

Archaeological Evaluation at Cowleigh Reservoir, Great Malvern, Worcestershire



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Archaeological evaluation at Cowleigh Reservoir, Great Malvern, Worcestershire

James Wilkins, with a contribution by Laura Griffin

Illustrations by Carolyn Hunt

Summary

An archaeological evaluation was undertaken on behalf of Mott MacDonald Bentley, whose client Severn Trent, intend to construct two new reservoir cells at Cowleigh Reservoir, Great Malvern, Worcestershire (NGR SO 376348 247774; HER ref WSM67994). The project was undertaken in preparation for a planning application which will be submitted to Malvern Hills District Council.

Three 20m length trenches were excavated over the proposed development area, and no significant archaeological deposits or features were observed. A small amount of Roman, and medieval pottery indicate some activity in the general area, and land drains indicated post-medieval agriculture. Considerable modern disturbance and a service were also noted.

Report

1 Background

1.1 Reasons for the project

An archaeological evaluation was undertaken at Cowleigh Reservoir, Great Malvern, Worcestershire (NGR SO 376348 247774). It was commissioned by Mott MacDonald Bentley whose client, Severn Trent, intends to construct two new reservoir cells for which a planning application will be submitted to Malvern Hills District Council.

The proposed development site is considered to include heritage assets and potential heritage assets, the significance of which may be affected by the application. No brief was issued for this project but a detailed specification was produced by Mott MacDonald Bentley (2016b), to which this project conforms.

The project also conforms to the *Standard and guidance: Archaeological field evaluation* (ClfA 2014a) and *Standards and guidelines for archaeological projects in Worcestershire* (WCC 2010).

The event reference for this project, given by the HER is WSM67994.

2 Aims

The aims of this evaluation were:

- to describe and assess the significance of the heritage asset with archaeological interest;
- to establish the nature, importance and extent of the archaeological site, and;
- to assess the impact of the application on the archaeological site.

3 Methods

3.1 Personnel

The project was led by Jamie Wilkins (BA (hons.)), who joined Worcestershire Archaeology in 2015. The project manager responsible for the quality of the project was Derek Hurst (BA (hons.); PG Dip). Illustrations were prepared by Carolyn Hunt (BSc (hons.); PG Cert; MClfA)., and finds reporting by Laura Griffin (BA (hons.); PG Cert; ACIfA).

3.2 Documentary research

An archaeological desk-based assessment was produced by Mott MacDonald Bentley (2016a). The DBA identified moderate potential for archaeology dating to the Roman and medieval periods (see more in Section 4 of this report).

Documentary sources

Published and grey literature sources are listed in the bibliography.

3.3 Fieldwork strategy

A detailed specification has been prepared by Mott MacDonald Bentley (2016b). The fieldwork was undertaken between 08 August and 09 August 2016 (site reference number and site code WSM 67994). Three trenches, amounting to just over 126m² in area, were excavated over the site area of 2500m², representing a sample of just over 5%. The location of the trenches is indicated in Figure 2. The trenches were not targeting any features and it was agreed on site that trenches could be relocated within the area subject to health and safety considerations.

Deposits considered not to be significant were removed using a 360° tracked excavator, employing a toothless bucket and under archaeological supervision. Subsequent excavation was undertaken

by hand. Clean surfaces were inspected and selected deposits were excavated to retrieve artefactual material and environmental samples, as well as to determine their nature. Deposits were recorded according to standard Worcestershire Archaeology practice (WA 2012).

3.4 Structural analysis

All fieldwork records were checked and cross-referenced. Analysis was effected through a combination of structural, artefactual and ecofactual evidence, allied to the information derived from other sources.

3.5 Artefact methodology

The finds work reported here conforms with the relevant sections of *Standard and guidance for the collection, documentation, conservation and research of archaeological materials* (ClfA 2014b; <http://www.archaeologists.net/codes/ifa>), with archive creation informed by *Archaeological archives: a guide to the best practice in the creation, compilation, transfer and curation* (AAF 2011; <http://www.archaeologyuk.org/archives/>), and museum deposition by *Selection, retention and dispersal of archaeological collections* (SMA 1993; <http://www.socmusarch.org.uk/publica.htm>). Other more detailed standards and guidance apply to some specific periods of artefactual material and should be cited where required.

The following categories/types of material will be discarded after a period of 6 months following the submission of this report, unless there is a specific request to retain them (and subject to the collection policy of the relevant depository): You will need to specify below according to the WA standard practice (though this has not been fully formulated but for the moment will probably consist of the following

- where unstratified
- post-medieval material in general, and;
- generally where material has been specifically assessed as having no obvious grounds for retention.

See the environmental section for other discard where appropriate.

3.5.1 Artefact recovery policy

The artefact recovery policy conformed to standard WA practice (2012; appendix 2).

3.5.2 Method of analysis

All hand-retrieved finds were examined. They were identified, quantified and dated to period. A *terminus post quem* date was produced for each stratified context. The date was used for determining the broad date of phases defined for the site. All information was recorded in a Microsoft Access database. The pottery and ceramic building material was examined under x20 magnification and referenced as appropriate by fabric type and form according to the fabric reference series maintained by Worcestershire Archaeology (Hurst and Rees 1992 and www.worcestershireceramics.org).

3.6 Environmental archaeology methodology

3.6.1 Sampling policy

Sampling policy followed standard Worcestershire Archaeology practice (WA 2012). In the event no deposits were identified which were considered to be suitable for environmental analysis.

3.7 Statement of confidence in the methods and results

The methods adopted allow a high degree of confidence that the aims of the project have been achieved.

4 The application site

4.1 Topography, geology and archaeological context

The site comprises an agricultural field immediately to the south of the current cell at Cowleigh Reservoir. It is bounded by a hedgerow to the south and east, and a modern agricultural fence line to the west. The current reservoir site forms the northern boundary. The topography of the site consists of a gentle slope rising to the east. The underlying bedrock geology of the area comprises Coalbrookdale Formation described as a silty mudstone; there are no superficial deposits within the area of proposed development (BGS 2016).

As briefly mentioned in Section 3, a DBA had been previously produced by Mott MacDonald Bentley (2016a) in preparation for this archaeological evaluation. The DBA identified no heritage assets within the development area. There is also no known prehistoric archaeology within the search radius of 500m and, therefore, the potential for features from this period was considered low. However, the DBA outlined moderate potential for the presence of archaeology dating from the Roman and Medieval periods as follows:

The site of a Roman pottery kiln (MM37) is located approximately 525m north from the proposed development site, and may be indicative of further Roman pottery kilns residing in the study area or within the proposed development site itself. It is possible that Roman pottery wasters and sherds will be encountered as buried remains within the proposed development area during ground investigations or construction phase.

Cowleigh Park (MM15) and associated features (MM03, MM14, MM16 & MM17) are situated approximately 75m-150m east of the proposed development area and therefore there is moderate potential for buried earthworks such as infilled fish ponds and ridge and furrow to be encountered within the proposed development site, although ridge and furrow have a low heritage value (Mott MacDonald Bentley 2016a).

4.2 Current land-use

The site is currently used for pasture; however, the evaluation trenching indicated that this field had previously been used for arable cultivation and so significant plough disturbance could be expected.

5 Results

5.1 Structural analysis

The trenches and features recorded are shown in Figure 2, with the structural record presented in Appendix 1. All three trenches followed the same stratigraphic sequence.

5.1.1 Phase 1: natural deposits

The underlying natural deposits consisted of brownish red clay to the south of the site (e.g. 303), and yellowish blue clay to the north and west (e.g. 103/203). Both of these deposits contained frequent sandstone and manganese inclusions.

5.1.2 Phase 2: late medieval/post-medieval

Below the made-ground, a thin reddish brown, silty clay subsoil was observed (e.g. 102). This stratum contained three residual sherds of Roman and one sherd of medieval pottery and is likely to relate to the arable cultivation of the site. The thickness of this subsoil varied between 0.12–

0.39m and appeared to correspond to the thickness of the made-ground above it, indicating heavier (phase 4) disturbance in some areas.

5.1.3 Phase 3: post-medieval

Three ceramic field drains survived in the centre and northern end of the trench 2.

5.1.4 Phase 4: modern

A thin layer of silty topsoil covered the entirety of the site (e.g. 100). Below this topsoil sat a significant deposit of made-ground which relates to the construction of the present reservoir cell in the 20th century. It varied in thickness from 0.24–0.68m, and primarily consisted of limestone fragments with frequent rubble inclusions in a silty clay matrix associated with occasional ceramic building material (i.e. 101). A modern service (probable power cable) was also located in trench 2, and the southern end of this trench was also heavily disturbed by a significant machine dug trench or pit, which could be observed in section to cut through the modern made-ground (101).

5.2 Artefact analysis, by Laura Griffin

The finds assemblage dated from the Roman period onwards and comprised four sherds of pottery and a brick (see table 1), all the pottery being from the subsoil.

period	material class	object specific type	count	weight (g)
Roman	ceramic	pot	3	12
medieval	ceramic	pot	1	21
modern	ceramic	brick	1	3100

Table 1: Quantification of the artefactual assemblage

Roman

Three sherds of locally produced Roman pottery were identified. These included two adjoining rim sherds of oxidised Severn Valley ware (fabric 12; context 102) which could be identified as coming from a wide-mouthed jar form of 2nd-3rd century date. The remaining sherd was a small highly abraded fragment of organically tempered oxidised Severn Valley ware (fabric 12.2; context 302) of mid 1st–2nd century date.

Medieval

A single sherd of locally produced oxidised glazed Malvernian ware (fabric 69) could be dated to this period. It was identified as the rim from a jar/bunghole form of 15th-16th century date

Modern

A near-complete brick was retrieved from context 101 (4.75"(width) x 3"(thickness) indicating a 19th century date).

5.3 Discard and retention

None of the finds are considered suitable for retention, subject to confirmation by the museum.

6 Synthesis

This evaluation revealed no significant archaeological deposits or features. The presence of Roman and medieval pottery within the subsoil is unremarkable for this area of Worcestershire, and represents a background scatter, while the field drains signify post-medieval agricultural improvement. The site was then subsequently heavily disturbed, particularly to the west, by activity

relating to the construction of the adjacent reservoir cell. The made-ground (e.g. 101) is a likely levelling layer/hard standing during the construction of the reservoir, and this would account for its heavily compacted nature and solid construction.

The evaluation has, therefore, indicated that the area of development has not been a focus for any earlier activity prior to the reservoir construction other than agriculture.

7 Significance and the impact of the development

No significant archaeological deposits, features or environmental evidence were present on site. Of the deposits observed, all were natural, post-medieval or modern, and the subsoil contained Roman and medieval pottery suggesting a former agricultural soil. No archaeological evidence relating to Roman pottery kilns or medieval earthworks was observed. Therefore, the essentially negative results from this archaeological evaluation indicate that the development at Cowleigh Reservoir should not adversely affect any archaeological remains.

8 Publication summary

Worcestershire Archaeology has a professional obligation to publish the results of archaeological projects within a reasonable period of time. To this end, Worcestershire Archaeology intends to use this summary as the basis for publication through local or regional journals. The client is requested to consider the content of this section as being acceptable for such publication.

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Three 20m length trenches were excavated over the proposed development area, and no significant archaeological deposits or features were observed. Residual finds included three sherds of Roman, and one sherd of medieval pottery in a background scatter. No evidence of Roman pottery kilns or medieval earthworks were observed. The evaluation indicated signs of earlier agricultural activity, most evidently for the post-medieval period, with the presence of land drains.

9 Acknowledgements

Worcestershire Archaeology would like to thank the following for their kind assistance in the conclusion of this project: Paul Riccoboni (Mott MacDonald Bentley), and Allan Romeo (J.N.Bentley Ltd).

10 Bibliography

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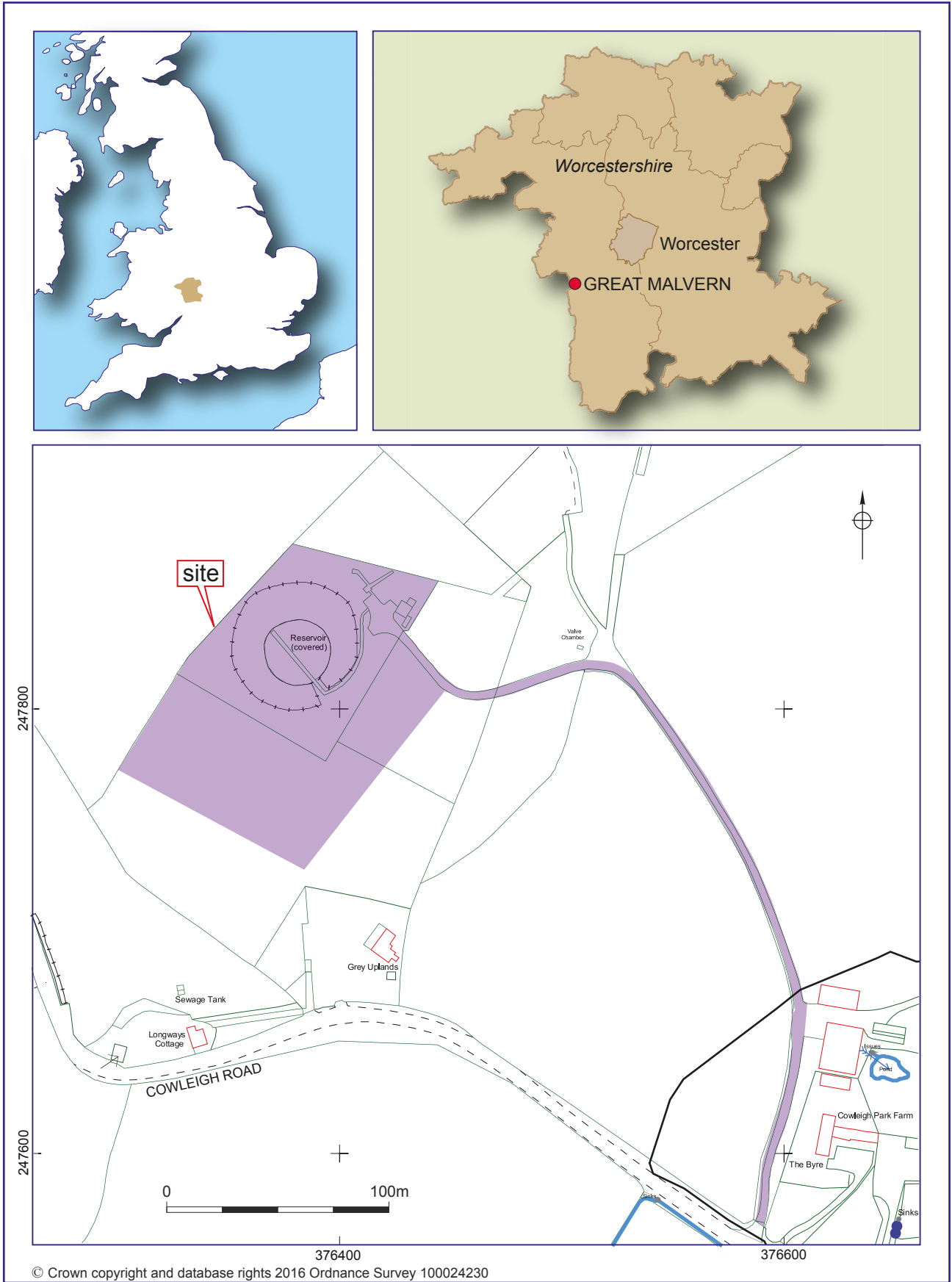
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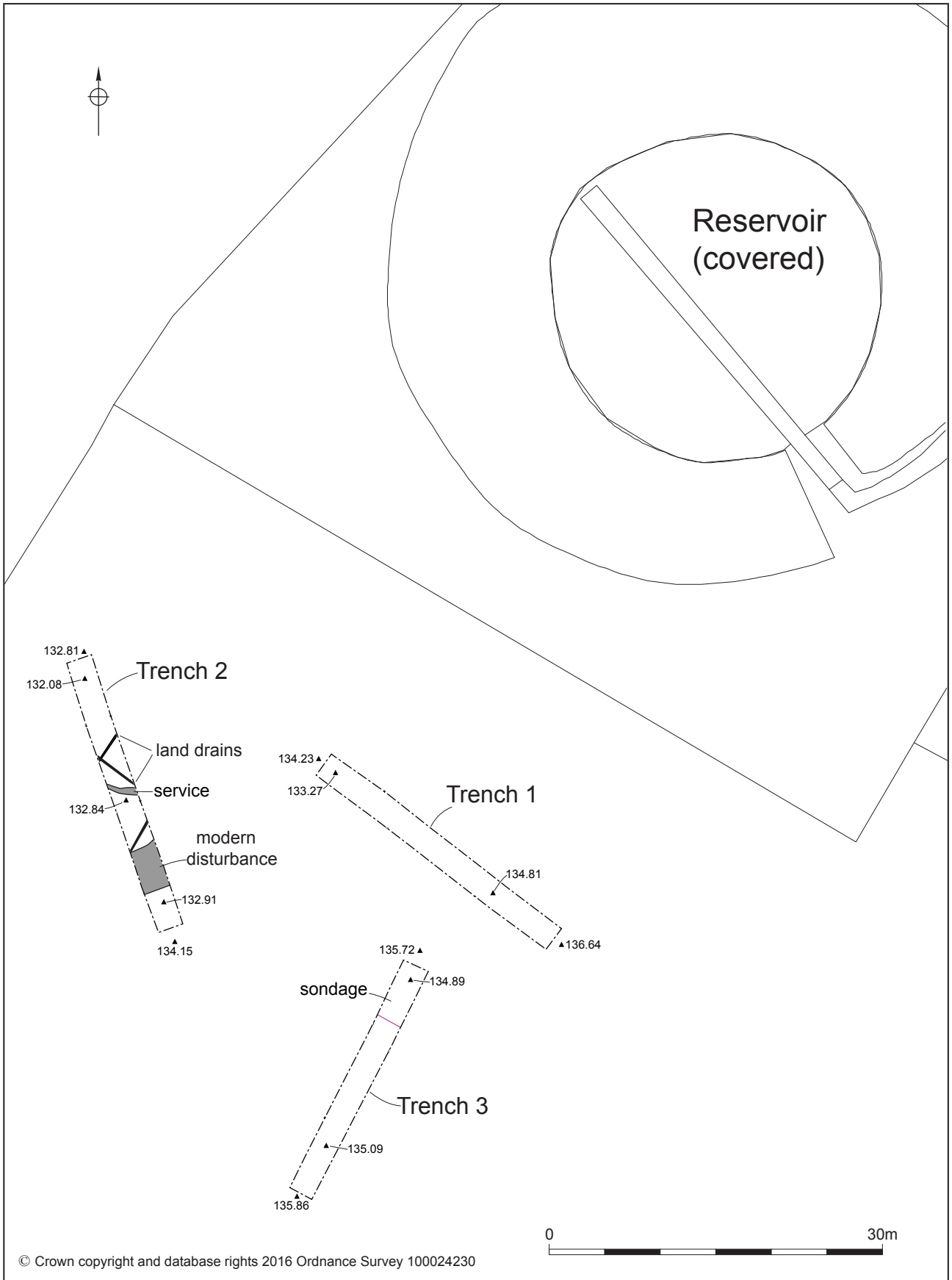
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Figures



Location of the site

Figure 1



Trench locations

Figure 2

Plates



Plate 1, Trench 1, showing yellowish-blue clay natural, view south-east, 1m scales



Plate 2, Trench 2, view south-east showing modern disturbance at top end of trench (for detail view see Plate 3), 1m scales



Plate 3, Modern disturbance in Trench 2, view north-west, 1m scales



Plate 4, Trench 3 showing red clay natural with sandstone inclusions, view north-west, 1m scales



Plate 5, south-west facing baulk of trench 2, showing the made-ground at its thinnest (upper) and the subsoil at its thickest (lower), 0.5m scale



Plate 6, north-east facing baulk of trench 1, showing the made-ground at its thickest (upper) and the subsoil at its thinnest (lower), 0.5m scale

Appendix 1 Trench descriptions

Trench 1

Length: 20m

Width: 2.10m

Orientation: North-west to south-east

Context summary:

Context	Phase	Feature type	Context type	Description	Height/ depth	Interpretation
100	4	Topsoil	Layer	Friable mid brownish grey silty sand	0.28m	Topsoil
101	4	Made Ground	Layer	Compact mid yellowish grey rubble	0.68m	Made ground, primarily rubble in a silty sand and a silty clay matrix. Rubbles includes modern waste, glass etc but also significant amount of limestone cobbles and fragments which may suggest this made ground was used as hardstanding as well as for levelling purposes.
102	2	Subsoil	Layer	Compact mid reddish brown silty clay	0.12m	A possible layer of subsoil, or even a dirty interface between the made ground and the natural geology (103). Contains some possible Roman pottery. It has been heavily disturbed by the made ground above it.
103	1	Natural	Layer	Compact mid yellowish blue clay	+	The natural geology, contains some patches of red marl clay and this trench appears to have caught the change in geology from the red clay observed in Trench 3, to a more yellowish blue clay seen in Trenches 1 and 2.

Trench 2

Length: 20m

Width: 2.10m

Orientation: North-west to south-east

Context summary:

Context	Phase	Feature type	Context type	Description	Height/ depth	Interpretation
200	4	Topsoil	Layer	Friable mid brownish grey silty sand	0.11m	Topsoil
201	4	Made Ground	Layer	Compact mid yellowish grey rubble	0.24m	Made ground consisting of rubble make up in a silty clay matrix. Same as (102) but not as deep in trench 2. Primarily limestone cobbles and fragments.
202	2	Subsoil	Layer	Compact mid reddish brown silty clay	0.39m	Clayey subsoil that is likely not as truncated as those layers seen in trenches 1 and 3. Contains sub rounded pebbles and occasional charcoal flecks and fragments.
203	1	Natural	Layer	Compact mid yellowish blue clay	+	Natural clay geology, with moderate sandstone inclusions.

Trench 3

Length: 20m

Width: 2.10m

Orientation: North-east to south-west

Context summary:

Context	Phase	Feature type	Context type	Description	Height/ depth	Interpretation
300	4	Topsoil	Layer	Friable mid brownish grey silty sand	0.23m	Topsoil.
301	4	Made Ground	Layer	Compact light yellowish grey rubble	0.43m	Made ground consisting of rubble in a silty clay matrix. Contains frequent CBM, bricks, limestone and sandstone fragments. Possible that this levelling / made-ground was also used as hardstanding.
302	2	Subsoil	Layer	Compact dark reddish brown silty clay	0.18m	A likely heavily truncated subsoil but it could also be a dirty interface between the made-ground (301) and natural (303). Contained some pottery sherds - possibly medieval. Also contained charcaol flecks. Same as (102) in trench 1. Possibly same as (202) in trench 2 but more heavily truncated.
303	1	Natural	Layer	Compact mid brownish red clay	+	Natural red marl clay with frequent manganese and sandstone fragments inclusions. A sondage dug at the northern end of trench 3 confirms that the blue clay natural is not present in this trench.

Appendix 2 Technical information

The archive (site code: WSM 67994)

The archive consists of:

- 1 Field progress reports AS2
- 1 Photographic records AS3
- 39 Digital photographs
- 3 Trench record sheets AS41
- 1 CD-Rom/DVDs
- 1 Copy of this report (bound hard copy)

The project archive is intended to be placed at:

Worcestershire County Museum
Museums Worcestershire
Hartlebury Castle
Hartlebury
Near Kidderminster
Worcestershire DY11 7XZ
Tel Hartlebury (01299) 250416