

ARCHAEOLOGICAL
EVALUATION
AT
PROSPECT PLACE RESERVOIR,
KNOWBURY,
SHROPSHIRE



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Worcestershire Archaeology
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Archaeological Evaluation at Prospect Place Reservoir, Knowbury, Shropshire

Graham Arnold (project leader)

With a contribution by Dennis Williams

Summary

An archaeological evaluation was undertaken at Prospect Place Reservoir, Knowbury, Shropshire (centred on National Grid Reference NGR SO 570 741). It was undertaken for Mott MacDonald Bentley (MMB) on behalf of Severn Trent Water. Severn Trent Water intends to upgrade the existing Prospect Place Reservoir to provide adequate storage to meet demand in the event of an asset failure at the reservoir inlet – a planning application is being submitted for this development.

The archaeological evaluation consisted of seven 30m long trenches, and the monitoring of geotechnical sampling (boreholes, trial pits, and a one soak-away test pit).

The geotechnical trial pits (3.9m and 4.00m deep) contained only naturally occurring deposits, and the boreholes also had no significant archaeology with solid geology encountered at 4.00m below the ground level. Nor was any significant archaeology uncovered during the evaluation trenching – the earthworks previously recorded on the site related to modern drainage improvements.

Report

1 Background

1.1 Reasons for the project

An archaeological evaluation was undertaken at Prospect Place, Knowbury, Shropshire (centred on National Grid Reference NGR SO 570 741 Fig. 1). It was commissioned by Mott MacDonald Bentley (MMB) on behalf of Severn Trent Water, which intends to upgrade the existing Prospect Place Reservoir to provide adequate storage to meet demand in the event of an asset failure at the reservoir inlet – a planning application is being submitted to Shropshire County Council for this development.

The proposed development site is considered to include potential heritage assets, the significance of which may be affected by the application.

The project conforms to the following:

- a) standard brief for sites in Shropshire;
- b) the Written Scheme of Investigations (WSI) prepared by Mott MacDonald (Mott MacDonald 2012), and;
- c) the Standard and guidance for archaeological field evaluation (IfA 2008a) Standard and guidance for an archaeological watching brief (IfA 2008b).

2 Aims

The aims of this evaluation are:

- to describe and assess the significance of the heritage asset with archaeological interest;
- to establish the nature, importance and extent of the archaeological site;
- to assess the impact of the application on the archaeological site;
- to monitor ground investigation works and record the results;
- to identify the location, nature and date of any features or deposits associated with the post-medieval activity noted to the north of the development, and;
- to identify the location, nature and extent of any earlier archaeological deposits within the development area

3 Methods

3.1 Personnel

The project was undertaken by Graham Arnold (BA MSc); who joined Worcestershire Archaeology in 2009 and has been practicing archaeology since 2002. The project manager responsible for the quality of the project was Derek Hurst (BA). Illustrations were prepared by Carolyn Hunt.

3.2 Documentary research

Prior to fieldwork commencing a search was made of the Historic Environment Record (HER).

3.3 Fieldwork strategy

A detailed specification had been prepared by Mott MacDonald Bentley (MMB 2012). Fieldwork was undertaken between 22nd and 29th January 2013.

Seven trenches, amounting to just over 378m² in area, were excavated over the site area of 95.8ha, representing a sample of 4%. The location of the trenches is indicated in Figure 2. Trench 3 was located to test a hollow and Trench 6 was located to test a possible field boundary ditch. The other trenches were located to cover an area sufficient to allow an appropriate mitigation strategy to be designed for the construction of the new reservoir development.

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. Deposits were recorded according to standard Worcestershire Archaeology practice (WA 2012). On completion of excavation, trenches were reinstated by replacing the excavated material.

The three geotechnical trial pits, soak-away, and two boreholes were monitored for archaeological potential, and were excavated using a toothless bucket.

All trenches were backfilled and reinstated at the end of each day's work for health and safety reasons.

3.4 Structural analysis

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

3.5 Artefact methodology

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

3.6 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 Topography, geology and archaeological context

Topographic, geological and archaeological background to the site is provided in the WSI produced by MMB for the site as follows (MMB 2012):

[Topography and land-use]

Prospect Place is located adjacent to Caynham Road which runs south westerly towards Caynham village and to the north of Tenbury Wells. The site is located approximately 6.9km east of the centre of Ludlow and lies at an approximate ground level of 200m AOD.

Comprising a below ground reservoir, a small pump house, control boxes and a sampling tap surrounded by palisade fencing and a locked gate, the reservoir is located on slightly higher ground than the land surrounding the site and is accessed via concrete steps by the eastern side of the reservoir.

The land to the west and east of the site comprises farm lands bounded by hedges. The surrounding land on all sides of the site is agricultural and generally slopes downwards away from the site. Overhead electricity cables run along the front of the site. There is likely to be some made ground associated with the construction of the reservoir but the location and depth of these deposits are not known at present.

[Geology]

The site is directly underlain by the Silurian Raglan Mudstone Formation of the Lower Old Red Sandstone, which comprises red brown mudstones with calcareous sandstones and is up to 450m thick in the area. Alluvium and river terrace deposits are present along the valley of the Ledwyche Brook, 2.5km south west of the site. The site is sandwiched between two south-west to north-east trending faults which join approximately 6km to the south west of the site. Other smaller faults are present to the north east of the area in Knowbury, approximately 700m from the site and to the south west approximately 150m from the site. Carboniferous Lower and Middle Coal Measures crop out in Knowbury approximately 700m to the north east of the site.

The Coal Measures, comprising mudstones, siltstones and sandstones and coal seams underlain by Basal sandstone up to 137m thick. Westphalian dolerite intrusions into the Coal Measures are exposed in Knowbury and in Cornbrook, more than 2.5km north east of the site.

[Archaeological background]

There is no evidence for Prehistoric activity at the site; however, there are numerous prehistoric spot finds within the surrounding areas, including a Late Neolithic/ Bronze Age Beaker hearth at Ludlow, Bronze Age Cairns at Clee Hill, a spot find of an axe hammer at Cleobury Mortimer and a battle axe and hammer at Bitterley. The evidence for long term occupation of the area is sparser, but the presence of a hillfort at Caynham Camp, a scheduled monument (SM 1010313) located approximately 2.62km to the south west of the site, and the Iron Age hillfort at Clee Hill (SM 1008391) 4.5km to the north east of the site, attest to the area being occupied during this period.

Medieval remains are in abundance in the surrounding areas, with the most prolific monument being the moated site, as evidenced at Hall Farm, Snitton (a grade II Listed Building 484120) located 1.75km to the northeast of the site, and Bower moated site (a Scheduled Monument 1020146) located 2.4km to the south west of the site.

Furthermore, evidence of activity from the Medieval period comes in the form of remains relating to the mining of coal, which began in the area around 1235, when mention of Wigmore Abbey taking coal from the Titter Stone Clee is documented, and in 1260, the Lord of Corfham granted land and a license to dig coals in the forest of Clee (Rowley 1972). By the 16th century, the by products of the coal mining production were being fully utilised, with the existence of several smithies being noted within the vicinity of the coal fields, taking advantage of extracted Ironstone. In the 17th century, John Sheppard is documented as having acquired the lands either side of Caynham Parish, (in which the modern site resides) with the intention of exploiting mineral rights within that area. The exploits were short lived due to the closure of the mines at Colleybrook and the nearby Knowbury collieries in 1778.

Remains of the extensive mining activities conducted across this part of the country can be observed as remnants of bell pits, such as those located at Caynham and approximately 1.1km to the northeast of the site (PRN 606051) and 1.6km to the west of the site (PRN 04625). These remains are believed to be medieval in date, with some of the earthworks having been ploughed out, along with respective spoil heaps, and can be seen as ashy deposits within the fields along Caynham Road, (with deposits being recorded as far as 1.1km to the east of the site). A lime kiln (PRN 604960) and Brickworks attest to the heavy industrial nature of the area during the late medieval and post medieval periods, and lie approximately 0.6km and 1.1km to the northwest of the site respectively.

The Elan Valley aqueduct which is aligned in an eastwards direction, and extends over 117km through mid Wales and the midlands, delivers water to Birmingham. Part of this aqueduct is located directly to the south of the site, constructed under the authority of the Birmingham Corporation Water Department work was started in 1896, with a section being opened in 1906, and two more being completed in 1919 and 1961 respectively. The aqueduct was built in sections by outside contractors, using three types of construction depending on the nature of the terrain it had to cross.

To the north of the site, and approximately 300m north of Irish Meadows, the remains of possible medieval or post medieval boundary ditches are extant (PRN 21274). Possibly representing boundary ditches shown on Foxall's tithe map of 1848, of Caynham parish. It is likely that earthworks identified during a walkover survey of the site are of a similar function and date as these features.

4.1 Current land-use

The site is currently in use as a clean-water reservoir and the surrounding fields are used for sheep pasture (January 2013).

5 Structural analysis

5.1 Archaeological trenching

The trenches and features recorded are shown in Figure 2. The results of the structural analysis are presented in Appendix 1. Photographs of each of the trenches are also in the appendix.

Phase 1: Natural deposits

The natural substrate was recorded at 0.50m below ground level and consisted of compact cohesive red clay with frequent large angular sandstone cobbles overlaying the Silurian mudstone geology. A sterile, gleyed blue grey clay was observed in Trial Hole 2 (Plate 10) suggesting waterlogging and poor drainage on the site.

Phase 2: modern deposits

The earthworks recorded in the walkover survey suggestive of a medieval field boundary were shown to be modern drainage channels that had been excavated recently and backfilled with large angular sandstones and sooty coal deposits to improve drainage across the site. The ditches were backfilled with topsoil and were of modern machine cut shape, or possibly natural drainage gullies that had been enhanced and improved sometime during the 20th century. The drainage channel observed in Trench 3 (Plate 3) containing broken sandstone and clinker on the west side of the site and deposits of coal dust and clinker in the topsoil from Trench 2 (Plate 2) showed that coal waste from mining in the area had been imported to improve the soil. A further modern drainage channel was also recorded in Trench 5 and 6 and backfilled with stone. Modern ceramic land drains were present in Trenches 1 - 4 running down slope.

5.2 Geotechnical pits and boreholes

The geotechnical pits and boreholes (Fig 2; Plate 9 and 10) revealed natural deposits at 0.40m and had no archaeological significance.

6 Artefactual analysis,

The artefactual assemblage recovered consisted of residual post-medieval ceramic building materials (including brick fragments) within the topsoil. No further analysis was required.

7 Synthesis

The negative results of the evaluation demonstrate that the archaeology in the surrounding area does not extend into the site. Earthworks on the site were related to modern drainage rather than any earlier settlement activity.

7.1 Research frameworks

In the light of the negative archaeological results no reference to research frameworks is considered necessary, though a negative result is still of archaeological interest in its own right.

8 Significance

8.1 Nature of the archaeological interest in the site

No significant archaeological deposits, features or finds were recorded on the site. The earthworks on the site that were sampled and demonstrated to relate to modern drainage improvement due to the heavy clay on the site.

9 The impact of the development

9.1 Impacts during construction

Since no significant archaeological deposits, features or finds were recorded on the site, there would be no impacts on archaeological remains by this development.

10 Recommendations

No further archaeological work will be required on the site due to the negative results of the evaluation.

11 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 the summary below 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.

An archaeological evaluation was undertaken for Mott MacDonald Bentley (MMB) on behalf of Severn Trent Water at Prospect Place Reservoir, Knowbury, Shropshire (centred on National Grid Reference NGR SO 570 741). Earthworks that were observed during a walk-over survey, and suggested as field boundaries, were shown to be modern drainage channels filled with broken stone and coal dust, and modern ceramic land drains were also present running down slope. No significant archaeology was observed on site. This demonstrates that the heritage assets in the general vicinity of the development site do not extend into the site.

12 Acknowledgements

Worcestershire Archaeology would like to thank the following for their kind assistance in the conclusion of this project: Joan Hernandez-Puy (Civil Design Engineer Project Leader, Mott MacDonald Bentley), and Mick Krupa (Historic Environment Records Officer, Shropshire County Council).

13 Bibliography

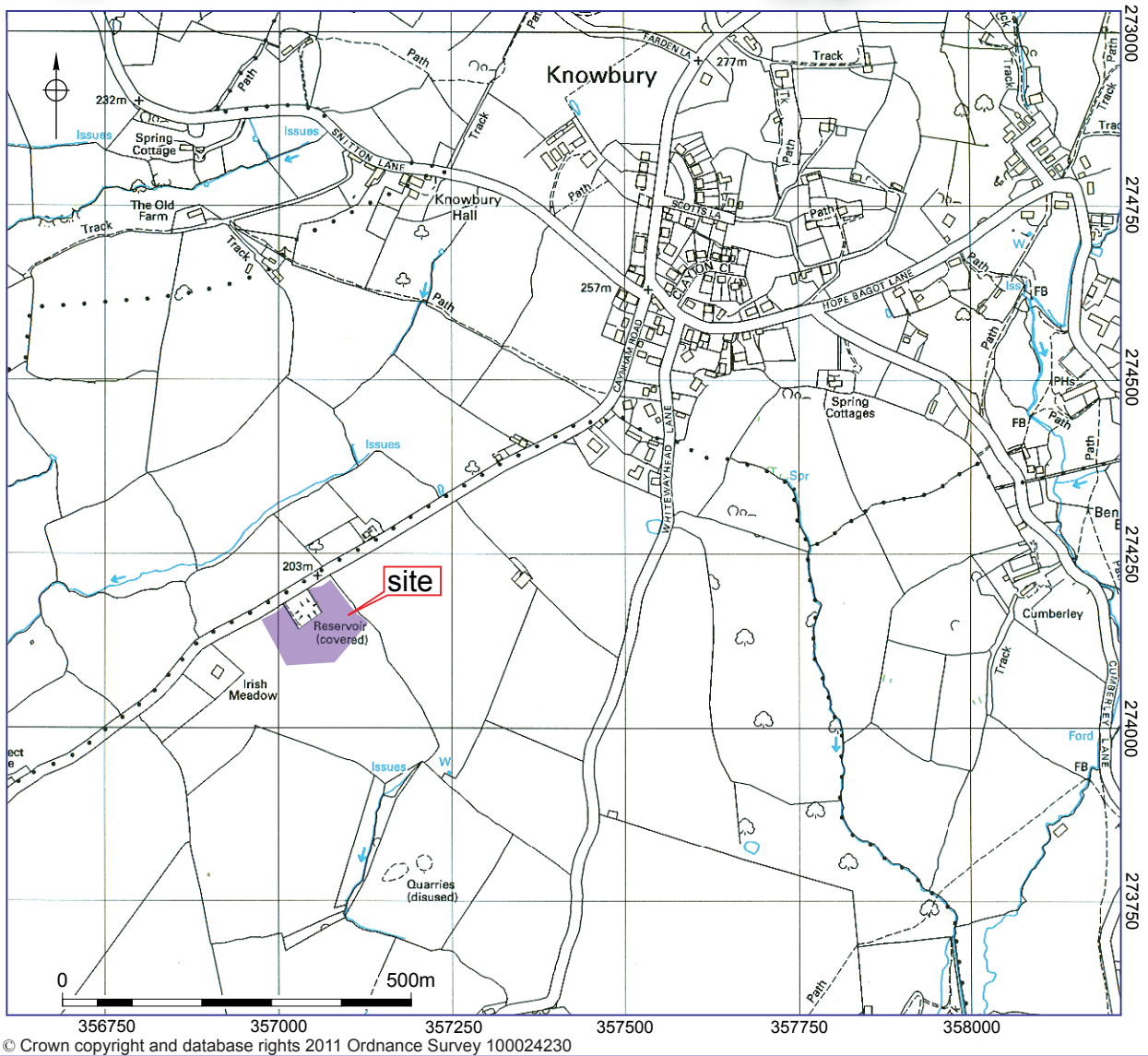
MMB 2012 *Prospect Place Reservoir, Knowbury, Shropshire, Written Scheme of Investigation for Archaeological Evaluation* unpublished report by Mott MacDonald Bentley dated December 2012

IfA 2008a *Standard and guidance for archaeological field evaluation* Institute for Archaeologists

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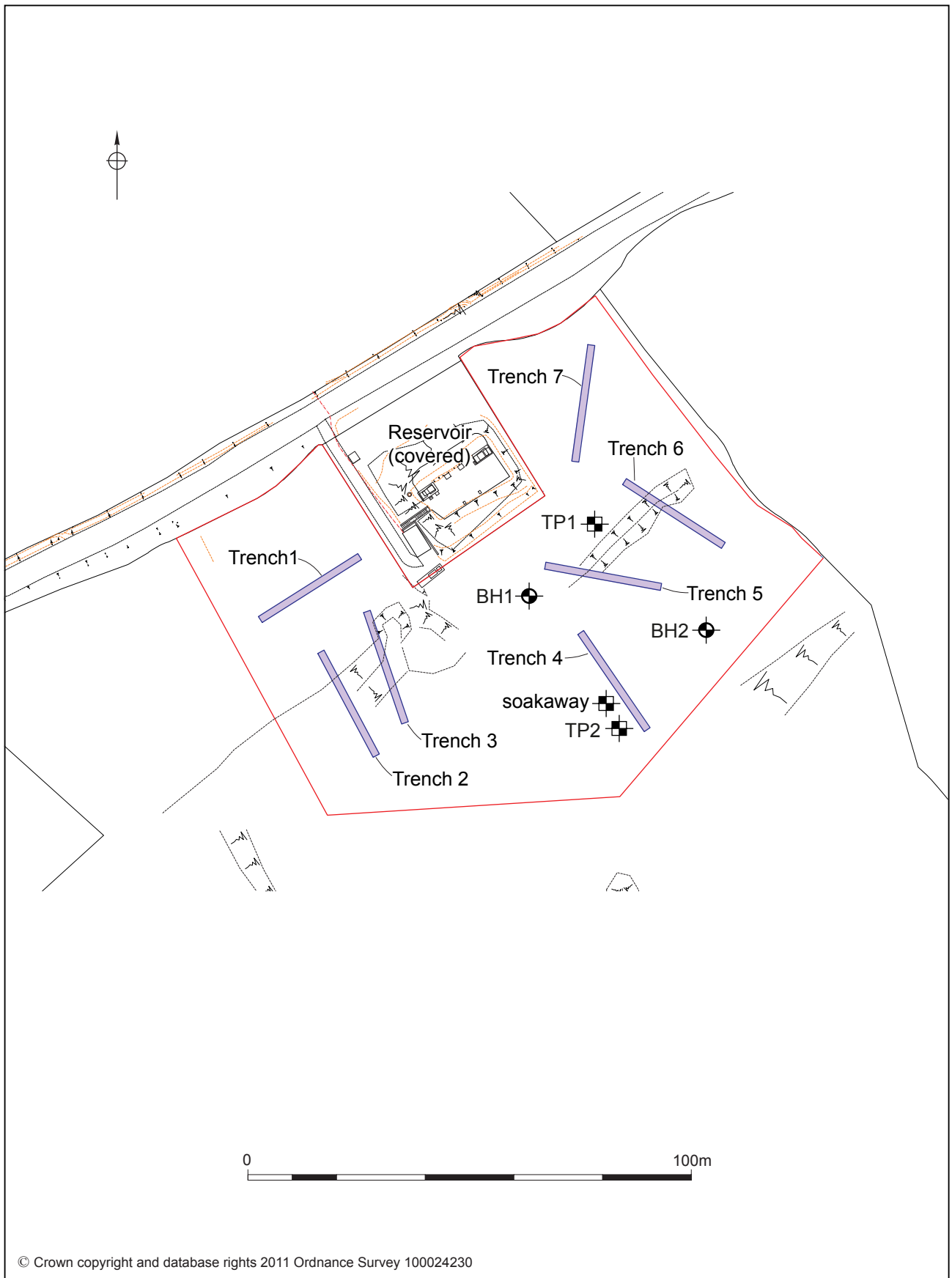
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Figures



Location of the site

Figure 1



Trench location plan (based upon Mott MacDonald Site Plan)

Figure 2

Plates



Plate 1 Trench 1 looking east.



Plate 2 Trench 2 showing enriched black topsoil and land drain cut.



Plate 3 Trench 3 backfill of land drainage channel.



Plate 4 Trench 4 in plan showing natural clay looking south



Plate 5 Trench 5 showing natural clay substrate



Plate 6 Trench 6 showing natural clay substrate



Plate 7 Modern drainage ditch in Trench 6 looking at the west-facing section



Plate 8 Trench 7 showing natural clay substrate and sandstone cobbles looking north-west



Plate 9 Borehole rig location



Plate 10 Blue grey clay found in geotechnical Trial Pit 2

Appendix 1 Evaluation trench descriptions

Trench 1

Maximum dimensions: Length: 30.00m Width: 1.80m Depth: 0.40 – 0.60m

Orientation: SW–NE

Main deposit description

Context	Classification	Description	Depth below ground surface (b.g.s) – top and bottom of deposits
100	Topsoil	Friable dark brown silty loam with frequent root action and worm sorting. Contains occasional medium flecks of charcoal, rare tile and cbm fragments.	0 – 0.30m
101	Subsoil	Medium yellowish brown friable silty sandy clay.	0.30 – 0.60m
102	Natural	Compact cohesive orange red clay with occasional sandy bands and frequent large angular sandstone cobbles. Contains occasional silt channels and patches of grey silty material. Cut by three modern ceramic land drains.	0.40m +

Trench 2

Maximum dimensions: Length: 30.00m Width: 1.80m Depth: 0.50m

Orientation: NW–SE

Main deposit description

Context	Classification	Description	Depth below ground surface (b.g.s) – top and bottom of deposits
200	Topsoil	Friable dark brown rich humic silty loam with frequent small sub-angular stone and rooting with frequent root action and worm sorting. Contains occasional medium flecks of charcoal, rare tile/cbm fragments.	0.00 – 0.30m
201	Subsoil	Medium yellowish brown friable silty sandy clay.	0.30 – 0.50m
202	Natural	Compact cohesive orange red clay with occasional sandy bands and frequent large angular sandstone cobbles.	0.50m +

Context	Classification	Description	Depth below ground surface (b.g.s) – top and bottom of deposits
203	Enriched Topsoil	Black sooty topsoil spread in the south-west edge of the trench. Also backfills a land drain.	0 – 0.20m
204	Natural	Area of large angular sandstone cobbles in abundance at the centre of the trench.	0.50m +

Trench 3

Maximum dimensions: Length: 30.00m Width: 1.80m Depth: 0.40 – 0.60m

Orientation: NW - SE

Main deposit description

Context	Classification	Description	Depth below ground surface (b.g.s) – top and bottom of deposits
300	Topsoil	Friable dark brown silty loam with frequent root action and worm sorting. Contains occasional medium flecks of charcoal, rare tile and cbm fragments.	0 – 0.30m
301	Subsoil	Medium yellowish brown friable silty clay with worm sorting and root action present in upper 0.10m.	0.30 – 0.60m
302	Natural	Compact cohesive orange red clay with occasional sandy bands and frequent granite boulders. Contains occasional silt channels and patches of grey silty material.	0.60m +
303	Backfill of drain	Broken sandstone, coal and clinker filling drainage channel	0.50m – 0.60m

Trench 4

Maximum dimensions: Length: 30.00m Width: 1.80m Depth: 0.70m

Orientation: NW – SE

Main deposit description

Context	Classification	Description	Depth below ground surface (b.g.s) – top and bottom of deposits
400	Topsoil	Friable dark grey brown silty loam with frequent root action and worm sorting. Contains occasional medium flecks of charcoal and coal.	0 – 0.25m
401	Subsoil	Medium yellowish brown friable silty clay with frequent large angular sandstone cobbles.	0.25 – 0.45m
402	Natural	Compact cohesive orange red clay with occasional sandy bands and frequent sandstone cobbles with an area of yellow brown sandy clay and angular sandstone cobbles in the last 6m of the trench. Natural variation in geology.	0.45m +

Trench 5

Maximum dimensions: Length: 30.00m Width: 1.80m Depth: 0.50m

Orientation: E – W

Main deposit description

Context	Classification	Description	Depth below ground surface (b.g.s) – top and bottom of deposits
500	Topsoil	Friable dark brown silty loam with frequent root action and worm sorting. Contains occasional medium flecks of charcoal, rare tile and cbm fragments.	0 – 0.25m
501	Subsoil	Medium yellowish brown friable silty clay.	0.25 – 0.45m
502	Natural	Compact cohesive orange red clay with frequent sandstone boulders.	0.45m +
503	Ditch	Modern drainage ditch orientated NE – SW, 2m wide in hollow.	0.25 - 0.45m

Trench 6

Maximum dimensions: Length: 30.00m Width: 1.80m Depth: 0.40 – 0.60m

Orientation: NW – SE

Main deposit description

Context	Classification	Description	Depth below ground surface (b.g.s) – top and bottom of deposits
600	Topsoil	Friable dark brown silty loam with frequent root action and worm sorting. Contains occasional medium flecks of charcoal, rare tile and cbm fragments.	0 – 0.30m
601	Subsoil	Medium yellowish brown friable silty clay with worm sorting and root action present in upper 0.10m.	0.30 – 0.60m
602	Natural	Compact cohesive orange red clay with frequent angular sandstone	0.60m +
603	Ditch	Stone-lined modern drainage ditch 3m wide and located in visible hollow. Excavated by machine and backfilled with topsoil.	0.60m

Trench 7

Maximum dimensions: Length: 30.00m Width: 1.80m Depth: 0.50 – 0.60m

Orientation: N – S

Main deposit description

Context	Classification	Description	Depth below ground surface (b.g.s) – top and bottom of deposits
700	Topsoil	Friable dark brown silty loam with frequent root action and occasional small angular stones. Large sandstone cobbles are close to the ground surface in places. Contains occasional pieces of coal.	0 – 0.25m
701	Subsoil	Medium yellowish brown friable silty clay	0.25 – 0.50m
702	Natural	Compact cohesive orange-red clay with frequent very large angular sandstone cobbles (0.30m x 0.30m x 0.20m average size). No land drains present.	0.50m +

Geotechnical Trial Pits

Trial Pit 1

Maximum dimensions: Length: 3.00m Width: 1.00m Depth: 2.90m

Orientation: SW – NE

Main deposit description

Context	Classification	Description	Depth below ground surface (b.g.s) – top and bottom of deposits
800	Topsoil	Friable dark brown silty loam with frequent root action and worm sorting. Contains occasional medium flecks of charcoal, rare tile and cbm fragments.	0 – 0.30m
801	Subsoil	Medium yellowish brown friable silty clay with worm sorting and root action present in upper 0.10m.	0.30 – 0.60m
802	Natural	Compact cohesive orange red clay with occasional sandy bands and frequent granite boulders. Contains occasional silt channels and patches of grey silty material.	0.60m – 1.00m
803	Natural	Silurian Mudstone	1.00m – 2.90m

Trial Pit 2

Maximum dimensions: Length: 3.00m Width: 1.00m Depth: 4.00m

Orientation: SW – NE

Main deposit description

Context	Classification	Description	Depth below ground surface (b.g.s) – top and bottom of deposits
900	Topsoil	Friable dark brown silty loam with frequent root action and worm sorting. Contains occasional medium flecks of charcoal, rare tile and cbm fragments.	0 – 0.30m
901	Subsoil	Medium yellowish brown friable silty clay with worm sorting and root action present in upper 0.10m.	0.30 – 0.40m
902	Natural	Red-brown sandy clay	0.40 – 1.00m
903	Natural	Sterile firm gleyed blue-grey clay (ie waterlog affected).	1.00m – 1.70m
904	Natural	Purple mottled blue grey clay	1.70m – 3.00m

Context	Classification	Description	Depth below ground surface (b.g.s) – top and bottom of deposits
905	Natural	Stiff purple mottled blue-grey clay/marl, Silurian mudstone	3.00m – 4.00m

Soak away Test Pit

Maximum dimensions: Length: 3.00m Width: 1.00m Depth: 2.00m

Orientation: SW – NE

Main deposit description

Context	Classification	Description	Depth below ground surface (b.g.s) – top and bottom of deposits
1000	Topsoil	Friable dark brown silty loam with frequent root action and worm sorting. Contains occasional medium flecks of charcoal, rare tile and cbm fragments.	0 – 0.30m
1001	Subsoil	Medium yellowish-brown friable silty clay with worm sorting and root action present in upper 0.10m.	0.30 – 0.40m
1002	Natural	Red-brown sandy clay	0.50m – 1.25m
1003	Natural	Sterile firm gleyed blue-grey clay (ie waterlog affected).	1.25m – 2.00m

Appendix 2 The archive

The archive consists of:

- 3 Field progress reports AS2
- 2 Photographic records AS3
- 121 Digital photographs
- 1 Drawing number catalogues AS4
- 1 Scale drawings
- 11 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:

Shropshire County Museum Service
Shropshire County Council
Wenlock Lodge
Acton Scott
Church Stretton
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