



Long Oat Lands, Little Wittenham

Written Scheme of Investigation for an Archaeological Evaluation

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Prepared by: Alex Davies (Project Officer)
Checked by: Tim Allen (Senior Project Manager)

Approved for Issue by: David Score (Head of Fieldwork)

Signature:



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OA South

Janus House
Osney Mead
Oxford
OX2 0ES

t. +44 (0)1865 263 800

OA East

15 Trafalgar Way
Bar Hill
Cambridge
CB23 8SG

t. +44 (0)1223 850 500

OA North

Mill 3
Moor Lane Mills
Moor Lane
Lancaster
LA1 1QD

t. +44 (0)1524 880 250

e. info@oxfordarch.co.uk
w. oxfordarchaeology.com

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Long Oat Lands, Little Wittenham
Written Scheme of Investigation for an Evaluation
Centred on SU 56205 93698

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1 INTRODUCTION

1.1 Project details

1.1.1 Long Oat Lands is a field adjacent to the village of Little Wittenham, Oxfordshire, and is currently under pasture, although it has previously been under arable cultivation. The owners, Church Farm Partnership, wish to revert to cultivation of this field, and so have approached Natural England for permission to do so. Natural England has requested an Environmental Impact Assessment to be carried out, and Church Farm Partnership have commissioned Oxford Archaeology (OA) to undertake the archaeological impact assessment.

1.1.2 A desk-based Archaeological Baseline has already been prepared and commented upon by Natural England's Historic Environment Advisor Dawn Enright. In the light of the Scheduled Monument area immediately adjacent to the site on the north-west side, and following advice from Historic England, she has requested an evaluation by trenching in order to test for buried archaeological features and, if present, to establish their depth of burial, date, condition and level of survival.

1.1.3 The initial evaluation strategy, which comprises a 1% sample targeted on cropmarks, was set out in Oxford Archaeology's Archaeological Baseline and Evaluation Proposal (OA 2018), and has been approved by the Natural England Historic Environment Advisor. This document outlines how OA will implement this strategy.

1.1.4 All work will be undertaken in accordance with local and national planning policies. All work will also follow the MoRPHE Project Manager's guide (Historic England 2015), and the Code of Conduct of the Chartered Institute for Archaeologists (CifA), of which OA is a Registered Organisation. The archaeological works will adhere to the Standards and guidance for archaeological evaluation, excavation and archiving (CifA 2014a; CifA 2014b).

1.1.5 Natural England has asked Richard Oram, planning archaeologist for Oxfordshire County Council, and David Wilkinson, Historic England's Assistant Inspector for Ancient Monuments, to assist the Natural England Historic Environment Advisor in monitoring the works. Richard Oram will be the principal point of contact for the monitoring.

1.2 Location, topography and geology

1.2.1 The site is located to the north-west of the village of Little Wittenham, and comprises a single trapezoidal field (longer on the west than the east) with an area of 15ha. lying at the base of the Sinodun Hills, which slopes gently northwards from 57.5m aOD at the south end to 50m aOD at the north end (Fig. 1).

1.2.2 The BGS (nd.) records that the bedrock deposit underlying the site is Gault Mudstone (clay), formed in the Cretaceous period. No superficial deposits are recorded overlying the mudstone in the southern half of the site, but Northmoor First Gravel Terrace deposits cover the northern half of the site, laid down in the Pleistocene from movement of material associated with the Thames.

1.2.3 The Thames flows southwards some 320m to the east, and LiDAR suggests that a stream formerly ran down the east edge of the site and turned east to run into the river (Fig. 2).

2 ARCHAEOLOGICAL AND HISTORICAL BACKGROUND AND POTENTIAL

2.1 Archaeological and historical background

2.1.1 The archaeological and historical background of the site has been described in detail in the archaeological baseline report and evaluation proposal (OA 2018), and will not be reproduced in full here. However, information that is particularly relevant to this project will be detailed.

2.1.2 Mesolithic, Neolithic and Early Bronze age struck flints were found in fieldwalking in the field immediately north-east of the site (Allen *et al.* 2006), further Neolithic finds within Dyke Hills across the river Thames some 600m to the east, and a Neolithic pit and struck flint on the slope of the Sinodun Hills north of the Earth Trust (formerly Hill Farm), some 800m south of the site (Allen *et al.* 2010). A probably Bronze Age barrow lies within a cropmark complex in the scheduled area some 600m north-west of the site.

2.1.3 Extensive cropmarks and geophysical surveys all around the site, together with targeted excavation, suggests a densely occupied landscape in the Iron Age. The Scheduled area around Northfield Farm to the west, north and north-east of the site (UID: 1002925), part of which is shown in Figure 2, includes enclosures, pit alignments and other structures of probable Iron Age date (Baker 2002), and fieldwalking over a cropmark complex in the field immediately to the north-east of the site recovered some late Iron pottery.

2.1.4 The foci of Iron Age activity in this area appear to have been the scheduled sites of Sinodun/Castle Hill hillfort (UID: 1006302), located 1km to the south-east of the site, and Dyke Hills (UID 1006364), 600m to the east. These monuments may have provided political, ritual and/or economic centres for the surrounding communities.

2.1.5 The area around Dyke Hills appears to have held a continued importance after the late Iron Age as the adjacent Roman town that developed at Dorchester-on-Thames was of some significance (Henig and Booth 2000, 39-40, 58-63). West of the Thames within the scheduled area around Northfield Farm are linear features, trackways and square enclosures more indicative of the Roman period.

2.1.6 The most significant Roman cropmark complex is the scheduled group immediately to the north-west of the site (Fig. 2). Features of probable Roman date include a main N-S aligned trackway with perpendicular enclosures, palisade, pits and a triple ditched system. This has been subjected to partial excavations, retrieving material from the 1st-3rd centuries, including cremations and inhumations (Haverfield 1901; Gray 1970; Gray 1977).

2.1.7 An east-west trackway continues both east and west at the south end of the scheduled area, running towards the cropmark complex just north-east of the site, where fieldwalking has recovered much Roman pottery, confirming a probable Roman date for the main cropmark enclosures (Fig. 2; Allen *et al.* 2006, figs. 14.16-17). Cropmarks within the site were recorded both by Benson and Miles and in Historic England's NMP (Benson and Miles 1974, 66, map 36, Fenner 1994), and could be related.

2.1.8 The NMP has transcribed cropmarks for the central/northern area of the site, centered on SU 56222 93650 (Fig. 2; Fenner 1994). This comprises two linear features on an ENE-WSW alignment, possibly forming a trackway, and a parallel linear boundary some 60m north of that. At the west end this boundary joins a short boundary at right angles, perhaps suggesting

that these two may belong to a former field or enclosure system. Close to the east edge of the field, another ditch runs NNE from the linear boundary towards the complex of rectilinear enclosures of Roman date in the adjacent field.

2.1.9 Anglo-Saxon settlement is known at Long Wittenham and Dorchester (Crossley and Elrington 1979, 478-91; Dodd in Hey and Hind 2014, 201), and cemeteries at Long Wittenham. Middle Saxon pits were also found at Neptune Wood east of College Farm, some 900m west of the site Allen *et al.* 2010, 217-235). Two sherds of Saxon pottery have been recovered from the field immediately north-east of the site (Allen *et al.* 2006, fig. 14.18), and one sherd from a trench north of the Manor House in Little Wittenham, suggesting some activity in the immediate vicinity of the site during this time.

2.1.10 Ridge-and-furrow cultivation is evident on the LiDAR survey in the fields immediately south and east of the site (Fig. 2), and it is likely that this was also present on the site in the medieval period, but has now been ploughed out.

2.1.11 The two boundaries joining at right angles match former field boundaries evident on the 1844 Tithe Map, and so are post-medieval in date (Fig. 2). The possible trackway and the NNE running boundary do not, and so may be of earlier date. These cropmarks are not visible in the field across the road to the west, and geophysical survey of the eastern side of this field (Allen *et al.* 2006, figures 14.7, 14.10 and 14.11) did not continue far south enough to overlie the projected line of the cropmark trackway. No geophysical survey has been carried out within the site itself, partly because of the clay geology of the southern half of the field; sites on clay rarely provide good results.

2.1.12 Aerial photographs were assessed as part of the research into the archaeological baseline of the site (OA 2018). The linear features recognised by the NMP were not clearly observed, and cropmarks were not evident on the majority of the photographs held at the NMR. One aerial photograph taken in 1975, however, does show a number of further linear marks that might be cropmarks of archaeological origin (Fig. 3; SU 5693/15/136). These include linear and curvilinear marks, including examples that differ from the prevailing orientation of the field and that of modern ploughmarks. As these marks were not included as archaeological during the NMP survey, they were presumably judged to have a natural origin, or merely to show areas of crop that have been trampled. However, the possibility remains that some of these marks represent archaeological features, and the evaluation has been designed in part to target potential features shown on the aerial photograph of 1975.

2.1.13 The LiDAR survey also shows a broad hollow running NNW parallel to the curving western site boundary running from the southern end two-thirds of the way up the field, and then returning roughly at right angles north-eastwards to the existing field boundary. This probably marks the edges of a former field boundary within the existing field, and corresponds to the position of the internal division marked on the Tithe map of 1844 (Fig. 2). Two similar hollows run from the western field boundary to join the NNW hollow, and probably mark further former field boundaries. A third hollow of similar length runs east from the western boundary close to the north end of the field, fading out in line with the NNW boundary visible further south. It is likely that the NNW boundary continued northwards to meet this at some stage, but has now been masked by later ploughing. None of these other former field divisions is shown on the Tithe map, so these presumably went out of use before the mid-19th century.

These slight undulations are former post-medieval field boundaries and have little historic environment interest.

2.2 Potential

2.2.1 Mesolithic, Neolithic and Bronze Age activity in the vicinity of the site demonstrates that the environs of the site were attractive to early settlement. Small numbers of struck flints have been recovered in fieldwalking from the field immediately to the north-east of the site (Allen *et al.* 2006, fig. 14.14), and these are the only indication that activity of these periods may have taken place within the site. The potential for evidence of earlier prehistoric activity in the topsoil/ploughsoil is medium, but for prehistoric features is low to medium.

2.2.2 Iron Age and Roman settlement is very well-attested in the area around the site. Numerous cropmark complexes are known, including the groups within the scheduled area north-west of the site. At least two linear cropmarks, possibly representing a trackway, have previously been identified as representing Roman activity, and a further mass of possible, unconfirmed cropmarks can be seen on a single aerial photograph (Figs. 2-3). If any of these marks do represent archaeological features, it is likely that they are Iron Age and/or Roman. However, the potential of the site to contain significant Iron Age and Roman activity remains uncertain until the possible cropmarks have been tested by trenching and hand-excavation.

2.2.3 The main foci of Saxon activity appear to lie some way to the west and east of the site. Saxon pottery does not tend to survive well in the ploughsoil, so it is possible that the two sherds from the adjacent field are indicative of more activity than is otherwise suggested, but the potential must be considered low.

2.2.4 It is likely that the site was in agricultural use in the medieval period, although as it is adjacent to the village of Little Wittenham some settlement activity may have extended into the site. Medieval remains are most likely to comprise agricultural boundary features and furrows of negligible historic significance. The potential for medieval activity, other than the furrows of ridge-and-furrow cultivation, is considered to be low.

2.2.5 The site appears to have also been in agricultural use in the post-medieval period. The 1844 Tithe map shows further subdivisions of the field, and these are partially visible on the LiDAR survey and in cropmarks. Other than field boundaries, the potential for post-medieval activity on the site is considered to be low.

3 PROJECT AIMS

3.1 General

3.1.1 The evaluation aims to test and refine the archaeological resource within the site to provide information on whether the proposal to revert the field to arable will negatively affect any remains that may be present.

3.2 Specific aims and objectives

3.2.1 The specific aims and objectives of the evaluation are:

- i. To determine or confirm the general nature of any remains present.
- ii. To determine or confirm the approximate date or date range of any remains, by means of artefactual or other evidence.
- iii. To establish the date and function of the linear features previously identified within the site from cropmarks, to establish whether this could be a trackway, and to see if this is related to significant archaeological features.
- iv. To establish if the possible cropmarks visible on the 1975 aerial photograph are of archaeological or natural origin.
- v. To confirm that the linear undulations in the field indicated by the LiDAR data are post-medieval agricultural boundaries and do not have historic significance.
- vi. To help establish the potential impacts of cultivation by establishing the existing depths of topsoil and subsoil across the field.
- vii. To provide information on the degree of previous soil erosion and the vulnerability of the field to further soil erosion in the future.
- viii. To assess whether the site contains archaeological remains of types not likely to be indicated by cropmark evidence, such as flint spreads or scatters, and for environmental evidence such as charcoal or waterlogged remains. Survival of such evidence may vary depending upon the underlying geology.

4 PROJECT SPECIFIC EXCAVATION AND RECORDING METHODOLOGY

4.1 Scope of works

4.1.1 The works will consist of a 1% sample of the 15.54 ha field, equaling 26 trenches measuring 30m long by 2m wide (Fig. 4). This evaluation will target the following:

- cropmarks transcribed by the NMP;
- possible cropmarks observed on the 1975 photograph;
- linear undulations in the field indicated by the LiDAR data, probably representing post-medieval field boundaries;

4.1.2 Trenches will also be positioned across both geologies in locations where archaeological features are not indicated by cropmarks to provide even coverage, and to test the depth of existing soil cover throughout. The proposed trench layout is shown in relation to the possible cropmarks on Figure 4, and in relation to the LiDAR plot on Figure 5.

Table 1: Trench layout

Trench Number	Feature(s) Targeted
1	Linear cropmarks: E-W
2	No target
3	Up to three linear cropmarks: NW-SE, N-S, and NNW-SSE
4	Three linear cropmarks: NW-SE, and two E-W
5	Two linear cropmarks: NW-SE and NE-SW
6	Two linear cropmarks: NW-SE and NE-SW
7	Two linear NMP cropmarks: NW-SE and NE-SW
8	Linear NMP cropmark: NE-SW
9	Two linear NMP cropmarks: NE-SW and NNE-SSW
10	Linear LiDAR bank: NE-SW
11	No target
12	Two parallel liner NMP cropmarks: NE-SW
13	Two parallel liner NMP cropmarks: NE-SW; and linear cropmark: ENE-WSW
14	No target
15	Two linear cropmarks: E-W and NW-SE
16	Linear LiDAR bank: NE-SW
17	Linear LiDAR bank: NW-SE
18	Two parallel linear cropmarks: N-S
19	No target
20	Curvilinear cropmark
21	No target
22	No target
23	Two linear cropmarks: NNW-SSE, NW-SE
24	Two linear cropmarks: NNW-SSE, WNW-ESE
25	Linear LiDAR bank: NE-SW
26	Linear LiDAR bank: NW-SE
27	No target

4.2 Programme

4.2.1 It is anticipated that the fieldwork will take two weeks to complete, by a team consisting of a Project Officer/Project Supervisor, Mark Dodd, directing up to three Project Archaeologists, under the management of Tim Allen, Senior Project Manager.

4.2.2 All fieldwork undertaken by Oxford Archaeology (South) is overseen by the Head of Fieldwork, David Score MCIfA.

4.3 Site specific methodology

4.3.1 A summary of OA's general approach to excavation and recording can be found in Appendix A. Standard methodologies for Geomatics and Survey, Environmental evidence, Artefactual evidence and Burials can also be found below (Appendices B, C, D and E respectively).

4.3.2 Site specific methodologies will be as follows:

- i. The trenches will be excavated using a 360° mechanical excavator fitted with a toothless ditching bucket under the close supervision of an archaeologist down to the top of the first archaeological horizon, or failing that, to the surface of the underlying geology.
- ii. Turf and topsoil will be removed separately. Turf will be stacked by the edge of the trenches, and reinstated by the client.
- iii. Trenches will normally be excavated to a depth no greater than 1m; should natural not have been encountered at that depth, then, following consultation with Richard Oram, the Oxfordshire Planning Archaeologist, and instruction from the client, the trench may be stepped out to allow safe excavation to greater depth.
- iv. The revealed horizons/surfaces will be inspected for archaeological features, photographed and planned.
- v. Following stripping, hand-cleaning as necessary, photography and planning, all trenches will be left open for at least 48 hours in order to allow buried features to weather out.
- vi. A representative sample of archaeological features will be investigated by hand to characterize and (if possible) date them, and sections of all investigated archaeological features will be drawn at an appropriate scale.
- vii. Discrete features and deposits will normally be excavated by hand, unless otherwise agreed with Richard Oram, the Oxfordshire Planning Archaeologist. A minimum of 20% of all linear features will be hand-excavated, or a minimum length of 1m if larger.
- viii. All excavated deposits and features will be recorded using single context recording on pro-forma OA context sheets and will be recorded in plan and section. OA recording will be carried out as set out in Appendix A, unless otherwise specified in this WSI.
- ix. Plans and sections will be at a scale of 1:20 or 1:50, unless the level of information requires a more detailed graphic record at 1:10 or greater. The information will be transferred onto an OS-referenced CAD or GIS plan. OA's procedures for survey and generation of plans are set out in Appendix B.

- x. Digital photographs will be taken of all trenches and archaeological features and of the general works in progress.
- xi. Bulk environmental samples will be taken from deposits with visible signs of well-preserved or frequent environmental remains. Column samples will be taken from deposit sequences if appropriate. Environmental sampling will be guided by the advice of the OA Environmental Manager Rebecca Nicholson, and the regional Historic England Scientific Advisor Jane Corcoran will be kept informed of progress, and asked for advice if necessary. Sampling, processing and assessment will generally be carried out as specified in Appendix C.
- xii. Finds will be bagged and identified by context, unless their distribution warrants recording individually in 3-D (as for instance for flint concentrations). In addition to the Finds Manager, who advises on lifting and on-site packaging of all finds categories, OA has a conservator on call (see Appendix G) to advise or visit should significant and fragile finds be encountered that warrant lifting with especial care. Finds processing and curation will generally be as set out in Appendix D.
- xiii. Should human bones be found, the Ministry of Justice, the client and Richard Oram, the Oxfordshire Planning Archaeologist, will be informed, and a Ministry of Justice licence under Section 25 of the Burial Act 1857 will be obtained. No further excavation will be carried out until the appropriate strategy for preservation in situ or removal has been agreed with the client and with Richard Oram, the Oxfordshire Planning Archaeologist.
- xiv. All exhumation and post-excavation treatment of the remains will be carried out in accordance with published guidelines.
- xv. All gold or silver artefacts will be reported to the coroner, in line with the Treasure Act 1996.
- xvi. Trenches containing archaeological features or other significant deposits will be left open until they have been seen by one of the monitoring archaeologists, unless otherwise agreed with Richard Oram.
- xvii. Trenches without archaeological features will be photographed and images sent to the monitoring archaeologists, and may then be backfilled once confirmation of receipt of the photographs has been obtained from Richard Oram.

5 PROJECT SPECIFIC REPORTING AND ARCHIVE METHODOLOGY

5.1 Programme

- 5.1.1 The report will be completed within four weeks of the completion of the fieldwork.
- 5.1.2 Bound copies of the completed report will be provided to the client and to Oxfordshire County Council.
- 5.1.3 Copies of the report in Adobe Acrobat (.pdf) format will be provided to the Oxfordshire HER, to David Wilkinson at Historic England and to Natural England. A copy of the results will also be incorporated into the Environmental Impact Assessment submitted to Natural England in support of the application for reversion to arable.

5.2 Content

- 5.2.1 The content of this report will be as defined in Appendix F.

5.3 Specialist input

- 5.3.1 OA has a large pool of internal specialists, as well as a network of external specialists with whom OA have well established working relationships. A general list of these specialists is presented in Appendix G; in the event that additional input should be required, an updated list of specialists can be supplied.

5.4 Archive

- 5.4.1 The site archive will be deposited with Oxfordshire Museum following completion of the project.
- 5.4.2 A summary of OA's general approach to documentary archiving can be found in Appendix H.

6 HEALTH AND SAFETY

6.1 Roles and responsibilities

6.1.1 The Senior Project Manager, Tim Allen, has responsibility for ensuring that safe systems of work are adhered to on site. He delegates elements of this responsibility to the Project Officer, who implements these on a day to day basis.

6.1.2 The Director with responsibility for Health and Safety at OA is Dan Poore Tech IOSH (Chief Business Officer).

6.2 Method statement and risk assessment

6.2.1 A summary of OA's general approach to health and safety can be found in Appendix I. A risk assessment has also been undertaken and approved and will be kept on site, along with OA's standard Health and Safety file, which will contain all relevant health and safety documentation.

6.2.2 The Health and Safety file will be available to view at any time.

6.3 Monitoring of works

6.3.1 At least 5 days' notice of the commencement of the archaeological evaluation trenching works will be given to Richard Oram, Planning Archaeologist for Oxfordshire Country Council, and the other monitoring archaeologists. They will have free access to the site (subject to Health and Safety considerations) and all records to ensure the works are being carried out in accordance with this WSI and all other relevant standards.

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OA STANDARD FIELDWORK METHODOLOGY APPENDICES

The following methods and terms will apply, where appropriate, to all OA fieldwork unless varied by the accompanying detailed Written Scheme of Investigation.

Copies of all OA internal standards and guidelines referred to below are available on request.

APPENDIX A GENERAL EXCAVATION AND RECORDING METHODOLOGY

A.1 Standard methodology – summary

Mechanical excavation

A.1.1 An appropriate mechanical excavator will be used for machine excavation. This will normally be a JCB or 360° tracked excavator with a 1.5 m to 2 m wide toothless ditching bucket. For work with restricted access or working room a mini excavator may be used.

A.1.2 All mechanical excavation will be undertaken under direct archaeological supervision.

A.1.3 All undifferentiated topsoil or overburden of recent origin will be removed down to the first significant archaeological horizon, in successive, level spits.

A.1.4 Following mechanical excavation, all areas that require examination or recording will be cleaned using appropriate hand tools.

A.1.5 Spoil heaps will be monitored in order to recover artefacts to assist in the analysis of the spatial distribution of artefacts. Modern artefacts will be noted but not retained.

A.1.6 After recording, evaluation trenches and test pits will usually be backfilled with excavated material in reverse order of excavation, and compacted as far as is practicable with the mechanical excavator. Area excavations will not normally be backfilled.

Hand excavation

A.1.7 All investigation of archaeological levels will usually be by hand, with cleaning, examination and recording both in plan and section.

A.1.8 Within significant archaeological levels the minimum number and proportion of features required to meet the aims of the excavation will be hand excavated. Pits and postholes will usually be subject to a 50% sample by volume. Linear features will be sectioned as appropriate. More complex features such as those associated with funerary activity will usually be subject to 100% hand excavation.

A.1.9 In the case of evaluations, it is not necessarily the intention that all trial trenches will be fully excavated to natural stratigraphy, but the depth of archaeological deposits across the site will be assessed. The stratigraphy of a representative sample of the evaluation trenches will be recorded even where no archaeological deposits have been identified. Any excavation, both by machine and by hand, will be undertaken with a view to avoiding damage to any archaeological features or deposits, which appear to be worthy of preservation in situ.

Recording

A.1.10 Written descriptions will be recorded on proforma sheets comprising factual data and interpretative elements.

A.1.11 Where stratified deposits are encountered a Harris matrix will be compiled during the course of the excavation.

A.1.12 Plans will normally be drawn at 1:100, but on urban or deeply stratified sites a scale of 1:50 or 1:20 will be used. Detailed plans will be at an appropriate scale. Burials will be drawn at scale 1:10 or recorded using geo-referenced digital photography.

A.1.13 The site grid will be accurately tied into the National Grid and located on the 1:2500 or 1:1250 map of the area.

A.1.14 A register of plans will be kept.

A.1.15 Long sections of showing layers will be drawn at 1:50. Sections of features or short lengths of trenches will be drawn at 1:20.

A.1.16 A register of sections will be kept.

A.1.17 Generally, all sections will be tied in to Ordnance Datum.

A.1.18 A full photographic record, illustrating in both detail and general context the principal features and finds discovered will be maintained. The photographic record will also include working shots to illustrate more generally the nature of the archaeological work.

A.1.19 Photographs will be recorded on OA Photographic Record Sheets.

A.2 Relevant industry standards and guidelines

A.1.20 The Chartered Institute for Archaeologists Standard and Guidance notes relevant to fieldwork are:

- Standard and Guidance for Archaeological Field Evaluation
- Standard and Guidance for Archaeological Excavation
- Standard and Guidance for an Archaeological Watching Brief.

A.1.21 These will be adhered to at all times.

A.3 Relevant OA manual and other supporting documentation

A.3.1 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).

A.3.2 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.

APPENDIX B GEOMATICS AND SURVEY

B.1 Standard methodology - summary

- B.1.1 The aim of OA methodology is to provide comprehensive survey cover of all investigation areas. Additionally, it is designed to provide coverage for any areas, beyond the original scope of the project, which arise as a result of further work. It provides digital plans of all required elements of the project and locates them within an overall grid.
- B.1.2 It also maintains all necessary survey data and ensures that the relevant information is copied into the primary record, in order to ensure the integrity of the project archive. Furthermore, it ensures that all core data is securely stored and backed up. It establishes accurate project reference systems utilising a series of control stations and permanent base lines.
- B.1.3 The survey will be conducted using a combination of Total Station Theodolite (TST) survey utilising Reflectorless Electronic Distance Measurement (REDM) where appropriate, hand-measured elements and GPS (Global Positioning System).
- B.1.4 Before the main work commences, a network of control stations will be laid out encompassing the area. Control stations will be tied in to known points or existing features using rigorous metric observation. The control network will be set in using a TST to complete a traverse or using techniques as appropriate to ensure sufficient accuracy. A GPS, or other appropriate method, will be used to orientate the control network to National Grid or other recognised coordinate system.
- B.1.5 All control stations will be checked by closed traverse and/or GPS, as appropriate. The accuracy of these control stations will be accessed on a regular basis and re-established accordingly. All stations will be recorded on Survey Control Station sheets.
- B.1.6 Each control station will be marked with a PGM (Permanent Ground Marker). Witness diagrams will include the full 3-D co-ordinates generated, a sketch diagram and measurements to at least three fixed details, written description of the mark and a photograph of the control point in its environs.
- B.1.7 Prior to entry into the field all equipment will be checked, and all pre-survey information will be logged onto the field computer and uploaded onto survey equipment as appropriate. The software in the field computer will be verified and all cabling between the GPS and/or TST and computer will be checked. Prior to conducting the survey, the site will be reconnoitred for locations for a viable control network and check the line of sight and any possible hindrance to survey. Daily record sheets will be kept to record daily tasks and conditions.
- B.1.8 All spatial data will be periodically downloaded onto a field computer, and backed up onto CD, or DVD. It will be cleaned, validated and inspected.
- B.1.9 All survey data will be documented on daily survey record sheets. Information entered on these sheets includes key set up information (Instrument height etc.) as well as daily variables and errors/comments. All survey data will be digitally recorded in a raw format and translated during the download process this shall allow for any errors to be cross referenced with the daily survey record and corrected accordingly.

- B.1.10** A weekly summary of survey work will be produced to access development and highlight problems. This information also will be recorded on the weekly survey journal. Technical support for the survey equipment and download software shall be available at all times. In those instances, where sites are remotely operated, all digital data will be backed up regularly and a copy returned to Oxford on a weekly basis.
- B.1.11** A site plan will initially be created by a rapid survey of relevant archaeological features by mapping their extent using a combination of TST and GPS. This will form the basis for deciding excavation strategy and will be updated as the excavation clarifies the extent of, and relationships between, archaeological features.
- B.1.12** Excavated archaeological interventions and areas of complex stratigraphy will be hand drawn. At least two Drawing Points (DPs) will be set in as a baseline and measurements taken off this by tape and offset. The hand drawn plans will be referenced to the digitally captured pre-site plan by measuring in the DPs with a TST or GPS. These hand drawn elements will then be scanned in, geo-referenced using the DPs as reference points and digitised following OA's digitising protocols. For further details on hand planning procedure please refer to the fieldwork guidelines.
- B.1.13** Where appropriate rectified photography may be used to record standing structures or burials. This will be carried out in line with Standard OA procedures for rectified photography.
- B.1.14** Survey data recorded in the field will be downloaded using appropriate downloading software, and saved as an AutoCAD Map DWG file, or an ESRI Shapefile. These files will be regularly updated and backed up with originals being stored on an OA server in Oxford.
- B.1.15** All drawings will be composed of closed polygons, polylines or points in accordance with the requirements of GIS construction and OA Geomatics protocols. Once created, additional GIS/CAD work will normally be carried out at the local OA central office or at on-site remote locations when appropriate. Support for all GIS/CAD work will be available from OA's Oxford Office during normal office hours. The aim of the GIS/CAD work is to produce workable draft plans, which can be produced as stand-alone products, or can be readily converted to GIS format. Any hand-drawn plans will be scanned and digitised on site in the first instance. Subsequent plans will be added to the main drawing as it develops.
- B.1.16** All plan scans will be numbered according to their plan site number. Digital plans will be given a standard new plan number taken out from the site plan index.
- B.1.17** All digital data will be backed up incrementally on CD or DVD. On each Friday the entire data directory will be backed up and returned to Oxford where it will be copied onto the OA projects server. Each CAD drawing will contain an information layout which will include all the relevant details appertaining to that drawing. Information (metadata) on all other digital files will be created and stored as appropriate. At the end of the survey all raw measurements will be made available as hard copy for archiving purposes.

B.2 Relevant industry standards and guidelines

- B.2.1 English Heritage (2007) Understanding the Archaeology of Landscapes A Guide to Good Recording Practice.
- B.2.2 Historic England (2015), Metric Survey Specifications for Cultural Heritage.
- B.2.3 Historic England (2016), Understanding Historic Buildings A Guide to Good Recording Practice.

B.3 Relevant OA manual and other supporting documentation

- B.3.1 OA South Metric Survey, Data Capture and Download Procedures
- B.3.2 OA South Digitising Protocols
- B.3.3 OA South GIS Protocols
- B.3.4 These will be superseded by the OA South Geomatics Manual (in progress).

APPENDIX C ENVIRONMENTAL EVIDENCE

C.1 Standard methodology – summary

- C.1.1 Different environmental and geoarchaeological sampling strategies may be employed according to established research targets and the perceived importance of the strata under investigation. Where possible an environmental specialist(s) will visit the site to advise on sampling strategies. Sampling methods will follow guidelines produced by English Heritage and Oxford Archaeology. A register of samples will be kept. 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.
- C.1.2 Geoarchaeological sampling methods are site specific, and methodologies will be designed in consultation with the geoarchaeological manager on a site by site basis.
- C.1.3 Bulk soil samples, where possible of 40 litres or 100% of a deposit if less is available, will be taken from potentially datable features and layers for flotation for charred plant remains and for the recovery of small bones and artefacts. 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 10-20 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. Columns will be taken from buried soils, peats and waterlogged feature fills for pollen and/or phytoliths, diatoms, ostracods and foraminifera if appropriate. Soil samples will be taken for soil investigations (particle size, organic matter, bulk chemistry, soil micromorphology etc.) and possibly for metallurgical analysis in consultation with the appropriate specialists.
- C.1.4 Bulk samples from dry deposits will be processed by standard water flotation using a modified Siraf-style machine and meshes of 0.25mm (flot) and 0.5 or 1mm depending on sediment type and like modes of preservation (residue). Heavy residues will be wet sieved, air dried and sorted. Samples taken exclusively for the recovery of bones, marine shell or artefacts will be wet sieved to 2mm. Waterlogged samples (1L sub-sample) and snail samples (2L) will be processed by hand flotation with flots and residues collected to 0.25mm (waterlogged plants) and 0.5mm (snails) respectively; these flots and residues will be sorted by the specialist. Samples specifically taken for insects, pollen, other microflora and microfauna, metallurgy and soil analysis will be submitted as whole earth to the appropriate specialists or processed following their instructions.

C.2 Relevant industry standards and guidelines

- C.2.1 English Heritage 2010. Waterlogged Wood: Guidelines on the recording, sampling, conservation and curation of waterlogged wood.
- C.2.2 English Heritage 2011. Environmental Archaeology. A guide to the theory and practice of methods, from sampling and recovery to post excavation, (2nd ed)

- C.2.3 English Heritage 2004. Dendrochronology: Guidelines on Producing and Interpreting Dendrochronological Dates.
 - C.2.4 English Heritage 2006. Archaeomagnetic Dating. Guidelines for Producing and Interpreting Archaeomagnetic Dates.
 - C.2.5 English Heritage 2008. Luminescence Dating. Guidelines on Using Luminescence Dating in Archaeology.
 - C.2.6 English Heritage 2008. Guidelines for the Curation of Waterlogged Macroscopic Plant and Invertebrate Remains.
 - C.2.7 English Heritage 2014. Animal Bones and Archaeology. Guidelines for Best Practice.
 - C.2.8 Historic England, 2015. Archaeometallurgy. Guidelines for Best Practice.
 - C.2.9 Historic England 2015 Geoarchaeology. Using Earth Sciences to Understand the Archaeological Record.
- C.3 Relevant OA manual and other supporting documentation**
- C.3.1 Oxford Archaeology 2005. Environmental Sampling Guidelines, 2nd ed.

APPENDIX D ARTEFACTUAL EVIDENCE

D.1 Standard methodology - summary

- D.1.1 Before a site begins arrangements concerning the finds will be discussed with the Head of Finds. Information will be provided by the project manager about the nature of the site, the expected size and make-up of the finds assemblage and any site specific finds retrieval strategies. On-site requirements will be discussed and a conservator appointed who can be called on to make site visits if required. Special requirements regarding particular categories of material will be raised at this early stage for instance the likelihood of recovering assemblages of waterlogged material, large timbers, quantities of structural stone or ceramic building material. Specialists may be required to visit sites to discuss retrieval strategies.
- D.1.2 The project manager will supply the Head of Finds with contact details of the landowner of the site so that consent to deposit any finds resulting from the investigation can be sought.
- D.1.3 The on-site retrieval, lifting and short term packaging of bulk and small finds will follow the detailed guidelines set out in the OA Finds Manual (sections 2 and 3), First Aid for Finds and the UKIC conservation guidelines No.2.
- D.1.4 All finds recovered from site will be transported to an OA regional office for processing; local sites will return finds at the end of each day, away based sites at the end of each week. Special arrangements can be discussed for certain sites with the department manager before the start of a project. Larger long running sites may in some instances set up on-site processing units to deal with the material from a particular site.
- D.1.5 All finds qualifying as Treasure will be removed to a safe place and reported to the local Coroner according to the procedures relating to the Treasure Act (1996), and the Treasure (Designation) Order 2002. Where removal cannot be effected on the same working day as the discovery, suitable security measures will be taken to protect the finds from theft.
- D.1.6 Each box of finds will be accompanied by a finds context checklist itemising the finds within each box. The number of bags of finds from each context and individual small find from each context will be recorded. A member of the processing team will check the list when it arrives in the department. There are separate forms for finds recovered from fieldwalking.
- D.1.7 The processing programme is reviewed on a weekly basis and priorities are worked out after discussions with the Head of Fieldwork and the Head of Post-excavation. Project managers will keep the Head of Finds informed of any pressing deadlines that they are aware of. All finds from evaluations are dealt with as a matter of priority.
- D.1.8 All bulk finds are washed (where appropriate), marked, bagged and boxed by the processing team according to the guidelines set out in section 4 and 5 of the OA Finds Manual, First-aid for finds and the UKIC guidelines No.2. They must also take into account the requirements of the receiving museum. Primary data recording count and weight of fragments by material from each context is recorded on the site database.

- D.1.9 Unstable and sensitive objects are recorded onto the database and then packaged and stored in controlled environments according to their individual requirements. The advice of a conservator will be sought for sensitive objects in need of urgent conservation. All metalwork will be x-rayed prior to assessment (and to meet the requirements of most receiving museums).
- D.1.10 Finds recovered from the environmental sample processing will be incorporated into the main assemblage and added to the database.
- D.1.11 On completion of the processing and data entry a finds file for each archaeological investigation will be produced, a summary of which is available for the project manager. The assemblage is allocated an OA number for storage purposes. Bulk finds are stored on a roller racking system, metals in a secure controlled storage and organic finds are refrigerated where possible.
- D.1.12 The movement of finds in and out of the department storage areas is strictly monitored and recorded. Carbon copy transit forms exist to record this information. Finds will not be removed from storage without the prior knowledge of the Head of Finds.
- D.1.13 Finds information summarised in the finds compendium is used to assess the finds requirements for the post excavation stages of the project. The Finds department holds a list of all specialists used by OA (see below) both internal and external.
- D.1.14 On completion of the post excavation stage of the project the department prepares the finds assemblage for deposition with the receiving museum. Discussions will be held with the museum, the excavator and the head of finds to finalise any selection, retention or discard policy. Most museums issue strict guidelines for the preparation of archives for deposition with their individual labelling, packaging and recording requirements.

D.2 Relevant industry standards and guidelines

- D.2.1 UKIC, 1983, Packaging and Storage of Freshly-Excavated Artefacts from Archaeological Sites. Conservation Guidelines No.2. Archaeology Section, United Kingdom Institute for Conservation.
- D.2.2 UKIC, 1988, Excavated Artefacts and Conservation: UK sites Revised Edition. Conservation Guidelines No.1. Archaeology Section, United Kingdom Institute for Conservation.
- D.2.3 Society of Museum Archaeologists, 1993, Selection, retention and dispersal of Archaeological Collections. Download available via <http://www.socmusarch.org.uk/publica.htm>
- D.2.4 Watkinson, D E & Neal, V, 1998, First Aid for Finds (3rd edition). RESCUE & UKIC

D.3 Relevant OA manual and other supporting documentation

- D.3.1 Allen, L, and Cropper, C (internal publication only) Oxford Archaeology Finds Manual.

APPENDIX E HUMAN REMAINS

E.1 Standard methodology - summary

- E.1.1 Human remains will not be excavated without a relevant licence/faculty and, where applicable (for example, a post medieval cemetery), a risk assessment from the local environmental officer.
- E.1.2 All human remains will be treated with due care and regard to the sensitivities involved, and will be screened from the public throughout the course of the works.
- E.1.3 Excavation will be undertaken in accordance with ClfA (Roberts and McKinley 1993) and the Advisory Panel on the Archaeology of Burials in England (APABE, 2015, 2017). For crypts and post-medieval burials, the recommendations set out by the ClfA (Cox 2001) and by the Association of Diocesan and Cathedral Archaeologists and APABE (2010) are also relevant.
- E.1.4 In accordance with recommendations set out in the English Heritage and Church of England (2005) document Guidance for best practice for treatment of human remains excavated from Christian burial grounds in England, skeletons will not be excavated beyond the limits of the trench, unless they are deemed osteologically or archaeologically important.
- E.1.5 Where any soft tissue survives and/or materials (for example, inner coffins, mattresses and other paddings) soaked in body liquor, no excavation or handling of the remains will take place until an appropriate risk assessment has been undertaken. Relevant protocols (i.e. Cox 2001) for their excavation, recording and removal will be adhered to.
- E.1.6 OA does not excavate or remove modern burials (post-1917) and does not remove or open sealed lead coffins. Appropriate PPE (e.g. chemical suit, latex gloves) will be worn by all staff when working with lead coffins.
- E.1.7 Graves and their contents will be hand excavated in plan. Each component (for example, skeleton, grave cut, coffin (or remains of), grave fill) will be assigned a unique context number from a running sequence. A group number will also be assigned to all of these, and small finds numbers to features such as coffin nails, hobnails and other grave goods (as appropriate).
- E.1.8 Soil samples will be normally taken during the excavation of inhumations, usually from the region of the skull, chest, right hand, left hand, abdomen and pelvis, right foot and left foot. Infants (circa. less than 5 years) will normally be recovered as bulk samples. Soil samples will also be taken from graves that appear to contain no human bone.
- E.1.9 Burials (including the skeleton, cremation, coffin fittings, coffin, urn, grave goods / other) will be recorded by photographic and written record using specialised pro forma context sheets, although these records may only include schematic representations of the location and position of the skeletons, depending on the nature and circumstances of the burial.

- E.1.10 Where necessary, hand drawn plans (usually at 1:10, sometimes 1:5) will be made, especially of contexts where required details cannot be adequately seen using photography (for example, urned cremations; undisturbed hob nails).
- E.1.11 Levels will be taken. For inhumations this will be on the skull, pelvis and feet as a minimum.
- E.1.12 Human remains that are exhumed will be bagged and labelled according to skeletal region and carefully packed into suitable containers (for example, acid free cardboard boxes) and transported to a suitable storage location. Any associated coffins and coffin fittings will be contained with the human remains wherever possible.
- E.1.13 Urned cremations will not usually be half sectioned, but excavated in spits or recovered as a bulk sample.
- E.1.14 Wherever possible, urned cremations will be carefully bandaged, recovered whole and will be excavated in spits in the laboratory, as per the recommendations of McKinley (2004).
- E.1.15 Unless deemed osteologically or archaeologically important disarticulated bone / chanel will be collected and reserved for re-burial if immediate re-internment as close to its original position is not practicable. In some instances, a rapid scan of this material may be undertaken by a qualified osteologist, if deemed relevant.
- E.1.16 If undisturbed, pyre sites will normally be excavated in quadrants, at the very least in 0.5 m blocks of 0.5 m spits.
- E.1.17 Pyre debris dumps will be half sectioned or quadrant and will be subject to 100% sampling.
- E.1.18 Wooden and lead coffins and any associated fittings, including fixing nails will be recorded on a pro forma coffin recording sheet. All surviving coffin fittings will be recorded by reference to Reeve and Adams (1993) and the unpublished master catalogue that is being compiled by OA. Where individual types cannot be paralleled, they will be drawn and/ or photographed and assigned a style number. Biographical details obtained from legible departum plate inscriptions will be recorded and further documentary research will be made.
- E.1.19 Funerary structures, such as brick shaft graves and/or vaults will be hand-drawn at a scale of 1:10 or 1:20, as appropriate. Location, dimensions and method of construction will be noted, and the structure added to the overall trench plan.
- E.1.20 Memorials, including headstones, revealed within the areas of development will be recorded irrespective of whether they are believed to be in situ.
- E.1.21 Where required, memorials will be accorded an individual context number and will also be included as part of the grave group, if the association with a burial is clear.
- E.1.22 Memorials will be recorded on pro-forma context sheets, based on and following the guidelines set out by Mytum (2002), and will include details of:
- Shape
 - Dimensions

- Type of stone used
- Iconography (an illustration may best describe these features)
- Inscription (verbatim record of inscription; font of the lettering)
- Stylistic type

E.2 Relevant industry standards and guidelines

- E.2.1 Advisory Panel on the Archaeology of Burials in England, 2017 Guidance for Best Practice for the Treatment of Human Remains Excavated from Christian Burial Grounds in England.
- E.2.2 Advisory Panel on the Archaeology of Burials in England, 2015 Large Burial Grounds. Guidance on sampling in archaeological fieldwork projects.
- E.2.3 Association of Diocesan and Cathedral Archaeologists and APABE. 2010 Archaeology and Burial Vaults. A guidance note for churches. Guidance Note 2.
- E.2.4 British Association of Biological Anthropology and Osteoarchaeology. 2011 Code of Practice.
- E.2.5 British Association of Biological Anthropology and Osteoarchaeology. 2011 Code of Ethics.
- E.2.6 Cox, M, 2001 Crypt archaeology. An approach. ClfA Paper No. 3
- E.2.7 McKinley, J, and Roberts, C, 1993 Excavation and post-excavation treatment of cremated and inhumed human remains, ClfA Technical Paper No. 13
- E.2.8 McKinley, J, 2004 Compiling a skeletal inventory: cremated human bone. In Brickley, M, and McKinley, J (eds) Guidelines to the Standards for Recording Human Remains, ClfA Technical Paper No. 7. 9-13.
- E.2.9 Mytum, H, 2000 Recording and Analysing Graveyards. CBA Handbook No. 15.
- E.2.10 Reeve, J, and Adams, M, 1993 The Spitalfields Project. Volume I – The Archaeology Across the Styx. CBA Research Report No. 85
- E.2.11 The Human Tissue Act 2004

E.3 Relevant OA manual and other supporting documentation

- E.3.1 Loe, L, 2008 The Treatment of Human Remains in the Care of Oxford Archaeology. Oxford Archaeology internal policy document.
- E.3.2 Excavating and recording human remains. Oxford Archaeology internal guidelines document.

APPENDIX F REPORTING

F.1 Standard methodology - summary

F.1.1 For Watching Briefs and Evaluations, the style and format of the report will be determined by OA, but will include as a minimum the following:

- A location plan of trenches and/or other fieldwork in relation to the proposed development.
- Plans and sections of features located at an appropriate scale.
- A section drawing showing depth of deposits including present ground level with Ordnance Datum, vertical and horizontal scale.
- A summary statement of the results.
- A table summarising the features, classes and numbers of artefacts contained within, spot dating of significant finds and an interpretation.
- A reconsideration of the methodology used, and a confidence rating for the results.
- An interpretation of the archaeological findings both within the site and within their wider landscape/townscape setting.

F.1.2 For Excavations, a Post-Excavation Assessment and Project Design will generally be prepared, as prescribed by English Heritage Management of Research Projects in the Historic Environment (MoRPHE) 2006, Section 2.3. This will include a Project Description containing:

- A summary description and background of the project.
- A summary of the quantities and assessment of potential for analysis of the information recovered for each category of site, finds, dating and environmental data. Detailed assessment reports will be contained within appendices.
- An explicit statement of the scope of the project design and how the project relates to any other projects or work preceding, concurrent with or following on from it.
- A statement of the research aims of the fieldwork and an illustrated summary of results to date indicating to what extent the aims were fulfilled.
- A list of the project aims as revised in the light of the results of fieldwork and the current post-excavation assessment process.

F.1.3 A section on Resources and Programming will also be produced, containing:

- A list of the personnel involved indicating their qualifications for the tasks undertaken, along with an explanation of how the project team will communicate, both internally and externally.
- A list of the methods which will be used to achieve the revised research aims.

- A list of all the tasks involved in using the stated methods to achieve the aims and produce a report and research archive in the stated format, indicating the personnel and time in days involved in each task. Allowance should be made for general project-related tasks such as monitoring, management and project meetings, editorial and revision time.
- A cascade or Gantt chart indicating tasks in the sequence and relationships required to complete the project. Due allowance will be made for leave and public holidays. Time will also be allowed for the report to be read by a named academic referee as agreed with the County Archaeological Officer, and by the County Archaeological Officer.
- A report synopsis indicating publisher and report format, broken down into chapters, section headings and subheadings, with approximate word lengths and numbers and titles of illustrations per chapter. The structure of the report synopsis should explicitly reflect the research aims of the project.

F.1.4 The Project Design will be submitted to the County Archaeological Officer or equivalent for agreement.

F.1.5 Under certain circumstances (e.g. with very small mitigations), and as agreed with the County Archaeological Officer or equivalent, a formal Assessment and Project Design may not be required and either the project will continue straight to full analysis, or a simple Project Proposal (MoRPHE 2006 Section 2.1) will be produced prior to full analysis. This proposal may include:

- A summary of the background to the project
- Research aims and objectives
- Methods statement outlining how the aims and objectives will be achieved
- An outline of the stages, products and tasks
- Proposed project team
- Estimated overall timetable and budget if appropriate.

F.1.6 Once the post-excavation Project Design or Project Proposal has been accepted, the County Archaeological Officer or his appointed deputy will monitor the progress of the post-excavation project at agreed points. Any significant variation in the project design will be agreed with the County Archaeological Officer.

F.1.7 The results of the project will be published in an appropriate archaeological journal or monograph. The appropriate level of publication will be dependent on the significance of the fieldwork results and will be agreed with the County Archaeological Officer. An OASIS (Online Access to the Index of Archaeological Investigations) form will be completed for each project as per English Heritage guidelines.

F.2 Relevant industry standards and guidelines

F.2.1 Oxford Archaeology (OA) adheres to the national standards in post-excavation procedure as outlined in English Heritage's Management of Research Projects in the Historic Environment (MoRPHE; EH 2006). Furthermore, all post-excavation projects

take into account the appropriate regional research frameworks as well as national research agendas such as the Framework for Historic Environment Activities & Programmes in English Heritage (SHAPE; EH 2008).

APPENDIX G LIST OF SPECIALISTS REGULARLY USED BY OA

G.1.1 Below are two tables, one containing 'in-house' OA specialists, and the other containing a list of external specialists who are regularly used by OA.

Internal archaeological specialists used by OA

Specialist	Specialism	Qualifications
Lisa Brown	Early Prehistoric pottery	BA, PGDip, MLitt, MCIfA
Paul Booth	Iron Age and Roman pottery	BA, FSA, MCIfA
John Cotter	Medieval and Post Medieval pottery, Clay Pipe and CBM	BA (Hons), MCIfA
Cynthia Poole	CBM and Fired Clay	BA (Hons), MSc
Edward Biddulph	Roman Pottery	BA (Hons), MA, MCIfA
Ian Scott	Metalwork and Glass	BA (Hons)
Leigh Allen	Metalwork and worked bone	BA (Hons), PGDip
Dr Ruth Shaffrey	Worked stone artefacts	BA, PhD, MCIfA
Julian Munby	Architectural Stone	BA, FSA
Dr Rebecca Nicholson	Fish and Bird Bone	BA (Hons), MA, D.Phil, MCIfA, FSA Scot
Dr Mairead Rutherford	Pollen	BSc, MSc
Lee Broderick	Animal bone	BA (hons), MA, MSc, FZG, SAC Dip (ecology)
Julia Meen	Charred and waterlogged plant remains and charcoal	BSc (Hons), MA
Dr Denise Druce	Charred plant remains, charcoal and pollen	BA (Hons), PhD, MCIfA
Elizabeth Stafford	Geoarchaeology and land snails	BA (Hons), MSc
Carl Champness	Geoarchaeology	BA (Hons), MSc, ACIfA
Dr Ian Smith	Animal Bone	BSc, PhD
Nicola Scott	Archaeological archive deposition	BA (Hons Dunelm)
Mike Donnelly	Flint	BSc, MCIfA
Dr Louise Loe	Human Bone	D.Phil, BA, MCIfA
Helen Webb	Human Bone	MSc, BSc
Mark Gibson	Human Bone	MSc, BA
Dr Lauren McIntyre	Human Bone	D.Phil, MSc, BSc

External archaeological specialists regularly used by OA

Specialist	Specialism	Qualifications
Lynne Keys	Slag	BA (Hons)
Quita Mould	Leather	BA, MA

Specialist	Specialism	Qualifications
Penelope Walton Rogers, The Anglo Saxon Laboratory	Identification of Medieval Textiles	FSA, Dip.Acc
Dana Goodburn-Brown	Conservation	BSc (Hons), BA, MSc
Steve Allen, York Archaeological Trust	Conservation	BA, MA, MAAIS
Dr Richard Macphail	Soils, especially Micromorphology	BA (Hons), MSc, PhD
Dana Challinor	Charcoal	MA, MSc
Dr Nigel Cameron	Diatoms	BSc, MSc, PhD
Dr David Smith	Insects	BA (Hons), MA, PhD
Professor Adrian Parker	Phytoliths and pollen	BSc (Hons), D.Phil
Dr David Starley	Metalworking Slag	BSc (Hons), PhD
Wendy Carruthers	Charred and waterlogged plant remains	BA (Hons)
Dr Sylvia Peglar	Pollen	PhD
Dr John Whittaker	Ostracods and Foraminifera	BA (Hons), PhD
Dr John Crowther	Soil Chemistry	MA, PhD
Dr Martin Bates	Geoarchaeology	BSc, PhD
Dr Dan Miles	Dendrochronology	D.Phil, FSA
Dr Jean-Luc Schwenninger	Optically Stimulated Luminescence Dating	PhD
Dr David Higgins	Clay Pipe	BA, PhD, MCIfA
Dr Hugo Anderson- Wymark	Flint	BSc, PhD, FSA Scot, MCIfA
Dr Damian Goodburn- Brown	Ancient Woodwork	BA, PhD

APPENDIX H DOCUMENTARY ARCHIVING

H.1 Standard methodology – summary

- H.1.1 The documentary archive constitutes all the written, drawn, photographic and digital records relating to the set up, fieldwork and post-excavation phases of the project. This documentary archive, together with the artefactual and environmental ecofact archive collectively forms the record of the site. The report is part of the documentary archive, and the archive must provide the evidence that supports the conclusions of the report, but the archive may also include data which exceeds the limitations of research parameters set down for the report and which could be of significant value to future researchers.
- H.1.2 At the outset of the project OA Archive department will contact the relevant local receiving museum or archive repository to notify them of the imminent start of a new fieldwork project in their collecting area. Relevant local archiving guidelines will be observed and site codes, which integrate with the receiving repository, will be agreed for labelling of archives and finds.
- H.1.3 Where there is currently no receiving museum for the project archive, although responsibility for the archive ultimately lies with the client, OA will hold the archive on their behalf for a period of up to 3 years, after which time (in the event that a suitable depository has not been secured) provision for further storage of the archive will be made in agreement with Oxford Archaeology, the client and the relevant County Council.
- H.1.4 During the course of the project the Archive department will assist the Project Manager in the management of the archive including the cataloguing and development technique suitable for photographic archive requirements.
- H.1.5 The hard copy site archive will be security copied by scanning to PDFa and a copy of this will be housed on the OA Archive Server. A further copy will be sent to ADS, along with the born digital elements of the archive. If requested, a copy on disk will also be sent to the receiving museum. This will act as a safeguard against the accidental loss and the long-term degeneration of paper records and photographs.
- H.1.6 Born digital data will only be printed to hard copy for the receiving museum where practical. Archive elements that need maintaining in digital form will be sent to ADS in accordance with Arches Standard and ADS guidelines. A copy will be sent to the receiving museum by CD and back-up copies will be stored on the OA digital network. In most cases a digital copy of the report will be included in the OASIS project library hosted by ADS.
- H.1.7 Prior to deposition the Archive department will contact the museum regarding the size and content of the archive and discuss any retention and dispersal policies which may be applicable in line with local and SMA Guidelines ' Selection, Retention & Dispersal of Archaeological Collections' 1993.
- H.1.8 The site archive will then be deposited with the relevant receiving museum or repository at the earliest opportunity unless further archaeological work on the site is expected. The documentary archive will include correspondence detailing landowner

consent to deposit the artefacts and any copyright licences in accordance with the receiving museum guidelines. Deposition charges will be required from the client as part of the project costs but the level of the fee is set by the receiving body.

- H.1.9 Oxford Archaeology will retain full copyright of any commissioned reports, tender documents or other project documents, under the Copyright, Designs and Patents Act 1988 with all rights reserved; excepting that it will provide a licence to the client in all matters directly relating to the project as described in the Written Scheme of Investigation.
- H.1.10 OA will advise the client of any such materials supplied in the course of projects which are not OA's copyright.
- H.1.11 OA undertakes to respect all requirements for confidentiality about the client's proposals provided that these are clearly stated. It is expected that such conditions shall not unreasonably impede the satisfactory performance of the services required. OA further undertake to keep confidential any conclusions about the likely implications of such proposals for the historic environment. It is expected that clients respect OA's general ethical obligations not to suppress significant archaeological data for an unreasonable period.

H.2 Relevant industry standards and guidelines

- H.2.1 At the end of the project the site archive will be ordered, catalogued, labelled and conserved and stored according to the following national guidelines:
- H.2.2 The 2014 EAC Guidelines A Standard and Guide to the Best Practice for Archaeological Archiving in Europe (GB) Perrin K, Brown E et al.
- H.2.3 The 2014 CIFA Standard and Guidance for the Creation, Compilation, Transfer and Deposition of Archaeological Archives.
- H.2.4 The 2011 AAF guide Archaeological Archives A Guide to Best Practice in Creation, Compilation, Transfer and Curation. Brown D.
- H.2.5 The UKIC's Guidelines for the preparation of excavation archives for long-term storage.
- H.2.6 The MGC's Standards in the museum care of archaeological collections.
- H.2.7 Local museum guidelines such as Museum of London Guidelines: (<http://www.museumoflondonarchaeology.org.uk/English/ArchiveResearch/DeposResource>) will be adopted where appropriate to the archive collecting area.
- H.2.8 The site archive will be prepared to at least the minimum acceptable standard defined in Management of Archaeological Projects 2, English Heritage 1991.

H.3 Relevant OA manual and other supporting documentation

- H.3.1 The OA Archives Policy.

APPENDIX I HEALTH AND SAFETY

I.1 Standard Methodology - summary

- I.1.1 All work will be undertaken in accordance with the OA Health and Safety Policy (Revision 19, July 2016), the OA Site Safety Procedures Manual, a site-specific Risk Assessment and, if required, Safety Plan or Method Statement. Copies of the site-specific documents will be submitted to the client or their representative for approvals prior to mobilisation, and all relevant H and S documentation will be available on site at all times. The Health and Safety documentation will be read in conjunction with the project WSI.
- I.1.2 Where a project falls under the Construction (Design and Management) Regulations (2015), all work will be carried out in accordance with the Principal Contractor's Construction Phase Plan (CPP).

I.2 Relevant industry standards and guidelines

- I.2.1 All work will be carried out according to the requirements of all relevant legislation and guidance, including, but not exclusively:
 - I.2.2 The Health and Safety at Work Act (1974).
 - I.2.3 Management of Health and Safety at Work Regulations (1999).
 - I.2.4 Manual Handling Operations Regulations 1992 (as amended).
 - I.2.5 The Reporting of Injuries, Diseases and Dangerous Occurrences Regulations (2013).
 - I.2.6 The Construction (Design and Management) Regulations (2015).
 - I.2.7 Relevant OA manual and other supporting documentation
 - I.2.8 The OA Health and Safety Policy.
 - I.2.9 The OA Site Safety Procedures Manual.
 - I.2.10 The OA Risk Assessment templates.
 - I.2.11 The OA Method Statement template.
 - I.2.12 The OA Construction Phase Plan template.

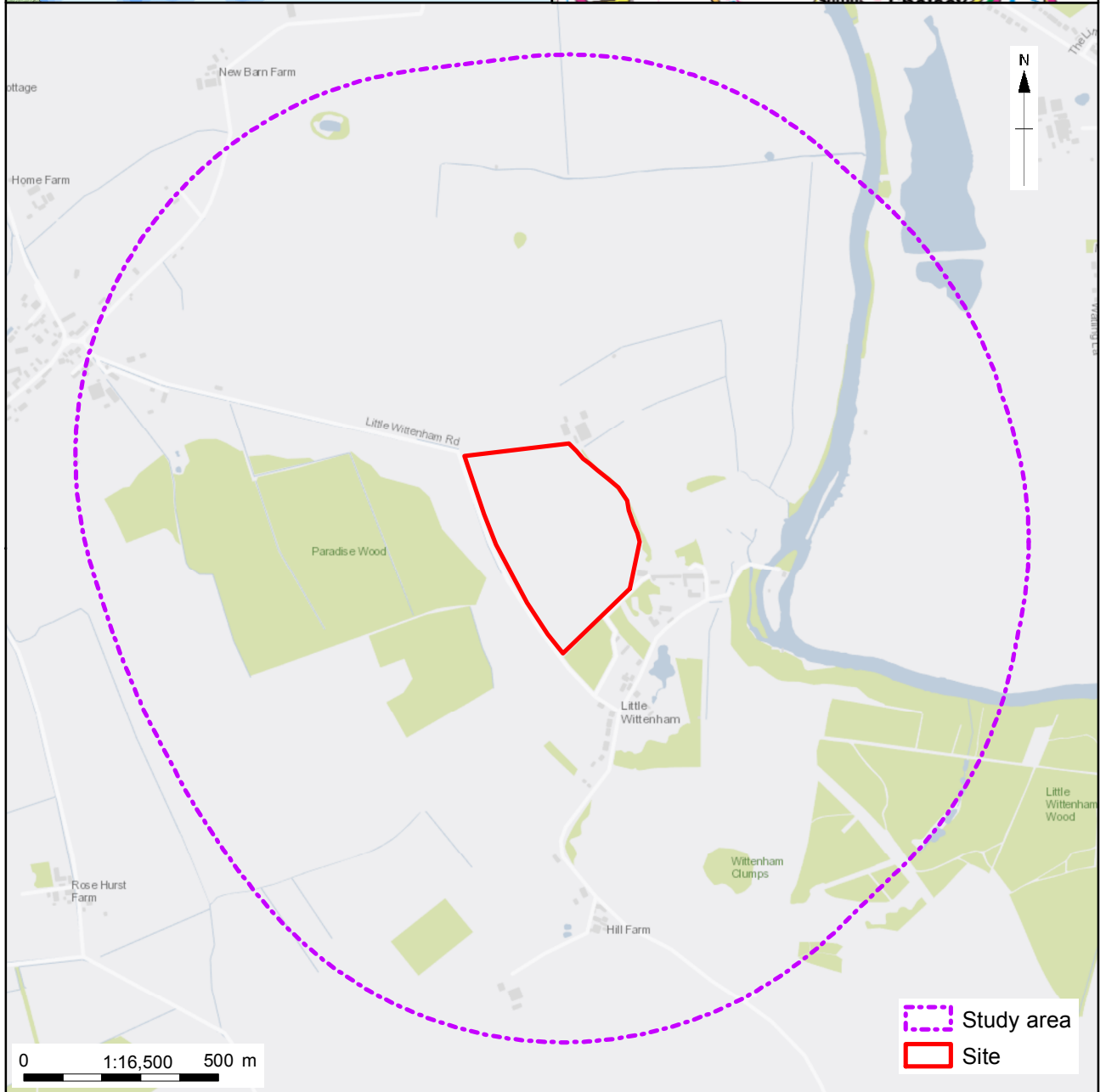
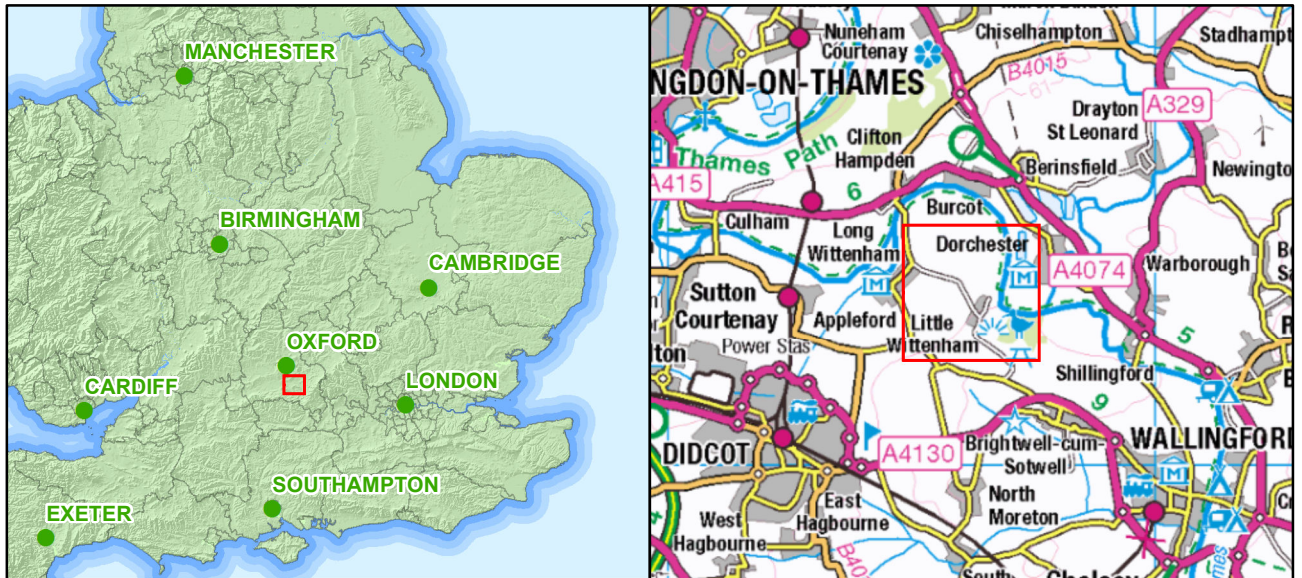
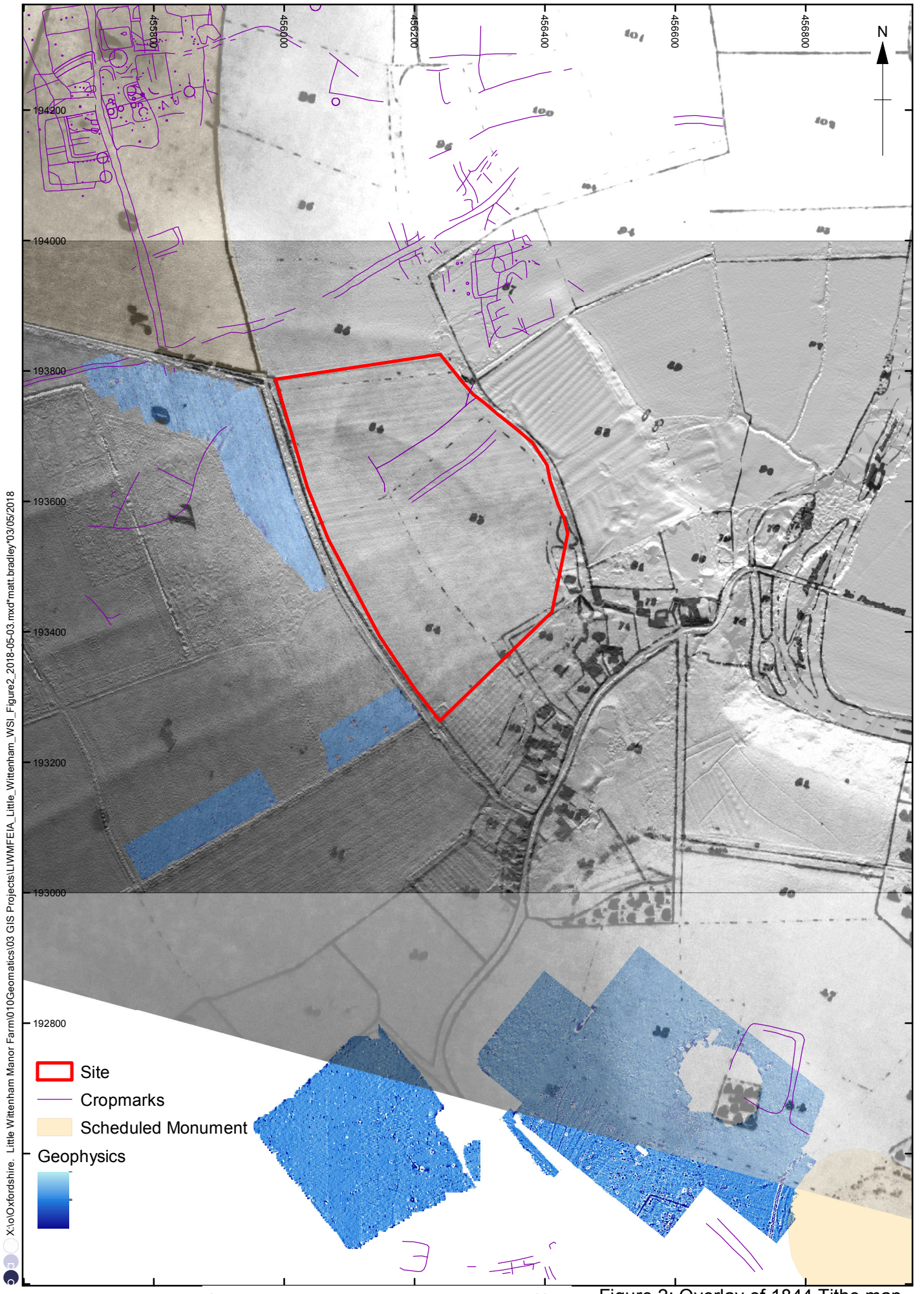


Figure 1: Site location



X:\Oxfordshire - Little Wittenham Manor Farm\010\Geomatics\03 GIS Projects\L1WMEIA_Little_Wittenham_WSI_Figure2_2018-05-03.mxd matt.bradley\03/05/2018

- Site
- Cropmarks
- Scheduled Monument
- Geophysics**
-

0 500 m
1:7,500 @ A4

Figure 2: Overlay of 1844 Tithe map, LiDAR, cropmarks, and nearby geophysical survey



Figure 3: Overlay of 1975 aerial photograph showing cropmarks transcribed by the National Mapping Programme



Figure 4: Trench layout overlaid on aerial photograph

0 150 m

1:2,500 @ A4

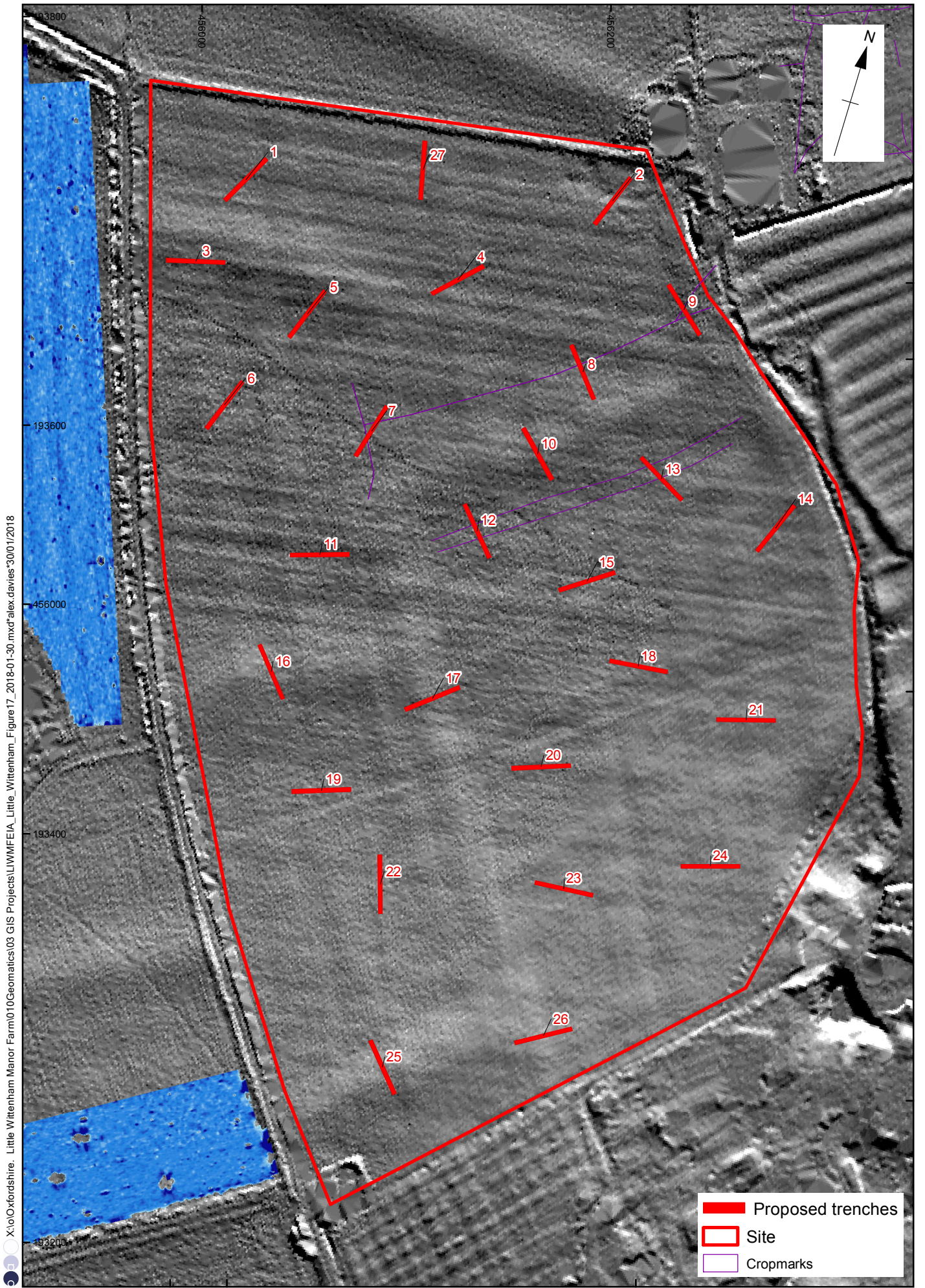


Figure 5: Trench layout overlaid on LiDAR survey



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

Janus House
Osney Mead
Oxford OX2 0ES

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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