

Areas 2 and 3, South Wokingham Strategic Development Location

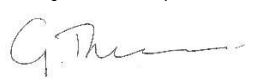
Wokingham, Berkshire

Written Scheme of Investigation

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Areas 2 and 3**South Wokingham Strategic Development Location***Written Scheme of Investigation for an Archaeological Strip, Map
and Sample Excavation**Centred on SU 8333 6804***Contents**

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1 INTRODUCTION

1.1 Project details

- 1.1.1 Oxford Archaeology (OA) has been commissioned by Miller Homes Ltd (the client) through Pegasus Group (the client's archaeologist), to produce this Written Scheme of Investigation (WSI) for the proposed strip, map and sample (SMS) excavation of Areas 2 and 3 within the proposed South Wokingham Strategic Development Location (SDL).
- 1.1.2 The work is being undertaken as a condition of planning permissions for a housing development in South Wokingham SDL. Most of the Area 2 and 3 excavations are in connection with Wokingham Borough Council planning ref: 190914 (South Wokingham SDL – Phase 2a). SMS excavation area 2 also includes small parts of the adjoining new line of Waterloo Road and associated new junctions which is covered by a separate planning application (Wokingham Borough Council planning ref: 240892, Land at Phase 2a & 2b of South Wokingham SDL). The separate application areas are shown on Figures 1 and 2.
- 1.1.3 Although Wokingham Borough Council and Berkshire Archaeology (BA), who provide them with archaeological advice and monitoring, have not set a brief for the work, a mitigation statement has been prepared by Pegasus Group (2020) detailing the anticipated requirements for work necessary to discharge the planning condition. This document outlines how OA will implement those requirements. A separate WSI will be prepared for an additional trial trench evaluation and SMS excavation of Area 1 in due course.
- 1.1.4 All work will be undertaken by OA in accordance with the Chartered Institute for Archaeologists' *Code of Conduct* (CIfA 2014) and the *Standard and Guidance for Archaeological Excavation* (CIfA 2023a and 2023b). The works will also be completed in accordance with BA Standards which are consistent with and reference the CIfA documents (BA n.d.).

1.2 Location, topography and geology

- 1.2.1 The larger development area (the site) is located to the south of the railway line between Wokingham and Bracknell, encompassing mixed arable and pasture farmland and small wooded areas (Fig. 1). This is crossed by public rights of way and Easthampstead Road, Waterloo Road and the recently constructed William Heelas Way.
- 1.2.2 The topography of the site is varied and is influenced by three interconnected minor watercourses, which pass through it on a north-east to south-west alignment and a north-west to south-east alignment, creating shallow valleys. The northern edge of the site follows the crest of two ridgelines, and the land at the northern edge is generally higher than the rest of the site. The eastern and north-eastern parts of the site, away from the watercourses and shallow valleys, is more level.
- 1.2.3 SMS Areas 2 and 3 are located to the east of William Heelas Way and close to the eastern boundary of the site (Figs 1 and 2). The two areas are situated between c 64 and 70m aOD.

- 1.2.4 The solid geology recorded across the central and eastern part of the site, encompassing Areas 2 and 3, is mapped as London Clay Formation. This is a clay, silt and sand sedimentary bedrock formed between 56 and 47.8 million years ago during the Palaeogene period (BGS geology viewer). The solid geology recorded across the western end of the site comprises sand of the Bagshot Formation. This is a sedimentary bedrock formed between 56 and 47.8 million years ago during the Palaeogene period.

2 ARCHAEOLOGICAL AND HISTORICAL BACKGROUND AND POTENTIAL

2.1 Archaeological and historical background

- 2.1.1 The site has been subject to an archaeological desk-based assessment (Pegasus Group 2019) and a geophysical survey (Magnitude 2018). Two targeted trial-trench evaluations have been carried out along the course of a proposed link road (AOC 2017; CA 2018) and a pre-determination trial-trench evaluation was later undertaken across the area of the wider development proposal by OA in 2019.
- 2.1.2 In summary, two 'Areas of High Archaeological Potential', identified by Wokingham Borough Council (WBC), are partially located within the site. One is associated with undated cropmarks located beyond the site boundary. The other is associated with below-ground remains of a field system of possible Roman origin, an area of ridge and furrow earthworks and a small number of find spots including prehistoric flint and Roman and medieval pottery fragments.
- 2.1.3 The local geology was found to be not conducive to geophysical (magnetometer) survey (Magnitude 2018). The 2018 targeted trial-trench evaluation by Cotswold Archaeology along the course of the Southern Distributor Road (SDR) within the northern aspect of the Site comprised the excavation of 128 trenches. No remains of high archaeological significance were identified, but evidence for Romano-British agricultural activity in the form of field system ditches and enclosures, and one middle Iron Age pit which contained iron working debris, were found (CA 2018).
- 2.1.4 An earlier eight-trench evaluation located to the east of the SDR was undertaken in 2016 by AOC Archaeology. This revealed a series of ditches and gullies indicative of a managed agricultural landscape, which were assumed to be Roman in date (AOC 2017).
- 2.1.5 Increased potential for archaeological remains towards the east of the application area is indicated both by the previous evaluations and the presence of a settlement site at Jennett's Park (Simmonds *et al.* 2009), c 1km to the east of the application area boundary where excavation revealed evidence of Mesolithic and Bronze Age activity, followed by the establishment of a settlement during the middle Iron Age. This farmstead continued in use into the late Iron Age when a complex of field boundary ditches was established but the farmstead was abandoned just before the start of the Roman period. The complex of boundary ditches continued in use up until the early 2nd century.

- 2.1.6 The fieldwork undertaken by OA in 2019 evaluated the wider site and confirmed the results of previous archaeological investigations in the locality, revealing former field boundaries or an absence of archaeological features across much of the area (OA 2019). There were two areas that exhibited exceptions to this trend. Trenches 33, 35 and 36 contained a number of ditches on different alignments to the surrounding field systems, although artefactual dating evidence was limited to a single sherd of uncertain prehistoric or Saxon date. Trenches 94, 97, 98, 101 and 102 contained a dispersed mix of ditches, pits and postholes indicating the presence of low-density settlement activity. The only dating evidence from this group of trenches was recovered from a single post-medieval ditch in Trench 97. The cluster of pits and postholes suggest the presence of settlement activity, although these remained undated.

2.2 Potential

- 2.2.1 The previous works on the site have identified three areas which require SMS mitigation due to their archaeological potential. Areas 2 and 3 are included in this WSI.

Area 2

- 2.2.2 Towards the eastern end of the site, close to Big Wood House, this 9,300m² area encompasses Trenches 97, 98, 101, and 102 from the Oxford Archaeology evaluation. These trenches identified a dispersed mix of ditches, pits and postholes which may be related to the Iron Age/Romano-British agricultural activity to the east of the site at Jennett's Park (Simmonds *et al.* 2009) despite remaining undated in the evaluation. This area of SMS aims to determine the date and extent of this field system.

Area 3

- 2.2.3 North of Area 2, this 2,500m² area encompasses Trench 94 where dispersed cut features of potentially Iron Age/Romano-British date were also identified. This area of SMS has the same aims as Area 2.

3 PROJECT AIMS

3.1 General

- 3.1.1 The overarching aims of the excavation are to determine the nature, character, function, date and purpose of the archaeological activity at the site, and to disseminate the results to stakeholders and the wider public. To do this, the general aims are:
- i. to determine or confirm the general nature of any remains present,
 - ii. to determine, through the recovery of artefact assemblages and organic materials for absolute dating, the relative chronology of any activity and occupation,
 - iii. to examine the evidence for occupation and land-use and spatial and chronological relationships,

- iv. to attempt a reconstruction of the history and use of the sites and their functions,
- v. to recover palaeoenvironmental remains to determine past environs and site activities,
- vi. to generate an accessible and useable archive which will allow future research of the evidence to be undertaken, if appropriate, and
- vii. to disseminate the results of the work in a format and manner proportionate to the significance of the findings

3.2 Specific aims and objectives

3.2.1 The specific aims and objectives of the excavation relate to the mitigation areas and include:

- viii. To determine the date and purpose of the possibly Iron Age/Romano-British features anticipated in Areas 2 and 3, and to establish the relationship between these excavation areas.

3.3 Research frameworks

3.3.1 These SMS excavations take place within Berkshire and are covered by the Solent Thames Regional Research Framework (Hey and Hind 2014). Due to the low level of data currently available for the remains within SMS Areas 2 and 3 it is difficult to be specific on which parts of the Research Framework will apply. The results of the excavation will be reviewed on a weekly basis and will include spot dating of artefacts to establish which questions from the research agenda can be applied.

3.3.2 The following themes have been extracted from the Framework that are most likely to apply for Iron Age and Roman remains at this location:

Iron Age

- **10.4 Landscape and land use**
 - **10.4.7**
 - Research may show whether fields were mainly created to control grazing. The importance of grassland management in the Iron Age economy, and the degree of specialisation of grazing farmsteads, for example whether horse raising was a major economic activity in the Thames Valley, should be explored.
- **10.6 Social organisation**
 - **10.6.7**
 - The size of communities in the Iron Age, their social and economic relationships and the degree of economic specialisation need more investigation.
- **10.7 The built environment**
 - **10.7.4**
 - ... More balanced sampling of Iron Age sites, concentrating less on pits, and targeting four-post structures and ditches etc. would be beneficial.

Roman

- **12.3 Environmental evidence**
 - **12.3.1**
 - Environmental evidence should be collected and analysed to help identify how field systems operated and developed.
 - **12.3.2**
 - Variation in resources and agricultural regimes from different scales of farm needs to be investigated.
- **12.4 Landscape and land use**
 - There have been extensive programmes investigating exploitation of the chalk downland and river valleys, but less of the claylands for example. This imbalance needs to be addressed so that an overall pattern across the region can be developed for the existence and spread of fields, stock raising and woodland. The importance of the full range of palaeo-environmental evidence in this respect must be emphasised.

4 PROJECT SPECIFIC EXCAVATION AND RECORDING METHODOLOGY

4.1 Scope of works

4.1.1 The excavation areas are shown on Figure 3 in relation to site constraints including utilities. Area 2 is to be completed initially with Area 3 taking place at a later date. The site area for Area 3 is bisected by two recently undergrounded electrical cable runs. The area has also been adjusted slightly to avoid impacting a hedgerow in the north-west corner. Great care will be needed to avoid damaging the cables, as detailed in the site-specific Health & Safety Method Statements for each area. A 10m wide exclusion zone will be left on either side of the cables. The areas to be excavated during this phase of works are as follows:

- Area 2: 10,600m²
- Area 3: 2,500m²

4.2 Programme

4.2.1 It is anticipated that the fieldwork will take a total of 6 weeks to complete, by a team consisting of a Project Officer directing up to 6 Project Archaeologists, under the management of a Senior Project Manager. The programme and staff resources may vary from those summarised here to reflect the local site conditions, the density of archaeological remains encountered or the division of access to each area.

4.2.2 All fieldwork undertaken by OA is overseen by the Head of Fieldwork (Oxford), Gerry Thacker 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). The content of the appendices will only apply where relevant to this project and where they are not

- otherwise contradicted by the content of the site-specific methodology outlined below. The site-specific content takes precedence over the content of the appendices
- 4.3.2 Excavation of the mitigation areas may be undertaken as a single stage or may be divided into phases or by area with this to be confirmed by the client. They may be undertaken in any order, dependant on the preference of the client and in light of the construction programme. No construction activity will start within the individual mitigation areas until the fieldwork has been completed to a satisfactory standard and agreed between the client's archaeological consultant and planning archaeologist. It is expected that the mitigation areas will be 'signed off' (i.e. released for construction) by the planning archaeologist either as a whole or separately.
- 4.3.3 Following machine clearance of the overburden the first site meeting will be arranged between the client's archaeological consultant, the planning archaeologist and OA to review the initial results. This will aim to establish an excavation sampling strategy. This strategy will remain flexible to respond to the results of the fieldwork as the excavation progresses.
- 4.3.4 Contingency provision will be made for the expansion of excavation areas in the instance that archaeological remains of significance (eg burials) extend beyond their edge and where these remains would be impacted upon by development. The extent of this contingency area will be limited to a maximum of 20% of the overall area, but would be used to extend the areas where most appropriate.
- 4.3.5 All stripped areas will remain open for an appropriate number of days to be determined through on-site experience to ensure that any archaeological remains that are not immediately apparent have sufficient time to 'weather out' and be identified and recorded. All excavation areas and features will be digitally planned utilising OA's Webmap programme. This will be made accessible to the archaeological advisor and archaeological consultant for the duration of the excavation to allow unrestricted real time viewing of the site plan and data as the excavation progresses. This will show all surveyed data, including excavated interventions, allowing distance 'monitoring' of the excavations' progress to supplement site visits.
- 4.3.6 OA's general excavation sampling strategy is set out in Appendix A and will be modified according to the outcome of the first site meeting.
- 4.3.7 OA will seek to assess the importance the site remains and features encountered throughout the investigation and will vary the density of feature-type excavation accordingly. This will not seek to reduce excavation that may adversely and negatively affect the results. This approach will actively identify features and areas that may benefit from more intensive excavation at the expense of other features where multiple excavations are unlikely to yield additional benefit. This will be implemented using advice from OA's specialists and through consultation and agreement with the client's archaeological consultant and the planning archaeologist. Sufficient hand excavation will be undertaken to characterise and understand the archaeological activity as a baseline across each area of the site and to fulfil the project aims.

- 4.3.8 All archaeological features and deposits will be hand-excavated unless otherwise agreed. Machine excavation of archaeological deposits will normally be limited to the exposure of buried secondary archaeological horizons once an upper layer has been suitably sampled, the excavation of very large ditch sections subsequent and supplementary to hand-excavated interventions, or to facilitate access and excavation of individual deep features such as wells or waterholes.
- 4.3.9 Where deposits are considered to have the potential to yield environmental or organic material that may contribute to site specific and regional research objectives, a programme of bulk soil sampling will be implemented. Bulk soil samples will normally comprise 40 litres or 100% of a deposit (whichever is less). The sampling strategy will be refined on-site in consultation with the client's archaeological consultant, planning archaeologist, OA's Senior Project Manager, OA's Environmental Manager and, where relevant, OA's Geoarchaeological Manager. The Regional Science Advisor for Historic England may also be consulted where deemed necessary.

5 PROJECT SPECIFIC REPORTING AND ARCHIVE METHODOLOGY

5.1 Programme

- 5.1.1 A Post-Excavation Assessment (PXA) report will be produced within six months of the completion of the fieldwork, unless otherwise agreed with the client's archaeological consultant and the planning archaeologist. This will include a revised Project Design with a proposal outlining the format and programme for the publication and archive of the project. It is expected that the final publication report will be issued within two years of the completion of the fieldwork.
- 5.1.2 An archive report (grey literature) will only be produced where the results do not warrant a detailed publication. In this instance the archive report will contain all site information and results, including specialist reports in full. An archive report will be supplemented by a summarised project report suitable for formal publication in a journal.
- 5.1.3 The PXA and final reports will be issued to the client's archaeological consultant for comment prior to revised versions being issued to the planning archaeologist for comment and, following any revisions, final approval.
- 5.1.4 Digital copies of the approved final PXA and archive and/or publication report in Adobe Acrobat (.pdf) format will be provided to the client's archaeological consultant and planning archaeologist. A digital copy of the archive report, if produced, will be submitted to the Berkshire Historic Environment Record (HER). Shapefiles of the final excavation areas and accompanying data will be provided to BA and the HER.

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 There is currently no museum covering the Borough of Wokingham accepting documentary archives and finds assemblages arising from archaeological work. The archive will be held by OA until a suitable repository can be identified subject to financial agreement with the client. The long term storage of the archive will be reviewed within two years of being created.
- 5.4.2 A summary of OA's general approach to documentary archiving can be found in Appendix H.

6 DIGITAL DATA MANAGEMENT PLAN

6.1 Introduction

- 6.1.1 All digital data will be collected, stored and selected in line with the OA Data Management Plan (forthcoming).

6.2 Data collection

- 6.2.1 The data to be collected and created comprises that specific to the project. It does not include related information from the same development, such as site works undertaken by other contractors, except where the findings are fully integrated into this analysis.
- 6.2.2 Site survey data is captured using Leica survey equipment and imported into ArcGIS via FTP transfer. Final versions of site plans will be produced in ArcGIS, AutoCAD and/or Adobe Illustrator.
- 6.2.3 Section drawings are created by hand on drafting film and paper context records are created by hand on standard OA pro forma recording forms. Site registers, including contexts, drawings and samples, will be created digitally in the field using OA's bespoke digital recording system. Selected data will be transferred to digital format in line with OA archive preparation guidance. Digital photographic images are taken in accordance with OA's digital data guidance in its Photographic Recording Manual.

6.3 Data formats

- 6.3.1 Analytical data created during post-excavation will comprise a project-specific MS Access database.
- 6.3.2 Individual contributing specialists create MS Excel, MS Word and/or MS Access datasheets which may stand alone from the site database. Analytical data may also include GIS files, charts and figures in MS Excel and hand-drawn visuals.

6.3.3 OA use Microsoft Office, Adobe Acrobat and ArcGIS. File formats will be readable by these programmes. Where appropriate, AutoCAD files will be in a format that can be imported into GIS (for example, .dxf).

6.4 Data retention, deposition, and version control

6.4.1 Strict version control will be applied throughout the project in line with the OA Data Management Plan (DMP). It is proposed that only the final version of all born digital documents (registers, reports, databases, images) will be selected for inclusion in the Preserved Archive. Digital photographs will be assessed during post-excavation and selection based on the principles set out in the OA DMP. All raw and processed survey data will be included in the preserved archive.

6.4.2 The digital data will be reviewed following data gathering and analysis to check that data is being properly preserved and version control upheld in line with the OA DMP. The final decision about selection for inclusion in the Preserved Archive will be made following the reporting stage of the project and enacted during archive completion.

6.4.3 The project executive will decide the fate of all de-selected material and archaeological digital data although it is likely this will consist mainly of duplicate and superseded data or confidential business data. It is envisaged that the de-selected material will be retained on the OA Archive Server for a minimum of three years following the completion of the project at which point they will be reviewed and deleted as necessary in line with the OA DMP. Information will be held and discarded in accordance with good business practice and GDPR guidelines.

6.4.4 The site's digital archive will be deposited with the Archaeological Data Service or another publicly accessible CoreTrustSeal certified repository on completion of the archaeological programme. BA and Wokingham Borough Council will be notified when this is complete.

7 HEALTH AND SAFETY

7.1 Roles and responsibilities

7.1.1 The Senior Project Manager has responsibility for ensuring that safe systems of work are adhered to on site. They delegate elements of this responsibility to the senior site staff (Project Officer or Project Supervisor) who implements these on a day-to-day basis.

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

7.2 Method statement and risk assessment

7.2.1 A summary of OA's general approach to health and safety can be found in Appendix I. A detailed risk assessment will be completed and approved prior to the start of the works and will be kept on site, along with OA's standard Health and Safety file, which will contain all relevant health and safety documentation.

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

7.3 Monitoring of works

- 7.3.1 Pegasus will provide notice of the commencement of the SMS Excavation works to BA, who provide the archaeological advice service for Windsor and Maidenhead, Reading, Bracknell Forest, Slough, and Wokingham local authorities.
- 7.3.2 The Planning Archaeologist 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. In addition, remote monitoring in the form of digital communications and access to OA's digital recording platforms (webmap) may be provided to facilitate monitoring where site access is not achievable for all parties. Distance monitoring will be subject to agreement with BA.

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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.2.1 The Chartered Institute for Archaeologists (CIfA) Standard and Universal guidance notes relevant to fieldwork are:

- Standard for archaeological field evaluation, 2023
- Standard for archaeological excavation, 2023
- Standard for archaeological monitoring and recording, 2023
- Universal guidance for archaeological field evaluation, 2023
- Universal guidance for excavation, 2023
- Universal guidance for archaeological monitoring and recording, 2023

- A.2.2 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 GPS/GNSS (Global Positioning System/Global Navigation Satellite System), hand-measured elements, Total Station Theodolite (TST) survey utilising Reflectorless Electronic Distance Measurement (REDM), or photogrammetry where appropriate.
- B.1.4 Before the main work commences, a network of control stations will be laid out encompassing the area as necessary. 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 GNSS, or other appropriate method, will be used to orientate the control network to National Grid or other recognised coordinate system.
- B.1.5 Control stations will be checked by closed traverse and/or GNSS, as appropriate. The accuracy of these control stations will be accessed on a regular basis and re-established accordingly. Control 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 uploaded onto survey equipment as appropriate. 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 recording daily tasks and conditions as appropriate.
- B.1.8 All spatial data will be periodically downloaded uploaded and backed up to our central servers via ftp. It will be cleaned, validated and inspected.

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- B.1.9 All survey data will be documented on daily survey record sheets as necessary. 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 summary of survey work will be produced as needed to access development and highlight problems. 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 via ftp to Oxford on a regular 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 GNSS. 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 Areas of complex stratigraphy will be hand drawn or recorded by photogrammetry as appropriate. Where 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 GNSS. 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 Photogrammetry may also be used to record standing structures or burials. This will be carried out in line with Standard OA procedures for photogrammetry.
- 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.
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B.1.17 Information (metadata) on all other digital files will be created and stored as appropriate. At the end of the survey all data recorded will be made available for archiving purposes.

B.2 Relevant industry standards and guidelines

B.2.1 Historic England, 2017 Understanding the Archaeology of Landscapes A Guide to Good Recording Practice

B.2.2 Historic England, 2015 Metric Survey Specifications for Cultural Heritage (3rd edn)

B.2.3 Historic England, 2016 Understanding Historic Buildings: A Guide to Good Recording Practice

B.2.4 Historic England, 2017 Photogrammetric Applications for Cultural Heritage: Guidance for Good 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 Historic England 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 Historic England, 2010 Waterlogged Wood: Guidelines on the recording, sampling, conservation and curation of waterlogged wood.
- C.2.2 Historic England, 2018 Waterlogged Organic Artefacts: Guidelines on their Recovery, Analysis and Conservation.
- C.2.3 Historic England, 2011 Environmental Archaeology. A guide to the theory and practice of methods, from sampling and recovery to post excavation, (2nd ed)
- C.2.4 Historic England, 1998 Dendrochronology: Guidelines on Producing and Interpreting Dendrochronological Dates (revision due 2021).
- C.2.5 University of Bradford, 2019 Archaeomagnetism: Magnetic Moments in the Past <https://www.brad.ac.uk/archaeomagnetism/>
- C.2.6 Historic England, 2008 Luminescence Dating. Guidelines on Using Luminescence Dating in Archaeology (revision due 2020).
- C.2.7 Historic England, 2008 Guidelines for the Curation of Waterlogged Macroscopic Plant and Invertebrate Remains (currently being revised).
- 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.2.10 Historic England, 2017 Organic Residue Analysis and Archaeology.
- C.2.11 Baker, P and Worley, F, 2019 Animal Bones and Archaeology: Recovery to archive. Historic England, London
- C.2.12 Bayliss, A and Marshall, P, 2022 Radiocarbon Dating and Chronological Modelling: Guidelines and Best Practices, Historic England, London

C.3 Relevant OA manual and other supporting documentation

C.3.1 Oxford Archaeology 2017. Environmental Sampling Guidelines, 4th 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 Finds Team Leader. 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 Finds Team Leader 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 Team Leader 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 Fieldwork Team Leader and the Post-excavation Team Leader. Project managers will keep the Finds Team Leader 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 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 Finds Team Leader.
- 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 Team Leader 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 team prepares the finds assemblage for deposition with the receiving museum. Discussions will be held with the museum, the excavator and the Finds Team Leader 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 ClfA, 2014 (updated 2020) Standard and guidance for the collection, documentation, conservation and research of archaeological materials
- D.2.2 Society of Museum Archaeologists, 1993 Selection, retention and dispersal of Archaeological Collections. Download available via <http://www.socmusarch.org.uk/publica.htm>)
- D.2.3 UKIC, 1983 Packaging and Storage of Freshly-Excavated Artefacts from Archaeological Sites. Conservation Guidelines No.2. Archaeology Section, United Kingdom Institute for Conservation.
- D.2.4 UKIC, 1988 Excavated Artefacts and Conservation: UK sites Revised Edition. Conservation Guidelines No.1. Archaeology Section, United Kingdom Institute for Conservation.

D.2.5 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), Historic England (2018), the Advisory Panel on the Archaeology of Burials in England (APABE, 2015, 2017) and British Association of Biological Anthropology and Osteoarchaeology Code of Practice (2019) and Code of Ethics (2019). 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 Historic England and Church of England (2005) and updated by the Advisory Panel on the Archaeology of Burials in England (2017), 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 (those less than 100 years old) 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 digital imaging is used it will be done in accordance with the British Association of Biological Anthropology and Osteoarchaeology Recommendations on the Ethical Issues Surrounding 2D and 3D Digital Images of Human Remains (2019).
- E.1.11 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.1.12 Levels will be taken. For inhumations this will be on the skull, pelvis and feet as a minimum.
- E.1.13 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.1.14 Unurned cremations will not usually be half sectioned, but excavated in spits and/or quadrants (i.e. large deposits or spreads), or recovered as a bulk sample.
- E.1.15 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, 2017).
- E.1.16 Unless deemed osteologically or archaeologically important disarticulated bone / charnel 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.1.17 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.1.18 Pyre debris dumps will be half sectioned or quadrant and will be subject to 100% sampling.
- E.1.19 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.

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- E.1.20 Funerary structures, such as brick shaft graves and/or vaults will be recorded by photogrammetry or 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.1.21 Memorials, including headstones, revealed within the areas of development will be recorded irrespective of whether they are believed to be in situ.
- E.1.22 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.1.23 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
 - Condition, completeness and fragmentation of stones, no longer in original positions
 - 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, 2013 Science and the Dead. A guideline for the destructive sampling of archaeological human remains for scientific analysis. English Heritage Publishing.
- E.2.2 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.2.3 Advisory Panel on the Archaeology of Burials in England, 2015 Large Burial Grounds. Guidance on sampling in archaeological fieldwork projects
- E.2.4 Association of Diocesan and Cathedral Archaeologists and APABE, 2010 Archaeology and Burial Vaults. A guidance note for churches. Guidance Note 2
- E.2.5 British Association of Biological Anthropology and Osteoarchaeology. 2019a Code of Practice (<http://www.babao.org.uk/index/ethics-and-standards>)
- E.2.6 British Association of Biological Anthropology and Osteoarchaeology. 2019b Code of Ethics (<http://www.babao.org.uk/index/ethics-and-standards>)
- E.2.7 British Association of Biological Anthropology and Osteoarchaeology, 2019c Recommendations on the Ethical Issues Surrounding 2D and 3D Digital Images of Human Remains (<http://www.babao.org.uk/index/ethics-and-standards>)
- E.2.8 Cox, M, 2001 Crypt archaeology. An approach. ClfA Paper No. 3
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- E.2.9 English Heritage, 2002 Human Bones from Archaeological Sites. Guidelines for producing assessment documents and analytical reports
- E.2.10 Historic England, 2018 The Role of the Human Osteologist in an Archaeological Fieldwork Project. Swindon, Historic England
- E.2.11 McKinley, J, and Roberts, C, 1993 Excavation and post-excavation treatment of cremated and inhumed human remains, ClfA Technical Paper No. 13
- E.2.12 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.2.13 McKinley, J, 2017 Compiling a skeletal inventory: cremated human bone. In Mitchell P, and Brickley, M (eds) Updated Guidelines to the Standards for Recording Human Remains, ClfA 14-19
- E.2.14 Mitchell P, and Brickley, M (eds) Updated Guidelines to the Standards for Recording Human Remains, ClfA 2017
- E.2.15 Mytum, H, 2000 Recording and Analysing Graveyards. CBA Handbook No. 15
- E.2.16 Reeve, J, and Adams, M, 1993 The Spitalfields Project. Volume I – The Archaeology Across the Styx. CBA Research Report No. 85
- E.2.17 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 Oxford Archaeology 2018 *Fieldwork Manual Human Remains* unpublished

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 Historic England Management of Research Projects in the Historic Environment (MoRPHE) 2015, 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 2015 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 their 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 Historic England 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 Historic England's Management of Research Projects in the Historic Environment (MoRPHE; HE 2015). 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 Historic England (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
John Cotter	Medieval and Post Medieval pottery, Clay Pipe and CBM	BA (Hons), MCIfA
Dr Alex Davies	Prehistoric Pottery	BA (Hons), MA, PhD, ACIfA
Edward Biddulph	Roman Pottery	BA (Hons), MA, MCIfA
Kate Brady	Roman Pottery	BA, ACIfA
Kirsty Smith	CBM and Fired Clay	BA (Hons), MA, ACIfA

Specialist	Specialism	Qualifications
Leigh Allen	Metalwork and worked bone	BA (Hons), PGDip
Anni Byard	Metalwork, coins and glass	MSc, MCIfA
Dr Ruth Shaffrey	Worked stone artefacts	BA, PhD, MCIfA
Dr Rebecca Nicholson	Fish and Bird Bone	BA (Hons), MA, DPhil, MCIfA, FSA Scot
Ian Smith	Animal Bone	BA (Hons), MSc, PCIfA
Dr Martyn Allen	Animal Bone	BA (Hons), MA, PhD
Adrienne Powell	Animal Bone	BA (Hons), MA
Dr Denise Druce	Archaeobotany	BA (Hons), PhD, MCIfA
Sharon Cook	Archaeobotany	BSc, MSc, ACIfA
Julia Meen	Archaeobotany	BSc (Hons), MA, MRes
Elizabeth Stafford	Geoarchaeology and land snails	BA (Hons), MSc
Carl Champness	Geoarchaeology	BA (Hons), MSc, ACIfA
Nicola Scott	Archaeological archive deposition	BA (Hons Dunelm)
Mike Donnelly	Flint	BSc, MCIfA
Dr Louise Loe	Human Bone	BA PhD, MCIfA, BABAO, FSA
Helen Webb	Human Bone	BSc, MSc, MCIfA, BABAO
Mark Gibson	Human Bone	BA, MSc, ACIfA, BABAO
Dr Lauren McIntyre	Human Bone	BSc, MSc, PhD, MCIfA, BABAO
Annsophie Witkin	Human Bone	BA (Hons), PhD, BABAO
Zoe Ui Choileain	Human Bone	Pg Dip, MA, MSc, BABAO
Natasha Dodwell	Human Bone	BA, MSc, BABAO

External archaeological specialists regularly used by OA

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

Specialist	Specialism	Qualifications
Professor Adrian Parker	Phytoliths and pollen	BSc (Hons), DPhil
Dr David Starley	Metalworking Slag	BSc (Hons), PhD
Wendy Carruthers	Charred and waterlogged plant remains	BA (Hons)
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	DPhil, FSA
Dr Jean-Luc Schwenninger	Optically Stimulated Luminescence Dating	PhD
Dr David Higgins	Clay Pipe	BA, PhD, MCIfA
Dr Hugo Anderson-Whymark	Flint	BSc, PhD, FSA Scot, MCIfA
Dr Damian Goodburn-Brown	Ancient Woodwork	BA, PhD
Dr David Dungworth	Archaeometallurgy and Glassworking	BA (Hons), 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 manager 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 completion of the report, 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 planning archaeologist.
- H.1.4 During the course of the project the Archive team will assist the Project Manager in the management of the archive including the cataloguing and development technique suitable for photographic archive requirements.

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- 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 full digital copy of the archive, including scanned hard copy and born digital data, will be deposited with and made publicly available on-line through the ADS. A further copy will be maintained on the OA server and if requested a copy on disk will also be sent to the receiving museum with the hard copy. 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 team 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 and may be subject to change during the lifespan of the project. Changes to archiving charges beyond OA's control will be passed across to the client.
- 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 the receiving repository or museum for the archive with a full licence for use to the client in all matters directly relating to the project as described in the Written Scheme of Investigation, and in line with the relevant receiving body guidelines.
- H.1.10 OA will advise the receiving repository or museum for the archive of 3rd party 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. Archaeological findings and conclusions can be kept confidential for a limited period but will be made publicly available in line with the above procedure either after a specified time period agreed with the client at the outset of the project, or where no such period is agreed, after a reasonable period of time. It is expected that clients respect OA's general ethical obligations not to suppress significant archaeological data for an unreasonable period.
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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 EAC, 2014 A Standard and Guide to Best Practice for Archaeological Archiving in Europe (EAC Guidelines 1)
- H.2.3 ClfA, 2014 (Updated 2020) Standard and Guidance for the Creation, Compilation, Transfer and Deposition of Archaeological Archives
- H.2.4 Brown, D, 2011 Archaeological Archives A Guide to Best Practice in Creation, Compilation, Transfer and Curation. AAF
- H.2.5 UKIC, 1990 Guidelines for the preparation of excavation archives for long-term storage
- H.2.6 SMA, 2020 Standards and Guidance in the 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, Historic England 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 current OA Health and Safety Policy, 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).

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- 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.

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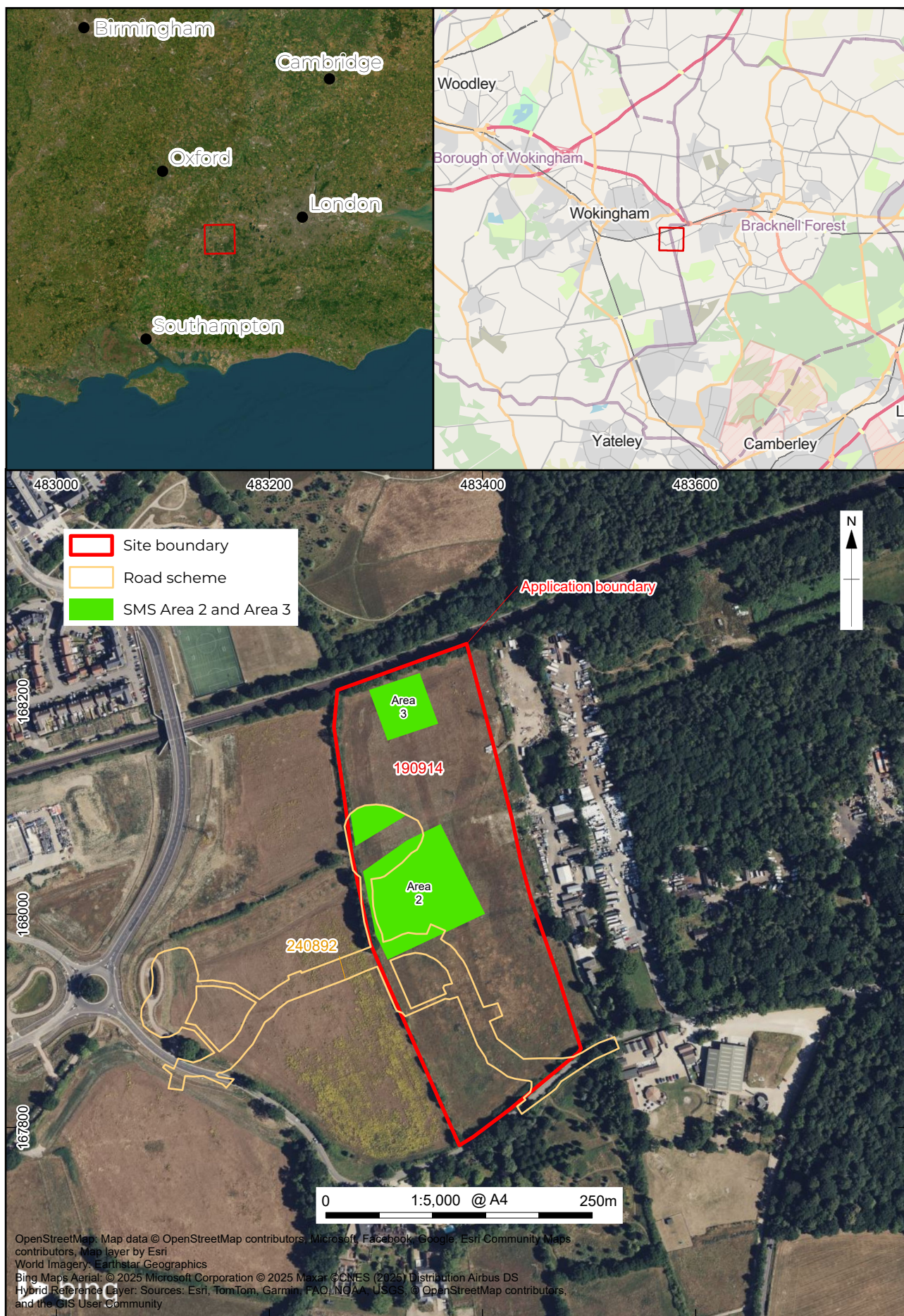


Figure 1: Location of archaeological excavation areas arising from planning applications 190914 and 240892

