovered during the trial trenching warrant it and/or prior to subsequent stages of archaeological work.



1.5 Summary of Geophysical Survey Results

The survey was undertaken by specialist contractors, Stratascan, and took place between 20th and 21st November 2014. It comprised a detailed gradiometry (magnetometer) survey covering the location of the proposed sports pitches, clubhouse, and car park — a total area of approximately 6.3ha.

The results of the survey are presented in a separate report (Stratascan 2014); data have been extracted for use in the present document, where relevant. No anomalies of probable archaeological origin were identified, but a relatively small number of possible archaeological anomalies were seen, including a linear feature near the projected line of the Roman road (Figure 2). The remaining anomalies were of natural or modern origin, relating to underground services, agricultural activity, scattered magnetic debris, ferrous objects and fencing.

The border between the alluvium and the sand and gravel geologies was evident in the data. It was observed that the best results were obtained from sand and gravel deposits on the east of the site, where weak anomalies could still be identified, whereas the alluvium on the west side did not seem to be conducive to the detection of anomalies corresponding to the recorded cropmarks.



2. TRIAL EXCAVATION

2.1 Introduction

The fieldwork took place between 6th and 9th January 2015. A total of eleven trenches were excavated. Eight were 50m long. Three 10m- or 15m-long trenches were targeted specifically on areas in which the proposed excavation of ponds would cause the greatest disturbance to any archaeological remains within a closely defined area.

The trenches were located across the development area (Figure 1), in positions agreed with the HET, in order to best assess the character, extent and depth of any archaeological remains present on site.

2.2 Summary Method Statement

Throughout the project the standards set in the CIfA Standard and Guidance for Field Evaluation were adhered to. Also those standards outlined in Albion Archaeology's Procedures Manual for Archaeological Fieldwork and the Analysis of Fieldwork Records (2nd edn, 2001), the CIfA Code of Conduct and English Heritage's MoRPHE Managers Guide (2006) were adhered to.

The main points with regard to the trial excavation methodology were as follows:

- Trenches were marked out in advance using dGPS apparatus operated by a trained technician. Ordnance datum heights referred to in this report were determined using GPS data.
- All machine excavation was supervised by experienced archaeologists and was undertaken using a mechanical excavator fitted with a toothless bucket.
- The spoil heaps were visually scanned for artefacts.
- Archaeological deposits, where found, were assigned context numbers.
- A photographic record of the trenches and deposits was maintained and contexts were described on pro-forma trench recording sheets.
- The HET Archaeological Officer inspected the trenches prior to backfilling.

The detailed method statement is presented in the WSI (Albion Archaeology 2014b).

2.3 Environmental Constraints

Due to the potential for Great Crested Newts and reptiles on the site, works were carried out subsequent to the issue of a licence from Natural England (NE). Trial trenching was planned to take place during winter when the amphibians were hibernating in hedge banks, woodland etc., away from areas of grassland. As a precaution, the fieldwork was monitored by a licensed specialist contractor (Greengage).



2.4 Results of the Trial Excavation

All significant deposits found during the investigations are described below and shown in Figures 2–10. Detailed information on all features and deposits can be found in Appendix 1. The only finds recovered were from a single feature in Trench 4; these are described together with the feature in Section 2.4.6.

Trenches 3, 5, 6, 9 and 10 produced no evidence of archaeological remains, although occasional organic remains indicated the presence of former vegetation.

2.4.1 Overburden and undisturbed geological deposits

Overburden varied across the site and was present to a depth of 0.5–0.75m. Topsoil was 0.3–0.45m thick; subsoil was 0.2–0.45m thick. The deepest overburden was present on the west side of site in Trenches 1, 8 and 10. This comprised a dark grey-brown clayey silt topsoil, overlying a brown clayey silt subsoil, which was probably alluvial in origin.

The natural deposits in Trenches 1, 8, 10 and 11 comprised yellow clay and gravels, typical of an active floodplain.

In the remaining trenches, located on the higher ground on the east side of the site, a brown-red clayey sand and gravel was overlain by red-brown gravely clay and a dark-grey silty topsoil.

2.4.2 Trench 1

The features in Trench 1 were not clearly defined and were mostly interpreted as due to the action of tree roots or other natural processes. One feature was tentatively recorded as archaeological: a possible ditch with a concave profile [103]. The bottom of the trench lay just below the prevailing water table.

2.4.3 Trench 2

Trench 2 revealed archaeological deposits at a depth of 0.55–0.65m. A large ditch [212], 2.4m wide and 0.7m deep, lay at the west end of the trench. It was filled with dark brown-grey clayey silt similar to the topsoil. The ditch was aligned on a recorded cropmark that runs roughly north—south, parallel to the current course of the Cople Brook, *c.* 140m to the west (Figure 11). The same ditch was encountered in Trench 7; its interpretation is discussed in Section 3. Two smaller ditches on the same alignment [215], [217] were filled with similar material, but were no more than 0.25m deep.

Two sub-square pits of similar dimensions and alignment [203] and [219] were revealed to the east of the ditches. On excavation, [203] revealed steep sides and a flat base and measured 1.35m wide with a depth of 0.45m. It was backfilled with a sterile sandy clay and brown clayey silt. Excavation of pit [219] was not practical, because there was insufficient room within the trench. The interpretation of these pits is discussed in Section 3.1.1.



Two circular pits were also revealed. Pit [209] was 1.45m wide and 0.2m deep and was only partially visible within the trench. Pit [206] was 1.0m in diameter and was filled with a dark silty clay probably modern in origin.

None of the excavated features in this trench produced datable artefacts. The nature of the deposits and their alignment with the current and former field boundaries suggest that they are post-medieval in origin, although they could be earlier (see Section 3.1.1).

2.4.4 Trench 7

To the north of Trench 2, Trench 7 revealed a continuation of the main features described above. Corresponding with the continuation of the recorded cropmark (Figure 11) a NE–SW aligned ditch [708] was revealed at the north end of the trench. Although wider at this point (c. 5m), it appears to be the continuation of ditch [212] and contained similar upper deposits. A second ditch [710] was observed on excavation of the trench; this was on an east—west alignment. The north end of the trench fell below the water table and flooded almost immediately, so it was not possible to investigate these two features by hand. Machine excavation of ditch [710] showed it to be shallow with a land drain at the base with similar dark silty fills to [708] suggesting them to be contemporary. The presence of ditch [710] is also indicated by the cropmarks.

Two partially revealed sub-square pits [703] and [712] had a similar profile to those in Trench 2 and were on a similar alignment (Figure 3). Pit [703] was 1.5m wide and 0.5m deep. Their interpretation is discussed further in Section 3.

A small E-W aligned gully [706] was filled with brown-grey silty clay and is probably associated with field drainage.

None of the excavated features in this trench produced datable artefacts. The nature of the deposits and their alignment with the current and former field boundaries suggest that they are post-medieval in origin, but they could be earlier (see Section 3.1.1).

2.4.5 Trench 11

A single ditch [1103]/[1104] was revealed within Trench 11. It was aligned east—west along the trench and turned to the south-west at the west end. It measured c.1m wide and 0.25m deep. No dating evidence was recovered but it appears to run parallel to the edge of the current field boundary. Its somewhat sinuous course might indicate, speculatively, that it is an earlier iteration of the boundary, possible predating Enclosure.

A single posthole [1107] contained the remains of a wooden post. The post could not have been very old, given that the deposits were reasonably well drained with no evidence of anaerobic conditions conducive to the preservation of organic materials.



2.4.6 Trench 4

Ditch [403] and the small parallel ditch [409] confirm the anomaly visible on the geophysical survey. Ditch [403] was revealed to be V-shaped with a concave base. It measured 1.1m wide and 0.7m deep. The distinct, asymmetrical V-shaped profile of the ditch suggests it to be different in function from the ditches to the west (Trenches 2 and 7). The ditch contained five distinct fills, including a primary silt (404), followed by a sequence of chalky or sandy silt deposits (405–7), which suggests that it initially began to fill through a gradual process of accumulation.

The upper fill was up to c. 0.5m deep. It contained an abraded, coarse, reduced, sand-tempered pottery sherd (3g), possibly of Roman date, tentatively dating the ditch to the Roman period. Two pieces of animal bone — an indeterminate rib and scapula fragment (9g) — and an oyster shell (25g) were collected from the same fill.

Ditch [409] lay adjacent, to the south of [403]. It was much smaller — 0.56m wide and only 0.16m deep, with a U-shaped profile. The fill was a firm, dark grey-brown sandy silt, similar to (408), the upper fill of [403].

The deposit between the two ditches (411) was excavated to test its origin. It contained no finds and appeared to be a natural deposit. Small depressions beneath this deposit were suggestive of rooting or animal burrowing (Figure 7), which might indicate the former presence of a hedgerow. This would suggest that the features comprised a field boundary.

The interpretation of these features is discussed further in Section 3.

2.4.7 Trench 8

Trench 8 contained a very ephemeral feature [803]. It comprised a broad, shallow depression, less than 0.3m deep, of indistinct extent. Its fill (803) was indistinguishable from the subsoil (801). However, it coincided with the line of a recorded cropmark on an east—west alignment (Figure 9). The feature may have been the heavily eroded remnant of a ditch that possibly once connected to [710] in Trench 7.

A small palaeochannel [804] and variations in the natural (802) within Trench 8 are interpreted as evidence of the action of the stream meandering across the floodplain over the centuries. Such features provide a possible explanation for the amorphous cropmarks that have been recorded in this part of the site.



3. DISCUSSION AND SIGNIFICANCE OF THE RESULTS

3.1 Discussion

Generally, the evaluation identified few archaeological features and the distinct lack of artefacts and food refuse from the excavated deposits suggests that these features were unrelated to settlement — despite their relative proximity to the centre of Cople village. It is most likely that the features reflect the primarily agricultural use of the land and functioned as drains and/or field boundaries. However, three groups of features might have greater archaeological significance and are worthy of further consideration, as follows.

3.1.1 Probable prehistoric pit alignment parallel to the Cople Brook

The four sub-square pits recorded in Trenches 2 and 7 (contexts [203], [219], [703] and [712]) had the appearance of relatively modern features — the fills were similar to the adjacent ditches which are interpreted as post-medieval (see below). They had all been dug into gravel and the initial interpretation was, therefore, that they were post-medieval quarry pits for small-scale, *ad hoc* gravel extraction.

However, their apparent regularity in size and shape (sub-square in plan), consistent spacing and alignment along the edge of the floodplain suggests a degree of deliberate planning in their construction. This leads to another conclusion: that they comprise part of the pit alignment identified from cropmarks on land to the south of Grange Lane. If so, this would suggest that they potentially date from the Iron Age, or earlier (cf. Luke 2008, 33).

A re-examination of the aerial photographic evidence in the HER (vertical photograph ref. R14-2029 SW, 18/07/1996) revealed that the pit alignment can be seen as a line of small cropmarks running for some distance within the development area, apparently following the edge of the floodplain (Figure 11).

The two partially excavated pits contained no artefacts or other material of particular note and did not contain visible quantities of charred plant remains. This would suggest that their potential for archaeological analysis is relatively low.

3.1.2 Evidence for post-medieval water meadow management

Examination of the topography of the site and reference to the height data presented in the Flood Risk Assessment for the development (SWH 2014) suggests that the Cople Brook, which now flows in a c. 2m-deep channel along the western edge of the floodplain, must have once flowed on a line c. 50m to the east. This is the where the lowest point of the floodplain lies (Figure 12). Various sinuous cropmarks that have been observed on the valley floor (Figure 11) probably indicate its former meandering course. These observations suggest that the stream has been deliberately diverted at some point in the past.

The present course of the Cople Brook is mirrored on the western edge of the floodplain by the ditch identified in Trenches 2 and 7 (contexts [212] and [708]) and observed as a cropmark (Figure 11). The ditch seems to have followed a



contour at the edge of the gravel terrace (its approximate location is indicated in profile on Figure 12) and may simply have served as a catchwater, draining runoff from the fields to the east. However, the existence of ditch [710] running west from [708] indicates that the function was more related to the drainage of the floodplain. Indeed, the cropmark plot suggests that there was a regular array of ditches crossing the floodplain on an east—west alignment. This sort of arrangement of ditches is typical for the management of drainage on water meadows (English Heritage 2013, figs.5 and 6; 2014, fig. C). It follows that the ditch along the east edge of the floodplain could be interpreted as a 'head main' supplying water drawn from the Cople Brook some distance upstream (to the south of the development area). Ditch [710] would, therefore, have formed one of a series of 'floats' to carry water onto the floodplain. There would also have been a corresponding series of drains taking the run-off westwards into the artificially diverted channel of the brook.

No evidence was found in the evaluation for penstocks or other structures for controlling the flow of water through the ditches (*see* English Heritage 2013), but these may have been made of wood, which has not survived. Nor are there any visible earthworks on the floodplain, but these could have been levelled by agricultural operations or as a result of construction of the Anglian Water pipeline. It is also likely that modern management of the Cople Brook channel will have masked remains of the outfall drains.

There was no dating evidence, but the ditches appeared to have been relatively recently filled, especially ditch [710] which contained a land drain. The Ordnance Survey Old Series' 1-inch map of 1835 (Cassini 2006) appears to show the Cople Brook in its present location and a second channel in the approximate location of the eastern ditch.

3.1.3 Boundary near the line of postulated Roman road (Viatores 124/HER738)

It should be recognised that several Roman roads or trackways have been recorded in the Bedford area, which can have been little more than green lanes defined by flanking ditches. This may in fact be the case for the road Viatores 124/HER738. In 2002, investigations on the line of the Willington to Steppingley gas pipeline may have excavated the flanking ditches of the road (Network Archaeology 2003, 22, fig. 4f), although this was not recognised at the time the report was compiled. The ditches were c. 10m apart, on an east—west alignment. They lay c. 170 east of the recorded cropmark, but were on the exact same alignment. The ditch fills contained Iron Age pottery, but this may have been residual.

Another local example was excavated in 2006 at Castle Mill Field, *c.* 1.5km north of Cople, which had flanking ditches, with evidence of a hedge on one side and clearly defined wheel ruts on the unmetalled carriageway (Albion Archaeology, in prep.).

Nevertheless, it cannot be said with confidence that ditch [403] (Trench 4) dates from the Roman period, so it is not reasonable to assert that it is related to the postulated Roman road, even though its alignment is broadly consistent with the



projected line of the road. There was no evidence of a corresponding ditch defining the other side of the road.

3.2 Assessment of Significance

3.2.1 Probable prehistoric pit alignment

Although the date is conjectural, the pit alignment is probably prehistoric and of regional significance. If it does date from the later Bronze Age or early Iron Age, it is a key piece of evidence for the interpretation of the landscape in that period, illustrating the change from the extensive ritual/mortuary use of this part of the Great Ouse Valley in the Neolithic and early Bronze Age to the essentially agrarian landscape that emerged in the middle Bronze Age and developed into the Iron Age and Roman periods. The evidence for the Neolithic and early Bronze Age periods comprises a complex of monuments identified from cropmarks; these are considered to be nationally important and most of the known remains are designated as scheduled monuments. The pit alignment has the potential to contribute to our understanding of subsequent cultural change in the Cardington/Cople/Willington area and this would considerably enhance the significance of the scheduled monuments by clarifying their diachronic cultural context.

However, two of the pits within the development area were sampled by trial excavation. The results suggest that the individual pits have relatively low archaeological potential, so small-scale development is unlikely to have a significant detrimental impact on the pit alignment as a whole.

Re-examination of aerial photographs undertaken as part of this evaluation has enhanced the existing record of the cropmark evidence, extending it into the development area.

3.2.2 Post-medieval water meadow

Floated water meadows were once a common feature of the English countryside, especially in the low-lying areas of the South Midlands and East Anglia. Surviving examples are recognised by both English Heritage and Natural England for their wildlife and historic-environment importance (English Heritage 2014).

Whilst the development area retains a number of archaeological and topographical features that point to the former management of the Cople Brook floodplain as a water meadow, the evaluation suggests the remains are incomplete and not well preserved — for example, there are no visible earthworks. It is possible that there are further structures that survive below the surface that have not been detected by the present evaluation, but even so the remains cannot really be considered of more than local significance. Furthermore, the features are extensive so it is unlikely that they will be adversely affected by small-scale development works.

3.2.3 Evidence for the postulated Roman road (Viatores 124/HER738)

If found, well preserved archaeological remains of the Roman road could be of regional significance. However, none of the features identified by the evaluation can be reliably associated with the postulated road. The only feature that might



tentatively be associated with the road was sampled by trial excavation and its extent determined by geophysical survey.

3.2.4 Other archaeological features

All the other archaeological features identified by the evaluation are undated and relate to the agricultural use of the land. They are of negligible archaeological significance.



4. BIBLIOGRAPHY

- Albion Archaeology 2014a, Land to the west of Cople, Cople, Bedfordshire: Heritage Assessment. Report 2014-35, vers. 1.2
- Albion Archaeology 2014b, Land to the west of Cople, Cople, Bedfordshire: Written Scheme of Investigation for Archaeological Evaluation. Report 2014-178, vers. 1.0
- Albion Archaeology, in prep. Willington Quarry: assessment and updated project design
- Brown, N. and Glazebrook, J. (eds.), 2000, Research and Archaeology: A framework for the Eastern Counties: Research Agenda and Strategy, East Anglian Archaeology Occasional Paper 8
- Cassini 2006, *Bedford and Huntingdon: sheet 153*, Cassini Historical Map Old Series 1:50,000, 1805-1836
- DCLG 2012, National Planning Policy Framework.
- English Heritage 2013, *Water Meadows: Introductions to Heritage Assets*, (Available at https://www.english-heritage.org.uk/publications/iha-water-meadows/ [accessed January 2015])
- English Heritage 2014, Conserving Historic Water Meadows, (Available at https://www.english-heritage.org.uk/publications/conserving-historic-water-meadows/ [accessed January 2015])
- HET 2013, Brief for a Programme of Archaeological Evaluation at Land to the North of Grange Lane and, West of Willington Road and Rye Crescent, Cople, Bedfordshire. September 2014
- Luke, M., 2008, Life in the Loop: Investigation of a Prehistoric and Romano-British Landscape at Biddenham Loop, Bedfordshire, East Anglian Archaeology Monograph 125. Bedford: Albion Archaeology
- Medlycott, M. (ed), 2011, Research and Archaeology Revisited: a revised framework for the East of England. East Anglian Archaeology Occasional Paper 24
- Network Archaeology 2003, Willington to Steppingley 900 mm Gas Pipeline: Archaeological Evaluation, Excavation and Watching Brief 2002, Network Archaeology Rep. no. 182
- Oake, M. Luke, M. Dawson, M. Edgeworth, M. and Murphy, P. 2007, Bedfordshire Archaeology. Research and Archaeology: Resource



Assessment, Research Agenda and Strategy, Bedfordshire Archaeology Monograph 9

Stratascan 2014, Geophysical Survey Report: Land to the west of Cople, Cople, Bedfordshire. Job ref. J7551

SWH 2014, *Proposed Playing Fields, Land at Cople, Bedfordshire: Flood Risk Assessment, April 2014*, Scott White and Hookins unpublished report.

Viatores 1964, Roman Roads in the South-East Midlands. London: Gollancz



5. APPENDIX 1: TRENCH SUMMARY

Trench: 1

Max Dimensions: Length: 50.00 m. Width: 2.00 m. Depth to Archaeology Min: 0.65 m. Max: 0.75 m.

Co-ordinates:

Reason: Archaeological evaluation. Test potential for undetected remains on alluvium.

Context:	Type:	Description:	Excavated: Finds	Present:
100	Topsoil	Friable dark brown grey clay silt Depth 0.3m.	✓	
101	Subsoil	Friable mid grey brown clay silt Depth 0.45m.	✓	
102	Natural	Compact mid orange red sandy gravel		
103	Ditch	Linear NW-SE sides: 45 degrees base: concave dimensions: max breadth 0.7 m, max depth 0.22 m	V	
104	Fill	Firm dark grey brown silty clay Depth. 0.22m. Waterlogged conditions due to inclement weather. Possibly pary of treethrow disturbance.	✓	
105	Treethrow	Circular dimensions: max breadth 0.65m		
106	Fill	Firm dark grey brown silty clay		
107	Treethrow	Circular dimensions: max breadth 0.3 m		
108	Fill	Firm dark grey brown silty clay		



Max Dimensions: Length: 50.00 m. Width: 2.00 m. Depth to Archaeology Min: 0.55 m. Max: 0.64 m.

Co-ordinates:

Reason: Archaeological evaluation. Verify and date cropmark.

Context:	Type:	Description:	Excavated: Finds Pres	sent:
200	Topsoil	Friable dark grey brown clay silt Depth 0.35m.	V	
201	Subsoil	Friable mid grey brown silty clay Depth 0.3 m.	✓	
202	Natural	Compact mid orange red sandy gravel		
203	Quarry	Sub-square N-S $$ sides: steep base: flat dimensions: max breadth 1.35m, max depth 0.45m $$	V	
204	Upper fill	Firm mid grey brown clay silt Depth 0.4m	\checkmark	
205	Lower fill	Firm mid blue grey sandy clay Depth 0.12m.	✓	
206	Pit	Circular sides: concave base: concave dimensions: max breadth 1.m, max depth 0.22m	✓	
207	Upper fill	Firm dark blue grey silty clay Depth0.22m.	\checkmark	
208	Lower fill	Firm mid grey brown clay silt Depth0.2m.	V	
209	Pit	Circular sides: concave base: concave dimensions: max breadth 1.45m, ma depth 0.2m	x 🗸	
210	Upper fill	Firm light blue grey sandy silt Depth 0.7m.	\checkmark	
211	Lower fill	Firm dark blue grey sandy silt Depth 0.16m.	✓	
212	Ditch	Linear N-S $$ sides: Asymmetrical base: concave dimensions: max breadth 2.4m, max depth 0.67m $$	V	
213	Upper fill	Firm dark brown grey clay silt Depth 0.52m.	✓	
214	Lower fill	Firm dark brown grey clay silt moderate small stones Depth 0.14m.	V	
215	Ditch	Linear N-S sides: 45 degrees base: concave dimensions: max breadth 0.5 m, max depth 0.15 m	, V	
216	Fill	Firm dark grey brown clay silt Depth 0.15 m.	✓	
217	Ditch	Linear N-S $$ sides: near vertical base: flat dimensions: max breadth 0.8m, max depth 0.25m $$	V	
218	Fill	Depth 0.25 m.	V	
219	Pit	Sub-square N-S dimensions: max breadth 1.45m Unexcavated pit.		
220	Fill	Firm mid grey brown clay silt Unexcavated pit fill.		



Max Dimensions: Length: 50.00 m. Width: 2.00 m. Depth to Archaeology Min: 0.65 m. Max: 0.65 m.

Co-ordinates:

Reason: Archaeological evaluation. Verify and date geophysical anomalies. Test potential for undetected remains on sand/gravel.

Context:	Type:	Description:	Excavated: Finds P	resent:
300	Topsoil	Friable dark grey grey silty silt occasional small stones Depth 0.4m.	V	
301	Subsoil	Friable mid red brown clay gravel Depth 0.25m.	✓	
302	Natural	Firm mid brown red clay sand moderate small stones		



Max Dimensions: Length: 50.00 m. Width: 2.00 m. Depth to Archaeology Min: 0.47 m. Max: 0.58 m.

Co-ordinates:

Reason: Archaeological evaluation. Verify and date geophysical anomalies. Test potential for undetected remains on sand/gravel.

Context:	Type:	: Type: Description:	Excavated: Finds Presen		
400	Topsoil	Firm dark grey brown sandy silt moderate small stones Depth 0.41m.	✓		
401	Subsoil	Firm mid orange brown sandy silt occasional small stones Depth 0.18m.	V		
402	Natural	Compact mid brown orange sandy gravel			
403	Di tch	Linear NE-SW sides: V-shaped base: concave dimensions: max breadth 1.11m, max depth 0.69m	V		
404	Lower fill	Friable mid orange brown sandy silt Depth 0.09m.	\checkmark		
405	Fill	Loose light white chalk Depth 0.05m.	✓		
406	Fill	Friable mid grey brown sandy silt occasional small stones Depth 0.07m.	\checkmark		
407	Fill	Friable white chalk occasional small stones Depth 0.06m.	\checkmark		
408	Upper fill	Firm dark brown grey sandy silt moderate small stones Depth 0.53m.	✓	✓	
409	Ditch	Linear NE-SW sides: U-shaped base: concave dimensions: max breadth 0.56m, max depth 0.16m	✓		
410	Ditch	Firm dark grey brown sandy silt occasional small stones Depth 0.16m.	✓		
411	Natural	Friable mid brown grey sandy silt occasional flecks sand Depth 0.11 m.	✓		



Max Dimensions: Length: 50.00 m. Width: 2.00 m. Depth to Archaeology Min: 0.6 m. Max: 0.65 m.

Co-ordinates:

Reason: Archaeological evaluation. Test potential for undetected remains on sand/gravel.

Context:	Type:	Description:	Excavated: Finds Present:	
500	Topsoil	Friable dark grey silt occasional small stones Depth 0.45m.	✓	
501	Subsoil	Friable mid red brown clay gravel Depth 0.2 m.	✓	
502	Natural	Firm mid brown red clay gravel Depth 0.25m.		



Max Dimensions: Length: 50.00 m. Width: 2.00 m. Depth to Archaeology Min: 0.6 m. Max: 0.65 m.

Co-ordinates:

Reason: Archaeological evaluation. Verify and date geophysical anomalies. Test potential for undetected remains on sand/gravel.

Context:	Type:	Description:	Excavated: Finds Present:	
600	Topsoil	Friable dark grey silt occasional small stones Dep[th 0.4m.	✓	
601	Subsoil	Friable mid red brown clay gravel Depth 0.25m.	✓	
602	Natural	Firm mid red brown clay sand		



Max Dimensions: Length: 50.00 m. Width: 2.00 m. Depth to Archaeology Min: 0.49 m. Max: 0.6 m.

Co-ordinates:

Reason: Archaeological evaluation. Verify and date cropmark. Test potential for remains on edge of alluvium.

Context:	Type:	Description:	Excavated: Finds Pre	sent:
700	Topsoil	Friable dark grey brown silty clay Depth 0.32m.	✓	
701	Subsoil	Friable mid grey brown silty clay Depth 0.19m.	✓	
702	Natural	Compact mid yellow orange sandy gravel occasional small stones		
703	Quarry	Sub-square N-S sides: steep base: concave dimensions: max breadth 1.5m max depth 0.5m	, V	
704	Upper fill	Firm mid grey brown silty clay Depth 0.28m.	V	
705	Lower fill	Firm dark brown blue silty clay Depth 0.22m.	\checkmark	
706	Ditch	Linear ENE-WSW sides: V-shaped base: concave dimensions: max breadt 0.4m, max depth 0.2m	th 🗹	
707	Fill	Firm mid brown grey clay silt Depth 0.2m.	V	
708	Ditch	Linear NE-SW		
709	Fill	Firm dark grey brown clay silt Unexcavated feature. Below water table.		
710	Ditch	Linear E-W dimensions: max breadth 1.m		
711	Fill	Firm dark brown grey clay silt Unexcavated feature. Below water table.		
712	Quarry	Sub-square N-S dimensions: max breadth 1.9m Unexcavated pit.		
713	Fill	Firm dark brown grey silty clay Unexcavated pit fill.		



Max Dimensions: Length: 50.00 m. Width: 2.00 m. Depth to Archaeology Min: 0.45 m. Max: 0.65 m.

Co-ordinates:

Reason: Archaeological evaluation. Verify and date cropmark and geophysical anomalies. Test potential for undetected remains on alluvium.

Context: Type:		Description:	Excavated: Finds Present:	
800	Topsoil	Friable dark brown grey clay silt Depth 0.3m.	✓	
801	Subsoil	Friable mid grey brown clay silt Depth 0.35m.	✓	
802	Natural	Compact mid brown orange clay gravel		
803		Shallow depression or channel c. 0.3m deep with very gradually sloping sides. Not a ditch, as such, but is perhaps the severely eroded remnant of ditch (therefore interpreted as an 'erosional interface').	a	
804		Friable mid grey brown clay silt		
805		Small palaeochannel modified by root action		
806		Mid grey silty gravel Fill of small palaeochannel		



Max Dimensions: Length: 15.00 m. Width: 2.00 m. Depth to Archaeology Min: 0.65 m. Max: 0.65 m.

Co-ordinates:

Reason: Archaeological evaluation. Test area of sand/gravel not subjected to geophysical survey.

Context:	Type:	Description:	Excavated: Finds Present:	
900	Topsoil	Friable dark grey silt occasional small stones Depth 0.45m.	V	<u> </u>
901	Subsoil	Friable mid red brown clay gravel Depth 0.2m.	V	<u> </u>
902	Natural	Firm mid red brown clay sand		Ţ



Max Dimensions: Length: 20.00 m. Width: 2.00 m. Depth to Archaeology Min: 0.65 m. Max: 0.7 m.

Co-ordinates:

Reason: Archaeological evaluation. Test area of alluvium not subjected to geophysical survey.

Context:	Type:	Description:	Description: Excavated: Finds Present	
1000	Topsoil	Friable dark brown grey clay silt Depth 0.37m.	V	
1001	Subsoil	Friable mid grey brown silty clay Depth 0.33m.	V	
1002	Natural	Compact light orange yellow sandy gravel		



Max Dimensions: Length: 20.00 m. Width: 2.00 m. Depth to Archaeology Min: 0.45 m. Max: 0.55 m.

Co-ordinates:

Reason: Archaeological evaluation. Test area sand/gravel not subjected to geophysical survey.

Context:	Type:	Description:	Excavated: Finds Present:	
1100	Topsoil	Friable dark brown grey clay silt Depth 0.35m.	~	
1101	Subsoil	Friable mid grey brown silty gravel Depth 0.25m.	V	
1102	Natural	Firm light orange yellow clay silt moderate small stones		
1103	Ditch	Linear E-W sides: V-shaped base: concave dimensions: max breadth 0.97n max depth 0.25m	n, 🔽	
1104	Fill	Friable mid green brown clay silt occasional small stones Depth 0.25m.	V	
1105	Ditch	Linear NE-SW sides: concave base: concave dimensions: max depth 0.25m Same as 1103. Corner of ditch partially visible in corner of Trench 11.	· 🗸	
1106	Fill	Friable mid grey brown clay silt occasional small stones Depth 0.25m.	\checkmark	
1107	Posthole	Circular sides: U-shaped base: concave dimensions: max depth 0.09m Modern posthole; modern wood fragments machined out.	✓	
1108	Fill	Friable mid grey brown clay silt occasional small stones Depth 0.09m.	~	



APPENDIX 2: OASIS RECORD 6.

OASIS ID: albionar1-192114

Project details

Project name Land west of Cople

the project

Short description of An archaeological field evaluation was undertaken in accordance with Condition 12 of Planning permission, which was granted by Bedford Borough Council for provision of 6 grass sports pitches, a two-storey clubhouse building, access, car parking, a maintenance barn, and associated landscaping on land to the west of Cople. The evaluation employed geophysical (gradiometer) survey and trial trenching, focusing on the areas of development impact (i.e. <7ha) within the development area. The detailed results of the geophysical survey are the subject of a separate report. Generally, the evaluation identified few archaeological features and there was a distinct lack of artefacts and food refuse from the excavated deposits suggests that these features were unrelated to settlement despite their relative proximity to the centre of Cople village. It is most likely that the features were of negligible significance, reflecting the primarily agricultural use of the land and functioned as drains and/or field boundaries. However there was a regionally significant, probably prehistoric pit alignment, visible as cropmarks running approximately north-south along the east side of the floodplain of the Cople Brook. A ditched boundary on an east-west alignment might tentatively be associated with the postulated Roman road (Viatores 124/HER738), but this

identification is uncertain.

Project dates Start: 06-01-2015 End: 09-01-2015

Previous/future

work

Yes / Not known

Any associated project reference

codes

LWC2344 - Contracting Unit No. BEDFM 2014.61 - Museum accession ID

14/00930/MAF - Planning Application No.

Type of project Field evaluation

DITCHES Post Medieval Monument type

POSTHOLE Modern DITCH Roman

PIT ALIGNMENT Uncertain

Significant Finds **POTTERY Roman**

Methods & techniques ""Sample Trenches""

Development type Sports Pitches and Associated Buildings

National Planning Policy Framework - NPPF **Prompt**

Position in the

planning process

Between deposition of an application and determination

Project location

England Country

Site location BEDFORDSHIRE BEDFORD COPLE Land west of Cople

Study area 12.60 Hectares

TL 10110 48672 Point Site coordinates



Project creators

Name of

Albion Archaeology

Organisation

Project brief originator

Local Authority Archaeologist and/or Planning Authority/advisory body

Project design

Albion Archaeology

originator

Project Jeremy Oetgen Mark Phillips director/manager

Kathleen Pilkinton Project supervisor

Project archives

Physical Archive

Bedford Museum

recipient

Physical Archive ID BEDFM 2014.61

"Animal Bones", 'Ceramics" **Physical Contents**

Digital Archive

Albion Archaeology

recipient

"Animal Bones", 'Ceramics" other" **Digital Contents**

Digital Media

"Database", 'Images raster / digital photography", 'Text"

available

Paper Archive

Bedford Museum

recipient

BEDFM 2014.61 Paper Archive ID

"other" Paper Contents

Paper Media

available

"Context sheet", ''Correspondence", "Drawing", ''Miscellaneous Material",

"Photograph", "Plan", "Report", 'Section"

Project bibliography 1

Grey literature (unpublished document/manuscript)

Publication type

Land West of Cople, Cople, Bedfordshire: Archaeological Evaluation Title

Author(s)/Editor(s)

'Pilkinton, K' Oetgen, J'

Other bibliographic

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details

Date 2015

Issuer or publisher Albion Archaeology

Place of issue or

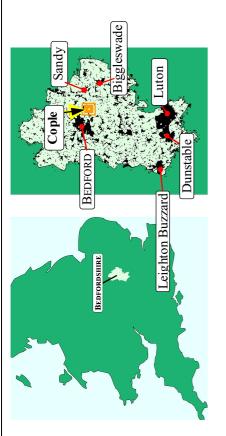
publication

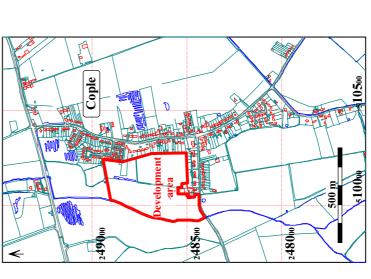
Bedford

Entered by Helen Parslow (hl.parslow@albion-arch.com)

Entered on 23 January 2015







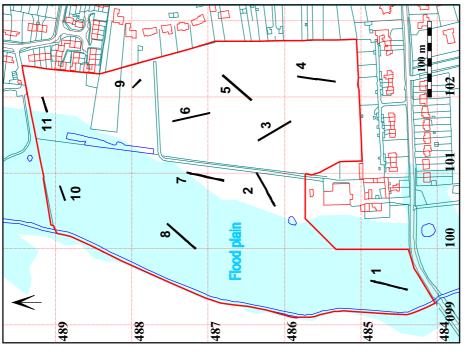


Figure 1: Site location and trench plan
(Extent of floodpla in based on SWH 2014, Appendix D)
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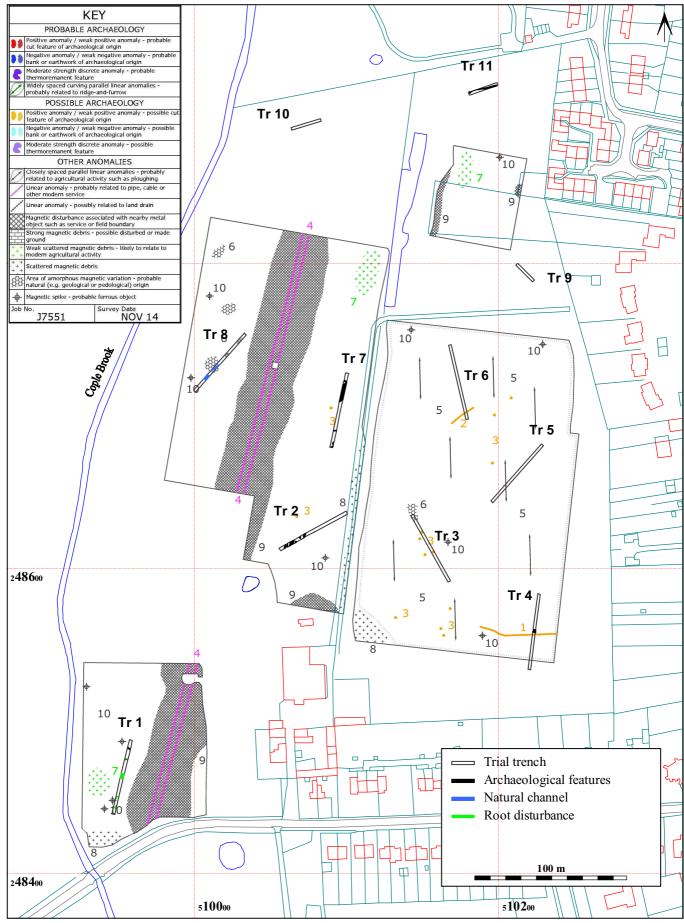


Figure 2: All features overlaid onto geophysics interpretation.

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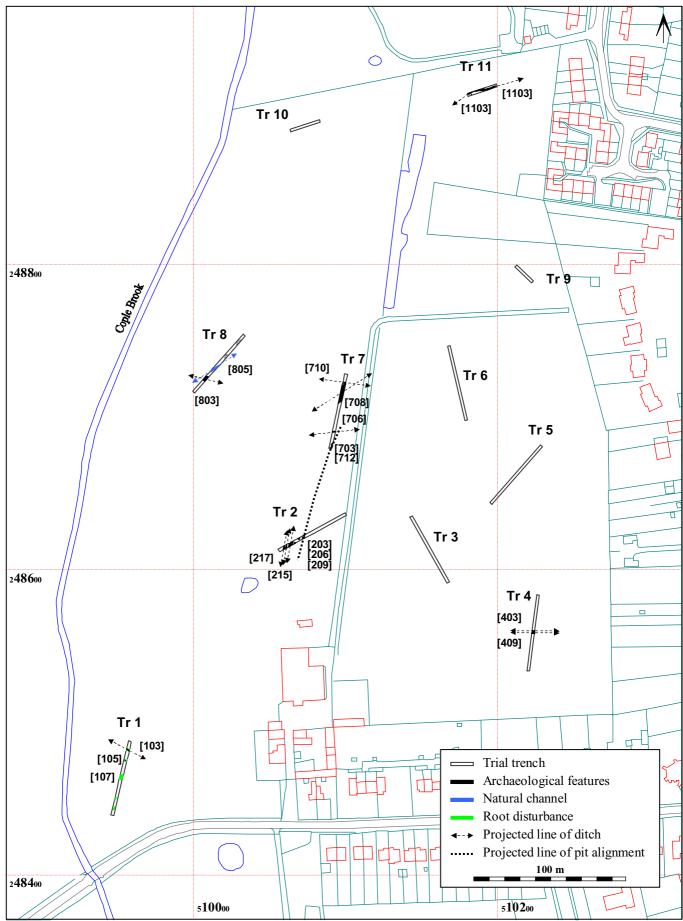


Figure 3: All features

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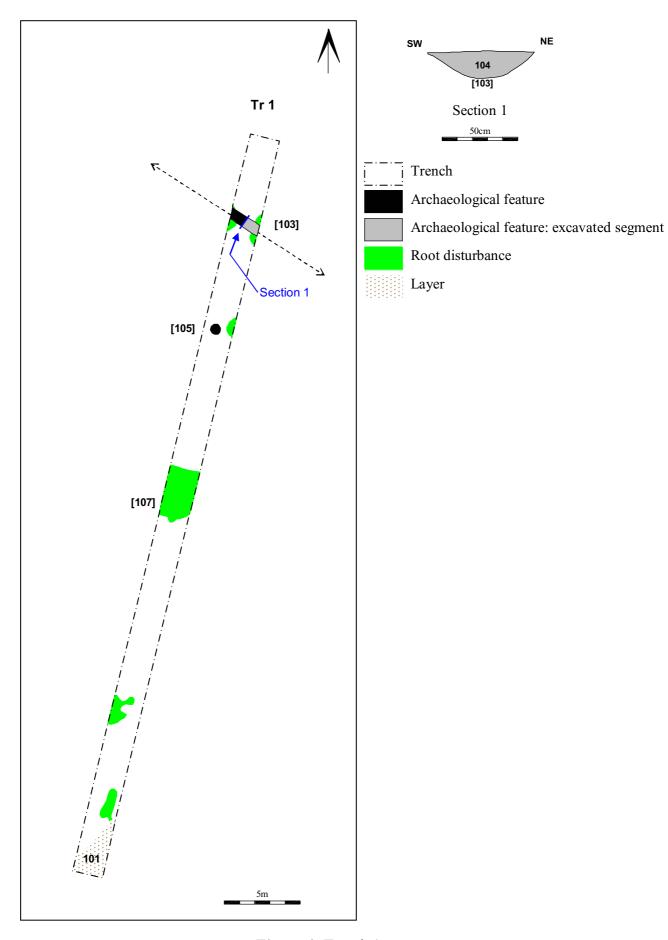
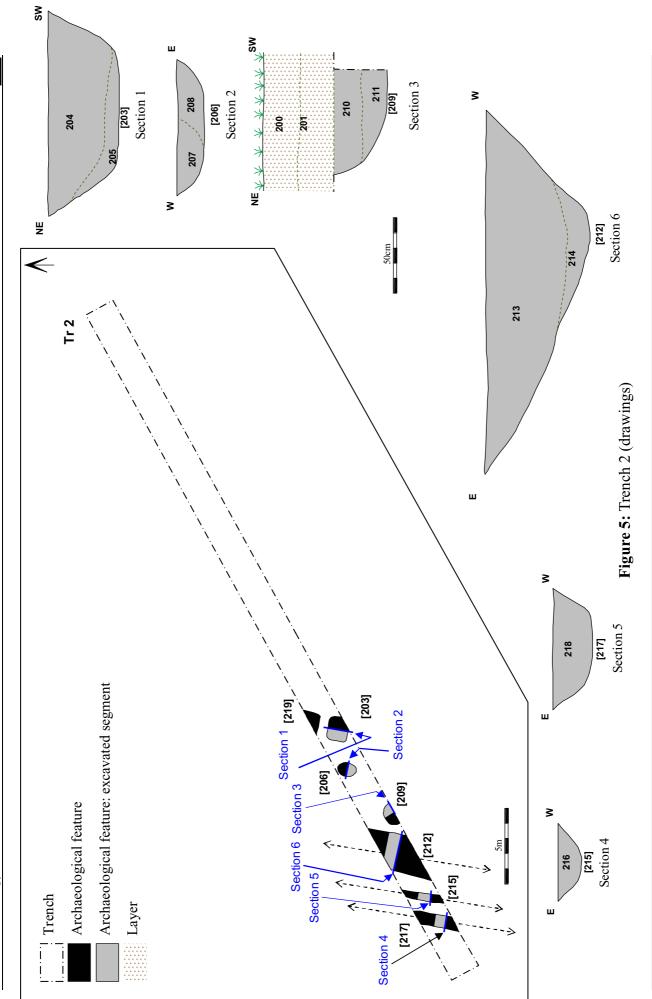


Figure 4: Trench 1





Land West of Cople, Bedfordshire: Archaeological Evaluation





Ditch [215] (left) and ditch [217] (right) looking south



Ditch [212], looking south-west, with [215] and [217] in background



Pit [203], looking north, with [219] in background



Pit [203], looking east

Figure 6: Trench 2 (photographs)



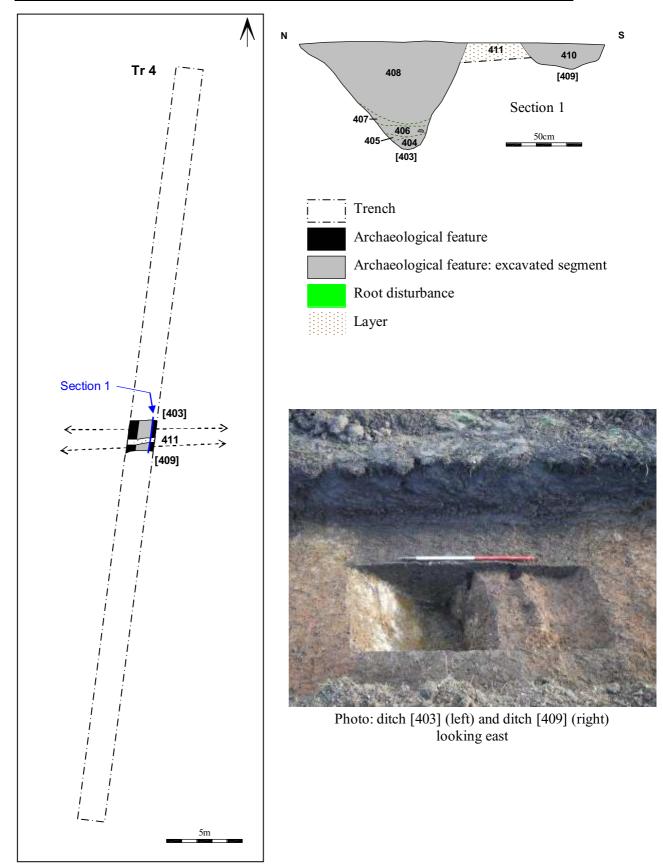


Figure 7: Trench 4



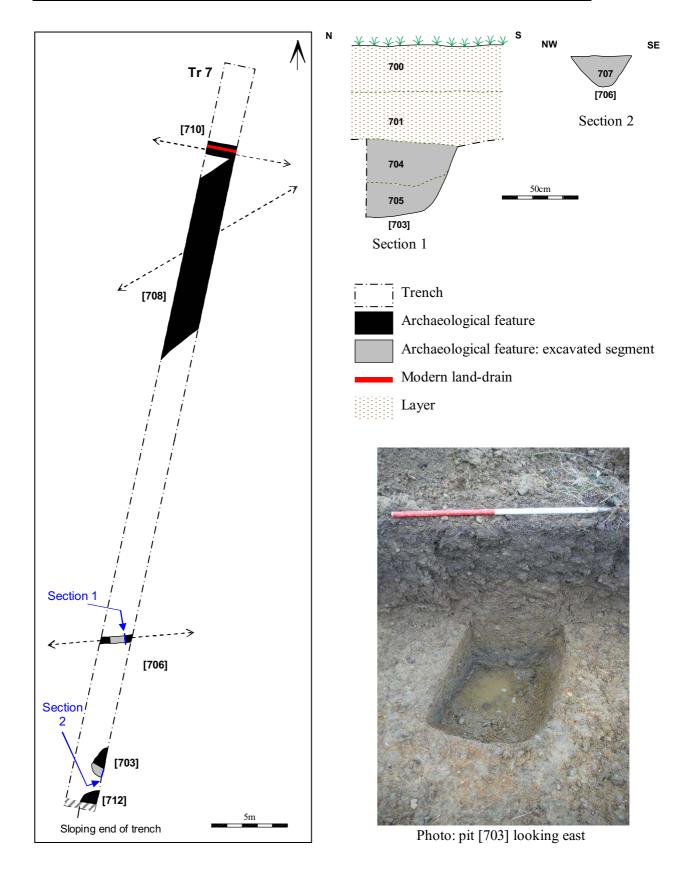


Figure 8: Trench 7



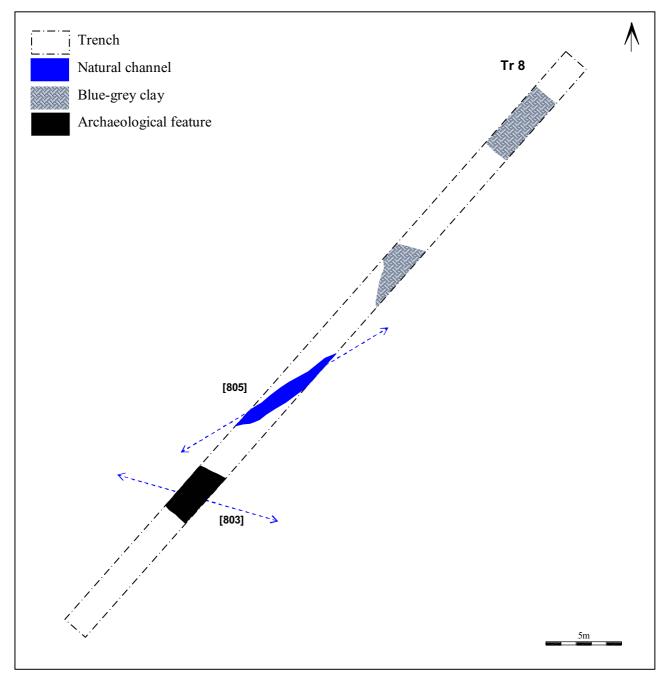


Figure 9: Trench 8



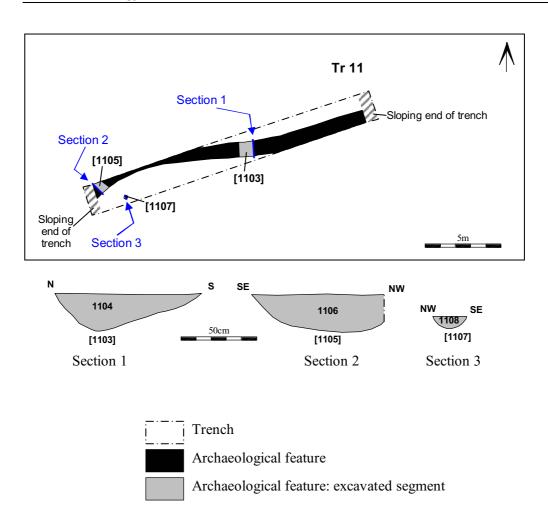


Figure 10: Trench 11



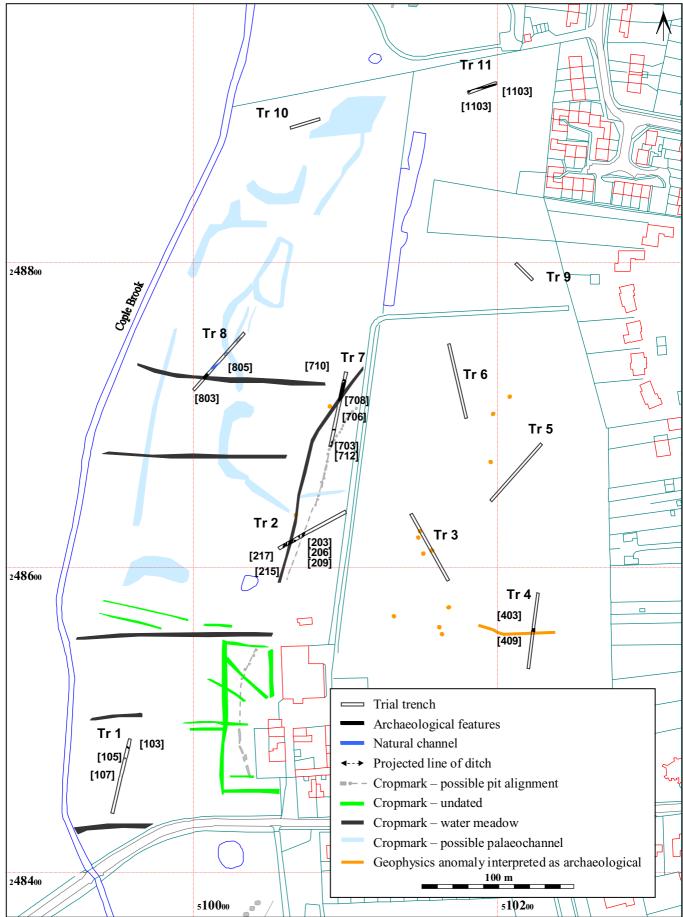


Figure 11: All features overlaid onto cropmark plot

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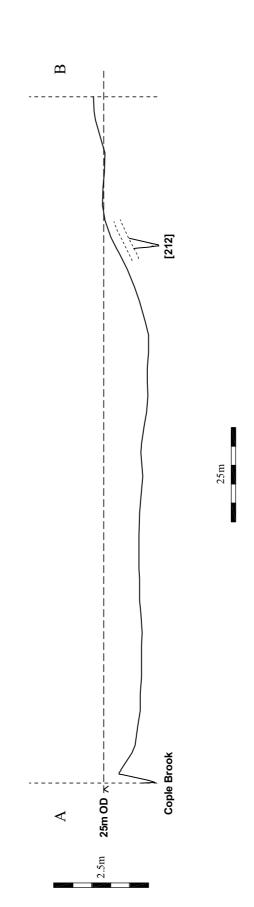


Figure 12: Floodplain profile (Vertical scale exaggerated x 10)

Land West of Cople, Bedfordshire: Archaeological Evaluation

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