



# **114-119 St. Aldates and 4-5 Queen Street, Oxford**

*Centred on SP 51320 06130*

***Written Scheme of Investigation for  
Archaeological excavation, strip, map and sample  
and watching brief***

*February 2016*

*Oxford Archaeology*



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# 114-119 St. Aldates and 4-5 Queen Street, Oxford

## *Written Scheme of Investigation for Archaeological excavation, strip, map and sample and watching brief*

### **1 INTRODUCTION**

#### **1.1 Project details**

- 1.1.1 Oxford Archaeology (OA) has been commissioned by CgMs Consulting Ltd on behalf of Reef Estates to undertake an archaeological programme of mitigation works at the site of a proposed redevelopment at 114-119 St. Aldates and 4-5 Queen Street, Oxford.
- 1.1.2 The work is being undertaken as part of a mitigation strategy required by a planning condition. Although the Local Planning Authority has not set a brief for the work, discussions with David Radford, City Archaeologist, have established the broad scope of the work required. This work follows on from the submission of an archaeological evaluation report (OA, 2015), which highlighted the potential for archaeological remains to survive at the site. This WSI details how OA plan to undertake these archaeological works. The first part is Site specific while the appendices detail general OA standards and procedures.
- 1.1.3 The evaluation identified extensive remains of undisturbed late Saxon to early medieval horizons preserved underneath the current basement levels at the site. Where possible the proposed development has been designed to minimise the impact on the archaeological remains. This method statement outlines the mitigation strategy that has been developed where impacts could not be avoided.
- 1.1.4 All work will be undertaken in accordance with local and national planning policies as outlined in the Desk Based Assessment (CgMs Consulting, 2014(i)).

#### **1.2 Location, geology and topography**

- 1.2.1 The area of proposed development currently consists of properties at the corner of St. Aldates and Queen Street (Fig. 1). The site has an area of approximately 0.135 hectares.
- 1.2.2 The north end of the site lies at about 64.7m Above Ordnance Datum (AOD) with a gentle slope to the south. Terraces have been created in this slope in order to accommodate the construction of the existing buildings on the site. The natural fall of the slope is visible along St Aldates. The first river terrace lies approximately 250m to the south at around 58.5m AOD. The River Thames lies 450m to the south of the site.
- 1.2.3 The geology of the area is made up of the second gravel terrace of the River Thames, though the first terrace starts just to the south (Brewer Street). The underlying solid geology is Oxford Clay and Kellaways Beds (British Geological Survey, Sheet 236).



## 2 ARCHAEOLOGICAL AND HISTORICAL BACKGROUND AND POTENTIAL

### 2.1 Archaeological and historical background

2.1.1 The general archaeological and historical background to the site has been described in detail in the Archaeological Desk Based Assessment and the following addendum (CgMs Consulting, 2014(i) and CgMs Consulting (ii)), and is only summarised here.

#### ***Prehistory (10,000 BC – 43 AD )***

2.1.2 Prehistoric finds and features have been recorded to the west (UAD 260) and south-east of the site at Christchurch (Sturdy 1961). Other evidence has been recovered elsewhere in the city such as at the University Science Area and North Oxford.

2.1.3 Based on the limited evidence for this period the site is therefore considered to have low potential for prehistoric remains.

#### ***Roman Period (43-410 AD)***

2.1.4 Very sparse evidence of Roman activity has been identified in the area of the site. It is believed to lie away from the main focuses of Roman settlement and activity, and so only low potential for remains from this period is expected.

#### ***Saxon (AD 410-1066)***

2.1.5 Early Saxon settlement seems to have been focused further south along the Thames Valley at Abingdon and Dorchester-on-Thames, the earliest activity in Oxford dates to around the early 8<sup>th</sup> century, with the founding of St Frideswide's minster. The minster is thought to be located at Christ Church Cathedral, to the south east of the site.

2.1.6 A burh had been founded on the second gravel terrace at Oxford by the start of the 10th century. The site lies in the heart of the Saxon town and just off the Grandpont, one of the principal crossing points over the River Thames. This is documented in the Anglo-Saxon Chronicle and is listed in the Burghal Hidage. The south gate of the town was located at the southern end of St Aldates, with the north gate at the north end of Cornmarket Street. Queen Street was also laid out in the Saxon period.

2.1.7 Unsurprisingly Late Saxon activity is recorded within the site. Archaeological excavations at no 4 Queen Street (within the north end of the site) revealed metalised surfaces from roads and markets about 2m below the ground surface (UAD 487), indicating that the street frontage lay to the south of the market (Collard 1986), but within the site.

2.1.8 Immediately adjacent to the north east, beneath 121 St Aldates, a late Saxon bunshaped loom weight (the former Glyn and Mills Bank, UAD 682) was found during building work in 1931. Outside the site evidence for Late Saxon street frontage was recorded in excavations at 7-8 Queen Street (UAD 344), where it was recorded as being no more than 3m behind (south of) the modern frontage (Durham 1986). Similar evidence was recorded during investigations at 11-12 Queen Street (UAD 288), and the neighbouring Marks and Spencer site (UAD 482, Halpin 1983).

2.1.9 Late Saxon/early Medieval activity is recorded along elsewhere on Queen Street (UAD 69 and 697), to the east (UAD 148), to the south (UAD 516) and west (UAD 287 and 493) of the site. The evidence to the south comprised 8, charcoal lined burials and a small area of occupation surface in the nave at St Aldates Church.



- 2.1.10 In light of the site being located within the Saxon town and that surviving Saxon deposits have been recorded at depth (potentially below modern basement level) within the study site, a high potential for the Saxon and Early Medieval period is identified.

***Medieval (AD1066-1550)***

- 2.1.11 The development of Oxford as a thriving City continued throughout the Medieval period. The site was located in St Martin's Parish. Street frontages at St Aldates (or Fish Street as it was known) and Queen Street (Butcher Row/Great Bailey) continued to be occupied.
- 2.1.12 The area around St Aldates, including the site, was the Jewish quarter or Jewry of Oxford during the 12th and 13th centuries and probably in the later part of the 11th century after William the Conqueror invited them to England to establish a network of credit and trading links between his English and French lands. The first written record of the Jewry dates to 1141 when Matilda was under siege at Oxford Castle by Stephen of Blois (Manix 2004). Documentary evidence has survived detailing which properties belonged to which Jews and this information has been recently been compiled (ibid). The Jewry continued to be part of the City of Oxford until the expulsion of the Jews from England by Edward I in 1290.
- 2.1.13 During this period the site was occupied by four properties. Manix (ibid) identifies the two more substantial land holdings fronting on to Aldgate Street as being in Jewish hands. The northernmost is the site of Jacobs Hall, possibly one of the most substantial private houses in Oxford at this time, with the southernmost owned by Elias or Elekin. Together these two land holding approximately correspond to the modern 114 to 119 Aldgate Street. During the late nineteenth century construction works revealed thirteenth century cellars running out across the whole width of the street at this point, linking properties on either side (UAD 1327).
- 2.1.14 Two much smaller properties, held by the Bishop of Lichfield, fronted on to Queen Street. These are in in the north western part of the site, corresponding with the modern 4 and 5 Queen Street. By the fourteenth century all properties were in Christian ownership, with the two St Aldates holdings now marked as being the site of Battes Inn and the Red Lion. Beyond the boundaries of the site, to the south west were two buildings, Gloucester Hall and Hinxey Hall, accessed from St Aldates via Kepeharm's Lane. The New Inn Court archaeological investigations (UAD 288) revealed structural remains of Hinxey Hall (originally known as domus Kepeharm) dating from the mid 13<sup>th</sup> century, when it was a domestic dwelling to the 16th century (Halpin 1983).
- 2.1.15 To the south east of the site investigations at the Post Office revealed a 13th- century crypt and late Medieval finds (UAD 1167). Further 13th century material was recovered from Nos 117-118 St Aldates. Excavations to the west along Queen Street recorded further evidence of the Medieval street frontage (UAD 344, 482 and 487). A rubbish pit dated to the 13th/14th centuries (6m below the ground surface) was revealed during excavations on the southwest corner of Carfax (UAD 131), and elsewhere road surfaces of probable Medieval date, have been recorded in excess of 4m below the present Queen Street.
- 2.1.16 The site was clearly occupied during the Medieval period and the structural remains of former buildings and other associated finds and deposits have been shown to survive at considerable depth immediately adjacent to the site. A high potential for medieval remains is therefore identified.



### ***Post-Medieval and Modern (AD 1550 - Present)***

- 2.1.17 Agas's 16th century Map of Oxford depicts buildings on the frontages of Fish Street, and Great Bayley Street. The number of land holdings appear to correspond with those shown on the Slater plan. Behind this are gardens or open plots.
- 2.1.18 This corresponds with the archaeological evidence recovered during the New Inn Court excavations, which indicated that Hinxey Hall, which had been located here, was demolished during the 16th century and the land laid to garden (Halpin 1983) Loggan's 17th century bird's eye view shows that the medieval plots have been subdivided, particularly those fronting Fish Street, with ranges of buildings around yards constructed over the earlier gardens.
- 2.1.19 The 1876 Ordnance Survey (OS) shows the site divided up into up to six buildings fronting St Aldates (including one marked as a Bank), with two onto Queen Street. The modern street names have been adopted. A similar layout is shown in 1900 and 1921. The 1939 and 1969/70 OS maps show redevelopment having taken place along St Aldates, with the earlier smaller buildings amalgamated into two main blocks as today.
- 2.1.20 Despite this process of renewal and disturbance there remains a high potential for the localised survival of fragmentary remains of Post-Medieval date, particularly along the street frontages.

## **2.2 Potential**

- 2.2.1 Previous investigations at the site suggest that archaeological remains from the Saxon to Post-medieval period might survive to depths between 4m and 6m below the existing ground surface. Within the site this means there is potential for survival beneath existing/former basements and between basements, and in localised areas where previous impacts may be more shallow. In some parts of the site archaeological deposits may have been completely removed.
- 2.2.2 In July 2015 Oxford Archaeology (OA 2015) undertook three test pits within the basement of the existing buildings to investigate levels of archaeological preservation at the site. The evaluation revealed the remains of undisturbed late Saxon/early medieval horizons underneath the current basement levels. A series of pits containing domestic waste and demolition material were exposed during the excavations. The possible presence of walls and a compacted gravel surface demonstrates the potential for structural remains to also be present. An absence of clay pipes and modern material suggests that the archaeological horizons may have been sealed in the early post-medieval period.
- 2.2.3 The vast majority of the features and deposits revealed during the evaluation date from the 13th-14th century. They include two potential walls, a compacted gravel surface and three rubbish pits. The pottery, animal bone and tile assemblages are predominately domestic in nature and presumably originated from the buildings with frontages on Queen Street and St Aldate's.

## **2.3 Site Potential**

- 2.3.1 The Archaeological Desk Based Assessment established that no designated heritage assets are present within the development site. It has also demonstrated that, despite disturbance from previous construction activity and archaeological investigation, the site has a high potential for the survival of non-designated buried archaeological assets relating to the Saxon, Medieval and Post-Medieval periods. These are likely to be of at least local/regional significance.



- 2.3.2 The addendum to the original Desk Based Assessment (CgMs Consulting, 2014 (ii)) identified the potential height Above Ordnance Datum (AOD) for the top of archaeological deposits and their potential depths. These are summarised below.
- 2.3.3 Using the evidence from excavations at Queen Street, and taking account of the north-south slope, complex stratified archaeological remains would survive to the following depths:
- 4 Queen Street -61.85m (up to 1.05m below base of existing slab, plus any deeper pits)
  - 5 Queen Street -61.85m (so likely to have been removed by existing slab, except for deeper pits)
  - 114/119 St Aldates (rear) -61.65m to 61.45m (between 170mm and 370mm below base of existing slab, plus any deeper pits).
- 2.3.4 The best survival will be within the shallow basemented area of 4 Queen Street where around 1m of complex stratigraphy might survive, with deeper pits cut below this. Within 5 Queen Street, complex remains are likely to have been removed by the existing basement, although deeper pits may survive (CgMs Consulting, 2014(ii)).
- 2.3.5 To the south, at the rear of 114/119 St Aldates, assuming a similar depth of remains as excavated in the north, the natural slope means that existing basements might seal between 170mm and 370mm of surviving complex stratigraphy, with deeper pits beneath this (CgMs Consulting, 2014(ii)).
- 2.3.6 The addendum to the Desk Based Assessment has a table on page 4 summarising the depths of impact and potential survival of archaeological deposits. It focusses on the impact of planned basement levels. Where perimeter piling is proposed archaeological remains will be wholly removed in these area. In addition, where strip footings/ground beams are proposed these would also impact on buried remains beneath the depth of the slab.

### **3 PROJECT AIMS**

#### **3.1 General**

- 3.1.1 The general aims of the archaeological excavation will be to:
- i. To provide a record and characterisation of the archaeological remains that will be impacted by the development;
  - ii. Identify and record any significant archaeological remains or surfaces revealed in the excavations, paying particular regard to the potential for Saxon and medieval remains.
  - iii. to record the main kinds of artefactual evidence (including pottery, brick, tile, stone, bone etc..) and collect representative samples;
  - iv. To establish the ecofactual and environmental potential of archaeological deposits and features within the site and to take samples where appropriate.
  - v. To prepare an appropriate archaeological archive of the site and make available the results of the investigation.

#### **3.2 Specific aims and research objectives**

- 3.2.1 The specific aims and objectives of the excavations are:





- v. To provide any material culture or structural evidence for Jewish occupation at the site;
- vi. To examine fauna remains for the evidence of specific dietary practices at the site;
- vii. To look for evidence of metal-working or specific industries that may have been practised at the site;
- viii. Any evidence of brewing or inn that later occupied the site;

## **4 PROJECT SPECIFIC EXCAVATION AND RECORDING METHODOLOGY**

### **4.1 Scope of works**

- 4.1.1 The archaeological site mitigation strategy involves the hand excavation of at least two excavation areas (**Lift shafts – Areas 2 and 3**), mechanical/hand strip, map and sample areas surrounding the basement (**Areas 3, 4 and 5**) and a watching brief on service trenches (**Area 6**). The resultant mitigation levels, and areas, are shown on **Figure 2** (see main WSI).
- 4.1.2 The Main Contractor will need to set out the correct areas and levels to which excavation will be conducted and relevant architects and structural engineers drawings (or any subsequent revisions).
- 4.1.3 The existing buildings are to be demolition and lift shafts excavated to record the survival of archaeological remains preserved underneath the current site basements. Archaeologists will hand dig, assess and record any archaeological significant remains, structures or deposits, that will be impacted by the development.
- 4.1.4 The lift shaft excavations areas are expected to measure 5.7m by 4.5m and 4.6m and 3.5m, and to be hand excavated to depths between 1-2m. The concrete will be cut out and removed by a ground contractor prior to the archaeological excavation. Shoring will be required and provided by the main contractor.
- 4.1.5 The strip, map and sample areas comprise a 7.4m by 7.8m courtyard area (**Area 5**), 7.8m by 2.7m back area (**Area 3**) and a small strip of 1-4m in width around the existing basement, which may preserved archaeological remains.
- 4.1.6 A watching brief will also be maintained on service trenches going from the existing basement towards the high street (**Area 6**).

### **4.2 Programme**

- 4.2.1 It is anticipated that the fieldwork will take up to eight week to complete, by a team consisting of a Project Supervisor and 8 archaeologists, under the management of Carl Champness, Senior Project Manager.
- 4.2.2 All fieldwork undertaken by Oxford Archaeology (South) is overseen by the Head of Fieldwork, Dan Poore MIFA.

### **4.3 Site specific methodology**

- 4.3.1 A summary of OA's general approach to excavation 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).



### ***Lift shaft excavations (Areas 1 and 2)***

- 4.3.2 The basement slab will be cut and removed and hand excavations will start from the base of the concrete. Following the mechanical stripping and initial archaeological excavation, any significant archaeological horizons revealed will be cleaned, recorded and sample excavated.
- 4.3.3 Where significant archaeological horizon, comprised of surfaces, occupation deposits, structures and discrete archaeological features are encountered these will be individually cleaned and planned. Where practicable, all archaeological features will be sampled by hand. In practice, no deep excavations will be entered by OA staff if they are at a depth assessed as constituting a health and safety hazard without further safety provisions. Shoring of the sides will be provided by the main contractor should the excavations need to go deeper than 1m. General site procedures are as defined in OA's Standard Appendices which are supplied with this document.
- 4.3.4 A site grid covering the area of excavation will be established and tied to the Ordnance Survey grid. In the first instance this will be maintained within the survey equipment, but if required this will be marked on site on a 1m spacing. A temporary benchmark related to Ordnance Datum will be created. All plans and sections will be related to the site grid and the Ordnance Datum.
- 4.3.5 All archaeological remains above the mitigation levels and limits as defined in **Figure 2** will be sample excavated with all significant relationships defined and investigated within the limitations defined below.

### **Pits, wells, post-holes**

Where appropriate these feature types will be subject to a minimum of 50% detailed hand excavation and recording i.e. half-sectioning.

### **Linears (including roads/lanes etc)**

Linear features will be subject to a maximum of 20% detailed hand excavation and recording.

### **'Industrial' and trade/craft production features**

All evidence of 'industrial' and trade craft/production remains will be 100% investigated.

### **Structures and occupation deposits**

All structural remains and occupation horizons will be 100% investigated.

### **Ritual features**

Funerary features with human remains, such as inhumations and cremations, will be 100% excavated (see below). Associated features, such as ring ditches will be excavated up to 50% of the exposed length, with each and every terminal excavated. Where appropriate, for instance where the stratigraphy is complex, single context recording will be used;

- 4.3.6 Where excavations are likely to exceed a safe working depth then the excavations will need to be shored and inspected by the Principal Contractor before proceeding with the excavation.
- 4.3.7 **Strip, map and sample areas (Areas 3, 4 and 5)**



- 4.3.8 The levels of archaeological preservation for Areas 3,4 and 5 are current unknown and will depend upon the levels of modern disturbance caused by the construction of the basement and surrounding walls.
- 4.3.9 The area surrounding the basement will be stripped with a machine under archaeological supervision to remove modern deposits and services. If areas of undisturbed archaeological deposits are identified then these will be made safe to work in and investigated by hand. The nature of the excavation will be determined by the degree of modern truncation and archaeological preservation. It is the Principal Contractors responsibility to ensure stability of adjacent structures and safe access to the excavation areas. Work will not be undertaken where there is a risk of collapse until suitably mitigated.
- 4.3.10 These areas will be excavated to impact depth which is the current base of the existing basement slab.
- 4.3.11 In Area 4, two initially 2m wide machine slots will be excavated against the western edge to first identify the level of archaeological preservation within this area. If areas of undisturbed archaeological are identified then these will be excavated by hand.
- 4.3.12 The mechanical excavator will be fitted with the appropriately sized toothless bucket and excavation will be completed in spits of no more than 0.15m in depth. This would be undertaken with complete control of the mechanical removal by qualified archaeologists, to reveal the top of the natural or the first significant archaeological horizon, whichever is encountered first.
- 4.3.13 If significant archaeological features and deposits are identified then the City archaeologist and archaeological consultant will be informed immediately. If necessary a meeting will be held on site in order to establish how to progress with these works.
- 4.3.14 Watching Brief (Basement slab removal and Area 6)**
- 4.3.15 A watching brief will be maintained during the lifting of the existing basement slab across areas of the site. The monitoring archaeologist will ensure that the works do not impact on archaeological remains. A meeting will be held with the Archaeological Consultant and City Archaeologist to ensure that the archaeological remains have not been disturbed by this process. Following the removal of the basement slab the exposed surface will be cleaned and any revealed archaeological remains will be photographed, planned and recorded.
- 4.3.16 A watching brief will also be maintained on any service diversions (Area 6) that go to depths greater than the modern made-ground. These excavations will not be entered and recording will take place from the edge of the trenches, where it is safe to do so.
- 4.3.17 All features and deposits will be issued with unique context numbers, and context recording will be in accordance with established best practice and the OA Field Manual. Small finds and samples will be allocated unique numbers. Bulk finds will be collected by context.
- 4.3.18 Digital photos and black-and-white negative photographs will be taken of any archaeological features and deposits and of the trenches and evaluation work in general.
- 4.3.19 Plans will be drawn at an appropriate scale (normally 1:10) with larger scale plans of features as necessary. Section drawings of features will be drawn at a scale of 1:10 and 1 m wide sample sections of stratigraphy will be drawn at a scale of 1:10. All



section drawings will be located on the appropriate plan/s. The absolute height (m. OD) of all principal strata and features, and the section datum lines shall be calculated and indicated on the drawing.

#### **4.4 Environmental sampling**

4.4.1 Appendix C provides an environmental sampling strategy. In general different environmental sampling strategies may be employed according to the perceived importance of the strata under investigation. Bulk samples, preferably of 40 litres if possible, will be taken for flotation for charred plant remains. Bulk samples will be taken from any waterlogged or mineralised deposits present for macroscopic plant remains. Columns for pollen analysis and mollusc samples will be taken if appropriate. Other bulk samples for small animal bones and other small artefacts may be taken from appropriate contexts. Sub-sampling will be undertaken to retrieve evidence of metal-working. The sampling process will be constantly reviewed on-site with the advice of Dr. Rebecca Nicholson, Head of the Environmental Dept. at Oxford Archaeology.

#### **4.5 Finds recovery**

4.5.1 Artefact assemblages will be recovered (by context) by hand to assist in dating the stratigraphic sequences and for obtaining ceramic assemblages for comparison with other sites. The finds will provide an invaluable contribution to the interpretation of the functions and activities taking place on (and off) the site, as well as reveal aspects of trade and economy. All artefacts will be retained from excavated contexts unless they are of recent origin. In these cases sufficient of the material will be retained to date and establish the function of the feature.

#### **4.6 Human Remains**

4.6.1 Although no human remains were encountered during any previous works close to the site and no known historic graveyards are within the development area, there is still the potential for burials to be encountered.

4.6.2 All human remains will be excavated under the appropriate Home Office licence, and will be Supervised by an experienced Osteoarchaeologist.

4.6.3 Human remains will be cleaned and placed in boxes by following the methods described by McKinley and Roberts (1993). Current guidance issued by English Heritage and the Church of England (2005, 43) states that human remains must be marked. However, the recent Code of Practice (see: <http://www.babao.org.uk/index/ethics-and-standards>), published by BABAO, acknowledges that marking bone is not always feasible and that there are economic, curatorial, conservational and ethical issues associated with this practice.

#### **4.7 Treatment of Treasure**

Finds, discovered by the archaeological contractor, falling under the statutory definition of Treasure (as defined by the Treasure Act of 1996 and its revision of 2002) will be reported immediately to the relevant Coroner's Office, the landowner and HCC. A Treasure Receipt (obtainable from either the FLO or the DCMS website) must be completed and a report submitted to the Coroner's Office and the FLO within 14 days of understanding the find is Treasure. Failure to report within 14 days is a criminal offense. The Treasure Receipt and Report must include the date and circumstances of the discovery, the identity of the finder (put as unit/contractor) and (as exactly as possible) the location of the find.



## **5 PROJECT SPECIFIC REPORTING AND ARCHIVE METHODOLOGY**

### **5.1 Programme**

- 5.1.1 The archaeological assessment report will be completed within 6 months following the completion of the fieldwork. All post-excavation reporting and publication will be completed within 2 years from the end of fieldwork
- 5.1.2 Bound copies of the completed report will be provided to the Archaeological and HER Officer, the Council's Historic Environment Record, the National Archaeological Record of English Heritage and the English Heritage Regional Science Advisor. A digital copy of the report in Adobe Acrobat (.pdf) format will also be provided. An OASIS entry will also be made.
- 5.1.3 A summary report will be submitted to the local journal. If significant results warrant more extensive publication an appropriate format will be agreed with all parties.
- 5.1.4 Three bound copies of the completed report(s) will also be provided to the client. A copy of the report in Adobe Acrobat (.pdf) format will also be provided.

### **5.2 Public outreach**

- 5.2.1 As part of the site mitigation OA will host an open day on the site with posters and displayed finds from the excavation to communicate the result of the excavation to the wider Oxford public. OA will also issue a local press release on the results of the work and provide photographs of any nice finds that have been uncovered.

### **5.3 Content**

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

### **5.4 Specialist input**

- 5.4.1 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.

### **5.5 Archive**

- 5.5.1 The site archive including copies of the final reports will be deposited with Oxfordshire Museum Service following completion of the project.
- 5.5.2 A copy of the report will be submitted to the City Archaeologist and that any digital data generated as a part of the work (such as GIS or CAD files) will be deposited with the HER. The report will also be made available for public access after an allotted period of time via the HER.
- 5.5.3 A summary report (including illustrations where appropriate) will also be sent to the editors of *Oxonensia* no later than three months after the end of the calendar year in which the work is undertaken.
- 5.5.4 For projects which have produced results of significant county, regional or national importance, an illustrated final report which meets the guidelines set out in MoRPHE (English Heritage 2006) and is suitable for publication in an approved archaeological journal will be provided to the City Archaeologist within one year following the completion of fieldwork (unless a longer time period has been agreed in the updated project design). The overall content of the report will be agreed with the City



Archaeologist. The report will reference all aspects of the work undertaken at the site. It will place the site in its local archaeological, historical and topographical context and include a clear location map. Each plan will be clearly referenced and appropriately scaled with reference to the national grid and ordnance datum.

- 5.5.5 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, to be confirmed, has responsibility for ensuring that safe systems of work are adhered to on site. He delegates elements of this responsibility to the Project Archaeologist 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 Health and Safety file will be available to view at any time.

## **7 MONITORING OF WORKS**

- 7.1.1 At least one weeks notice of the commencement of the mitigation works will be given to David Radford, Planning Archaeologist for Oxford City.
- 7.1.2 He 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.

## **8 REFERENCES**

CgMs Consulting; 2014 (i); Archaeological Desk Based Assessment: 114-119 St. Aldates & 4-5 Queen Street, Oxford.

CgMs Consulting; 2014 (ii); Addendum to Archaeological Desk Based Assessment: 114-119 St. Aldates & 4-5 Queen Street, Oxford.

Collard, M 1986 Oxford: 4 Queen Street, OAU Newsletter 36

Dodd, A (Ed) 2003 Oxford before the University. Durham, B 1981 11-12 Queen Street, Oxford, South Midlands Archaeology CBA Group 9 Newsletter 11

Halpin, C, 1983 late Saxon Evidence and Excavation of Hinxey Hall, Queen Street, Oxford

Manix, P "Oxford: Mapping the Jews," in The Jews of Europe in the Middle Ages (tenth to fifteenth centuries): Proceedings of the International Symposium held at Speyer, 20-25



October 2002. Turnhout: Brepols, 2004.

Oxford City Council, 2012, Oxford Urban Archaeological Resource Assessment and Research Agenda Oxford City Council, 2012a, Central Oxford Historic Urban Character Assessment.

Oxford Archaeology, 2015 114-119 St Aldate's and 4-5 Queen Street, Oxford Archaeological evaluation report.

Oxford Archaeology, 2008a Gas Main Replacement in St Aldate's Street, Oxford: Archaeological Watching Brief Report

Oxford Archaeology, 2008b Resurfacing Work, St Aldate's Street, Oxford: Archaeological Watching Brief Report

OCAS, 2006, 2008 Design Brief for Archaeological Watching Brief - St. Aldate's (A420) RoadWorks, Oxford City.



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## OA STANDARD FIELDWORK METHODOLOGY APPENDICES

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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.

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### 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 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 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 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 black and white photographic record, illustrating in both detail and general context the principal features and finds discovered will be maintained. The photographic record will also include colour (digital) 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 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 access development and highlight problems. This information also will be recorded on the weekly survey journal. Technical support for the survey equipment and download software shall be available at all times. In those instances where sites are remotely operated, all digital data will be backed up regularly and a copy returned to Oxford on a weekly basis.
- B.1.11 A site plan will initially be created by a rapid survey of relevant archaeological features by mapping their extent using a combination of TST and GPS. This will form the basis for deciding excavation strategy and will be updated as the excavation clarifies the extent of, and relationships between, archaeological features.
- B.1.12 Excavated archaeological interventions and areas of complex stratigraphy will be hand drawn. At least two Drawing Points (DPs) will be set in as a baseline and



measurements taken off this by tape and offset. The hand drawn plans will be referenced to the digitally captured pre-site plan by measuring in the DPs with a TST or GPS. These hand drawn elements will then be scanned in, geo-referenced using the DPs as reference points and digitised following OA's digitising protocols. For further details on hand planning procedure please refer to the fieldwork guidelines.

- B.1.13 Where appropriate rectified photography may be used to record standing structures or burials. This will be carried out in line with Standard OA procedures for rectified photography.
- B.1.14 Survey data recorded in the field will be downloaded using appropriate downloading software, and saved as an AutoCAD Map DWG file, or an ESRI Shapefile. These files will be regularly updated and backed up with originals being stored on an OA server in Oxford.
- B.1.15 All drawings will be composed of closed polygons, polylines or points in accordance with the requirements of GIS construction and OA Geomatics protocols. Once created, additional GIS/CAD work will normally be carried out at the local OA central office or at on-site remote locations when appropriate. Support for all GIS/CAD work will be available from OA's Oxford Office during normal office hours. The aim of the GIS/CAD work is to produce workable draft plans, which can be produced as stand-alone products, or can be readily converted to GIS format. Any hand-drawn plans will be scanned and digitised on site in the first instance. Subsequent plans will be added to the main drawing as it develops.
- B.1.16 All plan scans will be numbered according to their plan site number. Digital plans will be given a standard new plan number taken out from the site plan index.
- B.1.17 All digital data will be backed up incrementally on CD or DVD. On each Friday the entire data directory will be backed up and returned to Oxford where it will be copied onto the OA projects server. Each CAD drawing will contain an information layout which will include all the relevant details appertaining to that drawing. Information (metadata) on all other digital files will be created and stored as appropriate. At the end of the survey all raw measurements will be made available as hard copy for archiving purposes.

## **B.2 Relevant industry standards and guidelines**

- B.2.1 English Heritage (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 Standard methodology - summary**

- C.1.1 Different environmental and geoarchaeological sampling strategies may be employed according to established research targets and the perceived importance of the strata under investigation. Where possible an environmental specialist(s) will visit the site to advise on sampling strategies. Sampling methods will follow guidelines produced by English Heritage and Oxford Archaeology. A register of samples will be kept. Specialists will be consulted where non-standard sampling is required (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, (2<sup>nd</sup> 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.2.9 English Heritage 2014. Animal Bones and Archaeology. Guidelines for Best Practice.

### **C.3 Relevant OA manual and other supporting documentation**

- C.3.1 Oxford Archaeology 2005. Environmental Sampling Guidelines, 2nd ed.

## **APPENDIX D. ARTEFACTUAL EVIDENCE**

### **D.1 Standard methodology - summary**

- D.1.1 Before a site begins arrangements concerning the finds will be discussed with the Head of Finds. Information will be provided by the project manager about the nature of the site, the expected size and make-up of the finds assemblage and any site specific finds retrieval strategies. On-site requirements will be discussed and a conservator appointed who can be called on to make site visits if required. Special requirements regarding particular categories of material will be raised at this early stage for instance the likelihood of recovering assemblages of waterlogged material, large timbers, quantities of structural stone or ceramic building material. Specialists may be required to visit sites to discuss retrieval strategies.
- D.1.2 The project manager will supply the Head of Finds with contact details of the landowner of the site so that consent to deposit any finds resulting from the investigation can be sought.
- D.1.3 The on-site retrieval, lifting and short term packaging of bulk and small finds will follow the detailed guidelines set out in the OA Finds Manual (sections 2 and 3), First Aid for Finds and the UKIC conservation guidelines No.2.
- D.1.4 All finds recovered from site will be transported to an OA regional office for processing; local sites will return finds at the end of each day, away based sites at the end of each week. Special arrangements can be discussed for certain sites with the department manager before the start of a project. Larger long running sites may in some instances set up on-site processing units to deal with the material from a particular site.
- D.1.5 All finds qualifying as Treasure will be removed to a safe place and reported to the local Coroner according to the procedures relating to the Treasure Act (1996), and the Treasure (Designation) Order 2002. Where removal 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 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 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 quadrant and will be subject to 100% sampling.
- E.1.18 Wooden and lead coffins and any associated fittings, including fixing nails will be recorded on a pro forma coffin recording sheet. All surviving coffin fittings will be recorded by reference to Reeve and Adams (1993) and the unpublished master catalogue that is being compiled by OA. Where individual types cannot be paralleled, they will be drawn and/ or photographed and assigned a style number. Biographical details obtained from legible departum plate inscriptions will be recorded and further documentary research will be made.
- E.1.19 Funerary structures, such as brick shaft graves and/or vaults will be hand-drawn at a scale of 1:10 or 1:20, as appropriate. Location, dimensions and method of construction will be noted, and the structure added to the overall trench plan.
- E.1.20 Memorials, including headstones, revealed within the areas of development will be recorded irrespective of whether they are believed to be in situ.
- E.1.21 Where required, memorials will be accorded an individual context number and will also be included as part of the grave group, if the association with a burial is clear.
- E.1.22 Memorials will be recorded on pro-forma context sheets, based on and following the guidelines set out by Mytum (2002), and will include details of:
- Shape
  - Dimensions
  - Type of stone used
  - Iconography (an illustration may best describe these features)
  - Inscription (verbatim record of inscription; font of the lettering)
  - Stylistic type





## **E.2 Relevant industry standards and guidelines**

- E.2.1 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 Standard methodology - summary**

- F.1.1 For Watching Briefs and Evaluations, the style and format of the report will be determined by OA, but will include as a minimum the following:
  - A location plan of trenches and/or other fieldwork in relation to the proposed development.
  - Plans and sections of features located at an appropriate scale.
  - A section drawing showing depth of deposits including present ground level with Ordnance Datum, vertical and horizontal scale.
  - A summary statement of the results.
  - A table summarising the features, classes and numbers of artefacts contained within, spot dating of significant finds and an interpretation.
  - A reconsideration of the methodology used, and a confidence rating for the results.
  - An interpretation of the archaeological findings both within the site and within their wider landscape/townscape setting.
- F.1.2 For Excavations, a Post-Excavation Assessment and Project Design will generally be prepared, as prescribed by English Heritage Management of Research Projects in the Historic Environment (MoRPHE) 2006, Section 2.3. This will include a Project Description containing:
  - A summary description and background of the project.



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

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

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

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

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

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



- F.1.6 Once the post-excavation Project Design or Project Proposal has been accepted, the County Archaeological Officer or his appointed deputy will monitor the progress of the post-excavation project at agreed points. Any significant variation in the project design will be agreed with the County Archaeological Officer.
- F.1.7 The results of the project will be published in an appropriate archaeological journal or monograph. The appropriate level of publication will be dependent on the significance of the fieldwork results and will be agreed with the County Archaeological Officer. An OASIS (Online Access to the Index of Archaeological Investigations) form will be completed for each project as per English Heritage guidelines.

## F.2 Relevant industry standards and guidelines

- F.2.1 Oxford Archaeology (OA) adheres to the national standards in post-excavation procedure as outlined in English Heritage's Management of Research Projects in the Historic Environment (MoRPHE; EH 2006). Furthermore, all post-excavation projects take into account the appropriate regional research frameworks as well as national research agendas such as the Framework for Historic Environment Activities & Programmes in English Heritage (SHAPE; EH 2008).

## APPENDIX G. LIST OF SPECIALISTS REGULARLY USED BY OA

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

### Internal archaeological specialists used by OA

Specialist	Specialism	Qualifications
Lisa Brown	Early Prehistoric pottery	BA, PGDip, MLitt, MIfA
Paul Booth	Iron Age and Roman pottery	BA, FSA, MIfA
John Cotter	Medieval and Post Medieval pottery, Clay Pipe and CBM	BA (Hons), MIfA
Cynthia Poole	CBM and Fired Clay	BA (Hons), MSc
Edward Biddulph	Roman Pottery	BA (Hons), MA, MIfA
Ian Scott	Metalwork and Glass	BA (Hons)
Leigh Allen	Metalwork and worked bone	BA (Hons), PGDip
Dr Ruth Shaffrey	Worked stone artefacts	BA, PhD
Julian Munby	Architectural Stone	BA, FSA
Dr Rebecca Nicholson	Fish and Bird Bone	BA (Hons), MA, D.Phil, MIfA, FSA Scot
Mairead Rutherford	Pollen	BSc, MSc
Lena Strid	Animal bone	MA
Sheila Boardman	Charred plant remains and charcoal	BA (Hons)
Katherine Hunter	Charred and waterlogged plant remains	BA (Hons)
Dr Denise Druce	Charred plant remains, charcoal	BA (Hons), PhD, MIfA



<b>Specialist</b>	<b>Specialism</b>	<b>Qualifications</b>
	and pollen	
Elizabeth Stafford	Geoarchaeology and land snails	BA (Hons), MSc
Carl Champness	Geoarchaeology	BA (Hons), MSc
Chris Faine	Animal Bone	BSc
Nicola Scott	Archaeological archive deposition	BA
Mike Donnelly	Flint	BSc, MifA
Dr Louise Loe	Human Bone	D.Phil, BA, MifA
Helen Webb	Human Bone	MSc, BSc
Mark Gibson	Human Bone	MSc, BA

**External archaeological specialists regularly used by OA**

<b>Specialist</b>	<b>Specialism</b>	<b>Qualifications</b>
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
Professor Adrian Parker	Phytoliths and pollen	BSc (Hons), D.Phil
Dr David Starley	Metalworking Slag	BSc (Hons), PhD
Wendy Carruthers	Charred and waterlogged plant remains	BA (Hons)
Dr Sylvia Peglar	Pollen	PhD
Dr John Whittaker	Ostracods and Foraminifera	BA (Hons), PhD
Dr John Crowther	Soil Chemistry	MA, PhD
Dr Martin Bates	Geoarchaeology	BSc, PhD
Dr Dan Miles	Dendrochronology	D.Phil, FSA
Dr Jean-Luc Schwenninger	Optically Stimulated Luminescence Dating	PhD

Specialist	Specialism	Qualifications
Dr David Higgins	Clay Pipe	BA, PhD, MIfA
Dr Hugo Anderson-Wymark	Flint	BSc, PhD, FSA Scot, MIfA
Dr Damian Goodburn-Brown	Ancient Woodwork	BA, PhD, AIFA

## 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/DeposResouce>) 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 Standard Methodology - summary**

- I.1.1 All work will be undertaken in accordance with the OA Health and Safety Policy (Revision 16, April 2013), 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 (2007), all work will be carried out in accordance with the Principal Contractor's



Construction Phase Plan (CPP). In some cases OA will fulfil the Principal Contractor role, and produce a CPP based on our in-house template.

## **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 in 2002).
- I.2.5 The Construction (Design and Management) Regulations (2007).
- I.2.6 The Reporting of Injuries, Diseases and Dangerous Occurrences Regulations (1995).

## **I.3 Relevant OA manual and other supporting documentation**

- I.3.1 The OA Health and Safety Policy.
- I.3.2 The OA Site Safety Procedures Manual.
- I.3.3 The OA Risk Assessment templates.
- I.3.4 The OA Method Statement template.
- I.3.5 The OA Construction Phase Plan template