

# Whittle Jet Propulsion Laboratories, West Cambridge

Archaeological Trenching and Excavation



Adam Slater

CAMBRIDGE ARCHAEOLOGICAL UNIT  
UNIVERSITY OF CAMBRIDGE



**Whittle Jet Propulsion Laboratories**  
**WEST CAMBRIDGE**  
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With contributions by K. Andersen, R. Ballantyne  
and V. Rajkovača

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## CONTENTS

|   |    |
|---|----|
| <b>Introduction</b>                             |    |
| <i>Geology</i>                                  | 1  |
| <i>Archaeological and Historical Background</i> | 1  |
| <i>Methodology</i>                              | 2  |
| <b>Results</b>                                  |    |
| <i>Trenches 1 &amp; 2</i>                       | 5  |
| <i>Open-area excavation (Trench 3)</i>          | 5  |
| <b>Specialist Studies</b>                       |    |
| <i>Romano-British Pottery</i> Katie Anderson    | 10 |
| <i>Faunal Remains</i> Vida Rajkovača            | 11 |
| <i>Environmental Samples</i> Rachel Ballantyne  | 12 |
| <b>Discussion</b>                               | 13 |
| <b>References</b>                               | 14 |
| <b>Oasis Data Form</b>                          | 15 |

## GRAPHICS

|                 |  |   |
|-----------------|--|---|
| <b>Figure 1</b> | Site location and proximity to adjacent sites  | 3 |
| <b>Figure 2</b> | Trench location and excavated features   | 4 |
| <b>Figure 3</b> | Sections of Romano British ditch F.8/ F.9  | 7 |
| <b>Figure 4</b> | Photographs of Romano British ditch F. 8/ F. 9<br>(including section detail) with built-over Vicar's<br>Farm excavation-area in background | 8 |

## Introduction

Between 24th November and 1<sup>st</sup> December 2010 the Cambridge Archaeological Unit (CAU) undertook a combined evaluation and small open area excavation within the grounds of the Whittle Laboratory, West Cambridge (TL431590), prior to proposed extensions to the west and east of the current building.

The area of investigation was located immediately to the west of the Vicar's Farm Roman settlement complex excavated in 2001 (Lucas & Whittaker 2001; Evans & Lucas *forthcoming*) and lay at a height of 15.4m OD.

### *Geology*

The solid geology underlying the whole of the West Cambridge appears to be Gault Clay (BGS 1981). However, the base of the Lower Chalk outcrops only half a kilometre to the southwest at Coton Orchard, and a similar distance away to the northeast at the Observatory, suggesting that the clays lie somewhere in the top of the Gault sequence.

As with the adjacent Vicar's Farm excavations, the current area was located at a geological transition, with a relatively thin deposit of sandy clay overlying a more compact sandy gravel sequence. This transition, at a depth of approximately 1.2m below the upper geology, was marked by the presence of the watertable.

### *Archaeological and Historical Background*

The Whittle Laboratory is located within an area which, due largely to the University of Cambridge development, has been subjected to a high degree of archaeological investigation. The most relevant of these is the major excavation undertaken at Vicar's farm of an important Romano-British settlement which possessed over a thousand features, including both inhumation and cremation cemeteries, with an earlier enclosure containing a possible Romano-British shrine. The settlement spanning four centuries, from the 1<sup>st</sup> through to the early 5<sup>th</sup> century AD (Whittaker & Evans 1999; Lucas 2001), was shown to have a central core of activity surrounded by increasingly peripheral features. The location of the Whittle Laboratories excavation area was located at the probable junction of two of the westernmost of the identified 'boundary' ditches.

To the north of Madingley Road, a large scale evaluation (c. 140 ha) was recently undertaken by the CAU on the North West Cambridge lands of University Farm (Evans & Newman 2010). The earliest activity identified on the Observatory Gravel ridge was Palaeolithic in date, consisting of residual material recovered from post-Medieval gravel quarries. Mesolithic and Early Neolithic artefacts were also recovered from residual contexts, along with a few *in situ* Late Bronze Age features, a small Middle Iron Age settlement, and at least five later Iron Age settlements within the same general area. Five major Romano-British settlements were distinguished, of which two lay on

the clays; this included an Early Roman farmstead, and a probable Late Roman villa beneath the site of the Madingley Road Park-and-Ride. Settlements of this period extended almost continuously along the southern side of the ridge, the most impressive being Site IV, which covered more than nine hectares. Associated with the latter was a higher status building and a formal inhumation cemetery. This area of settlement also lay close to the high status Roman and Anglo-Saxon cemeteries discovered at Girton College during construction in the nineteenth century. The discovery of semi-continuous Iron Age – Roman occupation of this site on such a scale may well be relevant to our future understanding of the relative development or absence of early settlement in the wider West Cambridge area.

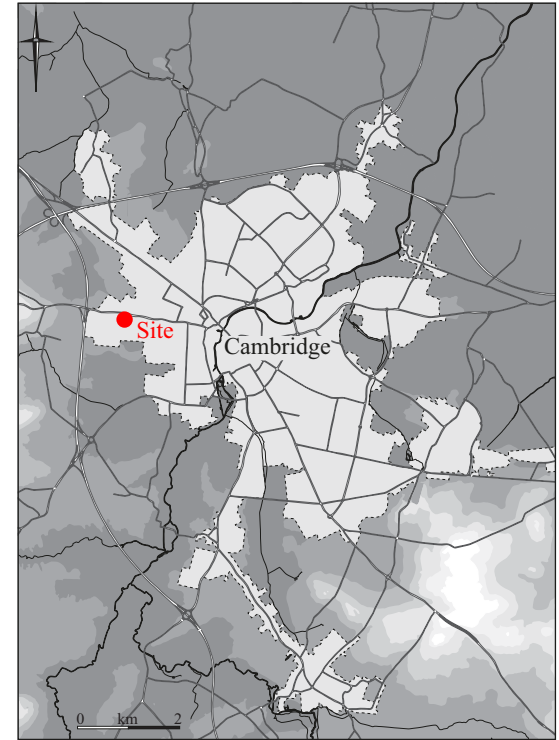
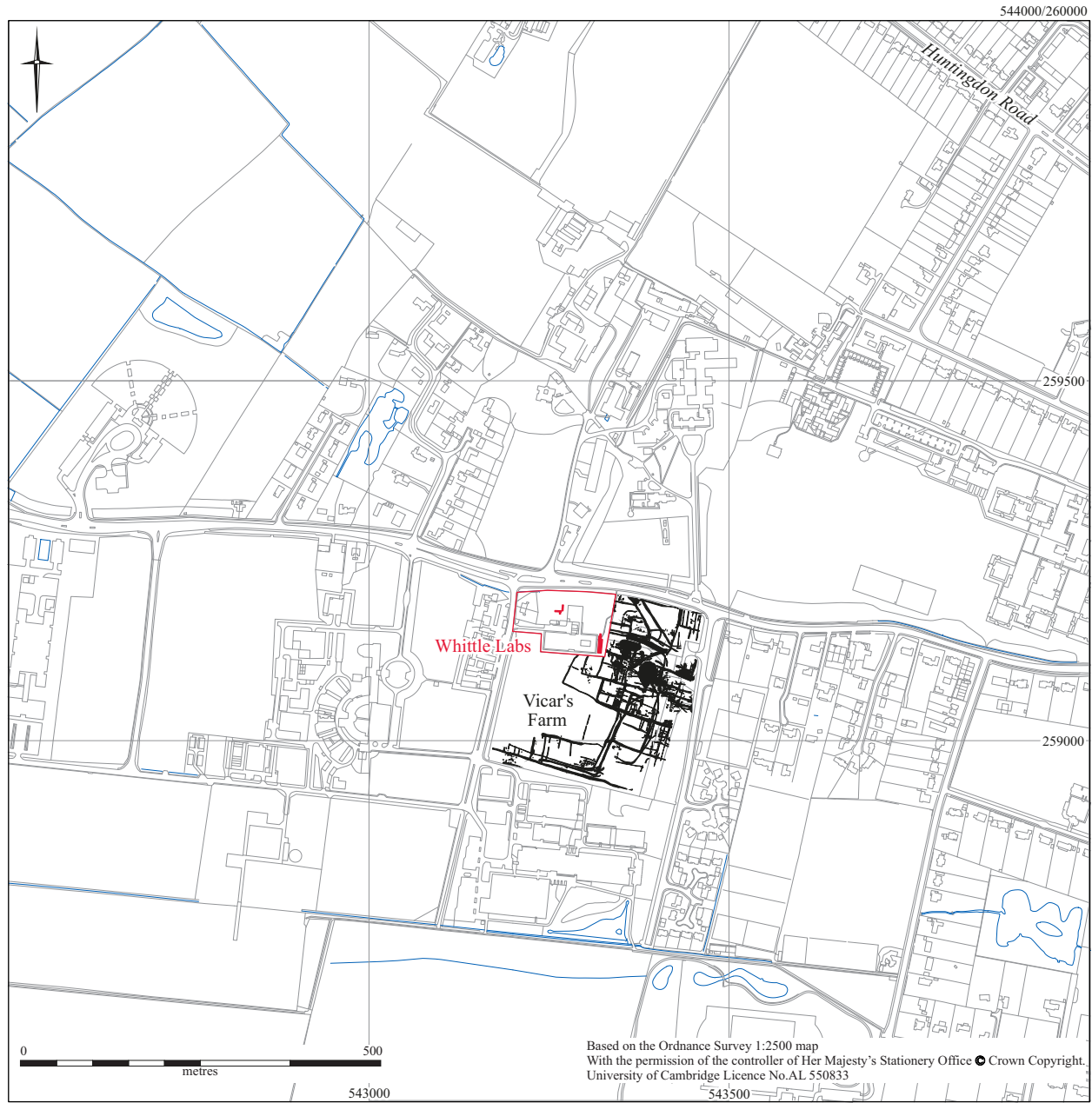
To the southwest of the current area of investigation the 2009/2020 excavation at High Cross fields (Timberlake 2010), demonstrated use of the valley-base from the Mesolithic/Neolithic to Medieval times, including clusters of Iron Age pits and an Early Romano-British ditch system that was probably associated with a farmstead located immediately west of that site.

### *Methodology*

The current investigation comprised of two evaluation trenches to the west of the current Whittle Laboratory and a larger open-area excavation located to the east. Both areas were mechanically stripped of top-soil and sub-soil under constant archaeological supervision. The removed sub-soil was also scanned with a metal-detector.

The exposed archaeological features were immediately planned, metal-detected and subsequently sampled in accordance with the Project Specification (Evans 2010). The excavation of all archaeological features was carried out by hand and all finds were retained. Recording followed the CAU-modified MoLAS system (Spence 1990), in which numbers were assigned to individual Context ('No. '; with cut numbers indicated by square brackets) and Feature Numbers ('F. No. ') to stratigraphic events. Plans were drawn at a scale of 1:50 and sections at 1:10. The photographic archive comprises of digital images. A representative sample of deposits was bulk-sampled.

All work was carried out in strict accordance with statutory Health and Safety legislation and with the recommendations of SCAUM (Allen & Holt 2002); the site code is WLC10.



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Figure 1. Location of the Whittle Labs evaluation, also showing the nearby Vicar's Farm excavation.

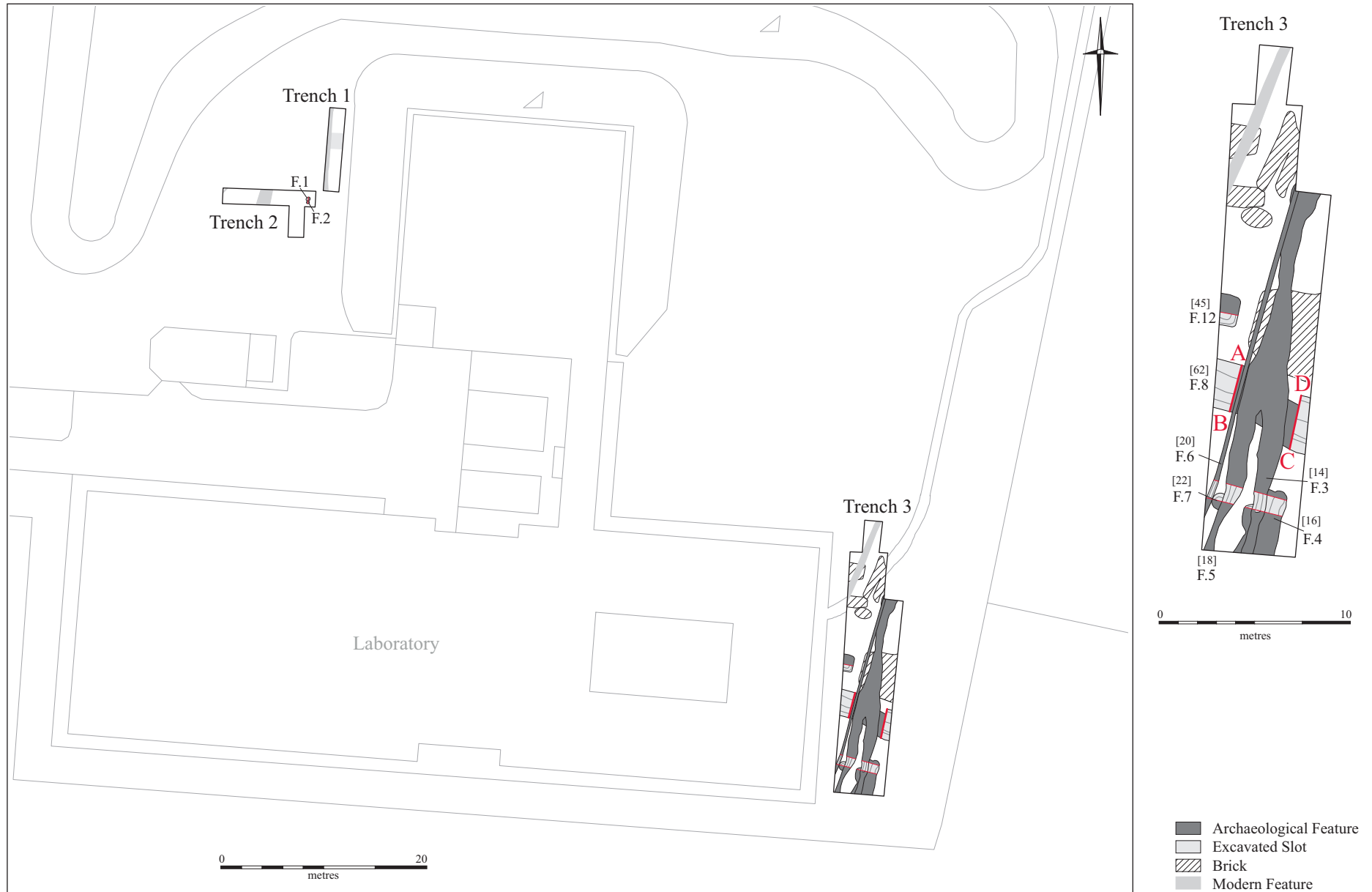


Figure 2. Trench Plan

## Results

### *Evaluation Trenches*

Two trenches, totalling 17m, were excavated to the immediate west of the laboratory building. The presence of several modern gas, oil, electrical, communication and drainage services crossing the area restricted the location and extent of the trenches.

#### *Trench 1*

This was 8m in length and 1.5m wide, orientated northeast to southwest, and was located at the base of a noise-reduction bund against the western wall of the laboratory. The trench exposed a backfill sequence of made-ground deposits to a depth of 0.8m along its length. A further 1.6m-deep, mechanically excavated sondage revealed the continuation of the backfill deposits, containing modern brick, concrete and construction detritus, 2.4m below the current ground surface.

#### *Trench 2*

Trench 2 was 9m in length, 1.5m in width, was a maximum depth of 0.65m and was oriented east-west. A small extension extending 4.5m to the south of the trench maximised access between services. An upper turf/top-soil deposit overlay a 0.3m-thick made-ground that comprised of modern brick, glass and construction debris within a matrix of dark grey loosely compacted silty clay. A sub-soil of light grey-brown, firmly compacted silty clay, a maximum 0.15m in thickness, overlay a compacted sandy, gravely clay geology.

Two small, circular postholes, **F. 1** and **F. 2** were sealed by the sub-soil deposit. A single abraded fragment of possibly Romano-British glass was recovered from the fill of **F. 2**.

**F. 1:** Cut [10] circular in plan, moderately to steeply sloping concaved sides to concaved base. Diameter 0.2m, depth 0.11m. Fill [011] light grey-brown, firmly compacted silty clay.

**F. 2:** Cut [12] circular in plan, moderately to steeply sloping concaved sides to concaved base. Diameter 0.22m, depth 0.1m. Fill [013] light grey-brown, firmly compacted silty clay.



### *Open Area Excavation - Trench 3*

A larger area, located to the east of the offices associated with the Whittle Laboratories, was opened to expose the footprint of proposed extension to the building. Modern drainage services were located to the immediate north and west of the area. Extended over 118.4 square metres, with a maximum depth of 0.9m below the current ground surface, features of Romano-British and post-Medieval date were found within it.

Geologically, Trench 3 was located on soft, sandy clays, [26], with surviving archaeological features truncating it. The underlying sandy gravels ([25]) were at a depth of approximately 1.2m and exposed a watertable sealed by the clays. At this juncture, a thin band of sterile sandy silt was identified ([24]).

#### Romano-British

The earliest archaeology encountered within Trench 3 was a wide, Romano-British linear, F. 8. Two slots were excavated through this ditch. Aligned northwest to southeast, F.8 was a maximum of 4.3m wide and 1.35m deep. Steeply sloping sides led to a wide, generally flat base. It would appear pertinent that the base of the ditch corresponded with the upper band of geological silt associated with the watertable affecting the depth to which the ditch was dug.

The fills of F. 8 represented a high degree of primary slumping of sandy clays, with a notable preference towards the south side of the ditch, suggestive of a collapsed bank. The main fills were compacted clays and silts that contained infrequent animal bone and ceramic. An environmental bulk-sample of the primary slumping deposit (59) contained very small quantities of charcoal and no organic material contemporary with its deposition. Corresponding with the samples from the Vicar's Farm excavations, it showed a rapid decline in organic content further away from the settlement core (Ballantyne, below).

F. 8: Cut [27] Steep to moderately sloping, generally straight sides with slight concavity to wide, moderately concaved base. Width 3.6m, depth 1.26m. Primary fills: (29), light orangey-brown, moderate to firmly compacted sandy-clay. (30), Mid orangey-brown, moderate to firmly compacted sandy-silt. (32), Mid grey-brown, moderately compacted silty clay infrequent charcoal and burned clay mottling. Main fills: (33), dark grey, firmly compacted clayey-silt, occasional orange sandy clay and charcoal mottling. (34), Mid grey-brown, firmly compacted clayey-silt, frequent charcoal mottling. (35), light brown, moderate to firmly compacted clay-silt, occasional charcoal and burned clay mottling.

Cut [62], Steeply sloping, generally straight sides to slightly concaved base. Width 3.9m, depth 1.35m. Primary fills: (59); Mid yellowy-grey moderate to firmly compacted clayey-silt occasional small gravel and charcoal inclusions bulk sample <1>. (58); Yellowy-grey, moderate to firmly compacted sandy, clayey-silt, occasional small gravels and charcoal inclusions. Main fills: (57); Light grey, moderate to firmly compacted sandy clay with infrequent charcoal mottling, laminations suggest accumulative deposition. (56); Dark yellowy-grey, moderately compacted clayey-silt, infrequent charcoal, occasional burned clay mottling.

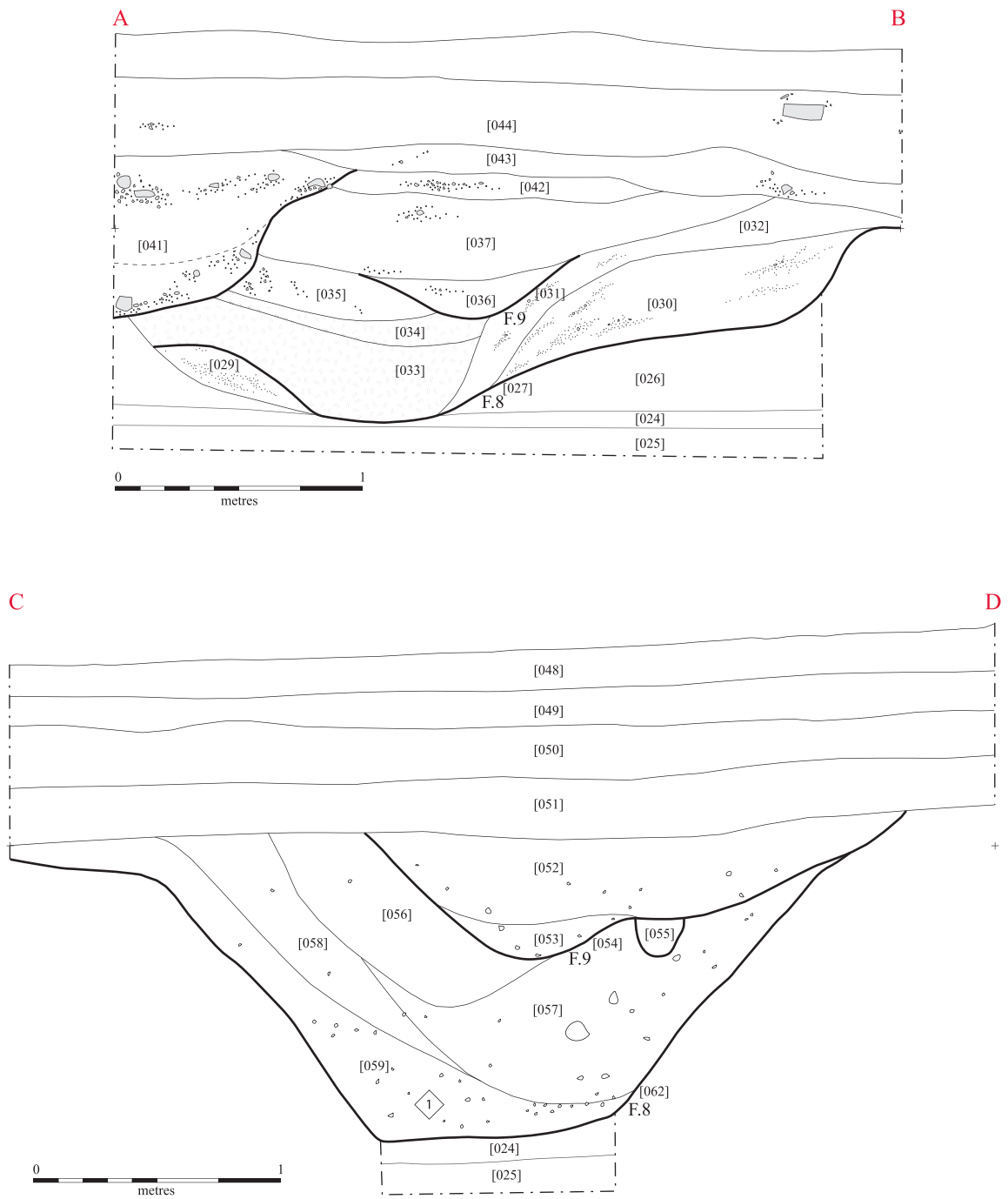


Figure 3. Romano-British Ditch Sections



Figure 4. Photographs of Romano-British Ditch F.8/F.9

A second linear, **F. 9**, likely representing a shallower re-cutting of F. 8 was also identified. A maximum 2.2m wide and 0.7m deep, with a concaved base and sides, this was filled with darker, more humic and materially rich fills.

Excavation of fills from a square-cut linear, **F. 6**, revealed a post-Medieval/modern ceramic field drain containing 1<sup>st</sup> to 3<sup>rd</sup> century ceramic, contemporary with that recovered from the fills of both F. 8 and F. 9.

**F. 9:** Cut [31]; wide moderately steeply sloping, concaved sides becoming steeper towards concaved base. Primary fill (36), light grey-brown, firmly compacted silty clay, frequent charcoal and burned clay mottling. Main fill (37), mid to dark grey-brown, moderately compacted silty, sandy clay, frequent charcoal and burned clay mottling.

Cut [54]; wide, moderately sloping, concaved sides becoming steeper towards concaved base. Primary fill [53], mid to light grey, moderate to firmly compacted silty clay, infrequent charcoal mottling. Main fill [52], mid to dark brown-grey, moderately compacted silty silt, frequent charcoal and burned clay mottling.

## Post-Medieval

Throughout the extent of Trench 3 were seven irregular rounded and sub-rounded pits varying in size from 1.7m to 3m+ in plan, with a fill-matrix predominantly comprised of soft, red, handmade brick. Three of these were partially excavated:

**F. 4:** Cut [16], sub-rectangular in plan steeply sloping generally straight sides to irregular concaved base. Length 3.75m+, width 2.25m, depth 0.43m. Fill [17] bright orangey red, angular and sub angular brick and brick fragments within a matrix of mid to dark grey-brown, moderately compacted silty clay. Occasional charcoal, coal and clinker fragments.

**F. 11:** Cut [40], sub-rectangular in plan, steeply sloping sides to irregular flat base. Length 4.5m, Width 3.5m+, depth 0.65m. Fill [41] orangey red, compacted brick and brick fragments within a matrix of compacted light grey-brown moderate to firmly compacted silty clay, infrequent charcoal, clinker and coal inclusions.

**F. 12:** Cut [45], sub rectangular in plan, steeply sloping generally straight sides to irregular concaved base. Length 1.1m+, width 2.25m, depth 0.45m. Basal fill [46], mid to light grey-brown, moderate to firmly compacted sandy clay, infrequent charcoal mottling. Main fill; [47], mid to light orangey-red compacted brick with brick fragments within a matrix of compacted light grey-brown moderate to firmly compacted silty clay, infrequent charcoal, clinker and coal inclusions.

The bricks identified within F. 4, F. 11 and F. 12 formed a deposit overlying the natural geology that increased in thickness as it rose to the north. Visible immediately under the turf layer at the northern end of the excavated area, these suggested a deliberate dumping down the slope into already pre-existing or pre-dug pits. The bricks themselves were handmade, contained high levels of mineral inclusion and often demonstrated signs of burning. Their dimensions - a maximum of 200mm in length, 120mm in width and 70mm in thickness - suggest an early post-Medieval (16-17th century) date for manufacture.

Truncating the brick deposits, were two narrow, shallow north-south aligned linears, **F. 3** and **F. 5**, which merged to form a single ditch extending beyond the northern limit of Trench 3. Ceramic from these indicates a 19<sup>th</sup> century date, and the alignment suggests that they respect the orientation of a Medieval and post-Medieval ridge-and-furrow system identified during the Vicar's Farm excavations (Lucas & Whittaker 2001).

**F.3:** Cut [14], linear in plan, steeply concaved sides to concaved base. Length 20m+, Width, max 0.8m, depth 0.38m. Fill [15], mid to dark grey, moderate to loosely compacted silty clay, moderate quantities of coal, charcoal and lime/ chalk.

**F. 5:** Cut [18], linear in plan, moderate to steeply sloping concaved sides to concaved base. Length 20m+, Width, max 1.1m, depth 0.35m. Fill [19], mid to dark grey, moderate to loosely compacted silty clay, moderate quantities of coal, charcoal and lime/ chalk.

## Undated

A single shallow pit/large posthole, **F. 7**, was truncated by the 19<sup>th</sup> century ditch **F. 5** in the south of Trench 3; no datable material culture was present within the fill of this feature.

**F. 7:** Cut [22], circular in plan, concaved sides to narrow concaved base. Diameter 0.35m, depth 0.3m. Fill [23], mid to dark brownish-grey moderate to loosely compacted silty clay.

## Specialist Studies - *Roman Pottery* Katie Anderson

A small assemblage, totalling 46 sherds (516g), was recovered. All of the material was examined and details of fabric, form and date were recorded.

The pottery was recovered from three different features and comprised predominately small-to medium-sized sherds. The majority of fabrics were coarsewares, most of which are likely to have been locally produced, including a Horningsea greyware sherd, broadly dating 2<sup>nd</sup>-4<sup>th</sup> century AD. Sandy greywares dominated the assemblage, representing 54% of the total. The only finewares recovered comprised two small and abraded colour-coated sherds (2<sup>nd</sup>-3<sup>rd</sup> century AD). No imported wares were recovered. Due to the condition of the assemblage very few vessel forms were identifiable: just four jars and a bowl.

Many of the sherds could only be generically dated Romano-British due to the nature of the assemblage; however, there were several that could be more specifically dated, including the colour-coated sherds and Horningsea sherd (2<sup>nd</sup>-3<sup>rd</sup> century AD). There was also a beaded rim greyware bowl dating to the same period. Several of the other sherds were indicative of Early Roman material (mid 1<sup>st</sup>-2<sup>nd</sup> century AD), including sandwich-fired sandy wares.

Feature 6 contained 13 sherds (128g), which included a sandy greyware bowl and two sandy greyware jars. The material from this feature dates mid 1<sup>st</sup>-3<sup>rd</sup> century AD. 18 sherds (260g) of pottery were recovered from Feature 8, including the Horningsea greyware sherd and also several body sherds that are likely to be earlier Roman in date (mid 1<sup>st</sup>-2<sup>nd</sup> century AD). Finally, Feature 9 yielded 15 sherds (128g), which broadly date mid 1<sup>st</sup>-3<sup>rd</sup> century AD.

Due to the limited size of the assemblage there are only a few conclusions that can be made. Firstly, it represented a fairly typical Roman rural settlement, dominated by locally made coarsewares. Pottery evidence suggests occupation between the Early and Middle Roman period (mid 1<sup>st</sup>-3<sup>rd</sup> century AD), with the lack of either any imported wares or local wares that can be more

specifically dated making it difficult to be more precise. Even this somewhat broad dating, however, is useful in fitting this site into its immediate landscape, with several other sites having been investigated within the immediate vicinity; the most immediate being the 1999 excavations at Vicar’s Farm (Monteil in Lucas & Whittaker 2001), which produced a substantial assemblage of over 12,000 sherds. Although given the obvious differences it is inappropriate to compare the site assemblages directly, it is worth noting that although a small percentage of the Vicar’s Farm assemblage could be associated with Early Roman occupation, the bulk of the material dates to the Late Roman period (*ibid.*). This, therefore, suggests that this excavation represents the somewhat ‘under-represented’ phase of occupation at the site.

### *Faunal Remains* Vida Rajkovača

The fieldwork resulted in the recovery of a small faunal assemblage. Seven contexts relating to Romano-British ditch F.8 and its re-cut (F.9) produced an assemblage totalling 31 assessable fragments (1700g). An additional bone specimen (28g) came from post-Medieval pit F.12. The assemblage has been hand-recovered; heavy residues from the one assessed bulk sample ([059]/F.8) did not produce animal bone material.

The zooarchaeological investigation followed the system implemented by Bournemouth University with all identifiable elements recorded (NISP: Number of Identifiable Specimens) and diagnostic zoning (amended from Dobney & Reilly 1988) used to calculate MNE (Minimum Number of Elements) from which MNI (Minimum Number of Individuals) was derived. Identification of the assemblage was undertaken with the aid of Schmid (1972), Hillson (1999) and reference material from the Cambridge Archaeological Unit, Cambridge. Unidentifiable fragments were assigned to general size categories where possible. This information is presented in order to provide a complete fragment count. Ageing of the assemblage employed both mandibular tooth wear and fusion of proximal and distal epiphyses. The ageing data of Silver (1969) was used to assess epiphyseal fusion of the post-cranial elements and the analyses of tooth eruption and mandibular toothwear stages were recorded following Grant (1982).

Overall, the assemblage demonstrated moderate to quite good state of preservation. Out of eight contexts examined, one displayed quite good level of preservation, with the remainder seven being recorded as moderately preserved. If we look at the number of fragments corresponding to each of these categories, out of 32 assessable specimens, 31 showed moderate preservation with some weathering or surface modification.

| Taxon         | <i>Romano-British</i> |            |          | <i>Post-Medieval</i> |            |          |
|---------------|-----------------------|------------|----------|----------------------|------------|----------|
|               | NISP                  | NISP%      | MNI      | NISP                 | NISP%      | MNI      |
| Cow           | 10                    | 55.6       | 1        | .                    | .          | .        |
| Sheep/Goat    | 2                     | 11.1       | 1        | 1                    | 100        | .        |
| Pig           | 1                     | 5.6        | 1        | .                    | .          | .        |
| Horse         | 5                     | 27.7       | 1        | .                    | .          | .        |
| Cattle-sized  | 7                     | .          | .        | .                    | .          | .        |
| Sheep-sized   | 5                     | .          | .        | .                    | .          | .        |
| Mammal n.f.i. | 1                     | .          | .        | .                    | .          | .        |
| <b>Total</b>  | <b>31</b>             | <b>100</b> | <b>.</b> | <b>1</b>             | <b>100</b> | <b>.</b> |

**Table 1:** Number of Identified Specimens (NISP) and Minimum Number of Individuals (MNI) for all species by phase; the abbreviation n.f.i. indicates that the specimen was not further identified

The list of taxa is given in Table 1. Of 32 assessable specimens in total, 19 were possible to identify to species. The three main food species are all present within the assemblage, followed by horse. It was not possible to observe any butchery or gnawing marks, most likely due to the erosion of the bone surface. Only two ageable specimens were recorded.

The assemblage recorded here demonstrates that the economic patterns at the Whittle Laboratory Site adhered to the Romano-British norm of a cattle-based economy. The evident comparison from the immediate vicinity would be with the Vicar's Farm site (Clarke in Evans & Lucas forthcoming), where a substantial faunal assemblage was recovered dominated by the remains of cattle (NISP=72%), followed by ovicapra (NISP=24%) and pigs (NISP=4%). If we look at the relative importance of the three main food species at the Whittle Site the ratio is quite similar, with prevalent cattle component (NISP=77%), followed by sheep (NISP=15%) and pig (NISP=8%).

### *Environmental Bulk Sample Rachel Ballantyne*

One bulk sample was assessed from [059], F.8.

The sample has been flotation-sieved using a modified version of the Sträf tank (Williams 1973). Flots (> 300µm) and heavy residues (>1mm) have been dried and then sorted using a Leica MS5 (x6.3 – x50) binocular microscope for flots, and sorting residues greater than 4mm by eye. The 1–4 mm residue has been scanned and discarded. Full raw data is summarised in Table 2. Nomenclature follows Stace (1997) for plants, and Beedham (1972) for molluscs.

Charring has preserved all plant remains and there is no biological evidence for waterlogging. The untransformed plant seeds and mollusc shells are therefore probably intrusive. Numerous rootlets and shells of the burrowing snail *Ceciliodes acicula*, further suggest extensive bioturbation. Only low quantities of vitrified charcoal are present. The accompanying untransformed seeds and molluscs likely represent the recent environment and so are inappropriate for further interpretation.

| Feature   |                                      | F.8          |
|---|--------------------------------------|--------------|
| <b>Context</b>  |                                      | <b>[059]</b> |
| <b>Sample Number</b>  |                                      | <1>          |
| FeatureType   |                                      | ditch        |
| Phase/Date  |                                      | late RB      |
| Sample Volume/ Litres   |                                      | 16           |
| Fraction of flot (>0.5mm) sorted                                |                                      | 1/1          |
| Fraction of residue (>4mm) sorted                               |                                      | 1/1          |
| <b>Taxonomic Name</b>   | <b>English Name/ mollusc habitat</b> |              |
| CHARCOAL  |                                      |              |
| charcoal volume/ millilitres                                    |                                      | < 1 ml.      |
| large charcoal (>3mm)   |                                      |              |
| small charcoal (<3mm)   |                                      | +            |
| - vitrified charcoal  |                                      | +            |
| INTRUSIVE BIOLOGICAL ITEMS                                      |                                      |              |
| <i>Atriplex prostrata</i> Boucher ex DC./ <i>patula</i> L. Seed | Common/Spear-leaved Orache           | * u          |
| <i>Viola</i> sp.  | Violets                              | * u          |
| <i>Aphanes arvensis</i> L. achene                               | Parsley-piert                        | * u          |
| <i>Sambucus nigra</i> L.  | Elder                                | * u          |
| intrusive roots   |                                      | +++          |
| TERRESTRIAL SNAILS  |                                      |              |
| <i>Vallonia exentrica</i> Sterki/ <i>pulchella</i> (Müller)     | open, damp and/or dry habitats       | * u          |
| <i>Trichia hispida</i> (L.)/ <i>striolata</i> (Pfeiffer)        | catholic                             | * u          |
| <i>Aegopinella/Oxychilus</i> sp.                                | moist & shady places                 | * u          |
| <i>Ceciliodes acicula</i> (Müller)                              | burrowing snail; probably intrusive  | +++ u        |

**Table 2:** Environmental remains from the Whittle Laboratory, Cambridge (WLC10)

KEY: \* 1 or 2 items, + less than 10 items, ++ 10 to 50 items, +++ more than 50 items

The very low amount of charcoal precludes any interpretation. These results are, however, consistent with those for the nearby Roman settlement at Vicar's Farm, where a dramatic reduction in charred plant densities has been identified from the core to peripheral settlement features.

## Discussion

The presence of the large, deep, Romano-British ditch crossing Trench 3 (F. 8) can be seen as a continuation of the major boundary ditch associated with the Phase III (AD270-410) reorganisation of the enclosures within the Vicar's Farm excavations (Evans & Lucas, forthcoming). The re-cutting of the ditch by F. 9 also corresponds well with the presence of a 4th century recut of the northern boundary of the settlement. The material culture, recovered from both primary and recut features, whilst being in sufficient quantity to allow confident dating to be made, was significantly less than that contained within the continuation of the linears to the east. The absence of any metal objects, within either the fills or the removed top-soil further emphasises the distance away from the settlement core as identified by Lucas (*ibid.*). The presence of two, possibly Romano-British postholes within Trench 2 again suggests activity on the very margin of settlement.

The peripheral nature of the current area of investigation compared with the settlement core was further reinforced by the absence of any material-rich 'dark earth' overlying the features as found towards the settlement core (*ibid.*). The only possible such deposit, the upper fills of F. 9, was artefactually abundant, but did not appear associated with a wider spread. The presence, however, of 1<sup>st</sup>-3<sup>rd</sup> century ceramics within modern features to the south of ditches F. 8/ F. 9 may suggest a spread of material favouring the inside of the Romano-British enclosure and might, thereby, be associated with the same slumped bank suggested by the basal fills of the ditch itself.

The presence of the brick-filled features F. 4, F. 11 and F. 12, suggests that, at some point prior to the 19<sup>th</sup> century, the area around Trench 3 was used as a dump, and it seems possible that this activity would have truncated the earlier Romano-British horizons to some degree. No mortar was present on the bricks, which reduces the possibility that they represented demolition rubble; old quarry pits in the locality frequently being used to dispose of waste from Cambridge. Alternatively, the nearby production of bricks may well be the origin of the dumping deposits, although without considerable amounts of *in situ* burning, and only a minimal quantity of charcoal within the fills, it is unlikely that the manufacture was adjacent to the final dump.

### *Acknowledgements*

Thanks must be given to the staff of the Whittle Laboratories who accommodated and tolerated our presence, and Hilary Glegg of the University's Estates Management and Building Services for organising the fieldwork. The excavation staff were Sam Riley and Dave Webb, with the site surveying carried out by Bryan Crossan and Iain Forbes. Graphics were prepared by Vicki Herring and Chris Evans managed the project.



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**OASIS ID: cambridg3-91187**

### Project details

|                                  |   |
|----------------------------------|---|
| Project name                     | Whittle Jet Propulsion Laboratories, Cambridge. Archaeological evaluation and excavation  |
| Short description of the project | A programme of evaluation trenching and small open area excavation was undertaken by the Cambridge Archaeological Unit. A Romano-British enclosure/ boundary ditch as well as post Medieval brick manufacturing/ dump site and post medieval field boundaries were excavated. |
| Project dates                    | Start: 24-11-2010 End: 01-12-2020   |
| Previous/future work             | No / No   |
| Type of project                  | Field evaluation  |
| Current Land use                 | Industry and Commerce 2 - Offices   |
| Monument type                    | FARMSTEAD Roman   |
| Monument type                    | BRICKYARD Post Medieval   |
| Significant Finds                | VESSEL Roman  |
| Significant Finds                | VESSEL Post Medieval  |
| Methods & techniques             | 'Environmental Sampling','Sample Trenches'  |
| Development type                 | Large/ medium scale extensions to existing structures (e.g. church, school, hospitals, law courts, etc.)  |
| Prompt                           | Direction from Local Planning Authority - PPG16   |
| Position in the planning process | After full determination (eg. As a condition)   |

### Project location

|               |  |
|---------------|--|
| Country       | England  |
| Site location | CAMBRIDGESHIRE CAMBRIDGE CAMBRIDGE Whittle Jet Propulsion Laboratories |

Postcode CB30FB  
 Study area 150.00 Square metres  
 Site coordinates TL 543150 259050 51.9098061290 0.243682443794 51 54 35 N 000 14 37 E Point  
 Height OD / Depth Min: 15.00m Max: 15.40m

### Project creators

Name of Organisation Cambridge Archaeological Unit  
 Project brief originator Local Authority Archaeologist and/or Planning Authority/advisory body  
 Project design originator Christopher Evans  
 Project director/ manager Christopher Evans  
 Project supervisor Adam Slater  
 Type of sponsor/ funding body Developer  
 Name of sponsor/ funding body University of Cambridge

### Project archives

Physical Archive recipient Cambridge Archaeological Unit  
 Physical Contents 'Animal Bones','Ceramics','Environmental'  
 Digital Archive recipient Cambridge Archaeological Unit  
 Digital Contents 'Environmental','Stratigraphic','Survey'  
 Digital Media available 'Database','Images raster / digital photography','Spreadsheets','Survey','Text'  
 Paper Archive recipient Cambridge Archaeological Unit  
 Paper Contents 'Stratigraphic','Survey'  
 Paper Media available 'Context sheet','Drawing','Matrices','Plan','Report','Section','Unpublished Text'

### Project bibliography 1

Publication type Grey literature (unpublished document/manuscript)  
 Title Whittle Jet Propulsion Laboratories, Cambridge: Evaluation and Excavation  
 Author(s)/Editor(s) Slater, A  
 Other bibliographic details CAU report no. 939

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