Proposed Postcombe and Lewknor Solar Farm, Oxfordshire: Written Scheme of Investigation for an Archaeology and Cultural Heritage Environmental Impact Assessment (Update)

AOC Project No: 26970
March 2025

AOC Archaeology Group

ARCHAEOLOGY | HERITAGE | CONSERVATION

Proposed Postcombe and Lewknor Solar Farm, Oxfordshire:

Written Scheme of Investigation for an Archaeology and Cultural Heritage Environmental Impact Assessment (Update)

For:	**SLR Consulting Ltd** 3rd Floor, Summit House, 12 Red Lion Square, London, United Kingdom On behalf of **Postcombe and Lewknor Solar Farm Limited**
National Grid Reference (NGR):	**SU 71070 98850 (Site centred)** **SP 68960 01070 (NW terminus of grid connection)** **SU 70575 99065 (SE end of grid connection)**
AOC Project No:	**26970**
Prepared by:	**Gary Millward**
Date:	**March 2025**

This document has been prepared in accordance with AOC standard operating procedures.	
Author: Gary Millward	**Date: March 2025**
Approved by: Vicky Oleksy	**Date: March 2025**
Draft/Final Report Stage: Draft	**Date: March 2025**

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1 INTRODUCTION

1.1 Project Background

1.1.1 AOC Archaeology Group has been commissioned by SLR Consulting Ltd, on behalf of Postcombe and Lewknor Solar Farm Limited, to undertake an Archaeology and Cultural Environmental Impact Assessment (EIA) for a proposed solar farm at Postcombe, Oxfordshire. This document is an update to a previously approved WSI (August 2022) in order to include the assessment of the proposed grid connection route, which has been added to the scheme after the previous assessment work of the main Site had been completed. Where elements of the work outlined in this WSI have already been completed this will be made clear.

1.1.2 The scope and methodology for undertaking the assessment is set out here for agreement with Oxfordshire County Council Archaeology Team who advise South Oxfordshire District Council on archaeological matters. This update to the Written Scheme of Investigation (WSI) relates solely to the desk-based work, walkover survey and setting assessment which will be undertaken for the EIA, which will form an Environmental Statement to accompany the planning application. The initial desk-based research, walkover survey and setting assessment undertaken for the EIA (which has been largely completed for the main Site, though will need updated in line with any changes to planning policy and subsequent updates to the HER) will inform the need for, scope and extent of any further archaeological works which may be required. It is noted that as per their pre-application advice, OCC Archaeology required that a geophysical survey be undertaken pre-determination and these survey works have been completed on the main Site. The scope of works and methodology to be employed for any further geophysical survey or any subsequent trial trenching will be agreed with Oxfordshire County Council Archaeology Team via a separate WSI and the results would be included in EIA.

1.1.3 The programme of works outlined here is in keeping with the policies outlined in current planning policy and guidance set out in National Planning Policy Framework (NPPF) (2025), Chapter 16; Planning Policy Guidance (2014, Historic Environment Section last updated 2019); and Local Planning Policy: South Oxfordshire Local Plan 2035 policies (SODC 2020) ENV1, ENV6, ENV7, ENV8, ENV9 and ENV10. All work will be undertaken in line with the Chartered Institute for Archaeologists (CIfA) standards and guidance documents, including Code of Conduct (2014, last updated 2022) and Regulations for Professional Conduct (2019, last revised 2024) and will adhere to the Standards and Guidance for Historic Environment Desk-Based Assessment (CIfA 2014, updated 2020) and Commissioning Work or Providing Consultancy Advice on the Historic Environment (CIfA 2014a, updated 2020). The scope of the assessment has also been designed with reference to the Oxfordshire Council Archaeology Team's Archaeological Desk-Based Assessment Advisory Document (no date).

1.2 Site location

1.2.1 The proposed development site (hereafter 'the Site), is located in the local authority area of South Oxfordshire District Council (SODC), to the north of Lewknor (Figure 1). The main Site is composed of two polygonal shaped parcels of land either side of the M40 and is approximately 89.24 hectares (ha).The Site is centred on National Grid Reference (NGR) SU 71070 98852. Both the eastern and western portions of the Site are currently in arable agricultural use. The proposed grid connection route (covering 8.26 ha) runs north-westwards from the western boundary of the main Site through arable farmland on the southwest side of the M40. The grid connection will terminate at the substation to the south of Tetsworth at National Grid Reference (NGR) SP 68960 01070

1.2.2 The proposed development is for a solar farm and associated infrastructure.

1.3 Historical and Archaeological Background

1.3.1 The main Site is located north of Lewknor and immediately south of the village of Postcombe. There are no designated heritage assets within the proposed Site boundary or grid connection route. Lewknor Conservation is located to the south of the main Site and Aston Rowant Conservation is located to the east. The eastern extent of the Grade II Registered Shirburn Castle Gardens (List Entry Number 1001105) lies just within 2km of the main Site. A total of 60 Listed Buildings are located within 2km of the main Site. The majority of these are Grade II Listed and located within the above noted Conservation Areas or the villages of Adwell, to the

northwest which includes the Grade II* Listed Adwell House, South Weston, to the southeast, and Potscombe, to the north. A few other individual Listed Buildings or groups of Listed Buildings are located in wider rural landscape. The Grade I Listed Church of St Andrew is located to the northwest at Wheatfield as is the Grade II* Listed Wheatfield Park Coach House, Stables and Farmhouse. Whilst the Grade I Listed Church of St Margaret is located within Lewknor and the Grade II* Listed Church of St Peter and St Paul is located within Aston Rowant. The Grade I Listed Church Farm, Barn Approximately 30 Metres East South East Of Farmhouse is also located within Lewknor. No designated heritage assets are located within 200m of the proposed grid connection route.

1.3.2 Data available online from the Oxfordshire Historic Environment Record (HER) records a number of findspots within the main Site. These were identified by the M40 Research Group during fieldwalking undertaken in advance of the extension of the M40 from Stokenchurch to Waterstock Crossroads in Great Milton (Rowley, 1973). Medieval pottery (MOX6309) was recovered from the eastern portion of the main Site; whist a number of finds including Roman (MOX6278), Anglo-Saxon (MOX6279) and medieval (MOX6280) pottery were recovered from the western portion. A medieval buckle (MOX6280) and a post-medieval silver coin (MOX6283) are also record as having been recovered from the western portion of the main Site. The remaining asset recorded within the main Site by the HER comprises a record of the currently undated occupational activity (30143 - MOX28530) that was identified during AOC's geophysical survey of the Site in October 2022 (EOX7539). This undated occupational activity includes a pair of parallel ditches orientated NE-SW, approximately 1.5m-2m apart, that are considered to be typical of the type found alongside roads during the Roman period. Further anomalies including ditched enclosure complexes, pits and a pair of NW-SE anomalies, potentially a trackway, are suggestive of later prehistoric to medieval dates. Further linear anomalies were also identified which may be related to agricultural activities, with a few apparently correlating to those shown on 1st edition OS maps (30143 - MOX28530). No heritage assets have been observed within the course of the proposed grid connection within the available online HER data.

1.3.3 The HER also records the Lower Icknield Way Roman Road (8930 - MOX6325) forming the southeastern boundary of the main Site; it may have originated as a prehistoric trackway. The route of a ridgeway (8865 - MOX10040), utilised as a medieval road running between London and Oxford, following the route of what is now the A40 London Road runs alongside the northeastern boundary of the main Site. A possible Bronze Age round barrow (MOX6243) is recorded immediately north of the western portion of the main Site at Adwell Cop as were three Anglo-Saxon burials (MOX6306). The location of a medieval moat, dovecot and fish ponds (MOX6317) associated with the no longer extant Nethercote House, are located to the west of the main Site, just north of Nethercote Lane. The house is recorded as having burned down in 1871. Further Anglo-Saxon burials were identified during works along the M40 just to the northeast of the proposed grid connection route (MOX28258) with scatters of medieval pottery sherds (MOX6268) and roman pottery (MOX6277) found further along the M40 to the northwest (again just to the northeast of the proposed grid connection route). A possible later prehistoric settlement identified via cropmarks, has also been identified in the fields to the southwest of the proposed grid connection route towards its southeastern end (MOX28257). Further along the M40 to the northwest, in an area just to the north of the proposed grid connection route, the HER records two points associated with the remains of a holloway and the embankment of an old road (MOX5900) that were destroyed by the construction of the motorway.

1.3.4 The Ordnance Survey (OS) map published in 1883 depicts the majority of the main Site within enclosed fields, likely arable fields. Buildings associated with Nethercote are located in the southwest corner of the field. A number of avenues aligned southwest are recorded across the southern area of the western portion of the main Site. A substantial tree belt runs around the Site boundary within the exception of the northeastern area, where the tree belts cross the main Site. The belts of trees appear to demarcate the Nethercote boundary. The OS maps of 1883 to 1885 depict that the proposed grid connection route is occupied by further areas of enclosed fields, many with significant hedgerow and wooded boundaries depicted, some of which have survived to the modern day.

1.3.5 A number of footpaths are recorded as crossing the main Site on the 1900 OS map. Fields in the eastern portion of the main Site had been subdivided by 1922 and the OS map of this date indicates two roughly U-shaped

features, the function of which is unknown, within this area. The early 20th century mapping indicates very little change in the layout of the field systems in the area of the proposed grid connection, with the major change coming in the latter part of the 20th century in the form of the construction of the M40 motorway (though this largely utilises a former road route so the change is more related to the scale of the communication route rather than any major change to alignment).

2 OBJECTIVES

2.1 The objectives of the desk-based assessment, walkover survey and setting assessment elements of the EIA are to:

i) identify and map the nature of the known archaeological and built heritage resource within the main Site (works already completed), proposed grid connection and surrounding study area from documentary records, HER data (an updated HER search will be requested to enable update to main site assessment and for assessment of proposed grid connection route), historic maps, aerial photographs and LiDAR data;

ii) determine through archaeological walkover survey if any archaeological remains are visible on the main Site (survey of main Site already completed) and proposed grid connection route and thence to determine the potential level of survival of any archaeology;

iii) identify and map the nature of the cultural heritage resource within the Site and proposed grid connection route and surrounding study area from the National Heritage List for England (NHLE), historic maps, aerial photographs and historic landscape characterisation (HLC);

iv) determine through site visits the settings of the cultural heritage resource and their intervisibility with the main Site (these setting assessment visits have been completed); and

v) to assesses the likely settings impact upon the cultural heritage resource which would result from the proposed development.

vi) the above will be used, along with any subsequent survey or evaluation work, to assesses the likely impact upon the known and potential heritage resources which will result from the proposed development in the final EIA;

3 SCOPE & METHOD OF ARCHAEOLOGICAL WORKS

3.1 Environmental Impact Assessment: Desk-based Assessment, Walkover Survey and Setting Assessment

3.1.1 The assessment will be prepared in compliance with the Chartered Institute for Archaeologists' Standard and Guidance for Historic Environment Desk-Based Assessment (CIfA 2020) and relevant statutory requirements, national, regional and local guidance, including National Planning Policy and Guidance on cultural heritage as contained within NPPF (2025) and Historic England Good Practice Advice notes as well as local planning policy included in South Oxfordshire Local Plan 2035 policies (SODC 2020) ENV1, ENV6, ENV7, ENV8, ENV9 and ENV10. The assessment will also be undertaken with reference to the Oxfordshire Council Archaeology Team's Archaeological Desk-Based Assessment Advisory Document (no date).

3.1.2 Two study areas will be used for the assessment. A study area of 1km from the main Site and 200m from the proposed grid connection route will be used to assess the likely nature and extent of the archaeological and built heritage resource within the Site and the immediate surrounding study area. This will be undertaken to identify any known heritage assets within the Site which could be subject to direct impacts and to understand the archaeological and historical character of the area to allow for an assessment of the potential for hitherto unknown buried remains to survive on the Site.

3.1.3 All designated heritage assets within 2km of the main Site and 200m of the proposed grid connection route, including Scheduled Monuments, Listed Buildings, Registered Parks and Gardens, Registered Battlefields and Conservation Areas, will be identified and shown on accompanying figures. These assets will be visited, insofar as they are publicly accessible, to establish their current settings and how this contributes to their significance (the setting assessment site visits for all assets within 2km of the main site have been completed). This will be undertaken in line with Historic England's (HE) The Setting of Heritage Assets: Historic Environment Good Practice Advice in Planning Note 3 (2017). The assessment will thus identify designated heritage assets which could be subject to setting impacts as a result of the proposed development. Given that the grid connection route will be entirely subterranean we are not anticipating that it would result in any long-term operational effects upon setting so we would look to scope out operational effects upon setting in relation to the grid connection route.

Baseline Research

3.1.4 The historic environment baseline will be established with reference to the following data sources:

- The Oxfordshire HER for records of known heritage assets including:
    - Records of archaeological sites, finds, and monuments;
    - Records of previous archaeological investigations (events) including any associated reports; and
    - Historic Landscape Characterisation (HLC) data.
- The National Heritage List for England (NHLE) for records of designated heritage assets;
- Historic England Archives for:
    - Aerial Photographs which cover the main Site and proposed grid connection route. These will be used to identify any archaeological features and also to identify areas of previous disturbance. Where archaeological features, e.g. cropmark sites, are identified the aerial photographs will be rectified to allow for accurate plotting of the features;
    - Data sets containing the aerial photographic transcriptions. These will be included if they cover the area of the main Site and proposed grid connection route; and
    - Additional data and grey literature reports held by HE Archives which pertain to the main Site, proposed grid connection route and study area.
- SODC for:
    - Conservation Area maps and appraisals.

3.1.5 The assessment will also be informed by a detailed map regression and archival research. The following repositories and online collections will be consulted:

- The Oxfordshire History Centre for:
    - Archival records associated with the main Site and proposed grid connection route;
    - Historical maps depicting the main Site and proposed grid connection route; and
    - Picture Oxon for online available historic maps and archival sources.
- The National Library of Scotland (NLS- https://maps.nls.uk/) for:
    - OS mapping depicting the main Site and proposed grid connection route; and
    - Pre-ordnance survey historical mapping depicting the main Site and proposed grid connection route.

- The Genealogist Website (https://www.thegenealogist.co.uk) for:
    - Tithe maps and apportionments for the main Site and proposed grid connection route.
- Old Maps Online (https://www.oldmapsonline.org/) for:
    - Historical maps depicting the main Site and proposed grid connection route.
- English Place Name Society (https://www.nottingham.ac.uk/research/groups/epns/) for:
    - Details relating to historic place names for the Study Area.
- British Geological Survey GeoIndex (https://www.bgs.ac.uk/\) for:
    - Information on bedrock and superficial deposits on main Site and proposed grid connection route; and
    - Information on historic boreholes.
- Portable Antiquities Scheme (https://finds.org.uk/) for:
    - Details of finds within the Study Area.
- Environmental Agency (https://environment.data.gov.uk/DefraDataDownload/?Mode=survey) for:
    - 1m-2m point cloud data, and composite digital surface models (DSM), digital terrain models (DTM).

3.1.6 Any OS maps that require to be reproduced within the report will be sourced and purchased with a license for reproduction from Promap.

3.1.7 If available, geotechnical reports supplied by the client will also be used to inform the assessment. Similarly, any relevant published works will also be considered.

3.1.8 All efforts will be made to access archival material held at local and national repositories. Any restrictions or limitations accessing material within the timeframe of the project or due to unforeseen circumstances will be outlined in the report.

3.1.9 It is noted that as per their pre-application advice, OCC Archaeology required a geophysical survey pre-determination and, depending on the results of this survey, a further archaeological investigation is also likely to be required. The geophysical survey of the main Site has been completed and the results shared with OCC Archaeology. Subsequent feedback from OCC Archaeology has indicated that a '*trenched evaluation to be conducted to inform an application. The purpose of this evaluation will be to provide an appropriate level of information as to the presence/absence, date, extent, character, complexity and state of preservation, and to sufficiently understand the significance that can be attached, to any archaeological heritage assets that would be affected by proposed development*'. Where AOC are instructed to carryout geophysical survey and/or further archaeological investigation, agreement of scope and method will be via further WSI's submitted to OCC.

Walkover Survey

3.1.10 Following the completion of desk-based research and data gathering, an archaeological walkover survey of the main Site was undertaken. The main Site was systematically surveyed along transects spaced at c. 30m intervals (dependent on topography).

3.1.11 It is proposed that a walkover survey is undertaken along the proposed grid connection route to investigate the survival, extent, significance and relationship to other assets of any known heritage assets along the route and allow for the identification of any previously unknown surface features. All heritage assets encountered will be recorded and photographed.

Setting Assessment

3.1.12 Site visits were undertaken to designated heritage assets within the 2km that may have intervisibility with the proposed development and thus be subject to impacts upon their settings. Site visits established the current settings of the assets, how this contributes to their significance, and the extent to which the proposed development could impact upon this. The setting assessment will be supported by photographic plates and, if required, visualisations.

Assessment Methodology

3.1.13 The assessment will be used to identify the known and likely archaeological potential of the Site and the relative value or importance of such a resource/asset. Based on information provided by the client, and where possible, the likely magnitude of direct impacts upon such a resource will be assessed. The criteria for assessing these factors will be detailed in the assessment.

3.1.14 The criteria for assessing archaeological potential will be expressed as ranging along a scale of High, Medium, Low, Negligible and Uncertain.

3.1.15 The sensitivity of each assets which could potentially be impacted upon, or the sensitivity of its setting, the potential magnitude of impact and the level of effect will be established in the EIA using AOC established impact assessment methodology. Consideration will be given to direct construction effects, operational setting effects and if required cumulative effects. For each asset impacted by the proposed development the assessment will clearly state whether the potential impact would be significant or not in EIA terms. Where designated heritage assets are concerned, the EIA will also clearly state whether the harm to the assets would be substantial or less than substantial in terms of the NPPF. Consideration will be given to the potential for impacts upon hitherto unrecorded buried archaeological remains.

3.1.16 Where the potential for adverse effects are identified proposals will be made for mitigation measures aimed at avoiding, minimising or offsetting any such impacts as appropriate. The assessment will consider the potential for residual effect following the implementation of any required mitigation measures.

4 REPORTING AND DISSEMINATION

4.1 Reporting

4.1.1 The results of the desk-based assessment, walkover survey and setting assessment will be set out as an ES Chapter, which will set out the objectives and method of the assessment. The chapter will identify known heritage assets, via the sources outlined above, within the Site and study areas which could be subject to either direct or setting impacts as a result of the proposed development. The potential for hitherto unknown buried archaeological remains to survive on site, and therefore potentially be impacted upon, will also be assessed. This assessment will consider the evidence assembled within a landscape context.

4.1.2 Based upon the historic environment baseline thus established, and the nature and extent of the proposed development, the assessment will consider the magnitude of potential impact upon heritage receptors and/or the historic landscape character and, the resulting level of effect. Where appropriate, the chapter will suggest mitigation measures in line with national and local legislation, policy and guidance.

4.1.3 The chapter will be supported by relevant figures, photographs and technical appendices and will contain a full bibliography outlining sources relied upon. The figures will include plotting of features identified within the Study Area from the sources noted above including known assets and HLC data and features identified from historic mapping, and aerial photography.

4.2 Dissemination

4.2.1 The final version of the ES chapter will be deposited with Oxfordshire Historic Environment Record following the submission of the planning application for the proposed development.

5 OPERATIONAL FACTORS

5.1 Health & Safety

5.1.1 AOC Archaeology Group has always maintained high standards on-site and a copy of our Health & Safety policy is available on request. The Project Officer undertaking the walkover survey and setting assessment site visits will liaise with client and, if required, the landowner before undertaking any work on-site to ensure that our element of the works are conducted in a manner that is safe for our staff, Main Contractor staff and members of the public if appropriate.

5.2 Project team

5.2.1 One of AOC Archaeology Group's experienced Project Officers will complete the walkover survey.

5.2.2 The project will be managed by Victoria Oleksy (MCIfA), AOC Associate Director. Quality assurance will be provided by Dr Andrew Heald, Managing Director.

6 REFERENCES

Chartered Institute for Archaeologist (2014, updated 2022) *Code of conduct: professional ethics in archaeology*. available at: https://www.archaeologists.net/codes/cifa

Chartered Institute for Archaeologist (2014, revised 2024) *Regulations for professional conduct*. available at: https://www.archaeologists.net/codes/cifa

Chartered Institute for Archaeologist (2014, updated 2020) *Standard and Guidance for Historic Environment Desk-Based Assessment.* available at: https://www.archaeologists.net/codes/cifa

Chartered Institute for Archaeologist (2014, updated 2020) *Commission Work or Providing Consultancy Advice on the Historic Environment.* available at: https://www.archaeologists.net/codes/cifa

Historic England (2017, Updated 2020) *The Setting of Heritage Assets: Historic Environment Good Practice Advice in Planning Note 3 (Second Edition).*available at: https://www.historicenvironment.scot/archives-and-research/publications/publication/?publicationid=80b7c0a0-584b-4625-b1fd-a60b009c2549

Ministry of Housing, Communities and Local Government (2025) *National Planning Policy Framework*. available at: https://www.gov.uk/government/publications/national-planning-policy-framework--2

Ministry of Housing, Communities and Local Government and Department for Levelling Up, Housing and Communities (2024, Historic Environment Section last updated 2019) *Planning Practice Guidance* available at: https://www.gov.uk/government/collections/planning-practice-guidance

Oxfordshire Council Archaeology Team (no date) *Archaeological Desk-Based Assessment Advisory Document*

Rowley, Trevor (1973) 'The Archaeology of the M40' in *Oxoniensia* available at: https://www.oxoniensia.org/volumes/1973/rowley1.pdf

South Oxfordshire District Council (2020) *South Oxfordshire Local Plan 2035* available at: https://www.southoxon.gov.uk/wp-content/uploads/sites/2/2021/02/SODC-LP2035-Publication-Feb-2021.pdf

AOC General Appendices for Archaeological Work

The following Appendices set out the general scope of all archaeological work undertaken by AOC Archaeology Group as part of our business. They will not all apply to individual projects and pieces of work and the reader is referred to the specifics of the project as set out in the main text of the WSI.

APPENDIX 1
Desk-top assessment

1.1 The sources consulted as part of the desk-top study will depend on the type and level of data required and the material that is available to provide that information. Sources used may include, where available, all or some of the following listed below:

i) Walkover survey (Appendix 5).
ii) The relevant Local Historic Environment Record(s) and the National Monuments Record.
iii) British Geological Survey maps.
iv) Ordnance Survey maps of the site and its locality.
v) Tithe, Apportionment and Parish maps.
vi) Historic (pre-Ordnance Survey) and Estate maps of the area.
vii) Appropriate archaeological and historical journals and books.
viii) Historical documents held in local museums, libraries, record offices and other archives. This may be a selective survey given the scope of potential historic documentation for some sites.
ix) Unpublished material held by local professional and amateur archaeological organisations and museums.
x) Aerial photographs held by local authorities, Sites and Monuments Record, the National Collection of Aerial Photographs in Scotland or the Historic England Archives in England, Cambridge University Collection of Aerial Photographs and other local parties.
xi) Designated Asset data bases for identification of Scheduled Monuments; Listed Building; Registers of Parks and Gardens and Battlefields; any local authority constraint designations (e.g. Conservation Areas).
xii) All available borehole, trial pit and geotechnical data from the site and its immediate environs.
xiii) Plans of services locations held by statutory undertakers.
xiv) Fire insurance maps.
xv) Old and New Statistical Accounts (in Scotland).
xvi) Building Control Records.
xvii) Standing Building Assessment (Appendix 10).

APPENDIX 2
Geophysical survey

2.1 All geophysical survey work will be undertaken by AOC Archaeology Group's in-house geophysical survey team.
2.2 Selection of techniques will be made taking into account land use, geology, complicating factors (e.g. metal pipes and fences), known and/or suspected archaeology.
2.3 The report will contain background information on the site (as above) and a description of any anomalies located. An interpretation of the anomalies will also be given.
2.4 At least one plot of the data will be included, normally of dot density or grey scale type. Any enhancement of the image will be explicitly stated and the likely affect of the processing described.
2.5 Clear interpretative plans will be provided in a form that a non-technical reader can understand.
2.6 Plots and interpretative diagrams will be reproduced at a scale from which exact measurements can be taken. These will normally be 1:1000 for detailed survey and 1:2500 for other plans.
2.7 The basic computerised data will form part of the site archive.

APPENDIX 3
Surface collection survey (fieldwalking)

3.1 This type of survey will only be carried out in suitable ground visibility conditions. This effectively restricts the technique to arable land which has been ploughed, harrowed and left to weather for several weeks in autumn to early spring.
3.2 The collection grid will align with the Ordnance Survey grid unless surveying for a linear scheme when the transects will be parallel to the centre of the scheme. The grid will be established using measured survey techniques.
3.3 The spacing of transects and length of collection units will be as specified in the main part of the Written Scheme of Investigation where this is included in the scope of works. Each transect will be 2m wide. Collection units will be logged using a numeric 12 figure National Grid Reference which will identify the southern end of the unit.
3.4 Transects will be measured cumulatively on the ground using fixed-length strings to avoid variation in individual pace. Sighting poles will be placed at opposite ends of the land parcel to mark transects.

3.5 All material considered to be man-made or not local to the area will be collected and recorded by the individual collection unit. The exception to this is where dense concentrations of building material are present when a representative sample is retained per collection unit.

3.6 Stone scatters, areas of soil discolouration and outcrops of natural substrata will be recorded and plotted by stint.

3.7 Pro-forma sheets will be used to record details of walker, soil/crop conditions, slope/topography, and lighting/weather conditions for each transect and presence/absence of finds for each collection unit.

3.8 Finds will be washed and sorted into groups in order to facilitate identification. Finds will be bagged according to artefact class within each collection unit.

3.9 Finds will be identified, quantified and recorded directly on to computer. The results will be plotted using a CAD graphics programme.

3.10 All significant artefact distributions will be plotted by field, group of fields or appropriate length for a linear scheme, at 1:2500, with separate plans for each period or relevant subdivision, indicating the numbers of artefacts per stint.

3.11 The pottery and other relevant artefacts will be scanned to assess the date range of the assemblage.

3.12 All finds and samples will be treated in a proper manner and to standards agreed in advance with the recipient museum or other body. These will be cleaned, conserved, bagged and boxed in accordance with the guidelines set out in UKIC's "*Conservation Guidelines No 2*".

APPENDIX 4
Earthwork surveys

4.1 Base points will be established using a Total Station.

4.2 Hachured plans will normally be prepared at 1:1250 or 1:2500 for most classes of earthwork. In certain cases more detailed survey by contouring will be carried out.

4.3 Appropriately experienced personnel will undertake the survey work.

4.4 All prepared plans will be presented with an accompanying descriptive text.

APPENDIX 5
Walkover Survey

5.1 The proposed study area will be walked over in a systematic manner. Approximately 30m wide transects will be used, although this can be reduced where conditions demand.

5.2 All features identified (including modern features) will be given a unique number. The location of each feature will be marked on a 1:10,000 map. A photographic and written record will be compiled.

APPENDIX 6
Test pits

6.1 Spacing and size of test pits will vary according to local topography, geology, and known or potential archaeology. Spacing and size will be as specified in the Written Scheme of Investigation.

6.2 Test pits will be laid out in relation to the Ordnance Survey national grid.

6.3 The most appropriate tools will be used taking into account the prevailing conditions at the time of the work.

6.4 A specified volume of topsoil from each test pit will be sieved through a 10mm mesh.

6.5 Conditions, contexts and artefact totals will be recorded on pro-forma sheets.

6.6 Subdivisions within the excavated material will be based on soil stratigraphy and spits of 100mm within each stratigraphical unit.

6.7 All artefact totals will be recorded by class.

6.8 Finds will be washed and sorted into groups in order to facilitate identification. Finds will be bagged according to artefact class within each collection unit.

6.9 Finds will be identified, quantified and recorded directly onto computer where appropriate. The results will be plotted using a CAD graphics programme when appropriate.

6.10 All significant artefact distributions will be plotted by field, group of fields or appropriate length for a linear scheme at 1:2500, with separate plans for each period or relevant subdivision, indicating the numbers of artefacts per test pit.

6.11 The pottery and other relevant artefacts will be scanned to assess the date range of the assemblage.

6.12 All finds and samples will be treated in a proper manner and to standards agreed in advance with the recipient museum or other body. These will be cleaned, conserved, bagged and boxed in accordance with the guidelines set out in UKIC's "*Conservation Guidelines No 2*".

APPENDIX 7
Machine excavated trenches

Excavation

7.1 The entire site will be visually inspected before the commencement of any machine excavation. This will include the examination of any available exposures (e.g. recently cut ditches and geo-technical test pits).

7.2 Normally trench positions will be accurately surveyed prior to excavation and related to the National Grid. It may be necessary to survey the positions after excavation in some instances.

7.3 All machining will be carried out by plant of an appropriate size. Normally, this will be a JCB 3CX (or similar) or 360^{O} tracked excavator with a 1.4 or 1.8m wide toothless bucket. Where access or working space is restricted a mini excavator such as a Kubota KH 90 will be used.

7.4 All machining will be carried out under direct control of an experienced archaeologist.

7.5 Undifferentiated topsoil or overburden of recent origin will be removed in successive level spits (approximately <0.5m) down to the first significant archaeological horizon.

7.6 Excavated material will be examined in order to retrieve artefacts to assist in the analysis of the spatial distribution of artefacts.

7.7 On completion of machine excavation, all faces of the trench that require examination or recording will be cleaned using appropriate hand tools.

7.8 All investigation of archaeological horizons will be by hand, with cleaning, inspection, and recording both in plan and section.

7.9 Within each significant archaeological horizon a minimum number of features required to meet the aims of the project will be hand excavated. Pits and postholes normally will be sampled by half-sectioning although some features may require complete excavation. Linear features will be sectioned as appropriate. Features not suited to excavation within the confines of narrow trenches will not be sampled. No deposits will be entirely removed unless this is unavoidable. As the objective is to define remains it will not necessarily be the intention to fully excavated all trenches to natural stratigraphy. However, the full depth of archaeological deposits across the entire site will be assessed. Even in the case where no remains have been located the stratigraphy of all evaluation trenches will be recorded.

7.10 Any excavation, whether by machine or by hand, will be undertaken with a view to avoiding damage to any archaeological features or deposits which appear to be demonstrably worthy of preservation *in situ*.

7.11 For palaeoenvironmental research different sampling strategies will be employed according to established research targets and the perceived importance of the strata under investigation. AOC Archaeology conventionally recovers three main categories of sample;

i) Routine Soil Samples; a representative 500g sample from every excavated soil context on site. This sample is used in the characterisation of the sediment, potentially through pollen analysis, particle size analysis, pH analysis, phosphate analysis and loss-on-ignition;

ii) Standard Bulk Samples; a representative 10 litre sample from every excavated soil context on site. This sample is used, through floatation sieving, to recover a sub-sample of charred macroplant material, faunal remains and artefacts;

iii) Purposive or Special Samples; a sample from a sediment which is determined, in field, to either have the potential for dating (wood charcoal for radiocarbon dating or *in situ* hearths for magnetic susceptibility dating) or for the recovery of enhanced palaeoenvironmental information (waterlogged sediments, peat columns, etc).

7.12 Any finds of human remains will be left *in situ*, covered and protected. In Scotland the local police will be informed. If removal is essential this will only take place with police approval, and in compliance with Historic Scotland's Operational Policy Paper '*The Treatment of Human Remains in Archaeology*'. In England and Wales the coroner's office will be informed. If removal is essential it will only take place under the relevant Home Office licence and local authority environmental health regulations.

7.13 All finds of gold and silver will be moved to a safe place. Where removal cannot be effected on the same working day as the discovery, suitable security measures will be taken to protect the artefacts from theft or damage. In Scotland the recovery of such material, along with all other finds, will be reported to the Queen's and Lord Treasurer's Remembrancer. In England and Wales the recovery of such material will be reported to the coroner's office according to the procedures relating to Treasure Trove.

7.14 After recording, the trenches will be backfilled with excavated material.

Recording

7.15 For each trench, a block of numbers in a continuous sequence will be allocated.

7.16 Written descriptions, comprising both factual data and interpretative elements, will be recorded on standardised sheets.

7.17 Where stratified deposits are encountered a 'Harris'-type matrix will be compiled during the course of the excavation.

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

7.19 Plans will normally be drawn at a scale of 1:100, but on urban or deeply stratified sites a scale of 1:50 or 1:20 will be used. Burials will be drawn at 1:10. Other detailed plans will be drawn at an appropriate scale.

7.20 Long sections of trenches showing layers and any cut features will be drawn at 1:50. Sections of features or short lengths of trenches will be drawn at 1:20.

7.21 Generally all sections will be accurately related to Ordnance Datum. There may, occasionally, be instances where this is unnecessary when it will be agreed with the local authority's archaeological representative in advance.

7.22 Registers of sections and plans will be kept.

7.23 A full colour print and colour transparency photographic record will be maintained. This will illustrate the principal features and finds both in detail and in a general context. The photographic record will also include working shots to represent more generally the nature of the fieldwork.

7.24 A register of all photographs taken will be kept on standardised forms.

7.25 All recording will be in accordance with the standards and requirements of the *Archaeological Field Manual* (Museum of London Archaeology Service 3rd edition 1994).

Finds

7.26 All identified finds and artefacts will be collected and retained. Certain classes of material, i.e. post-medieval pottery and building material, may on occasion be discarded after recording if a representative sample is kept. No finds will be discarded without the prior approval of the archaeological representative of the local authority and the receiving museum.

7.27 Finds will be scanned to assess the date range of the assemblage with particular reference to pottery. In addition the artefacts will be used to characterise the site, and to establish the potential for all categories of finds should further archaeological work be necessary.

7.28 All finds and samples will be treated in a proper manner and to standards agreed in advance with the recipient museum. Finds will be exposed, lifted, cleaned, conserved, marked, bagged and boxed in accordance with the guidelines set out in United Kingdom Institute for Conservation's *Conservation Guidelines No. 2*.

7.29 In England and Wales, at the beginning of the project (prior to commencement of fieldwork) the landowner and the relevant museum will be contacted regarding the preparation, ownership and deposition of the archive and finds. In Scotland all archaeological material recovered belongs to the Crown and its disposal is administered by the Queen's and Lord Treasurer's Remembrancer.

APPENDIX 8
Evaluation reports

8.1 The style and format of the evaluation report will be determined by AOC Archaeology, but will be compliant with Historic Scotland's issued guidance on Data Structure Reports. The report will include as a minimum the following;

i) A location plan of the site.
ii) A location plan of the trenches and/or other type of fieldwork strategy employed.
iii) Plans and sections of features and/or extent of archaeology located. These will be at an appropriate scale.
iv) A summary statement of the results.
v) A table summarising per trench the deposits, features, classes and numbers of artefacts encountered and spot dating of significant finds.
vi) Consideration to the methodology will be given along with a confidence rating for the results.

8.2 When an evaluation is followed by an excavation the procedures defined in English Heritage's *Management of Archaeological Projects* 2nd edition 1991 will be followed for immediate post-field archive preparation and initial assessment. It will then be agreed with the local authority's archaeological advisor which aspects will need to be taken forward to the report stage.

APPENDIX 9
Area excavation

9.1 Prior to the stripping of any area excavation, all appropriate surveys (e.g. geophysical, earthwork, contour) or sampling strategies (e.g. for topsoil artefact densities, metal detecting, phosphate analysis) will be undertaken.

9.2 In most cases sites will be mechanically stripped of topsoil and other overburden. An appropriate machine will always be used. This will normally be a 360° tracked excavator with a between 1.4 and 2.4m wide toothless bucket. In other cases a JCB 3CX (or similar), or for work with restricted access or working room a mini-excavator such as a Kubota KH 90 will be used. Suitably sized dumpers or lorries will be employed to remove spoil. No plant will be allowed to cross stripped areas.

9.3 All machining will be undertaken under the direct control of experienced archaeologists.

9.4 All undifferentiated topsoil or overburden will be removed down to the first significant archaeological horizon in level spits. The archaeological horizon to which the material will be cleared will have first been established by an evaluation or by the digging of test pits.

9.5 Depending on the aims of the project, the excavated spoil may be monitored in order to recover artefacts. Where their findspots are plotted this will usually be on a 2m grid.

9.6 The surface exposed by the stripping will be cleaned using appropriate hand tools.

9.7 Should the site grid not have already been established it will be done at the cleaning stage. The grid will normally be based on a 10m spacing and related to the National Grid. A temporary bench mark related to Ordnance Datum will be founded

9.8 After the cleaning and planning of the excavation area the sampling strategy will be finalised. This will take into account the project aims (which may need modifying at this stage) and the type, quality and quantity of remains revealed. The sampling strategy will normally seek to maintain at least the following levels;

i) all structures and all zones of specialised activity (e.g. funerary, ceremonial, industrial, agricultural processing) will be fully excavated and all relationships recorded;
ii) ditches and gullies will have all relationships defined, investigated and recorded. All terminals will be excavated. Sufficient lengths of the feature will be excavated to determine the character of the feature over its entire course; the possibility of re-cuts of parts of the feature, and not the whole, will be considered. This will be achieved by a minimum 10% sample of each feature (usually a 1m section every 10m).

iii) Sufficient artefact assemblages will be recovered (where possible) to assist in dating the stratigraphic sequence and for obtaining ample ceramic groups for comparison with other sites;

iv) all pits, as a minimum, will be half-sectioned. Usually at least 50% (by number) of the pits will be fully excavated. Decisions as to which pits will be fully excavated will be taken in the light of information gained in the half-sectioning taking into consideration, amongst other things; pit function, artefact content and location;

v) for post and stake holes where they are clearly not forming part of a structure (see above) 100% (by number) will be half-sectioned ensuring that all relationships are investigated. Where deemed necessary, by artefact content, a number may demand full excavation;

vi) for other types of feature such as working hollows, quarry pits, etc the basic requirement will be that all relationships are ascertained. Further investigation will be a matter of on-site judgement, but will seek to establish as a minimum their extent, date and function;

vii) for layers, an on-site decision will be made as to the limits of their excavation. The factors governing the judgement will include the possibility that they mask earlier remains, the need to understand function and depositional processes, and the necessity to recover sufficient artefacts to date the deposit and to meet the project aims.

9.9.1 For palaeoenvironmental research different sampling strategies will be employed according to established research targets and the perceived importance of the strata under investigation. AOC Archaeology conventionally recovers three main categories of sample;

i) Routine Soil Samples; a representative 500g sample from every excavated soil context on site. This sample is used in the characterisation of the sediment, potentially through pollen analysis, particle size analysis, pH analysis, phosphate analysis and loss-on-ignition;

ii) Standard Bulk Samples; a representative 10 litre sample from every excavated soil context on site. This sample is used, through floatation sieving, to recover a sub-sample of charred macroplant material, faunal remains and artefacts;

iii) Purposive or Special Samples; a sample from a sediment which is determined, in field, to either have the potential for dating (wood charcoal for radiocarbon dating or *in situ* hearths for magnetic susceptibility dating) or for the recovery of enhanced palaeoenvironmental information (waterlogged sediments, peat columns, etc).

9.10 Any finds of human remains will be left *in situ*, covered and protected. In Scotland the local police will be informed. If removal is essential this will only take place with police approval, and in compliance with Historic Scotland's Operational Policy Paper '*The Treatment of Human Remains in Archaeology*'. In England and Wales the coroner's office will be informed. If removal is essential it will only take place under the relevant Home Office licence and local authority environmental health regulations.

9.11 All finds of gold and silver will be moved to a safe place. Where removal cannot be effected on the same working day as the discovery, suitable security measures will be taken to protect the artefacts from theft or damage. In Scotland the recovery of such material, along with all other finds, will be reported to the Queen's and Lord Treasurer's Remembrancer. In England and Wales the recovery of such material will be reported to the coroner's office according to the procedures relating to Treasure Trove.

Recording

9.12 All on-site recording will be undertaken in accordance with the standards and requirements of the *Archaeological Site Manual* (Museum of London 1994).

9.13 A continuous unique numbering system will be employed.

9.14 Written descriptions, comprising both factual data and interpretative elements, will be recorded on standardised sheets.

9.15 Where stratified deposits are encountered a 'Harris'-type matrix will be compiled during the course of the excavation.

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

9.17 Plans will normally be drawn at a scale of 1:100, but on urban or deeply stratified sites a scale of 1:50 or 1:20 will be used. Burials will be drawn at 1:10. Other detailed plans will be drawn at an appropriate scale.

9.18 Long sections of trench edges or internal baulks showing layers and any cut features will be drawn at 1:50 or 1:20 depending on amount of detail contained. Sections of features will be drawn at 1:20.

9.19 All sections will be accurately related to Ordnance Datum.

9.20 Registers of sections and plans will be kept.

9.21 A full colour print and colour transparency photographic record will be maintained. This will illustrate the principal features and finds both in detail and in a general context. The photographic record will also include working shots to represent more generally the nature of the fieldwork.

9.22 A register of all photographs taken will be kept on standardised forms.

Finds

9.23 All identified finds and artefacts will be collected and retained. Certain classes of material, i.e. post-medieval pottery and building material may on occasion be discarded after recording if a representative sample is kept. No finds will be discarded without the prior approval of the archaeological representative of the local authority and the receiving museum.

9.24 All finds and samples will be treated in a proper manner and to standards agreed in advance with the recipient museum. Finds will be exposed, lifted, cleaned, conserved, marked, bagged and boxed in accordance with the guidelines set out in United Kingdom Institute for Conservation's *Conservation Guidelines No. 2*.

9.25 In England and Wales, at the beginning of the project (prior to commencement of fieldwork) the landowner and the relevant museum will be contacted regarding the preparation, ownership and deposition of the archive and finds. In Scotland all archaeological material recovered belongs to the Crown and its disposal is administered by the Queen's and Lord Treasurer's Remembrancer.

Archiving, post-excavation and publication

9.26 Following completion of each stage or the full extent of the fieldwork (as appropriate) the site archive will be prepared in the format agreed with the receiving institution.

9.27 On completion of the archive a summary report will be prepared. This will include;

i) an illustrated summary of the results to-date indicating to what extent the project aims were fulfilled;
ii) a summary of the quantities and potential for analysis of the information recovered for each category of site, artefact, dating and palaeoenvironmental data;
iv) proposals for analysis and publication.

9.28 The proposals for analysis and publication will include;

i) a list of the revised project aims arising from the fieldwork and post-excavation assessment;
ii) a method statement which will make clear how the methods advocated are those best suited to ensuring that the data-collection will fulfil the stated aims of the project;
iii) a list of all tasks involved in meeting the stated methods to achieve the aims and produce a report and research archive in the stated format;
iv) details of the research team and their projected work programmes in relation to the tasks. Allowance will be made for general project-related tasks such as project meetings, management, editorial and revision time;
v) a publication synopsis indicating publisher, report format and content shown by chapters, section and subheadings with the anticipated length of text sections and proposed number of illustrations.

9.29 The summary report embracing the analysis and publication proposals will be submitted to the client and the local authority's archaeological representative for approval.

9.30 Any significant variation in the project design, including timetables, proposed after the agreement of the proposals must be acceptable to the local authority's archaeological representative.

9.31 The results of the project will be published in an appropriate archaeological journal or monograph. The suitable level of publication will be dependent on the significance of the project results, but as a minimum the basic requirements of Appendix 7.1 of *Management of Archaeological Projects* (English Heritage 1991) will be met.

APPENDIX 10
Standing Building Assessment

10.1 A standing building assessment will normally take place in concordance with a Conservation Plan, but may also form part of a Desk-Based Assessment if required.

10.2 A visual inspection will be made of both the interior and exterior of the building(s) with a view to establishing the extent of the architecturally important elements that should be included in a later phase of historic building recording work.

10.3 A brief written record will be made in addition to digital photography of areas of interest to support recommendations and outline architectural features within the building(s).

APPENDIX 11
Historic Building Recording: The Written Record (Levels 0-6)

11.1 Pro forma building recording sheets will be used for the basic written record of the building(s) including comments on the condition, construction techniques, materials, fixtures and fittings and interpretation of function. A competent analysis will be made of all building phases and any relationship between buildings. Day Book records will also be kept for any levels of recording above Level 1.

11.2 At Level 4, the written record will encompass a thorough context description of each broad phase of construction and alteration with a view to formulating a stratigraphic matrix of the site.

APPENDIX 12
Historic Building Recording: Photography (Levels 1-5)

12.1 Photography will take place at all levels of building recording, and will be undertaken with a single lens reflex camera with through-the-lens (TTL) light metering. A standard 28-90mm lens will be used at all times except where wider or shorter angle lenses are required for longer elevation photography and detailed photography.

12.2 The camera will be placed at mid-height to the subject with due care and attention to lighting situations. Two shots will be taken of each feature, undertaken by a light-meter reading of a two-step change in aperture. This change up or down will depend on light conditions.

12.3 Interior photography will be undertaken with appropriate lighting conditions and the use of a tripod. Where light access is still quite minimal, an automatic flash will be used.

12.4 All photography will be taken on colour slide and black & white negative film, such as Kodak PLUS-X or Ilford FP4, or approved equivalent. It should be exposed and processed to an archival standard, i.e., fix and wash in accordance with the manufacturers specifications.

12.5 The use of a digital camera may be used as a reference to survey and drawn elevations and ground plans on-site.

APPENDIX 13
Historic Building Recording: Rectified Photography and Photogrammetry (Level 3)

13.1 An external contractor will carry out rectified photography and photogrammetry in compliance with the following guidelines:

i) All photography will be carried out with an approved type of camera. Details of the camera used may be supplied on completion of the project.

ii) The smallest permissible photographic negative scale will normally be defined as follows: for 1:50 scale plotting, negative scale should be no more than 1:200 and for 1:20 scale plotting, negative scale should be no more than 1:200.

iii) All rectified photography will be taken on black & white negative film, such as Kodak PLUS-X or Ilford FP4, or approved equivalent. It should be exposed and processed to an archival standard, i.e., fix and wash in accordance with the manufacturers specifications.

APPENDIX 14
Historic Building Recording: Elevation Recording (Level 2)

14.1 All elevations drawn or surveyed will be a 'preservation by record' of the current state of the building. The following categories will be recorded:

i) All architectural features with associated decorative detail including windows, doors, quoin stones, string courses, roof lines and other structural stonework and jointing.

ii) Fixtures and fittings such as drainpipes and guttering, signs, brackets and vents.

iii) Later modifications and/or damage to the building such as structural cracks, areas of erosion, patches of rendering, blocked doorways, windows and other openings.

14.2 Large or small repetitive features such as windows, capitals, mouldings, etc. sampling will be undertaken as appropriate.

14.3 Where the façade is of stone construction each individual stone may be recorded. However, in most instances, a representative area, usually 1m², will be sufficient, although windows, corner stones and other architectural details will always be fully recorded. The degree of recording for ashlar will be depend upon the scale with which the elevation is to be produced and will be determined in advance of the start of works. When drawings are carried out at 1:50, a single line between the joints of the stone will normally be considered satisfactory. However, if there is a considerable gap between the stones, both sides of the stone will be shown. At a scale of 1:20 or larger, then all joints will normally be shown except where the stone is very fine ashlar.

14.4 Elevation recording by hand will normally take place if it is inappropriate to do so by survey. The size and complexity of an elevation will determine what on-site scale will be required. In general, a scale of 1:50 will be deemed appropriate with a larger scale adopted if portions of this elevation are more complex. For highly detailed architectural detail a scale of 1:1 may be appropriate.

14.5 All hand-drawn measured elevations and detail will be drawn using water-resistant paper with a hard 4H – 6H pencil. A levelled datum line will be taken through the centre of the elevation with offset measurements. All datum points will be accurately positioned within the site either by hand or by survey.

APPENDIX 15
Historic Building Recording: Elevation Recording – By Survey (Levels 2-4)

15.1 Where appropriate, elevations may be recorded by radiation survey using a reflectorless EDM (REDM) Trimble Total Station Theodolite (TST). This method of survey allows the accurate capture of data of upper floor levels. If more than one elevation is to be recorded, then a traverse will be created around each building or group of buildings. Extra stations may be set up in places where there is limited access. Values in the traverse will be adjusted by Bowditch adjustment to compensate for any errors in measurement. The adjusted values will then be calculated using Trimble surveying and processing software, Co-ordinates will be located by resection from existing traverse points. The survey data will be downloaded to a laptop computer on-site via Trimble surveying and processing software. All measurements taken by survey will consist of three-dimensional co-ordinates relating to the Ordnance Survey National Grid.

15.2 The recording of an elevation will not be carried out by survey equipment if:

i) There are too many obstructions;

ii) The surface of the building is too dark or mossy;

iii) There is too much curved architectural detail;

iv) The distance required to set up the survey equipment in front of the elevation is too large (i.e., more than 25m) or too short to capture data from the upper levels of the elevation.

15.3 Where appropriate, elevations carried out by survey will be supplemented by detail measured by hand.

APPENDIX 16
Historic Building Recording: Interior Recording (Levels 2-4)

16.1 The recording of the interior(s) of the building(s) will consist of a written record and, where appropriate, measured sketch plans of the ground plan and the roof elevations based on the following guidelines:

i) Critical analysis of the interior condition, construction, materials, fixtures and fittings will be made using *pro forma* recording sheets.

ii) Measured interior ground plans of each room of the interior will be carried out using tapes and a Leica Disto™ Classic electronic distance measurer.

iii) All measured plans will contain: notes on the size of structural members, and finishes; floor levels, change in levels, and ceiling heights; direction of stair rises in plan with each riser numbered; the positions of service entry points, plant and machinery and sanitary fittings; below-ground drainage; soil and vent stacks and rainwater pipes where appropriate.

APPENDIX 17
Historic Building Recording: Standard Report Illustrations (Level 6)

17.1 All final illustrations for archive will be produced digitally on the Computer-Aided Drawing package, AutoCAD 2020LT and/or Adobe Illustrator CC. A standard methodology will be used with all drawings adhering to the following guidelines:

17.2 Line Weight. The appropriate line weight will depend on anticipated plot scale and may need editing if the output scale is to change. The degree of detail used will affect the line weight utilised in the finished drawing. All fine architectural detail (stonework, moulded stonework, brickwork, etc.) will be produced at a line weight of 0.05mm. More general architectural features (outlines of doors and windows, etc.) will be produced at a line weight of 0.09mm. A much heavier line will indicate the changing of plane in complex elevations.

17.3 Text. Text will be made clear and informative, with orientation, position, size and letter spacing remaining appropriate to the layout of the plotted sheets.

17.4 Scale. No archaeological or historic building survey will be carried out without a particular scale or range of scales in mind.

17.5 Layers. The layering system in CAD packages allow the separation of data into specified criteria. To achieve this, there is an AOC standard layering system. This system is largely based on the coding system inherent in the use of the reflectorless EDM Trimble TST.

17.6 Digital Archiving. All drawings are produced at a 1:1 scale for easy scaling in .dxf or .dwg format. At the end of a project, all data is stored on CD-ROM.

APPENDIX 18
Historic Building Recording: Dendrochronological Analysis (Level 3)

18.1 Dendrochronological analysis of timbers from standing building is primarily undertaken to provide accurate dates for its construction. Where appropriate, samples may be taken for analysis to provide information on the source and quality of the timber, thus informing on the social and economic context of the building.

18.2 Samples for analysis will take place under the following conditions:

i) That the timber sample taken is from a species where date chronologies already exist, namely oak and pine.

ii) A minimum of eight timbers per phase or building are required to cross-match results.

iii) The ring patterns inherent in a timber sample must be over a certain length, usually seventy rings.

18.3 The method of the removal of samples of timber will be to use a corer attached to a power-driven drill, removing a core leaving a hole in the timber 10mm in diameter. The core will be taken so that a maximum radius from pith to bark is taken, thus ensuring the maximum numbers of growth rings for analysis. Timbers will be selected which have retained a full ring sequence as possible (i.e., those where the outermost rings have not been trimmed off or destroyed by woodworm).

18.4 Where it is impossible to use this intrusive method of sample, for example, in the case of painted ceilings and carved panels, the ring sequence can be measured *in situ* using a hand lens. Silicone rubber casts can also be taken where the end grain is exposed.

APPENDIX 19
Historic Building Recording: Paint and Wallpaper Analysis (Level 3)

19.1 Paint and/or wallpaper analysis will usually only take place where layers that have been applied over the years have not been removed. Where appropriate, paint analysis can take place by methods of scraped samples or thin section analysis. Cross-sections may also be obtained from samples of paint to reveal a stratigraphy of paint layers.

APPENDIX 20
Historic Building Recording: Reporting (Levels 0-6)

20.1 The style and format of the final report on historic building recording works will be determined by AOC Archaeology, but will be compliant with Historic Scotland's issued guidance on Data Structure Reports. The content of this report will depend greatly in the level of works that have taken place but at minimum will include:

i) A location plan of the site showing the areas under investigation numbered and cross-referenced in the text;
ii) A summary statement of the results;
iii) An introduction, methodology and results of the works;
iv) Photographic plates to illustrate the text.

20.2 Where a programme of historic building recording has taken place at Level 2 or above, the Data Structure Report will contain a number of illustrations, the format of which is outlined in more detail in Appendix 17.

APPENDIX 21
Watching Briefs

21.1 Where the archaeologist (Watching Brief Officer) has no remit over the working methodology of the site (specification of machine or depth of excavation). The Watching Brief Officer will simply observe the works and record their nature and form. Where the Watching Brief Officer specifies the site methodology, ie type of machine and depth of excavation. AOC Archaeology's preferred approach is to consider the Watching Brief Area as a large evaluation trench and follows in general, Appendix 7.

21.1 It is important to stress that the client determines the area affected and unless instructed by a curator the Watching Brief Officer has no power to extend the area unless it is to fully excavate a human body that otherwise would have been truncated by the works.

21.2 In addition to the general principles outlines in Appendix 7 the following approaches will be undertaken:

i) a record will be made of all site attendances; in general a written and photographic record will be kept of the excavated sediments;
ii) where archaeological features are identified and they can be dealt with in less than two hours this work will be undertaken by the Watching Brief Officer. Recording and excavation protocols will follow Appendices 7.9 –7.11;
iii) where archaeological remains requiring more than two hours of excavation and recording, the Watching Brief Officer will stop the works and both the curator and the client will be contacted to devise a mitigation strategy. All delays will be kept to a minimum. Any resultant excavation and recording work will be in keeping with the methods outlined in Appendix 9;
iv) the extent of the watching brief area will not be recorded unless specifically required by either the client or the curator. Where such recording is required the area will be accurately recorded by total station and linked into the Ordnance Datum;
v) Reporting of Watching Briefs will follow methods specified in Appendix 8.

APPENDIX 22
General

22.1 The requirements of the Brief will be met in full where reasonably practicable .

22.2 Any significant variations to the proposed methodology will be discussed and agreed with the local authority's archaeological representative in advance of implementation.

22.3 The scope of fieldwork detailed in the main part of the Written Scheme of Investigation is aimed at meeting the aims of the project in a cost-effective manner. AOC Archaeology Group attempts to foresee all possible site-specific problems and make allowances for these. However there may on occasions be unusual circumstances which have not been included in the programme and costing. These can include;

i) unavoidable delays due to extreme weather, vandalism, etc;
ii) trenches requiring shoring or stepping, ground contamination, unknown services, poor ground conditions;
iii) extensions to specified trenches or feature excavation sample sizes requested by the local authority's archaeological advisor;
iv) complex structures or objects, including those in waterlogged conditions, requiring specialist removal.

Health and Safety

22.4 All relevant health and safety legislation, regulations and codes of practice will be respected.

22.5 With the introduction of the Construction, Design and Management Regulations 1994, AOC Archaeology works with Clients, Main Contractors, and Planning Supervisors to create a Health and Safety Plan. Where CDM regulations apply, each project will have its own unique plan.

Insurances

22.6 AOC Archaeology holds Employers Liability Insurance, Public Liability Insurance and Professional Indemnity Insurance. Details can be supplied on request.

22.7 AOC Archaeology will not be liable to indemnify the client against any compensation or damages for or with respect to;

i) damage to crops being on the Area or Areas of Work (save in so far as possession has not been given to the Archaeological Contractor);

ii) the use or occupation of land (which has been provided by the Client) by the Project or for the purposes of completing the Project (including consequent loss of crops) or interference whether temporary or permanent with any right of way light air or other easement or quasi easement which are the unavoidable result of the Project in accordance with the Agreement;

iii) any other damage which is the unavoidable result of the Project in accordance with the Agreement;

iv) injuries or damage to persons or property resulting from any act or neglect or breach of statutory duty done or committed by the client or his agents servants or their contractors (not being employed by AOC Archaeology) or for or in respect of any claims demands proceedings damages costs charges and expenses in respect thereof or in relation thereto.

22.8 Where excavation has taken place evaluation trenches will be backfilled with excavated material but will otherwise not be reinstated unless other arrangements have previously been agreed. Open area excavations normally will not be backfilled but left in a secure manner unless otherwise agreed.

Copyright and confidentiality

22.9 AOC 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 an exclusive licence to the Client in all matters directly relating to the project as described in the Written Scheme of Investigation.

22.10 AOC Archaeology will assign copyright to the client upon written request but retains the right to be identified as the author of all project documentation and reports as defined in the Copyright, Designs and Patents Act 1988.

22.11 AOC Archaeology will advise the Client of any such materials supplied in the course of projects which are not AOC Archaeology's copyright.

22.12 AOC Archaeology undertake to respect all requirements for confidentiality about the Client's proposals provided that these are clearly stated. In addition AOC Archaeology further undertakes to keep confidential any conclusions about the likely implications of such proposals for the historic environment. It is expected that Clients respect AOC Archaeology's and the Institute of Field Archaeologists' general ethical obligations not to suppress significant archaeological data for an unreasonable period.

Standards

22.13 AOC Archaeology conforms to the standards of professional conduct outlined in the Institute of Field Archaeologists' Code of Conduct, the IFA Code of Approved Practice for the Regulation of Contractual Arrangements in Field Archaeology, the IFA Standards and Guidance for Desk Based Assessments, Field Evaluations etc., and the British Archaeologists and Developers Liaison Group Code of Practice.

22.14 Project Directors normally will be recognised in an appropriate Area of Competence by the Institute of Field Archaeologists.

22.15 Where practicable AOC Archaeology will liaise with local archaeological bodies (both professional and amateur) in order that information about particular sites is disseminated both ways (subject to client confidentiality).

APPENDIX 23
Specialist staff

The following specialist staff may be used on this project depending on the type of artefacts and soil samples recovered during the course of the fieldwork.

AOC Archaeology Staff:

Ms Lynne Roy	Soils and sediments analysis
Mr Virgil Yendell	Geoarchaeology
Dr Anne Crone	Dendrochronology, charcoal and timber analysis
Dr Paula Milburn	Pollen analysis
Mr Rob Engl	Lithics & coarse stone
Dr Alexandra Johnson	Human bone
Ms Amy Halliday	Vertebrate animal bone
Ms Jackaline Robertson	Macroplant specialist
Ms Genoveva Dimova	Charcoal identification
Ms Gretel Evans	Artefact conservation
Dr Dawn McLaren	Artefactual analysis

Sub-contractors:

Mr Bob Clark	Industrial archaeology & coal-mining
Ms Marta McGlynn	Historic designed landscapes
Dr Jennifer Harland	Marine shell and fish bone
Dr Ann MacSween	Prehistoric pottery
Ms Naomi Crowley	Building material, medieval and post-medieval potter

Ms Amanda Clydesdale	Plaster, paint and wallpaper analysis

APPENDIX 24
Post-excavation

24.1 *Sample Flotation*

Sample flotation is a water recovery technique designed to separate organic remains from the soil matrix. A Siraf style system of flotation and wet-sieving will be operated by the archaeological contractor. This system comprises an enclosed area of water into which the soil samples are deposited and agitated. Due to the difference in densities of organic and inorganic remains the light fractions will float, the heavy fractions will sink and the silt fraction will be washed away. The resulting floating material (flot) is collected in sieves of 0.3 mm and 1 mm, the non-floating residue (retent) is wet-sieved through a 1 mm mesh.

All flots and retents are air dried, bagged and labelled accordingly. Throughout this process all equipment is kept clean to prevent contamination of the samples. For each sample, a Sieving Assessment sheet is completed. This gives basic information about the sample, retent and flot. Prior to flotation and wet-sieving, the volume of each sample is measured by means of a graduated bucket.

If in a sample a high concentration of clay can be observed and therefore separation of the different fractions of the soil is difficult, an aqueous solution of defloculant 'Calgon' is added and the sample is left to soak overnight, before processing by flotation and wet-sieving.

Sample flotation will be carried out on site and/or at the premises of the archaeological contractor.

24.2 *Sample Wet sieving*
Sample wet sieving, also a water recovery technique, is carried out in laboratory conditions and is designed to recover waterlogged material. For the recovery of waterlogged botanical material, small soil samples (0.5 to 1.0 litre) are processed through a 0.3 mm sieve. The sediment is placed in a bucket with water and agitated before being washed through the 0.3 mm sieve. This process is repeated until the sample is totally disaggregated. The resulting material is stored in water or ethanol depending on the length of the storage period. Sample wet sieving can also be used to recover larger waterlogged material such as leather and wood in which case larger volumes of soil are processed.

24.3 *Sample Dry sieving*
Sample dry sieving is carried out to retrieve smaller artefacts that might be missed during normal excavation procedure, e.g. small sherds of pottery and bone . Done in laboratory conditions, all samples are air dried in the first instance. Done in the field, the samples are processed with the sample in a field-moist state. In both cases the sample is passed through a 4 mm mesh and any items of interest are recovered and recorded.

24.4 *Residue sorting*
All residue (retent) sorting is carried out in laboratory conditions, and is designed to recover not only material that might be missed during normal excavation procedure (see dry sample sieving), but also material that would be impossible to recover during normal excavation procedure e.g. charred and uncharred plant remains, insect remains and small fragments of charcoal.

The volume of the residue is recorded and then passed through a set of sieves (mesh sizes 8 mm, 4 mm, 2 mm and 1 mm). Each fraction is spread out onto a separate tray, is scanned with the naked eye and all items of interest are recovered. Under normal circumstances all identifiable material from all fractions is recovered. The only exception to this is burnt wood (charcoal) which is only retrieved from the > 4 mm fractions. All material recovered is bagged individually by material type and the material types and weights recorded on the Retent Sorting Sheet. Also recorded on this sheet are the project number, context number, area, sample number, the sorters initials, date, sample volume, retent volume and percent of the retent sorted. Under normal circumstances 100 % of all fractions are sorted. In those instances where this is not the case, this will be recorded. Where no material is recovered from a retent, the Retent Sorting Sheet will be filled out as usual, with the word sterile written across it.

24.5 *Flot sorting*
All flot sorting is carried out in laboratory conditions. The volume of each flot is measured. The flots are sorted by means of a low powered binocular microscope. The macro plant remains and other archaeological or ecological material are extracted from the flots and put into gelatine capsules or glass tubes. An estimate of the number of items recovered and the species represented are recorded. The charcoal larger than 4mm is extracted from the flots and weighed. All extracted items are bagged and labelled accordingly.

24.6 *Soils and Sediments Analysis*
All the samples taken on-site will have a routine partner. Where questions about the formation processes and natures of specific contexts and sediments have been raised a range of tests will be carried out archaeological contractor. These may include but are not limited to pH analysis, Loss on Ignition, Calcium Carbonate content and Easily available phosphate content.

The pH value is the measure of the acidity (H+) or alkalinity (OH+) of the sample. Dissolving a portion of the soil in distilled water, then measuring the sample using pH meter carries this out. This is to allow us to estimate the potential for preservation within the sediment.

Loss on Ignition is the measure organic content of the sample. This is measured by burning a small amount of the sediment in a furnace at 400^0C for four hours. By measuring the weight before and after burning the organic content can be calculated. The organic content allows us to examine whether manuring or treatment of the natural soil has taken place.

Calcium Carbonate content can be measured by dissolving a few grains of the sample using Hydrochloric acid. If calcium carbonate is present then a small amount of Carbon Dioxide is given off, the greater the amount of CO_2 released the greater the amount of $CaCO_2$. The Calcium Carbonate content shows us if there is any natural calcium carbonate within the sediment, or if not, any mortar or shell has been included artificially.

The amount of phosphate within a sample is examined at the same time as $CaCO_2$. After the CO_2 has been released Ascorbic acid is applied, if Phosphate is present a colour change will occur. The phosphate content may show the presence of animals or to a lesser degree indicate where animals were kept.

24.7 *Soil Micromorphological Analysis*

Micromorphology is the study of undisturbed soils and loose sediments and other materials at a microscopic scale. A 25-30 micron thick slice of soil or sediment is mounted on glass and studied using a petrographic microscope. The samples are prepared for thin section analyses at the Department of Environmental Science, University of Stirling using the methods outlined by Murphy (1986). The samples are analysed using the descriptive terminology of Bullock et al (1985) and FitzPatrick (1993).

Bullock, P., Fedoroff , N., Jongerius, A., Stoops, G., Tursina, T. & Babel, U.1985 *Handbook for soil thin section description*. Wolverhampton: Waine research Publications.

FitzPatrick, E.A.1993. *Soil microscopy and micromorphology.* Chichester: John Wiley & Sons.

Murphy, C. P. 1986. *Thin section preparation of soils and sediments*. Berkhamsted: AB Academic Press.

24.8 *Charcoal ID*

Only charcoal retrieved from the 4mm sieve (see Sieving and Sorting procedures) is used for species identification, mainly because fragments below that threshold are too small to identify. If there is no charcoal larger than 4mm present then attempts will be made to identify the largest fragments present for the purpose of C14 samples.

Surfaces are prepared for identification by using a surgical blade to prise off flakes of charcoal revealing fresh surfaces on which diagnostic features can be identified. The charcoal fragment is bedded in sand for examination under a reflected-light microscope.

On average, up to 10 fragments of charcoal are identified per bulk sample. If a single species is present then identification can stop at 5 fragments. However, if a great variety of species is present, i.e. more than four, then identification should continue until the analyst is happy that a representative sample has been examined. Unusual or exotic species should be bagged and labelled separately within the bulk sample.

Other variables, such as whether the fragment is young roundwood, with sub-bark surfaces intact, whether it has come from a large piece of wood and whether it is fast or slow grown, should be noted.

Species identification is undertaken with reference to Schweingruber's (1982)

24.9 *Wood ID*

Waterlogged wood; Surfaces on waterlogged wood are prepared for identification by using a cut-throat razor or a double-sided razor blade to pare off thin-sections which are cell-thick and transparent so that diagnostic features can be identified. It is consequently difficult to identify fragments of waterlogged wood smaller than 10 mm^2. The thin-sections are temporarily mounted in water on slides for examination under a transmitted-light microscope.

Sampling for identification is carried out on the same basis as that for charcoal. Species identification is undertaken with reference to Schweingruber's (1982) *Microscopic Wood Anatomy* and the in-house reference collection of the archaeological contractor.

24.10 *Non-charcoal charred plant macrofossil analysis and Waterlogged plant analysis*

Analysis of the charred plant macrofossils and waterlogged plants involves identification, quantification and interpretation. Identification of the macro plant remains is done using a low power binocular microscope with x10 and x40 magnifications. The modern reference collection of the archaeological contractor and various seed atlases (Beijerinck 1947, Berggren 1969 & 1981 and Anderberg 1994) will be used to ease identification. The botanical nomenclature follows Flora Europaea (Tutin *et al* 1964-1981). A standardised counting method is used for quantification. Habitat information for the plant species will be taken from Hanf (1983).

24.11 *Dendrochronological analysis*

Sample size and species type; Three conditions are necessary to ensure the successful dating of a building or archaeological site. The timber must be a species for which there are already dated chronologies which in the UK usually means oak. Cross-matching is a statistical process, and therefore a number of timbers are required, usually at least 8 per building or phase. Finally, and for the same reasons the ring-patterns must be over a certain length, usually 70 rings. With these conditions observed it can be relatively straightforward to obtain a date for a building.

On-site sampling; In situ timbers in a standing building are usually sampled using a corer, which is attached to a power-driven drill and removes a core leaving a hole in the timber 10 mm in diameter. The core must be taken so that the maximum radius from pith to bark is sampled, thus ensuring the maximum number of growth-rings for analysis. It is also important to select those timbers which have retained as full a ring sequence as possible, i.e. those where the outermost rings have not been trimmed off or destroyed by woodworm.

Coring is an intrusive method of sampling and it is occasionally impossible to use this method, as in the case of painting ceilings and carved panels. If the end-grain is exposed the ring sequence can be measured *in situ* using a hand lens. Silicone rubber casts can also be taken.

If structural timbers have been removed during the renovation of a building then slices, approximately 50 mm thick can be sampled by saw, usually a chainsaw, from a point along the timber where the maximum radius survives.

Timbers only survive below ground in waterlogged conditions. Waterlogged timbers are sampled as above, by the removal of a 50 mm slice by sawing.

Sample preparation;
Cores are mounted in angle moulding and then the surface is prepared by paring with a Stanley knife followed by fine sanding with Wet&Dry sandpaper until the ring-pattern is clear and measurable.

Slices (dry); The surface of the slice is sanded, usually with a power sander, using progressively finer sandpaper until the ring-pattern is clear and measurable. It is often necessary to finish off the surface with W&D sandpaper.
Slices (wet); The slice is usually frozen for 24 hours and then the surface is planed flat using a Surform plane. This often achieves the necessary clarity of ring-pattern but where the wood is particularly hard it will be necessary to use a razor blade to pare the surface to achieve a clear ring-pattern.
Silicone rubber casts; These are fixed to battens of wood using silicone rubber, for ease of measurement.
Measurement and analysis; The samples are measured on a custom-made measuring table and the data logged onto the computer using DENDRO (Tyers 2000). Data graphing and statistical analysis are also carried out using the same package.

APPENDIX 25
Conservation

25.1 *Conservation principles*
The principles, ethical codes and techniques of conservation are under constant review by both practitioners and professional bodies. The archaeological contractor's approach to conservation will reflect current theory and practice, as recommended by the United Kingdom Institute for Conservation, the Scottish Museums Council, Resources for Museums and Galleries, the International Council on Museums and the International Institute for Conservation.

25.2 *Security*
The archaeological contractor will take all reasonable precautions to ensure the security of items brought in for conservation. The building will be protected by intruder detector systems; all conservation items will be kept in a secure locked store when not being worked on, and will not be left unattended. Particularly valuable items will be stored in a safe where required. A heat and smoke detection system will also be in operation 24 hours a day.

25.3 *Insurance*
Artefacts for conservation will not be covered by the contents insurance of the archaeological contractor. Insurance cover can be arranged for individual items and collections, but this is expensive. Clients are normally advised that the cheapest option is to extend their own insurance for these items for a fixed period. If required, the archaeological contractor could arrange additional insurance, and these costs would be passed on.

The archaeological contractor will have full professional indemnity cover for all its staff.

25.4 *Health and safety*
All relevant Health and Safety legislation, Regulations, Guidelines and Codes of Practice will be respected; Health and Safety plans will be compiled where Construction, Design and Management Regulations 1994 apply.

25.5 *Conservators and allied specialist services*

Professionalism: The conservators of the archaeological contractor will be graduates of approved conservation courses, and will have a thorough knowledge of current conservation practices in their particular specialist fields. The conservators will have been actively encouraged to broaden their skills and experience, and to obtain professional accreditation through the United Kingdom Institute for Conservation or PACR.

25.6 *Specialist post-excavation analyses*

Other services which the archaeological contractor will be able to offer are:

wood identification and woodworking analysis
tree ring dating
pollen analysis
building materials analysis
metal artefacts
metalworking and glass working debris
materials analysis
textile analysis
insects
fish and shells
bird bones
plant remains
bone identification
soils specialist/geologist
artefact specialist
fibre identification
leather identification

25.7 *Documentation*

Conservation complements the work of other professionals by preventing the deterioration of the artefact, and by ensuring that the wider community benefits from the additional information recovered about an artefact in the course of conservation work.

Conservation reports are normally supplied as a hard copy, but can also be supplied on disc in a variety of formats, according to the client's requirements. Reports are normally printed on paper with a guaranteed life expectancy of 150 years; photographic materials are processed to professional industry standards such as Q-Lab.

25.8 *Archival considerations*

The archaeological contractor will endeavour to ensure that the materials used to document artefacts undergoing treatment have a reasonable life span. Paper used will have an estimated lifetime of 150 years (HMSO specification), and all photographic films will be processed to industry standards by a processing company that specialises in high quality work for professional photographers. Radiography films and chemicals will be fresh and well within their expiry dates. All labelling of boxes etc. will be carried out with archival quality inks; labels will generally be duplicated for safety's sake.

Wherever possible, the archaeological contractor will consider the archiving requirements for the site, and may consult the receiving museum or archive about their requirements; the archaeological contractor will follow guidelines proposed by the Association of Museum Archaeologists.

The archaeological contractor will abide by current guidelines on the care and disposal of artefacts and human remains, as set out in:

The Disposal and Allocation of Finds
Publication and Archiving of Archaeological Projects
Treatment of Human Remains in Archaeology
Archaeological Project Design, Implementation and Archiving

25.9 *Museum of London Guidelines*

Museum of London requirements for conservation, recording, documentation, packing and archiving will be applied where these are a pre-condition.

25.10 *Assessment and estimating*

The assessment determines the condition of the artefact and the best means to ensure its survival. Radiography (x-raying) of the object is normally carried out at an early stage, and is compulsory for iron objects, which have poor survival prospects, and for some copper alloy artefacts.

The estimate for the work normally applies for six months; it may be necessary to review it thereafter. Conservation rates are agreed by negotiation.

25.11 *Recording*

Text and image records (paper, digital and/or film as appropriate) will be made of all artefacts before conservation commences. Any information recovered during cleaning and conservation (e.g. associated material, residues, corrosion products, manufacturing techniques) will be carefully recorded, with samples taken where necessary. Soil removed from an artefact during the process will normally be retained and returned with the object, unless the excavator and/or client decides that it is not required. Where necessary, experts will be consulted on the nature of any material discovered during cleaning or conservation of artefacts. All samples and slides will become part of the site archive and remain with the artefact.

The conservation report will also include recommendations for the care and curation of the assemblage; special finds with particular packing requirements will have clear handling and lifting instructions on the outside of any packaging.

25.12 *Conservation Record*

The conservation assessment sets out the proposed treatments for each type of artefact or material: these treatments can be discussed with the client, and with the museum, to take into account any priorities and display requirements. (See Section 9, Assessment)

25.13 *Radiography*

The archaeological contractor will x-ray all excavated iron objects, as well as some of the copper alloy, and any other items as requested by the excavator: information from the x-rays are incorporated into the conservation report. All metal artefacts can be x-rayed if required; only film and chemicals within their expiry date are used, washing periods are the optimum to maximise film preservation.

X-rays normally become part of the archive, and are returned to the client, with full details of exposure time and voltages used.

25.14 *Record photography*

All artefacts selected for conservation will be photographed (on colour slide film) at least once; usually before and after conservation, with a label and scale in the frame. Unusual artefacts, noteworthy features or modified conservation treatments will be photographed whenever appropriate.

All images will be recorded in the conservation report, and each slide labelled with the context and find number. The archaeological contractor will use Professional grade film, and a professional developing service to ensure maximum film stability. The slides form part of the conservation archive, and will remain with the artefact.

25.15 *On-site conservation and conservation on call*

A conservator can be available on site if required, and the conservators of the archaeological contractor can provide immediate advice over the phone at any time (specific arrangements must be made for out of hours working).

Advice on packing, lifting and transporting artefacts may be given in the early stages of a project.

25.16 *Conservation treatments*

The requirements of each artefact will be considered individually, and any remedial treatments carried out will use only recognised conservation treatments and approved materials. The archaeological contractor will be committed to CPD, which ensures that its conservation staff are fully cognisant with new developments in the field.

25.17 *Post-excavation storage*

It is recognised that budgetary arrangements may mean considerable time can elapse between excavation and conservation or Finds Disposal. All finds will be examined by a conservator on receipt; packing and storage materials will be renewed as necessary, and the archaeological contractor will ensure that all finds will be kept in a secure, stable environment until conservation treatments begin. Any finds that require immediate treatment will undergo conservation as soon as the conservators have consulted the Project Field Officer. Large volume storage at 1° C and -20° C; and storage for waterlogged material will be available in-house.

25.18 *Packing*

All artefacts will be packed in suitable inert materials, with silica gel if required. Fragile objects will be supported by Ethafoam, or similar, and lifting and handling instructions on the container. Especial care will be taken for artefacts, which will be going into long term storage. All containers will be carefully labelled, and box lists supplied.

APPENDIX 26
Publications

26.1 *General*

All publications by the archaeological contractor will be clear, correct and concise accounts of what was done and will reach standards acceptable to the archaeological profession. Final reports will be published within five years of the end of fieldwork. Publications should be published in popular archaeological, general and specialist formats to inform a wide readership of what work was done

and must be made available to both lay and professional audiences for the foreseeable future. Publications must also provide good value for money in terms of the content and style of the publications. In DES entries and journal publications the role of the client will be fully acknowledged. In the popular publications and monographs suggested below the role of the client will be more fully promoted, with the display of the client's logo on the cover and a foreword by their representative. The over-riding aim of the procedures outlined in this section is to ensure that, during the duration of the project, a continuous stream of information about the archaeological works is made available for peer review and public consumption. The following stages and publication vehicles are envisaged;

26.2 *DES entries in Scotland*

After the completion of each piece of on-site work, whether it be a watching brief, evaluation, set-piece excavation or building recording exercise a Data Structure Report (DSR) will be produced (see Fieldwork procedures). These are not reports intended for publication but they usually include a short summary which will be submitted for publication in *Discovery and Excavation Scotland* (DES), an annual summary of fieldwork published by the Council for Scottish Archaeology. It is proposed that an individual entry for each piece of on-site work will not be submitted; rather a single entry summarising all the works carried out in any one year will be compiled by the Project Manager. The DES summary is a standard requirement of planning authority archaeologists and ensures that notice of ground-breaking works is disseminated throughout the archaeological community.

26.3 *Journal publications*

Reports on the results of excavations are normally published either as an article in an academic journal or as a monograph in an appropriate series, depending on the scale of the results. The results of the set-piece excavations will be published as journal articles with reference to other on-site works such as watching briefs and building recording, where appropriate. The publication of these articles will follow on timeously from the completion of post-excavation works.

26.4 *Monograph publications*

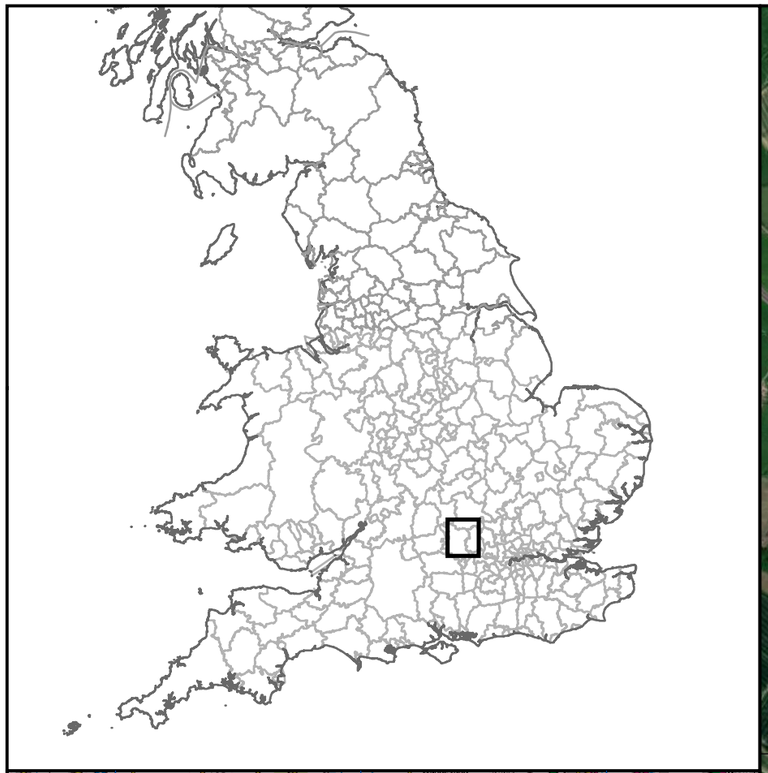
The results of all the on-site works will be drawn together in a single volume, a monograph designed primarily for academic consumption. This will be published within 5 years of the completion of on-site works.

26.5 *Popular publications*

The results of all the on-site works will also be drawn together in 'popular' publications that augment the academic publications in making the results available to a wider public. This is a method of providing 'community gain' to the local and national community in return for its consent, through the planning process, to alter or demolish elements of the archaeological heritage. Popular publications may include, as deemed appropriate by the client, Internet reports within the web site of the archaeological contractor, printed colour booklets, leaflets, on-site interpretative panels and exhibitions.

27.6 *Editorial procedures*

The archaeological contractor will apply their in-house editorial policy and procedures, through which any projects nominated for publication are normally submitted.



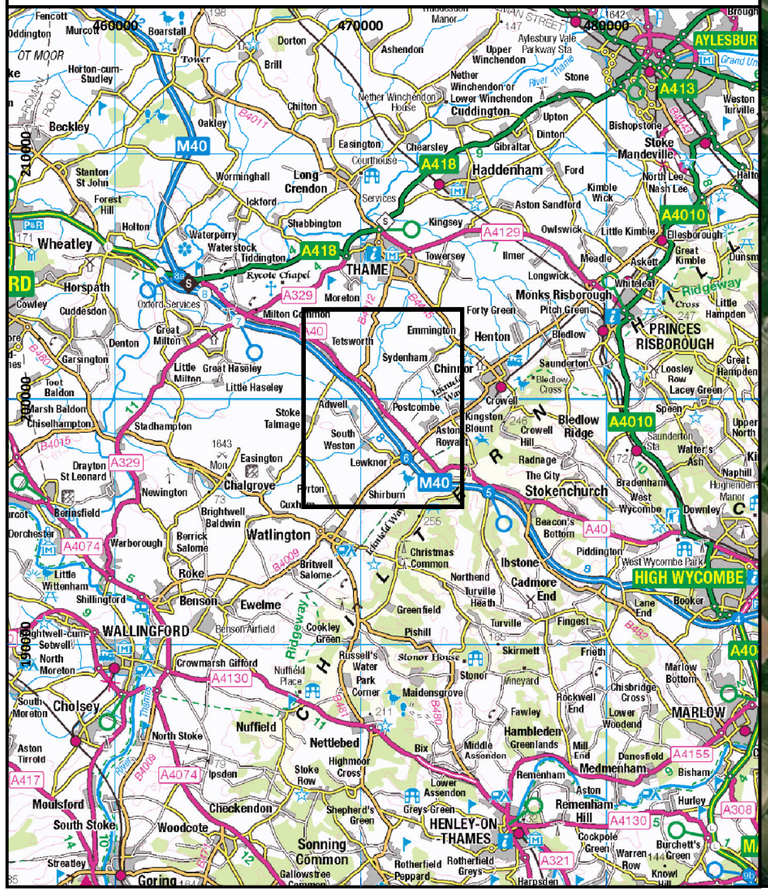


Figure 1

Site Location Plan

Legend

- Site Boundary
- Study Area (Direct Impacts)
- Study Area (Setting Impacts)

FOR

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United Kingdom

Drawn/checked:	GM/SO
DWG no:	01/26970/EIAWSI/01/01
AOC Project No.:	26041

AOC Archaeology Group

N

SYSTEM

Coordinate System: British National Grid
Projection: Transverse Mercator
Datum: OSGB 1936

SCALE

1:30,000 @ A3

SCALE

0 1km

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