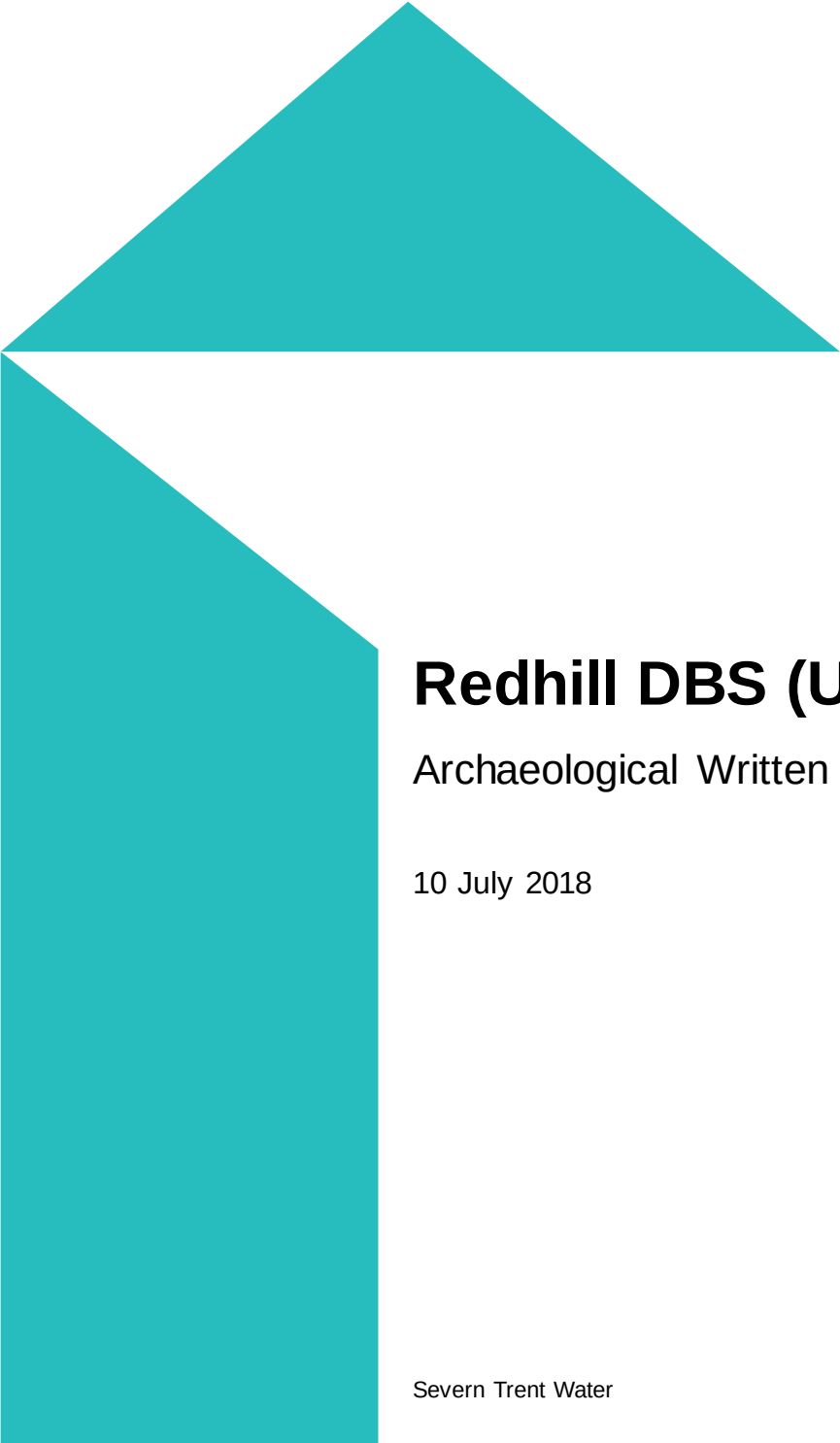




Redhill DBS (Uxacona)

Archaeological Written Scheme of Investigation

10 July 2018

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Contents

Executive summary	1
1 Introduction	2
1.1 Overview	2
2 Baseline	3
2.1 Geology and topography	3
Archaeological background	3
2.2 3	
3 Objectives and Proposals	5
3.1 Aims and objectives	5
3.2 Proposals for investigation	5
3.2.1 Archaeological Strip, Map and Sample	5
3.2.2 Archaeological Watching Brief	5
3.2.3 Contingency	6
4 Detailed Methodology	7
4.1.1 Machining	7
4.2 Planning	8
4.3 Hand investigation	8
4.4 Recording	9
4.5 Finds and environmental sampling	9
4.6 Scientific dating	10
5 Health and safety	11
5.1 Programme	11
5.1.1 Post-excavation	11
6 Post-excavation requirements	12
6.1 SMS and Watching Brief Report (combined)	12
7 Guidance documents	13
7.1 Project Management	13
7.2 Fieldwork	13
7.3 Finds and environmental sampling	13
7.4 Scientific dating	13

8	Archive	14
8.1	OASIS and ADS	14
8.2	Copyright and Ownership	15
9	References	16
A.	Historic Environment Record (HER) Summary	17
B.	Figures	20
B.1	Figure 1; General site location with known archaeology	21
B.2	Figure 2; detail of the proposed development area	22
B.3	Figure 3; Proposed development area	23

Executive summary

This Written Scheme of Investigation (WSI) sets out proposals for an archaeological strip, map and sample ("SMS") and archaeological watching brief ("WB") in advance of a new kiosk(s), access road and pipeline at Redhill Reservoir (NGR SJ 7261 1097) adjacent to the A5, at Redhill near Telford, Shropshire TF2 9NJ. Previous substantial excavations by Worcestershire Archaeology have taken place in 2011-2013 within and immediately adjacent to the proposed development area. The outline scheme design is shown in Appendix B, which may be subject to minor changes, including an additional kiosk, but all works will be within the land acquisition boundary (shown as a red line).

This Written Scheme of Investigation ("WSI") has been prepared by Mott MacDonald Bentley ("MMB") on behalf of Severn Trent Water ("STW") and details the method, resources, reporting and timetable necessary to fulfil the requirements of the Local Authority who will be following guidance from National Planning Policy Framework ("NPPF") and the Telford Local Plan.

This WSI is in accordance with the standards and guidance set out in Management of Research Projects in the Historic Environment ("MoRPHE"), Historic England 2006b, and the Chartered Institute for Archaeologists' ("CIfA") guidelines for excavation, watching brief, conservation and research, and archiving and the CIfA Code of Conduct (2014a, 2014b, 2014c, 2014d, 2014e).

1 Introduction

1.1 Overview

This WSI is intended to fulfil the requirements of Telford District Council determined during pre-application consultation with Hugh Hannaford (Senior Archaeological Advisor, Shropshire Council) on the 12th May 2017 and sets out the scope for archaeological investigations at the site as part of the planning application for a new kiosk, access road and pipe installation at Redhill Reservoir (NGR SJ 7261 1097) adjacent to the A5, at Redhill near Telford, Shropshire TF2 9NJ (see Appendix B for proposed scheme details).

The scope of works is expected to comprise of:

- installation of a Factory Built Assembly (FBA) Booster pumping station. The ground works for the FBA will require a 500mm ground reduction in advance of the installation of a base slab;
- A new surge vessel will require a 500mm ground reduction in advance of the installation of a concrete plinth required for a new surge vessel (new tank);
- Ground reduction of 250mm will be required in advance of an access track and kiosk;
- Some ancillary such as ducting for power and control will also be installed within the site boundary;
- New pipework will be installed outside of the red line boundary.
- Total area to be stripped 110m²

All elements of the fieldwork and post-excavation will be undertaken by Worcestershire Archaeology, the contracting division of Worcestershire County Council who are certified as a Registered Organisation with the Chartered Institute for Archaeologists ("CIfA") and have undertaken the previous archaeological investigations on the adjacent site. The Project Officer in charge will have CIfA Membership to at least Associate level.

Worcestershire Archaeology, undertaking this work on behalf of Mott MacDonald Bentley ("MMB") will adhere to the contents of this WSI as part of their contractual appointment with Mott MacDonald. In accepting a contract to undertake the works, the appointed archaeological sub-contractor will take responsibility for the standards and levels of recording and reporting, as well as the preparation of Health and Safety documentation.

All of the archaeological work is being carried out in accordance with Chartered Institute for Archaeologists *standards and guidance for archaeological excavation, watching briefs* and the CIfA *code of conduct*.

2 Baseline

There are no world heritage sites, listed buildings, registered parks and gardens or battlefields within a 1km study area. There are two scheduled monuments (divided into three parts) (see 2.2) to the immediate east of the development area.

2.1 Geology and topography

The Redhill Service Reservoir site is located approximately 5km west of Telford town centre and is just outside the Telford settlement boundary in open countryside. The site is situated adjacent to the A5 from which it is directly accessed.

The Redhill site is located to the north of the A5 and is rectangular in shape with a level topography. The site contains a grass covered service reservoir, a single-storey brick building with a flat roof, approximately 5m in height, and a tarmac access road and area of hard standing.

The solid geology of the route comprises middle coal measures, which underlies deposits of glacial till.

2.2 Archaeological background

The entire site of Uxacona, with its boundary to the immediate east and south-east of the development site, is a scheduled monument (referenced under two National Heritage List for England (NHLE) list entry numbers: 1003811 and 1006272). The monument, which falls into three areas of protection, includes parts of a small Roman town, a section of the Roman road known as Watling Street, and a “mansio”¹ known collectively as 'Uxacona' or "the high place". It is situated on the crest of a prominent hill, overlooking the Shropshire Plain. The part of the town, road and *mansio* survive as entirely buried structures and deposits which are visible on aerial photographs as crop and soil marks and have been confirmed through partial excavation, field walking and geophysical surveys. Watling Street still lies partially beneath the present road surface but, where exposed by excavation, was found to be composed of small cobbles mixed with pottery, above cobbles and overlying the natural geology.

A Roman site has been known across this area since a ruined hypocaust is said to have been seen near Oakengates in 1767. A full list of the archaeological events to date have been tabulated as an appendix (Appendix A) which include excavations from the 1960s and the 1970s to the present day which has been taken from a full HER data search².

A partial geophysical survey was conducted within the scheme area (see Figure B.2 for illustration of results) and a full archaeological excavation was conducted to the immediate east of the proposed development area which uncovered part of a mid-1st century Roman cavalry fort represented by a north-south Punic ditch to the south-west of the larger fort explored in the 1970s.

Most of the activity across the hilltop formed part of a 2nd century AD civilian settlement. Possibly sitting within an enclosure, there were five earth-fast buildings, in at least three plots facing onto Watling Street to the south (though neither the road nor the building frontages were

¹ In the Roman Empire, a mansio was an official stopping place on a Roman road, maintained by the central government for the use of officials and those on official business whilst travelling.

² March 2017

exposed). Up to eight fired clay ovens were also excavated, three of which appear to have sat within one of the buildings, perhaps indicating commercial activity such as a bakery, taking advantage of its roadside position. Overall the site produced a large number of coins, metallic small finds, and pottery artefacts, some of the artefacts being of particular interest as very unusual items (Worcestershire Archaeology 2011).

3 Objectives and Proposals

3.1 Aims and objectives

The aims and objectives of the archaeological investigation are:

- to determine the presence or absence of archaeological remains shown on the geophysical survey (WYAS 2012), and further characterise (nature, date, complexity and extent) any deposits which were encountered during the 2011-2013 excavation (Mann *et al.* 2015) found within the proposed development area itself, which may be affected by the proposed scheme;
- to add to the characterisation of the Roman settlement and activity at the Redhill site;
- to provide further contributions to the Research Frameworks developed for the west Midlands (Watt S, 2011), where Red Hill is listed as one of seven Shropshire military fort sites at strategic locations on the new Roman road network, and as one of three roadside settlements in Shropshire that developed as a vicus outside a fort;
- to place the site in the ready-made context of the Wroxeter hinterland study; and
- to enhance understanding of the patterns of production and distribution (i.e. trade), of the large number of production centres (pottery, minerals etc.), and the generally heavily industrial nature of the Roman West Midlands.

3.2 Proposals for investigation

3.2.1 Archaeological Strip, Map and Sample

The investigation will involve the Strip, Map and Sample (“SMS”) of the areas which will be covered by the new kiosk(s) and access road (see Appendix B; Figure 1 & 2; MMD-380859-XX-00-INF-01/2) or should additional facilities be added to the design then a SMS will apply to any affected area shown within the red line boundary. Mechanical excavation will cease at the uppermost surface of any archaeological remains, but it is expected remains from the Roman settlement of Uxacona and its military fort (or any features or deposits considered as archaeology or with historical value) will be encountered first or the natural geology. All machining will be done under the direction of the Worcestershire Archaeology Project Officer.

The SMS investigation will plot observed features onto a site plan, and then sample excavate those features. Features will be sufficiently hand sampled in accordance with the standards and guidance documents listed in Section 4.3.

Once all the recording has been completed, there will be no formal re-instatement.

3.2.2 Archaeological Watching Brief

The archaeological watching brief (WB) element will take place in conjunction with groundworks associated with the new pipework which will connect to an existing main in the field. Any encountered archaeological remains will be recorded to professional standards as per Chartered Institute for Archaeologists *Standard and Guidance* (CIfA, 2014) and Section 4.3 below. The pipework will be in a narrow trench (0.60m wide), but is expected to be deep enough to impact upon buried archaeology.

3.2.3 Contingency

It is proposed that there be a contingency to be used where deemed appropriate by the field archaeologist in order to characterise any features which may extend beyond the limits of the excavation. This is expected to be no more than 10m².

4 Detailed Methodology

All work (both the SMS and WB) will be undertaken to standards described in the Chartered Institute for Archaeologists' *Standard and Guidance for archaeological excavation* (revised 2014)³⁴. The archaeologists will follow the Chartered Institute for Archaeologists' *Code of Conduct*⁵ (revised 2014).

All relevant Health and Safety legislation will be adhered to. A Risk Assessment and Method Statement (RAMS) detailing the staffing and all relevant Health and Safety legislation will be prepared by Worcestershire Archaeology.

Service plans will be consulted by the principal contractor (to be confirmed) prior to commencement of works.

The control of the site and plant will be maintained by the principal contractor, Mott MacDonald Bentley (MMB). Worcestershire Archaeology will work under their supervision but retain responsibility for the levels of the ground reduction and strip, map and sampling of the site.

Worcestershire Archaeology will report on progress to the Mott MacDonald Senior Archaeologist and notify as soon as possible if there are any significant finds. Mott MacDonald will arrange a site meeting during the works with the Shropshire County Archaeologist.

The archaeological contractor will make provision for the deposition of the site archive with the appropriate museum and obtain an accession number for the archive. A unique site code will be assigned to the project.

4.1.1 Machining

The SMS areas will be opened by a mechanical excavator and driver provided by the construction contractor using a toothless ditching bucket operating under archaeological supervision and control at all time. Each area will be excavated to the natural geology or the uppermost archaeological horizon (whichever comes first).

Care will be taken to avoid damage to archaeological remains and will be limited to removal of overburden or topsoil. Mechanical excavators shall not track over an area once excavated.

It is the responsibility of the supervising archaeologist to ensure that the finished surface is machined to a suitably 'clean' state in order to identify, define and investigate any exposed archaeological deposits. If the surface is not sufficiently clean, hand cleaning of the surface will be required.

³ Chartered Institute for Archaeologists (2014) *Standard and Guidance for an archaeological evaluation*

⁴ Chartered Institute for Archaeologists (2014) *Standard and Guidance for an archaeological watching brief*

⁵ Chartered Institute for Archaeologists (2014) *Code of Conduct*.

4.2 Planning

Each area will be accurately surveyed using a Total Station or GPS and will be related to the Ordnance Survey Grid and mapped upon (or during) machine excavation.

A record of the full extent in plan of all archaeological deposits as revealed in the investigation will be made, either digitally or by hand, and related to the OS grid. Where digital planning is used, the project archaeologists will ensure that a sufficient number of points are taken on each feature to ensure an accurate representation of the site. A plan of each area will be made and included in the report where appropriate.

A sufficient number of levels will be taken across the excavated areas to gain a sub-surface topographical model.

4.3 Hand investigation

If significant archaeological features are encountered within SMS and WB the following sampling strategy will be used. Each sampled context will be excavated in sequence. A pneumatic drill may be used only with permission from the Mott MacDonald archaeologist and Shropshire County Archaeologist.

The following sampling strategy will be adopted where features are sampled to ascertain the nature, depth, date and state of preservation of archaeological features as well as the stratigraphical relationships of these deposits and features to one another:

- 100% of Roman ovens will be excavated and fully recorded;
- Normally 50% of the fills of pits, post-holes and other discrete archaeological features will be excavated;
- Pits or post-holes will be fully excavated if they are particularly rich in environmental or and/or artefactual evidence;
- The exposed lengths of ditches will be sampled to characterise and date the phase of activity. There is no specified percentage of sampling or excavation segment length since these will be established in the field following stripping. Terminals of linear features and intersections will normally be targeted by excavation. A flexible approach will be adopted to the location of excavation samples such that areas of exposed ditch fill with higher artefact or ecofact content may be targeted, also longer sample segments will be excavated to attempt provide a secure date for the features;
- At least 50% excavation of ring gullies will include excavation of the terminals and sections at each side to the rear of the gully. Special regard will be given to significant stratigraphical relationships and concentrations of artefactual material;
- In the event that stone structures are encountered, these will be excavated in sufficient detail to establish their construction sequence and sequence of repairs or extensions. All stratigraphic associations will be recorded. Should floor levels be encountered, these will be fully cleaned, excavated and environmentally sampled;
- 100% excavation of hearths, furnaces or kilns in all cases where these are identified. These are not anticipated but should these be encountered they will be fully excavated (and bulk sampled) to determine their function and any sequence of repairs or replacements; and
- 100% excavation of ancient human burials, including cremations and ancient animal burials, in all cases where these are identified. Human remains will only be excavated after obtaining

the relevant Ministry of Justice Licence, as required by the Burials Act of 1857 (amended 1981). The discovery of human remains will be reported to the local coroner. Other structured or placed deposits will be recorded and retained as “small finds”.

Metal detectors will be used to scan for metallic finds on spoil heaps, vacated areas, areas of modern disturbance and during the excavation of key archaeological features or deposits.

4.4 Recording

The following procedures will be followed:

- All archaeological features will be planned either digitally or hand drawn and located on appropriate scale plans. Plans will show the limits of the areas and will be related to the OS grid.
- All features will be planned at a scale of 1:20 and either digitally or hand drawn and located on appropriate scale plans. Plans will show the limits of the excavations and will be related to the OS grid;
- All sectioned and excavated archaeological features will be drawn at a scale of 1:20 or 1:10 and will be levelled to Ordnance Datum. Sample sections of the trial trenches will be drawn at 1:20 or 1:50 to provide evidence of the stratigraphy at the sites;
- All archaeological features, layers or deposits will be allocated unique context numbers prior to any hand excavation. These will be recorded on pro-forma context sheets detailing: character, contextual relationships, a detailed description, associated finds, interpretation and cross referencing to the drawn, photographic and finds records. On-site matrices will be compiled during the excavation such that the results of the written stratigraphical records may be fully analysed and phased;
- An adequate photographic record of the investigations will be made of all excavated areas and all archaeological features and deposits. The photographic record will consist of 35mm format black and white negatives, colour slides and digital images. The photographic record will include photographs and images of all archaeological features (pre- and post-excavation) and working and promotional shots. Photographic records will include information detailing: site code; date; context(s); section number; a north arrow and a scale unless they are to be used for publication purposes. The black and white negatives and contact prints will be filed. All photographs will be listed and indexed on context record sheets; and
- All photographs will be listed and indexed on context record sheets.

A record or index will be maintained of all site drawings and these will form part of the project archive. All site drawings will contain the following information: site name; site number and code; scale; plan or section number; orientation, date and compiler.

4.5 Finds and environmental sampling

All finds will be treated in a proper manner and to standards agreed in advance with the recipient museum. They will be exposed, lifted, cleaned, conserved, marked, bagged and boxed in accordance with best professional practice.

All finds of gold and silver will be recorded, removed to a safe place and reported to the Coroner in accordance with the Treasure Act 1996 and the Treasure (Designation) Order (2002). Where retrieval cannot be effected the same day, appropriate security measures will be put in place to safeguard the finds.

Environmental sampling strategies will be developed subject to the requirements of the investigation. If contamination is not an issue, specialist staff will have a role in ensuring that appropriate deposits are sampled to retrieve palaeoenvironmental and economic indicators to fulfil the project aims. Preparation, taking, processing and assessment of environmental samples will be in accordance with guidance provided by Historic England.

If necessary, the sampling strategy and methodology will be based on the following (subject to H&S considerations):

- All collected samples will be labelled with context and sequential sample numbers;
- Appropriate contexts will be bulk sampled for the recovery of carbonised plant remains and insects
- Assemblages of charred crop remains are of particular importance and will be used to provide data in addition to the associated weed flora on agricultural activities and the economy of the site;
- Environmental samples will be taken where organic remains survive in well-stratified, datable deposits.
- Bulk samples (15 litres or the whole context dependent upon size) will be taken for wet sieving and flotation where there is clear indication of good analytical potential and dating evidence for such material (subject to evaluation requirements). Where there is potential for spatial variation in the distribution of such remains, the sampling strategy will include a percentage sample of each feature/deposit type, distributed throughout the excavation area;
- Bulk samples may be taken, if appropriate, from significant datable waterlogged deposits for insects and macroscopic plant remains;
- Sub-samples or monolith samples of waterlogged deposits and sealed buried soils with potential for pollen preservation will be taken for assessment if appropriate and columns of such samples will be taken through deposits where there is clear potential for recovering a datable sequence of environmental information; and recovery of small animal bones, bird bone and large molluscs will normally be achieved through processing other bulk samples or 30 litre samples may be taken specifically to sample particularly rich deposits.
- Appropriate specialist staff will be used on this project depending on the type of artefacts and soil samples recovered during the course of the fieldwork. Details of specialists will be provided in the archaeological contractor's method statement.

4.6 Scientific dating

If Roman hearths, ovens, kilns are discovered it will be necessary to scientifically date the features by either radiocarbon dating or archaeomagnetic dating whichever is most appropriate.

5 Health and safety

The Risk Assessment Method Statement (RAMS) will be prepared by the archaeological contractor and will confirm appropriate levels of protective personal equipment (PPE) to be worn by workers on site and all other pertinent risk avoidance procedures. Appropriate welfare facilities are to be provided by the archaeological contractor.

5.1 Programme

The archaeological strip, map and sample will be carried out in the Spring of 2018. The programme for the Watching Brief element is not known.

5.1.1 Post-excavation

Post-excavation work will commence immediately after completion of the fieldwork. See Section 6, below, for details.

6 Post-excavation requirements

6.1 SMS and Watching Brief Report (combined)

A full report for the SMS and the watching brief should include all factual data and interpretation of the data. The report should be in line with the requirements contained within, MoRPHE⁷ (*Management of Research Projects in the Historic Environment*, Historic England 2006b), MoRPHE Project Planning Note 3 (Historic England 2008) and ClfA guidelines. The report should also consider the results of the archaeological investigations in the context of local and regional sequences along with regional and national research frameworks.

A draft report outlining the results of the investigation will be produced within 3 weeks of completion of the fieldwork and submitted to the Mott MacDonald archaeologist for comment. Any revisions required by the Mott MacDonald archaeologist will be made within 5 working days. The report will then be distributed to the project team and issued to the Shropshire County Archaeologist.

The final report shall be fully illustrated and present the results of all the archaeological works, and will contain the following information:

- An introduction;
- A description of the site (location, topography and context);
- A methodology SMS and watching brief;
- A results section;
- A methodology for the recording;
- A summary of the history of the site;
- A descriptive of all archaeological features;
- A phased plan;
- A results section;
- A selection of appropriate photographs to illustrate features described in the text; and
- A combined discussion of all aspects of archaeological mitigation;
- A fully referenced bibliography.

Once the report has been approved by the Mott MacDonald archaeologist, and the Shropshire County Archaeologist, copies of the report shall be made available to the Shropshire HER and OASIS project as appropriate.

Expert analysis of any finds and environmental evidence should be carried out by specialists, details of which will be included in the archaeological contractor's method statement. As already noted above, the scope of such works (if deemed appropriate/necessary) will have been agreed in advance with the Shropshire County Archaeologist and the Mott MacDonald archaeologist.

The results will be published in the relevant publication which might be a local or national journal

⁷ English Heritage (2006) *Management of Research Projects in the Historic Environment (MoRPHE)*.

7 Guidance documents

All work will be undertaken in accordance with the following standards and guidance documents:

7.1 Project Management

All work will be undertaken in accordance with the following standards and guidance documents:

- Chartered Institute for Archaeologists (CIfA) Code of Conduct (2014c);
- Management of Research Projects in the Historic Environment (MoRPHE) (Historic England 2015);
- MoRPHE Project Planning Guidance Note 3 (Historic England 2008).

7.2 Fieldwork

Historic England 2015 Archaeological and Historic Pottery Production Sites Guidelines for Best Practice

- CIfA Standard and Guidance for Archaeological Excavation (2014a);
- CIfA Standard and Guidance for an Archaeological Watching Brief (2014b).

7.3 Finds and environmental sampling

- First Aid for Finds (Watkinson and Neal 2001);
- CIfA Standard and Guidance for the collection, documentation, conservation and research of archaeological materials (2014d);
- Historic England guidance document Guidelines on the X-Radiography of Archaeological Metalwork (2006b);
- Historic England Environmental Archaeology: A guide to the theory and practice of methods, from sampling and recovery to post-excavation (Second Edition, 2011);
- Historic England Waterlogged Historic Artefacts: guidelines on their recovery, analysis and conservation (2011);
- Historic England Waterlogged organic artefacts: guidelines on their recovery, analysis and conservation (2012); and
- Historic England Animal bones and archaeology: guidelines for best practice (2014).

7.4 Scientific dating

- Historic England Guidelines on the Use of Radiocarbon Dating and Chronological Modelling in Archaeology (2015);
- Historic England Dendrochronology: Guidelines on producing and interpreting dendrochronological dates (1998).

8 Archive

A full archive will be prepared to standards outlined in MoRPHE (HE 2006b), Archaeological Archives: A guide to best practice in creation, compilation, transfer and curation (AAF 2011 ed. Brown, D. H) and Chartered Institute for Archaeologists' Standard and Guidance for the collection, documentation, conservation and research of archaeological materials (Revised 2014).

If no suitable repository can be found then the archive will need to be held until a suitable repository becomes available. Proposals for deposition of the archive should be included in the archaeological contractor's method statement.

All retained artefacts will be cleaned, conserved and packaged in accordance with the requirements and guidelines of First Aid for Finds (Watkinson and Neal 2001). There may be a case for non-retention of certain artefacts of low academic value. The selection of these will accord with guidance in Archaeological Archives: A guide to best practice in creation, compilation, transfer and curation, (Section 4, Selection and Retention; AAF 2011). Historic England 2006a *Guidelines on the X-Radiography of Archaeological Metalwork* will also be consulted where appropriate. Proposals for deposition of the archive should be included in the archaeological contractor's method statement.

Archiving will be carried out as soon as is practicable, and within six months of completion of publication text on the project. Agreement with the landowner will be sought by Worcestershire Archaeology for deposition of the finds. Transfer of ownership from the landowner to the museum will be agreed (where possible) and a written transfer of ownership form will be forwarded to the museum ahead of deposition.

A project's archive comprises every record relating to that project, from written records and illustrative material to the retained artefacts. The accession number assigned for the artefacts will be used for the whole project archive. The archive will be deposited complete and will include a full index of contents. Finds (and other retained materials) will be bagged and boxed in the manner recommended by the local repository.

The site archive will be deposited in accordance with the requirements of the repository for conservation and storage and subject to the guidelines and requirements of MoRPHE PPN 3 (2008), as soon as is practicable, and within six months of completion of publication text on the project. Agreement with the landowner will be sought for deposition of the finds and paper archive.

8.1 OASIS and ADS

One bound copy and one digital (pdf) copy of each report should be submitted to the County HER within 6 months of completion. The report should also be submitted to the Archaeology Data Service (ADS) in the required format. The archaeological contractor must complete the online OASIS form at <http://ads.ahds.ac.uk/project/oasis/>. An OASIS database form will be submitted at the end of each phase of fieldwork and assessment level reporting.

8.2 Copyright and Ownership

It is normal practice for both the copyright and ownership of the paper and any digital archive resulting from an archaeological project to rest with the originating body (usually the Archaeological Contractor). The originating body will deposit the archive in a museum or other appropriate repository on the completion of the project, and normally transfer title and/or licences the use of the archive at this stage.

Transfer of ownership from the landowner to the museum will be agreed in principle prior to the fieldwork and a written transfer of ownership form will be forwarded to the museum ahead of deposition.

However, until notified to the contrary, existing and future copyright and all other proprietary rights in all drawings, details, plans, specifications, schedules, reports, calculations and other work originated or made in the course of performing the scope of works will be assigned with the chosen repository.

9 References

- ADS, 2013. Caring for Digital Data in Archaeology: a guide to good practice. Archaeology Data Service and Digital Antiquity Guides to Good Practice
- Brown, D. H., 2011. Archaeological archives; a guide to best practice in creation, compilation, transfer and curation. Archaeological Archives Forum (AFF) (revised edition)
- ClfA 2014(a) Standard and guidance for field excavation
- ClfA 2014(b) Standard and guidance for archaeological watching brief
- ClfA 2014(c) Code of Conduct
- ClfA, 2014(d) Standard and Guidance for the collection, documentation, conservation and research of archaeological materials.
- ClfA 2014(e) Standard and guidance for the creation, compilation, transfer and deposition of archaeological archives.
- EA 2015 Minimum technical requirements: 801_14_SD01 Cultural heritage and archaeology standards
- Historic England 2006(a) Guidelines on the X-Radiography of Archaeological Metalwork
- Historic England 2008 MoRPHE Project Planning Note 3: Archaeological Excavation
- Historic England 2015 Management of Research Projects in the Historic Environment (MoRPHE)
- Historic England 2007 Understanding the Archaeology of Landscapes
- MPRG, 2001 "Minimum Standards for the Processing, Recording, Analysis and Publication of Post-Roman Ceramics" Medieval Pottery Res Group Occ Paper 2.
- Worcestershire Archaeology 2011 Evaluation and Watching Brief at Redhill Reservoir, Telford, Shropshire. Author Andrew Mann.
- Mann, A (*et al.*) Worcestershire Archaeology 2015 Excavations in 2011–13 at Redhill (Uxacona), Telford, Shropshire. Archive report.
- WYAS Archaeological Services 2012 Lilleshall Nitrate Improvement Scheme, Redhill Reservoir, Near Telford, Shropshire. Geophysical Survey. Report no. 2412
- Watt S, 2011 The Archaeology of the West Midlands; A framework for research
- Watkinson, D, and Neal, V, 2001 First Aid for Finds, 2nd ed, London: RESCUE

A. Historic Environment Record (HER) Summary

Table 1: Relevant Events from HER data

Event Ref:	Event Name	Event Type	Description
ESA142	1994 Evaluation at Woodhouse Farm by BUFAU	Aerial photograph interpretation Desk based assessment Geophysical survey Trial trench Walkover survey	In early 1994 BUFAU carried out an evaluation of a proposed landfill site consisting of three fields centred at SJ 725 116, west of Woodhouse Lane. The documentary research revealed that the fields immediately to the south were named wall ashes on estate maps of the C17 and C19. No evidence for archaeological features of Roman date were found in the walkover survey, geophysical survey or trial trenching carried out for the evaluation. This suggested that the Roman settlement zone did not extend up to the northern plateau which extends just within the southern boundary of the study area.
ESA6738	2011 Trial trenching and WB at Redhill Reservoir, Telford by Worcestershire	Trial trench Watching brief	An archaeological evaluation was undertaken at Redhill Reservoir, Telford (NGR SJ 7261 1097) in 2011, ahead of the submission of a planning application for construction of nitrate improvement structures and associated pipework. The site lies immediately north of the A5, formally Roman Watling Street and to the south of a Roman military camp/signal station (SAM 1006269) partially excavated in the 1970s during the construction of the reservoir. The evaluation identified significant Roman settlement remains dating from the 1st to 3rd centuries AD. The remains mostly comprise boundary ditches, pits and postholes. Beam slots and frequent fired wattle/daub remains suggest that wooden buildings were present on the site although no floors or surfaces were identified as being associated with them. More substantial buildings may also be present as a large robbed-out sandstone wall foundation was excavated and a single Roman tegula (roof tile) was recovered. Two possible oven/furnace bases were also identified in association with metal-working debris indicating that industrial activities may also have been undertaken on site. Significant quantities of exotic and high status pottery and metal-working finds were also recovered from the site, including a trumpet brooch, two Polden Hill type brooches and a possible military phalera mount. There was no evidence that the nearby military enclosure extended into this part of the site or that Roman Watling Street (SAM 1003811) ran through the evaluated area.
ESA7676	2011-2013 excavations at Redhill (Uxacona) Reservoir by Worcestershire Archaeology	Environmental sampling Open area excavation Watching brief	An archaeological excavation and watching brief was undertaken at Redhill Reservoir, Telford, Shropshire (NGR SJ 7261 1097) in 2011-2013 on the site of the Roman settlement at Uxacona (the 'high place'). It was undertaken in advance of construction of a nitrate filtration plant on the site. This followed on from previous evaluation undertaken on the site (ESA 7638). The earliest structure was part of a mid-1st century Roman fort represented by a north-south Punic ditch to the south-west of the larger fort

explored in the 1970s (ESA 1377). There is a suggestion from the artefactual evidence that the army unit was cavalry. Most of the activity across the whole site was 2nd century in date and in the nature of civilian settlement. Possibly sitting within an enclosure, there were five earth-fast buildings, in at least three plots, facing onto Watling Street to the south (though neither the road nor the building frontages were exposed). Up to eight fired clay ovens were also excavated, three of which appear to have sat within one of the buildings, perhaps indicating commercial activity, such as a bakery, taking advantage of its roadside position. Overall the site produced a large number of coins, metallic small finds, and pottery artefacts were associated with this main occupation phase, some of the artefacts being of particular interest as very unusual items. Environmental evidence revealed a generally low level of charred cereal crop waste, suggesting that crop processing was not a significant activity here. One building, however, produced free-threshing wheat (the predominant wheat of post-Roman Britain), in addition to the glume wheats characteristic of Roman sites. This raises the possibility that the wheat supply was for a specific purpose, perhaps for baking on a commercial scale as suggested above, since this more easily processed wheat would have been more suited for this purpose. During the 3rd century a large east-west V-shaped ditch was dug across the rear of the settlement area on a new alignment, parallel (it is presumed) to Watling Street (modern A5). There is little sign that the settlement went much beyond the mid-3rd century, after which only a thin spread of finds was present here. Subsequently the site was abandoned and the evaluation had shown that no later finds were associated with overlying soils other than a few post-medieval and modern finds from the 17th century onwards. As a result the plough-soil was carefully removed in spits and the Roman artefacts recovered as an integral part of site reconstitution. <

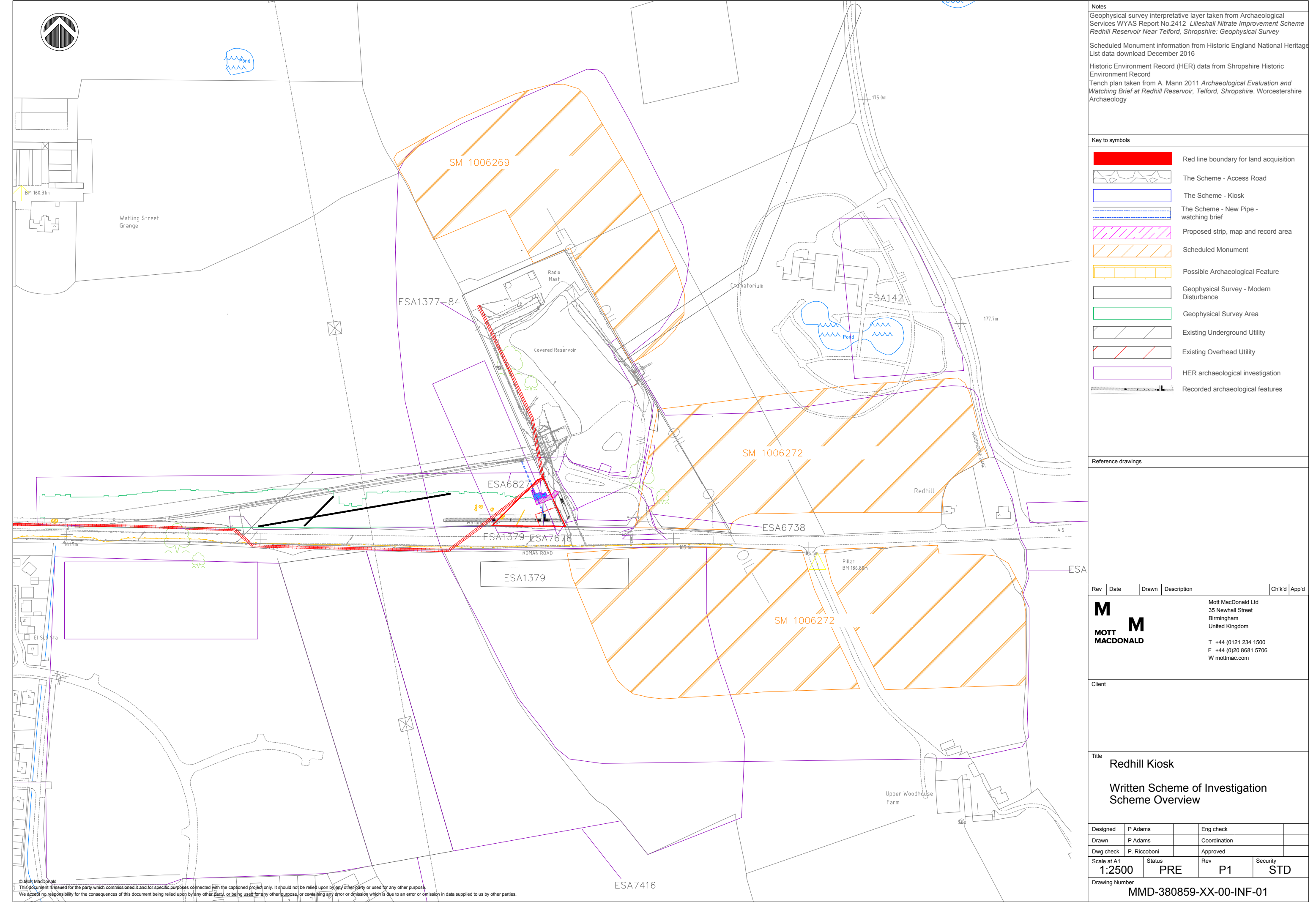
ESA1379	1972-1973 fieldwalking survey at Redhill by D.B. Corbyn	Field walking	A programme of fieldwalking was undertaken in December 1972 and December 1973 on either side of the A5 at Redhill.
ESA6827	2012 geophysical survey west of Redhill Roman Settlement by ASWYAS	Magnetometry Survey	A geophysical (magnetometer) survey was carried out along part of the proposed route of a new waste water main which will run parallel with, and immediately north of, the A5 (the route of the Roman road known as Watling Street) on the eastern edge of Telford. The extremely strong magnetic response from an existing pipe dominates the data in the central section of the survey corridor. At the eastern end of the corridor several discrete anomalies and a short linear anomaly could have an archaeological origin particularly given the proximity to the former Roman road. However, they might equally be due to ground disturbance during the installation of the existing pipe. Further archaeological work may be required in order to determine the cause of these anomalies.
ESA1377	1973 excavations in advance of reservoir construction at Redhill by David	EXCAVATION	In 1973 rescue excavations were conducted by David Browne on behalf of DoE in advance of the construction of a new reservoir and access road. Crop marks on the site indicated a series of enclosures; the excavated evidence

		is briefly discussed and a chronological framework suggested.	
		Typescript draft report (not illustrated).	
		An audit was undertaken of the archive associated with this excavation in 2015, prompted by more recent, development-led commercial excavation in 2011/13 in the same general area as the 1972-1973 work. The audit process involved the summary examination of the scope, quantity and quality of the 1972-3 site archive, including the extent and quality of post-fieldwork conservation, analysis and reporting done over an extended period. The report makes a summary case for future analysis and publication.	
ESA1378	1961 excavation at Redhill by John Pagett	Excavation	No details
ESA1379	1972-1973 fieldwalking survey at Redhill by D.B. Corbyn	Systematic Fieldwalking Survey	A programme of fieldwalking was undertaken in December 1972 and December 1973 on either side of the A5 at Redhill.
ESA1380	1961 field observation by English Heritage	Field observation	No descriptive details provided on the HER
ESA1381	1975 field observation by the Ordnance Survey	Field observation	No descriptive details provided on the HER
ESA1382	1981 field observation by English Heritage	Field observation	No descriptive details provided on the HER
ESA1383	1983 field observation by English Heritage	Field observation	No descriptive details provided on the HER
ESA1384	1987 field observation by English Heritage	Field observation	No descriptive details provided on the HER

Source: Shropshire HER

B. Figures

B.1 Figure 1; General site location with known archaeology



B.2 Figure 2; detail of the proposed development area

