



Rhodes Building and St Mary's Quad

- New Lift Shaft and Services

at

Oriel College, Oxford

Written Scheme of Investigation for

an Archaeological Watching Brief

Centred on SP 516 062

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Fig. 1. Location of Lift Shaft within the east wing of the Rhodes Building (Construction Drawing Ramboll Drg. No. 15400-S-100 C02)

1 INTRODUCTION

1.1 Project details

- 1.1.1 Oxford Archaeology (OA), has been commissioned by MBA on behalf of Oriel College to undertake an Archaeological Watching Brief during the installation of a new lift pit and services for the development of additional accommodation in the Rhodes Building, which forms the north range of St Mary's Quad, at Oriel College's central Oxford campus, on the High Street, henceforth the Site.
- 1.1.2 The Watching Brief will be undertaken in relation to a Planning Condition regarding Archaeology for Application No. 09/02820/FUL, and specifically in response to the associated brief set by David Radford, Oxford City Archaeologist, Oxford City Council which established the scope of work required. This Written Scheme of Investigation (WSI) outlines how OA will implement those requirements and should be considered in conjunction with that brief.
- 1.1.3 All work will be undertaken in accordance with local and national planning policies.

1.2 Location, geology and topography

- 1.2.1 The college lies within modern Oxford, on the south side of High Street, the Rhodes Building, forms the north range of St Mary's Quad, and fronts onto the High Street opposite St Mary's Church, between Oriel Street (to the west) and Magpie Lane (to the east). The lift pit is located in the eastern wing of the Rhodes Building, centred on National Grid Reference (NGR) 451626 206213 (Fig. 1).
- 1.2.2 Topographically the Site sits towards the southern end of a gravel promontory between the Thames to the west and the Cherwell to the east, and the underlying geology is First Terrace River Gravel (BGS Sheet 236). The site currently occupies relatively level ground at approximately 62 m OD.

1.3 Scope of works

- 1.3.1 The proposed scheme will entail a limited amount of groundworks:
- the excavation of a construction pit within which the new lift shaft will be built, the location of the Lift Pit is shown on Fig. 2
 - and excavated trenches to install new services (mainly foul and storm water, but also electrical) with associated inspection chambers/man holes, especially but not exclusively within St Mary's Quad. The final construction detail for these has not yet been issued.
 - Previous plans to extend the basement levels throughout the east wing have now been removed from the scheme.

2 ARCHAEOLOGICAL AND HISTORICAL BACKGROUND AND POTENTIAL

2.1 Archaeological and historical background

- 2.1.1 An archaeological desk based assessment was produced for this site by Wessex Archaeology (2010). The archaeological and historical background to the Site detailed in that DBA is summarised below.
- 2.1.2 The Site is located within the historic core of Oxford, close to the suggested defensive line of the primary Saxon burh and on the site of St Mary's Hall, one of Oxford

University's medieval academic halls. The hall was appropriated by Oriel College in 1326, but in the 16th century it developed a separate identity as St Mary's Society, which continued until 1902 when it returned to Oriel. The original building probably survived into the 17th century and its former site is now occupied by part of the Rhodes Building. Various medieval finds have been recovered from the vicinity of the Rhodes Building during building work in the late 19th and early 20th century (UAD Event No's 1228, 1148 and 1243).

Previous Investigations

- 2.1.3 An archaeological evaluation was undertaken at the Site by Wessex Archaeology (2011). Two test pits were excavated within the basement of the east wing of the Rhodes Building and one against the external, south wall of the east wing. The evaluation recorded masonry and brickwork structural remains of medieval/early post-medieval and 18th–20th century date, associated with possible medieval cellars and later recorded structures including the 'Doll's House' (built 1743) and the Rhodes Building itself. No artefactual, structural or stratigraphic evidence of pre-medieval date was recorded (Wessx 2011).
- 2.1.4 In the vicinity of the proposed lift pit 19th century brick cellar walls were recorded, with a light-well facing Magpie Lane. A well-preserved flagstone floor was partially exposed, lying directly on the natural gravel geology (at 59.15m AOD). Artefactual evidence from the cellar infilling, undertaken prior to the Rhodes Building construction, included 11th–13th and 16th–20th century pottery and many large masonry rubble blocks, suggesting the demolition of a medieval (11th–15th century) or early post-medieval (16th–17th century) cellared structure at this location, probably associated with shops fronting the High Street to the north (Wessex 2011).
- 2.1.5 In the south part of the east wing the test pitting identified a substantial masonry wall lying on the west side of Magpie Lane, along with a poorly-built masonry wall perpendicular to it, both on a slightly different alignment to 19th century brick walls built over them, indicate possible medieval structural remains.

2.2 Potential

- 2.2.1 There is a high potential to encounter in-situ and redeposited or demolished structural remains of the medieval and post-medieval periods. Remains are likely to include architectural stone, pottery, and other material culture.
- 2.2.2 There is some potential to encounter the remains of deep archaeological features / structures below the former basement floors. These features could be prehistoric or later.
- 2.2.3 There is moderate potential to encounter archaeological remains within service runs and associated man holes.

3 PROJECT AIMS

3.1 General

- 3.1.1 Identify and record any significant archaeological remains revealed by the ground works, paying particular regard to the potential for medieval and post-medieval remains associated with structures previously fronting onto the High Street and Magpie Lane.

3.2 Specific aims and objectives

- 3.2.1 The specific aims and objectives of the watching brief are to contribute, if appropriate, to the research agendas for Oxford in particular section 7.10 on the university and colleges during the medieval period (OARARA, 2012).

4 PROJECT SPECIFIC EXCAVATION AND RECORDING METHODOLOGY

4.1 Programme

- 4.1.1 The overall scheme is scheduled to take place throughout the remainder of 2013 and the first half of 2014. It is likely that the lift shaft will be excavated in August 2013, and the services in Spring 2014. The watching brief will undertaken by a Project Supervisor, under the management of Ben Ford, BA, MIFA, Senior Project Manager.
- 4.1.2 All fieldwork undertaken by Oxford Archaeology (South) is overseen by the Head of Fieldwork, Dan Poore MIFA.

4.2 Site specific methodology

- 4.2.1 A summary of OA's general approach to Watching Briefs 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).
- 4.2.2 A watching brief will be maintained during the period of all significant ground works, that may affect or reveal below ground remains.
- 4.2.3 The OA archaeologist will work alongside the groundworks contractor to monitor the groundworks. Should any items of archaeological interest be uncovered during the works then the groundworks contractor will immediately cease work to allow the archaeologist to excavate deposits and record the information. The groundworks contractor will not re-commence works until the archaeological contractor has confirmed that this is acceptable.
- 4.2.4 The presence/absence of archaeological features will be noted. If features are identified then sufficient work will be done to date, characterise and record the remains in accordance with the project objectives.
- 4.2.5 If an 'unexpected discovery' is encountered, the City Archaeologist, Principal Contractor and client will be alerted and consulted, and works in that area of site will cease until a appropriate mitigation strategy is agreed and adequate resources are available.
- 4.2.6 The term 'unexpected discovery', as defined in the brief, covers features whose existence and/or significance was unknown at the outset of the watching brief but subsequently prove to be potentially of county or national importance.
- 4.2.7 Recording standards will be the same as for formal excavations but some practical difficulties and constraints may impinge on this. Features will be recorded in plan at an appropriate scale and accurately located in relation to the National Grid. Each context will be recorded on pro-forma records which will include the following minimum details: character; contextual relationships; detailed description (dimensions and shape; soil components, colour, texture and consistency); associated finds; interpretation and phasing as well as cross-references to the drawn, photographic and finds registers. Normally each context will be recorded on an individual record. Sections will be drawn through all significant cut features and levelled to ordnance datum.



- 4.2.8 A black and white photographic record will be maintained including photos of all significant features and overall photos of each watching brief area. Selected colour digital images will also be taken.

5 PROJECT SPECIFIC REPORTING AND ARCHIVE METHODOLOGY

5.1 Programme

- 5.1.1 An archive report for the UAD and the client will be prepared. The report will be completed within four weeks of the completion of the fieldwork. A summary report (including illustrations where appropriate) will be sent to the editors of South Midlands Archaeology not later than three months after the end of the calendar year in which the work is undertaken.
- 5.1.2 If the results are of significant county, regional or national importance, an illustrated interim report together with a post-excavation assessment and updated project design (MAP Stage 3) should be submitted by the archaeological contractor and approved by the City Council Archaeologist within 6 months of the completion of fieldwork. Post-excavation analysis and report preparation should proceed in accordance with an agreed updated project design unless subsequent variations are agreed by the City Council Archaeologist
- 5.1.3 Bound copies of the completed report(s) will be provided to the client and Oxford City Council. A CD containing a copy of the report in Adobe Acrobat (.pdf) format will also be provided.

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 County 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, Ben Ford, has responsibility for ensuring that safe systems of work are adhered to on site. He delegates elements of this responsibility to the Project Officer/Supervisor, who implements these on a day to day basis.
- 6.1.2 The Director with responsibility for Health and Safety at OA is Robert Williams (Chief Operations Officer); he is advised by the OA Group Health and Safety Coordinator, Dan Poore (NEBOSH Level 3).



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 H and S file will be available to view at any time.

7 MONITORING OF WORKS

- 7.1.1 At least five days notice of the commencement of the watching brief works will be given to David Radford, City Council Archaeologist for Oxford.
- 7.1.2 David Radford will have free access to the site (subject to H and S considerations) and all records to ensure the works are being carried out in accordance with this WSI and all other relevant standards.
- 7.1.3 A programme of monitoring will be agreed with the Oxford City Council Archaeologist prior to the commencement of fieldwork. The archaeological contractor will keep the Oxford City Council Archaeologist regularly informed of the project's progress and facilitate the monitoring of the project at each stage, including post-excavation. There will be no substantial modification of the approved brief and project design without the prior consent of the Oxford City Council Archaeologist.
- 7.1.4 The Oxford City Council Archaeologist will be informed at the earliest opportunity of any unexpected discoveries, especially where there may be a need to vary the project design.

8 REFERENCES

Communities and Local Government, 2011 *National Planning Policy Framework*

English Heritage, 1991 *Management of Archaeological Projects*

Radford, D, 13th May 2013, Brief for an Archaeological Watching Brief, Oriel College, Oriel Square, Oxford. OCC

Wessex Archaeology, March 2010, 'Alterations and Additions to the Rhodes Building, Oriel College, Oxford: Archaeological Desk-Based Assessment. Unpublished client report ref: 73970.02

Wessex Archaeology, October 2011, Alterations and Additions to the Rhodes Building, Oriel College, Oxford. Archaeological Evaluation Report. Unpublished client report ref: 73971.02

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 excavated trenches. This will normally be a JCB or 360° tracked excavator with a 1.8 m to 2 m wide toothless ditching bucket. For work with restricted access or working room a mini excavator will 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 of the trench 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, the trenches will be backfilled with excavated material in reverse order of excavation, but will otherwise not be fully reinstated.

Hand excavation

- A.1.7 All investigation of archaeological levels will be by hand, with cleaning, examination and recording both in plan and section.
- A.1.8 Within significant archaeological levels the minimum number of features required to meet the aims will be hand excavated. Pits and postholes will usually be subject to a 50% sample by volume. Linear features will be sectioned as appropriate. Features not suited to excavation within narrow trenches will not be sampled. No archaeological deposits will be entirely removed unless this is unavoidable.
- A.1.9 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 entire site will be assessed. The stratigraphy of all evaluation trenches will be recorded even where no archaeological deposits have been identified.
- A.1.10 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.1.11 Written descriptions will be recorded on proforma sheets comprising factual data and interpretative elements.



- A.1.12 Where stratified deposits are encountered a Harris matrix will be compiled during the course of the excavation.
- A.1.13 Plans will normally 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.1.14 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.1.15 A register of plans will be kept.
- A.1.16 Long sections of trenches showing layers will be drawn at 1:50. Sections of features or short lengths of trenches will be drawn at 1:20.
- A.1.17 A register of sections will be kept.
- A.1.18 Generally all sections will be tied in to Ordnance Datum.
- A.1.19 A full black and white and colour (digital) 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.1.20 Photographs will be recorded on OA Photographic Record Sheets.

A.2 Relevant industry standards and guidelines

- A.2.1 The Institute for Archaeologists' Standard and Guidance notes relevant to fieldwork are:
- Standard and Guidance for Field Evaluation
 - Standard and Guidance for Excavation
 - Standard and Guidance for an Archaeological Watching Brief.
- 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 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 assess 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 (2009), Metric Survey Specifications for Cultural Heritage
- B.2.2 English Heritage (2006), Understanding Historic Buildings A Guide to Good Practise
- B.2.3 English Heritage, (2007) Understanding the Archaeology of Landscapes A Guide to Good Recording practise

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 Summary of Standard methodology

- 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 (eg. 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 (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 2001. Archaeometallurgy. Centre for Archaeology Guidelines 2001.01.
- C.2.3 English Heritage 2011. Environmental Archaeology. A guide to the theory and practice of methods, from sampling and recovery to post excavation, (2nd ed)
- C.2.4 English Heritage 2004. Dendrochronology: Guidelines on Producing and Interpreting Dendrochronological Dates.
- C.2.5 English Heritage 2006. Archaeomagnetic Dating. Guidelines for Producing and Interpreting Archaeomagnetic Dates.
- C.2.6 English Heritage 2007. Geoarchaeology. Using Earth Sciences to Understand the Archaeological Record.
- C.2.7 English Heritage 2008. Luminescence Dating. Guidelines on Using Luminescence Dating in Archaeology.



- C.2.8 English Heritage 2008. Guidelines for the Curation of Waterlogged Macroscopic Plant and Invertebrate Remains.

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 Summary of Standard methodology

- 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 can not 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. BURIALS

E.1 Summary of Standard methodology

- 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 IFA (Roberts and McKinley 1993) and English Heritage and The Church of England guidelines (Mays 2005). For crypts and post-medieval burials the recommendations set out by the IFA (Cox 2001) in *Crypt Archaeology: an approach*, 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-1907) 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 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 digital rectified 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 Unurned cremations will not usually be half sectioned or excavated in spits, but 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 / 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.1.16 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 quadrantised 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 Cox, M, 2001 Crypt archaeology. An approach. IFA Paper No. 3
- E.2.2 Mays, S, 2005 Guidance for Best Practice for Treatment of Human Remains Excavated from Christian Burial Grounds in England. Church of England and English Heritage.



- E.2.3 McKinley, J, and Roberts, C, 1993 Excavation and post-excavation treatment of cremated and inhumed human remains, IFA Technical Paper No. 13
- E.2.4 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, IFA Technical Paper No. 7. 9-13.
- E.2.5 Mytum, H, 2000 Recording and Analysing Graveyards. CBA Handbook No. 15.
- E.2.6 Reeve, J, and Adams, M, 1993 The Spitalfields Project. Volume I – The Archaeology Across the Styx. CBA Research Report No. 85
- E.2.7 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 Summary of Standard methodology

- 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 (eg 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 specialists who are regularly used by OA.

Internal archaeological specialists used by OA

Specialist	Specialism	Qualifications
Lisa Brown	Early Prehistoric pottery	BA, PGDip, MIitt, MIfA
Paul Booth	Iron Age and Roman pottery	BA, FSA, MIfA
John Cotter	Medieval and Post Medieval pottery, Clay Pipe and CBM	BA (Hon.), MIfA
Cynthia Poole	CBM and Fired Clay	BA (Hon.), MSc
Edward Biddulph	Roman Pottery	BA (Hon.), MA, MIfA
Ian Scott	Metalwork and Glass	BA (Hon.)
Leigh Allen	Metalwork and worked bone	BA (Hon.), PGDip
Dr Ruth Shaffrey	Worked stone artefacts	BA, PhD
Julian Munby	Architectural Stone	BA, FSA
Dr Rebecca Nicholson	Fish and Bird Bone	BA (Hon.), MA, D.Phil, MIfA, FSA Scot
Elizabeth Huckerby	Pollen and waterlogged plant remains	BA, MSc, MIfA
Lena Strid	Animal bone	MA
Kath Hunter	Charred and waterlogged plant remains	BA, MSc, PhD, MIfA
Andrew Bates	Animal Bone	BA, MA
Dr Denise Druce Pollen	Charred plant remains and charcoal	BA, PhD, MIfA
Liz Stafford	Geoarchaeology and land snails	BA, Msc
Nicola Scott	Archaeological archive	BA

Specialist	Specialism	Qualifications
	deposition	
Mike Donnelly	Flint	BSc, MIfA

External archaeological specialists regularly used by OA

Specialist	Specialism	Qualifications
Lynne Keys	Slag	BA (Hon.)
Quita Mould	Leather	BA, MA
Penelope Walton Rogers, The Anglo Saxon Laboratory	Identification of Medieval Textiles	FSA, Dip.Acc
Dana Goodburn Brown	Conservation	BSc (Hon.), BA, MSc
Steve Allen, York Archaeological Trust	Conservation	BA, MA, MAAIS
Dr Richard McPhail	Soils, especially Micromorphology	BA (Hon.), MSc, PhD
Dana Challinor	Charcoal	MA (Hon.), MSc
Dr Nigel Cameron	Diatoms	BSc, MSc, PhD
Dr David Smith	Insects	BA (Hon.), MA, PhD
Professor Adrian Parker	Phytoliths and pollen	BSc (Hons.), D.Phil
Dr David Starley	Slag	BSc, PhD
Wendy Carruthers	Charred and waterlogged plant remains	
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
Professor Mark Robinson	Insects, molluscs, waterlogged plant remains	MA, PhD
Dr Dan Miles	Dendrochronology	D.Phil, FSA
Dr Jean-luc Schwenninger	Optically Stimulated Luminescence Dating	PhD
Dr David Higgins	Clay Pipe	BA, PhD, MIfA
Dr Hugo Lamdin Wymark	Flint	BSc, PhD, FSA Scot, MIfA

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 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.1.4 The site archive will be security copied either by microfilming and the master sent to English Heritage as part of the National Archaeological Record or it will be digitally scanned and stored in a dedicated archive section of the OA computer network. A copy of the work as microfiche diazo or .pdf/a on disk will be sent to the receiving museums 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.1.5 Born digital data where suitable will be printed to hard copy for the receiving museum but if the format is such that it needs maintaining in digital form a copy will be sent to the receiving museum by CD. Back-up copies will be stored on the OA digital network and or posted to the ADS in accordance with AAF & ADS guidelines. In most cases a digital copy of the report will be included in the OASIS project library hosted by ADS.
- H.1.6 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.1.7 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.
- H.1.8 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.1.9 OA will advise the client of any such materials supplied in the course of projects which are not OA's copyright.

- H.1.10 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 2007 AAF guide Archaeological Archives A Guide to best practice in creation, compilation, transfer and curation. Brown D.
- H.2.3 The IFA Standard & Guidance for the creation, compilation, transfer and deposition of archaeological archives
- H.2.4 The UKIC's Guidelines for the preparation of excavation archives for long-term storage
- H.2.5 The MGC's Standards in the museum care of archaeological collections
- H.2.6 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.2.7 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 Summary of Standard Methodology

- I.1.1 All work will be undertaken in accordance with the OA Health and Safety Policy (Revision 13, August 2009), 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 site is covered by the The Construction (Design and Management) Regulations (2007), all work will be carried out in accordance with the Principal Contractor's Construction Phase Plan.
- I.1.3 All work will be carried out according to the requirements of all relevant legislation and guidance, including, but not exclusively.
- The Health and Safety at Work Act (1974),
 - Management of Health and Safety at Work Regulations (1999),
 - Manual Handling Operations Regulations 1992 (as amended in 2002),
 - The Construction (Design and Management) Regulations (2007), and



- The Reporting of Injuries, Diseases and Dangerous Occurrences Regulations (1995).