



Grafham Water Solar Array

Written Scheme of Investigation

Client: Anglian Water Services

Prepared by	Louise Bush
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1 GENERAL BACKGROUND

- 1.1.1 This WSI conforms to the principles identified in Historic England's guidance documents Management of Research Projects in the Historic Environment (MoRPHE), specifically the MoRPHE Project Manager's Guide (2015) and Project Planning Note 3: Archaeological Excavation.
- 1.1.2 All work will be conducted in accordance with the Chartered Institute for Archaeologists Code of Conduct and Standard and Guidance for Archaeological Evaluation.
- 1.1.3 This WSI also incorporates the requirements of the EAA Standards for Field Archaeology in the East of England (Gurney 2003).

1.2 Circumstances of the project

- 1.2.1 Oxford Archaeology East (OA East) have been commissioned by Anglian Water Services to conduct an archaeological trial trench evaluation on c.11.5ha of land on the south and eastern edge of Grafham Water, Cambridgeshire (centred on TL 16724 66324).
- 1.2.2 This Written Scheme of Investigation (WSI) has been prepared on behalf of the Client in response to an Archaeological Brief for Investigation issued by Andy Thomas of the Cambridgeshire Historic Environment Team (CHET).

1.3 The proposed archaeological strategy

- 1.3.1 A 3% sample of the site is proposed, which consists of 35 trenches (measuring 50x1.8m). A 1% contingency of a further 11 trenches has also been agreed, if sufficient archaeological remains are uncovered to necessitate further investigation.
- 1.3.2 The trenching strategy will be based on a standard grid array to provide a representative sample of the entire development area.

1.4 Changes to this method statement

- 1.4.1 If changes need to be made to the methods outlined below – either before or during works on site – CHET will be informed and asked to consider changes before they are made. Changes will be agreed in before work on site commences, or else at the earliest available opportunity.

2 THE GEOLOGY AND TOPOGRAPHY

- 2.1.1 The site is located on the south-eastern edge of Grafham Water, to the east of the village of Perry.
- 2.1.2 The proposed site is situated on a bedrock geology Oxford Clay Formation mudstone, with superficial deposits of Oadby Member diamicton. The site is situated at around a height of between 31m and 51m OD.

3 ARCHAEOLOGICAL BACKGROUND

- 3.1.1 An HER search (under licence number 18-3493) was undertaken for the site and surrounding area, the most pertinent records are reproduced below.

3.2 Neolithic and Bronze Age

- 3.2.1 Very little in the way of pre-Iron Age activity is recorded in the vicinity. A findspot of worked flint (CHER 00485) has been recovered from land just 140m beyond the westernmost limit of the proposed site and around 1km to the south-west (CHER 20191).

3.3 Iron Age and Roman

- 3.3.1 A wealth of Iron Age and Roman remains are recorded on land to the south of the site. An evaluation (ECB4284) to the immediate south and west of the proposed development identified Iron Age and Roman settlement-related features (MCB 24244, MCB 24245 & MCB 24546) including pits, enclosure ditches and roundhouses containing quantities of pottery. The full extents of the settlement were not identified, and the layout would indicate that it probably continues eastward into the proposed site, where further Iron Age and Roman findspots have been recorded (CHER 00992 & 00993).
- 3.3.2 Archaeological works at HMP Littlehey (ECB3112), c.600m south-west of the proposed site has also uncovered evidence for late Iron Age and Roman activity (MCB 18586) comprising of enclosure ditches, a waterhole, roundhouses and pits all containing pottery and animal bone assemblages.
- 3.3.3 Further archaeological works (ECB3895) undertaken some 600m south-east of the site uncovered two possible hearths as well as a ring ditch, pits and boundary ditches. Quantities of Iron Age and Roman pottery were recovered from these features (MCB 20330).
- 3.3.4 Groundworks undertaken within the proposed development site near Hangmans Spinney and under the car park in Plummers Park to the immediate north of the B661 revealed the remains of a NNE-SSW aligned metalled Roman road, along with an inhumation burial and a cremation. Burnt material and a number of kiln bars were also identified. Further to this a bronze brooch, pin and bracelet were recovered as well as sherds of Samian pottery and a 1st and 4th century coin (CHER 00506).

- 3.3.5 Other Roman findspots in this vicinity comprise of a brooch (CHER 11337A) just 80m south of the proposed development area and pottery, tile, a coin, lead steelyard and bronze object 1km to the south (MCB 16272).

3.4 Anglo- Saxon

- 3.4.1 Anglo-Saxon remains are confined to a single findspot of a brooch (CHER 11337), around 80m south of the proposed site.

3.5 Medieval

- 3.5.1 A number of moated manor sites are recorded within this vicinity and include Gaynes Hall (CHER 00477) 1km to the south-west, Shooter's Hollow (CHER 00533) c.140m to the east and Buckden Wood (CHER 00673) about 600m to the north-east.

- 3.5.2 This area is known to have been used for brick manufacture from the 15th century onward, and number of kiln have been recorded on land to the immediate east of the proposed site (CHER 00532, 00532a & 00532b).

- 3.5.3 The land south of Grafham Water around the village of Perry also contains a large number of records pertaining to ridge and furrow (both cropmarks and earthworks), including CHER 11602, 11603, 11367, MCB 18763, MCB 18764, MCB 18765, MCB 18766, MCB 18767 & MCB 24521.

3.6 Post-medieval and modern

- 3.6.1 The majority of the most immediate records relating to post-medieval and modern activity are confined to the land in and around Perry and include a 19th century decoy earthwork at Crow Spinney (CHER 0487) and extensive WWII remains at Gaynes Hall (MCB 19591).

- 3.6.2 Farther away, around 1km south of the proposed site are cropmarks relating to two sinuous ditches running along the parish boundary (MCB 20017).

3.7 Undated

- 3.7.1 A series of undated cropmarks have been recorded by aerial photographs on land around the proposed site and include 00485a, MCB 19591, MCB 18785, MCB 18786, MCB 21268, MCB 21269 & MCB 25083.

4 AIMS AND OBJECTIVES

4.1 Aims of the evaluation

4.1.1 This evaluation will seek to establish the character, date, state of preservation of archaeological remains within the proposed development area. The scheme of works detailed below aims to:

- establish the presence or absence of archaeological remains on the site, characterise where they are found (location, depth and extent), and establish the quality of preservation of any archaeology and environmental remains
- provide sufficient coverage to establish the character, condition, date and purpose of any archaeological deposits
- provide sufficient coverage to evaluate the likely impact of past land uses, and the possible presence of masking deposits
- provide – in the event that archaeological remains are found – sufficient information to construct an archaeological mitigation strategy, dealing with preservation, the recording of archaeological deposits, working practices, timetables, and orders of cost.

4.2 Research frameworks

4.2.1 This excavation takes place within, and will contribute to the goals of Regional Research Frameworks relevant to this area:

- Research and Archaeology Revisited: A Revised Framework for the East of England (Medlycott 2011, East Anglian Archaeology Occasional Papers 24)
- Research and Archaeology: A Framework for the Eastern counties: 1. Resource Assessment (Glazebrook 1997, East Anglian Archaeology Occasional Papers 3);
- Research and Archaeology: A Framework for the Eastern counties: 2. Research Agenda and Strategy (Brown & Glazebrook 2000, East Anglian Archaeology Occasional Papers 8)

5 METHODS

5.1 Background research

- 5.1.1 A suitable level of documentary research has been undertaken. This research drew on information in the Cambridgeshire Historic Environment Record, and included historical sources, previous archaeological finds, and past archaeological investigations in the vicinity.

5.2 Event number and site code

- 5.2.1 The event number ECB 5491 has been obtained from the Cambridgeshire HER and will be written on all paper and digital archive material. A unique site code (GRFSOL18) has also been assigned to the project.

5.3 Trial Trenching

Excavation standards

- 5.3.1 The proposed archaeological evaluation and analysis will be conducted in accordance with current best archaeological practice and the appropriate national and regional standards and guidelines.
- 5.3.2 All work will be conducted in accordance with the Chartered Institute for Archaeologists' *Code of Conduct and Standard and Guidance for Archaeological Field Evaluations*.
- 5.3.3 All fieldwork will be undertaken in accordance with the requirements of the OA Field Manual (ed. D Wilkinson 1992), and the revised OA fieldwork manual (publication forthcoming). Further guidance is provided to all excavators in the form of the *OA Fieldwork Crib Sheets – a companion guide to the Fieldwork Manual*. These have been issued ahead of formal publication of the revised Fieldwork Manual.

Pre-commencement

- 5.3.4 Before work on site commences, service plans will be checked to ensure that access and groundworks can be conducted safely.
- 5.3.5 The site is bisected by the B661, therefore there will be a necessity to move the machine by low-loader.
- 5.3.6 In order to minimise damage to the site and disruption to site users, OA East will agree the following with the client/landowner before work on site commences:
- the location of entrance ways
 - sites for welfare units
 - soil storage areas
 - refuelling points for plant (if necessary), and the extent of any bunding required around fuel dumps
 - access routes for plant and vehicles across the site

Excavation methods

- 5.3.7 A total of 35 trenches measuring 50 x 2m will be excavated. This is equivalent to 3% of the development area. A contingency of a further 1% (equivalent to 11 trenches of the same length) has also been agreed with CHET. During machine stripping, the location of trenches may be altered if there are site obstructions, services, or modern disturbance. If so, the location of affected trenches will be re-surveyed.
- 5.3.8 All machine excavation will take place under the supervision of a suitably qualified and experienced archaeologist.
- 5.3.9 Trial trenches will be excavated by a mechanical excavator to the depth of geological horizons, or to the upper interface of archaeological features or deposits, whichever is encountered first. A toothless ditching bucket with a minimum bucket width of 1.8m will be used to excavate the trenches. Overburden will be excavated in spits not greater than 0.1m thick.
- 5.3.10 Spoil will be stored alongside trenches, unless otherwise specified by the client. Topsoil, subsoil, and archaeological deposits will be kept separate during excavation, to allow for sequential backfilling of excavations. Trenches will not be backfilled without the approval of CHET.
- 5.3.11 The depth and nature of any colluvial or other masking deposits will be established across the site. Buried soils will be tested pitted, or bucket sampled at trench ends (90 litres sampled per 50m).
- 5.3.12 Where buried soils are identified, mechanical stripping will be suspended. Test pits measuring 1 x 1 metre will be hand excavated, in order to assess the nature and depth of the buried soils. Once assessed and recorded, the remaining soil will be machine stripped.
- 5.3.13 The top of the first archaeological deposit will be cleared by machine, then cleaned off by hand. Exposed surfaces will be cleaned by trowel and hoe as necessary, in order to clarify located features and deposits.
- 5.3.14 All features will be investigated and recorded to provide an accurate evaluation of archaeological potential, whilst at the same time minimising disturbance to archaeological structures, features, and deposits. All relationships between features or deposits will be investigated and recorded. Any natural subsoil surface revealed will be hand cleaned and examined for archaeological deposits and artefacts. Excavation will characterise the full archaeological sequence down to undisturbed natural deposits. Apparently natural features (such as tree throws) will be sampled sufficiently to establish their character.
- 5.3.15 All excavation of archaeological deposits will be done by hand, unless agreed with CHET that there will be no loss of evidence using a machine. The method of excavation will be decided by the senior project archaeologist.
- 5.3.16 There will be sufficient excavation to give clear evidence for the period, depth, and nature of any archaeological deposit. Investigation slots through all linear features will be a least 1m in width. Discrete features will be half-sectioned or excavated in quadrants where they are large or deep.

- 5.3.17 Deep features will be evaluated with hand auger or boreholes, to assess their depth and structure.

5.4 Bucket sampling

- 5.4.1 Bucket samples of 90 litres of excavated soil will be taken from each trench, in order to characterise artefactual remains in the topsoil and other soil horizons above the archaeological level.

5.5 Recording of archaeological deposits and features

- 5.5.1 Records will comprise survey, drawn, written, and photographic data.

Survey

- 5.5.2 Surveying will be done using a survey-grade differential GPS (Leica CS10/GS08 or Leica 1200) fitted with "smartnet" technology with an accuracy of 5mm horizontal and 10mm vertical.
- 5.5.3 The site grid will be accurately tied into the Ordnance Survey National Grid and located on the 1:2500 or 1:1250 map of the area. Elevations will be levelled to the Ordnance Datum.

Written records

- 5.5.4 A register of all trenches, features, photographs, survey levels, small finds, and human remains will be kept.
- 5.5.5 All features, layers and deposits will be issued with unique context numbers. Each feature will be individually documented on context sheets, and hand-drawn in section and plan. Written descriptions will be recorded on pro-forma sheets comprising factual data and interpretative elements.
- 5.5.6 Where stratified deposits are encountered, a Harris Matrix will be compiled during the course of the excavation.

Plans and sections

- 5.5.7 Site plans will normally be drawn at 1:50, but on deeply-stratified sites a scale of 1:20 will be used. Detailed plans of individual features or groups will be at an appropriate scale (1:10 or 1:20).
- 5.5.8 Long sections showing layers will be drawn at 1:50. Sections of features or short lengths of trenches will be drawn at 1:10 or 1:20. All section levels will be tied in to Ordnance Datum.
- 5.5.9 All site drawings will include the following information: site name, site code, scale, plan or section number, relevant context or feature numbers, orientation, date and the name or initials of the archaeologist who prepared the drawing.

Photogrammetric recording

- 5.5.10 Plans and sections may be supplemented with photogrammetric recording of the excavation areas. Photogrammetric models will be based on high-

resolution digital photographs with a minimum file size of 5 MB. Photogrammetric processing will be conducted using the Agisoft Photosoft (Professional Edition) software, and will incorporate reference points taken by GPS-based survey equipment.

Photographs

- 5.5.11 The photographic record will comprise high resolution digital photographs.
- 5.5.12 Photographs will include both general site shots and photographs of specific features. Every feature will be photographed at least once. Photographs will include a scale, north arrow, site code, and feature number (where relevant), unless they are to be used in publications. The photograph register will record these details, and photograph numbers will be listed on corresponding context sheets.

5.6 Exceptional remains, including human remains

Significant archaeological features

- 5.6.1 If exceptional or unexpected features are uncovered, CHET will be informed, and their advice sought on further excavation or preservation.
- 5.6.2 Significant archaeological features (e.g. solid or bonded structural remains, building slots or post-holes) will be preserved intact, even if fills are sampled. The following features will normally be cleaned, recorded and preserved for future excavation, unless directed to by CHET:
 - layers relating to domestic or industrial activity (e.g. floor, middens)
 - discrete features relating to domestic or industrial activity (e.g. kilns, ovens, hearths)
 - artefact scatters (e.g. flint, metal-working debris).
- 5.6.3 If preservation *in situ* is required by CHET, all exposed surfaces will be cleaned and prepared for reburial beneath construction materials. If appropriate, the areas will be protected with geotextile or other buffering materials.

Human remains

- 5.6.4 If human remains are encountered, the Client, County Coroner, and CHET will be informed immediately.
- 5.6.5 Unless directed otherwise by CHET, human remains will be left in situ (covered and protected), until a full program of excavation is agreed by CHET and Client. No further excavation will then take place in the vicinity of the remains until removal becomes necessary. If the remains are under imminent threat, or if CHET requires information on date and preservation, we will excavate and remove them.
- 5.6.6 Human remains will be excavated in accordance with all appropriate legislation and Environmental Health regulations. Excavation will only take place after Oxford Archaeology has obtained a Ministry of Justice exhumation license.

5.7 Metal detecting and the Treasure Act

- 5.7.1 Metal detector searches will take place at all stages of the excavation by an experienced metal detector user. Excavated areas will be detected immediately before and after mechanical stripping. Both excavated areas and spoil heaps will be checked. To prevent losses from night-hawking, features will be metal detected immediately after stripping.
- 5.7.2 Metal detectors will not be set to discriminate against iron.
- 5.7.3 Artefacts will be removed and given a small find number. Labels will be placed on the location of each 'small find' and surveyed in with a GPS.
- 5.7.4 If finds are made that might constitute 'Treasure' under the definition of the Treasure Act (1996), they will, if possible, be excavated and removed to a safe place. Should it not be possible to remove the finds on the day they are found, suitable security will be arranged. Finds that are 'Treasure' will be reported to the landowner and Cambridgeshire Coroner within 14 days, in accordance with the Act. The Cambridgeshire Finds Liaison Officer from the Portable Antiquities Scheme will also be informed.

5.8 Post-excavation processing

- 5.8.1 Processing will take place in tandem with excavation, and advice will be sought from relevant specialists on key artefact types. The Project Manager and fieldwork project officer will be given feedback to enable them to develop excavation strategies during fieldwork.
- 5.8.2 Any finds requiring specialist treatment and conservation will be sent for appropriate treatment.
- 5.8.3 Finds will be marked with context numbers, site code or accession number, as detailed in the requirements of the Cambridgeshire County Council Store.

5.9 Finds recovery and processing

Standards for finds handling

- 5.9.1 Finds will be exposed, lifted, cleaned, conserved, marked, bagged, and boxed in line with the standards in:
- United Kingdom Institute for Conservators (2012) *Conservation Guidelines No. 2*
 - Watkinson & Neal (1988) *First Aid for Finds*
 - Chartered Institute for Archaeologists (2014) *Standard and Guidance for the Collection, Documentation, Conservation and Research of Archaeological Materials*
 - English Heritage (1995) *A Strategy for the Care and Investigation of Finds*.
- 5.9.2 Where finds require conservation, this will be done in accordance with the guidelines of the Institute for Conservation (ICON),

Procedures for finds handling

- 5.9.3 At the start of work, a finds supervisor will be appointed to oversee the collection, processing, cataloguing, and specialist advice on all artefacts collected.
- 5.9.4 Artefacts will be collected by hand, sieving, and metal detector. Excavation areas and spoil will be scanned visually and with a metal detector to aid recovery of artefacts. All finds will be bagged and labelled according to the individual deposit from which they were recovered, ready for later cleaning and analysis. 'Special/small finds' may be located more accurately by GPS if appropriate.
- 5.9.5 Processing will take place in tandem with excavation, and advice will be sought from relevant specialists on key artefact types. (See the Appendix for a list of specialists.)
- 5.9.6 All artefacts recovered from excavated features will be retained for post-excavation processing and assessment, except:
- those which are obviously modern in date
 - where very large volumes are recovered (typically ceramic building material)
 - where directed to discard on site by CHET.
- 5.9.7 Where artefacts are not removed from site, a strategy will be employed to ensure a sufficient sample is retained, in order to characterise the date and function of the features they were excavated from. A record will be kept of the quantity and nature of artefacts which are not removed from site.

5.10 Sampling for environmental remains and small artefact retrieval

Standards for sampling and processing

- 5.10.1 Features will be sampled and processed in accordance with the guidelines set out in:
- English Heritage (2011, 2nd edition) *Environmental Archaeology: A Guide to the Theory and Practice of Methods, from Sampling and Recovery to Post-excavation*.
 - Association for Environmental Archaeology (1995) *Environmental archaeology and archaeological evaluations. Recommendations concerning the environmental archaeology component of archaeological evaluations in England*. Working Papers of the Association for Environmental Archaeology 2. York: Association for Environmental Archaeology.
 - Dobney, K., Hall, A., Kenward, H. & Milles, A. (1992) A working classification of sample types for environmental archaeology. *Circaea* 9.1: 24-26
 - Murphy, P.L. & Wiltshire, P.E.J. (1994) *A guide to sampling archaeological deposits for environmental analysis*.

Procedures for sampling and processing

- 5.10.2 Bulk samples (up to 40 litres or 100% of context) will be taken from a range of site features and deposits to target the recovery of plant remains (charcoal and macrobotanicals) fish, bird, small mammal and amphibian bone and small artefacts. Environmental samples will be taken from well-stratified, datable deposits. Samples will be labelled with the site code, context number, and sample number.
- 5.10.3 If appropriate, monolith samples of waterlogged deposits and buried soils will be taken for pollen analysis, soil micro-morphological, or sedimentological analysis. Where consistent with the aims of the evaluation, samples will be taken from deposits, artefacts, and ecofacts for scientific (absolute) dating.
- 5.10.4 Where features containing very small artefacts – such as micro-debitage and hammerscale – are identified, bulk samples will be taken (up to 40 litres or 100% of context).
- 5.10.5 Typically, 20 litres of each bulk sample will be processed using tank flotation, with the remaining sub-sample processed where appropriate or necessary. Normally, early prehistoric samples will be fully processed. Waterlogged samples will be wet sieved and stored in cool or wet conditions as appropriate.
- 5.10.6 Where practical, waterlogged wood specimens will be recorded in detail on site, in situ. When removed, they will be cleaned and photographed, and stored in wet cool conditions for assessment by a suitably qualified specialist (see the Appendix).
- 5.10.7 The project team will consult Historic England's Scientific Advisor on environmental sampling and dating where necessary.

6 REPORTING

6.1 Evaluation Report

- 6.1.1 Post-excavation analysis and reporting will follow guidance in Historic England's (2015) *Management of Research Projects in the Historic Environment* (MoRPHE).

6.2 Contents of the evaluation report

- 6.2.1 The report will include:
- a title page detailing site address, site code and accession number, NGR, author/originating body, client's name and address
 - full list of contents
 - a non-technical summary of the findings
 - the aims of the evaluation
 - a description of the geology and topography of the area
 - a description of the methodologies used
 - a description of the findings
 - tables summarising features and artefacts
 - site and trench location plans, and plans of each area excavated showing the archaeological features found
 - sections of excavated features
 - interpretation of the archaeological features found
 - specialist reports on artefacts and environmental finds
 - relevant colour photographs of features and the site
 - a predictive model of surviving archaeological remains, where affected by development proposals, and assessment of their importance
 - an impact assessment of development proposals
 - a bibliography of all reference material
 - the OASIS reference and summary form.

6.3 Draft and final reports

- 6.3.1 A draft copy of the report will be supplied to CHET for comment.
- 6.3.2 Following approval of the report, one printed copy and one digital copy (PDF) will be presented to the Cambridgeshire Historic Environment Record. A copy will also be sent to Historic England's Regional Scientific Advisor.
- 6.3.3 If CHET requires no further excavation on the site, a summary report will be prepared for the County Archaeological Journal: *Proceedings of the Cambridge Antiquarian Society*

6.4 OASIS

- 6.4.1 A digital copy of the approved report will be uploaded to the OASIS database. A copy of the OASIS Data Collection Form will be included in the report.

7 ARCHIVING

Archive standards

- 7.1.1 The site archive will conform to the requirements Appendix 1 of the Historic England's (2015) *Management of Research Projects in the Historic Environment* (MoRPHE), and the requirements of the Cambridgeshire County Council Store (*Deposition of Archaeological Archives in Cambridgeshire*, CCC 2014).
- 7.1.2 The preparation of the archive will follow the guidelines contained in *Guidelines for the Preparation of Excavation Archives for Long Term Storage* (United Kingdom Institute for Conservation, 1990), *Standards in the Museum care of Archaeological Collections* (Museums and Galleries Commission 1992), and *Archaeological Archives: A guide to best practice in creation, compilation, transfer and curation* (Brown 2007).

Archive contents

- 7.1.3 The archive will be quantified, ordered, and indexed. It will include:
- artefacts
 - ecofacts
 - project documentation – including plans, section drawings, context sheets, registers, and specialist reports
 - photographs (digital photographs will be stored on CD-ROM, and colour printouts made of key features)
 - an archive-standard CD-ROM with electronic documentation (such as GIS and CAD files)
 - a printed copy of the Written Brief
 - a printed copy of the WSI
 - a printed copy of the final report
 - a printed copy of the OASIS form.
- 7.1.4 It is Oxford Archaeology Ltd's policy, in line with accepted practice, to keep site archives (paper and artefactual) together wherever possible.
- 7.1.5 A digital security copy of all documentary parts of the archive will also be made and retained by Oxford Archaeology.

Transfer of ownership

- 7.1.6 The archaeological material and paper archive produced from this investigation will be held in storage by OA East who will seek to transfer the complete project archive to the Cambridgeshire County Council Store, in order to facilitate future study and ensure long-term public access to the archive. To do so will require a transfer of title to the repository in line with the county's guidance on deposition of archaeological archives (*Deposition of Archaeological Archives in Cambridgeshire*, CCC 2014). Where the landowner wishes to retain items recovered during excavation, all selected artefacts will be fully drawn and photographed, identified, analysed, documented and conserved in order to create a comprehensive catalogue of

items to be kept by the landowner before the remainder of the archive can be deposited in the Cambridgeshire County Council Store. A written transfer of ownership document will be forwarded to CHET before the archive is deposited. In the unlikely event that artefacts of significant monetary value are discovered, and if they are not subject to Treasure Act legislation, separate ownership arrangements may be negotiated following the creation of a comprehensive illustrated catalogue, as described above.

8 TIMETABLE

- 8.1.1 Trial trenching is expected to take two working weeks to complete, based on a five-day week, working Monday to Friday. This does not allow for delays caused by bad weather, but it does include time for site set-up and final backfilling of trenches.
- 8.1.2 Post-excavation processing and assessment tasks will commence shortly after excavation commences, to inform the excavation strategy, and minimise time required to prepare the final report after excavation is completed.
- 8.1.3 Post-excavation tasks and report writing will take a maximum of four weeks following the end of fieldwork, unless there are exceptional discoveries requiring lengthier analysis.

9 STAFFING AND SUPPORT

9.1 Fieldwork

- 9.1.1 The fieldwork team will be made up of the following staff:
- 1 x Project Manager (supervisory only, not based on site)
 - 1 x Project Officer/Supervisor (full-time)
 - 3 x Site Assistants (as required)
 - 1 x Archaeological Surveyor
 - 1 x Finds Assistant (part-time, as required)
 - 1 x Environmental Assistant (part-time, as required)
- 9.1.2 Site work will be directed by one of OAE's Project Officers or Supervisors.
- 9.1.3 All Site Assistants will be drawn from a pool of qualified and experienced staff. Oxford Archaeology East will not employ volunteer, amateur, or student staff, whether paid or unpaid, except as an addition to the team stated above.

9.2 Post-excavation processing

- 9.2.1 We anticipate that the site may produce Iron Age to medieval remains. Environmental remains will also be sampled.
- 9.2.2 Pottery will be assessed by Matt Brudenell (prehistoric), Alice Lyons (Roman) and Dr Paul Spoerry (Saxon and medieval).
- 9.2.3 Environmental analysis will be carried out by OA East staff, in consultation with the OA Environmental Department in Oxford. The results will be reported to Historic England's Regional Scientific Advisor. Environmental analysis will be undertaken by Rachel Fosberry (charred plant macrofossils, plant macrofossils), Liz Stafford (land molluscs), and Denise Druce and Mairead Rutherford (pollen analysis).
- 9.2.4 Faunal remains will be examined by Hayley Foster.
- 9.2.5 Conservation will be undertaken by Ipswich and Colchester Museums / Karen Barker (Antiquities Conservator) and will be undertaken in accordance with guidelines issued by the Institute for Conservation (ICON).
- 9.2.6 In the event that OA's in-house specialists are unable to undertake the work within the time constraints of the project, or if other remains are found, specialists from the list in the Appendix will be approached to carry out analysis.

10 OTHER MATTERS

10.1 Monitoring

- 10.1.1 CHET will be informed appropriately of dates and arrangements to allow for adequate monitoring of the works.
- 10.1.2 During the excavation, representatives of the client, OA East and CHET will meet on site to monitor the excavations, discuss progress and findings to date, and excavation strategies to be followed.

10.2 Insurance

- 10.2.1 OA East is covered by Public and Employer's Liability Insurance. The underwriting company is Lloyds Underwriters, policy number CC004337. Details of the policy can be supplied on request to the Oxford Archaeology East office.

10.3 Chartered Institute for Archaeologists

- 10.3.1 Oxford Archaeology is a Registered Organisation with the Chartered Institute for Archaeologists (CIfA), and is bound by CIfA By-Laws, Standards, and Policy.

10.4 Services, Public Rights of Way, Tree Preservation Orders etc.

- 10.4.1 The client will inform the project manager of any live or disused cables, gas pipes, water pipes or other services that may be affected by the proposed excavations before the commencement of fieldwork. Hidden cables/services should be clearly identified and marked where necessary. If there are overhead cables on the site or in the approachways, a survey must be completed by the relevant authority before plant is taken onto site.
- 10.4.2 The client will likewise inform the project manager of any public rights of way or permissive paths on or near the land which might affect or be affected by the work.
- 10.4.3 The client will inform the Project Manager if the site is a Scheduled Ancient Monument, Site of Special Scientific Interest (SSSI), or any other type of designated site. The client will also inform the project manager of any trees subject to Tree Preservation Orders, protected hedgerows, protected wildlife, nesting birds, or areas of ecological significance within the site or on its boundaries.

10.5 Site Security

- 10.5.1 Unless previously agreed with the Project Manager in writing, this specification and any associated statement of costs is based on the assumption that the site will be sufficiently secure for archaeological work

to commence. All security requirements, including fencing, padlocks for gates etc. are the responsibility of the client.

10.6 Access

- 10.6.1 The client will secure access to the site for archaeological personnel and plant, and obtain the necessary permissions from owners and tenants to place a mobile office and portable toilet on or near to the site. Any costs incurred to secure access, or incurred as a result of withholding of access will not be Oxford Archaeology's responsibility. The costs of any delays as a result of withheld access will be passed on to the client in addition to the project costs already specified.

10.7 Site Preparation

- 10.7.1 The client is responsible for clearing the site and preparing it so as to allow archaeological work to take place without further preparatory works, and any cost statement accompanying or associated with this specification is offered on this basis. Unless previously agreed in writing, the costs of any preparatory work required, including tree felling and removal, scrub or undergrowth clearance, removal of concrete or hard standing, demolition of buildings or sheds, or removal of excessive overburden, refuse or dumped material, will be charged to the client, in addition to any costs for archaeological evaluation already agreed.

10.8 Site offices and welfare

- 10.8.1 All site facilities – including welfare facilities, tool stores, mess huts, and site offices – will be positioned to minimise disruption to other site users, and to minimise impact on the environment (including buried archaeology).

10.9 Backfilling/Reinstatement

- 10.9.1 Backfilling – but not specialist reinstatement – of trenches is included in the cost unless otherwise agreed with the client. Backfilling will only take place with the approval of CHET.

10.10 Health and Safety, Risk Assessments

- 10.10.1 A risk assessment covering all activities to be carried out during the lifetime of the project will be prepared before work commences.
- 10.10.2 The risk assessment will conform to the requirements of health and safety legislation and regulations, and will draw on OA East's activity-specific risk assessment literature.
- 10.10.3 All aspects of the project, both in the field and in the office will be conducted according to OA East's Health and Safety Policy, Oxford Archaeology Ltd's Health and Safety Policy, and Health and Safety in Field Archaeology (J.L. Allen and A. St John-Holt, 1997). A copy of OA East's Health and Safety Policy can be supplied on request.

11 APPENDIX: CONSULTANT SPECIALISTS

NAME	SPECIALISM	ORGANISATION
Allen, Leigh	Worked bone, CBM, medieval metalwork	Oxford Archaeology
Allen, Martin	Medieval coins	Fitzwilliam Museum
Anderson, Sue	HSR, pottery and CBM	Suffolk County Council
Bayliss, Alex	C14	English Heritage
Biddulph, Edward	Roman pottery	Oxford Archaeology
Billington, Laurence	Lithics	Oxford Archaeology
Bishop, Barry	Lithics	Freelance
Blinkhorn, Paul	Iron Age, Anglo-Saxon and medieval pottery	Freelance
Boardman, Sheila	Plant macrofossils, charcoal	Oxford Archaeology
Bonsall, Sandra	Plant macrofossils; pollen preparations	Oxford Archaeology
Booth, Paul	Roman pottery and coins	Oxford Archaeology
Boreham, Steve	Pollen and soils/ geology	Cambridge University
Brown, Lisa	Prehistoric pottery	Oxford Archaeology
Cane, Jon	illustration & reconstruction artist	Freelance
Champness, Carl	Snails, geoarchaeology	Oxford Archaeology
Cotter, John	Medieval/post-Medieval finds, pottery, CBM	Oxford Archaeology
Crummy, Nina	Small Find Assemblages	Freelance
Cowgill, Jane	Slag/metalworking residues	Freelance
Dickson, Anthony	Worked Flint	Oxford Archaeology
Dodwell, Natasha	Osteologist	Oxford Archaeologist
Donnelly, Mike	Flint	Oxford Archaeology
Doonan, Roger	Slags, metallurgy	
Druce, Denise	Pollen, charred plants, charcoal/wood identification, sediment coring and interpretation	Oxford Archaeology
Drury, Paul	CBM (specialised)	Freelance
Evans, Jerry	Roman pottery	Freelance
Fletcher, Carole	Medieval pot, glass, small finds	Oxford Archaeology
Fosberry, Rachel	Charred plant remains	Oxford Archaeology
Foster, Haley	Zooarchaeologist	Oxford Archaeology
Fryer, Val	Molluscs/environmental	Freelance
Gale, Rowena	Charcoal ID	Freelance
Geake, Helen	Small finds	Freelance
Gleed-Owen, Chris	Herpetologist	
Goffin, Richenda	Post-Roman pottery, building materials, painted wall plaster	Suffolk CC
Hamilton-Dyer, Sheila	Fish and small animal bones	

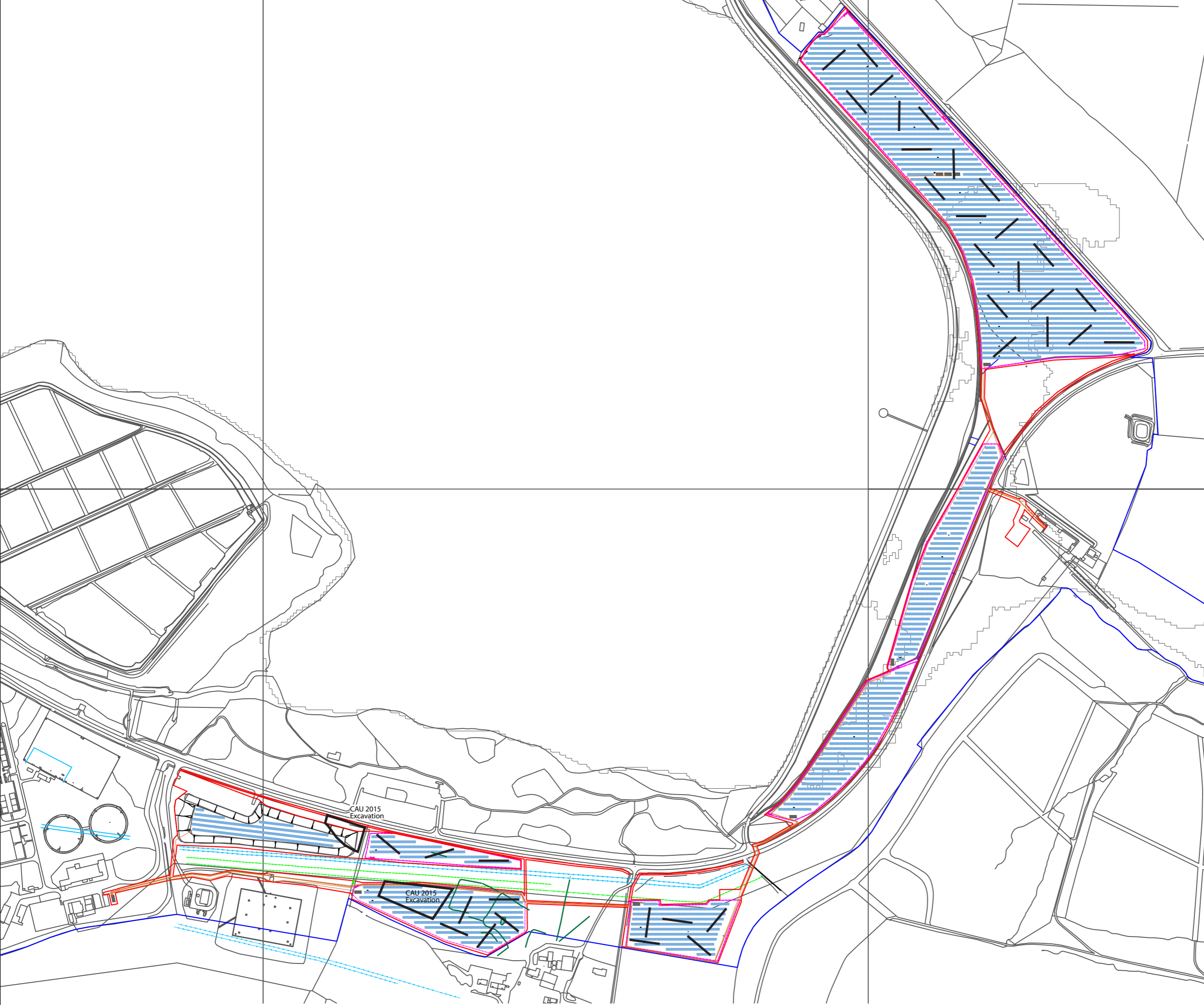
NAME	SPECIALISM	ORGANISATION
Howard-Davis, Chris	Small finds, Mesolithic flint, RB coarse pottery, leather, wooden objects and wood technology;	Oxford Archaeology
Hunter, Kath	Archaeobotany (charred, waterlogged and mineralised plant remains)	Oxford Archaeology
Jones, Jenny	Conservation	ASUD, Durham University
King, David	Window glass & lead	
Locker, Alison	Fishbone	
Loe, Louise	Osteologist	Oxford Archaeology
Lyons, Alice	Late Iron Age/Roman pottery	Oxford Archaeology
Macaulay, Stephen	Roman pottery	Oxford Archaeology
Masters, Pete	geophysics	Cranfield University
Middleton, Paul	Phosphates/garden history	Peterborough Regional College
Mould, Quita	Ironwork, leather	
Nicholson, Rebecca	Fish and small mammal and bird bones, shell	Oxford Archaeology
Palmer, Rog	Aerial photographs	Air Photo Services
Percival, Sarah	Prehistoric pottery, quern stones	Freelance
Poole, Cynthia	Multi-period finds, CBM, fired clay	Oxford Archaeology
Popescu, Adrian	Roman coins	Fitzwilliam Museum
Rackham, James	Faunal and plant remains, can arrange pollen analysis	
Riddler, Ian	Anglo-Saxon bone objects & related artefact types	Freelance
Robinson, Mark	Insects	
Rowland, Steve	Faunal and human bone	Oxford Archaeology
Rutherford, Mairead	Pollen, non-pollen palynomorphs, dinoflagellate cysts, diatoms	Oxford Archaeology
Samuels, Mark	Architectural stonework	Freelance
Scaife, Rob	Pollen	
Scott, Ian	Roman, Medieval, post-medieval finds, metalwork, glass	Oxford Archaeology
Sealey, Paul	Iron Age pottery	Freelance
Shafrey, Ruth	Worked stone, cbm	Oxford Archaeology
Smith, Ian	Animal Bone	Oxford Archaeology
Spoerry, Paul	Medieval pottery	Oxford Archaeology
Stafford, Liz	Snails	Oxford Archaeology
Strid, Lena	Animal bone	Oxford Archaeology
Tyers, Ian	Dendrochronology	
Ui Choileain, Zoe	Human bone	Oxford Archaeology
Vickers, Kim	Insects	Sheffield University

NAME	SPECIALISM	ORGANISATION
Wadeson, Stephen	Samian, Roman glass	Oxford Archaeology
Walker, Helen	Medieval Pottery in the Essex area	
Way, Twigs	Medieval landscape and garden history	Freelance
Webb, Helen	Osteologist	Oxford Archaeology
Willis, Steve	Iron Age pottery	
Young, Jane	Medieval Pottery in the Lincolnshire area	
Zant, John	Coins	Oxford Archaeology

Radiocarbon dating is normally undertaken for Oxford Archaeology East by SUERC and by the Oxford University Accelerator Laboratory.

Geophysical prospection is normally undertaken by Magnitude Surveys Ltd.

- Evaluation trench
- Buried electric cable
- Water main
- Cropmarks



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**Head Office/Registered Office/
OA South**

Janus House
Osney Mead
Oxford OX20ES

t: +44 (0) 1865 263 800
f: +44 (0) 1865 793 496
e: info@oxfordarchaeology.com
w: <http://oxfordarchaeology.com>

OA North

Mill 3
Moor Lane
Lancaster LA1 1QD

t: +44 (0) 1524 541 000
f: +44 (0) 1524 848 606
e: [oanorth@oxfordarchaeology.com](mailto: oanorth@oxfordarchaeology.com)
w: <http://oxfordarchaeology.com>

OA East

15 Trafalgar Way
Bar Hill
Cambridgeshire
CB23 8SQ

t: +44 (0) 1223 850500
e: [oaeast@oxfordarchaeology.com](mailto: oaeast@oxfordarchaeology.com)
w: <http://oxfordarchaeology.com>



Director: Gill Hey, BA PhD FSA MCIfA
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