



# NORTH WEST **cambridge**

Programme of Archaeological Works (Sites II and IV)

Condition 63

October 2012



# North West Cambridge

## UNIVERSITY OF CAMBRIDGE

*Project Specification for Archaeological Excavation*  
(Phase 1/Sites II & IV; revised)  
ECB forthcoming

### BACKGROUND

#### 1.1 Site Description

The c. 150ha development site lies in the western hinterland of Cambridge (centred TL 42805990). In the main, its underlying geology consists of gault clays, although a band of Head and Observatory Bed gravels (corresponding to a distinct ridge in the landscape) runs northwest-southeast across the south-centre of the area.

This WSI specifically relates to the planning application for North West Cambridge (REF C/11/1114/OUT and S/1886/11), and reflects the archaeological assessment included within the Environmental Statement and approved as part of the application. This WSI is submitted to discharge, in part, Condition 62, which requires that:

No development shall take place before the implementation of a programme of archaeological works in accordance with a written scheme of investigation which has been submitted to and approved by the Local Planning Authority. Development within areas identified for archaeological investigation in the approved written scheme shall not commence until the archaeological fieldwork in those areas has been completed and the Local Planning Authority has confirmed in writing that the archaeological fieldwork has been completed satisfactorily. The archive report and publication shall be submitted to the Local Planning Authority within 6 months following completion of the archaeological investigations.

#### 1.2 Previous Work

Including aerial photographic plotting, the broader archaeological and historical background for the area has been fully outlined in an earlier Desktop Study (Redfern 2001; revised 2008). The key points which this highlighted were both the scale of the area's usage in Roman times and also the extent of 19<sup>th</sup> century gravel and coprolite quarrying therein. This, indeed, proved to be the case when the site was evaluated and, following limited-scale preliminary investigations in 2002 (Mackay *et al.* 2002) and 2008 (Anderson & Hall 2008; Armour 2008), the CAU undertook a major trench-based evaluation across the area between April and November of 2009 (Evans & Newman 2010); in addition, fieldwalking and geophysical surveys were also conducted as part of the programme.

From this, 11 sites were identified (though, in the end, Site XI fell beyond the borders of the final development zone). Of these, with the probable Site VII villa earmarked for preservation *in situ* (for which a long-term management scheme will be prepared and agreed), only two fall within the bounds of the development's early works (see Fig. 1):

*Site II* - A Roman and Middle Iron Age settlement (also involving a distinct Bronze Age component), with the latter being particularly dense along the south side of Field 132. Note that, relating to findings within the immediate area during the early decades of the last century, both Palaeolithic and Neolithic flintwork has also been recovered from the area; Neolithic pottery was also recovered from two trenches in the west-centre of that field. As it is currently defined (the western limits of the site have yet to be fully established), in the northwest this site complex appears to include still another Iron Age foci and further Neolithic pottery was also found in the corner of Field D/'Dry Field'.

*Site IV* - In the main, this seems a major, high-status Roman settlement complex, and potentially even a villa site. A formal inhumation cemetery has been identified through its west-

central swathe and very high artefact densities were found throughout its central sector. In addition, due to perched watertable conditions, waterlogging has been encountered within some of its deeper features. Having the promise of excellent environmental preservation (e.g. pollen and plant remains), a piece of fine lathe-turned woodwork was also recovered – probably a scrollwork ornament from a chair or the like. Though the artefact and feature density is lower along the site's eastern side, there both distinctly Early Roman and Bronze/Iron Age features were also found, and Neolithic pottery was recovered in one trench along the site's north-central margin.

That said, it is likely that Site VI (Iron Age/Early Roman) will also be affected by drainage/landscaping works; its fieldwork will be subject to a separate specification. Of the other sites affected by Phase 1 works, Site III only consists of the line of a minor Late Medieval droveway and, test-excavated during the evaluation-phase (Evans & Newman 2010), it does not warrant further investigation. (Note that, largely falling within the area of the relocated SSSI, the eastern half of Site II will be preserved *in situ* and left undisturbed by building groundworks.) Similarly, as part of the archaeological works, Site V will be excavated in July/August of 2012 to avoid any possible drying out of its waterlogged features through construction-related dewatering (a separate specification also being submitted for its fieldwork programme).

### **1.3 Circumstances of the Project**

The fieldwork is undertaken anticipating the long-term construction of the proposed development, which will eventually include new University buildings, housing and landscaped open land.

### **1.4 Archive Deposition**

The site assemblages and archive will be temporarily retained by the CAU pending deposition in an approved County Store; ownership of finds will be assigned to the County Council.

## **AIMS AND OBJECTIVES**

### **2.1 Research Framework and Aims**

The wider North West Cambridge-area research agenda/background – particularly its contribution to understanding the dynamics of Cambridge's western hinterland settlement sequence – was fully detailed within the main evaluation report (Evans & Newman 2010). Aside from investigating the general character of the area's prehistoric land-use (i.e. when its 'inland' gravel terrace was first substantially settled, apparent paucity of monuments, *etc.*), for the immediate purposes of Sites II/IV's excavation the main issues to address are:

- 1) What was the interrelationship between the Roman complex and the preceding Iron Age settlements – direct continuity or hiatus?
- 2) Did, in particular, Site IV's Roman occupation involve something other than just a major farmstead; was it a secondary-tier crossroads 'centre', perhaps involving a market function and/or a 'quality' residence/buildings? Equally, was it directly related to the Girton College settlement, from which high-quality sculpture pieces of the period were recovered (Hollingworth & O'Reilly 1925)?
- 3) What was the nature of Sites II/IV's Roman economy: did it involve the importation of food stuffs from the adjacent clayland farms (e.g. consumer *vs.* producer settlement) and/or did it itself contribute the same to Roman Cambridge proper?

### **2.2 Publication and Presentation**

The results will appear within a c. 400-500 page-long monograph that will cover the archaeology and historic development of the North West Cambridge Application Site.

In order to further the dispersion of the sites' results, as detailed below, the excavations will also involve a major outreach programme.

## METHODS STATEMENT

### 3.1 Programme

Together amounting to 14.5ha of open-area excavation, as shown on the accompanying plan (Fig. 2), both of the designated sites have areas of what has been characterised as 'intense' archaeology (i.e. feature-dense and artefact-rich) and which extends over 3ha. Accordingly, a staged and 'tiered' excavation strategy will be implemented:

- 1) Prior to machine-stripping, both site areas will be metal-detected, by 10m-long collection units along 5m- and 20m-wide transects across, respectively, the intense and non-intense areas.
- 2) The sites' machine-stripping will be undertaken by dedicated monitoring teams, allowing for features to be digitally base-planned and metal-detected during the course of the stripping (1.5 weeks per hectare).
- 3) As detailed below (see 3.2), using a team of 12 (10 Site Assistants, plus Director and Supervisor), the 3ha of intensive archaeology will together see 16 weeks of excavation; with the remaining non-intensive areas being allocated four weeks excavation per hectare by a team of six (excluding machine-stripping and base-planning, *etc.*).

It should be noted that though the western third of Site IV actually lies outside of the Phase 1 development zone and within the second phase area, for the sake of archaeological and 'public' coherence the University has decided to progress with the excavation of the entire site at this time.

In addition to the main programme there will also be provision to excavate up to 300m-length of trenching between Sites IV and VI to further elucidate their fieldsystem boundaries. Equally, should significant feature groups extend beyond the limits of excavation there is contingency provision if their further excavation is required.

Also, in order to potentially investigate the area's renowned Palaeolithic finds, there will be watching brief monitoring of any deep basement-reductions down into the gravels (i.e. not piling).

### 3.2 Excavation Procedures

Aside from recent-date quarries, all features will be excavated. Throughout this will involve not less than 50% of each discrete feature, with all structural deposits to be 100% excavated. For linear features, the basic unit of excavation will be metre-long segments; aside from the fact that all ditch junctions will be appropriately investigated, within the non-intensive zone these will be excavated on an interval of not more than one in 30m and, within the intensive-excavation areas, the interval of direct settlement-/building-related ditches will be one in 4m.

The Unit-modified Museum of London recording system (Spence 1990), including full digital photographic record (with there also being film-shot publication imagery), will be employed throughout. Base plans will be variously drawn at 1:50 and 1:20 (dependent upon their structural complexity), with sections recorded at 1:10.

There will be full compliance with the Treasure Act and any 'treasure finds' recovered during fieldwork will be immediately reported to the County's Finds Liaison Officer of the Portable Antiquities Scheme (for reportage to the appropriate coroner).

### **3.3 Environmental Deposits**

Soil samples will be taken from appropriate contexts (e.g. waterlogged or charcoal-rich) and assessed for molluscan and macro-botanical remains; it is anticipated that not less than 150 samples will be processed and assessed. Although many of the sites' samples showed evidence of having once been waterlogged and subsequently dried out, substantive cereal assemblages were still recovered (grain, as well as chaff; see de Vareilles in Evans & Newman 2010). The rationale behind the site's plant remains sampling is to detail the location of the settlements' crop-processing activities; emphasis will also be given to the geographic/topographic source of their arable weeds to determine whether crops were being grown on adjacent clayland farms and exported up to the major settlements upon the gravel terrace (this being distinguished at Site IV; *ibid.*). In addition, the mollusc shells from the samples will be studied for the purposes of habitat-reconstruction, and the distribution of their small finds-fractions will also be analysed so that the location of middens, *etc.* can be plotted.

Pollen cores will be taken and assessed from any deep waterlogged deposits, and Prof. CAI French will study the soil micromorphology of any surviving significant horizontal strata. Also, should significant prehistoric features be recovered there is provision for their radiocarbon dating.

### 3.4 Excavation Timetable

The 20 week-long excavation programme is scheduled to begin in the late autumn of this year, with the fieldwork completed by April.

### 3.5 Constraints

There are ecological constraints imposed upon the programme. The most significant is a Badger sett located in the extreme southeast corner of Site II. This will need to be closed under licence to Natural England as part of the Proposed Development. No excavation will take place within 30m of the sett until it has been closed and subsequently destroyed. The 30m zone will be demarcated by appropriate (netlon-type) fencing, the installation of which will be overseen by the project's ecologist before archaeological excavations commence within that area.

Equally, there is a 'veteran'/preservation order oak along the southern side of Site IV. The project's arboricultural specialist will duly determine what stand-off is necessary for it and this area will be fenced off and left undisturbed.

## OUTREACH PROGRAMME

### 4.1 Public Presentation

In addition to having a dedicated project outreach officer (half-time for 16 weeks), provision has been made for the following:

- 1) At the commencement of the fieldwork an A5 colour brochure will be issued *gratis* to all neighbours and, later, visitors to the site, which will outline the area's archaeology and the scope of the excavation programme.
- 2) There will be a dedicated project website page, hosted by the University, which will be updated on a bi-monthly basis.
- 3) A single two week-long 'public' excavation will be conducted allowing up to 15 volunteers to dig on part of the site (otherwise sample-excavated by the CAU) under professional supervision, when they will receive appropriate training.
- 4) Having a target audience-size of 600 visitors each, there will be two public open-days.
- 5) As was implemented during the Vicar's Farm, West Cambridge excavations, there will be a dedicated Schools' Visit week during which 10-20 class visits are expected.

In addition, there will be regular media/press releases and the HET will be informed when all outreach events occur.

### 4.2 Arts Initiatives

Although not entirely finalised at this time, it is likely that the excavations will link to the artist-in-residence programme established through the Public Arts Strategy. Other related initiatives being explored include casting geological sections from the Traveller's Rest Pit beds and having them exhibited on building facades, as well as - upon the completion of its excavation - turning the settlement-core of Site IV over to stage Shakespeare's Roman plays (i.e. using the footprints of 'real' period buildings).

## POST-EXCAVATION

### 5.1 Specialists

English Heritage's MORPHE guidelines will be followed throughout. Post-excavation finds work will be co-ordinated by the CAU Finds Officer and conform to the practices and standards described in *Preparation of Archaeological Archives; Selection, Retention and Dispersal of Archaeological Collections* (1993) and the Institute of Field Archaeologist's *Draft Standards and Guidance for Finds Work* (2000).



The appointed project specialists are:

Name	Organisation	Field of Expertise	Status
J. Matthews/A. Hall	U. of Cambridge	Illustration/Computing	Staff
A. de Vareilles	U. of Cambridge	Plant and mollusc macrofossils	Staff
J. Wiles	U. of Cambridge	Finds Processing	Staff
G. Appleby	U. of Cambridge	Metalwork	Staff
L. Billington	U. of Cambridge	Prehistoric flint	Staff
Dr S. Boreham	U. of Cambridge	Pollen	Dept of Geography
N. Dodwell	U. of Cambridge	Human bone	Staff
Dr C. French	U. of Cambridge	Soil Micromorphology	Dept of Archaeology
D. Hall	Freelance	Saxon & Medieval Ceramics	Freelance
V. Rajkovaca	U. of Cambridge	Faunal Remains	Staff
Dr M. Brudenell	U. of Cambridge	Iron Age pottery	Staff
R. Reece	Freelance	Roman coins	Freelance
C. Stimpson	U. of Cambridge	Bird bone	Freelance
Claire Ingrem	Freelance	Fish Bone	Freelance
K. Anderson	Freelance	Roman Ceramics	Freelance
M. Knight	U. of Cambridge	Prehistoric Ceramics	Staff

## 5.2 Timetable

Post-excavation will begin on the conclusion of fieldwork. An interim statement will be prepared within eight weeks of its completion; the assessment report eight months thereafter (an Oasis record will be made and the form submitted with the assessment report), with the publication text then finished 18 months after that. (All of the above-listed reports will first be issued to HET in draft form for due comment and all will carry the project's HER Event Number.) That said, this only pertains to Sites II and IV, and their publication itself may be delayed awaiting the results of any sites that are dug in the following year (e.g. Site VI; subject to a separate specification). It is, however, anticipated that the final volume will be published no later than 2015.

## RESOURCES AND PROGRAMMING

### 6.1 Staffing

The project will be managed by Christopher Evans, MIFA, FSA and Prof. Martin Millet (Dept of Classics, University of Cambridge) has agreed to jointly provide on-site intellectual/research guidance (i.e. bi-weekly visits). The field team will consist entirely of professional staff from the CAU and will include a Director, Site Supervisor and, at any one time, up to 15 Site Assistants; all together, some 515 personnel-week's of excavation are budgeted.

### 6.2 Equipment

The programme will require the hire of earthmoving machines and on-site office and toilet facilities; public outreach will variously involve the hire of marquees and duckboards, *etc.*

### 6.3 Health & Safety and Insurance

Health and Safety provision will be made according to the SCAUM Health and Safety in Field Archaeology Manual. A risk assessment will be completed before the excavation.

The University has Public Liability Insurance to the value of £15 million and Professional Indemnity Insurance to the value of £10 million.

**6.4 Budget**

An adequate budget will be agreed with the client to cover the cost of excavation, post-excavation assessment and publication.

## References

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