

British Sugar site, Peterborough Written Scheme of Investigation

Client: Stirling Maynard on behalf of British Sugar

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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 The Client is planning to redevelop the British Sugar headquarters site as a mixed residential and retail development. The current office buildings will be demolished, carparks and landscaping removed, to be replaced by a new retail unit on the western half of the site and housing in the east.
- 1.2.2 The site lies close to the River Nene and the area has produced archaeology from the Palaeolithic to post-medieval. The main types of activity recovered in excavation nearby include Bronze Age and Iron Age settlements, along with several Roman and Saxon cemeteries. Although parts of the site have been quarried for sand and gravel, and others built on, there is still potential for buried archaeology under the carparks and landscaping.
- 1.2.3 Redevelopment of the site will damage or destroy any buried archaeology. For this reason, the Peterborough City Archaeologist requires an evaluation of the site in order to assess the nature, extent and preservation of any buried archaeology on the site.
- 1.2.4 This Written Scheme of Investigation (WSI) has been prepared on behalf of the Client in response to advice from the Peterborough City Archaeologist.

1.3 The proposed archaeological strategy

- 1.3.1 Based on advice from the Peterborough City Archaeologist, Oxford Archaeology East proposes to excavate a 3% sample of the site (excluding building footprints and former quarried areas). We will do this by excavating a total of 270 metres of trench measuring 1.8m wide. A proposed trenching plan is attached.
- 1.3.2 Evaluation will take place following demolition of the current buildings, and removal of landscaping elements which will not be retained in the new plan.

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 – the Peterborough City Archaeologist 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, TOPOGRAPHY AND OTHER FEATURES OF THE SITE

2.1.1	The site lies close to the interface of limestone beds to the north (Cornbrash Formation) and mudstones to the south (Oxford Clay Formation, Kellways Clay Member, Blissworth Clay Formation). (British Geological Survey 2014, (BGS map viewer <u>http://mapapps.bgs.ac.uk/geologyofbritain/home.html</u>). This is overlain by River Terrace Gravels.
2.1.2	The soils are typical calcareous pelosols (SSEW 1983)
2.1.3	The site is flat, lying at 12OD on a terrace above the River Nene, 500m to the north.
2.1.4	The site is currently the British Sugar headquarters in Peterborough. It comprises several large office buildings, carparks and landscaping. There are numerous services long the southern edge of the site on Oundle Road, as well as gas pipeline into the site, electricity cabling and drains.
215	The portheastern corner of the site was guarried for sand and gravel in the

2.1.5 The northeastern corner of the site was quarried for sand and gravel in the first half of the twentieth century.



3 ARCHAEOLOGICAL BACKGROUND

3.1 Palaeolithic and Mesolithic

3.1.1 Many Palaeolithic handaxes have been found at several locations close to the site (PHER 01396, 01404, 01795) during sand and gravel quarrying along the river. These included a collection of over 50 early or middle Acheulian hand axes and a few Levellois flakes in a gravel pit (PHER 01404). A Palaeolithic floor was excavated in the early 20th century, 250m south of the site (PHER 01656a), and it produced Palaeolithic and Mesolithic finds.

3.2 Neolithic and Bronze Age

- 3.2.1 Neolithic remains were found immediately to the west of the site during construction of the Riverside Retail Park (PHER 51239), as well as 600m to the east, where excavations uncovered pits, pottery, and worked flints (PHER 51221, 51924).
- 3.2.2 In the Bronze Age, activity was concentrated along the River Nene corridor. Excavation former British Sugar factory site recorded Late Bronze Age domestic activity, including ditches, gullies, pits and postholes (PHER 51287, 51751). 600m to the west of the site, excavation of a gravel quarry uncovered a Middle Bronze Age urned cremation, including shale beads (PHER 01716a).

3.3 Iron Age

- 3.3.1 Excavations at the British Sugar factory, immediately west of the site, unearthed a two possible Iron Age roundhouses and postholes, along with a very large ditch (PHER 51166).
- 3.3.2 Settlement activity, including several pits, pottery animal bone and potboilers in a hearth were excavated 300m south of the site (PHER 01711). Four inhumation burials were also recorded.
- 3.3.3 250m southwest of the site, pits and ditches containing Iron Age pottery and animal remains were found during evaluation and excavation (PHER 53927).
- 3.3.4 Excavation at the Johnson Press site, 250m south of the site, unearthed field systems of a later Iron Age farmstead (PHER 53927). Pottery recovered from the boundary ditches suggested a settlement close by. Plant remains recovered suggested an environment of open meadow, rather than cereal cultivation.

3.4 Roman

3.4.1 The Nene Valley was extensively settled during the Roman period, with the Roman town of Durobrivae 7 kilometres to the west, where Ermine Street crossed the River Nene. Durobrivae had begun as a fort, and later expanded into a large industrial town. Another fort was located at Longthorpe on the northern bank of the river, 2 kilometres west of the site. From the second century AD, the area also produced the Nene Valley pottery, with workshops along the Nene River valley.



- 3.4.2 Immediately around the site, levels of activity appear to have declined after the Iron Age. An oven base and 12 kiln bars were also excavated at the Johnson Press site, 250m south of the site (PHER 53928), along with eight inhumation burials of low status. A further four inhumation burials had been uncovered earlier (PHER 01405, 10086).
- Another low-status burial site was excavated 400m to the west in the early 20th century. This burial ground contained 14 inhumation burials, most without gravegoods (PHER 01716b).
- 3.4.4 800m to the west, excavations at Lidgate Close uncovered Roman building materials, including tegulae and box flue tiles, as well as metalled surfaces (PHER 51165). There was also a well and possible oven. Combined with pottery finds, these suggest a high-status farmstead or late villa.

3.5 Saxon and Early Medieval

- 3.5.1 A Saxon settlement with sunken feature buildings was excavated 250m south of the site (PHER 01656), and another settlement site with buildings, pottery and quernstones 850m to the east (PHER 10631a).
- 3.5.2 Several Saxon cemeteries have been uncovered nearby. A barrow with cremation is located 300m west of the site (PHER 52062). An inhumation cemetery was found during gravel quarrying 600m west of the site (PHER 01716), and another uncovered while pipelaying in WWII 750m to the southwest included iron weapons (PHER 50386). A mixed cremation/inhumation cemetery with numerous gravegoods (including weapons, shield, knives, spindle whorls and pots) was excavated 400m east of the site at the New Fletton Cemetery (PHER 01666, 51627).

3.6 Later medieval and post-medieval

- 3.6.1 The village of Woodston is recorded in the Domesday book of 1086. The centre of medieval village lay 500m to the east, around St Augustine's Church (PHER 51159). Immediately to the north is the site of the medieval guildhall (PHER 53984).
- 3.6.2 There is rather limited for medieval activity in the immediate vicinity of the site. An evaluation at the British Sugar factory, immediately east of the site, uncovered ridge and furrow, ditches and postholes (PHER 51621). Aerial photographs of the area predating the expansion of modern Peterborough show surviving ridge and furrow ploughing.
- 3.6.3 Post-medieval activity is even more limited: excavation at the British Sugar factory produced 18th century pottery from structured comprising postholes and gullies (PHER 51621). Most post-medieval activity is recorded in the centre of Woodston, 500m to the east around the church buildings (PHER 01924, 51158, 51927, 53655, 53830, 5341, 53979), and includes barns, workshops, and factories, as well as findspots.

3.7 Modern

3.7.1 Documentary and cartographic evidence shows that the area around Woodston remained open farmland and meadows along the river between



the early 19th century and the mid-20th century, when housing from Peterborough extended down Oundle Road. There was also extensive quarrying along the river, exploiting the aggregate and clay deposits.

3.7.2 British Sugar had a beet-processing factory immediately to the west until 1989, when the site was closed for redevelopment. The British Sugar headquarters was constructed the present site in the 1990s, when the area to the north was still open fields. Quarrying is known to have taken place in the north-eastern corner of the site, under part of the current carpark.



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:

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

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5 METHODS

5.1 Background research

5.1.1 A suitable level of documentary research will be undertaken before work on site commences. This research will draw on information in the Peterborough Historic Environment Record and Peterborough Archives, and will include historical sources, maps, previous archaeological finds, and past archaeological investigations in the vicinity. The results will not be presented separately, but will be incorporated into the final evaluation report.

5.2 Event number and site code

5.2.1 Before work commences on site, an event number will be obtained from the Peterborough HER. A unique site code (PETSUG18) has been assigned to the project.

5.3 Trial Trenching

Excavation standards

5.3.1 All work will be conducted in accordance with the Chartered Institute for Archaeologists' *Code of Conduct* and *Standard and Guidance for Archaeological Field Evaluations*.

Pre-commencement

- 5.3.2 Before work on site commences, service plans will be checked to ensure that access and groundworks can be conducted safely. There are known to be numerous electricity cables and drains in the carparks, as well as a gas pipeline.
- 5.3.3 The works will take place after the current buildings have been demolished and tree removed.
- 5.3.4 In order to minimise damage to the site and disruption to site users, Oxford Archaeology 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

5.3.5 A total of 270m of trenches measuring 1.8m wide will be excavated. This is equivalent to 3% of the development area. A plan of the proposed trench layout is attached to this WSI. The proposed trenches consist of three measuring 30 x 1.8m, two measuring 60 x 1.8m, and one each measuring 23 x 1.8m and 25 x 1.8m. 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.

- 5.3.6 Service plans will be checked before work commences on site. Before trenching, the footprint of each trench will be scanned by a qualified and experienced operator using a CAT and Genny with a valid calibration certificate.
- 5.3.7 All machine excavation will take place under the supervision of a suitably qualified and experienced archaeologist.
- 5.3.8 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.
- 5.3.9 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 the Peterborough City Archaeologist.
- 5.3.10 Where the archaeological levels are particularly deep, safe excavation procedures will be followed to ensure that trenches are safe to enter.
- 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.
- 5.3.12 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.
- 5.3.13 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.
- 5.3.14 All excavation of archaeological deposits will be done by hand, unless agreed with the Peterborough City Archaeologist that there will be no loss of evidence using a machine. The method of excavation will be decided by the senior project archaeologist.
- 5.3.15 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 halfsectioned or excavated in quadrants where they are large or deep.
- 5.3.16 Deep features will be evaluated with hand auger or boreholes, to assess their depth and structure.



5.4 Recording of archaeological deposits and features

5.4.1 Records will comprise survey, drawn, written, and photographic data.

Survey

- 5.4.2 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.
- 5.4.3 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

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

Plans and sections

- 5.4.7 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).
- 5.4.8 Long sections showing layers will be drawn at 1:50. Sections of features or short lengths of trenches will be drawn at 1:20. All section levels will be tied in to Ordnance Datum.
- 5.4.9 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

5.4.10 Plans and sections may be supplemented with photogrammetric recording of the excavation areas. Photogrammetric models will be based on highresolution 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

- 5.4.11 The photographic record will comprise high resolution digital photographs.
- 5.4.12 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.

5.5 Exceptional remains, including human remains

Significant archaeological features

- 5.5.1 If exceptional or unexpected features are uncovered, the Peterborough City Archaeologist will be informed, and their advice sought on further excavation or preservation.
- 5.5.2 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 the Peterborough City Archaeologist:
 - 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).
- 5.5.3 If preservation *in situ* is required by the Peterborough City Archaeologist, 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

- 5.5.4 If human remains are encountered, the Client, Cambridgeshire Coroner, and the Peterborough City Archaeologist will be informed immediately.
- 5.5.5 Unless directed otherwise by the Peterborough City Archaeologist, human remains will be left in situ (covered and protected), until a full program of excavation is agreed by the Peterborough City Archaeologist 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 the Peterborough City Archaeologist requires information on date and preservation, we will excavate and remove them.
- 5.5.6 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.

5.6 Metal detecting and the Treasure Act

5.6.1 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.



- 5.6.2 Metal detectors will not be set to discriminate against iron.
- 5.6.3 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.
- 5.6.4 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.

5.7 Post-excavation processing

- 5.7.1 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.
- 5.7.2 Any finds requiring specialist treatment and conservation will be sent for appropriate treatment.
- 5.7.3 Finds will be marked with context numbers, site code or accession number, as detailed in the requirements of the Peterborough Museum.

5.8 Finds recovery and processing

Standards for finds handling

- 5.8.1 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.*
- 5.8.2 Where finds require conservation, this will be done in accordance with the guidelines of the Institute for Conservation (ICON),

Procedures for finds handling

- 5.8.3 At the start of work, a finds supervisor will be appointed to oversee the collection, processing, cataloguing, and specialist advice on all artefacts collected.
- 5.8.4 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.

- 5.8.5 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.)
- 5.8.6 All artefacts recovered from excavated features will be retained for postexcavation 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 the Peterborough City Archaeologist.
- 5.8.7 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.

5.9 Sampling for environmental remains and small artefact retrieval

Standard methodology – summary

5.9.1 Sampling methods will follow guidelines produced by Historic England and Oxford Archaeology. The project team will consult Historic England's Scientific Advisor on environmental sampling and dating where necessary. Where possible an environmental specialist(s) will visit the site to advise on sampling strategies which will be reviewed periodically during the length of the excavation. Specialists will be consulted where non-standard sampling is required (e.g. TL, OSL or archaeomagnetic dating) and if appropriate will be invited to visit the site and take the samples.

Standards for environmental sampling and processing

Paleoenvironmental remains will be sampled and processed in accordance to the OA Sampling Policy (2005) with reverence to the relevant guidelines produced by Historic England:

- Oxford Archaeology 2005. Environmental Sampling Guidelines, 2nd ed.
- Historic England 2011. *Environmental Archaeology. A guide to the theory and practice of methods, from sampling and recovery to post excavation,* (2nd ed)
- Historic England 2008. *Guidelines for the Curation of Waterlogged Macroscopic Plant and Invertebrate Remains*.
- Historic England 2010. *Waterlogged Wood: Guidelines on the recording, sampling, conservation and curation of waterlogged wood.*
- Historic England 2012. *Waterlogged organic artefacts. Guidelines on their recovery, analysis and conservation.*
- Historic England 2008. Investigative conservation. Guidance on how detailed examination of artefacts from archaeological sites can shed light on their manufacture and use.



- Historic England 2014. Animal Bones and Archaeology. Guidelines for Best Practice.
- Historic England 2004. *Dendrochronology: Guidelines on Producing and Interpreting Dendrochronological Dates*.
- Historic England 2006. Archaeomagnetic Dating. Guidelines for Producing and Interpreting Archaeomagnetic Dates.
- Historic England 2008. *Luminescence Dating. Guidelines on Using Luminescence Dating in Archaeology*.
- Historic England 2015. Archaeometallurgy. Guidelines for Best Practice.
- Historic England 2015 Geoarchaeology. Using Earth Sciences to Understand the Archaeological Record.

Procedures for sampling and processing

- 5.9.2 Environmental samples (up to 40 litres or 100% of context if less is available) will be taken from a range of potentially datable features and well-stratified deposits to target the recovery of plant remains, fish, bird, small mammal and amphibian bone and small artefacts. Samples will be labelled with the site code, context number, and sample number and a register will be kept.
- 5.9.3 Larger soil samples (up to 100L) may be taken for the complete recovery of animal bones, marine shell and small artefacts from appropriate contexts. Smaller bulk samples (general biological samples) of 20 litres will be taken from any waterlogged deposits present for the recovery of macroscopic plant remains and insects. Series of incremental 2L samples may be taken through buried soils and deep feature fills for the recovery of snails and/or waterlogged plant remains, depending on the nature of the stratigraphy and of the soils and sediments.
- 5.9.4 Columns will be taken from buried soils, peats and waterlogged feature fills for pollen and/or phytoliths, diatoms, ostracods if appropriate. Soil samples will be taken for soil investigations (particle size, organic matter, bulk chemistry, soil micromorphology etc.) in consultation with the appropriate specialists. Where features containing very small artefacts such as microdebitage and hammerscale are identified, 1L grid sampling may be employed.
- 5.9.5 Early feedback on selected samples taken during the excavation will result in a dynamic sampling strategy according the results of rapid assessment of typically 10L sub-samples.
- 5.9.6 Typically, 20 litres of each bulk sample will be processed standard water flotation using a modified Siraf-style machine and meshes of 0.3mm (flot) and 0.5 or 1mm depending on sediment type and like modes of preservation (residue). The remaining soil from a sample will be subsequently processed if appropriate based on the results of an initial assessment. Normally, early prehistoric samples will be fully processed and samples containing human remains will always be fully processed. Heavy residues will be wet sieved, air dried and selectively sorted. Samples taken exclusively for the recovery of bones, marine shell or artefacts will be wet sieved to 2mm. Waterlogged samples will have a sub-sample (approximately 10L) processed as above and the flot will assessed whilst wet and again once dried. Snail samples (2L) will



be processed by hand flotation with flots and residues collected to 0.5mm; these flots and residues will be sorted by the specialist.

5.9.7 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).





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 the Peterborough City
	Archaeologist for comment.

- 6.3.2 Following approval of the report, one printed copy and one digital copy (PDF) will be presented to the Peterborough City Archaeologist.
- 6.3.3 If the Peterborough City Archaeologist requires no further excavation on the site, a summary report will be prepared for the *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.
- 6.4.2 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 Peterborough Museum and Art Gallery.
- 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 Peterborough Museum, in order to facilitate future study and ensure long-term public access to the archive. 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 Peterborough Museum. A written transfer of ownership document will be forwarded to the Peterborough City Archaeologist 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 5-6 working days 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.
8.1.4	The project archive will be deposited within three months of delivering the final report, unless the Peterborough City Archaeologist requires further excavation on the site.



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)
 - 1 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 Before work on site commences, the Peterborough City Archaeologist will be advised of the Project Manager Project Officer responsible for work on site.
- 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 early prehistoric to medieval remains. Environmental remains will also be sampled.
- 9.2.2 Pottery will be assessed by Matt Brudenell (prehistoric), Alice Lyons (Roman) and Carole Fletcher (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 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 The Peterborough City Archaeologist 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, Oxford Archaeology East and the Peterborough City Archaeologist 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 the Peterborough City Archaeologist.

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
Allen, Martyn	Zooarchaeology	Oxford Archaeology
Anderson, Katie	Roman pottery	Freelance
Anderson, Sue	Medieval & post-medieval pottery (specifically from Norfolk & Suffolk), CBM and human remains	Freelance
Bamforth, Mike	Woodworking	York University
Barker, Karen	Small find conservation & X-Ray	Freelance
Bayliss, Alex	C14 advice	Historic England
Biddulph, Edward	Roman pottery	Oxford Archaeology
Billington, Lawrence	Lithics	Oxford Archaeology
Bishop, Barry	Lithics	Freelance
Blinkhorn, Paul	Iron Age, Anglo-Saxon and medieval pottery	Freelance
Booth, Paul	Roman pottery and coins	Oxford Archaeology
Boreham, Steve	Pollen and soils/ geology	Cambridge University
Broderick, Lee	Zooarchaeology	Oxford Archaeology
Brown, Lisa	Prehistoric pottery	Oxford Archaeology
Brudenell, Matt	Prehistoric pottery	Oxford Archaeology
Cane, Jon	Display & reconstruction artist	Freelance
Champness, Carl	Molluscs, geoarchaeology	Oxford Archaeology
Cotter, John	Medieval/post-medieval finds, pottery, CBM	Oxford Archaeology
Crummy, Nina	Small finds	Freelance
Cowgill, Jane	Slag/metalworking residues	Freelance
Dickson, Anthony	Worked Flint	Oxford Archaeology
Dodwell, Natasha	Osteology, including cremations	Oxford Archaeologist
Donelly, Mike	Lithics	Oxford Archaeology
Doonan, Roger	Slags, metallurgy	Freelance
Druce, Denise	Pollen, charred plants, charcoal/wood identification, sediment coring and interpretation	Oxford Archaeology
Drury, Paul	CBM (specialised)	Freelance
Fletcher, Carole	Medieval & post-medieval pottery, glass, shell & small finds	Oxford Archaeology
Fosberry, Rachel	Charred waterlogged and mineralised plant remains	Oxford Archaeology
Foster, Hayley	Zooarchaeologist	Oxford Archaeology
Fryer, Val	Molluscs/environmental	Freelance
Mark Gibson	Osteology	Oxford Archaeology



		WRITTEN SCHEWE OF INVESTIGATION
NAME	SPECIALISM	ORGANISATION
Gleed-Owen, Chris	Herpetologist (amphibians & reptiles)	CGO Ecology Ltd
Goffin, Richenda	Post-Roman pottery, building materials, painted wall plaster	Suffolk CC
Howard-Davis, Chris	Small finds, Mesolithic flint, leather, wooden objects and wood technology	Freelance
Locker, Alison	Fish bone	Freelance
Loe, Louise	Osteology	Oxford Archaeology
Lyons, Alice	Late Iron Age/Roman pottery	Oxford Archaeology
Martin, Toby	Anglo-Saxon metalwork and artefacts	Oxford University
Masters, Pete	Geophysics	Cranfield University
McIntyre, Lauren	Osteology	Oxford Archaeology
Middleton, Paul	Phosphates/garden history	Peterborough Regional College
Mould, Quita	Ironwork, leather	freelance
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 and later coins	Fitzwilliam Museum
Quinn, Patrick	Pottery thin section, ceramic petrology	UCL
Riddler, Ian	Worked bone objects & related artefact types	Freelance
Robinson, Mark	Insects	Oxford University
Rowland, Steve	Zooarchaeology & osteology	Oxford Archaeology
Rutherford, Mairead	Pollen, diatoms, <i>etc</i>	Oxford Archaeology
Samuels, Mark	Architectural stonework	Freelance
Scott, lan	Roman, medieval, post-medieval finds, metalwork, glass	Oxford Archaeology
Shaffrey, Ruth	Worked stone and Roman CBM	Oxford Archaeology
Smith, David	Insects	University of Birmingham
Smith, Ian	Zooarchaeology	Oxford Archaeology
Spoerry, Paul	Medieval pottery	Oxford Archaeology
Stafford, Liz	Molluscs and geoarchaeology	Oxford Archaeology
Timberlake, Simon	Archaeometallurgy & geoarchaeology	Freelance
Tyers, lan	Dendrochronology	Sheffield University
Ui Choileain, Zoe	Osteology & zooarchaeology	Oxford Archaeology
Vickers, Kim	Insects	Sheffield University
Wadeson, Stephen	Samian pottery, Roman glass	Oxford Archaeology
Walker, Helen	Medieval pottery (Essex)	Essex CC
Way, Twigs	Medieval landscape and garden history	Freelance



NAME	SPECIALISM	ORGANISATION
Webb, Helen	Osteology	Oxford Archaeology
Young, Jane	Medieval Pottery (Lincolnshire)	Freelance
Zant, John	Roman 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.









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