

# Cotswold Archaeology

# Plot 5610 Hatfield Business Park Hertfordshire

Written Scheme of Investigation for a Strip, Map and Record Excavation



for Arlington

CA Project: 661229 Site Code:PHB18 Event Number:TBC Accession Number:TBC December 2018



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CA Project: 661229



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FIGURE 1: SITE LOCATION PLAN

#### 1. INTRODUCTION

- 1.1 This document sets out details of a *Written Scheme of Investigation* (WSI) by Cotswold Archaeology (CA) for a Strip, Map and Record Excavation at Plot 5610, Hatfield Business Park, Hatfield, Hertfordshire (centred at NGR: 521410 209653; Fig.1). The project was commissioned by Arlington.
- 1.2 The work is being undertaken to inform a planning application to Welwyn Hatfield Borough Council (WHBC; the local planning authority) for industrial development of the site.
- 1.3 The scope of the strip, map and record excavation was defined during discussions between Simon West Hertfordshire County Council's Historic Environment Advisor (HCCHEA), the archaeological advisors to WHBC.
- 1.4 This WSI has been guided in its composition by the pre-application advice issued by the HCCHEA, Standard and guidance: Archaeological excavation (ClfA 2014), the Management of Research Projects in the Historic Environment (MORPHE): Project Manager's Guide and the accompanying PPN 3: Archaeological Excavation (Historic England 2015) and any other relevant standards or guidance contained within Appendix B.

# The site

- 1.5 The site comprises a plot of land, approximately 0.99ha in extent, near the centre of Hatfield Business Park, which is located on the north-western outskirts of Hatfield, to the west of the A1 (M), situated within the Vale of St Albans. The business park occupies the site of the former Hatfield Aerodrome.
- 1.6 The site comprises an irregular plot of land which is currently under industrial use, with associated green space. The site is bounded to the north by Hatfield Avenue, to the east by Gypsy Moth Avenue and to the south and west by industrial units and associated infrastructure. The topography of the site and the surrounding area is generally flat, lying at *c*. 74m above Ordnance Datum (aOD).
- 1.7 The underlying bedrock geology of the area is mapped as Lewes Nodular Chalk Formation and Seaford Chalk Formation of the Cretaceous period with superficial

deposits of Lowestoft Formation Diamicton formed in the Quaternary Period (BGS 2018). The encountered natural substrate was recorded as silty clays with varying chalk and flint deposits (CAT 1999a) and gravels and sands (CA 2017) during previous archaeological works.

#### 2. ARCHAEOLOGICAL BACKGROUND

2.1 The archaeological and historical background of the site has been detailed within an Archaeological Assessment (CAT 1999b) and from more recent archaeological investigations (CAT 1999b, MOLA 2001, 2004, 2015, CA 2017). The following section has been summarised from these sources.

#### Prehistoric (pre AD 43)

- 2.2 Archaeological investigations within the area of the business park over the last two decades have revealed the extensive remains of a Late Bronze Age or Early Iron Age field system, with some evidence for contemporary settlement and funerary remains. Initially identified by the evaluation undertaken by CA (CAT 1999b), subsequent mitigation work by MOLA confirmed the presence of the field system within the site of Plot 5600, along with several groups of postholes that appeared to form a small rectangular structure and a series of straight-sided enclosures.
- 2.3 Further settlement remains of Middle Bronze Age date were recorded at the University of Hertfordshire Bus Garage site, *c.* 500m to the north of the site. The remains comprised three or possibly four ditches and a number of small pits; worked flint flakes and a sherd of Middle Bronze Age Deveril-Rimbury pottery were recovered from these features.
- 2.4 Three unurned cremation burials were found during the evaluation; although undated, they are considered to be Bronze Age of Iron Age in date (CAT 1999b).
- 2.5 Recent excavations directly to the south revealed the presence of Middle to Late Bronze Age activity in the form of field systems, possible structures and cremations. A semi-circular arc of postholes potentially represents a small building: associated pits and postholes provide further evidence for settlement activity. An L shaped distribution of postholes and possible cremations potentially relate to a cremation

cemetery or remains of a sub-rectangular building. All of the settlement activity was located within an enclosed area showing evidence of maintenance.

# Late Iron Age and Roman (100 BC to AD 410)

- 2.6 Two Late Iron Age or early Roman field boundary ditches and an urned cremation burial were identified in trial trenches close to the western edge of the business park, approximately 400m to the west of the site (CAT 1999b, 17–18). Two pits, a posthole and a small quantity of Roman pottery were also recovered during mitigation works for the development of the residential area in the same area (MOLA 2004).
- 2.7 No evidence has been identified for Late Iron Age or Roman settlement within the business park, suggesting that the area was predominately farmland in the Roman period. However, a residual fragment of box flue tile and a small assemblage of Roman finds were recovered from the site of Plot 5600, suggesting that there may have been a heated Roman building in the vicinity (MOLA 2015).

#### Saxon AD (410 to 1066)

2.8 Approximately 300m to the north-east of the site, nine sherds of Anglo-Saxon pottery were recovered during an archaeological watching brief at the LM Solutions site (MOLA 2001). The pottery has been dated to the Early to Middle Saxon period (AD 400–750). More recently, several Saxon pits yielding a large assemblage of early Saxon pottery were investigated within the site of Plot 5600, *c*. 500m to the north-east of the site (MOLA 2015).

#### Medieval (1066 to 1485)

- 2.9 During the medieval period the site lay within an area of open fields and woodland, interspersed with small farmsteads, at a distance from local centres. No archaeological remains of medieval date have been identified within the area of the business park.
- 2.10 The site of Harpsfield Hall, which is located approximately 300m to the north-west of the site, was a post-medieval building constructed on the site of an earlier medieval manor house. In a charter drawn up during the reign of King John (1199–1215), the manor was recorded as belonging to the Abbot of St Albans and it was held from the Abbey by Ralph de Harpsfield. The Harpsfields retained the manor until its return to the Abbey in 1429 (CAT 1999a).

#### Post-medieval and modern (1485 to present)

- 2.11 During the post-medieval period the site and the surrounding area lay within the estate of Harpsfield Hall, which was rebuilt in the 17th century on the site of the medieval manor. Excavations at the site of Harpsfield Hall have indicated five major phases of development at the hall, dating from the 17th to the 19th centuries.
- 2.12 Reference to historic mapping shows that the site was farmland or parkland from the mid-18th century, with a number of paths radiating out from the hall complex.
- 2.13 Hatfield Aerodrome was opened in 1930 and the de Havilland Aircraft Company moved its main headquarters and factory there in 1934. Expansion of the aerodrome led to the demolition of Harpsfield Hall in 1938. During WWII the factory developed and produced the Mosquito fighter bomber. A concrete runway was built at the aerodrome in 1947 and during the Cold War years the Blue Streak rocket was developed by BAe Dynamics at the aerodrome in specially constructed buildings.

# 3. AIMS AND OBJECTIVES

- 3.1 The objectives of the archaeological mitigation are to:
  - record the nature of the main stratigraphic units encountered;
  - assess the overall presence, survival and potential of structural and industrial remains;
  - assess the overall presence, survival, condition, and potential of artefactual and ecofactual remains.
- 3.2 The specific aims of the work are to:
  - record any evidence of past settlement or other land use;
  - recover artefactual evidence to date any evidence of past settlement that may be identified;
  - sample and analyse environmental remains to create a better understanding of past land use and economy.

3.3 Subject to the results of the fieldwork, the specific research aims of the project will be reviewed and updated to incorporate new findings. The results will be examined with reference to *Research and Archaeology Revisited: A Revised Framework for the East of England* (Medlycott 2011).

# Bronze Age

- To investigate the relationship between settlement sites and burial;
- To excavate/investigate Bronze Age sites in non-gravel locations,
- To gain a better characterisation of the nature of changes associated with the adoption and development of farming, the beginning of woodland clearance and establishment of permanent field systems.

# 4. METHODOLOGY

# Excavation and recording

- 4.1 The archaeological excavation will be undertaken within the footprint of the building prior to development taking place, and in the areas of any landscaping works, site strip or ground reduction which is likely to impact on the below ground archaeological remains. The final excavation area will be approved by the HCCHEA.
- 4.2 Excavation areas will be set out on OS National Grid (NGR) co-ordinates using a Leica GPS, and scanned for live services by trained staff using CAT and Genny equipment in accordance with the Cotswold Archaeology *Safe System of Work for avoiding underground services*. The position and size of excavation areas may be adjusted on site to account for services and other constraints, with the approval of the HCCHEA. The final 'as dug' areas will be recorded with GPS.
- 4.3 Initially works will comprise the mechanical removal of non-archaeologically significant soils, under constant archaeological supervision, using a toothless ditching bucket. The generated spoil will be monitored in order to recover artefacts, including systematic sweeping with a metal detector. Metal detecting and hand-cleaning of the stripped surface, to better define any identified archaeological deposits/features and record the distribution of unstratified/surface artefacts, will be undertaken if deemed appropriate. All machining will be conducted under archaeological supervision and will cease when the first archaeological horizon or

natural substrate is revealed (whichever is encountered first). All archaeological features will be recorded in plan using Leica GPS. No plant or any other site vehicles will be permitted to track or drive over the stripped area until it has been signed off by HCCHEA and no parts of the excavation areas will be handed back to the developer until written confirmation that they have been signed off is obtained from County Archaeological Services. A post excavation plan showing the features and interventions along with grid references will need to be provided for any sign off areas in advance of this written confirmation.

- 4.4 Examination of features will concentrate on recovering the plan and any structural sequences. Particular emphasis will be placed upon gaining a secure understanding of the stratigraphic and chronological development of the site, including the recovery of samples suitable for radiocarbon dating where appropriate, and on upon obtaining details of the phasing of the site.
- 4.5 Following the mechanical stripping of the site to the first archaeologically significant layer, all features will be recoded in plan. Once the planning has been completed the sampling strategy will be agreed between the archaeological contractor (acting on behalf of the applicant) and County Archaeological Services. This iterative approach will form the basis of the excavation strategy. However, the following sampling strategies will be appropriate unless otherwise specified during the initial post-site strip discussions. All funerary/ritual activity and domestic/industrial deposits will be 100% excavated. All discrete features (post holes, pits) will be sampled by hand excavation (average sample unlikely to exceed 50%) unless their common/repetitious nature suggests they are unlikely to yield significant new information. All linear features (ditches, pathways etc) will be sampled to a maximum of 10%. Bulk horizontal deposits will as a minimum be 10% by area hand excavated, after which a decision may be taken (in conjunction with the HCCHEA) to remove the remainder with machinery. Priority will be attached to features which yield sealed assemblages which can be related to the chronological sequence of the site.
- 4.6 All archaeological features revealed will be planned and recorded in accordance with CA Technical Manual 1 *Fieldwork Recording Manual*. Each context will be recorded on a pro-forma context sheet by written and measured description; principal deposits will be recorded by drawn plans (scale 1:20 or 1:50, or electronically using Leica GPS or Total Station (TST) as appropriate) and drawn sections (scale 1:10 or 1:20 as appropriate). Where detailed feature planning is

undertaken using GPS/TST this will be carried out in accordance with CA Technical Manual 4 *Survey Manual*. Photographs (digital colour) will be taken as appropriate. All finds and samples will be bagged separately and related to the context record. All artefacts will be recovered and retained for processing and analysis in accordance with CA Technical Manual 3 *Treatment of Finds Immediately after Excavation*.

#### Artefact retention and discard

4.7 Artefacts from topsoil and subsoil and un-stratified contexts will normally be noted but not retained unless they are of intrinsic interest (e.g. worked flint or flint debitage, featured pottery sherds, and other potential 'registered artefacts'). All artefacts will be collected from stratified excavated contexts except for large assemblages of post-medieval or modern material. Such material may be noted and not retained, or, if appropriate, a representative sample may be collected and retained.

#### Human remains

4.8 If human remains are encountered, the client and the HCCHEA will be informed immediately. Where excavation of human remains is undertaken, this will be conducted following the provisions of the Coroners Unit in the Ministry of Justice.

#### Environmental remains

- 4.9 Due care will be taken to identify deposits which may have environmental potential, and where appropriate, a programme of environmental sampling will be initiated. This will follow the Historic England environmental sampling guidelines outlined in *Environmental Archaeology, A guide to the Theory and Practice of Methods, from Sampling and Recovery to Post-excavation* (English Heritage 2011), and *CA Technical Manual 2: The Taking and Processing of Environmental and Other Samples from Archaeological Sites.* The sampling strategy will be adapted for the specific circumstances of this site, in close consultation with the CA Environmental Officer, but will follow the general selection parameters set out in the following paragraphs.
- 4.10 Secure and phased deposits, especially those related to settlement activity and/or structures will be considered for sampling for the recovery of charred plant remains, charcoal and mineralised remains. Any cremation-related deposits will be sampled appropriately for the recovery of cremated human bone and charred remains. If any evidence of *in situ* metal working is found, suitable samples for the recovery of slag and hammer scale will be taken.

- 4.11 Where sealed waterlogged deposits are encountered, samples for the recovery of waterlogged remains, insects, molluscs and pollen, as well as any charred remains, will be considered. The taking of sequences of samples for the recovery of molluscs and/or waterlogged remains will be considered through any suitable deposits such as deep enclosure ditches, barrow ditches, palaeo-channels, or buried soils. Monolith samples will also be taken from this kind of deposit as appropriate to allow soil and sediment description/interpretation as well as sub-sampling for pollen and other micro/macrofossils such as diatoms, foraminifera and ostracods.
- 4.12 The need for any more specialist samples, such as OSL, archaeomagnetic dating and dendrochronology will be evaluated and will be taken under the direction of the relevant specialist.
- 4.13 The processing of the samples will be done in conjunction with the relevant specialist following the Historic England general environmental processing guidelines (English Heritage 2011). Flotation or wet sieve samples will be processed to 0.25mm. Other more specialist samples such as those for pollen will be prepared by the relevant specialist. Further details of the general sampling policy and the methods of taking and processing specific sample types are contained within *CA Technical Manual 2: The Taking and Processing of Environmental and Other Samples from Archaeological Sites*.

# Treasure

4.14 Upon discovery of Treasure CA will notify the client and the curator immediately. CA will comply fully with the provisions of the Treasure Act 1996 and the Code of Practice referred to therein. Findings will be reported to the coroner within 14 days.

# 5. STAFF AND TIMETABLE

- 5.1 This project will be under the management of Stuart Joyce MCIfA, Project Manager, CA.
- 5.2 The staffing structure will be organised thus: the Project Manager will direct the overall conduct of the evaluation as required during the period of fieldwork. Day to

day responsibility however will rest with the Project Leader who will be on-site throughout the project.

- 5.3 The structure of the field team will be defined once the scope of works has been established.
- 5.4 The duration of the project and subsequent reporting will be defined once the scope works has been established by the HCCHEA.
- 5.5 Specialists who will be invited to advise and report on specific aspects of the project as necessary are:

| Ceramics              | Ed McSloy MCIfA (CA)                   |
|-----------------------|--|
|                       | Pete Banks (CA)                        |
|                       | Ioannis Smyranios (CA)                 |
| Metalwork             | Ed McSloy MCIfA (CA)                   |
| Flint                 | Jacky Sommerville PCIfA (CA)           |
| Animal Bone           | Andy Clarke BA (Hons) MA (CA)/         |
|                       | Matty Holmes BSc MSc ACIfA (freelance) |
| Human Bone            | Sharon Clough MCIfA (CA)               |
| Environmental Remains | Sarah Wyles PCIfA (CA)                 |
|                       | Emma Aitken (CA)                       |
| Conservation          | Pieta Greeves BSc MSc ACR              |
|                       | (Drakon Heritage and Conservation)     |
| Geoarchaeology        | Dr Keith Wilkinson (ARCA)              |
|                       | Dr Peter Boyer (CA)                    |
|                       |  |

5.6 Depending upon the nature of the deposits and artefacts encountered it may be necessary to consult other specialists not listed here. A full list of specialists currently used by Cotswold Archaeology is contained within Appendix A.

# 6. POST-EXCAVATION, ARCHIVING AND REPORTING

6.1 Following completion of fieldwork, all artefacts and environmental samples will be processed, assessed, conserved and packaged in accordance with CA Technical Manuals and Welwyn Hatfield Museum Service (WHMS). A recommendation will be made regarding material deemed suitable for disposal/dispersal in line with the WHMS Museum Service collection policy.

6.2 A post-excavation assessment will be undertaken following completion of all site works. This will be prepared in accordance with the specification given in Appendices 4 and 5 of *Management of Archaeological Projects 2* (English Heritage 1991). Any variations to these post-excavation requirements will require the written approval of the HCCHEA. The post-excavation assessment report will include:

(i) an abstract containing the essential elements of the results preceding the main body of the report and a summary of the project's background;

(ii) description and illustration of the site location;

(iii) a methodology of the works undertaken;

(iv) include plans and reports of all documentary and other research undertaken;

(v) a description of the project's results;

(vi) an interpretation of the results in the appropriate context;

(vii) a summary of the contents of the project archive and its location (including summary catalogues of finds and samples);

(viii) a site location plan at an appropriate scale on an Ordnance Survey, or equivalent, base-map;

(ix) a plan showing the location of the trenches and exposed archaeological features and deposits in relation to the site boundaries;

(x) plans of each trench, or part of trench, in which archaeological features are recognised. These will be at an appropriate scale to allow the nature of the features exposed to be shown and understood. Plans will show the orientation of trenches in relation to north. Section drawing locations will be shown on these plans. Archaeologically sterile areas will not be illustrated unless this can provide information development of on the the site stratigraphy show or palaeoenvironmental deposits that have influenced the site stratigraphy;

(xi) appropriate section drawings of trenches and features will be included, with OD heights and at scales appropriate to the stratigraphic detail being represented. These will show the orientation of the drawing in relation to north/south/east/west. Archaeologically sterile trenches will not be illustrated unless they provide significant information on the development of the site stratigraphy or show palaeoenvironmental deposits that have influenced the site stratigraphy;

(xii) site matrices, if appropriate;

(xiii) photographs showing significant features and deposits that are referred to in the text. All photographs will contain appropriate scales, the size of which will be noted in the illustration's caption;

(xiv) a consideration of evidence within its wider local/regional context;

(xv) a summary table and descriptive text showing the features, classes and numbers of artefacts recovered and soil profiles with interpretation;

(xvi) specialist assessment or analysis reports where undertaken;

(xvii) an evaluation of the methodology employed and the results obtained (i.e. a confidence rating).

- 6.3 Specialist artefact and palaeoenvironmental assessment will take into account the wider local/regional context of the archaeology and will include:
  - (i) specialist aims and objectives
  - (ii) processing methodologies (where relevant)
  - (iii) any known biases in recovery, or problems of contamination/residuality
  - (iv) quantity of material; types of material present; distribution of material
  - (v) for environmental material, a statement on abundance, diversity and preservation
  - (vi) summary and discussion of the results to include significance in a local and regional context
- 6.4 Copies of the <u>draft post-excavation assessment report</u> will be distributed to the Client or their Representative and to the HCCHEA thereafter for verification and approval. Thereafter, copies of the <u>approved report</u> will be issued to the Client, HCCHEA and the local Historic Environment Record (HER). Reports will be issued in digital format (PDF/PDFA as appropriate) except where hard copies have been specifically requested, and will be supplied to the HER along with shapefiles containing location data for the areas investigated, if required.

#### Academic dissemination

6.5 Should the post-excavation assessment identify the potential for further analysis, an updated project design will be prepared for agreement by the HCCHEA prior to the commencement of the detailed analysis and reporting. Arrangements will be made for an appropriate level of academic publication of the results of the excavations. A summary account of the work will be submitted to *CBA East Archaeology* and relevant period journals (e.g. *Proceedings of the Prehistoric Society*).

6.6 Copies of any reports arising from the fieldwork will be deposited with the Hertfordshire Historic Environment Record (HER). A summary of information from the project will also be entered onto the OASIS online database of archaeological projects in Britain, including the upload of a digital (PDF) copy of the final report, which will appear on the Archaeology Data Service (ADS) website once the OASIS record has been verified.

#### Public dissemination

6.7 In addition to the ADS website, a digital (PDF) copy of the final report will also be made available for public viewing via Cotswold Archaeology's Archaeological Reports Online web page, generally within 12 months of completion of the project (http://reports.cotswoldarchaeology.co.uk/).

# Archive preparation and deposition

- 6.8 An ordered, indexed, and internally consistent site archive will be prepared and deposited in accordance with *Archaeological Archives: A Guide to Best Practice in Creation, Compilation, Transfer and Curation* (Brown 2007).
- 6.9 CA will make arrangements with the Manuals and WHMS for the deposition of the site archive and, subject to agreement with the legal landowner(s), the artefact collection. The WHMS will be consulted at this stage concerning their requirements and notified in advance of the expected time limits for deposition of the archive.

# 7. HEALTH, SAFETY AND ENVIRONMENT

7.1 CA will conduct all works in accordance with the Health and Safety at Work Act 1974 and all subsequent Health and Safety legislation, CA Health and Safety and Environmental policies and the CA Safety, Health and Environmental Management System (SHE), as well as any Principal Contractor's policies or procedures. A site-specific Construction Phase Plan (form SHE 017) will be formulated prior to commencement of fieldwork.

#### 8. INSURANCES

8.1 CA holds Public Liability Insurance to a limit of £10,000,000 and Professional Indemnity Insurance to a limit of £10,000,000.

# 9. MONITORING

9.1 Notification of the start of site works will be made to the HCCHEA so that there will be opportunities to visit the excavation and check on the quality and progress of the work.

# 10. QUALITY ASSURANCE

- 10.1 CA is a Registered Organisation (RO) with the Chartered Institute for Archaeologists (RO Ref. No. 8). As a RO, CA endorses the *Code of Conduct* (CIfA 2014) and the *Code of Approved Practice for the Regulation of Contractual Arrangements in Field Archaeology* (CIfA 2014). All CA Project Managers and Project Officers hold either full Member or Associate status within the CIfA.
- 10.2 CA operates an internal quality assurance system in the following manner. Projects are overseen by a Project Manager who is responsible for the quality of the project. The Project Manager reports to the Chief Executive who bears ultimate responsibility for the conduct of all CA operations. Matters of policy and corporate strategy are determined by the Board of Directors, and in cases of dispute recourse may be made to the Chairman of the Board.

# 11. PUBLIC ENGAGEMENT, PARTICIPATION AND BENEFIT

11.1 It is not envisaged that this project will afford opportunities for public engagement or participation during the course of the fieldwork. However, the results will be made publicly available on the ADS and Cotswold Archaeology websites, as set out in Section 6 above, in due course.

#### 12. STAFF TRAINING AND CPD

- 12.1 CA has a fully documented mandatory Performance Management system for all staff which reviews personal performance, identifies areas for improvement, sets targets and ensures the provision of appropriate training within CA's adopted training policy. In addition, CA has developed an award-winning Career Development Programme for its staff, which ensures a consistent and high quality approach to the development of appropriate skills.
- 12.2 As part of the company's requirement for Continuing Professional Development, all members of staff are also required to maintain a Personal Development Plan and an associated log which is reviewed within the Performance Management system. All staff are subject to probationary periods on appointment, with monthly review; for site-based staff additional monthly Employee Performance Evaluations measure and record skills and identify training needs.

#### 13. **REFERENCES**

- BGS (British Geological Survey) 2018 Geology of Britain Viewer http://mapapps.bgs.ac.uk/geologyofbritain/home.html Accessed 14 November 2018
- Brown, DH 2007 Archaeological Archives Forum: A Guide to Best Practice in Creation, Compilation, Transfer and Curation
- Brown, N and Glazebrook, J (2000) Research and Archaeology: A Framework for the Eastern Counties – 2 Research Agenda and Strategy. East Anglian Archaeology Occasional Paper 8
- CA (Cotswold Archaeological) 2017 Plot 5000, Hatfield Business Park, Hertfordshire: Archaeological Summary Report, unpublished report
- CA (Cotswold Archaeological) 2017 Plot 5000, Hatfield Business Park, Hertfordshire: Written Scheme of Investigation for a Strip, Map and Record Excavation

- CAT (Cotswold Archaeological Trust) 1999a Hatfield Business Park Stage 2, Hertfordshire: Archaeological Assessment, Report **991015**
- CAT (Cotswold Archaeological Trust) 1999b Hatfield Aerodrome, Hertfordshire: Archaeological Evaluation, report **991093**
- ClfA 2014 Standard and guidance: Archaeological field excavation
- Glazebrook, J (1997) Research and Archaeology: A Framework for the Eastern Counties 1 Resource Assessment. East Anglian Archaeology Occasional Paper 3
- HE (Historic England) 2015 Management of Research Projects in the Historic Environment (MORPHE): Project Planning Note 3
- HE (Historic England) 2011 Environmental Archaeology: A guide to the theory and practice of methods, from sampling and recovery to post-excavation. English Heritage Centre for Archaeology Guidelines (London)
- Medlycott, M (2011) Research and Archaeology Revisited: A Revised Framework for the East of England. East Anglian Archaeology Occasional Paper 24. available online at: <u>http://www.eaareports.org.uk</u>
- MOLA (Museum of London Archaeology) 2001 LM Solutions: An Interim Report on the Archaeological Investigation, unpublished report
- MOLA (Museum of London Archaeology) 2004 Residential Development, Hatfield Aerodrome: A Post-excavation Assessment and Updated Project Design, unpublished report
- MOLA (Museum of London Archaeology) 2015 Plot 5600 and Borrow Pit Area: A Postexcavation Assessment and Updated Project Design, unpublished report

# APPENDIX A: COTSWOLD ARCHAEOLOGY SPECIALISTS

| Ceramics                          |   |  |
|-----------------------------------|---|--|
| Neolithic/Bronze Age              | Ed McSloy BA MCIFA (CA)<br>Emily Edwards (freelance)<br>Dr Elaine Morris BA PhD FSA MCIFA (University of Southampton)   |  |
| Iron Age/Roman                    | Ed McSloy BA MCIFA (CA)<br>Kayt Marter Brown BA MSc MCIFA (freelance)<br>Gwladys Montell MA PhD (freelance)<br>Dr David Williams PhD FSA (freelance)                                |  |
| (Samian)<br>(Amphorae stamps)     |   |  |
| Anglo-Saxon                       | Paul Blinkhorn BTech (freelance)<br>Dr Jane Timby BA PhD FSA MCIFA (freelance)  |  |
| Medieval/post-medieval            | Ed McSloy BA MCIFA (CA)<br>Kayt Marter Brown BA MSc MCIFA (freelance)<br>Stephanie Ratkai BA (freelance)<br>Paul Blinkhorn BTech (freelance)<br>John Allan BA MPhil FSA (freelance) |  |
| South West                        | Henrietta Quinnell BA FSA MCIFA (University of Exeter)  |  |
| Clay tobacco pipe                 | Reg Jackson MLitt MCIFA (freelance)<br>Marek Lewcun (freelance)   |  |
| Ceramic Building Material         | Ed McSloy MCIFA (CA)<br>Dr Peter Warry PhD (freelance)  |  |
| <b>Other Finds</b><br>Small Finds | Ed McSloy BA MCIFA (CA)   |  |
| Metal Artefacts                   | Katie Marsden BSc (CA)<br>Dr Jörn Schuster MA DPhil FSA MCIFA (freelance)<br>Dr Hilary Cool BA PhD FSA (freelance)  |  |
| Lithics                           | Ed McSloy BA MCIFA (CA)<br>Jacky Sommerville BSc MA PCIFA (CA)<br>Dr Francis Wenban-Smith BA MA PhD (University of Southampton)   |  |
| (Palaeolithic)                    |   |  |
| Worked Stone                      | Dr Ruth Shaffrey BA PhD MCIFA (freelance)<br>Dr Kevin Hayward FSA BSc MSc PhD PCIFA (freelance)   |  |
| Inscriptions                      | Dr Roger Tomlin MA DPhil, FSA (Oxford)  |  |
| Glass                             | Ed McSloy MCIFA (CA)<br>Dr Hilary Cool BA PhD FSA (freelance)<br>Dr David Dungworth BA PhD (freelance; English Heritage)  |  |
| Coins                             | Ed McSloy BA MCIFA (CA)<br>Dr Peter Guest BA PhD FSA (Cardiff University)<br>Dr Richard Reece BSc PhD FSA (freelance)   |  |
| Leather                           | Quita Mould MA FSA (freelance)  |  |
| Textiles                          | Penelope Walton Rogers FSA Dip Acc. (freelance)   |  |
| Iron slag/metal technology        | Dr Tim Young MA PhD (Cardiff University)<br>Dr David Starley BSc PhD  |  |
| Worked wood                       | Michael Bamforth BSc MCIFA (freelance)  |  |

| <i>Biological Remains</i><br>Animal bone | Dr Philip Armitage MSc PhD MCIFA (freelance)<br>Dr Matilda Holmes BSc MSc ACIFA (freelance)                                   |
|--|---|
| Human Bone                               | Sharon Clough BA MSc MCIFA (CA)   |
| Environmental sampling                   | Sarah Wyles BA PCIFA (CA)<br>Sarah Cobain BSc MSc ACIFA (CA)<br>Dr Keith Wilkinson BSc PhD MCIFA (ARCA)                       |
| Pollen                                   | Dr Michael Grant BSc MSc PhD (University of Southampton)<br>Dr Rob Batchelor BSc MSc PhD MCIFA (QUEST, University of Reading) |
| Diatoms                                  | Dr Tom Hill BSc PhD CPLHE (Natural History Museum)<br>Dr Nigel Cameron BSc MSc PhD (University College London)                |
| Charred Plant Remains                    | Sarah Wyles BA PCIFA (CA)<br>Sarah Cobain BSc MSc ACIFA (CA)  |
| Wood/Charcoal                            | Sarah Cobain BSc MSc ACIFA(CA)<br>Dana Challinor MA (freelance)   |
| Insects                                  | Enid Allison BSc D.Phil (Canterbury Archaeological Trust)<br>Dr David Smith MA PhD (University of Birmingham)                 |
| Mollusca                                 | Sarah Wyles BA PCIFA (CA)<br>Dr Keith Wilkinson BSc PhD MCIFA (ARCA)  |
| Ostracods and Foraminifera               | Dr John Whittaker BSc PhD (freelance)   |
| Fish bones                               | Dr Philip Armitage MSc PhD MCIFA (freelance)  |
| Geoarchaeology                           | Dr Keith Wilkinson BSc PhD MCIFA (ARCA)   |
| Soil micromorphology                     | Dr Richard Macphail BSc MSc PhD (University College London)   |
| Scientific Dating<br>Dendrochronology    | Robert Howard BA (NTRDL Nottingham)   |
| Radiocarbon dating                       | SUERC (East Kilbride, Scotland)<br>Beta Analytic (Florida, USA)   |
| Archaeomagnetic dating                   | Dr Cathy Batt BSc PhD (University of Bradford)  |
| TL/OSL Dating                            | Dr Phil Toms BSc PhD (University of Gloucestershire)  |
| Conservation                             | Karen Barker BSc (freelance)<br>Pieta Greaves BSc MSc ACR (Drakon Heritage and Conservation)                                  |

#### APPENDIX B: ARCHAEOLOGICAL STANDARDS AND GUIDELINES

- AAF 2007 Archaeological Archives. A guide to best practice in creation, compilation, transfer and curation. Archaeological Archives Forum
- AAI&S 1988 The Illustration of Lithic Artifacts: A guide to drawing stone tools for specialist reports. Association of Archaeological Illustrators and Surveyors Paper **9**
- AAI&S 1994 The Illustration of Wooden Artifacts: An Introduction and Guide to the Depiction of Wooden Objects. Association of Archaeological Illustrators and Surveyors Paper **11**
- AAI&S 1997. Aspects of Illustration: Prehistoric pottery. Association of Archaeological Illustrators and Surveyors Paper 13
- AAI&S nd Introduction to Drawing Archaeological Pottery. Association of Archaeological Illustrators and Surveyors, Graphic Archaeology Occasional Papers 1
- ACBMG 2004 Draft Minimum Standards for the Recovery, Analysis and Publication of Ceramic Building Material. (third edition) Archaeological Ceramic Building Materials Group
- AEA 1995 Environmental Archaeology and Archaeological Evaluations. Recommendations concerning the environmental archaeology component of archaeological evaluations in England. Working Papers of the Association for Environmental Archaeology No. **2**
- BABAO and IFA, 2004 Guidelines to the Standards for Recording Human Remains. British Association for Biological Anthropology and Osteoarchaeology and Institute of Field Archaeologists. Institute of Field Archaeologists Technical Paper 7 (Reading)
  Barber, B., Carver, J., Hinton, P. and Nixon, T. 2008 Archaeology and development. A good practice guide to
- Barber, B., Carver, J., Hinton, P. and Nixon, T. 2008 Archaeology and development. A good practice guide to managing risk and maximising benefit. Construction Industry Research and Information Association Report C672
- Bayley, J. (ed) 1998 Science in Archaeology. An agenda for the future. English Heritage (London)
- Bewley, R., Donoghue, D., Gaffney, V., Van Leusen, M., Wise, M., 1998 Archiving Aerial Photography and Remote Sensing Data: A guide to good practice. Archaeology Data Service
- Blake, H. and P. Davey (eds) 1983 Guidelines for the processing and publication of Medieval pottery from excavations, report by a working party of the Medieval Pottery Research Group and the Department of the Environment. Directorate of Ancient Monuments and Historic Buildings Occasional Paper 5, 23-34, DoE, London
- Brickley, M. and McKinley, J.I., 2004 *Guidelines to the Standards for Recording Human Remains*. IFA Paper No 7,Institute of Field Archaeologists (Reading)
- Brickstock, R.J. 2004 The Production, Analysis and Standardisation of Romano-British Coin Reports. English Heritage (Swindon)
- Brown, A. and Perrin, K. 2000 A Model for the Description of Archaeological Archives. English Heritage Centre for Archaeology/ Institute of Field Archaeologists (Reading)
- Brown, D.H. 2007 Archaeological Archives: A guide to best practice in creation, compilation, transfer and curation. IFA Archaeological Archives Forum (Reading)
- Buikstra, J.E. and Ubelaker D.H. (eds) 1994 Standards for Data Collection from Human Skeletal Remains. (Fayetteville, Arkansas)
- ClfA, 2014, Code of Approved Practice for the Regulation of Contractual Arrangements in Field
- Archaeology. Chartered Institute for Archaeologists (Reading)
- ClfA, 2014, Standard and Guidance for Archaeological Desk-based Assessment. Chartered Institute for Archaeologists (Reading)
- ClfA, 2014, Standard and Guidance for Archaeological Watching Brief. Chartered Institute for Archaeologists (Reading)
- ClfA, 2014, Standard and Guidance for Archaeological Excavation. Chartered Institute for Archaeologists (Reading)
- ClfA, 2014, Standard and Guidance for Archaeological Investigation and Recording of Standing Buildings or Structures. Chartered Institute for Archaeologists (Reading)
- ClfA, 2014, Standard and Guidance for the Collection, Documentation, Conservation and Research of Archaeological Materials. Chartered Institute for Archaeologists (Reading)
- ClfA, 2014, Standard and Guidance for the Creation, Compilation, Transfer and Deposition of
- Archaeological Archives. Chartered Institute for Archaeologists (Reading)
- ClfA, 2014, Standard and Guidance for Archaeological Field Evaluation. Chartered Institute for Archaeologists (Reading)
- Clark, J., Darlington, J. and Fairclough, G. 2004 Using Historic Landscape Characterisation. English Heritage (London)
- Coles, J.M., 1990 Waterlogged Wood: guidelines on the recording, sampling, conservation and curation of structural wood. English Heritage (London)
- Cowton, J., 1997 Spectrum. The UK Museums Documentation Standard. Second edition. Museums Documentation Association
- Cox, M., 2002 Crypt Archaeology: an approach. Institute of Field Archaeologists Technical Paper 3 (Reading)
- Darvill, T. and Atkins, M., 1991 Regulating Archaeological Works by Contract. IFA Technical Paper No 8, Institute of Field Archaeologists (Reading)

Davey P.J. 1981 *Guidelines for the processing and publication of clay pipes from excavations.* Medieval and Later Pottery in Wales, IV, 65-87

Eiteljorg, H., Fernie, K., Huggett, J. and Robinson, D. 2002 *CAD: A guide to good practice.* Archaeology Data Service (York)

EA 2005 Guidance on Assessing the Risk Posed by Land Contamination and its Remediation on Archaeological Resource Management. English Heritage/ Environment Agency Science Report P5-077/SR (Bristol)

EH 1995 A Strategy for the Care and Investigation of Finds. English Heritage Ancient Monuments Laboratory (London)

EH 1998 *Identifying and Protecting Palaeolithic Remains*. Archaeological guidance for planning authorities and developers. English Heritage (London)

- EH 1999 Guidelines for the Conservation of Textiles. English Heritage (London)
- EH 2000, Managing Lithic Scatters. Archaeological guidance for planning authorities and developers. English Heritage (London)
- EH 2002 With Alidade and Tape: graphical and plane table survey of archaeological earthworks. English Heritage (Swindon)
- EH 2003a Where on Earth Are We? The Global Positioning System (GPS) in archaeological field survey. English Heritage (London)
- EH 2003b Twentieth-Century Military Sites. Current approaches to their recording and conservation English Heritage (Swindon)
- EH 2004a Dendrochronology. Guidelines on producing and interpreting dendrochronological dates. English Heritage (Swindon)
- EH 2004b Human Bones from Archaeological Sites: Guidelines for producing assessment documents and analytical report. English Heritage Centre for Archaeology Guidelines
- EH 2006a Guidelines on the X-radiography of Archaeological Metalwork. English Heritage (Swindon)
- EH 2006b Archaeomagnetic Dating. English Heritage (Swindon)
- EH 2006c Science for Historic Industries: Guidelines for the investigation of 17th- to 19th-century
  - industries. English Heritage (Swindon)
- EH 2007a Understanding the Archaeology of Landscapes. A guide to good recording practice. English Heritage (Swindon)
- EH 2007b Geoarchaeology. Using earth sciences to understand the archaeological record. (London)
- EH 2008a Luminescence Dating. Guidelines on using luminescence dating in archaeology. English Heritage (Swindon)
- EH 2008b Geophysical Survey in Archaeological Field Evaluation. English Heritage Research and Professional Services Guidelines No 1 (second edition). English Heritage (Swindon)
- EH 2008c Research and Conservation Framework for the British Palaeolithic. English Heritage/Prehistoric Society (Swindon)
- EH 2008d Investigative Conservation. Guidelines on how the detailed examination of artefacts from archaeological sites can shed light on their manufacture and use. English Heritage (Swindon)
- EH 2010 Waterlogged Wood: Guidelines on the recording, sampling, conservation and curation of archaeological wood. English Heritage (London)
- EH 2011 Environmental Archaeology: A guide to the theory and practice of methods, from sampling and recovery to post-excavation. English Heritage Centre for Archaeology Guidelines (London)
- EH 2012, Guidelines for the Care of Waterlogged Organic Artefacts: guidelines on their recovery, analysis and conservation.
- EH 2014 Our Portable Past: a statement of English Heritage policy and good practice for portable antiquities/surface collected material in the context of field archaeology and survey programmes (including the use of metal detectors). English Heritage (Swindon)
- EH and Church of England, 2005, *Guidance for Best Practice for Treatment of Human Remains Excavated from Christian Burial Grounds in England.* English Heritage (London)
- Ferguson, L. and Murray, D., 1997, Archaeological Documentary Archives. IFA Paper 1, Institute of Field Archaeologists (Reading)
- Gaffney, C. and Gater, J., with Ovenden, S., 2002, The Use of Geophysical Techniques in Archaeological Evaluations. IFA Technical Paper 9, Institute of Field Archaeologists (Reading)
- Gillings, M. and Wise, A., 1999, GIS: A guide to good practice. Archaeology Data Service (York)
- Gurney, D.A., 1985, *Phosphate Analysis of Soils: A Guide for the Field Archaeologist*. IFA Technical Paper 3, Institute of Field Archaeologists (Reading)
- HE 2015a Archaeometallurgy: Guidelines for Best Practice. Historic England (Swindon)
- HE 2015b (revised 2008), Metric Survey Specifications for Cultural Heritage. Historic England (Swindon)
- HE 2015c Management of Research Projects in the Historic Environment. The MoRPHE Project Managers' Guide. Historic England (Swindon)

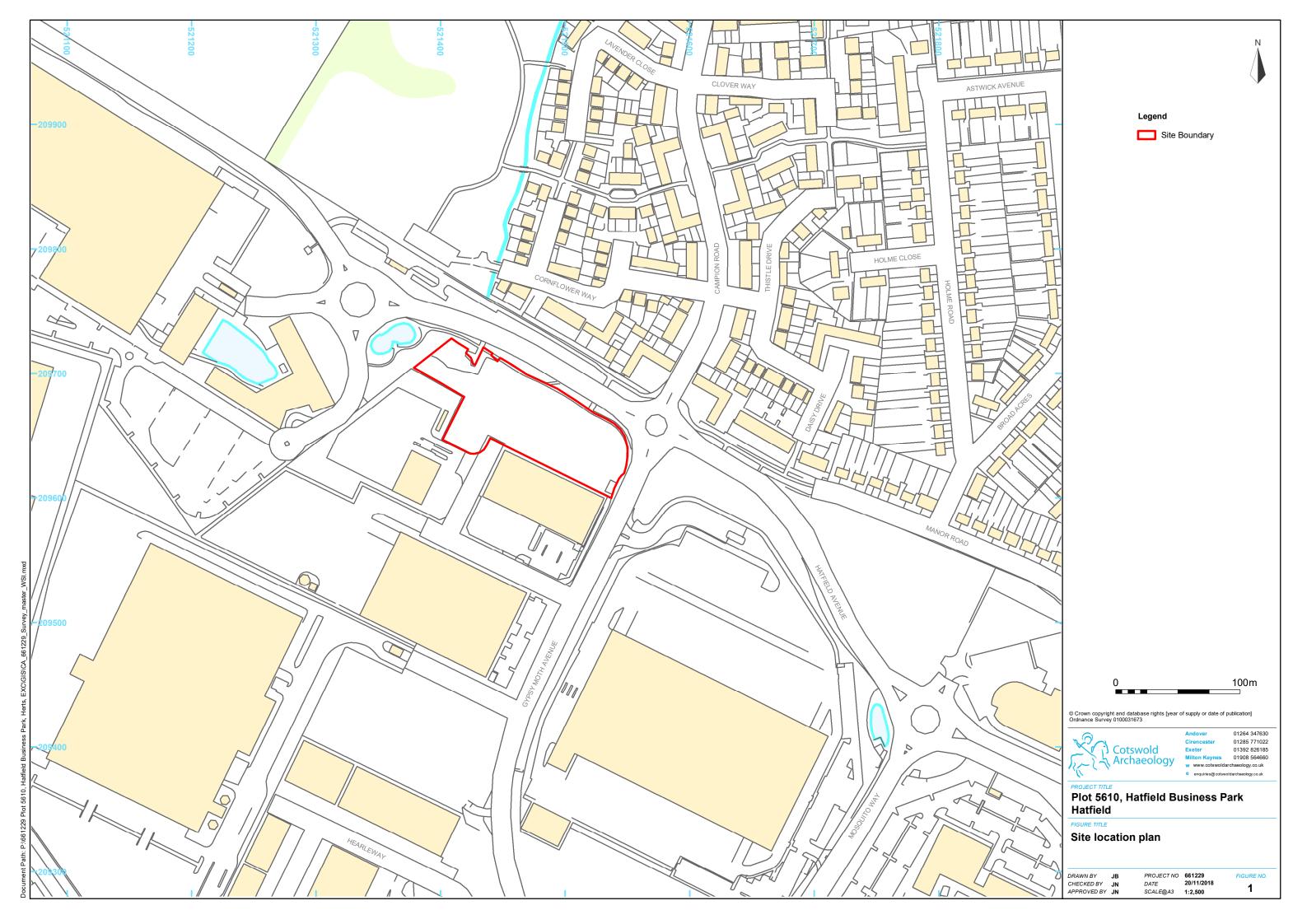
Handley, M., 1999, *Microfilming Archaeological Archives*. IFA Technical Paper 2, Institute of Field Archaeologists (Reading)

- Mays, S., 1991, Recommendations for Processing Human Bone from Archaeological Sites. Ancient Monuments Lab Report 124/91 (London)
- Mays, S., Brickley, M. and Dodwell, N., 2002, *Human Bones from Archaeological Sites. Guidelines for Producing Assessment Documents and Analytical Reports.* Centre for Archaeology Guidelines, English Heritage (Portsmouth)

McKinley, J.I. and Roberts, C., 1993, *Excavation and Post-excavation Treatment of Cremated and Inhumed Human Remains*. Institute of Field Archaeologists Technical Paper No. 13 (Reading)

MGC, 1992, Standards in the Museum Care of Archaeological Collections. Museums and Galleries Commission

- Murphy, P.L. and Wiltshire, P.E.J. 1994, A Guide to Sampling Archaeological Deposits for Environmental Analysis. English Heritage (London)
- MPRG 2000, A Guide to the Classification of Medieval Ceramics. Medieval Pottery Research Group Occasional Papers No. 1.
- MPRG 2001, *Minimum Standards for the Processing, Recording, Analysis and Publication of Post-Roman Ceramics.* Medieval Pottery Research Group
- Owen, J., 1995, Towards an Accessible Archaeological Archive. The Transfer of archaeological archives to museums: guidelines for use in England, Northern Ireland, Scotland and Wales. Society of Museum Archaeologists
- PCRG 1997, The Study of Later Prehistoric Pottery: General polices and guidelines for analysis and publication. Prehistoric Ceramics Research Group Occasional Paper 12
- Philo, C. and Swann, A., 1992, *Preparation of Artwork for Publication*. Institute of Field Archaeologists Technical Paper No. 10 (Reading)
- RCHME 1999, Recording Archaeological Field Monuments: A descriptive specification. RCHME (Swindon)
- RCHME 2007, MIDAS: A manual and data standard for monuments inventories. RCHME (Swindon)
- Schofield, A J, (ed) 1998, Interpreting Artefact Scatters. Oxbow Monograph 4 (Oxford)
- Richards, J. and Robinson, D. (eds), 2001, *Digital Archives From Excavation and Fieldwork: A guide to good* practice. Archaeology Data Service
- Robinson, W., 1998, First Aid for Underwater Finds. Archetype Books (London)
- RFG and FRG, 1993, *Guidelines for the Preparation of Site and Assessments for all Finds other than Fired Clay* Vessels. Roman Finds Group And Finds Research Group
- Schmidt, A., 2001, Geophysical Data in Archaeology: A guide to good practice. Archaeology Data Service
- SGRP, 1994, Guidelines for the Archiving of Roman Pottery. Study Group for Roman Pottery
- SMA, 1993, Guidelines on the Selection, Retention and Dispersal of Archaeological Collections. Society of Museum Archaeologists
- UKIC, 1983, Packaging and Storage of Freshly Excavated Artefacts from Archaeological Sites. (United Kingdom Institute for Conservation, Conservation Guidelines No 2)
- UKIC, 1984, Environmental Standards for Permanent Storage of Excavated material from Archaeological Sites. (United Kingdom Institute for Conservation, Conservation Guidelines No 3)
- UKIC, 1990, Guidance for Conservation Practice. United Kingdom Institute for Conservation
- UKIC, 1990, *Guidelines for the Preparation of Excavation Archives for Long-term Storage*. United Kingdom Institute for Conservation Archaeology Section
- UKIC, 2001, Excavated Artefacts and Conservation. (United Kingdom Institute for Conservation,
- Conservation Guidelines No 1, revised)
- Watkinson, D.E., and Neal, V., 1998, *First Aid for Finds*. (3rd edition) RESCUE/United Kingdom Institute for Conservation, Archaeology Section and Museum of London
- Willis, S., 1997, (ed) Research Frameworks for the Study of Roman Pottery. Study Group for Roman Pottery
- World Archaeology Congress 1989, *The Vermillion Accord Human Remains*. Motion Approved at the First Inter-Congress on the Disposal of the Dead (Vermillion)
- Young C., 1980, Guidelines for the Processing and Publication of Roman Pottery. Department of the Environment





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