# High Cross, West Cambridge, University of Cambridge - *Further Archaeological Evaluation*

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# High Cross

## West Cambridge, University of Cambridge

***-Further Archaeological Evaluation-***

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Report No. 1119
ECB No: 3844
August 2012

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## Graphics and Table List

## INTRODUCTION

Between the 21st and 24th August 2012 the Cambridge Archaeological Unit undertook a trench based evaluation on some 2.76 hectares of University land at the High Cross Site, West Cambridge. This work was undertaken prior to the development of the southern part of the evaluated area, which lay to the south of Charles Babbage Road and immediately to the east of the M11 motorway. The work was commissioned by the University of Cambridge Estate Management and Building Service (EMBS) in advance of construction of a Data centre.

### *Geology*

The solid geology underlying the whole of the West Cambridge site is Gault Clay (BGS 1981). However, the base of the Lower Chalk outcrops only half a kilometre to the west at Coton Orchard, and a similar distance away to the northeast at the Observatory. Sunk close to the latter site the 'Cambridge Borehole' recorded upwards of 127 feet of clay underlying 10 feet of Head Gravel (Worssam & Taylor 1969). This early pre-terrace gravel is effectively the same horizon as the Observatory Gravels which were recorded in some detail a short distance to the northwest in the *Traveller's Rest Pit*, which produced an important assemblage of water-worn Acheulian, Chellean and possibly also Early Levalloisian implements (Penning & Jukes Brown 1881; Marr 1920). The 2009/2010 excavations at High Cross (Timberlake 2010, see also below), situated on the lower slopes of the northern side of the valley, immediately to the east of the evaluated area, exposed sandy gravels overlain by Gault clays, which were in turn overlain by soft sands in the north of the site.

### *Archaeological and Historical Background*

The University's West Cambridge Site has been the subject of many detailed archaeological investigations. These are recounted in detail in the excavation report of the 2009/2010 High Cross excavations (Timberlake 2010) and will therefore only be summarised here. The historical and archaeological background of the wider West Cambridge environs is also fully outlined in earlier desktop studies (Alexander 1996, Dickens 1999), however, since 1999 archaeology has been found at a number of different locations within a half kilometre radius: Iron Age pottery was recovered from Medieval/post-Medieval quarry pits dug on the Hoyle Building site at the Institute of Astronomy (Masser 2000), whilst a short distance to the northeast during the winter and spring of 1999/2000 a major excavation was undertaken on land that previously surrounded Vicar's Farm. These investigations led to the discovery of an important Romano-British settlement that had over a thousand features, including an inhumation and cremation cemetery and an earlier enclosure containing a possible Romano-British shrine, the settlement spanned four centuries from the 1st through to the early 5th century AD (Whittaker & Evans 1999; Lucas 2001).

Prehistoric and Romano-British features were also identified during an evaluation at High Cross (Whittaker 2001) and the area was subsequently the subject of a large open area excavation, which revealed the presence of *The High Cross Settlement*. Evidence of Early to Middle Iron Age and Romano-British occupation was recorded

as well as Medieval cultivation furrows and the probable line of the medieval 'Coton Way' or 'Sheepcote Way' (Timberlake 2010).

Turning to the area of the current evaluation specifically, other than being cultivated land, there is little indication of the use of this part of the West Cambridge site prior to the 1940s when Short Sebro Ltd. built a factory for the assembly and repair of Stirling bombers flying from Bourn Airfield (www.rfcbourn.flyer.co.uk). The site consisted of a number of large hangers, workshops and stores, the biggest area of which covered the fields immediately to the east of the current evaluation area. The other side of this L-shaped factory site was located within the northern area of the current evaluation, and remnants of the factory floor are still present along with surviving air raid shelters at the southern end. The factory buildings remained on site until 1972 when they were demolished and levelled, with the rubble from these buildings, as well as from other construction works in and around Cambridge being dumped into the southernmost field of the current evaluation area.

*Methodology*

Seven evaluation trenches, totalling 303m in length were excavated in accordance with the project specifications (Evans 2012). Three trenches (Trenches 30-32) were excavated within the disturbed overburden of the southernmost field and four (Trenches 33-36) within the concrete slab covered car-park to the north. Following CAT scanning to avoid buried services, the concrete of Trenches 33-36 was cut with a powered saw to minimise vibration and disturbance to nearby University research establishments.

Excavation of all trenches was undertaken by a 20 tonne tracked machine using a toothless 2.2m wide bucket, under constant archaeological guidance. Overburden was removed until archaeological deposits were encountered. Excavations revealed that archaeological features were cut into both subsoil deposits and the underlying natural deposits. Consequently subsoil layers were cleaned, planned and photographed prior to their removal. The excavation was stopped once geological natural was encountered.

A metal detector survey of each removed stratigraphic horizon was also attempted, but abandoned due to the high density of modern detritus. All exposed archaeological features and the lowest subsoil horizons were however surveyed, but identified no metal artefacts.

Concurrent with the Archaeological Evaluation, the digging of a series of geotechnical bore holes, test pits and test trenches were closely monitored by an experienced archaeologist: the archaeological sequence where possible was recorded for each intervention (Fig. 3).

The excavation of all archaeological features encountered was carried out by hand. All plans were drawn at a scale of 1:50 and sections at a scale of 1:20. The recording followed a CAU modified MoLAS system (Spence 1990). All work was carried out in strict accordance with statutory health and safety legislation and with recommendations of FAME (Allen & Holt 2010). The site code is HGX12.

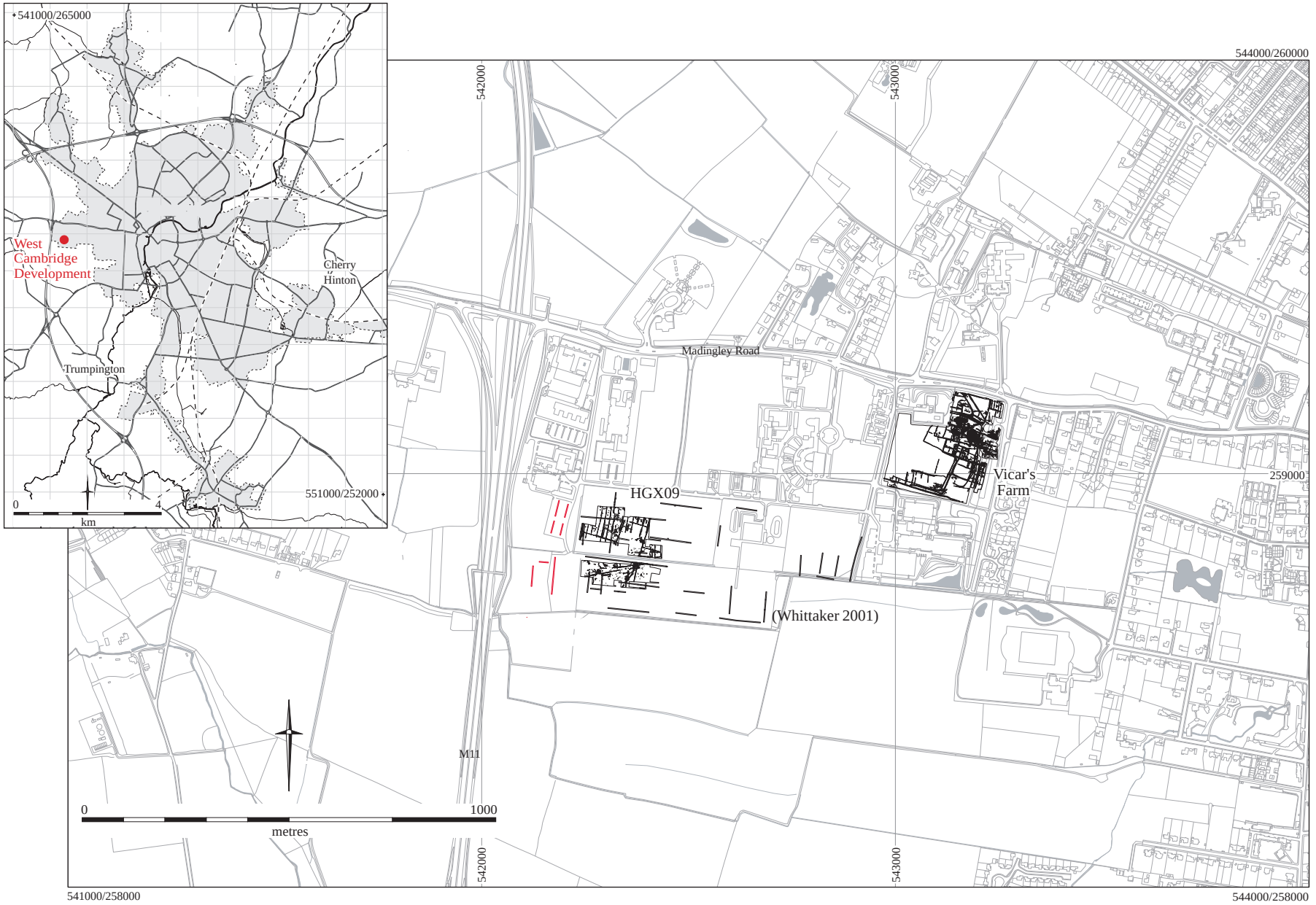


Figure 1. Location map showing the 2012 trenches in red


Figure 2. Trench plan (red) of the 2012 features, also showing the 2009 excavation (black) and evaluation trenches (grey)

## **RESULTS** (Fig. 2)

Of the seven excavated trenches, only two, Trenches 31 and 32, revealed the presence of any cut archaeological features (Table 1). The paucity of datable material culture in all but one of the excavated features made any precise phasing problematic although the detailed recording of the 'stratified' subsoil deposits within the trenches allowed many of the features, which were cut from different levels, to be more broadly phased in relation to each other.

*Late Medieval – Post-Medieval*

Within Trench 31 two narrow, northeast to southwest aligned linear gullies or shallow ditches, F. 501 and F. 502, were recorded as partially cutting subsoil deposit [1509] as well as the geological natural. No material culture was recovered from either ditch, which were located 36m apart, although stratigraphically they would appear to be contemporary.

Within the southern end of Trench 32 were four closely grouped, northeast to southwest aligned, linear shallow ditches (F. 504, F. 505, F. 506, F. 507), which like those in Trench 31 truncated the lower part of subsoil [1509] as well as the geological natural. A single sherd of 16-17$^{th}$ century red ceramic peg tile was recovered from the upper fill of F. 505, suggesting a late medieval/post-medieval date for the ditches.

*Post-Medieval*

Within the uppermost horizon of subsoil [1509] and remnant agricultural topsoil deposit [1507] in Trenches 31 and 32 were seven shallow, east to west aligned linear features (not numbered), likely representing surviving, otherwise un-'ploughed out' agricultural furrows. Whilst undated by material culture, the stratigraphically high position of these features suggests a later Medieval or post-medieval date.

Several field drains, both ceramic and gravel filled (eg. F. 503) were identified as truncating both the remnant topsoil and subsoil horizons, in both Trenches 31 and 32, which likely date from the 19$^{th}$ and 20$^{th}$ centuries.

*Undated*

A single shallow circular pit, F. 500 was located within the northern end of Trench 32. Due to modern truncation disturbing the sequence in this part of the site no detailed stratigraphic position could attributed. No material culture was present.

Trenches 33 to 36 contained no cut features. The shallowness of these trenches and the complete absence of topsoil suggests a significant level of truncation prior to the laying of the concrete slab factory floor in the early 1940's. The degree of this truncation and the 'original' height of the ground were unclear, although the westernmost trenches (Trenches 34 and 36) were visibly shallower and demonstrated a higher degree of truncation which suggests a topographic rise west of the evaluation area.

A single flint implement (Billington, *below*) was recovered from the upper horizon of subsoil deposit [1500] and while similar flints were recovered from the adjacent excavation areas (Billington in Timberlake 2010) and the recovered example could have been residual within the subsoil, it is also possible that it may derive from the large quantity of gravels and aggregate contained within the concrete surface.

| Trench No. | Length (m) | Max Depth (m) | Orientation | Profile | Archaeology |
|---|---|---|---|---|---|
| 30 | 22.5 | 1.75 | E-W | 0-0.1 [1502] Topsoil<br>0.1-1.55 [1503]/ [1504] Modern dump<br>1.55-1.6 [1507] Agricultural horizon<br>1.6-1.75 [1509] Subsoil | None |
| 31 | 100 | 2.6 | N-S | 0-0.1 [1502] Topsoil<br>0.1- 2.1 [1503]/ [1504] Modern Dump<br>2.1-2.3 [1507] Agricultural Horizon<br>2.3-2.6 [1509] Subsoil | NE-SW aligned ditches. Furrows |
| 32 | 50 | 2.85 | N-S | 0-0.1 [1502] Topsoil<br>0.1- 2.1 [1503]/ [1504] Modern dump<br>2.1-2.35 [1507] Agricultural horizon<br>2.35-2.85 [1509] Subsoil | NE-SW aligned ditches, circular pit. Furrows |
| 33 | 30 | 1 | N-S | 0-0.3 [1501] Concrete<br>0.3-1 [1500] Subsoil | None |
| 34 | 30.5 | 0.65 | N-S | 0-0.3 [1501] Concrete<br>0.3-0.65 [1500] Subsoil | None |
| 35 | 30 | 0.95 | N-S | 0-0.3 [1501] Concrete<br>0.3-0.95 [1500] Subsoil | None |
| 36 | 40 | 0.55 | N-S | 0-0.3 [1501] Concrete<br>0.3-0.55 [1500] Subsoil | None |

**Table 1: Trench descriptions**

## *Material Culture*

### **Flint** *Lawrence Billington*

A small flaked axe head was recovered from deposit [1500] in Trench 33. The axe is in poor condition with extensive edge damage and rounded ridges and has evidently been subject to considerable post depositional disturbance. Although lacking the transversally sharpened edge of a classic Mesolithic tranchet adze the somewhat crude flaking and sub angular cross section of the axe head are characteristic of Mesolithic core tool production, although a later (Neolithic) date is possible. The context of the find and its condition imply that the piece may have been transported from well away from the site, although small amounts of Mesolithic flintwork were recovered from the adjacent open area excavations at High Cross (Timberlake 2010).

### **Ceramic Tile** *David Hall and Adam Slater*

A single sherd of roof-tile was recovered from linear ditch F. 505:

F.505, context [1524]: Red fabric with darker core, notable de-mineralization of inclusions (max 2mm) creating voids within fabric. Single circular perforation (9mm diam). Probably of local manufacture. Date: 16-17$^{th}$ century.

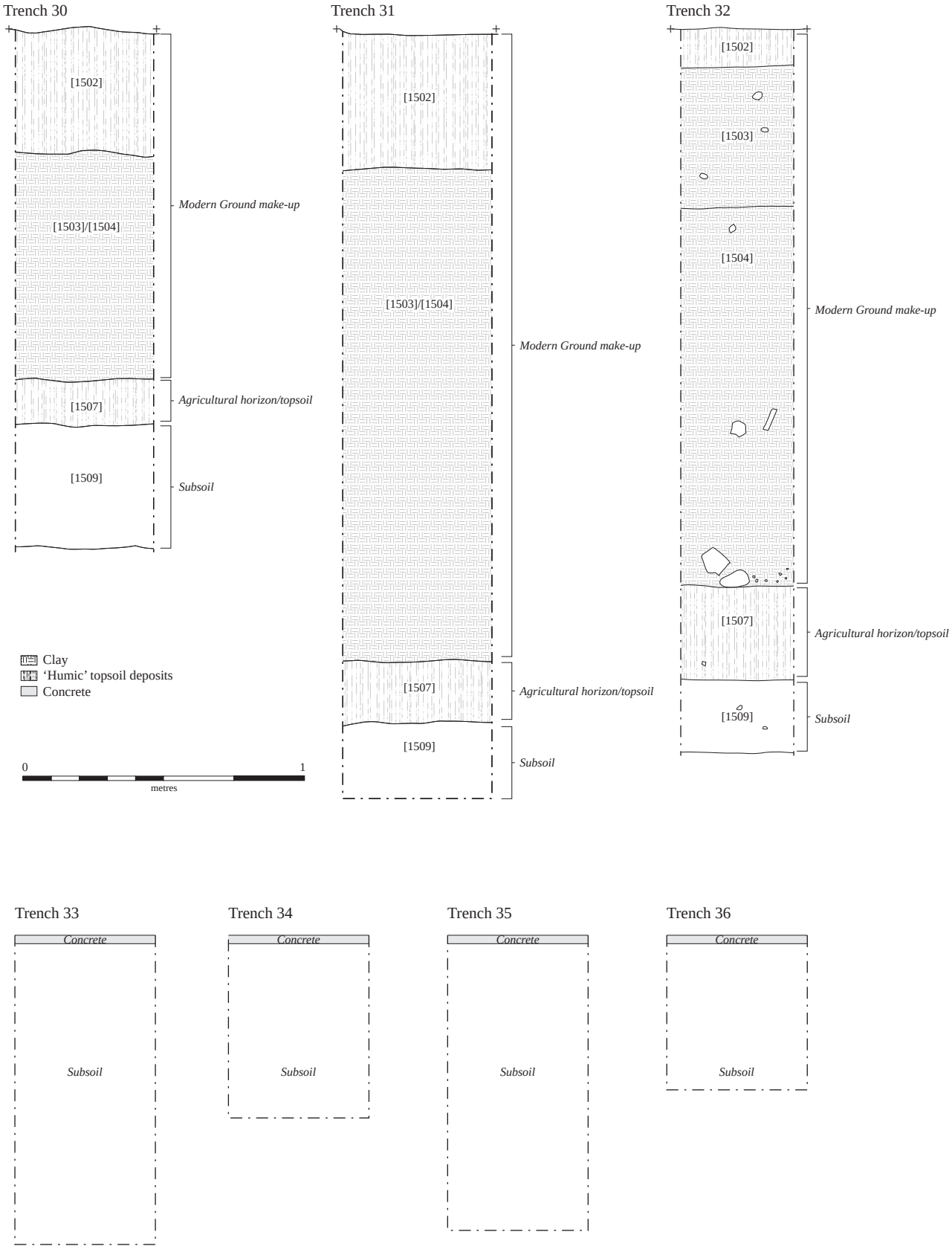


Figure 3. Trench sections

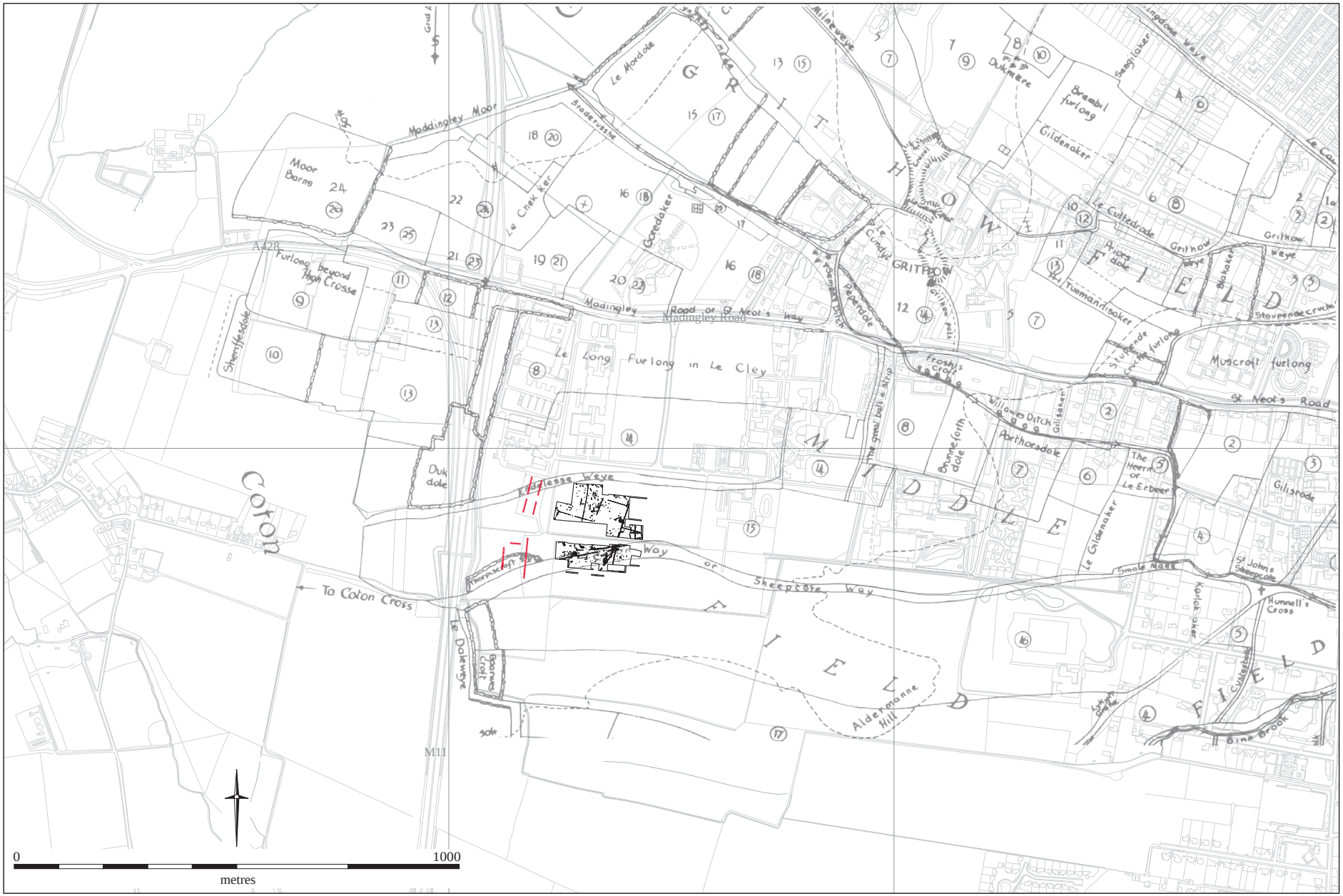


Figure 4. The 2012 trenches and 2009 excavation overlaid on Hall and Ravensdale's plan of the West Fields of Cambridge

## DISCUSSION

The evaluation at High Cross did not reveal any archaeology definitively dated earlier than the Late Medieval/Post-Medieval linear ditches within the southernmost trenches. It is likely that these ditches form part of the track/ droveway known as the *Coton Way* (or *Sheepcote Way*), which has Medieval origins, and was identified as crossing the south of the 2009/2010 High Cross excavation area (Timberlake 2010). This corresponds with the approximate route of the track shown on the reconstructed map of the fields of West Cambridge (Hall & Ravensdale 1976), to the south and east of *High Crosse,* itself a probable Medieval name. (Fig. 4).

The 20th century truncation within the northernmost trenches of the current evaluation appears to have removed all physical traces of the parallel trackway known as *Endlesse Way,* shown on the same map (Hall & Ravensdale 1976). Within the previous open area excavations, both of these routeways appeared determine the orientation of contemporary Medieval ridge-and-furrow, which appeared restricted to the slopes of the northern area of the site. The absence of such features contemporary with the *Coton Way* within the current evaluation (Trench 30) supports the idea that the lower southern fields were uncultivated and likely waterlogged. Later, Post-Medieval furrows, however, suggest the land was utilised following the possible abandonment of the routeway.

The truncation of the ground surface within Trenches 33-36 does not allow the primary question relating to the 2009/2010 excavations immediately to the east to be addressed; namely, the nature and extent of the Iron Age and Romano-British activity, and whether associated features extended westwards. The lack of prehistoric or Romano-British features within the largely undisturbed subsoil and natural deposits of the southernmost trenches indicates that the settlement itself ended within or not far beyond the southwestern limits of the previous excavation area.

The northwestern side of the 2009/2010 excavation, however, demonstrated a definite continuation, and indeed an westward increase, in the density of material culture, and it was thought likely that the settlement would extend into the northern trenches of the current evaluation. Whilst no cut features were present within the trenches - probably due to the high degree of truncation - there was a complete absence of later prehistoric or Romano-British material culture within the surviving deposits there, which were also devoid of the charcoal flecking.

**Acknowledgements**

Excavation was undertaken at the request of Brian Lees of Cambridge University's EMBS, on-site liaison with the CAU being through Andrew Merrick (EMBS) and Andy Gale (Davis Langdon). Andy Thomas of CCHET monitored the archaeological work. Chris Evans was CAU Project Manager. Survey work on site was undertaken by Donald Horne, and the production of graphics by Vicki Herring.

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**Appendix** - *Feature and Deposit Descriptions*

| Feature Number | Feature Type | Trench Number | Context | Context Type | Description | Length (m) | Width (m) | Depth (m) |
|---|---|---|---|---|---|---|---|---|
| 500 | Pit | 32 | 1513 | Cut | Sub circular in plan, moderate to gradually sloping concaved sides to concaved base. | 1.25 | 1.1 | 0.12 |
| | | | 1514 | Fill | Mid to dark grey-brown moderately compacted silty clay with occasional large charcoal lumps. | | | |
| 501 | Gully NE-SW | 31 | 1515 | Cut | Straight, narrow linear gully in plan, moderately steeply sloping concaved sides to narrow concaved base. | 2.4 (Exc) | 0.52 | 0.19 |
| | | | 1516 | Fill | Mid to dark grey, moderate to firmly compacted silty clay with frequent gravel mottling | | | |
| 502 | Gully Terminus NE-SW | 31 | 1517 | Cut | Very shallow linear gully terminus in plan; rounded terminal woth gradually concaved sides to concaved base | 1.8 (Exc) | 0.78 | 0.15 |
| | | | 1518 | Fill | Mid to dark grey, very firmly compacted silty clay with occasional silty gravel inclusions. | | | |
| 503 | Gully/ Field Drain NE-SW | 31 | 1519 | Cut | Linear ditch in plan, very steep and vertical sides to generally flat base. | 2.6 (Exc) | 0.7 | 0.42 |
| | | | 1520 | Fill | Mid to dark orangey-brown moderately compacted silty clay with frequent gravel inclusions | | | |
| 504 | Ditch NE-SW | 32 | 1521 | Cut | Linear ditch in plan, gradual to moderately sloping concaved sides to concaved base. | 2.8 (Exc) | 1.52 | 0.19 |
| | | | 1522 | Fill | Mid to dark grey, moderate to firmly compacted silty clay with infrequent charcoal mottling | | | |
| 505 | Ditch NE-SW | 32 | 1523 | Cut | Linear ditch in plan, gradual to moderately sloping concaved sides to concaved base | 2.8 (Exc) | 1.65 | 0.23 |
| | | | 1524 | Fill | Mid to dark grey, moderate to firmly compacted silty clay. Single fragment of Medieval Peg -tile | | | |
| 506 | Ditch NE-SW | 32 | 1525 | Cut | Linear ditch in plan, gradual to moderately sloping concaved sides to concaved base. | 2.8 (Exc) | 2.2 | 0.16 |
| | | | 1526 | Fill | Mid to dark grey, moderate to firmly compacted silty clay with infrequent charcoal mottling | | | |
| 507 | Ditch Terminus | 32 | 1527 | Cut | Linear ditch terminus in plan, moderate to gradually sloping concaved sides to concaved base | 2.8 (Exc) | 0.8 | 0.13 |

| | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| | NE-SW | | 1528 | Fill | Mid to dark grey, moderate to firmly compacted silty clay with infrequent charcoal mottling | | | |
| - | - | 33, 35, 36 | 1500 | Subsoil | Dark grey compacted clayey silt | | | |
| - | - | 33-36 | 1501 | Concrete | Concrete car-park surface | | | |
| - | - | 30-32 | 1502 | Modern Topsoil | Mid grey brown, poorly established firmly compacted clayey silt with frequent rooting and modern detritus. | | | |
| - | - | 30-32 | 1503 | Modern Dump | Light to mid grey-brown, very firmly compacted clay with frequent modern industrial detritus, brick, stone and mortar. | | | |
| - | - | 30-32 | 1504 | Modern Dump | Light to mid grey-brown, firmly compacted clay with frequent modern industrial detritus, brick, stone and mortar. | | | |
| - | - | 30-32 | 1507 | Agricultural Topsoil | Mid to dark grey-brown sandy silty clay, with frequent darker mottled clay lenses | | | |
| - | - | 30-32 | 1509 | Subsoil | Mid to light browny grey sandy silty clay with occasional small gravel inclusions. | | | |

# OASIS DATA COLLECTION FORM: England



## OASIS ID: cambridg3-133134

### Project details

| | |
|---|---|
| Project name | High Cross, West Cambridge, University of Cambridge; Further Archaeological Evaluations |
| Short description of the project | 300 metres of evaluation trench were excavated through deep deposits of modern backfill and wartime factory floor deposits in land adgacent to a revious open area excavation which revealed the presence of prehistoric, romano-british and nedieval occupation and land use. The trenches contained the remnants of a medieval routeway as well as demonstrating large quantities of modern truncation |
| Project dates | Start: 21-08-2012 End: 24-08-2012 |
| Previous/future work | No / No |
| Type of project | Field evaluation |
| Site status | None |
| Current Land use | Grassland Heathland 3 - Disturbed |
| Monument type | ROAD Medieval |
| Significant Finds | FLINT Late Mesolithic |
| Significant Finds | TILE Medieval |
| Methods & techniques | "Metal Detectors","Sample Trenches" |
| Development type | Urban commercial (e.g. offices, shops, banks, etc.) |
| Development type | University Data Cantre |
| Prompt | Direction from Local Planning Authority - PPG15 |
| Position in the planning process | After full determination (eg. As a condition) |

### Project location

| | |
|---|---|
| Country | England |
| Site location | CAMBRIDGESHIRE CAMBRIDGE CAMBRIDGE High Cross |
| Postcode | CB30HB |
| Study area | 2.00 Hectares |
| Site coordinates | TL 421 558 52 0 52 10 54 N 000 04 43 E Point |
| Height OD / Depth | Min: 16.00m Max: 20.00m |

## Project creators

| | |
|---|---|
| Name of Organisation | Cambridge Archaeological Unit |
| Project brief originator | City/Nat. Park/District/Borough archaeologist |
| Project design originator | Christopher Evans |
| Project director/ manager | Christopher Evans |
| Project supervisor | Adam Slater |
| Type of sponsor/ funding body | University of Cambridge |
| Name of sponsor/ funding body | University of Cambridge |

## Project archives

| | |
|---|---|
| Physical Archive recipient | Cambridge Archaeological Unit |
| Physical Contents | ''Ceramics'',''Worked stone/lithics'' |
| Digital Archive recipient | Cambridge Archaeological Unit |
| Digital Contents | ''Stratigraphic'' |
| Digital Media available | ''Survey'',''Text'' |
| Paper Archive recipient | Cambridge Archaeological Unit |
| Paper Contents | ''Ceramics'',''Stratigraphic'',''Survey'',''Worked stone/lithics'' |
| Paper Media available | ''Context sheet'',''Drawing'',''Map'',''Photograph'',''Plan'',''Report'',''Section'',''Survey'',''Unpublished Text'' |

## Project bibliography 1

| | |
|---|---|
| Publication type | Grey literature (unpublished document/manuscript) |

| | |
|---|---|
| Title | High Cross, West Cambridge; Further archaeological Evaluation |
| Author(s)/Editor(s) | Slater, A |
| Other bibliographic details | Report no 1119 |
| Date | 2012 |
| Issuer or publisher | CAU |
| Place of issue or publication | Cambridge |

| | |
|---|---|
| Entered by | Adam Slater (as813@cam.ac.uk) |
| Entered on | 30 August 2012 |

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